

DRAFTING Room
NOT CORRECTED

Erata 28/05/63
p 159
p 171

UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

CCOFI Cruise 5904
7-26 April 1959

SIO Reference 60-37
29 June 1960

UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5904

7-26 April 1959

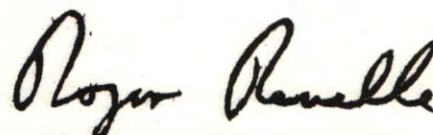
Sponsored by

Marine Research Committee

SIO Reference 60-37

29 June 1960

Approved for distribution:

A handwritten signature in dark ink, reading "Roger Revelle". The signature is fluid and cursive, with the first name "Roger" and last name "Revelle" clearly distinguishable.

Roger Revelle, Director

CONTENTS

List of Figures.	ii
Introduction	iii
Personnel	v
Tabulated Data	123
Hydrographic Casts.	123
Observations at 10 Meters (Net-Tow Stations)	179
Distribution List	185

FIGURES

1. CCOFI Cruise 5904, station positions
2. Horizontal distribution of dynamic height anomaly (η over 500 d-bar)
3. Horizontal distribution of temperature at 10 meters
4. Horizontal distribution of salinity at 10 meters
5. Horizontal distribution of temperature at 200 meters
6. Horizontal distribution of salinity at 200 meters

INTRODUCTION

The data presented in this report were collected on the one hundred and nineteenth consecutive cruise of the California Cooperative Oceanic Fisheries Investigations program. The R/V Orca, R/V Paolina-T and R/V Stranger 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

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.

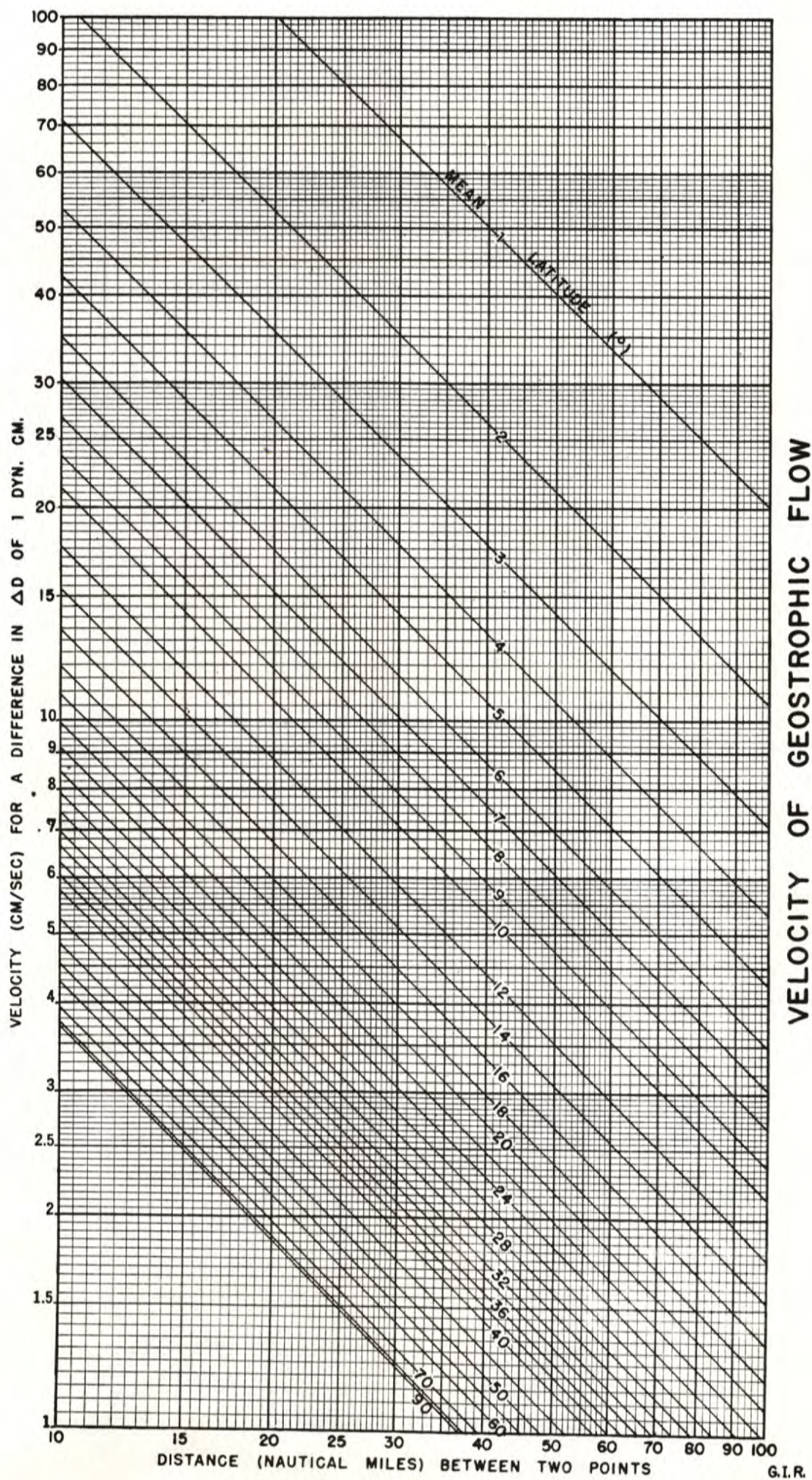
Values which are not drawn through because they seem to be in error without apparent reason are indicated by one of the following notations.

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 1959 volume, the first page of the Cruise 5904 data is numbered 123.



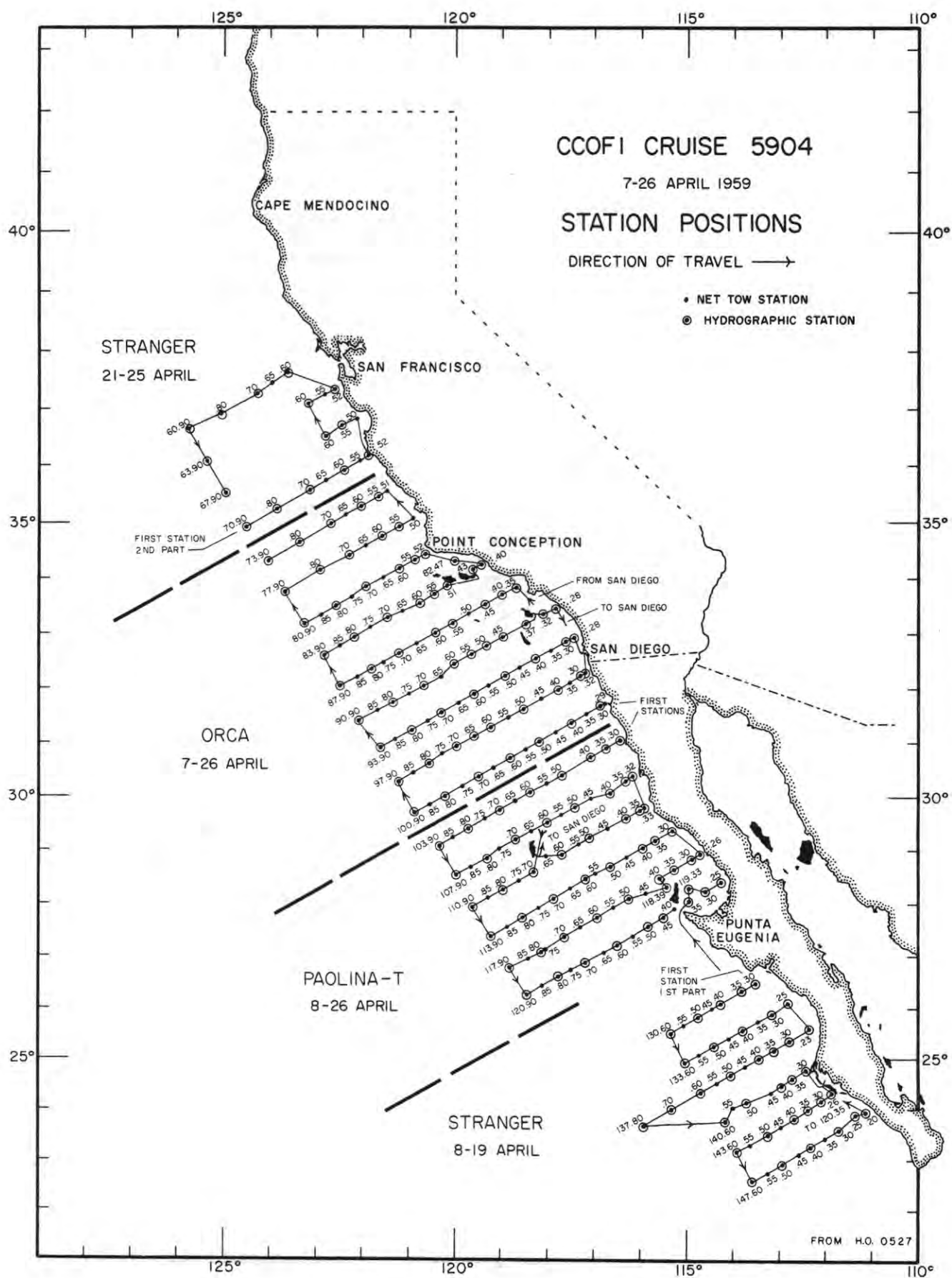


FIGURE 1

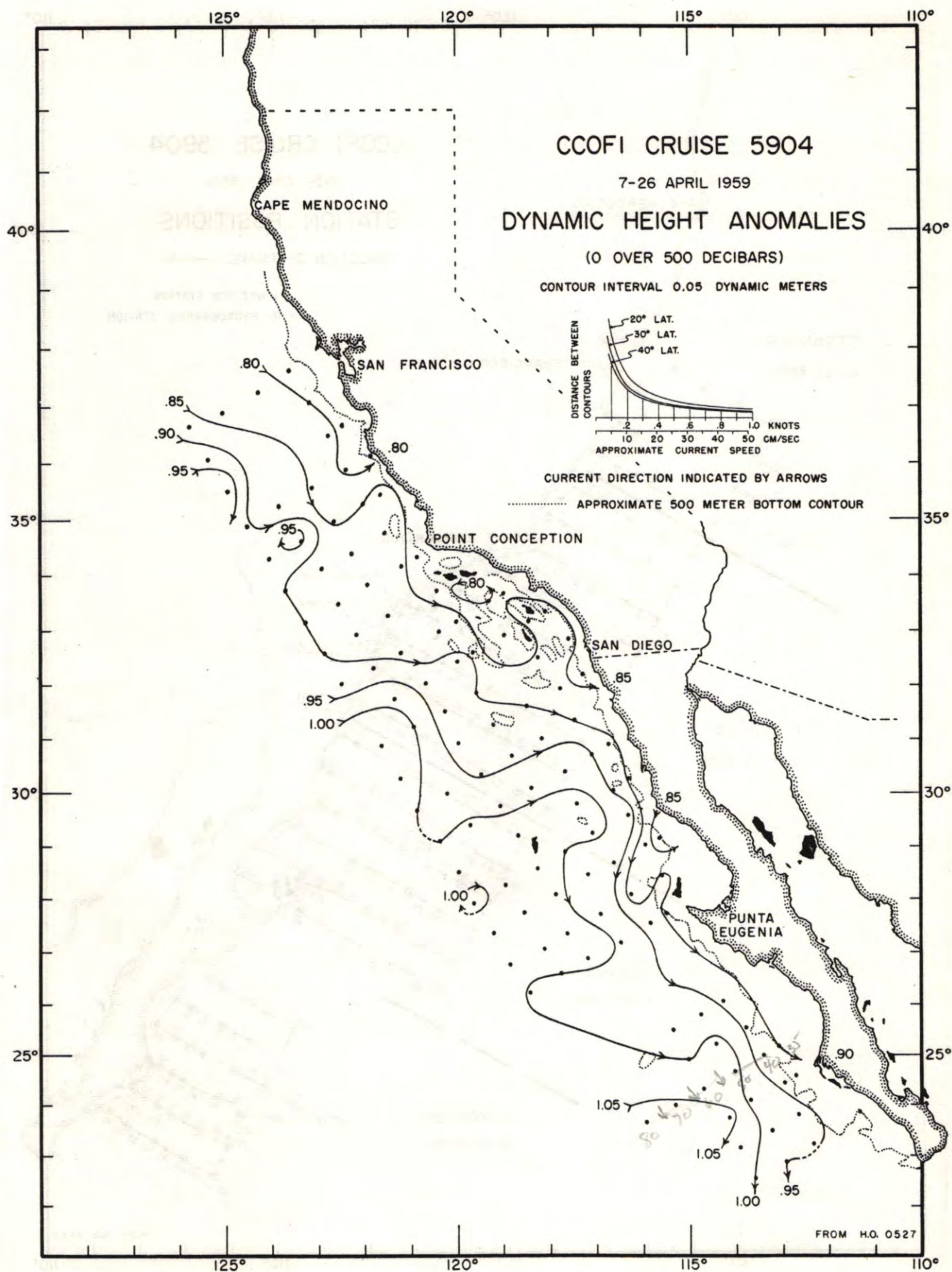


FIGURE 2

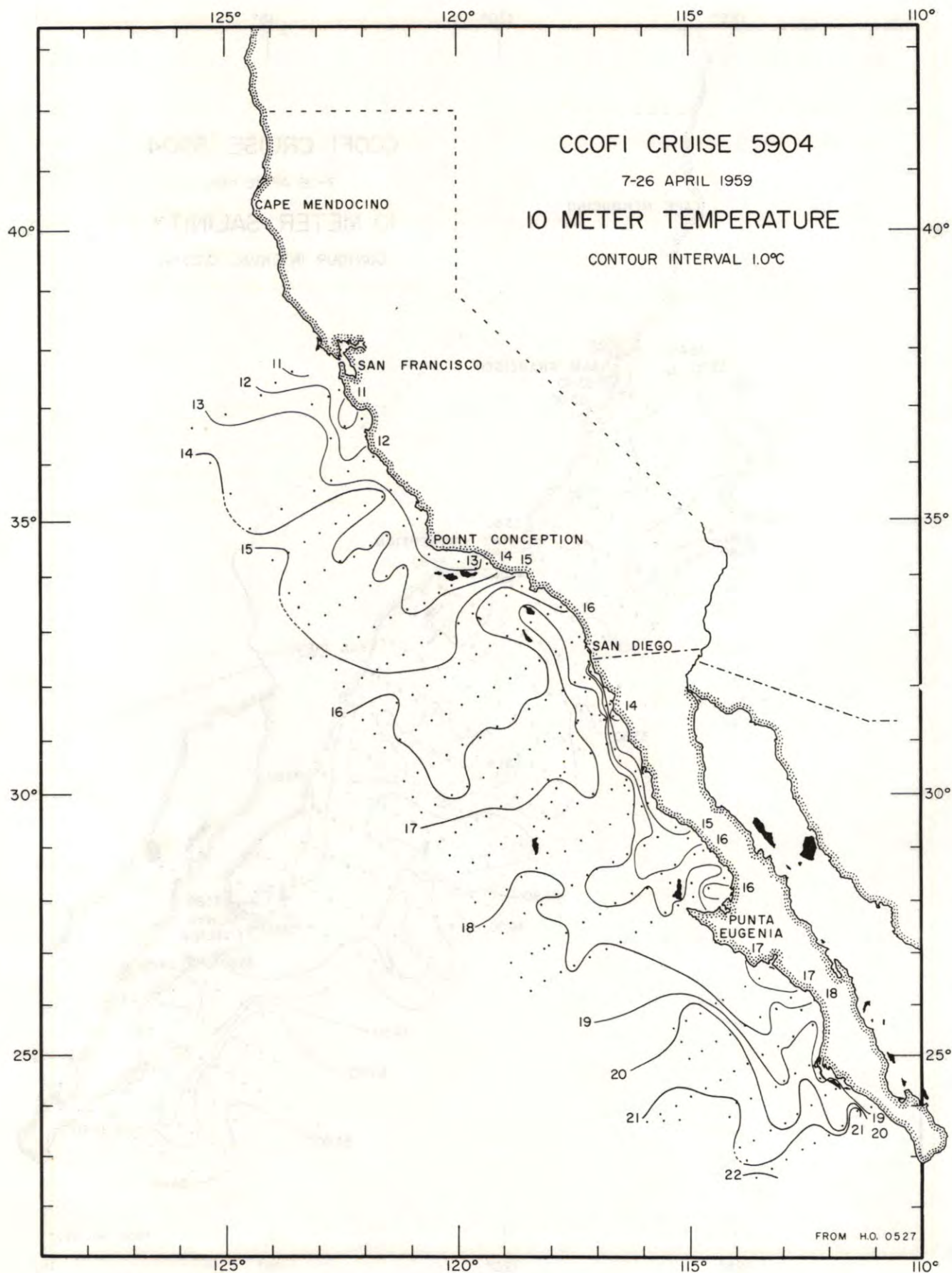


FIGURE 3

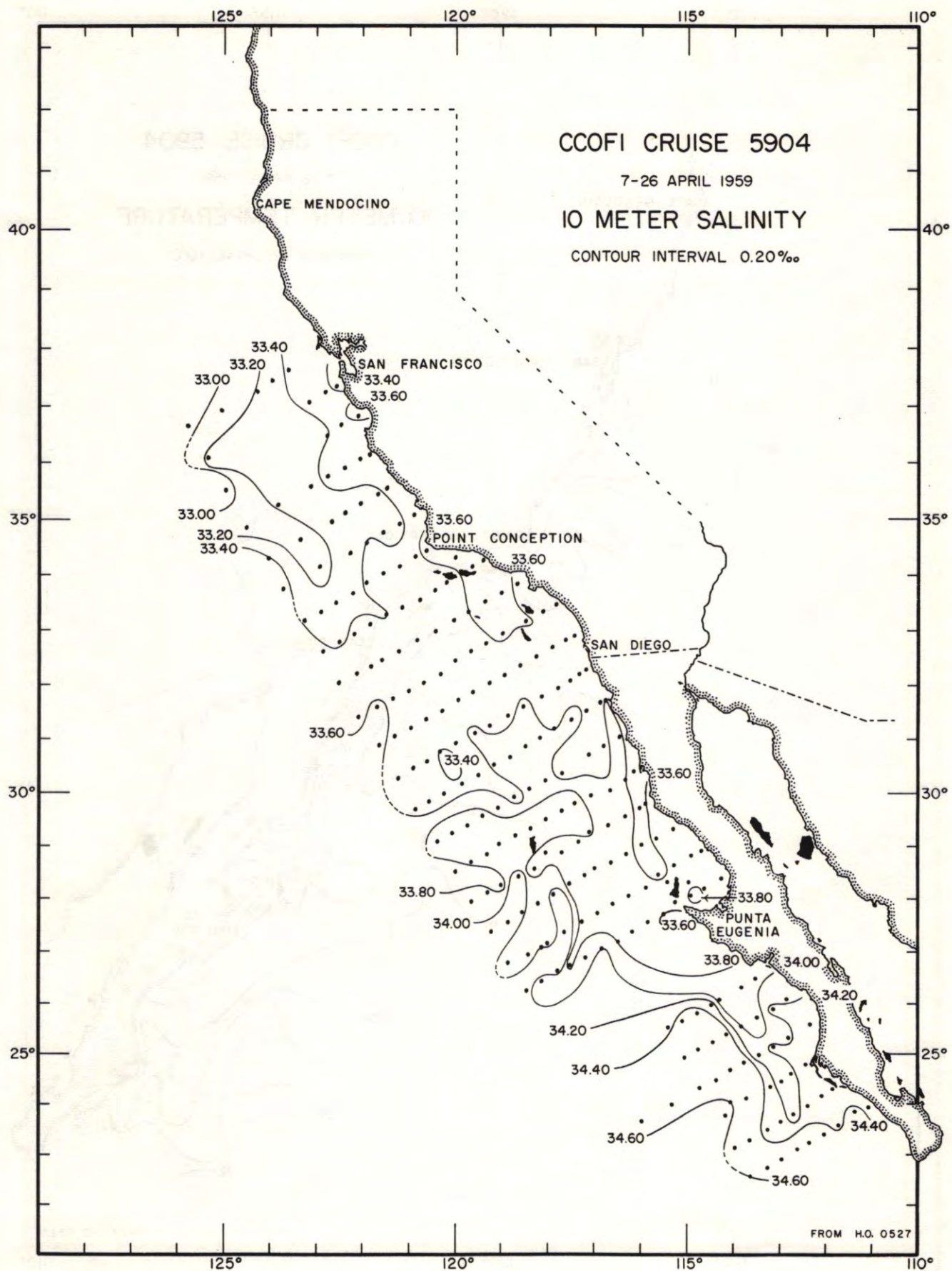


FIGURE 4

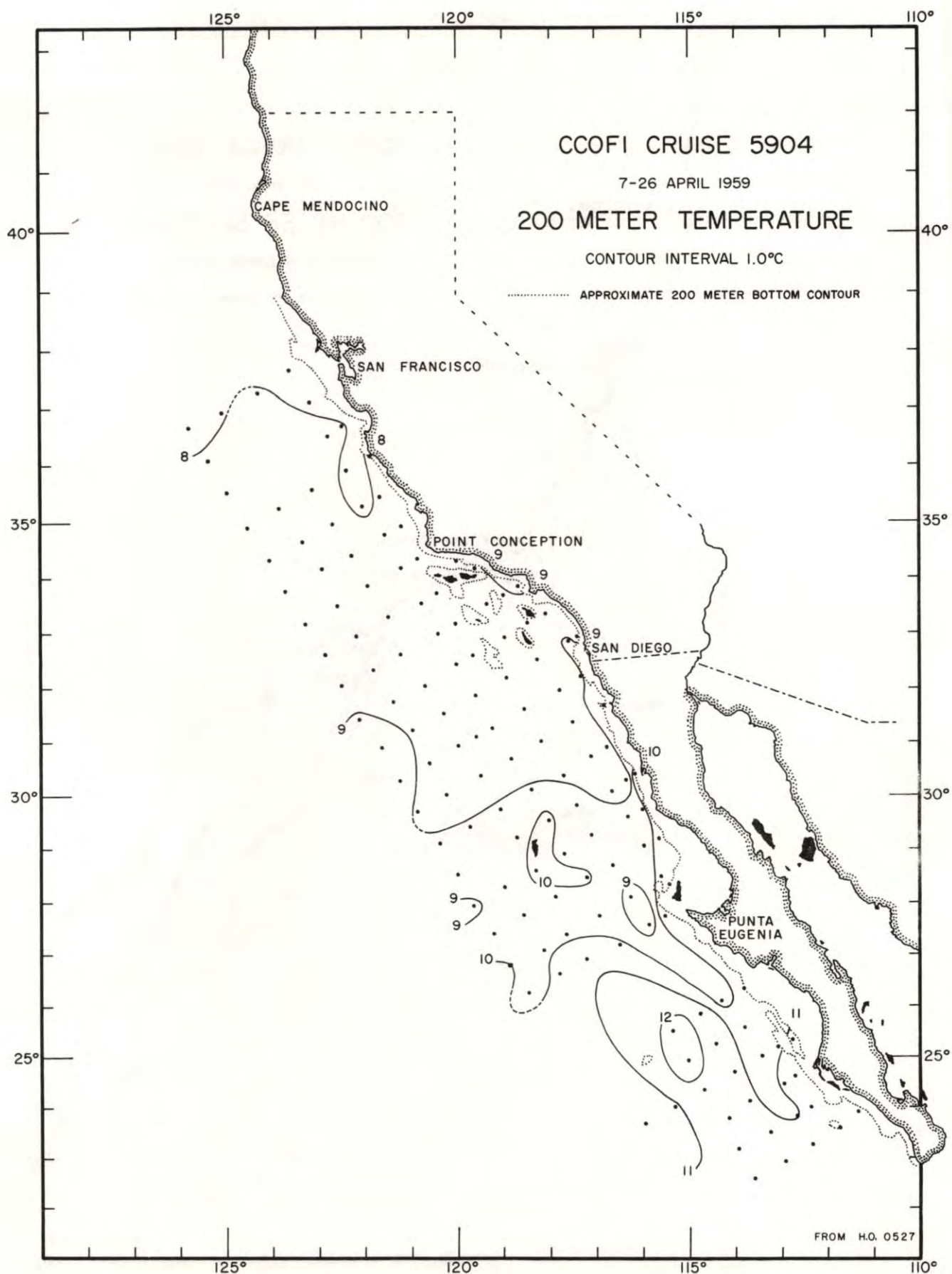


FIGURE 5

PERSONNEL

SHIPS' CAPTAINS

Phinney, Alan W., R/V Orca
Miller, Frank, R/V Paolina-T
Smith, Charles H., R/V Stranger

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

R/V Orca

Gilkey, Robert W., Senior Marine Technician
Bassel, John B., Marine Technician
Claussen, L. G., Fishery Research Biologist, Bureau of Commercial Fisheries
Lawson, Jan B., Marine Technician
*Wyllie, John G., Senior Laboratory Technician

R/V Paolina-T

Davoll, Peter J., Senior Marine Technician
Begnoche, Donald J., Marine Technician
Old, James H., Fishery Aid, Bureau of Commercial Fisheries
Pine, James S., Marine Technician

R/V Stranger

Kiwala, Robert S., Senior Marine Technician
Bingman, Allen R., Marine Technician
Bottom, Kenneth S., Marine Technician
Hodnett, Haley L., Engineering Aid
Merino, Jose M., Fishery Aid, Bureau of Commercial Fisheries

*Participated in part of cruise.

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

SIO
CCOFI
5904

STRANGER; April 24, 1959; 1425 GCT; 37°37'N, 123°37'W; sounding, 1750 fm; wind, 170°, force 2; weather, overcast; sea, moderate; wire angle, 10°.

60.60

2	10.95	33.45	6.18	240	0	(10.95)	(33.45)	(6.18)	(25.60)	(240)	(0.00)
12	10.90	33.46	5.99	238	10	10.92	33.46	6.00	25.62	238	0.02
31	9.92	33.75	5.51	200	20	10.20	33.65	5.66	25.88	212	0.05
41	9.56	33.73	5.22	196	30	9.97	33.75	5.54	26.01	201	0.07
51	9.39	33.77	5.76u	190	50	9.40	33.76		26.10	192	0.11
65	9.24	33.82	4.92	185	75	9.20	33.84	4.82	26.20	182	0.15
80	9.16	33.85	4.79	181	100	9.01	33.86	3.95	26.24	178	0.20
100	9.01	33.86	3.95	178	150	8.41	33.96	2.26	26.42	162	0.28
124	8.66	33.93	2.37	168	200	7.89	34.00	1.88	26.53	152	0.36
144	8.46	33.95	2.29	164	250	7.52	34.08	1.71	26.65	140	0.44
173	8.18	34.03	2.08	153	300	7.00	34.10	1.46	26.73	132	0.51
203	7.84	34.00	1.85	151	400	6.30	34.20	0.79	26.90	116	0.64
233	7.72	34.08	1.74	143	500	5.74	34.22	0.59	26.99	107	0.75
271	7.18	34.09	1.67	135							
330	6.82	34.14	1.15	127							
405	6.27	34.20	0.78	116							
479	5.84	34.22	0.62	109							
558	5.50	34.23	0.42	104							

STRANGER; April 24, 1959; 1955 GCT; 37°14'N, 124°16'W; sounding, 2100 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 07°.

60.70

2	12.85	33.22	6.38	290	0	(12.85)	(33.22)	(6.38)	(25.06)	(290)	(0.00)
12	12.20	33.25	6.40	276	10	12.28	33.24	6.40	25.19	278	0.03
32	12.06	33.29	6.11	271	20	12.11	33.28	6.18	25.26	272	0.06
61	11.22	33.28	5.66	257	30	12.07	33.29	6.12	25.27	271	0.08
71	10.62	33.38	4.92	240	50	12.05	33.29	6.08	25.28	270	0.14
86	9.97	33.48	4.42	221	75	10.40	33.42	4.73	25.67	233	0.20
101	9.54	33.61	4.00	205	100	9.55	33.61	4.01	25.96	205	0.26
116	9.27	33.71	3.54	194	150	8.90	33.88	2.74	26.28	175	0.35
141	9.02	33.84	2.85	180	200	8.12	34.02	2.11	26.52	153	0.43
160	8.70	33.91	2.61	170	250	7.46	34.09	1.76	26.66	139	0.51
190	8.28	34.00	2.18	158	300	7.09	34.09	1.47	26.72	134	0.58
219	7.87	34.05	2.04	148	400	6.28	34.14	0.74	26.86	120	0.71
250	7.46	34.09	1.76	139	500	5.76	34.17	0.65	26.94	112	0.83
299	7.10	34.09	1.48	134	600	5.25	34.24	0.61	27.06	101	0.94
354	6.58	34.22u	1.06	-							
438	6.08	34.16	0.62	116							
522	5.63	34.18	0.65	109							
608	5.21	34.24	0.60	100							

STRANGER; April 25, 1959; 0052 GCT; 36°54'N, 125°02.5'W; sounding, 2275 fm; wind, direction missing, force 1; weather, cloudy; sea, rough; wire angle, 13°.

60.80

3	13.25	33.06	6.21	310	0	(13.25)	(33.06)	(6.21)	(24.86)	(310)	(0.00)
13	12.54	33.09	6.21	294	10	12.80	33.07	6.21	24.96	300	0.03
32	11.52	33.23	6.38	266	20	12.40	33.10	6.22	25.06	291	0.06
41	11.16	33.28	6.17	256	30	11.53	33.23	6.38	25.32	266	0.09
51	11.03	33.31	6.10	252	50	11.04	33.31	6.11	25.47	252	0.14
66	10.73	33.36	5.96	242	75	10.72	33.36	5.95	25.58	242	0.20
81	10.44	33.43	5.66	233	100	9.76	33.62	4.13	25.94	208	0.26
100	9.76	33.62	4.13	208	150	8.41	33.82	3.77	26.31	172	0.35
124	9.16	33.75	3.28	189	200	7.98	33.93	2.77	26.46	158	0.44
142	8.51	33.78	3.81	176	250	7.22	33.96	2.87	26.59	146	0.52
170	8.24	33.91	3.41	164	300	6.40	33.96	2.53	26.70	135	0.59
198	8.00	33.93	2.77	158	400	5.58	34.00	1.59	26.84	122	0.72
227	7.62	33.97	2.76	150	500	5.59	34.18	0.52	26.98	108	0.84
264	6.93	33.96	2.99	141							
322	6.12	33.96	2.30	131							
397	5.58	34.00	1.59	122							
470	5.72	34.16	0.78	112							
550	5.14	34.18	0.14	104							

SIO

CCOFI
5904

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

60.90

STRANGER; April 25, 1959; 0548 GCT; 36°37'N, 125°47'W; sounding, 2430 fm; wind, direction missing, force 1; weather, missing; sea, rough; wire angle, 04°.

2	13.74	32.87	6.03	333	0	(13.74)	(32.87)	(6.03)	(24.62)	(333)	(0.00)
12	13.46	32.92	5.71	324	10	13.47	32.92	5.72	24.71	324	0.03
32	12.34	32.92	6.09	303	20	13.38	32.92	5.73	24.74	322	0.06
61	11.96	33.04	5.04	287	30	12.60	32.92	6.04	24.88	308	0.10
72	10.97	33.10	5.35	266	50	12.08	33.00	5.37	25.04	292	0.16
87	9.97	33.36	5.16	230	75	10.30	33.25	5.32	25.56	244	0.22
101	9.32	33.45	4.31	214	100	9.39	33.44	4.36	25.86	214	0.28
116	8.96	33.51	4.10	204	150	8.48	33.72	3.83	26.22	180	0.38
142	8.58	33.66	3.90	186	200	7.73	33.94	3.40	26.50	154	0.47
161	8.35	33.80	3.74	173	250	6.96	33.98	2.95	26.65	140	0.54
190	7.90	33.93	3.50	157	300	6.15	33.96	1.99	26.74	132	0.61
221	7.38	33.96	3.17	148	400	5.35	34.00	1.47	26.87	119	0.74
250	6.96	33.98	2.95	140	500	5.04	34.13	0.66	27.01	106	0.86
300	6.15	33.96	1.99	132	600	4.62	34.24	0.38	27.14	94	0.96
355	5.54	33.95	1.96	126							
441	5.22	34.07	0.99	113							
526	4.95	34.16	0.57	103							
611	4.56	34.25	0.35	92							

63.52

STRANGER; April 24, 1959; 0850 GCT; 37°19'N, 122°36.5'W; sounding, 45 fm; wind, 180°, force 2; weather, overcast; sea, moderate; wire angle, 00°.

2	11.39	33.39	7.34	251	0	(11.39)	(33.39)	(7.34)	(25.48)	(251)	(0.00)
12	11.42	33.38	7.60	253	10	11.42	33.38	7.60	25.46	253	0.02
32	10.18	33.66	5.01	212	20	11.13	33.48	6.80	25.59	240	0.05
52	9.39	33.78	3.30	190	30	10.30	33.64	5.25	25.86	215	0.07
					50	9.45	33.77	3.49	26.10	192	0.11

63.60

STRANGER; April 24, 1959; 0450 GCT; 37°03.5'N, 123°10'W; sounding, 1275 fm; wind, 180°, force 2; weather, overcast; sea, moderate; wire angle, 15°.

2	12.93	33.44	5.77	276	0	(12.93)	(33.44)	(5.77)	(25.22)	(276)	(0.00)
12	12.62	33.42	6.02	272	10	12.67	33.42	6.01	25.26	272	0.03
30	12.24	33.40	5.94	266	20	12.58	33.42	6.02	25.27	271	0.05
54	11.96	33.40	5.93	260	30	12.24	33.40	5.94	25.32	266	0.08
64	10.14	33.58	4.25	217	50	11.96	33.40	5.93	25.38	261	0.13
74	9.70	33.68	3.52	202	75	9.69	33.68	3.52	26.00	202	0.19
88	9.38	33.68	3.55	197	100	9.20	33.77	3.05	26.14	188	0.24
102	9.16	33.78	2.95	186	150	8.49	33.94	2.30	26.40	164	0.33
125	8.88	33.86	2.48	176	200	7.89	34.00	1.84	26.53	151	0.41
144	8.58	33.93	2.33	166	250	7.34	34.08	1.49	26.67	138	0.48
166	8.27	33.96	2.19	160	300	6.78	34.08	1.10	26.75	130	0.55
192	7.96	33.98	1.90	154	400	6.15	34.14	0.74	26.88	118	0.68
220	7.72	34.05	1.71	146	500	5.64	34.19	0.53	26.98	109	0.80
257	7.27	34.08	1.45	137							
313	6.66	34.08	1.06	130							
383	6.23	34.13	0.78	120							
456	5.88	34.16	0.68	114							
535	5.44	34.22	0.36	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	$\frac{10^{-5} \text{ cm}^3}{\text{g}}$	m	°C	‰	ml/L	g/L	$\frac{10^{-5} \text{ cm}^3}{\text{g}}$	dyn. m

SIO
CCOFI
5904

STRANGER; April 25, 1959; 1042 GCT; 36°02'N, 125°21'W; sounding, 2430 fm; wind, 180°, force 1; weather, overcast; sea, rough; wire angle, 05°.

63.90

3	14.93	33.26		328	0	(14.93)	(33.26)		(24.67)	(328)	(0.00)
13	14.59	33.28		320	10	14.65	33.28		24.74	321	0.03
33	14.46	33.30		316	20	14.52	33.30		24.78	317	0.06
43	14.37	33.28		315	30	14.48	33.30		24.80	316	0.10
52	14.47	33.33		314	50	14.45	33.32		24.82	314	0.16
68	14.67	33.51		305	75	14.47	33.51		24.95	301	0.24
82	13.76	33.46		290	100	11.45	33.19		25.30	268	0.31
103	11.12	33.16		264	150	8.82	33.66		26.12	190	0.42
126	9.64	33.47		217	200	8.31	33.92		26.40	164	0.51
146	8.90	33.64		193	250	7.62	33.96		26.54	150	0.59
177	8.51	33.83		173	300	6.89	33.96		26.64	141	0.67
206	8.24	33.93		162	400	5.86	34.01		26.82	124	0.80
235	7.90	33.97		154	500	4.98	34.08		26.97	109	0.93
274	7.27	33.96		146							
336	6.41	33.96		135							
410	5.78	34.02		123							
483	5.06	34.06		112							
566	4.84	34.18		101							

STRANGER; April 23, 1959; 2053, 2117 GCT; 36°41'N, 122°27.5'W; sounding, 1070 fm; wind, 210°, force 2; weather, cloudy; sea, moderate; wire angle, 04°, 09°.

67.55

2	11.98	33.55	7.19	250	0	(11.98)	(33.55)	(7.19)	(25.49)	(250)	(0.00)
12	10.84	33.57	5.42	230	10	10.90	33.54	5.62	25.68	232	0.02
31	10.65	33.60	4.99	224	20	10.72	33.59	5.11	25.75	226	0.05
41	10.61	33.62	4.92	222	30	10.66	33.60	5.00	25.77	224	0.07
52	10.54	33.64	4.48	218	50	10.57	33.64	4.66	25.81	220	0.11
67	9.84	33.67	3.49	206	75	9.59	33.72	3.06	26.05	197	0.17
82	9.45	33.75	2.88	193	100	9.17	33.84	2.50	26.21	182	0.21
102	9.12	33.86	2.48	180	150	8.44	33.94	2.22	26.40	164	0.30
127	8.81	33.91	2.46	172	200	8.11	34.04	1.78	26.52	152	0.38
146	8.48	33.93	2.28	166	250	7.73	34.09	1.33	26.62	143	0.46
176	8.26	34.00	1.86	157	300	7.36	34.12	1.14	26.70	135	0.53
205	8.07	34.04	1.76	152	400	6.61	34.20	0.72	26.86	120	0.66
234	7.86	34.07	1.40	146	500	6.05	34.22	0.63	26.96	111	0.78
275	7.54	34.12	1.26	138							
334	7.12	34.14	0.96	131							
409	6.54	34.20	0.70	118							
484	6.15	34.22	0.65	112							
564	5.60	34.23	0.42	105							

STRANGER; April 23, 1959; 2345 GCT; 36°29'N, 122°45.5'W; sounding, 1595 fm; wind, 220°, force 2; weather, cloudy; sea, moderate; wire angle, missing.

67.60

3	14.23	33.41		304	0	(14.23)	(33.41)		(24.93)	(304)	(0.00)
13	12.94	33.40		278	10	12.96	33.40		25.18	279	0.03
33	12.66	33.40		274	20	12.93	33.40		25.19	278	0.06
43	12.18	33.37		267	30	12.70	33.40		25.24	274	0.08
53	11.74	33.44		254	50	12.11	33.37		25.33	266	0.14
68	10.37	33.59		220	75	10.13	33.63		25.88	213	0.20
83	9.90	33.66		207	100	9.29	33.70		26.08	195	0.25
104	9.18	33.71		192	150	8.69	33.87		26.30	173	0.34
127	8.82	33.82		179	200	8.38	33.98		26.44	160	0.43
149	8.70	33.87		173	250	8.02	34.08		26.57	148	0.50
178	8.46	33.95		164	300	7.49	34.12		26.68	136	0.58
207	8.35	34.00		158	400	6.59	34.18		26.84	122	0.71
237	8.12	34.06		150	500	5.88	34.22		26.97	109	0.83
277	7.74	34.11		141							
338	7.06	34.14		130							
412	6.50	34.18		120							
488	5.96	34.22		110							
568	5.48	34.25		102							

SIO

CCOFI
5904

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

67.90

STRANGER; April 25, 1959; 1530 GCT; 35°29'N, 124°56'W; sounding, 2408 fm; wind, 270°, force 3; weather, fog; sea, rough; wire angle, 10°.

4	14.11	32.94	4.20	335	0	14.3	(32.94)	(4.20)	(24.56)	(339)	(0.00)
14	13.88	32.99	5.52	327	10	13.96	32.96	5.08	24.65	330	0.03
33	13.83	33.03	5.28	324	20	13.85	33.02	5.30	24.72	324	0.07
44	13.91	33.06	5.82	322	30	13.84	33.02	5.30	24.72	324	0.10
59	13.79	33.08	5.79	318	50	13.89	33.07	5.82	24.75	321	0.16
73	13.48	33.01	5.35a)	318	75	13.45	33.02	5.36	24.79	317	0.24
98	13.30	33.26	5.69	296	100	13.23	33.27	5.68	25.03	294	0.32
117	11.78	33.31	5.42	264	150	9.93	33.45	5.03	25.78	223	0.45
137	10.76	33.37	5.42	242	200	8.66	33.81	4.48	26.26	177	0.55
156	9.68	33.48	4.91	217	250	7.94	33.92	3.98	26.46	158	0.64
184	8.80	33.74	4.59	184	300	7.23	33.96	2.63	26.58	146	0.72
221	8.52	33.88	4.33	170	400	5.82	33.98	1.72	26.79	127	0.86
250	7.94	33.92	3.98	158	500	5.25	34.06	0.86	26.92	114	0.98
300	7.23	33.96	2.63	146	600	4.98	34.17	0.52	27.04	102	1.10
355	6.22	33.96	2.35	132							
440	5.59	34.00	1.28	122							
524	5.16	34.09	0.75	110							
608	4.98	34.18	0.49	102							

70.52

STRANGER; April 23, 1959; 1239 GCT; 36°07.5'N, 121°50'W; sounding, 370 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 13°.

3	12.28	33.49	5.89	260	0	(12.28)	(33.49)	(5.89)	(25.38)	(260)	(0.00)
13	12.17	33.49	5.99	258	10	12.22	33.49	5.95	25.40	259	0.03
32	10.69	33.57	4.53	226	20	11.80	33.61	5.43	25.57	242	0.05
41	10.14	33.60	3.81	216	30	11.15	33.58	4.96	25.66	234	0.07
51	10.04	33.58	3.77	216	50	10.05	33.58	3.81	25.85	216	0.12
66	9.51	33.64	3.51	202	75	9.20	33.68	3.40	26.07	195	0.17
80	9.20	33.68	3.40	195	100	8.97	33.80	3.40	26.20	182	0.22
101	8.96	33.80	3.40	182	150	8.74	33.91	2.60	26.33	170	0.31
123	8.96	33.83	2.75	180	200	8.17	33.98	2.01	26.47	157	0.39
144	8.80	33.88	2.63	174	250	7.80	34.11	1.54	26.63	142	0.47
172	8.44	33.97	2.43	162	300	7.47	34.16	1.29	26.71	134	0.54
201	8.16	33.98	2.00	157	400	6.69	34.22	0.82	26.87	119	0.67
229	7.98	34.07	1.69	147	500	5.79	34.19	0.58	26.96	110	0.79
267	7.66	34.13	1.44	139							
324	7.34	34.17	1.20	132							
399	6.70	34.22	0.83	119							
472	5.96	34.18	0.63	113							
553	5.56	34.23	0.45	104							

70.60

STRANGER; April 23, 1959; 0806 GCT; 35°53'N, 122°22.5'W; sounding, 1550 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 07°.

3	12.50	33.51	5.80	262	0	(12.50)	(33.51)	(5.80)	(25.36)	(262)	(0.00)
13	12.48	33.50	5.96	263	10	12.49	33.50	5.92	25.36	263	0.03
58	10.11	33.62	3.67	213	20	(12.47)	(33.50)	(5.95)	(25.36)	(262)	(0.05)
67	9.93	33.63	3.35	210	30	(12.44)	(33.50)	(5.94)	(25.36)	(262)	(0.08)
77	9.50	33.72	3.07	196	50	(12.00)	(33.50)	(5.59)	(25.45)	(254)	(0.13)
92	9.30	33.81	2.70	186	75	9.59	33.69	3.14	26.02	200	(0.19)
107	9.12	33.84	2.55	182	100	9.22	33.82	2.62	26.19	184	(0.24)
132	8.78	33.95	2.33	168	150	8.53	33.98	2.05	26.42	162	(0.32)
151	8.51	33.98	2.04	162	200	7.85	34.04	1.79	26.57	148	(0.40)
175	8.18	34.02	1.92	154	250	7.56	34.10	1.40	26.65	140	(0.47)
205	7.80	34.05	1.72	146	300	7.12	34.16	1.06	26.76	129	(0.54)
234	7.72	34.07	1.50	144	400	6.32	34.19	0.70	26.90	116	(0.67)
272	7.30	34.13	1.30	134	500	5.59	34.22	0.46	27.02	105	(0.78)
329	6.94	34.18	0.86	125							
405	6.27	34.19	0.69	116							
479	5.70	34.21	0.50	108							
560	5.38	34.29	0.36	98							

a) Alternate value, 6.01 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$\frac{1}{10} \text{ cm/g}$	m	°C	‰	ml/L	g/L	$\frac{1}{10} \text{ cm/g}$	dyn. m

SIO
CCOFI
5904

STRANGER; April 23, 1959; 0248 GCT; 35°33'N, 123°06'W; sounding, 2100 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 03°.

70.70

4	13.94	33.32	6.10	304	0	14.1	(33.32)	(6.10)	(24.89)	(307)	(0.00)
14	13.52	33.28	6.08	298	10	13.63	33.29	6.09	24.96	300	0.03
34	13.46	33.33	6.01	294	20	13.51	33.30	6.05	25.00	297	0.06
59	12.87	33.42	5.83	276	30	13.48	33.33	6.01	25.03	294	0.09
68	12.20	33.49	5.94	258	50	13.40	33.35	5.98	25.06	291	0.15
78	10.70	33.40	4.74	240	75	11.25	33.43	5.18	25.53	246	0.22
93	9.86	33.53	4.46	216	100	9.38	33.58	4.28	25.97	205	0.27
108	9.20	33.60	4.20	200	150	8.80	33.88	2.90	26.30	174	0.37
133	8.94	33.82	3.43	180	200	8.23	34.03	2.16	26.50	154	0.45
153	8.72	33.91	2.64	170	250	7.46	34.07	1.88	26.65	140	0.53
177	8.48	34.00	2.31	160	300	6.90	34.11	1.46	26.75	130	0.60
206	8.16	34.04	2.10	152	400	6.23	34.18	0.82	26.90	116	0.72
235	7.72	34.07	1.92	144	500	5.62	34.20	0.46	27.00	107	0.84
275	7.05	34.08	1.76	134							
336	6.76	34.14	1.14	126							
410	6.16	34.18	0.78	116							
485	5.70	34.20	0.46	108							
565	5.26	34.24	0.48	101							

STRANGER; April 22, 1959; 2203 GCT; 35°13'N, 123°48.5'W; sounding, 2170 fm; wind, 130°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.

70.80

2	14.22	33.25	6.06	315	0	(14.22)	(33.25)	(6.06)	(24.81)	(315)	(0.00)
12	13.74	33.26	5.95	304	10	13.80	33.26	5.96	24.90	306	0.03
32	13.50	33.26	6.08	300	20	13.60	33.26	6.02	24.95	302	0.06
57	13.46	33.28	6.03	298	30	13.51	33.26	6.07	24.96	300	0.09
67	13.34	33.30	6.06	294	50	13.48	33.28	6.05	24.98	298	0.15
77	12.30	33.28	5.87	276	75	12.38	33.28	5.91	25.20	278	0.22
92	11.36	33.39	5.24	251	100	10.53	33.45	4.53	25.67	233	0.29
106	10.08	33.48	4.21	223	150	8.90	33.74	3.48	26.17	186	0.39
132	9.20	33.64	3.92	198	200	8.33	33.93	3.31	26.41	163	0.48
153	8.84	33.75	3.45	184	250	7.54	33.95	3.50	26.53	151	0.56
176	8.52	33.86	3.71	171	300	6.75	33.95	2.68	26.65	140	0.64
206	8.27	33.94	3.25	162	400	5.69	34.02	1.40	26.84	122	0.77
236	7.74	33.94	3.72	154	500	5.64	34.20	0.59	26.99	108	0.89
276	7.15	33.95	2.91	145							
335	6.22	33.96	2.39	133							
411	5.64	34.04	1.26	120							
487	5.69	34.18	0.63	110							
565	5.16	34.25	0.47	98							

STRANGER; April 22, 1959; 1719 GCT; 34°53'N, 124°30'W; sounding, 2280 fm; wind, 160°, force 2; weather, partly cloudy; sea, moderate; wire angle, 04°.

70.90

2	13.97	33.12	5.79	319	0	(13.97)	(33.12)	(5.79)	(24.77)	(319)	(0.00)
12	13.93	33.12	5.79	318	10	13.94	33.12	5.79	24.78	318	0.03
31	13.90	33.19	5.69	313	20	13.91	33.12	5.78	24.78	317	0.06
36	14.47	33.46	5.58	304	30	13.90	33.19	5.70	24.83	313	0.10
41	13.37	33.22	5.90	300	50	12.93	33.17	5.84	25.02	296	0.16
46	13.02	33.15	5.94	299	75	13.00	33.31	5.74	25.11	286	0.23
51	12.92	33.17	5.83	295	100	10.52	33.32	5.04	25.58	242	0.30
71	13.03	33.31	5.79	288	150	9.22	33.76	4.63	26.14	189	0.41
95	10.87	33.29	5.15	250	200	8.29	33.91	4.08	26.40	164	0.50
116	10.02	33.53	4.83	219	250	7.32	33.98	3.20	26.60	145	0.57
155	9.04	33.80	4.60	184	300	6.91	34.04	2.38	26.70	136	0.65
184	8.50	33.87	3.97	170	400	6.34	34.16	1.22	26.87	119	0.78
219	8.04	33.96	4.23	157	500	5.76	34.26	0.53	27.02	105	0.90
248	7.34	33.98	3.21	145	600	5.06	34.25	0.38	27.09	98	1.00
297	6.92	34.03	2.41	136							
435	6.13	34.20	0.83	113							
519	5.62	34.27	0.47	102							
602	5.04	34.25	0.37	98							

SIO

CCOFI
5904

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

73.55

ORCA; April 25, 1959; 2038 GCT; 35°26.5'N, 121°37'W; sounding, 600 fm; wind, 120°, force 4; weather, cloudy; sea, moderate; wire angle, 13°.

1	14.22	33.37	5.70	306	0	(14.22)	(33.37)	(5.70)	(24.90)	(306)	(0.00)
11	14.16	33.37	5.76	305	10	14.17	33.37	5.75	24.92	305	0.03
30	13.73	33.37	5.67	296	20	13.98	33.37	5.74	24.96	301	0.06
59	12.00	33.39	4.94	262	30	13.73	33.37	5.67	25.01	296	0.09
70	10.86	33.39	4.60	243	50	13.22	33.38	5.49	25.11	286	0.15
84	10.10	33.55	3.64	218	75	10.50	33.45	4.18	25.68	232	0.21
99	9.64	33.62	3.37	206	100	9.62	33.62	3.36	25.96	206	0.27
114	9.26	33.68	3.14	196	150	8.70	33.85	2.93	26.29	174	0.36
138	8.89	33.82	2.94	180	200	8.22	34.03	1.97	26.50	154	0.45
157	8.60	33.87	2.91	171	250	7.95	34.07	1.56	26.58	147	0.52
186	8.29	33.98	2.06	159	300	7.54	34.13	1.34	26.68	137	0.60
216	8.18	34.06	1.92	151	400	6.99	34.20	0.86	26.82	124	0.73
245	7.99	34.07	1.61	148	500	6.30	34.24	0.51	26.94	112	0.86
295	7.58	34.13	1.37	138	600	5.59	34.28	0.40	27.06	101	0.97
349	7.22	34.18	0.94	129							
432	6.80	34.22	0.80	120							
518	6.16	34.25	0.45	110							
604	5.58	34.28	0.40	101							

73.60

ORCA; April 26, 1959; 0032 GCT; 35°15.5'N, 121°59'W; sounding, 1300 fm; wind, 160°, force 3; weather, overcast; sea, very rough; wire angle, 07°.

1	14.42	33.35	5.67	311	0	(14.42)	(33.35)	(5.67)	(24.85)	(311)	(0.00)
11	14.14	33.35	5.73	306	10	14.16	33.35	5.72	24.90	306	0.03
31	13.60	33.31	5.79	298	20	13.83	33.33	5.77	24.95	302	0.06
60	12.04	33.27	5.41	272	30	13.62	33.31	5.79	24.98	298	0.09
70	11.18	33.44	4.36	244	50	13.18	33.29	5.74	25.06	291	0.15
85	10.14	33.48	3.96	224	75	10.77	33.46	4.17	25.64	236	0.22
101	9.40	33.58	3.57	205	100	9.42	33.57	3.60	25.95	206	0.27
115	9.16	33.66	3.32	196	150	8.59	33.86	3.60	26.31	172	0.37
140	8.78	33.78	3.43	181	200	7.82	33.95	3.45	26.50	154	0.45
160	8.41	33.91	3.69	166	250	7.61	34.05	1.74	26.60	144	0.53
190	7.96	33.95	3.55	156	300	6.99	34.11	1.43	26.74	132	0.60
220	7.58	33.95	3.06	151	400	6.53	34.16	0.77	26.85	121	0.73
249	7.61	34.05	1.75	144	500	6.02	34.28	0.43	27.00	107	0.85
299	7.00	34.11	1.44	132	600	5.38	34.32	0.31	27.12	96	0.96
353	6.68	34.11	1.09	127							
438	6.44	34.23	0.59	115							
525	5.84	34.29	0.39	104							
611	5.32	34.32	0.30	95							

73.70

ORCA; April 26, 1959; 0713 GCT; 34°57'N, 122°38'W; sounding, 2000+ fm; wind, 160°, force 2; weather, partly cloudy; sea, rough; wire angle, 04°.

1	14.32	33.33	5.73	310	0	(14.32)	(33.33)	(5.73)	(24.86)	(310)	(0.00)
11	14.05	33.35	5.74	304	10	14.07	33.35	5.74	24.92	305	0.03
30	13.58	33.42	5.73	290	20	13.82	33.39	5.74	25.00	297	0.06
60	10.98	33.46	4.30	240	30	13.58	33.42	5.73	25.08	290	0.09
70	10.36	33.53	3.96	224	50	13.15	33.43	5.54	25.17	281	0.15
85	9.96	33.62	3.43	211	75	10.11	33.53	3.82	25.81	220	0.21
100	9.78	33.74	3.14	199	100	9.78	33.74	3.14	26.03	199	0.26
115	9.29	33.76	3.17	190	150	9.02	33.87	2.55	26.25	178	0.36
140	9.14	33.86	2.65	180	200	8.19	34.02	2.22	26.50	154	0.44
160	8.88	33.89	2.45	174	250	7.09	33.97	3.13	26.62	143	0.52
190	8.38	34.02	2.06	157	300	6.32	33.95	2.50	26.71	134	0.59
220	7.78	34.01	2.89	149	400	6.00	34.10	1.10	26.86	120	0.72
250	7.09	33.97	3.13	143	500	5.78	34.26	0.46	27.02	105	0.84
300	6.32	33.95	2.50	134	600	5.03	34.29	0.34	27.13	95	0.94
355	5.95	34.01	1.72	126							
440	6.09	34.18	0.56	115							
525	5.58	34.27	0.42	102							
611	4.99	34.29	0.32	94							

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 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m

SIO
CCOFI
5904

ORCA; April 26, 1959; 1249 GCT; 34°37'N, 123°19'W; sounding, 2100 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 10°.

73.80

1	14.53	33.17	5.68	326	0	(14.53)	(33.17)	(5.68)	(24.69)	(326)	(0.00)
11	14.52	33.15	5.70	328	10	14.52	33.15	5.70	24.68	328	0.03
31	13.78	33.16	5.77	313	20	14.22	33.16	5.73	24.74	322	0.06
40	13.72	33.16	5.76	311	30	13.79	33.16	5.77	24.83	313	0.10
50	13.72	33.17	5.70	310	50	13.72	33.17	5.70	24.86	310	0.16
64	13.69	33.17	5.75	309	75	13.52	33.18	5.70	24.90	306	0.24
80	13.42	33.18	5.67	304	100	12.76	33.32	5.44	25.16	281	0.31
99	12.81	33.32	5.45	282	150	9.46	33.58	3.91	25.96	206	0.44
123	11.04	33.37	4.73	247	200	8.66	33.89	2.65	26.33	170	0.53
141	9.82	33.50	4.10	218	250	8.18	34.01	1.91	26.49	155	0.61
170	9.02	33.75	3.58	186	300	7.43	34.06	1.68	26.64	141	0.69
199	8.67	33.89	2.66	171	400	6.39	34.12	0.86	26.83	123	0.83
228	8.38	33.96	2.14	162	500	5.91	34.22	0.48	26.97	110	0.95
266	8.02	34.05	1.78	150							
325	7.04	34.07	1.60	135							
399	6.40	34.12	0.87	123							
474	6.06	34.20	0.54	113							
556	5.52	34.25	0.35	102							

ORCA; April 26, 1959; 1826 GCT; 34°17'N, 124°00'W; sounding, 2400 fm; wind, 350°, force 4; weather, partly cloudy; sea, moderate; wire angle, 07°.

73.90

1	15.30	33.39	5.67	327	0	(15.30)	(33.39)	(5.67)	(24.68)	(327)	(0.00)
11	15.24	33.40	5.66	324	10	15.25	33.40	5.66	24.71	325	0.03
31	14.88	33.40	5.65	317	20	15.12	33.40	5.66	24.74	322	0.06
61	14.47	33.40	5.67	310	30	14.90	33.40	5.65	24.78	317	0.10
72	14.43	33.40	5.64	309	50	14.57	33.40	5.66	24.86	310	0.16
87	13.78	33.39	5.51	296	75	14.43	33.40	5.64	24.88	308	0.24
102	11.72	33.33	4.89	261	100	11.95	33.33	4.99	25.33	266	0.31
117	10.50	33.45	4.25	232	150	8.96	33.74	3.29	26.16	186	0.42
141	9.20	33.68	3.53	195	200	8.21	33.98	2.62	26.46	158	0.51
161	8.74	33.80	3.06	178	250	7.71	34.03	1.89	26.58	147	0.59
191	8.29	33.95	2.82	161	300	7.24	34.09	1.37	26.69	136	0.66
221	8.05	34.04	2.17	151	400	6.30	34.13	0.92	26.85	121	0.79
251	7.70	34.03	1.89	147	500	5.49	34.18	0.60	27.00	107	0.91
301	7.22	34.09	1.36	136	600	5.02	34.27	0.39	27.12	96	1.02
356	6.67	34.11	1.08	127							
440	5.96	34.15	0.77	115							
526	5.32	34.20	0.53	104							
612	4.98	34.28	0.37	94							

ORCA; April 25, 1959; 1031 GCT; 34°54.5'N, 121°10'W; sounding, 300 fm; wind, 100°, force 3; weather, drizzle; sea, rough; wire angle, 04°.

77.55

1	13.92	33.38	5.76	299	0	(13.92)	(33.38)	(5.76)	(24.98)	(299)	(0.00)
11	13.38	33.39	5.82	288	10	13.50	33.39	5.81	25.07	290	0.03
31	13.06	33.38	5.76	283	20	13.07	33.38	5.77	25.14	283	0.06
51	11.56	33.48	4.92	248	30	13.06	33.38	5.76	25.14	283	0.09
76	10.01	33.57	3.68	216	50	11.62	33.48	4.98	25.50	250	0.14
102	9.28	33.66	3.46	198	75	10.03	33.57	3.69	25.84	216	0.20
127	8.96	33.73	3.10	187	100	9.31	33.66	3.47	26.04	198	0.25
167	8.66	33.87	2.61	172	150	8.77	33.81	2.82	26.24	178	0.35
207	8.32	34.00	1.96	158	200	8.39	33.98	2.07	26.44	160	0.43
258	7.88	34.07	1.56	146	250	7.94	34.06	1.60	26.57	148	0.51

SIO

CCOFI
5904

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

77.60

ORCA; April 25, 1959; 0657 GCT; 34°43.5'N, 121°31'W; sounding, 560 fm; wind, 130°, force 4; weather, drizzle; sea, rough; wire angle, 10°.

1	14.23	33.37	5.74	306	0	(14.23)	(33.37)	(5.74)	(24.90)	(306)	(0.00)
11	14.24	33.37	5.74	306	10	14.24	33.37	5.74	24.90	306	0.03
36	13.88	33.37	5.71	299	20	14.00	33.37	5.73	24.95	301	0.06
66	11.94	33.43	4.73	258	30	13.91	33.37	5.72	24.97	300	0.09
76	11.03	33.56	4.18	233	50	13.55	33.37	5.55	25.05	292	0.15
96	10.38	33.66	3.54	214	75	11.09	33.55	4.21	25.65	234	0.22
110	10.03	33.71	3.12	206	100	10.28	33.67	3.41	25.89	212	0.27
126	9.70	33.82	2.71	192	150	9.29	33.85	2.46	26.20	183	0.37
156	9.20	33.87	2.39	180	200	8.45	34.01	2.04	26.45	159	0.46
175	8.98	33.96	2.20	170	250	7.99	34.11	1.52	26.60	145	0.54
205	8.36	34.02	2.00	157	300	7.66	34.13	1.36	26.66	139	0.61
240	8.05	34.11	1.59	146	400	6.64	34.20	0.81	26.86	120	0.74
270	7.86	34.11	1.47	143	500	6.01	34.25	0.47	26.98	108	0.86
320	7.52	34.14	1.26	136	600	5.59	34.28	0.33	27.06	101	0.97
384	6.80	34.19	0.88	123							
485	6.08	34.25	0.51	109							
576	5.73	34.27	0.36	103							
651	5.20	34.32	0.32	94							

77.70

ORCA; April 25, 1959; 0037 GCT; 34°22.5'N, 122°14'W; sounding, 2200 fm; wind, 120°, force 4; weather, overcast; sea, moderate; wire angle, 17°.

1	14.40	33.31	5.70	314	0	(14.40)	(33.31)	(5.70)	(24.82)	(314)	(0.00)
10	14.38	33.33	5.78	312	10	14.38	33.33	5.78	24.84	312	0.03
34	13.86	33.33	5.76	302	20	14.01	33.33	5.77	24.91	305	0.06
63	13.21	33.31	5.59	290	30	13.90	33.33	5.76	24.94	302	0.09
72	12.19	33.30	5.28	272	50	13.84	33.33	5.74	24.96	301	0.15
91	10.76	33.36	4.57	243	75	11.86	33.31	5.14	25.32	266	0.22
106	9.94	33.49	4.08	220	100	10.27	33.43	4.27	25.70	230	0.29
120	9.26	33.62	3.75	200	150	8.87	33.80	3.06	26.22	181	0.39
147	8.90	33.78	3.15	183	200	8.12	33.94	2.75	26.45	159	0.48
166	8.68	33.88	2.76	172	250	7.64	34.04	1.86	26.59	146	0.55
193	8.27	33.93	2.76	162	300	6.79	34.04	1.73	26.72	134	0.62
226	7.66	33.98	2.70	150	400	6.26	34.14	0.78	26.86	120	0.76
254	7.63	34.05	1.78	144	500	5.48	34.18	0.45	27.00	107	0.87
301	6.78	34.04	1.73	134	600	4.99	34.27	0.30	27.12	95	0.98
362	6.56	34.11	1.03	126							
459	5.76	34.16	0.54	112							
547	5.22	34.22	0.37	102							
623	4.89	34.29	0.28	93							

77.80

ORCA; April 24, 1959; 1945 GCT; 34°07'N, 122°53'W; sounding, 2185 fm; wind, 120°, force 4; weather, cloudy; sea, moderate; wire angle, 13°.

1	14.35	33.17	5.62	323	0	(14.35)	(33.17)	(5.62)	(24.72)	(323)	(0.00)
11	14.22	33.17	5.61	320	10	14.23	33.17	5.61	24.75	321	0.03
35	13.65	33.22	5.57	306	20	13.80	33.21	5.57	24.87	309	0.06
64	13.16	33.23	5.64	296	30	13.74	33.21	5.57	24.88	308	0.09
75	12.62	33.30	5.20	280	50	13.40	33.22	5.61	24.96	300	0.16
94	10.72	33.36	4.41	242	75	12.62	33.30	5.20	25.17	280	0.23
109	9.65	33.42	4.08	221	100	10.17	33.38	4.25	25.68	232	0.29
123	9.30	33.56	3.90	205	150	8.90	33.71	3.44	26.14	188	0.40
152	8.88	33.71	3.43	188	200	8.38	33.92	2.40	26.39	164	0.49
171	8.68	33.80	3.39	178	250	7.49	34.03	2.01	26.60	144	0.57
200	8.38	33.92	2.40	164	300	6.91	34.09	1.44	26.74	131	0.64
234	7.84	34.01	1.96	150	400	6.36	34.19	0.74	26.89	117	0.77
263	7.23	34.04	2.03	140	500	5.71	34.27	0.51	27.03	104	0.88
311	6.84	34.11	1.30	130	600	5.28	34.32	0.39	27.13	94	0.99
375	6.52	34.17	0.84	120							
473	5.88	34.25	0.55	107							
564	5.36	34.30	0.44	97							
639	5.21	34.34	0.30	93							

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

SIO
CCOFI
5904

ORCA; April 24, 1959; 1303 GCT; 33°43'N, 123°40'W; sounding, 2400 fm; wind, 140°, force 2; weather, drizzle; sea, slight; wire angle, 18°.

77.90

1	15.20	33.41	5.64	323	0	(15.20)	(33.41)	(5.64)	(24.73)	(323)	(0.00)
10	14.71	33.41	5.65	313	10	14.71	33.41	5.65	24.83	313	0.03
29	14.53	33.40	5.66	310	20	14.57	33.40	5.65	24.86	310	0.06
53	14.48	33.40	5.64	309	30	14.53	33.40	5.66	24.86	310	0.09
62	14.46	33.42	5.61	307	50	14.49	33.40	5.65	24.87	309	0.16
72	14.44	33.40	5.66	308	75	14.44	33.40	5.66	24.88	308	0.23
86	12.42	33.37	4.93	272	100	10.96	33.46	4.34	25.60	239	0.30
100	10.96	33.46	4.34	239	150	9.10	33.74	3.31	26.14	188	0.41
124	9.66	33.62	4.11	206	200	8.43	33.95	2.41	26.41	163	0.50
142	9.26	33.68	3.59	196	250	7.80	34.06	1.85	26.58	146	0.58
166	8.86	33.84	2.93	178	300	7.32	34.13	1.37	26.71	134	0.65
194	8.50	33.93	2.49	166	400	6.62	34.16	0.68	26.83	123	0.78
222	8.20	34.02	2.13	154	500	5.93	34.22	0.46	26.97	110	0.90
259	7.69	34.07	1.75	144							
316	7.20	34.14	1.28	132							
388	6.69	34.15	0.72	124							
461	6.20	34.20	0.52	114							
541	5.66	34.23	0.40	106							

ORCA; April 23, 1959; 0238 GCT; 34°24.5'N, 120°36'W; sounding, 156 fm; wind, 340°, force 5; weather, cloudy; sea, moderate; wire angle, 34°.

80.52

1	12.54	33.67	4.84	252	0	(12.54)	(33.67)	(4.84)	(25.48)	(252)	(0.00)
9	12.50	33.67	4.90	251	10	12.50	33.67	4.90	25.48	251	0.02
27	10.70	33.77	3.31	212	20	11.55	33.72	4.17	25.70	230	0.05
45	10.27	33.80	2.54	202	30	10.54	33.78	3.01	25.93	208	0.07
66	10.02	33.84	2.60	196	50	10.20	33.81	2.55	26.02	200	0.11
90	9.80	33.87	2.38	190	75	9.93	33.85	2.53	26.09	194	0.16
113	9.61	33.95	2.25	181	100	9.72	33.90	2.31	26.16	186	0.21
150	9.26	34.00	1.92	172	150	9.26	34.00	1.92	26.32	172	0.30
189	8.86	34.07	1.62	160							

ORCA; April 23, 1959; 0506, 0548 GCT; 34°18.5'N, 120°48.5'W; sounding, 415 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 30°, 35°.

80.55

1	13.12	33.53	5.78	272	0	(13.12)	(33.53)	(5.78)	(25.26)	(272)	(0.00)
10	13.10	33.50	5.81	274	10	13.10	33.50	5.81	25.24	274	0.03
32	12.88	33.48	5.52	272	20	13.04	33.49	5.70	25.24	274	0.05
40	12.06	33.48	4.85	257	30	12.93	33.48	5.54	25.26	272	0.08
53	11.28	33.58	4.20	236	50	11.45	33.56	4.32	25.59	240	0.13
66	10.48	33.58	3.85	222	75	10.10	33.58	3.71	25.85	216	0.19
88	9.93	33.58	3.65	213	100	9.68	33.70	3.33	26.01	201	0.24
104	9.68	33.74	3.24	198	150	9.10	33.95	2.29	26.30	173	0.34
121	9.42	33.78	2.97	190	200	8.72	34.06	1.70	26.45	159	0.42
147	9.13	33.94	2.35	174	250	8.14	34.08	1.56	26.56	149	0.50
172	8.86	34.00	1.96	166	300	7.62	34.14	1.28	26.67	138	0.58
207	8.69	34.07	1.68	158	400	6.78	34.17	0.77	26.82	124	0.71
233	8.38	34.06	1.62	154	500	6.26	34.26	0.52	26.96	111	0.83
266	7.90	34.11	1.47	144							
322	7.45	34.15	1.15	135							
412	6.70	34.18	0.68	122							
496	6.28	34.26	0.53	111							
570	5.82	34.26	0.40	106							

SIO

CCOFI
5904

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

80.60

ORCA; April 23, 1959; 0921 GCT; 34°09'N, 121°09.5'W; sounding, 1200 fm; wind, 340°, force 2; weather, cloudy; sea, moderate; wire angle, 19°.

1	14.00	33.42	5.73	298	0	(14.00)	(33.42)	(5.73)	(24.98)	(298)	(0.00)
10	14.01	33.44	5.75	297	10	14.01	33.44	5.75	25.00	297	0.03
29	13.92	33.44	5.69	294	20	13.98	33.44	5.74	25.00	296	0.06
39	13.84	33.42	5.66	294	30	13.91	33.44	5.69	25.02	294	0.09
53	13.31	33.44	5.44	283	50	13.54	33.43	5.53	25.09	288	0.15
67	11.80	33.53	4.72	248	75	11.32	33.56	4.41	25.62	238	0.21
91	10.77	33.58	3.98	227	100	10.24	33.60	3.59	25.84	217	0.27
100	10.24	33.60	3.59	217	150	9.29	33.79	2.73	26.14	188	0.37
129	9.72	33.69	3.28	202	200	8.50	34.00	2.05	26.43	161	0.46
147	9.38	33.77	2.79	190	250	8.15	34.14	1.37	26.60	145	0.54
175	8.72	33.89	2.46	171	300	7.70	34.16	1.12	26.68	136	0.61
207	8.50	34.04	1.90	157	400	6.70	34.21	0.72	26.86	120	0.74
235	8.33	34.13	1.48	148	500	5.80	34.27	0.39	27.03	104	0.86
282	7.82	34.14	1.22	140	600	(5.31)	(34.32)		(27.12)	(95)	(0.97)
336	7.43	34.22	0.94	129							
418	6.50	34.21	0.66	117							
499	5.81	34.27	0.40	104							
584	5.38	34.31	0.33	96							

80.70

ORCA; April 23, 1959; 1625 GCT; 33°50'N, 121°53.5'W; sounding, 2000 fm; wind, 340°, force 2; weather, overcast; sea, rough; wire angle, 02°.

0	14.07	33.44	5.66	298	0	14.07	33.44	5.66	24.98	298	0.00
10	14.04	33.43	5.83	298	10	14.04	33.43	5.83	24.98	298	0.03
30	13.98	33.44	5.66	296	20	14.01	33.44	5.72	25.00	297	0.06
60	13.86	33.44	5.59	293	30	13.98	33.44	5.66	25.01	296	0.09
70	13.40	33.46	5.40	283	50	13.91	33.44	5.60	25.02	294	0.15
86	11.55	33.48	4.26	248	75	12.68	33.47	4.94	25.29	269	0.22
101	10.87	33.63	3.74	225	100	10.89	33.63	3.75	25.75	225	0.28
116	9.67	33.68	3.34	202	150	9.00	33.83	2.72	26.22	180	0.38
141	8.94	33.73	3.35	187	200	8.35	33.93	2.53	26.40	164	0.47
161	9.08	33.93	2.24	174	250	7.81	34.02	1.80	26.56	149	0.55
191	8.51	33.93	2.51	166	300	7.21	34.09	1.40	26.70	136	0.62
221	8.04	33.93	2.53	159	400	6.24	34.16	0.80	26.88	118	0.76
251	7.80	34.03	1.79	148	500	5.59	34.22	0.59	27.01	106	0.87
301	7.20	34.09	1.39	136	600	5.00	34.30	0.40	27.14	94	0.98
356	6.60	34.14	0.97	124							
442	5.96	34.18	0.69	113							
528	5.40	34.24	0.53	102							
614	4.92	34.31	0.36	91							

80.80

ORCA; April 23, 1959; 2220, 2255 GCT; 33°29'N, 122°32'W; sounding, 2000+ fm; wind, direction missing, force 1; weather, overcast; sea, very rough; wire angle, 03°, 03°.

1	14.81	33.27	5.74	326	0	(14.81)	(33.27)	(5.74)	(24.70)	(326)	(0.00)
11	14.16	33.30	5.77	310	10	14.17	33.30	5.77	24.86	310	0.03
31	14.04	33.30	5.77	308	20	14.09	33.30	5.77	24.88	308	0.06
56	13.95	33.30	5.70	306	30	14.05	33.30	5.77	24.88	308	0.09
66	13.90	33.30	5.72	305	50	13.97	33.30	5.71	24.90	306	0.15
76	13.49	33.31	5.60	296	75	13.59	33.31	5.64	24.99	298	0.23
92	11.34	33.42	4.49	248	100	10.75	33.47	4.20	25.65	235	0.30
107	10.32	33.53	4.00	223	150	8.94	33.78	3.24	26.20	183	0.40
132	9.19	33.73	3.35	190	200	8.27	33.97	2.53	26.45	159	0.49
					250	7.50	34.08	1.78	26.65	140	0.56
151	8.92	33.78	3.22	183	300	6.98	34.10	1.37	26.74	131	0.63
176	8.65	33.89	2.79	170	400	6.17	34.19	0.75	26.92	114	0.76
206	8.18	33.99	2.46	156	500	5.60	34.24	0.44	27.03	104	0.88
237	7.68	34.07	1.93	144							
277	7.20	34.09	1.57	135							
337	6.66	34.13	1.08	126							
413	6.07	34.20	0.71	113							
489	5.64	34.23	0.48	106							
570	5.19	34.30	0.33	95							

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
5904

ORCA; April 24, 1959; 0446, 0610 GCT; 33°09'N, 123°13'W; sounding, 2200 fm; wind, 200°, force 2; weather, partly cloudy; sea, very rough; wire angle, 02°, 13°.

80.90

1	15.55	33.47	5.59	326	0	(15.55)	(33.47)	(5.59)	(24.70)	(326)	(0.00)
11	14.78	33.39	5.65	316	10	14.81	33.39	5.65	24.80	316	0.03
31	14.38	33.42	5.65	305	20	14.51	33.41	5.65	24.88	308	0.06
56	14.29	33.42	5.62	304	30	14.39	33.42	5.65	24.91	305	0.09
66	14.27	33.47	5.57	300	50	14.30	33.42	5.63	24.92	304	0.15
76	13.50	33.44	5.25	286	75	13.85	33.46	5.41	25.04	292	0.23
91	11.58	33.46	4.37	250	100	11.05	33.47	4.27	25.60	240	0.30
106	10.32	33.50	4.14	225	150	9.13	33.77	3.12	26.16	186	0.40
131	9.44	33.66	3.53	200	200	8.45	33.94	2.52	26.40	164	0.49
152	9.10	33.78	3.10	186	250	7.84	34.03	1.93	26.56	148	0.57
177	8.82	33.87	2.88	175	300	7.29	34.09	1.51	26.68	137	0.64
208	8.32	33.97	2.37	160	400	6.43	34.18	0.82	26.87	119	0.78
238	7.98	34.02	2.01	151	500	5.98	34.28	0.42	27.01	106	0.90
278	7.54	34.06	1.73	143							
338	6.84	34.13	1.15	128							
414	6.36	34.19	0.74	117							
489	6.02	34.27	0.45	107							
570	5.58	34.29	0.32	100							
3724a)	1.52	34.63	2.94	-							
3825	1.50	34.64	3.05	-							
3924	1.50	34.61	3.08	-							

ORCA; April 22, 1959; 2128 GCT; 34°15.5'N, 119°57.5'W; sounding, 315 fm; wind, 260°, force 1; weather, partly cloudy; sea, slight; wire angle, 05°.

82.47

0	13.42	33.75	6.92	262	0	13.42	33.75	6.92	25.36	262	0.00
10	12.46	33.73	6.11	246	10	12.46	33.73	6.11	25.53	246	0.02
30	10.54	33.75	3.24	210	20	11.10	33.74	4.15	25.80	221	0.05
50	10.02	33.84	2.66	196	30	10.54	33.75	3.24	25.91	210	0.07
74	9.72	33.90	2.26	186	50	10.02	33.84	2.66	26.06	196	0.11
99	9.62	33.96	2.09	180	75	9.71	33.90	2.25	26.17	186	0.16
124	9.45	34.05	1.81	171	100	9.61	33.96	2.08	26.23	180	0.20
163	9.04	34.14	1.76	158	150	9.18	34.11	1.76	26.42	162	0.29
204	8.74	34.20	1.36	149	200	8.79	34.20	1.42	26.55	150	0.37
254	7.97	34.16	1.08	141	250	8.01	34.16	1.10	26.64	141	0.44
304	7.72	34.14	0.99	138	300	7.76	34.14	1.00	26.66	139	0.52
409	6.96	34.24	0.59	121	400	7.01	34.22	0.63	26.83	123	0.65

ORCA; April 22, 1959; 1746 GCT; 34°13.5'N, 119°21.5'W; sounding, 12 fm; wind, direction missing, force 1; weather, missing; sea, smooth; wire angle, 00°.

83.40

1	14.76	33.64	6.13	297	0	(14.76)	(33.64)	(6.13)	(25.00)	(297)	(0.00)
11	13.81	33.66	6.51	276	10	14.06	33.66	6.42	25.16	282	0.03

ORCA; April 22, 1959; 1537 GCT; 34°08'N, 119°34.5'W; sounding, 134 fm; wind, direction missing, force 1; weather, cloudy; sea, smooth; wire angle, 01°.

83.43

0	13.46	33.68	6.30	268	0	13.46	33.68	6.30	25.30	268	0.00
10	12.92	33.69	6.07	257	10	12.92	33.69	6.07	25.42	257	0.03
31	12.70	33.69	5.62	253	20	12.77	33.69	5.79	25.45	254	0.05
51	12.18	33.68	4.96	244	30	12.71	33.69	5.63	25.46	253	0.08
77	10.28	33.72	3.14	208	50	12.19	33.68	4.97	25.55	244	0.13
101	10.16	33.86	2.52	196	75	10.36	33.72	3.21	25.91	210	0.18
126	9.68	34.00	1.97	179	100	10.15	33.86	2.53	26.06	196	0.24
168	9.29	34.11	1.53	164	150	9.44	34.06	1.71	26.34	170	0.33
208	8.88	34.18	1.27	153	200	8.98	34.17	1.31	26.50	154	0.41

a) Special cast for aluminum samples.

SIO
CCOFI
5904

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$\frac{1}{10} \text{ cm/g}$	m	°C	‰	ml/L	g/L	$\frac{1}{10} \text{ cm/g}$	dyn. m

83.51

ORCA; April 22, 1959; 1014 GCT; 33°51.5'N, 120°07.5'W; sounding, 68 fm; wind, 330°, force 5; weather, cloudy; sea, rough; wire angle, 11°.

2	13.64	33.57	5.31	280	0	(13.64)	(33.57)	(5.31)	(25.18)	(280)	(0.00)
12	13.35	33.58	5.24	274	10	13.42	33.58	5.28	25.23	275	0.03
31	11.21	33.66	3.74	228	20	12.70	33.60	4.83	25.39	260	0.05
51	10.05	33.84	2.74	196	30	11.22	33.66	3.75	25.71	229	0.08
75	9.65	33.96	2.29	181	50	10.09	33.83	2.76	26.05	197	0.12
100	9.37	34.01	2.04	172	75	9.65	33.96	2.29	26.22	181	0.17
					100	9.37	34.01	2.04	26.31	172	0.21

83.55

ORCA; April 22, 1959; 0649 GCT; 33°44'N, 120°24.5'W; sounding, 530 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 21°.

1	13.97	33.56	5.60	287	0	(13.97)	(33.56)	(5.60)	(25.10)	(287)	(0.00)
10	13.96	33.57	5.65	286	10	13.96	33.57	5.65	25.11	286	0.03
34	13.86	33.58	5.61	284	20	13.94	33.57	5.64	25.12	285	0.06
45	12.46	33.59	4.42	256	30	13.90	33.58	5.62	25.13	284	0.08
57	11.34	33.65	3.59	232	50	12.03	33.61	4.03	25.52	247	0.14
72	10.54	33.66	3.53	217	75	10.44	33.67	3.50	25.86	215	0.20
96	9.90	33.77	3.02	198	100	9.68	33.80	2.95	26.09	193	0.25
113	9.06	33.84	2.84	181	150	8.50	33.94	2.25	26.39	164	0.34
132	8.76	33.86	2.66	174	200	8.04	34.00	2.03	26.50	154	0.42
159	8.38	33.96	2.17	162	250	7.63	34.06	1.75	26.61	144	0.49
188	8.13	33.99	2.10	156	300	7.22	34.15	1.15	26.74	132	0.56
225	7.90	34.01	1.90	151	400	6.38	34.22	0.59	26.91	115	0.69
253	7.60	34.07	1.71	142	500	5.99	34.25	0.51	26.99	108	0.81
300	7.22	34.15	1.15	132	600	5.56	34.29	0.37	27.07	100	0.92
362	6.53	34.20	0.64	118							
458	6.22	34.24	0.54	112							
547	5.76	34.27	0.44	104							
623	5.48	34.29	0.34	99							

83.60

ORCA; April 22, 1959; 0313 GCT; 33°31'N, 120°43'W; sounding, 1200 fm; wind, 300°, force 4; weather, partly cloudy; sea, moderate; wire angle, 31°.

1	13.78	33.47	5.71	289	0	(13.78)	(33.47)	(5.71)	(25.08)	(289)	(0.00)
10	13.78	33.46	5.74	290	10	13.78	33.46	5.74	25.07	290	0.03
32	13.76	33.48	5.65	288	20	13.77	33.47	5.69	25.08	289	0.06
56	12.61a)	33.47	4.95	267	30	13.76	33.48	5.65	25.09	288	0.09
64	11.14	33.52	4.14	238	50	13.60	33.48	5.54	25.12	286	0.14
81	9.98	33.60	3.61	212	75	10.78	33.54	3.97	25.70	230	0.21
92	9.52	33.66	3.37	201	100	9.30	33.73	3.23	26.10	193	0.26
105	9.19	33.77	3.15	188	150	8.65	33.89	2.60	26.33	171	0.35
128	8.92	33.84	2.84	178	200	8.12	34.02	2.10	26.50	154	0.44
143	8.76	33.87	2.66	173							
166	8.35	33.96	2.34	161							
195	8.16	34.01	2.11	154							
221	7.99	34.03	1.88	150							

a) Alternate value, 12.47°C, not used in interpolation.

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
5904

ORCA; April 21, 1959; 2028 GCT; 33°16'N, 121°25.5'W; sounding, 2100 fm; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 19°.

83.70

3	14.32	33.42	5.62	304	0	(14.32)	(33.42)	(5.62)	(24.93)	(304)	(0.00)
12	14.28	33.40	5.67	305	10	14.29	33.40	5.66	24.92	305	0.03
31	14.20	33.42	5.65	302	20	14.24	33.41	5.66	24.93	304	0.06
60	13.38	33.45	5.24	284	30	14.21	33.42	5.65	24.94	302	0.09
69	12.61	33.40	4.78	272	50	14.14	33.43	5.63	24.97	300	0.15
83	11.78	33.49	4.33	251	75	12.29	33.43	4.57	25.34	264	0.22
97	10.14	33.48	3.99	224	100	9.94	33.48	3.95	25.80	221	0.28
111	9.44	33.55	3.82	208	150	8.88	33.76	3.03	26.19	183	0.38
135	8.98	33.73	3.30	187	200	8.23	33.96	2.30	26.45	159	0.47
154	8.82	33.78	2.96	182	250	7.65	34.05	1.69	26.61	144	0.55
183	8.46	33.93	2.54	166	300	7.10	34.09	1.19	26.71	134	0.62
211	8.10	33.98	2.17	156	400	6.22	34.15	0.67	26.88	118	0.75
240	7.76	34.04	1.77	146	500	5.75	34.22	0.40	27.00	107	0.87
287	7.23	34.08	1.30	137	600	(6.31)	(34.30)		(27.11)	(96)	(0.98)
340	6.70	34.12	0.93	127							
421	6.08	34.17	0.59	116							
504	5.72	34.23	0.39	106							
589	5.37	34.29	0.31	98							

ORCA; April 21, 1959; 1334, 1406 GCT; 32°55'N, 122°09'W; sounding, 2200 fm; wind, 300°, force 2; weather, overcast; sea, rough; wire angle, 09°, 10°.

83.80

1	14.22	33.42	5.65	302	0	(14.22)	(33.42)	(5.65)	(24.94)	(302)	(0.00)
11	14.22	33.44	5.67	300	10	14.22	33.44	5.67	24.96	300	0.03
31	14.14	33.44	5.67	299	20	14.20	33.44	5.67	24.96	300	0.06
60	14.12	33.43	5.67	299	30	14.15	33.44	5.67	24.98	299	0.09
70	13.36	33.46	5.25	282	50	14.14	33.43	5.67	24.98	299	0.15
85	12.12	33.43	4.74	262	75	13.02	33.45	5.11	25.21	276	0.22
100	10.89	33.57	3.84	230	100	10.89	33.57	3.84	25.70	230	0.29
115	10.20	33.67	3.49	211	150	9.09	33.78	3.05	26.16	186	0.39
140	9.24	33.71	3.39	193	200	8.29	33.96	2.68	26.44	160	0.48
160	8.90	33.84	2.69	178	250	7.72	34.04	1.97	26.58	146	0.56
189	8.48	33.93	3.02	165	300	7.29	34.11	1.37	26.70	135	0.63
					400	6.49	34.19	0.71	26.87	119	0.76
218	8.00	34.00	2.18	153	500	5.81	34.30	0.41	27.04	103	0.88
248	7.74	34.04	1.98	146	600	5.19	34.29	0.34	27.12	96	0.98
298	7.30	34.11	1.38	135							
353	6.81	34.16	0.98	125							
438	6.24	34.23	0.50	113							
523	5.66	34.31	0.39	100							
608	5.14	34.29	0.33	96							

ORCA; April 21, 1959; 0700 GCT; 32°34'N, 122°48'W; sounding, 2200 fm; wind, 300°, force 3; weather, overcast; sea, very rough; wire angle, 08°.

83.90

1	15.06	33.40	5.51	321	0	(15.06)	(33.40)	(5.51)	(24.75)	(321)	(0.00)
11	15.06	33.42	5.48	320	10	15.06	33.42	5.49	24.76	320	0.03
36	14.98	33.44	5.46	316	20	15.03	33.44	5.47	24.78	318	0.06
65	14.14	33.37	5.49	304	30	14.99	33.44	5.46	24.80	316	0.10
76	12.96	33.33	5.24	284	50	14.96	33.44	5.46	24.80	316	0.16
96	11.08	33.39	4.75	246	75	13.14	33.33	5.29	25.10	287	0.23
109	10.04	33.50	4.27	221	100	10.78	33.42	4.62	25.60	239	0.30
125	9.44	33.56	4.04	207	150	9.12	33.74	3.16	26.14	189	0.41
155	9.04	33.78	3.07	185	200	8.06	33.93	3.33	26.45	159	0.50
175	8.44	33.86	3.37	170	250	7.53	34.01	2.14	26.59	146	0.57
205	8.00	33.94	3.32	158	300	7.02	34.06	1.61	26.70	136	0.65
239	7.61	33.99	2.48	148	400	6.39	34.18	0.80	26.88	118	0.78
269	7.40	34.05	1.73	141	500	5.82	34.26	0.53	27.01	106	0.90
319	6.81	34.07	1.52	132	600	5.31	34.32	0.39	27.12	95	1.00
385	6.46	34.16	0.93	120							
484	5.90	34.25	0.56	107							
574	5.48	34.31	0.42	98							
650	4.94	34.33	0.33	90							

SIO

CCOFI
5904

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

87.35

ORCA; April 19, 1959; 0913, 0936 GCT; 33°50'N, 118°37.5'W; sounding, 324 fm; wind, direction missing, force 1; weather, cloudy; sea, slight; wire angle, 03°, 02°.

1	15.58	33.58	5.93	318	0	(15.58)	(33.58)	(5.93)	(24.78)	(318)	(0.00)
11	15.57	33.58	5.95	318	10	15.57	33.58	5.95	24.78	318	0.03
30	13.17	33.52	4.88	274	20	15.25	33.58	5.87	24.84	312	0.06
50	11.30	33.57	3.71	237	30	13.17	33.52	4.88	25.24	274	0.09
74	10.55	33.70	3.12	214	50	11.30	33.57	3.71	25.63	237	0.14
99	10.19	33.86	2.62	197	75	10.53	33.71	3.09	25.88	214	0.20
					100	10.18	33.87	2.58	26.06	196	0.25
123	9.90	33.96	2.18	185	150	9.67	34.08	1.80	26.32	172	0.34
163	9.57	34.14	1.66	166	200	9.21	34.22	1.36	26.49	155	0.43
203	9.17	34.22	1.35	154	250	8.53	34.20	1.27	26.59	146	0.50
254	8.48	34.20	1.26	145	300	8.04	34.24	1.09	26.69	136	0.58
306	7.99	34.25	1.05	134							

87.40

ORCA; April 19, 1959; 1304 GCT; 33°40'N, 118°58.5'W; sounding, 465 fm; wind, 240°, force 2; weather, cloudy; sea, moderate; wire angle, 05°.

0	16.60	33.60	5.52	339	0	16.60	33.60	5.52	24.56	339	0.00
10	16.62	33.62	5.54	338	10	16.62	33.62	5.54	24.56	338	0.03
30	14.13	33.56	5.49	290	20	15.73	33.60	5.54	24.76	320	0.07
40	12.36	33.58	4.28	255	30	14.13	33.56	5.49	25.07	290	0.10
50	11.62	33.58	4.03	242	50	11.62	33.58	4.03	25.57	242	0.15
65	10.86	33.63	3.64	225	75	10.58	33.66	3.53	25.83	218	0.21
81	10.42	33.68	3.48	214	100	9.81	33.78	3.09	26.05	197	0.26
101	9.78	33.79	3.03	196	150	9.14	34.02	2.15	26.36	168	0.35
126	9.38	33.92	2.52	180	200	8.79	34.17	1.55	26.52	152	0.43
146	9.18	34.00	2.22	170	250	8.39	34.23	1.25	26.63	142	0.51
176	8.96	34.13	1.78	157	300	7.86	34.24	1.07	26.72	134	0.58
206	8.74	34.18	1.47	150	400	6.90	34.28	0.67	26.88	118	0.71
236	8.52	34.23	1.28	144	500	6.14	34.32	0.42	27.02	105	0.83
275	8.11	34.23	1.19	138							
335	7.51	34.25	0.88	128							
412	6.80	34.28	0.61	116							
487	6.22	34.31	0.45	106							
567	5.83	34.38	0.31	97							

87.45

ORCA; April 19, 1959; 1631 GCT; 33°30'N, 119°19'W; sounding, 917 fm; wind, 240°, force 4; weather, partly cloudy; sea, moderate; wire angle, 10°.

2	15.34	33.60	5.67	312	0	(15.34)	(33.60)	(5.67)	(24.84)	(312)	(0.00)
12	15.30	33.64	5.65	308	10	15.31	33.64	5.65	24.88	308	0.03
32	11.66	33.64	3.84	238	20	14.80	33.64	5.52	24.99	298	0.06
41	10.96	33.68	3.40	222	30	11.86	33.64	3.96	25.58	241	0.09
50	10.68	33.70	3.22	217	50	10.68	33.70	3.22	25.84	217	0.13
66	10.23	33.77	3.07	204	75	9.94	33.81	2.88	26.06	196	0.18
81	9.76	33.84	2.72	192	100	9.56	33.92	2.43	26.20	182	0.23
101	9.54	33.92	2.42	182	150	9.09	34.05	1.92	26.38	166	0.32
126	9.38	33.97	2.27	176	200	8.58	34.14	1.56	26.54	151	0.40
146	9.12	34.04	1.95	167	250	8.13	34.18	1.21	26.63	142	0.48
176	8.84	34.11	1.78	158	300	7.76	34.21	1.00	26.71	134	0.55
205	8.52	34.14	1.53	150	400	6.84	34.23	0.62	26.86	120	0.68
234	8.24	34.16	1.32	145	500	6.25	34.30	0.42	26.99	108	0.80
274	7.98	34.20	1.09	138							
333	7.48	34.22	0.88	130							
407	6.78	34.23	0.60	120							
482	6.36	34.29	0.44	110							
563	5.88	34.32	0.29	102							

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
5904

ORCA; April 19, 1959; 2251 GCT; 33°10'N, 120°00.5'W; sounding, 650 fm; wind, 300°, force 4; weather, overcast; sea, very rough; wire angle, 17°.

87.55

2	15.10	33.51	5.52	314	0	(15.10)	(33.51)	(5.52)	(24.82)	(314)	(0.00)
12	15.10	33.52	5.50	313	10	15.10	33.52	5.50	24.83	313	0.03
31	15.12	33.53	5.46	312	20	15.11	33.53	5.47	24.83	313	0.06
41	15.06	33.53	5.50	311	30	15.12	33.53	5.47	24.83	313	0.09
55	12.68	33.42	4.65	272	50	13.95	33.48	5.12	25.06	292	0.15
70	11.16	33.42	4.44	246	75	10.78	33.43	4.38	25.62	238	0.22
93	9.95	33.53	4.05	218	100	9.82	33.55	3.95	25.88	214	0.28
112	9.62	33.60	3.71	207	150	9.11	33.83	2.75	26.20	182	0.38
131	9.18	33.69	3.42	194	200	8.44	34.00	2.02	26.44	160	0.47
150	9.11	33.83	2.75	182	250	7.67	34.06	1.69	26.61	144	0.54
179	8.73	33.93	2.38	168	300	7.29	34.13	1.26	26.72	133	0.62
212	8.27	34.03	1.86	155	400	6.67	34.24	0.68	26.89	117	0.74
241	7.77	34.05	1.75	146	500	6.10	34.29	0.41	27.00	107	0.86
289	7.38	34.11	1.34	136	600	(5.60)	(34.32)	(0.34)	(27.10)	(98)	(0.97)
342	6.96	34.20	0.94	124							
424	6.54	34.25	0.54	114							
507	6.06	34.29	0.40	106							
591	5.62	34.32	0.34	99							

ORCA; April 20, 1959; 0247, 0324 GCT; 32°59'N, 120°22.5'W; sounding, 410 fm; wind, 290°, force 6; weather, overcast; sea, very rough; wire angle, 25°, 27°.

87.60

2	14.82	33.54	5.51	306	0	(14.82)	(33.54)	(5.51)	(24.90)	(306)	(0.00)
10	14.82	33.53	5.49	306	10	14.82	33.53	5.49	24.90	306	0.03
34	14.84	33.51	5.47	308	20	14.82	33.52	5.48	24.89	307	0.06
62	13.20	33.39	5.21	284	30	14.83	33.51	5.47	24.88	308	0.09
70	11.80	33.40	4.58	258	50	14.84	33.51	5.47	24.88	308	0.15
88	10.64	33.50	3.96	231	75	11.38	33.42	4.37	25.50	249	0.22
100	10.08	33.58	3.72	216	100	10.08	33.58	3.72	25.85	216	0.28
113	9.80	33.60	3.68	210	150	8.93	33.84	2.84	26.24	179	0.38
139	9.16	33.77	3.07	187	200	8.27	33.98	2.27	26.46	158	0.47
156	8.83	33.87	2.73	175	250	7.63	34.06	1.75	26.62	143	0.54
181	8.48	33.95	2.42	164	300	7.24	34.15	1.58	26.74	132	0.62
211	8.14	34.00	2.18	155	400	6.53	34.23	1.00	26.90	116	0.74
236	7.76	34.04	1.83	147	500	5.96	34.24	0.50	26.98	109	0.86
279	7.40	34.11	1.66	137							
347a)	6.88	34.22	1.40	122							
445a)	6.27	34.23	0.68	113							
533a)	5.78	34.25	0.43	106							

ORCA; April 20, 1959; 1216 GCT; 32°36'N, 121°10.5'W; sounding, 2100 fm; wind, 320°, force 4; weather, partly cloudy; sea, high; wire angle, 15°.

87.70

2	14.36	33.48		300	0	(14.36)	(33.48)		(24.96)	(300)	(0.00)
11	14.34	33.45		302	10	14.34	33.45		24.94	302	0.03
36	14.37	33.48		300	20	14.35	33.47		24.96	301	0.06
65	14.34	33.47		300	30	14.36	33.47		24.96	301	0.09
74	14.34	33.49		299	50	14.36	33.47		24.96	300	0.15
94	11.62	33.32		261	75	14.34	33.49		24.98	299	0.22
108	10.28	33.46		228	100	11.29	33.34		25.46	254	0.30
122	9.66	33.55		211	150	8.88	33.74		26.17	185	0.40
152	8.84	33.76		183	200	8.27	33.95		26.44	160	0.49
171	8.68	33.86		174	250	7.84	34.05		26.58	147	0.57
199	8.30	33.95		161	300	7.29	34.13		26.72	134	0.64
233	7.98	34.03		150	400	6.54	34.19		26.87	119	0.78
262	7.72	34.07		144	500	5.82	34.24		27.00	107	0.89
311	7.19	34.14		132	600	5.39	34.30		27.10	97	1.00
374	6.73	34.18		122							
472	5.99	34.22		110							
562	5.56	34.28		100							
638	5.18	34.31		94							

a) Pretrip suspected.

SIO

CCOFI
5904

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

87.80

ORCA; April 20, 1959; 1846 GCT; 32°18'N, 121°47.5'W; sounding, 2000+ fm; wind, 320°, force 3; weather, overcast; sea, high; wire angle, 22°.

2	14.81	33.42	5.58	314	0	(14.81)	(33.42)	(5.58)	(24.82)	(314)	(0.00)
12	14.78	33.44	5.60	312	10	14.79	33.44	5.60	24.84	312	0.03
31	14.79	33.40	5.52	315	20	14.79	33.43	5.55	24.83	313	0.06
59	14.76	33.40	5.55	315	30	14.79	33.40	5.52	24.81	315	0.09
68	14.72	33.40	5.51	314	50	14.78	33.40	5.54	24.81	315	0.16
82	14.00	33.38	5.49	300	75	14.56	33.40	5.50	24.86	310	0.24
95	12.70	33.30	5.37	282	100	12.12	33.31	5.21	25.28	270	0.31
109	10.93	33.38	4.74	244	150	9.09	33.62	3.72	26.04	198	0.43
132	9.83	33.48	-	220	200	8.52	33.90	2.90	26.35	168	0.52
150	9.09	33.62	3.72	198	250	7.88	34.00	2.14	26.53	152	0.60
177	8.62	33.78	3.51	178	300	7.14	34.06	1.74	26.68	137	0.68
204	8.50	33.91	2.81	167	400	6.30	34.17	0.89	26.88	118	0.81
232	8.17	33.98	2.23	157	500	5.61	34.26	0.45	27.04	103	0.92
277	7.44	34.03	2.02	143							
329	6.80	34.10	1.38	130							
408	6.24	34.18	0.82	116							
490	5.67	34.25	0.47	104							
573	5.32	34.31	0.38	96							

87.90

ORCA; April 21, 1959; 0051 GCT; 32°01'N, 122°27'W; sounding, 2400 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 21°.

1	15.44	33.44	5.50	326	0	(15.44)	(33.44)	(5.50)	(24.69)	(326)	(0.00)
11	15.40	33.44	5.50	325	10	15.41	33.44	5.50	24.70	325	0.03
30	15.27	33.42	5.48	324	20	15.33	33.43	5.49	24.71	324	0.06
58	15.22	33.44	5.50	321	30	15.27	33.42	5.48	24.71	324	0.10
67	14.35	33.31	5.65	313	50	15.24	33.43	5.49	24.74	322	0.16
81	13.59	33.35	5.72	295	75	13.92	33.33	5.73	24.94	302	0.24
95	12.72	33.31	5.41	281	100	12.50	33.32	5.32	25.21	277	0.31
109	11.41	33.39	4.89	252	150	9.65	33.58	4.30	25.92	209	0.43
132	10.02	33.50	4.43	221	200	8.50	33.88	3.17	26.34	169	0.53
150	9.65	33.58	4.30	209	250	7.79	34.02	2.10	26.56	149	0.61
178	8.71	33.76	3.40	181	300	7.03	34.06	1.67	26.70	136	0.68
206	8.43	33.91	3.10	166	400	6.21	34.13	0.86	26.86	120	0.82
234	8.04	34.00	2.27	154	500	5.52	34.23	0.47	27.04	104	0.93
281	7.26	34.04	1.87	140	600	(5.10)	(34.33)		(27.16)	(92)	(1.04)
333	6.75	34.09	1.32	130							
414	6.10	34.14	0.76	118							
497	5.52	34.23	0.48	104							
582	5.18	34.31	0.29	94							

90.28

ORCA; April 17, 1959; 2058 GCT; 33°28.5'N, 117°47'W; sounding, 148 fm; wind, 230°, force 3; weather, cloudy; sea, slight; wire angle, 05°.

1	16.28	33.62	5.89	331	0	(16.28)	(33.62)	(5.89)	(24.64)	(331)	(0.00)
11	15.94	33.58	5.89	326	10	16.00	33.59	5.89	24.68	327	0.03
32	12.64	33.58	4.09	260	20	14.50	33.58	5.21	25.01	296	0.06
51	11.30	33.67	3.21	230	30	12.88	33.58	4.21	25.34	264	0.09
76	10.45	33.75	2.96	210	50	11.34	33.66	3.25	25.69	231	0.14
					75	10.47	33.75	2.97	25.92	210	0.20

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$\frac{10^{-5} T_3}{cm/g}$	m	°C	‰	ml/L	g/L	$\frac{10^{-5} T_3}{cm/g}$	dyn. m

SIO
CCOFI
5904

ORCA; April 17, 1959; 1741 GCT; 33°20.5'N, 118°03.5'W; sounding, 410 fm; wind, 240°, force 2; weather, overcast; sea, slight; wire angle, 09°.

90.32

2	16.90	33.60	5.64	346	0	(16.90)	(33.60)	(5.64)	(24.48)	(346)	(0.00)
12	16.90	33.58	5.64	347	10	16.90	33.58	5.64	24.47	347	0.03
32	15.80	33.59	5.77	322	20	16.72	33.58	5.67	24.52	343	0.07
41	13.90	33.55	5.11	286	30	16.06	33.59	5.75	24.67	328	0.10
51	12.60	33.58	3.94	260	50	12.78	33.57	4.08	25.36	263	0.16
66	11.74	33.65	3.45	238	75	11.47	33.67	3.25	25.68	233	0.22
80	11.26	33.68	3.11	228	100	10.34	33.73	3.17	25.93	208	0.28
100	10.34	33.73	3.17	208	150	9.31	33.95	2.38	26.27	176	0.38
125	9.63	33.84	2.81	190	200	8.73	34.13	1.72	26.51	154	0.46
145	9.38	33.93	2.47	179	250	8.43	34.23	1.20	26.63	142	0.54
174	8.90	34.04	2.09	163	300	8.12	34.25	0.96	26.69	136	0.61
204	8.72	34.14	1.69	153	400	6.84	34.23	0.66	26.86	120	0.74
233	8.50	34.22	1.32	144	500	6.26	34.28	0.50	26.97	110	0.86
273	8.38	34.25	1.07	140							
332	7.68	34.25	0.86	130							
407	6.77	34.23	0.64	119							
482	6.36	34.27	0.52	111							
563	5.86	34.29	0.34	104							

ORCA; April 16, 1959; 1519 GCT; 33°10.5'N, 118°23.5'W; sounding, 645 fm; wind, 210°, force 3; weather, partly cloudy; sea, moderate; wire angle, 12°.

90.37

0	17.30	33.61	5.48	354	0	17.30	33.61	5.48	24.40	354	0.00
9	17.28	33.62	5.53	353	10	17.27	33.62	5.54	24.41	352	0.04
29	16.76	33.62	5.61	342	20	16.83	33.62	5.61	24.52	343	0.07
38	15.09	33.57	5.74	309	30	16.75	33.62	5.62	24.53	341	0.10
49	13.50	33.53	5.24	280	50	13.35	33.53	5.18	25.20	277	0.16
64	11.86	33.57	4.21	247	75	11.40	33.59	4.01	25.63	237	0.23
78	11.28	33.60	3.96	234	100	10.23	33.69	3.41	25.91	210	0.29
97	10.36	33.68	3.48	212	150	9.30	33.96	2.40	26.28	175	0.38
122	9.65	33.81	2.89	192	200	8.82	34.12	1.70	26.48	156	0.47
141	9.34	33.90	2.54	180	250	8.30	34.22	1.30	26.64	141	0.54
171	8.98	34.03	2.07	165	300	7.76	34.23	1.16	26.72	133	0.62
200	8.82	34.12	1.70	156	400	6.76	34.28	0.62	26.91	115	0.74
229	8.54	34.20	1.49	146	500	6.25	34.32	0.46	27.00	106	0.86
268	8.08	34.23	1.20	137							
327	7.52	34.23	1.13	129							
401	6.74	34.28	0.61	115							
475	6.38	34.31	0.49	108							
557	5.90	34.34	0.40	100							

ORCA; April 16, 1959; 0957, 1039 GCT; 32°55'N, 118°56.5'W; sounding, 900 fm; wind, 310°, force 3; weather, cloudy; sea, very rough; wire angle, 06°, 05°.

90.45

2	16.02	33.59	5.62	327	0	(16.02)	(33.59)	(5.62)	(24.68)	(327)	(0.00)
12	16.01	33.61	5.62	326	10	16.02	33.61	5.62	24.70	326	0.03
32	13.62	33.55	5.14	280	20	14.42	33.57	5.39	25.02	295	0.06
42	12.97	33.57	4.73	267	30	13.78	33.55	5.21	25.14	284	0.09
56	11.78	33.58	4.08	244	50	12.40	33.58	4.43	25.42	256	0.15
72	10.64	33.66	3.54	220	75	10.59	33.69	3.47	25.85	216	0.20
96	9.78	33.78	2.98	196	100	9.69	33.80	2.88	26.09	193	0.26
					150	9.02	34.00	2.16	26.36	168	0.35
114	9.42	33.91	2.53	181	200	8.48	34.14	1.74	26.55	150	0.43
134	9.16	33.96	2.40	173	250	8.03	34.15	1.32	26.62	143	0.50
154	8.99	34.02	2.08	166	300	7.66	34.23	1.15	26.74	132	0.57
183	8.70	34.11	1.89	155	400	6.72	34.23	0.72	26.88	119	0.70
217	8.27	34.15	1.55	146	500	6.15	34.29	0.50	27.00	107	0.82
248	8.04	34.15	1.32	143	600	5.59	34.34	0.41	27.10	97	0.93
297	7.69	34.23	1.16	132							
352	7.08	34.22	0.94	124							
437	6.51	34.25	0.55	115							
523	6.00	34.30	0.49	104							
609	5.54	34.34	0.40	96							

SIO

CCOFI
5904

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

90.50

ORCA; April 16, 1959; 0625 GCT; 32°44.5'N, 119°16.5'W; sounding, 180 fm; wind, 310°, force 4; weather, cloudy; sea, very rough; wire angle, 08°.

1	15.34	33.58	5.62	314	0	(15.34)	(33.58)	(5.62)	(24.82)	(314)	(0.00)
11	15.34	33.58	5.62	314	10	15.34	33.58	5.62	24.82	314	0.03
31	13.66	33.57	5.38	280	20	15.34	33.58	5.62	24.82	314	0.06
51	11.86	33.57	4.60	247	30	14.00	33.57	5.46	25.10	287	0.09
					50	11.87	33.57	4.61	25.52	247	0.15

90.55

ORCA; April 16, 1959; 0259 GCT; 32°35.5'N, 119°35.5'W; sounding, 505 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 35°.

2	15.02	33.57	5.86	308	0	(15.02)	(33.57)	(5.86)	(24.88)	(308)	(0.00)
10	15.02	33.58	5.86	307	10	15.02	33.58	5.86	24.89	307	0.03
26	14.60	33.54	5.58	301	20	14.98	33.58	5.84	24.90	306	0.06
50	14.43	33.53	5.44	298	30	14.57	33.54	5.53	24.96	300	0.09
58	13.80	33.53	5.30	286	50	14.43	33.53	5.44	24.98	298	0.15
69	12.52	33.55	4.86	260	75	12.02	33.56	4.50	25.49	250	0.22
81	11.60	33.58	4.33	241	100	10.82	33.69	3.62	25.81	220	0.28
94	11.02	33.68	3.75	224	150	9.36	33.88	2.54	26.21	182	0.38
112	10.37	33.71	3.31	210	200	8.74	34.06	1.95	26.45	159	0.47
126	10.02	33.80	2.91	199	250	7.98	34.12	1.57	26.62	144	0.54
149	9.40	33.88	2.57	183	300	7.38	34.15	1.22	26.72	133	0.62
170	8.93	33.96	2.31	170	400	6.90	34.26	0.68	26.88	118	0.75
193	8.79	34.04	2.02	162	500	(6.28)	(34.30)		(26.99)	(108)	(0.86)
227	8.56	34.14	1.60	151							
267	7.54	34.11	1.54	138							
328	7.26	34.20	0.92	128							
394	6.92	34.26	0.69	119							
468	6.48	34.29	0.54	111							

90.60

ORCA; April 15, 1959; 2324 GCT; 32°24.5'N, 119°57.5'W; sounding, 500 fm; wind, 300°, force 4; weather, cloudy; sea, very rough; wire angle, 25°.

3	15.26	33.54	5.47	315	0	(15.26)	(33.54)	(5.47)	(24.81)	(315)	(0.00)
12	15.22	33.54	5.52	314	10	15.22	33.54	5.51	24.82	314	0.03
31	15.22	33.57	5.60	312	20	15.22	33.55	5.56	24.83	313	0.06
58	14.71	33.53	5.54	304	30	15.22	33.57	5.60	24.84	312	0.09
66	14.34	33.51	5.43	297	50	15.11	33.56	5.60	24.86	310	0.16
79	13.70	33.45	5.22	290	75	13.91	33.47	5.31	25.05	292	0.23
92	12.30	33.37	4.91	269	100	11.30	33.41	4.63	25.51	248	0.30
106	10.75	33.47	4.38	235	150	9.56	33.77	3.27	26.08	194	0.41
126	10.02	33.68	3.60	208	200	8.86	33.97	2.43	26.35	168	0.50
144	9.68	33.75	3.37	197	250	8.18	34.06	1.79	26.53	151	0.58
171	9.16	33.84	2.89	182	300	7.73	34.12	1.36	26.64	140	0.66
197	8.90	33.96	2.47	169	400	6.83	34.22	0.74	26.85	121	0.79
225	8.50	34.00	2.09	160	500	6.26	34.26	0.48	26.96	111	0.92
270	7.97	34.09	1.60	146							
319	7.59	34.13	1.26	138							
398	6.84	34.22	0.75	121							
480	6.36	34.25	0.50	112							
565	5.93	34.29	0.44	104							

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
5904

ORCA; April 15, 1959; 1513 GCT; 32°01'N, 120°38'W; sounding, 2000 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 15°.

90.70

1	15.24	33.47	5.53	319	0	(15.24)	(33.47)	(5.53)	(24.76)	(319)	(0.00)
10	15.22	33.42	5.55	322	10	15.22	33.42	5.55	24.74	322	0.03
29	15.24	33.41	5.53	324	20	15.23	33.42	5.54	24.73	323	0.06
39	15.08	33.39	5.48	322	30	15.24	33.41	5.53	24.72	324	0.10
54	14.42	33.39	5.56	308	50	14.88	33.39	5.52	24.78	318	0.16
68	13.75	33.33	5.51	300	75	13.29	33.33	5.44	25.07	291	0.24
92	11.78	33.33	5.09	263	100	11.20	33.37	4.77	25.50	250	0.30
112	10.52	33.47	4.19	231	150	9.25	33.69	3.45	26.07	195	0.42
131	9.88	33.60	3.61	211	200	8.53	33.92	2.46	26.37	166	0.51
151	9.22	33.70	3.44	193	250	7.98	34.10	1.83	26.60	145	0.59
180	8.82	33.87	2.81	175	300	7.49	34.13	1.38	26.69	136	0.66
214	8.36	33.97	2.23	160	400	6.63	34.19	0.82	26.86	120	0.79
243	8.04	34.09	1.91	147	500	5.89	34.28	0.38	27.02	105	0.91
292	7.58	34.13	1.44	137	600	5.40	34.34	0.32	27.13	94	1.02
346	7.08	34.15	1.08	129							
430	6.38	34.22	0.68	115							
514	5.80	34.29	0.36	103							
601	5.38	34.34	0.32	94							

ORCA; April 15, 1959; 0839 GCT; 31°43'N, 121°18.5'W; sounding, 2000 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 17°.

90.80

2	16.08	33.51	5.47	334	0	(16.08)	(33.51)	(5.47)	(24.60)	(334)	(0.00)
12	16.09	33.58	5.42	329	10	16.09	33.58	5.43	24.66	329	0.03
31	16.10	33.58	5.35	329	20	16.10	33.58	5.39	24.66	329	0.07
60	16.10	33.58	5.38	329	30	16.10	33.58	5.36	24.66	329	0.10
70	16.07	33.58	5.48	329	50	16.10	33.58	5.37	24.66	329	0.16
84	16.02	33.58	5.45	328	75	16.04	33.58	5.47	24.66	329	0.25
98	14.84	33.46	5.50	312	100	14.68	33.46	5.49	24.88	308	0.33
112	13.40	33.46	5.26	283	150	10.30	33.57	4.35	25.80	220	0.46
135	11.32	33.43	4.73	247	200	8.81	33.81	3.23	26.24	179	0.56
153	9.80	33.53	4.28	215	250	8.09	33.97	2.33	26.47	157	0.65
181	9.16	33.73	3.80	190	300	7.39	34.04	1.83	26.63	142	0.73
209	8.64	33.85	2.88	173	400	6.45	34.11	1.01	26.82	124	0.87
236	8.31	33.93	2.49	163	500	5.84	34.18	0.53	26.95	112	0.99
283	7.56	34.02	2.02	146	600	(5.38)	(34.27)		(27.07)	(100)	(1.10)
335	7.06	34.07	1.49	135							
417	6.32	34.12	0.91	122							
498	5.85	34.18	0.54	112							
583	5.46	34.25	0.37	102							

ORCA; April 14-15, 1959; 2338, 0050 GCT; 31°23'N, 122°03.5'W; sounding, 2000 fm; wind, 330°, force 2; weather, overcast; sea, high; wire angle, 12°, 10°.

90.90

1	16.15	33.50	5.44	336	0	(16.15)	(33.50)	(5.44)	(24.58)	(336)	(0.00)
11	16.11	33.52	5.44	334	10	16.12	33.52	5.44	24.61	334	0.03
31	16.05	33.51	5.45	334	20	16.08	33.52	5.45	24.61	334	0.07
60	16.04	33.51	5.45	334	30	16.06	33.51	5.45	24.62	334	0.10
70	16.00	33.48	5.50	335	50	16.04	33.51	5.45	24.62	334	0.17
85	15.12	33.40	5.53	322	75	16.00	33.48	5.51	24.60	335	0.25
99	14.60	33.50	5.24	304	100	14.57	33.50	5.23	24.93	303	0.33
114	12.86	33.43	5.02	275	150	10.78	33.57	4.56	25.72	228	0.46
139	11.58	33.59	4.72	240	200	9.12	33.72	3.77	26.12	190	0.57
160	10.00	33.56	4.36	216	250	8.22	33.95	2.88	26.44	160	0.66
190	9.33	33.66	3.95	198	300	7.52	34.03	2.20	26.61	144	0.74
219	8.73	33.86	3.38	174							
249	8.24	33.95	2.91	160							
298	7.54	34.03	2.21	144							
353	6.86	34.09	1.56	131							
3282a)	1.60	34.65	2.78	-							
3381	1.56	34.62	2.79	-							
3480	1.56	34.63	2.80	-							

a) Special cast for aluminum.

SIO

CCOFI
5904

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	

93.28

ORCA; April 13, 1959; 0129 GCT; 32°54.5'N, 117°22'W; sounding, 324 fm; wind, direction missing, force 1; weather, partly cloudy; sea, moderate; wire angle, 12°.

0	17.52	33.57	5.78	362	0	17.52	33.57	5.78	24.31	362	0.00
10	16.46	33.55	6.47	340	10	16.46	33.55	6.47	24.55	340	0.04
30	13.20	33.55	4.02	273	20	14.74	33.55	5.17	24.93	303	0.07
40	12.18	33.57	3.85	252	30	13.20	33.55	4.02	25.25	273	0.10
49	11.44	33.59	3.71	238	50	11.42	33.59	3.70	25.62	238	0.15
64	10.86	33.68	3.18	221	75	10.71	33.70	3.11	25.84	217	0.20
79	10.64	33.71	3.09	216	100	10.09	33.84	2.72	26.05	197	0.26
98	10.18	33.82	2.77	200	150	9.08	33.96	2.26	26.31	172	0.35
121	9.64	33.90	2.54	185	200	8.88	34.15	1.62	26.49	155	0.43
140	9.24	33.91	2.43	178	250	8.78	34.26	1.07	26.60	145	0.51
169	8.92	34.05	1.96	163							
197	8.82	34.11	1.77	157							
225	9.06	34.27	1.15	149							
263	8.58	34.25	1.06	143							

93.30

ORCA; April 13, 1959; 0343 GCT; 32°50'N, 117°31.5'W; sounding, 400 fm; wind, direction missing, force 1; weather, partly cloudy; sea, moderate; wire angle, 06°.

0	17.44	33.58	5.43	360	0	17.44	33.58	5.43	24.34	360	0.00
10	16.52	33.57	5.85	339	10	16.52	33.57	5.85	24.56	339	0.04
29	14.78	33.55	5.72	304	20	16.17	33.56	5.85	24.63	332	0.07
39	14.45	33.54	5.55	298	30	14.72	33.55	5.70	24.94	303	0.10
49	13.46	33.55	4.31	278	50	13.35	33.55	4.24	25.22	276	0.16
63	11.77	33.64	-	240	75	11.13	33.68	3.60	25.75	226	0.22
78	10.98	33.69	3.51	223	100	10.36	33.78	3.04	25.96	206	0.28
99	10.38	33.77	3.06	206	150	9.33	34.00	2.22	26.31	172	0.37
123	9.49	33.89	2.79	183	200	9.19	34.23	1.32	26.50	154	0.45
143	9.38	33.98	2.32	175	250	8.60	34.28	1.02	26.64	141	0.53
172	9.10	34.07	1.99	164	300	8.35	34.28	0.90	26.67	138	0.60
202	9.14	34.23	1.27	153	400	7.41	34.25	0.74	26.79	127	0.74
232	8.71	34.26	1.10	144	500	6.31	34.28	0.39	26.96	110	0.86
271	8.51	34.29	0.96	139							
331	8.15	34.25	0.85	137							
405	7.34	34.25	0.73	126							
481	6.44	34.27	0.45	112							
561	6.02	34.30	0.31	105							

93.40

ORCA; April 13, 1959; 0957 GCT; 32°29.5'N, 118°13.5'W; sounding, 800 fm; wind, 260°, force 1; weather, fog; sea, moderate; wire angle, 04°.

1	16.47	33.63	5.43	334	0	(16.47)	(33.63)	(5.43)	(24.61)	(334)	(0.00)
11	15.78	33.57	5.61	324	10	15.84	33.57	5.59	24.71	325	0.03
31	14.33	33.57	5.44	293	20	15.30	33.57	5.61	24.83	313	0.06
41	14.04	33.58	5.16	287	30	14.36	33.57	5.46	25.03	294	0.10
56	13.32	33.58	4.28	273	50	13.70	33.58	4.63	25.18	280	0.15
71	11.94	33.55	4.22	250	75	11.70	33.56	4.12	25.55	244	0.22
97	10.94	33.62	3.72	227	100	10.45	33.62	3.54	25.82	218	0.28
117	9.88	33.74	3.19	201	150	9.28	33.90	2.45	26.24	179	0.38
137	9.49	33.82	2.58	189	200	8.63	34.07	1.77	26.47	157	0.46
157	9.18	33.94	2.37	175	250	8.06	34.12	1.41	26.60	145	0.54
186	8.79	34.05	1.85	161	300	7.57	34.17	1.14	26.70	135	0.61
221	8.40	34.09	1.65	152	400	6.92	34.23	0.75	26.85	121	0.74
251	8.04	34.12	1.40	145	500	6.23	34.29	0.42	26.99	108	0.86
301	7.56	34.17	1.14	135	600	5.53	34.34	0.37	27.12	96	0.97
355	7.22	34.22	0.97	126							
441	6.64	34.24	0.60	117							
528	6.01	34.32	0.39	104							
613	5.46	34.34	0.37	95							

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 ⁻⁵ cm/g	m	°C	‰	ml/L	g/L	10 ⁻⁵ cm/g	dyn. m	

SIO
CCOFI
5904

ORCA; April 13, 1959; 1600 GCT; 32°10'N, 118°52'W; sounding, 730 fm; wind, 300°, force 5; weather, cloudy; sea, rough; wire angle, 18°.

93.50

3	15.20	33.58	5.72	310	0	(15.20)	(33.58)	(5.72)	(24.86)	(310)	(0.00)
12	15.18	33.58	5.63	310	10	15.19	33.58	5.64	24.86	310	0.03
31	13.82	33.56	5.56	284	20	15.17	33.58	5.62	24.86	310	0.06
41	13.26	33.58	5.40	271	30	14.00	33.56	5.57	25.10	287	0.09
56	12.94	33.59	5.11	265	50	13.07	33.59	5.24	25.31	267	0.15
70	11.72	33.58	4.21	243	75	11.22	33.63	3.90	25.69	231	0.21
93	10.36	33.76	3.40	207	100	10.16	33.76	3.34	25.98	203	0.26
112	9.84	33.77	3.23	198	150	8.84	33.95	2.31	26.34	169	0.36
131	9.30	33.86	2.81	183	200	8.49	34.00	2.01	26.44	160	0.44
149	8.86	33.95	2.32	169							
176	8.66	33.97	2.17	165							
209	8.40	34.02	1.93	158							
237	8.02	34.11	1.60	145							

ORCA; April 13, 1959; 2218 GCT; 31°50'N, 119°33'W; sounding, 1220 fm; wind, 300°, force 3; weather, cloudy; sea, very rough; wire angle, 07°.

93.60

2	15.84	33.55	5.62	326	0	(15.84)	(33.55)	(5.62)	(24.69)	(326)	(0.00)
12	15.60	33.58	5.62	320	10	15.63	33.58	5.62	24.76	320	0.03
37	15.50	33.55	5.61	319	20	15.54	33.57	5.62	24.77	319	0.06
47	15.00	33.53	5.62	310	30	15.52	33.56	5.62	24.77	319	0.10
62	13.38	33.34	5.38	292	50	14.72	33.49	5.60	24.90	306	0.16
77	12.54	33.31	5.12	278	75	12.58	33.31	5.13	25.19	279	0.23
102	10.56	33.51	4.09	229	100	10.68	33.49	4.17	25.68	232	0.30
121	9.96	33.63	3.73	210	150	9.44	33.70	3.55	26.05	196	0.40
141	9.58	33.68	3.63	200	200	8.69	33.95	2.36	26.36	167	0.50
171	8.99	33.82	3.05	181	250	8.19	34.13	1.67	26.58	146	0.58
202	8.65	33.95	2.35	166	300	7.85	34.20	1.17	26.69	136	0.65
241	8.22	34.11	1.80	148	400	6.54	34.18	0.86	26.86	120	0.78
271	8.10	34.15	1.47	143	500	6.01	34.25	0.46	26.98	109	0.90
320	7.58	34.22	1.02	131	600	5.53	34.30	0.33	27.08	99	1.01
385	6.68	34.18	0.93	122							
487	6.08	34.25	0.48	110							
577	5.63	34.29	0.36	101							
652	5.29	34.34	0.26	93							

ORCA; April 14, 1959; 0443 GCT; 31°30'N, 120°13.5'W; sounding, 2000 fm; wind, 310°, force 4; weather, cloudy; sea, very rough; wire angle, 26°.

93.70

2	15.83	33.56	5.45	326	0	(15.83)	(33.56)	(5.45)	(24.70)	(326)	(0.00)
11	15.84	33.56	5.55	326	10	15.84	33.56	5.54	24.70	326	0.03
29	15.60	33.53	5.54	322	20	15.74	33.55	5.54	24.71	324	0.06
56	14.92	33.37	5.55	320	30	15.58	33.53	5.54	24.74	322	0.10
65	14.78	33.36	5.63	318	50	15.07	33.40	5.55	24.75	321	0.16
77	14.12	33.33	5.70	307	75	14.30	33.33	5.70	24.86	310	0.24
90	13.02	33.31	5.35	287	100	12.24	33.31	5.14	25.25	273	0.31
104	11.94	33.31	5.07	267	150	9.38	33.64	3.77	26.02	200	0.43
125	10.34	33.49	4.37	226	200	8.52	33.93	2.73	26.39	165	0.52
141	9.58	33.58	3.99	208	250	7.62	34.01	2.21	26.57	147	0.60
167	9.07	33.75	3.35	188	300	7.04	34.07	1.65	26.70	135	0.68
191	8.70	33.89	2.81	171	400	6.34	34.15	0.81	26.86	120	0.81
217	8.19	33.98	2.60	157	500	5.80	34.26	0.46	27.02	105	0.93
259	7.49	34.02	2.10	144							
306	6.99	34.08	1.57	133							
382	6.44	34.13	0.92	123							
462	5.98	34.22	0.55	110							
543	5.62	34.30	0.38	100							

SIO

CCOFI
5904

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

93.80

ORCA; April 14, 1959; 1126 GCT; 31°11.5'N, 120°54'W; sounding, 2000 fm; wind, 320°, force 3; weather, cloudy; sea, very rough; wire angle, 09°.

1	15.71	33.50	5.51	327	0	(15.71)	(33.50)	(5.51)	(24.68)	(327)	(0.00)
11	15.72	33.49	5.60	328	10	15.72	33.49	5.59	24.68	328	0.03
31	15.74	33.48	5.48	329	20	15.73	33.48	5.56	24.67	328	0.06
60	15.70	33.49	5.48	328	30	15.74	33.48	5.49	24.66	329	0.10
71	15.20	33.39	5.63	324	50	15.72	33.48	5.48	24.67	328	0.16
85	14.95	33.36	5.68	321	75	15.04	33.37	5.65	24.73	323	0.24
100	14.24	33.33	5.44	309	100	14.24	33.33	5.44	24.87	309	0.33
115	13.24	33.26	5.46	295	150	10.48	33.45	4.57	25.68	232	0.46
139	10.96	33.37	4.60	246	200	8.99	33.74	3.63	26.16	186	0.57
159	10.14	33.55	4.55	219	250	8.16	33.97	2.60	26.46	158	0.66
188	9.22	33.68	3.92	195	300	7.39	34.05	1.89	26.64	141	0.74
218	8.69	33.85	3.21	174	400	6.51	34.13	1.02	26.82	124	0.87
248	8.20	33.96	2.64	159	500	5.90	34.24	0.52	26.98	108	1.00
297	7.42	34.05	1.92	142	600	5.39	34.29	0.38	27.09	98	1.11
352	6.88	34.07	1.49	133							
436	6.27	34.18	0.72	117							
522	5.78	34.25	0.47	106							
608	5.34	34.29	0.37	98							

93.90

ORCA; April 14, 1959; 1735 GCT; 30°52'N, 121°35'W; sounding, 2245 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 10°.

2	16.36	33.59	5.45	334	0	(16.36)	(33.59)	(5.45)	(24.61)	(334)	(0.00)
12	16.34	33.62	5.44	332	10	16.34	33.62	5.44	24.63	332	0.03
31	16.34	33.62	5.38	332	20	16.34	33.62	5.42	24.63	332	0.07
60	16.24	33.55	5.40	335	30	16.34	33.62	5.38	24.63	332	0.10
70	16.05	33.53	5.52	332	50	16.30	33.58	5.39	24.62	333	0.17
84	16.54	33.80	5.41	323	75	16.20	33.62	5.49	24.66	329	0.25
99	15.35	33.65	5.44	309	100	15.32	33.64	5.44	24.88	308	0.33
113	14.01	33.59	5.30	286	150	11.28	33.58	4.70	25.64	236	0.47
138	11.94	33.57	4.87	248	200	9.08	33.81	3.57	26.19	183	0.58
158	10.88	33.60	4.58	228	250	8.14	33.97	2.52	26.47	157	0.67
187	9.44	33.74	3.88	194	300	7.51	33.98	2.06	26.57	148	0.74
217	8.70	33.89	3.09	172	400	6.52	34.11	1.12	26.81	125	0.89
247	8.18	33.97	2.54	158	500	5.91	34.17	0.62	26.94	113	1.01
296	7.55	33.98	2.08	149	600	5.42	34.30	0.39	27.09	98	1.12
351	6.96	34.07	1.58	134							
435	6.28	34.13	0.85	121							
528	5.76	34.20	0.55	109							
607	5.38	34.31	0.38	96							

97.30

ORCA; April 11, 1959; 1952 GCT; 32°15.5'N, 117°08.5'W; sounding, 35 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 10°.

2	15.85	33.55	6.11	326	0	(15.85)	(33.55)	(6.11)	(24.69)	(326)	(0.00)
12	14.82	33.55	6.07	305	10	15.03	33.54	6.09	24.86	310	0.03
31	11.56	33.64	3.64	236	20	13.87	33.58	5.87	25.14	284	0.06
52	11.20	33.73	3.23	223	30	11.60	33.64	3.68	25.62	237	0.09
					50	11.22	33.73	3.27	25.76	224	0.13

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

SIO
CCOFI
5904

PAOLINA-T; April 8, 1959; 0104 GCT;^{a)} 32°12'N, 117°14.5'W; sounding, 750 fm; wind, 220°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.

97.32

426	6.82	34.28		116
436	6.82	34.27		117
447	6.80	34.29		115
457	6.76	34.32		112
467	6.70	34.29		114
478	6.70	34.32		112
488	6.56	34.28		113
499	6.50	34.32		110
509	6.50	34.27		113
520	6.38	34.31		108
530	6.32	34.30		108
540	6.26	34.33		106
550	6.21	34.27		110
561	6.16	34.32		105
572	6.06	34.26		108
582	6.12	34.32		104
593	5.92	34.24		108
603	5.86	34.29		104

STRANGER; April 8, 1959; 0155, 0238 GCT;^{b)} 32°13'N, 117°16'W; sounding, 740 fm; wind, 290°, force 1; weather, overcast; sea, moderate; wire angle, 00°, 01°.

97.32

425	6.94	34.27	0.30	119
435	6.87	34.27	0.15	118
445	6.71	34.25	0.12	117
456	6.78	34.31	0.11	113
466	6.66	34.29	0.11	113
476	6.64	34.31	0.08	112
486	6.61	34.32	0.09	111
496	6.50	34.29	0.10	111
506	6.44	34.31	0.13	109
516	6.38	34.31	0.20	108
528	6.32	34.29	0.24	109
538	6.29	34.31	0.26	107
548	6.18	34.29	0.25	107
558	6.09	34.34	0.28	103
568	6.07	34.34	0.28	102
578	5.99	34.31	0.28	104
588	5.92	34.32	0.29	102
598	5.82	34.34	0.28	100

a) Special cast.

b) Special casts.

SIO
CCOFI
5904

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 ORCA; April 11, 1959; 1805 GCT; 32°11'N, 117°16'W; sounding, 750 fm; wind, 310°, force 3; weather, cloudy; sea, moderate; wire angle, 27°.

3	16.77	33.58	5.67	344	0	(16.77)	(33.58)	(5.67)	(24.50)	(344)	(0.00)
11	16.42	33.58	5.33	337	10	16.48	33.58	5.37	24.57	338	0.03
29	12.28	33.58	3.99	254	20	13.70	33.58	4.43	25.18	280	0.06
38	11.74	33.64	3.64	239	30	12.22	33.58	3.95	25.47	252	0.09
47	11.25	33.67	3.45	229	50	11.16	33.69	3.37	25.74	226	0.14
59	10.94	33.76	3.04	217	75	10.69	33.81	2.91	25.93	209	0.19
72	10.72	33.80	2.93	210	100	10.00	33.89	2.71	26.10	192	0.24
89	10.36	33.86	2.80	200	150	9.28	34.01	2.34	26.32	171	0.34
111	9.69	33.91	2.62	185	200	8.51	34.09	1.94	26.50	154	0.42
128	9.48	33.95	2.46	179	250	8.14	34.15	1.62	26.61	144	0.49
154	9.10	34.00	2.30	170	300	7.62	34.20	1.22	26.72	133	0.56
180	8.74	34.04	2.07	161	400	6.97	34.25	0.68	26.86	120	0.70
207	8.44	34.10	1.89	152	500	6.25	34.31	0.42	27.00	107	0.82
243	8.20	34.14	1.68	146							
297	7.64	34.20	1.23	134							
367	7.22	34.23	0.82	126							
438	6.68	34.28	0.56	114							
515	6.16	34.31	0.40	106							

97.40 ORCA; April 11, 1959; 1306 GCT; 31°56.5'N, 117°44'W; sounding, 378 fm; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 10°.

2	17.00	33.56	5.40	351	0	(17.00)	(33.56)	(5.40)	(24.43)	(351)	(0.00)
12	17.00	33.57	5.40	350	10	17.00	33.57	5.40	24.44	350	0.04
31	16.08	33.55	5.48	332	20	16.90	33.57	5.41	24.46	348	0.07
41	14.44	33.49	5.56	301	30	16.24	33.55	5.46	24.60	335	0.10
55	12.80	33.55	4.43	265	50	13.28	33.53	4.79	25.22	276	0.16
70	11.97	33.58	3.95	248	75	11.52	33.60	3.76	25.62	238	0.23
95	10.93	33.68	3.47	223	100	10.70	33.69	3.33	25.83	218	0.29
115	10.48	33.79	3.00	207	150	9.85	34.09	2.21	26.28	175	0.39
135	9.90	33.85	2.80	193	200	8.67	34.00	1.89	26.42	162	0.47
155	9.76	34.09	2.17	173	250	8.19	34.15	1.60	26.60	145	0.55
184	8.94	34.04	2.13	164	300	7.69	34.20	1.14	26.72	134	0.62
219	8.44	33.98	1.72	161	400	6.90	34.26	0.75	26.88	119	0.76
249	8.20	34.14	1.61	146	500	6.16	34.32	0.41	27.02	105	0.87
298	7.71	34.20	1.16	134	600	5.61	34.34	0.35	27.10	97	0.98
352	7.32	34.23	0.92	127							
437	6.57	34.28	0.61	113							
523	6.05	34.33	0.37	103							
608	5.58	34.34	0.35	96							

97.50 ORCA; April 11, 1959; 0627 GCT; 31°35.5'N, 118°27.5'W; sounding, 1300 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 14°.

2	16.32	33.62	5.45	331	0	(16.32)	(33.62)	(5.45)	(24.64)	(331)	(0.00)
12	16.33	33.62	5.37	331	10	16.33	33.62	5.37	24.64	331	0.03
31	16.05	33.60	5.27	327	20	16.25	33.62	5.29	24.65	330	0.07
61	13.81	33.55	4.94	285	30	16.06	33.60	5.27	24.68	327	0.10
70	12.82	33.53	4.46	267	50	15.41	33.58	5.18	24.81	315	0.16
85	12.08	33.55	4.15	252	75	12.52	33.54	4.30	25.38	261	0.24
100	11.28	33.57	3.92	237	100	11.28	33.57	3.92	25.63	237	0.30
115	10.66	33.64	3.61	221	150	9.48	33.77	2.99	26.10	192	0.41
139	9.94	33.73	3.21	203	200	8.60	34.10	1.77	26.50	155	0.50
158	9.37	33.87	2.75	183	250	8.15	34.19	1.29	26.63	142	0.57
187	8.71	34.06	1.93	159	300	7.82	34.22	1.13	26.71	134	0.64
217	8.46	34.13	1.61	150	400	6.99	34.24	0.70	26.85	121	0.78
246	8.19	34.18	1.30	143	500	6.31	34.27	0.47	26.96	110	0.90
296	7.86	34.22	1.16	135	600	5.69	34.33	0.33	27.08	99	1.01
350	7.38	34.24	0.89	127							
433	6.74	34.25	0.58	118							
519	6.18	34.28	0.43	108							
605	5.66	34.33	0.31	98							

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
5904

ORCA; April 10, 1959; 2340 GCT; 31°16'N, 119°09.5'W; sounding, 1950 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 17°.

97.60

1	15.96	33.58	5.47	326	0	(15.96)	(33.58)	(5.47)	(24.69)	(326)	(0.00)
11	15.94	33.58	5.45	326	10	15.94	33.58	5.45	24.69	326	0.03
29	15.87	33.55	5.43	327	20	15.91	33.56	5.44	24.69	326	0.06
58	15.50	33.56	5.50	318	30	15.86	33.55	5.43	24.68	327	0.10
67	14.94	33.57	5.22	306	50	15.68	33.55	5.49	24.73	322	0.16
82	13.62	33.54	4.71	281	75	14.60	33.56	5.07	24.97	300	0.24
96	12.00	33.57	4.29	249	100	11.36	33.59	4.06	25.63	236	0.31
111	11.06	33.60	3.94	230	150	9.66	33.77	3.08	26.06	195	0.42
135	10.08	33.68	3.46	209	200	8.87	34.00	2.04	26.38	166	0.51
154	9.54	33.80	2.93	191	250	8.22	34.12	1.76	26.57	148	0.59
182	9.10	33.93	2.08	175	300	7.80	34.15	1.38	26.66	139	0.67
211	8.72	34.04	2.02	161	400	7.07	34.25	0.74	26.84	122	0.80
239	8.37	34.11	1.84	150	500	6.33	34.31	0.42	26.98	108	0.92
287	7.88	34.14	1.46	141	600	(5.70)	(34.31)	(0.37)	(27.07)	(100)	(1.03)
340	7.54	34.18	1.14	134							
422	6.88	34.27	0.61	118							
506	6.29	34.31	0.41	107							
590	5.76	34.31	0.37	101							

ORCA; April 10, 1959; 2001 GCT; 31°05'N, 119°31'W; sounding, 2000 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 08°.

97.65

2	16.36	33.66	5.40	329	0	(16.36)	(33.66)	(5.40)	(24.66)	(329)	(0.00)
12	16.34	33.66	5.39	328	10	16.35	33.66	5.39	24.66	329	0.03
50	16.31	33.66	5.37	328	20	16.34	33.66	5.38	24.67	328	0.06
56	16.20	33.67	5.34	325	30	16.33	33.66	5.38	24.67	328	0.10
61	16.17	33.66	5.45	325	50	16.31	33.66	5.37	24.67	328	0.16
66	16.10	33.68	5.36	323	75	14.67	33.58	5.10	24.97	300	0.24
71	15.13	33.58	5.21	309	100	11.85	33.58	4.19	25.54	246	0.31
76	14.54	33.58	5.07	297	150	9.69	33.78	3.23	26.08	195	0.42
81	13.80	33.57	4.89	283	200	8.76	33.95	2.54	26.36	168	0.51
86	13.32	33.55	4.62	275							
91	12.84	33.58	4.49	264							
96	12.32	33.57	4.31	255							
101	11.74	33.58	4.17	244							
106	11.16	33.58	3.96	234							
111	10.83	33.64	3.81	224							
116	10.67	33.64	3.80	221							
152	9.58	33.80	3.16	192							
202	8.70	33.96	2.50	166							

ORCA; April 10, 1959; 1549 GCT; 30°55.5'N, 119°54.5'W; sounding, 1900 fm; wind, 340°, force 5; weather, cloudy; sea, rough; wire angle, 24°.

97.70

1	15.88	33.55	5.40	327	0	(15.88)	(33.55)	(5.40)	(24.68)	(327)	(0.00)
10	15.87	33.55	5.43	327	10	15.87	33.55	5.43	24.68	327	0.03
28	15.82	33.51	5.48	328	20	15.84	33.51	5.45	24.67	328	0.06
56	15.65	33.54	5.56	323	30	15.80	33.51	5.49	24.66	328	0.10
65	15.57	33.53	5.57	322	50	15.70	33.53	5.54	24.71	324	0.16
78	14.27	33.40	5.53	305	75	15.15	33.48	5.57	24.80	316	0.24
92	12.20	33.30	5.14	273	100	11.48	33.35	4.90	25.42	256	0.32
105	11.08	33.39	4.75	246	150	9.21	33.71	3.54	26.10	192	0.43
127	9.91	33.58	4.12	213	200	8.24	33.97	2.52	26.45	158	0.52
144	9.35	33.69	3.63	196	250	7.75	34.08	1.87	26.62	143	0.59
170	8.80	33.84	3.13	177	300	6.94	34.08	1.48	26.73	132	0.67
197	8.30	33.97	2.56	160	400	6.38	34.21	0.83	26.90	116	0.79
223	7.82	34.01	2.21	150	500	6.08	34.28	0.47	27.00	107	0.91
269	7.41	34.07	1.70	140							
318	6.79	34.11	1.36	128							
396	6.39	34.20	0.85	117							
476	6.20	34.27	0.54	109							
559	5.68	34.31	0.34	100							

SIO

CCOFI
5904

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

97.80

ORCA; April 10, 1959; 0907 GCT; 30°36'N, 120°32.5'W; sounding, 2000 fm; wind, 290°, force 4; weather, cloudy; sea, rough; wire angle, 15°.

2	15.90	33.44	5.43	335	0	(15.90)	(33.44)	(5.43)	(24.60)	(335)	(0.00)
11	15.88	33.46	5.40	334	10	15.89	33.46	5.40	24.61	334	0.03
30	15.65	33.42	5.50	332	20	15.87	33.46	5.41	24.62	334	0.07
60	15.53	33.47	5.45	325	30	15.65	33.42	5.50	24.63	332	0.10
70	15.43	33.42	5.33	327	50	15.54	33.47	5.46	24.70	326	0.17
85	15.36	33.45	5.47	323	75	15.41	33.42	5.35	24.69	327	0.25
99	14.34	33.48	5.40	300	100	14.30	33.48	5.40	24.97	300	0.33
114	12.78	33.42	5.20	274	150	9.91	33.51	4.30	25.82	219	0.46
138	10.66	33.48	4.41	232	200	8.79	33.81	3.16	26.24	178	0.56
157	9.87	33.59	4.22	212	250	8.12	33.99	2.47	26.49	156	0.65
186	9.10	33.75	3.60	188	300	7.32	34.05	1.83	26.65	140	0.72
214	8.58	33.86	2.88	172							
243	8.22	33.98	2.55	158							
291	7.42	34.04	1.94	142							
345	6.84	34.13	1.27	128							

97.90

ORCA; April 10, 1959; 0250 GCT; 30°16.5'N, 121°09.5'W; sounding, 2000 fm; wind, 290°, force 3; weather, overcast; sea, moderate; wire angle, 16°.

1	16.17	33.51	5.42	336	0	(16.17)	(33.51)	(5.42)	(24.59)	(336)	(0.00)
10	16.18	33.49	5.40	338	10	16.18	33.49	5.40	24.57	338	0.03
29	16.05	33.48	5.38	336	20	16.11	33.48	5.38	24.58	337	0.07
58	15.90	33.51	5.43	331	30	16.04	33.48	5.38	24.59	336	0.10
68	15.88	33.53	5.45	328	50	15.93	33.50	5.41	24.63	332	0.17
82	15.82	33.49	5.45	330	75	15.86	33.51	5.45	24.66	329	0.25
97	15.85	33.48	5.41	332	100	15.98	33.50	5.41	24.63	332	0.34
111	15.49	33.55	5.40	318	150	11.18	33.55	4.61	25.64	236	0.48
136	12.30	33.54	4.76	257	200	9.12	33.73	3.53	26.12	190	0.59
155	10.68	33.57	4.42	226	250	8.29	33.92	2.60	26.41	163	0.68
184	9.46	33.66	3.79	200	300	7.56	34.03	2.06	26.59	145	0.76
212	8.90	33.78	3.33	183	400	6.59	34.12	0.96	26.81	125	0.90
241	8.42	33.89	2.72	168	500	5.99	34.23	0.46	26.97	110	1.02
289	7.69	34.01	2.20	148	600	(5.42)	(34.31)	(0.34)	(27.10)	(97)	(1.13)
342	7.10	34.07	1.46	136							
427	6.39	34.15	0.79	120							
511	5.92	34.24	0.45	108							
596	5.44	34.31	0.34	98							

100.30

ORCA; April 8, 1959; 0658 GCT; 30°40.5'N, 116°46.5'W; sounding, 240 fm; wind, calm; weather, overcast; sea, slight; wire angle, 05°.

2	15.40	33.58	5.88	315	0	(15.40)	(33.58)	(5.88)	(24.81)	(315)	(0.00)
12	15.10	33.58	6.02	308	10	15.17	33.58	6.02	24.86	310	0.03
32	12.32	33.64	4.20	250	20	13.90	33.60	5.35	25.15	283	0.06
52	11.14	33.72	3.28	223	30	12.37	33.64	4.26	25.48	251	0.09
77	10.43	33.78	2.94	207	50	11.23	33.71	3.36	25.75	225	0.14
100	10.12	33.93	2.38	190	75	10.52	33.77	2.97	25.93	208	0.19
125	10.14	34.13	1.70	176	100	10.12	33.93	2.38	26.12	190	0.24
164	9.64	34.22	1.43	162	150	9.57	34.14	1.54	26.38	166	0.33
203	9.73	34.33	1.15	155	200	9.75	34.33	1.17	26.49	155	0.41
252	9.43	34.36	0.97	148	250	9.44	34.36	0.97	26.56	148	0.49
296a)	8.86	34.36	0.82	139	300	8.80	34.36	0.80	26.67	138	0.56
392a)	7.78	34.36	0.66	123							

a) Pretrip suspected.

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

SIO
CCOFI
5904

ORCA; April 8, 1959; 1315 GCT; 31°21'N, 117°27'W; sounding, 1100 fm; wind, 280°, force 3; weather, overcast; sea, moderate; wire angle, 09°.

100.40

0	17.15	33.66	5.50	347	0	17.15	33.66	5.50	24.48	347	0.00
10	17.14	33.67	5.31	346	10	17.14	33.67	5.31	24.48	346	0.03
30	16.44	33.62	5.39	334	20	17.14	33.67	5.31	24.48	346	0.07
40	16.30	33.64	5.40	330	30	16.44	33.62	5.39	24.61	334	0.10
49	15.64	33.57	5.44	321	50	15.40	33.55	5.42	24.79	317	0.17
64	13.60	33.51	4.84	283	75	13.48	33.54	4.77	25.19	279	0.24
79	12.42	33.55	4.44	259	100	10.99	33.58	4.01	25.70	230	0.31
99	11.04	33.58	4.03	232	150	9.42	33.82	3.09	26.15	188	0.41
124	9.92	33.62	3.92	210	200	8.51	33.97	2.31	26.42	162	0.50
144	9.48	33.77	3.19	192	250	8.09	34.12	1.85	26.59	146	0.58
173	8.86	33.90	2.85	173	300	7.76	34.19	1.43	26.70	136	0.66
203	8.48	33.98	2.30	161	400	7.00	34.28	0.72	26.88	118	0.79
233	8.20	34.08	2.00	150	500	6.28	34.34	0.44	27.02	105	0.90
274	7.92	34.16	1.61	140							
333	7.53	34.22	1.20	130							
408	6.92	34.29	0.66	117							
483	6.38	34.33	0.47	107							
563	5.89	34.38	0.37	97							

ORCA; April 8, 1959; 1935 GCT; 31°00'N, 118°07.5'W; sounding, 950 fm; wind, 290°, force 3; weather, cloudy; sea, rough; wire angle, 12°.

100.50

1	16.82	33.62	5.27	343	0	(16.82)	(33.62)	(5.27)	(24.52)	(343)	(0.00)
11	16.68	33.62	5.28	340	10	16.69	33.62	5.28	24.55	340	0.03
30	16.58	33.62	5.23	337	20	16.61	33.62	5.24	24.57	338	0.07
60	14.52	33.49	5.33	303	30	16.58	33.62	5.23	24.58	337	0.10
70	13.92	33.48	5.13	292	50	16.25	33.60	5.25	24.64	331	0.17
83	12.34	33.53	4.44	258	75	13.30	33.50	4.84	25.19	278	0.24
99	11.40	33.56	4.07	240	100	11.39	33.56	4.05	25.61	239	0.31
114	10.74	33.60	3.75	225	150	9.50	33.75	3.27	26.08	194	0.42
138	9.78	33.67	3.65	204	200	8.76	34.00	2.27	26.40	164	0.51
158	9.31	33.79	3.03	188	250	7.76	34.04	1.93	26.58	147	0.59
187	8.90	33.95	2.46	170	300	7.17	34.13	1.43	26.73	132	0.66
217	8.46	34.04	2.10	157	400	6.69	34.26	0.71	26.90	116	0.79
247	7.80	34.04	1.95	147	500	6.01	34.31	0.41	27.03	104	0.91
295	7.20	34.12	1.46	133	600	5.50	34.34	0.33	27.12	96	1.01
350	6.96	34.20	1.04	124							
434	6.46	34.29	0.52	111							
520	5.89	34.31	0.39	102							
605	5.47	34.34	0.32	95							

ORCA; April 9, 1959; 0202 GCT; 30°40.5'N, 118°47'W; sounding, 1515 fm; wind, 290°, force 3; weather, cloudy; sea, rough; wire angle, 10°.

100.60

1	16.62	33.67	5.34	335	0	(16.62)	(33.67)	(5.34)	(24.60)	(335)	(0.00)
11	16.62	33.68	5.32	334	10	16.62	33.68	5.32	24.61	334	0.03
31	16.42	33.65	5.33	332	20	16.55	33.67	5.33	24.62	333	0.07
60	16.04	33.63	5.35	325	30	16.43	33.65	5.33	24.64	332	0.10
71	13.93	33.53	5.30	288	50	16.11	33.63	5.35	24.70	326	0.16
85	12.49	33.47	4.33	266	75	13.46	33.51	5.00	25.17	281	0.24
100	11.10	33.58	3.92	233	100	11.10	33.58	3.92	25.67	233	0.31
115	10.18	33.66	3.63	211	150	9.34	33.77	3.21	26.12	190	0.41
140	9.46	33.75	3.33	194	200	8.60	33.95	2.54	26.38	165	0.50
160	9.22	33.80	3.10	186	250	8.03	34.09	1.91	26.58	147	0.58
189	8.78	33.91	2.69	171	300	7.42	34.08	1.61	26.66	139	0.66
219	8.30	34.02	2.25	156	400	7.05	34.30	0.65	26.88	118	0.79
249	8.04	34.09	1.92	147	500	6.22	34.33	0.38	27.02	105	0.91
298	7.42	34.08	1.62	140	600	5.59	34.35	0.28	27.12	96	1.01
354	7.35	34.25	0.94	126							
438	6.70	34.31	0.51	113							
523	6.02	34.33	0.33	103							
608	5.54	34.35	0.28	95							

S10

CCOFI
5904

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

100.70

ORCA; April 9, 1959; 0824 GCT; 30°20.5'N, 119°27'W; sounding, 2000 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 10°.

1	16.21	33.53	5.41	336	0	(16.21)	(33.53)	(5.41)	(24.59)	(336)	(0.00)
11	16.20	33.56	5.46	334	10	16.20	33.56	5.46	24.62	334	0.03
30	15.86	33.49	5.48	331	20	16.20	33.56	5.46	24.62	334	0.07
60	15.36	33.48	5.43	321	30	15.86	33.49	5.48	24.64	331	0.10
70	15.32	33.49	5.54	319	50	15.50	33.48	5.44	24.72	324	0.16
85	13.74	33.39	5.43	295	75	15.30	33.49	5.54	24.77	318	0.25
100	12.40	33.49	4.90	262	100	12.40	33.49	4.90	25.36	262	0.32
114	11.56	33.51	4.65	246	150	9.65	33.62	4.09	25.95	206	0.44
139	10.10	33.61	4.24	214	200	8.92	33.93	2.88	26.32	172	0.53
159	9.54	33.69	3.91	199	250	8.15	34.05	2.01	26.54	151	0.62
189	8.96	33.86	3.17	178	300	7.77	34.14	1.57	26.66	139	0.69
219	8.55	33.98	2.43	163	400	6.91	34.25	0.75	26.86	120	0.83
248	8.18	34.05	2.02	152	500	6.13	34.32	0.38	27.03	104	0.94
298	7.78	34.14	1.58	140	600	5.56	34.38	0.28	27.14	94	1.05
353	7.28	34.22	1.04	127							
438	6.60	34.27	0.55	114							
523	5.96	34.34	0.34	101							
609	5.51	34.38	0.27	93							

100.80

ORCA; April 9, 1959; 1451 GCT; 30°00'N, 120°09'W; sounding, 1900 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 08°.

1	15.88	33.48	5.46	332	0	(15.88)	(33.48)	(5.46)	(24.62)	(332)	(0.00)
11	15.88	33.48	5.49	332	10	15.88	33.48	5.48	24.62	332	0.03
30	15.82	33.44	5.45	334	20	15.87	33.48	5.49	24.62	332	0.07
59	15.32	33.44	5.48	323	30	15.82	33.44	5.45	24.61	334	0.10
70	15.30	33.44	5.53	323	50	15.42	33.44	5.47	24.70	326	0.16
85	15.23	33.46	5.49	320	75	15.29	33.44	5.52	24.74	322	0.25
99	14.24	33.40	5.47	304	100	13.85	33.42	5.39	25.02	295	0.33
114	12.83	33.51	5.05	269	150	10.32	33.54	4.31	25.78	222	0.46
139	11.22	33.51	4.60	240	200	8.94	33.79	3.34	26.20	182	0.56
159	9.94	33.58	4.15	214	250	8.04	33.95	2.46	26.46	158	0.65
188	9.21	33.72	3.65	192	300	7.45	34.02	1.84	26.61	144	0.73
217	8.52	33.89	2.88	169	400	6.52	34.11	0.98	26.80	126	0.87
247	8.08	33.94	2.49	159	500	5.88	34.20	0.52	26.96	110	0.99
297	7.48	34.02	1.88	144	600	5.34	34.31	0.31	27.11	96	1.10
352	6.92	34.07	1.31	133							
437	6.24	34.13	0.76	121							
522	5.74	34.23	0.44	106							
608	5.30	34.31	0.30	96							

100.90

ORCA; April 9, 1959; 2041 GCT; 29°40'N, 120°48'W; sounding, 2050 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 06°.

1	16.58	33.58	5.37	340	0	(16.58)	(33.58)	(5.37)	(24.54)	(340)	(0.00)
11	16.48	33.58	5.37	338	10	16.49	33.58	5.37	24.56	338	0.03
32	16.24	33.57	5.45	334	20	16.45	33.58	5.38	24.57	337	0.07
61	16.04	33.58	5.44	328	30	16.27	33.57	5.45	24.61	334	0.10
71	16.01	33.56	5.47	329	50	16.11	33.58	5.45	24.65	330	0.17
87	15.46	33.51	5.48	321	75	16.00	33.56	5.47	24.66	329	0.25
102	14.66	33.48	5.28	306	100	14.67	33.46	5.29	24.88	308	0.33
117	13.80	33.65	4.99	277	150	10.80	33.57	4.41	25.72	228	0.47
142	11.30	33.56	4.55	238	200	8.99	33.80	3.30	26.21	182	0.57
162	10.21	33.60	4.20	216	250	8.40	33.94	2.55	26.41	163	0.66
192	9.12	33.77	3.47	186	300	7.56	34.05	1.94	26.62	143	0.74
222	8.72	33.87	2.93	173	400	6.69	34.18	1.02	26.84	122	0.88
252	8.36	33.95	2.49	162	500	6.19	34.27	0.50	26.98	109	1.00
301	7.54	34.05	1.93	143	600	5.62	34.32	0.33	27.09	98	1.11
357	6.96	34.13	1.33	129							
444	6.44	34.22	0.76	116							
528	6.03	34.29	0.42	106							
615	5.51	34.33	0.32	96							

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	

SIO
CCOFI
5904

PAOLINA-T; April 8, 1959; 1103 GCT; 31°04.5'N, 116°26'W; sounding, 45 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 00°.

103.30

1	15.56	33.63	6.11	314	0	(15.56)	(33.63)	(6.11)	(24.82)	(314)	(0.00)	
12	14.78	33.57	5.91	302	10	15.28	33.60	6.05	24.86	310	0.03	
32	11.79	33.64	3.62	240	20	12.57	33.63	4.18	25.44	255	0.06	
52	10.82	33.60	3.72	226	30	11.93	33.64	3.68	25.57	242	0.08	
73	10.36	33.77	3.09	206	50	10.92	33.60	3.72	25.72	228	0.13	
					75	(10.32)	(33.79)	(3.04)	(25.97)	(204)	(0.18)	

PAOLINA-T; April 8, 1959; 1417 GCT; 30°55'N, 116°45'W; sounding, 970 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 07°.

103.35

2	17.14	33.57		353	0	(17.14)	(33.57)		(24.40)	(353)	(0.00)	
12	17.14	33.60		351	10	17.14	33.59		24.42	352	0.04	
33	16.66	33.58		342	20	17.00	33.60		24.46	348	0.07	
43	16.00	33.60		326	30	16.68	33.58		24.52	342	0.10	
53	14.40	33.55		296	50	14.98	33.57		24.89	307	0.17	
68	12.80	33.55		265	75	12.29	33.57		25.44	255	0.24	
83	11.74	33.59		243	100	11.04	33.62		25.71	229	0.30	
103	10.95	33.62		227	150	9.82	33.78		26.05	197	0.41	
127	10.50	33.79		207	200	8.81	34.00		26.39	165	0.50	
147	9.92	33.78		198	250	8.25	34.18		26.61	144	0.58	
176	9.08	33.89		178	300	7.60	34.15		26.69	136	0.65	
205	8.76	34.03		162	400	7.26	34.28		26.84	122	0.79	
234	8.47	34.18		147	500	6.48	34.31		26.98	109	0.91	
274	7.89	34.15		140								
333	7.36	34.18		131								
408	7.24	34.29		121								
485	6.60	34.31		111								
566	6.00	34.31		104								

PAOLINA-T; April 8, 1959; 1756 GCT; 30°45'N, 117°05.5'W; sounding, 960 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 09°.

103.40

2	16.82	33.59		345	0	(16.82)	(33.59)		(24.49)	(345)	(0.00)	
12	16.82	33.59		345	10	16.82	33.59		24.49	345	0.03	
32	16.60	33.69		332	20	16.82	33.64		24.52	342	0.07	
57	16.46	33.69		330	30	16.69	33.69		24.60	335	0.10	
67	16.15	33.64		326	50	16.70	33.75		24.64	330	0.17	
76	14.48	33.44		306	75	14.57	33.45		24.89	307	0.25	
91	13.39	33.48		282	100	12.41	33.46		25.34	264	0.32	
105	11.88	33.46		255	150	9.79	33.63		25.94	207	0.44	
131	10.60	33.56		226	200	8.93	33.94		26.32	172	0.54	
150	9.79	33.63		207	250	7.97	34.05		26.56	148	0.62	
174	9.14	33.83		182	300	7.53	34.14		26.69	136	0.69	
202	8.91	33.94		171	400	6.89	34.22		26.84	122	0.83	
231	8.31	34.02		156	500	6.19	34.29		26.99	108	0.95	
271	7.68	34.09		142								
331	7.44	34.18		132								
405	6.86	34.23		121								
479	6.34	34.28		110								
561	5.79a)	34.29		103								

a) Alternate value, 5.90°C, not used in interpolation.

SIO

CCOFI
5904

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	

103.50

PAOLINA-T; April 9, 1959; 0039 GCT; 30°25'N, 117°41.5'W; sounding, 1550 fm; wind, 300°, force 4; weather, cloudy; sea, moderate; wire angle, 07°.

1	16.58	33.58	5.23	340	0	(16.58)	(33.58)	(5.23)	(24.54)	(340)	(0.00)
11	16.60	33.52	5.36	345	10	16.60	33.52	5.36	24.49	345	0.03
31	15.94	33.48	5.43	333	20	16.00	33.48	5.42	24.61	334	0.07
61	15.74	33.48	5.42	329	30	15.95	33.48	5.43	24.62	333	0.10
71	15.48	33.50	5.32	323	50	15.83	33.48	5.43	24.64	331	0.17
86	13.98	33.37	5.31	301	75	15.19	33.48	5.31	24.78	318	0.25
100	13.30	33.57	5.11	273	100	13.30	33.57	5.11	25.25	273	0.32
115	12.12	33.56	4.88	252	150	10.06	33.58	4.23	25.85	216	0.45
139	10.50	33.55	4.46	225	200	8.77	33.82	3.20	26.26	177	0.55
160	9.68	33.61	3.98	207	250	8.20	33.96	2.54	26.45	158	0.63
188	8.92	33.78	3.26	183	300	7.56	34.06	1.80	26.62	143	0.71
218	8.55	33.87	3.12	170	400	6.91	34.15	1.13	26.79	127	0.85
247	8.24	33.96	2.61	160	500	6.26	34.22	0.51	26.94	113	0.98
297	7.59	34.05	1.82	144	600	5.60	34.28	0.32	27.06	101	1.09
351	7.12	34.09	1.57	134							
436	6.73	34.20	0.78	121							
522	6.10	34.23	0.46	111							
608	5.56	34.29	0.30	100							

103.60

PAOLINA-T; April 9, 1959; 0715 GCT; 30°07'N, 118°23'W; sounding, 2050 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 05°.

1	16.60	33.62	5.36	338	0	(16.60)	(33.62)	(5.36)	(24.56)	(338)	(0.00)
11	16.62	33.62	5.57	338	10	16.62	33.62	5.57	24.56	338	0.03
31	15.92	33.48	5.43	333	20	16.62	33.62	5.57	24.56	338	0.07
61	15.68	33.48	5.61	328	30	15.93	33.48	5.43	24.62	333	0.10
72	15.68	33.46	5.62	330	50	15.82	33.48	5.48	24.64	331	0.17
88	14.31	33.45	5.40	301	75	15.68	33.46	5.62	24.66	330	0.25
103	13.85	33.55	5.35	285	100	14.05	33.54	5.37	25.07	290	0.33
117	12.24	33.53	5.06	257	150	10.25	33.60	4.35	25.84	217	0.46
140	10.58	33.56	4.45	225	200	9.14	33.83	2.96	26.20	182	0.56
160	9.98	33.66	4.22	208	250	8.42	34.03	2.20	26.47	157	0.64
189	9.36	33.80	3.08	188	300	7.83	34.12	1.72	26.64	142	0.72
218	8.78	33.89	2.80	172	400	7.19	34.25	0.83	26.82	124	0.86
246	8.48	34.02	2.25	159	500	6.22	34.26	0.48	26.96	110	0.98
295	7.87	34.11	1.76	143	600	5.60	34.33	0.38	27.10	97	1.09
349	7.54	34.22	1.25	130							
432	6.94	34.26	0.59	120							
516	6.05	34.27	0.46	108							
602	5.59	34.33	0.37	97							

103.70

PAOLINA-T; April 9, 1959; 1402 GCT; 29°46'N, 119°04'W; sounding, 2000 fm; wind, 290°, force 4; weather, overcast; sea, moderate; wire angle, 07°.

1	16.94	33.70	5.42	339	0	(16.94)	(33.70)	(5.42)	(24.56)	(339)	(0.00)
11	16.96	33.70	5.43	340	10	16.96	33.70	5.43	24.55	340	0.03
31	16.86	33.69	5.44	339	20	16.97	33.70	5.43	24.55	340	0.07
56	16.00	33.55	5.54	330	30	16.88	33.69	5.44	24.56	339	0.10
66	16.05	33.58	5.44	328	50	16.00	33.55	5.54	24.66	330	0.17
76	16.06	33.61	5.40	326	75	16.06	33.61	5.40	24.69	326	0.25
90	15.54	33.55	5.54	320	100	13.69	33.46	5.35	25.08	289	0.33
105	13.68	33.47	5.34	288	150	10.63	33.66	4.44	25.82	219	0.46
129	12.22	33.63	4.41	249	200	9.03	33.85	3.64	26.23	180	0.56
149	10.68	33.66	4.45	220	250	8.18	33.96	2.76	26.45	158	0.65
174	9.72	33.70	4.09	201	300	7.58	34.05	1.96	26.61	144	0.72
203	8.93	33.86	3.57	177	400	6.77	34.18	1.02	26.83	123	0.86
233	8.40	33.93	3.11	164	500	6.13	34.24	0.51	26.96	110	0.98
273	7.89	34.00	2.30	152							
333	7.22	34.12	1.51	134							
409	6.71	34.19	0.95	121							
485	6.21	34.23	0.56	112							
567	5.82	34.31	0.39	102							

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$\frac{1}{10} \text{ cm/g}$	m	°C	‰	ml/L	g/L	$\frac{1}{10} \text{ cm/g}$	dyn. m

SIO
CCOFI
5904

PAOLINA-T; April 9, 1959; 2005 GCT; 29°24.5'N, 119°44'W; sounding, 2000 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 01°.

103.80

1	17.46	33.93	5.29	334	0	(17.46)	(33.93)	(5.29)	(24.60)	(334)	(0.00)
11	17.42	33.87	5.34	338	10	17.43	33.87	5.34	24.57	338	0.03
31	17.40	33.91	5.30	334	20	17.42	33.87	5.34	24.57	338	0.07
57	17.36	33.93	5.26	332	30	17.40	33.91	5.30	24.60	334	0.10
67	17.50	33.96	5.13	333	50	17.27	33.91	5.29	24.64	331	0.17
77	17.62	34.00	5.00	333	75	17.76	34.00	5.01	24.59	336	0.25
93	16.71	33.97	5.32	314	100	15.85	33.86	5.11	24.93	304	0.33
108	14.40	33.64	4.77	290	150	11.38	33.58	4.24	25.63	237	0.47
133	12.48	33.52	4.15	262	200	9.35	33.73	3.46	26.09	193	0.58
152	11.23	33.59	4.23	234	250	8.67	33.98	2.60	26.40	164	0.67
176	10.10	33.59	3.98	215	300	8.31	34.11	1.64	26.56	149	0.75
207	9.19	33.78	3.32	187	400	7.21	34.22	0.83	26.80	126	0.90
236	8.76	33.93	2.91	169	500	6.44	34.26	0.52	26.94	112	1.02
275	8.54	34.07	1.94	156							
335	7.96	34.16	1.28	140							
410	7.10	34.23	0.78	124							
485	6.54	34.26	0.58	114							
566	5.94	34.29	0.27	104							

PAOLINA-T; April 10, 1959; 0217 GCT; 29°07'N, 120°22.5'W; sounding, 2100 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, 04°.

103.90

1	17.62	33.95	5.15	336	0	(17.62)	(33.95)	(5.15)	(24.59)	(336)	(0.00)
11	17.64	33.96	5.30	336	10	17.64	33.96	5.30	24.59	336	0.03
31	17.58	33.94	5.29	336	20	17.64	33.96	5.30	24.59	336	0.07
57	17.28	33.90	5.45	333	30	17.59	33.94	5.29	24.59	336	0.10
67	17.56	34.02	5.38	330	50	17.10	33.86	5.34	24.64	331	0.17
77	17.61	34.18	5.33	320	75	17.61	34.17	5.33	24.75	321	0.25
92	17.47	34.19	5.39	316	100	16.40	34.00	5.43	24.92	305	0.33
107	15.33	33.82	5.45	295	150	11.22	33.58	4.80	25.66	234	0.46
132	12.82	33.60	5.09	262	200	9.13	33.74	3.37	26.13	189	0.57
151	11.10	33.58	4.78	233	250	8.27	33.96	2.62	26.44	160	0.66
176	9.62	33.62	3.84	206	300	7.64	34.04	2.23	26.60	145	0.74
206	9.01	33.77	3.26	185	400	6.63	34.15	1.05	26.82	124	0.88
236	8.48	33.93	2.69	165	500	5.79	34.22	0.60	26.98	108	1.00
276	7.91	34.00	2.53	152							
336	7.27	34.11	1.55	135							
413	6.51	34.16	0.98	121							
489	5.88	34.21	0.63	110							
570	5.35	34.27	0.42	99							

PAOLINA-T; April 11, 1959; 2237 GCT; 30°26'N, 116°09.5'W; sounding, 200 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 22°.

107.32

2	15.55	33.58		318	0	(15.55)	(33.58)		(24.78)	(318)	(0.00)
11	15.28	33.58		313	10	15.31	33.58		24.83	313	0.03
30	12.94	33.53		269	20	14.60	33.57		24.98	299	0.06
49	11.68	33.57		244	30	12.94	33.53		25.29	269	0.09
72	10.90	33.74		218	50	11.62	33.58		25.58	242	0.14
95	10.52	33.88		200	75	10.84	33.76		25.86	215	0.20
117	10.45	34.02		189	100	10.51	33.91		26.04	198	0.25
153	10.36	34.26		170	150	10.37	34.25		26.32	171	0.34
186a)	10.28	34.32		164	200	10.17	34.35		26.44	160	0.43
227a)	9.92	34.38		154	250	9.58	34.39		26.56	148	0.51
268a)	9.30	34.38		144	300	8.92	34.35		26.64	140	0.58
315a)	8.72	34.33		139							

a) Pretrip suspected.

SIO

CCOFI
5904

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

107.35 PAOLINA-T; April 11, 1959; 1950 GCT; 30°18'N, 116°20.5'W; sounding, 750 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 25°.

2	17.12	33.58	5.45	352	0	(17.12)	(33.58)	(5.45)	(24.42)	(352)	(0.00)
11	17.06	33.60	5.77	350	10	17.07	33.60	5.76	24.44	350	0.04
30	16.68	33.59	5.30	342	20	17.02	33.60	5.73	24.46	348	0.07
39	15.92	33.58	5.35	326	30	16.68	33.59	5.30	24.52	342	0.10
52	13.88	33.57	4.69	285	50	14.16	33.57	4.78	25.07	290	0.17
66	12.69	33.58	4.09	261	75	12.01	33.62	3.82	25.53	246	0.23
88	11.04	33.67	3.54	225	100	10.40	33.68	3.73	25.87	214	0.29
105	10.17	33.68	3.76	210	150	8.97	33.86	3.00	26.25	178	0.39
120	9.73	33.73	3.53	199	200	8.68	34.05	2.26	26.45	159	0.48
137	9.34	33.81	3.24	187	250	9.02	34.30	1.10	26.58	146	0.56
160	8.79	33.89	2.85	173	300	8.13	34.27	0.99	26.70	135	0.63
188	8.70	34.00	2.43	164	400	7.06	34.26	0.70	26.85	121	0.76
213	8.62	34.11	2.04	154	500	6.20	34.26	0.63	26.96	110	0.88
256	9.03	34.32	1.03	145							
302	8.10	34.27	0.99	134							
376	7.33	34.27	0.80	124							
452	6.50	34.24	0.54	115							
534	6.02	34.27	0.73	107							

107.40 PAOLINA-T; April 11, 1959; 1613 GCT; 30°06.5'N, 116°39'W; sounding, 1400 fm; wind, 330°, force 5; weather, cloudy; sea, rough; wire angle, 18°.

3	17.12	33.64	5.79	348	0	(17.12)	(33.64)	(5.79)	(24.46)	(348)	(0.00)
12	17.12	33.61	5.48	350	10	17.12	33.61	5.56	24.44	350	0.03
32	16.26	33.64	5.50	329	20	16.65	33.63	5.49	24.57	337	0.07
41	16.12	33.58	5.51a)	330	30	16.28	33.64	5.50	24.66	329	0.10
56	15.84	33.57	5.50	325	50	16.06	33.58	5.51	24.67	328	0.17
70	14.61	33.48	5.37	306	75	14.10	33.48	5.30	25.02	295	0.25
94	12.66	33.57	5.08	261	100	12.26	33.57	4.96	25.44	254	0.32
114	11.88	33.57	4.84	247	150	9.70	33.68	3.85	26.00	202	0.43
132	10.44	33.57	4.46	222	200	8.63	33.90	2.90	26.33	170	0.53
151	9.68	33.68	3.81	202	250	7.91	34.01	1.24	26.54	151	0.61
179	8.94	33.82	3.15	180	300	7.50	34.12	0.88	26.68	138	0.68
210	8.48	33.93	2.76	165	400	7.21	34.26	0.35	26.83	123	0.82
238	8.08	34.00	1.41	154	500	6.30	34.30	0.27	26.98	108	0.94
285	7.48	34.08	0.98	140	600	(5.54)	(34.31)		(27.08)	(98)	(1.05)
337	7.68	34.22	0.62	133							
417	7.04	34.27	0.30	120							
500	6.30	34.30	0.27	108							
583	5.64	34.31	0.13	100							

107.50 PAOLINA-T; April 11, 1959; 0932 GCT; 29°50'N, 117°23.5'W; sounding, 1575 fm; wind, 330°, force 5; weather, partly cloudy; sea, rough; wire angle, 16°.

1	17.48	33.91		336	0	(17.48)	(33.91)		(24.59)	(336)	(0.00)
11	17.48	33.89		338	10	17.48	33.89		24.57	338	0.03
30	17.50	33.91		337	20	17.49	33.90		24.58	337	0.07
59	17.28	33.89		334	30	17.50	33.91		24.58	337	0.10
69	17.30	33.91		332	50	17.44	33.90		24.59	336	0.17
83	17.24	33.89		332	75	17.28	33.90		24.63	332	0.25
97	17.00	33.87		328	100	16.90	33.86		24.68	327	0.34
111	15.38	33.77		300	150	11.89	33.67		25.60	240	0.48
135	12.96	33.72		256	200	9.50	33.74		26.07	195	0.59
153	11.67	33.66		237	250	8.48	33.95		26.40	164	0.68
181	10.04	33.68		208	300	7.76	34.06		26.60	145	0.76
210	9.26	33.78		188	400	6.84	34.15		26.80	126	0.90
238	8.68	33.91		170	500	6.14	34.26		26.98	109	1.02
286	7.93	34.04		149	600	(5.63)	(34.33)		(27.09)	(98)	(1.13)
339	7.32	34.10		136							
421	6.68	34.17		123							
504	6.11	34.27		108							
588	5.68	34.33		99							

154

a) Alternate value, 5.66 ml/L, not used in interpolation.

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
5904

PAOLINA-T; April 11, 1959; 0313 GCT; 29°32'N, 118°01'W; sounding, 1830 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 15°.

107.60

2	17.23	33.87	5.21	334	0	(17.23)	(33.87)	(5.21)	(24.61)	(334)	(0.00)
12	17.26	33.87	5.56	334	10	17.25	33.87	5.50	24.61	334	0.03
32	17.28	33.89	5.26	334	20	17.27	33.88	5.43	24.61	334	0.07
61	17.14	33.90	5.11	329	30	17.28	33.89	5.28	24.62	334	0.10
71	17.15	33.91	5.03	328	50	17.13	33.90	5.12	24.66	329	0.17
85	17.17	33.94	5.10	326	75	17.16	33.92	5.04	24.67	328	0.25
100	16.40	33.90	5.28	313	100	16.40	33.90	5.28	24.83	313	0.33
114	14.84	33.86	5.15	283	150	11.50	33.76	3.40	25.74	226	0.47
138	12.46	33.68	3.99	250	200	10.07	34.00	2.46	26.18	185	0.57
156	11.16	33.82	3.11	216	250	9.24	34.22	1.79	26.48	156	0.66
184	10.64	33.93	2.58	199							
212	9.74	34.04	2.38	176							
239	9.42	34.18	1.86	161							
284	8.50	34.25	1.59	142							

PAOLINA-T; April 10, 1959; 2020 GCT; 29°14'N, 118°42'W; sounding, 1950 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 08°.

107.70

1	17.59	33.93		337	0	(17.59)	(33.93)		(24.58)	(337)	(0.00)
11	17.58	33.93		337	10	17.58	33.93		24.58	337	0.03
31	17.56	33.93		337	20	17.57	33.93		24.58	337	0.07
62	17.32	33.92		332	30	17.56	33.93		24.58	337	0.10
72	17.32	33.90		333	50	17.34	33.92		24.63	332	0.17
87	17.22	33.93		329	75	17.31	33.90		24.62	333	0.25
102	15.97	33.81		310	100	16.15	33.82		24.83	313	0.33
117	14.71	33.71		291	150	11.80	33.70		25.64	236	0.47
142	12.42	33.72		246	200	9.81	33.84		26.09	193	0.58
162	11.02	33.68		224	250	9.11	34.14		26.45	159	0.67
191	9.95	33.76		200	300	8.68	34.30		26.64	141	0.75
220	9.54	34.00		176	400	7.79	34.35		26.82	124	0.89
249	9.12	34.14		159	500	6.88	34.36		26.95	111	1.01
298	8.70	34.29		142	600	6.05	34.38		27.07	100	1.12
352	8.09	34.32		131							
437	7.55	34.37		120							
522	6.65	34.36		108							
612	5.97a)	34.38		98							

PAOLINA-T; April 10, 1959; 1409 GCT; 28°51.5'N, 119°19'W; sounding, 2000 fm; wind, 330°, force 5; weather, overcast; sea, rough; wire angle, 15°.

107.80

2	17.40	33.87	5.29	337	0	(17.40)	(33.87)	(5.29)	(24.58)	(337)	(0.00)
12	17.42	33.84	5.38	340	10	17.41	33.84	5.38	24.55	340	0.03
31	17.08	33.79	5.26	336	20	17.40	33.84	5.38	24.55	340	0.07
61	17.16	33.82	5.35	335	30	17.09	33.79	5.27	24.59	336	0.10
					50	17.12	33.81	5.30	24.60	335	0.17

a) Alternate value, 6.16°C, not used in interpolation.

SIO

CCOFI
5904

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

107.90

PAOLINA-T; April 10, 1959; 0749 GCT; 28°32'N, 119°58.5'W; sounding, 2300 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 15°.

1	17.28	33.76		343	0	(17.28)	(33.76)		(24.51)	(343)	(0.00)
11	17.30	33.69		348	10	17.30	33.69		24.46	348	0.03
30	17.22	33.73		344	20	17.30	33.71		24.47	347	0.07
59	16.89	33.69		339	30	17.22	33.73		24.50	344	0.10
69	16.88	33.68		340	50	16.90	33.69		24.56	339	0.17
83	16.26	33.62		330	75	16.78	33.66		24.56	339	0.26
98	15.48	33.70		307	100	15.06	33.67		24.96	301	0.34
112	13.82	33.63		279	150	11.12	33.68		25.76	225	0.47
135	12.60	33.66		254	200	9.92	33.99		26.20	183	0.58
154	10.74	33.69		218	250	9.42	34.26		26.48	156	0.66
183	9.69	33.82		192	300	8.71	34.26		26.61	144	0.74
211	10.00	34.08		178	400	7.64	34.28		26.78	128	0.88
240	9.58	34.23		160	500	6.72	34.34		26.95	111	1.01
287	8.86	34.26		146	600	(6.00)	(34.35)		(27.06)	(101)	(1.12)
341	8.24	34.27		137							
423	7.41	34.28		124							
507	6.66	34.34		110							
593	6.03	34.35		102							

110.33

PAOLINA-T; April 12, 1959; 0347 GCT; 29°49.5'N, 115°52'W; sounding, 52 fm; wind, 340°, force 5; weather, clear; sea, rough; wire angle, 07°.

2	14.47	33.66	5.82u	290	0	(14.47)	(33.66)		(25.07)	(290)	(0.00)
13	14.47	33.59	4.72	294	10	14.47	33.60		25.03	294	0.03
33	11.78	33.62	4.12	242	20	13.30	33.60	4.47	25.27	271	0.06
53	10.82	33.73	3.29	217	30	12.06	33.62	4.19	25.52	247	0.08
78	10.45	33.94	2.87	195	50	10.89	33.70	3.43	25.80	221	0.13
					75	10.49	33.91	2.91	26.04	198	0.18

110.35

PAOLINA-T; April 12, 1959; 0550 GCT; 29°46'N, 116°00'W; sounding, 750 fm; wind, 320°, force 5; weather, clear; sea, rough; wire angle, 40°.

3	16.42	33.58	5.90	337	0	(16.42)	(33.58)	(5.90)	(24.58)	(337)	(0.00)
10	16.39	33.58	5.76	336	10	16.39	33.58	5.76	24.59	336	0.03
25	15.70	33.57	6.14	322	20	16.05	33.58	5.94	24.66	329	0.07
33	15.16	33.54	6.02	312	30	15.39	33.55	6.10	24.79	316	0.10
45	13.12	33.55	4.71	271	50	12.64	33.57	4.37	25.38	261	0.16
56	12.16	33.58	4.08	251	75	11.08	33.59	4.10	25.68	232	0.22
73	11.29	33.59	4.08	235	100	10.52	33.81	3.46	25.96	206	0.27
86	10.38	33.58	4.13	221	150	10.12	34.05	2.47	26.21	182	0.37
97	10.49	33.78	3.53	208	200	9.77	34.30	1.36	26.46	158	0.46
107	10.56	33.87	3.21	202	250	9.53	34.40	0.91	26.58	146	0.54
122	10.30	33.98	2.38	190	300	8.76	34.39	0.90	26.70	135	0.61
141	10.17	34.03	2.55	184	400	(7.69)	(34.38)	(0.53)	(26.86)	(120)	(0.74)
159	10.07	34.07	2.26	180							
187	9.70	34.22	1.74	162							
218	9.88	34.38	1.06	154							
272	9.22	34.42	0.84	140							
331	8.30	34.38	0.94	129							
397	7.72	34.38	0.54	120							

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

SIO
CCOFI
5904

PAOLINA-T; April 12, 1959; 0944 GCT; 29°37'N, 116°18.5'W; sounding, 1165 fm; wind, 300°, force 5; weather, cloudy; sea, rough; wire angle, 25°.

110.40

2	17.03	33.68	5.43	343	0	(17.03)	(33.68)	(5.43)	(24.51)	(343)	(0.00)
11	17.04	33.68	5.49	343	10	17.04	33.68	5.49	24.51	343	0.03
34	16.82	33.67	5.59	339	20	17.04	33.68	5.49	24.51	343	0.07
61	16.20	33.61	5.50	330	30	17.00	33.68	5.53	24.52	342	0.10
71	16.05	33.62	5.46	326	50	16.33	33.61	5.54	24.63	332	0.17
89	15.36	33.69	5.34	306	75	15.93	33.62	5.44	24.73	323	0.25
102	13.16	33.61	5.11	267	100	13.42	33.61	5.14	25.26	272	0.33
116	12.36	33.67	4.90	248	150	9.84	33.61	4.11	25.91	210	0.45
142	10.28	33.59	4.25	218	200	9.13	33.97	2.59	26.31	172	0.55
158	9.58	33.66	3.93	202	250	9.41	34.29	1.13	26.52	152	0.63
211	9.10	34.04	2.24	166	300	8.83	34.32	0.89	26.64	142	0.71
237	9.46	34.26	1.25	156	400	7.25	34.27	0.69	26.83	123	0.84
278	9.14	34.31	0.99	147	500	6.20	34.26	0.49	26.97	109	0.96
334	8.28	34.33	0.76	133							
422	6.90	34.25	0.68	120							
505	6.16	34.27	0.47	108							
576	5.92	34.34	0.32	101							

PAOLINA-T; April 12, 1959; 1635 GCT; 29°17'N, 117°05'W; sounding, 2050 fm; wind, 330°, force 5; weather, overcast; sea, rough; wire angle, 10°.

110.50

3	17.26	33.83	5.52	336	0	(17.26)	(33.83)	(5.52)	(24.58)	(336)	(0.00)
13	17.26	33.80	5.66	339	10	17.26	33.81	5.65	24.56	339	0.03
33	17.27	33.83	5.59	338	20	17.26	33.81	5.66	24.56	339	0.07
63	16.86	33.75	5.52	334	30	17.27	33.83	5.62	24.57	338	0.10
73	16.74	33.76	5.50	330	50	17.27	33.83	5.59	24.57	338	0.17
88	16.28	33.75	5.44	321	75	16.72	33.76	5.49	24.65	330	0.25
102	14.81	33.68	5.47	295	100	14.94	33.68	5.47	25.00	298	0.33
118	14.10	33.69	5.16	280	150	11.43	33.66	3.87	25.67	233	0.47
141	11.90	33.63	4.09	243	200	9.96	33.90	2.98	26.13	190	0.58
161	10.96	33.71	3.63	221	250	8.38	33.99	2.67	26.45	159	0.66
190	10.20	33.89	3.10	194	300	7.87	34.08	1.93	26.60	145	0.74
220	9.42	33.93	2.76	180	400	7.15	34.18	1.24	26.78	128	0.89
249	8.39	33.99	2.68	159	500	6.49	34.29	0.59	26.95	112	1.01
298	7.88	34.08	1.95	146	600	5.91	34.35	0.37	27.08	100	1.12
352	7.51	34.14	1.38	136							
438	6.88	34.22	1.15	122							
524	6.36	34.32	0.46	108							
611	5.86	34.36	0.36	98							

PAOLINA-T; April 12, 1959; 2230 GCT; 28°56'N, 117°41'W; sounding, 2000+ fm; wind, 320°, force 6; weather, cloudy; sea, rough; wire angle, 18°.

110.60

2	17.26	33.74	5.16	344	0	(17.26)	(33.74)	(5.16)	(24.50)	(344)	(0.00)
12	17.25	33.73	5.15	344	10	17.25	33.73	5.15	24.50	344	0.03
31	17.16	33.72	5.11	342	20	17.22	33.73	5.14	24.50	344	0.07
60	16.81	33.69	5.15	337	30	17.16	33.72	5.11	24.51	343	0.10
69	16.77	33.71	5.18	335	50	17.12	33.71	5.11	24.52	342	0.17
84	16.06	33.77	5.20	315	75	16.30	33.72	5.20	24.72	323	0.25
98	-	33.58	5.12	-	100	14.20	33.58	5.07	25.07	290	0.33
112	12.75	33.57	4.45	263	150	10.79	33.68	3.47	25.80	220	0.46
136	11.32	33.63	3.69	232	200	9.79	33.94	2.57	26.18	184	0.56
155	10.67	33.69	3.40	218	250	8.78	34.03	2.23	26.42	162	0.65
184	10.36	33.96	2.42	192	300	8.20	34.09	1.79	26.55	150	0.73
213	9.23	33.91	2.69	178	400	7.68	34.28	0.72	26.78	128	0.88
242	8.87	34.01	2.34	165	500	6.68	34.31	0.35	26.94	112	1.00
345	7.75	34.14	1.39	139	600	5.94	34.33	0.37	27.06	101	1.12
428	7.64	34.35	0.45	122							
513	6.53	34.31	0.34	110							
600	5.94	34.33	0.37	101							

SIO

CCOFI
5904

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

110.70 PAOLINA-T; April 18, 1959; 0432 GCT; 28°36.5'N, 118°17'W; sounding, 1600 fm; wind, 320°, force 5; weather, cloudy; sea, moderate; wire angle, 10°.

2	17.33	33.79	5.27	342	0	(17.33)	(33.79)	(5.27)	(24.53)	(342)	(0.00)
12	17.34	33.73	5.22	346	10	17.34	33.74	5.23	24.49	345	0.03
32	17.35	33.75	5.22	345	20	17.34	33.74	5.22	24.48	346	0.07
63	17.18	33.78	5.23	339	30	17.35	33.75	5.22	24.49	345	0.10
72	16.79	33.73	5.18	334	50	17.35	33.76	5.22	24.50	344	0.17
88	16.10	33.81	4.73	313	75	16.65	33.73	5.12	24.64	331	0.26
103	14.82	33.72	4.34	293	100	15.20	33.75	4.41	24.99	298	0.34
118	13.97	33.77	4.55	271	150	11.25	33.70	3.42	25.74	226	0.47
142	11.55	33.69	3.51	232	200	10.16	33.99	2.35	26.16	186	0.57
162	10.92	33.74	3.30	218	250	8.95	34.14	1.79	26.47	157	0.66
191	10.35	33.93	2.54	194	300	8.52	34.20	1.47	26.59	146	0.74
220	9.66	34.09	1.99	172	400	7.26	34.23	0.83	26.80	126	0.88
250	8.95	34.14	1.79	157	500	6.67	34.33	0.38	26.96	110	1.01
299	8.52	34.20	1.48	146	600	6.03	34.36	0.27	27.06	101	1.12
355	7.56	34.20	1.22	132							
437	7.04	34.27	0.51	120							
525	6.50	34.35	0.34	107							
613	5.94	34.36	0.26	100							

110.80 PAOLINA-T; April 18, 1959; 1122 GCT; 28°17'N, 118°59'W; sounding, 2050 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 15°.

1	17.22	33.74	5.26	343	0	(17.22)	(33.74)	(5.26)	(24.51)	(343)	(0.00)
11	17.23	33.73	5.31	344	10	17.23	33.73	5.31	24.50	344	0.03
31	17.28	33.72	5.26	345	20	17.25	33.72	5.29	24.50	344	0.07
60	17.08	33.78	5.34	337	30	17.28	33.72	5.26	24.49	345	0.10
69	17.02	33.77	5.33	337	50	17.22	33.77	5.30	24.54	340	0.17
84	15.96	33.64	5.32	322	75	16.99	33.76	5.32	24.59	336	0.26
98	15.39	33.64	5.31	310	100	15.22	33.64	5.28	24.90	306	0.34
112	13.54	33.62	4.78	274	150	10.82	33.58	4.27	25.72	228	0.47
136	11.62	33.56	4.38	244	200	9.52	33.85	3.12	26.16	186	0.58
155	10.58	33.60	4.23	222	250	9.15	34.14	1.83	26.44	160	0.66
184	9.61	33.74	3.69	197	300	8.66	34.22	1.24	26.59	146	0.74
212	9.44	33.95	2.65	178	400	7.41	34.28	0.65	26.81	125	0.88
241	9.22	34.11	1.97	163	500	6.54	34.29	0.43	26.94	112	1.01
290	8.77	34.22	1.30	148	600	(6.18)	(34.31)	(0.39)	(27.01)	(106)	(1.12)
344	8.16	34.26	0.89	136							
427	7.61	34.28	0.55	120							
513	6.45	34.29	0.40	111							
598	6.19	34.31	0.39	106							

110.90 PAOLINA-T; April 18, 1959; 1805 GCT; 27°56.5'N, 119°39'W; sounding, 2000+ fm; wind, 300°, force 4; weather, cloudy; sea, very rough; wire angle, 08°.

2	17.79	33.96	5.33	340	0	(17.79)	(33.96)	(5.33)	(24.55)	(340)	(0.00)
12	17.79	33.96	5.47	340	10	17.79	33.96	5.45	24.55	340	0.03
32	17.78	33.99	5.36	337	20	17.79	33.97	5.42	24.56	339	0.07
62	17.78	33.96	5.39	340	30	17.78	33.98	5.38	24.57	338	0.10
72	17.61	33.95	5.41	336	50	17.78	33.97	5.39	24.56	339	0.17
87	16.16	33.82	5.32	313	75	17.38	33.93	5.41	24.63	332	0.25
102	14.47	33.78	5.11	281	100	14.72	33.78	5.14	25.12	285	0.33
118	12.80	33.66	4.60	257	150	10.66	33.68	4.31	25.83	218	0.46
142	11.07	33.66	4.45	226	200	8.98	33.83	3.36	26.23	180	0.56
161	10.16	33.70	4.09	208	250	8.16	34.02	2.50	26.50	154	0.64
191	9.10	33.78	3.58	186	300	7.55	34.11	1.85	26.67	138	0.72
220	8.72	33.95	2.86	167	400	6.75	43.20	0.89	26.85	121	0.86
250	8.16	34.02	2.50	154	500	5.96	34.25	0.53	26.99	108	0.98
298	7.56	34.11	1.87	138	600	5.47	34.33	0.41	27.11	96	1.08
353	7.13	34.17	1.23	128							
438	6.42	34.22	0.68	116							
522	5.80	34.27	0.49	105							
608	5.44	34.33	0.40	96							

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

SIO
CCOFI
5904

PAOLINA-T; April 20, 1959; 1401 GCT; 29°23'N, 115°17.5'W; sounding, 30 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 00°.

113.30

1	14.24	33.69	4.71	283	0	(14.24)	(33.69)	(4.71)	(25.15)	(283)	(0.00)
11	14.24	33.69	4.65	283	10	14.24	33.69	4.65	25.15	283	0.03
32	14.08	33.69	4.13	280	20	14.24	33.69	4.65	25.15	283	0.06
42	13.04	33.69	3.32	260	30	14.24	33.69	4.65	25.15	283	0.08

PAOLINA-T; April 20, 1959; 1031 GCT; 29°11'N, 115°41'W; sounding, 620 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 15°.

113.35

2	15.90	33.66	5.78	319	0	(15.90)	(33.66)	(5.78)	(24.77)	(319)	(0.00)
12	15.91	33.62	5.85	322	10	15.91	33.62	5.85	24.74	322	0.03
31	13.56	33.58	4.65	277	20	15.91	33.60	5.85	24.73	323	0.06
41	12.60	33.60	4.30	258	30	14.00	33.58	4.86	25.11	286	0.09
56	11.77	33.63	3.99	240	50	11.89	33.61	4.06	25.56	244	0.15
70	11.28	33.77	3.33	222	75	11.10	33.76	3.37	25.82	219	0.20
95	10.49	33.73	3.54	211	100	10.29	33.75	3.51	25.95	207	0.26
114	9.86	33.87	3.12	191	150	10.35	34.25	1.48	26.33	170	0.35
133	10.62	34.17	1.77	181	200	10.06	34.39	0.85	26.48	156	0.44
152	10.32	34.26	1.46	169	250	9.27	34.35	0.89	26.59	146	0.51
180	10.10	34.38	1.31	157	300	8.67	34.34	0.77	26.68	137	0.59
213	10.04	34.40	0.80	155	400	7.60	34.34	0.50	26.84	122	0.72
241	9.44	34.36	0.90	148	500	6.78	34.40	0.56	27.00	107	0.84
289	8.74	34.34	0.81	138	600	(6.03)	(34.36)		(27.07)	(100)	(0.95)
342	8.32	34.34	0.50	132							
424	7.37	34.35	0.50	118							
508	6.72	34.40	0.57	106							
594	6.08	34.37	0.26	100							

PAOLINA-T; April 20, 1959; 0701 GCT; 29°01.5'N, 115°59'W; sounding, 800 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 23°.

113.40

2	15.38	33.58		314	0	(15.38)	(33.58)		(24.82)	(314)	(0.00)
11	15.41	33.55		317	10	15.40	33.55		24.79	317	0.03
30	15.40	33.57		315	20	15.40	33.56		24.79	317	0.06
39	14.84	33.57		304	30	15.40	33.57		24.81	315	0.09
52	13.88	33.54		287	50	14.03	33.54		25.07	290	0.16
65	12.53	33.56		259	75	11.39	33.57		25.62	238	0.22
87	10.54	33.59		222	100	10.40	33.72		25.91	210	0.28
106	10.40	33.78		206	150	9.75	34.12		26.33	171	0.38
123	10.30	33.93		193	200	9.91	34.35		26.48	156	0.46
141	10.12	34.11		177	250	8.97	34.33		26.62	143	0.53
166	9.76	34.18		166	300	8.40	34.33		26.72	134	0.61
197	9.92	34.34		157	400	7.50	34.38		26.88	118	0.74
224	9.34	34.33		148	500	6.58	34.34		26.98	109	0.86
270	8.70	34.33		139							
320	8.20	34.34		130							
397	7.52	34.38		118							
478	6.78	34.34		111							
560	6.12	34.35		102							

SIO

CCOFI
5904

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

113.50

PAOLINA-T; April 20, 1959; 0035 GCT; 28°42'N, 116°37.5'W; sounding, 2000 fm; wind, 340°, force 4; weather, overcast; sea, moderate; wire angle, 12°.

1	17.18	33.81	5.38	337	0	(17.18)	(33.81)	(5.38)	(24.58)	(337)	(0.00)
11	17.18	33.75	5.43	341	10	17.18	33.75	5.43	24.54	341	0.03
31	17.15	33.78	5.38	338	20	17.16	33.76	5.40	24.55	340	0.07
61	17.02	33.82	5.38	333	30	17.15	33.78	5.38	24.56	338	0.10
71	17.13	33.88	5.33	330	50	17.19	33.83	5.38	24.59	336	0.17
86	15.76	33.73	5.47	311	75	17.10	33.88	5.33	24.66	330	0.25
100	14.44	33.60	5.40	294	100	14.44	33.60	5.40	25.03	294	0.33
115	13.34	33.73	5.16	262	150	10.00	33.66	4.04	25.93	208	0.46
138	10.69	33.64	4.60	222	200	9.62	34.04	2.23	26.29	174	0.56
158	9.80	33.72	3.69	201	250	9.31	34.29	1.33	26.54	151	0.64
186	9.63	33.91	2.69	184	300	8.76	34.33	1.01	26.65	140	0.71
215	9.60	34.16	1.83	165	400	7.55	34.36	0.60	26.86	120	0.85
243	9.38	34.27	1.39	153	500	6.80	34.38	0.39	26.98	108	0.97
291	8.90	34.33	1.03	142	600	(5.88)	(34.38)	(0.28)	(27.10)	(97)	(1.08)
345	8.00	34.31	0.93	130							
428	7.34	34.39	0.45	115							
512	6.70	34.38	0.39	108							
597	5.91	34.38	0.28	98							

113.60

PAOLINA-T; April 19, 1959; 1914 GCT; 28°29'N, 117°12.4'W; sounding, 1900 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 10°.

2	17.17	33.77		340	0	(17.17)	(33.77)		(24.55)	(340)	(0.00)
12	17.16	33.75		340	10	17.16	33.76		24.55	340	0.03
32	17.15	33.73		342	20	17.15	33.74		24.54	341	0.07
63	16.42	33.66		331	30	17.15	33.73		24.53	342	0.10
72	15.92	33.62		322	50	17.00	33.71		24.55	340	0.17
87	14.91	33.74		293	75	15.75	33.63		24.78	318	0.25
102	13.88	33.64		280	100	14.10	33.66		25.15	282	0.33
116	12.58	33.58		259	150	10.90	33.72		25.82	219	0.46
140	11.22	33.66		229	200	10.03	34.09		26.25	178	0.56
159	10.62	33.78		210	250	9.78	34.33		26.48	156	0.64
188	9.70	33.87		188	300	9.20	34.36		26.60	144	0.72
217	10.70	34.40		166	400	7.87	34.34		26.80	126	0.86
246	9.83	34.33		156	500	6.72	34.33		26.96	111	0.98
295	9.26	34.36		146	600	5.98	34.37		27.08	99	1.10
348	8.40	34.33		134							
432	7.56	34.34		122							
519	6.51	34.33		108							
604	5.96	34.37		99							

113.70

PAOLINA-T; April 19, 1959; 1255 GCT; 28°06.5'N, 117°52'W; sounding, 1800 fm; wind, 320°, force 3; weather, drizzle; sea, moderate; wire angle, 08°.

1	18.23	34.06	5.24	343	0	(18.23)	(34.06)	(5.24)	(24.52)	(343)	(0.00)
11	18.26	34.02	5.32	346	10	18.25	34.02	5.31	24.48	346	0.03
31	18.26	34.01	5.38	347	20	18.26	34.01	5.37	24.47	347	0.07
61	18.27	34.04	5.30	345	30	18.26	34.01	5.38	24.47	347	0.10
71	18.03	34.02	5.30	341	50	18.26	34.02	5.34	24.48	346	0.17
86	16.48a)	33.84	5.32	319	75	17.95	34.01	5.30	24.55	340	0.26
101	14.60	33.68	4.93	291	100	14.66	33.68	4.96	25.05	292	0.34
116	13.88	33.69	4.63	276	150	11.39	33.66	4.26	25.68	232	0.47
141	11.92	33.65	4.40	242	200	9.34	33.80	3.42	26.14	188	0.58
161	10.80	33.67	4.05	221	250	8.53	34.01	2.53	26.44	160	0.67
190	9.64	33.75	3.63	196	300	7.87	34.08	2.03	26.60	145	0.75
219	8.88	33.92	2.97	172	400	7.06	34.23	0.93	26.82	124	0.89
248	8.57	34.01	2.56	160	500	6.25	34.26	0.53	26.96	111	1.01
297	7.90	34.08	2.08	146	600	5.76	34.31	0.39	27.06	101	1.12
350	7.40	34.21	1.31	129							
434	6.80	34.23	0.72	120							
519	6.11	34.27	0.49	108							
608	5.72	34.31	0.38	100							

160

a) Alternate value, 15.93°C, not used in interpolation.

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
5904

PAOLINA-T; April 19, 1959; 0624 GCT; 27°45'N, 118°32.5'W; sounding, 2000+ fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 07°.

113.80

2	18.12	34.08		338	0	(18.12)	(34.08)		(24.56)	(338)	(0.00)
13	18.14	34.04		342	10	18.13	34.05		24.53	342	0.03
32	18.13	34.05		342	20	18.14	34.04		24.52	342	0.07
62	18.08	34.04		341	30	18.13	34.05		24.53	342	0.10
72	18.08	34.02		342	50	18.10	34.04		24.54	341	0.17
87	18.06	34.02		341	75	18.08	34.02		24.52	342	0.26
101	17.60	33.96		336	100	17.61	33.96		24.59	336	0.34
117	15.32	33.77		299	150	11.49	33.68		25.68	232	0.48
141	12.04	33.63		246	200	9.81	33.95		26.18	184	0.59
161	11.00	33.77		217	250	8.73	34.04		26.44	160	0.68
190	10.22	33.94		192	300	8.04	34.14		26.62	143	0.76
219	9.04	33.96		172	400	7.36	34.23		26.79	127	0.90
249	8.74	34.04		161	500	6.47	34.25		26.92	114	1.02
299	8.04	34.14		143	600	5.80	34.27		27.03	104	1.14
353	7.72	34.20		134							
438	7.02	34.25		122							
523	6.28	34.25		112							
611	5.74	34.28		103							

PAOLINA-T; April 19, 1959; 0003 GCT; 27°22'N, 119°12'W; sounding, 2000+ fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 07°.

113.90

1	18.28	34.09	5.05	342	0	(18.28)	(34.09)	(5.05)	(24.52)	(342)	(0.00)
12	18.29	34.02	5.16	347	10	18.29	34.02	5.16	24.47	347	0.03
32	18.24	34.04	5.29	345	20	18.28	34.03	5.22	24.48	346	0.07
62	18.19	34.04	5.25	344	30	18.25	34.04	5.28	24.49	345	0.10
72	18.21	34.06	5.15	342	50	18.20	34.04	5.27	24.51	344	0.17
87	17.24	33.89	5.11	333	75	18.20	34.06	5.14	24.52	342	0.26
102	16.60	33.86	4.96	320	100	16.68	33.86	4.99	24.74	322	0.34
117	15.00	33.78	4.04	292	150	11.89	33.69	3.93	25.62	238	0.48
142	12.54	33.73	3.91	247	200	9.50	33.91	2.71	26.21	182	0.59
163	10.94	33.64	3.96	225	250	8.68	34.06	2.32	26.45	159	0.68
192	9.69	33.86	2.88	189	300	7.86	34.16	1.90	26.66	140	0.76
222	9.03	34.01	2.43	168	400	6.66	34.12	1.05	26.80	126	0.89
253	8.64	34.06	2.30	158	500	5.88	34.23	0.65	26.98	108	1.02
302	7.82	34.16	1.87	139	600	5.64	34.33	0.37	27.09	98	1.13
358	7.08	34.11	1.32	133							
443	6.26	34.15	0.87	119							
529	5.76	34.27	0.54	104							
615	5.62	34.34	0.35	97							

PAOLINA-T; April 20, 1959; 1908 GCT; 28°56'N, 114°41'W; sounding, 40 fm; wind, 280°, force 4; weather, clear; sea, moderate; wire angle, 05°.

117.26

2	16.34	33.74	5.65	322	0	(16.34)	(33.74)	(5.65)	(24.74)	(322)	(0.00)
12	16.16	33.73	5.70	320	10	16.20	33.73	5.69	24.75	321	0.03
33	13.54	33.60	4.56	275	20	15.80	33.71	5.63	24.82	314	0.06
53	12.72	33.70	3.24	253	30	14.10	33.62	4.88	25.12	285	0.09
					50	12.83	33.68	3.49	25.42	256	0.15

SIO

CCOFI
5904

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

117.30

PAOLINA-T; April 20, 1959; 2138 GCT; 28°50'N, 114°53'W; sounding, 51 fm; wind, 320°, force 5; weather, clear; sea, rough; wire angle, 10°.

1	16.79	33.73	5.60	334	0	(16.79)	(33.73)	(5.60)	(24.61)	(334)	(0.00)
11	16.72	33.74	5.64	332	10	16.73	33.74	5.64	24.63	332	0.03
31	14.92	33.65	5.04	299	20	16.53	33.74	5.61	24.67	328	0.07
51	12.28	33.69	3.14	246	30	15.10	33.65	5.13	24.93	303	0.10
76	11.36	33.82	2.45	220	50	12.32	33.69	3.15	25.53	246	0.15
91	11.18	33.95	1.56	206	75	11.39	33.81	2.51	25.80	220	0.21

117.35

PAOLINA-T; April 21, 1959; 0027 GCT; 28°38'N, 115°16'W; sounding, 140 fm;^{a)} wind, 260°, force 4; weather, overcast; sea, rough; wire angle, 05°.

2	16.80	33.61	5.66	343	0	(16.80)	(33.61)	(5.66)	(24.52)	(343)	(0.00)
12	16.80	33.62	5.72	342	10	16.80	33.62	5.72	24.52	342	0.03
32	15.78	33.58	5.74	323	20	16.78	33.62	5.72	24.53	342	0.07
52	13.88	33.56	5.29	286	30	16.10	33.59	5.73	24.67	328	0.10
78	12.10	33.68	4.20	243	50	13.88	33.56	5.30	25.11	286	0.16
103	10.52	33.76	3.84	209	75	12.30	33.67	4.32	25.52	247	0.23
128	10.04b)	34.04	2.86	182	100	10.70	33.75	3.88	25.88	213	0.29
157	10.36	34.27	1.41	169	150	10.25	34.22	1.72	26.32	171	0.38

117.40

PAOLINA-T; April 21, 1959; 0454 GCT; 28°28'N, 115°35.5'W; sounding, 500+ fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 15°.

3	16.16	33.58	5.74	331	0	(16.16)	(33.58)	(5.74)	(24.64)	(331)	(0.00)
13	16.16	33.58	5.79	331	10	16.16	33.58	5.79	24.64	331	0.03
32	15.84	33.58	5.70	324	20	16.10	33.58	5.79	24.65	330	0.07
62	13.68	33.53	5.22	284	30	15.90	33.58	5.72	24.70	325	0.10
72	13.08	33.55	4.94	271	50	15.00	33.56	5.50	24.88	308	0.16
86	11.46	33.57	4.56	240	75	12.78	33.56	4.85	25.34	264	0.23
100	10.36	33.75	3.63	208	100	10.36	33.75	3.63	25.94	208	0.29
116	9.96	33.80	3.46	197	150	10.08	34.00	2.70	26.18	185	0.39
138	9.81	33.84	3.57	192	200	10.18	34.33	1.23	26.42	162	0.48
157	10.26	34.11	2.06	180	250	9.90	34.43	0.70	26.55	150	0.56
186	10.24	34.30	1.30	165	300	9.40	34.46	0.58	26.65	140	0.64
214	10.11	34.36	1.13	158	400	7.87	34.36	0.51	26.82	124	0.77
243	9.96	34.42	0.74	151	500	6.83	34.36	0.35	26.96	111	0.90
292	9.54	34.46	0.58	142	600	(6.03)	(34.40)	(0.34)	(27.09)	(98)	(1.00)
345	8.51	34.38	0.60	132							
428	7.56	34.36	-	120							
514	6.70	34.36	0.35	109							
599	6.04	34.40	0.34	98							

117.50

PAOLINA-T; April 22, 1959; 0203 GCT; 28°07'N, 116°15'W; sounding, 2450 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 10°.

2	16.96	33.70	5.73	340	0	(16.96)	(33.70)	(5.73)	(24.55)	(340)	(0.00)
12	16.92	33.71	5.72	338	10	16.93	33.71	5.72	24.56	338	0.03
32	16.78	33.71	5.68	335	20	16.86	33.71	5.70	24.58	337	0.07
61	14.00	33.59	5.08	285	30	16.78	33.71	5.68	24.60	335	0.10
71	12.73	33.60	4.28	260	50	16.00	33.69	5.48	24.77	319	0.17
85	11.63	33.57	4.69	243	75	12.40	33.59	4.37	25.44	255	0.24
100	10.81	33.63	3.93	224	100	10.81	33.63	3.93	25.76	224	0.30
115	10.62	33.81	2.98	208	150	9.61	33.91	2.89	26.19	184	0.40
140	10.01	33.91	2.88	190	200	8.92	34.04	2.46	26.40	164	0.49
159	9.36	33.93	2.91	178	250	8.24	34.14	2.00	26.58	147	0.57
188	9.08	34.02	2.50	168	300	7.74	34.16	1.42	26.68	137	0.64
217	8.69	34.07	2.43	158	400	7.53	34.39	0.59	26.88	118	0.78
246	8.30	34.13	2.06	148	500	6.77	34.40	0.42	27.00	107	0.89
295	7.74	34.15	1.46	138	600	6.06	34.42	0.42	27.10	97	1.00
349	7.76	34.31	0.74	127							
433	7.34	34.42	0.52	112							
518	6.60	34.39	0.39	106							
605	6.02	34.42	0.42	96							

a) Sounding varied from 140 to 100 fathoms.

b) Alternate value, 9.78°C, not used in interpolation.

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
5904

PAOLINA-T; April 22, 1959; 0852 GCT; 27°44.5'N, 116°56.5'W; sounding, 2100 fm; wind, 330°, force 4; weather, overcast; sea, moderate; wire angle, 10°.

117.60

2	17.42	33.80	5.34	343	0	(17.42)	(33.80)	(5.34)	(24.51)	(343)	(0.00)
12	17.42	33.79	5.34	344	10	17.42	33.79	5.34	24.50	344	0.03
32	17.42	33.79	5.42	344	20	17.42	33.79	5.42	24.50	344	0.07
62	17.38	33.77	5.34	344	30	17.42	33.79	5.42	24.50	344	0.10
72	16.86	33.73	5.40	336	50	17.41	33.78	5.34	24.50	344	0.17
87	15.50	33.66	5.17	311	75	16.50	33.71	5.33	24.67	328	0.26
102	13.47	33.55	4.73	278	100	13.75	33.56	4.80	25.15	282	0.33
117	12.71	33.57	4.45	262	150	10.44	33.76	3.21	25.94	208	0.46
141	10.73	33.69	3.52	218	200	9.72	34.03	2.20	26.27	176	0.56
160	10.22	33.86	2.87	198	250	9.55	34.25	2.14	26.46	158	0.64
189	9.84	34.02	2.25	180	300	8.47	34.24	1.03	26.63	142	0.72
218	9.52	34.05	2.14	172	400	7.76	34.35	0.48	26.82	124	0.86
247	9.58	34.24	2.16	159	500	6.68	34.35	0.34	26.98	109	0.98
295	8.52	34.24	1.06	143	600	5.81	34.36	0.30	27.09	98	1.09
348	8.17	34.31	0.72	132							
433	7.46	34.38	0.35	118							
517	6.48	34.34	0.34	108							
602	5.80	34.36	0.30	98							

PAOLINA-T; April 22, 1959; 1533 GCT; 27°22'N, 117°38'W; sounding, 2050 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 04°.

117.70

2	18.08	34.08	5.12	338	0	(18.08)	(34.08)	(5.12)	(24.57)	(338)	(0.00)
12	18.10	34.09	4.27u	338	10	18.10	34.09	(5.19)	24.57	338	0.03
32	18.10	34.10	5.34	337	20	18.10	34.09	(5.27)	24.57	338	0.07
63	18.10	34.08	4.69u	339	30	18.10	34.10	(5.33)	24.58	337	0.10
73	18.11	34.08	5.30	339	50	18.10	34.09	5.33	24.57	338	0.17
88	17.30	33.95	5.33	329	75	18.10	34.08	5.30	24.56	339	0.25
102	16.35	33.87	4.90	314	100	16.63	33.91	5.03	24.78	318	0.34
117	14.54	33.77	4.99	283	150	11.78	33.70	3.94	25.65	235	0.48
142	12.32	33.68	4.19	247	200	9.98	33.96	2.69	26.17	186	0.58
162	11.02	33.75	3.59	219	250	8.99	34.13	1.96	26.46	158	0.67
190	10.09	33.90	2.94	192	300	9.03	34.34	1.07	26.62	143	0.75
220	9.75	34.07	2.26	174	400	7.77	34.33	0.71	26.81	125	0.89
250	8.99	34.13	1.96	158	500	6.82	34.34	0.48	26.95	112	1.01
298	9.06	34.34	1.08	144	600	6.10	34.38	0.39	27.07	100	1.12
351	8.48	34.36	0.82	134							
436	7.28	34.32	0.62	120							
521	6.68	34.35	0.44	109							
607	6.04	34.39	0.39	99							

PAOLINA-T; April 22, 1959; 1709 GCT;^{a)} 27°22'N, 117°38'W; sounding, 2050 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 04°.

117.70

1	18.14	34.13	5.35	336	0	(18.14)	(34.13)	(5.35)	(24.59)	(336)	(0.00)
11	18.12	34.10	5.37	337	10	18.12	34.10	5.37	24.58	337	(0.03)
51	18.12	34.09	5.34	338	20	(18.12)	(34.09)	(5.34)	(24.57)	(338)	(0.07)
56	18.12	34.09	5.40	338	30	(18.12)	(34.09)	(5.34)	(24.57)	(338)	(0.10)
61	18.13	34.08	5.48	339	50	(18.12)	(34.09)	(5.34)	(24.57)	(338)	(0.17)
66	18.12	34.08	5.30	339	75	18.12	34.07	5.33	24.55	340	(0.25)
71	18.13	34.05	5.35	341	100	15.30	33.77	5.10	24.98	298	(0.34)
76	18.11	34.07	5.33	340	150	11.32	33.71	3.57	25.74	226	(0.47)
80	17.78	33.98	5.40	338	200	10.06	33.93	2.71	26.12	190	(0.57)
86	17.01	33.86	5.19	330							
90	16.65	33.81	5.17	325							
95	16.07	33.80	5.16	313							
100	15.30	33.77	5.10	298							
104	14.61	33.76	4.90	286							
109	14.22	33.73	4.87	280							
114	13.93	33.73	4.75	274							
149	11.34	33.71	3.59	227							
200	10.06	33.93	2.71	190							

a) Special cast.

SIO

CCOFI
5904

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

117.80 PAOLINA-T; April 22, 1959; 2153 GCT; 27°04.5'N, 118°08.5'W; sounding, 2000+ fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 10°.

2	18.31	34.05	5.29	345	0	(18.31)	(34.05)	(5.29)	(24.49)	(345)	(0.00)
12	18.13	33.98	5.37	346	10	18.17	34.00	5.35	24.48	346	0.03
32	18.04	33.97	5.31	345	20	18.06	33.97	5.35	24.48	346	0.07
62	18.02	33.96	5.34	346	30	18.05	33.97	5.31	24.49	345	0.10
72	18.00	33.96	5.36	345	50	18.03	33.96	5.32	24.48	346	0.17
86	16.95	33.89	5.24	326	75	17.95	33.96	5.35	24.51	344	0.26
101	16.16	33.84	5.08	312	100	16.18	33.84	5.08	24.84	312	0.34
115	15.40	33.77	4.70	301	150	11.98	33.81	3.22	25.69	231	0.48
139	12.62	33.77	3.64	246	200	9.99	33.94	2.63	26.15	188	0.59
159	11.44	33.84	2.89	220	250	9.07	34.09	2.12	26.42	162	0.68
188	10.53	33.91	2.68	198	300	8.93	34.24	1.33	26.56	149	0.76
216	9.40	34.00	2.56	174	400	7.72	34.30	0.73	26.79	127	0.90
246	9.08	34.08	2.19	164	500	6.78	34.32	0.41	26.94	113	1.03
295	8.97	34.23	1.39	150	600	6.03	34.36	0.24	27.07	101	1.14
349	8.30	34.28	0.97	136							
434	7.34	34.31	0.58	121							
517	6.64	34.32	0.38	111							
604	6.00	34.36	0.24	100							

117.90 PAOLINA-T; April 23, 1959; 0450 GCT; 26°47'N, 118°50'W; sounding, 2000+ fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 05°.

2	18.18	33.99	5.36	346	0	(18.18)	(33.99)	(5.36)	(24.48)	(346)	(0.00)
12	18.18	33.98	5.36	347	10	18.18	33.98	5.36	24.47	347	0.03
32	18.17	34.01	5.30	345	20	18.18	33.99	5.35	24.48	346	0.07
58	18.16	33.98	5.33	346	30	18.17	34.01	5.30	24.49	345	0.10
68	18.18	34.00	5.23	346	50	18.16	33.99	5.33	24.48	346	0.17
78	18.12	34.02	5.21	344	75	18.15	34.02	5.22	24.50	344	0.26
93	17.07	33.96	5.17	324	100	16.19	33.87	4.97	24.86	310	0.34
107	15.12	33.76	4.70	296	150	11.90	33.76	3.54	25.66	234	0.48
132	12.86	33.70	3.95	255	200	10.00	34.04	2.26	26.23	180	0.58
152	11.80	33.77	3.48	231	250	9.27	34.22	1.70	26.48	156	0.67
176	10.51	33.89	2.89	200	300	8.58	34.23	1.38	26.61	144	0.75
206	9.90	34.08	2.15	176	400	7.59	34.33	0.73	26.83	123	0.89
235	9.44	34.20	1.82	160	500	6.50	34.35	0.37	27.00	107	1.01
275	8.96	34.22	1.53	151							
334	8.04	34.25	1.20	135							
408	7.52	34.33	0.67	122							
482	6.66	34.34	0.41	110							
563	6.11	34.35	0.25	101							

118.39 PAOLINA-T; April 21, 1959; 0805 GCT; 28°18.5'N, 115°24'W; sounding, 160 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 12°.

2	16.60	33.64	5.70	336	0	(16.60)	(33.64)	(5.70)	(24.59)	(336)	(0.00)
12	16.60	33.64	5.63	336	10	16.60	33.64	5.63	24.59	336	0.03
32	15.98	33.60	5.77	326	20	16.60	33.64	5.63	24.59	336	0.07
51	13.20	33.58	5.07	270	30	16.00	33.60	5.77	24.70	326	0.10
75	10.80	33.69	4.03	220	50	13.60	33.58	5.20	25.20	278	0.16
99	11.38	34.03	2.17	204	75	10.80	33.69	4.03	25.81	220	0.22
122	10.78	34.14	1.67	186	100	11.40	34.04	2.15	25.98	204	0.28
158	10.60	34.27	1.21	173	150	10.63	34.24	1.30	26.27	176	0.37
196	10.20	34.38	0.84	158	200	10.16	34.38	0.84	26.46	157	0.46
244	9.64	34.39	0.76	149	250	(9.59)	(34.39)	(0.76)	(26.56)	(148)	(0.53)

119.33 STRANGER; April 18, 1959; 1944 GCT; 28°19'N, 114°56'W; sounding, 60 fm; wind, 350°, force 2; weather, overcast; sea, moderate; wire angle, 08°.

2	17.58	33.81	5.29	346	0	(17.58)	(33.81)	(5.29)	(24.48)	(346)	(0.00)
12	17.53	33.79	5.60	346	10	17.54	33.79	5.55	24.48	346	0.03
32	17.40	33.78	5.56	344	20	17.49	33.79	5.59	24.49	345	0.07
52	16.69	33.75	5.63	330	30	17.41	33.78	5.57	24.50	344	0.10
77	11.94	-	2.51	-	50	17.00	33.76	5.62	24.59	336	0.17
					75	12.00		2.75			

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$\frac{1}{10} \frac{cm}{g}$	m	°C	‰	ml/L	g/L	$\frac{1}{10} \frac{cm}{g}$	dyn. m

SIO
CCOFI
5904

STRANGER; April 19, 1959; 0030 GCT; 28°23'N, 114°14.5'W; sounding, 32 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 00°.

120.25

2	16.98	33.75	5.74	336	0	(16.98)	(33.75)	(5.74)	(24.59)	(336)	(0.00)
12	16.96	33.77	5.70	334	10	16.97	33.77	5.71	24.60	335	0.03
32	16.45	33.72	5.76	327	20	16.71	33.75	5.73	24.64	331	0.07
42	14.04	33.66	4.52	281	30	16.52	33.72	5.76	24.68	328	0.10

STRANGER; April 18, 1959; 2202 GCT; 28°13'N, 114°34'W; sounding, 49 fm; wind, 350°, force 3; weather, cloudy; sea, moderate; wire angle, 02°.

120.30

2	16.84	33.73	5.21	336	0	(16.84)	(33.73)	(5.21)	(24.59)	(336)	(0.00)
12	16.72	33.71	5.56	334	10	16.76	33.72	5.53	24.61	334	0.03
32	16.08	33.66	5.65	323	20	16.30	33.67	5.64	24.68	327	0.07
52	12.53	33.63	3.93	254	30	16.10	33.67	5.65	24.73	323	0.10
77	11.32	33.84	2.59	217	50	13.30	33.63	4.45	25.30	268	0.16
					75	11.57	33.78	2.92	25.74	226	0.22

STRANGER; April 18, 1959; 1736 GCT; 28°03'N, 114°53.5'W; sounding, 41 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 04°.

120.35

2	17.72	33.86	5.67	345	0	(17.72)	(33.86)	(5.67)	(24.49)	(345)	(0.00)
12	17.70	33.85	5.41	345	10	17.70	33.85	5.45	24.49	345	0.03
32	17.69	33.85	5.29	345	20	17.70	33.85	5.37	24.49	345	0.07
52	17.62	33.83	5.36	345	30	17.69	33.85	5.30	24.49	345	0.10
					50	17.63	33.83	5.35	24.49	345	0.17

PAOLINA-T; April 24, 1959; 1904 GCT; 27°44'N, 115°29'W; sounding, 1100 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 17°.

120.45

2	17.22	33.66	5.19	349	0	(17.22)	(33.66)	(5.19)	(24.45)	(349)	(0.00)
12	16.95	33.60	5.10	347	10	16.99	33.60	5.11	24.47	347	0.04
31	16.22	33.58	5.27	332	20	16.62	33.59	5.18	24.54	340	0.07
41	15.68	33.57	5.12	322	30	16.26	33.58	5.27	24.62	333	0.10
51	14.75	33.62	4.70	298	50	14.86	33.61	4.75	24.96	301	0.17
65	13.32	33.79	3.24	257	75	12.22	33.78	3.08	25.62	238	0.23
79	11.76	33.78	3.03	229	100	10.59	33.84	2.85	25.97	204	0.29
98	10.58	33.81	2.92	207	150	10.89	34.31	1.01	26.28	175	0.38
122	10.95	34.19	1.52	185	200	10.27	34.41	0.77	26.47	157	0.47
140	10.96	34.28	1.13	178	250	9.99	34.48	0.48	26.58	147	0.55
168	10.73	34.37	0.87	168	300	9.58	34.46	0.42	26.63	142	0.62
196	10.30	34.40	0.79	158	400	8.57	34.41	0.37	26.75	130	0.76
225	10.18	34.46	0.60	152	500	7.43	34.38	0.30	26.89	117	0.89
262	9.89	34.49	0.45	145							
319	9.41	34.45	0.41	141							
391	8.66	34.42	0.37	132							
464	7.94	34.38	0.34	124							
544	6.74	34.38	0.26	108							

SIO
CCOFI
5904

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

120.50

PAOLINA-T; April 24, 1959; 1422, 1600, 1624 GCT; 27°34'N, 115°49'W; sounding, 2150 fm; wind, 300°, force 3; weather, cloudy; sea, slight; wire angle, 04, 02, 00°.

2	17.50	33.76	5.34	348	0	(17.50)	(33.76)	(5.34)	(24.46)	(348)	(0.00)
12	17.50	33.77	5.33	347	10	17.50	33.77	5.33	24.47	347	0.03
33	17.46	33.79	5.34	344	20	17.50	33.78	5.33	24.48	346	0.07
58	15.80	33.59	5.48	322	30	17.48	33.79	5.34	24.49	345	0.10
68	15.15	33.60	5.29	308	50	17.02	33.77	5.40	24.59	336	0.17
78	13.16	33.60	4.77	268	75	13.30	33.58	4.84	25.25	273	0.25
93	12.22	33.68	4.08	245	100	11.90	33.70	3.92	25.62	238	0.31
108	11.54	33.73	3.74	229	150	10.00	33.82	3.21	26.06	196	0.42
133	10.84	33.83	3.22	210	200	8.70	34.03	2.63	26.43	161	0.51
153	9.84	33.82	3.21	194	250	8.51	34.21	1.60	26.60	145	0.59
177	9.18	33.93	2.99	175	300	8.41	34.29	0.99	26.68	137	0.67
207	8.58	34.05	2.51	157	400	7.53	34.32	0.47	26.83	123	0.80
					500	6.60	34.36	0.33	27.00	107	0.92
232	8.39	34.13	2.07	149							
271	8.73	34.30	1.14	141							
332	7.92	34.25	0.85	133							
408	7.49	34.32	0.44	122							
484	6.72	34.35	0.33	109							
565	6.14	34.36	0.35	102							

120.60

PAOLINA-T; April 24, 1959; 0800 GCT; 27°12.5'N, 116°28.5'W; sounding, 2000+ fm; wind, 300°, force 2; weather, partly cloudy; sea, slight; wire angle, 09°.

1	17.74	33.79		351	0	(17.74)	(33.79)		(24.43)	(351)	(0.00)
11	17.74	33.80		351	10	17.74	33.80		24.43	351	0.04
31	18.10	33.98		346	20	18.00	33.93		24.47	347	0.07
41	18.16	34.01		344	30	18.08	33.98		24.48	346	0.10
51	18.19	34.04		343	50	18.18	34.04		24.51	343	0.17
65	17.84	33.99		339	75	17.25	33.94		24.66	329	0.26
80	16.92	33.91		323	100	14.62	33.77		25.12	285	0.34
100	14.62	33.77		285	150	10.97	33.80		25.86	215	0.46
123	12.14	33.68		244	200	10.21	34.14		26.26	177	0.56
143	11.22	33.76		222	250	9.53	34.22		26.45	159	0.65
171	10.50	33.88		200	300	8.60	34.22		26.59	146	0.72
200	10.21	34.14		177	400	7.12	34.25		26.83	123	0.86
229	9.79	34.19		166	500	6.39	34.29		26.96	110	0.99
268	9.30	34.25		154							
327	7.95	34.18		139							
401	7.10	34.25		122							
475	6.56	34.27		114							
556	6.02	34.33		103							

120.70

PAOLINA-T; April 24, 1959; 0136 GCT; 26°54'N, 117°10.5'W; sounding, 2000+ fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 04°.

1	18.50	33.95	5.35	357	0	(18.50)	(33.95)	(5.35)	(24.37)	(357)	(0.00)
11	18.02	33.87	5.40	352	10	18.06	33.87	5.39	24.42	352	0.04
32	17.89	33.87	5.33	349	20	17.93	33.87	5.35	24.44	350	0.07
57	17.72	33.83	5.37	347	30	17.89	33.87	5.33	24.45	349	0.10
67	17.40	33.78	5.40	344	50	17.89	33.87	5.33	24.45	349	0.18
77	17.30	33.78	5.35	342	75	17.32	33.78	5.36	24.52	343	0.26
92	16.90	33.76	5.34	334	100	16.46	33.74	5.18	24.70	326	0.35
108	15.86	33.71	4.90	315	150	11.50	33.72	3.50	25.70	230	0.49
133	12.97	33.68	4.00	259	200	10.77	34.05	2.20	26.10	192	0.60
153	11.40	33.75	3.42	226	250	10.29	34.32	1.20	26.40	164	0.69
178	11.14	33.95	2.69	206	300	9.22	34.32	1.11	26.57	148	0.77
207	10.68	34.10	2.02	188	400	7.66	34.25	0.92	26.76	130	0.91
237	10.48	34.29	1.33	170	500	6.73	34.32	0.51	26.94	113	1.04
277	9.76	34.35	1.07	153							
337	8.31	34.23	1.20	140							
412	7.54	34.25	0.85	128							
486	6.82	34.31	0.53	114							
567	6.38	34.36	0.46	105							

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

SIO
CCOFI
5904

PAOLINA-T; April 23, 1959; 2003 GCT; 26°37'N, 117°46.5'W; sounding, 2000+ fm; wind, 300°, force 2; weather, cloudy; sea, slight; wire angle, 06°.

120.80

1	18.53	34.03		352	0	(18.53)	(34.03)		(24.42)	(352)	(0.00)
11	18.59	34.11		348	10	18.58	34.11		24.46	348	0.04
32	18.70	34.15		348	20	18.65	34.13		24.46	348	0.07
57	18.54	34.07		349	30	18.70	34.15		24.46	348	0.10
67	17.70	33.87		344	50	18.53	34.07		24.45	349	0.17
77	17.68	33.95		338	75	17.69	33.93		24.55	340	0.26
92	16.32	33.88		312	100	15.40	33.83		25.01	296	0.34
107	14.53	33.78		282	150	10.80	33.69		25.81	220	0.47
132	11.97	33.73		236	200	10.29	34.10		26.22	180	0.57
152	10.74	33.70		218	250	9.51	34.23		26.45	159	0.66
177	10.59	33.95		196	300	9.00	34.29		26.59	146	0.74
206	10.19	34.13		177	400	7.67	34.29		26.79	127	0.88
236	9.66	34.21		163	500	6.79	34.33		26.95	112	1.00
276	9.22	34.26		153							
336	8.56	34.31		138							
410	7.54	34.29		125							
485	6.89	34.33		114							
566	6.42	34.35		106							

PAOLINA-T; April 23, 1959; 1035, 1227 GCT; 26°15'N, 118°25'W; sounding, 2450 fm; wind, 300°, force 2; weather, cloudy; sea, slight; wire angle, 05, 06°.

120.90

1	18.70	34.22	5.08	342	0	(18.70)	(34.22)	(5.08)	(24.52)	(342)	(0.00)
11	18.72	34.15	5.20	347	10	18.72	34.15	5.20	24.47	347	0.03
32	18.70	34.18	5.22	345	20	18.71	34.16	5.21	24.47	347	0.07
57	18.71	34.20	5.24	344	30	18.70	34.18	5.22	24.49	345	0.10
67	18.70	34.16	5.16	347	50	18.71	34.20	5.24	24.50	344	0.17
77	18.68	34.18	5.19	344	75	18.69	34.17	5.18	24.49	345	0.26
92	15.16	33.75	4.73	297	100	14.56	33.73	4.58	25.11	286	0.34
107	14.00	33.72	4.45	276	150	11.35	33.79	3.21	25.79	222	0.47
133	12.16	33.68	4.03	244	200	9.48	33.95	2.75	26.24	179	0.57
152	11.26	33.80	3.12	220	250	8.82	34.13	2.00	26.49	155	0.66
177	9.98	33.82	3.10	196	300	8.36	34.23	1.42	26.64	141	0.73
206	9.38	33.98	2.65	175	400	7.40	34.30	0.67	26.84	122	0.87
236	8.94	34.10	2.17	159	500	6.67	34.36	0.33	26.98	108	0.99
276	8.62	34.19	1.68	148							
335	7.96	34.27	1.06	132							
409	7.33	34.31	0.61	121							
485	6.78	34.35	0.36	110							
566	6.26	34.41	0.28	100							
3868	1.65	34.66	2.97	36							
3966	1.60	34.68	2.93	34							
4065	1.60	34.60a)	2.46a)	-							

STRANGER; April 10, 1959; 0132 GCT; 26°29'N, 113°29'W; sounding, 40 fm; wind, 280°, force 5; weather, partly cloudy; sea, rough; wire angle, 09°.

130.30

2	16.10	33.96	4.81	302	0	(16.10)	(33.96)	(4.81)	(24.95)	(302)	(0.00)
12	16.10	33.90	4.81	306	10	16.10	33.91	4.81	24.91	305	0.03
32	14.32	33.89	3.39	270	20	15.49	33.89	4.30	25.03	294	0.06
52	12.82	33.93	2.55	238	30	14.52	33.89	3.53	25.24	274	0.09
					50	12.92	33.93	2.58	25.60	240	0.14

a) Nansen bottle may have leaked.

SIO

CCOFI
5904

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	

130.35

STRANGER; April 10, 1959; 0418 GCT; 26°19'N, 113°48.5'W; sounding, 240 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 13°.

2	17.56	33.89	5.35	340	0	(17.56)	(33.89)	(5.35)	(24.55)	(340)	(0.00)	
12	17.58	33.89	5.34	340	10	17.57	33.89	5.35	24.55	340	0.03	
31	17.40	33.87	5.50	337	20	17.49	33.88	5.47	24.56	338	0.07	
50	16.00	33.78	5.14	312	30	17.41	33.87	5.50	24.57	338	0.10	
74	13.50	33.78	3.84	262	50	16.00	33.78	5.14	24.84	312	0.17	
98	11.64	33.92	2.78	217	75	13.40	33.78	3.80	25.39	260	0.24	
121	11.48	34.11	1.89	200	100	11.62	33.93	2.72	25.84	216	0.30	
157	11.60	34.34	1.51	186	150	11.60	34.30	1.58	26.15	188	0.40	
195	10.92	34.54	0.63	159	200	10.88	34.55	0.60	26.47	157	0.49	
239	10.66	34.62	0.36	148	250	10.48	34.61	0.33	26.59	146	0.57	
285	9.77	34.54	0.31	140	300	9.59	34.52	0.31	26.68	138	0.64	
385	8.71	34.47	0.39	128								

130.40

STRANGER; April 10, 1959; 0820 GCT; 26°03.5'N, 114°16.5'W; sounding, 2000 fm; wind, 260°, force 5; weather, partly cloudy; sea, moderate; wire angle, 20°.

3	17.48	33.89	5.58	338	0	(17.48)	(33.89)	(5.58)	(24.57)	(338)	(0.00)	
12	17.51	33.86	6.39u	340	10	17.50	33.86		24.54	340	0.03	
30	17.49	33.90	5.58	337	20	17.51	33.88		24.56	339	0.07	
40	17.40	33.84	5.64	339	30	17.49	33.90	5.58	24.58	337	0.10	
54	17.06	33.85	5.63	331	50	17.19	33.85	5.63	24.61	334	0.17	
68	16.28	33.80	5.64	318	75	15.71	33.79	5.39	24.90	306	0.25	
90	14.35	33.75	4.46	280	100	13.40	33.73	4.20	25.35	263	0.32	
109	12.53	33.72	4.04	248	150	10.68	33.94	2.85	26.03	199	0.44	
126	11.28	33.72	3.81	225	200	9.85	34.24	2.19	26.40	164	0.53	
141	10.75	33.87	3.10	205	250	9.57	34.36	1.11	26.55	150	0.61	
169	10.55	34.06	2.33	188	300	9.19	34.42	0.58	26.66	139	0.68	
198	9.85	32.23	2.20	164	400	8.03	34.42	0.37	26.83	122	0.82	
225	9.80	34.34	1.33	155	500	7.02	34.44	0.23	27.00	107	0.94	
269	9.38	34.38	0.93	145								
320	9.06	34.46	0.36	135								
398	8.06	34.42	0.37	123								
478	7.22	34.45	0.23	109								
559	6.49	34.42	0.27	102								

130.50

STRANGER; April 10, 1959; 1300 GCT; 25°49'N, 114°45'W; sounding, 1825 fm; wind, direction missing, force 1; weather, cloudy; sea, moderate; wire angle, 05°.

2	20.54	34.51	5.08	366	0	(20.54)	(34.51)	(5.08)	(24.27)	(366)	(0.00)	
12	20.56	34.57	5.20	363	10	20.56	34.56	5.17	24.30	363	0.04	
32	20.57	34.54	5.12	365	20	20.57	34.56	5.17	24.29	364	0.07	
42	20.56	34.54	5.16	365	30	20.57	34.54	5.12	24.29	365	0.11	
57	19.68	34.42	5.32	351	50	20.36	34.52	5.25	24.32	361	0.18	
71	18.35	34.18	4.91	336	75	18.03	34.14	4.83	24.62	333	0.27	
96	14.72	33.93	3.71	275	100	14.70	33.93	3.70	25.24	274	0.35	
116	13.36	34.09	2.34	236	150	11.81	34.28	1.59	26.08	194	0.46	
136	12.11	34.16	2.04	208	200	11.56	34.63	0.59	26.41	163	0.55	
156	11.75	34.34	1.35	188	250	10.86	34.59	0.41	26.50	154	0.63	
185	11.72	34.60	0.73	168	300	9.80	34.56	0.43	26.66	139	0.71	
220	11.26	34.63	0.44	158	400	8.60	34.49	0.32	26.81	125	0.85	
251	10.84	34.59	0.41	154	500	7.32	34.45	0.30	26.96	110	0.97	
300	9.80	34.56	0.43	139	600	6.40	34.45	0.18	27.09	98	1.08	
355	9.12	34.52	0.37	131								
439	8.12	34.47	0.31	120								
522	7.04	34.45	0.29	107								
608	6.34	34.45	0.17	98								

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
5904

STRANGER; April 10, 1959; 1840 GCT; 25°31'N, 115°20'W; sounding, 2025 fm; wind, 290°, force 3; weather, cloudy; sea, moderate; wire angle, 05°.

130.60

2	19.46	34.34	5.37	352	0	(19.46)	(34.34)	(5.37)	(24.42)	(352)	(0.00)
12	19.44	34.36	5.35	350	10	19.45	34.36	5.35	24.44	350	0.04
32	19.26	34.34	5.37	348	20	19.41	34.36	5.35	24.44	350	0.07
42	18.46	34.18	5.30	340	30	19.30	34.34	5.36	24.47	348	0.10
57	18.44	34.17	4.40	340	50	18.42	34.17	5.00	24.55	340	0.17
72	18.38	34.16	5.52	339	75	18.20	34.14	5.50	24.58	336	0.26
98	15.53	33.90	4.39	294	100	15.50	33.90	4.37	25.04	293	0.34
118	13.52	33.86	3.64	256	150	13.05	34.36	1.44	25.91	210	0.46
138	12.94	34.19	2.09	221	200	12.19	34.68	0.40	26.33	170	0.56
158	13.14	34.49	0.93	203	250	11.31	34.67	0.28	26.48	156	0.65
187	12.42	34.67	0.46	176	300	10.32	34.61	0.26	26.62	143	0.72
223	11.78	34.68	0.35	163	400	8.39	34.48	0.37	26.83	123	0.86
253	11.24	34.67	0.27	155	500	7.00	34.44	0.40	27.00	106	0.98
302	10.29	34.61	0.26	143	600	6.16	34.44	0.23	27.12	96	1.09
356	9.22	34.56	0.31	130							
440	7.66	34.42	0.41	117							
525	6.77	34.45	0.39	102							
610	6.08	34.44	0.21	95							

STRANGER; April 11, 1959; 2140 GCT; 26°04.5'N, 112°48'W; sounding, 45 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°.

133.25

2	17.26	34.29	4.70	304	0	(17.26)	(34.29)	(4.70)	(24.93)	(304)	(0.00)
27	16.68	34.16	4.03	300	10	16.70	34.16	4.04	24.97	300	0.03
47	14.87	34.18	1.16	260	20	16.68	34.16	4.04	24.97	300	0.06
67	13.91	34.20	1.13	238	30	16.60	34.16	3.91	24.98	298	0.09
77	12.90	34.22	1.06	218	50	14.84	34.18	1.15	25.40	259	0.14
					75	13.22	34.21	1.10	25.76	224	0.21

STRANGER; April 11, 1959; 1855 GCT; 25°52'N, 113°08'W; sounding, 108 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 05°.

133.30

2	18.84	34.29	4.99	341	0	(18.84)	(34.29)	(4.99)	(24.54)	(341)	(0.00)
12	18.80	34.29	5.19	340	10	18.81	34.29	5.19	24.55	340	0.03
32	18.69	34.22	5.18	342	20	18.76	34.26	5.19	24.54	341	0.07
52	15.31	34.00	3.21	282	30	18.71	34.22	5.18	24.53	342	0.10
77	13.07	34.04	2.60	234	50	16.12	34.03	3.54	25.00	297	0.17
102	11.94	34.19	1.73	202	75	13.18	34.04	2.64	25.63	237	0.23
127	11.64	34.31	1.36	188	100	12.00	34.18	1.80	25.97	204	0.29
157	11.46	34.49	0.70	172	150	11.47	34.45	0.83	26.28	175	0.39

STRANGER; April 11, 1959; 1130 GCT; 25°34.5'N, 113°45.5'W; sounding, 1500 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 26°.

133.40

2	18.10	34.00	5.47	344	0	(18.10)	(34.00)	(5.47)	(24.50)	(344)	(0.00)
10	18.11	34.00	5.43	344	10	18.11	34.00	5.43	24.50	344	0.03
33	18.23	34.05	5.41	344	20	18.15	34.02	5.42	24.50	344	0.07
61	18.29	34.09	5.43	342	30	18.21	34.04	5.42	24.50	344	0.10
70	17.28	33.97	5.24	327	50	18.29	34.08	5.42	24.52	342	0.17
88	14.49	33.79	4.52	280	75	16.60	33.91	5.11	24.79	316	0.25
101	12.76	33.78	3.54	248	100	12.90	33.78	3.60	25.49	250	0.33
115	12.04	33.79	3.52	234	150	11.72	34.28	1.38	26.10	192	0.44
141	12.08	34.23	1.55	202	200	10.89	34.50	0.75	26.43	161	0.53
159	11.38	34.31	1.29	184	250	10.02	34.47	0.62	26.55	150	0.61
185	11.26	34.49	0.75	168	300	9.48	34.49	0.41	26.66	139	0.68
216	10.46	34.48	0.75	155	400	8.41	34.48	0.22	26.82	124	0.82
242	10.12	34.46	0.66	151	500	7.22	34.45	0.23	26.97	109	0.94
286	9.63	34.48	0.46	142	600	(6.18)	(34.43)	(0.15)	(27.10)	(97)	(1.05)
344	8.98	34.49	0.29	131							
437	8.02	34.47	0.21	119							
521	6.95	34.44	0.23	106							
594	6.22	34.43	0.15	98							

S10

CCOFI
5904

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

133.50

STRANGER; April 11, 1959; 0513 GCT; 25°14.5'N, 114°24'W; sounding, 1665 fm; wind, 320°, force 5; weather, cloudy; sea, moderate; wire angle, 15°.

2	20.74	34.57	-	368	0	(20.74)	(34.57)		(24.26)	(368)	(0.00)
12	20.74	34.54	5.24	370	10	20.74	34.54		24.24	370	0.04
31	20.76	34.55	5.22	369	20	20.75	34.55	5.22	24.24	369	0.07
55	20.29	34.47	5.52	363	30	20.76	34.55	5.22	24.24	369	0.11
64	20.26	34.50	5.29	360	50	20.52	34.50	5.38	24.27	366	0.18
75	19.80	34.40	5.29	356	75	19.80	34.40	5.29	24.38	356	0.27
89	17.38	34.14	4.34	317	100	15.78	34.02	3.96	25.07	290	0.36
103	15.43	34.01	3.83	284	150	12.88	34.24	1.78	25.85	216	0.48
127	14.24	34.10	2.78	253	200	11.22	34.36	1.16	26.26	177	0.58
147	13.14	34.24	1.85	221	250	10.52	34.51	0.66	26.50	154	0.67
171	11.77	34.24	1.62	195	300	10.07	34.54	0.48	26.60	145	0.75
200	11.22	34.36	1.16	177	400	8.56	34.49	0.38	26.81	125	0.89
228	10.76	34.47	0.86	161	500	7.24	34.48	0.23	27.00	107	1.01
267	10.40	34.53	0.56	150							
324	9.77	34.54	0.44	140							
397	8.60	34.49	0.39	125							
471	7.59	34.48	0.25	112							
549	6.82	34.49	0.21	101							

133.60

STRANGER; April 10, 1959; 2325 GCT; 24°54.5'N, 115°01'W; sounding, 2450 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 07°.

3	20.60	34.53	5.27	367	0	(20.60)	(34.53)	(5.27)	(24.26)	(367)	(0.00)
13	20.60	34.52	5.16	367	10	20.60	34.53	5.20	24.26	367	0.04
33	20.48	34.54	5.35	363	20	20.60	34.52	5.16	24.26	367	0.07
43	19.70	34.40	5.24	353	30	20.54	34.53	5.23	24.28	366	0.11
57	18.74	34.18	5.49	346	50	19.10	34.25	5.37	24.44	350	0.18
71	18.46	34.17	5.47	340	75	18.35	34.16	5.42	24.57	338	0.27
95	17.00	34.04	4.69	316	100	16.30	34.04	4.16	24.96	300	0.35
115	14.36	34.09	2.90	256	150	13.40	34.38	1.32	25.85	216	0.48
134	13.98	34.33	1.75	230	200	12.67	34.73	0.32	26.27	176	0.58
154	13.30	34.41	1.20	212	250	11.98	34.79	0.14	26.45	159	0.66
181	13.06	34.67	0.44	188	300	11.06	34.74	0.17	26.58	146	0.74
216	12.34	34.75	0.25	168	400	8.95	34.60	0.20	26.84	122	0.88
244	12.04	34.79	0.14	160	500	7.38	34.54	0.14	27.03	104	1.00
292	11.23	34.75	0.15	148	600	9.28	34.52	0.08	27.17	91	1.10
347	10.08	34.69	0.21	134							
430	8.42	34.57	0.17	117							
514	7.18	34.54	0.14	102							
600	6.28	34.52	0.08	91							

137.23

STRANGER; April 12, 1959; 0154 GCT; 25°34'N, 112°18.5'W; sounding, 40 fm; wind, 260°, force 2; weather, partly cloudy; sea, moderate; wire angle, 01°.

2	19.02	34.29	5.28	345	0	(19.02)	(34.29)	(5.28)	(24.49)	(345)	(0.00)
12	19.02	34.31	5.28	344	10	19.02	34.31	5.28	24.51	344	0.03
32	17.47	34.22	4.31	313	20	19.01	34.31	5.28	24.51	344	0.07
52	14.66	34.01	3.15	268	30	18.20	34.27	4.73	24.68	327	0.10
					50	15.00	34.04	3.29	25.25	273	0.16

137.30

STRANGER; April 12, 1959; 0501 GCT; 25°20.5'N, 112°44.5'W; sounding 180 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 03°.

2	18.52	34.20	5.32	339	0	(18.52)	(34.20)	(5.32)	(24.55)	(339)	(0.00)
12	18.52	34.19	5.28	340	10	18.52	34.19	5.29	24.54	340	0.03
32	18.14	34.13	5.27	336	20	18.52	34.19	5.27	24.54	340	0.07
52	15.74	33.89	4.33	299	30	18.28	34.15	5.27	24.58	337	0.10
77	13.60	33.95	2.96	251	50	16.30	33.92	4.62	24.88	309	0.17
102	13.00	34.22	1.80	220	75	13.71	33.94	3.04	25.45	254	0.24
127	12.78	34.49	0.74	196	100	13.01	34.18	1.94	25.78	223	0.30
168	11.68	34.58	0.34	169	150	12.16	34.57	0.47	26.24	179	0.40
207	11.06	34.58	0.23	158	200	11.15	34.58	0.24	26.44	160	0.48
256	10.67	34.57	0.19	152	250	10.70	34.57	0.19	26.52	153	0.56
306	10.44	34.57	0.18	148	300	10.46	34.57	0.18	26.56	149	0.64

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
5904

STRANGER; April 12, 1959; 0755 GCT; 25°10'N, 113°04.5'W; sounding, 595 fm; wind, 300°, force 2;
weather, missing; sea, slight; wire angle, 04°.

137.35

2	18.98	34.29	5.24	344	0	(18.98)	(34.29)	(5.24)	(24.51)	(344)	(0.00)
12	18.98	34.27	4.98	345	10	18.98	34.27	4.98	24.49	345	0.03
32	18.84	34.26	4.93	343	20	18.98	34.27	4.98	24.49	345	0.07
42	17.78	34.12	5.04	328	30	18.95	34.27	4.95	24.50	344	0.10
52	16.48	34.00	4.44	307	50	16.75	34.02	4.61	24.84	312	0.17
67	14.20	33.93	3.08	264	75	13.55	33.91	3.02	25.46	253	0.24
82	13.03	33.90	3.00	244	100	11.62	33.89	2.80	25.81	219	0.30
102	11.60	33.89	2.79	219	150	11.70	34.32	0.62	26.14	189	0.40
126	10.76	34.01	2.39	195	200	10.90	34.54	0.43	26.45	159	0.49
146	11.69	34.29	0.70	190	250	10.66	34.61	0.33	26.56	149	0.57
176	11.14	34.52	0.45	164	300	10.05	34.59	0.28	26.64	141	0.64
207	10.86	34.54	0.42	158	400	8.32	34.49	0.28	26.85	121	0.78
236	10.75	34.60	0.36	151	500	7.39	34.46	0.20	26.96	110	0.90
275	10.42	34.61	0.27	146							
336	9.41	34.55	0.29	134							
406	8.22	34.49	0.28	120							
481	7.53	34.47	0.21	112							
562	6.86	34.43	0.19	106							

STRANGER; April 12, 1959; 1039 GCT; 25°00'N, 113°23.5'W; sounding, 1680 fm; wind, 300°, force 3;
weather, missing; sea, slight; wire angle, 08°.

137.40

2	18.60	34.11	5.29	348	0	(18.60)	(34.11)	(5.29)	(24.46)	(348)	(0.00)
12	18.58	34.08	5.28	349	10	18.59	34.08	5.28	24.45	349	0.03
32	18.25	34.05	5.34	344	20	18.25	34.04	5.33	24.49	345	0.07
41	17.88	33.99	5.33	340	30	18.25	34.05	5.34	24.50	344	0.10
56	16.67	33.95	5.13	315	50	16.68	33.95	5.13	24.81	315	0.17
71	14.48	33.83	3.97	277	75	13.98	33.83	3.70	25.31	267	0.24
96	12.76	33.92	2.94	237	100	12.61	33.94	2.87	25.66	234	0.31
115	12.19	34.00	2.50	221	150	11.34	34.21	1.56	26.12	190	0.41
136	11.65	34.14	1.85	201	200	10.60	34.46	0.77	26.45	159	0.50
155	11.23	34.23	1.50	187	250	10.17	34.49	0.54	26.55	150	0.58
184	10.52	34.34	1.19	166	300	9.62	34.48	0.42	26.63	142	0.66
218	10.72	34.56	0.44	154	400	8.40	34.46	0.24	26.81	125	0.80
249	10.18	34.49	0.54	150	500	7.12	34.43	0.22	26.98	109	0.92
298	9.63	34.48	0.43	142	600	6.12	34.43	0.21	27.11	96	1.03
353	9.08	34.50	0.26	132							
438	7.86	34.43	0.23	120							
522	6.88	34.43	0.21	106							
607	6.08	34.43	0.21	96							

STRANGER; April 12, 1959; 1540 GCT; 24°40'N, 114°02'W; sounding, 1930 fm; wind, 320°, force 1;
weather, cloudy; sea, moderate; wire angle, 04°.

137.50

5	20.30	34.55	5.06	358	0	(20.30)	(34.55)	(5.06)	(24.36)	(358)	(0.00)
15	20.30	34.51	5.06	361	10	20.30	34.54	5.06	24.35	358	0.04
34	20.32	34.51	4.99	360	20	20.31	34.51	4.99	24.33	360	0.07
60	19.96	34.40	5.09	360	30	20.32	34.51	4.99	24.33	360	0.11
70	19.68	34.34	5.12	357	50	20.25	34.50	5.05	24.33	360	0.18
80	19.05	34.23	4.95	350	75	19.43	34.30	5.07	24.40	354	0.27
96	17.15	34.00	4.59	322	100	16.30	34.00	3.99	24.94	303	0.35
111	15.76	34.02	3.50	290	150	13.20	34.33	1.53	25.86	215	0.48
136	14.08	34.22	2.05	241	200	11.42	34.40	1.01	26.25	178	0.58
156	12.90	34.34	1.43	209	250	10.93	34.58	0.61	26.48	156	0.67
181	11.84	34.36	1.22	188	300	10.21	34.60	0.41	26.62	143	0.75
211	11.29	34.43	0.89	173	400	8.81	34.55	0.22	26.82	124	0.89
241	11.03	34.56	0.68	160	500	7.52	34.47	0.20	26.95	112	1.01
281	10.48	34.60	0.48	147							
341	9.66	34.58	0.27	135							
421	8.52	34.53	0.21	121							
491	7.63	34.47	0.20	114							
572	6.76	34.47	0.26	101							

S10

CCOFI
5904

OBSERVED					INTERPOLATED				COMPUTED		
Z	T	S	O ₂	δT_3	Z	T	S	O ₂	σ_t	δT_3	ΔD
m	°C	‰	ml/L	$\frac{1}{10} \text{ cm/g}$	m	°C	‰	ml/L	g/L	$\frac{1}{10} \text{ cm/g}$	dyn. m

137.60

STRANGER; April 12, 1959; 2050 GCT; 24°20'N, 114°39.5'W; sounding, 1965 fm; wind, 280°, force 2; weather, cloudy; sea, rough; wire angle, 05°.

2	20.77	34.54	5.10	370	0	(20.77)	(34.54)	(5.10)	(24.23)	(370)	(0.00)
12	20.59	34.56	4.94	364	10	20.62	34.56	4.95	24.28	365	0.04
32	20.50	34.56	5.01	362	20	20.55	34.56	4.95	24.30	363	0.07
42	20.22	34.49	5.03	360	30	20.52	34.56	5.00	24.31	362	0.11
52	19.86	34.43	5.13	355	50	20.00	34.45	5.10	24.37	357	0.18
68	19.68	34.40	5.15	353	75	19.37	34.32	5.16	24.43	351	0.27
82	18.88	34.19	5.18	348	100	17.10	33.98	4.49	24.74	322	0.36
102	16.82	33.96	4.39	318	150	11.72	33.84	3.10	25.76	224	0.49
127	13.33	33.74	3.98	261	200	11.31	34.39	1.05	26.27	176	0.59
146	11.80	33.78	3.37	230	250	10.89	34.56	0.44	26.48	156	0.68
177	11.48	34.24	1.47	190	300	10.25	34.59	0.39	26.61	144	0.76
207	11.24	34.42	0.96	173	400	8.99	34.53	0.18	26.78	128	0.90
237	11.04	34.55	0.47	160	500	7.69	34.48	0.23	26.93	113	1.03
277	10.56	34.58	0.43	150							
336	9.80	34.60	0.29	136							
411	8.84	34.52	0.18	127							
486	7.84	34.48	0.23	115							
566	7.04	34.45	0.20	107							

137.70

STRANGER; April 13, 1959; 0117 GCT; 23°59.5'N, 115°18'W; sounding, 1950 fm; wind, 300°, force 4; weather, cloudy; sea, rough; wire angle, 13°.

2	21.22	34.60	5.01	378	0	(21.22)	(34.60)	(5.01)	(24.14)	(378)	(0.00)
12	21.18	34.58	4.94	378	10	21.19	34.58	4.94	24.14	378	0.04
32	21.12	34.58	4.94	376	20	21.15	34.58	4.94	24.15	377	0.08
41	21.11	34.59	4.88	376	30	21.12	34.58	4.94	24.15	377	0.11
52	21.10	34.59	4.77	375	50	21.10	34.59	4.80	24.17	375	0.19
66	20.32	34.45	5.11	365	75	20.13	34.42	5.12	24.30	363	0.28
80	20.02	34.40	5.12	362	100	18.73	34.23	4.65	24.52	342	0.37
99	18.83	34.24	4.69	344	150	12.78	34.00	2.47	25.68	232	0.52
125	14.97	33.92	3.80	280	200	10.60	34.15	1.83	26.21	182	0.62
143	13.32	33.99	2.60	242	250	10.00	34.33	1.19	26.45	159	0.71
171	11.48	34.00	2.29	208	300	9.44	34.39	0.74	26.59	146	0.79
201	10.59	34.15	1.82	182	400	8.45	34.43	0.43	26.78	128	0.93
230	10.32	34.29	1.36	167	500	7.20	34.44	0.26	26.97	110	1.06
268	9.74	34.35	1.05	153							
325	9.22	34.42	0.54	140							
400	8.45	34.43	0.43	128							
477	7.48	34.45	0.26	112							
556	6.58	34.40	0.26	104							

137.80

STRANGER; March 13, 1959; 0603 GCT; 23°40'N, 115°55'W; sounding, 2130 fm; wind, 300°, force 4; weather, clear; sea, rough; wire angle, 05°.

2	21.10	34.56	4.97	378	0	(21.10)	(34.56)	(4.97)	(24.14)	(378)	(0.00)
12	21.14	34.56	4.93	378	10	21.13	34.56	4.93	24.14	378	0.04
32	21.11	34.57	4.98	377	20	21.13	34.56	4.93	24.14	378	0.08
62	21.02	34.57	4.95	375	30	21.12	34.57	4.98	24.15	377	0.11
72	20.98	34.53	4.93	376	50	21.06	34.57	4.97	24.16	376	0.19
88	19.92	34.36	5.03	362	75	20.97	34.53	4.93	24.16	376	0.28
103	17.94	34.13	4.51	331	100	18.10	34.14	4.57	24.62	333	0.37
117	15.50	33.93	4.01	291	150	12.11	33.81	3.37	25.66	234	0.51
142	12.49	33.77	3.64	244	200	10.58	34.08	2.18	26.16	186	0.62
162	11.65	33.90	2.83	218	250	10.18	34.36	1.19	26.45	159	0.71
192	10.74	34.04	2.30	192	300	9.68	34.45	0.66	26.60	145	0.79
222	10.30	34.23	1.73	171	400	8.33	34.42	0.41	26.80	126	0.93
253	10.17	34.38	1.12	158	500	7.24	34.43	0.25	26.96	110	1.06
302	9.64	34.45	0.65	144	600	6.42	34.45	0.22	27.08	99	1.17
357	8.90	34.42	0.48	135							
442	7.83	34.43	0.34	119							
527	6.98	34.43	0.23	107							
611	6.35	34.45	0.22	98							

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
5904

STRANGER; April 14, 1959; 1010 GCT; 24°45.5'N, 112°24'W; sounding, 60 fm; wind, 300°, force 1, weather, clear; sea, slight; wire angle, 00°.

140.30

2	19.75	34.34	5.21	359	0	(19.75)	(34.34)	(5.21)	(24.35)	(359)	(0.00)
12	19.74	34.31	5.13	361	10	19.74	34.31	5.13	24.32	361	0.04
32	19.55	34.36	5.20	352	20	19.71	34.32	5.16	24.35	359	0.07
52	16.78	34.10	4.31	306	30	19.59	34.35	5.20	24.40	354	0.11
76	13.20	34.27	1.73	220	50	17.15	34.12	4.50	24.83	313	0.17
103	12.70	34.37	1.23	203	75	13.26	34.26	1.81	25.79	222	0.24
					100	12.73	34.36	1.27	25.98	204	0.30

STRANGER; April 14, 1959; 0727 GCT; 24°35.5'N, 112°42.5'W; sounding, 470 fm; wind 320°, force 2; weather, clear; sea, moderate; wire angle, 14°.

140.35

2	19.52	34.16	5.13	366	0	(19.52)	(34.16)	(5.13)	(24.27)	(366)	(0.00)
12	19.50	34.17	5.10	366	10	19.50	34.17	5.10	24.27	366	0.04
31	18.84	34.18	5.23	349	20	19.43	34.17	5.12	24.30	364	0.07
40	18.41	34.22	5.30	336	30	18.92	34.18	5.23	24.44	350	0.11
55	16.74	33.91	5.28	320	50	16.90	33.94	5.28	24.74	322	0.18
71	14.86	33.91	3.68	280	75	14.60	33.91	3.51	25.24	274	0.25
90	13.10	33.93	2.80	243	100	12.54	34.02	2.45	25.74	226	0.31
114	11.98	34.12	2.01	208	150	11.99	34.48	0.86	26.21	182	0.42
134	11.64	34.20	1.62	196	200	11.74	34.65	0.27	26.39	165	0.50
152	12.00	34.52	0.70	179	250	11.03	34.67	0.20	26.54	151	0.59
181	11.86	34.65	0.30	167	300	10.15	34.64	0.20	26.67	138	0.66
215	11.62	34.65	0.24	164	400	8.74	34.53	0.21	26.82	124	0.80
244	11.14	34.67	0.19	152	500	7.39	34.46	0.19	26.96	110	0.92
292	10.27	34.65	0.20	140	600	(6.33)	(34.46)	(0.20)	(27.11)	(96)	(1.03)
345	9.62	34.58	0.19	134							
429	8.30	34.51	0.22	120							
514	7.22	34.46	0.19	108							
598	6.34	34.46	0.20	96							

STRANGER; April 14, 1959; 0447 GCT; 24°27'N, 112°56'W; sounding, 1450 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 14°.

140.40

2	19.51	34.12	5.24	369	0	(19.51)	(34.12)	(5.24)	(24.24)	(369)	(0.00)
12	18.96	34.09	5.23	358	10	19.01	34.10	5.23	24.34	359	0.04
31	18.56	34.07	5.28	350	20	18.81	34.08	5.24	24.39	355	0.07
40	17.76	33.98	5.24	338	30	18.58	34.07	5.28	24.44	350	0.11
55	17.14	33.96	5.11	325	50	17.28	33.97	5.16	24.68	328	0.18
71	15.65	33.82	4.55	303	75	15.15	33.79	4.37	25.03	294	0.25
95	12.99	33.75	3.50	254	100	12.79	33.81	3.28	25.52	246	0.32
114	12.46	33.96	2.70	229	150	11.73	34.42	0.95	26.21	182	0.43
134	11.72	34.16	1.78	200	200	11.13	34.59	0.40	26.46	158	0.52
153	11.74	34.45	0.84	179	250	10.62	34.60	0.23	26.55	150	0.60
181	11.48	34.58	0.49	166	300	9.62	34.50	0.38	26.65	140	0.67
215	10.90	34.59	0.36	154	400	8.10	34.42	0.30	26.83	123	0.81
245	10.70	34.60	0.23	150	500	7.19	34.44	0.25	26.98	109	0.93
292	9.77	34.51	0.38	142	600	(6.15)	(34.49)	(0.10)	(27.16)	(92)	(1.04)
346	8.91	34.49	0.30	130							
428	7.74	34.40	0.31	120							
512	7.08	34.45	0.22	107							
596	6.20	34.49	0.10	92							

SIO

CCOFI
5904

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

140.50

STRANGER; March 13, 1959; 2217 GCT; 24°05.5'N, 113°39.5'W; sounding, 1780 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough, wire angle, 24°.

2	20.86	34.56	5.03	371	0	(20.86)	(34.56)	(5.03)	(24.22)	(371)	(0.00)
11	20.58	34.52	4.97	366	10	20.59	34.52	4.97	24.26	367	0.04
29	19.96	34.38	5.14	361	20	20.39	34.48	5.02	24.29	364	0.07
38	19.44	34.29	5.19	355	30	19.93	34.38	5.15	24.32	361	0.11
52	18.70	34.20	5.13	344	50	18.82	34.22	5.13	24.49	345	0.18
65	17.80	33.99	5.44	338	75	17.30	33.94	5.40	24.65	330	0.26
88	15.56	33.82	4.89	300	100	14.40	33.86	3.74	25.25	273	0.34
107	14.14	33.87	3.54	267	150	11.02	33.92	2.77	25.95	207	0.46
124	12.88	33.86	3.20	244	200	11.17	34.42	1.01	26.32	171	0.56
142	11.30	33.84	3.05	216	250	10.83	34.60	0.34	26.51	154	0.64
166	10.88	34.11	2.02	190	300	10.31	34.61	0.24	26.61	144	0.72
196	11.15	34.40	1.11	173	400	8.68	34.51	0.27	26.81	125	0.86
223	11.08	34.52	0.62	163	500	7.58	34.51	0.20	26.98	109	0.98
266	10.64	34.61	0.27	148							
321	10.09	34.60	0.24	140							
391	8.80	34.51	0.28	127							
467	7.94	34.52	0.19	113							
549	6.96	34.47	0.21	104							

140.50

STRANGER; April 13, 1959; 2325 GCT;^{a)} 24°05.5'N, 113°39.5'W; sounding, 1780 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 13°.

2	20.86	34.54	5.07	373	0	(20.86)	(34.54)	(5.07)	(24.20)	(373)	(0.00)
11	20.60	34.54	5.05	366	10	20.62	34.54	5.05	24.27	366	0.04
31	19.78	34.37	5.19	358	20	20.56	34.53	5.06	24.28	365	0.07
35	19.54	34.32	5.12	356	30	19.82	34.39	5.18	24.35	358	0.11
40	19.24	34.26	5.17	352	50	18.55	34.08	5.28	24.45	349	0.18
45	19.02	34.25	5.10	348	75	17.85	34.18	4.37	24.70	325	0.26
50	18.55	34.08	5.28	349	100	14.34	33.84	4.12	25.25	273	0.34
55	18.46	34.11	5.16	344	150	11.15	33.95	2.68			
60	18.02	34.04	5.29	340	200	(11.18)	(34.43)	(1.02)			
65	17.70	33.96	5.43	338							
69	17.60	33.96	5.44	335							
74	17.86	34.18	4.37	325							
79	17.58	34.13	4.37	322							
84	16.35	33.89	4.94	312							
89	15.58	33.84	4.95	300							
95	14.83	33.78	4.46	288							
148	11.20	33.93	2.75	208							
197	11.18	34.42	1.02	172							

140.60

STRANGER; March 13, 1959; 1640 GCT; 23°45'N, 114°08.5'W; sounding, 1850 fm; wind, 300°, force 2; weather, overcast; sea, rough, wire angle, 04°.

2	21.26	34.65	4.92	375	0	(21.26)	(34.65)	(4.92)	(24.18)	(375)	(0.00)
12	21.26	34.61	4.88	378	10	21.26	34.61	4.89	24.14	378	0.04
32	21.26	34.63	4.70	376	20	21.26	34.62	4.77	24.15	377	0.08
63	21.15	34.62	4.69	374	30	21.26	34.63	4.70	24.16	376	0.11
73	20.50	34.47	4.84	368	50	21.24	34.63	4.69	24.16	376	0.19
89	19.44	34.32	4.66	353	75	20.37	34.45	4.84	24.27	366	0.28
104	18.07	34.21	4.09	328	100	18.60	34.24	4.36	24.56	338	0.37
121	15.97	34.19	2.55	282	150	16.09	34.86	1.39	25.64	236	0.51
145	16.11	34.82	1.49	240	200	11.71	34.40	1.12	26.20	182	0.62
165	15.50	34.83	1.15	225	250	11.26	34.60	0.43	26.44	160	0.71
195	11.78	34.37	1.19	186	300	10.36	34.56	0.41	26.57	147	0.79
225	11.50	34.53	0.66	169	400	9.04	34.53	0.24	26.76	130	0.93
255	11.18	34.60	0.41	158	500	7.46	34.40	0.31	26.91	116	1.06
306	10.24	34.56	0.41	146	600	6.47	34.42	0.27	27.06	101	1.18
360	9.65	34.56	0.27	136							
446	8.30	34.47	0.24	122							
531	7.04	34.38	0.33	112							
607	6.42	34.43	0.26	100							

174

a) Special cast.

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
5904

STRANGER; April 15, 1959; 0335 GCT; 24°19'N, 111°48'W; sounding, 40 fm; wind, 300°, force 4; weather, clear; sea, moderate; wire angle, 06°.

143.26

2	19.38	34.26	5.20	356	0	(19.38)	(34.26)	(5.20)	(24.38)	(356)	(0.00)
12	19.20	34.27	5.17	351	10	19.25	34.27	5.18	24.42	352	0.04
32	17.92	34.22	4.66	324	20	18.90	34.26	5.08	24.50	344	0.07
52	16.06	34.19	3.40	284	30	18.20	34.23	4.80	24.66	330	0.10
					50	16.07	34.19	3.40	25.13	284	0.16

STRANGER; April 15, 1959; 0540 GCT; 24°10.5'N, 112°03'W; sounding, 110 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 15°.

143.30

2	19.98	34.35	5.08	364	0	(19.98)	(34.35)	(5.08)	(24.30)	(364)	(0.00)
12	19.92	34.33	4.84	364	10	19.93	34.34	4.88	24.30	364	0.04
31	19.00	34.28	4.50	345	20	19.90	34.33	4.80	24.30	364	0.07
50	15.56	33.92	4.08	293	30	19.87	34.32	4.79	24.30	363	0.11
75	14.03	34.06	2.28	252	50	15.56	33.92	4.08	25.04	293	0.17
100	13.25	34.42	1.13	210	75	14.03	34.06	2.28	25.47	252	0.24
124	12.64	34.58	0.53	187	100	13.25	34.42	1.13	25.91	210	0.30
153	12.12	34.63	0.33	173	150	12.18	34.63	0.34	26.29	174	0.40

STRANGER; April 15, 1959; 0830 GCT; 23°58.5'N, 112°21.5'W; sounding, 640 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 13°.

143.35

3	20.12	34.05a	5.23	390	0	(20.12)	(34.05)	(5.23)	(24.02)	(390)	(0.00)
13	20.12	34.33a	5.25	369	10	20.12	34.29	5.24	24.21	372	0.04
32	18.26	34.04a	5.26	345	20	19.60	34.26	5.25	24.32	362	0.07
42	18.19	34.16a	4.94	335	30	18.30	34.04	5.26	24.48	346	0.11
56	17.17	34.00	4.80	322	50	17.78	34.10	4.87	24.66	329	0.18
72	15.74	33.96	3.71	294	75	15.71	33.96	3.67	25.04	293	0.26
95	14.57	34.17	3.06	254	100	14.03	34.30	2.72	25.66	234	0.32
114	13.35	34.52	1.94	204	150	12.82	34.59	0.60	26.14	189	0.43
134	13.23	34.56	0.80	200	200	11.66	34.62	0.36	26.38	166	0.52
152	12.77	34.60	0.59	188	250	10.86	34.63	0.23	26.54	151	0.60
180	12.02	34.63	0.43	172	300	10.12	34.58	0.18	26.63	142	0.68
214	11.42	34.62	0.32	162	400	8.90	34.51	0.18	26.77	128	0.82
243	10.97	34.63	0.26	152	500	7.69	34.46	0.14	26.92	114	0.94
293	10.21	34.59	0.17	143	600	(6.63)	(34.47)	(0.16)	(27.07)	(100)	(1.06)
347	9.63	34.53	0.23	138							
431	8.46	34.49	0.17	124							
515	7.51	34.46	0.14	112							
599	6.64	34.47	0.16	100							

STRANGER; April 15, 1959; 1121 GCT; 23°47.5'N, 112°39'W; sounding, 1670 fm; wind, 300°, force 2; weather, clear; sea, moderate; wire angle, 08°.

143.40

3	19.44	34.20	5.30	362	0	(19.44)	(34.20)	(5.30)	(24.32)	(362)	(0.00)
13	19.43	34.18	5.27	363	10	19.43	34.18	5.28	24.31	363	0.04
33	19.24	34.19	5.28	358	20	19.40	34.18	5.27	24.32	362	0.07
63	18.40	34.13	5.29	342	30	19.30	34.19	5.28	24.34	359	0.11
73	17.94	34.09	5.18	334	50	18.84	34.18	5.29	24.44	349	0.18
88	15.73	33.83	4.94	304	75	17.78	34.07	5.14	24.64	331	0.26
103	14.74	33.93	3.75	276	100	14.97	33.91	3.99	25.16	282	0.34
117	12.78	33.91	2.95	238	150	11.80	34.25	1.57	26.07	195	0.46
142	11.84	34.14	2.01	204	200	11.00	34.49	0.76	26.40	164	0.56
162	11.69	34.34	1.18	186	250	10.32	34.55	0.50	26.57	148	0.64
191	11.12	34.47	0.82	167	300	9.85	34.58	0.26	26.67	138	0.71
221	10.77	34.51	0.64	158	400	8.42	34.57	0.23	26.90	117	0.84
250	10.32	34.55	0.50	148	500	7.26	34.50	0.19	27.01	106	0.96
299	9.86	34.58	0.26	138	600	6.27	34.46	0.19	27.12	96	1.06
354	9.02	34.57	0.24	126							
439	7.97	34.57	0.22	110							
524	6.98	34.47	0.17	104							
608	6.20	34.46	0.19	96							

a) First four salinity ~~samples~~ ^{VALUES} were assumed to be listed out of order. They appear below as originally listed according to increasing depth: 34.33, 34.05, (34.04), and 34.16% and

as follows

SIO

CCOFI
5904

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

143.50

STRANGER; April 15, 1959; 1659 GCT; 23°29.5'N, 113°14.5'W; sounding, 1355 fm; wind, 310°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°.

2	20.32	34.41	4.87	368	0	(20.32)	(34.41)	(4.87)	(24.25)	(368)	(0.00)
12	20.22	34.34	5.02	371	10	20.24	34.34	5.01	24.22	371	0.04
32	20.08	34.35	5.13	366	20	20.16	34.34	5.08	24.24	369	0.07
62	19.18	34.22	5.14	354	30	20.10	34.35	5.11	24.25	368	0.11
71	19.22	34.29	5.04	350	50	19.80	34.31	5.14	24.31	362	0.18
86	17.86	34.10	4.71	331	75	19.20	34.29	5.02	24.45	349	0.27
101	15.38	33.98	3.63	285	100	15.50	33.98	3.70	25.10	287	0.35
116	13.84	34.00	2.58	252	150	12.09	34.21	1.59	25.98	204	0.48
141	12.20	34.09	2.01	214	200	11.49	34.53	0.56	26.34	170	0.57
160	12.00	34.33	1.15	193	250	10.73	34.58	0.44	26.52	152	0.65
190	11.62	34.52	0.61	172	300	10.04	34.56	0.34	26.62	143	0.73
220	11.19	34.54	0.48	163	400	8.59	34.50	0.30	26.82	124	0.87
249	10.74	34.58	0.44	152	500	7.35	34.43	0.32	26.95	112	0.99
299	10.05	34.56	0.34	143	600	6.42	34.44	0.21	27.08	100	1.10
354	9.22	34.55	0.26	130							
437	8.10	34.47	0.33	120							
522	7.12	34.43	0.30	109							
606	6.39	34.44	0.20	99							

143.60

STRANGER; April 15, 1959; 2220 GCT; 23°10.5'N, 113°55'W; sounding, 1980 fm; wind, 310°, force 3; weather, cloudy; sea, moderate; wire angle, 11°.

3	20.99	34.45	5.09	382	0	(20.99)	(34.45)	(5.09)	(24.10)	(382)	(0.00)
13	20.64	34.45	4.97	374	10	20.77	34.45	5.00	24.16	377	0.04
32	20.58	34.43	4.98	373	20	20.61	34.44	4.98	24.19	374	0.08
42	20.55	34.49	4.90	368	30	20.59	34.43	4.98	24.19	374	0.11
56	19.88	34.33	5.11	362	50	20.55	34.49	4.90	24.25	368	0.19
72	19.33	34.41	5.00	344	75	19.15	34.39	4.94	24.54	340	0.28
97	16.78	33.96	4.26	317	100	16.25	33.96	3.92	24.92	305	0.36
110	14.96	33.99	3.07	275	150	13.12	34.17	1.87	25.75	226	0.49
135	13.80	34.04	2.21	248	200	11.11	34.38	1.06	26.29	174	0.59
155	12.86	34.21	1.78	218	250	10.55	34.53	0.46	26.52	153	0.68
185	11.26	34.26	1.37	185	300	9.97	34.51	0.38	26.59	146	0.76
218	10.98	34.48	0.73	164	400	8.57	34.51	0.25	26.82	124	0.89
248	10.58	34.53	0.47	153	500	7.06	34.43	0.25	26.98	108	1.02
297	10.01	34.51	0.39	146	600	6.32	34.47	0.23	27.12	96	1.12
352	9.19	34.52	0.30	132							
434	8.12	34.49	0.24	118							
519	6.79	34.42	0.25	106							
603	6.31	34.47	0.23	96							

147.20

STRANGER; April 17, 1959; 0525 GCT; 23°56'N, 111°03.5'W; sounding, 63 fm; wind, 310°, force 4; weather, clear; sea, moderate; wire angle, 10°.

2	18.69	34.23	5.26	341	0	(18.69)	(34.23)	(5.26)	(24.54)	(341)	(0.00)
12	18.68	34.23	5.31	341	10	18.68	34.23	5.31	24.54	341	0.04
31	17.24	34.19	4.47	311	20	18.65	34.23	5.30	24.54	340	0.07
51	15.46	34.04	3.52	282	30	17.26	34.19	4.48	24.85	311	0.10
75	14.04	34.32	1.62	233	50	15.46	34.04	3.53	25.16	282	0.16
					75	14.04	34.32	1.62	25.67	233	0.22

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

SIO

CCOFI
5904

STRANGER; April 17, 1959; 0118, 0151 GCT; 23°51.5'N, 111°20'W; sounding, 310 fm; wind, 310°, force 6; weather, clear; sea, rough; wire angle, 20°, missing.

147.25

3	21.26	34.45	5.33	390	0	(21.26)	(34.45)	(5.33)	(24.02)	(390)	(0.00)
13	21.30	34.47	4.77	389	10	21.29	34.47	4.78	24.03	389	0.04
32	19.98	34.32	5.10	366	20	21.29	34.47	4.77	24.03	389	0.08
41	19.24	34.23	5.17	356	30	20.20	34.35	5.04	24.23	370	0.12
56	17.64	34.18	4.05	320	50	17.90	34.18	4.27	24.70	326	0.18
69	15.87	34.14	2.76	284	75	15.39	34.18	2.76	25.27	271	0.26
92	14.28	34.34	2.80	236	100	13.59	34.40	1.38	25.82	218	0.32
110	13.36	34.42	1.00	212	150	12.46	34.62	0.42	26.22	180	0.42
126	13.04	34.56	0.61	196	200	11.75	34.69	0.26	26.42	162	0.51
142	12.62	34.61	0.45	184	250	10.89	34.62	0.22	26.52	152	0.59
171	12.12	34.64	0.34	172	300	10.21	34.62	0.19	26.64	141	0.67
201	11.74	34.69	0.26	162	400	8.69	34.55	0.16	26.84	122	0.80
229	11.16	34.61	0.23	157	500	7.47	34.52	0.16	26.99	108	0.92
274	10.56	34.63	0.19	146							
326	9.86	34.61	0.18	136							
405	8.60	34.55	0.16	121							
486	7.61	34.52	0.15	109							

561 7.02 34.51 0.21 102

STRANGER; April 16, 1959; 2207 GCT; 23°34'N, 111°42'W; sounding, 180 fm; wind, 340°, force 4; weather, partly cloudy; sea, moderate; wire angle, 08°.

147.30

2	20.68	34.39	5.14	379	0	(20.68)	(34.39)	(5.14)	(24.13)	(379)	(0.00)
12	20.69	34.38	5.23	380	10	20.68	34.38	5.22	24.12	380	0.04
32	20.56	34.36	5.27	378	20	20.66	34.38	5.24	24.13	379	0.08
51	19.14	34.31	4.94	346	30	20.59	34.37	5.27	24.14	378	0.11
75	14.93	34.24	3.05	256	50	19.34	34.32	5.02	24.43	351	0.19
100	13.50	34.32	1.52	222	75	14.93	34.24	3.05	25.42	256	0.26
125	12.68	34.45	0.91	196	100	13.50	34.32	1.52	25.79	222	0.32
164	12.38	34.63	0.43	178	150	12.50	34.58	0.59	26.19	184	0.42
204	11.70	34.64	0.21	165	200	11.78	34.64	0.21	26.38	166	0.51
254	10.98	34.62	0.23	154	250	11.04	34.62	0.23	26.50	154	0.60
304	10.12	34.60	0.23	141	300	10.22	34.60	0.23	26.62	142	0.67

STRANGER; April 16, 1959; 1545 GCT; 23°14.5'N, 112°18.5'W; sounding, 1725 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 07°.

147.40

2	21.32	34.60	5.11	380	0	(21.32)	(34.60)	(5.11)	(24.12)	(380)	(0.00)
12	21.32	34.58	5.01	382	10	21.32	34.58	5.01	24.11	382	0.04
32	20.04	34.33	5.07	368	20	20.40	34.40	5.04	24.21	372	0.08
42	19.58	34.25	5.27	362	30	20.12	34.34	5.06	24.25	368	0.11
56	18.30	34.22	4.67	333	50	18.36	34.22	4.70	24.61	334	0.18
71	16.71	34.04	4.28	310	75	16.29	34.08	3.74	25.00	297	0.26
96	15.34	34.23	2.43	266	100	15.07	34.26	2.18	25.40	258	0.33
117	14.04	34.34	1.52	231	150	12.48	34.47	0.88	26.10	192	0.44
137	12.84	34.42	1.07	202	200	11.43	34.54	0.62	26.34	168	0.54
156	12.34	34.49	0.80	188	250	10.94	34.61	0.32	26.50	154	0.62
185	11.63	34.52	0.63	173	300	10.43	34.57	0.37	26.56	148	0.70
218	11.24	34.58	0.60	162	400	9.08	34.56	0.32	26.78	127	0.84
249	10.96	34.61	0.32	154	500	7.52	34.48	0.29	26.96	110	0.96
298	10.45	34.57	0.37	149	600	6.66	34.48	0.28	27.08	100	1.08
352	9.66	34.58	0.34	135							
437	8.60	34.54	0.31	122							
521	7.20	34.47	0.28	106							
607	6.62	34.48	0.28	99							

SIO
CCOFI
5904

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

147.50

STRANGER; April 16, 1959; 0908 GCT; 22°55'N, 112°55'W; sounding, 1950 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 10°.

3	21.55	34.55	5.01	390	0	(21.55)	(34.55)	(5.01)	(24.02)	(390)	(0.00)
13	21.50	34.54	4.99	389	10	21.53	34.54	5.00	24.03	389	0.04
33	20.80	34.45	4.98	378	20	21.50	34.54	4.99	24.03	389	0.08
42	19.73	34.33	5.07	359	30	21.35	34.52	4.98	24.06	387	0.12
57	18.30	34.16	4.97	337	50	19.30	34.28	5.06	24.42	352	0.19
73	17.10	34.09	4.13	314	75	17.02	34.09	4.07	24.83	313	0.27
97	14.54	34.22	2.23	250	100	14.35	34.24	2.10	25.55	244	0.34
118	13.32	34.37	1.22	214	150	12.23	34.51	0.69	26.18	184	0.45
136	12.30	34.46	0.99	189	200	11.51	34.64	0.34	26.42	162	0.54
156	12.21	34.52	0.63	183	250	10.71	34.63	0.30	26.56	148	0.62
187	11.69	34.62	0.41	166	300	10.00	34.60	0.26	26.66	139	0.69
221	11.22	34.65	0.26	156	400	8.51	34.54	0.21	26.86	120	0.83
251	10.69	34.63	0.30	148	500	7.39	34.53	0.17	27.02	105	0.95
300	10.00	34.60	0.26	139	600	6.46	34.49	0.26	27.11	96	1.05
353	9.12	34.54	0.21	130							
437	8.08	34.54	0.21	114							
521	7.18	34.52	0.17	103							
605	6.41	34.49	0.28	96							

147.60

STRANGER; April 16, 1959; 0302 GCT; 22°34'N, 113°34'W; sounding, 2430 fm; wind, 340°, force 4; weather, clear; sea, moderate; wire angle, 10°.

2	22.59	34.58	5.08	416	0	(22.59)	(34.58)	(5.08)	(23.75)	(416)	(0.00)
12	22.62	34.60	4.99	415	10	22.62	34.60	4.99	23.76	415	0.04
31	22.54	34.62	5.11	412	20	22.60	34.62	5.05	23.78	413	0.08
41	21.04	34.38	5.29	389	30	22.56	34.62	5.10	23.79	412	0.12
56	20.84	34.52	5.40	374	50	20.93	34.46	5.37	24.12	380	0.20
70	19.12	34.29	4.15	347	75	18.50	34.25	3.79	24.60	335	0.29
96	16.04	34.18	2.83	284	100	15.50	34.18	2.62	25.25	273	0.37
115	14.15	34.27	1.85	238	150	13.11	34.63	0.64	26.10	192	0.49
135	13.42	34.51	1.10	207	200	11.74	34.61	0.52	26.36	168	0.58
154	13.02	34.64	0.59	190	250	10.81	34.63	0.33	26.54	150	0.66
183	12.28	34.63	0.50	176	300	10.06	34.60	0.37	26.64	140	0.74
216	11.30	34.60	0.53	161	400	8.53	34.49	0.29	26.82	124	0.87
246	10.86	34.63	0.33	151	500	7.36	34.44	0.27	26.95	111	1.00
297	10.11	34.60	0.37	141	600	6.49	34.45	0.23	27.08	99	1.11
350	9.27	34.54	0.35	123							
433	8.10	34.47	0.28	120							
518	7.18	34.44	0.26	109							
603	6.46	34.45	0.22	99							

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Force	Weather	Sea	10 Meters T S	
60.65-S	IV-24	1700	37°25.0'	123°57.5'	1900	190°	2	overcast	moderate	11.62	33.30
63.55-S	24	0715	37°13.0'	122°49.0'	138	180°	2	overcast	moderate	12.04	33.44
67.50-S	23	1800	36°49.0'	122°05.0'	61	130°	2	cloudy	moderate	11.21	33.69
70.55-S	23	1040	36°03.0'	122°02.0'	670	340°	3	partly cloudy	moderate	12.79	33.49
70.65-S	23	0530	35°43.0'	122°45.0'	1360	320°	2	cloudy	slight	12.81	33.50
73.51-O	25	1809	35°32.0'	121°25.5'	335	160°	2	cloudy	moderate	12.73	33.52
73.65-O	26	0348	35°05.5'	122°19.5'	2100	180°	2	overcast	rough	14.43	33.31
77.50-O	25	1257	35°02.5'	120°51.0'	74	090°	2	overcast	moderate	12.94	33.47
77.65-O	25	0345	34°33.0'	121°53.0'	2000+	130°	4	overcast	rough	13.88	33.40
80.65-O	23	1240	33°59.5'	121°31.0'	1800	340°	3	overcast	moderate	13.97	33.44
80.75-O	23	1909	33°38.5'	122°11.0'	2000	-	1	overcast	rough	13.97	33.33
80.85-O	24	0150	33°17.5'	122°52.0'	2160	180°	3	cloudy	very rough	14.18	33.27
83.65-O	21	2326	33°23.5'	121°05.5'	1900	310°	4	cloudy	moderate	13.86	33.57
83.75-O	21	1717	33°05.5'	121°48.5'	2100	340°	3	cloudy	rough	14.18	33.48
83.85-O	21	1020	32°45.0'	122°28.0'	2200	300°	2	cloudy	rough	14.83	33.39
87.50-O	19	1945	33°20.0'	119°39.5'	42	270°	4	overcast	moderate	15.84	33.60
87.65-O	20	0740	32°47.5'	120°47.5'	2000	290°	6	overcast	very rough	14.70	33.52
87.75-O	20	1610	32°26.0'	121°32.0'	2000+	320°	4	overcast	high	14.58	33.49
87.85-O	20	2130	32°10.0'	122°04.0'	2000+	320°	4	cloudy	very rough	15.26	33.41

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

SIO
CCOFI
5904

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	
90.65-O	IV-15	1822	32°10.0'	120°16.5'	2000	320°	4	cloudy	very rough	15.68	33.53
90.75-O	15	1157	31°52.0'	120°58.0'	2000	330°	4	cloudy	rough	15.62	33.41
90.85-O	15	0510	31°34.0'	121°39.0'	2200	340°	4	cloudy	rough	16.24	33.61
93.35-O	13	0624	32°40.0'	117°52.5'	300	-	1	fog	moderate	17.26	33.58
93.45-O	13	1253	32°20.0'	118°32.5'	1000	260°	2	cloudy	rough	15.27	33.55
93.55-O	13	1906	32°00.0'	119°13.0'	880	320°	4	cloudy	rough	15.44	33.55
93.65-O	14	0135	31°40.5'	119°53.5'	2000	310°	5	cloudy	very rough	15.90	33.55
93.75-O	14	0750	31°21.5'	120°34.0'	2200	320°	4	overcast	very rough	15.56	33.48
93.85-O	14	1425	31°01.5'	121°14.5'	2000	320°	3	cloudy	very rough	15.98	33.51
97.35-O	11	1545	32°04.0'	117°29.0'	600	300°	3	partly cloudy	moderate	16.98	33.55
97.45-O	11	0947	31°46.0'	118°05.5'	650	320°	4	clear	moderate	16.14	33.55
97.55-O	11	0320	31°26.0'	118°49.0'	300	310°	5	cloudy	rough	15.86	33.53
97.75-O	10	1208	30°45.5'	120°14.5'	1950	330°	4	cloudy	rough	15.52	33.40
97.85-O	10	0555	30°26.0'	120°51.0'	2050	330°	4	cloudy	moderate	16.14	33.48
100.29-O	8	0507	31°42.0'	116°43.5'	56	300°	1	missing	slight	14.26	33.60
100.35-O	8	1000	31°30.5'	117°06.5'	600	280°	2	overcast	moderate	17.16	33.58
100.45-O	8	1624	31°10.5'	117°47.5'	950	290°	2	overcast	moderate	16.76	33.60
100.55-O	8	2250	30°51.0'	118°26.5'	1400	290°	3	cloudy	rough	16.70	33.64
100.65-O	9	0455	30°31.0'	119°07.0'	1700	300°	4	missing	rough	16.75	33.66

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
100.75-O	IV-9	1139	30°10.0'	119°48.0'	2000	320°	3	overcast	rough	15.93	33.42
100.85-O	9	1746	29°49.0'	120°30.0'	2080	320°	3	overcast	moderate	16.42	33.53
103.55-P	9	0340	30°16.0'	118°02.5'	1300	270°	4	cloudy	moderate	16.72	33.62
103.65-P	9	1100	29°56.5'	118°43.0'	1900	320°	4	overcast	moderate	16.46	33.51
103.75-P	9	1710	29°35.0'	119°24.0'	1950	330°	3	overcast	moderate	17.52	33.85
103.85-P	9	2302	29°16.5'	120°03.5'	2040	320°	3	overcast	moderate	17.76	33.96
107.45-P	11	1245	30°00.0'	117°03.5'	1250	320°	5	partly cloudy	rough	16.99	33.68
107.55-P	11	0620	29°41.0'	117°41.5'	1850	330°	5	cloudy	rough	17.43	33.93
107.65-P	10	2330	29°22.5'	118°21.0'	2040	330°	4	overcast	moderate	17.52	33.87
107.75-P	10	1710	29°02.5'	119°01.5'	2000	360°	3	overcast	rough	17.56	33.95
107.85-P	10	1115	28°42.0'	119°39.0'	2000	330°	5	overcast	rough	17.64	33.86
110.45-P	12	1300	29°25.5'	116°43.0'	900	300°	5	overcast	rough	17.09	33.71
110.55-P	12	1915	29°07.5'	117°20.0'	2100	330°	5	cloudy	rough	17.06	33.69
110.65-P	13	0145	28°53.0'	118°04.5'	2000	320°	3	cloudy	rough	17.28	33.78
110.75-P	18	0800	28°26.5'	118°37.5'	2000+	320°	4	overcast	moderate	18.19	34.04
110.85-P	18	1435	28°07.0'	119°19.0'	2000+	330°	4	cloudy	rough	17.65	33.84
113-45-P	20	0330	28°52.0'	116°19.0'	1050	330°	4	cloudy	rough	17.05	33.68
113.55-P	19	2110	28°35.0'	117°00.0'	1900	320°	4	overcast	rough	17.00	33.71
113-65-P	19	1600	28°17.5'	117°33.0'	1800	290°	4	overcast	moderate	17.10	33.73

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

SIO
CCOFI
5904

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
113.75-P	IV-19	0940	27°55.0'	118°12.5'	2000+	320°	4	cloudy	moderate	17.67	33.84
113.85-P	19	0310	27°33.0'	118°52.0'	2100	320°	4	cloudy	rough	18.25	34.05
117.45-P	21	2232	28°13.0'	115°52.5'	1600	320°	4	partly cloudy	moderate	17.00	33.65
117.55-P	22	0526	27°56.0'	116°35.0'	2100	320°	4	overcast	moderate	16.98	33.64
117.65-P	22	1210	27°33.5'	117°16.0'	1400	330°	4	overcast	moderate	17.33	33.76
117.75-P	22	2030	27°08.5'	118°01.5'	2080	340°	3	cloudy	slight	18.05	33.98
117.85-P	23	0010	26°58.5'	118°24.0'	2000+	320°	3	cloudy	moderate	18.04	33.91
120.40-P	24	2138	27°56.5'	115°14.0'	24	270°	4	partly cloudy	slight	17.22	33.72
120.55-P	24	1120	27°23.5'	116°09.0'	2073	340°	2	partly cloudy	slight	17.61	33.73
120.65-P	24	0438	27°03.0'	116°48.5'	2000+	270°	2	partly cloudy	slight	18.25	34.00
120.75-P	23	2230	26°44.0'	117°29.5'	2000+	270°	2	cloudy	slight	17.88	33.77
120.85-P	23	1635	26°25.0'	118°07.0'	2000+	300°	2	partly cloudy	moderate	18.03	33.86
130.45-S	10	1015	25°59.0'	114°26.0'	1975	260°	5	partly cloudy	moderate	18.94	34.25
130.55-S	10	1545	25°39.0'	115°04.0'	1885	310°	3	cloudy	moderate	20.56	34.53
133.35-S	11	1424	25°44.5'	113°26.5'	380	300°	3	overcast	moderate	17.40	33.93
133.45-S	11	0750	25°24.5'	114°05.0'	1775	320°	5	overcast	moderate	20.63	34.52
133.55-S	11	0215	25°04.5'	114°43.0'	2000	310°	3	cloudy	moderate	20.77	34.52
137.45-S	12	1301	24°50.0'	113°42.5'	1900	300°	2	cloudy	moderate	20.70	34.54
137.55-S	12	1810	24°30.0'	114°20.5'	1860	320°	2	cloudy	moderate	20.88	34.54

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters	
						Dir	Force			T	S
140.45-S	IV-14	0210	24°20.0'	113°09.0'	1250	320°	2	partly cloudy	rough	19.74	34.33
140.55-S	13	1932	24°02.0'	114°00.0'	1775	320°	2	cloudy	moderate	21.00a)	34.60
143.45-S	15	1355	23°38.5'	112°56.0'	1750	310°	2	clear	moderate	19.79	34.23
143.55-S	15	1955	23°17.0'	113°38.0'	2100	310°	3	partly cloudy	moderate	20.79	34.52
147.35-S	16	1815	23°24.5'	112°00.0'	1630	340°	4	partly cloudy	rough	21.13	34.52
147.45-S	16	1150	23°06.0'	112°34.5'	1930	310°	4	clear	moderate	21.43	34.53
147.55-S	16	0615	22°44.5'	113°14.5'	1925	340°	4	clear	moderate	21.26	34.52

a) Alternate value, 21.44°C.

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

Deutsches Hydrographisches Institut
Bernhard-Nocht-Str. 78
Hamburg 4, Germany

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

Dr. Robert H. Gibbs, Jr.
Department of Biology
Boston University
Boston 15, Massachusetts

Mr. C. G. Gunnerson
Department of Water Resources
Division of Resources Planning
P. O. Box 388
Sacramento 2, California

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

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

Herrn Professor Dr. A Defant
Sternwartestrasse 38
Innsbruck
Austria

Dirección General de Pesca é
Industrias Conexas
Estación de Biología Marina
Casa del Marina
Mazatlán, Sinaloa, México

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

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

Mr. Rafael Soto Gil
Secretario General
Universidad de Baja California
Mexicali, B. C.
México

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

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

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

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

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

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

Japan Meteorological Agency
Oceanographical Section
Tokyo, Japan

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

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

Dr. E. C. LaFond
Code 2250
U. S. Navy Electronics Laboratory
San Diego 52, California

Cdr. J. R. Lumby, Director (2)
IGY, WDC-A, Oceanography
Texas A. and M. College
College Station, Texas

Dr. John Lyman
National Science Foundation
Washington 25, D. C.

Mr. Joseph Mardesich
1513 West Fifteenth Street
San Pedro, California

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

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

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

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

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

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

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, Code 416
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

Librarian
Ministry of Agriculture, Fisheries
and Food
Fisheries Laboratory
Lowestoft, Suffolk, England

National Marine Consultants, Inc.
1500 Chapala Street
Santa Barbara, California
Attn: Dr. Richard Kent

Mr. Kenneth S. Norris
University of California
Department of Zoology
Los Angeles 24, California

Director
Norwegian Polar Institute
Observatoriegte 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

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

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

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

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

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. R. B. Tibby
Hancock Foundation
University of Southern California
University Park
Los Angeles 7, California

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

U. S. Hydrographic Office (2)
Navy Department
Washington 25, D. C.
Attn: Dr. Boyd E. Olson
Division of Oceanography

University of California
Department of Zoology
Berkeley 4, California

Director
University of Miami
Marine Laboratory
Coral Gables, Florida

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.

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. Alvariño 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

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
Laboratory Director
Biological Laboratory
Bureau of Commercial Fisheries
734 Jackson Place, N. W.
Washington 25, D. C.

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

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

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

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

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