CORRECTIONS MADE:
STATION POSITIONS #5

UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA
CCOFI CRUISE 5406
(MLR 61)
2-23 June 1954

SIO Reference 59-16
1 March 1958

UNIVERSITY OF CALIFORNIA

SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5406

(MLR 61)

2-23 June 1954

Sponsored by

Marine Research Committee

SIO Reference 59-16
1 March 1959

Approved for distribution:

Roger Revelle

Roger Revelle, Director

CONTENTS

FIGURES

INTRODUCTION

The data presented in this report were collected on the sixty-first consecutive cruise of the California Cooperative Oceanic Fisheries Investigations program. The R/V Crest and the R/V Horizon of the Scripps Institution participated in this cruise.

The data are tabulated at observed depths, and the interpolated and computed values are tabulated at standard depths. They are accompanied by charts of horizontal distribution. The presentation of data in this report does not constitute publication, and the interpretations herein may be subject to modification as the program continues.

STANDARD PROCEDURES

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. Extrapolated values and values interpolated between remote observations are entered within parentheses. A hyphen is used to indicate a missing observed value. The time is the time of messenger release. When more than one cast was made on a station, each messenger time and wire angle is given in the order of increasing depth. A line is left blank between the observed data of each cast.

FOOTNOTES

Standard footnotes which appear frequently are "loose bottle cap" and "possible evaporation." To avoid any confusion as to their meaning the following explanation is included.

Laboratory personnel, before titrating the salinity samples, 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 of 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, three special notations are used without footnotes because their meaning is always the same.

To indicate a premature or a delayed reversal of the water-sampling device which results in certain depth and property errors, the following notation is used.

p: pretrip or posttrip.

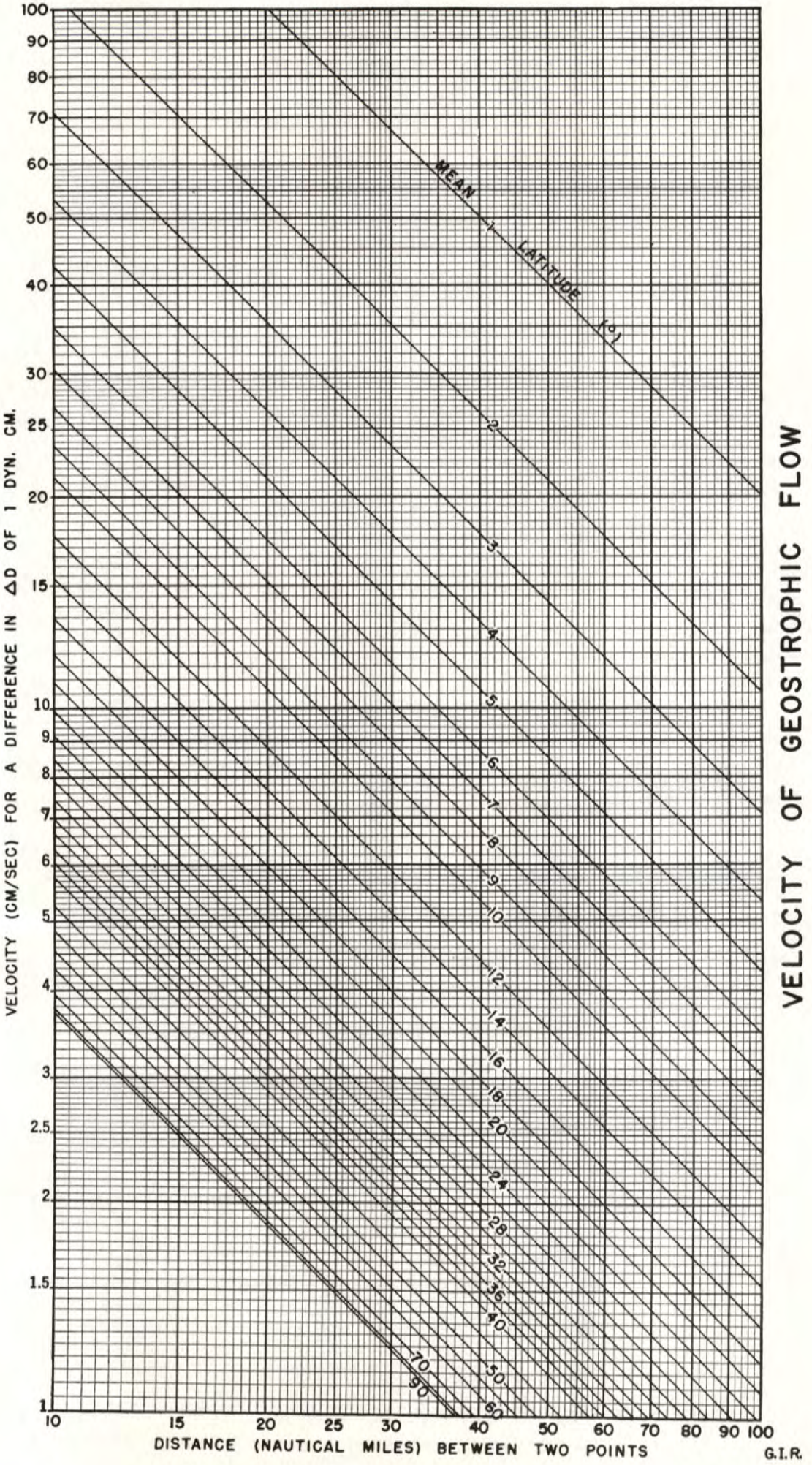
Values which are not drawn through because they seem to be in error without apparent reason are indicated by one of the following notations.

r: rejected value (value seems to be definitely wrong),

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

FORMAT

These data are typed in the format of the University of California Press publication, "Oceanic Observations of the Pacific." So that these pages can be used as copy for the 1954 volume, the first page of the Cruise 5406 data is numbered 169.


VELOCITY OF GEOSTROPHIC FLOW
VELOCITY (CM/SEC) FOR A DIFFERENCE IN ΔD OF 1 DYN. CM.
DISTANCE (NAUTICAL MILES) BETWEEN TWO POINTS
MEAN LATITUDE (°)
100
90
80
70
60
50
40
30
25
20
15
10
9
8
7
6
5
4
3
2.5
2
1.5
1
10
15
20
25
30
40
50
60
70
80
90
100
1
2
3
4
5
6
7
8
9
10
12
14
16
18
20
24
28
32
36
40
50
60
70
90
G.I.R.

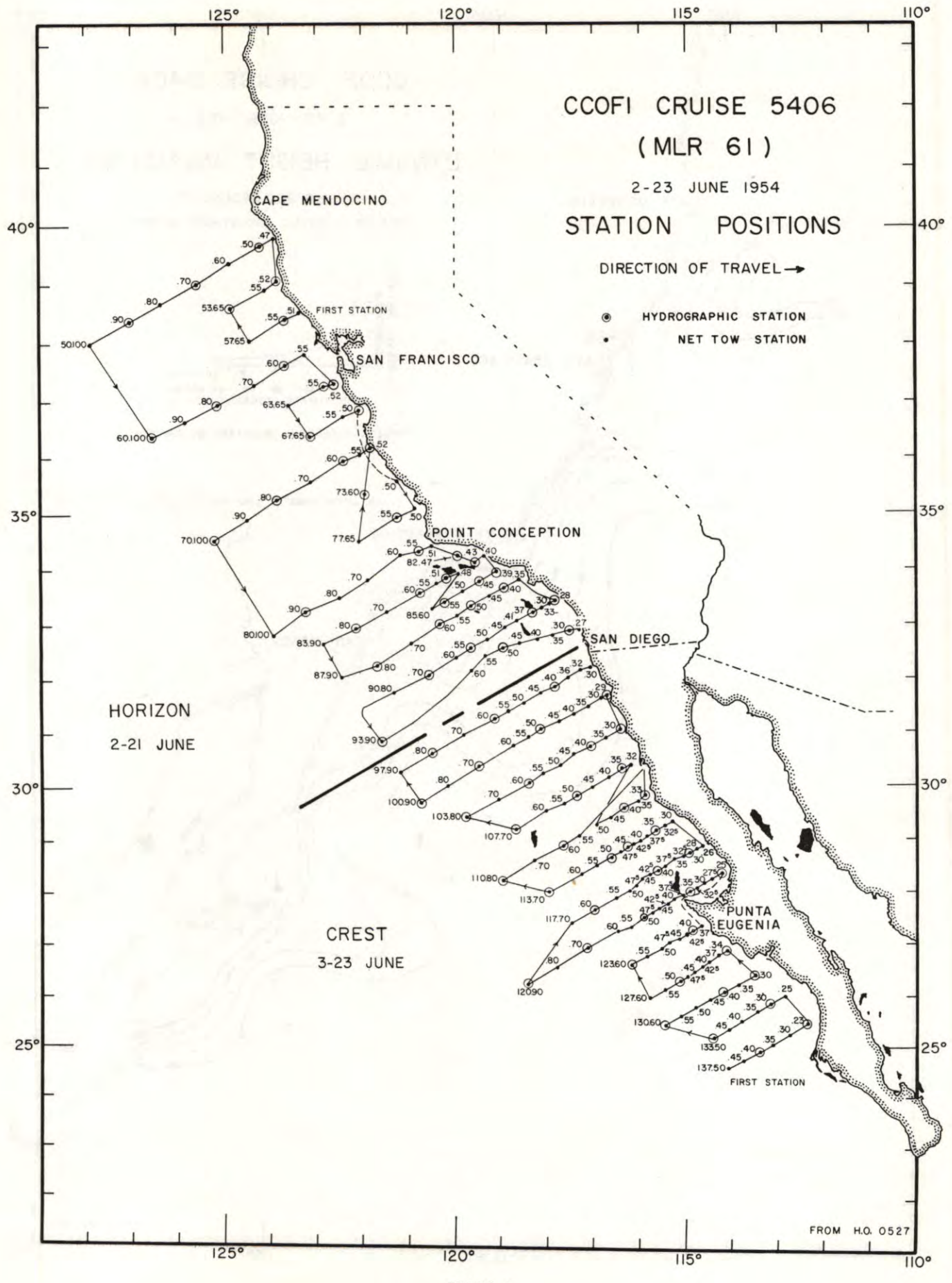

CCOFI CRUISE 5406
(MLR 61)
2-23 JUNE 1954
STATION POSITIONS
DIRECTION OF TRAVEL →
HYDROGRAPHIC STATION
NET TOW STATION
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
FIRST STATION
FIRST STATION
HORIZON
2-21 JUNE
CREST
3-23 JUNE
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°

FIGURE 1

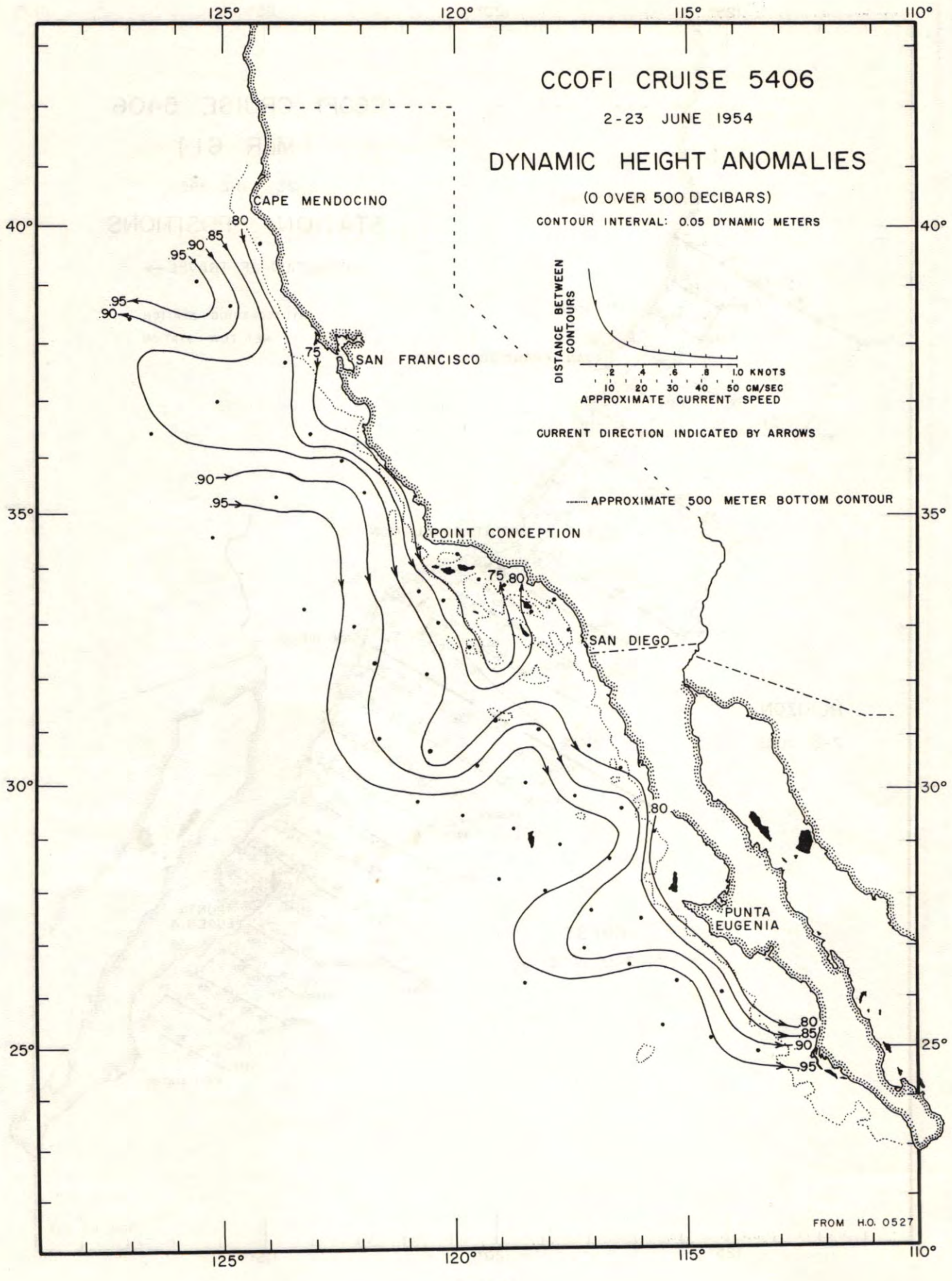

CCOFI CRUISE 5406
2-23 JUNE 1954
DYNAMIC HEIGHT ANOMALIES
(0 OVER 500 DECIBARS)
CONTOUR INTERVAL: 0.05 DYNAMIC METERS
DISTANCE BETWEEN CONTOURS
.2 .4 .6 .8 1.0 KNOTS
10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CURRENT DIRECTION INDICATED BY ARROWS
APPROXIMATE 500 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
.80
.85
.90
.95
.75
FROM H.O. 0527

FIGURE 2

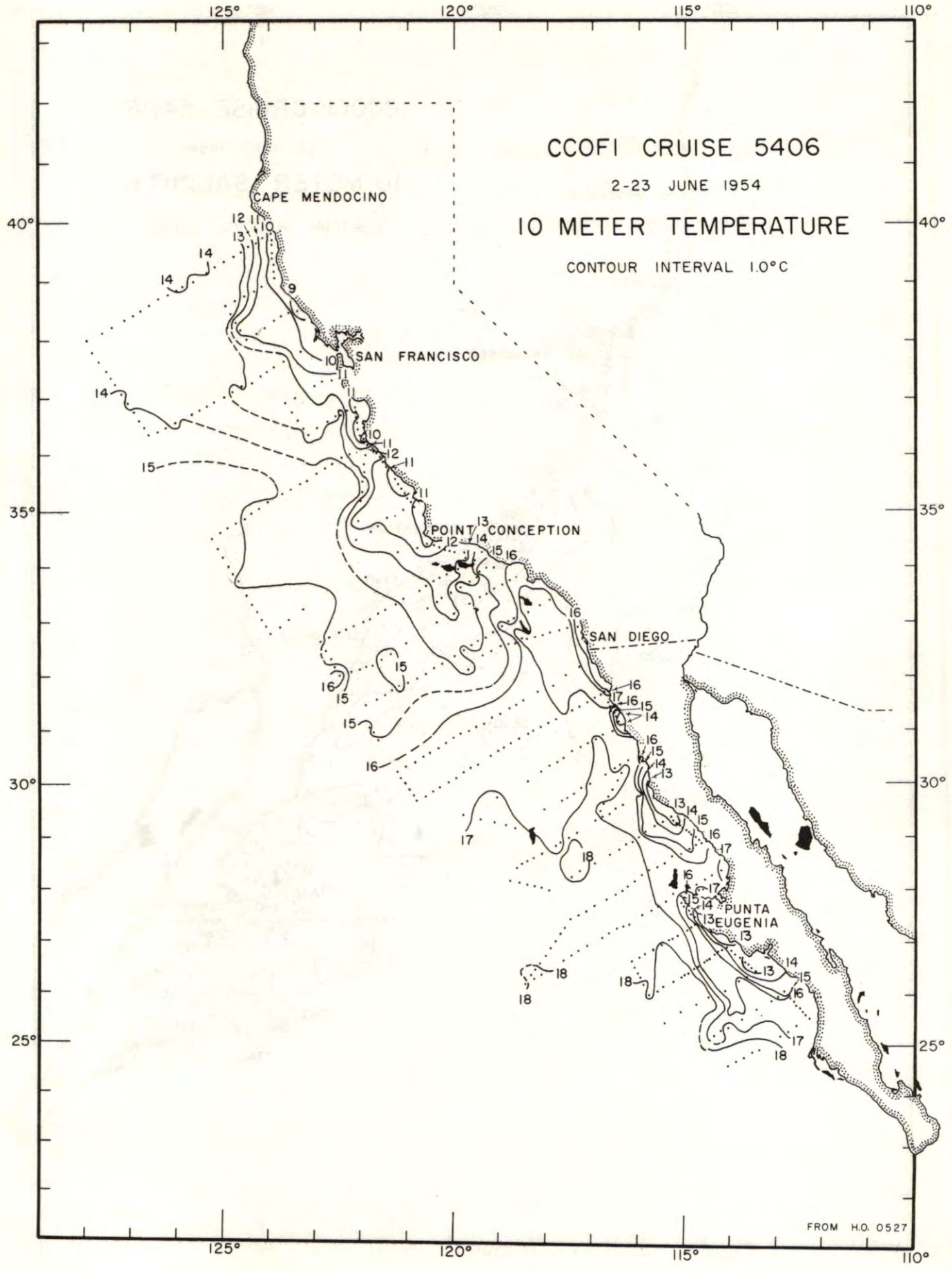

CCOFI CRUISE 5406
2-23 JUNE 1954
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°

FIGURE 3

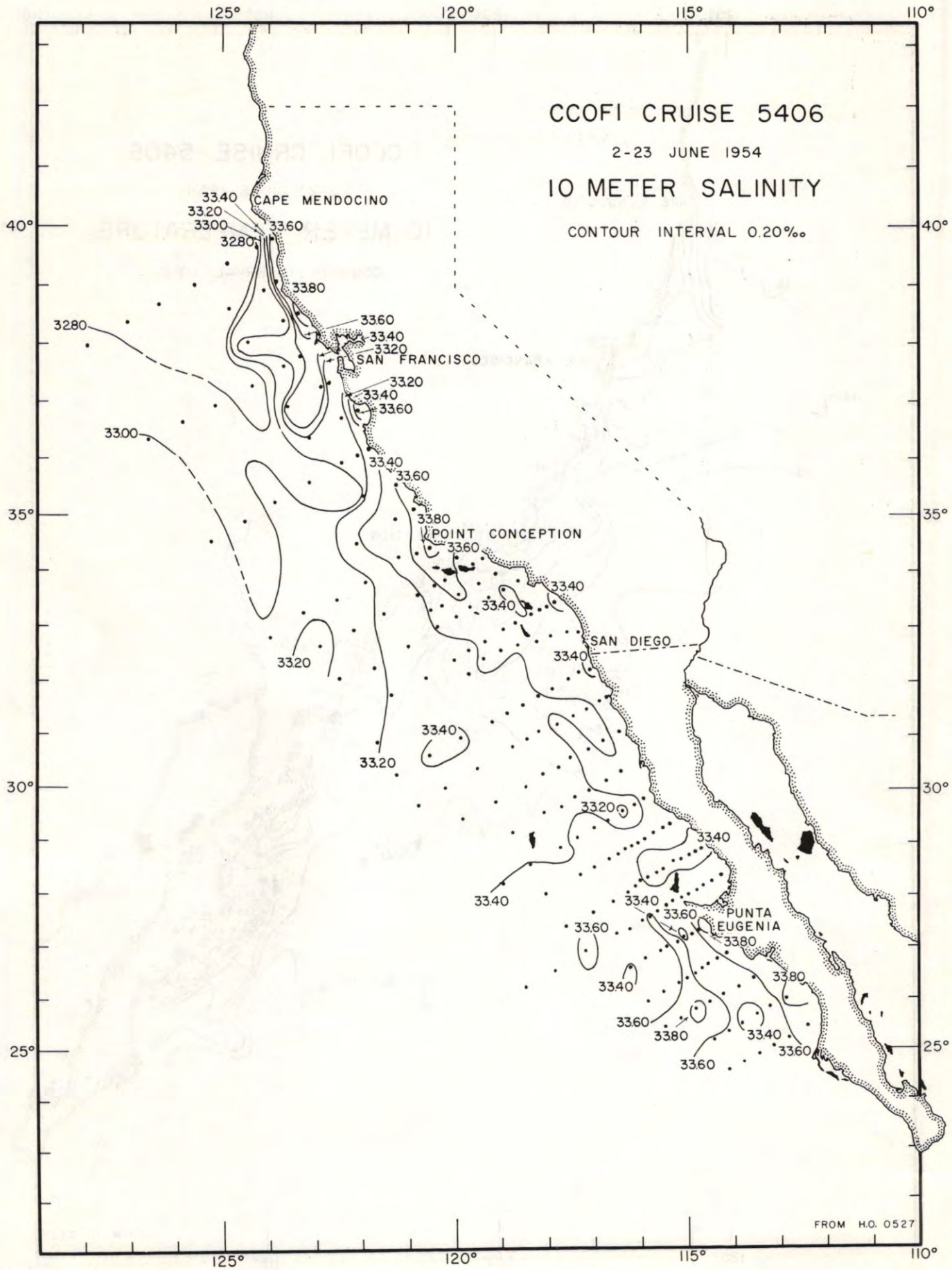

CCOFI CRUISE 5406
2-23 JUNE 1954
10 METER SALINITY
CONTOUR INTERVAL 0.20‰
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°

FIGURE 4

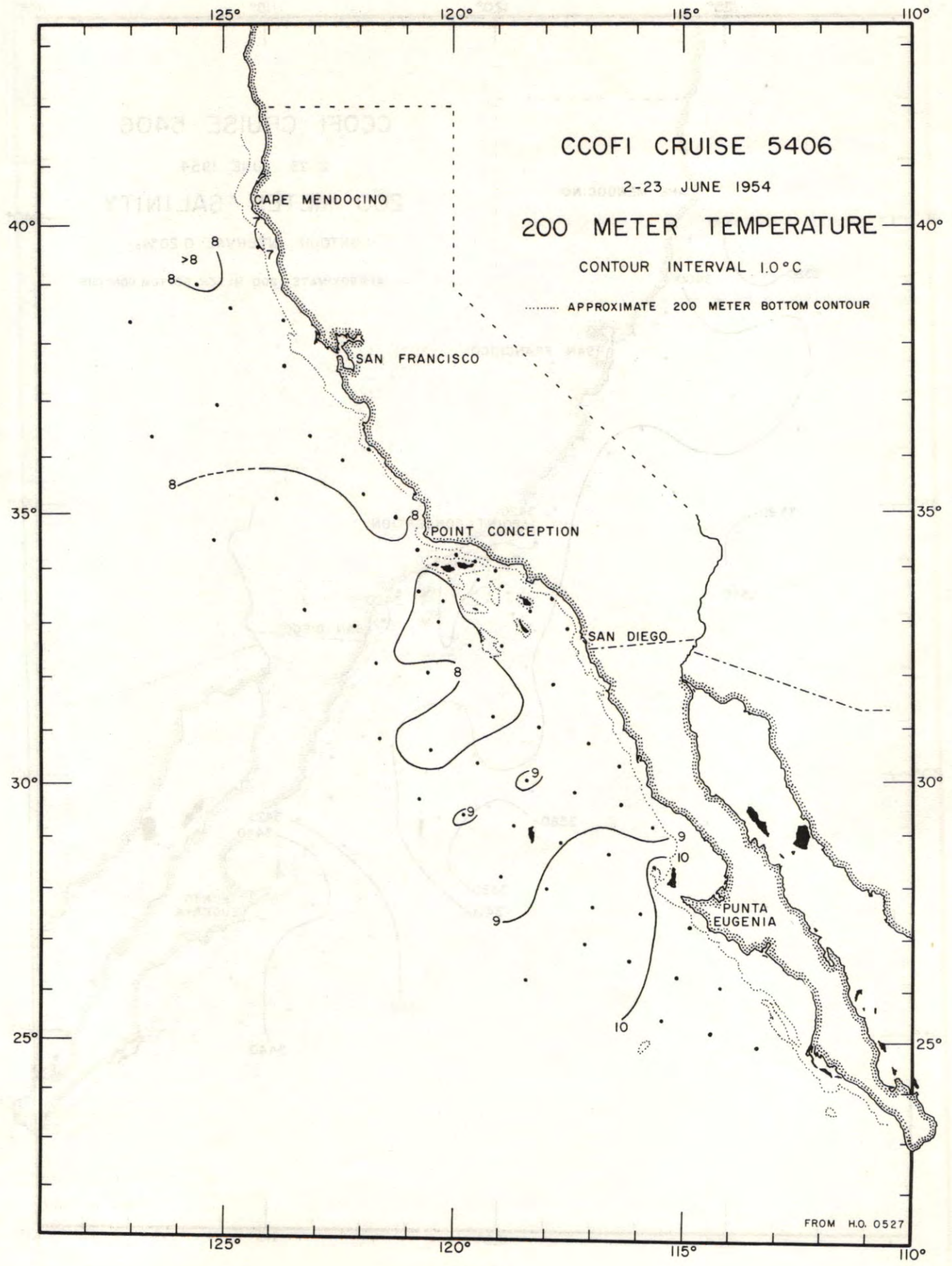

CCOFI CRUISE 5406
2-23 JUNE 1954
200 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°
>8
8
7
9
10

FIGURE 5

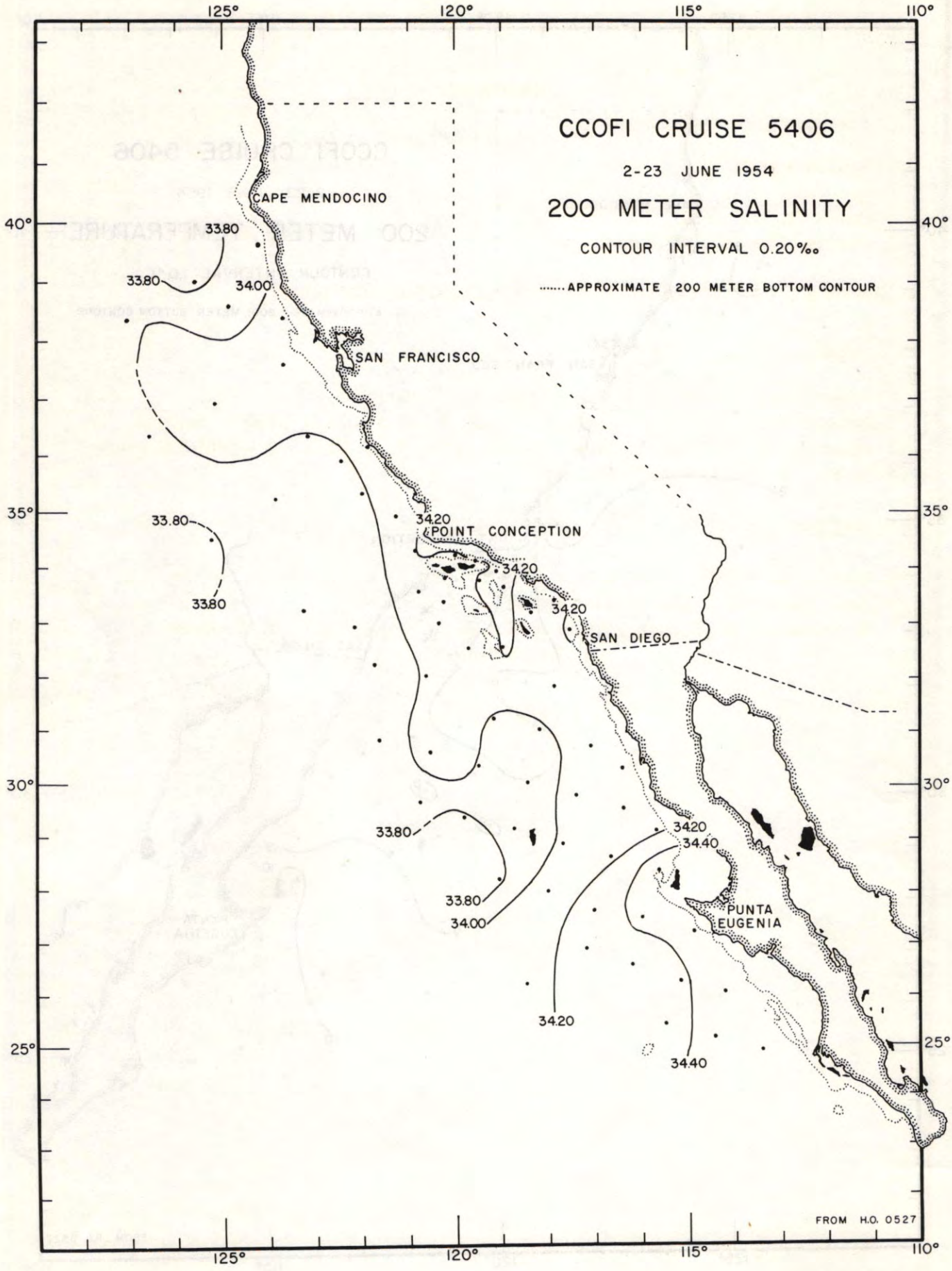

CCOFI CRUISE 5406
2-23 JUNE 1954
200 METER SALINITY
CONTOUR INTERVAL 0.20‰
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
33.80
34.00
34.20
34.40
125°
120°
115°
110°
40°
35°
30°
25°
FROM H.O. 0527

FIGURE 6

PERSONNEL

SHIPS' CAPTAINS

Davis, Laurence E., R/V Crest
Ferris, Noel L., R/V Horizon

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

R/V Crest

Schwartzlose, Richard A., Senior Marine Technician
Böhlke, J., Fishery Research Biologist, U. S. Fish and Wildlife Service
Kramer, David, Fishery Research Biologist, U. S. Fish and Wildlife Service
Willis, R. S., Marine Technician

R/V Horizon

Gilkey, Robert W., Senior Marine Technician
Linn, Robert J., Marine Technician
Livingstone, R. L., Jr., Fishery Research Biologist, U. S. Fish and Wildlife Service

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HORIZON; June 5, 1954; 1837 GCT; 39°38.5'N, 124°11.5'W; sounding, 675 fm; wind, 300°, force 2; weather, partly cloudy; sea, rough; wire angle, 15°. 50.50

0	12.41	32.64	0	12.41	32.64	24.70	325	0.00
10	10.47	32.73	10	10.47	32.73	25.12	285	0.03
25	10.34	32.99	20	10.37	32.97	25.33	265	0.06
50	9.14	33.07	30	10.01	33.00	25.41	258	0.08
60	8.86	33.26	50	9.14	33.07	25.61	239	0.13
70	8.61	33.29	75	8.58	33.29	25.87	214	0.19
80	8.52	33.30	100	7.94	33.70	26.28	175	0.24
99	7.96	33.69	150	7.49	33.91	26.51	153	0.32
122	7.82	33.81	200	6.93	33.96	26.63	142	0.40
150	7.49	33.91	250	6.44	33.99	26.72	133	0.47
196	6.96	33.96	300	6.07	34.03	26.80	126	0.54
260	6.37	34.00	400	5.73	34.15	26.94	112	0.66
359	5.82	34.09	500	5.46	34.26	27.06	101	0.77
480	5.54	34.25	600	5.07	34.30	27.13	94	0.88
656	4.84	34.33	700	4.68	34.35	27.22	86	0.97
873	4.04	34.42	800	4.30	34.39	27.29	79	1.06
1183	3.35	34.51	1000	3.73	34.46	27.41	68	1.22

HORIZON; June 6, 1954; 0343 GCT; 39°00.5'N, 125°34'W; sounding, 2100 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 12°. 50.70

0	13.82	32.91	0	13.82	32.91	24.63	332	0.00
10	13.75	32.87	10	13.75	32.87	24.62	333	0.03
25	13.48	32.85	20	13.52	32.85	24.65	330	0.07
55	13.24	32.87	30	13.44	32.85	24.66	329	0.10
65	13.20	32.86	50	13.26	32.87	24.71	324	0.16
75	13.16	32.89	75	13.16	32.89	24.75	320	0.25
90	11.91	32.82	100	11.38	32.83	25.04	293	0.32
110	11.07	32.92	150	9.28	33.30	25.76	224	0.45
134	9.62	33.15	200	8.20	33.72	26.26	177	0.56
164	9.04	33.42	250	7.34	33.89	26.52	152	0.64
217	7.90	33.82	300	6.73	33.96	26.66	139	0.71
296	6.78	33.95	400	6.12	34.13	26.87	119	0.85
404	6.10	34.13	500	5.26	34.14	26.99	108	0.97
547	4.78	34.15	600	4.36	34.18	27.12	95	1.07
740	3.88	34.31	700	3.96	34.26	27.22	86	1.17
978	3.70	34.49	800	3.80	34.39	27.34	74	1.26
1287	3.05	34.52	1000	3.67	34.49	27.44	65	1.41

HORIZON; June 6, 1954; 1307 GCT; 38°22'N, 127°07'W; sounding, 2250 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 13°. 50.90

0	13.21	32.74	0	13.21	32.74	24.62	333	0.00
10	13.20	32.72	10	13.20	32.72	24.61	334	0.03
25	12.90	32.71	20	13.08	32.71	24.63	332	0.07
55	12.03	32.76	30	12.76	32.71	24.69	326	0.10
65	11.61	32.81	50	12.24	32.75	24.82	314	0.16
75	11.30	32.81	75	11.30	32.81	25.04	293	0.24
90	10.90	32.94	100	10.23	33.06	25.42	257	0.31
109	9.57	33.21	150	8.64	33.79	26.25	178	0.42
133	8.99	33.63	200	7.82	33.99	26.53	151	0.50
162	8.40	33.87	250	7.21	34.03	26.65	140	0.58
214	7.64	34.01	300	6.76	34.04	26.72	133	0.65
290	6.82	34.04	400	6.23	34.19	26.91	115	0.78
396	6.26	34.18	500	5.61	34.28	27.05	102	0.89
535	5.39	34.29	600	4.97	34.29	27.14	93	1.00
723	4.34	34.31	700	4.42	34.30	27.21	87	1.09
971	3.68	34.42	800	4.10	34.34	27.27	81	1.18
1275	3.06	-	1000	3.61	(34.43)	(27.39)	(70)	(1.35)

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

53.52

HORIZON; June 5, 1954; 1141 GCT; 39°02.5'N, 123°52'W; sounding, 60 fm; wind, 300°, force 3; weather, partly cloudy; sea, rough; wire angle, 03°.

0	9.83	33.60	0	9.83	33.60	25.91	210	0.00
11	9.64	33.62	10	9.70	33.61	25.94	207	0.02
18	9.11	33.69	20	8.90	33.72	26.15	187	0.04
20	8.90	33.72	30	8.14	33.78	26.32	171	0.06
24	8.13	33.75	50	8.22	33.89	26.39	164	0.09
30	8.14	33.78						
36	8.22	33.80						
46	8.22	-						
55	8.21	33.91						
65	8.19	33.91						

53.65

HORIZON; June 5, 1954; 0438, 0458 GCT; 38°36'N, 124°51'W; sounding, 2100 fm; wind, 270°, force 3; weather, rain; sea, rough; wire angle, 22°, 38°.

0	13.03	32.70	0	13.03	32.70	24.63	332	0.00
10	13.10	32.66	10	13.10	32.66	24.58	337	0.03
30	12.10	32.61	20	13.04	32.62	24.56	339	0.07
44	12.00	32.64	30	12.10	32.61	24.74	321	0.10
53	11.96	32.63	50	11.96	32.63	24.78	318	0.16
63	12.05	32.79	75	11.75	32.81	24.96	300	0.24
72	11.76	32.81	100	10.13	32.86	25.28	270	0.31
81	11.79	32.84	150	8.54	33.40	25.96	205	0.43
94	10.34	32.90	200	7.88	33.94	26.48	156	0.53
103	10.02	32.86	250	7.13	33.96	26.60	145	0.60
123	9.21	33.15	300	6.65	34.02	26.72	133	0.67
150	8.54	33.40	400	5.98	34.09	26.86	120	0.80
200	7.88	33.94	500	5.34	34.16	26.99	108	0.92
220	7.50	33.92						
315	6.52	34.04						
429	5.82	34.11						
556	5.02	34.20						

57.55

HORIZON; June 4, 1954; 1901 GCT; 38°24'N, 123°41'W; sounding, 450 fm; wind, 240°, force 4; weather, overcast; sea, rough; wire angle, 05°.

0	10.63	33.14	0	10.63	33.14	25.41	258	0.00
10	10.31	33.12	10	10.31	33.12	25.45	254	0.03
31	9.48	33.30	20	9.68	33.26	25.67	233	0.05
47	9.26	33.31	30	9.50	33.30	25.73	227	0.07
57	9.26	33.39	50	9.26	33.33	25.79	222	0.12
67	9.27	33.44	75	9.10	33.50	25.95	206	0.17
77	9.04	33.55	100	8.72	33.77	26.22	181	0.22
86	8.94	33.70	150	8.27	33.94	26.42	162	0.31
101	8.70	33.77	200	7.73	34.03	26.57	148	0.39
110	8.62	33.82	250	7.34	34.07	26.66	139	0.46
135	8.45	33.90	300	7.01	34.10	26.73	132	0.53
164	8.12	33.98	400	6.26	34.14	26.86	120	0.66
217	7.58	34.04	500	5.75	34.26	27.02	105	0.78
280	7.18	34.09	600	5.27	34.29	27.10	97	0.89
392	6.30	34.14						
522	5.64	34.27						
661	4.94	34.31						

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} T_3 cm/g	ΔD dyn. m

60.60

HORIZON; June 7, 1954; 2345 GCT; 37°37'N, 123°37'W; sounding, 1700 fm; wind, 300°, force 4; weather, cloudy; sea, rough; wire angle, 36°.

0	12.66	33.06	0	12.66	33.06	24.98	299	0.00
9	12.65	33.01	10	12.64	33.01	24.94	302	0.03
22	12.54	33.06	20	12.56	33.05	24.99	298	0.06
47	11.45	33.17	30	12.32	33.08	25.06	291	0.09
56	11.13	33.26	50	11.33	33.20	25.34	264	0.14
64	11.02	33.33	75	10.96	33.57	25.69	231	0.21
75	10.96	33.57	100	8.93	33.62	26.07	195	0.26
88	9.21	33.58	150	8.34	33.98	26.44	160	0.35
108	8.83	33.72	200	7.66	34.06	26.61	144	0.43
128	8.67	33.88	250	7.12	34.09	26.71	134	0.50
167	8.07	34.02	300	6.66	34.09	26.77	128	0.57
224	7.39	34.08	400	5.73	34.16	26.94	112	0.69
302	6.64	34.09	500	5.15	34.20	27.05	102	0.80
406	5.70	34.16	600	4.73	34.25	27.13	94	0.91
550	4.92	34.22	700	4.38	34.32	27.23	85	1.00
741	4.26	34.36	800	4.12	34.40	27.32	76	1.09
1126	3.68	34.52	1000	3.80	34.49	27.42	67	1.25

60.80

HORIZON; June 7, 1954; 1346 GCT; 36°55.5'N, 125°08.5'W; sounding, 2400 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 16°.

0	13.20	32.90	0	13.20	32.90	24.75	320	0.00
10	13.20	32.91	10	13.20	32.91	24.76	320	0.03
25	12.84	32.94	20	12.92	32.93	24.83	313	0.06
56	10.60	33.13	30	12.76	32.95	24.87	309	0.10
66	9.53	33.32	50	11.83	33.04	25.12	285	0.15
75	9.28	33.44	75	9.28	33.44	25.87	214	0.22
91	9.08	33.60	100	8.96	33.71	26.14	188	0.27
110	8.81	33.78	150	8.37	33.92	26.39	164	0.36
134	8.53	33.86	200	7.67	34.04	26.59	146	0.44
163	8.20	33.97	250	7.07	34.06	26.69	136	0.51
216	7.47	34.05	300	6.60	34.07	26.76	129	0.58
291	6.67	34.07	400	5.90	34.11	26.88	118	0.70
395	5.95	34.11	500	5.20	34.19	27.03	104	0.82
534	5.00	34.22	600	4.67	34.28	27.16	92	0.92
720	4.25	34.54r	700	4.30	34.34	27.25	83	1.02
954	3.78	34.46	800	4.06	34.40	27.32	76	1.10
1267	3.14	34.55	1000	3.68	34.48	27.43	66	1.26

60.100

HORIZON; June 7, 1954; 0439 GCT; 36°20'N, 126°32'W; sounding, 2600 fm; wind, 020°, force 3; weather, partly cloudy; sea, rough; wire angle, 20°.

0	14.58	33.03	0	14.58	33.03	24.57	338	0.00
10	14.58	33.01	10	14.58	33.01	24.55	340	0.03
25	14.46	33.01	20	14.50	33.01	24.57	338	0.07
54	14.13	33.01	30	14.41	33.01	24.59	336	0.10
64	13.94	33.01	50	14.19	33.01	24.63	332	0.17
73	11.28	33.12	75	10.86	33.16	25.39	260	0.24
87	9.79	33.31	100	9.26	33.42	25.86	215	0.30
106	9.07	33.47	150	8.12	33.85	26.37	166	0.40
129	8.52	33.69	200	7.65	33.98	26.55	149	0.48
158	8.00	33.89	250	7.17	34.02	26.65	140	0.55
208	7.60	33.99	300	6.56	34.05	26.75	130	0.62
281	6.80	34.04	400	5.59	34.08	26.90	116	0.75
383	5.70	34.07	500	5.14	34.21	27.06	101	0.86
517	5.09	34.22	600	4.76	34.27	27.15	92	0.97
702	4.40	34.32	700	4.43	34.32	27.22	86	1.06
932	3.78	34.45	800	4.13	34.38	27.30	78	1.15
1241	3.16	34.53	1000	3.62	34.47	27.43	66	1.31

SIO

CCOFI
5406

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

63.55

HORIZON; June 9, 1954; 2102 GCT; 37°14'N, 122°49.5'W; sounding, 110 fm; wind, 220°, force 4; weather, cloudy; sea, rough; wire angle, 09°.

0	11.53	33.41	0	11.53	33.41	25.46	253	0.00
10	11.20	33.42	10	11.20	33.42	25.53	246	0.02
21	10.75	33.42	20	10.77	33.42	25.61	239	0.05
31	10.43	33.46	30	10.44	33.46	25.70	230	0.07
41	10.33	33.48	50	10.24	33.43	25.71	229	0.12
51	10.22	33.43	75	9.69	33.53	25.88	213	0.18
77	9.65	33.54	100	9.18	33.61	26.02	200	0.23
102	9.16	33.62	150	8.56	33.88	26.33	170	0.32
128	8.78	33.75						
154	8.52	33.90						

67.50

HORIZON; June 10, 1954; 1240 GCT; 36°49.5'N, 122°05'W; sounding, 75 fm; wind, 320°, force 2; weather, partly cloudy; sea, rough; wire angle, 03°.

0	10.56	33.71	0	10.56	33.71	25.87	214	0.00
10	10.34	33.69	10	10.34	33.69	25.89	212	0.02
21	10.27	33.69	20	10.26	33.69	25.91	210	0.04
31	9.76	33.66	30	9.81	33.66	25.96	205	0.06
41	9.30	33.74	50	9.10	33.76	26.15	187	0.10
52	9.06	33.76	75	8.73	33.85	26.28	175	0.15
77	8.70	33.86	100	8.48	33.92	26.37	166	0.19
103	8.46	33.93						

67.65

HORIZON; June 10, 1954; 0557 GCT; 36°20.5'N, 123°06.5'W; sounding, 1750 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 15°.

0	12.96	33.19	0	12.96	33.19	25.02	295	0.00
10	12.88	33.18	10	12.88	33.18	25.03	294	0.03
32	11.96	33.18	20	12.66	33.18	25.07	290	0.06
47	11.15	33.31	30	12.05	33.18	25.19	279	0.09
57	9.83	33.30	50	10.82	33.31	25.51	248	0.14
67	9.54	33.53	75	9.00	33.67	26.10	192	0.20
77	8.90	33.68	100	8.38	33.77	26.27	176	0.24
87	8.73	33.69	150	7.94	33.96	26.49	155	0.32
102	8.36	33.77	200	7.32	33.99	26.60	145	0.40
111	8.28	33.76	250	6.64	34.00	26.70	135	0.47
135	8.06	33.93	300	6.27	34.03	26.77	128	0.54
164	7.80	33.98	400	5.72	34.12	26.91	115	0.67
217	7.08	33.99	500	5.07	34.21	27.06	101	0.78
279	6.42	34.01	600	4.74	34.32	27.19	89	0.88
391	5.76	34.11						
519	4.98	34.23						
654	4.62	34.38						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HORIZON; June 11, 1954; 2225 GCT; 36°08.5'N, 121°50'W; sounding, 355 fm; wind, 320°, force 6; weather, partly cloudy; sea, rough; wire angle, 32°. 70.52

0	11.3	33.26	0	11.3	33.26	25.39	260	0.00
10	11.23	33.28	10	11.23	33.28	25.42	257	0.03
27	9.88	33.58	20	10.50	33.44	25.67	233	0.05
36	9.13	33.53	30	9.58	33.58	25.93	208	0.07
45	8.96	33.58	50	8.89	33.59	26.05	197	0.11
54	8.84	33.60	75	8.58	33.70	26.19	184	0.16
63	8.75	33.61	100	8.53	33.84	26.30	173	0.21
71	8.58	33.70	150	8.14	34.01	26.50	154	0.29
80	8.57	33.69	200	7.83	34.11	26.62	143	0.36
89	8.58	33.82	250	7.52	34.06	26.63	142	0.44
110	8.46	33.86	300	7.00	34.10	26.73	132	0.51
137	8.23	33.93	400	6.31	34.20	26.90	116	0.64
181	7.93	34.13	500	5.78	34.24	27.00	107	0.75
227	7.71	34.05						
332	6.72	34.13						
438	6.10	34.22						
541	5.61	34.25						

HORIZON; June 12, 1954; 0301 GCT; 35°54.5'N, 122°22.5'W; sounding, 1750 fm; wind, 300°, force 6; weather, overcast; sea, rough; wire angle, 10°. 70.60

0	13.6	33.15	0	13.6	33.15	24.85	311	0.00
10	13.84	33.03	10	13.84	33.03	24.72	323	0.03
25	13.66	33.04	20	13.73	33.04	24.75	320	0.06
56	13.28	33.08	30	13.62	33.04	24.77	319	0.10
66	12.72	33.15	50	13.44	33.07	24.83	313	0.16
77	10.40	33.08	75	11.20	33.08	25.27	271	0.23
91	9.46	33.33	100	9.13	33.44	25.90	211	0.29
111	8.90	33.53	150	8.38	33.83	26.32	171	0.39
136	8.50	33.78	200	7.79	33.95	26.50	154	0.47
165	8.25	33.87	250	7.24	34.04	26.65	140	0.55
217	7.56	33.99	300	6.90	34.10	26.75	130	0.62
293	6.94	34.09	400	5.81	34.16	26.93	113	0.74
399	5.84	34.16	500	5.36	34.21	27.03	104	0.86
537	5.24	34.23	600	5.01	34.29	27.13	94	0.96
725	4.58	34.39	700	4.67	34.37	27.24	84	1.06
962	3.92	34.49	800	4.36	34.43	27.32	76	1.15
1276	3.16	34.55	1000	3.82	34.50	27.43	66	1.31

HORIZON; June 12, 1954; 1209, 1237 GCT; 35°13'N, 123°48'W; sounding, 2200 fm; wind, 300°, force 4; weather, fog; sea, moderate; wire angle, 17°, 23°. 70.80

0	15.11	33.04	0	15.11	33.04	24.46	348	0.00
10	15.14	33.04	10	15.14	33.04	24.45	349	0.04
25	14.76	32.97	20	14.90	33.00	24.47	347	0.07
55	12.05	32.76	30	14.59	32.94	24.49	345	0.10
65	12.20	32.84	50	13.03	32.77	24.68	327	0.17
76	12.23	32.97	75	12.24	32.96	24.98	299	0.25
90	11.26	33.09	100	10.08	33.17	25.53	246	0.32
110	9.56	33.26	150	8.74	33.68	26.15	187	0.43
134	8.83	33.53	200	8.28	33.92	26.41	163	0.52
163	8.71	33.76	250	7.56	33.98	26.56	148	0.60
215	8.07	33.96	300	7.05	33.99	26.64	141	0.67
			400	6.41	34.01	26.74	131	0.81
285	7.18	33.99	500	5.41	34.12	26.95	111	0.94
486	5.86	34.04	600	4.86	34.25	27.12	95	1.05
520	5.20	34.18	700	4.56	34.30	27.19	89	1.15
701	4.56	34.31	800	4.26	34.36	27.27	81	1.24
932	3.91	34.43	1000	3.75	34.46	27.40	69	1.40
1243	3.26	34.55						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m
70.100	HORIZON; June 12, 1954; 2133 GCT; 34°31.5'N, 125°10'W; sounding, 2450 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 18°.							
0	15.83	33.20	0	15.83	33.20	24.42	352	0.00
10	15.80	33.19	10	15.80	33.19	24.42	352	0.04
25	15.66	33.13	20	15.74	33.14	24.40	354	0.07
54	14.98	33.19	30	15.53	33.14	24.44	350	0.11
64	14.23	33.08	50	15.09	33.19	24.58	337	0.18
74	13.40	33.06	75	13.34	33.06	24.84	312	0.26
88	13.05	33.04	100	12.64	33.10	25.01	296	0.33
107	11.76	33.15	150	9.62	33.29	25.70	230	0.46
131	10.38	33.17	200	8.36	33.76	26.27	176	0.57
159	9.32	33.39	250	7.66	33.90	26.48	156	0.65
209	8.21	33.80	300	7.24	34.03	26.64	141	0.73
284	7.36	33.99	400	6.55	34.18	26.86	120	0.86
386	6.68	34.17	500	5.70	34.22	27.00	107	0.98
523	5.54	34.23	600	5.13	34.28	27.11	96	1.09
706	4.72	34.38	700	4.73	34.38	27.24	84	1.19
939	3.90	34.44	800	4.36	34.41	27.30	78	1.28
1248	3.22	34.60	1000	3.72	34.47	27.42	67	1.44
73.60	HORIZON; June 11, 1954; 1542 GCT; 35°17.5'N, 121°58'W; sounding, 1300 fm; wind, 340°, force 6; weather, clear; sea, very rough; wire angle, 25°.							
0	14.10	32.95	0	14.10	32.95	24.60	335	0.00
10	14.09	32.94	10	14.09	32.94	24.60	335	0.03
29	14.10	32.98	20	14.10	32.97	24.62	333	0.07
43	14.06	32.95	30	14.10	32.98	24.63	332	0.10
57	13.37	32.96	50	13.79	32.95	24.67	328	0.17
66	13.03	32.96	75	12.00	32.94	25.01	296	0.24
76	11.78	32.94	100	9.49	33.27	25.71	229	0.31
90	9.94	33.12	150	8.53	33.76	26.24	179	0.41
99	9.52	33.26	200	7.95	33.92	26.45	159	0.50
112	9.17	33.39	250	7.53	34.09	26.65	140	0.58
140	8.73	33.73	300	7.10	34.15	26.76	129	0.65
167	8.28	33.81	400	6.23	34.18	26.90	116	0.77
222	7.78	34.01	500	5.70	34.28	27.04	103	0.89
287	7.22	34.14	600	5.25	34.34	27.14	93	0.99
401	6.22	34.18	700	(4.82)	(34.38)	(27.23)	(85)	(1.09)
540	5.52	34.31						
691	4.85	34.38						
77.55	HORIZON; June 11, 1954; 0326 GCT; 34°54.5'N, 121°13'W; sounding, 310 fm; wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 42°.							
0	11.77	33.44	0	11.77	33.44	25.44	255	0.00
10	11.75	33.45	10	11.75	33.45	25.45	254	0.02
25	11.64	33.59	20	11.73	33.55	25.53	246	0.05
33	11.26	33.53	30	11.47	33.59	25.61	239	0.08
40	10.20	33.46	50	9.88	33.53	25.85	216	0.12
48	9.94	33.51	75	8.99	33.74	26.15	187	0.17
56	9.60	33.57	100	8.79	33.86	26.28	175	0.22
64	9.48	33.58	150	8.31	33.97	26.44	160	0.30
71	9.10	33.73	200	7.69	34.11	26.64	141	0.38
79	8.93	33.75	250	7.14	34.13	26.74	131	0.45
93	8.86	33.84	300	6.85	34.14	26.78	128	0.52
111	8.67	33.89	400	6.56	34.24	26.90	116	0.64
123	8.55	33.95						
151	8.30	33.97						
219	7.46	34.13						
294	6.88	34.14						
404	6.56	34.25						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	$\delta_{T_{-5}}^{3}$	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

HORIZON; June 14, 1954; 0722 GCT; 34°20'N, 120°48.5'W; sounding, 440 fm; wind, 320°, force 6; weather, cloudy; sea, high; wire angle, 10°. 80.55

0	11.90	33.66	0	11.90	33.66	25.59	240	0.00
10	11.90	33.66	10	11.90	33.66	25.59	240	0.02
30	11.20	33.77	20	11.82	33.69	25.63	237	0.05
45	10.79	33.70	30	11.20	33.77	25.80	221	0.07
61	9.63	33.82	50	10.53	33.71	25.87	214	0.11
71	9.48	33.86	75	9.42	33.88	26.19	184	0.16
81	9.32	33.94	100	9.15	34.16	26.46	158	0.21
97	9.17	34.16	150	8.82	34.16	26.51	153	0.29
107	9.12	34.16	200	8.49	34.20	26.59	146	0.36
122	8.99	34.14	250	8.05	34.22	26.67	138	0.44
150	8.82	34.16	300	7.79	34.24	26.73	132	0.50
180	8.66	34.18	400	6.94	34.27	26.87	119	0.64
238	8.14	34.22	500	6.14	34.28	26.99	108	0.76
305	7.76	34.24	600	5.54	34.31	27.09	98	0.87
421	6.76	34.27	700	5.14	34.35	27.17	91	0.97
560	5.76	34.30						
700	5.14	34.35						

HORIZON; June 13, 1954; 1358 GCT; 33°14'N, 123°16'W; sounding, 2300 fm; wind, 320°, force 5; weather, cloudy; sea, high; wire angle, 26°. 80.90

0	15.38	33.19	0	15.38	33.19	24.52	342	0.00
10	15.34	33.17	10	15.34	33.17	24.51	343	0.03
24	15.38	33.18	20	15.38	33.18	24.51	343	0.07
52	15.32	33.16	30	15.38	33.18	24.51	343	0.10
61	15.00	33.15	50	15.33	33.16	24.50	344	0.17
70	14.46	33.11	75	14.05	33.09	24.72	323	0.26
84	13.26	33.08	100	12.04	33.14	25.16	281	0.33
103	11.80	33.17	150	9.46	33.54	25.92	209	0.46
126	10.31	33.28	200	8.62	33.90	26.34	169	0.55
152	9.41	33.58	250	7.99	34.02	26.53	151	0.64
200	8.62	33.90	300	7.30	34.08	26.67	138	0.71
269	7.75	34.05	400	6.26	34.17	26.89	117	0.85
364	6.52	34.14	500	5.75	34.24	27.01	106	0.96
490	5.80	34.23	600	5.32	34.38	27.17	91	1.07
664	5.04	34.42	700	4.88	34.43	27.26	82	1.16
885	4.16	34.45	800	4.46	34.44	27.31	77	1.25
1187	3.42	34.53	1000	3.82	34.48	27.41	68	1.41

HORIZON; June 14, 1954; 1310 GCT; 34°15'N, 119°59'W; sounding, 320 fm; wind, 320°, force 2; weather, overcast; sea, very rough; wire angle, 14°. 82.47

0	14.26	33.51	0	14.26	33.51	25.00	297	0.00
10	12.58	33.57	10	12.58	33.57	25.39	260	0.03
30	10.19	33.71	20	10.73	33.67	25.81	220	0.05
40	9.80	33.77	30	10.19	33.71	25.93	208	0.07
50	9.45	33.89	50	9.45	33.89	26.20	183	0.11
60	9.36	33.91	75	9.22	34.02	26.34	169	0.16
70	9.26	34.04	100	8.98	34.06	26.41	163	0.20
81	9.16	34.01	150	8.67	34.13	26.51	153	0.28
90	9.08	34.04	200	8.12	34.19	26.64	141	0.35
100	8.98	34.06	250	7.67	34.21	26.72	133	0.42
119	8.85	34.06	300	7.33	34.23	26.79	127	0.49
145	8.70	34.13	400	6.76	34.27	26.90	116	0.62
163	8.54	34.14	500	6.42	34.29	26.96	110	0.74
202	8.10	34.19						
280	7.46	34.22						
383	6.84	34.27						
506	6.40	34.29						

S10

CCOFI
5406

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

83.43

HORIZON; June 14, 1954; 1608 GCT; 34°08.5'N, 119°34'W; sounding, 130 fm; wind, 320°, force 2; weather, partly cloudy; sea, very rough; wire angle, 08°.

0	14.30	33.68	0	14.30	33.68	25.12	285	0.00
10	13.88	33.57	10	13.88	33.57	25.13	284	0.03
26	12.28	33.64	20	12.66	33.63	25.42	257	0.06
36	11.79	33.58	30	12.07	33.63	25.53	246	0.08
46	11.02	33.59	50	10.72	33.61	25.76	224	0.13
56	10.38	33.66	75	9.66	33.80	26.09	193	0.18
65	10.02	33.70	100	9.31	33.97	26.28	175	0.23
75	9.66	33.80	150	8.86	34.15	26.50	154	0.31
95	9.35	33.95	200	8.51	34.20	26.59	146	0.39
110	9.24	34.00						
140	8.96	34.11						
169	8.70	34.20						
202	8.50	34.20						

83.51

HORIZON; June 15, 1954; 1709 GCT; 33°52'N, 120°08.5'W; sounding, 63 fm; wind, 300°, force 4; weather, fog; sea, rough; wire angle, 18°.

0	12.72	33.59	0	12.72	33.59	25.38	260	0.00
10	11.62	33.63	10	11.62	33.63	25.62	238	0.02
20	11.30	33.66	20	11.30	33.66	25.70	230	0.05
30	11.01	33.68	30	11.01	33.68	25.77	223	0.07
40	9.98	33.78	50	9.48	33.87	26.18	184	0.11
50	9.48	33.87	75	9.04	34.07	26.40	164	0.16
60	9.17	34.02						
70	9.06	34.07						
80	9.02	34.07						
89	8.92	34.13						

83.60

HORIZON; June 15, 1954; 2152 GCT; 33°34'N, 120°45'W; sounding, 860 fm; wind, 320°, force 6; weather, partly cloudy; sea, very rough; wire angle, 14°.

0	13.86	33.32	0	13.86	33.32	24.94	302	0.00
10	13.85	33.32	10	13.85	33.32	24.94	302	0.03
30	13.79	33.35	20	13.86	33.34	24.95	301	0.06
45	13.64	33.34	30	13.79	33.35	24.98	299	0.09
55	13.32	33.30	50	13.54	33.32	25.00	297	0.15
65	11.20	33.27	75	11.16	33.33	25.47	252	0.22
75	11.16	33.33	100	9.30	33.64	26.03	199	0.28
85	9.78	33.53	150	8.60	33.95	26.38	166	0.37
100	9.30	33.64	200	7.99	34.04	26.54	150	0.45
110	9.07	33.73	250	7.43	34.12	26.69	136	0.52
134	8.79	33.89	300	7.03	34.24	26.84	122	0.59
163	8.43	33.98	400	6.46	34.38	27.02	105	0.71
217	7.80	34.07	500	5.90	34.28	27.02	105	0.82
280	7.16	34.17	600	5.30	34.30	27.11	96	0.92
393	6.50	34.38						
522	5.74	34.28						
660	5.02	34.33						

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

HORIZON; June 16, 1954; 0657 GCT; 32°55.5'N, 122°08'W; sounding, 2350 fm; wind, 320°, force 6; weather, overcast; sea, high; wire angle, 15°. 83.80

0	14.53	33.06	0	14.53	33.06	24.60	335	0.00
10	14.54	33.12	10	14.54	33.12	24.64	331	0.03
30	14.36	33.30	20	14.45	33.26	24.77	319	0.07
45	14.24	33.13	30	14.36	33.30	24.82	314	0.10
55	14.20	33.13	50	14.22	33.13	24.72	323	0.16
65	-	33.12	75	13.06	33.07	24.91	305	0.24
75	13.06	33.07	100	10.78	33.11	25.36	262	0.31
85	11.76	32.97	150	10.00	33.68	25.94	207	0.43
100	10.78	33.11	200	8.21	33.94	26.43	161	0.52
109	10.10	33.28	250	7.59	34.04	26.60	145	0.60
133	9.25	33.48	300	7.03	34.09	26.72	133	0.67
160	8.88	33.75	400	6.13	34.18	26.91	115	0.80
211	8.02	33.98	500	5.67	34.26	27.03	104	0.92
271	7.39	34.06	600	5.24	34.32	27.13	94	1.02
381	6.22	34.16						
507	5.65	34.27						
640	5.08	34.34						

HORIZON; June 14, 1954; 2022 GCT; ~~33°60'~~ 34°00'N, 119°04.5'W; sounding, 280 fm; wind, 240°, force 2; weather, partly cloudy; sea, rough; wire angle, 15°. 85.39

0	17.75	33.41	0	17.75	33.41	24.14	379	0.00
10	15.66	33.48	10	15.66	33.48	24.68	327	0.04
25	12.10	33.54	20	13.55	33.54	25.17	280	0.07
35	10.40	33.44	30	11.06	33.51	25.63	237	0.09
45	10.04	33.56	50	9.84	33.62	25.92	209	0.14
55	9.67	33.67	75	9.52	33.95	26.23	180	0.18
65	9.69	33.78	100	9.36	33.91	26.23	180	0.23
75	9.52	33.95	150	9.07	34.15	26.46	158	0.32
94	9.41	33.91	200	8.73	34.21	26.56	148	0.39
109	9.28	33.94						
138	9.14	34.05						
167	8.96	34.22						
201	8.72	34.21						

HORIZON; June 15, 1954; 0143 GCT; 33°47'N, 119°31'W; sounding, 1030 fm; wind, 320°, force 2; weather, clear; sea, rough; wire angle, 15°. 85.45

0	16.78	33.46	0	16.78	33.46	24.41	353	0.00
10	13.22	33.48	10	13.22	33.48	25.19	279	0.03
30	9.73	33.65	20	10.21	33.60	25.84	217	0.06
40	9.58	33.71	30	9.73	33.65	25.96	205	0.08
50	9.44	33.80	50	9.44	33.80	26.13	189	0.12
60	9.44	33.87	75	9.06	33.87	26.25	178	0.16
70	9.08	33.86	100	8.80	34.01	26.40	164	0.21
79	9.04	33.89	150	8.69	34.10	26.48	156	0.29
89	8.92	34.00	200	8.21	34.21	26.64	141	0.36
98	8.80	34.01	250	7.86	34.23	26.71	134	0.43
121	8.80	34.07	300	7.55	34.24	26.76	129	0.50
149	8.70	34.10	400	6.88	34.37	26.96	110	0.63
195	8.25	34.21	500	6.25	34.44	27.10	97	0.74
251	7.86	34.23	600	(5.75)	(34.38)	(27.12)	(95)	(0.84)
350	7.22	34.27						
465	6.46	34.44						
581	5.84	34.38						

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

85.55

HORIZON; June 15, 1954; 0651 GCT; 33°25.5'N, 120°13.5'W; sounding, 660 fm; wind, 300°, force 6; weather, clear; sea, high; wire angle, 16°.

0	12.70	33.55	0	12.70	33.55	25.35	263	0.00
10	12.70	33.55	10	12.70	33.55	25.35	263	0.03
30	12.68	33.54	20	12.73	33.54	25.34	264	0.05
45	12.03	33.54	30	12.68	33.54	25.35	263	0.08
60	10.04	33.51	50	11.53	33.53	25.56	243	0.13
70	9.63	33.58	75	9.40	33.68	26.04	198	0.19
80	9.22	33.73	100	8.98	33.82	26.22	181	0.23
95	9.04	33.80	150	8.32	34.03	26.49	155	0.32
105	8.91	-	200	7.90	34.14	26.63	142	0.39
120	8.67	33.87	250	7.55	34.17	26.71	134	0.46
149	8.32	34.03	300	7.00	34.22	26.83	123	0.53
178	8.16	34.04	400	6.43	34.23	26.91	115	0.66
190p	8.00	34.13	500	5.97	34.24	26.98	109	0.77
236	7.68	34.16	600	5.53	34.34	27.11	96	0.88
308p	6.94	34.22						
468p	6.12	34.23						
624p	5.45	34.36						

87.40

HORIZON; June 17, 1954; 1714 GCT; 33°40.5'N, 118°59'W; sounding, 465 fm; wind, 320°, force 2; weather, overcast; sea, rough; wire angle, 10°.

0	17.24	33.44	0	17.24	33.44	24.28	365	0.00
10	14.24	33.39	10	14.24	33.39	24.91	305	0.03
30	10.68	33.51	20	11.45	33.43	25.49	250	0.06
40	10.00	33.59	30	10.68	33.51	25.69	231	0.08
50	9.77	33.64	50	9.77	33.64	25.95	206	0.13
60	9.78	33.71	75	9.49	33.86	26.17	185	0.18
70	9.60	33.84	100	9.06	33.92	26.28	175	0.22
80	9.38	33.87	150	8.80	34.09	26.46	158	0.31
90	9.28	33.89	200	8.63	34.22	26.59	146	0.39
100	9.06	33.92	250	8.33	34.27	26.67	138	0.46
125	8.78	33.96	300	7.15	34.27	26.84	122	0.53
154	8.80	34.11	400	6.49	34.28	26.94	112	0.65
201	8.62	34.22	500	6.11	34.32	27.02	105	0.76
258	8.28	34.27	600	5.53	34.38	27.14	93	0.87
320	6.88	34.27						
479	6.24	34.31						
605	5.52	34.38						

87.50

HORIZON; June 17, 1954; 1205 GCT; 33°20.5'N, 119°40.5'W; sounding, 45 fm; wind, 320°, force 5; weather, clear; sea, high; wire angle, 08°.

0	14.01	33.53	0	14.01	33.53	25.07	290	0.00
10	13.73	33.54	10	13.73	33.54	25.14	283	0.03
20	9.92	33.69	20	9.92	33.69	25.96	205	0.05
30	9.39	33.79	30	9.39	33.79	26.13	189	0.07
41	9.17	33.86	50	8.73	33.98	26.38	166	0.11
51	8.70	33.99						
62	8.52	34.02						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

HORIZON; June 17, 1954; 0624 GCT; 33°00'N, 120°21.5'W; sounding, 360 fm; wind, 330°, force 6; weather, clear; sea, very high; wire angle, 22°. 87.60

0	13.75	33.39	0	13.75	33.39	25.02	295	0.00
10	13.74	33.40	10	13.74	33.40	25.03	294	0.03
30	13.74	33.43	20	13.74	33.41	25.03	294	0.06
44	13.35	33.47	30	13.74	33.43	25.05	292	0.09
53	13.14	33.44	50	13.24	33.46	25.17	280	0.15
63	12.12	33.39	75	10.48	33.45	25.68	232	0.21
73	10.67	33.44	100	9.13	33.62	26.04	198	0.26
82	9.85	33.46	150	8.46	34.01	26.45	159	0.36
96	9.22	33.57	200	7.87	34.13	26.63	142	0.43
106	9.02	33.68	250	7.56	34.21	26.74	131	0.50
129	8.72	33.86	300	7.24	34.24	26.81	125	0.57
156	8.38	34.04	400	6.56	34.25	26.91	115	0.69
207	7.81	34.14	500	5.92	34.28	27.02	105	0.81
265	7.47	34.23	600	5.30	34.37	27.16	92	0.91
373	6.74	34.25						
498	5.93	34.28						
632	5.14	34.40						

HORIZON; June 16, 1954; 2033 GCT; 32°14.5'N, 121°43'W; sounding, 2050 fm; wind, 320°, force 6; weather, partly cloudy; sea, high; wire angle, 20°. 87.80

0	15.13	33.19	0	15.13	33.19	24.57	338	0.00
10	15.14	33.13	10	15.14	33.13	24.52	342	0.03
30	15.02	33.16	20	15.10	33.14	24.54	340	0.07
43	14.40	33.17	30	15.02	33.16	24.57	338	0.10
53	12.94	33.16	50	13.27	33.16	24.94	302	0.17
62	12.72	33.22	75	12.43	33.28	25.19	279	0.24
71	12.57	33.28	100	10.12	33.28	25.61	239	0.30
81	12.06	33.26	150	8.66	33.75	26.21	182	0.41
95	10.41	33.28	200	8.02	33.87	26.41	163	0.50
104	9.92	33.28	250	7.54	34.03	26.60	145	0.58
127	8.92	33.57	300	7.09	34.10	26.72	133	0.65
155	8.60	33.77	400	6.40	34.17	26.87	119	0.78
207	7.96	33.89	500	5.94	34.32	27.04	103	0.90
269	7.37	34.07	600	5.43	34.35	27.13	94	1.00
379	6.52	34.14						
507	5.90	34.32						
644	5.23	34.36						

HORIZON; June 18, 1954; 0606 GCT; 33°28'N, 117°47.5'W; sounding, 310 fm; wind, 330°, force 2; weather, clear; sea, moderate; wire angle, 08°. 90.28

0	17.78	33.39	0	17.78	33.39	24.11	382	0.00
10	16.56	33.39	10	16.56	33.39	24.40	354	0.04
31	11.60	33.37	20	13.07	33.38	25.15	282	0.07
42	10.89	33.43	30	11.70	33.37	25.40	259	0.10
52	10.24	33.49	50	10.35	33.47	25.72	228	0.14
62	9.96	33.62	75	9.68	33.79	26.08	194	0.20
72	9.75	33.76	100	9.47	33.81	26.13	189	0.25
82	9.58	33.82	150	8.99	33.96	26.33	170	0.34
92	9.52	33.78	200	8.78	34.12	26.48	156	0.42
102	9.46	33.84	250	8.47	34.20	26.60	145	0.50
120	9.14	34.01	300	8.06	34.25	26.70	135	0.57
145	9.01	33.96	400	7.24	34.28	26.84	122	0.70
165	8.91	34.08	500	6.39	34.30	26.97	110	0.83
202	8.78	34.13						
279	8.24	34.23						
382	7.38	34.28						
505	6.36	34.30						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

90.37

HORIZON; June 18, 1954; 1128 GCT; 33°11'N, 118°23.5'W; sounding, 660 fm; wind, 180°, force 2; weather, overcast; sea, rough; wire angle, 10°.

0	17.57	33.41	0	17.57	33.41	24.18	375	0.00
10	17.30	33.40	10	17.30	33.40	24.24	369	0.04
30	11.96	33.33	20	13.36	33.34	25.06	291	0.07
40	10.90	33.35	30	11.96	33.33	25.32	266	0.10
50	10.00	33.51	50	10.00	33.51	25.81	220	0.15
60	9.65	33.48	75	9.51	33.67	26.02	200	0.20
70	9.75	33.65	100	9.17	33.82	26.19	184	0.25
80	9.36	33.69	150	8.51	33.98	26.42	162	0.34
91	9.28	33.74	200	8.03	34.07	26.56	148	0.42
101	9.16	33.84	250	8.14	34.23	26.67	138	0.49
125	9.00	33.95	300	7.97	34.23	26.69	136	0.56
155	8.40	33.98	400	7.08	34.23	26.82	124	0.69
203	8.02	34.10	500	6.13	34.33	27.03	104	0.82
260	8.14	34.23	600	5.70	34.34	27.09	98	0.92
362	7.48	34.22						
480	6.26	34.33						
607	5.69	34.34						

90.55

HORIZON; June 18, 1954; 2100 GCT; 32°35'N, 119°37'W; sounding, 620 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 08°.

0	13.98	33.35	0	13.98	33.35	24.94	302	0.00
10	13.94	33.34	10	13.94	33.34	24.94	302	0.03
30	13.05	33.32	20	13.60	33.32	24.99	298	0.06
40	11.02	33.27	30	13.05	33.32	25.10	287	0.09
50	10.12	33.46	50	10.12	33.46	25.75	225	0.14
61	9.81	33.54	75	9.60	33.64	25.98	204	0.20
71	9.68	33.63	100	9.16	33.76	26.14	188	0.24
82	9.46	33.66	150	8.46	33.96	26.41	163	0.33
102	9.12	33.78	200	7.89	34.12	26.62	143	0.41
126	8.73	33.90	250	7.50	34.21	26.75	130	0.48
156	8.40	33.97	300	7.14	34.25	26.83	123	0.55
205	7.82	34.13	400	6.40	34.31	26.98	109	0.67
275	7.34	34.23	500	5.89	34.36	27.08	99	0.78
377	6.55	34.30	600	5.56	34.34	27.11	96	0.88
505	5.88	34.36	700	5.25	34.35	27.15	92	0.98
659	5.40	34.34	800	4.72	34.42	27.27	81	1.08
816	4.62	34.43						

90.70

HORIZON; June 19, 1954; 0409 GCT; 32°04.5'N, 120°36.5'W; sounding, 2150 fm; wind, 320°, force 6; weather, clear; sea, high; wire angle, 10°.

0	14.59	33.31	0	14.59	33.31	24.78	318	0.00
10	14.60	33.33	10	14.60	33.33	24.79	317	0.03
25	14.60	33.27	20	14.60	33.28	24.75	320	0.06
55	13.34	33.37	30	14.60	33.28	24.75	320	0.10
65	12.90	33.37	50	13.76	33.36	24.99	298	0.16
75	12.15	33.35	75	12.15	33.35	25.30	268	0.23
90	10.82	33.46	100	10.32	33.47	25.72	228	0.29
110	9.94	33.48	150	8.91	33.85	26.25	178	0.39
136	9.10	33.77	200	8.09	34.01	26.50	154	0.48
165	8.72	33.91	250	7.68	34.10	26.64	141	0.55
219	7.89	34.05	300	7.44	34.16	26.72	133	0.62
298	7.48	34.16	400	6.50	34.23	26.90	116	0.76
406	6.48	34.23	500	5.98	34.31	27.03	104	0.87
549	5.74	34.34	600	5.45	34.36	27.14	93	0.98
742	4.70	34.39	700	4.90	34.38	27.22	86	1.07
983	3.94	34.47	800	4.51	34.41	27.28	80	1.16
1298	3.18	34.56	1000	3.91	34.48	27.40	69	1.33

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HORIZON; June 20, 1954; 2323 GCT; 32°53'N, 117°32'W; sounding, 450 fm; wind, 180°, force 3; weather, overcast; sea, rough; wire angle, 09°. 93.30

0	18.4	33.40	0	18.4	33.40	23.97	395	0.00
10	17.78	33.41	10	17.78	33.41	24.13	380	0.04
30	12.09	33.40	20	14.18	33.40	24.93	303	0.07
41	11.52	33.40	30	12.09	33.40	25.35	263	0.10
51	10.56	33.41	50	10.56	33.41	25.64	236	0.15
61	10.52	33.57	75	9.75	33.73	26.02	200	0.21
72	9.90	33.72	100	9.25	33.90	26.24	179	0.25
82	9.54	33.74	150	8.98	34.05	26.40	164	0.34
92	9.37	33.87	200	8.66	34.23	26.59	146	0.42
102	9.22	33.91	250	8.46	34.29	26.67	138	0.49
126	8.99	34.04	300	8.10	34.30	26.73	132	0.56
155	8.98	34.05	400	7.17	34.31	26.87	119	0.69
205	8.64	34.24	500	6.60	34.34	26.97	110	0.82
264	8.42	34.30	600	5.91	34.37	27.09	98	0.93
367	7.40	34.31						
488	6.70	34.33						
616	5.82	34.38						

HORIZON; June 20, 1954; 1419 GCT; 32°33.5'N, 118°58.5'W; sounding, 602 fm; wind, 320°, force 2; weather, clear; sea, very rough; wire angle, 15°. 93.50

0	14.4	33.47	0	14.4	33.47	24.94	302	0.00
10	14.37	33.41	10	14.37	33.41	24.90	306	0.03
30	10.05	33.49	20	10.94	33.43	25.59	240	0.06
46	9.74	33.65	30	10.05	33.49	25.79	222	0.08
56	9.56	33.73	50	9.66	33.68	26.00	202	0.12
65	9.44	33.86	75	9.39	33.91	26.22	181	0.17
75	9.39	33.91	100	9.14	34.06	26.38	166	0.22
85	9.36	33.96	150	8.77	34.16	26.52	152	0.30
100	9.14	34.06	200	8.16	34.21	26.65	140	0.37
110	9.02	34.11	250	7.57	34.25	26.77	128	0.44
133	8.92	34.15	300	7.09	34.26	26.84	122	0.50
162	8.62	34.17	400	6.44	34.26	26.93	113	0.63
214	7.97	34.22	500	5.99	34.34	27.05	102	0.74
275	7.32	34.26	600	5.66	34.33	27.09	98	0.85
385	6.52	34.26						
509	5.96	34.34						
642	5.54	34.33						

HORIZON; June 19, 1954; 1750 GCT; 30°49'N, 121°34.5'W; sounding, 2410 fm; wind, 320°, force 6; weather, partly cloudy; sea, high; wire angle, 10°. 93.90

0	15.3	33.24	0	15.3	33.24	24.57	338	0.00
10	15.17	33.19	10	15.17	33.19	24.56	339	0.03
30	15.16	33.24	20	15.16	33.22	24.59	336	0.07
45	15.12	33.22	30	15.16	33.24	24.60	335	0.10
55	14.74	33.19	50	15.06	33.21	24.60	335	0.17
66	13.06	33.10	75	12.32	33.12	25.09	288	0.25
76	12.25	33.12	100	10.60	33.28	25.53	246	0.31
86	11.40	33.13	150	8.78	33.76	26.20	183	0.42
101	10.54	33.30	200	8.02	33.98	26.49	155	0.51
110	9.98	33.39	250	7.82	34.05	26.58	146	0.58
135	9.04	33.69	300	6.88	34.13	26.77	128	0.66
165	8.54	33.82	400	6.67	34.30	26.93	113	0.78
218	7.78	34.02	500	6.10	34.33	27.03	104	0.90
281	6.98	34.09	600	5.50	34.39	27.15	92	1.00
393	6.70	34.30						
523	5.92	34.34						
659	5.24	34.42						

S10

CCOFI
5406

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	$\delta_{T_3}^{-5}$ 10^{-5} cm^3/g	ΔD dyn. m
97.40	CREST; June 22, 1954; 1909 GCT; 31°51'N, 117°49.5'W; sounding, 250 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, 10°.							
0	17.5	33.49	0	17.5	33.49	24.26	367	0.00
10	17.22	33.72r	10	17.22	33.49	24.32	361	0.04
15	16.35	33.49	20	15.92	33.48	24.62	333	0.07
20	15.92	33.48	30	12.80	33.35	25.18	280	0.10
25	13.43	33.35	50	10.72	33.47	25.66	234	0.15
30	12.80	33.35	75	9.96	33.67	25.94	207	0.21
40	11.92	33.39	100	9.41	33.84	26.17	185	0.26
50	10.72	33.47	150	8.55	34.03	26.45	159	0.35
65	10.14	33.57	200	8.16	34.15	26.60	145	0.42
79	9.88	33.71	250	8.02	34.29	26.73	132	0.49
99	9.44	-	300	7.78	34.36	26.82	124	0.56
115	9.06	33.91	400	6.81	34.38	26.98	109	0.68
160	8.45	33.12r						
199	8.17	34.15						
250	8.02	34.29						
329	7.57	34.37						
407	6.76	34.38						
97.60	CREST; June 22, 1954; 0920 GCT; 31°15.5'N, 119°09'W; sounding, 600 fm; wind, 300°, force 4; weather, overcast; sea, rough; wire angle, 05°.							
0	16.8	33.40	0	16.8	33.40	24.35	359	0.00
10	16.30	33.33	10	16.30	33.33	24.42	352	0.04
30	16.19	33.39	20	16.20	33.37	24.47	347	0.07
45	14.52	33.27	30	16.19	33.39	24.49	345	0.10
55	13.12	33.14	50	13.70	33.14	24.83	313	0.17
66	12.43	33.22	75	11.75	33.31	25.34	264	0.24
76	11.70	33.31	100	9.79	33.43	25.78	222	0.30
86	10.40	33.30	150	8.91	33.80	26.21	182	0.41
100	9.79	33.43	200	7.90	33.98	26.51	153	0.49
111	9.42	33.55	250	7.21	34.08	26.69	136	0.57
136	9.20	-	300	6.74	34.15	26.81	125	0.63
166	8.44	33.87	400	6.45	34.24	26.92	114	0.76
219	7.66	34.02	500	5.95	34.35	27.07	100	0.87
283	6.84	34.13						
398	6.46	34.24						
528	5.80	34.36						
564	5.08	34.38						
97.80	CREST; June 21, 1954; 2327 GCT; 30°35.5'N, 120°31'W; sounding, 2150 fm; wind, 290°, force 2; weather, overcast; sea, rough; wire angle, 08°.							
0	16.6	33.39	0	16.6	33.39	24.39	355	0.00
10	16.38	33.44	10	16.38	33.44	24.48	346	0.04
30	16.30	33.49	20	16.30	33.47	24.52	342	0.07
45	16.28	33.49	30	16.30	33.49	24.54	340	0.10
55	12.97	33.30	50	16.27	33.49	24.54	340	0.18
65	11.38	33.33	75	10.50	33.40	25.64	236	0.26
75	10.50	33.40	100	9.51	33.61	25.97	204	0.30
85	10.06	33.47	150	8.60	34.02	26.43	161	0.39
100	9.51	33.61	200	7.83	34.05	26.57	148	0.47
109	9.26	33.71	250	7.35	34.10	26.68	137	0.54
133	8.90	-	300	6.94	34.18	26.80	126	0.61
162	8.36	34.04	400	6.20	34.24	26.95	111	0.74
214	7.68	34.05	500	5.75	34.33	27.08	99	0.85
277	7.14	34.16	600	5.29	34.37	27.16	92	0.95
387	6.28	34.23						
511	5.69	34.34						
646	5.08	34.38						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

CREST; June 20, 1954; 0417 GCT; 31°42'N, 116°43.5'W; sounding, 53 fm; wind, 330°, force 2; weather, overcast; sea, slight; wire angle, 00°. 100.29

0	16.8	33.51	0	16.8	33.51	24.44	350	0.00
5	16.70	33.57	10	15.76	33.56	24.72	323	0.03
10	15.76	33.56	20	13.24	33.49	25.20	278	0.06
15	13.92	33.46	30	11.60	33.51	25.53	246	0.09
20	13.24	33.49	50	10.04	33.54	25.83	218	0.14
45	10.19	33.53	75	9.60	33.65	25.99	202	0.19
71	9.70	33.63						
81	9.48	33.69						

CREST; June 20, 1954; 1500, 1531 GCT; 31°04.5'N, 118°07'W; sounding, 970 fm; wind, 260°, force 2; weather, overcast; sea, rough; wire angle, 07°, 09°. 100.50

0	16.4	33.50	0	16.4	33.50	24.52	342	0.00
10	16.31	33.33	10	16.31	33.33	24.41	353	0.04
25	16.30	33.31	20	16.30	33.32	24.41	353	0.07
55	13.69	33.16	30	16.30	33.29	24.39	355	0.11
65	12.88	33.12	50	14.32	33.19	24.74	321	0.17
76	12.20	33.16	75	12.28	33.16	25.13	284	0.25
91	10.90	33.12	100	10.59	33.21	25.48	251	0.32
111	10.30	33.42	150	8.70	33.70	26.17	185	0.43
135	9.04	33.58	200	8.18	33.98	26.47	157	0.52
165	8.50	33.86	250	7.71	34.10	26.63	142	0.59
217	7.96	34.03	300	7.24	34.21	26.78	128	0.66
293	7.26	34.22	400	6.70	34.29	26.92	114	0.79
			500	6.08	34.32	27.03	104	0.90
219	8.04	34.08	600	5.49	34.35	27.12	95	1.01
303	7.24	34.20	700	4.98	34.39	27.22	86	1.11
410	6.65	34.29	800	4.60	34.41	27.27	81	1.20
554	5.74	34.34	1000	4.02	34.45	27.37	72	1.37
748	4.79	34.40						
986	4.06	34.45						
1300	3.24	34.58						

CREST; June 21, 1954; 0229 GCT; 30°21'N, 119°27'W; sounding, 2000+ fm; wind, 300°, force 1; weather, overcast; sea, rough; wire angle, 08°. 100.70

0	16.8	33.42	0	16.8	33.42	24.37	357	0.00
10	16.31	33.33	10	16.31	33.33	24.41	353	0.04
25	16.24	33.40	20	16.23	33.39	24.48	346	0.07
55	13.63	33.08	30	16.22	33.35	24.45	349	0.10
65	12.59	33.09	50	14.40	33.09	24.65	330	0.17
75	12.12	33.10	75	12.12	33.10	25.11	286	0.25
89	11.54	33.33	100	11.00	33.39	25.54	245	0.32
109	10.45	33.42	150	9.18	33.80	26.17	185	0.43
134	9.38	-	200	8.28	33.99	26.46	158	0.51
162	9.06	33.88	250	7.43	34.04	26.62	143	0.59
215	7.95	34.01	300	6.90	34.07	26.72	133	0.66
294	6.96	34.06	400	6.11	34.21	26.94	112	0.79
403	6.10	34.21	500	5.60	34.28	27.06	101	0.90
545	5.41	34.31	600	5.21	34.35	27.16	92	1.00
737	4.76	34.43	700	4.87	34.41	27.24	84	1.10
974	4.06	34.53	800	4.55	34.47	27.33	75	1.19
1281	3.30	34.56	1000	3.99	34.53	27.44	65	1.35

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

100.90

CREST; June 21, 1954; 1234 GCT; 29°40.5'N, 120°47'W; sounding, 2200 fm; wind, 220°, force 2; weather, overcast; sea, rough; wire angle, 16°.

0	16.1	33.30	0	16.1	33.30	24.44	350	0.00
10	16.04	33.30	10	16.04	33.30	24.45	349	0.04
25	15.96	33.29	20	16.00	33.29	24.45	349	0.07
54	15.08	33.18	30	15.89	33.27	24.46	348	0.10
63	14.72	33.20	50	15.21	33.19	24.55	340	0.17
74	13.72	33.10	75	13.67	33.09	24.80	316	0.26
87	12.95	33.03	100	11.97	33.07	25.12	285	0.33
106	11.32	33.09	150	9.41	33.23	25.69	231	0.46
130	9.76	-	200	8.60	33.91	26.35	168	0.56
157	9.31	33.25	250	7.85	34.00	26.53	151	0.64
207	8.50	33.94	300	7.20	34.05	26.66	139	0.72
384	6.42	34.13	400	6.30	34.15	26.86	120	0.85
522	5.59	34.30	500	5.70	34.28	27.04	103	0.97
708	4.80	34.38	600	5.22	34.36	27.16	92	1.07
940	4.02	34.35	700	4.81	34.38	27.23	85	1.17
1250	3.24	34.54	800	4.48	34.37	27.26	82	1.26
			1000	3.86	34.36	27.31	77	1.44

103.30

CREST; June 19, 1954; 2309 GCT; 31°05.5'N, 116°25'W; sounding, 38 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 02°.

0	15.7	33.44	0	15.7	33.44	24.64	331	0.00
5	15.08	33.47	10	13.37	33.49	25.17	280	0.03
10	13.37	33.49	20	11.28	33.46	25.55	244	0.06
15	11.40	33.45	30	10.40	33.47	25.71	229	0.08
20	11.28	33.46	50	9.76	33.51	25.85	216	0.12
26	10.82	33.48						
36	9.94	33.45						
51	9.74	33.51						
61	9.64	33.55						

103.40

CREST; June 19, 1954; 1755 GCT; 30°45.5'N, 117°05.5'W; sounding, 950 fm; wind, 340°, force 1; weather, cloudy; sea, moderate; wire angle, 01°.

0	16.9	33.49	0	16.9	33.49	24.40	354	0.00
10	16.79	33.49	10	16.79	33.49	24.43	351	0.04
30	16.03	33.55	20	16.68	33.51	24.47	347	0.07
45	13.18	33.32	30	16.03	33.55	24.65	330	0.10
56	11.28	33.22	50	12.17	33.25	25.22	276	0.16
66	11.23	33.47	75	10.86	33.52	25.67	233	0.23
77	10.76	33.53	100	9.99	33.65	25.92	209	0.28
88	10.44	33.60	150	8.39	33.97	26.43	161	0.38
103	9.82	33.66	200	8.12	34.08	26.55	149	0.46
113	9.32	33.83	250	7.93	34.21	26.69	136	0.53
138	8.58	33.93	300	7.41	34.28	26.82	124	0.60
168	8.18	34.02	400	6.80	34.31	26.92	114	0.72
222	8.12	34.13	500	6.11	34.39	27.08	99	0.84
287	7.54	34.27	600	5.51	34.41	27.17	91	0.94
401	6.80	34.31						
531	5.92	34.40						
667	5.20	34.42						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

CREST; June 19, 1954; 0722 GCT; 30°04.5'N, 118°24'W; sounding, 1900 fm; wind, 320°, force 4; weather, clear; sea, very rough; wire angle, 15°. 103.60

0	16.7	33.21	0	16.7	33.21	24.23	370	0.00
10	16.51	33.27	10	16.51	33.27	24.32	361	0.04
30	16.50	33.28	20	16.50	33.28	24.33	360	0.07
45	16.43	33.35	30	16.50	33.28	24.33	360	0.11
59	14.81	33.30	50	16.21	33.34	24.44	350	0.18
68	13.85	33.13	75	13.58	33.13	24.85	311	0.26
79	13.45	33.13	100	12.77	33.23	25.09	288	0.34
94	12.83	33.09	150	10.39	33.58	25.80	221	0.47
103	12.72	33.26	200	9.43	33.96	26.26	177	0.57
117	11.50	33.28	250	8.89	34.17	26.51	153	0.65
146	10.52	33.55	300	8.25	34.23	26.65	140	0.73
175	9.70	33.78	400	7.20	34.36	26.91	115	0.86
233	9.10	34.14	500	6.46	34.39	27.03	104	0.98
301	8.23	34.23	600	5.80	34.42	27.14	93	1.08
417	7.09	34.37	700	(5.20)	(34.45)	(27.24)	(84)	(1.18)
554	6.10	34.40						
693	5.24	34.45						

CREST; June 18, 1954; 2125 GCT; 29°25.5'N, 119°46'W; sounding, 2000+ fm; wind, 330°, force 5; weather, partly cloudy; sea, very rough; wire angle, 20°. 103.80

0	17.0	33.28	0	17.0	33.28	24.22	371	0.00
10	16.86	33.28	10	16.86	33.28	24.25	368	0.04
30	16.80	33.30	20	16.81	33.29	24.27	366	0.07
44	16.79	33.31	30	16.80	33.30	24.28	365	0.11
58	16.10	33.34	50	16.68	33.32	24.32	361	0.18
68	15.79	33.33	75	15.58	33.34	24.59	336	0.27
77	15.56	33.34	100	14.95	33.50	24.85	311	0.35
91	15.76	33.50	150	10.70	33.31	25.53	246	0.49
100	14.95	33.50	200	9.08	33.74	26.14	188	0.60
113	14.06	33.49	250	8.27	33.92	26.41	163	0.69
141	11.54	33.31	300	7.51	33.98	26.57	148	0.77
168	9.70	33.43	400	6.39	34.11	26.82	124	0.91
224	8.68	33.88	500	5.69	34.20	26.98	109	1.04
288	7.70	33.96	600	5.22	34.29	27.11	96	1.14
399	6.40	34.11						
532	5.52	34.22						
667	5.00	34.39						

CREST; June 17, 1954; 1956 GCT; 30°21.5'N, 116°23'W; sounding, 950 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 12°. 107.35

0	16.7	33.42	0	16.7	33.42	24.39	355	0.00
10	16.64	33.43	10	16.64	33.43	24.41	353	0.04
30	15.94	33.39	20	16.24	33.42	24.50	344	0.07
44	13.26	33.12	30	15.94	33.39	24.54	340	0.10
49	13.16	33.24	50	13.11	33.27	25.05	292	0.17
54	12.85	33.33	75	10.74	33.41	25.61	239	0.24
63	12.08	33.40	100	9.55	33.77	26.09	193	0.29
74	10.80	33.41	150	9.08	34.00	26.34	169	0.38
92	9.90	33.63	200	8.30	34.10	26.54	150	0.46
105	9.40	33.82	250	7.83	34.18	26.68	137	0.54
130	9.08	33.94	300	7.41	34.24	26.78	128	0.60
165	9.06	34.03	400	6.75	34.31	26.93	113	0.73
210	8.15	33.49r	500	6.20	34.32	27.01	106	0.85
268	7.70	34.20	600	5.70	34.39	27.13	94	0.95
380	6.86	34.31						
508	6.15	34.32						
644	5.48	34.42						

SIO

CCOFI
5406

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

107.50

CREST; June 18, 1954; 0353 GCT; 29°49'N, 117°23'W; sounding, 1320 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 30°.

0	16.0	33.34	0	16.0	33.34	24.49	345	0.00
10	15.96	33.37	10	15.96	33.37	24.52	342	0.03
28	15.90	33.39	20	15.91	33.38	24.54	340	0.07
41	15.72	33.36	30	15.88	33.39	24.56	339	0.10
54	14.36	33.21	50	14.99	33.25	24.65	330	0.17
63	12.38	33.17	75	12.20	33.10	25.10	287	0.25
71	12.33	33.09	100	10.45	33.24	25.52	247	0.31
84	11.10	33.19	150	8.78	33.73	26.18	184	0.42
91	10.72	33.20	200	8.65	34.04	26.44	160	0.51
103	10.37	33.26	250	8.42	34.19	26.60	145	0.59
128	9.33	33.47	300	7.93	34.24	26.71	134	0.66
150	8.78	33.73	400	6.90	34.29	26.89	117	0.79
197	8.66	34.03	500	6.19	34.35	27.04	103	0.91
253	8.40	34.20	600	5.63	34.37	27.12	95	1.02
353	7.34	34.26						
474	6.32	34.34						
606	5.62	34.37						

107.70

CREST; June 18, 1954; 1327 GCT; 29°11'N, 118°42'W; sounding, 1750 fm; wind, 340°, force 3; weather, overcast; sea, rough; wire angle, 16°.

0	17.2	33.38	0	17.2	33.38	24.25	368	0.00
10	17.12	33.37	10	17.12	33.37	24.26	367	0.04
30	17.10	33.37	20	17.10	33.37	24.26	367	0.07
45	16.99	33.34	30	17.10	33.37	24.26	367	0.11
60	16.46	33.31	50	16.85	33.33	24.29	364	0.18
69	15.24	33.20	75	14.89	33.19	24.62	333	0.27
80	14.63	33.18	100	13.32	33.18	24.94	302	0.35
94	14.06	-	150	9.67	33.53	25.88	213	0.48
103	12.52	33.18	200	8.75	33.92	26.33	170	0.58
117	10.33	33.18	250	8.32	34.08	26.52	152	0.66
145	9.78	33.48	300	7.98	34.15	26.63	142	0.74
174	9.17	33.74	400	7.05	34.21	26.81	125	0.88
229	8.44	34.04	500	6.33	34.29	26.97	110	1.00
295	8.02	34.14	600	5.70	34.34	27.09	98	1.11
411	6.94	34.22	700	(5.09)	(34.36)	(27.18)	(90)	(1.21)
547	6.03	34.32						
687	5.16	34.36						

110.33

CREST; June 16, 1954; 2355 GCT; 29°50.5'N, 115°52.5'W; sounding, 48 fm; wind, 270°, force 1; weather, overcast; sea, moderate; wire angle, 00°.

0	13.9	33.34	0	13.9	33.34	24.95	301	0.00
5	12.80	33.40	10	12.24	33.43	25.35	263	0.03
10	12.24	33.43	20	11.52	33.52	25.55	244	0.05
15	11.72	33.47	30	10.97	33.54	25.67	233	0.08
20	11.52	33.52	50	10.61	33.56	25.74	226	0.12
45	10.62	33.56	75	10.62	33.59	25.77	223	0.18
71	10.64	33.58						
81	10.58	33.62						

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

110.40

CREST; June 17, 1954; 0358, 0417 GCT; 29°36'N, 116°21'W; sounding, 1180 fm; wind, 320°, force 4; weather, fog; sea, moderate; wire angle, 12°, 12°.

0	16.7	33.18	0	16.7	33.18	24.21	372	0.00
10	16.63	33.18	10	16.63	33.18	24.23	370	0.04
25	16.50	33.30	20	16.52	33.27	24.32	361	0.07
48	14.58	33.07	30	16.48	33.27	24.33	360	0.11
58	13.73	33.18	50	14.35	33.07	24.64	331	0.18
			75	11.52	33.06	25.19	279	0.26
69	12.96	33.11	100	10.20	33.47	25.75	225	0.32
79	10.91	33.05	150	9.21	33.92	26.26	177	0.42
98	10.29	33.42	200	8.84	34.05	26.42	162	0.51
121	9.30	33.68	250	8.34	34.09	26.53	151	0.59
150	9.21	33.92	300	7.92	34.15	26.64	141	0.66
196	8.88	34.04	400	7.15	34.29	26.86	120	0.80
262	8.22	34.10	500	6.30	34.36	27.03	104	0.92
362	7.45	34.25	600	5.74	34.39	27.13	94	1.02
487	6.41	34.35	700	5.28	34.43	27.21	87	1.12
666	5.44	34.41	800	4.80	34.50	27.32	76	1.21
887	4.45	34.52	1000	4.07	34.53	27.43	66	1.37
1196	3.54	34.54						

110.60

CREST; June 16, 1954; 0453 GCT; 28°56.5'N, 117°40'W; sounding, 2000 fm; wind, 320°, force 2; weather, overcast; sea, smooth; wire angle, 10°.

0	16.8	33.22	0	16.8	33.22	24.22	371	0.00
10	16.50	33.24	10	16.50	33.24	24.30	363	0.04
25	16.42	33.30	20	16.43	33.29	24.36	358	0.07
50	14.68	33.08	30	16.40	33.27	24.35	359	0.11
60	14.24	33.14	50	14.68	33.08	24.58	337	0.18
70	14.06	33.22	75	13.82	33.18	24.84	312	0.26
80	13.37	33.13	100	11.51	33.13	25.25	273	0.33
99	11.62	33.13	150	9.71	33.72	26.02	200	0.45
124	10.06	33.42	200	8.92	34.01	26.38	166	0.55
152	9.68	33.75	250	8.40	34.14	26.56	148	0.63
198	8.94	34.01	300	7.95	34.23	26.70	135	0.70
265	8.26	34.17	400	7.10	34.29	26.87	119	0.83
365	7.39	34.30	500	6.34	34.26	26.95	111	0.96
489	6.42	34.26	600	5.69	34.36	27.11	96	1.07
666	5.36	34.41	700	5.20	34.41	27.21	87	1.17
883	4.48	34.42	800	4.79	34.42	27.26	82	1.26
1184	3.62	34.50	1000	4.11	34.45	27.36	73	1.43

110.80

CREST; June 15, 1954; 1901 GCT; 28°14'N, 118°57.5'W; sounding, 2100 fm; wind, 340°, force 1; weather, overcast; sea, rough; wire angle, 02°.

0	17.5	33.32	0	17.5	33.32	24.13	380	0.00
10	17.42	33.40	10	17.42	33.40	24.21	372	0.04
25	17.40	33.38	20	17.40	33.38	24.20	373	0.08
50	17.14	33.38	30	17.36	33.38	24.21	372	0.11
61	16.98	33.35	50	17.14	33.38	24.26	367	0.19
72	14.94	33.22	75	14.63	33.17	24.66	329	0.27
82	14.07	33.14	100	12.18	33.25	25.22	276	0.35
101	12.16	33.26	150	9.70	33.52	25.87	214	0.47
127	10.53	33.31	200	8.72	33.80	26.24	179	0.57
157	9.52	33.58	250	8.43	34.10	26.52	152	0.66
207	8.66	33.84	300	8.06	34.24	26.69	136	0.73
276	8.28	34.21	400	7.10	34.29	26.87	119	0.87
381	7.26	34.28	500	6.32	34.32	27.00	107	0.99
511	6.25	34.32	600	5.58	34.35	27.11	96	1.09
695	5.06	34.38	700	5.02	34.38	27.20	88	1.19
920	4.29	34.51	800	4.65	34.44	27.29	79	1.28
1229	3.40	34.55	1000	4.03	34.52	27.42	67	1.45

SIO

CCOFI
5406

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

113.35

CREST; June 14, 1954; 1444 GCT; 29°11'N, 115°38.5'W; sounding, 680 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 05°.

0	14.5	33.49	0	14.5	33.49	24.94	302	0.00
10	14.40	33.51	10	14.40	33.51	24.97	300	0.03
30	12.26	33.44	20	14.04	33.46	25.01	296	0.06
46	11.46	33.53	30	12.26	33.44	25.35	263	0.09
56	9.98	33.65	50	11.01	33.57	25.68	232	0.14
66	9.56	33.72	75	9.40	33.89	26.21	182	0.19
75	9.40	33.89	100	9.18	33.97	26.30	173	0.23
86	9.26	33.93	150	9.07	34.07	26.40	164	0.32
101	9.18	33.97	200	8.60	34.16	26.54	150	0.40
111	9.18	33.96	250	8.08	34.22	26.67	138	0.47
136	9.12	34.05	300	7.64	34.24	26.75	130	0.54
166	8.97	34.09	400	6.92	34.27	26.88	118	0.67
220	8.36	34.19	500	6.39	34.36	27.02	105	0.79
285	7.78	34.24	600	5.89	34.41	27.12	95	0.90
398	6.94	34.27						
529	6.24	34.38						
663	5.54	34.42						

113.50

CREST; June 15, 1954; 0032, 0146 GCT; 28°42'N, 116°37'W; sounding, 1900 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 02°, 02°.

0	17.4	33.47	0	17.4	33.47	24.27	366	0.00
10	17.32	33.49	10	17.32	33.49	24.30	363	0.04
30	17.22	33.49	20	17.28	33.49	24.31	362	0.07
45	16.86	33.42	30	17.22	33.49	24.32	361	0.11
55	16.09	33.31	50	16.51	33.36	24.39	355	0.18
65	15.16	33.44	75	13.73	33.43	25.05	292	0.26
76	13.60	33.43	100	12.05	33.55	25.47	252	0.33
85	12.52	33.32	150	9.80	33.74	26.02	200	0.44
101	12.01	33.57	200	9.42	34.13	26.39	164	0.54
111	11.66	33.64	250	9.20	34.31	26.57	148	0.62
136	10.26	33.66	300	8.80	34.38	26.68	137	0.69
166	9.57	33.90	400	7.52	34.31	26.82	124	0.83
221	9.36	34.21	500	6.30	34.35	27.02	105	0.95
285	8.94	34.38	600	5.80	34.37	27.10	97	1.06
401	7.50	34.31	700	5.26	34.45	27.23	85	1.16
531	6.06	34.34	800	4.79	34.48	27.31	77	1.24
667	5.46	34.40	1000	4.09	34.60	27.48	61	1.40
			1200	3.60	34.57	27.51	58	1.54
478	6.58	34.35	1500	2.92	34.62	27.61	49	1.73
534	6.02	34.34	2000	2.18	34.63	27.68	42	2.01
593	5.82	34.36	2500	(1.84)	(34.68)	(27.75)	(36)	(2.25)
664	5.44	34.45						
738	5.08	34.47						
824	4.69	34.49						
913	4.38	34.51						
1014	4.04	34.60						
1134	3.77	34.54						
1261	3.47	34.59						
1402	3.14	34.60						
1565	2.80	34.63						
1746	2.52	34.65						
1946	2.24	34.63						
2172	2.02	34.65						
2416	1.88	34.67						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

CREST; June 15, 1954; 1218 GCT; 28°02'N, 117°56.5'W; sounding, 1950 fm; wind, 290°, force 4; weather, overcast; sea, rough; wire angle, 05°. 113.70

0	17.5	33.53	0	17.5	33.53	24.29	364	0.00
10	17.46	33.53	10	17.46	33.53	24.30	363	0.04
30	17.34	33.48	20	17.40	33.50	24.29	364	0.07
45	16.52	33.44	30	17.34	33.48	24.29	364	0.11
55	15.16	33.30	50	15.75	33.38	24.58	337	0.18
65	14.70	33.22	75	14.21	33.35	24.89	307	0.26
76	14.15	33.35	100	11.70	33.28	25.33	265	0.33
86	13.34	33.25	150	10.18	33.82	26.02	200	0.45
101	11.68	33.28	200	9.25	34.11	26.40	164	0.54
111	11.48	33.43	250	9.32	34.43	26.64	141	0.62
136	10.52	33.71	300	9.20	34.49	26.71	134	0.69
165	9.83	33.93	400	7.72	34.36	26.84	122	0.82
220	9.16	34.20	500	6.80	34.39	26.99	108	0.95
283	9.44	34.50	600	6.02	34.41	27.11	96	1.06
397	7.75	34.36						
527	6.60	34.40						
663	5.60	34.42						

CREST; June 14, 1954; 0319 GCT; 28°48'N, 114°56.5'W; sounding, 52 fm; wind, 300°, force 4; weather, cloudy; sea, rough; wire angle, 17°. 117.30

0	14.6	33.39	0	14.6	33.39	24.84	312	0.00
5	14.46	33.37	10	14.44	33.37	24.86	310	0.03
10	14.44	33.37	20	14.18	33.42	24.95	301	0.06
15	14.32	33.40	30	13.67	33.41	25.05	292	0.09
20	14.18	33.42	50	10.87	33.28	25.48	251	0.15
25	13.88	33.43						
30	13.67	33.41						
45	11.40	33.28						
55	10.46	33.29						
69	9.90	33.46						

CREST; June 13, 1954; 1106, 1132 GCT; 28°28'N, 115°36'W; sounding, 550 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 02°, 05°. 117.40

0	16.5	33.36	0	16.5	33.36	24.39	355	0.00
10	16.46	33.39	10	16.46	33.39	24.43	351	0.04
15	16.40	33.39	20	16.28	33.40	24.47	347	0.07
20	16.28	33.40	30	16.04	33.41	24.54	340	0.10
25	16.08	33.40	50	13.51	33.19	24.91	305	0.17
30	16.04	33.41	75	11.17	33.32	25.46	252	0.24
40	15.10	33.38	100	9.90	33.64	25.93	208	0.30
51	13.39	33.18	150	10.61	34.27	26.30	173	0.39
66	12.24	33.17	200	10.01	34.51	26.59	146	0.48
81	10.46	33.44	250	9.51	34.42	26.60	145	0.55
100	9.90	33.64	300	9.22	34.46	26.68	137	0.63
125	10.77	34.16	400	8.29	34.42	26.80	126	0.76
165	10.41	34.34						
204	9.96	34.51						
257	9.48	34.42						
331	9.07	34.47						
412	8.08	34.41						

SIO

CCOFI
5406

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

117.60

CREST; June 12, 1954; 2037 GCT; 27°41'N, 116°58.5'W; sounding, 1750 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 08°.

0	17.4	33.48	0	17.4	33.48	24.27	366	0.00
10	17.31	33.53	10	17.31	33.53	24.33	360	0.04
25	16.61	33.36	20	16.87	33.44	24.37	357	0.07
35	15.87	33.25	30	16.31	33.30	24.39	355	0.11
44	14.49	33.13	50	13.53	33.14	24.87	309	0.17
49	13.66	33.14	75	11.58	33.42	25.46	253	0.24
60	12.62	33.12	100	10.10	33.74	25.97	204	0.30
70	12.21	33.32	150	10.07	34.22	26.35	168	0.40
85	10.56	33.59	200	9.50	34.39	26.58	146	0.48
105	10.02	33.78	250	8.99	34.41	26.68	137	0.55
131	9.96	34.02	300	8.58	34.42	26.75	130	0.62
168	10.12	34.34	400	7.55	34.43	26.91	115	0.75
218	9.27	34.40	500	6.49	34.47	27.09	98	0.86
282	8.73	34.42	600	5.81	34.48	27.19	89	0.96
396	7.60	34.43						
525	6.30	34.47						
660	5.53	34.49						

117.60

CREST; June 12, 1954; 2139 GCT; 27°41'N, 116°58.5'W; sounding, 1750 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 08°.

0	17.5	33.48	0	17.5	33.48	24.25	368	0.00
10	17.36	33.46	10	17.36	33.46	24.27	366	0.04
30	16.25	33.36	20	16.91	33.43	24.35	359	0.07
45	13.66	33.17	30	16.25	33.36	24.45	349	0.11
55	12.48	33.17	50	12.99	33.17	25.00	297	0.17
65	11.58	33.37	75	11.28	33.47	25.56	243	0.24
76	11.22	33.48	100	10.42	33.78	25.95	206	0.30
86	10.50	33.59	150	9.85	34.14	26.33	170	0.39
101	10.40	33.78	200	9.60	34.33	26.52	152	0.48
111	10.04	33.78	250	9.12	34.41	26.66	139	0.55
136	9.90	34.03	300	8.51	34.42	26.76	129	0.62
165	9.79	34.23	400	7.41	34.38	26.89	117	0.75
220	9.44	34.37	500	6.58	34.39	27.02	105	0.87
283	8.73	34.42	600	5.91	34.44	27.14	93	0.97
396	7.45	34.38						
524	6.40	34.40						
661	5.54	34.47						

120.25

CREST; June 9, 1954; 2006 GCT; 28°23'N, 114°14.5'W; sounding, 31 fm; wind, 290°, force 5; weather, clear; sea, rough; wire angle, 10°.

0	17.2	33.55	0	17.2	33.55	24.38	356	0.00
10	17.14	33.55	10	17.14	33.55	24.39	355	0.04
20	14.00	33.36	20	14.00	33.36	24.94	302	0.07
25	12.03	33.22	30	11.48	33.22	25.32	266	0.10
30	11.48	33.22						
35	11.18	33.26						
40	10.75	33.27						
45	10.98	33.37						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

CREST; June 10, 1954; 0151 GCT; 28°02.5'N, 114°55'W; sounding, 47 fm; wind, 320°, force 7; weather, clear; sea, very rough; wire angle, 24°. 120.35

0	16.4	33.53	0	16.4	33.53	24.55	340	0.00
5	16.36	33.42r	10	16.34	33.53	24.56	339	0.03
10	16.34	33.53	20	16.36	33.52	24.55	340	0.07
15	16.36	33.51	30	15.43	33.51	24.75	320	0.10
20	16.36	33.52	50	10.27	33.39	25.67	233	0.16
24	16.34	33.49						
29	15.72	33.51						
43	11.26	33.26						
52	10.13	33.44						
66	9.78	33.59						

CREST; June 11, 1954; 0919 GCT; 27°33'N, 115°52'W; sounding, 2100 fm; wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 15°. 120.50

0	17.4	33.45	0	17.4	33.45	24.25	368	0.00
10	17.32	33.47	10	17.32	33.47	24.29	364	0.04
30	17.28	33.48	20	17.27	33.48	24.31	362	0.07
55	12.66	33.38	30	17.28	33.48	24.30	363	0.11
70	11.24	33.34	50	13.39	33.40	25.10	287	0.18
80	12.00	33.71	75	11.76	33.47	25.47	252	0.24
95	10.70	33.70	100	10.53	33.71	25.87	214	0.30
119	10.18	33.89	150	9.79	34.12	26.32	171	0.40
153	9.74	34.14	200	9.90	34.44	26.55	149	0.48
178	9.46	34.25	250	10.32	34.60	26.60	145	0.56
237	10.40	34.61	300	9.32	34.55	26.73	132	0.63
319	8.96	34.53	400	7.42	34.42	26.92	114	0.76
433	7.06	34.41	500	6.55	34.42	27.04	103	0.87
586	6.02	34.43	600	5.93	34.43	27.13	94	0.98
796	4.92	34.47	700	5.37	34.45	27.22	86	1.08
1045	3.99	34.52	800	4.89	34.47	27.29	79	1.17
1377	3.18	34.58	1000	4.12	34.51	27.41	68	1.33

CREST; June 11, 1954; 1941 GCT; 26°56'N, 117°09'W; sounding, 2100 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 28°. 120.70

0	17.6	33.66	0	17.6	33.66	24.36	358	0.00
10	17.52	33.69	10	17.52	33.69	24.41	353	0.04
28	15.45	33.40	20	17.39	33.54	24.32	361	0.07
51	11.32	33.25	30	14.90	33.38	24.77	319	0.10
64	10.88	33.46	50	11.42	33.25	25.36	262	0.16
72	10.53	33.53	75	10.46	33.56	25.77	223	0.22
86	10.27	33.67	100	9.77	33.76	26.04	198	0.28
107	9.69	33.79	150	9.64	34.15	26.37	166	0.37
129	9.90	34.05	200	9.20	34.28	26.54	150	0.45
148	9.68	34.14	250	8.50	34.29	26.66	139	0.52
196	9.24	34.28	300	8.12	34.34	26.76	129	0.60
263	8.34	34.30	400	7.20	34.39	26.93	113	0.72
355	7.72	34.39	500	6.33	34.38	27.04	103	0.84
481	6.48	34.38	600	5.72	34.38	27.12	95	0.94
652	5.41	34.39	700	5.10	34.41	27.22	86	1.04
858	4.26	34.50	800	4.51	34.47	27.33	75	1.13
1147	3.57	34.60	1000	3.85	34.56	27.47	62	1.28

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

120.90

CREST; June 12, 1954; 0545 GCT; 26°12'N, 118°27'W; sounding, 2200 fm; wind, 340°, force 5; weather, overcast; sea, moderate; wire angle, 14°.

0	17.8	33.43	0	17.80	33.43	24.14	379	0.00
10	17.80	33.47	10	17.80	33.47	24.17	376	0.04
30	17.77	33.42	20	17.79	33.44	24.15	378	0.08
55	16.33	33.40	30	17.77	33.42	24.14	379	0.11
70	15.84	33.49	50	16.60	33.40	24.40	354	0.19
80	15.50	33.48	75	15.68	33.49	24.68	327	0.27
96	14.47	33.45	100	14.19	33.45	24.97	300	0.35
121	12.22	33.49	150	10.25	33.69	25.91	210	0.48
156	10.10	33.76	200	9.69	34.18	26.38	166	0.58
180	9.87	34.11	250	9.31	34.30	26.54	150	0.66
239	9.38	34.27	300	9.02	34.50	26.74	131	0.73
321	8.88	34.52	400	8.17	34.49	26.87	119	0.86
434	7.72	34.48	500	6.85	34.48	27.05	102	0.98
586	6.08	34.48	600	5.96	34.48	27.17	91	1.08
792	4.86	34.53	700	5.32	34.50	27.26	82	1.18
1039	3.88	34.66	800	4.81	34.53	27.35	74	1.26
1370	3.08	34.66	1000	4.00	34.66	27.54	56	1.41

123.40

CREST; June 9, 1954; 0722 GCT; 27°18'N, 114°52'W; sounding, 310 fm; wind, 320°, force 5; weather, clear; sea, rough; wire angle, 45°.

0	15.3	33.42	0	15.3	33.42	24.71	324	0.00
8	15.32	33.42	10	15.32	33.42	24.71	324	0.03
23	12.82	33.30	20	13.27	33.31	25.05	292	0.06
30	11.85	33.38	30	11.85	33.38	25.38	260	0.09
39	10.67	33.33	50	11.79	33.82	25.73	227	0.14
45	11.36	33.70	75	11.26	34.11	26.06	196	0.19
51	11.82	33.85	100	11.20	34.32	26.23	180	0.24
57	11.84	34.02	150	11.04	34.48	26.38	166	0.33
63	11.54	34.02	200	10.73	34.53	26.48	156	0.41
69	11.37	34.08	250	10.20	34.55	26.59	146	0.49
80	11.20	34.13	300	9.54	34.59	26.73	132	0.56
94	11.14	34.26						
105	11.26	34.35						
126	11.16	34.40						
172	10.94	34.52						
234	10.41	34.54						
317	9.31	34.60						

123.60

CREST; June 8, 1954; 1934 GCT; 26°37'N, 116°09.5'W; sounding, 2000 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 18°.

0	17.5	33.38	0	17.5	33.38	24.17	376	0.00
10	17.51	33.39	10	17.51	33.39	24.18	375	0.04
25	17.38	33.37	20	17.40	33.37	24.19	374	0.08
34	17.37	33.38	30	17.39	33.38	24.20	373	0.11
43	16.36	33.37	50	15.71	33.34	24.56	339	0.18
48	15.86	33.36	75	13.88	33.25	24.88	308	0.26
56	15.41	33.29	100	12.78	33.64	25.40	259	0.34
66	14.70	33.32	150	11.30	34.15	26.08	194	0.45
80	13.50	33.24	200	9.79	34.24	26.41	163	0.54
97	12.88	33.59	250	8.97	34.31	26.60	145	0.62
119	12.14	33.91	300	8.21	34.31	26.72	133	0.69
154	11.18	34.17	400	7.15	34.35	26.91	115	0.82
198	9.82	34.24	500	6.35	34.40	27.06	101	0.94
256	8.88	34.31	600	5.55	34.40	27.16	92	1.04
360	7.51	34.31						
479	6.52	34.40						
612	5.47	34.40						

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

CREST; June 7, 1954; 2109 GCT; 26°55'N, 114°06'W; sounding, 44 fm; wind, 280°, force 5; weather, clear; sea, moderate; wire angle, 18°. 127.34

0	14.0	33.53	0	14.0	33.53	25.07	290	0.00
10	13.28	33.62	10	13.28	33.62	25.29	269	0.03
15	12.79	33.66	20	12.16	33.66	25.54	245	0.05
20	12.16	33.66	30	11.18	33.82	25.85	216	0.08
25	11.48	33.71	50	11.14	34.11	26.08	194	0.12
30	11.18	33.82						
45	11.16	34.00						
55	11.12	34.20						
69	11.24	34.33						

CREST; June 8, 1954; 0730, 0748 GCT; 26°22'N, 115°07.5'W; sounding, 1650 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 18°, 22°. 127.50

0	18.1	33.53	0	18.1	33.53	24.14	379	0.00
10	18.04	33.56	10	18.04	33.56	24.18	375	0.04
25	18.02	33.53	20	18.02	33.54	24.17	376	0.08
35	17.99	33.54	30	18.01	33.54	24.17	376	0.11
45	17.45	33.49	50	16.82	33.42	24.37	357	0.19
50	16.82	33.42	75	15.86	33.57	24.70	325	0.27
61	16.50	33.46	100	13.29	33.34	25.07	290	0.35
			150	10.97	33.87	25.92	209	0.48
64	16.46	33.50	200	10.82	34.38	26.34	169	0.57
77	15.68	33.57	250	10.56	34.60	26.56	148	0.65
94	13.64	33.35	300	9.67	34.57	26.69	136	0.73
115	12.62	33.34	400	8.19	34.47	26.85	121	0.86
149	10.98	33.85	500	7.04	34.43	26.99	108	0.98
193	10.84	34.33	600	6.12	34.43	27.11	96	1.10
250	10.56	34.60						
353	8.88	34.52						
473	7.35	34.43						
604	6.09	34.43						

CREST; June 7, 1954; 1617 GCT; 26°29'N, 113°29.5'W; sounding, 43 fm; wind, 240°, force 2; weather, clear; sea, moderate; wire angle, 00°. 130.30

0	13.4	33.60	0	13.4	33.60	25.25	273	0.00
10	12.93	33.59	10	12.93	33.59	25.34	264	0.03
15	12.74	33.57	20	12.74	33.66	25.43	256	0.05
20	12.74	33.66	30	11.93	33.54	25.49	250	0.08
25	12.38	33.66	50	11.06	33.89	25.92	209	0.12
30	11.93	33.54	75	(11.26)	(34.20)	(26.13)	(189)	(0.18)
45	11.11	33.80						
56	11.04	33.98						
71	11.20	34.16						

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

130.40 CREST; June 7, 1954; 0955 GCT; 26°08'N, 114°09.5'W; sounding, 1500 fm; wind, 310°, force 4; weather, clear; sea, rough; wire angle, 30°.

0	15.80	33.45	0	15.8	33.45	24.62	333	0.00
10	15.43	33.43	10	15.43	33.43	24.69	326	0.03
23	15.42	33.42	20	15.43	33.42	24.68	327	0.07
50	13.78	33.38	30	15.05	33.41	24.76	320	0.10
58	13.44	33.63	50	13.78	33.38	25.00	297	0.16
67	13.03	33.78	75	13.23	33.93	25.54	245	0.23
80	13.28	33.96	100	11.03	33.97	25.99	202	0.28
95	11.12	33.96	150	10.51	34.35	26.38	166	0.38
115	10.89	34.12	200	10.58	34.59	26.55	149	0.46
136	10.46	34.19	250	10.00	34.57	26.64	141	0.53
179	10.66	34.59	300	9.21	34.57	26.77	128	0.60
239	10.17	34.57	400	7.80	34.45	26.89	117	0.73
324	8.87	34.56	500	6.92	34.45	27.02	105	0.85
439	7.41	34.44	600	6.22	34.47	27.13	94	0.96
595	6.26	34.47	700	5.49	34.48	27.23	85	1.06
794	4.98	34.49	800	4.93	34.49	27.30	78	1.15
1072	4.14	34.52	1000	4.29	34.51	27.39	70	1.32

130.60 CREST; June 6, 1954; 2123 GCT; 25°29'N, 115°27'W; sounding, 2100 fm; wind, 330°, force 5; weather, clear; sea, very rough; wire angle, 17°.

0	18.8	33.73	0	18.8	33.73	24.12	380	0.00
10	18.38	33.68	10	18.38	33.68	24.19	374	0.04
30	18.28	33.70	20	18.30	33.69	24.22	371	0.08
55	16.70	33.44	30	18.28	33.70	24.23	370	0.11
69	15.74	33.40	50	17.08	33.48	24.35	359	0.18
78	15.32	33.48	75	15.47	33.47	24.71	324	0.27
93	13.94	33.30	100	13.44	33.31	25.02	295	0.35
116	12.48	33.63	150	11.12	34.03	26.02	200	0.47
149	11.12	34.02	200	10.28	34.31	26.39	164	0.57
172	11.05	34.31	250	9.30	34.32	26.56	148	0.65
228	9.45	34.30	300	9.03	34.42	26.68	137	0.72
307	9.00	34.43	400	8.01	34.45	26.86	120	0.86
417	7.82	34.45	500	6.95	34.44	27.01	106	0.98
564	6.42	34.44	600	6.16	34.44	27.11	96	1.09
764	5.24	34.51	700	5.55	34.48	27.22	86	1.19
1004	4.22	34.52	800	5.02	34.52	27.31	77	1.28
1325	3.38	34.57	1000	4.21	34.52	27.40	69	1.44

133.30 CREST; June 6, 1954; 0214 GCT; 25°54'N, 113°07'W; sounding, 107 fm; wind, 300°, force 4; weather, clear; sea, rough; wire angle, 20°.

0	16.6	33.59	0	16.6	33.59	24.55	340	0.00
10	16.58	33.53	10	16.58	33.53	24.51	343	0.03
15	16.54	33.57	20	16.14	33.61	24.67	328	0.07
20	16.14	33.61	30	15.21	33.64	24.90	306	0.10
25	15.78	33.62	50	11.49	33.79	25.77	223	0.15
30	15.21	33.64	75	11.90	34.24	26.04	198	0.21
35	12.70	33.49	100	11.64	34.40	26.21	182	0.25
44	11.54	33.66	150	11.23	34.67	26.50	154	0.34
55	11.50	33.88						
64	12.08	34.15						
79	11.84	34.27						
97	11.67	34.38						
116	11.56	34.46						
149	11.27	34.67						
174	11.02	34.65						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	$\delta_{T_3}^{-5}$	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

CREST; June 6, 1954; 1301 GCT; 25°12.5'N, 114°22.5'W; sounding, 1900 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 22°. 133.50

0	16.9	33.42	0	16.90	33.42	24.35	359	0.00
10	16.93	33.44	10	16.93	33.44	24.36	358	0.04
29	16.92	33.48	20	16.93	33.47	24.38	356	0.07
44	16.41	33.44	30	16.90	33.48	24.39	355	0.11
59	15.58	33.40	50	16.15	33.42	24.52	342	0.18
69	14.06	33.33	75	13.49	33.34	25.03	294	0.26
78	13.29	33.36	100	13.22	33.88	25.50	249	0.32
92	12.76	33.70	150	10.98	34.07	26.08	194	0.44
101	13.24	33.93	200	10.82	34.48	26.42	162	0.53
114	12.80	34.16	250	10.33	34.52	26.54	150	0.61
141	10.96	34.04	300	9.76	34.52	26.64	141	0.68
167	11.04	34.32	400	8.58	34.49	26.81	125	0.82
221	10.62	34.51	500	7.33	34.50	27.00	107	0.95
285	9.92	34.52	600	6.30	34.48	27.12	95	1.06
398	8.62	34.49						
533	6.95	34.50						
674	5.69	34.45						

CREST; June 5, 1954; 1833 GCT; 25°33.5'N, 112°20.5'W; sounding, 40 fm; wind, 300°, force 4; weather, clear; sea, moderate; wire angle, 05°. 137.23

0	16.8	33.66	0	16.8	33.66	24.55	340	0.00
5	16.54	33.72	10	16.32	33.68	24.68	327	0.03
10	16.32	33.68	20	14.60	33.69	25.07	290	0.06
15	15.50	33.71	30	13.49	33.96	25.51	248	0.09
20	14.60	33.69	50	12.90	34.16	25.78	222	0.14
25	13.73	33.92						
30	13.49	33.96						
40	13.26	34.05						
55	12.71	34.20						
66	12.39	34.26						

CREST; June 5, 1954; 0900 GCT; 24°56'N, 113°22.5'W; sounding, 1975 fm; wind, 320°, force 6; weather, clear; sea, rough; wire angle, 30°. 137.40

0	18.3	33.53	0	18.3	33.53	24.09	383	0.00
10	18.23	33.57	10	18.23	33.57	24.14	379	0.04
28	18.17	33.53	20	18.18	33.55	24.14	379	0.08
40	15.48	33.30	30	18.16	33.51	24.11	382	0.11
49	14.45	33.22	50	14.36	33.22	24.76	320	0.18
57	13.92	33.28	75	12.63	33.35	25.21	277	0.26
65	13.02	33.22	100	12.00	33.86	25.72	228	0.32
73	12.68	33.28	150	11.01	34.38	26.31	172	0.42
84	12.47	33.61	200	10.50	34.54	26.53	151	0.51
90	12.34	33.77	250	10.07	34.56	26.62	143	0.58
109	11.60	33.93	300	9.55	34.56	26.70	135	0.66
130	11.30	34.22	400	8.38	34.48	26.83	123	0.79
173	10.75	34.49	500	7.21	34.45	26.98	109	0.92
223	10.31	34.56						
315	9.38	34.55						
425	8.07	34.47						
550	6.70	34.45						

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
50.47-H	VI-5	1614	39°46.0'	123°54.0'	52	calm		partly cloudy	rough	9.19	33.77
50.60-H	5	2305	39°20.0'	124°52.0'	1600	310°	2	partly cloudy	rough	13.52	32.62
50.80-H	6	0833	38°41.0'	126°21.0'	2400	320°	4	clear	rough	13.24	32.65
50.100-H	6	1722	38°00.0'	127°49.0'	2550	270°	2	cloudy	rough	13.84	32.88
53.55-H	5	0947	38°55.5'	124°04.5'	650	270°	3	clear	rough	10.59	33.01
57.51-H	4	1648	38°30.0'	123°22.0'	54	240°	2	partly cloudy	rough	8.48	33.89
57.65-H	4	2331	38°02.0'	124°23.5'	2180	250°	4	partly cloudy	rough	11.26	33.38
60.55-H	8	0238	37°47.5'	123°14.5'	68	310°	3	partly cloudy	moderate	10.20	33.40
60.70-H	7	1850	37°17.0'	124°19.0'	2200	290°	4	cloudy	rough	12.72a)	32.72
60.90-H	7	0919	36°36.5'	125°49.0'	2500	320°	4	clear	rough	14.04	32.95
63.52-H	9	1924	37°18.5'	122°36.5'	43	220°	3	cloudy	moderate	11.30	33.04
63.65-H	10	0115	36°53.5'	123°33.0'	1850	320°	4	cloudy	rough	12.64	33.47
67.55-H	10	1016	36°40.5'	122°26.5'	1150	320°	4	clear	rough	13.56	33.07
70.55-H	12	0012	36°03.5'	122°01.5'	760	300°	5	cloudy	rough	12.90	33.10
70.70-H	12	0743	35°33.0'	123°06.0'	2100	270°	3	cloudy	rough	14.48	32.87

a) Average value of 12.77 and 12.66°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
70.90-H	VI-12	1700	34°52.5'	124°26.5'	2350	340°	4	cloudy	rough	14.98	32.87
73.50-H	10	2047	35°37.0'	121°16.5'	48	320°	4	partly cloudy	rough	10.43	33.60
77.50-H	11	0030	35°05.0'	120°52.0'	80	320°	6	partly cloudy	rough	10.68	33.79
77.65-H	11	0803	34°30.5'	122°03.5'	2100	320°	6	clear	very rough	12.21	33.40
80.51-H	14	0940	34°26.5'	120°32.5'	50	300°	6	cloudy	high	10.48	33.84
80.60-H	14	0428	34°16.5'	121°11.0'	1150	320°	7	clear	high	13.02	33.48
80.70-H	13	2346	33°50.0'	121°52.0'	2000	320°	7	clear	high	13.96	33.12
80.80-H	13	1909	33°28.0'	122°32.0'	2150	320°	6	partly cloudy	very rough	15.06	33.04
80.100-H	13	0902	32°49.0'	123°54.0'	2400	330°	6	partly cloudy	very rough	15.88	33.01
83.40-H	14	1800	34°14.0'	119°23.5'	12	calm		clear	slight	14.89	33.48
83.48-H	15	1535	33°58.5'	119°55.0'	100	340°	3	partly cloudy	slight	13.73	33.57
83.55-H	15	1930	33°43.5'	120°25.5'	655	330°	5	fog	very rough	12.58	33.51
83.70-H	16	0243	33°14.0'	121°27.0'	2100	320°	6	partly cloudy	very rough	14.03	33.32
83.90-H	16	1141	32°38.5'	122°51.0'	2300	320°	5	drizzle	very rough	15.12	33.26
85.50-H	15	0435	33°37.0'	119°51.5'	190	310°	5	clear	very rough	14.46	33.64
85.60-H	15	0957	33°13.5'	120°32.0'	655	340°	5	clear	high	13.28	33.40
87.35-H	17	2001	33°51.0'	118°38.5'	270	260°	2	cloudy	rough	16.86	33.43

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
87.45-H	VI-17	1501	33°30.0'	119°18.5'	930	320°	3	overcast	rough	14.38	33.53
87.55-H	17	0943	33°08.0'	119°59.5'	700	320°	7	clear	high	12.98	33.49
87.90-H	16	1615	32°03.0'	122°28.0'	2250	310°	6	cloudy	very rough	16.02	33.13
90.30-H	18	0753	33°24.0'	117°55.5'	310	290°	2	cloudy	slight	18.21	33.45
90.33^{5}-H	18	0948	33°17.5'	118°10.0'	400	220°	1	cloudy	slight	17.62	33.46
90.41-H	18	1420	33°02.5'	118°40.0'	180	180°	2	overcast	rough	15.75	33.42
90.45-H	18	1617	32°54.5'	118°56.0'	950	220°	1	cloudy	rough	16.18	33.44
90.50-H	18	1845	32°44.5'	119°17.5'	240	270°	4	clear	very rough	14.22	33.42
90.60-H	18	2356	32°25.0'	119°57.5'	520	320°	5	clear	very rough	14.10	33.33
93.27-H	21	0059	32°55.5'	117°18.5'	100	240°	1	cloudy	moderate	15.80	33.42
93.35-H	20	2120	32°48.0'	117°53.0'	341	140°	2	overcast	moderate	17.72	33.40
93.40-H	20	1918	32°45.5'	118°13.5'	725	140°	3	cloudy	moderate	17.42	33.43
93.45-H	20	1703	32°38.0'	118°37.0'	600	290°	1	cloudy	rough	16.21	33.40
93.55-H	20	1203	32°26.0'	119°21.5'	280	330°	5	clear	rough	14.10	33.42
93.60-H	20	0939	32°09.5'	119°40.0'	1900	320°	5	clear	high	13.88	33.39
97.30-C	23	0130	32°15.5'	117°09.0'	32	320°	4	partly cloudy	moderate	15.92	33.39
97.32-C	23	0005	32°11.5'	117°17.0'	800	300°	3	overcast	moderate	17.15	33.46

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
97.36-C	VI-22	2204	32°03.0'	117°33.5'	820	310°	3	overcast	rough	17.28	33.48
97.45-C	22	1704	31°43.0'	118°09.5'	800	330°	2	overcast	rough	16.91	33.40
97.50-C	22	1415	31°35.0'	118°30.0'	1350	310°	3	overcast	rough	16.53	33.35
97.55-C	22	1205	31°26.0'	118°47.0'	1200	290°	4	overcast	moderate	16.18	33.34
97.70-C	22	0420	30°55.0'	119°50.0'	1900	280°	3	overcast	moderate	16.60	33.43
97.90-C	21	1845	30°15.0'	121°12.5'	2100	200°	3	overcast	moderate	16.06	33.31
100.30-C	20	0505	31°40.5'	116°46.5'	230	330°	2	overcast	slight	17.32	33.48
100.35-C	20	0725	31°31.0'	117°07.0'	720	240°	2	overcast	moderate	16.52	33.37
100.40-C	20	0955	31°21.0'	117°27.5'	1000	240°	3	overcast	rough	16.37	33.38
100.45-C	20	1215	31°13.0'	117°47.0'	950	260°	2	overcast	rough	16.84	33.54
100.55-C	20	1822	30°56.5'	118°23.5'	950	260°	2	overcast	rough	16.46	33.27
100.60-C	20	2105	30°45.5'	118°44.0'	1600	180°	2	overcast	very rough	16.60	33.30
100.80-C	21	0720	30°01.0'	120°07.0'	2200	310°	2	overcast	very rough	16.08	33.33
103.35-C	19	2039	30°55.5'	116°46.0'	1050	310°	3	overcast	rough	16.79	33.35
103.45-C	19	1513	30°36.5'	117°24.5'	450	300°	4	cloudy	rough	16.10	33.35
103.50-C	19	1250	30°23.0'	117°44.0'	1200	310°	5	clear	rough	16.24	33.31
103.55-C	19	1015	30°14.0'	118°04.5'	1300	310°	5	clear	rough	16.62	33.35

SIO
CCOFI
5406

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
113.47^{5}-C	VI-14	2248	28°47.0'	116°27.0'	2150	310°	4	overcast	rough	17.30	33.44
113.55-C	15	0505	28°32.0'	116°56.5'	1900	290°	4	missing	rough	17.38	33.46
113.60-C	15	0735	28°22.5'	117°16.0'	2000	290°	4	missing	rough	17.68	33.51
117.26-C	14	0602	28°56.0'	114°41.0'	44	290°	5	clear	moderate	14.66	33.33
117.28-C	14	0440	28°52.0'	114°48.5'	49	280°	4	clear	moderate	14.94	33.39
117.32^{5}-C	14	0145	28°43.0'	115°06.5'	83	300°	5	overcast	rough	15.22	33.35
117.35-C	14	0010	28°38.0'	115°17.0'	105	310°	6	overcast	rough	16.08	33.37
117.37^{5}-C	13	2225	28°31.0'	115°27.0'	150	300°	5	overcast	rough	16.56	33.39
117.42^{5}-C	13	0910	28°23.0'	115°45.5'	800	320°	4	missing	rough	16.46	33.36
117.45-C	13	0733	28°18.0'	115°55.5'	1850	320°	4	overcast	rough	17.52	33.49
117.47^{5}-C	13	0530	28°11.0'	116°04.0'	2400	330°	6	overcast	rough	17.42	33.51
117.50-C	13	0400	28°04.5'	116°12.5'	2200	320°	4	missing	rough	17.52	33.47
117.55-C	13	0125	27°55.0'	116°32.0'	2300	310°	5	cloudy	rough	17.40	33.55
117.70-C	12	1600	27°24.0'	117°30.5'	2150	330°	5	overcast	rough	17.39	33.51
120.27^{5}-C	9	2130	28°18.0'	114°24.0'	47	310°	6	clear	rough	16.65	33.51
120.30-C	9	2300	28°13.0'	114°34.0'	52	310°	6	partly cloudy	rough	16.46	33.49
120.32^{5}-C	10	0012	28°07.5'	114°44.5'	46	320°	6	clear	very rough	16.56	33.48

SIO
CCOFI
5406

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
120.37^{5}-C	VI-10	0304	27°58.5'	115°03.0'	41	350°	4	clear	moderate	16.70	33.48
120.40-C	11	0256	28°55.5'	115°16.0'	27	320°	7	partly cloudy	missing	16.22	33.51
120.42^{5}-C	11	0415	27°48.0'	115°23.0'	120	320°	6	missing	rough	16.22	33.42
120.45-C	11	0540	27°42.0'	115°33.0'	1400	320°	6	missing	rough	16.98	33.46
120.47^{5}-C	11	0720	27°37.5'	115°42.0'	2400	320°	6	missing	very rough	17.54	33.63
120.55-C	11	1223	27°22.5'	116°12.0'	2000	320°	4	cloudy	rough	17.36	33.50
120.60-C	11	1455	27°13.0'	116°32.0'	2000	330°	4	cloudy	rough	17.27	33.51
120.80-C	12	0103	26°32.0'	117°49.0'	2100	330°	5	cloudy	rough	17.71	33.43
123.37-C	9	0920	27°24.0'	114°40.0'	40	290°	3	missing	rough	12.02	33.84
123.42^{5}-C	9	0525	27°13.0'	115°01.5'	1100	320°	6	clear	rough	16.54	33.40
123.45-C	9	0350	27°08.0'	115°11.0'	2200	330°	5	partly cloudy	rough	17.93	33.66
123.47^{5}-C	9	0218	27°03.0'	115°21.0'	2100	330°	5	partly cloudy	rough	17.94	33.58
123.50-C	9	0045	26°58.0'	115°30.5'	2000	320°	5	partly cloudy	rough	18.11	33.52
123.55-C	8	2215	26°47.5'	115°50.0'	2000	340°	5	cloudy	rough	17.72	33.46
127.37-C	7	2300	26°49.5'	114°17.0'	1300	300°	5	clear	rough	14.88	33.51
127.40-C	8	0050	26°43.5'	114°29.0'	1650	310°	5	clear	rough	15.94	33.46
127.42^{5}-C	8	0220	26°38.5'	114°38.0'	2000	300°	5	clear	very rough	15.70	33.49

TEMPERATURE AND SALINITY AT 10 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
127.45-C	VI-8	0358	26°33.0'	114°48.0'	1770	310°	5	clear	rough	17.30	33.43
127.47.5-C	8	0530	26°27.5'	114°58.0'	1900	320°	5	clear	rough	18.28	33.74
127.55-C	8	1033	26°10.5'	115°27.0'	2000	320°	5	clear	rough	17.97	33.51
127.60-C	8	1330	26°01.0'	115°47.5'	2000	340°	6	cloudy	rough	17.72	33.48
130.35-C	7	1325	26°17.0'	113°48.0'	335	310°	4	clear	rough	16.09	33.47
130.45-C	7	0650	25°58.5'	114°27.0'	1900	320°	5	missing	rough	18.38	33.78
130.50-C	7	0425	25°50.0'	114°46.5'	1950	320°	5	missing	rough	18.54	33.88
130.55-C	7	0135	25°40.0'	115°07.0'	2000	320°	5	partly cloudy	very rough	18.26	33.71
133.25-C	5	2315	26°04.0'	112°50.0	50	270°	5	clear	rough	15.62	33.87
133.35-C	6	0450	25°44.0'	113°26.5'	400	320°	5	clear	rough	16.37	33.58
133.40-C	6	0725	25°34.0'	113°45.0'	1500	320°	5	missing	rough	15.87	33.37
133.45-C	6	0955	25°23.5'	114°04.0'	1900	320°	6	missing	rough	17.10	33.58
137.30-C	5	1510	25°20.0'	112°45.5'	200	320°	4	missing	rough	16.12	33.58
137.35-C	5	1155	25°04.5'	113°03.0'	650	320°	4	missing	rough	17.71	33.56
137.45-C	5	0546	24°47.5'	113°42.0'	1750	320°	4	missing	rough	18.32	33.55
137.50-C	5	0305	24°39.0'	114°01.5'	1840	310°	4	partly cloudy	rough	18.12	33.53

DISTRIBUTION LIST

Dr. E. H. Ahlstrom
Bureau of Commercial Fisheries
c/o Scripps Institution of Oceanography
La Jolla, California

Dr. Ernest R. Anderson
Code 2233
U. S. Navy Electronics Laboratory
San Diego 52, California

Mr. William Anderson
Bureau of Commercial Fisheries
Brunswick, Georgia

Mr. Thomas S. Austin
Bureau of Commercial Fisheries
Biological Laboratory
P. O. Box 3830
Honolulu 12, Hawaii

Dr. Leo D. Berner
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. Rolf Bolin
Hopkins Marine Station
Pacific Grove, California

Dr. Edward Brinton
University of California
Scripps Institution of Oceanography
La Jolla, California

British Joint Services
(Navy Staff)
1910 K Street N. W.
Washington, D. C.

Dr. Wayne V. Burt
Assoc. Prof. of Oceanography
School of Science
Oregon State College
Corvallis, Oregon

Mr. J. G. Burnette, Chairman
Marine Research Committee
P. O. Box 807
Los Altos, California

Librarian (4)
Department of Fish and Game
California State Fisheries Laboratory
Terminal Island, California

Mr. Ray Cannon
Ocean Fish Protective Association
645 N. Serrano Street
Los Angeles 4, California

Chief, Division of Fisheries
Commonwealth Scientific and Industrial
Research Organization
P. O. Box 21
Crunulla, N. S. W., Australia

Mr. Harold B. Clemens, Jr.
Marine Resources Operations
California State Fisheries Laboratory
Terminal Island, California

Mr. R. S. Croker, Director
California Department of Fish and Game
Marine Fisheries Laboratory Branch
772 Capitol Avenue
Sacramento 14, California

Herrn Professor Dr. A. Defant
Sternwartestrasse 38
Innsbruck
Austria

Chief
Division of Biological Research
U. S. Fish and Wildlife Service
Bureau of Commercial Fisheries
Washington 25, D. C.

Director of Research
Fish Commission of Oregon
Route 1, Box 31A
Clackamas, Oregon

Dr. Richard H. Fleming
University of Washington
Oceanographic Laboratories
Seattle 5, Washington

Mr. Jeffery D. Frautschy
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. Paul M. Fye
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts

Hancock Library of Biology and
Oceanography
Allan Hancock Foundation
University of Southern California
Los Angeles 7, California

Mr. John Hawk
c/o Seafarers' International Union of
North America
450 Harrison Street
San Francisco 5, California

Dr. Robert W. Hiatt
University of Hawaii
Honolulu, Hawaii

Mr. T. Hirano
Tokai Regional Fisheries Research
Laboratory
Tsukishima
Tokyo, Japan

Director
Instituto de Geofísica
Torre de Ciencias, 3er piso
Universidad Nacional Autónoma de
México
Villa Obregón, D. F.
México

Mr. John D. Isaacs
Program Director, Marine Life Research
University of California
Scripps Institution of Oceanography
La Jolla, California

Mr. Milton C. James
Pacific Marine Fishery Commission
340 State Office Building
1400 S. W. Fifth Avenue
Portland 1, Oregon

Japan Meteorological Agency
Oceanographical Section
Tokyo, Japan

Dr. Martin W. Johnson
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. H. Kitamura
Oceanographic Section
Kobe Marine Observatory
Kobe, Japan

Mr. Hans T. Klein
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. E. Koto
Institute of Fisheries
Hokkaido University
Hakodate, Japan

Mr. Joseph Mardesich
Franco-Italian Packing Company
Fish Harbor Wharf
Terminal Island, California

Dr. J. L. McHugh
Virginia Fisheries Laboratory
Gloucester Point, Virginia

Mr. Arthur H. Mendonca
c/o R. E. Booth Company, Inc.
280 Battery Street
San Francisco 11, California

Mr. John V. Morris
French Sardine Company
582 Tuna Street
Terminal Island, California

Dr. A. W. H. Needler, Director
Pacific Biological Station
Nanaimo, B. C.
Canada

Dr. Robert M. Norris
Department of Physical Sciences
University of California
Santa Barbara Campus
Goleta, California

Pusan Fisheries College
Pusan
Korea

Chief of Naval Research
Office of Naval Research
Geophysics Branch
Washington 25, D. C.

Dr. E. C. La Fond
Code 2235
U. S. Navy Electronics Laboratory
San Diego 52, California

Mr. John C. Marr
Bureau of Commercial Fisheries
Biological Laboratory
P. O. Box 3830
Honolulu 12, Hawaii

Dr. H. J. McLellan
Atlantic Oceanographic Group
St. Andrews, New Brunswick
Canada

Dr. R. C. Miller, Director
California Academy of Science
Golden Gate Park
San Francisco 18, California

National Marine Consultants, Inc.
Administration Airport
Goleta, California
Attn: Dr. R. Kent

Mr. Kenneth S. Norris, Curator
Marineland of the Pacific
Portuguese Bend
Marineland, California

Director
Norwegian Polar Institute
Observatoriegt 1
Oslo, Norway

Dr. Yngve H. Olsen
Journal of Marine Research
Yale University
New Haven, Connecticut

Dr. E. L. Pickard
Institute of Oceanography
University of British Columbia
Vancouver, B. C.
Canada

Mr. Don Powell
Bureau of Commercial Fisheries
2725 Montlake Boulevard
Seattle 2, Washington

Mr. John Radovich
California Department of Fish and Game
California State Fisheries Laboratory
Terminal Island, California

Dr. Roger Revelle
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. Gordon A. Riley
Bingham Oceanographic Foundation
Yale University
New Haven, Connecticut

Mr. Gunnar I. Roden
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. M. B. Schaefer
Inter-American Tropical Tuna
Commission
c/o Scripps Insitution of Oceanography
La Jolla, California

Dr. O. E. Sette, Chief
Bureau of Commercial Fisheries
Biological Laboratory
450-B Jordan Hall
Stanford, California

Mr. W. E. Stewart
c/o California State Chamber of
Commerce
350 Bush Street
San Francisco 4, California

Dr. D. W. Pritchard, Director
Chesapeake Bay Institute
The Johns Hopkins University
121 Maryland Hall
Baltimore 18, Maryland

Mr. Joseph L. Reid, Jr.
University of California
Scripps Institution of Oceanography
La Jolla, California

Mrs. Margaret K. Riedel
University of California
Scripps Institution of Oceanography
La Jolla, California

Mrs. Margaret K. Robinson
University of California
Scripps Institution of Oceanography
La Jolla, California

Mr. Don T. Saxby
California Division
California Packing Corporation
2600 Seventh Street
Berkeley 10, California

Mr. Richard A. Schwartzlose
University of California
Scripps Institution of Oceanography
La Jolla, California

Mr. D. Shoji
Japanese Hydrographic Office
Tsukiji
Tokyo, Japan

Mr. Henry M. Stommel
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts

Miss Margaret Storey, Librarian
Natural History Museum
Stanford, California

Mr. Norman Tebble
Annelida Section
British Museum (Natural History)
Cromwell Road
London SW7, England

Dr. John P. Tully
Pacific Oceanographic Group
P. O. Drawer 6
Nanaimo, B. C.
Canada

Librarian
Bureau of Commercial Fisheries
Biological Laboratory
P. O. Box 3830
Honolulu 12, Hawaii

Library, Code 2400 (2)
U. S. Navy Electronics Laboratory
San Diego 52, California

Library (4)
University of California
Scripps Institution of Oceanography
La Jolla, California

University of California (2)
Serials Department
General Library
Berkeley 4, California

Librarian
University of Washington
Oceanographic Laboratories
Friday Harbor, Washington

Dr. Y. Takenouti
Oceanographical Section
Japan Meteorological Agency
Chuo-ku
Tokyo, Japan

Department of Oceanography
Texas A. and M. College
College Station, Texas

Dr. M. Uda
Tokyo University of Fisheries
Minato-ku
Tokyo, Japan

U. S. Hydrographic Office (2)
Navy Department
Washington 25, D. C.
Attn: Dr. John Lyman

University of California
Department of Zoology
Berkeley 4, California

Library
University of California
Scripps Institution of Oceanography
Scripps Field Annex
La Jolla, California

Director
University of Miami
Marine Laboratory
Coral Gables, Florida

Librarian (2)
University of Washington
Oceanographic Laboratories
Seattle 5, Washington

Director
University of Washington
School of Fisheries
Seattle 4, Washington

Mr. Richard C. Vetter
Secretary to the Committee
on Oceanography
National Academy of Sciences
2101 Constitution Avenue
Washington 25, D. C.

Dr. Boyd W. Walker
University of California
Department of Zoology
Los Angeles 24, California

Dr. Warren S. Wooster
University of California
Scripps Institution of Oceanography
La Jolla, California

Dr. Kozo Yoshida
Geophysical Institute
Tokyo University
Bunkyo-ku
Tokyo, Japan

Mr. Gilbert C. Van Camp, Sr.
772 Tuna Street
Terminal Island, California

Dr. Lionel A. Walford, Chief
Atlantic Fishery Oceanographic
Research Center
Bureau of Commercial Fisheries
734 Jackson Place, N. W.
Washington 25, D. C.

Mr. William E. Warne
California Department of Fish and Game
926 J Street
Sacramento 14, California

Mr. Charles G. Worrall (20)
University of California
Scripps Institution of Oceanography
La Jolla, California