UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

CCOFI Cruise 6504
31 March - 24 April 1965

and

CCOFI Cruise 6505 (El Golfo II)
14 May - 17 June 1965

SIO Reference 67-16

UNIVERSITY OF CALIFORNIA

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Sponsored by
Marine Research Committee

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the National Science Foundation

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Approved for distribution:

W. A. Nierenberg

W. A. Nierenberg, Director

CONTENTS

INTRODUCTION

The data presented in this report were collected by the RV Black Douglas of the Bureau of Commercial Fisheries and the RV Alexander Agassiz of the Scripps Institution of Oceanography on Cruise 6504 of the California Cooperative Oceanic Fisheries Investigations program and the RV Alexander Agassiz on Cruise 6505 (EL GOLFO II). The first two figures in this cruise numbering system represent the year of the cruise; the last two figures, the month. The cruises preceding this one in the series are 6501 (Scripps Institution report, SIO Ref. 66-4) and 6404 and 6407 (SIO Ref. 66-20).

On Cruise 6504 the RV Alexander Agassiz made three-bottle casts in the mixed layer for temperature, salinity and inorganic phosphate-phosphorus at each net haul station. These data are reported with the net haul information.

El Golfo II had as its primary objective an examination of the vertical distribution of zooplankton of the Gulf of California immediately after the conclusion of the winter north winds. This study was a repetition in a different season of El Golfo I (6311-12), when similar collections were made to determine zooplankton vertical distribution immediately after the conclusion of the summer southerly winds. Vertically stratified plankton samples were obtained at 10 depths using standard CalCOFI nets modified to open and close at desired fishing depths. Opening and closing of the nets was accomplished by a strangling noose across the throat of the net that was loosened and tightened by a Leavitt-type, messenger-activated, release mechanism. Oblique samples were obtained at 100-meter intervals between the depth of 100 meters and the surface. Vertically stratified samples were obtained at mid-day and again at mid-evening on each station; an attempt was made at every second station to obtain two day and two night sets. In addition to net tows, hydrographic casts and bathythermographs were made. Direct current measurements were obtained by parachute drogues set out at plankton-sampling depths.

Continuing a long-range program of sampling the coastal plankton of the Americas, stations were occupied at intervals of 30 to 60 miles along the Pacific coastline of Mexico as far south as the Gulf of Tehuantepec. At shore stations a skiff was launched to sample surface waters with a half-meter plankton net just seaward of the surf zone, as well as half way between the surf zone and the ship which lay to between the 15- and 20-fathom isobaths. Net tows and bathythermographs were taken from the ship to complete the short transect of three or more samples arranged perpendicular to the shoreline. Off the southern Mexican coast otter trawl samples were also taken on sandy bottoms roughly between 10 and 20 fathoms.

Gravity cores were obtained systematically at stations roughly equivalent to every second skiff-station as well as at various localities within the Gulf of California.

Only data from the hydrographic casts and temperature and salinity data at net tow stations are included in this report.

The data are tabulated at observed depths; the interpolated and computed values are tabulated at standard depths and for Cruise 6504 are accompanied by charts of horizontal distribution.

STANDARD PROCEDURES

Processing of the data was carried out using the method described by Klein.[1] The 125-meter level was introduced into the integration to obtain greater accuracy in the determination of ΔD.

To indicate degree of accuracy, temperatures are recorded in tenths of a degree when obtained by bucket thermometer, thermograph, or bathythermograph, while temperatures from reversing thermometers are recorded in hundredths of a degree. The salinity values obtained by salinometer are recorded to three decimal places, provided they meet accepted standards. The values recorded "have a reproducibility of ±0.004‰ salinity at the 95 per cent probability level, and a probable accuracy of ±0.01‰ salinity or better at the same level of probability."[2] The values are recorded to two decimal places where only one determination per sample was obtained, or where there is doubt concerning the accuracy of a particular sample, or of all samples on a station. The accuracy of all samples obtained by salinometer and recorded to two decimal places is believed to be equal to or better than those obtained by manual titration.

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[1] Klein, Hans T. A new technique for processing physical oceanographic data. MS.

[2] Quotation from Department of Oceanography, University of Washington, Tech. Rep. No. 66, UW Ref. 60-18, October 1960.

Tabulated Data

The data tabulated are of the same type as have previously appeared in these reports; the column headings from the computer are explained as follows:

Z	Depth in meters	
T	Temperature	°C
S	Salinity	‰
OXY	Oxygen	ml/L
PHO	Phosphate	μg at/L
SIL	Silicate	μg at/L
NIT	Nitrite	μg at/L
D*T	δ_T	cl/ton
SIG*T	σ_T	g/L
DD	ΔD	dyn m

Extrapolated values and values between remote observations are not indicated but can be determined from the tabulation of observed depths. A hyphen is used to indicate a missing observed or interpolated value. The time is the time of messenger release. When more than one cast was made on a station messenger times and wire angles are given in the order of increasing depth and a significant change in position during a multiple cast is listed similarly. Multiple casts are indicated by a footnote letter following all observed depths of each cast except the cast originating at the surface.

On stations where more than one cast is lowered, the various property curves may not agree perfectly. This discrepancy may be caused by changes in geographical position, real property changes with time, slight error in measurement, or a combination of these factors. Stations with overlapping casts have the following footnote: Overlapping casts; reconciliation of property curves when necessary.

FOOTNOTES

Laboratory personnel note any possible imperfections in the sealing of the bottles as follows:

Loose bottle cap:	The cap is definitely loose so that it could be moved with very little applied pressure. The salinity values obtained from these samples may be usable depending on time and/or conditions or storage.

Possible evaporation: Either the cap was sealed with less than usual pressure, the bottle edge chipped, the rubber washer cracked, or the bale broke on opening, etc.

Use of the above values in interpolation depends upon consistency with other values of salinity and other properties, and these footnotes are supplemented with "falls on property curve" or "does not fall on property curve," depending upon whether the property curve was drawn through the value or not.

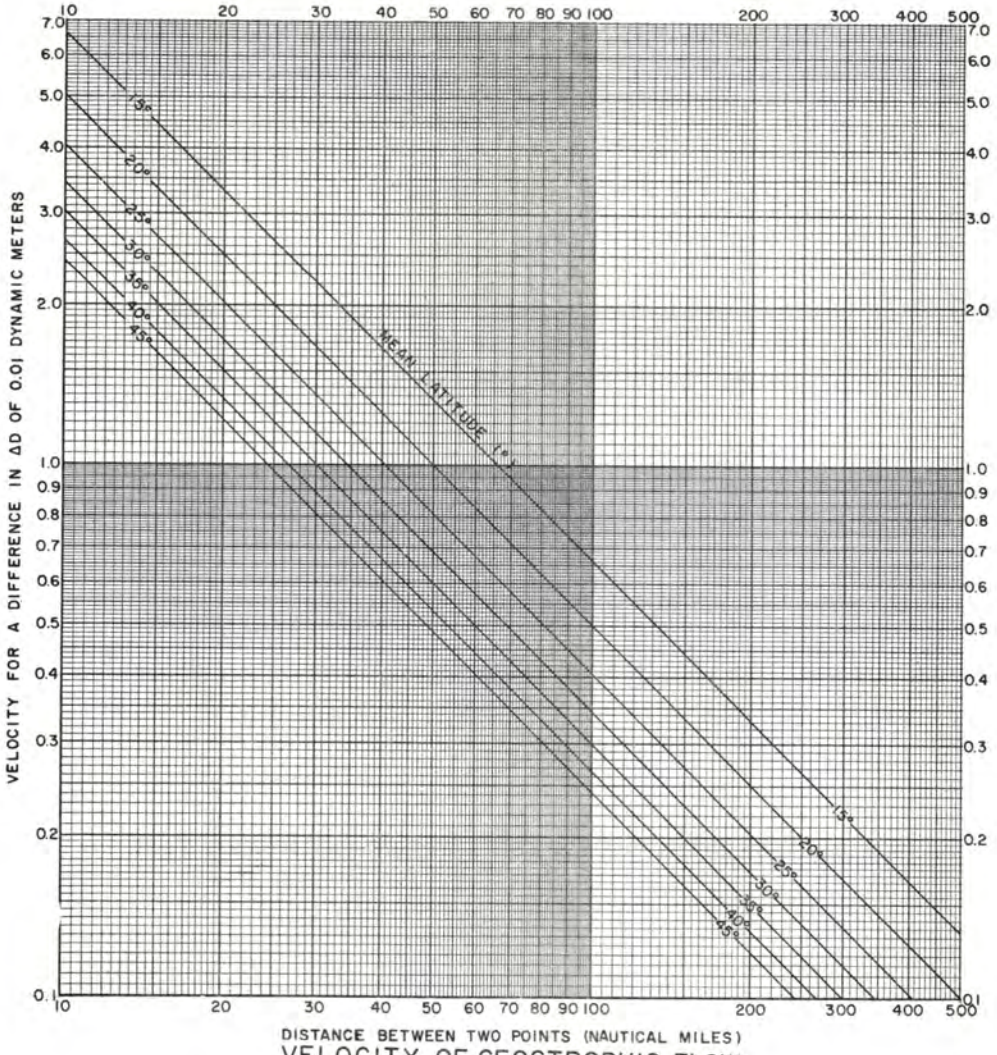
In addition to footnotes, a special notation is used without a footnote because its meaning is always the same.

Values which are not drawn through because they seem to be in error without apparent reason are indicated by the following notation.

u: uncertain value (value may be correct; occasionally it can influence the drawing of the property curve).

FORMAT

These data were collected in part by personnel of and processed completely by the Data Collection and Processing Group (DCPG, MLR), Scripps Institution of Oceanography.



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 / 2331	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

FIGURES
Cruise 6504

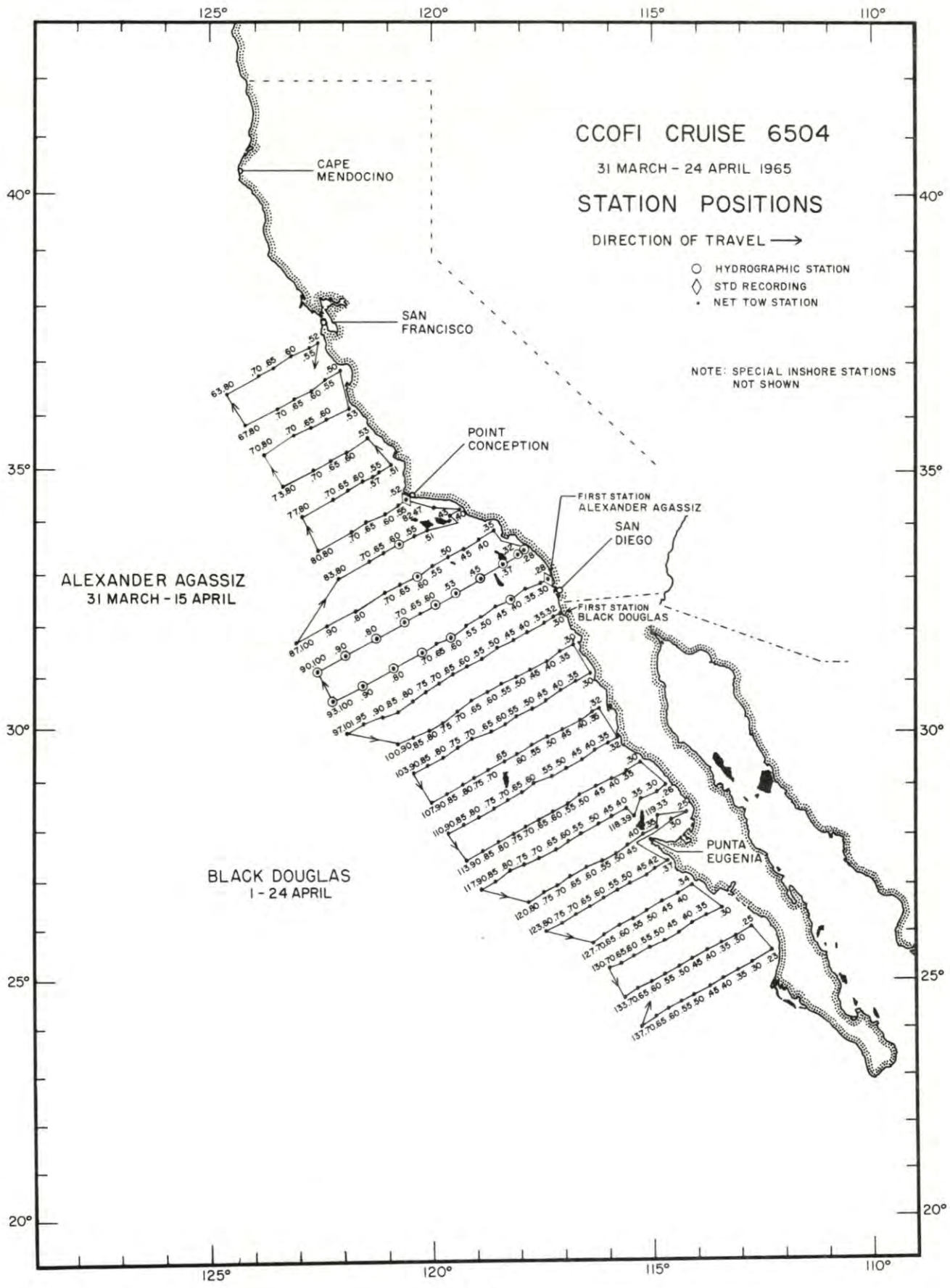

CCOFI CRUISE 6504
31 MARCH - 24 APRIL 1965
STATION POSITIONS
DIRECTION OF TRAVEL ⟶
HYDROGRAPHIC STATION
STD RECORDING
NET TOW STATION
NOTE: SPECIAL INSHORE STATIONS NOT SHOWN
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
FIRST STATION ALEXANDER AGASSIZ
SAN DIEGO
FIRST STATION BLACK DOUGLAS
PUNTA EUGENIA
ALEXANDER AGASSIZ
31 MARCH - 15 APRIL
BLACK DOUGLAS
1 - 24 APRIL
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 1

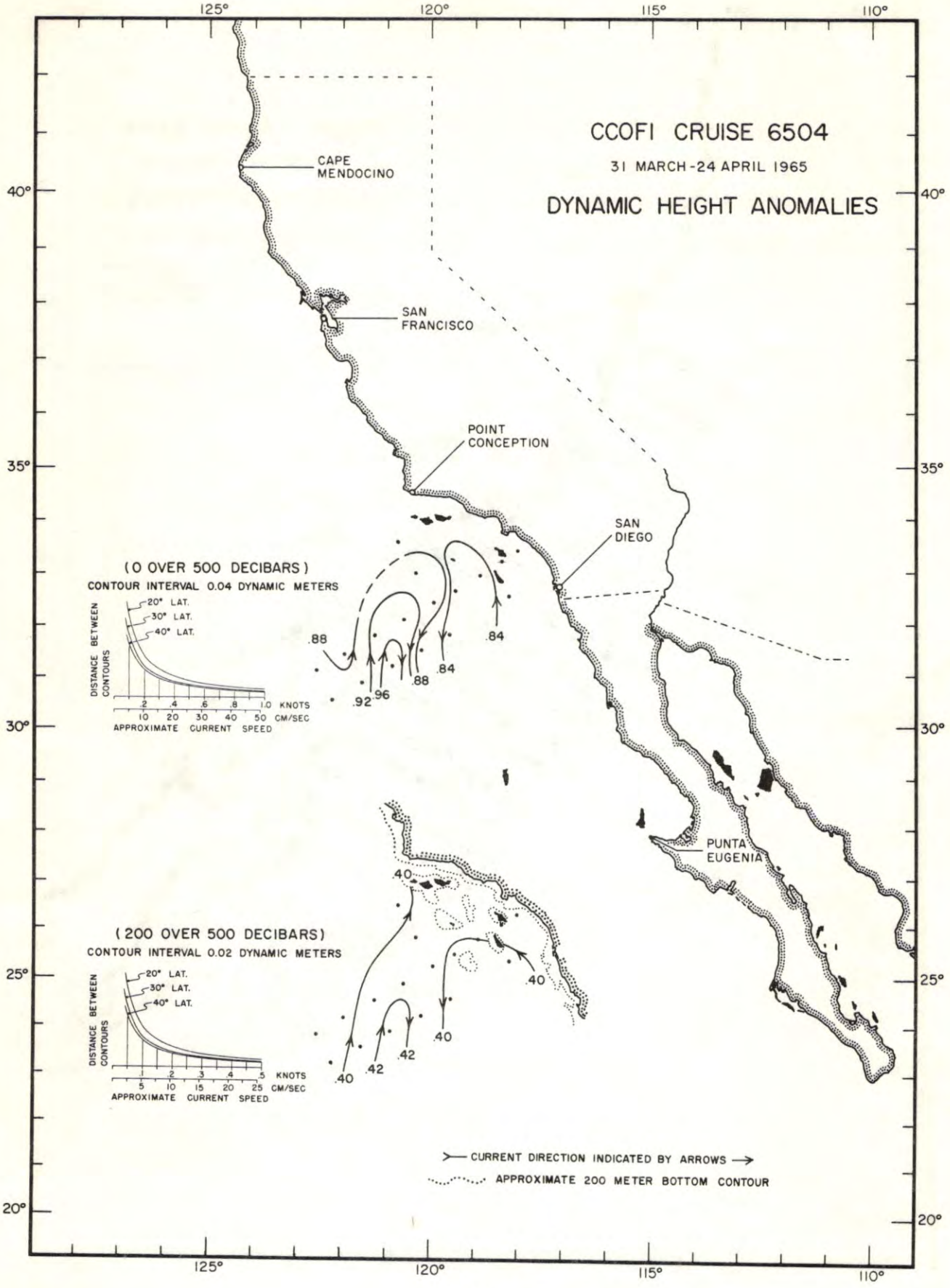

CCOFI CRUISE 6504
31 MARCH-24 APRIL 1965
DYNAMIC HEIGHT ANOMALIES
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
(0 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
20° LAT.
30° LAT.
40° LAT.
DISTANCE BETWEEN CONTOURS
.2 .4 .6 .8 1.0 KNOTS
10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
.88
.84
.92
.96
.88
.84
(200 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.02 DYNAMIC METERS
20° LAT.
30° LAT.
40° LAT.
DISTANCE BETWEEN CONTOURS
1 2 3 4 5 KNOTS
5 10 15 20 25 CM/SEC
APPROXIMATE CURRENT SPEED
.40
.40
.40
.42
.42
.40
CURRENT DIRECTION INDICATED BY ARROWS
APPROXIMATE 200 METER BOTTOM CONTOUR

FIGURE 2

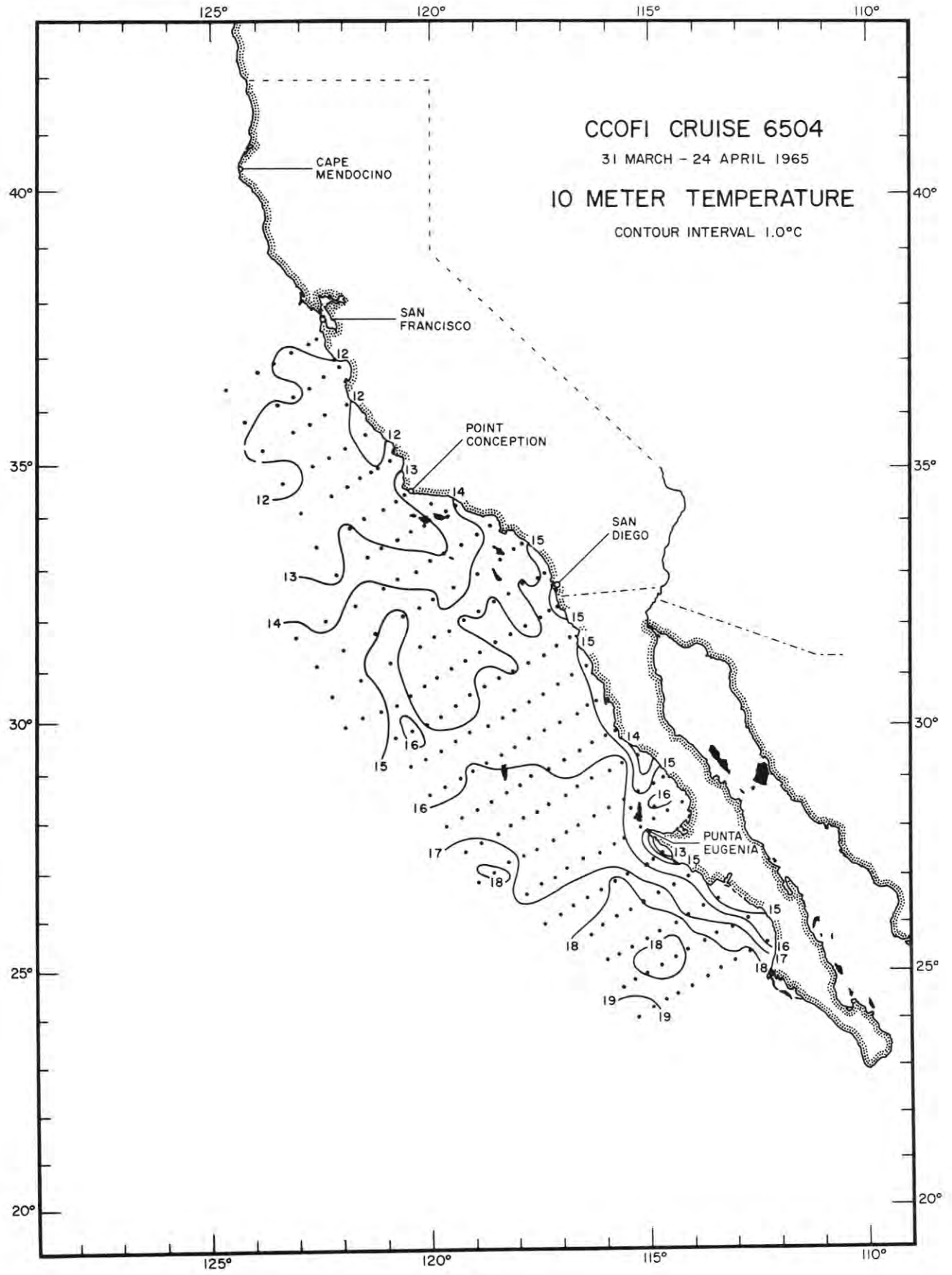

CCOFI CRUISE 6504
31 MARCH - 24 APRIL 1965
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 3

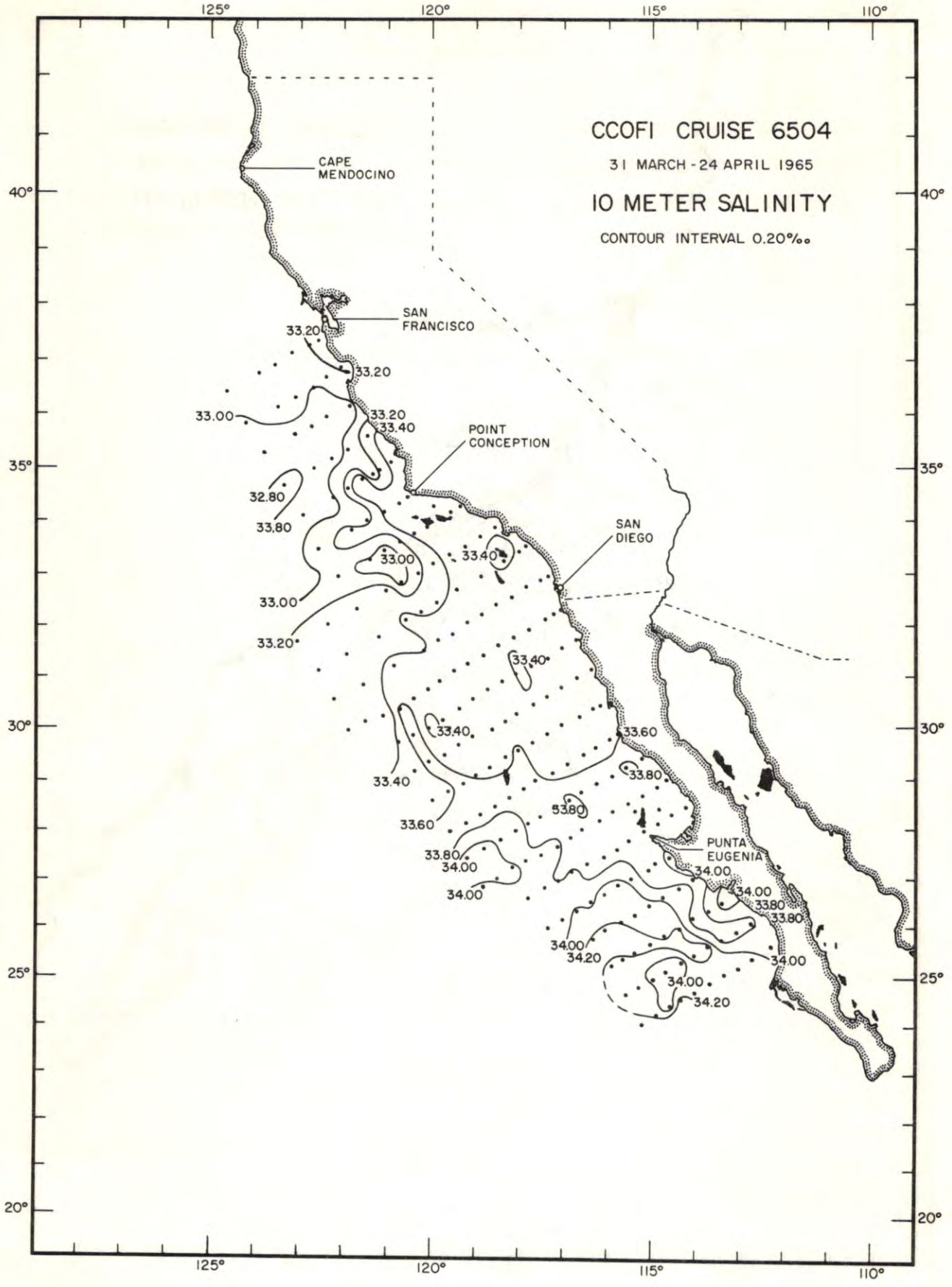

CCOFI CRUISE 6504
31 MARCH - 24 APRIL 1965
10 METER SALINITY
CONTOUR INTERVAL 0.20‰
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
33.20
33.20
33.00
33.20
33.40
32.80
33.80
33.00
33.40
33.00
33.20
33.40
33.40
33.60
33.80
33.80
33.60
33.80
34.00
34.00
34.00
33.80
33.80
34.00
34.20
34.00
34.00
34.20

FIGURE 4

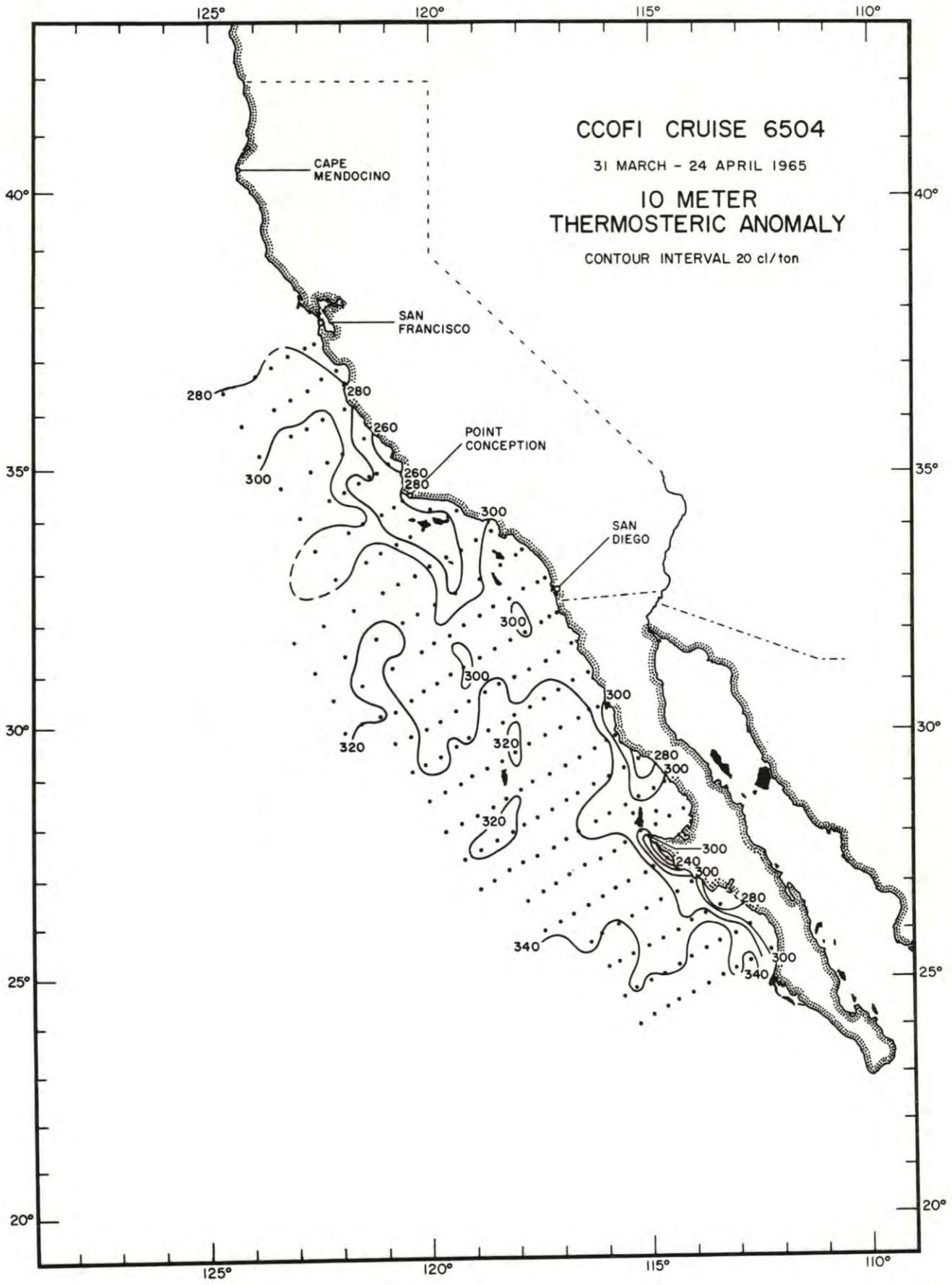

CCOFI CRUISE 6504
31 MARCH - 24 APRIL 1965
10 METER
THERMOSTERIC ANOMALY
CONTOUR INTERVAL 20 cl/ton
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
125°
120°
115°
110°
40°
35°
30°
25°
20°
280
260
300
320
240
340

FIGURE 5

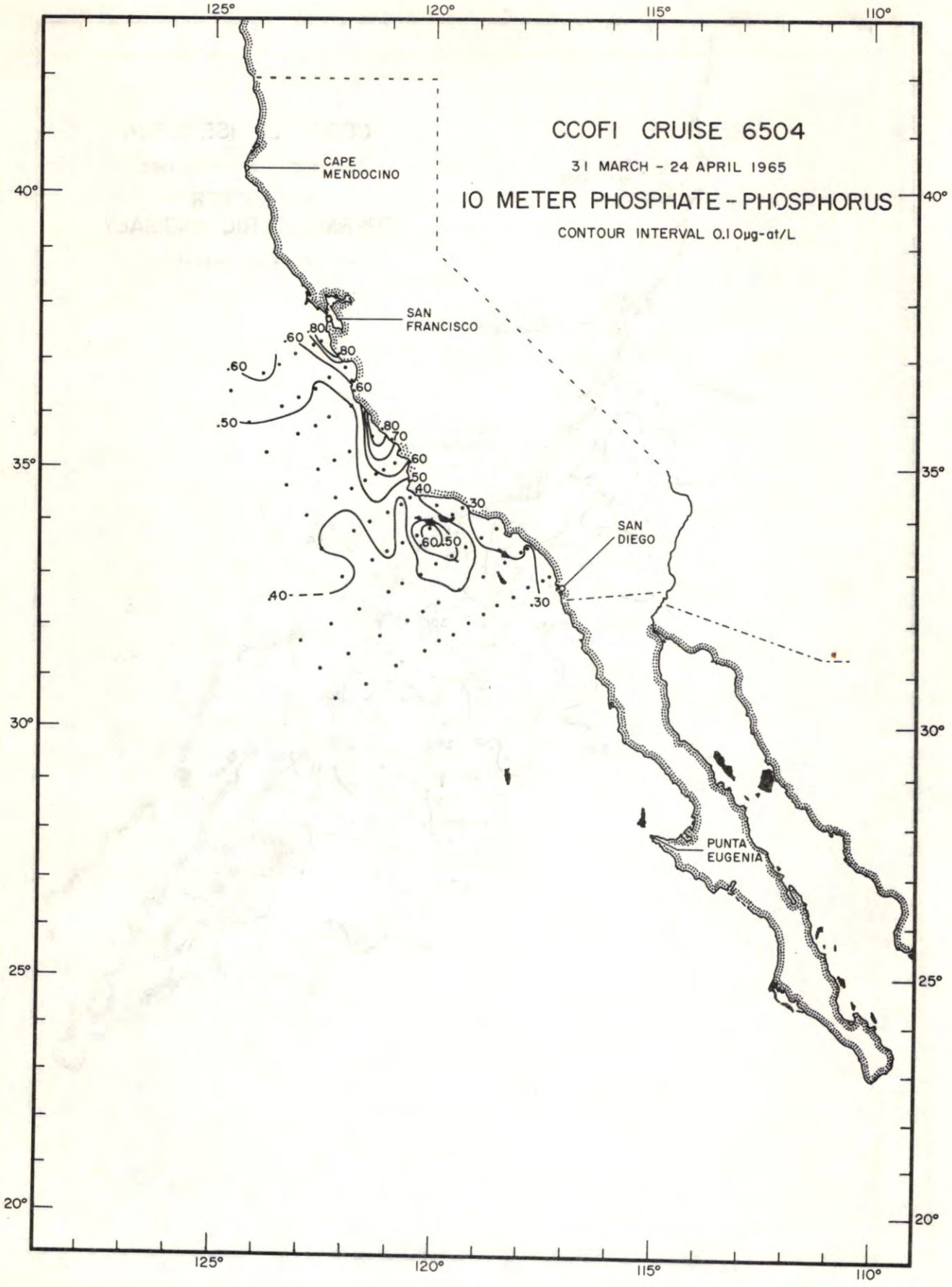

CCOFI CRUISE 6504
31 MARCH - 24 APRIL 1965
10 METER PHOSPHATE - PHOSPHORUS
CONTOUR INTERVAL 0.10µg-at/L
CAPE MENDOCINO
SAN FRANCISCO
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
.80
.60
.70
.50
.40
.30

FIGURE 6

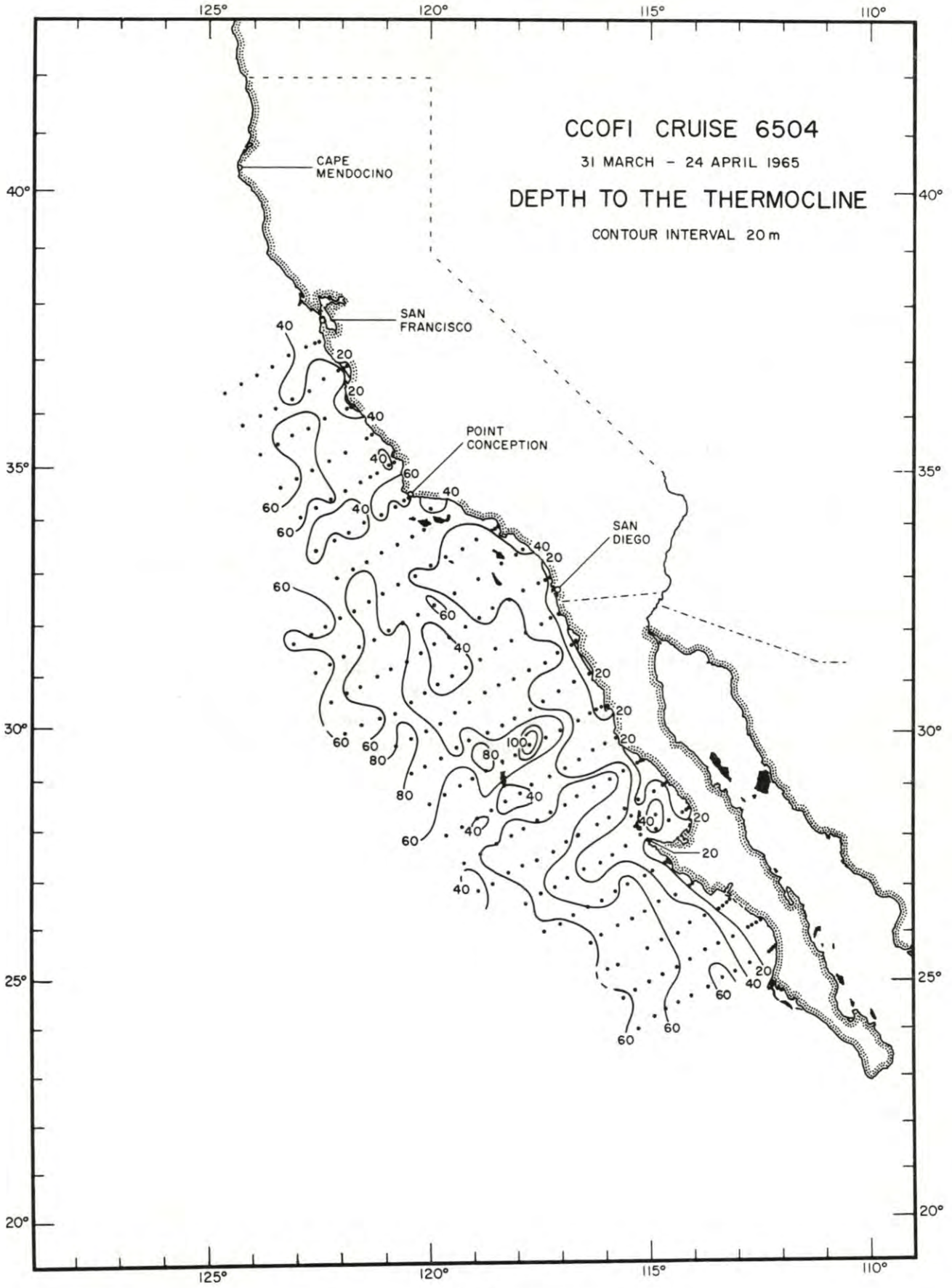

CCOFI CRUISE 6504
31 MARCH - 24 APRIL 1965
DEPTH TO THE THERMOCLINE
CONTOUR INTERVAL 20 m
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 7

PERSONNEL
Cruise 6504

SHIPS' CAPTAINS

Forster, Charles W., RV Black Douglas
Miller, Frank, RV Alexander Agassiz

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

RV Alexander Agassiz

Brennen, Robert E., Senior Marine Technician
Ferriera, Simon M., Electronics Technician
Hart, Joseph T., Senior Marine Technician
Muus, David A., Senior Marine Technician
Netzley, Ronald L., Marine Technician
Wagner, Vaughn M., Fisheries Technician, Bureau of Commercial Fisheries

RV Black Douglas

Counts, Robert C., Fishery Research Biologist, Bureau of Commercial Fisheries
Leong, Roderick J. H., Fishery Biologist, Bureau of Commercial Fisheries
Paloma, Peter A., Fishery Aid, Bureau of Commercial Fisheries
Simmons, James, Physical Science Aid, Bureau of Commercial Fisheries

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
		INPUT					COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
83.60					CCOFI CRUISE 6504								83.60	

ALEXANDER AGASSIZ, APRIL 7 1965, 1656 GCT, 33 34N 120 45W, SOUNDING 750 FM, WIND 290 FORCE 3, WEATHER CLOUDY, SEA MODERATE, WIRE ANGLE 10.

0	12.88	33.163	6.35	0.40	-	-	295.2	0	12.88	33.16	6.35	25.01	295.4	0
10	12.88	33.159	6.38	0.39	-	-	295.5	10	12.88	33.16	6.38	25.01	295.4	.030
30	12.84	33.211	6.33	0.40	-	-	290.9	20	12.88	33.18	6.37	25.03	294.0	.059
39	12.58	33.266	6.25	-	-	-	282.1	30	12.84	33.21	6.33	25.06	291.0	.088
54	12.12	33.304	6.04	-	-	-	270.9	50	12.37	33.30	6.14	25.22	275.7	.145
70	10.96	33.232	5.62	-	-	-	256.0	75	10.72	33.28	5.39	25.51	248.4	.211
93	10.38	33.420	4.93	-	-	-	232.4	100	10.07	33.49	4.63	25.78	222.2	.270
113	9.66	33.675	4.06	-	-	-	202.0	125	9.50	33.77	3.74	26.10	192.5	.323
133	9.34	33.808	3.58	-	-	-	187.2	150	8.90	33.88	3.40	26.28	175.2	.369
152	8.88	33.888	3.39	-	-	-	174.3	200	8.38	34.01	2.70	26.46	157.8	.454
181	8.70	33.952	3.02	-	-	-	166.8	250	7.46	34.08	2.04	26.65	139.7	.531
214	8.12	34.042	2.51	-	-	-	151.7	300	7.00	34.11	1.70	26.74	131.4	.600
243	7.56	34.075	2.10	-	-	-	141.5	400	6.26	34.17	.98	26.89	117.5	.730
291	7.06	34.104	1.78	-	-	-	132.6	500	5.88	34.27	.57	27.01	105.5	.847
344	6.70	34.153	1.20	-	-	-	124.3	600	5.13	34.31	.46	27.14	93.9	.954
427	6.09	34.190	.94	-	-	-	114.0							
512	5.84	34.281	.48	-	-	-	104.2							
597	5.16	34.309	.46	-	-	-	94.3							

87.60 CCOFI CRUISE 6504 87.60

ALEXANDER AGASSIZ, APRIL 6 1965, 0218 GCT, 32 59N 120 20W, SOUNDING 490 FM, WIND 110 FORCE 3, WEATHER CLOUDY, SEA ROUGH, WIRE ANGLE 07.

0	13.48	33.176	6.30	0.41	-	-	305.6	0	13.48	33.18	6.30	24.91	305.3	0
10	13.24	33.135	6.32	0.42	-	-	304.1	10	13.24	33.14	6.32	24.93	303.7	.030
30	13.16	33.127	6.29	0.44	-	-	303.1	20	13.18	33.13	6.31	24.93	303.3	.061
40	12.70	33.086	6.30	-	-	-	297.5	30	13.16	33.13	6.29	24.93	302.9	.091
55	11.95	33.071	6.11	-	-	-	285.0	50	12.10	33.07	6.16	25.09	287.8	.150
69	11.45	33.226	5.6	-	-	-	264.8	75	11.43	33.31	5.40	25.40	258.2	.219
94	10.97	33.526	4.75	-	-	-	234.4	100	10.77	33.56	4.57	25.72	228.5	.280
114	10.30	33.636	4.19	-	-	-	215.1	125	9.99	33.69	4.02	25.95	206.1	.335
134	9.75	33.730	3.91	-	-	-	199.4	150	9.36	33.80	3.62	26.14	188.1	.385
153	9.30	33.819	3.53	-	-	-	185.7	200	8.71	33.96	2.93	26.37	166.4	.476
183	8.92	33.917	3.12	-	-	-	172.7	250	8.01	34.06	2.49	26.56	148.8	.556
217	8.48	34.003	2.78	-	-	-	159.8	300	7.52	34.11	1.87	26.67	138.3	.630
247	8.03	34.054	2.50	-	-	-	149.6	400	6.89	34.21	1.00	26.83	122.5	.766
296	7.58	34.102	1.92	-	-	-	139.7	500	6.34	34.29	.54	26.97	109.6	.889
350	7.05	34.144	1.40	-	-	-	129.5	600	5.67	34.35	-	27.10	97.0	.999
434	6.77	34.251	.75	-	-	-	117.9							
519	6.22	34.307	.51	-	-	-	106.8							
603	5.65	34.352	-	-	-	-	96.6							

90.28 CCOFI CRUISE 6504 90.28

ALEXANDER AGASSIZ, APRIL 5 1965, 0239 GCT, 33 28.5N 117 47W, SOUNDING 150 FM, WIND 220 FORCE 3, WEATHER OVERCAST, SEA MODERATE, WIRE ANGLE 03.

0	14.70	33.426	-	0.26	-	-	311.5	0	14.70	33.43	-	24.85	311.2	0
10	14.74	33.446	6.27	0.29	-	-	310.8	10	14.74	33.45	6.27	24.85	310.5	.031
30	14.76	33.498	6.16	0.30	-	-	307.4	20	14.75	33.47	6.22	24.87	309.3	.062
45	14.10	33.524	5.59	-	-	-	292.2	30	14.76	33.50	6.16	24.89	307.3	.093
55	12.14	33.536	4.68	-	-	-	254.2	50	12.85	33.53	4.94	25.30	267.7	.151
70	10.96	33.624	4.23	-	-	-	227.0	75	10.77	33.66	4.07	25.79	221.1	.212
85	10.48	33.715	3.76	-	-	-	212.3	100	10.17	33.78	3.47	25.99	202.4	.266
105	10.12	33.804	3.40	-	-	-	199.8	125	9.86	33.88	3.22	26.12	190.0	.315
130	9.72	33.897	3.16	-	-	-	186.5	150	9.44	33.98	2.88	26.27	176.0	.362
150	9.44	33.975	2.88	-	-	-	176.3	200	8.88	34.15	1.98	26.49	154.8	.446
185	9.01	34.113	2.19	-	-	-	159.5	250	8.44	34.19	1.71	26.59	145.3	.523
214	8.73	34.169	1.87	-	-	-	151.2							
254	8.41	34.187	1.69	-	-	-	145.1							

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
	INPUT						COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
90.32					CCOFI CRUISE 6504								90.32	
ALEXANDER AGASSIZ, APRIL 4 1965, 2356 GCT, 33 21.5N 118 01.5W, SOUNDING 390 FM, WIND 260 FORCE 2, WEATHER RAIN, SEA MODERATE, WIRE ANGLE 10.														
0	14.60	33.472	6.34	0.27	-	-	306.1	0	14.60	33.47	6.34	24.90	306.2	0
10	14.62	33.464	6.32	0.28	-	-	307.1	10	14.62	33.46	6.32	24.89	307.4	.031
30	14.36	33.497	6.15	0.36	-	-	299.4	20	14.55	33.48	6.26	24.92	304.5	.061
39	13.71	33.501	6.22	-	-	-	286.2	30	14.36	33.50	6.15	24.97	299.2	.092
54	12.01	33.516	5.00	-	-	-	253.3	50	12.45	33.51	5.32	25.37	261.7	.148
70	11.25	33.598	4.35	-	-	-	233.9	75	11.04	33.63	4.17	25.72	227.9	.209
94	10.42	33.757	3.63	-	-	-	208.2	100	10.33	33.77	3.56	25.96	205.7	.264
114	10.11	33.808	3.42	-	-	-	199.3	125	9.97	33.84	3.37	26.07	194.7	.315
134	9.82	33.860	3.33	-	-	-	190.8	150	9.37	33.99	2.91	26.29	174.2	.362
153	9.30	34.006	2.86	-	-	-	171.9	200	8.98	34.11	2.22	26.45	159.3	.447
183	9.14	34.080	2.40	-	-	-	163.9	250	8.45	34.19	1.67	26.59	145.5	.525
217	8.82	34.149	2.02	-	-	-	154.0	300	7.97	34.22	1.30	26.69	136.4	.598
247	8.48	34.194	1.71	-	-	-	145.6	400	7.20	34.26	.79	26.83	122.8	.733
296	8.00	34.220	1.32	-	-	-	136.8	500	6.53	34.30	.50	26.95	111.2	.857
351	7.62	34.255	.98	-	-	-	128.9	600	6.07	34.33	.43	27.04	103.3	.972
415	6.89	34.271	.68	-	-	-	117.9							
518	6.44	34.314	.47	-	-	-	109.0							
602	6.06	34.338	.42	-	-	-	102.5							
90.37					CCOFI CRUISE 6504								90.37	
ALEXANDER AGASSIZ, APRIL 4 1965, 2022 GCT, 33 11N 118 22.5W, SOUNDING 634 FM, WIND 260 FORCE 5, WEATHER RAIN, SEA MODERATE, WIRE ANGLE 26.														
0	14.36	33.377	6.17	0.32	-	-	308.2	0	14.36	33.38	6.17	24.88	308.0	0
9	14.40	33.375	6.19	0.31	-	-	309.1	10	14.40	33.38	6.18	24.87	308.8	.031
27	14.38	33.486	6.10	0.34	-	-	300.6	20	14.40	33.45	6.12	24.93	303.6	.062
36	13.30	33.536	5.76	-	-	-	275.7	30	14.15	33.52	6.06	25.03	293.5	.091
50	12.30	33.514	5.13	-	-	-	258.7	50	12.30	33.51	5.13	25.40	259.0	.147
63	11.50	33.557	4.70	-	-	-	241.2	75	11.03	33.61	4.37	25.71	229.2	.208
85	10.71	33.652	4.14	-	-	-	220.7	100	10.41	33.70	3.84	25.89	212.2	.264
103	10.33	33.717	3.77	-	-	-	209.6	125	9.80	33.88	3.16	26.13	189.0	.315
121	9.84	33.874	3.23	-	-	-	190.1	150	9.57	33.99	2.82	26.26	177.3	.361
137	9.74	33.939	2.98	-	-	-	183.7	200	8.77	34.09	2.53	26.46	157.6	.447
162	9.38	34.012	2.74	-	-	-	172.7	250	8.38	34.18	1.82	26.59	145.2	.524
191	8.85	34.054	2.64	-	-	-	161.5	300	7.80	34.20	1.37	26.70	135.5	.597
217	8.60	34.163	2.26	-	-	-	149.7	400	7.06	34.28	.80	26.86	119.5	.730
257	8.32	34.182	1.76	-	-	-	144.2	500	6.31	34.32	.52	27.00	106.9	.850
302	7.79	34.198	1.35	-	-	-	135.5							
376	7.26	34.278	.90	-	-	-	122.3							
453	6.66	34.296	.59	-	-	-	113.1							
535	6.06	34.336	.50	-	-	-	102.7							
90.45					CCOFI CRUISE 6504								90.45	
ALEXANDER AGASSIZ, APRIL 4 1965, 1615 GCT, 32 54.5N 118 55.5W, SOUNDING 890 FM, WIND 260 FORCE 2, WEATHER RAIN, SEA MODERATE, WIRE ANGLE 17.														
1	13.99	33.244	6.15	0.32	-	-	310.6	0	13.99	33.24	6.15	24.85	310.9	0
10	14.24	33.491	6.21	0.34	-	-	297.4	10	14.24	33.49	6.21	24.99	297.5	.030
30	14.00	33.537	6.15	0.39	-	-	289.3	20	14.10	33.50	6.19	25.03	294.0	.060
39	13.46	33.568	5.92	-	-	-	276.5	30	14.00	33.54	6.15	25.08	289.1	.089
49	12.63	33.576	5.45	-	-	-	260.2	50	12.56	33.58	5.38	25.40	258.6	.144
63	11.74	33.596	4.86	-	-	-	242.6	75	11.22	33.62	4.50	25.68	231.7	.206
77	11.18	33.632	4.44	-	-	-	230.2	100	10.18	33.71	3.80	25.94	207.7	.261
97	10.30	33.696	3.9	-	-	-	210.7	125	9.54	33.90	3.13	26.19	183.5	.311
120	9.67	33.869	3.24	-	-	-	187.8	150	9.07	33.99	2.87	26.34	169.6	.356
139	9.24	33.962	2.98	-	-	-	174.2	200	8.59	34.11	2.16	26.51	153.5	.438
167	8.86	34.029	2.67	-	-	-	163.5	250	8.19	34.16	1.76	26.61	144.0	.514
195	8.66	34.101	2.22	-	-	-	155.2	300	7.88	34.21	1.30	26.69	135.9	.587
223	8.37	34.147	2.02	-	-	-	147.5	400	6.90	34.28	.77	26.89	117.4	.719
261	8.12	34.170	1.69	-	-	-	142.2	500	6.32	34.32	.50	27.00	107.1	.838
317	7.77	34.229	1.17	-	-	-	132.9							
388	7.00	34.276	.82	-	-	-	119.0							
459	6.54	34.303	.56	-	-	-	111.1							
537	6.14	34.342	.46	-	-	-	103.2							

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
	INPUT						COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
90.53							CCOFI CRUISE 6504						90.53	
ALEXANDER AGASSIZ, APRIL 4 1965, 1158 GCT, 32 39N 119 28.5W, SOUNDING 664 FM, WIND 300 FORCE 4, WEATHER RAIN, SEA MODERATE, WIRE ANGLE 27.														
0	13.62	33.548	6.21	0.37	-	-	281.0	0	13.62	33.55	6.21	25.17	280.9	0
9	13.66	33.567	6.23	0.40	-	-	280.4	10	13.66	33.57	6.23	25.17	280.2	.028
31	13.48	33.584	6.10	0.42	-	-	275.7	20	13.60	33.58	6.19	25.19	278.3	.056
40	12.90	33.612	5.70	-	-	-	262.6	30	13.49	33.58	6.11	25.22	276.2	.084
53	11.55	33.611	4.63	-	-	-	238.1	50	11.86	33.61	4.87	25.56	243.7	.136
66	10.50	33.682	4.07	-	-	-	215.0	75	10.09	33.72	3.94	25.96	205.5	.192
88	9.76	33.759	3.85	-	-	-	197.4	100	9.64	33.77	3.79	26.07	194.7	.243
106	9.58	33.779	3.74	-	-	-	193.1	125	9.32	33.86	3.55	26.20	183.0	.291
123	9.36	33.855	3.56	-	-	-	184.0	150	8.82	33.94	3.25	26.34	169.5	.335
148	8.86	33.939	3.28	-	-	-	170.2	200	8.41	34.08	2.23	26.51	153.1	.418
174	8.52	34.008	2.69	-	-	-	160.0	250	8.23	34.20	1.45	26.63	141.6	.493
208	8.39	34.104	2.10	-	-	-	151.0	300	7.70	34.23	1.13	26.73	131.9	.564
234	8.33	34.179	1.61	-	-	-	144.6	400	6.84	34.29	.87	26.90	115.9	.693
277	7.94	34.222	1.22	-	-	-	135.8	500	6.28	34.31	.52	26.99	107.3	.811
333	7.38	34.260	1.00	-	-	-	125.3	600	5.84	34.34	-	27.07	99.7	.922
423	6.69	34.295	.79	-	-	-	113.6							
506	6.26	34.316	.51	-	-	-	106.6							
582	5.91	34.340	.46	-	-	-	100.6							
90.60							CCOFI CRUISE 6504						90.60	
ALEXANDER AGASSIZ, APRIL 4 1965, 0815 GCT, 32 25.5N 119 55.5W, SOUNDING 750 FM, WIND 310 FORCE 4, WEATHER CLEAR, SEA MISSING, WIRE ANGLE 18.														
0	14.10	33.350	6.09	0.37	-	-	305.0	0	14.10	33.35	6.09	24.91	305.0	0
9	14.11	33.333	6.17	0.37	-	-	306.4	10	14.11	33.33	6.17	24.90	306.6	.031
28	14.11	33.333	6.14	0.40	-	-	306.4	20	14.11	33.33	6.15	24.90	306.6	.061
57	13.86	33.349	6.16	-	-	-	300.3	30	14.11	33.33	6.14	24.90	306.6	.092
66	13.70	33.353	6.06	-	-	-	296.9	50	14.02	33.34	6.16	24.92	304.1	.153
80	12.54	33.344	5.69	-	-	-	275.6	75	13.00	33.34	5.84	25.13	284.4	.227
95	12.18	33.472	5.39	-	-	-	259.6	100	11.83	33.49	5.23	25.47	252.0	.295
110	11.20	33.517	4.93	-	-	-	239.0	125	10.38	33.64	4.48	25.85	216.2	.354
134	10.00	33.706	4.31	-	-	-	205.1	150	9.68	33.78	4.22	26.07	194.5	.406
153	9.61	33.799	4.18	-	-	-	192.0	200	8.87	34.05	2.58	26.42	162.1	.497
181	9.02	33.967	3.17	-	-	-	170.5	250	8.17	34.07	2.47	26.54	150.4	.577
210	8.78	34.074	2.44	-	-	-	159.0	300	7.70	34.10	1.88	26.63	141.5	.652
238	8.30	34.067	2.60	-	-	-	152.5	400	7.25	34.25	.94	26.81	124.3	.791
286	7.82	34.095	2.00	-	-	-	143.6	500	6.40	34.31	.57	26.98	108.8	.914
339	7.41	34.138	1.62	-	-	-	134.7	600	5.72	34.36	-	27.10	96.8	1.024
421	7.18	34.279	.77	-	-	-	121.2							
503	6.38	34.311	.55	-	-	-	108.5							
586	5.80	34.352	.48	-	-	-	98.4							
90.70							CCOFI CRUISE 6504						90.70	
ALEXANDER AGASSIZ, APRIL 4 1965, 0146 GCT, 32 05N 120 39W, SOUNDING 2044 FM, WIND 310 FORCE 4, WEATHER CLOUDY, SEA ROUGH, WIRE ANGLE 04.														
0	15.00	33.437	5.99	0.34	-	-	316.8	0	15.00	33.44	5.99	24.79	316.6	0
10	15.02	33.420	6.01	0.34	-	-	318.5	10	15.02	33.42	6.01	24.77	318.5	.032
30	14.84	33.419	5.96	0.35	-	-	314.9	20	14.90	33.42	5.98	24.80	316.0	.064
60	14.75	33.417	6.03	0.35	-	-	313.2	30	14.84	33.42	5.96	24.81	314.8	.095
70	13.85	33.417	6.04	-	-	-	295.1	50	14.83	33.42	5.97	24.81	314.6	.158
85	13.12	33.419	5.76	-	-	-	280.9	75	13.31	33.42	5.83	25.13	284.5	.234
100	12.38	33.586	5.37	-	-	-	254.8	100	12.38	33.59	5.37	25.44	254.6	.302
115	11.69	33.592	5.11	-	-	-	242.0	125	11.19	33.60	4.92	25.67	232.7	.363
141	10.40	33.630	4.61	-	-	-	217.2	150	9.98	33.69	4.38	25.95	206.0	.419
161	9.54	33.790	4.03	-	-	-	191.6	200	8.84	33.94	3.29	26.33	169.8	.514
190	9.00	33.904	3.42	-	-	-	174.9	250	8.20	34.10	2.42	26.56	148.6	.596
220	8.54	34.002	3.02	-	-	-	160.8	300	7.52	34.10	1.97	26.66	139.1	.670
250	8.20	34.100	2.42	-	-	-	148.6	400	6.56	34.17	1.03	26.85	121.3	.806
300	7.52	34.100	1.97	-	-	-	139.1	500	5.86	34.23	.61	26.98	108.2	.926
354	6.96	34.147	1.38	-	-	-	128.1	600	5.38	34.31	.47	27.11	96.7	1.036
439	6.26	34.197	.84	-	-	-	115.5							
524	5.72	34.245	.55	-	-	-	105.4							
609	5.34	34.318	.45	-	-	-	95.6							

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
		INPUT					COMPUTED			INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
90.80						CCOFI CRUISE 6504							90.80	
ALEXANDER AGASSIZ, APRIL 3 1965, 2031 GCT, 31 47N 121 15.5W, SOUNDING 2025 FM, WIND 290 FORCE 4, WEATHER PARTLY CLOUDY, SEA ROUGH, WIRE ANGLE 08.														
0	15.06	33.340	5.94	0.35	-	-	325.2	0	15.06	33.34	5.94	24.70	325.2	0
10	14.98	33.336	5.98	0.34	-	-	323.8	10	14.98	33.34	5.98	24.72	323.5	.032
30	14.92	33.336	5.98	0.34	-	-	322.6	20	14.95	33.34	5.98	24.72	322.9	.065
59	14.60	33.339	6.11	-	-	-	315.8	30	14.92	33.34	5.98	24.73	322.3	.097
69	13.80	33.293	6.22	-	-	-	303.3	50	14.75	33.34	6.05	24.77	318.8	.161
84	13.64	33.430	5.91	-	-	-	290.1	75	13.66	33.36	6.05	25.01	295.6	.239
99	12.94	33.541	5.56	-	-	-	268.5	100	12.92	33.54	5.56	25.30	268.2	.310
115	12.07	33.566	5.33	-	-	-	250.7	125	11.12	33.59	4.85	25.68	232.2	.373
139	10.17	33.612	4.37	-	-	-	214.8	150	9.77	33.68	4.23	25.98	203.4	.428
159	9.54	33.744	4.14	-	-	-	195.0	200	8.92	33.95	3.23	26.33	170.3	.523
189	9.09	33.922	3.36	-	-	-	174.9	250	8.09	34.09	2.35	26.57	147.7	.605
218	8.64	33.992	3.06	-	-	-	163.0	300	7.80	34.17	1.61	26.67	137.7	.678
248	8.11	34.084	2.40	-	-	-	148.5	400	6.70	34.22	.91	26.87	119.3	.812
298	7.82	34.162	1.64	-	-	-	138.6	500	6.05	34.27	.58	26.99	107.5	.932
352	7.08	34.176	1.21	-	-	-	127.5	600	5.42	34.33	.47	27.12	95.6	1.041
437	6.46	34.245	.72	-	-	-	114.4							
521	5.90	34.276	.54	-	-	-	105.3							
605	5.39	34.327	.45	-	-	-	95.5							
90.90						CCOFI CRUISE 6504							90.90	
ALEXANDER AGASSIZ, APRIL 3 1965, 1426 GCT, 31 26N 121 59W, SOUNDING 2106 FM, WIND 280 FORCE 3, WEATHER CLOUDY, SEA VERY ROUGH, WIRE ANGLE 10.														
0	14.54	33.367	6.00	0.36	-	-	312.5	0	14.54	33.37	6.00	24.84	312.3	0
10	14.56	33.356	6.08	0.36	-	-	313.8	10	14.56	33.36	6.08	24.82	313.5	.031
29	14.56	33.357	6.02	0.36	-	-	313.7	20	14.56	33.36	6.05	24.82	313.5	.063
59	13.18	33.326	6.08	-	-	-	288.9	30	14.56	33.36	6.02	24.82	313.5	.094
70	12.60	33.277	5.85	-	-	-	281.6	50	14.11	33.35	6.06	24.91	305.2	.156
84	11.36	33.307	5.42	-	-	-	257.3	75	12.19	33.28	5.72	25.24	273.9	.229
99	11.24	33.620	4.98	-	-	-	232.1	100	11.24	33.62	4.97	25.68	232.1	.293
114	10.36	33.621	4.74	-	-	-	217.2	125	9.87	33.70	4.52	25.98	203.5	.348
138	9.35	33.769	4.22	-	-	-	190.2	150	9.10	33.86	3.83	26.23	179.7	.396
158	8.96	33.888	3.58	-	-	-	175.5	200	8.39	34.00	2.60	26.45	158.7	.483
187	8.60	33.980	2.77	-	-	-	163.3	250	7.74	34.12	2.13	26.64	140.6	.559
216	8.13	34.029	2.46	-	-	-	152.8	300	7.21	34.13	1.60	26.73	132.7	.630
246	7.79	34.118	2.20	-	-	-	141.4	400	6.71	34.27	.80	26.90	115.7	.759
295	7.24	34.120	1.69	-	-	-	133.8	500	6.18	34.33	.48	27.02	104.6	.876
349	6.97	34.213	.98	-	-	-	123.3	600	5.63	34.36	.42	27.11	95.8	.983
432	6.55	34.297	.7	-	-	-	111.7							
515	6.10	34.327	.44	-	-	-	103.8							
599	5.63	34.357	.42	-	-	-	96.0							
90.100						CCOFI CRUISE 6504							90.100	
ALEXANDER AGASSIZ, APRIL 3 1965, 0923 GCT, 31 06N 122 37W, SOUNDING 2220 FM, WIND 290 FORCE 4, WEATHER CLEAR, SEA MODERATE, WIRE ANGLE 30.														
0	14.10	33.279	6.08	0.35	-	-	310.2	0	14.10	33.28	6.08	24.86	310.1	0
9	14.14	33.275	6.10	0.34	-	-	311.3	10	14.14	33.29	6.10	24.86	310.2	.031
30	14.09	33.282	6.10	0.32	-	-	309.8	20	14.12	33.28	6.10	24.85	310.5	.062
56	13.88	33.308	6.14	-	-	-	303.7	30	14.09	33.28	6.10	24.86	309.9	.093
65	13.72	33.353	6.10	-	-	-	297.3	50	14.00	33.29	6.12	24.89	307.4	.155
82	12.22	33.375	5.63	-	-	-	267.5	75	13.40	33.36	6.00	25.06	290.6	.230
96	11.34	33.472	4.96	-	-	-	244.7	100	11.08	33.48	4.86	25.60	239.7	.297
108	10.50	33.492	4.70	-	-	-	229.1	125	9.81	33.60	4.46	25.91	209.9	.354
134	9.52	33.678	4.37	-	-	-	199.6	150	9.14	33.83	4.32	26.20	182.5	.404
151	9.12	33.843	4.32	-	-	-	181.2	200	8.41	33.98	3.91	26.43	160.5	.491
176	8.68	33.941	4.08	-	-	-	167.4	250	7.56	34.02	3.15	26.59	145.6	.569
206	8.30	33.993	3.86	-	-	-	158.0	300	7.00	34.08	1.92	26.72	133.6	.641
231	7.83	34.007	3.62	-	-	-	150.3	400	6.32	34.21	.82	26.91	115.3	.771
274	7.25	34.042	2.56	-	-	-	139.8	500	5.41	34.24	.61	27.05	102.2	.885
329	6.78	34.131	1.32	-	-	-	127.0							
415	6.20	34.217	.77	-	-	-	113.3							
496	5.43	34.238	.61	-	-	-	102.6							
568	5.14	34.305	.50	-	-	-	94.3							

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
INPUT							COMPUTED	INPUT					COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
93.40					CCOFI CRUISE 6504								93.40	
ALEXANDER AGASSIZ, APRIL 1 1965, 0915 GCT, 32 30.5N 118 11.5W, SOUNDING 914 FM, WIND 180 FORCE 3, WEATHER OVERCAST, SEA MODERATE, WIRE ANGLE 06.														
0	14.62	33.468	6.04	0.38	-	-	306.8	0	14.62	33.47	6.04	24.90	306.6	0
10	14.65	33.466	6.10	0.38	-	-	307.5	10	14.65	33.47	6.10	24.89	307.2	.031
30	14.64	33.477	6.10	0.35	-	-	306.5	20	14.65	33.47	6.10	24.89	307.2	.061
40	14.46	33.488	6.2	-	-	-	302.1	30	14.64	33.48	6.10	24.90	306.3	.092
55	12.29	33.484	5.39	-	-	-	260.7	50	13.00	33.48	5.70	25.24	274.2	.150
70	11.84	33.516	5.10	-	-	-	250.3	75	11.65	33.54	4.97	25.54	245.1	.216
95	10.76	33.647	4.28	-	-	-	221.9	100	10.50	33.68	4.18	25.86	215.2	.274
115	9.74	33.753	3.83	-	-	-	197.5	125	9.59	33.81	3.61	26.11	190.9	.325
134	9.44	33.870	3.42	-	-	-	184.1	150	9.01	33.94	3.17	26.31	172.4	.371
155	8.90	33.961	3.10	-	-	-	169.1	200	8.51	34.07	2.60	26.49	155.3	.455
185	8.60	34.039	2.82	-	-	-	158.9	250	8.11	34.15	1.98	26.61	143.6	.531
220	8.40	34.098	2.38	-	-	-	151.6	300	7.65	34.19	1.35	26.71	134.1	.603
249	8.12	34.151	2.00	-	-	-	143.6	400	6.94	34.28	.78	26.88	117.9	.735
299	7.67	34.188	1.37	-	-	-	134.6	500	6.27	34.33	.51	27.01	105.7	.853
354	7.25	34.260	.95	-	-	-	123.5	600	5.78	34.36	.44	27.10	97.5	.962
439	6.68	34.297	.66	-	-	-	113.3							
523	6.12	34.340	.48	-	-	-	103.1							
609	5.73	34.365	.43	-	-	-	96.6							
93.60					CCOFI CRUISE 6504								93.60	
ALEXANDER AGASSIZ, APRIL 2 1965, 0314 GCT, 31 48.5N 119 33W, SOUNDING 800 FM, WIND 270 FORCE 4, WEATHER PARTLY CLOUDY, SEA ROUGH, WIRE ANGLE 06.														
0	14.84	33.507	6.13	0.35	-	-	308.4	0	14.84	33.51	6.13	24.88	308.2	0
10	14.88	33.501	6.19	0.33	-	-	309.7	10	14.88	33.50	6.19	24.86	309.7	.031
30	14.58	33.490	6.20	0.36	-	-	304.4	20	14.79	33.49	6.20	24.87	308.6	.062
40	12.81	33.479	6.01	-	-	-	270.7	30	14.58	33.49	6.20	24.92	304.4	.093
55	11.73	33.510	5.20	-	-	-	248.8	50	12.02	33.50	5.42	25.44	254.7	.149
71	10.72	33.576	4.69	-	-	-	226.5	75	10.53	33.60	4.57	25.79	221.6	.209
95	9.89	33.709	4.11	-	-	-	203.1	100	9.76	33.73	4.06	26.02	199.5	.262
115	9.42	33.796	3.88	-	-	-	189.3	125	9.27	33.84	3.62	26.19	183.7	.310
134	9.16	33.894	3.35	-	-	-	178.0	150	9.00	33.96	3.08	26.32	170.7	.355
155	8.96	33.971	3.03	-	-	-	169.3	200	8.50	34.03	2.67	26.46	158.1	.439
185	8.66	34.010	2.83	-	-	-	161.9	250	7.64	34.06	2.50	26.61	143.7	.516
220	8.21	34.069	2.44	-	-	-	151.0	300	7.07	34.11	1.73	26.73	132.3	.587
249	7.66	34.056	2.52	-	-	-	144.3	400	6.52	34.21	.92	26.88	117.8	.718
299	7.08	34.102	1.77	-	-	-	133.0	500	6.07	34.28	.60	27.00	107.0	.836
354	6.68	34.157	1.23	-	-	-	123.8	600	5.45	34.35	.46	27.13	94.5	.944
439	6.39	34.254	.73	-	-	-	112.9							
523	5.92	34.294	.54	-	-	-	104.1							
609	5.38	34.361	.44	-	-	-	92.8							
93.70					CCOFI CRUISE 6504								93.70	
ALEXANDER AGASSIZ, APRIL 2 1965, 0932 GCT, 31 30N 120 14W, SOUNDING 2100 FM, WIND 310 FORCE 4, WEATHER MISSING, SEA ROUGH, WIRE ANGLE 15.														
0	14.47	33.407	6.08	0.39	-	-	308.2	0	14.47	33.41	6.08	24.88	308.0	0
10	14.49	33.398	6.11	0.37	-	-	309.3	10	14.49	33.40	6.11	24.87	309.1	.031
29	14.21	33.427	6.11	0.40	-	-	301.5	20	14.37	33.40	6.11	24.89	306.7	.062
58	13.21	33.564	5.92	-	-	-	272.0	30	14.20	33.43	6.10	24.95	301.1	.092
68	12.81	33.541	5.64	-	-	-	266.1	50	13.53	33.54	5.99	25.18	279.9	.150
82	12.23	33.547	5.29	-	-	-	255.0	75	12.53	33.54	5.46	25.37	261.0	.218
96	11.10	33.572	4.64	-	-	-	233.2	100	11.03	33.58	4.56	25.69	231.4	.281
112	10.42	33.723	3.70	-	-	-	210.7	125	9.98	33.77	3.57	26.02	200.1	.335
136	9.66	33.824	3.44	-	-	-	191.0	150	9.48	33.94	2.97	26.23	179.6	.383
155	9.42	33.976	2.82	-	-	-	176.0	200	8.97	34.10	2.27	26.44	159.9	.470
185	9.06	34.073	2.39	-	-	-	163.2	250	8.38	34.18	1.75	26.59	145.2	.548
214	8.87	34.128	2.13	-	-	-	156.3	300	7.80	34.19	1.48	26.69	136.2	.621
243	8.47	34.177	1.82	-	-	-	146.7	400	6.88	34.27	.80	26.88	117.9	.753
291	7.92	34.197	1.52	-	-	-	137.4	500	6.17	34.32	.48	27.02	105.2	.871
344	7.12	34.189	1.17	-	-	-	127.1	600	5.59	34.37	.43	27.13	94.6	.978
426	6.76	34.296	.64	-	-	-	114.4							
508	6.11	34.320	.48	-	-	-	104.5							
590	5.63	34.361	.43	-	-	-	95.7							

OBSERVED LEVELS OF DEPTH								STANDARD LEVELS OF DEPTH						
		INPUT					COMPUTED		INPUT				COMPUTED	
Z	T	S	OXY	PHO	SIL	NIT	D*T	Z	T	S	OXY	SIG*T	D*T	DD
93.80						CCOFI CRUISE 6504							93.80	
ALEXANDER AGASSIZ, APRIL 2 1965, 1526 GCT, 31 10N 120 55W, SOUNDING 2090 FM, WIND 240 FORCE 3, WEATHER CLOUDY, SEA ROUGH, WIRE ANGLE 17.														
1	15.03	33.437	5.96	0.34	-	-	317.4	0	15.03	33.44	5.96	24.78	317.2	0
10	15.05	33.430	6.06	0.34	-	-	318.4	10	15.05	33.43	6.06	24.77	318.4	.032
29	15.04	33.425	6.00	0.35	-	-	318.5	20	15.04	33.43	6.03	24.77	318.2	.064
59	15.02	33.424	6.12	0.32	-	-	318.2	30	15.03	33.42	6.00	24.77	318.7	.096
68	14.27	33.346	6.19	-	-	-	308.7	50	15.02	33.42	6.08	24.77	318.5	.160
83	14.04	33.450	6.10	-	-	-	296.5	75	14.16	33.39	6.16	24.93	303.2	.238
96	13.20	33.411	5.88	-	-	-	283.0	100	13.07	33.42	5.83	25.18	279.9	.311
111	12.76	33.455	5.73	-	-	-	271.5	125	12.24	33.52	5.51	25.42	257.2	.379
136	11.79	33.577	5.29	-	-	-	244.9	150	10.84	33.61	4.95	25.74	226.0	.440
155	10.50	33.619	4.80	-	-	-	219.7	200	9.15	33.84	3.90	26.21	181.9	.544
183	9.48	33.750	4.07	-	-	-	193.6	250	8.35	33.98	3.42	26.44	159.6	.631
211	8.96	33.890	3.80	-	-	-	175.3	300	7.72	34.05	2.56	26.59	145.5	.710
240	8.49	33.973	3.55	-	-	-	162.2	400	6.81	34.17	1.22	26.81	124.5	.850
288	7.86	34.031	2.79	-	-	-	148.9	500	6.12	34.25	.68	26.97	109.8	.974
339	7.32	34.113	1.87	-	-	-	135.4	600	5.34	34.30	-	27.10	97.0	1.084
421	6.65	34.193	1.07	-	-	-	120.7							
503	6.08	34.256	.67	-	-	-	108.9							
587	5.44	34.298	.55	-	-	-	98.2							
93.90						CCOFI CRUISE 6504							93.90	
ALEXANDER AGASSIZ, APRIL 2 1965, 2212 GCT, 30 48N 121 36W, SOUNDING 2140 FM, WIND 240 FORCE 3, WEATHER CLOUDY, SEA VERY ROUGH, WIRE ANGLE 03.														
0	15.04	33.380	6.00	0.32	-	-	321.8	0	15.04	33.38	6.00	24.74	321.8	0
10	14.94	33.371	5.99	0.32	-	-	320.4	10	14.94	33.37	5.99	24.75	320.5	.032
30	14.86	33.366	5.94	0.33	-	-	319.1	20	14.91	33.37	5.97	24.76	319.9	.064
61	14.02	33.414	5.98	-	-	-	298.7	30	14.86	33.37	5.94	24.77	318.8	.096
70	13.16	33.346	5.87	-	-	-	287.0	50	14.15	33.40	5.98	24.94	302.3	.159
85	12.20	33.319	5.67	-	-	-	271.2	75	12.80	33.33	5.80	25.16	281.4	.232
100	12.12	33.530	5.37	-	-	-	254.2	100	12.12	33.53	5.37	25.45	254.2	.299
115	11.00	33.511	4.97	-	-	-	236.0	125	10.70	33.62	4.79	25.78	222.9	.360
141	10.10	33.660	4.59	-	-	-	210.1	150	9.66	33.73	4.27	26.04	197.9	.413
161	9.17	33.818	3.88	-	-	-	183.8	200	8.62	33.97	3.33	26.39	164.3	.505
191	8.74	33.942	3.44	-	-	-	168.2	250	7.86	34.03	2.77	26.55	149.0	.585
220	8.29	33.995	3.15	-	-	-	157.7	300	7.38	34.09	1.87	26.67	137.9	.659
250	7.86	34.026	2.77	-	-	-	149.3	400	6.54	34.18	1.02	26.86	120.3	.794
300	7.38	34.089	1.87	-	-	-	138.0	500	5.84	34.24	.58	26.99	107.2	.914
355	6.89	34.133	1.33	-	-	-	128.2	600	5.33	34.31	.42	27.11	96.1	1.022
440	6.23	34.212	.81	-	-	-	114.0							
525	5.68	34.250	.51	-	-	-	104.6							
609	5.28	34.316	.41	-	-	-	95.1							
93.100						CCOFI CRUISE 6504							93.100	
ALEXANDER AGASSIZ, APRIL 3 1965, 0317 GCT, 30 31N 122 13W, SOUNDING 2152 FM, WIND 300 FORCE 8, WEATHER THUNDERSTORM, SEA ROUGH, WIRE ANGLE 36.														
0	14.72	33.330	5.94	0.36	-	-	318.9	0	14.72	33.33	5.94	24.77	318.9	0
8	14.72	33.328	6.03	0.33	-	-	319.1	10	14.71	33.33	6.02	24.77	318.7	.032
28	14.60	33.329	6.01	0.33	-	-	316.5	20	14.62	33.33	6.01	24.79	316.9	.064
52	14.43	33.331	6.11	-	-	-	313.0	30	14.60	33.33	6.01	24.79	316.5	.095
60	13.98	33.306	6.13	-	-	-	305.8	50	14.48	33.33	6.10	24.82	314.0	.159
76	12.52	33.306	5.75	-	-	-	278.0	75	12.60	33.31	5.78	25.18	279.2	.233
88	11.70	33.373	5.35	-	-	-	258.3	100	10.97	33.49	5.32	25.63	237.1	.298
99	11.12	33.479	5.36	-	-	-	240.4	125	9.81	33.67	4.33	25.97	204.7	.354
122	9.90	33.642	4.42	-	-	-	208.2	150	9.27	33.81	3.97	26.16	186.0	.404
138	9.50	33.744	4.03	-	-	-	194.4	200	8.39	34.01	2.98	26.46	158.0	.491
159	9.10	33.854	3.89	-	-	-	180.1	250	7.57	34.05	2.27	26.61	143.5	.568
185	8.69	33.953	3.32	-	-	-	166.6	300	6.93	34.09	1.67	26.73	132.0	.639
206	8.26	34.026	2.85	-	-	-	154.9	400	6.33	34.20	.89	26.90	116.2	.769
241	7.70	34.046	2.39	-	-	-	145.6	500	5.87	34.28	.54	27.02	104.6	.885
289	7.04	34.084	1.75	-	-	-	133.9							
365	6.31	34.122	1.21	-	-	-	121.7							
438	6.34	34.279	.56	-	-	-	110.4							
504	5.84	34.285	.54	-	-	-	103.9							

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µgat/L	SiO_3-Si µgat/L	NO_2-N µgat/L	δ_T cl/ton
63.49-G	IV-15	1349	37°24.0'	122°26.5'	12	150°	7	cloudy	rough	0	11.73	33.270	6.80	0.88			266
										10	11.76	33.270	5.95	0.92			267
63.50-G	15	1307	37°23.5'	122°28.0'	16	150°	7	cloudy	rough	0	11.49	33.312	6.22	1.02			259
										10	11.52	33.312	6.21	1.06			260
										20	11.50	33.310	6.21	1.06			260
63.51-G	15	1206	37°21.5'	122°32.0'	35	150°	6	cloudy	rough	0	11.30	33.226	6.26	1.14			262
										10	11.33	33.224	6.29	1.11			263
										25	11.25	33.272	6.04	1.23			258
63.52-G	15	1030	37°19.0'	122°36.0'	45	150°	5	cloudy	very rough	0	11.60	33.248	6.42	0.81			266
										10	11.63	33.247	6.42	0.80			266
		1042								15	11.60	33.258	6.54	0.83			265
63.55-G	15	0814	37°13.0'	122°49.0'	155	150°	5	cloudy	very rough	0	11.96	33.193	6.59	0.65			276
										10	11.98	33.200	6.56	0.63			276
										20	11.85	33.211	6.46	0.70			273
63.60-G	15	0339	37°02.5'	123°11.0'	1370	150°	6	cloudy	very rough	0	11.99	33.076	6.48	0.55			285
										10	12.02	33.080	-	0.58			285
										20	12.02	33.073	6.47	0.57			286
63.65-G	15	0106	36°53.0'	123°33.5'	1930	160°	6	overcast	very rough	1	11.98	33.107	6.50	0.54			282
										10	12.00	33.107	6.42	0.54			283
										30	11.98	33.114	6.42	0.56			282
63.70-G	14	2223	36°42.5'	123°55.0'	2090	160°	6	cloudy	very rough	1	11.82	33.088	6.41	0.55			282
										10	11.78	33.098	6.46	0.62			280
										40	11.66	33.160	6.42	0.56			273
63.80-G	14	1714	36°23.0'	124°39.5'	2228	150°	5	cloudy	rough	1	11.78	33.091	6.37	0.50			280
										10	11.78	33.080	-	0.53			281
										54	11.40	33.119	6.20	0.67			272
67.47-G	13	1746	36°54.5'	121°53.0'	11	160°	2	cloudy	slight	0	12.11	33.071	6.88	0.66			288
										10	12.06	33.103	6.88	0.64			284

SIO
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DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µgat/L	SiO_3-Si µgat/L	NO_2-N µgat/L	δ_T cl/ton
67.48-G	IV-13	1839	36°53.0'	121°56.0'	25	210°	2	cloudy	slight	0	12.18	33.149	6.42	0.59			283
										10	11.98	33.164	-	0.59			278
										20	11.80	33.219	6.19	0.74			271
67.49-G	13	1940	36°51.0'	122°00.5'	46	200°	4	cloudy	slight	0	12.22	33.182	6.47	0.63			282
										10	12.17	33.177	6.45	0.62			281
										45	11.72	33.279	6.11	0.80			265
67.50-G	13	2049	36°49.5'	122°05.0'	58	200°	4	overcast	moderate	0	12.08	33.217	6.42	0.67			277
										10	12.04	33.219	6.38	0.69			276
										40	11.68	33.296	5.95	0.85			264
67.55-G	13	2355	36°39.0'	122°26.0'	1145	180°	3	cloudy	rough	0	12.09	32.897	6.53	0.49			300
										10	12.23	33.129	6.50	0.52			286
										50	11.38	33.446	5.42	1.04			247
67.60-G	14	0235	36°28.0'	122°47.5'	1570	200°	3	cloudy	rough	0	12.61	33.008	6.44	0.47			301
										10	12.18	32.999	6.43	0.48			294
										35	11.96	33.007	6.41	0.87			290
67.65-G	14	0520	36°19.0'	123°09.0'	1740	180°	4	cloudy	moderate	0	12.22	33.080	6.46	0.53			289
										10	11.90	33.086	6.54	0.58			283
										20	11.84	33.112	6.45	0.57			280
67.70-G	14	0757	36°06.0'	123°30.0'	1910	180°	4	cloudy	moderate	0	12.03	33.108	6.63	0.55			284
										10	12.04	33.108	6.56	0.53			284
										35	11.92	33.127	6.54	0.60			280
67.80-G	14	1245	35°48.5'	124°12.0'	2120	160°	5	cloudy	moderate	0	11.92	32.959	6.38	0.50			293
										10	11.94	32.960	6.57	0.50			293
										35	11.93	32.957	6.44	0.50			293

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
70.51-G	IV-13	0822	36°10.5'	121°46.0'	220	180°	3	drizzle	moderate	0	12.00	33.190	6.33	0.67			277
										10	11.59	33.264	6.00	0.85			264
										60	10.87	33.601	4.69	1.43			227
70.51-G	13	0925	36°11.5'	121°44.0'	90	080°	3	drizzle	slight	0	11.90	33.277	6.05	0.89			269
										10	11.72	33.286	6.00	0.94			265
70.52-G	13	0713	36°08.5'	121°50.0'	340	100°	4	cloudy	moderate	0	12.11	32.990	6.51	0.53			294
										10	12.12	33.007	6.50	0.54			293
										30	11.93	33.193	6.47	0.63			276
70.53-G	13	0607	36°06.5'	121°54.0'	550	140°	4	cloudy	rough	0	12.09	32.968	6.48	0.50			295
										10	12.03	32.971	6.50	0.50			294
										30	11.89	33.004	6.44	0.54			289
70.60-G	13	0235	35°54.5'	122°24.0'	1640	290°	3	cloudy	rough	0	12.50	32.966	6.40	0.44			303
										10	12.46	32.975	6.39	0.45			302
										55	11.94	33.538	5.50	0.97			250
70.65-G	12	2342	35°43.0'	122°45.5'	1080	320°	3	cloudy	high	0	12.10	32.889	6.58	0.42			301
										10	12.10	32.887	6.55	0.43			301
										50	12.00	33.180	6.42	0.58			278
70.70-G	12	2040	35°34.0'	123°08.5'	2014	300°	4	overcast	high	0	12.10	32.880	6.45	0.45			302
										10	12.14	32.877	6.50	0.45			303
										39	12.08	32.882	6.46	0.45			301
70.80-G	12	1417	35°13.5'	123°47.5'	2590	310°	6	cloudy	very rough	0	12.12	32.959a)	6.13	0.48			296
										10	12.14	32.922	6.36	0.47			299
										35	11.94	32.992	6.38	0.52			291
73.50-G	11	1232	35°38.0'	121°15.0'	22	020°	2	partly cloudy	slight	0	11.75	33.418	5.92	1.00			256
										10	11.84	33.435	5.95	0.97			257
										30	11.72	33.573	5.52	1.15			244
73.50-G	11	1325	35°37.0'	121°17.0'	60	330°	3	partly cloudy	moderate	0	11.68	33.390	5.90	0.97			257
										10	11.74	33.383	5.92	0.97			258
										25	11.76	33.418	5.79	1.01			256

a) Possible evaporation.

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
73.51-G	IV-11	1420	35°35.0'	121°21.0'	200	330°	4	partly cloudy	rough	0	11.64	33.348	5.96	0.97			259
										10	11.68	33.345	5.86	0.95			260
										30	11.72	33.372	5.88	0.96			259
73.53-G	11	1548	35°31.5'	121°28.5'	400	310°	3	partly cloudy	rough	1	11.71	33.345	6.00	0.88			261
										11	11.74	33.351	6.04	0.85			261
										51	11.80	33.465	5.91	0.94			253
73.60-G	11	1921	35°18.0'	121°57.5'	1392	310°	3	partly cloudy	very rough	0	12.59	33.023	6.54	0.46			300
										10	12.58	33.020	6.50	0.46			300
										50	12.66	33.414	6.42	0.49			273
73.65-G	11	2209	35°08.0'	122°19.5'	2000+	360°	5	partly cloudy	very rough	0	12.30	32.877	6.56	0.46			306
										10	12.30	32.876	6.50	0.44			306
										45	12.20	32.900	6.63	0.46			302
73.70-G	12	0113	34°58.0'	122°40.5'	2170	340°	5	cloudy	very rough	1	12.44	32.878	6.38	0.45			308
										10	12.48	32.883	6.35	0.49			308
										54	11.90	32.907	6.34	0.54			296
73.80-G	12	0555	34°39.0'	123°22.5'	2335	330°	5	partly cloudy	rough	0	11.74	32.791	6.46	0.49			302
										10	11.79	32.790	6.52	0.49			303
										30	11.78	32.788	6.50	0.49			303
77.48-G	11	0217	35°08.0'	120°43.5'	16	300°	5	partly cloudy	rough	0	12.5	33.531	6.18	0.76			261
										10	12.5	33.530	6.16	0.76			261
										20	12.42	33.534	6.11	0.76			260
77.48-G	11	0305	35°09.0'	120°42.0'	8	300°	3	partly cloudy	slight	0	12.60	33.471	6.21	0.54			267
										10	12.55	33.496	6.19	0.82			265
77.49-G	11	0110	35°06.5'	120°48.0'	33	320°	4	partly cloudy	very rough	0	12.48	33.524	6.25	0.68			261
										10	12.50	33.525	6.21	0.69			261
										39	12.44	33.589	5.89	0.75			256

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
77.51-G	IV-10	2335	35°02.0'	120°55.5'	80	300°	4	partly cloudy	very rough	0	12.62	33.575	6.25	0.63			260
										10	12.64	33.587	6.14	0.64			260
										25	12.50	33.572	6.05	0.61			258
77.55-G	10	2120	34°54.0'	121°12.5'	314	320°	4	partly cloudy	high	0	12.02	33.274	6.37	0.65			272
										10	12.01	33.277	6.34	0.66			271
										40	11.91	33.400	6.16	0.77			260
77.57-G	10	1928	34°50.5'	121°21.0'	234	320°	4	partly cloudy	high	1	12.16	33.089	6.41	0.53			287
										11	12.18	33.087	6.41	0.54			288
										45	12.18	33.468	5.88	0.76			260
77.60-G	10	1612	34°44.0'	121°33.5'	384	310°	5	cloudy	high	1	12.72	33.460	6.22	0.48			270
										11	12.76	33.463	-	0.51			270
										40	12.60	33.528	6.11	0.53			263
77.65-G	10	1220	34°34.0'	121°54.5'	2020	300°	6	cloudy	very rough	0	12.69	33.305	6.78	0.49			281
										10	12.72	33.308	6.26	0.47			281
										29	12.71	33.316	6.25	0.47			281
77.70-G	10	0923	34°24.0'	122°16.5'	2130	290°	5	cloudy	very rough	0	12.68	32.959	6.31	0.39			307
		0909								9	12.72	32.959	6.34	0.42			307
										43	12.71	32.960	6.29	0.39			307
77.80-G	10	0401	34°03.5'	122°57.0'	2270	310°	5	cloudy	high	0	12.53	32.861	6.28	0.43			311
										9	12.56	32.859	6.34	0.42			311
										48	12.56	32.859	6.29	0.42			311
80.50-G	9	0114	34°28.0'	120°29.5'	14	130°	2	cloudy	rough	0	13.42	33.426	6.65	0.38			286
										10	13.32	33.418	6.62	0.38			285
80.51-G	9	0214	34°26.5'	120°32.5'	54	280°	4	partly cloudy	very rough	0	13.31	33.465	6.33	0.42			281
										10	13.31	33.472	6.30	0.43			280
										50	13.12	33.505	6.12	0.47			274
80.52-G	9	0327	34°24.5'	120°36.5'	158	300°	4	clear	very rough	0	13.20	33.435	6.42	0.41			281
										10	13.22	33.436	6.44	0.41			281
										35	13.16	33.485	6.12	0.47			277

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
80.55-G	IV-9	0532	34°18.5'	120°47.5'	420	240°	3	clear	very rough	0	12.84	33.501a)	6.84	0.38			270
										10	12.87	33.495	6.76	0.39			271
										20	12.86	33.495	6.81	0.37			271
80.60-G	9	0824	34°09.0'	121°06.0'	1064	200°	3	clear	very rough	0	12.84	33.432	6.66	0.44			275
										10	12.90	33.434	6.62	0.43			276
										35	12.44	33.566	6.30	0.62			257
80.65-G	9	1144	33°59.5'	121°30.0'	1800	240°	4	overcast	rough	0	12.90	33.096	6.41	0.40			300
										10	12.91	33.097	6.40	0.41			300
										25	12.94	33.159	6.46	0.41			297
80.70-G	9	1445	33°48.0'	121°50.0'	1950	240°	4	overcast	very rough	0	12.99	33.228	6.25	0.41			292
										10	13.01	33.230	6.31	0.39			293
										20	13.08	33.329	6.26	0.41			287
80.80-G	9	1959	33°27.5'	122°32.0'	2184	200°	5	rain	very rough	0	12.66	33.106	6.48	0.39			295
										10	12.69	33.117	6.46	0.40			295
										25	12.72	33.382	6.45	0.43			276
82.47-G	8	2109	34°15.0'	119°58.5'	320	120°	4	rain	moderate	0	13.19	33.327	6.50	0.41			289
										10	13.22	33.335	6.57	0.39			289
										30	13.20	33.394	6.41	0.42			284
83.40-G	8	0453	34°13.5'	119°22.0'	12	130°	4	rain	slight	0	14.34	33.457	6.30	0.32			302
										10	14.05	33.459	6.38	0.31			296
										15	13.94	33.450	6.25	0.37			294
83.43-G	8	0259	34°07.5'	119°34.5'	130	170°	3	cloudy	slight	0	13.28	33.506	6.67	0.45			277
										10	13.16	33.506	6.95	0.37			275
										50	12.08	33.632	5.39	0.92			246
83.51-G	7	2234	33°52.0'	120°07.5'	60	180°	2	cloudy	slight	0	13.89	33.501	6.06	0.62			289
										10	12.92	33.496	6.06	0.62			271
										30	12.46	33.537	6.13	0.83			260

a) Possible evaporation.

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
83.55-G	IV-7	2001	33°44.0'	120°24.5'	450	230°	2	partly cloudy	moderate	0	13.42	33.559	5.99	0.57			277
										10	12.98	33.555	6.01	0.58			268
										40	12.42	33.606	5.33	0.88			254
83.65-G	7	1408	33°24.0'	121°05.5'	1906	340°	4	cloudy	moderate	0	13.00	32.980	6.34	0.42			311
										10	13.02	32.975	6.32	0.42			312
										35	12.75	32.982	6.42	0.43			306
83.70-G	7	1123	33°15.0'	121°25.5'	2030	330°	4	missing	moderate	0	13.00	32.980	6.46	0.40			311
										10	13.03	32.982	6.42	0.38			311
										40	12.94	32.967	6.45	0.41			310
83.80-G	7	0645	32°55.5'	122°07.0'	2226	340°	3	drizzle	moderate	0	12.74	33.006	6.41	0.42			304
										10	12.50	33.071	6.50	0.44			295
										35	12.87	33.256	6.42	0.42			288
87.32-G	5	0857	33°55.5'	118°27.5'	14	280°	4	overcast	slight	0	14.09	33.320	6.09	0.57			307
										10	14.15	33.339	6.00	0.58			306
										20	14.14	33.384	5.84	0.62			303
87.33-G	5	0944	33°54.0'	118°29.5'	28	290°	4	cloudy	slight	0	14.10	33.290	6.06	0.60			309
										10	14.12	33.296	6.05	0.63			309
										40	13.54	33.459	5.32	0.95			286
87.34-G	5	1035	33°52.5'	118°33.5'	39	280°	4	overcast	moderate	0	14.21	33.364	6.19	0.44			306
										10	14.22	33.366	6.17	0.41			306
										30	14.32	33.491	6.07	0.46			299
87.35-G	5	1130	33°50.0'	118°37.5'	286	290°	4	cloudy	moderate	0	14.38	33.421	6.32	0.28			305
										10	14.40	33.424	6.35	0.28			305
										20	14.40	33.424	6.38	0.27			305
87.40-G	5	1409	33°40.0'	118°58.0'	480	280°	4	cloudy	moderate	0	13.88	33.492	6.30	0.30			290
										10	13.90	33.495	6.31	0.28			290
										20	13.84	33.502	6.14	0.35			289

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
87.45-G	IV-5	1700	33°30.0'	119°19.0'	887	220°	3	cloudy	moderate	0	13.70	33.495	6.34	0.47			286
										10	13.71	33.499	6.28	0.45			286
										25	13.62	33.501	6.22	0.51			284
87.50-G	5	2001	33°20.0'	119°39.5'	40	210°	3	cloudy	rough	0	13.14	33.557	6.19	-			271
										10	13.00	33.551	6.04	0.52			269
										20	12.75	33.559	5.87	0.68			263
87.55-G	5	2244	33°10.0'	120°00.0'	840	250°	2	cloudy	rough	0	13.98	33.299	6.19	0.41			306
										10	13.60	33.304	6.21	0.41			298
										40	13.50	33.310	6.19	0.47			296
87.65-G	6	0536	32°48.0'	120°43.0'	2036	240°	1	clear	slight	0	13.31	32.993	6.26	0.39			316
										10	13.16	32.990	6.32	0.38			313
										30	12.94	33.006	6.34	0.41			308
87.70-G	6	0819	32°38.0'	121°04.0'	2002	230°	1	missing	slight	0	14.80	33.399	6.27	0.37			316
										10	14.70	33.393	6.06	0.37			314
										50	14.62	33.399	6.19	0.37			312
87.80-G	6	1241	32°19.5'	121°43.5'	2170	240°	3	missing	moderate	0	14.48	33.346	6.06	0.36			313
										10	14.49	33.339	6.07	0.38			313
										50	14.40	33.338	6.14	0.38			312
87.90-G	6	1649	32°00.0'	122°24.0'	2216	320°	2	rain	moderate	0	13.92	33.277	6.17	0.37			307
										10	13.92	33.276	6.24	0.38			307
										55	13.67	33.290	6.10	0.42			301
87.100-G	6	2129	31°40.0'	123°04.0'	2206	300°	4	partly cloudy	rough	0	14.45	33.295	6.22	0.38			316
										10	14.22	33.288	6.20	0.38			312
										50	14.08	33.288	6.23	0.36			309
90.28-G	5	0353	33°29.5'	117°44.5'	15	220°	2	cloudy	slight	0	14.92	33.421	6.22	0.34			316
										10	14.94	33.430	6.26	0.36			316
										20	14.91	33.427	6.12	0.38			316

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
90.65-G	IV-4	0500	32°16.0'	120°17.0'	2030	310°	4	missing	rough	0	14.82	33.388	5.99	0.34			317
										10	14.84	33.387	6.05	0.35			317
										35	14.74	33.411	6.05	0.36			313
93.27-G	III-31	1948	32°57.0'	117°17.0'	10	180°	4	drizzle	moderate	0	15.32	33.550	6.38	0.37			315
										10	15.23	33.558	6.33	0.39			313
93.27-G	31	2055	32°56.0'	117°19.0'	50	180°	4	rain	moderate	0	15.06	33.504	6.98	0.24			313
										10	15.08	33.520	6.91	0.19			313
										15	15.03	33.535	6.90	0.20			311
93.28-G	31	2244	32°55.0'	117°22.0'	280	140°	4	rain	moderate	0	15.26	33.527	6.47	0.34			315
										10	15.22	33.530	6.48	0.28			314
93.30-G	IV-1	0130	32°50.5'	117°31.0'	440	150°	5	rain	very rough	0	14.94	33.501	6.26	0.28			311
										10	14.97	33.504	6.22	0.28			311
93.35-G	1	0525	32°41.0'	117°52.5'	290	210°	4	overcast	moderate	0	15.22	33.529	6.08	0.33			314
										10	15.24	33.529	6.15	0.33			315
										20	15.22	33.53	6.15	0.36			314
93.45-G	1	1323	32°20.5'	118°33.0'	820	210°	5	partly cloudy	very rough	0	15.04	33.504	6.03	0.36			313
										10	15.07	33.504	6.03	0.34			313
										25	15.04	33.508	6.06	0.36			313
93.50-G	1	1856	32°09.5'	118°53.0'	832	240°	6	partly cloudy	high	0	14.84	33.47	6.12	0.33			311
										10	14.86	33.46	6.21	0.34			312
										29	14.79	33.47	6.21	0.34			310
93.55-G	1	2338	32°00.0'	119°13.0'	750	270°	5	partly cloudy	high	0	15.04	33.52	6.10	0.36			312
										10	15.07	33.505	6.09	0.36			313
										34	14.89	33.504	6.15	0.39			310
93.65-G	2	0634	31°40.0'	119°54.0'	1995	280°	3	partly cloudy	moderate	0	14.44	33.426	6.17	0.30			306
										10	14.48	33.421	6.08	0.34			307
										20	14.50	33.436	6.19	0.30			307

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DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
97.29-B	III-31	0220	32°19.5'	117°04.0'	7	270°	2	cloudy	moderate	10	12.84	33.534					267
97.29-B	31	0320	32°17.5'	117°04.5'	30	270°	2	missing	moderate	10	15.04	33.566					308
97.30-B	31	0350	32°16.0'	117°07.0'	33	240°	2	missing	slight	10	14.88	33.564					305
97.32-B	31	0535	32°12.0'	117°15.0'	620	280°	1	missing	slight	10	15.43	33.556					317
97.35-B	31	0755	32°05.0'	117°28.0'	620	200°	3	missing	moderate	10	15.20	33.529					314
97.40-B	31	1040	31°55.0'	117°50.0'	850	170°	4	missing	moderate	10	14.42	33.534					298
97.45-B	31	1420	31°46.0'	118°10.0'	500	160°	4	cloudy	moderate	10	15.05	33.473					315
97.50-B	31	1750	31°36.0'	118°30.5'	1200	160°	5	missing	rough	10	15.02	33.462					316
97.55-B	31	2100	31°25.5'	118°50.5'	500	230°	3	partly cloudy	very rough	10	14.58	33.466					306
97.60-B	IV-1	0015	31°15.5'	119°11.0'	1900	290°	4	partly cloudy	moderate	10	14.60	33.555					300
97.65-B	1	0325	31°05.0'	119°31.0'	2000	220°	4	cloudy	rough	10	14.82	33.536					306
97.70-B	1	0635	30°54.0'	119°50.0'	1950	200°	5	missing	rough	10	14.72	33.487					307
97.75-B	1	1000	30°42.5'	120°08.5'	2000	230°	6	missing	rough	10	14.43	33.436					305
97.80-B	1	1325	30°32.5'	120°26.0'	2000	230°	6	missing	rough	10	14.97	33.463					314
97.85-B	1	1725	30°20.0'	120°46.5'	2050	260°	6	partly cloudy	very rough	10	15.93	33.617					323
97.90-B	1	2035	30°14.5'	121°09.5'	2000	260°	5	partly cloudy	very rough	10	14.61	33.331					317
97.95-B	1	2350	30°06.5'	121°32.5'	2000	280°	5	partly cloudy	rough	10	14.96	33.375					320
97.101-B	2	0310	29°58.0'	121°56.5'	2250	300°	5	partly cloudy	rough	10	14.66	33.365					315
100.29-B	3	2115	31°42.0'	116°43.5'	70	210°	4	partly cloudy	moderate	10	15.22	33.475					318

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
100.30-B	IV-3	2005	31°41.0'	116°47.0'	250	240°	4	partly cloudy	rough	10	15.30	33.494					319
100.35-B	3	1720	31°30.5'	117°07.0'	620	210°	4	partly cloudy	rough	10	15.03	33.455					316
100.40-B	3	1440	31°19.0'	117°24.5'	1000	220°	5	cloudy	rough	10	15.40	33.535					318
100.45-B	3	1150	31°10.0'	117°46.5'	900	200°	4	missing	rough	10	15.36	33.534					317
100.50-B	3	0900	31°00.5'	118°08.5'	900	130°	4	missing	moderate	10	14.97	33.400					319
100.55-B	3	0605	30°52.5'	118°28.0'	1400	180°	4	missing	moderate	10	15.51	33.466					325
100.60-B	3	0325	30°44.0'	118°47.0'	1450	220°	3	partly cloudy	moderate	10	15.70	33.489					327
100.65-B	3	0035	30°32.5'	119°07.0'	1700	220°	4	cloudy	rough	10	14.63	33.484					306
100.70-B	2	2205	30°20.0'	119°26.5'	2000	230°	3	cloudy	moderate	10	14.71	33.445					310
100.75-B	2	1900	30°08.0'	119°46.0'	1950	280°	3	cloudy	very rough	10	14.86	33.420					315
100.80-B	2	1600	29°59.5'	120°04.5'	1950	290°	4	cloudy	rough	10	14.86	33.390					317
100.85-B	2	1305	29°50.0'	120°26.5'	1000	270°	4	missing	moderate	10	16.08	33.652					324
100.90-B	2	1000	29°41.0'	120°47.0'	2000	270°	4	missing	rough	10	15.16	33.419					321
103.29-B	4	0220	31°08.0'	116°19.0'	9	250°	4	cloudy	rough	10	14.95	33.504					311
103.29-B	4	0250	31°07.0'	116°21.0'	17	250°	4	cloudy	rough	10	15.06	33.527					312
103.30-B	4	0345	31°06.0'	116°24.5'	35	240°	4	missing	moderate	10	14.90	33.534					308
103.35-B	4	0645	30°56.0'	116°45.0'	850	260°	4	missing	rough	10	15.28	33.508					317
103.40-B	4	0930	30°46.0'	117°04.5'	1000	260°	4	missing	rough	10	15.40	33.479					322
103.45-B	4	1220	30°36.0'	117°24.0'	1200	260°	4	missing	moderate	10	15.60	33.490					325

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
103.50-B	IV-4	1505	30°25.0'	117°43.5'	1100	280°	3	partly cloudy	rough	10	15.40	33.460					323
103.55-B	4	1755	30°15.0'	118°03.5'	1200	270°	4	partly cloudy	rough	10	15.70	33.568					322
103.60-B	4	2045	30°07.0'	118°21.0'	1500	300°	5	partly cloudy	very rough	10	15.70	33.528					325
103.65-B	4	2350	29°58.0'	118°40.0'	1800	300°	5	partly cloudy	very rough	10	15.30	33.442					323
103.70-B	5	0307	29°49.0'	119°05.5'	1750	280°	5	partly cloudy	rough	10	15.08	33.429					319
103.75-B	5	0605	29°39.0'	119°25.5'	1250	320°	4	missing	rough	10	15.16	33.429					321
103.80-B	5	0900	29°27.5'	119°44.0'	2000	300°	4	missing	rough	10	15.12	33.441					319
103.85-B	5	1145	29°17.0'	120°05.0'	2000	300°	5	missing	very rough	10	15.80	33.668					317
103.90-B	5	1430	29°07.5'	120°26.0'	2100	320°	4	overcast	rough	10	15.52	33.479					324
107.30-B	7	0745	30°30.0'	116°03.5'	8	320°	4	missing	rough	10	14.87	33.534					307
107.31-B	7	0655	30°28.0'	116°07.0'	24	320°	4	missing	rough	10	14.33	33.548					295
107.32-B	7	0555	30°26.0'	116°11.0'	380	320°	4	missing	rough	10	14.91	33.552					307
107.35-B	7	0400	30°21.0'	116°22.0'	950	320°	4	missing	rough	10	15.66	33.537					323
107.40-B	7	0130	30°11.0'	116°39.5'	1500	320°	3	cloudy	rough	10	15.59	33.516					323
107.45-B	6	2230	30°00.5'	117°00.5'	1000	310°	3	partly cloudy	moderate	10	15.68	33.491					327
107.50-B	6	1945	29°51.0'	117°22.5'	1200	320°	2	cloudy	rough	10	15.74	33.495					328
107.55-B	6	1440	29°41.0'	117°43.5'	1750	320°	3	cloudy	rough	10	15.79	33.492					329
107.60-B	6	1345	29°31.5'	118°01.5'	1750	320°	2	missing	rough	10	15.85	33.652					319
107.65-B	6	1045	29°21.0'	118°21.0'	1600	320°	3	missing	moderate	10	15.81	33.533					327

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
107.70-B	IV-6	0735	29°11.5'	118°41.0'	1600	320°	2	missing	rough	10	15.96	33.527					330
107.75-B	6	0450	29°01.5'	119°00.5'	1950	320°	3	missing	rough	10	16.05	33.509					333
107.80-B	6	0145	28°52.0'	119°19.5'	2000	320°	3	cloudy	rough	10	15.82	33.597					322
107.85-B	5	2240	28°42.0'	119°39.5'	2000	320°	3	cloudy	rough	10	15.82	33.527					327
107.90-B	5	1940	28°31.5'	119°59.5'	2050	320°	3	partly cloudy	rough	10	15.90	33.577					325
110.32-B	10	1405	29°52.0'	115°48.0'	14	330°	5	cloudy	rough	10	14.19	33.561					291
110.35-B	10	1610	29°46.0'	116°00.0'	750	330°	6	partly cloudy	very rough	10	15.78	33.549					325
110.40-B	10	1905	29°38.0'	116°19.5'	1150	330°	6	partly cloudy	very rough	10	15.62	33.538					322
110.45-B	10	2200	29°27.0'	116°38.0'	800	320°	5	partly cloudy	very rough	10	15.68	33.525					325
110.50-B	11	0040	29°16.5'	116°58.0'	1800	330°	5	partly cloudy	very rough	10	15.90	33.521					329
110.55-B	11	0345	29°06.5'	117°19.5'	1900	330°	5	partly cloudy	very rough	10	15.99	33.534					330
110.60-B	11	0632	28°57.5'	117°41.5'	1850	330°	5	partly cloudy	rough	10	16.18	33.664					325
110.65-B	11	0905	28°46.0'	117°58.0'	2000	320°	4	missing	rough	10	16.12	33.680					323
110.70-B	11	1150	28°36.5'	118°18.0'	1900	320°	4	missing	rough	10	16.02	33.617					325
110.75-B	11	1445	28°26.0'	118°36.5'	2100	320°	4	partly cloudy	rough	10	16.30	33.730					323
110.80-B	11	1725	28°17.0'	118°56.5'	2050	270°	4	partly cloudy	very rough	10	16.58	33.699					332
110.85-B	11	2010	28°06.5'	119°16.0'	2050	270°	5	partly cloudy	very rough	10	16.68	33.751					330
110.90-B	11	2215	27°56.5'	119°35.0'	2000	350°	4	missing	rough	10	16.30	33.702					325
113.28-B	13	1510	29°25.0'	115°11.5'	9	300°	3	partly cloudy	moderate	10	12.52	33.914					233

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DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
113.29-B	IV-13	1435	29°24.0'	115°13.0'	14	300°	3	partly cloudy	moderate	10	13.40	33.710					265
113.30-B	13	1335	29°22.0'	115°18.0'	34	300°	5	cloudy	rough	10	13.88a)	33.631					280
113.35-B	13	1055	29°11.5'	115°38.0'	650	340°	5	missing	rough	10	16.30	33.827					316
113.40-B	13	0755	29°02.0'	115°57.0'	900	330°	5	cloudy	rough	10	16.16	33.723					321
113.45-B	13	0500	28°52.0'	116°18.0'	1100	330°	5	partly cloudy	rough	10	16.18	33.691					323
113.50-B	13	0145	28°42.0'	116°40.0'	1900	340°	5	partly cloudy	rough	10	16.45	33.766					323
113.55-B	12	2305	28°31.5'	116°57.0'	1800	340°	4	partly cloudy	rough	10	16.58	33.813					323
113.60-B	12	2035	28°22.0'	117°16.5'	1900	320°	5	partly cloudy	rough	10	16.46	33.680					330
113.65-B	12	1750	28°12.0'	117°33.0'	1900	330°	5	partly cloudy	rough	10	16.38	33.686					328
113.70-B	12	1510	28°03.5'	117°53.0'	2000	330°	5	partly cloudy	very rough	10	16.58	33.724					330
113.75-B	12	1240	27°55.5'	118°09.5'	1800	320°	5	missing	very rough	10	16.80	33.935					319
113.80-B	12	0935	27°47.0'	118°30.0'	2000	320°	4	missing	very rough	10	16.84	33.945					319
113.85-B	12	0625	27°35.0'	118°50.5'	2050	330°	6	missing	very rough	10	17.52	34.150					319
113.90-B	12	0125	27°23.0'	119°11.0'	2100	330°	5	missing	very rough	10	17.45	34.103					321
117.25-B	13	1940	28°58.5'	114°36.5'	9	290°	3	partly cloudy	moderate	10	13.28	33.742					260
117.25-B	13	2022	28°58.0'	114°37.0'	28	280°	4	partly cloudy	moderate	10	14.26	33.726					280
117.26-B	13	2120	28°56.0'	114°41.5'	40	280°	4	partly cloudy	moderate	10	15.23	33.722					300

a) Alternate value, 13.76°C; 278 cl/ton.

DATA AT NET TOW STATIONS																	
Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
117.30-B	IV-14	0000	28°48.0'	114°56.5'	53	280°	6	clear	very rough	10	15.02	33.722					296
117.35-B	14	0235	28°38.0'	115°16.0'	105	300°	5	clear	very rough	10	14.90	33.721					294
117.40-B	14	0740	28°28.0'	115°35.5'	500	320°	4	partly cloudy	moderate	10	16.06	33.723					318
117.45-B	14	1020	28°18.0'	115°56.0'	2000	320°	3	partly cloudy	moderate	10	16.08	33.718					319
117.50-B	14	1300	28°08.0'	116°15.0'	2500	280°	2	partly cloudy	moderate	10	16.15	33.757					318
117.55-B	14	1530	27°58.0'	116°39.0'	1800	300°	3	partly cloudy	rough	10	16.17	33.733					320
117.60-B	14	1755	27°48.5'	116°55.5'	1950	320°	3	partly cloudy	rough	10	16.20	33.627					328
117.65-B	14	2025	27°37.0'	117°11.0'	1900	360°	3	partly cloudy	moderate	10	16.74	33.872					322
117.70-B	14	2315	27°28.0'	117°32.5'	2000	360°	3	partly cloudy	slight	10	16.89	33.896					324
117.75-B	15	0215	27°19.0'	117°54.0'	2100	300°	3	partly cloudy	rough	10	16.88	33.891					324
117.80-B	15	0440	27°10.5'	118°12.0'	2200	320°	3	partly cloudy	rough	10	17.64	34.065					329
117.85-B	15	0645	26°59.0'	118°33.0'	2150	320°	2	cloudy	moderate	10	18.04	34.194					329
117.90-B	15	0925	26°48.0'	118°53.0'	2000	360°	4	cloudy	moderate	10	17.18	33.870					332
118.39-B	14	0530	28°18.5'	115°23.5'	127	320°	3	clear	rough	10	15.58	33.684					311
119.33-B	16	2150	28°19.0'	114°53.0'	66	310°	6	clear	high	10	16.22	33.784					317
120.22-B	17	0245	28°28.0'	114°04.0'	9	300°	3	clear	moderate	10	15.93	33.733					314
120.23-B	17	0325	28°27.0'	114°06.5'	14	300°	3	clear	moderate	10	15.78	33.726					312
120.24-B	17	0405	28°25.0'	114°10.5'	18	320°	3	clear	rough	10	15.62	33.719					309
120.25-B	17	0500	28°22.5'	114°15.0'	30	320°	4	clear	rough	10	15.69	33.728					310

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δT cl/ton
120.30-B	IV-17	0725	28°13.0'	114°34.0'	50	320°	4	clear	rough	10	15.08	33.624					305
120.35-B	16	1900	28°03.0'	114°54.0'	47	350°	6	partly cloudy	high	10	15.18	33.688					302
120.40-B	16	1620	27°56.5'	115°14.0'	21	360°	7	partly cloudy	high	10	15.06	33.688					300
120.45-B	16	1318	27°43.0'	115°33.0'	1300	340°	5	missing	high	10	16.04	33.666					322
120.50-B	16	1030	27°32.0'	115°50.0'	2200	340°	6	missing	high	10	16.08	33.696					321
120.55-B	16	0725	27°22.0'	116°09.5'	2000	360°	6	missing	high	10	16.10	33.664					323
120.60-B	16	0415	27°15.0'	116°30.0'	1800	360°	6	missing	high	10	16.18	33.654					326
120.65-B	16	0100	27°04.0'	116°52.0'	2050	360°	6	partly cloudy	very rough	10	16.85	33.834					327
120.70-B	15	2155	26°53.0'	117°10.0'	2000	340°	5	cloudy	rough	10	16.88	33.798					331
120.75-B	15	1915	26°46.0'	117°28.5'	2050	360°	5	cloudy	rough	10	16.90	33.825					329
120.80-B	15	1310	26°32.0'	117°49.5'	2150	360°	6	partly cloudy	rough	10	16.90	33.859					327
123.35-B	17	1540	27°24.0'	114°32.0'	10	360°	1	clear	slight	10	13.18	34.040					236
123.36-B	17	1625	27°26.0'	114°36.0'	25	var.	1	clear	moderate	10	12.87	34.007					233
123.37-B	17	1720	27°24.0'	114°40.0'	39	280°	1	clear	moderate	10	12.90	33.993					235
123.42-B	17	2000	27°13.5'	114°59.0'	800	150°	2	partly cloudy	moderate	10	15.74	33.606					320
123.45-B	17	2120	27°09.0'	115°08.0'	2200	360°	1	partly cloudy	moderate	10	15.83	33.606					322
123.50-B	18	0035	26°58.0'	115°30.5'	2000	300°	3	partly cloudy	rough	10	17.17	33.932					327
123.55-B	18	0315	26°48.5'	115°49.5'	2000	320°	4	overcast	rough	10	18.18	34.137					336
123.60-B	18	0545	26°39.0'	116°09.5'	2050	330°	4	missing	rough	10	17.60	34.107					325

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
123.65-B	IV-18	0825	26°29.0'	116°27.5'	2050	330°	4	missing	rough	10	17.30	33.948					329
123.70-B	18	1100	26°18.0'	116°46.5'	2200	360°	4	cloudy	rough	10	17.78	34.059					332
123.75-B	18	1325	26°08.5'	117°04.5'	2100	340°	5	cloudy	rough	10	17.38	33.857					338
123.80-B	18	1610	25°58.5'	117°23.0'	2200	360°	4	partly cloudy	rough	10	17.46	33.902					336
127.33-B	19	1905	26°57.5'	114°02.0'	36	300°	2	clear	moderate	10	14.47	33.888					273
127.33-B	19	1945	26°58.5'	114°00.5'	10	280°	4	clear	moderate	10	13.68	34.104					241
127.34-B	19	1810	26°55.0'	114°06.5'	41	340°	3	clear	moderate	10	15.82	33.792					308
127.40-B	19	1525	26°44.5'	114°26.5'	1300	var.	3	partly cloudy	moderate	10	16.28	33.814					317
127.45-B	19	1235	26°34.0'	114°47.0'	1800	320°	3	missing	moderate	10	17.38	33.957					331
127.50-B	19	0940	26°23.5'	115°08.0'	1800	340°	4	missing	rough	10	17.92	34.080					334
127.55-B	19	0645	26°13.5'	115°27.0'	1900	360°	4	missing	rough	10	18.40	34.185					338
127.60-B	19	0350	26°06.0'	115°47.5'	2000	340°	5	missing	very rough	10	18.55	34.198					341
127.65-B	19	0055	25°55.0'	116°06.0'	2000	360°	4	clear	rough	10	18.64	34.228					340
127.70-B	18	2225	25°45.5'	116°21.5'	2000	360°	4	partly cloudy	moderate	10	18.48	34.206					338
130.25-B	20	0635	26°38.0'	113°11.0'	10	360°	4	missing	slight	10	15.27	34.097					274
130.26-B	20	0708	26°37.0'	113°13.0'	16	360°	4	missing	slight	10	15.22	34.037					277
130.28-B	20	0830	26°33.0'	113°21.0'	30	350°	2	missing	moderate	10	16.08	34.127					290
130.30-B	20	0950	26°29.0'	113°29.0'	42	350°	2	missing	moderate	10	14.74	34.053					266
130.35-B	20	1235	26°19.0'	113°48.0'	250	300°	3	missing	moderate	10	16.66	33.819					324

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton
130.40-B	IV-20	1508	26°10.0'	114°08.5'	1100	320°	4	clear	rough	10	16.40	33.794					321
130.45-B	20	1758	25°58.5'	114°25.0'	2100	320°	5	clear	rough	10	18.36	34.199					336
130.50-B	20	2040	25°48.5'	114°46.5'	2000	320°	5	clear	moderate	10	18.36	34.178					337
130.55-B	20	2320	25°39.0'	115°04.5'	2000	320°	4	clear	rough	10	18.54	34.249					336
130.60-B	21	0200	25°29.0'	115°23.5'	2050	320°	3	clear	moderate	10	18.95	34.259					345
130.65-B	21	0430	25°19.5'	115°43.0'	2050	320°	5	missing	rough	10	18.69	34.033					356
130.70-B	21	0652	25°11.0'	115°59.0'	1950	330°	5	missing	rough	10	18.65	34.159					345
133.19-B	22	1715	26°13.5'	112°26.0'	8	var.	1	fog	calm	10	14.95	34.169					262
133.21-B	22	1610	26°12.5'	112°32.5'	25	var.	1	fog	smooth	10	14.80	34.100					264
133.23-B	22	1500	26°08.5'	112°40.0'	40	040°	1	fog	moderate	10	16.62	33.988					311
133.25-B	22	1335	26°02.5'	112°47.0'	45	040°	2	fog	moderate	10	15.08	33.788					293
133.30-B	22	1035	25°51.5'	113°07.0'	63	270°	1	missing	slight	10	17.08	33.752					339
133.35-B	22	0742	25°42.5'	113°26.5'	260	320°	2	missing	moderate	10	17.37	33.772					344
133.40-B	22	0500	25°34.5'	113°45.5'	1800	330°	4	missing	rough	10	18.88	34.272					343
133.45-B	22	0205	25°25.0'	114°06.5'	2000	330°	4	clear	rough	10	18.86	34.232					345
133.50-B	21	2310	25°14.5'	114°23.0'	1900	340°	4	clear	rough	10	17.17	33.870					332
133.55-B	21	2020	25°04.0'	114°43.0'	2000	320°	3	clear	moderate	10	17.76	33.947					340
133.60-B	21	1730	24°55.0'	115°01.0'	1950	330°	3	clear	rough	10	17.94	33.984					341
133.65-B	21	1442	24°46.0'	115°20.5'	2000	330°	4	clear	rough	10	18.12	34.072					339

DATA AT NET TOW STATIONS

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µgat/L	SiO_3-Si µgat/L	NO_2-N µgat/L	δ_T cl/ton
133.70-B	IV-21	1145	24°35.0'	115°38.5'	2000	340°	5	missing	rough	10	18.77	34.090					353
137.20-B	22	2122	25°40.0'	112°07.0'	10	270°	3	light fog	smooth	10	15.42	34.051					281
137.21-B	22	2200	25°38.0'	112°11.0'	14	270°	4	fog	slight	10	15.42	34.027					282
137.22-B	22	2255	25°36.0'	112°15.0'	34	270°	4	fog	slight	10	15.54	33.995					287
137.23-B	22	2350	25°34.0'	112°19.0'	40	300°	3	fog	moderate	10	15.25	33.951					284
137.30-B	23	0320	25°20.0'	112°46.0'	185	320°	3	partly cloudy	moderate	10	18.52	34.077					348
137.35-B	23	0558	25°10.0'	113°04.5'	650	330°	4	missing	rough	10	18.02	34.082					336
137.40-B	23	0834	25°00.0'	113°23.5'	1800	320°	5	missing	moderate	10	18.42	34.088					345
137.45-B	23	1115	24°50.0'	113°42.5'	1700	320°	5	missing	rough	10	18.88	34.190					349
137.50-B	23	1450	24°38.0'	114°02.5'	2000	320°	5	overcast	very rough	10	18.74	34.161					348
137.55-B	23	1810	24°29.5'	114°22.0'	1900	330°	5	cloudy	very rough	10	18.94	34.217					348
137.60-B	23	2040	24°21.0'	114°40.0'	2000	340°	4	cloudy	very rough	10	18.14	33.891					353
137.65-B	23	2323	24°10.5'	114°58.0'	2000	340°	5	cloudy	rough	10	19.26	34.189					358
137.70-B	24	0202	23°59.5'	115°17.5'	2100	330°	5	partly cloudy	rough	10	19.42	34.247					358