

UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA
CCOFI CRUISE 5506
(MLR 73)
11-28 June 1955

SIO Reference 59-45
19 May 1959

UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5506

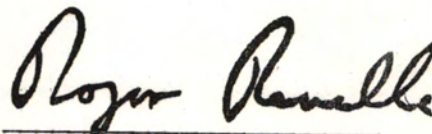
(MLR 73)

11-28 June 1955

Sponsored by
Marine Research Committee

SIO Reference 59-45
19 May 1959

Approved for distribution:


Roger Revelle, Director

CONTENTS

List of Figures	ii
Introduction	iii
Personnel	v
Tabulated Data	110
Distribution List	163

FIGURES

1. CCOFI Cruise 5506 (MLR 73), station positions
2. Horizontal distribution of dynamic height anomaly (0 over 500 d-bar)
3. Surface currents measured by geomagnetic electrokinetograph (GEK)
4. Horizontal distribution of temperature at 10 meters
5. Horizontal distribution of salinity at 10 meters
6. Horizontal distribution of temperature at 200 meters
7. Horizontal distribution of salinity at 200 meters

INTRODUCTION

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

The data are tabulated at observed depths; the interpolated and computed values are tabulated at standard depths and are accompanied by charts of horizontal distribution. The presentation of data in this report does not constitute publication; however, the data contained in this report have been carefully edited and no modifications should be necessary before final publication.

STANDARD PROCEDURES

Processing of the data was carried out using the method described by Klein.^{1/} Certain approximations have been introduced for the determination of the integrated pressure terms which may result in errors whose maximum values are less than 0.5 dynamic centimeter at 0 over 200 decibars, 1.0 dynamic centimeter at 0 over 500 decibars, and 2.0 dynamic centimeters at 0 over 1000 decibars. The 125-meter level was introduced into the integration to obtain greater accuracy in the determination of ΔD . The interpolated values at 125 meters are not tabulated.

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, messenger times and wire angles are given in the order of increasing depth. A line is left blank between the observed data of each cast.

^{1/} Klein, Hans T. A new technique for processing physical oceanographic data. MS.

FOOTNOTES

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.

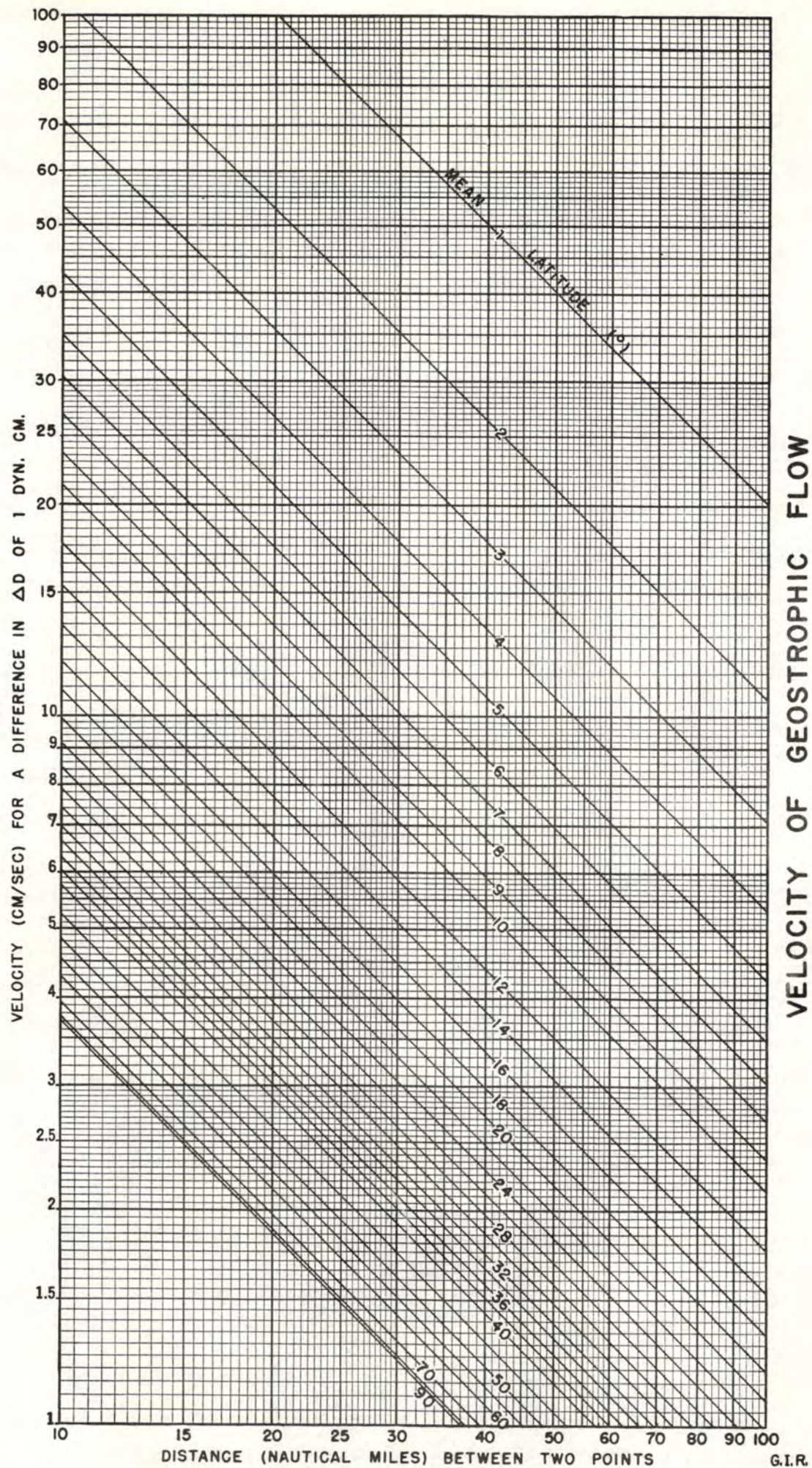
Values which are not drawn through because they seem to be in error without apparent reason are indicated by one of the following notations.

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 1955 volume, the first page of the Cruise 5506 data is numbered 110.



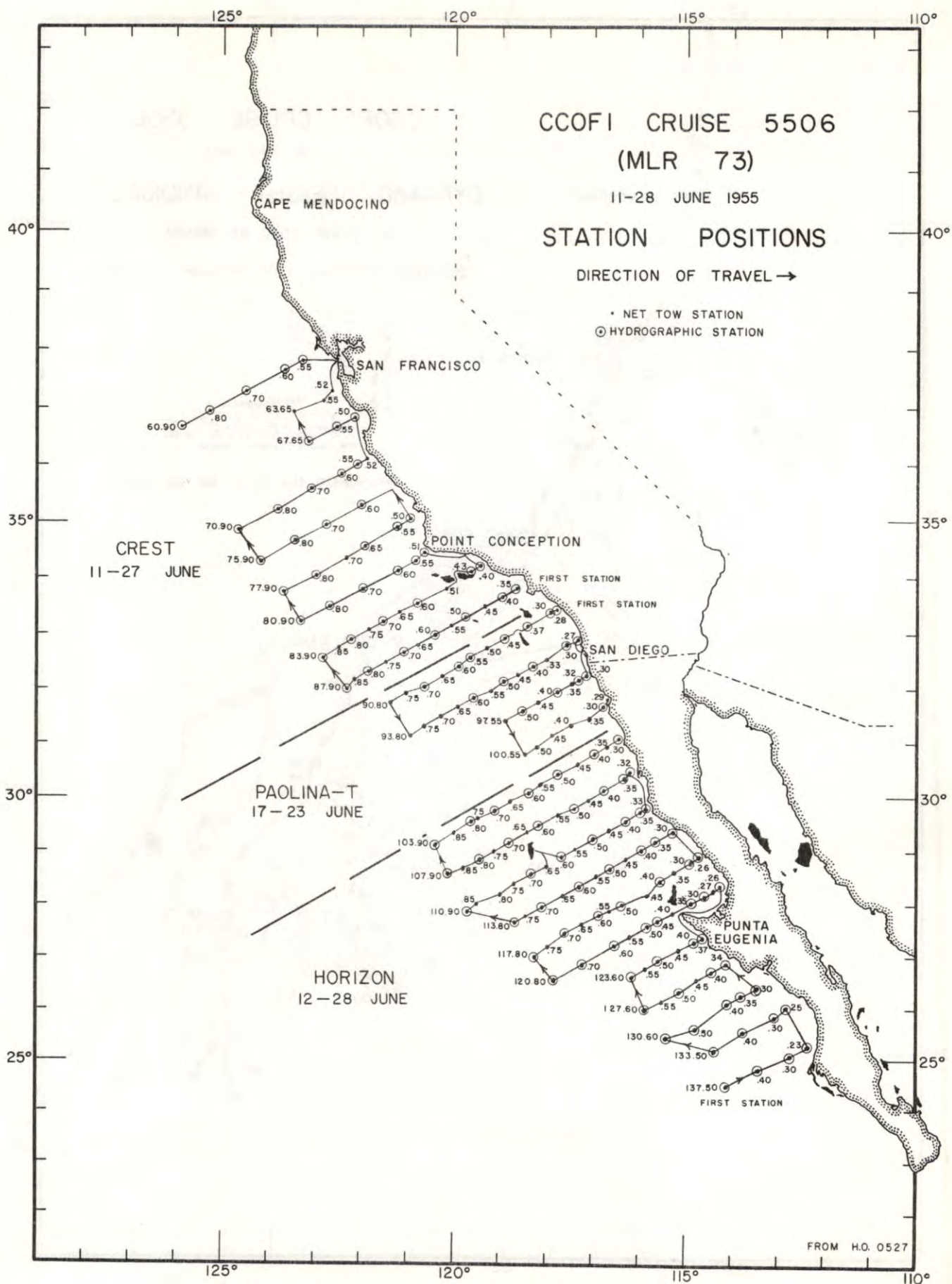


FIGURE 1

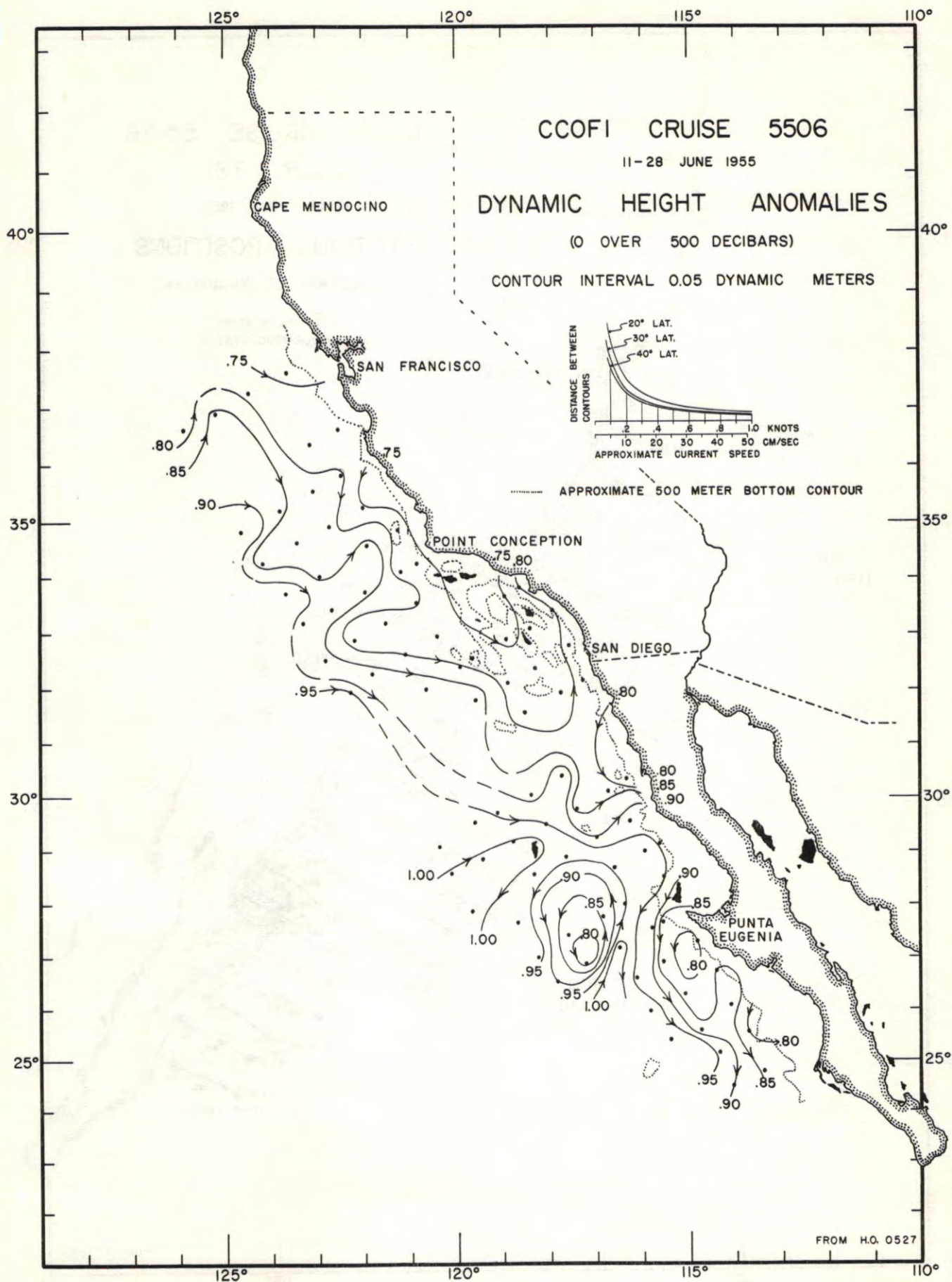


FIGURE 2

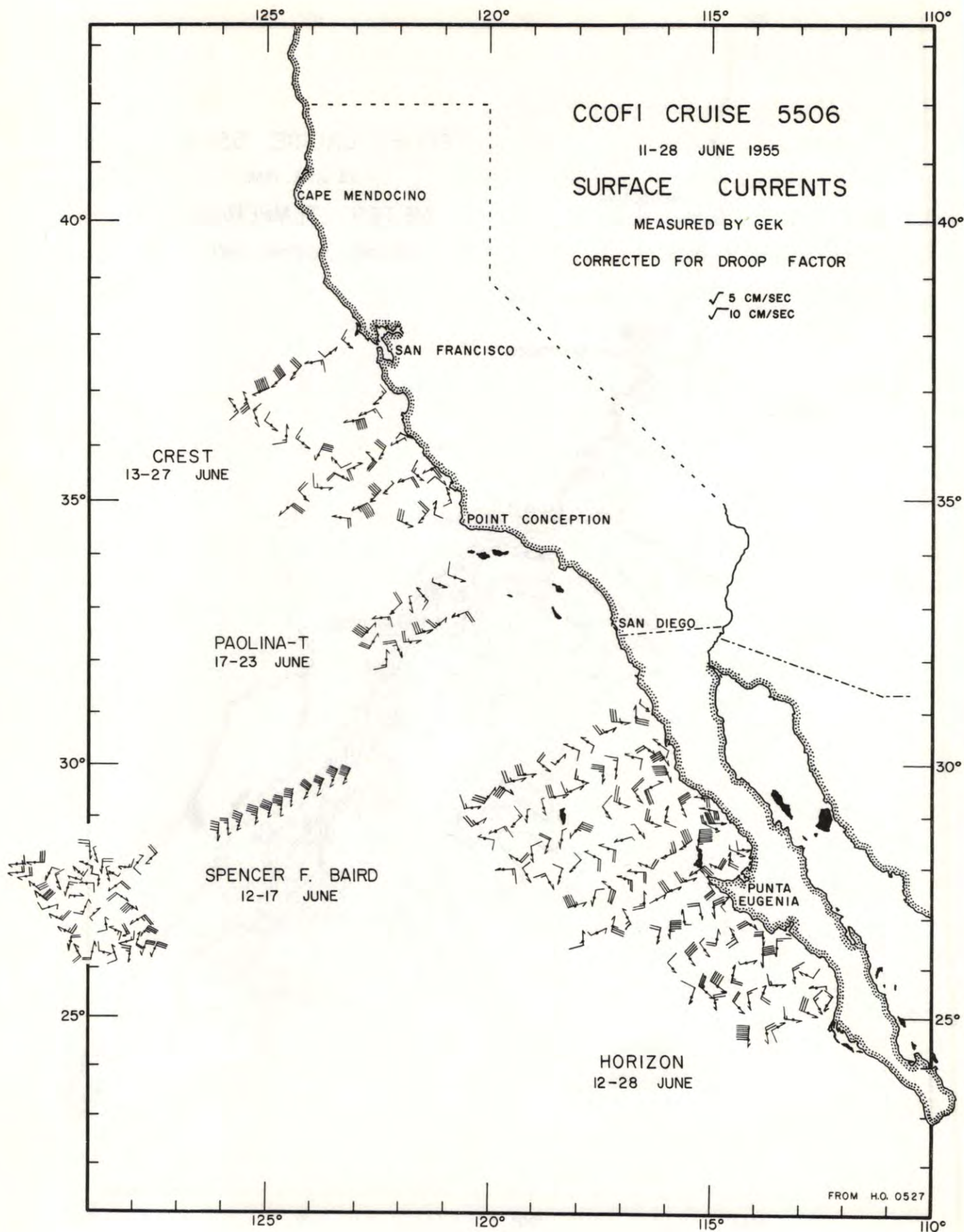


FIGURE 3

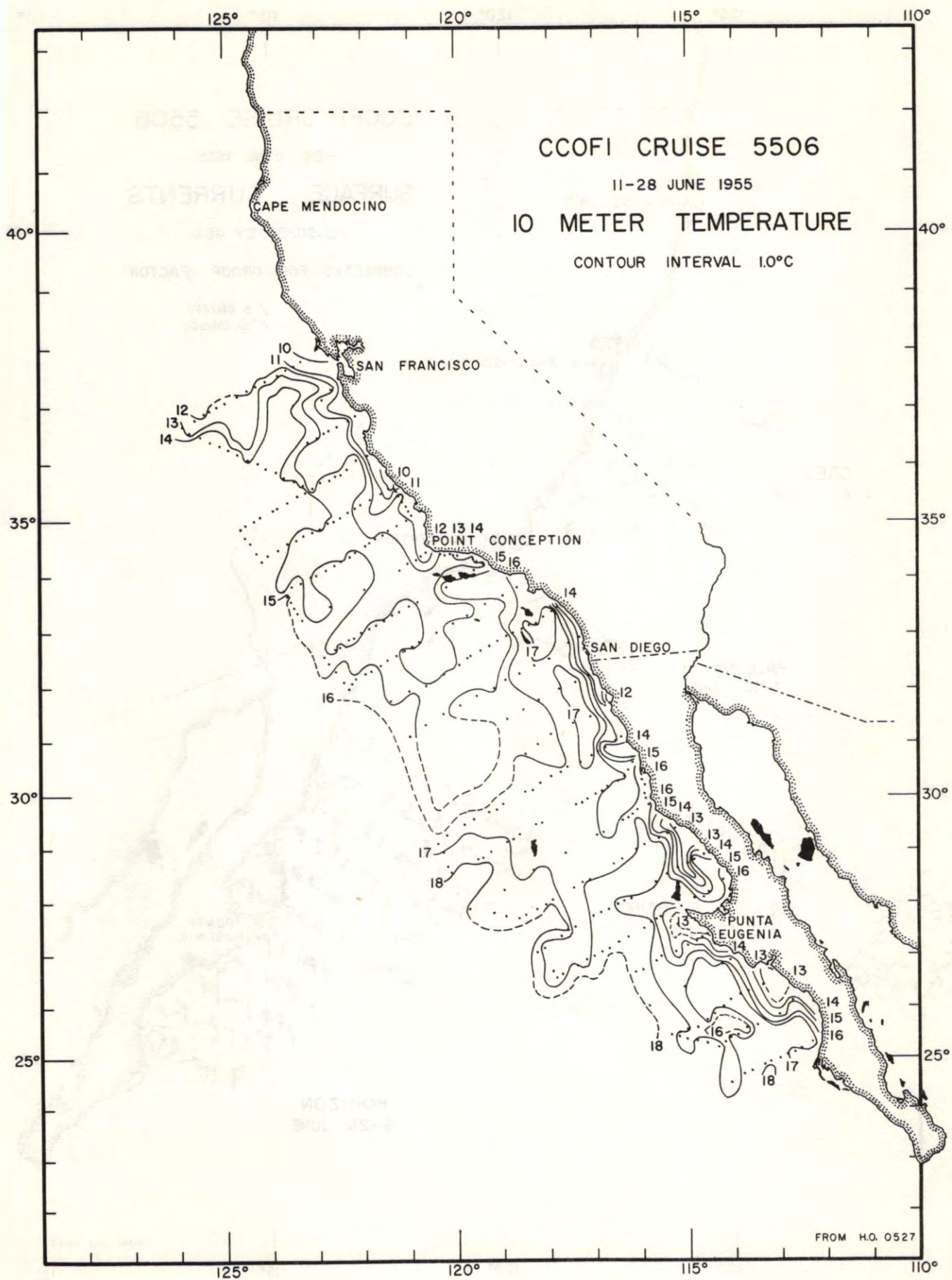


FIGURE 4

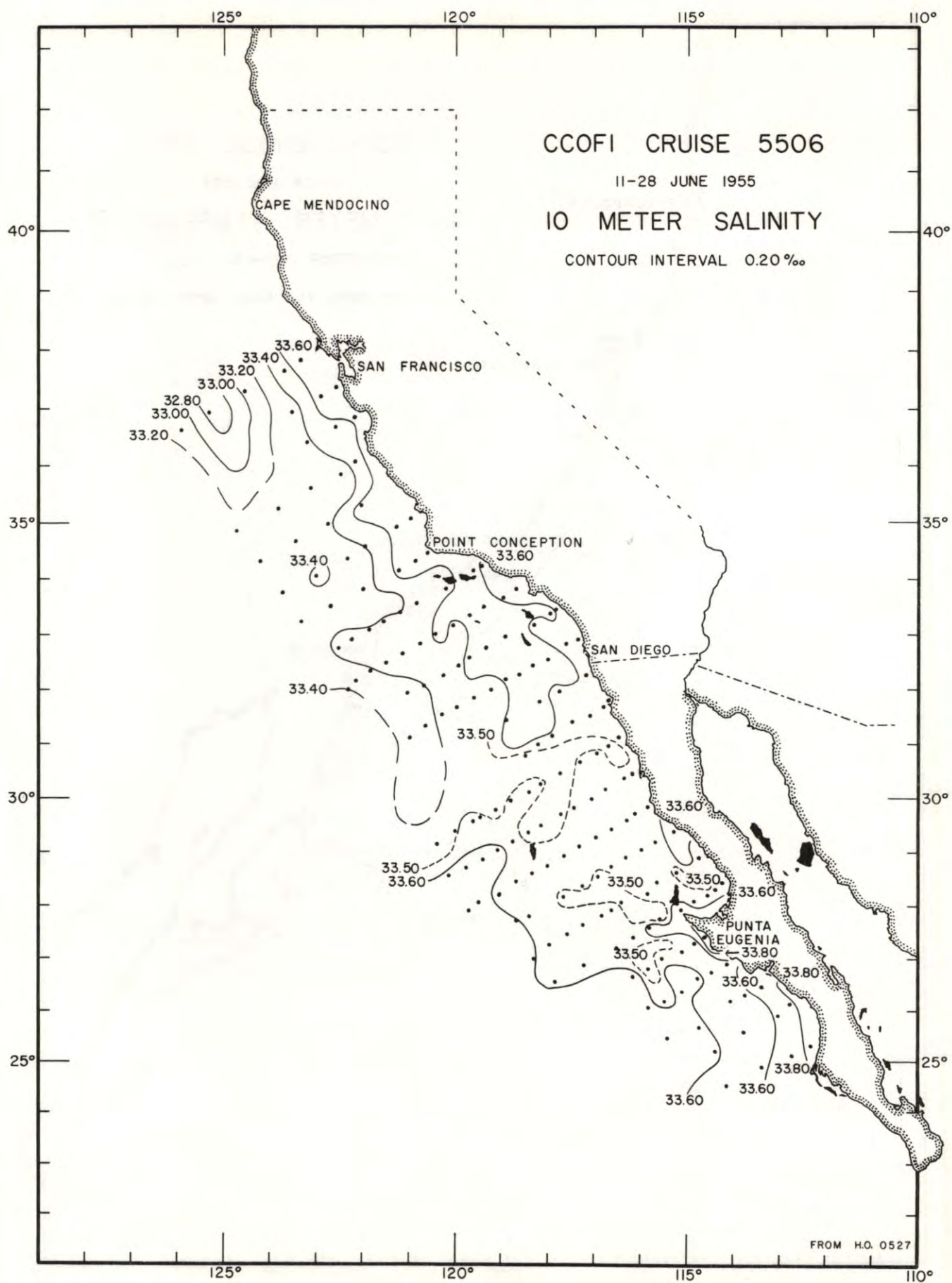


FIGURE 5

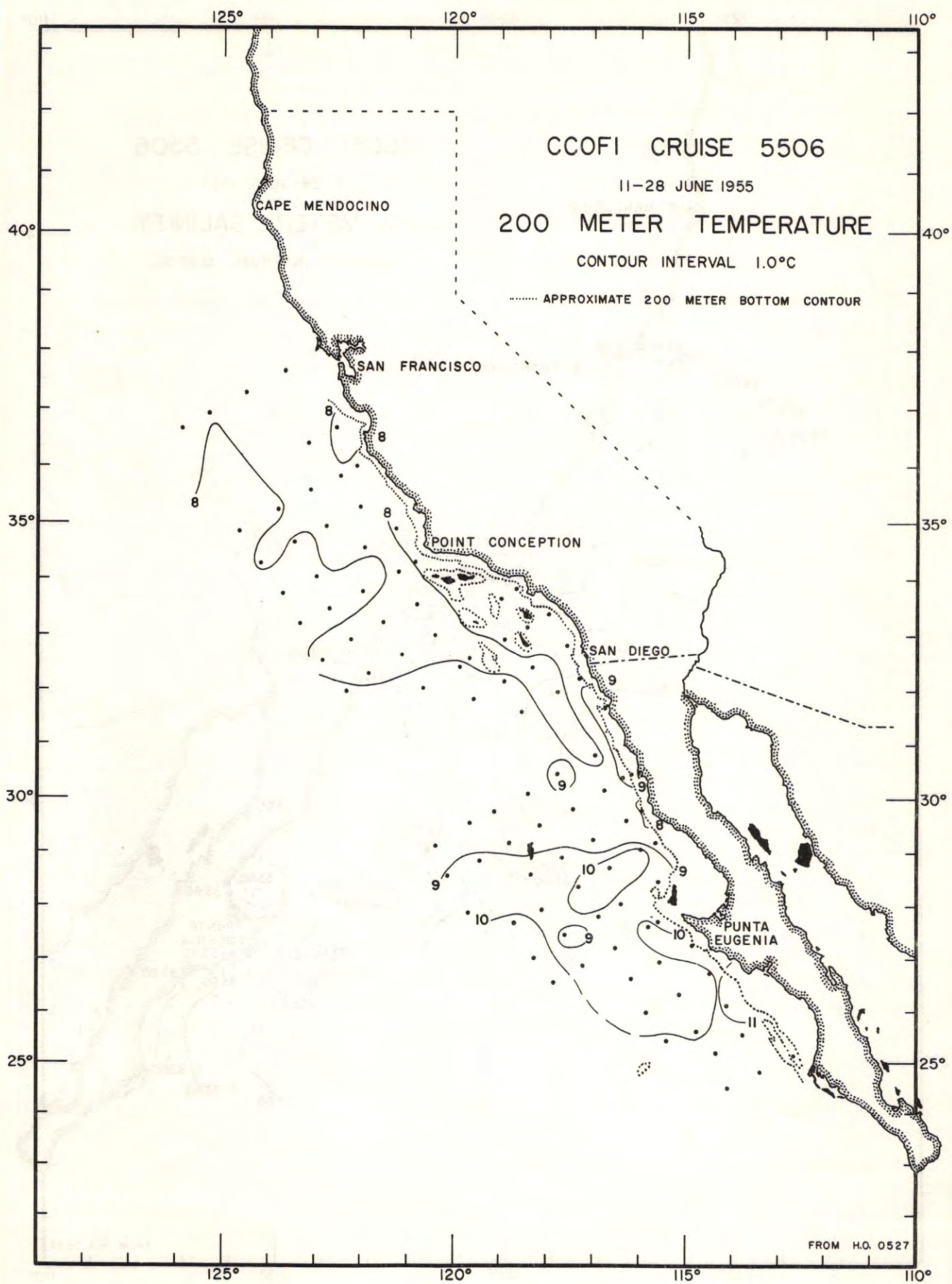


FIGURE 6

PERSONNEL

SHIPS' CAPTAINS

- Haines, Robert B. , R/V Paolina-T
- Hopkins, Marvin F. , R/V Horizon
- Newbegin, Robert C. , R/V Crest

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

R/V Crest

King, Robert D. , Marine Technician
Fields, G. F. , summer fellowship student
Fletcher, Kenneth H. , Marine Technician
Hinds, James W. , Jr. , Marine Technician

R/V Paolina-T

Schwartzlose, Richard A. , Senior Marine Technician
Casey, Harold D. , Fishery Aid, U. S. Fish and Wildlife Service
Livingstone, Robert L. , Jr. , Marine Biologist, U. S. Fish and Wildlife Service
Taft, Bruce A. , Fishery Aid, U. S. Fish and Wildlife Service

R/V Horizon

Linn, Robert J. , Senior Marine Technician
Brenner, Robert E. , Marine Technician
Bryer, Bruce A. , Marine Technician
Gilbert, B. L. , summer fellowship student
Vorobiov, Alexander A. , Fishery Aid, U. S. Fish and Wildlife Service

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD	
m	°C	‰	ml/L	10 ⁻⁵ cm ³ /g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm ³ /g	dyn. m	

60.55

CREST; June 26, 1955; 0005 GCT; 37°47.5'N, 123°15'W; sounding, 60 fm; wind, 280°, force 2; weather, cloudy; sea, slight; wire angle, 00°.

0	10.22	33.92		193	0	10.22	33.92		26.09	193	0.00	
11	10.02	33.90		191	10	10.07	33.90		26.10	192	0.02	
15	9.84	33.91		188	20	9.80	33.91		26.15	187	0.04	
20	9.80	33.91		187	30	9.84	33.92		26.15	187	0.06	
25	9.82	33.91		187	50	8.87	33.88		26.28	175	0.09	
30	9.84	33.92		187	75	8.89	33.90		26.29	174	0.14	
35	9.82	33.94		185								
45	8.90	33.89		174								
56	8.88	33.87		176								
66	8.92	33.89		175								
81	8.86	33.90		173								

60.60

CREST; June 26, 1955; 0325 GCT; 37°36.5'N, 123°36'W; sounding, 1800 fm; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 17°.

0	12.78	33.57	6.35	263	0	12.78	33.57	6.35	25.35	263	0.00	
9	12.77	33.56	6.39	264	10	12.77	33.56	6.39	25.35	264	0.03	
23	12.60	33.57	6.26	260	20	12.68	33.56	6.32	25.37	262	0.05	
48	9.74	33.68	5.21	203	30	12.06	33.59	5.92	25.51	248	0.08	
58	9.20	33.66	3.90	196	50	9.59	33.68	5.04	26.01	200	0.12	
67	9.01	33.71	3.52	189	75	8.86	33.74	3.22	26.18	184	0.17	57
76	8.86	33.75	3.22	184	100	8.62	33.88	2.80	26.32	171	0.22	
96	8.68	33.87	2.85	173	105	7.86	33.97	2.16	26.51	153	0.30	
119	8.31	33.91	2.43	164	200	7.18	34.01	1.96	26.64	141	0.37	
145	7.98	33.96	2.18	155	250	6.68	34.05	1.74	26.73	132	0.44	
187	7.37	34.00	2.00	144	300	6.29	34.08	1.35	26.82	124	0.51	
249	6.73	34.05	1.76	132	400	5.75	34.16	0.60	26.95	112	0.63	
343	6.00	34.11	0.98	119	500	5.37	34.27	0.39	27.08	99	0.74	
458	5.56	34.23	0.44	104	600	5.08	34.31	0.35	27.14	94	0.84	
625	5.02	34.31	0.35	93	700	4.83	34.35	0.35	27.20	88	0.94	
832	4.45	34.41	0.36	79	800	4.57	34.39	0.35	27.26	82	1.03	
1125	3.63	34.49	0.62	65	1000	3.97	34.46	0.50	27.38	72	1.19	

60.70

CREST; June 26, 1955; 0917 GCT; 37°14.5'N, 124°24'W; sounding, 2200 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 14°.

0	11.46	33.06	6.61	277	0	11.46	33.06	6.61	25.21	277	0.00	
10	11.46	33.07	6.69	276	10	11.46	33.07	6.69	25.22	276	0.03	
25	10.66	33.04	6.52	265	20	11.44	33.07	6.69	25.22	276	0.06	
49	11.49	33.48	5.60	247	30	10.23	33.02	6.50	25.39	259	0.08	
59	10.10	33.22	6.05	243	50	11.45	33.48	5.60	25.53	247	0.13	
68	9.39	33.36	5.29	221	75	9.97	33.62	5.39	25.91	210	0.19	59
78	9.98	33.66	5.39	208	100	9.17	33.78	3.40	26.16	186	0.24	
97	9.18	33.77	3.55	187	150	8.13	33.94	2.50	26.44	160	0.33	
120	8.74	33.87	2.92	173	200	7.67	34.03	1.96	26.58	146	0.40	
147	8.19	33.93	2.53	161	250	7.15	34.04	1.62	26.67	138	0.48	
192	7.75	34.03	2.03	147	300	6.79	34.08	1.24	26.74	131	0.55	
256	7.08	34.04	1.60	137	400	6.23	34.22	0.56	26.94	113	0.67	
351	6.52	34.19	0.74	119	500	5.53	34.26	0.40	27.05	102	0.78	
470	5.79	34.25	0.45	106	600	4.92	34.30	0.32	27.15	92	0.89	
641	4.74	34.31	0.30	89	700	4.48	34.33	0.30	27.23	85	0.98	
853	4.06	34.39	0.32	77	800	4.19	34.37	0.31	27.29	79	1.07	
1148	3.24	34.49	0.68	62	1000	3.64	34.44	0.47	27.40	69	1.23	

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

CREST; June 26, 1955; 1540, 1625 GCT; 36°53.5'N, 125°11'W; sounding, 2000+ fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 21°, 32°.

0	12.46	32.79	6.55	315	0	12.46	32.79	6.55	24.81	315	0.00
9	12.36	32.79	6.64	313	10	12.32	32.79	6.64	24.84	312	0.03
23	11.48	32.83	6.74	294	20	11.67	32.82	6.74	24.98	298	0.06
48	11.40	33.12	6.66	272	30	11.28	32.87	6.73	25.09	288	0.09
57	11.41	33.19	6.59	267	50	11.41	33.13	6.59	25.27	271	0.15
66	10.72	33.19	6.61	255	75	9.42	33.17	5.60	25.64	236	0.21
75	9.42	33.17	5.60	236	100	8.90	33.40	5.02	25.90	211	0.27
94	9.01	33.35	4.99	216	150	8.42	33.76	3.60	26.26	177	0.37
117	8.90	33.53	4.92	201	200	7.93	33.95	2.42	26.48	156	0.45
144	8.50	33.72	3.77	181	250	7.19	33.95	2.52	26.59	146	0.53
185	8.13	33.94	2.42	160	300	6.97	34.02	2.18	26.68	137	0.60
245	7.22	33.95	2.53	147	400	6.11	34.12	0.94	26.87	119	0.73
337	6.74	34.07	1.39	131	500	5.44	34.17	0.61	26.99	108	0.85
					600	5.01	34.24	0.48	27.09	98	0.96
421	5.98	34.14	0.81	116	700	4.77	34.32	0.45	27.18	89	1.06
576	5.14	34.21	0.49	101	800	4.53	34.39	0.46	27.27	81	1.15
771	4.62	34.36	0.45	85	1000	3.85	34.45	0.51	27.39	70	1.32
1055	3.65	34.47	0.54	67							

CREST; June 26, 1955; 2118, 2235 GCT; 36°38'N, 125°46'W; sounding, 2500 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 07°, 04°.

0	13.36	33.12	6.73	307	0	13.36	33.12	6.73	24.89	307	0.00
11	13.18	33.17	6.73	300	10	13.19	33.17	6.73	24.96	300	0.03
31	11.04	33.24	6.46	257	20	13.00	33.19	6.70	25.01	296	0.06
46	10.03	33.37	5.30	230	30	11.20	33.23	6.51	25.38	260	0.09
56	9.78	33.39	5.01	225	50	9.94	33.38	5.20	25.71	229	0.14
66	9.52	33.48	4.33	214	75	9.27	33.56	4.01	25.97	204	0.19
76	9.21	33.57	3.96	203	100	8.64	33.73	3.67	26.20	183	0.24
86	8.96	33.64	3.58	193	150	8.09	33.94	2.50	26.45	159	0.33
100	8.64	33.73	3.67	183	200	7.57	34.00	2.31	26.57	148	0.40
110	8.50	33.82	2.92	174	250	7.14	34.03	1.74	26.67	138	0.48
134	8.25	33.91	2.51	163	300	6.69	34.07	1.27	26.75	130	0.54
162	7.96	33.96	2.50	155	400	5.84	34.17	0.82	26.94	112	0.67
216	7.42	34.01	2.16	145	500	5.62	34.27	0.56	27.05	102	0.78
279	6.90	34.05	1.41	134	600	5.16	34.32	0.35	27.14	93	0.88
392	5.88	34.16	0.85	114	700	4.63	34.41	0.27	27.28	80	0.98
519	5.50	34.31	0.35	-	800	4.33	34.44	0.32	27.33	75	1.06
653	4.86	34.36	0.30	87	1000	3.84	34.49	0.44	27.42	67	1.22
					1200	3.38	34.51	0.65	27.48	62	
0a)	13.42	33.13	6.54	-	1500	2.76	34.56	0.98	27.58	52	
479	5.68	34.23	0.60	106	2000	2.04	34.61	1.67	27.68	42	
533	5.51	34.31	0.45	-							
591	5.20	34.32	0.37	94							
661	4.80	34.36	0.28	86							
734	4.55	34.42	0.27	79							
818	4.26	34.44	0.37	75							
907	4.06	34.47	0.37	70							
1004	3.82	34.49	0.45	67							
1118	3.55	34.50	0.60	63							
1246	3.29	34.51	0.73	60							
1383	3.00	34.56	0.87	54							
1541	2.70	34.56	1.01	51							
1719	2.40	34.58	1.23	47							
1918	2.16	34.61	1.51	43							
2136	1.98	34.62	1.86	41							
2376	1.82	34.63	2.07	39							

a) Overlapping casts; reconciliation of property curves when necessary.

SIO
CCOFI
5506

60.80

60.90

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$10^{-5} \text{ cm}^3/\text{g}$	m	°C	‰	ml/L	g/L	$10^{-5} \text{ cm}^3/\text{g}$	dyn. m

67.50

CREST; June 23, 1955; 1338 GCT; 36°49'N, 122°05.5'W; sounding, 60+ fm; wind, 330°, force 3; weather, clear; sea, slight; wire angle, 00°.

0	11.30	33.75	6.03	224	0	11.30	33.75	6.03	25.77	224	0.00
10	10.45	33.66	5.33	216	10	10.45	33.66	5.33	25.85	216	0.02
15	10.44	33.68	5.20	214	20	10.38	33.70	5.50	25.90	211	0.04
20	10.38	33.70	5.50	211	30	10.24	33.69	5.36	25.91	210	0.06
25	10.24	33.68	5.40	211	50	10.18	33.72	5.16	25.94	207	0.11
30	10.24	33.69	5.36	210							
35	10.24	33.68	5.35	211							
45	10.20	33.73	5.18	206							
55	10.14	33.70	5.15	208							
70	9.00	33.79	3.24	183							

67.55

CREST; June 23, 1955; 1651 GCT; 36°38'N, 112°28'W; sounding, 1240 fm; wind, 330°, force 4; weather, clear; sea, moderate; wire angle, 18°.

0	12.51	33.53	6.16	262	0	12.51	33.53	6.16	25.37	262	0.00
9	12.50	33.50	6.16	263	10	12.48	33.50	6.16	25.35	263	0.03
28	12.39	33.50	6.16	261	20	12.43	33.50	6.16	25.36	262	0.05
43	11.66	33.58	5.74	242	30	12.36	33.50	6.14	25.38	260	0.08
52	10.03	33.75	4.05	203	50	10.22	33.74	4.27	25.95	206	0.12
62	9.58	33.78	3.46	193	75	9.27	33.86	3.02	26.20	183	0.17
71	9.37	33.86	3.19	183	100	9.04	33.92	2.40	26.28	175	0.22
80	9.20	33.86	2.77	181	150	8.84	34.02	1.70	26.40	164	0.31
95	9.08	33.89	2.63	177	200	8.29	34.14	1.60	26.57	147	0.38
103	9.04	33.92	2.23	174	250	7.82	34.16	1.33	26.66	139	0.46
126	8.88	33.96	2.08	169	300	7.41	34.18	1.00	26.74	132	0.53
153	8.82	34.02	1.59	164	400	6.85	34.25	0.67	26.87	119	0.66
202	8.28	34.14	1.60	147	500	6.20	34.29	0.48	26.98	108	0.78
262	7.70	34.16	1.25	137	600	5.42	34.33	0.38	27.11	96	0.88
367	7.02	34.23	0.72	123							
490	6.25	34.28	0.50	109							
622	5.24	34.34	0.34	93							

67.65

CREST; June 23, 1955; 2221 GCT; 36°23.5'N, 123°05.5'W; sounding, 1700 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 17°.

0	13.22	33.40	6.29	284	0	13.22	33.40	6.29	25.13	284	0.00
10	13.12	33.39	6.32	283	10	13.12	33.39	6.32	25.14	283	0.03
29	12.04	33.33	6.23	268	20	12.97	33.38	6.30	25.16	281	0.06
44	10.56	33.30	5.91	244	30	11.90	33.32	6.22	25.32	266	0.08
54	10.10	33.37	5.55	232	50	10.22	33.34	5.59	25.64	236	0.13
63	9.97	33.41	5.57	226	75	9.75	33.52	5.32	25.87	214	0.19
72	9.76	33.48	5.35	218	100	9.06	33.70	3.85	26.10	192	0.24
83	9.70	33.65	5.22	205	150	8.08	33.94	2.48	26.45	159	0.33
97	9.22	33.68	4.05	195	200	7.37	34.01	2.24	26.61	144	0.41
106	8.70	33.77	3.33	180	250	6.90	34.04	1.83	26.70	135	0.48
130	8.40	33.86	2.85	169	300	6.51	34.08	1.35	26.78	127	0.54
158	7.94	33.96	2.37	155	400	5.74	34.14	0.78	26.93	114	0.67
211	7.24	34.02	2.20	141	500	5.08	34.16	0.49	27.02	105	0.78
272	6.72	34.06	1.58	131	600	4.78	34.23	0.37	27.12	96	0.89
382	5.85	34.13	0.84	116							
508	5.02	34.16	0.47	104							
642	4.67	34.32	0.33	88							

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT_{-5}^{+3}	Z	T	S	O ₂	σ_t	δT_{-5}^{+3}	ΔD	
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m	

S10
CCOFI
5506

CREST; June 22, 1955; 2228 GCT; 36°02.5'N, 122°02'W; sounding, 750 fm; wind, 330°, force 5; weather, partly cloudy; sea, moderate; wire angle, 48°.

70.55

0	13.11	33.45	6.24	278	0	13.11	33.45	6.24	25.20	278	0.00	
6	13.07	33.45	6.22	278	10	13.07	33.45	6.22	25.20	277	0.03	
14	13.04	33.45	6.22	277	20	11.40	33.44	6.13	25.51	248	0.05	
23	10.98	33.44	6.05	240	30	10.80	33.48	5.73	25.65	235	0.08	
29	10.81	33.48	5.73	235	50	10.37	33.53	5.33	25.77	224	0.12	
47	10.41	33.53	5.33	225	75	9.25	33.59	3.52	26.00	202	0.18	
65	9.48	33.55	4.04	209	100	8.92	33.81	2.65	26.22	180	0.23	
98	8.94	33.80	2.71	181	150	8.39	33.96	2.15	26.42	162	0.31	
138	8.58	33.95	2.14	165	200	7.63	33.98	2.50	26.54	150	0.39	
217	7.42	33.98	2.59	147	250	7.22	34.02	2.22	26.64	141	0.46	
316	7.14	34.13	1.24	131	300	7.15	34.10	1.40	26.72	134	0.54	

CREST; June 22, 1955; 1730 GCT; 35°50'N, 122°23'W; sounding, 1600 fm; wind, 330°, force 4; weather, fog; sea, moderate; wire angle, 31°.

70.60

0	13.22	33.33	5.95	290	0	13.22	33.33	5.95	25.07	290	0.00	
8	13.18	33.33	6.05	288	10	13.14	33.33	6.05	25.10	287	0.03	
21	13.04	33.37	6.02	283	20	13.04	33.37	6.04	25.14	284	0.06	
49	11.24	33.37	5.79	247	30	12.93	33.37	6.01	25.17	280	0.09	
57	10.76	33.36	5.42	243	50	11.15	33.37	5.76	25.50	249	0.14	
66	10.30	33.36	5.16	235	75	10.12	33.42	4.86	25.72	228	0.20	
77	10.08	33.44	4.72	226	100	9.32	33.58	3.88	25.98	203	0.25	
93	9.63	33.58	4.17	209	150	8.39	33.91	2.50	26.38	165	0.35	
114	8.99	33.60	3.65	197	200	7.88	34.04	2.10	26.56	148	0.43	
135	8.57	33.80	2.83	176	250	7.22	34.10	1.90	26.70	135	0.50	
178	8.16	34.00	2.20	155	300	6.77	34.12	1.43	26.79	127	0.56	2.4
242	7.36	34.09	1.96	138	400	6.03	34.19	0.78	26.93	113	0.69	
333	6.50	34.14	1.15	123	500	5.54	34.27	0.42	27.06	101	0.80	~
457	5.76	34.23	0.55	106	600	5.20	34.33	0.33	27.15	93	0.90	
624	5.18	34.34	0.31	92	700	4.86	34.38	0.31	27.22	86	1.00	
839	4.30	34.43	0.38	76	800	4.50	34.42	0.32	27.29	79	1.09	
1133	3.55	34.54	0.63	60	1000	3.89	34.48	0.49	27.41	68	1.25	

CREST; June 22, 1955; 1200 GCT; 35°35'N, 123°01'W; sounding, 2200 fm; wind, 340°, force 5; weather, drizzle; sea, moderate; wire angle, 30°.

70.70

0	12.50	33.27	6.48	280	0	12.50	33.27	6.48	25.17	280	0.00	
8	12.51	33.28	6.61	280	10	12.48	33.29	6.61	25.18	279	0.03	
22	12.28	33.40	6.49	267	20	12.33	33.40	6.55	25.31	267	0.06	
49	11.00	33.36	5.64	247	30	12.04	33.40	6.35	25.36	262	0.08	
57	10.42	33.31	5.71	241	50	10.97	33.36	5.65	25.53	246	0.13	
65	10.02	33.31	5.52	235	75	9.88	33.39	5.45	25.74	226	0.19	
77	9.88	33.40	5.45	226	100	9.26	33.58	4.15	25.98	203	0.25	
93	9.50	33.51	4.50	212	150	8.48	33.89	2.55	26.35	168	0.34	
115	8.96	33.71	3.57	188	200	7.91	34.01	1.88	26.54	151	0.42	
137	8.66	33.84	2.89	174	250	7.51	34.07	1.65	26.64	141	0.49	
180	8.11	33.97	2.06	157	300	7.04	34.12	1.34	26.74	131	0.56	2.5
245	7.57	34.07	1.68	142	400	5.83	34.12	0.95	26.90	116	0.69	
337	6.60	34.13	1.09	125	500	4.97	34.13	0.70	27.02	105	0.81	~
459	5.25	34.12	0.89	109	600	4.57	34.20	0.44	27.12	96	0.91	
629	4.46	34.27	0.39	90	700	4.31	34.34	0.38	27.25	83	1.01	
848	4.10	34.43	0.38	74	800	4.20	34.40	0.38	27.32	76	1.09	
1149	3.39	34.52	0.71	60	1000	3.78	34.48	0.50	27.42	67	1.25	

SIO
CCOFI
5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_{-5}^{+3}	Z	T	S	O ₂	σ_t	δT_{-5}^{+3}	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

70.80

CREST; June 22, 1955; 0532 GCT; 35°13.5'N, 123°45'W; sounding, 2000+ fm; wind, 340°, force 4; weather, missing; sea, slight; wire angle, 17°.

0	14.48	33.30	6.14	316	0	14.48	33.30	6.14	24.79	316	0.00
15	14.18	33.30	6.16	310	10	14.25	33.30	6.14	24.84	312	0.03
39	13.92	33.30	6.12	305	20	14.10	33.30	6.14	24.88	308	0.06
49	13.11	33.28	6.32	291	30	14.02	33.30	6.13	24.89	307	0.09
59	12.50	33.30	6.27	278	50	13.04	33.28	6.32	25.07	290	0.15
68	11.92	33.33	6.13	264	75	11.60	33.35	6.03	25.40	258	0.22
88	11.02	33.40	5.69	244	100	10.55	33.42	5.23	25.66	234	0.28
112	10.04	33.45	4.70	225	150	9.03	33.76	3.59	26.17	186	0.39
139	9.30	33.69	3.69	195	200	8.05	33.96	3.19	26.48	156	0.48
186	8.24	33.91	3.38	163	250	7.48	34.03	2.54	26.61	144	0.55
225	7.82	34.01	2.79	150	300	6.83	34.07	2.00	26.73	132	0.62
251	7.44	34.03	2.52	144	400	5.88	34.16	0.91	26.92	114	0.75
348	6.32	34.11	1.33	122	500	5.35	34.22	0.52	27.05	102	0.86
471	5.46	34.21	0.58	105	600	4.89	34.28	0.37	27.14	93	0.97
642	4.76	34.31	0.32	89	700	4.54	34.34	0.31	27.23	85	1.06
856	4.03	34.43	0.31	74	800	4.20	34.41	0.31	27.32	76	1.15
1150	3.38	34.51	0.68	61	1000	3.70	34.48	0.44	27.43	66	1.31

70.90

CREST; June 21, 1955; 2059, 2230 GCT; 34°50.5'N, 124°32'W; sounding, 2400 fm; wind, 310°, force 2; weather, cloudy; sea, slight; wire angle, 00°, 04°.

0	14.63	33.29	6.08	320	0	14.63	33.29	6.08	24.75	320	0.00
10	14.33	33.28	6.02	314	10	14.33	33.28	6.02	24.81	314	0.03
31	14.24	33.26	6.00	314	20	14.27	33.27	6.02	24.81	314	0.06
46	14.17	33.26	5.94	312	30	14.24	33.27	6.00	24.81	314	0.09
56	13.90	33.30	6.12	304	50	14.08	33.28	5.98	24.86	310	0.16
66	13.50	33.27	6.31	299	75	13.01	33.30	6.27	25.10	287	0.23
76	12.96	33.30	6.25	286	100	11.40	33.28	5.78	25.38	260	0.30
85	12.34	33.26	6.13	278	150	9.62	33.54	4.25	25.90	211	0.42
99	11.42	33.28	5.78	261	200	8.37	33.87	3.19	26.35	168	0.52
110	10.94	33.28	5.64	252	250	7.70	33.98	2.55	26.54	150	0.60
135	10.18	33.49	4.82	224	300	7.31	34.02	2.10	26.63	142	0.67
163	9.20	33.58	3.88	202	400	6.47	34.14	0.90	26.84	122	0.81
217	8.11	33.94	2.92	159	500	5.68	34.17	0.51	26.96	110	0.93
280	7.46	34.00	2.36	146	600	5.02	34.27	0.36	27.12	96	1.04
392	6.57	34.14	0.96	123	700	4.79	34.32	0.28	27.18	90	1.14
520	5.40	34.18	0.46	-	800	4.45	34.40	0.30	27.28	80	1.23
653	4.88	34.31	0.29	91	1000	3.79	34.43	0.52	27.38	71	1.40
					1200	3.34	34.49	0.75	27.47	62	
0a)	14.72	33.30	6.06	-	1500	2.78	34.55	1.02	27.57	53	
472	5.98	34.20u	0.59	-	2000	2.05	34.58	1.58	27.66	44	
526	5.46	34.19	0.46	-							
585	5.13	34.25	0.42	98							
652	4.89	34.31	0.28	91							
725	4.74	34.33	0.29	88							
808	4.43	34.40	0.30	80							
897	4.10	34.40	0.35	76							
994	3.80	34.43	0.51	71							
1106	3.53	34.49	0.62	64							
1234	3.25	34.49	0.81	61							
1372	3.00	34.52	0.87	57							
1529	2.72	34.55	1.06	52							
1707	2.45	34.55	1.26	50							
1905	2.18	34.56	1.52	47							
2124	1.98	34.61	1.80	42							
2364	1.82	34.61	2.10	41							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$\frac{10^{-5} \text{ cm}^3}{\text{g}}$	m	°C	‰	ml/L	g/L	$\frac{10^{-5} \text{ cm}^3}{\text{g}}$	dyn. m

SIO
CCOFI
5506

CREST; June 20, 1955; 1820 GCT; 35°18'N, 121°57'W; sounding, 1300 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 24°.

73.60

0	12.68	33.67	6.20	254	0	12.68	33.67	6.20	25.44	254	0.00
9	12.68	33.67	6.39	254	10	12.67	33.66	6.39	25.45	254	0.02
27	12.61	33.65	6.16	254	20	12.65	33.66	6.20	25.44	254	0.05
41	10.22	33.54	4.65	221	30	12.61	33.64	6.16	25.45	254	0.08
50	9.40	33.60	3.92	204	50	9.40	33.60	3.92	25.98	204	0.12
60	9.09	33.66	3.52	194	75	8.79	33.78	3.06	26.23	180	0.17
67	8.95	33.71	3.30	188	100	8.68	33.86	2.53	26.30	173	0.22
76	8.78	33.79	3.00	180	150	8.53	34.09	1.62	26.50	154	0.30
90	8.70	33.81	2.86	177	200	7.84	34.15	1.57	26.65	140	0.37
99	8.68	33.86	2.62	173	250	7.73	34.22	0.97	26.72	133	0.44
121	8.67	33.97	2.15	165	300	7.38	34.22	0.77	26.78	128	0.51
148	8.58	34.09	1.65	155	400	(6.61)	34.25	0.55	(26.90)	(116)	(0.63)
196	7.90	34.13	1.58	142	500	(6.05)	34.31	0.40	(27.03)	(104)	(0.75)
254	7.72	34.22	0.96	133	600	(5.56)	34.34	0.28	(27.11)	(96)	(0.85)
360	6.90	34.23	0.61	121							
483	7.66r	34.30	0.41	-							
614	5.44	34.35	0.26	94							

CREST; June 21, 1955; 0010 GCT; 34°57'N, 122°41'W; sounding, 2250 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 17°.

73.70

0	13.80	33.38	6.17	297	0	13.80	33.38	6.17	25.00	297	0.00
9	13.72	33.37	6.32	296	10	13.71	33.37	6.32	25.01	296	0.03
28	12.86	33.44	6.44	274	20	13.65	33.40	6.42	25.10	287	0.06
44	11.28	33.31	6.01	256	30	12.84	33.44	6.43	25.24	274	0.09
53	11.46	33.42	6.28	250	50	11.39	33.40	6.02	25.48	251	0.14
62	11.34	33.51	6.00	242	75	10.96	33.53	5.78	25.66	234	0.20
71	11.11	33.55	5.91	235	100	9.35	33.54	4.13	25.94	208	0.26
81	10.40	33.44	5.25	231	150	8.45	33.92	2.66	26.38	166	0.35
94	9.62	33.53	4.30	212	200	7.85	34.00	2.14	26.54	150	0.43
105	9.08	33.55	4.03	203	250	7.20	34.08	1.71	26.69	136	0.50
126	8.72	33.77	3.04	180	300	6.75	34.10	1.41	26.76	129	0.57
154	8.40	33.92	2.61	165	400	6.04	34.14	0.91	26.89	117	0.70
204	7.80	34.01	2.11	150	500	5.43	34.23	0.57	27.04	103	0.81
264	7.04	34.09	1.62	134	600	4.98	34.27	0.34	27.12	95	0.92
371	6.24	34.11	1.05	122							
493	5.54	34.22	0.60	105							
626	4.82	34.28	0.28	93							

CREST; June 21, 1955; 0535, 0632 GCT; 34°38'N, 123°22'W; sounding, 2100 fm; wind, 330°, force 5; weather, cloudy; sea, moderate; wire angle, 05°, 05°.

73.80

0	13.52	33.28	5.65	298	0	13.52	33.28	5.65	24.98	298	0.00
10	13.52	33.29	6.30	298	10	13.52	33.29	6.30	24.99	298	0.03
30	13.48	33.30	-	296	20	13.51	33.30	6.30	25.00	297	0.06
45	13.32	33.29	6.19	294	30	13.48	33.30	6.30	25.00	296	0.09
54	10.84	33.35	5.44	245	50	11.68	33.32	5.65	25.37	262	0.14
64	10.52	33.35	5.18	240	75	10.20	33.37	4.90	25.67	233	0.21
74	10.23	33.37	4.93	234	100	9.54	33.52	4.09	25.90	211	0.26
85	9.96	33.42	4.36	225	150	8.41	33.86	2.80	26.33	170	0.36
98	9.58	33.51	4.14	213	200	8.08	34.03	2.37	26.52	152	0.44
109	9.30	33.63	3.66	200	250	7.40	34.05	2.03	26.64	141	0.52
132	8.62	33.78	-	179	300	6.77	34.05	1.83	26.72	133	0.58
					400	6.20	34.16	0.73	26.88	118	0.71
164	8.37	33.89	2.76	166	500	5.79	34.27	0.36	27.03	104	0.83
217	7.96	34.05	2.18	149	600	5.39	34.33	0.30	27.13	95	0.94
279	6.96	34.04	1.96	136							
393	6.23	34.15	0.82	119							
520	5.70	34.29	0.33	102							
654	5.03	34.36	0.29	89							

S10

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

73.90

CREST; June 21, 1955; 1147, 1336, 1434 GCT; 34°18'N, 124°04'W; sounding, 2100 fm; wind, 340°, force 3; weather, drizzle; sea, slight; wire angle, 11°, 19°, 26°.

0	14.25	33.37	6.16	306	0	14.25	33.37	6.16	24.90	306	0.00
10	14.26	33.39	6.12	305	10	14.26	33.39	6.12	24.91	305	0.03
30	12.98	33.46u	6.40	-	20	14.25	33.39	6.12	24.92	305	0.06
40	12.52	33.23	6.33	284	30	12.98	33.28	6.40	25.08	289	0.09
49	11.61	33.33	6.15	260	50	11.60	33.33	6.14	25.39	260	0.14
59	11.30	33.37	5.83	252	75	10.45	33.34	5.23	25.60	239	0.21
68	10.83	33.39	5.63	242	100	9.67	33.55	4.08	25.90	211	0.26
77	10.37	33.33	5.14	238	150	8.48	33.86	2.15	26.33	170	0.36
87	9.91	33.48	4.60	220	200	7.83	33.98	1.93	26.52	152	0.44
96	9.72	33.53	4.18	214	250	7.06	34.04	1.27	26.68	137	0.52
119	9.34	33.76	3.65	190	300	6.55	34.08	0.69	26.78	128	0.58
148	8.50	33.86	2.17	171	400	6.00	34.12	0.32	26.89	117	0.71
196	7.88	33.98	1.96	153	500	5.38	34.19	0.35	27.01	106	0.83
250	7.06	34.04	1.27	137	600	4.90	34.25	0.34	27.11	96	0.93
350	6.20	34.10	0.38	122	700	4.60	34.35	0.32	27.23	85	1.03
463	5.58	34.20	0.32	-	800	4.27	34.39	0.35	27.30	79	1.12
582	4.95	34.31r	2.60r	-	1000	3.74	34.43	0.40	27.39	70	1.28
					1200	3.27	34.48	0.80	27.46	63	
0a)	14.18	33.39	6.21	-	1500	2.77	34.53	1.10	27.56	54	
452	5.62	34.16	0.59u	111	2000	2.11	34.58	1.68	27.65	45	
504	5.38	34.19	0.46u	106							
559a)	5.08	34.22	0.35	100							
624	4.81	34.27	0.32	94							
691	4.66	34.34	0.30	86							
765	4.37	34.37	0.35	81							
848	4.15	34.42	0.37	75							
936	3.86	34.43	0.36	71							
1040	3.65	34.49u	0.77r	-							
1158	3.39	34.47	0.75	64							
1285	3.12	34.49	0.91	60							
1434	2.86	34.53	1.04	55							
1604	2.58	34.54	1.25	52							
1796	2.28	34.58	1.52	46							
2011	2.11	34.58	3.38r	45							
2250	1.94	34.60	1.93	42							

77.50

CREST; June 20, 1955; 0659 GCT; 35°04.5'N, 120°53'W; sounding, 60 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 09°.

0	11.40	33.72	5.65	228	0	11.40	33.72	5.65	25.72	228	0.00
10	11.40	33.71	5.57	228	10	11.40	33.71	5.57	25.72	228	0.02
15	11.40	33.75	5.60	225	20	11.36	33.76	5.62	25.77	223	0.04
20	11.36	33.76	5.62	223	30	11.11	33.75	4.46	25.80	220	0.07
25	11.31	33.75	4.97	224	50	10.61	33.76	4.76	25.90	211	0.11
30	11.11	33.75	4.46	220	75	9.46	33.91	2.45	26.21	181	0.16
36	11.02	33.78	5.49	217	100	9.20	33.95	2.30	26.29	174	0.20
46	10.72	33.76	5.05	213							
56	10.46	33.78	3.90	207							
65	9.92	33.86	3.03	192							
80	9.37	33.93	2.34	178							
100	9.20	33.95	2.30	174							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD	
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m	

SIO
CCOFI
5506

CREST; June 20, 1955; 0354 GCT; 34°53'N, 121°12'W; sounding, 320 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 20°.

77.55

0	12.52	33.69	6.66	250	0	12.52	33.69	6.66	25.49	250	0.00
9	12.46	33.70	6.69	248	10	12.45	33.70	6.68	25.52	248	0.02
28	12.40	33.70	6.60	247	20	12.42	33.70	6.65	25.52	248	0.05
37	11.28	33.66	5.82	230	30	12.39	33.66	6.58	25.67	233	0.07
47	10.84	33.66	5.45	223	50	10.65	33.67	5.19	25.82	219	0.12
56	10.16	33.72	4.00	206	75	9.63	33.78	2.95	26.08	194	0.17
67	9.84	33.76	3.17	199	100	9.11	33.93	2.38	26.29	174	0.22
76	9.60	33.78	2.93	193	150	8.85	34.09	1.98	26.45	158	0.30
85	9.26	33.86	2.56	182	200	8.39	34.16	1.26	26.57	147	0.38
95	9.12	33.91	2.45	176	250	7.92	34.19	1.02	26.67	138	0.45
114	9.04	33.98	2.31	170	300	7.50	34.21	0.84	26.75	130	0.52
138	8.90	34.04	2.07	163	400	7.02	34.24	0.60	26.84	122	0.65
157	8.84	34.11	1.81	157	500	(6.12)	(34.30)	(0.48)	(27.01)	(106)	(0.77)
193	8.48	34.15	1.32	149							
271	7.76	34.20	0.95	135							
370	7.20	34.23	0.65	125							
484	6.27	34.29	0.50	109							

CREST; June 19, 1955; 2148 GCT; 34°32'N, 121°51.5'W; sounding, 2200 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 39°.

77.65

0	13.94	33.38	6.04	299	0	13.94	33.38	6.04	24.97	299	0.00
8	13.90	33.40	6.22	297	10	13.90	33.40	6.22	25.00	296	0.03
25	13.82	33.40	6.25	296	20	13.85	33.40	6.25	25.01	296	0.06
37	13.68	33.35	6.16	297	30	13.77	33.39	6.22	25.01	296	0.09
45	13.34	33.35	6.21	290	50	12.58	33.31	6.00	25.20	278	0.15
52	12.30	33.30	5.91	274	75	11.10	33.36	5.53	25.51	248	0.21
58	11.73	33.26	5.80	267	100	10.12	33.53	4.69	25.81	220	0.27
64	11.72	33.33	5.57	262	150	8.42	33.84	2.83	26.32	171	0.37
74	11.16	33.36	5.56	250	200	7.99	33.96	2.34	26.48	156	0.45
78	10.90	33.39	5.16	243	250	7.53	34.06	1.91	26.62	142	0.53
95	10.30	33.50	4.82	225	300	7.10	34.09	1.51	26.72	134	0.60
112	9.63	33.60	3.96	208	400	6.52	34.12	0.93	26.82	124	0.73
144	8.52	33.81	2.92	175	500	6.00	34.20	0.58	26.95	112	0.86
189	8.04	33.95	2.40	158							
277	7.28	34.08	1.68	137							
388	6.59	34.12	0.98	125							
514	5.92	34.22	0.50	109							

CREST; June 19, 1955; 1300 GCT; 34°02'N, 122°54.5'W; sounding, 2400 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 25°.

77.80

0	14.50	33.45	6.16	306	0	14.50	33.45	6.16	24.91	306	0.00
10	14.49	33.46	6.19	305	10	14.49	33.46	6.19	24.91	305	0.03
28	14.52	33.46	6.14	305	20	14.50	33.46	6.14	24.91	305	0.06
42	14.51	33.46	6.30	305	30	14.52	33.46	6.20	24.91	305	0.09
50	13.64	33.40	5.85	292	50	13.64	33.40	5.85	25.05	292	0.15
58	12.46	33.42	5.54	268	75	10.45	33.49	4.80	25.71	229	0.22
67	11.00	33.44	5.22	241	100	9.40	33.61	4.03	25.98	203	0.27
75	10.45	33.49	4.80	229	150	8.53	33.93	3.03	26.38	166	0.36
88	9.73	33.55	4.22	212	200	8.02	34.02	2.25	26.52	152	0.44
97	9.46	33.59	4.10	205	250	7.57	34.08	1.92	26.64	141	0.52
116	9.06	33.75	3.37	187	300	7.13	34.13	1.50	26.74	131	0.59
140	8.62	33.89	3.17	171	400	6.40	34.22	0.80	26.91	115	0.72
183	8.19	33.99	2.40	157	500	5.84	34.29	0.47	27.03	104	0.83
234	7.70	34.07	2.02	144							
328	6.88	34.16	1.29	126							
441	6.14	34.26	0.60	109							
567	5.44	34.32	0.35	97							

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$10^{-5} \text{ cm}^3/\text{g}$	m	°C	‰	ml/L	g/L	$10^{-5} \text{ cm}^3/\text{g}$	dyn. m

77.90

CREST; June 19, 1955; 0505, 0630 GCT; 33°45'N, 123°37'W; sounding, 2400 fm; wind, 350°, force 5; weather, missing; sea, rough; wire angle, 27°, 34°.

0	14.00	33.31	6.21	306	0	14.00	33.31	6.21	24.90	306	0.00
9	14.00	33.32	6.18	305	10	14.00	33.32	6.17	24.91	305	0.03
27	14.00	33.30	6.12	306	20	14.00	33.31	6.09	24.90	306	0.06
40	14.00	33.32	6.12	305	30	14.00	33.30	6.05	24.90	306	0.09
49	13.99	33.31	6.13	306	50	13.99	33.31	6.03	24.90	306	0.15
58	14.00	33.31	6.06	306	75	13.63	33.28	5.63	24.96	301	0.23
67	13.88	33.32	6.11	302	100	12.10	33.30	5.75	25.26	272	0.30
76	13.58	33.27	5.60	300	150	9.23	33.59	4.07	26.00	202	0.42
90	12.92	33.33	5.98	284	200	8.12	33.87	3.30	26.39	164	0.51
99	12.23	33.30	5.80	274	250	7.38	33.97	3.12	26.58	147	0.59
122	10.37	33.31	5.27	240	300	6.78	34.02	2.28	26.70	135	0.67
144	9.40	33.53	4.28	208	400	6.08	34.07	1.00	26.83	123	0.80
188	8.36	33.82	3.35	171	500	5.38	34.22	0.48	27.04	103	0.92
236	7.55	33.96	3.18	150	600	5.05	34.30	0.30	27.14	94	1.02
327	6.52	34.04	1.74	130	700	4.82	34.34	0.30	27.20	88	1.13
437	5.73	34.13	0.75	114	800	4.46	34.42	0.33	27.30	78	1.21
561	5.16	34.24	0.38	-	1000	3.90	34.49	0.45	27.41	68	1.37
					1200	3.33	34.56	0.75	27.53	57	
0a)	14.08	33.30	6.30	-	1500	2.78	34.60	1.14	27.61	49	
397	6.12	34.07	1.02	123	2000	2.17	34.65	1.88	27.70	40	
446	5.73	34.16	0.74	112							
496	5.40	34.22	0.47	103							
555	5.17	34.26	0.34	-							
618	5.02	34.31	0.28	93							
690	4.83	34.42u	0.33	-							
766	4.59	34.37	0.33	83							
851	4.36	34.44	0.34	76							
950	4.01	34.47	0.38	70							
1062	3.71	34.52	0.53	63							
1184	3.37	34.56	0.72	57							
1323	3.07	34.58	0.86	53							
1481	2.79	34.60	1.05	49							
1662	2.54	34.63	1.23	45							
1863	2.28	34.63	1.72	43							
2101	2.00	34.67	1.89	38							

80.51

CREST; June 17, 1955; 1948 GCT; 34°26.5'N, 120°33'W; sounding, 60 fm; wind, 320°, force 5; weather, clear; sea, moderate; wire angle, 06°.

0	11.20	33.61	4.42	232	0	11.20	33.61	4.42	25.68	232	0.00
12	11.17	33.64	4.29	229	10	11.17	33.64	4.30	25.70	230	0.02
17	11.16	33.63	4.23	230	20	11.09	33.63	4.25	25.72	229	0.05
22	11.08	33.64	4.35	228	30	11.05	33.67	4.31	25.75	226	0.07
28	11.08	33.66	4.31	226	50	9.75	33.75	3.02	26.04	198	0.11
34	10.85	33.73	4.07	217	75	9.37	33.87	2.47	26.20	183	0.16
40	9.96	33.72	3.16	203	100	9.17	33.98	2.00	26.31	172	0.20
50	9.75	33.75	3.02	198							
61	9.60	33.79	2.88	193							
71	9.44	33.84	2.54	186							
87	9.20	33.95	2.19	174							
107	9.16	33.98	1.98	171							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT	Z	T	S	O ₂	σ_t	δT	ΔD	
m	°C	‰	ml/L	$10^{-5} \text{ cm}^3/\text{g}$	m	°C	‰	ml/L	g/L	$10^{-5} \text{ cm}^3/\text{g}$	dyn. m	

S10
CCOFI
5506

CREST; June 17, 1955; 2236 GCT; 34°19'N, 120°48'W; sounding, 400 fm; wind, 330°, force 5; weather, partly cloudy; sea, rough; wire angle, 18°.

80.55

0	12.24	33.74	5.22	241	0	12.24	33.74	5.22	25.58	241	0.00
11	12.07	33.70	5.31	241	10	12.07	33.71	5.30	25.58	241	0.02
31	11.64	33.69	5.06	234	20	11.90	33.69	5.30	25.61	238	0.05
46	10.69	33.75	3.81	213	30	11.68	33.69	5.08	25.65	235	0.07
56	10.13	33.78	3.31	201	50	10.41	33.77	3.57	25.94	208	0.12
66	9.76	33.78	2.88	196	75	9.69	33.81	2.81	26.10	192	0.17
76	9.65	33.81	2.81	192	100	9.18	33.92	2.38	26.27	176	0.21
86	9.31	33.88	2.54	181	150	8.80	34.14	1.61	26.50	154	0.30
100	9.18	33.92	2.38	176	200	8.58	34.21	0.93	26.59	146	0.37
110	9.09	33.95	2.26	173	250	8.27	34.24	0.68	26.65	140	0.44
135	8.84	34.09	1.84	159	300	7.90	34.28	0.61	26.75	130	0.51
164	8.76	34.20	1.32	149	400	7.04	34.29	0.70	26.88	118	0.64
217	8.48	34.22	0.84	144	500	6.43	34.33	0.40	26.99	108	0.76
280	8.06	34.27	0.60	134	600	5.84	34.36	0.33	27.09	98	0.87
391	7.13	34.29	0.72	119							
519	6.38	34.34	0.40	106							
653	5.43	34.36	0.31	93							

CREST; June 18, 1955; 0235 GCT; 34°08.5'N, 121°09'W; sounding, 1100 fm; wind, 340°, force 5; weather, clear; sea, rough; wire angle, 27°.

80.60

0	13.47	33.63	6.38	272	0	13.47	33.63	6.38	25.26	272	0.00
10	13.46	33.63	6.38	272	10	13.46	33.63	6.38	25.26	272	0.03
25	13.46	33.61	6.75	273	20	13.46	33.61	6.60	25.25	273	0.05
54	10.61	33.73	4.66	213	30	13.19	33.62	6.68	25.30	268	0.08
63	10.34	33.73	4.38	209	50	10.97	33.72	4.99	25.81	219	0.13
74	9.78	33.77	3.60	196	75	9.72	33.77	3.54	26.06	196	0.18
88	9.29	33.80	3.16	187	100	8.96	33.86	2.80	26.26	177	0.23
106	9.17	33.95	2.12	174	150	8.31	34.04	2.30	26.49	155	0.31
130	8.77	34.01	2.21	163	200	7.68	34.02	2.07	26.57	147	0.39
156	8.20	34.04	2.30	153	250	7.37	34.11	1.39	26.69	136	0.46
205	7.61	34.02	2.00	146	300	7.14	34.20	0.90	26.79	126	0.53
278	7.23	34.18	0.99	129	400	6.56	34.24	0.66	26.90	116	0.65
377	6.67	34.23	0.70	118	500	6.07	34.28	0.40	27.00	106	0.77
508	6.06	34.29	0.38	106	600	5.53	34.34	0.32	27.12	96	0.88
686	5.08	34.39	0.32	88	700	5.02	34.39	0.32	27.21	87	0.97
912	4.21	34.45	0.46	73	800	4.68	34.42	0.34	27.28	80	1.06
1213	3.35	34.54	0.85	58	1000	3.97	34.47	0.56	27.39	70	1.23

CREST; June 18, 1955; 0900 GCT; 33°48.5'N, 121°53.5'W; sounding, 2000+ fm; wind, 340°, force 6; weather, clear; sea, rough; wire angle, 35°.

80.70

0	14.24	33.35	6.02	308	0	14.24	33.35	6.02	24.88	308	0.00
8	14.26	33.37	6.07	307	10	14.26	33.38	6.07	24.90	306	0.03
25	14.28	33.40	5.96	305	20	14.28	33.40	5.98	24.91	305	0.06
38	13.58	33.38	6.38	293	30	14.26	33.40	5.98	24.92	304	0.09
46	12.79	33.37	6.38	277	50	12.58	33.36	6.35	25.23	275	0.15
53	12.44	33.36	6.31	273	75	11.81	33.45	5.83	25.44	254	0.22
62	12.23	33.39	6.31	267	100	10.74	33.45	5.30	25.64	236	0.28
71	11.98	33.44	6.01	258	150	9.19	33.76	3.40	26.14	188	0.39
83	11.35	33.45	5.64	246	200	8.30	33.97	2.57	26.44	160	0.47
91	11.02	33.44	5.52	242	250	7.77	34.06	1.95	26.59	146	0.55
112	10.34	33.53	4.66	224	300	7.11	34.06	1.55	26.69	136	0.62
137	9.51	33.71	-	197	400	6.20	34.15	0.86	26.88	118	0.76
182	8.58	33.90	2.82	168	500	5.69	34.26	0.46	27.03	104	0.87
237	7.90	34.05	2.03	148							
336	6.66	34.07	1.32	130							
451	5.96	34.20	0.61	111							
575	5.36	34.32	0.35	95							

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD	
m	°C	‰	ml/L	$\frac{10^{-5} \text{ cm}^3}{\text{g}}$	m	°C	‰	ml/L	g/L	$\frac{10^{-5} \text{ cm}^3}{\text{g}}$	dyn. m	

80.80

CREST; June 18, 1955; 1450 GCT; 33°29'N, 122°37'W; sounding, 2000+ fm; wind, 060°, force 5; weather, cloudy; sea, rough; wire angle, 22°.

0	14.02	33.31	6.10	306	0	14.02	33.31	6.10	24.90	306	0.00
10	14.02	33.35	6.26	303	10	14.02	33.35	6.26	24.93	303	0.03
24	14.02	33.33	6.21	305	20	14.02	33.34	6.21	24.92	304	0.06
52	12.54	33.39	6.23	272	30	14.02	33.36	6.21	24.94	302	0.09
60	12.17	33.37	6.09	266	50	12.80	33.40	6.23	25.21	276	0.15
70	11.69	33.42	5.49	255	75	11.59	33.42	5.49	25.46	253	0.22
86	11.31	33.42	5.52	248	100	10.86	33.42	5.39	25.60	240	0.28
104	10.67	33.43	5.22	237	150	9.40	33.79	2.92	26.13	189	0.38
126	9.78	33.62	3.96	208	200	8.69	33.94	2.24	26.36	168	0.48
157	9.30	33.83	2.71	185	250	8.07	34.03	1.88	26.53	152	0.56
209	8.56	33.96	2.17	164	300	7.58	34.11	1.53	26.65	140	0.63
285	7.74	34.09	1.61	142	400	6.65	34.18	(0.84)	26.84	121	0.77
390	6.76	34.18	0.89	123	500	5.93	34.22	(0.51)	26.96	110	0.89
529	5.72	34.23	-	106	600	5.41	34.26	(0.34)	27.07	100	1.00
716	4.96	34.37	0.26	87	700	4.99	34.36	(0.27)	27.19	89	1.10
948	4.18	34.43	0.42	74	800	4.65	34.40	0.30	27.26	82	1.19
1253	3.34	34.54	0.56	58	1000	4.04	34.44	0.46	27.36	73	1.36

80.90

CREST; June 18, 1955; 2028, 2202 GCT; 33°13'N, 123°13.5'W; sounding, 2400 fm; wind, 360°, force 5; weather, missing; sea, rough; wire angle, 24°, 40°.

4	14.16	33.37	6.17	305	0	(14.16)	(33.37)	(6.17)	24.92	305	(0.00)
22	14.12	33.37	6.13	304	10	14.15	33.37	6.15	24.92	304	0.03
35p	13.58	33.36	6.24	294	20	14.15	33.37	6.15	24.92	304	0.06
45p	12.62	33.36	6.13	276	30	14.08	33.37	6.12	24.94	303	0.09
54p	12.33	33.37	6.02	270	50	12.46	33.36	6.09	25.25	272	0.14
64p	11.97	33.42	5.83	260	75	11.38	33.40	5.58	25.48	251	0.21
72p	11.56	33.40	5.68	253	100	10.58	33.46	4.79	25.68	232	0.28
86p	10.98	33.40	4.79	243	150	9.28	33.81	2.97	26.16	186	0.38
95p	10.74	33.44	4.80	237	200	8.61	34.00	1.93	26.42	162	0.47
119p	9.90	33.58	4.25	213	250	7.89	34.06	1.91	26.58	147	0.55
147p	9.28	33.80	2.99	187	300	7.38	34.11	1.66	26.68	137	0.62
197p	8.62	34.00	1.94	162	400	6.70	34.20	0.71	26.86	120	0.75
258p	7.78	34.07	1.89	144	500	6.00	34.23	0.45	26.97	110	0.87
365p	6.92	34.17	0.88	126	600	5.30	34.33	0.26	27.13	94	0.98
489p	6.00	34.23	0.45	110	700	4.95	34.35	0.27	27.19	89	1.08
618p	5.24	34.33	0.28	94	800	4.49	34.40	0.32	27.28	80	1.17
					1000	3.84	34.48	0.42	27.42	67	1.33
382a)	6.90	34.18	-	-	1200	3.35	34.49	0.65	27.47	62	
429	6.44	34.22	0.59	116	1500	2.77	34.56	1.08	27.58	52	
476	6.00	34.22	0.43	110	2000	2.11					
534	5.88	34.23	0.36	-							
595	5.39	34.31	0.26	96							
666	5.07	34.34	0.23	91							
741	4.75	34.38	0.30	84							
825	4.42	34.41	0.32	79							
921	4.06	34.45	0.38	72							
1032	3.76	34.49	0.49	66							
1151	3.46	34.49	0.60	63							
1288	3.17	34.56u	0.82	-							
1447	2.88	34.51u	0.99	-							
1622	2.58	34.58	1.24	49							
1823	2.32	34.63	1.63	43							
2054	2.06	34.51r	1.68u	-							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	$\delta T_{10}^{-5} \frac{3}{cm/g}$	Z	T	S	O ₂	σ_t	$\delta T_{10}^{-5} \frac{3}{cm/g}$	ΔD	
m	°C	‰	ml/L		m	°C	‰	ml/L	g/L		dyn. m	

SIO
CCOFI
5506

CREST; June 16, 1955; 1254 GCT; 34°13.5'N, 119°22'W; sounding, 13 fm; wind, 270°, force 1; weather, partly cloudy; sea, slight; wire angle, 07°.

83.40

0	15.40	33.60	5.86	313	0	15.40	33.60	5.86	24.82	313	0.00
5	15.47	33.65	5.91	311	10	13.66	33.55	5.35	25.16	281	0.03
10	13.66	33.55	5.35	281	20	11.91	33.56	4.56	25.51	248	0.06
15	12.01	33.55	4.77	251							
20	11.91	33.56	4.56	248							

CREST; June 16, 1955; 1059 GCT; 34°07.5'N, 119°34'W; sounding, 130 fm; wind, 270°, force 6; weather, missing; sea, rough; wire angle, 07°.

83.43

0	14.41	33.66	5.99	289	0	14.41	33.66	5.99	25.08	289	0.00
10	14.45	33.68	5.75	288	10	14.45	33.68	5.75	25.09	288	0.03
15	14.43	33.68	6.14	288	20	14.41	33.68	6.12	25.10	288	0.06
20	14.41	33.68	6.12	288	30	14.39	33.70	6.15	25.12	285	0.09
25	14.40	33.68	6.02	287	50	11.09	33.57	4.02	25.68	232	0.14
30	14.39	33.70	6.15	285							
35	14.31	33.67	6.10	285							
45	12.22	33.55	4.89	255							
55	10.32	33.60	3.44	218							
69	9.62	33.73	2.93	197							

CREST; June 15, 1955; 2224 GCT; 33°32'N, 120°45'W; sounding, 1100 fm; wind, 330°, force 5; weather, partly cloudy; sea, moderate; wire angle, 36°.

83.60

0	13.86	33.40	6.42	296	0	13.86	33.40	6.42	25.00	296	0.00
9	13.85	33.46	6.21	292	10	13.85	33.46	6.22	25.05	292	0.03
25	13.70	33.44	6.24	290	20	13.76	33.45	6.23	25.06	291	0.06
37	12.25	33.39	6.38	267	30	13.35	33.42	6.29	25.12	285	0.09
46	12.16	33.51	4.52	256	50	11.99	33.49	4.39	25.44	254	0.14
53	11.30	33.40	4.18	249	75	10.26	33.51	4.50	25.77	224	0.20
61	10.76	33.45	4.39	236	100	9.32	33.67	3.57	26.05	197	0.26
69	10.46	33.51	4.95u	227	150	8.27	33.91	3.00	26.40	164	0.34
82	9.98	33.51	4.52	219	200	7.79	34.02	2.59	26.56	148	0.42
90	9.56	33.58	4.03	206	250	7.06	34.06	2.33	26.69	136	0.50
109	9.16	33.71	3.26	191	300	6.67	34.10	1.78	26.78	128	0.56
131	8.53	33.82	3.23	174	400	6.35	34.22	0.77	26.91	115	0.69
173	8.13	33.98	2.70	156	500	6.08	34.29	0.40	27.01	106	0.80
223	7.40	34.04	2.52	142							
316	6.58	34.11	1.57	126							
425	6.28	34.25	0.58	112							
542	5.81	34.32	0.31	101							

CREST; June 15, 1955; 1440 GCT; 33°13'N, 121°28'W; sounding, 2200 fm; wind, 350°, force 5; weather, cloudy; sea, rough; wire angle, 10°.

83.70

0	14.06	33.45	6.42	296	0	14.06	33.45	6.42	25.00	296	0.00
10	14.04	33.46	6.37	296	10	14.04	33.46	6.37	25.01	296	0.03
31	11.82	33.40	6.24	258	20	13.60	33.45	6.33	25.09	288	0.06
46	11.12	33.47	5.65	241	30	11.93	33.40	6.27	25.38	260	0.09
56	10.82	33.45	5.62	237	50	11.04	33.46	5.64	25.60	240	0.14
65	10.08	33.44	5.07	226	75	9.72	33.42	4.69	25.79	222	0.19
75	9.72	33.42	4.69	222	100	9.38	33.76	3.84	26.11	192	0.25
84	9.98	33.71	4.68	204	150	8.55	34.06	2.27	26.48	156	0.33
99	9.40	33.76	3.84	192	200	7.80	34.08	2.22	26.61	144	0.41
110	9.16	33.86	3.38	180	250	7.20	34.11	2.05	26.71	134	0.48
133	8.84	34.04	2.38	162	300	6.58	34.15	1.49	26.82	123	0.54
161	8.36	34.07	2.24	153	400	5.86	34.16	0.87	26.93	114	0.67
214	7.62	34.09	2.21	141	500	5.39	34.28	0.49	27.08	99	0.78
276	6.82	34.14	1.74	127	600	5.04	34.39	0.46	27.21	87	0.88
388	5.94	34.16	0.91	114							
514	5.30	34.31	0.46	96							
647	4.97	34.42	0.48	84							

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

83.80

CREST; June 15, 1955; 0738 GCT; 32°54'N, 122°07.5'W; sounding, 2000+ fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 15°.

0	13.28	33.50	6.48	278	0	13.28	33.50	6.48	25.20	278	0.00
24	13.15	33.49	6.46	276	10	13.26	33.50	6.48	25.20	277	0.03
38	12.48	33.68	5.92	250	20	13.19	33.49	6.47	25.21	276	0.06
48	12.25	33.58	5.96	253	30	12.95	33.53	6.38	25.28	270	0.08
57	11.56	33.64	5.51	236	50	12.24	33.58	5.96	25.46	253	0.14
66	11.48	33.71	5.24	230	75	10.43	33.72	4.62	25.90	211	0.19
74	10.48	33.72	4.65	212	100	9.41	33.73	3.62	26.08	194	0.24
89	9.83	33.72	3.82	202	150	8.15	33.88	3.04	26.39	165	0.33
98	9.46	33.73	3.64	195	200	7.49	34.02	2.41	26.60	144	0.41
121	8.66	33.84	2.93	174	250	7.00	34.02	1.98	26.67	138	0.48
148	8.19	33.87	3.03	165	300	6.67	34.14	1.42	26.82	124	0.55
199	7.49	34.02	2.41	144	400	6.43	34.28	0.47	26.95	112	0.67
260	6.87	34.02	1.87	137	500	5.84	34.32	0.44	27.06	101	0.78
369	6.57	34.25	0.49	115	600	5.27	34.33	0.52	27.13	94	0.89
494	5.86	34.32	0.44	101							
631	5.04	34.33	0.56	92							

83.90

CREST; June 14-15, 1955; 2242, 0014 GCT; 32°32'N, 122°46'W; sounding, 2250 fm; wind, 350°, force 3; weather, cloudy; sea, moderate; wire angle, 25°, 30°.

0	14.26	33.31	6.08	311	0	14.26	33.31	6.08	24.85	311	0.00
9	14.16	33.31	6.13	309	10	14.11	33.31	6.13	24.88	308	0.03
28	14.08	33.39	6.15	302	20	13.87	33.31	6.14	24.93	304	0.06
41	13.28	33.35	6.30	289	30	14.04	33.39	6.17	24.96	300	0.09
51	12.75	33.51	6.43	267	50	12.80	33.51	6.42	25.30	268	0.15
60	11.84	33.32	6.03	265	75	11.18	33.41	5.40	25.53	247	0.21
68	11.51	33.37	5.81	255	100	10.58	33.56	5.26	25.75	225	0.27
77	11.12	33.42	5.29	245	150	8.87	33.84	3.05	26.26	177	0.37
90	11.25	33.57	5.62	236	200	7.70	33.96	2.90	26.52	152	0.46
98	10.69	33.56	5.32	227	250	7.24	33.98	2.48	26.61	144	0.53
117	9.60	33.62	3.72	205	300	6.89	34.04	1.83	26.70	135	0.60
140	9.12	33.80	3.10	184	400	6.15	34.15	0.94	26.88	118	0.74
183	8.06	33.94	3.00	158	500	5.54	34.18	0.57	26.99	108	0.85
236	7.38	33.97a)	2.63	146	600	5.25	34.27	0.25	27.09	98	0.96
329	6.62	34.11	1.34	126	700	5.16	34.42	0.22	27.22	86	1.06
442	5.94	34.17	0.80	113	800	4.38	34.44	0.33	27.32	76	1.15
566	5.35	34.23	0.43	102	1000	3.70	34.53	0.64	27.47	62	1.30
					1200	3.29	34.57	0.84	27.54	56	
424b)	6.00	34.16	0.67	115	1500	2.77	34.60	1.13	27.61	49	
473	5.68	34.17	0.68	111	2000	2.06	34.63	1.82	27.69	41	
522	5.43	34.27	0.47	-							
584	5.26	34.27	0.33	98							
649	5.23	34.38	0.22	90							
722	5.00	34.44	0.25	83							
801	4.38	34.44	0.36	76							
887	3.98	34.48	0.48	69							
988	3.76	34.52	0.61	64							
1102	3.49	34.56	0.72	58							
1227	3.22	34.53u	0.87	-							
1373	2.98	34.58	1.06	52							
1539	2.72	34.61	1.18	48							
1728	2.42	34.60u	1.45	-							
1939	2.16	34.63	0.96u	42							
2177	1.98	34.63	1.91	40							

a) Alternate value, 34.14‰, not used in interpolation.

b) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_{-5}^{+3}	Z	T	S	O ₂	σ_t	δT_{-5}^{+3}	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

SIO
CCOFI
5506

CREST; June 11, 1955; 0900 GCT; 33°50'N, 118°38'W; sounding, 400 fm; wind, 080°, force 3; weather, missing; sea, rough; wire angle, 00°.

87.35

0	16.56	33.58	5.70	339	0	16.56	33.58	5.70	24.55	339	0.00
10	16.40	33.55	5.70	339	10	16.40	33.55	5.70	24.56	339	0.03
30	11.42	33.48	4.42	246	20	13.50	33.49	5.02	25.15	283	0.06
40	10.46	33.54	3.58	225	30	11.42	33.48	4.42	25.54	246	0.09
50	10.08	33.59	3.18	215	50	10.08	33.59	3.18	25.86	215	0.14
60	9.74	33.69	3.11a)	202	75	9.34	33.82	2.70	26.16	186	0.19
71	9.42	33.77	2.82	191	100	9.16	33.90	2.40	26.26	177	0.23
81	9.24	33.87	2.57	181	150	8.92	34.08	2.14	26.44	160	0.32
91	9.18	33.89	2.42	178	200	8.86	34.24	1.33	26.57	148	0.40
101	9.16	33.90	2.40	177	250	8.55	34.25	1.13	26.62	143	0.47
119	9.02	34.01	2.32	167	300	8.27	34.25	1.04	26.67	138	0.54
144	8.92	34.04	2.29	163	400	7.64	34.28	0.68	26.79	127	0.68
163	8.96	34.22	1.69	150	500	6.56	34.33	0.41	26.97	110	0.80
203	8.84	34.25	1.27	147							
281	8.40	34.25	1.10	140							
384	7.79	34.28	0.74	129							
502	6.55	34.33	0.40	109							

CREST; June 11, 1955; 1415 GCT; 33°40'N, 118°58.5'W; sounding, 480 fm; wind, 180°, force 1; weather, partly cloudy; sea, rough; wire angle, 05°.

87.40

0	16.42	33.60	4.67r	335	0	16.42	33.60	(6.31)	24.59	335	0.00
10	15.41	33.58	6.31	315	10	15.41	33.58	6.31	24.81	315	0.03
26	10.87	33.60	3.92	227	20	11.80	33.59	4.42	25.55	245	0.06
50	9.67	33.75	2.67	196	30	10.51	33.62	3.64	25.81	220	0.08
75	9.32	33.92	2.24	178	50	9.67	33.75	2.67	26.05	196	0.12
99	9.20	33.98	2.24	172	75	9.32	33.92	2.24	26.24	178	0.17
153	8.86	34.16	1.74	154	100	9.20	33.98	2.24	26.31	172	0.22
201	8.63	34.27b)	1.10	143	150	8.89	34.14	1.75	26.49	156	0.30
300	7.92	34.29	0.80	130	200	8.67	34.27	1.12	26.62	143	0.38
404	6.90	34.31	0.52	115	250	8.23	34.29	0.90	26.70	135	0.45
503	6.18	34.35b)	0.42	103	300	7.92	34.29	0.80	26.75	130	0.51
609	5.62	34.42	0.12	91	400	6.94	34.31	0.53	26.90	116	0.64
					500	6.19	34.34	0.44	27.03	104	0.75
					600	5.70	34.41	0.18	27.15	93	0.86

CREST; June 11, 1955; 2050 GCT; 33°20'N, 119°40'W; sounding, 40 fm; wind, 280°, force 3; weather, cloudy; sea, moderate; wire angle, 00°.

87.50

0	13.96	33.74	5.88	273	0	13.96	33.74	5.88	25.24	273	0.00
10	13.74	33.73	5.82	269	10	13.74	33.73	5.82	25.28	269	0.03
15	13.62	33.73	5.66	267	20	13.52	33.74	5.74	25.34	265	0.05
20	13.52	33.74	5.74	265	30	11.80	33.78	4.52	25.70	230	0.08
25	12.72	33.75	4.76	249	50	9.54	33.92	2.67	26.21	182	0.12
30	11.80	33.78	4.52	230							
35	11.49	33.80	4.28	223							
40	10.97	33.83	3.80	211							
50	9.54	33.92	2.67	182							

a) Mean value of 3.07 and 3.15 ml/L.

b) Possible evaporation; value falls on property curve.

S10

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

87.60

CREST; June 12, 1955; 0244 GCT; 33°00'N, 120°22'W; sounding, 420 fm; wind, 280°, force 2; weather, cloudy; sea, moderate; wire angle, 07°.

0	13.74	33.57	6.68	282	0	13.74	33.57	6.68	25.16	282	0.00
10	13.43	33.65u	8.75r	-	10	13.43	(33.57)	(6.44)	(25.22)	(276)	(0.03)
31	13.30	33.57	6.33	273	20	13.35	(33.57)	(6.38)	(25.24)	(274)	(0.06)
41	12.01	33.44	6.04	259	30	13.32	(33.57)	(6.36)	(25.25)	(273)	(0.08)
51	11.44	33.39	6.33	253	50	11.45	33.39	6.32	25.46	253	(0.14)
61	10.80	33.38	5.07	242	75	10.20	33.58	4.40	25.83	218	(0.19)
70	10.28	33.58	4.47	219	100	8.85	33.71	3.42	26.15	187	(0.25)
80	10.12	33.58	4.34	216	150	8.26	33.96	2.68	26.44	160	(0.33)
89	9.54	33.64	4.02	202	200	7.80	34.10	1.86	26.62	142	(0.41)
99	8.89	33.71	3.46	187	250	7.51	34.21	1.35	26.74	131	(0.48)
124	8.46	33.88	2.83	169	300	7.30	34.24	1.06	26.80	125	(0.54)
154	8.21	33.96	2.63	159	400	6.62	34.30	0.42	26.94	112	(0.67)
204	7.79	34.11	1.79	142	500	6.15	34.35	0.35	27.04	103	(0.78)
260	7.48	34.22	1.29	129	600	5.59	34.38	0.33	27.14	94	(0.88)
364	6.86	34.28	0.53	117							
481	6.22	34.34	0.36	104							
604	5.58	34.38	0.32	93							

87.70

CREST; June 13, 1955; 2116 GCT; 32°39'N, 121°02.5'W; sounding, 2100 fm; wind, 290°, force 2; weather, cloudy; sea, moderate; wire angle, 08°.

0	14.40	33.46	6.47	303	0	14.40	33.46	6.47	24.93	303	0.00
10	13.89	33.41	6.45	296	10	13.89	33.41	6.45	25.00	296	0.03
30	12.05	33.40	6.34	262	20	13.00	33.40	6.42	25.18	280	0.06
40	11.54	33.48	6.16	247	30	12.05	33.40	6.34	25.36	262	0.09
49	11.39	33.48	5.91	245	50	11.33	33.48	5.88	25.55	244	0.14
60	11.16	33.58	5.82	234	75	10.87	33.62	5.32	25.75	225	0.20
69	11.06	33.60	5.47	231	100	9.58	33.60	4.40	25.95	207	0.25
79	10.61	33.62	5.22	221	150	8.47	33.84	2.61	26.31	172	0.34
89	9.76	33.53	4.62	214	200	7.62	33.96	2.21	26.54	150	0.43
98	9.62	33.58	4.48	209	250	6.83	34.03	2.20	26.70	135	0.50
122	8.80	33.72	3.54	185	300	6.45	34.11	2.04	26.82	124	0.56
151	8.46	33.84	2.58	172	400	6.14	34.23	0.60	26.95	111	0.69
197	7.68	33.96	2.21	152	500	5.44	34.30	0.50	27.09	98	0.80
255	6.78	34.04	2.20	133	600	(5.04)	(34.31)	(0.54)	(27.15)	(93)	(0.90)
357	6.31	34.18	0.78	117							
473	5.62	34.29	0.50	101							
596	5.04	34.31	0.53	93							

87.80

CREST; June 14, 1955; 0415 GCT; 32°20'N, 121°43.5'W; sounding, 2000+ fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 25°.

0	15.42	33.39	5.93	329	0	15.42	33.39	5.93	24.66	329	0.00
9	15.41	33.40	5.91	328	10	15.41	33.40	5.92	24.67	328	0.03
26	15.00	33.40	5.97	320	20	15.18	33.40	5.93	24.73	323	0.06
36	14.76	33.40	6.02	314	30	14.88	33.40	5.98	24.79	317	0.10
45	14.68	33.40	6.10	313	50	14.30	33.41	6.25	24.92	304	0.16
54	13.54	33.46	6.38	286	75	12.20	33.27	5.78	25.23	275	0.23
62	12.65	33.28	6.46	282	100	10.63	33.35	5.23	25.58	242	0.30
71	12.31	33.26	6.06	277	150	8.58	33.81	3.36	26.27	176	0.40
80	12.04	33.28	5.62	271	200	7.81	34.01	2.85	26.54	150	0.48
88	11.64	33.30	5.90	263	250	7.29	34.04	2.41	26.65	140	0.56
108	9.94	33.41	4.64	226	300	6.70	34.10	1.81	26.77	128	0.63
134	8.91	33.69	3.59	189	400	5.91	34.18	0.86	26.94	113	0.75
175	8.14	33.98	3.06	157	500	5.62	34.24	0.50	27.03	104	0.86
226	7.56	34.02	2.62	145							
315	6.58	34.11	1.70	126							
423	5.81	34.18	0.74	111							
544	5.44	34.30	0.39	98							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT	Z	T	S	O ₂	σ_t	δT	ΔD
m	°C	‰	ml/L	$\frac{10^{-5} \text{ cm}^3}{\text{g}}$	m	°C	‰	ml/L	g/L	$\frac{10^{-5} \text{ cm}^3}{\text{g}}$	dyn. m

SIO
CCOFI
5506

CREST; June 14, 1955; 1121, 1310 GCT; 31°59'N, 122°22.5'W; sounding, 2000+ fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 02°, 08°.

87.90

0	15.58	33.39	5.89	332	0	15.58	33.39	5.89	24.63	332	0.00
10	15.56	33.40	5.93	330	10	15.56	33.40	5.93	24.65	330	0.03
30	15.36	33.39	6.00	327	20	15.49	33.40	5.98	24.66	329	0.07
45	14.46	33.30	6.03	316	30	15.36	33.39	6.00	24.68	327	0.10
55	13.68	33.27	6.31	303	50	14.09	33.28	6.17	24.87	309	0.16
65	13.16	33.29	6.33	290	75	12.80	33.29	6.20	25.14	284	0.24
76	12.74	33.29	6.17	283	100	11.88	33.28	5.88	25.30	268	0.31
85	12.48	33.30	6.10	278	150	9.23	33.57	4.23	25.98	203	0.43
100	11.88	33.28	5.88	268	200	8.35	33.64	3.43	26.18	185	0.53
110	11.41	33.21	5.73	265	250	7.66	33.76	2.88	26.38	166	0.62
134	9.76	33.40	5.02	223	300	7.11	34.04	2.14	26.67	138	0.70
163	8.98	33.64	3.88	194	400	6.23	34.14	0.92	26.86	120	0.83
218	8.06	33.64	3.28	181	500	5.35	34.18	0.63	27.01	106	0.95
281	7.28	34.01	2.37	142	600	4.90	34.31	0.28	27.16	92	1.05
394	6.30	34.14	0.94	120	700	4.80	34.38	0.26	27.23	85	1.15
522	5.18	34.19	0.51	103	800	4.50	34.40	0.26	27.28	80	1.24
656	4.90	34.38	0.27	86	1000	4.00	34.45	0.40	27.37	72	1.40
					1200	3.52	34.52	0.64	27.48	62	
802p	4.49	34.40	0.26	80	1500	2.89	34.56	1.03	27.57	53	
1122p	3.72	34.48	0.58	66	2000	2.15	34.60	1.76	27.66	44	
1377p	3.18	34.56	0.86	55							
1623p	2.66	34.56	1.18	51							
1948p	2.20	34.60	1.59	44							
2171p	2.01	34.60	1.93	43							
2381p	1.90	34.61	2.06	41							
2583a)	1.82	34.62	2.25	40							
2784a)	1.74	34.65	2.45	37							
2995a)	1.66	34.65	2.51	36							

PAOLINA-T; June 17, 1955; 0405 GCT; 33°28.5'N, 117°45.5'W; sounding, 28 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°.

90.28

0	17.53	33.56	5.22	363	0	17.53	33.56	5.22	24.31	363	0.00
5	17.36	33.55	4.96	360	10	14.02	33.57	5.76	25.10	288	0.03
10	14.02	33.57	5.76	288	20	12.06	33.55	5.11	25.47	252	0.06
15	12.68	33.55	3.88r	263	30	11.16	33.51	5.04	25.61	239	0.08
20	12.06	33.55	5.11	252							
25	11.68	33.57	4.99	244							
30	11.16	33.51	5.04	239							
40	10.32	33.56	3.88	221							

705
788

a) Pretrip; depth too uncertain for interpolation.

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD	
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m	

90.30

PAOLINA-T; June 17, 1955; 0709 GCT; 33°24.5'N, 117°55'W; sounding, 340 fm; wind, 280°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°.

0	17.96	33.60	6.01	370	0	17.96	33.60	6.01	24.23	370	0.00
10	17.68	33.63	6.34	361	10	17.68	33.63	6.34	24.32	361	0.04
30	12.23	33.47	5.73	261	20	15.10	33.54	6.27	24.87	309	0.07
40	11.41	33.55	4.80	240	30	12.23	33.47	5.73	25.38	261	0.10
50	10.56	33.55	4.25	225	50	10.56	33.55	4.25	25.76	225	0.15
60	10.08	33.65	3.72	210	75	9.63	33.73	3.51	26.04	198	0.20
70	9.78	33.71	3.48	201	100	9.34	33.87	2.96	26.20	182	0.25
80	9.53	33.74	3.52	195	150	8.99	34.07	2.48	26.42	162	0.33
90	9.48	33.84	3.44	187	200	8.68	34.17	1.97	26.54	150	0.41
100	9.34	33.87	2.96	182	250	8.57	34.22	1.78	26.58	146	0.49
120	9.15	33.98	2.55	172	300	7.98	(34.23)	1.17	(26.70)	(135)	(0.56)
143	9.02	34.07	2.50	163	400	7.09	(34.32)	0.77	(26.90)	(116)	(0.70)
164	8.84	34.07	2.22	160	500	6.59	(34.42)	0.72	(27.05)	(102)	(0.80)
202	8.68	34.18	1.93	149							
281	8.02	34.23	1.20	137							
385	7.21	34.30a)	0.80	120							
505	6.49	34.42a)	0.71	102							

90.37

PAOLINA-T; June 17, 1955; 1225 GCT; 33°10.5'N, 118°23.5'W; sounding, 650 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 00°.

0	16.50	33.60	6.05	337	0	16.50	33.60	6.05	24.58	337	0.00
10	16.46	33.58	6.17	338	10	16.46	33.58	6.17	24.57	338	0.03
32	11.40	33.55	5.05	240	20	16.30	33.56	6.14	24.60	335	0.07
42	10.91	33.57	4.50	230	30	11.58	33.55	5.14	25.56	244	0.10
53	10.31	33.58	3.90	219	50	10.42	33.58	4.00	25.79	221	0.14
64	9.36	33.71	3.40	195	75	9.17	33.77	3.22	26.15	187	0.19
74	9.17	33.77	3.25	187	100	9.15	33.86	3.20	26.23	180	0.24
84	9.17	33.78	3.13	186	150	9.03	34.16	1.90	26.48	156	0.32
94	9.16	33.80	3.23	185	200	8.81	34.25	1.32	26.58	146	0.40
104	8.97	33.87	3.56	177	250	8.47	34.31	1.05	26.68	137	0.47
129	9.03	34.09	2.08	161	300	8.00	34.31		26.75	130	0.54
159	9.01	34.18	1.70	155	400	6.73	34.30		26.93	114	0.67
207	8.78	34.27	1.24	146	500	6.34	34.35		27.02	105	0.78
266	8.37	34.31	0.94	135	600	5.66	34.37		27.12	96	0.89
371	6.97	34.28	-	118							
484	6.42	34.34	-	107							
614	5.58	34.37	-	94							

90.45

PAOLINA-T; June 17, 1955; 1808 GCT; 32°58.5'N, 118°54'W; sounding, 900 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 15°.

0	15.00	33.75		294	0	15.00	33.75		25.03	294	0.00
10	14.79	33.75		290	10	14.79	33.75		25.07	290	0.03
24	11.21	33.72		224	20	14.51	33.75		25.14	284	0.06
53	9.28	33.92		178	30	10.67	33.76		25.89	212	0.08
63	9.04	33.92		174	50	9.38	33.91		26.22	180	0.12
73	8.90	33.94		170	75	8.88	33.96		26.34	169	0.17
88	8.84	34.02		164	100	8.78	34.04		26.43	161	0.21
106	8.71	34.07		160	150	8.40	34.14		26.56	148	0.29
131	8.41	34.11		151	200	8.10	34.23		26.67	138	0.36
161	8.40	34.16		147	250	7.74	34.25		26.74	131	0.43
210	8.06	34.23		137	300	7.40	34.27		26.81	125	0.49
282	7.55	34.26		127	400	6.60	34.32		26.96	111	0.61
382	6.74	34.32		112	500	5.99	34.32		27.05	102	0.72
512	5.88	34.32		100	600	5.68	34.33		27.09	98	0.83
694	5.26	34.38		90	700	5.25	34.38		27.18	89	0.93
921	4.42	34.43		77	800	4.83	34.41		27.25	83	1.02
1224	3.86	34.52		65	1000	4.23	34.46		27.35	73	1.19

a) Salinity samples at 385 and 505 meters appear to have been reversed; they are assumed to be in the order listed.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

SIO

CCOFI

5506

PAOLINA-T; June 18, 1955; 0300 GCT; 32°34.5'N, 119°37'W; sounding, 600 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 22°.

90.55

0	14.43	33.61		293	0	14.43	33.61		25.04	293	0.00
9	14.36	33.64		289	10	14.35	33.64		25.08	289	0.03
28	14.22	33.62		287	20	14.28	33.63		25.09	288	0.06
42	13.34	33.55		276	30	14.21	33.61		25.10	287	0.09
51	12.02	33.52		254	50	12.03	33.52		25.46	254	0.14
60	11.77	33.58		244	75	9.94	33.53		25.83	218	0.20
71	10.20	33.50		223	100	9.28	33.75		26.12	190	0.25
78	9.75	33.56		212	150	8.57	34.09		26.50	154	0.34
93	9.42	33.69		197	200	7.80	34.10		26.62	143	0.42
102	9.24	33.78		188	250	7.36	34.11		26.69	136	0.48
126	8.90	33.86		176	300	6.99	34.19		26.81	125	0.55
153	8.50	34.11		152	400	6.33	34.26		26.95	111	0.67
204	7.75	34.10		142	500	5.82	34.31		27.05	102	0.78
262	7.22	34.14		132	600	5.38	34.39		27.17	90	0.89
371	6.49	34.24		115							
493	5.88	34.31		103							
624	5.26	34.41		88							

PAOLINA-T; June 18, 1955; 0721 GCT; 32°24'N, 119°51'W; sounding, 450 fm; wind, 320°, force 4; weather, missing; sea, rough; wire angle, 12°.

90.60

0	14.09	33.53		292	0	14.09	33.53		25.05	292	0.00
10	14.08	33.57		288	10	14.08	33.57		25.09	288	0.03
30	14.08	33.55		290	20	14.07	33.56		25.08	289	0.06
43	12.50	33.42		269	30	14.07	33.55		25.07	290	0.09
53	11.49	33.35		256	50	11.72	33.36		25.39	260	0.14
64	11.26	33.44		246	75	10.32	33.50		25.75	226	0.20
74	10.35	33.50		226	100	9.41	33.67		26.03	199	0.26
84	9.88	33.56		214	150	8.60	33.94		26.38	166	0.35
98	9.42	33.66		200	200	8.06	34.04		26.54	150	0.43
108	9.18	33.70		192	250	7.78	34.14		26.69	136	0.50
132	8.82	33.86		176	300	7.12	34.18		26.78	127	0.57
161	8.44	33.96		163	400	6.13	34.23		26.96	111	0.69
213	7.92	34.06		150	500	5.61	34.32		27.09	98	0.80
274	7.38	34.16		132	600	5.33	34.39		27.17	90	0.90
384	6.25	34.21		115							
510	5.59	34.33		97							
643	5.22	34.42		87							

PAOLINA-T; June 18, 1955; 1455 GCT; 32°02'N, 120°36'W; sounding, 2000 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 27°.

90.70

0	14.89	33.40		317	0	14.89	33.40		24.78	317	0.00
9	14.89	33.40		317	10	14.88	33.40		24.78	317	0.03
27	14.86	33.40		317	20	14.86	33.40		24.79	317	0.06
51	14.22	33.38		305	30	14.82	33.40		24.80	316	0.10
63	13.22	33.29		292	50	14.30	33.38		24.91	305	0.16
71	12.26	33.29		275	75	12.04	33.30		25.29	269	0.23
84	11.54	33.34		258	100	10.83	33.39		25.58	241	0.29
104	10.25	33.44		229	150	8.66	33.80		26.25	178	0.40
131	9.10	33.66		194	200	8.34	34.09		26.53	151	0.48
149	8.68	33.80		178	250	8.04	34.16		26.63	142	0.56
196	8.34	34.08		152	300	7.33	34.19		26.76	129	0.63
260	7.92	34.17		140	400	6.23	34.27		26.97	110	0.75
351	6.62	34.20		120	500	6.01	34.33		27.04	103	0.86
471	6.08	34.31		105	600	5.55	34.39		27.15	92	0.96
641	5.22	34.42		86	700	4.92	34.45		27.27	81	1.06
855	4.33	34.51		70	800	4.48	34.49		27.35	74	1.14
1163	3.55	34.54		60	1000	3.86	34.53		27.45	64	1.29

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

93.27 PAOLINA-T; June 20, 1955; 1821 GCT; 32°56'N, 117°18'W; sounding, 50 fm; wind, 280°, force 1; weather, overcast; sea, slight; wire angle, 00°.

0	20.48r	33.62	-	0	18.2	33.62	24.19	374	0.00
10	13.90	33.53	288	10	13.90	33.53	25.10	288	0.03
15	12.58	33.63	255	20	11.62	33.52	25.53	246	0.06
20	11.62	33.52	246	30	10.56	33.50	25.71	229	0.08
25	11.14	33.48	241	50	9.68	33.62	25.94	207	0.13
30	10.56	33.50	229	75	9.18	33.78	26.16	187	0.18
35	10.26	33.52	223						
45	9.88	33.61	210						
55	9.48	33.63	203						
65	9.32	33.71	194						
80	9.13	33.81	184						

93.30 PAOLINA-T; June 20, 1955; 1533 GCT; 32°49.5'N, 117°31.5'W; sounding, 470 fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 06°.

0	18.72r	33.68	-	0	17.6	33.68	24.38	356	0.00
10	16.40	33.58	337	10	16.40	33.58	24.58	337	0.03
30	12.92	33.51	270	20	14.40	33.54	25.00	297	0.07
40	11.74	33.50	250	30	12.92	33.51	25.28	270	0.09
50	11.06	33.54	235	50	11.06	33.54	25.65	235	0.14
60	10.48	33.56	224	75	9.56	33.61	25.97	205	0.20
69	9.72	33.58	210	100	9.29	33.71	26.09	193	0.25
79	9.48	33.64	202	150	8.50	33.93	26.38	166	0.34
88	9.38	33.69	196	200	8.10	34.05	26.53	151	0.42
98	9.32	33.71	194	250	8.11	34.15	26.61	144	0.50
123	8.99	33.86	178	300	8.10	34.24	26.69	136	0.57
151	8.49	33.93	166	400	7.61	34.31	26.81	124	0.70
199	8.10	34.05	151	500	6.46	34.31	26.97	109	0.82
259	8.11	34.16	142	600	5.75	34.35	27.10	97	0.93
360	7.96	34.31	129						
476	6.74	34.31	113						
604	5.72	34.36	96						

93.40 PAOLINA-T; June 20, 1955; 0745 GCT; 32°24'N, 118°17'W; sounding, 400 fm; wind, 300°, force 5; weather, cloudy; sea, rough; wire angle, 03°.

0	18.98r	33.64	-	0	16.9	33.64	24.52	343	0.00
10	16.88	33.65	342	10	16.88	33.65	24.53	342	0.03
30	11.44	33.58	239	20	13.20	33.61	25.30	268	0.06
45	10.57	33.64	219	30	11.44	33.58	25.61	239	0.09
60	9.68	33.68	202	50	10.16	33.67	25.90	211	0.14
70	9.46	33.68	198	75	9.33	33.71	26.08	194	0.18
80	9.20	33.75	189	100	8.87	33.85	26.26	177	0.23
95	8.88	33.82	179	150	8.33	34.06	26.50	154	0.32
105	8.83	33.87	175	200	7.82	34.14	26.65	140	0.39
120	8.60	33.94	166	250	7.43	34.17	26.73	133	0.46
148	8.34	34.05	154	300	7.11	34.21	26.81	125	0.52
178	8.02	34.12	144	400	6.72	34.32	26.95	112	0.65
236	7.56	34.16	135	500	6.13	34.33	27.03	104	0.76
305	7.08	34.22	124	600	5.44	34.36	27.14	94	0.86
422	6.60	34.33	110	700	(4.92)	(34.43)	(27.25)	(83)	(0.96)
558	5.71	34.34	98						
697	4.96	34.42	83						

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

SIO

CCOFI

5506

PAOLINA-T; June 20, 1955; 0110 GCT; 32°10'N, 118°53'W; sounding, 740 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 22°.

93.50

0	15.78	33.64	318	0	15.78	33.64	24.77	318	0.00
9	15.75	33.66	316	10	15.75	33.66	24.80	316	0.03
28	12.24	33.60	252	20	13.98	33.65	25.20	278	0.06
42	10.94	33.57	230	30	11.96	33.59	25.52	248	0.09
56	9.86	33.62	209	50	10.10	33.61	25.87	214	0.13
65	9.48	33.71	197	75	9.26	33.77	26.14	188	0.18
73	9.30	33.76	190	100	8.83	33.88	26.29	174	0.23
88	9.08	33.86	180	150	8.57	34.02	26.44	160	0.32
96	8.90	33.87	176	200	8.21	34.12	26.57	148	0.39
111	8.68	33.90	170	250	7.74	34.17	26.69	136	0.46
133p	8.59	33.95	165	300	7.44	34.22	26.76	129	0.53
138	8.57	33.96	164	400	7.12	34.36	26.92	114	0.66
165	8.60	34.08	156	500	6.18	34.33	27.03	104	0.77
242p	7.80	34.16	138						
372p	7.22	34.36	116						
506p	6.08	34.33	103						

PAOLINA-T; June 19, 1955; 1908 GCT; 31°51'N, 119°30'W; sounding, 900 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 18°.

93.60

0	15.68	33.49	328	0	15.68	33.49	24.67	328	0.00
10	15.64	33.47	328	10	15.64	33.47	24.67	328	0.03
29	15.58	33.49	325	20	15.56	33.48	24.68	327	0.07
43	13.76	33.42	293	30	15.56	33.49	24.70	325	0.10
58	13.11	33.44	279	50	13.44	33.42	25.11	286	0.16
67	12.73	33.45	272	75	12.42	33.43	25.31	267	0.23
76	12.40	33.43	267	100	11.42	33.50	25.55	244	0.29
91	11.92	33.46	256	150	9.37	33.78	26.13	189	0.40
100	11.42	33.50	244	200	8.61	34.06	26.46	158	0.49
114	10.82	33.48	235	250	8.32	34.18	26.61	144	0.57
141	9.64	33.72	198	300	7.74	34.23	26.73	132	0.64
169	8.88	33.93	171	400	6.62	34.26	26.91	115	0.77
219	8.53	34.12	152	500	6.01	34.33	27.05	102	0.88
285	7.92	34.23	135	600	5.49	34.38	27.15	92	0.98
392	6.69	34.26	116						
519	5.88	34.34	100						
654	5.28	34.39	89						

PAOLINA-T; June 22, 1955; 0125 GCT; 32°15.5'N, 117°09'W; sounding, 32 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°.

97.30

0	16.76	33.58	343	0	16.76	33.58	24.52	343	0.00
5	16.59	33.59	339	10	15.16	33.50	24.81	315	0.03
10	15.16	33.50	315	20	12.96	33.53	25.29	269	0.06
15	13.42	33.50	281	30	9.72	33.64	25.96	206	0.09
20	12.96	33.53	269						
25	11.32	33.57	237						
30	9.72	33.64	206						
40	9.53	33.72	196						

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

97.32

PAOLINA-T; June 22, 1955; 0353 GCT; 32°11'N, 117°17'W; sounding, 780 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 25°.

0	18.0	33.64	368	0	18.0	33.64		24.25	368	0.00
9	17.90	33.60	369	10	17.89	33.59		24.24	369	0.04
27	14.42	33.45	304	20	16.20	33.51		24.58	337	0.07
39	12.28	33.40	267	30	13.80	33.43		25.04	293	0.10
48	11.06	33.37	247	50	10.93	33.38		25.55	244	0.16
57	10.26	33.50	224	75	9.53	33.70		26.04	198	0.21
64	9.86	33.58	212	100	9.40	33.78		26.12	190	0.26
71	9.52	33.68	200	150	9.02	34.13		26.46	158	0.35
83	9.58	33.78	193	200	8.85	34.23		26.56	148	0.43
90	9.50	33.77	192	250	8.64	34.26		26.62	143	0.50
106	9.34	33.81	187	300	8.43	34.29		26.67	138	0.58
127	9.19	33.95	174	400	6.70	34.18		26.84	122	0.71
164	8.93	34.16	154	500	6.30	34.30		26.99	108	0.83
211	8.77	34.24	146							
295	8.46	34.29	138							
398	6.75	34.18	123							
520	6.29	34.34	105							

97.40

PAOLINA-T; June 22, 1955; 1025 GCT; 31°58'N, 117°45'W; sounding, 930 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 00°.

0	17.84r	33.57	-	0	16.8	33.57		24.48	346	0.00
10	16.74	33.55	346	10	16.74	33.55		24.48	346	0.03
30	12.80	33.60	262	20	16.71	33.55		24.49	346	0.07
45	10.82	33.58	228	30	12.80	33.60		25.37	262	0.10
56	10.12	33.65	211	50	10.44	33.60		25.81	220	0.15
65	9.90	33.69	204	75	9.64	33.78		26.08	194	0.20
75	9.64	33.78	194	100	9.18	33.91		26.25	178	0.25
85	9.48	33.83	188	150	8.80	34.06		26.44	160	0.33
99	9.20	33.91	178	200	7.94	34.11		26.61	144	0.41
109	9.11	33.91	176	250	7.81	34.26		26.74	131	0.48
134	8.88	34.04	163	300	7.40	34.33		26.86	120	0.54
164	8.72	34.07	158	400	6.67	34.31		26.95	112	0.66
217	8.03	34.17	141	500	6.04	34.35		27.05	102	0.77
282	7.56	34.33	123	600	5.48	34.40		27.16	91	0.88
394	6.70	34.31	112							
523	5.91	34.36	99							
657	5.24	34.42	86							

97.50

PAOLINA-T; June 22, 1955; 1849 GCT; 31°37'N, 118°29'W; sounding, 1070 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 32°.

0	16.5	33.64	334	0	16.5	33.64		24.61	334	0.00
18	16.13	33.65	325	10	16.29	33.64		24.66	330	0.03
31	14.02	33.68	280	20	15.42	33.66		24.87	309	0.06
43	12.17	33.69	243	30	14.19	33.68		25.15	283	0.10
51	11.30	33.65	231	50	11.42	33.66		25.68	232	0.15
58	10.28	33.61	217	75	9.66	33.72		26.04	198	0.20
70	9.84	33.68	204	100	8.97	33.88		26.27	176	0.25
78	9.54	33.75	194	150	8.57	34.14		26.53	151	0.33
89	9.18	33.78	186	200	8.22	34.19		26.62	143	0.40
111	8.81	33.96	168	250	7.69	34.22		26.73	132	0.47
132	8.76	34.07	159	300	7.12	34.21		26.80	126	0.54
177	8.42	34.16	148	400	6.42	34.29		26.96	110	0.66
234	7.88	34.22	135	500	6.07	34.34		27.05	102	0.77
322	6.90	34.20	123							
437	6.36	34.32	107							
561	5.78	34.36	97							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

S10
CCOFI
5506

PAOLINA-T; June 23, 1955; 2251 GCT; 31°42.5'N, 116°43.5'W; sounding, 83 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 17°.

100.29

0	15.24	33.56		313	0	15.24	33.56		24.83	313	0.00
10	11.82	33.50		251	10	11.82	33.50		25.48	251	0.03
14	11.37	33.53		241	20	11.02	33.49		25.62	237	0.05
19	11.04	33.49		238	30	10.25	33.57		25.82	219	0.08
24	10.66	33.55		227	50	9.61	33.67		26.00	202	0.12
29	10.25	33.57		219	75	9.35	33.74		26.10	192	0.17
34	10.24	33.57		219	100	9.19	33.96		26.29	174	0.21
43	9.84	33.61		210							
53	9.55	33.68		200							
63	9.46	33.68		198							
78	9.32	33.75		191							
97	9.21	33.93		176							
116	9.14	34.01		169							

PAOLINA-T; June 23, 1955; 2130 GCT; 31°40.5'N, 116°46.5'W; sounding, 227 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 17°.

100.30

0	16.75	33.57		345	0	16.75	33.57		24.49	345	0.00
10	14.40	33.53		298	10	14.40	33.53		24.99	298	0.03
14	13.18	33.47		278	20	12.72	33.48		25.29	269	0.06
19	12.72	33.48		269	30	10.92	33.45		25.61	239	0.09
24	11.52	33.43		251	50	9.76	33.59		25.91	210	0.13
29	10.97	33.45		239	75	9.18	33.89		26.24	179	0.18
33	10.68	33.46		236	100	9.09	33.94		26.30	173	0.22
43	10.08	33.55		218	150	9.05	34.09		26.42	162	0.31
52	9.68	33.60		208	200	9.00	34.22		26.52	152	0.39
62	9.41	33.69		197	250	8.77	34.31		26.64	141	0.46
67	9.26	33.80		187	300	(8.23)	(34.32)		(26.73)	(132)	(0.53)
96	9.08	33.93		174							
110	9.11	33.98		171							
157	9.05	34.11		160							
195	9.01	34.21		153							
235	8.83	34.31		142							
290	8.35	34.32		134							

HORIZON; June 28, 1955; 2212 GCT; 31°05'N, 116°25'W; sounding, 35 fm; wind, 300°, force 4; weather, clear; sea, moderate; wire angle, 12°.

103.30

0	14.84	6.07		0	14.84	6.07
10	14.36	5.98		10	14.36	5.98
15	13.68	5.96		20	12.12	5.41
20	12.12	5.41		30	10.86	4.66
25	11.26	4.77				
29	10.90	4.64				
34	10.67	4.68				
39	10.30	4.43				
49	9.88	4.04				

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

103.40

HORIZON; June 28, 1955; 1729 GCT; 30°48'N, 116°57'W; sounding, 1300 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 30°.

0	16.67		5.89		0	16.67		5.89			
9	16.66		5.90		10	16.66		5.90			
26	14.37		6.11		20	16.55		5.91			
39	13.17		5.97		30	13.84		6.08			
48	12.42		5.68		50	12.26		5.54			
56	11.18		4.72		75	10.10		3.70			
64	10.76		4.30		100	9.49		2.97			
73	10.17		3.77		150	8.42		2.43			
86	9.78		3.36		200	7.75		1.96			
93	9.68		3.01		250	7.45		1.76			
112	8.98		2.97		300	7.30		1.20			
132	8.70		2.68		400	6.68		0.47			
175	8.05		2.11		500	6.03		0.34			
224	7.54		1.86								
317	7.26		0.85								
426	6.50		0.44								
550	5.64		0.31								

103.50

HORIZON; June 28, 1955; 1150 GCT; 30°27'N, 117°43.5'W; sounding, 1550 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 23°.

0	16.27	33.49	5.81	340	0	16.27	33.49	5.81	24.54	340	0.00
9	16.25	33.49	5.75	340	10	16.25	33.49	5.75	24.54	340	0.03
28	16.26	33.47	5.74	341	20	16.26	33.48	5.75	24.53	341	0.07
42	15.40	33.45	5.90	324	30	16.24	33.46	5.75	24.53	341	0.10
51	14.34	33.44	6.00	303	50	14.54	33.44	5.98	24.90	306	0.17
60	13.66	33.40	6.04	292	75	13.10	33.38	5.84	25.14	283	0.24
69	13.36	33.40	5.84	286	100	11.21	33.40	4.94	25.51	248	0.31
79	12.88	33.37	5.83	280	150	9.12	33.84	3.00	26.21	182	0.41
92	11.81	33.40	5.27	258	200	9.05	34.13	2.00	26.46	158	0.50
101	11.13	33.40	4.90	246	250	8.25	34.16	1.74	26.60	145	0.58
123	9.56	33.59	3.76	207	300	8.07	34.22	1.59	26.67	138	0.65
149	9.12	33.83	3.01	182	400	7.40	34.28	0.63	26.82	124	0.79
195	9.08	34.13	2.04	160	500	6.39	34.32	0.49	26.99	108	0.91
251	8.22	34.16	1.72	145	600	5.90	34.39	0.35	27.10	97	1.02
353	7.88	34.27	0.84	131							
474	6.58	34.30	0.52	112							
603	5.88	34.39	0.33	96							

103.60

HORIZON; June 28, 1955; 0603 GCT; 30°05.5'N, 118°22.5'W; sounding, 1900 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 18°.

0	16.37	33.49		342	0	16.37	33.49		24.52	342	0.00
10	16.37	33.52		339	10	16.37	33.52		24.56	339	0.03
28	16.30	33.63		330	20	16.35	33.59		24.60	335	0.07
43	13.91	33.43		315	30	16.28	33.63		24.65	330	0.10
52	13.28	33.42		284	50	13.40	33.42		25.11	286	0.16
61	12.61	33.48		267	75	12.00	33.42		25.38	260	0.23
70	12.14	33.42		263	100	10.78	33.46		25.64	236	0.29
79	11.82	33.42		257	150	8.88	33.74		26.18	185	0.40
92	11.26	33.43		246	200	8.06	33.97		26.48	156	0.49
100	10.78	33.46		236	250	7.42	34.19		26.74	131	0.56
123	9.52	33.53		210	300	6.89	34.17		26.80	126	0.63
148	8.92	33.73		186	400	6.30	34.21		26.91	115	0.75
198	8.08	33.96		157	500	6.15	34.35		27.05	102	0.86
257	7.36	34.20		129	600	5.50	34.41		27.18	90	0.97
363	6.38	34.14		121							
486	6.20	34.33		104							
621	5.36	34.42		88							

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD	
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m	

SIO
CCOFI
5506

HORIZON; June 28, 1955; 0005 GCT; 29°46.5'N, 119°06.5'W; sounding, 1750 fm; wind, 340°, force 4; weather, overcast; sea, very rough; wire angle, 07°.

103.70

0	16.31	33.42	5.63	346	0	16.31	33.42	5.63	24.48	346	0.00
11	16.30	33.44	5.58	344	10	16.30	33.44	5.59	24.50	344	0.03
30	16.26	33.45	5.42	342	20	16.27	33.45	5.50	24.51	343	0.07
45	15.22	33.37	5.91	326	30	16.26	33.45	5.42	24.52	342	0.10
55	14.59	33.36	6.04	314	50	14.77	33.36	6.04	24.79	317	0.17
65	14.43	33.35	5.85	312	75	14.14	33.34	5.88	24.90	306	0.25
75	14.14	33.34	5.88	306	100	12.41	33.31	5.50	25.22	276	0.32
84	13.51	33.31	5.81	295	150	9.43	33.59	4.28	25.96	205	0.44
98	12.51	33.30	5.52	278	200	8.52	33.87	3.50	26.33	170	0.54
108	11.99	33.37	5.43	264	250	7.67	33.99	2.85	26.55	149	0.62
132	10.26	33.46	4.75	227	300	7.24	34.09	2.55	26.69	136	0.69
161	9.14	33.65	4.03	196	400	6.81	34.30	0.67	26.92	114	0.82
214	8.30	33.92	3.31	164	500	6.02	34.36	0.39	27.07	100	0.94
277	7.34	34.05	2.66	140	600	5.40	34.38	0.34	27.16	92	1.04
388	6.90	34.29	0.71	116							
506	6.00	34.36	0.38	100							
649	5.04	34.38	0.34	88							

HORIZON; June 27, 1955; 1942 GCT; 29°33'N, 119°34'W; sounding, 2000 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 08°.

103.80

0	16.64	33.58		342	0	16.64	33.58		24.52	342	0.00
10	16.63	33.57		342	10	16.63	33.57		24.52	342	0.03
31	16.55	33.54		342	20	16.63	33.56		24.52	342	0.07
46	15.60	33.52		323	30	16.60	33.54		24.52	342	0.10
55	15.52	33.57		318	50	15.55	33.55		24.76	320	0.17
66	14.88	33.46		313	75	14.31	33.41		24.92	304	0.25
76	14.30	33.41		304	100	13.20	33.39		25.13	284	0.32
86	14.16	33.48		296	150	10.38	33.48		25.72	228	0.45
100	13.20	33.39		284	200	8.78	33.81		26.25	178	0.55
110	12.80	33.42		274	250	7.70	33.98		26.54	150	0.64
134	11.12	33.43		244	300	7.15	34.05		26.67	138	0.71
163	9.91	33.55		215	400	6.42	34.14		26.84	122	0.85
214	8.40	33.88		168	500	5.75	34.22		26.99	108	0.97
277	7.37	34.02		142	600	5.22	34.29		27.11	96	1.08
387	6.50	34.13		123							
513	5.66	34.23		106							
647	5.00	34.34		90							

SIO
CCOFI
5506

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	$\delta T_{3/5}$	Z	T	S	O ₂	σ_t	$\delta T_{3/5}$	ΔD	
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m	

103.90 HORIZON; June 27, 1955; 1145, 1317 GCT; 29°09'N, 120°19'W; sounding, 2100 fm; wind, 330°, force 5; weather, clear; sea, rough; wire angle, 08°, 23°.

0	16.31	33.42	5.72	345	0	16.31	33.42	5.72	24.49	345	0.00
10	16.30	33.46	5.78	342	10	16.30	33.46	5.78	24.52	342	0.03
30	16.05	33.49	5.74	334	20	16.24	33.48	5.78	24.56	339	0.07
45	15.08	33.44	6.00	318	30	16.05	33.49	5.74	24.61	334	0.10
54	14.54	33.38	6.00	312	50	14.80	33.41	6.00	24.81	315	0.17
64	14.00	33.33	6.18	304	75	13.58	33.29	6.19	24.98	299	0.24
73	13.72	33.30	6.18	301	100	12.42	33.26	5.90	25.18	280	0.32
83	13.07	33.26	6.22	291	150	10.00	33.45	4.66	25.76	224	0.45
99	12.42	33.26	5.90	280	200	8.79	33.78	3.88	26.22	181	0.55
107	12.32	33.27	5.89	277	250	7.90	33.99	3.15	26.52	152	0.64
131	11.58	33.43	5.48	252	300	7.24	34.06	2.50	26.67	138	0.71
159	9.56	33.46	4.47	216	400	6.42	34.13	1.15	26.83	123	0.85
211	8.60	33.85	3.74	172	500	5.70	34.23	0.56	27.01	106	0.97
272	7.54	34.03	2.91	144	600	5.15	34.28	0.44	27.11	96	1.07
383	6.52	34.12	1.21	124	700	4.80	34.38	0.48	27.23	85	1.17
511	5.66	34.22	0.60	-	800	4.56	34.42	0.55	27.29	79	1.26
646	5.01	34.28	0.38	-	1000	3.85	34.48	0.64	27.41	68	1.42
					1200	3.40	34.54	0.91	27.50	59	
0a)	16.28	33.40	5.71	-	1500	2.80	34.57	1.22	27.58	52	
444	6.09	34.14	1.03	118	2000	2.15	34.61	1.90	27.67	43	
493	5.71	34.23	0.56	-							
548	5.40	34.25	0.49	101							
612	5.12	34.31	0.41	-							
680	4.86	34.38	0.43	86							
759	4.65	34.38	0.56	83							
841	4.42	34.45	0.54	76							
933	4.12	34.45	0.60	75							
1039	3.77	34.50	0.69	66							
1158	3.51	34.54	0.88	60							
1289	3.20	34.53	1.01	58							
1440	2.90	34.58u	1.18	-							
1611	2.60	34.56u	1.35	-							
1804	2.30	34.60	1.65	45							
2021	2.08	34.61	1.95	43							
2263	1.91	34.67	2.13	36							

107.32 HORIZON; June 25, 1955; 1911 GCT; 30°26.5'N, 116°11.5'W; sounding, 160 fm; wind, 320°, force 1; weather, cloudy; sea, moderate; wire angle, 07°.

0	15.45	33.52	5.88	320	0	15.45	33.52	5.88	24.76	320	0.00
10	15.25	33.51	6.11	317	10	15.25	33.51	6.11	24.79	317	0.03
15	14.65	33.48	6.10	307	20	13.74	33.48	5.96	25.09	288	0.06
20	13.74	33.48	5.96	288	30	11.97	33.46	5.08	25.43	256	0.09
25	12.85	33.51	5.57	269	50	10.70	33.47	4.34	25.66	234	0.14
30	11.97	33.46	5.08	256	75	9.35	33.63	3.72	26.01	200	0.19
35	11.40	33.42	4.77	250	100	9.10	33.86	3.45	26.24	179	0.24
45	10.86	33.45	4.38	238	150	9.29	34.16	1.80	26.44	160	0.33
54	10.52	33.48	4.31	230	200	9.13	34.32	1.20	26.59	146	0.41
68	9.68	33.57	3.88	210	250	(8.92)	(34.34)	(1.01)	(26.64)	(141)	(0.48)
82	9.14	33.69	3.57	192							
102	9.08	33.88	3.03	178							
130	9.14	34.02	2.27	168							
163	9.40	34.26	1.45	154							
197	9.17	34.32	1.21	146							
236	9.03	34.34	1.02	143							
245	8.98	34.34	1.01	142							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_{-5}^{+3}	Z	T	S	O ₂	σ_t	δT_{-5}^{+3}	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

SIO

CCOFI

5506

HORIZON; June 25, 1955; 2131 GCT; 30°21'N, 116°21.5'W; sounding, 1050 fm; wind, 290°, force 3; weather, cloudy; sea, slight; wire angle, 10°.

107.35

0	16.69	33.55	5.79	345	0	16.69	33.55	5.79	24.49	345	0.00
10	16.40	33.57	5.82	337	10	16.40	33.57	5.82	24.58	337	0.03
31	13.05	33.48	5.56	277	20	15.37	33.56	5.80	24.80	316	0.07
40	11.16	33.44	4.34	244	30	13.20	33.49	5.59	25.21	277	0.10
49	10.62	33.55	3.99	227	50	10.58	33.56	3.96	25.75	225	0.15
60	9.82	33.59	3.65	211	75	9.27	33.67	3.55	26.06	196	0.20
70	9.50	33.62	3.58	204	100	8.68	33.90	3.15	26.33	170	0.25
79	9.18	33.71	3.52	191	150	8.22	34.05	2.16	26.51	153	0.33
81	9.12	33.76	3.35	187	200	9.00	34.41	0.80	26.73	132	0.40
92	8.80	33.82	3.23	172	250	8.26	34.40	0.64	26.79	127	0.47
116	8.60	33.93	2.90	167	300	7.70	34.36	0.54	26.84	122	0.53
144	8.18	34.00	2.59	156	400	7.04	34.35	0.40	26.92	114	0.65
192	9.05	34.39	0.88	140	500	6.55	34.37	0.32	27.01	106	0.77
249	8.28	34.40	0.64	127	600	(6.12)	(34.37)	(0.31)	(27.07)	(100)	(0.88)
353	7.28	34.34	0.46	118							
470	6.68	34.37	0.35	108							
594	6.16	34.37	0.31	101							

HORIZON; June 26, 1955; 0047 GCT; 30°09'N, 116°44.5'W; sounding, 1550 fm; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 22°.

107.40

0	16.23	33.49		339	0	16.23	33.49		24.56	339	0.00
9	16.20	33.51		336	10	16.19	33.51		24.59	336	0.03
28	15.30	33.46		321	20	15.90	33.50		24.64	331	0.07
41	13.02	33.35		284	30	15.00	33.44		24.80	316	0.10
50	12.50	33.32		276	50	12.50	33.32		25.22	276	0.16
60	12.00	33.33		267	75	11.24	33.40		25.50	249	0.22
69	11.56	33.39		254	100	9.73	33.60		25.92	209	0.28
77	11.14	33.40		247	150	8.96	33.97		26.33	170	0.38
91	9.92	33.56		214	200	8.35	34.09		26.53	151	0.46
100	9.73	33.60		209	250	8.44	34.29		26.67	138	0.53
123	9.02	33.73		188	300	8.18	34.39		26.80	126	0.60
149	8.98	33.96		170	400	7.24	34.37		26.91	115	0.72
201	8.33	34.09		151	500	6.50	34.35		27.00	107	0.84
261	8.46	34.33		135	600	5.86	34.37		27.09	98	0.95
369	7.46	34.38		117							
492	6.54	34.35		108							
624	5.72	34.38		95							

HORIZON; June 26, 1955; 0616 GCT; 29°50'N, 117°24'W; sounding, 1500 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 34°.

107.50

0	16.45	33.57	5.51	338	0	16.45	33.57	5.51	24.57	338	0.00
8	16.44	33.51	5.57	343	10	16.44	33.50	5.58	24.52	342	0.03
25	15.88	33.48	5.71	331	20	16.43	33.50	5.59	24.52	342	0.07
37	15.24	33.46	6.32	320	30	15.58	33.47	5.95	24.69	326	0.10
46	13.88	33.40	5.68	297	50	13.56	33.40	5.62	25.07	290	0.16
54	13.20	33.40	5.59	284	75	12.00	33.46	4.97	25.41	258	0.23
62	12.44	33.40	5.20	270	100	10.25	33.64	4.03	25.87	214	0.29
71	12.14	33.45	5.06	260	150	8.90	34.01	2.20	26.38	165	0.39
82	11.46	33.46	4.54	248	200	8.38	34.16	1.76	26.58	147	0.46
90	10.84	33.58	4.40	228	250	7.70	34.17	1.46	26.69	136	0.54
111	9.62	33.68	3.51	201	300	7.30	34.19	1.20	26.76	129	0.60
129	8.88	33.86	3.06	176	400	6.90	34.35	0.40	26.94	112	0.73
166	8.92	34.10	2.11	159	500	6.23	34.39	0.36	27.07	100	0.84
211	8.20	34.16	1.72	144							
294	7.36	34.18	1.24	131							
395	6.96	34.34	0.41	113							
511	6.18	34.40	0.36	99							

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT_{30}	Z	T	S	O ₂	σ_t	δT_{30}	ΔD	
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m	

107.60

HORIZON; June 26, 1955; 1214 GCT; 29°30'N, 118°05'W; sounding, 1825 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 15°.

0	16.42	33.49		343	0	16.42	33.49		24.51	343	0.00
10	16.42	33.46		345	10	16.42	33.46		24.49	345	0.03
28	16.38	33.47		343	20	16.42	33.46		24.49	345	0.07
43	15.52	33.41		330	30	16.35	33.47		24.51	343	0.10
52	14.76	33.41		314	50	14.89	33.41		24.80	316	0.17
61	14.42	33.40		308	75	13.83	33.39		25.01	296	0.24
71	13.96	33.38		300	100	12.48	33.38		25.26	272	0.32
80	13.66	33.44		290	150	9.91	33.49		25.81	220	0.44
95	12.70	33.40		274	200	8.63	33.85		26.29	174	0.54
104	12.32	33.37		269	250	7.85	34.12		26.63	142	0.62
127	10.93	33.40		243	300	7.25	34.14		26.72	133	0.69
154	9.79	33.51		216	400	6.40	34.14		26.85	121	0.83
205	8.56	33.87		170	500	6.01	34.28		27.01	106	0.95
264	7.64	34.14		138	600	5.63	34.37		27.12	95	1.05
373	6.57	34.13		124							
498	6.02	34.28		106							
631	5.52	34.40		91							

107.70

HORIZON; June 26, 1955; 1748 GCT; 29°11.5'N, 118°45'W; sounding, 1400 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 42°.

0	16.60	33.51	5.62	346	0	16.60	33.51	5.62	24.48	346	0.00
8	16.58	33.51	5.62	346	10	16.57	33.51	5.60	24.48	346	0.03
23	16.54	33.51	5.50	345	20	16.55	33.51	5.53	24.49	345	0.07
34	16.54	33.53	5.43	343	30	16.54	33.52	5.45	24.50	344	0.10
42	16.55	33.54	5.51	342	50	16.52	33.51	5.54	24.51	343	0.17
49	16.52	33.51	5.55	343	75	15.69	33.65	5.60	24.80	316	0.25
56	16.50	33.59	5.52	338	100	14.10	33.48	5.69	25.01	296	0.33
64	15.84	33.56	5.60	325	150	11.02	33.40	4.83	25.54	245	0.47
74	15.70	33.65	5.59	316	200	8.87	33.78	3.83	26.21	182	0.58
81	15.62	33.68	5.63	312	250	7.90	33.96	2.95	26.50	154	0.66
98	14.26	33.49	5.69	297	300	7.42	34.04	2.30	26.63	142	0.74
116	13.08	33.38	5.64	283	400	6.70	34.17	0.88	26.83	123	0.88
154	10.83	33.41	4.74	241	500	5.90	34.27	0.51	27.02	105	1.00
200	8.87	33.78	3.83	182							
288	7.49	34.03	2.47	144							
396	6.74	34.16	0.95	124							
520	5.74	34.29	0.45	102							

107.80

HORIZON; June 26, 1955; 2301 GCT; 28°51'N, 119°21.5'W; sounding, 2000 fm; wind, 330°, force 5; weather, cloudy; sea, rough; wire angle, 32°.

0	17.69	33.69		357	0	17.69	33.69		24.37	357	0.00
9	17.66	33.69		356	10	17.64	33.69		24.38	356	0.04
25	17.51	33.69		353	20	17.53	33.69		24.40	354	0.07
38	17.51	33.72		350	30	17.50	33.70		24.42	352	0.11
47	17.51	33.68		353	50	17.51	33.68		24.41	353	0.18
54	17.50	33.68		353	75	15.78	33.54		24.69	326	0.26
62	16.44	33.60		336	100	14.05	33.41		24.98	299	0.34
69	16.03	33.54		331	150	11.18	33.44		25.55	244	0.48
82	15.48	33.54		319	200	9.63	33.88		26.16	186	0.59
89	14.92	33.48		312	250	8.83	34.04		26.42	162	0.68
108	13.49	33.39		290	300	7.92	34.11		26.61	144	0.76
130	12.24	33.40		266	400	7.22	34.27		26.84	122	0.90
171	10.17	33.55		220	500	6.60	34.40		27.03	104	1.02
221	9.32	34.00		172							
314	7.70	34.14		138							
423	7.10	34.31		118							
545	6.32	34.44		98							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	$\delta T_{10}^{-5} \frac{3}{cm/g}$	Z	T	S	O ₂	σ_t	$\delta T_{10}^{-5} \frac{3}{cm/g}$	ΔD
m	°C	‰	ml/L		m	°C	‰	ml/L	g/L		dyn. m

SIO
CCOFI
5506

HORIZON; June 27, 1955; 0615, 0430 GCT; 28°33'N, 120°02.5'W; sounding, 2200 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 12°, 30°.

107.90

0	17.37	33.81r	5.40	-	0	17.37	(33.72)	5.40	(24.47)	(347)	(0.00)
10	17.38	33.64	5.51	353	10	17.38	33.64	5.51	24.41	353	0.04
29	17.20	33.63	5.57	351	20	17.30	33.63	5.55	24.42	352	0.07
43	17.17	33.65	5.63	348	30	17.20	33.63	5.57	24.44	350	0.11
58	17.14	33.62	5.62	350	50	17.16	33.64	5.62	24.45	349	0.18
67	17.06	33.62	5.68	347	75	15.79	33.49	5.87	24.65	330	0.26
76	15.54	33.46	5.90	326	100	13.60	33.30	5.84	24.98	299	0.34
91	14.45	33.34	6.04	313	150	10.54	33.46	4.35	25.68	232	0.48
100	13.60	33.30	5.84	299	200	9.26	33.80	3.64	26.16	186	0.58
115	12.96	33.34	5.58	285	250	8.43	34.01	3.10	26.46	158	0.67
142	10.86	33.42	4.52	240	300	7.94	34.10	2.30	26.60	145	0.75
171	9.94	33.59	4.04	213	400	7.19	34.21	1.02	26.80	126	0.89
228	8.78	33.95	3.39	168	500	6.46	34.34	0.51	27.00	107	1.01
295	8.00	34.09	2.47	146	600	5.80	34.36	0.35	27.09	98	1.12
410	7.10	34.23	0.98	124	700	5.30	34.41	0.34	27.20	88	1.22
548	6.10	34.31u	0.44	-	800	4.95	34.44	0.37	27.26	82	1.31
688	5.38	34.41	0.29	89	1000	4.15	34.51	0.58	27.41	68	1.48
					1200	3.60	34.53	0.70	27.47	62	
0a)	17.72u	33.72	3.86u	-	1500	2.90	34.58	1.18	27.59	51	
424	7.00	34.29	0.89	118	2000	2.16	34.64	1.85	27.70	41	
473	6.64	34.33	0.61	110							
527	6.34	34.38u	0.44	-							
589	5.92	34.35	0.36	100							
656	5.44	34.37	0.32	93							
732	5.18	34.41	0.34	87							
814	4.88	34.44	0.39	82							
904	4.44	34.45	0.50	76							
1008	4.08	34.51	0.59	68							
1127	3.79	34.53	0.66	64							
1255	3.46	34.53	0.77	60							
1403	3.11	34.57	1.00	54							
1571	2.72	34.60	1.28	48							
1759	2.40	34.69r	1.53	-							
1972	2.16	34.64	1.77	41							
2211	1.96	34.65	2.01	38							

HORIZON; June 25, 1955; 1337 GCT; 29°50.5'N, 115°52.5'W; sounding, 50 fm; wind, 310°, force 2; weather, overcast; sea, moderate; wire angle, 14°.

110.33

0	16.19	33.55	6.02	334	0	16.19	33.55	6.02	24.61	334	0.00
10	16.17	33.55	5.93	334	10	16.17	33.55	5.93	24.61	334	0.03
15	16.15	33.53	5.46	334	20	16.05	33.55	5.84	24.65	330	0.07
19	16.10	33.55	5.87	331	30	13.50	33.47	6.05	25.13	284	0.10
24	14.56	33.46	5.59	306	50	10.91	33.49	5.01	25.64	236	0.15
29	13.71	33.48	6.08	287	75	9.65		4.39			
34	12.86	33.44	5.63	274							
43	11.51	-	-	-							
53	10.64	33.49	4.94	232							
63	10.32	33.49	4.67	226							
77	9.54	-	4.37	-							

a) Overlapping casts; reconciliation of property curves when necessary.

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

110.35

HORIZON; June 25, 1955; 1118, 1145 GCT; 29°44'N, 115°55'W; sounding, 380 fm; wind, 290°, force 3; weather, missing; sea, moderate; wire angle, 34°, 45°.

0	16.50	33.56	5.68	340	0	16.50	33.56	5.68	24.54	340	0.00
8	16.48	33.54	5.84	341	10	16.48	33.54	5.85	24.54	341	0.03
25	15.96	33.58	5.97	326	20	16.45	33.54	5.86	24.54	340	0.07
34	14.80	-	6.10	-	30	15.30	33.54	6.02	24.80	316	0.10
42	13.69	33.39	6.10	294	50	12.93	33.34	5.96	25.14	283	0.16
50	12.93	-	5.96	-	75	10.50	33.59	4.54	25.80	220	0.22
57	12.54	33.33	5.73	276	100	9.30	33.71	3.64	26.09	193	0.28
65	12.11	-	5.20	-	150	8.44	33.90	3.10	26.37	166	0.37
71	11.21	33.50	4.80	240	200	8.00	(34.10)	2.80	(26.60)	(145)	(0.45)
77	10.24	-	4.44	-	250	7.89	(34.17)	1.80	(26.66)	(139)	(0.52)
88	9.51	33.69	3.79	198	300	7.79	(34.24)	1.15	(26.73)	(132)	(0.59)
103	9.25	-	3.61	-							
113	9.07	33.74	3.50	188							
125	8.88	-	3.31	-							
167	8.13	34.04	2.98	152							
238	7.90	-	1.95	-							
331	7.72	34.28	0.83	128							

110.40

HORIZON; June 25, 1955; 0757 GCT; 29°36.5'N, 116°17'W; sounding, 1400 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 25°.

0	16.63	33.51	5.79	346	0	16.63	33.51	5.79	24.48	346	0.00
9	16.61	33.53	5.74	344	10	16.61	33.53	5.71	24.50	344	0.03
22	16.60	33.51	5.58	345	20	16.60	33.52	5.60	24.49	345	0.07
50	14.54	33.35	6.15	314	30	16.57	33.50	5.58	24.49	345	0.10
57	14.12	33.33	6.30	307	50	14.54	33.35	6.15	24.82	314	0.17
67	13.62	33.31	6.00	299	75	13.10	33.32	5.83	25.10	287	0.24
79	12.74	33.33	5.78	280	100	11.20	33.34	5.19	25.47	252	0.31
97	11.45	33.34	5.30	256	150	9.37	33.84	3.30	26.16	186	0.42
118	10.06	33.41	4.74	228	200	8.37	33.95	3.20	26.42	162	0.51
143	9.49	33.81	3.36	189	250	7.70	34.06	2.35	26.61	144	0.59
191	8.52	33.93	3.23	166	300	7.25	34.12	1.70	26.71	134	0.66
260	7.60	34.08	2.21	142	400	6.44	34.23	0.84	26.91	115	0.79
356	6.75	34.18	1.12	123	500	5.86	34.31	0.47	27.05	102	0.91
483	5.98	34.30	0.50	104	600	5.48	34.35	0.41	27.13	94	1.01
659	5.22	34.38	0.40	90	700	5.09	34.39	0.40	27.21	87	1.11
883	4.41	34.45	0.46	76	800	4.75	34.42	0.42	27.27	81	1.20
1189	3.48	34.52	0.88	61	1000	4.03	34.48	0.62	27.40	69	1.36

110.50

HORIZON; June 25, 1955; 0151 GCT; 29°16'N, 116°59'W; sounding, 2150 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 16°.

0	16.49	33.48	5.87	345	0	16.49	33.48	5.87	24.49	345	0.00
10	16.46	33.55	5.86	340	10	16.46	33.55	5.86	24.54	340	0.03
24	16.35	33.48	5.86	343	20	16.39	33.50	5.86	24.52	342	0.07
53	14.38	-	6.10	-	30	16.30	33.48	5.87	24.52	342	0.10
62	14.06	33.40	6.00	300	50	14.85	33.44	6.06	24.83	313	0.17
72	13.30	33.33	5.93	291	75	13.05	33.34	5.90	25.12	285	0.24
87	12.19	33.39	5.59	266	100	11.21	33.42	5.04	25.52	247	0.31
107	10.69	33.43	-	237	150	9.27	33.74	3.20	26.11	191	0.42
129	9.78	33.55	3.78	213	200	8.78	34.07	2.20	26.45	159	0.51
158	9.14	33.79	3.06	186	250	8.42	34.20	1.50	26.61	144	0.59
212	8.69	34.12	2.03	154	300	8.03	34.26	1.10	26.71	134	0.66
286	8.18	34.25	1.18	137	400	6.80	34.28	0.71	26.90	116	0.79
390	6.96	34.28	0.74	118	500	5.94	34.30	0.42	27.03	104	0.90
528	5.72	34.31	0.37	100	600	5.35	34.38	0.33	27.16	91	1.01
712	4.96	34.43	0.32	83	700	4.98	34.43	0.32	27.25	83	1.10
944	4.18	34.46	0.53	72	800	4.64	34.44	0.38	27.29	79	1.18
1252	3.33	34.52	0.82	60	1000	3.98	34.47	0.60	27.39	70	1.35

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_{-5}^{+3}	Z	T	S	O ₂	σ_t	δT_{-5}^{+3}	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

SIC

CCOFI

5506

HORIZON; June 24, 1955; 1931 GCT; 28°56'N, 117°38.5'W; sounding, 2000+ fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 25°.

110.60

0	16.76	33.57	5.62	345	0	16.76	33.57	5.62	24.49	345	0.00
9	16.72	33.57	5.63	344	10	16.70	33.57	5.62	24.51	343	0.03
22	16.64	33.60	5.60	340	20	16.67	33.60	5.61	24.53	341	0.07
50	16.30	33.55	5.79	336	30	16.60	33.60	5.60	24.56	339	0.10
59	15.65	33.53	5.84	324	50	16.30	33.55	5.79	24.59	336	0.17
68	15.12	33.50	5.79	315	75	14.68	33.48	5.79	24.89	307	0.25
80	14.38	33.47	5.78	303	100	13.32	33.37	5.82	25.08	289	0.33
98	13.42	33.37	5.83	290	150	10.22	33.43	4.59	25.71	229	0.46
122	11.62	33.39	5.13	256	200	9.30	33.99	2.70	26.30	173	0.56
147	10.32	33.42	4.64	232	250	9.25	34.29	2.30	26.54	150	0.64
194	9.33	33.96	2.77	196	300	9.10	34.40	0.74	26.66	139	0.72
264	9.22	34.34	1.26	146	400	8.10	34.40	0.39	26.81	125	0.85
360	8.66	34.43	0.43	131	500	6.72	34.32	0.39	26.94	112	0.98
488	6.83	34.32	0.39	114	600	5.92	34.37	0.39	27.09	98	1.09
664	5.46	34.40	0.39	91	700	5.26	34.41	0.39	27.20	88	1.19
886	4.48	34.43	0.43	78	800	4.80	34.42	0.40	27.26	82	1.28
1188	3.68	34.52	0.78	63	1000	4.10	34.46	0.55	27.38	71	1.45

HORIZON; June 23, 1955; 1310 GCT; 28°34.5'N, 118°17.5'W; sounding, 2150 fm; wind, 340°, force 6; weather, clear; sea, high; wire angle, 22°.

110.70

0	16.98	33.58	5.51	348	0	16.98	33.58	5.51	24.46	348	0.00
9	16.97	33.58	5.53	348	10	16.97	33.58	5.49	24.46	348	0.03
23	16.96	33.58	5.40	348	20	16.96	33.58	5.42	24.46	348	0.07
52	16.24	33.54	5.69	336	30	16.88	33.58	5.42	24.48	346	0.10
61	15.69	33.49	5.66	328	50	16.33	33.55	5.64	24.58	337	0.17
70	15.38	33.50	5.70	320	75	14.90	33.47	5.75	24.84	312	0.25
83	14.14	33.40	5.81	302	100	12.98	33.39	5.34	25.18	280	0.33
102	12.82	33.39	5.22	277	150	10.12	33.72	3.30	25.95	206	0.45
124	11.23	33.49	4.01	242	200	9.81	34.11	2.02	26.31	172	0.55
149	10.17	33.72	3.32	206	250	9.34	34.37	1.17	26.58	146	0.63
199	9.81	34.11	2.07	172	300	8.88	34.39	0.85	26.68	137	0.70
270	9.16	34.39	0.99	141	400	7.89	34.39	0.54	26.83	123	0.84
366	8.26	34.39	0.60	128	500	6.63	34.36	0.40	26.99	108	0.96
496	6.66	34.36	0.41	108	600	5.93	34.39	0.37	27.10	97	1.06
671	5.53	34.41	0.37	91	700	5.36	34.42	0.40	27.20	88	1.16
891	4.58	34.46	0.57	76	800	4.89	34.44	0.50	27.27	81	1.26
1190	3.58	34.53	0.75	61	1000	4.19	34.48	0.63	27.39	70	1.42

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_{3-5}	Z	T	S	O ₂	σ_t	δT_{3-5}	ΔD
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m

110.90

HORIZON; June 22-23, 1955; 2255, 0022 GCT; 27°55'N, 119°35.5'W; sounding, 2320 fm; wind, 300°, force 6; weather, clear; sea, very rough; wire angle, 23°, 23°.

0	17.94	33.71	5.33	362	0	17.94	33.71	5.33	24.31	362	0.00
10	17.92	33.71	5.32	360	10	17.92	33.71	5.32	24.34	360	0.04
29	17.86	33.73	5.40	358	20	17.87	33.72	5.35	24.35	359	0.07
41	17.83	33.77	5.41	355	30	17.85	33.74	5.41	24.37	357	0.11
52	16.64	33.57	5.64	342	50	16.89	33.61	5.61	24.49	345	0.18
61	16.26	33.53	5.65	336	75	15.58	33.48	5.40	24.69	326	0.26
70	15.86	33.45	5.74	334	100	14.06	33.32	5.62	24.90	306	0.34
78	15.38	33.48	5.78	322	150	11.03	33.45	5.77	25.60	240	0.48
92	14.66	-	5.66	-	200	9.23	33.90	2.67	26.24	179	0.59
101	13.97	33.32	5.62	304	250	8.64	34.09	2.03	26.49	155	0.67
123	12.25	33.33	5.01	271	300	8.17	34.17	1.60	26.62	143	0.75
151	10.99	33.45	4.66	240	400	7.23	34.26	0.83	26.82	124	0.89
197	9.31	33.87	2.78	182	500	6.24	34.33	0.44	27.01	106	1.01
255	8.60	34.10	2.00	154	600	5.51	34.34	0.39	27.11	96	1.12
360	7.59	34.22	1.11	131	700	5.02					
481	6.44	34.33	0.46	-	800	4.76					
616	5.44	-	0.39	-	1000	4.09					
					1200	3.55					
0a)	17.90	-	5.44	-	1500	2.80					
437	6.89	-	0.53	-	2000	2.15					
486	6.32	34.30	0.48	-							
542	5.94	34.34	0.33	101							
606	5.46	34.34	0.36	95							
674	5.08	34.42	0.35	85							
754	4.92	-	0.30	-							
833	4.65	-	0.40	-							
927	4.29	-	0.53	-							
1032	4.00	34.48	0.53	69							
1154	3.68	-	0.69	-							
1285	3.32	-	0.81	-							
1432	2.97	-	1.03	-							
1609	2.67	-	1.23	-							
1799	2.43	34.60	1.44	46							
2018	2.13	-	1.74	-							
2259	1.92	-	2.20	-							

113.30

HORIZON; June 21, 1955; 1109 GCT; 29°23'N, 115°18'W; sounding, 32 fm; wind, 270°, force 3; weather, cloudy; sea, moderate; wire angle, 00°.

0	12.52	33.62	6.24	255	0	12.52	33.62	6.24	25.44	255	0.00
10	12.52	33.65	6.30	252	10	12.52	33.65	6.30	25.47	252	0.02
20	11.86	33.61	5.26	243	20	11.86	33.61	5.26	25.56	243	0.05
25	11.30	33.62	4.38	233	30	11.14	33.64	4.21	25.71	229	0.07
30	11.14	33.64	4.21	229							
35	11.06	33.61	4.14	229							
41	11.02	33.62	4.12	228							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT	Z	T	S	O ₂	σ_t	δT	ΔD	
m	°C	‰	ml/L	$10^{-5} \text{ cm}^3/\text{g}$	m	°C	‰	ml/L	g/L	$10^{-5} \text{ cm}^3/\text{g}$	dyn. m	

SIO
CCOFI
5506

HORIZON; June 21, 1955; 1354 GCT; 29°12'N, 115°39'W; sounding, 850 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 19°.

113.35

0	16.87	33.57	5.65	347	0	16.87	33.57	5.65	24.47	347	0.00
10	16.86	33.56	5.66	348	10	16.86	33.56	5.66	24.46	348	0.03
29	16.82	33.55	5.70	348	20	16.85	33.55	5.68	24.46	348	0.07
44	16.62	33.51	5.70	346	30	16.81	33.54	5.70	24.46	348	0.10
53	15.66	33.42	5.72	332	50	16.00	33.45	5.72	24.58	337	0.17
63	15.00	33.36	5.98	323	75	14.23	33.30	5.94	24.85	311	0.25
73	14.46	33.31	5.98	315	100	11.36	33.35	4.60	25.45	254	0.33
82	13.18	33.29	5.69	311	150	9.39	33.71	3.60	26.07	195	0.44
96	11.76	33.32	4.72	263	200	8.36	33.94	2.98	26.41	163	0.53
105	10.81	33.40	4.50	241	250	7.62	34.03	2.24	26.60	145	0.61
128	9.92	33.49	4.12	219	300	7.38	34.13	1.75	26.71	134	0.68
156	9.32	33.78	3.38	188	400	6.93	34.22	0.70	26.84	122	0.82
206	8.18	33.93	2.86	161	500	6.19	34.26	0.49	26.96	110	0.94
267	7.50	34.08	2.03	140	600	5.71	34.32	0.40	27.08	99	1.05
376	7.10	34.21	0.85	125							
503	6.19	34.26	0.48	110							
635	5.59	34.35	0.39	96							

HORIZON; June 21, 1955; 1704 GCT; 29°03'N, 115°58.5'W; sounding, 1050 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 18°.

113.40

0	17.13	33.58	5.45	352	0	17.13	33.58	5.45	24.42	352	0.00
10	17.11	33.56	5.42	353	10	17.11	33.56	5.42	24.41	353	0.04
28	17.10	33.57	5.51	352	20	17.10	33.57	5.48	24.41	353	0.07
42	17.12	33.50	5.50	357	30	17.10	33.56	5.51	24.41	353	0.11
51	17.04	33.55	5.50	352	50	17.06	33.55	5.50	24.41	353	0.18
60	16.27	33.48	5.70	341	75	14.90	33.41	5.73	24.80	316	0.26
71	15.38	33.45	5.70	324	100	12.54	33.36	5.21	25.24	274	0.34
80	14.10	33.36	5.80	304	150	9.91	33.56	3.90	25.87	214	0.46
93	13.07	33.38	5.45	283	200	10.09	34.21	1.67	26.33	170	0.56
103	12.24	33.35	5.06	270	250	8.27	34.03	2.54	26.49	155	0.64
127	10.82	33.43	4.21	239	300	7.21	34.03	2.10	26.65	140	0.72
153	9.81	33.58	3.88	211	400	6.70	34.19	0.98	26.85	121	0.85
204	10.06	34.22	1.59	168	500	6.30	34.32	0.38	27.00	107	0.97
264	7.78	33.99	2.73	151	600	5.80	34.35	0.27	27.09	98	1.08
371	6.82	34.12	1.27	128							
496	6.36	34.31	0.42	108							
627	5.63	34.36	0.26	96							

HORIZON; June 21, 1955; 2232 GCT; 28°43'N, 116°36'W; sounding, 1900 fm; wind, 330°, force 5; weather, overcast; sea, very rough; wire angle, 10°.

113.50

0	16.82	33.56	5.60	347	0	16.82	33.56	5.60	24.47	347	0.00
10	16.80	33.54	5.67	348	10	16.80	33.54	5.67	24.46	348	0.03
30	16.68	33.53	5.68	346	20	16.73	33.54	5.67	24.47	347	0.07
44	16.68	33.51	5.70	348	30	16.68	33.53	5.68	24.48	346	0.10
54	16.28	33.48	5.85	341	50	16.51	33.49	5.79	24.50	344	0.17
63	15.78	33.43	5.80	334	75	15.30	33.42	5.89	24.71	324	0.26
73	15.36	33.42	5.88	326	100	13.48	33.25	5.72	24.96	300	0.34
83	14.82	33.35	5.95	319	150	10.94	33.81	3.30	25.89	212	0.46
96	13.82	33.25	5.82	307	200	10.71	34.26	1.30	26.27	176	0.56
106	12.82	33.27	5.50	286	250	9.83	34.28	1.28	26.44	160	0.65
129	11.12	33.44	4.39	243	300	8.99	34.32	1.11	26.61	144	0.73
158	10.92	33.93	2.07	203	400	8.15	34.39	0.41	26.80	126	0.87
211	10.67	-	1.29	-	500	6.96	34.34	0.33	26.93	113	0.99
272	9.33	34.29	1.28	151	600	6.04	34.33	0.30	27.04	103	1.11
381	8.33	34.39	0.46	129							
508	6.85	34.34	0.33	112							
642	5.62	34.33	0.30	98							

SIO

CCOFI
5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10^{-5} cm/g	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m

113.60

HORIZON; June 22, 1955; 0419 GCT; 28°21.5'N, 117°16.5'W; sounding, 2000 fm; wind, 330°, force 5; weather, overcast; sea, high; wire angle, 25°.

0	16.88	-	5.62	-	0	16.88		5.62			
8	16.88	33.53	5.75	350	10	16.87		5.76			
26	16.66	-	5.70	-	20	16.75		5.74			
40	15.84	-	5.87	-	30	16.49		5.72			
48	15.38	-	5.89	-	50	15.30		5.88			
57	14.92	33.40	5.86	318	75	13.05		5.91			
65	14.28	-	6.09	-	100	11.09		4.98			
73	13.19	-	5.95	-	150	9.62		2.70			
85	12.39	-	5.70	-	200	10.21		1.16			
93	11.68	-	5.26	-	250	9.98		0.74			
113	10.01	33.39	4.60	229	300	9.67		0.53			
138	9.70	-	2.94	-	400	8.68		0.30			
184	10.21	34.28	1.22	166	500	7.51		0.27			
238	10.06	-	0.83	-	600	(6.38)		(0.29)			
340	9.34	-	0.38	-							
462	7.95	-	0.27	-							
592	6.46	34.42	0.29	101							

113.70

HORIZON; June 22, 1955; 0952 GCT; 27°58.5'N, 118°01'W; sounding, 1900 fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 23°.

0	17.26		5.51		0	17.26		5.51			
9	17.24		5.34		10	17.24		5.34			
28	16.72		5.48		20	17.19		5.34			
41	15.99		5.52		30	16.62		5.50			
51	15.73		5.55		50	15.79		5.53			
59	15.20		5.72		75	13.59		5.26			
69	14.12		5.25		100	11.98		4.67			
78	13.26		5.30		150	11.03		1.65			
91	12.44		4.98		200	9.75		1.50			
99	12.02		4.71		250	9.36		1.04			
119	10.76		4.32		300	8.86		0.78			
142	10.89		2.15		400	7.81		0.43			
187	9.83		1.52		500	6.91		0.27			
240	9.44		1.11		600	(6.14)					
338	8.41		0.61								
455	7.28		0.29								
582	6.26		0.27								

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

SIO
CCOFI
5506

HORIZON; June 22, 1955; 1700, 1512 GCT; 27°42'N, 118°36.5'W; sounding, 2150 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 23°, 24°.

113.80

0	17.45	33.60	5.59	358	0	17.45	33.60	5.59	24.36	358	0.00
9	17.34	33.61	5.24	355	10	17.34	33.60	5.25	24.39	355	0.04
28	17.29	33.57	5.58	356	20	17.33	33.58	5.45	24.38	356	0.07
41	16.60	33.53	5.71	344	30	17.28	33.56	5.60	24.38	356	0.11
50	15.82	33.63r	5.97	-	50	15.82	33.46	5.97	24.62	333	0.18
59	15.36	33.41	6.02	326	75	14.00	33.31	5.96	24.91	305	0.26
68	14.62	33.35	6.02	316	100	12.29	33.36	5.28	25.29	269	0.33
78	13.68	33.30	5.92	300	150	10.25	33.87	2.73	26.05	197	0.45
90	12.82	33.30	5.77	284	200	10.42	34.24	1.40	26.31	172	0.54
99	12.34	33.36	5.30	271	250	9.95	34.33	1.15	26.46	158	0.63
122	10.99	33.44	4.50	241	300	9.51	34.38	0.91	26.56	148	0.71
148	10.28	33.86	2.90	198	400	8.42	34.39	0.52	26.75	130	0.85
198	10.44	34.24	1.41	173	500	7.23	34.39	0.30	26.92	114	0.98
257	9.90	34.34	1.12	157	600	6.38	34.40	0.32	27.05	102	1.09
364	8.92	34.40	0.65	137	700	5.60	34.38	0.27	27.13	94	1.20
487	7.38	34.35	0.42	118	800	5.01	34.45	0.33	27.26	82	1.29
618	6.20	34.40	0.32	100	1000	4.22	34.48	0.51	27.38	71	1.46
					1200	3.64	34.53	0.68	27.47	62	
0a)	17.43	-	5.50	-	1500	3.00	34.58	1.08	27.58	52	
445	7.82	-	0.41	-	2000	2.23	34.64	1.76	27.68	42	
493	7.27	34.38	0.30	115							
547	6.84	-	0.31	-							
609	6.20	-	0.25	-							
675	5.70	34.38	0.24	95							
748	5.39	-	0.30	-							
826	4.90	34.46	0.34	80							
913	4.62	34.47	0.38	76							
1012	4.19	34.49	0.53	70							
1127	3.84	34.52	0.62	65							
1251	3.50	34.53	0.73	61							
1395	3.19	34.56	1.00	55							
1562	2.88	34.59	1.17	50							
1751	2.52	34.61	1.42	46							
1964	2.25	34.47r	1.72	-							
2203	2.00	34.65	2.02	39							

HORIZON; June 21, 1955; 0625 GCT; 28°55.5'N, 114°40'W; sounding, 40 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 04°.

117.26

0	14.74	33.55	6.98	303	0	14.74	33.55	6.98	24.93	303	0.00
10	14.74	33.58	7.00	301	10	14.74	33.58	7.00	24.95	301	0.03
15	12.85	33.50	5.89	270	20	12.27	33.50	4.96	25.40	259	0.06
20	12.27	33.50	4.96	259	30	11.28	33.53	4.07	25.61	239	0.08
25	11.94	33.53	4.51	251	50	10.04	33.66	2.68	25.92	209	0.13
30	11.28	33.53	4.07	239							
35	11.02	33.60	3.24	230							
40	10.68	33.61	2.87	223							
50	10.04	33.66	2.68	209							
60	9.99	33.81	1.95	197							

HORIZON; June 21, 1955; 0416 GCT; 28°48'N, 114°56'W; sounding, 52 fm; wind, 300°, force 4; weather, missing; sea, rough; wire angle, 15°.

117.30

0	15.72	33.58	6.26	321	0	15.72	33.58	6.26	24.74	321	0.00
10	15.70	33.60	6.11	319	10	15.70	33.60	6.11	24.76	319	0.03
14	15.38	33.62	6.10	311	20	13.40	33.58	5.05	25.23	275	0.06
19	13.70	33.57	5.23	281	30	11.22	33.69	3.00	25.73	227	0.09
24	12.10	33.61	4.40	248	50	10.01	33.88	1.86	26.10	192	0.13
29	11.22	33.69	3.00	227	75	9.68	34.02	1.35	26.27	176	0.18
34	10.86	33.71	2.67	219							
44	10.22	33.88	2.00	196							
53	9.87	33.88	1.82	190							
63	9.64	33.89	1.69	186							
77	9.70	34.04	1.32	176							

143

a) Overlapping casts; reconciliation of property curves when necessary.

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

117.40

HORIZON; June 20, 1955; 2157, 2212 GCT; 28°27.5'N, 115°35'W; sounding, 500 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 36°, 36°.

0	17.00	33.57	5.70	350	0	17.00	33.57	5.70	24.44	350	0.00
8	16.96	33.57	5.67	349	10	16.92	33.57	5.67	24.45	349	0.03
24	16.84	33.59	5.73	345	20	16.88	33.58	5.70	24.48	346	0.07
36	16.72	33.54	5.66	346	30	16.80	33.58	5.73	24.49	345	0.10
44	16.10	33.48	5.74	337	50	15.61	33.44	5.88	24.66	329	0.17
51	15.54	33.44	5.90	328	75	14.27	33.37	5.86	24.90	306	0.25
60	15.00	33.43	5.89	318	100	12.60	33.38	5.38	25.24	274	0.32
66	14.70	33.40	5.82	313	150	10.25	33.66	3.29	25.89	212	0.45
76	14.21	33.37	5.88	306	200	9.69	34.18	1.78	26.38	165	0.54
85	13.76	33.37	5.83	297	250	9.10	34.30	1.32	26.58	147	0.62
105	12.12	33.40	5.16	263	300	8.43	34.31	1.03	26.69	136	0.70
					400	7.44	34.31	0.62	26.84	122	0.83
129	10.96	33.50	4.16	236	500	6.79	34.34	0.47	26.94	112	0.95
171	9.64	33.95	2.50	182							
223	9.42	34.27	1.51	154							
315	8.24	34.31	0.99	134							
427	7.24	34.31	0.53	120							
548	6.53	34.38	0.46	105							

117.50

HORIZON; June 20, 1955; 1444 GCT; 28°02'N, 116°23.5'W; sounding, 2325 fm; 320°, force 4; weather, overcast; sea, very rough; wire angle, 23°.

0	16.53	33.51	5.33	344	0	16.53	33.51	5.33	24.50	344	0.00
10	16.52	33.49	5.59	345	10	16.52	33.49	5.59	24.49	345	0.03
29	15.86	33.48	5.85	332	20	16.19	33.49	5.76	24.57	338	0.07
43	15.40	33.43	5.95	326	30	15.85	33.48	5.85	24.64	331	0.10
53	15.16	33.44	5.92	320	50	15.23	33.44	5.94	24.73	322	0.17
62	14.88	33.43	5.78	315	75	14.57	33.42	5.90	24.87	309	0.25
71	14.71	33.42	5.89	312	100	13.20	33.37	5.86	25.12	286	0.32
81	13.93	33.48	5.92	292	150	9.86	33.70	3.80	25.98	204	0.45
95	13.50	33.37	5.89	291	200	9.76	34.20	1.80	26.38	165	0.54
104	12.43	33.39	5.75	270	250	9.64	34.41	1.10	26.58	147	0.62
125	11.00	33.37	4.96	246	300	8.97	34.39	0.83	26.67	138	0.69
153	9.80	33.78	3.74	196	400	7.61	34.32	0.67	26.82	124	0.83
203	9.75	34.21	1.71	164	500	6.78	34.34	0.45	26.95	111	0.95
261	9.54	34.42	0.96	145	600	6.20	34.40	0.29	27.07	100	1.06
367	8.00	34.32	0.73	129							
489	6.81	34.34	0.47	112							
618	6.12	34.42	0.26	97							

117.60

HORIZON; June 20, 1955; 0902 GCT; 27°48'N, 116°52'W; sounding, 1850 fm; wind, 320°, force 5; weather, missing; sea, very rough; wire angle, 27°.

0	17.81	33.60	5.52	366	0	17.81	33.60	5.52	24.27	366	0.00
9	17.81	33.60	5.38	366	10	17.81	33.60	5.40	24.27	366	0.04
26	17.80	33.57	5.52	368	20	17.81	33.59	5.47	24.26	367	0.07
40	15.00	33.41	6.14	318	30	17.72	33.55	5.58	24.26	367	0.11
53	12.86	33.35	5.96	281	50	13.20	33.36	6.02	25.10	287	0.18
62	12.38	33.35	5.40	272	75	11.91	33.38	4.92	25.38	261	0.24
71	12.08	33.37	5.10	265	100	10.22	33.74	3.06	25.95	206	0.30
84	11.14	33.46	4.07	242	150	9.65	34.10	1.70	26.33	170	0.40
92	10.56	33.58	3.46	223	200	9.69	34.33	1.07	26.51	153	0.48
105	10.08	33.84	2.98	196	250	9.20	34.36	0.80	26.61	144	0.56
131	9.84	33.98	2.11	182	300	8.63	34.37	0.64	26.70	135	0.63
157	9.62	34.14	1.67	167	400	7.70	34.38	0.38	26.85	121	0.76
210	9.69	34.36	1.02	152	500	6.65	34.33	0.38	26.95	111	0.88
269	8.92	34.36	0.74	140	600	6.06	34.38	0.30	27.08	99	0.99
376	8.00	34.39	0.38	124							
502	6.64	34.33	0.38	110							
631	5.88	34.42	0.26	94							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

SIO
CCOFI
5506

HORIZON; June 20, 1955; 0322 GCT; 27°27.5'N, 117°32'W; sounding, 2200 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 04°.

117.70

0	17.03	33.58	5.90	350	0	17.03	33.58	5.90	24.44	350	0.00
10	16.96	33.53	5.40	352	10	16.96	33.53	5.40	24.42	352	0.04
30	16.07	33.62	6.18	325	20	16.70	33.55	5.55	24.50	344	0.07
45	12.06	33.70u	5.19	-	30	16.07	33.62	6.18	24.70	325	0.10
55	11.18	33.47	4.82	242	50	11.55	33.48	4.99	25.51	248	0.16
65	10.58	33.46	4.36	232	75	10.18	33.65	3.32	25.89	212	0.22
75	10.18	33.65	3.32	212	100	9.78	33.92	2.26	26.16	186	0.27
85	10.05	33.76	2.90	202	150	9.40	34.22	1.49	26.46	158	0.35
100	9.78	33.92	2.26	186	200	8.82	34.24	1.25	26.56	148	0.43
109	9.74	34.04	2.11	176	250	8.59	34.34	0.75	26.69	136	0.50
133	9.51	34.16	1.87	163	300	8.33	34.39	0.45	26.76	129	0.57
162	9.50	34.29	1.22	154	400	7.42	34.40	0.28	26.91	115	0.70
215	8.62	34.23	1.26	145	500	6.61	34.38	0.27	27.01	106	0.81
278	8.48	34.38	0.56	132	600	5.83	34.42	0.28	27.13	94	0.92
391	7.48	34.40	0.28	116							
518	6.45	34.38	0.27	104							
653	5.40	34.48	0.28	84							

HORIZON; June 19, 1955; 2105, 1918 GCT; 27°01.5'N, 118°10.5'W; sounding, 2100 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 30°, 34°.

117.80

0	17.57	33.62	5.44	359	0	17.57	33.62	5.44	24.35	359	0.00
8	17.48	33.60	5.43	359	10	17.46	33.60	5.41	24.36	358	0.04
25	17.31	33.62	5.34	353	20	17.36	33.61	5.37	24.38	356	0.07
36	16.16	33.63	5.62	326	30	17.01	33.63	5.37	24.49	345	0.11
51	15.62	33.51	5.69	324	50	15.67	33.51	5.69	24.70	325	0.17
59	15.34	33.50	5.65	319	75	14.65	33.43	5.65	24.85	311	0.25
67	15.10	33.48	5.56	316	100	12.84	33.38	5.18	25.20	278	0.33
79	14.40	33.40	5.74	308	150	9.60	33.69	3.46	26.02	200	0.45
88	13.82	33.42	5.52	296	200	10.16	34.16	1.64	26.29	174	0.54
99	12.99	33.38	5.22	281	250	9.32	34.31	1.23	26.55	149	0.63
123	10.75	33.48	4.34	234	300	9.04	34.36	1.10	26.64	141	0.70
146	9.79	33.68	3.64	204	400	7.93	34.38	0.37	26.82	124	0.84
194	10.22	34.12	1.77	178	500	6.92	34.42	0.25	27.00	107	0.96
250	9.32	34.31	1.23	149	600	6.07	34.42	0.28	27.11	96	1.07
348	8.70	34.40	-	133	700	5.43	34.42	0.23	27.19	89	1.17
467	7.30	34.41	0.25	113	800	4.85	34.46	0.37	27.29	79	1.26
594	6.12	34.42	0.26	97	1000	4.06	34.50	0.52	27.41	68	1.42
					1200	3.50	34.54	0.73	27.49	60	
0a)	17.48	33.66	5.13	-	1500	2.80	34.57	1.10	27.59	51	
403	7.86	34.38	0.36	123	2000	2.20	34.60	1.85	27.66	44	
445	7.30	34.37	0.35	116							
492	7.01	34.42	0.25	108							
547	6.43	34.42	0.26	101							
606	6.00	34.50r	0.30	-							
672	5.60	34.42	0.22	90							
744	5.13	34.43	0.28	85							
826	4.78	34.47	0.40	78							
918	4.38	34.48	0.46	73							
1025	3.98	34.51	0.55	67							
1141	3.66	34.52	0.64	63							
1273	3.30	34.57	0.79	56							
1430	2.98	34.57	0.99	53							
1607	2.70	34.56u	1.27	-							
1807	2.41	34.60	1.56	46							
2032	2.13	34.60	1.91	43							

a) Overlapping casts; reconciliation of property curves when necessary.

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD	
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m	

120.25

HORIZON; June 18, 1955; 0328 GCT; 28°23'N, 114°14.5'W; sounding, 25 fm; wind, 310°, force 5; weather, overcast; sea, rough; wire angle, 04°.

0	16.03	33.60	6.10	327	0	16.03	33.60	6.10	24.68	327	0.00
10	16.01	33.57	6.13	328	10	16.01	33.57	6.13	24.67	328	0.03
15	15.96	33.57	6.13	327	20	13.82	33.53	6.81	25.11	286	0.06
20	13.82	33.53	6.81	286	30	12.22	33.52	4.74	25.42	257	0.09
25	13.33	33.58	5.85	273							
30	12.22	33.52	4.74	257							

120.30

HORIZON; June 18, 1955; 0654 GCT; 28°12'N, 114°34'W; sounding, 50 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 15°.

0	14.98	33.58	6.85	306	0	14.98	33.58	6.85	24.90	306	0.00
10	14.98	33.56	6.95	308	10	14.98	33.56	6.95	24.88	308	0.03
14	14.96	33.58	7.01	305	20	14.83	33.55	7.16	24.91	305	0.06
19	14.84	33.55	7.17	305	30	14.20	33.58	6.59	25.08	289	0.09
24	14.48	33.58	6.83	296	50	11.00	33.44	4.60	25.58	241	0.14
28	14.29	33.59	6.59	291							
33	13.94	33.57	6.60	285							
43	11.20	33.40	5.11	248							
53	11.21	33.57	3.70	236							
67	10.27	33.81	1.87	202							

120.35

HORIZON; June 18, 1955; 0938 GCT; 28°03'N, 114°55'W; sounding, 42 fm; wind, 330°, force 2; weather, clear; sea, slight; wire angle, 02°.

0	16.67	33.59	5.78	341	0	16.67	33.59	5.78	24.53	341	0.00
10	16.68	33.58	5.76	342	10	16.68	33.58	5.76	24.52	342	0.03
15	16.67	33.60	5.83	341	20	16.67	33.58	5.73	24.52	342	0.07
20	16.67	33.58	5.73	342	30	16.64	33.57	5.72	24.52	342	0.10
25	16.66	33.56	5.61	343	50	15.22	33.55	5.88	24.83	313	0.17
30	16.64	33.57	5.72	342							
35	16.52	33.58	5.88	339							
40	16.25	33.58	5.84	333							
50	15.22	33.55	5.88	313							

120.45

HORIZON; June 18, 1955; 1444 GCT; 27°42.5'N, 115°33'W; sounding, 1240 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 10°.

0	15.15	33.46	6.10	318	0	15.15	33.46	6.10	24.78	318	0.00
10	15.14	33.46	6.48	318	10	15.14	33.46	6.48	24.78	318	0.03
30	14.42	33.44	6.12	305	20	14.94	33.45	6.38	24.82	314	0.06
55	12.35	33.39	5.46	269	30	14.42	33.44	6.12	24.91	305	0.09
69	11.18	33.36	4.71	250	50	12.63	33.40	5.54	25.25	273	0.15
78	10.99	33.52	3.92	235	75	11.05	33.49	4.25	25.62	238	0.22
94	10.20	33.70	3.36	208	100	10.19	33.76	3.34	25.98	204	0.27
118	10.14	33.95	2.70	189	150	9.88	34.16	1.97	26.33	170	0.37
152	9.86	34.16	1.97	169	200	9.18	34.25	1.60	26.52	152	0.45
177	9.28	34.16	2.11	160	250	8.93	34.32	1.10	26.62	143	0.52
235	9.04	34.31	1.19	145	300	8.37	34.33	0.82	26.71	134	0.60
319	8.19	34.33	0.78	131	400	7.46	34.37	0.53	26.88	118	0.72
431	7.22	34.38	0.45	114	500	6.67	34.40	0.37	27.01	106	0.84
581	6.06	34.40	0.34	98	600	5.95	34.40	0.35	27.11	96	0.95
796	4.90	34.43	0.48	82	700	5.40	34.42	0.41	27.19	89	1.05
1043	4.16	34.52	0.54	68	800	4.86	34.44	0.48	27.26	82	1.14
1370	3.16	34.58	0.89	54	1000	4.28	34.50	0.53	27.39	70	1.30

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm ³ /g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm ³ /g	dyn. m

SIO
CCOFI
5506

HORIZON; June 18, 1955; 1800 GCT; 27°34'N, 115°49'W; sounding, 2150 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 31°.

120.50

0	17.57	33.62	5.59	359	0	17.57	33.62	5.59	24.35	359	0.00
8	17.56	33.60	5.54	360	10	17.55	33.60	5.55	24.34	360	0.04
21	17.54	33.60	5.68	360	20	17.54	33.60	5.65	24.34	360	0.07
47	15.22	33.39	6.00	325	30	17.49	33.60	5.72	24.34	360	0.11
55	14.36	33.33	6.12	312	50	14.80	33.36	6.06	24.78	318	0.18
64	13.83	33.35	6.05	300	75	12.80	33.38	5.28	25.21	277	0.25
77	12.60	33.39	5.10	273	100	10.49	33.62	4.05	25.82	219	0.31
93	10.80	33.55	-	230	150	10.29	34.16	2.70	26.27	176	0.41
112	10.28	33.72	3.94	208	200	10.39	34.38	2.00	26.42	162	0.50
136	10.25	34.11	3.24	180	250	10.43	34.55	1.15	26.54	150	0.58
180	10.34	34.27	2.28	168	300	9.80	34.54	0.61	26.65	140	0.65
242	10.47	34.55	1.26	151	400	8.45	34.46	0.30	26.80	126	0.79
327	9.44	34.52	0.50	136	500	7.14	34.38	0.26	26.93	113	0.92
443	7.86	34.42	0.26	120	600	6.16	34.36	0.28	27.05	102	1.03
600	6.16	34.36	0.28	102	700	5.55	34.38	0.31	27.14	93	1.13
801	4.96	34.42	0.36	84	800	4.96	34.42	0.35	27.24	84	1.23
1088	3.98	34.50	0.46	68	1000	4.26	34.48	0.42	27.37	72	1.40

HORIZON; June 19, 1955; 0002 GCT; 27°13'N, 116°30'W; sounding, 2050 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 06°.

120.60

0	17.83	33.58	5.62	368	0	17.83	33.58	5.62	24.25	368	0.00
10	17.77	33.57	5.56	367	10	17.77	33.57	5.56	24.26	367	0.04
25	17.66	33.56	5.56	365	20	17.69	33.57	5.56	24.27	366	0.07
55	14.36	33.37	6.10	308	30	17.65	33.56	5.57	24.28	365	0.11
65	13.12	33.38	5.61	284	50	16.10	33.44	5.89	24.56	339	0.18
75	11.56	33.38	4.82	255	75	11.56	33.38	4.82	25.44	255	0.25
89	11.13	33.48	3.93	240	100	10.65	33.59	3.48	25.76	224	0.32
109	10.30	33.66	3.26	213	150	9.90	34.06	2.26	26.26	177	0.42
133	10.08	33.91	2.53	191	200	9.46	34.22	1.50	26.46	158	0.50
162	9.76	34.13	2.05	170	250	9.06	34.31	1.04	26.58	146	0.58
213	9.38	34.25	1.28	156	300	8.57	34.35	0.84	26.70	135	0.65
292	8.66	34.35	0.87	137	400	7.33	34.35	0.52	26.88	118	0.78
399	7.36	34.35	0.52	118	500	6.42	34.35	0.36	27.01	106	0.90
542	6.12	34.35	0.29	102	600	5.74	34.36	0.32	27.09	98	1.01
732	5.12	34.38	0.41	88	700	5.25	34.38	0.40	27.18	90	1.11
970	4.15	34.47	0.54	72	800	4.83	34.40	0.47	27.25	83	1.20
1279	3.40	34.52	0.84	60	1000	4.04	34.48	0.57	27.39	70	1.37

HORIZON; June 19, 1955; 0510 GCT; 26°53'N, 117°11'W; sounding, 2100 fm; wind, 320°, force 4; weather, missing; sea, rough; wire angle, 14°.

120.70

0	16.73	33.51	5.67	349	0	16.73	33.51	5.67	24.45	349	0.00
10	16.70	33.51	5.83	346	10	16.70	33.51	5.83	24.48	346	0.03
24	15.98	33.50	5.92	333	20	16.40	33.51	5.91	24.52	342	0.07
52	11.28	33.41	4.73	248	30	14.65	33.48	5.66	24.90	306	0.10
63	10.70	33.45	4.61	235	50	11.42	33.41	4.79	25.48	251	0.16
72	10.43	33.52	4.01	226	75	10.38	33.55	3.86	25.78	222	0.22
87	10.18	33.68	3.33	210	100	10.02	33.86	2.91	26.08	194	0.27
106	10.00	33.91	2.86	190	150	9.64	34.16	1.93	26.38	166	0.36
129	9.93	34.09	2.05	175	200	9.34	34.32	1.13	26.55	149	0.44
157	9.65	34.18	1.90	165	250	8.89	34.40	0.78	26.69	136	0.51
210	9.26	34.34	1.09	146	300	8.29	34.42	0.49	26.80	126	0.58
285	8.52	34.42	0.52	130	400	6.78	34.42	0.44	27.02	105	0.70
388	6.92	34.42	0.45	107	500	6.00	34.40	0.37	27.10	97	0.80
527	5.86	34.40	0.35	95	600	5.42	34.42	0.35	27.19	89	0.90
716	4.92	34.45	0.37	81	700	4.94	34.45	0.36	27.27	81	0.99
953	4.14	34.52	0.59	68	800	4.60	34.48	0.42	27.33	75	1.08
1264	3.34	34.59	0.87	55	1000	4.00	34.54	0.62	27.44	65	1.23

S10

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT	Z	T	S	O ₂	σ_t	δT	ΔD
m	°C	‰	ml/L	$\frac{10^{-5} T}{cm/g}$	m	°C	‰	ml/L	g/L	$\frac{10^{-5} T}{cm/g}$	dyn. m

120.80

HORIZON; June 19, 1955; 1028, 1408 GCT; 26°33'N, 117°48.5'W; sounding, 2100 fm; wind, 330°, force 4; weather, missing; sea, rough; wire angle, 29°, 14°.

0	16.89	33.59	5.84	346	0	16.89	33.59	5.84	24.48	346	0.00
9	16.86	33.58	5.78	346	10	16.84	33.58	5.77	24.48	346	0.03
26	15.99	33.48	5.73	334	20	16.40	33.53	5.73	24.54	340	0.07
39	14.96	33.42	5.95	317	30	15.63	33.45	5.78	24.67	328	0.10
48	14.50	33.45	5.95	305	50	14.42	33.45	5.95	24.92	304	0.17
58	13.82	33.35	5.95	300	75	13.18	33.31	5.88	25.07	290	0.24
67	13.65	33.44	5.91	289	100	11.57	33.32	5.30	25.38	260	0.31
75	13.18	33.31	5.88	290	150	9.69	34.03	2.67	26.27	176	0.42
88	12.09	33.26	5.47	274	200	10.05	34.34	1.15	26.45	159	0.50
96	11.78	33.29	5.38	266	250	9.49	34.42	0.73	26.61	144	0.58
116	10.46	33.44	4.60	232	300	8.88	34.42	0.53	26.71	134	0.65
138	9.84	33.80	2.90	196	400	7.78	34.40	0.34	26.87	119	0.79
181	10.19	34.26	1.48	167	500	6.67	34.38	0.30	27.00	107	0.90
234	9.67	34.41	0.82	147	600	5.83	34.38	0.30	27.10	97	1.01
330	8.50	34.42	0.48	129	700	5.35	34.42	0.29	27.20	88	1.11
					800	4.78	34.45	0.29	27.29	79	1.20
0a)	16.78	33.53	5.66	-	1000	4.04	34.52	0.45	27.42	67	1.36
465	7.14	34.39	0.24	112	1200	3.47	34.55	0.76	27.50	59	
519	6.47	34.37	0.34	105	1500	2.84	34.58	1.08	27.59	51	
577	6.00	34.37	0.29	99	2000	2.10	34.64	1.75	27.70	40	
644	5.59	34.40	0.33	92							
718	5.22	34.42	0.28	86							
800	4.78	34.45	0.29	79							
886	4.45	34.49	0.45	73							
984	4.13	34.51	0.45	68							
1093	3.74	34.53	0.60	63							
1218	3.45	34.55	0.78	59							
1354	3.13	34.57	0.89	54							
1508	2.83	34.58	1.10	51							
1683	2.52	34.61	1.35	46							
1880	2.26	34.64	1.68	42							
2109	2.05	34.65	1.83	39							
2349	1.87	34.66	2.05	37							

123.37

HORIZON; June 17, 1955; 1447 GCT; 27°24'N, 114°39'W; sounding, 35 fm; wind, 360°, force 1; weather, clear; sea, rough; wire angle, 03°.

0	12.99	33.86	5.82	246	0	12.99	33.86	5.82	25.53	246	0.00
10	12.60	33.84	5.42	240	10	12.60	33.84	5.42	25.60	240	0.02
15	12.08	33.78	4.75	235	20	11.54	33.85	4.59	25.81	220	0.05
20	11.54	33.85	4.59	220	30	10.82	33.78	3.09	25.88	213	0.07
25	10.80	33.69	3.63	219	50	10.54	34.02	2.02	26.11	191	0.11
30	10.82	33.78	3.09	213							
35	10.75	33.86	2.78	206							
40	10.62	33.93	2.54	199							
50	10.54	34.02	2.02	191							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$\frac{10^{-5}}{10 \text{ cm/g}}$	m	°C	‰	ml/L	g/L	$\frac{10^{-5}}{10 \text{ cm/g}}$	dyn. m

SIO
CCOFI
5506

HORIZON; June 17, 1955; 1205 GCT; 27°16.5'N, 114°52'W; sounding, 490 fm; wind, 360°, force 5; weather, clear; sea, rough; wire angle, 33°.

123.40

0	14.08	33.55	6.39	290	0	14.08	33.55	6.39	25.07	290	0.00
8	14.04	33.57	6.25	288	10	14.03	33.57	6.23	25.10	287	0.03
26	12.92	33.56	5.60	266	20	13.91	33.57	6.12	25.13	284	0.06
38	11.54	33.57	4.19	241	30	12.20	33.56	4.96	25.46	253	0.08
51	11.30	33.69	3.72	228	50	11.32	33.69	3.75	25.72	228	0.13
60	10.80	33.69	3.27	219	75	10.47	33.95	2.20	26.07	195	0.18
67	10.34	33.82	2.71	202	100	10.72	34.24	1.00	26.25	178	0.23
80	10.62	34.05	1.95	190	150	10.80	34.53	0.42	26.47	157	0.32
86	10.74	34.17	1.39	183	200	10.32	34.55	0.33	26.56	148	0.40
98	10.72	34.23	1.02	178	250	9.91	34.55	0.29	26.64	141	0.47
118	10.78	34.29	0.93	174	300	9.57	34.54	0.24	26.69	136	0.54
140	10.86	34.50	0.51	160	400	8.74	34.52	0.21	26.81	125	0.68
184	10.52	34.55	0.36	151	500	7.60	34.48	0.21	26.94	112	0.80
235	10.02	34.55	0.30	143							
329	9.40	34.53	0.21	134							
445	8.22	34.50	0.21	119							
572	6.71	34.44	0.19	103							

HORIZON; June 17, 1955; 0450 GCT; 26°58.5'N, 115°32'W; sounding, 1850 fm; wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 33°.

123.50

0	16.26	33.58	5.99	333	0	16.26	33.58	5.99	24.62	333	0.00
8	16.24	33.58	5.90	333	10	16.24	33.57	5.91	24.61	334	0.03
26	16.22	33.56	5.92	334	20	16.23	33.57	5.92	24.61	334	0.07
38	16.18	33.56	5.81	333	30	16.21	33.56	5.92	24.61	334	0.10
47	12.57	33.47	5.24	267	50	12.29	33.49	5.05	25.38	260	0.16
55	11.94	33.52	4.52	252	75	10.49	33.72	2.85	25.89	212	0.22
63	11.01	33.63	3.55	227	100	10.37	34.00	2.01	26.13	189	0.27
72	10.55	33.68	3.03	216	150	10.24	34.28	1.13	26.36	167	0.36
84	10.45	33.82	2.45	204	200	9.79	34.42	0.70	26.55	149	0.44
93	10.47	33.93	2.20	196	250	9.19	34.42	0.56	26.66	139	0.51
111	10.18	34.08	1.87	180	300	8.78	34.46	0.45	26.75	130	0.58
136	10.26	34.20	1.41	173	400	7.70	34.44	0.32	26.90	116	0.71
179	10.12	34.42	0.80	156	500	6.82	34.43	0.28	27.01	106	0.82
232	9.36	34.41	0.61	143							
327	8.56	34.46	0.39	127							
439	7.33	34.43	0.32	112							
564	6.30	34.42	0.23	99							

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

123.60

HORIZON; June 16, 1955; 2039, 2201 GCT; 26°39.5'N, 116°08'W; sounding, 2100 fm; wind, 360°, force 4; weather, overcast; sea, rough; wire angle, 22°, 36°.

0	17.60	33.64	6.07	358	0	17.60	33.64	6.07	24.36	358	0.00
9	17.58	33.71	5.96	353	10	17.58	33.70	5.94	24.40	354	0.04
28	17.54	33.59	5.60	362	20	17.57	33.66	5.70	24.37	357	0.07
41	16.88	33.62	5.88	344	30	17.54	33.59	5.60	24.32	361	0.11
51	15.85	33.62	5.78	322	50	15.98	33.62	5.78	24.73	322	0.18
61	14.98	33.39	5.76	320	75	13.62	33.33	5.94	25.00	297	0.25
68	13.85	33.35	5.96	300	100	12.02	33.34	5.18	25.31	267	0.32
78	13.41	33.31	5.88	294	150	9.84	33.88	2.87	26.12	190	0.44
91	12.41	33.31	5.50	276	200	9.43	34.19	1.90	26.44	160	0.53
100	12.02	33.34	5.18	267	250	8.78	34.25	1.50	26.58	146	0.61
124	10.32	33.48	4.18	227	300	8.21	34.30	1.11	26.71	134	0.68
148	9.84	33.87	2.90	190	400	7.39	34.34	0.43	26.87	119	0.81
195	9.49	34.18	1.94	162	500	6.60	34.43	0.26	27.05	102	0.93
251	8.77	34.25	1.49	146	600	5.87	34.45	0.27	27.16	92	1.03
353	7.70	34.33	0.71	125	700	5.29	34.46	0.31	27.24	84	1.12
472	6.82	34.43	0.35	-	800	4.88	34.49	0.41	27.30	78	1.21
600	5.87	34.45	0.36	92	1000	4.19	34.51	0.48	27.41	68	1.37
					1200	3.66	34.54	0.68	27.48	61	
0a)	17.40	33.58	5.44u	-	1500	3.00	34.57	0.99	27.57	53	
397	7.40	34.34	0.47	120	2000	2.25	34.64	1.70	27.69	41	
443	7.09	34.39	0.30	112							
494	6.67	34.42	0.27	-							
553	6.12	34.42	0.22	97							
616	5.76	34.56r	0.26	-							
688	5.37	34.45	0.30	86							
766	5.01	34.49	0.35	79							
853	4.64	34.49	0.45	75							
954	4.30	34.56r	0.45	-							
1066	3.99	34.52	0.54	66							
1189	3.66	34.54	0.68	62							
1330	3.32	34.56	0.80	57							
1488	3.00	34.57	0.98	53							
1663	2.62	34.61	1.29	47							
1867	2.35	34.61	1.55	45							
2096	2.11	34.66	1.85	39							

127.34

HORIZON; June 15, 1955; 2020 GCT; 26°55.5'N, 114°06'W; sounding, 40 fm; wind, 290°, force 4; weather, clear; sea, moderate; wire angle, 16°.

0	15.82	33.52	6.34	328	0	15.82	33.52	6.34	24.67	328	0.00
10	15.18	33.51	5.72	315	10	15.18	33.51	5.72	24.81	315	0.03
14	12.86	33.40	5.30	277	20	12.70	33.40	5.26	25.23	275	0.06
19	12.76	33.40	5.28	275	30	11.88	33.54	4.24	25.50	249	0.09
25	12.34	33.41	4.96	267							
28	12.00	33.50	4.43	254							
33	11.64	33.55	4.05	244							
38	11.49	33.53	3.95	243							
48	10.94	33.58	3.51	230							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

SIO
CCOFI
5506

HORIZON; June 15, 1955; 2347 GCT; 26°44.5'N, 114°29.5'W; sounding, 1700 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 11°.

127.40

3	17.04	33.58	5.54	350	0	(17.04)	(33.60)	(5.54)	(24.45)	(349)	(0.00)
13	16.98	33.54	5.46	352	10	16.99	33.54	5.47	24.42	352	0.04
32	15.58	33.57	5.79	319	20	16.90	33.54	5.46	24.44	350	0.07
46	12.96	33.51	4.91	271	30	15.90	33.56	5.70	24.69	326	0.10
61	11.34	33.73u	3.74	-	50	12.50	33.51	4.64	25.35	263	0.16
70	10.76	33.60	3.34	223	75	10.66	33.64	3.30	25.80	221	0.22
79	10.62	33.66	3.25	219	100	10.43	33.84	2.40	26.00	202	0.28
95	10.44	33.82	2.44	204	150	9.95	34.13	1.68	26.31	172	0.37
105	10.40	33.86	2.33	200	200	9.75	34.34	0.86	26.50	154	0.45
120	10.36	33.96	1.95	192	250	9.35	34.39	0.60	26.61	144	0.53
149	9.96	34.13	1.69	172	300	8.74	34.40	0.54	26.71	134	0.60
177	9.84	34.30	1.30	159	400	7.68	34.39	0.36	26.86	120	0.73
235	9.52	34.38	0.66	147	500	6.85	34.39	0.24	26.99	108	0.85
303	8.69	34.40	0.52	133	600	6.06	34.42	0.24	27.11	96	0.96
419	7.50	34.39	0.32	117	700	(5.53)	(34.47)	(0.26)	(27.22)	(86)	(1.05)
557	6.38	34.40	0.23	101							
696	5.54	34.47	0.26	86							

HORIZON; June 16, 1955; 0639 GCT; 26°23.5'N, 115°08'W; sounding, 1900 fm; wind, 310°, force 5; weather, missing; sea, rough; wire angle, 29°.

127.50

0	16.92	33.68	5.72	340	0	16.92	33.68	5.72	24.54	340	0.00
10	16.92	33.64	5.53	343	10	16.92	33.64	5.53	24.51	343	0.03
28	15.64	33.58	-	320	20	16.90	33.64	5.51	24.51	343	0.07
42	13.06	33.53	5.01	271	30	15.35	33.57	5.93	24.83	313	0.10
51	11.86	33.53	4.26	250	50	11.99	33.53	4.35	25.47	252	0.16
60	11.38	33.58	3.75	237	75	10.42	33.74	2.92	25.91	210	0.22
69	10.87	33.73	3.08	217	100	10.34	34.02	2.14	26.15	187	0.27
78	10.24	33.76	2.89	205	150	10.00	34.33	1.06	26.46	158	0.35
91	10.35	33.86	2.56	199	200	9.65	34.43	0.72	26.58	146	0.43
100	10.34	34.02	2.14	187	250	9.20	34.49	0.39	26.71	134	0.50
123	10.02	34.19	1.58	170	300	8.70	34.46	0.28	26.77	128	0.57
148	10.00	34.32	1.08	160	400	7.76	34.42	0.26	26.88	118	0.70
196	9.69	34.42	0.74	147	500	6.67	34.42	0.26	27.03	104	0.81
254	9.16	34.49	0.34	134	600	6.00	34.43	0.23	27.12	95	0.92
359	8.16	34.43	0.26	123							
480	6.88	34.42	0.26	107							
609	5.96	34.43a)	0.21	94							

a) Alternate value, 34.52‰, not used in interpolation.

SIO
CCOFI
5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

127.60 HORIZON; June 16, 1955; 1242, 1435 GCT; 26°01.5'N, 115°50.5'W; sounding, 2050 fm; wind, 010°, force 5; weather, overcast; sea, very rough; wire angle, 33°, 32°.

0	17.92	33.67	5.49	364	0	17.92	33.67	5.49	24.29	364	0.00
8	17.90	33.62	5.45	366	10	17.90	33.63	5.43	24.28	365	0.04
25	17.88	33.64	5.39	365	20	17.89	33.63	5.40	24.28	365	0.07
38	17.91	33.65	5.29	364	30	17.90	33.64	5.32	24.28	365	0.11
47	17.72	33.64	5.52	362	50	17.60	33.62	5.57	24.34	360	0.18
56	17.40	33.60	5.59	357	75	16.14	33.48	5.73	24.57	338	0.27
65	16.52	33.56	5.00	340	100	13.59	33.37	5.29	25.04	293	0.35
71	16.30	33.48	5.67	342	150	10.13	33.74	3.16	25.96	205	0.47
84	15.42	33.48	5.82	323	200	9.72	34.18	1.90	26.38	165	0.57
92	14.96	33.44	5.74	316	250	9.34	34.40	1.18	26.61	144	0.65
110	12.23	33.34	4.96	270	300	8.71	34.43	0.85	26.73	132	0.72
133	10.45	33.55	3.85	224	400	7.60	34.40	0.50	26.88	118	0.85
178	9.84	34.03	2.40	178	500	6.58	34.40	0.26	27.03	104	0.96
231	9.54	34.34	1.43	151	600	6.00	34.42	0.25	27.12	95	1.07
330	8.38	34.43	0.72	126	700	5.36	34.47	0.34	27.24	84	1.17
448	7.06	34.42	0.35	109	800	4.88	34.48	0.36	27.30	78	1.26
579	6.10	34.42	0.28	-	1000	4.11	34.52	0.55	27.42	67	1.42
					1200	3.54	34.53	0.85	27.48	61	
0a)	17.93	33.65	5.65	-	1500	2.95	34.58	1.17	27.58	52	
420	7.40	34.39	0.46	116	2000	2.15	(34.62)	1.82	(27.67)	(43)	
468	6.89	34.41	0.30	107							
521	6.32	34.39	0.26	102							
584	6.01	34.41	0.24	-							
650	5.59	34.54r	0.25	-							
725	5.26	34.47	0.36	83							
806	4.84	34.48	0.36	78							
898	4.48	34.50	0.38	73							
1000	4.11	34.52	0.55	67							
1116	3.77	34.52	0.64	64							
1242	3.46	34.53	0.86	61							
1387	3.17	34.57	0.93	54							
1550	2.82	34.58	1.34	51							
1736	2.46	34.62	1.96	45							
1949	2.21	34.62	1.78	43							
2171	2.01	34.60u	2.13	-							

130.30 HORIZON; June 15, 1955; 1506 GCT; 26°28.5'N, 113°28'W; sounding, 44 fm; wind, 300°, force 2; weather, clear; sea, moderate; wire angle, 00°.

0	13.53	33.65	6.05	272	0	13.53	33.65	6.05	25.26	272	0.00
10	13.38	33.69	5.69	266	10	13.38	33.69	5.69	25.32	266	0.03
15	11.52	33.71	3.73	230	20	10.80	33.77	3.34	25.87	214	0.05
20	10.80	33.77	3.34	214	30	10.72	33.78	2.91	25.90	211	0.07
25	10.72	33.77	3.06	212	50	10.81	34.04	1.71	26.08	194	0.11
30	10.72	33.78	2.91	211	75	(11.09)	(34.23)	(0.58)	(26.18)	(185)	(0.16)
36	10.74	33.87	2.38	205							
45	10.72	33.90	2.15	202							
55	10.96	34.13	1.30	189							
70	11.09	34.22	0.58	185							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

SIO
CCOFI
5506

HORIZON; June 15, 1955; 1239 GCT; 26°21.5'N, 113°46.5'W; sounding, 55 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 14°.

130.35

0	16.14	33.55	5.73	332	0	16.14	33.55	5.73	24.63	332	0.00
10	16.12	33.50	5.72	336	10	16.12	33.50	5.72	24.59	336	0.03
14	16.09	33.55	5.72	332	20	15.92	33.50	5.75	24.64	331	0.07
19	15.92	33.50	5.75	332	30	14.98	33.48	5.85	24.83	313	0.10
24	15.67	33.53	5.66	324	50	12.30	33.52	4.48	25.41	258	0.16
28	15.10	33.49	5.86	315	75	10.69	33.83	2.75	25.94	207	0.21
33	14.08	33.46	5.62	297							
42	12.74	33.49	5.03	268							
51	12.22	33.53	4.30	256							
61	10.88	33.65	2.99	224							
74	10.70	33.82	2.80	208							
91	10.68	33.92	2.36	200							

HORIZON; June 15, 1955; 0932 GCT; 26°11'N, 114°06'W; sounding, 850 fm; wind, 300°, force 4; weather, missing; sea, rough; wire angle, 35°.

130.40

0	17.29	33.57	5.59	357	0	17.29	33.57	5.59	24.37	357	0.00
9	17.28	33.58	5.35	356	10	17.26	33.58	5.37	24.38	356	0.04
27	17.25	33.60	5.52	353	20	17.25	33.59	5.48	24.40	354	0.07
49	16.18	33.58	5.54	330	30	17.23	33.60	5.52	24.41	353	0.11
64	13.90	33.51	5.35	290	50	16.00	33.58	5.52	24.67	328	0.17
71	12.80	33.42	4.90	275	75	12.16	33.44	4.54	25.38	261	0.25
84	11.66	33.49	4.25	249	100	11.37	33.91	2.88	25.88	213	0.31
104	11.33	33.95	1.52	209	150	11.13	34.44	0.95	26.33	170	0.40
133	11.16	34.29	1.02	181	200	11.11	34.61	0.40	26.48	156	0.49
155	11.12	34.46	0.91	168	250	10.48	34.66	0.30	26.63	142	0.56
205	11.10	34.63	0.30	155	300	9.70	34.63	0.31	26.73	132	0.64
277	10.05	34.65	0.31	136	400	8.41	34.51	0.37	26.84	122	0.77
374	8.71	34.52	0.38	125	500	7.41	34.49	0.25	26.98	109	0.88
508	7.34	34.49	0.22	107	600	6.47	34.49	0.24	27.11	96	1.00
694	5.65	34.49	0.30	86	700	5.63	34.49	0.31	27.22	86	1.09
928	4.44	34.52	0.50	71	800	5.09	34.50	0.38	27.29	79	1.18
1253	3.48	34.58	0.74	57	1000	4.20	34.53	0.56	27.42	67	1.34

HORIZON; June 15, 1955; 0304 GCT; 25°41'N, 114°47'W; sounding, 1975 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 24°.

130.50

10	17.11	33.62	5.59	348	0	(17.12)	(33.62)	(5.60)	(24.45)	(349)	(0.00)
23	15.40	33.63	6.37	311	10	17.11	33.62	5.59	24.46	348	0.03
51	11.97	33.51	5.00	253	20	15.86	33.63	6.24	24.76	319	0.07
60	11.12	33.52	4.24	248	30	14.80	33.62	6.26	24.98	299	0.10
70	10.82	33.57	3.86	228	50	11.97	33.51	5.01	25.46	253	0.15
84	10.53	33.76	3.11	210	75	10.70	33.64	3.60	25.80	221	0.21
102	10.38	33.88	2.65	198	100	10.38	33.87	2.69	26.03	199	0.27
126	10.27	34.05	2.23	184	150	10.27	34.24	1.58	26.33	170	0.36
152	10.27	34.25	1.54	169	200	9.83	34.37	0.94	26.51	153	0.44
201	9.81	34.37	0.92	153	250	9.55	34.51	0.61	26.67	138	0.52
223	9.78	34.47	0.82	145	300	8.91	34.50	0.44	26.75	130	0.59
268	9.36	34.52	0.53	134	400	7.79	34.44	0.32	26.88	118	0.71
362	8.18	34.43	0.37	123	500	6.92	34.46	0.24	27.03	104	0.83
486	7.04	34.47	0.24	105	600	6.05	34.44	0.24	27.13	94	0.93
657	5.60	34.44	0.29	89	700	5.30	34.45	0.30	27.23	85	1.03
873	4.60	34.50	0.43	74	800	4.84	34.48	0.39	27.30	78	1.12
1172	3.71	34.55	0.84	61	1000	4.24	34.52	0.56	27.41	68	1.28

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT	Z	T	S	O ₂	σ_t	δT	ΔD
m	°C	‰	ml/L	$10^{-5} \text{ cm}^3/\text{g}$	m	°C	‰	ml/L	g/L	$10^{-5} \text{ cm}^3/\text{g}$	dyn. m

130.60

HORIZON; June 14, 1955; 2205, 1958 GCT; 25°29'N, 115°24.5'W; sounding, 1800 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 24°, 28°.

0	17.82	33.68	6.08	362	0	17.82	33.68	6.08	24.31	362	0.00
9	17.76	33.69	5.15	358	10	17.75	33.68	5.15	24.35	359	0.04
27	17.66	33.66	5.18	359	20	17.70	33.67	5.16	24.35	359	0.07
41	17.62	33.65	5.25	358	30	17.66	33.65	5.22	24.35	359	0.11
50	16.50	33.56	5.18	340	50	16.50	33.56	5.18	24.54	340	0.18
59	16.09	33.51	5.51	334	75	15.15	33.45	5.37	24.76	319	0.26
67	15.74	33.50	5.45	328	100	12.67	33.39	4.38	25.24	274	0.34
77	15.06	33.45	5.35	317	150	10.51	33.91	2.50	26.04	198	0.45
90	14.22	33.46	5.09	299	200	10.06	34.23	1.52	26.36	167	0.55
98	12.96	33.39	4.50	280	250	9.16	34.27	1.45	26.54	150	0.63
120	11.16	33.49	3.58	240	300	8.66	34.32	1.10	26.66	139	0.70
147	10.55	33.83	2.53	205	400	7.79	34.42	0.45	26.87	119	0.84
196	10.13	34.22	1.55	179	500	6.78	34.43	0.32	27.03	104	0.96
251	9.14	34.27	1.45	150	600	6.05	34.42	0.30	27.11	96	1.06
356	8.20	34.38	0.58	127	700	5.46	34.46	0.54	27.22	86	1.16
474	7.07	34.43	-	109	800	4.89	34.52	0.40	27.32	76	1.25
596	6.07	34.42	0.24	-	1000	4.23	34.56	0.63	27.44	65	1.40

0a)	17.69	33.68	5.11u	-
433	7.50	34.43	1.44r	114
537	6.46	34.42	0.30	101
601	6.00	34.42	0.36	-
669	5.66	34.44	0.42	90
732	5.24	34.48	0.60	82
832	4.81	34.52	0.39	75
1035	4.16	34.57	0.64	64

133.25

HORIZON; June 13, 1955; 2053 GCT; 26°04.5'N, 112°48'W; sounding, 40 fm; wind, 230°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.

0	16.77	33.76	6.52	331	0	16.77	33.76	6.52	24.64	331	0.00
10	14.22	33.78	5.36	276	10	14.22	33.78	5.36	25.22	276	0.03
15	13.50	33.80	4.45	260	20	13.03	33.78	4.17	25.47	252	0.06
20	13.03	33.78	4.17	252	30	11.43	33.86	2.35	25.83	218	0.08
25	11.66	33.78	4.39	227	50	11.62	34.25	0.54	26.10	192	0.12
30	11.43	33.86	2.35	218							
35	11.63	34.02	1.40	209							
40	11.65	34.08	0.99	205							
50	11.62	34.25	0.54	192							
60	11.67	34.40	0.35	182							

133.30

HORIZON; June 13, 1955; 2332 GCT; 25°54'N, 113°03.5'W; sounding, 80 fm; wind, 270°, force 4; weather, overcast; sea, slight; wire angle, 14°.

0	15.95	33.66	5.91	320	0	15.95	33.66	5.91	24.76	320	0.00
10	14.30	33.64	5.88	288	10	14.30	33.64	5.88	25.09	288	0.03
14	14.08	33.66	5.56	282	20	13.56	33.76	4.64	25.33	265	0.06
19	13.60	33.75	4.72	266	30	13.44	33.95	3.58	25.51	248	0.08
24	13.48	33.88	3.93	254	50	11.60	33.99	1.88	25.91	210	0.13
29	13.45	33.95	3.61	248	75	11.67	34.38	0.74	26.18	184	0.18
34	13.38	33.96	3.50	246	100	11.40	34.46	0.56	26.30	173	0.22
43	11.69	33.89	2.19	220							
53	11.59	34.02	1.63	208							
63	11.57	34.13	1.20	200							
77	11.67	34.40	0.69	182							
97	11.42	34.45	0.58	174							
121	11.33	34.49	0.46	170							

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

SIO
CCOFI
5506

HORIZON; June 14, 1955; 0453 GCT; 25°35'N, 113°45.5'W; sounding, 1350 fm; wind, 290°, force 4; weather, missing; sea, moderate; wire angle, 19°.

133.40

0	17.76	33.69	4.82	359	0	17.76	33.69	4.82	24.35	359	0.00
9	15.56	33.55	4.50	320	10	15.40	33.55	4.55	24.79	317	0.03
28	13.28	33.58	5.68	272	20	14.07	33.56	5.29	25.09	288	0.06
42	12.36	33.64	3.83	250	30	13.20	33.58	5.68	25.28	270	0.09
56	11.55	33.82	2.36	223	50	11.82	33.73	2.82	25.66	234	0.14
66	11.36	33.96	1.96	209	75	11.64	34.09	1.62	25.98	204	0.20
75	11.64	34.09	1.62	204	100	11.45	34.29	1.40	26.16	186	0.25
89	11.54	34.19	1.43	195	150	10.82	34.50	0.97	26.44	160	0.33
98	11.46	34.28	1.43	187	200	10.29	34.54	0.65	26.56	148	0.41
111	11.44	34.38	0.94	180	250	9.75	34.54	0.40	26.65	140	0.48
139	10.93	34.46	0.97	165	300	9.27	34.53	0.40	26.72	133	0.56
166	10.74	34.52	0.98	157	400	8.29	34.53	0.39	26.88	118	0.69
221	10.03	34.54	0.44	144	500	7.22	34.45	0.23	26.98	109	0.80
286	9.41	34.53	0.40	135	600	6.42	34.46	0.38	27.09	98	0.91
398	8.32	34.53	0.39	118							
531	6.97	34.44	0.21	106							
666	5.96	34.51	0.69	88							

HORIZON; June 14, 1955; 0959, 1200 GCT; 25°15.5'N, 114°20'W; sounding, 2000 fm; wind, 280°, force 4; weather, cloudy; sea, rough; wire angle, 22°, 21°.

133.50

0	17.46	33.62	5.62	357	0	17.46	33.62	5.62	24.37	357	0.00
9	17.44	33.64	5.52	355	10	17.43	33.64	5.50	24.40	354	0.04
28	17.28	33.60	5.40	354	20	17.38	33.62	5.41	24.40	354	0.07
42	16.44	33.53	5.82	342	30	17.25	33.60	5.42	24.40	354	0.11
51	16.16	33.48	5.98	338	50	16.17	33.48	5.96	24.57	338	0.18
61	16.14	33.48	5.95	337	75	14.78	33.45	5.94	24.84	312	0.26
69	15.91	33.49	6.00	332	100	13.00	33.39	5.66	25.18	280	0.33
79	14.08	33.42	5.88	300	150	10.71	34.07	2.15	26.12	190	0.45
93	13.52	33.37	5.80	292	200	10.48	34.44	1.00	26.45	159	0.54
100	13.00	33.39	5.66	280	250	10.11	34.53	0.60	26.58	146	0.62
124	11.62	33.77	3.30	228	300	9.39	34.53	0.34	26.70	135	0.68
150	10.71	34.07	2.15	190	400	8.17	34.49	0.20	26.87	119	0.82
196	10.52	34.42	1.11	160	500	7.22	34.47	0.17	26.99	108	0.94
254	10.05	34.53	0.58	145	600	6.51	34.46	0.17	27.08	99	1.05
355	8.64	34.51	0.24	124	700	5.61	34.46	0.17	27.20	88	1.15
475	7.34	34.56r	0.17	-	800	5.02	34.45	0.28	27.26	82	1.24
601	6.36	34.45	0.24	-	1000	4.28	34.51	0.45	27.39	70	1.41
					1200	3.70	34.53	0.61	27.47	62	
0a)	17.38	33.60	5.49	-	1500	2.95	34.59	1.02	27.58	52	
460	7.70	34.47	0.15	-	2000	2.12	34.65	1.78	27.70	40	
513	7.11	34.47	0.17	106							
570	6.74	34.46	0.18	102							
637	6.26	34.46	0.16	96							
709	5.56	34.53r	0.19	-							
792	5.08b)	34.45	0.28	83							
881	4.70	34.47	0.28	77							
977	4.37	34.51	0.41	70							
1091	4.02	34.52	0.52	67							
1219	3.61	34.54	0.63	61							
1357	3.29	34.56	0.77	57							
1514	2.94	34.59	1.04	51							
1692	2.58	34.63	1.29	45							
1889	2.22	34.65	1.64	40							
2107	2.02	34.65	1.84	39							
2353	1.84	34.66	2.12	37							

- a) Overlapping casts; reconciliation of property curves when necessary.
b) Mean value of 5.04 and 5.11°C.

SIO

CCOFI

5506

OBSERVED					INTERPOLATED				COMPUTED			
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD	
m	°C	‰	ml/L	10 cm/g	m	°C	‰	ml/L	g/L	10 cm/g	dyn. m	

137.23 HORIZON; June 13, 1955; 1539 GCT; 25°21.5'N, 112°18.5'W; sounding, 42 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, 04°.

0	17.88	33.91	5.84	345	0	17.88	33.91	5.84	24.49	345	0.00	
10	17.28	33.90	5.96	332	10	17.28	33.90	5.96	24.63	332	0.03	
15	14.84	33.93	3.92	277	20	13.57	33.94	2.44	25.49	251	0.06	
20	13.57	33.94	2.44	251	30	12.45	34.13	1.67	25.85	216	0.09	
25	12.83	34.07	1.57	228	50	12.08	34.27	0.87	26.03	199	0.13	
30	12.45	34.13	1.67	216								
35	11.95	34.08	1.61	211								
40	12.10	34.20	1.20	204								
50	12.08	34.27	0.87	199								
60	11.95	34.33	0.62	192								

137.30 HORIZON; June 13, 1955; 1139 GCT; 25°09.5'N, 112°44'W; sounding, 230 fm; wind, 270°, force 3; weather, drizzle; sea, slight; wire angle, 23°.

0	17.12	33.72	5.51	342	0	17.12	33.72	5.51	24.52	342	0.00	
9	16.34	33.68	4.33u	328	10	16.32	33.68		24.68	327	0.03	
14	16.10	33.69	6.01	322	20	16.01	33.72	6.16	24.79	317	0.07	
18	16.02	33.72	6.16	317	30	15.30	33.69	4.90	24.92	304	0.10	
23	15.94	33.73	6.00	315	50	12.42	33.68	3.45	25.50	249	0.15	
28	15.68	33.70	4.72	312	75	11.86	34.14	1.50	25.98	204	0.21	
36	13.97	33.66	5.90	299	100	11.54	34.40	1.24	26.24	179	0.26	
45	12.66	33.64	3.90	276	150	11.24	34.65	0.45	26.48	156	0.34	
59	12.17	33.87	2.91	230	200	10.76	34.64	0.23	26.56	148	0.42	
71	11.93	34.09	1.81	209	250	10.50	34.62	0.20	26.58	146	0.49	
88	11.66	34.28	1.20	191	300	10.32	34.61	0.20	26.61	144	0.57	
110	11.48	34.43	1.26	177								
145	11.28	34.65	0.53	157								
180	10.90	34.65	0.26	150								
224	10.62	-	0.21	-								
293	10.36	34.61	0.20	144								
368	10.15	34.62	0.15	140								

137.40 HORIZON; June 13, 1955; 0523, 0606 GCT; 24°52.5'N, 113°24'W; sounding, 2000 fm; wind, 310°, force 3; weather, missing; sea, moderate; wire angle, 18°, 20°.

0	17.91	33.58	5.38	370	0	17.91	33.58	5.38	24.23	370	0.00	
9	17.77	33.58	5.24	366	10	17.75	33.58	5.24	24.27	366	0.04	
28	16.60	33.60	5.60	339	20	17.43	33.59	5.31	24.36	358	0.07	
42	13.83	33.57	4.91	284	30	16.40	33.60	5.60	24.60	335	0.11	
53	12.81	33.66	4.01	257	50	13.11	33.64	4.20	25.34	264	0.17	
62	11.34	33.63	3.57	233	75	11.68	33.99	2.15	25.89	212	0.23	
72	11.45	33.86	2.54	218	100	11.57	34.34	1.22	26.18	184	0.28	
81	11.75	34.15	1.77	202	150	11.20	34.52	0.78	26.40	164	0.37	
96	11.64	34.33	1.31	187	200	10.88	34.60	0.28	26.51	153	0.45	
105	11.46	34.35	1.18	182	250	9.39	34.48	0.67	26.67	138	0.52	
129	11.14	34.38	1.11	174	300	8.86	34.50	0.50	26.78	128	0.59	
157	11.22	34.55	0.76	163	400	8.08	34.52	0.16	26.91	115	0.72	
210	10.67	34.60	0.20	150	500	7.13	34.50	0.13	27.03	104	0.83	
137p	10.96	34.38	0.97	171								
244p	9.52	34.48	0.67	140								
368p	8.38	34.52	0.21	119								
501p	7.13	34.50	0.13	104								

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	10 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

S10
CCOFI
5506

HORIZON; June 12, 1955; 2141, 2259 GCT; 24°37'N, 114°02.5'W; sounding, 2000 fm; wind, 300°, force 3;
weather, cloudy; sea, moderate; wire angle, 15°, 24°.

137.50

0	17.14	33.54	4.88	355	0	17.14	33.54	4.88	24.39	355	0.00
10	16.38	33.50	4.74	342	10	16.38	33.50	4.74	24.52	342	0.03
29	16.12	33.50	4.88	335	20	16.22	33.50	4.79	24.57	338	0.07
44	15.64	33.51	4.98	325	30	16.10	33.50	4.88	24.60	335	0.10
53	14.58	33.42	4.99	309	50	15.00	33.46	4.99	24.81	315	0.17
63	14.04	33.43	5.03	298	75	13.00	33.44	4.36	25.21	277	0.24
72	13.30	33.47	4.50	281	100	11.54	33.57	3.40	25.58	241	0.31
82	12.50	33.40	4.31	271	150	11.30	34.33	0.80	26.21	182	0.41
97	11.53	33.50	3.66	246	200	10.93	34.51	0.35	26.43	161	0.50
105	11.58	33.77	2.94	226	250	9.82	34.45	0.33	26.58	147	0.58
130	11.30	34.13	1.17	196	300	9.14	34.44	0.33	26.68	137	0.65
157	11.32	34.37	0.71	178	400	8.23	34.48	0.07	26.85	120	0.78
210	10.79	34.52	0.29	158	500	7.16	34.44	0.11	26.98	108	0.90
270	9.42	34.43	0.37	142	600	6.25	34.44	0.10	27.10	97	1.01
379	8.42	34.51	0.07	-	700	5.53	34.46	0.17	27.21	87	1.11
503	7.12	34.44	0.43u	-	800	5.14	34.46	0.22	27.26	82	1.20
580	6.45	34.46	0.09	-	1000	4.23	34.51	0.36	27.40	69	1.37
					1200	3.63	34.53	0.65	27.47	62	
0a)	16.95	33.49	5.47	-	1500	3.04	34.57	0.88	27.57	53	
443	7.84	34.44	0.15	-	2000	2.20	34.64	1.88	27.69	41	
492	7.24	34.45	0.10	-							
547	6.75	34.45	0.16	103							
610	6.17	34.43	0.10	-							
679	5.62	34.46	0.15	88							
757	5.38	34.45	0.23	86							
839	4.92	34.48	0.21	79							
933	4.50	34.49	0.26	75							
1040	4.08	34.52	0.45	67							
1161	3.72	34.52	0.58	64							
1292	3.42	34.55	0.74	59							
1442	3.15	34.56	0.82	55							
1611	2.74	34.52u	1.15	-							
1805	2.41	34.61	1.55	45							
2019	2.16	34.64	1.92	41							

a) Overlapping casts; reconciliation of property curves when necessary.

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Force	Weather	Sea	10 Meters T S	
63.52-C	VI-24	1225	37°18.5'	122°37.0'	40	330°	5	clear	rough	12.06	33.48
63.55-C	24	0940	37°05.5'	122°48.5'	150	340°	5	clear	rough	11.78	33.69
63.65-C	24	0400	36°52.5'	123°26.0'	1860	330°	7	partly cloudy	very rough	14.02	33.35
70.52-C	23	0100	36°08.0'	121°50.0'	400	330°	7	clear	rough	10.36	33.77
77.70-C	19	1822	34°21.0'	122°12.0'	2000+	340°	4	cloudy	moderate	14.30	33.35
83.51-C	16	0440	33°51.5'	120°08.5'	200	320°	7	missing	very rough	15.18	33.56
83.65-C	15	1850	33°23.0'	121°08.0'	1950	340°	6	cloudy	rough	14.53	33.40
83.75-C	15	1100	33°03.5'	121°47.5'	2000+	350°	5	missing	moderate	14.10	33.42
83.85-C	15	0350	32°45.0'	122°27.0'	2300	340°	3	cloudy	moderate	14.24	33.44
87.45-C	11	1800	33°30.5'	119°19.5'	930	270°	1	cloudy	slight	14.36	33.69
87.55-C	11	2350	33°10.0'	120°00.5'	700	250°	4	cloudy	moderate	14.58	33.58
87.65-C	13	1840	32°50.0'	120°42.0'	2000+	300°	3	cloudy	moderate	14.23	33.34
87.75-C	14	0045	32°30.0'	121°23.5'	2400	300°	3	cloudy	moderate	14.28	33.42
87.85-C	14	0840	32°10.0'	122°04.0'	-	320°	4	cloudy	moderate	15.24	33.34
90.50-P	17	2310	32°46.0'	119°17.0'	235	280°	4	cloudy	moderate	14.24	33.94
90.65-P	18	1030	32°14.0'	120°11.0'	1850	310°	5	missing	very rough	14.10	33.48
90.75-P	18	1930	31°55.5'	120°59.0'	2000+	330°	6	clear	very rough	14.86	33.37
93.35-P	20	1110	32°31.0'	117°59.0'	920	300°	3	missing	rough	16.74	33.62
93.45-P	20	0425	32°16.5'	118°35.0'	400	300°	5	missing	rough	16.56	33.62

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
93.55-P	VI-19	2220	31°59.0'	119°09.0'	930	320°	5	cloudy	very rough	14.90	33.47
93.65-P	19	1525	31°40.0'	119°52.0'	2050	320°	5	overcast	very rough	15.64	33.48
93.70-P	19	1155	31°30.0'	120°13.0'	2000+	320°	6	missing	very rough	14.61	33.46
93.75-P	19	0830	31°19.0'	120°34.0'	2000+	310°	6	missing	very rough	14.42	33.35
93.80-P	19	0510	31°09.5'	120°54.5'	2000+	330°	6	missing	very rough	15.48	33.38
97.35-P	22	0650	32°07.5'	117°26.0'	600	290°	5	cloudy	rough	17.28	33.57
97.45-P	22	1445	31°46.0'	118°09.5'	850	320°	5	partly cloudy	rough	16.12a)	33.61
97.55-P	22	2250	31°25.0'	118°50.0'	370	320°	7	partly cloudy	high	15.54	33.64
100.35-P	23	1745	31°28.0'	117°05.0'	650	320°	5	partly cloudy	very rough	17.32	34.09
100.40-P	23	1430	31°21.5'	117°27.0'	1050	320°	6	clear	very rough	16.72	33.57
100.45-P	23	1045	31°08.5'	117°53.5'	850	320°	6	missing	very rough	15.78	33.60
100.50-P	23	0730	30°57.5'	118°10.0'	770	320°	5	missing	very rough	15.36	33.55
100.55-P	23	0420	30°46.5'	118°26.5'	1400	320°	6	missing	very rough	15.94	33.49
103.35-H	28	1930	30°55.0'	116°42.0'	900	330°	3	overcast	rough	15.48	33.49
103.45-H	28	1430	30°37.0'	117°19.5'	1000	330°	4	overcast	rough	15.80	33.55
103.55-H	28	0845	30°16.0'	118°05.0'	1250	340°	4	overcast	rough	16.46	33.52
103.65-H	28	0242	29°57.5'	118°46.0'	1900	330°	4	overcast	rough	16.37	33.52

a) Alternate value, 16.23°C.

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

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
103.75-H	VI-27	2115	29°37.5'	119°25.0'	1600	340°	4	overcast	rough	16.66	33.52
103.85-H	27	1640	29°22.0'	119°57.5'	2100	360°	4	overcast	rough	16.47	33.43
107.45-H	26	0310	29°59.5'	117°03.5'	700	310°	4	overcast	rough	16.74	33.51
107.55-H	26	0845	29°42.0'	117°44.0'	1900	330°	5	clear	very rough	16.56	33.48
107.65-H	26	1432	29°22.0'	118°22.5'	1600	340°	4	overcast	very rough	-	33.44
107.75-H	26	2000	29°02.5'	119°02.0'	1900	320°	3	cloudy	rough	17.20	33.64
107.85-H	27	0135	28°42.5'	119°43.5'	2075	330°	4	cloudy	rough	17.78	33.67
110.45-H	25	0435	29°25.5'	116°38.5'	800	320°	4	clear	very rough	16.43	33.52
110.55-H	24	2301	29°06.5'	117°18.5'	2000	330°	5	cloudy	very rough	16.62	33.53
110.65-H	23	1640	28°46.0'	117°57.5'	1950	340°	6	clear	high	16.92	33.55
110.75-H	23	1009	28°26.0'	118°37.0'	2175	320°	6	clear	very rough	17.12	33.57
110.80-H	23	0720	28°16.0'	118°57.5'	2300	330°	6	clear	high	17.08	33.53
110.85-H	23	0430	28°04.0'	119°25.0'	2150	330°	5	clear	high	17.48	33.67
113.45-H	21	1945	28°53.0'	116°19.5'	1225	330°	3	overcast	very rough	17.11	33.58
113.55-H	22	0130	28°32.0'	116°57.0'	1900	340°	4	cloudy	very rough	16.74	33.49
113.65-H	22	0700	28°12.0'	117°35.0'	2150	330°	5	overcast	high	16.72	33.49
113.75-H	22	1252	27°48.5'	118°22.0'	2100	310°	5	clear	very rough	17.14	33.57
117.35-H	21	0120	28°38.0'	115°16.0'	103	340°	5	overcast	very rough	15.94	33.48
117.45-H	20	1915	28°13.0'	115°53.0'	1800	330°	4	overcast	very rough	16.92	33.53

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
117.55-H	VI-20	1200	27°55.0'	116°37.0'	1950	320°	4	overcast	very rough	17.58	33.54
117.65-H	20	0604	27°38.0'	117°13.0'	1800	320°	5	clear	very rough	17.72	33.56
117.75-H	20	0015	27°14.5'	117°56.0'	2400	350°	4	cloudy	rough	17.53	33.53
120.27-H	18	0515	28°19.0'	114°23.0'	45	300°	4	overcast	moderate	15.50	33.51
120.40-H	18	1205	27°55.5'	115°17.5'	40	310°	3	overcast	rough	15.46	33.68
120.55-H	18	2115	27°23.0'	116°10.0'	2150	330°	4	overcast	rough	17.51	33.54
123.45-H	17	0759	27°08.0'	115°10.0'	2300	360°	6	missing	very rough	16.67	33.52
123.55-H	17	0138	26°49.0'	115°50.5'	2095	320°	4	partly cloudy	rough	15.25	33.44
127.45-H	16	0310	26°38.0'	114°48.5'	2050	320°	5	clear	very rough	16.97	33.62
127.55-H	16	0950	26°13.0'	115°27.5'	2000	320°	4	clear	rough	17.27	33.53

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

DISTRIBUTION LIST

Mr. D. L. Alverson, Chief
North Pacific Fisheries Exploration and
Gear Research
Bureau of Commercial Fisheries
2725 Montlake Boulevard
Seattle 2, Washington

Mr. William Anderson
Bureau of Commercial Fisheries
Brunswick, Georgia

Mr. William E. Batzler
Code 2232
U. S. Navy Electronics Laboratory
San Diego 52, California

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

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

Library
Oceanographic Group
Central Fisheries Experiment Station
Pusan, Korea

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

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

Dr. Rolf Bolin
Hopkins Marine Station
Pacific Grove, California

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

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

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

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

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

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

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

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

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

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

Dr. G. M. Cresswell
Department of Earth Sciences
Stanford Research Institute
Menlo Park, California

Herrn Professor Dr. A. Defant
Sternwartestrasse 38
Innsbruck
Austria

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

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

Dr. William J. Hargis, Jr., Director
Virginia Fisheries Laboratory
Gloucester Point, Virginia

Dr. Robert W. Hiatt
University of Hawaii
Honolulu 12, Hawaii

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

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

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

Dr. E. C. LaFond
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. J. L. McHugh, Chief
Division of Biological Research
Bureau of Commercial Fisheries
Washington 25, D. C.

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

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

Japan Meteorological Agency
Oceanographical Section
Tokyo, Japan

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

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

Mr. Jotaro Masuzuwa
Japan Meteorological Agency
Oceanographical Section
Tokyo, Japan

Dr. Hugh J. McLellan
Department of Oceanography
Texas A. and M. College
College Station, Texas

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

National Marine Consultants, Inc.
2913 De la Vina
Santa Barbara, California
Attn: Dr. Richard Kent

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

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

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

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

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

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

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

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

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

Director
Norwegian Polar Institute
Observatorieggt 1
Oslo, Norway

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

Dr. G. Pogade, Librarian
Deutscher Wetterdienst Seewetteramt
Hamburg, Germany

Pusan Fisheries College
Pusan
Korea

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

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

Miss Margaret Storey, Librarian
Natural History Museum
Stanford, California

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

Library, Code 2420 (2)
U. S. Navy Electronics Laboratory
San Diego 52, California

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

Librarian
University of Washington
Oceanographic Laboratories
Friday Harbor, 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.

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

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

University of California
Department of Zoology
Berkeley 4, California

Director
University of Miami
Marine Laboratory
Coral Gables, Florida

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

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.

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

Dr. M. Pat Wennekens
Oceanic Research Division
(Code 508)
Naval Ordnance Test Station
China Lake, California

Inter-American Tropical Tuna Commission
(c/o Scripps Institution of Oceanography)

Dr. M. B. Schaefer

Scripps Institution of Oceanography

Mrs. A. Alvarinho de Leira
Dr. Leo D. Berner
Dr. Maurice Blackburn
Dr. Edward Brinton
Dr. Abraham Fleminger
Mr. Jeffery D. Frautschy
Mr. John D. Isaacs
Dr. Martin W. Johnson
Mr. Hans T. Klein
Mr. Garth I. Murphy
Mr. Joseph L. Reid, Jr.
Dr. Roger Revelle
Mrs. Margaret K. Riedel
Mrs. Margaret K. Robinson
Mr. Gunnar I. Roden
Mr. Richard A. Schwartzlose
Dr. Warren S. Wooster
Mr. Charles G. Worrall (20)
Library (4)
Library, SFA

U. S. Bureau of Commercial Fisheries
(c/o Scripps Institution of Oceanography)

Dr. E. H. Ahlstrom
Mr. Gerald V. Howard

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

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