

UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

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10/3/61 RTH

July 1964 RTH

cover
p 236

data report

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5707

(MLR 98)

8 July - 3 August 1957

and

CCOFI CRUISE 5708

(MLR 99)

9-27 August 1957

SIO Reference 58-63

20 August ~~1957~~

1958

UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5707
(MLR 98)
8 July - 3 August 1957

and

CCOFI CRUISE 5708
(MLR 99)
9-27 August 1957

Sponsored by
Marine Research Committee

SIO Reference 58-63
20 August 1958

Approved for distribution:



Roger Revelle, Director

CONTENTS

INTRODUCTION iii

CRUISE 5707

 List of Figures. v

 Personnel vii

 Tabulated Data. 172

CRUISE 5708

 List of Figures. ix

 Personnel x

 Tabulated Data. 223

DISTRIBUTION LIST 251

INTRODUCTION

The data presented in this report were collected on the ninety-eighth and ninety-ninth consecutive cruises of the California Cooperative Oceanic Fisheries Investigations program. The R/V Black Douglas of the U. S. Fish and Wildlife Service, the R/V Orca, the R/V Paolina-T and the R/V Stranger of the Scripps Institution of Oceanography participated in the ninety-eighth cruise while the R/V Black Douglas and the R/V Stranger participated in the ninety-ninth cruise.

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

The stations occupied in the Gulf of California are based on a special grid; therefore, they will appear in each report following the data obtained in the normal station pattern. In each group stations are listed in numerical order. The designation "G" in the station number is used to denote Gulf of California stations.

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

^{1/}

Klein, Hans T. A new technique for processing physical oceanographic data. (MS). Contribution from the Scripps Institution of Oceanography, New Series, No. 000.

time is the time of messenger release. When more than one cast was made on a station, each messenger time and wire angle is given in the order of increasing depth of casts. A line is left blank between the observed data of each cast.

FOOTNOTES

In addition to standard 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 1957 volume, the first page of Cruise 5707 is numbered 172 and the first page of Cruise 5708 is numbered 223.

FIGURES

1. CCOFI Cruise 5707 (MLR 98), station positions
2. Horizontal distribution of dynamic height anomaly (0 over 500 d-bar)
3. Surface currents measured by geomagnetic electrokinetograph (GEK)
4. Horizontal distribution of temperature at 10 meters
5. Horizontal distribution of salinity at 10 meters
6. Horizontal distribution of temperature at 200 meters
7. Horizontal distribution of salinity at 200 meters

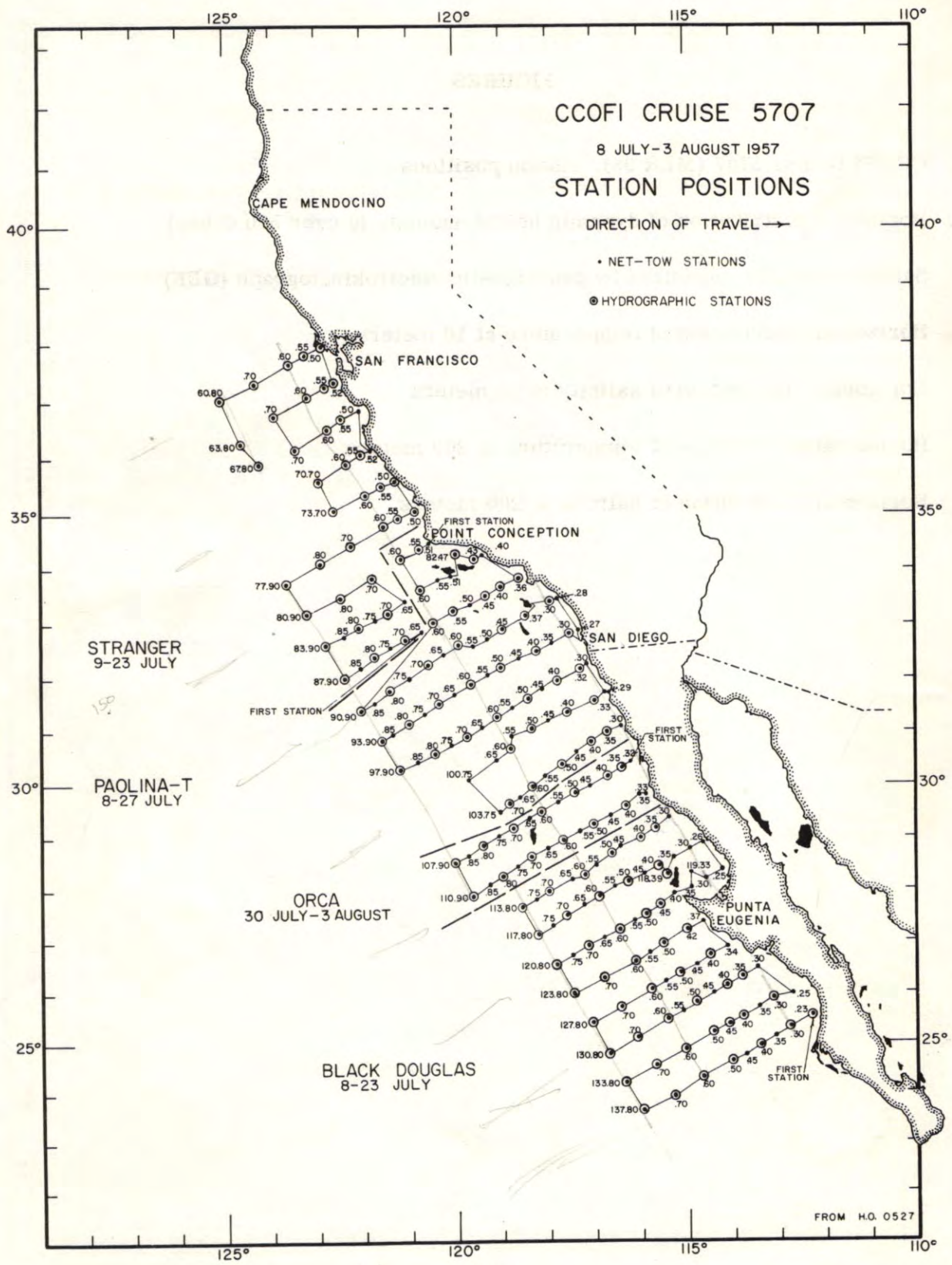


FIGURE I

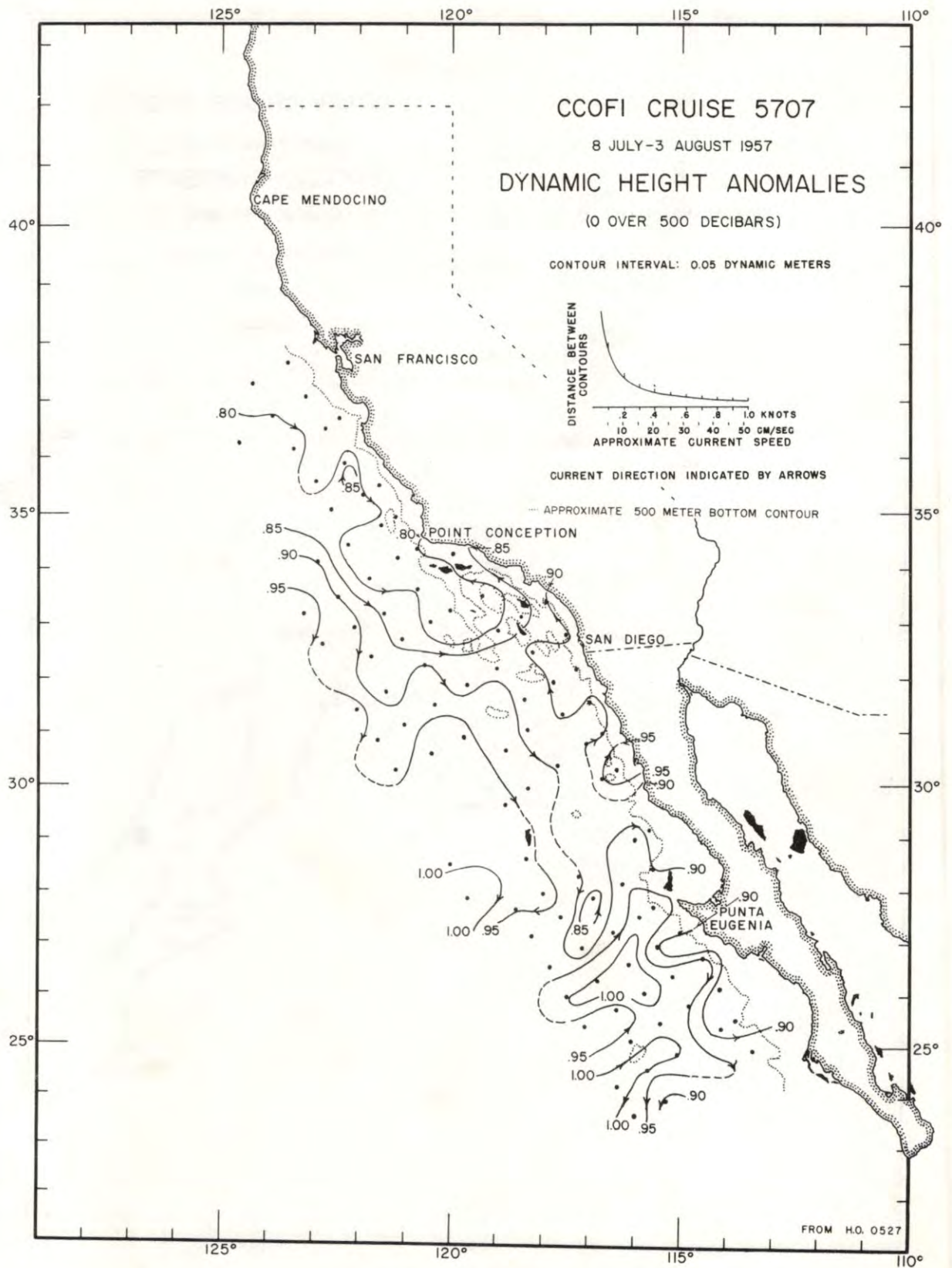


FIGURE 2

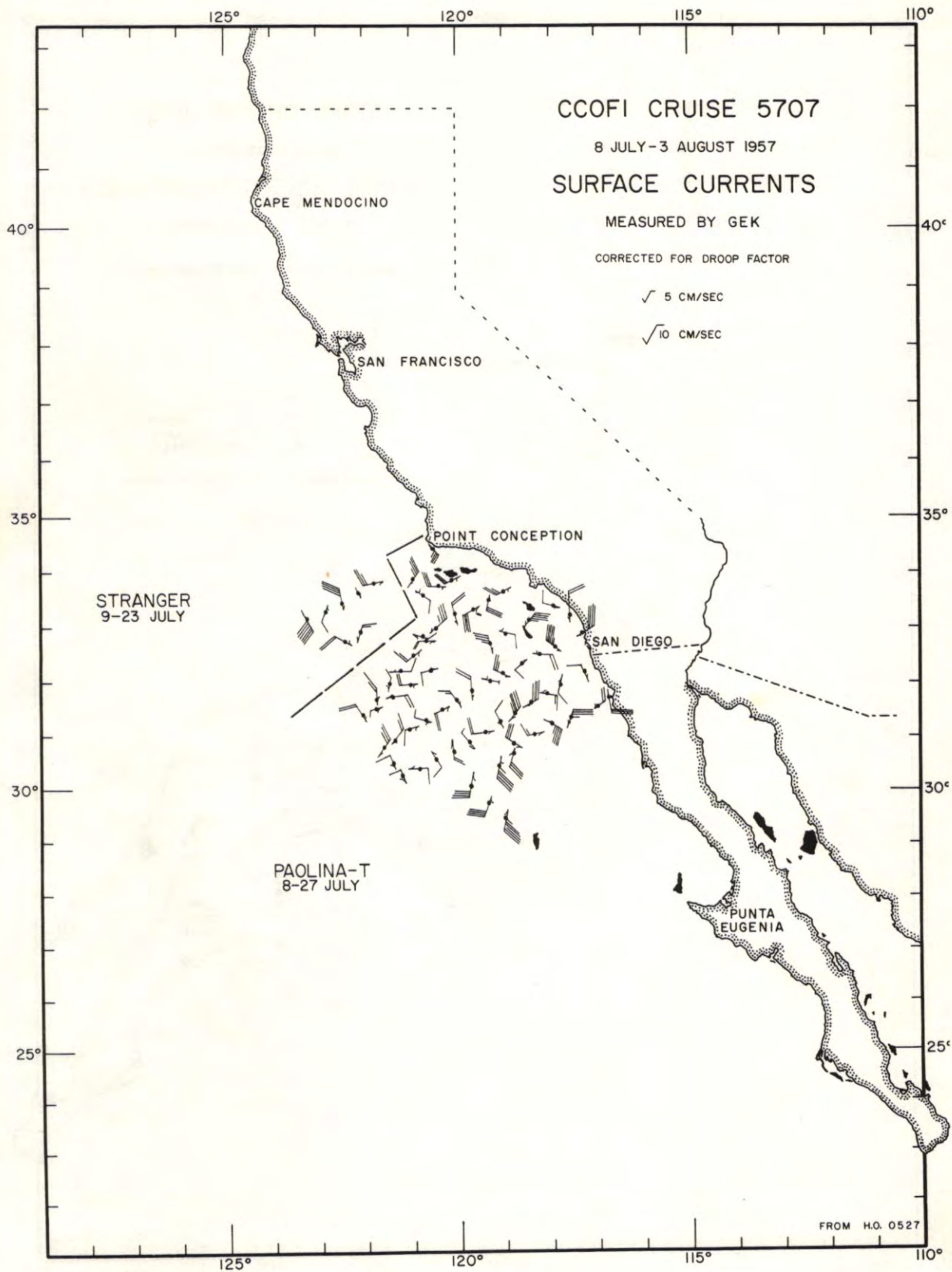


FIGURE 3

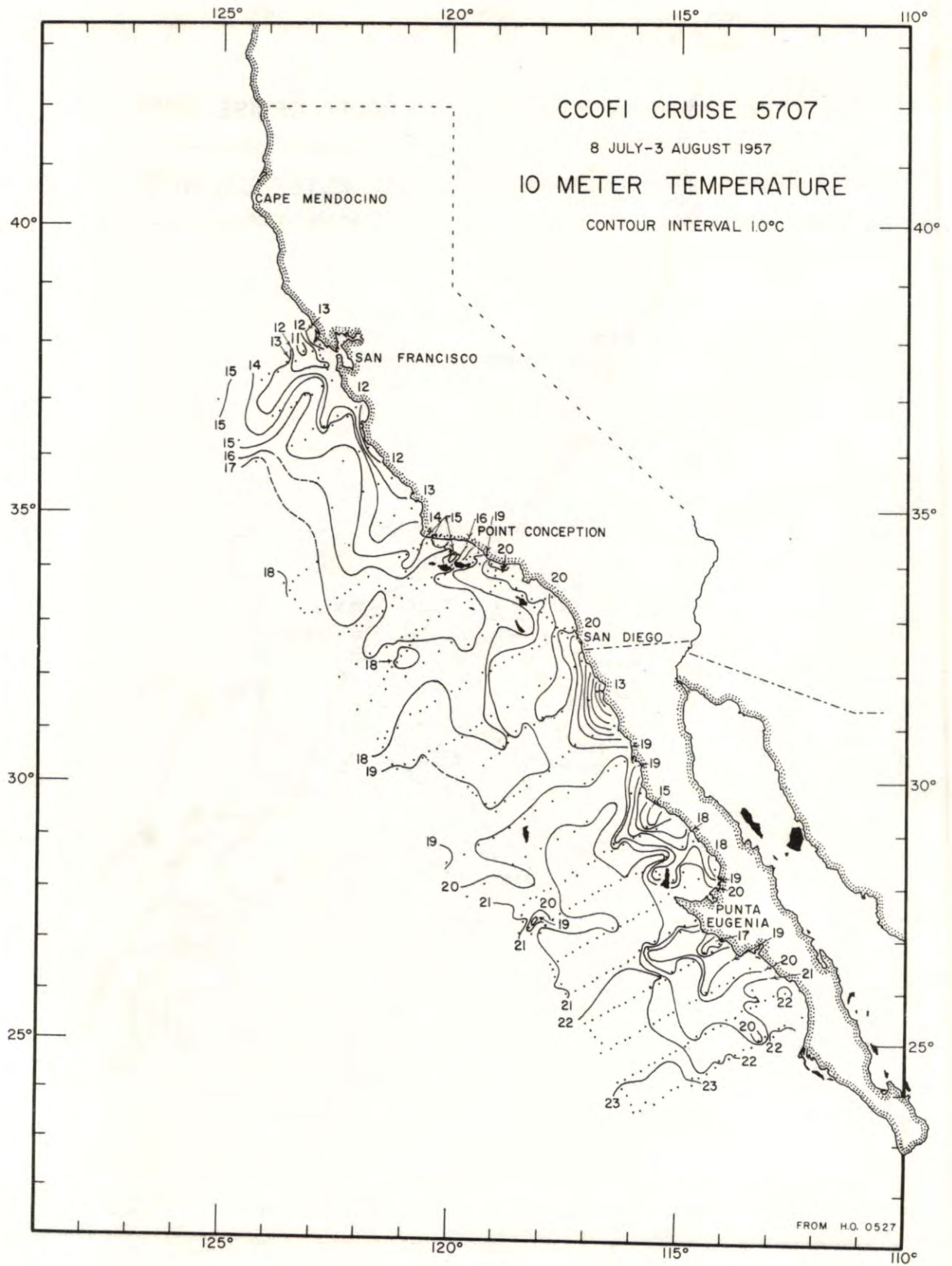


FIGURE 4

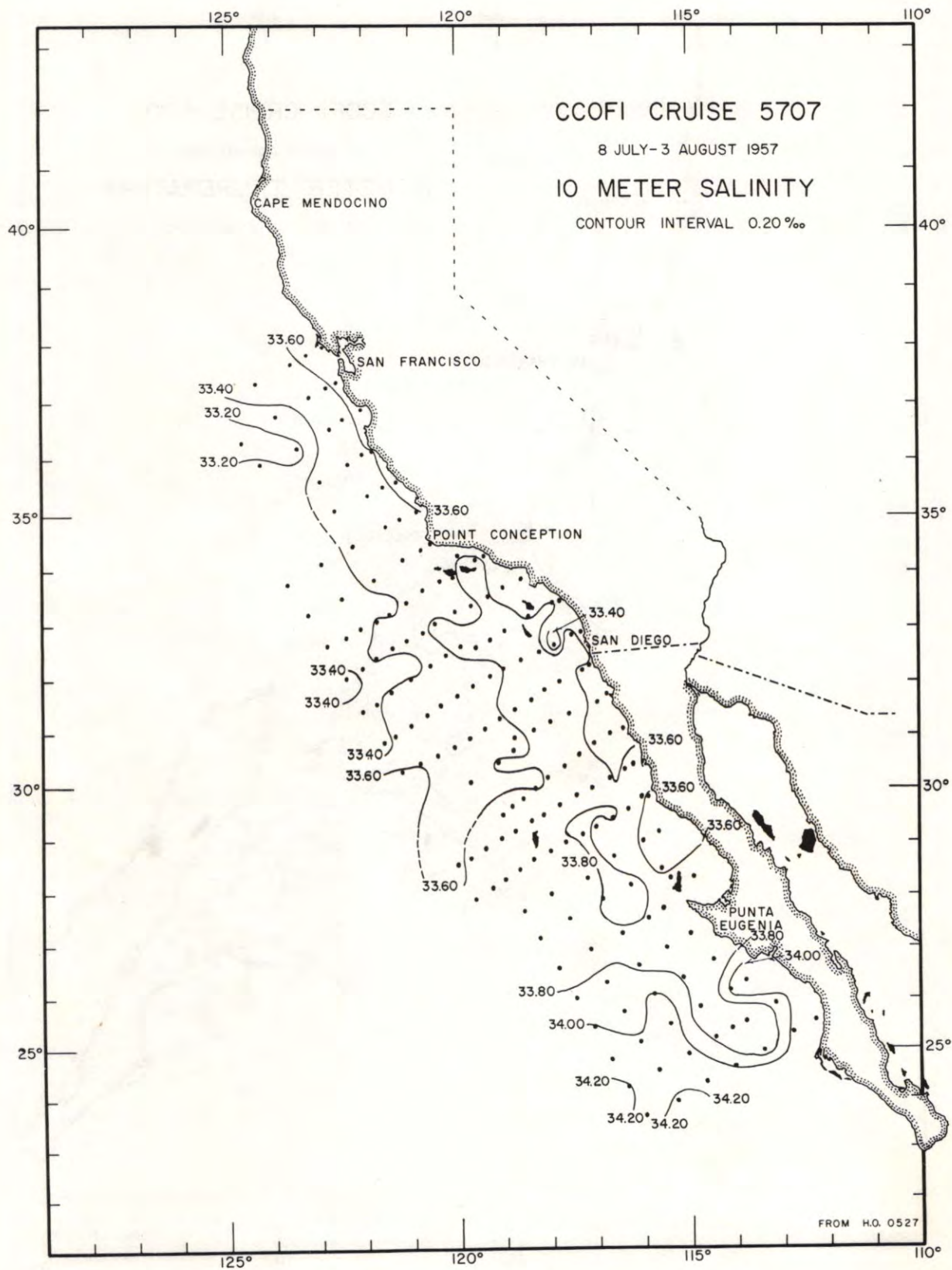


FIGURE 5

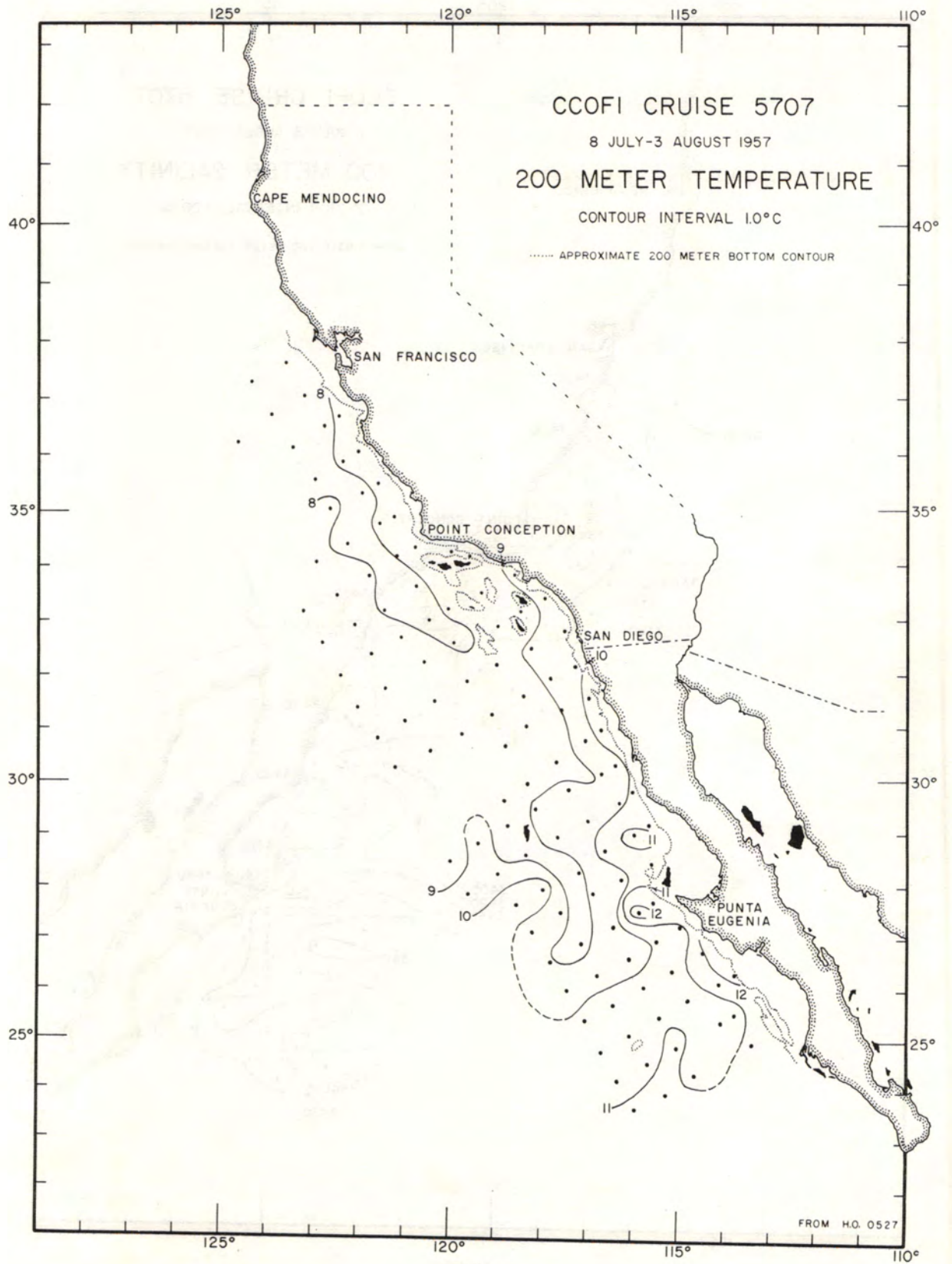


FIGURE 6

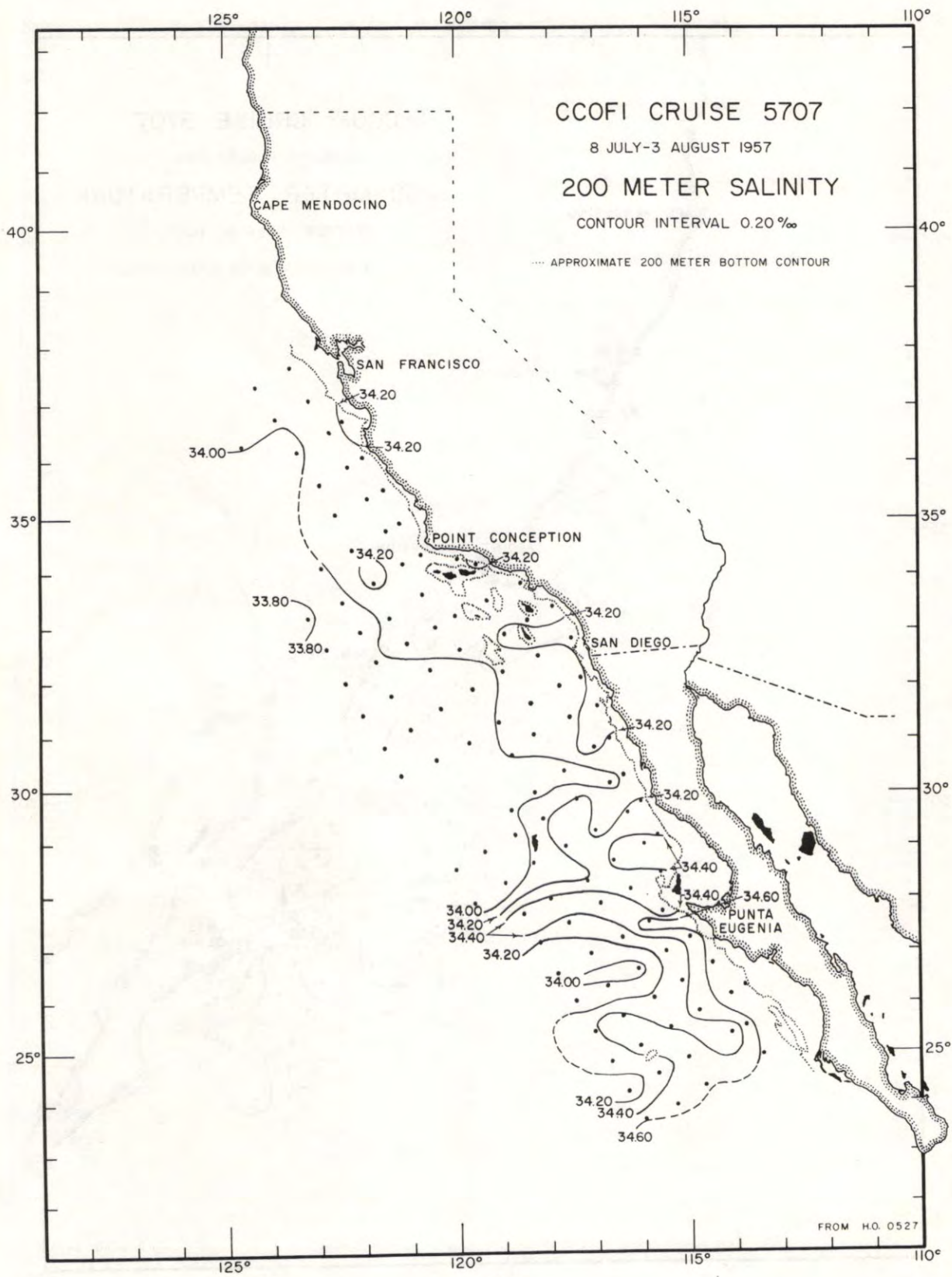


FIGURE 7

CRUISE 5707
PERSONNEL

SHIPS' CAPTAINS

Davis, Laurence E., R/V Orca and R/V Stranger
Forster, Charles W., R/V Black Douglas
Miller, Frank, R/V Paolina-T

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

R/V Black Douglas

Vrooman, Andrew M., Fishery Research Biologist, U. S. Fish and Wildlife Service
Anderson, Norman E., Statistician
Jaynes, John M., Marine Technician
Vorobiov, Alexander V., Fishery Aid, U. S. Fish and Wildlife Service

R/V Orca

Brown, Daniel M., Senior Marine Technician
Froerer, Arthur I., Marine Technician
Reid, Charles F., Fishery Aid, U. S. Fish and Wildlife Service
Vorobiov, Alexander F., Fishery Aid, U. S. Fish and Wildlife Service

R/V Paolina-T

Brown, Daniel M., Senior Marine Technician
Brennan, Robert E., Marine Technician
Farrar, Lloyd, Fishery Aid, U. S. Fish and Wildlife Service
Gilley, Ellis Gene, Marine Technician
Richardson, Park W., Laboratory Technician

R/V Stranger

Gilkey, Robert W., Senior Marine Technician
Davoll, Peter J., Marine Technician
Justice, David K., Fishery Aid, U. S. Fish and Wildlife Service
Scanlan, Thomas F., Marine Technician

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

S10

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5707

6050

STRANGER; July 20, 1957; 0033 GCT; 37°57.5'N, 122°53'W; sounding, 22 fm; wind, 180°, force 2; weather, overcast; sea, moderate; wire angle, 02°.

0	13.35	33.67	8.20	0	13.35	33.67	8.20	25.32	267	0.00
9	13.15	33.62	8.26	10	13.12	33.62	8.24	25.32	266	0.03
24	9.48	33.83	2.18	20	10.80	33.76	4.27	25.87	214	0.05

6055

STRANGER; July 20, 1957; 0255 GCT; 37°47.5'N, 123°15'W; sounding, 60 fm; wind, 280°, force 4; weather, overcast; sea, rough; wire angle, 07°.

0	11.65	33.75	7.68	0	11.65	33.75	7.68	25.70	230	0.00
9	10.93	33.73	6.56	10	10.90	33.73	6.54	25.83	217	0.02
28	10.22	33.73	4.91	20	10.51	33.73	5.65	25.90	211	0.04
47	9.77	33.73	4.10	30	10.21	33.73	4.87	25.95	206	0.06
71	9.11	33.86	2.06	50	9.83	33.74	3.90	26.05	197	0.11
93	8.79	33.89	2.06	75	9.02	33.86	2.06	26.25	178	0.15
				100	(8.70)	(33.90)	(2.06)	(26.33)	(171)	(0.20)

6060

STRANGER; July 20, 1957; 0529 GCT; 37°37'N, 123°37'W; sounding, missing; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 10°.

0	12.94	33.53	6.63	0	12.94	33.53	6.63	25.29	269	0.00
9	12.93	33.51	6.66	10	12.92	33.51	6.65	25.28	270	0.03
28	10.17	33.51	4.40	20	10.80	33.51	4.97	25.67	233	0.05
43	9.65	33.57	3.93	30	10.07	33.51	4.36	25.80	221	0.07
53	9.32	33.68	3.51	50	9.42	33.65	3.69	26.01	200	0.12
61	9.02	33.72	3.32	75	8.79	33.76	3.22	26.20	182	0.16
71	8.87	33.70u	3.27	100	8.41	33.83	2.70	26.33	171	0.21
89	8.48	33.82	2.86	150	8.20	34.11	1.60	26.57	148	0.29
103	8.40	33.95u	2.61	200	7.96	34.11	1.44	26.61	144	0.36
117	8.36	33.94	2.39	250	7.78	34.14	1.31	26.66	139	0.44
140	8.33	34.09	1.66	300	7.45	34.14	1.16	26.70	135	0.51
167	8.11	34.11	1.54	400	6.57	34.16	0.90	26.84	122	0.64
205	7.90	34.11	1.40	500	6.00	34.21	0.58	26.95	112	0.76
256	7.76	34.14	1.29							
337	7.15	34.14	1.07							
436	6.24	34.18	0.78							
574	5.82	34.24	0.46							

6070

STRANGER; July 20, 1957; 1006 GCT; 37°16.5'N, 124°21.5'W; sounding, missing; wind, 330°, force 5; weather, overcast; sea, very rough; wire angle, 14°.

0	13.76	33.40		0	13.76	33.40		25.03	294	0.00
9	13.76	33.43		10	13.75	33.43		25.05	292	0.03
28	13.75	33.44		20	13.75	33.43		25.05	292	0.06
42	13.00	33.43		30	13.74	33.45		25.06	291	0.09
52	10.82	33.35		50	11.20	33.35		25.48	251	0.14
60	10.20	33.53		75	9.69	33.67		25.99	203	0.20
69	9.41	33.52		100	8.67	33.76		26.22	181	0.25
88	9.19	33.75		150	8.21	33.99		26.47	157	0.33
101	8.64	33.76		200	7.63	34.05		26.60	145	0.41
115	8.66	33.89		250	7.07	34.07		26.70	136	0.48
136	8.39	33.96		300	6.70	34.11		26.78	127	0.55
163	8.08	34.01		400	6.18	34.22		26.95	112	0.67
198	7.64	34.04		500	5.73	34.29		27.05	102	0.78
248	7.10	34.07								
325	6.58	34.13								
420	6.07	34.24								
555	5.48	34.32								

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

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5707

STRANGER; July 19, 1957; 2016 GCT; 37°18.5'N, 122°36.5'W; sounding, 50 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 00°.

6352

0	13.25	33.57	7.89	0	13.25	33.57	7.89	25.26	272	0.00
9	11.54	33.66	5.60	10	11.40	33.66	5.47	25.68	232	0.02
24	10.26	33.66	4.47	20	10.40	33.66	4.64	25.86	215	0.05
48	9.34	33.80	3.12	30	10.32	33.71	4.13	25.90	211	0.07
73	9.08	33.87	2.57	50	9.27	33.80	3.09	26.16	187	0.11
				75	(9.07)	(33.88)	(2.54)	(26.25)	(178)	(0.15)

STRANGER; July 19, 1957; 1851 GCT; 37°12'N, 122°49.5'W; sounding, 100 fm; wind, calm; weather, overcast; sea, rough; wire angle, 17°.

6355

0	14.65	33.53	6.42	0	14.65	33.53	6.42	24.94	303	0.00
18	14.09	33.54	6.55	10	14.60	33.53	6.44	24.95	302	0.03
42	10.52	33.62	4.66	20	13.80	33.54	6.46	25.13	285	0.06
64	9.45	33.62	4.03	30	12.25	33.58	5.57	25.47	252	0.09
87	9.08	33.79	3.12	50	9.95	33.62	4.37	25.90	211	0.13
122	8.89	33.98	2.20	75	9.15	33.64	3.68	26.04	198	0.18
158	8.54	34.11	1.66	100	9.00	33.87	2.71	26.26	177	0.23
				150	8.61	34.08	1.75	26.48	156	0.32

STRANGER; July 19, 1957; 1550 GCT; 37°02'N, 123°12'W; sounding, missing; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 00°.

6360

0	14.60	33.50	6.00	0	14.60	33.50	6.00	24.93	304	0.00
9	14.62	33.49	6.11	10	14.61	33.49	6.10	24.92	305	0.03
29	13.25	33.53	6.03	20	14.00	33.49	6.10	24.92	305	0.06
43	10.86	33.62	4.84	30	13.00	33.54	5.96	25.28	270	0.09
53	10.30	33.65	4.35	50	10.50	33.64	4.54	25.83	218	0.14
63	9.62	33.68	3.67	75	9.43	33.79	3.11	26.13	189	0.19
73	9.44	33.78	3.15	100	8.87	33.89	2.88	26.29	174	0.24
92	9.03	33.87	2.95	150	8.04	33.98	2.28	26.49	155	0.32
107	8.72	33.90	2.81	200	7.60	34.03	2.11	26.59	146	0.40
120	8.37	33.90	2.65	250	7.20	34.08	1.78	26.69	136	0.47
143	8.10	33.97	2.28	300	6.99	34.19	1.00	26.81	125	0.53
171	7.85	34.00	2.20	400	6.15	34.20	0.80	26.90	116	0.66
209	7.48	34.04	2.04	500	5.60	34.20	0.57	27.00	107	0.77
262	7.10	34.10	1.60							
340	6.85	34.22	0.85							
441	5.94	34.18	0.75							
579	5.28	34.29	0.37							

STRANGER; July 19, 1957; 1043 GCT; 36°42.5'N, 123°55'W; sounding, missing; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 08°.

6370

0	13.20	33.37	6.00	0	13.20	33.37	6.00	25.11	286	0.00
9	13.18	33.34	6.00	10	13.18	33.34	6.00	25.10	287	0.03
33	13.07	33.37	6.03	20	13.10	33.36	6.01	25.12	285	0.06
43	11.01	33.22	5.45	30	13.01	33.37	6.02	25.13	284	0.08
57	10.10	33.21	5.37	50	10.55	33.20	5.42	25.48	251	0.14
67	9.73	33.40	4.87	75	9.40	33.43	4.39	25.85	216	0.20
76	9.25	33.42	4.35	100	8.80	33.66	3.38	26.13	189	0.25
94	8.87	33.64	3.53	150	8.29	33.89	2.57	26.39	165	0.34
113	8.65	33.71	3.00	200	7.71	34.01	1.95	26.56	148	0.42
127	8.55	33.78	2.70	250	7.21	34.06	1.68	26.67	138	0.49
150	8.29	33.89	2.57	300	6.73	34.08	1.52	26.76	129	0.56
187	7.85	33.98	2.04	400	6.05	34.18	1.45	26.92	114	0.69
224	7.45	34.05	1.82	500	5.54	34.26	0.49	27.05	102	0.80
280	6.88	34.07	1.52	600	5.01	34.32	0.36	27.15	92	0.90
365	6.28	34.15	1.51							
473	5.66	34.23	0.55							
616	4.97	34.33	0.33							

S10

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5707

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

6380

STRANGER; July 23, 1957; 1627 GCT; 36°24'N, 124°39'W; sounding, missing; wind, 340°, force 6; weather, overcast; sea, very rough; wire angle, 17°.

0	14.28	33.19	6.34	0	14.28	33.19	6.34	24.76	320	0.00
9	14.30	33.19	6.31	10	14.30	33.19	6.31	24.76	320	0.03
33	14.30	33.31	6.28	20	14.30	33.26	6.30	24.80	316	0.06
41	13.76	33.24	6.23	30	14.30	33.30	6.29	24.84	312	0.10
55	11.33	33.21	6.17	50	12.35	33.22	6.20	25.17	281	0.15
64	10.54	33.23	5.46	75	10.10	33.30	5.45	25.63	237	0.22
74	10.15	33.30	5.45	100	8.95	33.42	4.35	25.91	210	0.28
92	9.25	33.39	4.66	150	8.40	33.89	2.80	26.37	167	0.37
110	9.03	33.64	3.61	200	7.90	34.00	2.00	26.52	152	0.45
124	8.66	33.66	3.82	250	7.33	34.07	1.66	26.66	139	0.53
147	8.40	33.86	2.83	300	6.85	34.10	1.42	26.75	130	0.60
182	8.11	33.98	2.12	400	6.29	34.17	0.81	26.88	118	0.72
220	7.65	34.02	1.86	500	5.87	34.24	0.56	26.99	108	0.84
275	7.07	34.09	1.51	600	5.32	34.30	0.57	27.11	97	0.95
358	6.47	34.13	1.18							
463	6.02	34.22	0.55							
603	5.30	34.30	0.59							

6755

STRANGER; July 18, 1957; 1746 GCT; 36°39.5'N, 122°28.5'W; sounding, 1100 fm; wind, 300°, force 3; weather, partly cloudy; sea, high; wire angle, 05°.

0	13.78	33.50	6.72	0	13.78	33.50	6.72	25.10	287	0.00
9	13.60	33.52	6.60	10	13.59	33.52	6.60	25.16	282	0.03
29	12.36	33.53	5.98	20	13.44	33.52	6.51	25.18	280	0.06
39	10.73	33.59	5.10	30	12.20	33.53	5.80	25.41	255	0.08
48	10.22	33.66	4.26	50	10.19	33.67	4.21	25.91	210	0.13
58	9.85	33.77	3.88	75	9.32	33.84	2.96	26.18	185	0.18
68	9.44	33.80	3.42	100	9.12	33.94	2.40	26.29	174	0.22
82	9.25	33.87	2.70	150	8.73	34.07	1.49	26.45	159	0.31
95	9.14	33.93	2.47	200	8.35	34.21	1.45	26.63	142	0.39
109	9.05	33.96	2.27	250	8.16	34.22	1.28	26.65	140	0.46
133	8.60	33.98	2.29	300	7.98	34.22	1.18	26.69	136	0.53
160	8.80	34.13	1.47	400	7.23	34.24	1.00	26.81	125	0.66
193	8.38	34.31r	1.59	500	6.13	34.26	0.74	26.98	108	0.78
241	8.31	34.22	1.30							
314	7.85	34.22	1.16							
407	7.19	34.24	1.00							
528	5.74	34.27	0.64							

6760

STRANGER; July 18, 1957; 2048 GCT; 36°28'N, 122°47'W; sounding, missing; wind, 280°, force 2; weather, cloudy; sea, high; wire angle, 10°.

0	13.82	33.49	6.81	0	13.82	33.49	6.81	25.08	289	0.00
9	13.25	33.55	6.81	10	13.23	33.55	6.80	25.25	273	0.03
28	12.74	33.55	6.16	20	12.99	33.55	6.50	25.30	268	0.06
38	10.42	33.46	4.91	30	12.70	33.55	6.13	25.36	262	0.08
48	9.97	33.53	4.59	50	9.88	33.54	4.55	25.86	216	0.13
57	9.80	33.58	4.33	75	9.00	33.72	3.74	26.13	188	0.18
66	9.31	33.66	3.97	100	8.78	33.88	2.99	26.30	173	0.23
80	9.15	33.79	-	150	8.27	34.02	2.79	26.49	155	0.31
94	8.84	33.86	3.08	200	7.82	34.07	2.01	26.59	146	0.38
109	8.65	33.91	2.82	250	7.75	34.20	1.45	26.70	135	0.46
131	8.38	34.00	2.82	300	7.60	34.27	1.02	26.78	127	0.52
159	8.20	34.04	2.54	400	6.70	34.30	0.69	26.94	113	0.65
191	7.85	34.06	2.17	500	5.75	34.28	0.53	27.04	103	0.76
238	7.76	34.18	1.56							
311	7.56	34.28	0.97							
404	6.65	34.30	0.68							
526	5.53	34.28	0.50							

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

S10
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5707

STRANGER; July 19, 1957; 0209 GCT; 36°08'N, 123°29.5'W; sounding, missing; wind, 340°, force 7; weather, overcast; sea, high; wire angle, 35°.

67.70

0	14.91	33.22	5.97	0	14.91	33.22	5.97	24.64	331	0.00
8	14.91	33.17	6.12	10	14.88	33.18	6.15	24.61	334	0.03
28	14.73	33.22	6.09	20	14.82	33.21	6.16	24.65	330	0.07
35	12.62	33.07	6.47	30	14.59	33.20	6.12	24.73	322	0.10
48	11.10	33.06	6.04	50	11.03	33.07	6.00	25.29	269	0.16
56	10.83	33.21	5.50	75	9.40	33.36	4.94	25.79	222	0.22
63	10.18	33.28	5.24	100	8.83	33.64	3.75	26.10	192	0.27
78	9.25	33.38	4.81	150	8.31	33.89	2.34	26.35	166	0.36
92	9.02	33.49	4.11	200	7.70	33.98	2.12	26.54	150	0.44
102	8.80	33.65	3.71	250	7.09	34.04	1.84	26.67	138	0.52
120	8.70	33.77	2.77	300	6.63	34.08	1.41	26.77	128	0.58
147	8.38	35.88	2.38	400	5.84	34.16	0.79	26.93	113	0.71
176	8.04	33.96	2.16	500	5.40	34.24	0.47	27.08	101	0.82
220	7.04	34.00	2.08							
288	6.72	34.08	1.50							
380	5.98	34.14	0.87							
509	5.39	34.25	0.47							

STRANGER; July 23, 1957; 2125 GCT; 35°52'N, 124°14.5'W; sounding, missing; wind, 320°, force 6; weather, overcast; sea, high; wire angle, 24°.

67.80

0	17.28	33.24	5.66	0	17.28	33.24	5.66	24.12	380	0.00
8	17.30	33.24	5.61	10	17.30	33.24	5.60	24.11	380	0.04
31	17.28	33.24	5.59	20	17.30	33.24	5.60	24.12	380	0.08
40	17.23	33.23	5.69	30	17.28	33.24	5.60	24.12	382	0.11
53	14.02	33.03	6.20	50	15.00	33.09	6.05	24.52	342	0.19
62	12.80	33.08	6.38							

STRANGER; July 17, 1957; 1317 GCT; 36°02.5'N, 122°01'W; sounding, 700 fm; wind, 300°, force 3; weather, missing; sea, very rough; wire angle, 04°.

70.55

0	14.84	33.50	6.14	0	14.84	33.50	6.14	24.87	309	0.00
9	14.78	33.48	6.28	10	14.77	33.48	6.27	24.87	309	0.03
28	14.50	33.49	6.04	20	14.67	33.49	6.18	24.90	306	0.06
38	13.15	33.49	5.71	30	14.45	33.49	6.02	24.95	301	0.09
48	11.99	33.51	5.21	50	11.89	33.51	5.18	25.48	251	0.15
57	11.36	33.57	4.99	75	10.14	33.64	4.19	25.89	212	0.20
66	10.80	33.63	4.91	100	9.49	33.83	2.91	26.15	188	0.26
80	9.85	33.65	3.56	150	9.03	34.02	2.11	26.37	167	0.35
94	9.64	33.83	2.95	200	8.27	34.15	1.74	26.59	146	0.42
108	9.25	33.84	2.87							
130	8.98	33.90	2.61							
158	9.04	34.06	1.99							
191	8.45	34.15	1.85							
279p	8.10	34.14	1.60							
408p	6.37	34.18	0.97							

S10

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

7060

STRANGER; July 17, 1957; 0912 GCT; 35°52.5'N, 122°22.5'W; sounding, missing; wind, 320°, force 4; weather, clear; sea, high; wire angle, 08°.

0	15.24	33.42	5.89	0	15.24	33.42	5.89	24.72	323	0.00
9	15.24	33.45	5.84	10	15.23	33.45	5.84	24.75	321	0.03
28	-	33.51	5.87	20	15.00	33.48	5.84	24.82	314	0.06
43	13.64	33.51	5.76	30	13.80	33.51	5.81	25.10	287	0.09
52	13.02	33.48	5.78	50	13.33	33.49	5.77	25.18	279	0.15
61	11.12	33.52	4.69	75	10.45	33.59	3.88	25.80	220	0.21
71	10.54	33.58	4.00	100	9.69	33.70	3.47	26.01	201	0.27
89	10.10	33.65	3.42	150	9.24	33.95	2.21	26.29	174	0.36
103	9.60	33.72	3.48	200	8.40	34.03	2.05	26.48	156	0.44
117	9.45	33.84	2.87	250	7.62	34.07	1.78	26.62	142	0.52
141	9.30	33.93	2.26	300	7.00	34.08	1.61	26.72	133	0.59
168	9.10	34.00	2.10	400	6.55	34.16	1.28	26.84	122	0.72
206	8.25	34.04	2.03	500	6.20	34.24	0.64	26.96	111	0.85
257	7.56	34.07	1.74							
336	6.61	34.09	1.48							
436	6.52	34.20	0.77							
575	5.62	34.30	0.55							

7070

STRANGER; July 17, 1957; 0402 GCT; 35°34.5'N, 122°56'W; sounding, missing; wind, 320°, force 6; weather, clear; sea, very high; wire angle, 20°.

0	15.83	33.49	5.90	0	15.83	33.49	5.90	24.65	330	0.00
9	15.83	33.49	5.84	10	15.83	33.49	5.82	24.65	330	0.03
32	15.80	33.48	5.78	20	15.82	33.49	5.80	24.65	330	0.07
41	11.88	33.64	5.00	30	15.81	33.49	5.78	24.65	330	0.10
55	9.85	33.64	4.10	50	10.40	33.64	4.36	25.84	217	0.15
63	9.34	33.64	3.90	75	9.27	33.71	3.25	26.09	193	0.20
72	9.32	33.69	3.34	100	8.85	33.93	2.41	26.32	161	0.25
88	9.01	33.80	2.94	150	8.21	34.01	2.50	26.49	155	0.33
105	8.78	33.95	2.33	200	7.60	34.05	1.86	26.60	144	0.41
117	8.50	33.98	2.47	250	7.27	34.14	1.43	26.73	132	0.48
138	8.36	33.96u	2.54	300	7.10	34.20	0.93	26.80	126	0.55
171	7.94	34.04	1.99	400	6.55	34.31	0.59	26.95	110	0.67
208	7.52	34.05	1.81	500	5.92	34.33	0.53	27.06	101	0.78
257	7.21	34.16	1.42							
333	6.99 ^{a)}	34.23	0.82							
434	6.37	34.33	0.53							
569	5.51	34.33	0.53							

7350

STRANGER; July 16, 1957; 0845 GCT; 35°36.5'N, 121°17.5'W; sounding, 53 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 00°.

0	12.55	33.65	6.01	0	12.55	33.65	6.01	25.46	253	0.00
9	12.31	33.65	5.69	10	12.28	33.65	5.67	25.51	248	0.02
29	11.02	33.64	4.25	20	11.73	33.64	4.68	25.61	239	0.05
48	10.36	33.68	3.67	30	11.02	33.64	4.22	25.74	226	0.07
73	9.86	33.80	2.98	50	10.30	33.69	3.64	25.90	211	0.12
				75	(9.84)	(33.81)	(2.93)	(26.07)	(195)	(0.17)

a) Alternate value of 6.87° rejected.

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

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STRANGER; July 16, 1957; 1125 GCT; 35°29'N, 121°36'W; sounding, missing; wind, 320°, force 6; weather, clear; sea, high; wire angle, 10°.

7355

0	13.55	33.48	6.53	0	13.55	33.48	6.53	25.13	284	0.00
9	13.55	33.48	6.41	10	13.54	33.48	6.41	25.13	284	0.03
29	13.22	33.48	6.13	20	13.41	33.48	6.31	25.16	282	0.06
43	11.08	33.43	5.17	30	13.20	33.48	5.87	25.20	278	0.08
53	10.37	33.46	4.88	50	10.60	33.45	4.98	25.67	233	0.14
62	9.90	33.50	4.51	75	9.62	33.70	3.97	26.02	200	0.19
72	9.66	33.64	4.03	100	9.35	33.92	2.51	26.24	178	0.24
90	9.48	33.85	2.94	150	8.82	34.00	2.19	26.39	165	0.33
104	9.32	33.94	2.42	200	8.44	34.16	1.41	26.55	148	0.40
118	9.23	33.96	2.31	250	7.40	34.12	1.56	26.69	136	0.48
141	8.96	33.99	2.25	300	7.18	34.16	1.24	26.75	130	0.54
168	8.61	34.04	1.95	400	6.43	34.20	0.79	26.89	118	0.67
205	8.40	34.16	1.41	500	5.95	34.27		27.01	106	0.79
257	7.52	34.16	1.46							
336	6.83	34.16	1.11							
434	6.22	34.22	0.66							
573	5.64	34.32	0.82u							

STRANGER; July 16, 1957; 1456 GCT; 35°20'N, 121°57.5'W; sounding, missing; wind, 320°, force 7; weather, clear; sea, high; wire angle, 18°.

7360

0	14.92	33.49	5.98	0	14.92	33.49	5.98	24.85	311	0.00
9	14.95	33.49	5.95	10	14.94	33.49	5.95	24.84	312	0.03
28	14.64	33.49	5.95	20	14.83	33.49	5.96	24.87	309	0.06
41	12.18	33.54	5.18	30	14.61	33.49	5.94	24.92	305	0.09
50	10.71	33.56	4.35	50	10.71	33.56	4.35	25.73	227	0.15
59	9.76	33.60	3.29	75	9.62	33.73	3.56	26.05	197	0.20
68	9.75	33.67	3.74	100	9.30	33.90	2.58	26.23	180	0.25
86	9.36	33.82	2.95	150	8.46	33.95	2.32	26.42	162	0.34
100	9.30	33.90	2.58	200	7.89	34.05	2.14	26.57	148	0.41
113	9.23	33.94	2.28	250	7.43	34.09	1.81	26.66	139	0.48
136	8.64	33.93	2.51	300	6.90	(34.13)	1.60	(26.77)	(128)	(0.56)
162	8.33	34.00	2.06	400	6.16	34.18	1.00	26.91	115	(0.68)
198	7.90	34.04	2.14	500	5.64	34.26	0.66	27.03	104	(0.80)
248	7.44	34.09	1.81							
324	6.62	-	1.50							
420	6.02	34.19	0.93							
554	5.40	34.31	0.45							

STRANGER; July 16, 1957; 2027 GCT; 35°03'N, 122°38'W; sounding, missing; wind, 320°, force 8; weather, cloudy; sea, high; wire angle, 20°.

7370

0	16.15	33.44		0	16.15	33.44		24.54	340	0.00
9	16.15	33.45		10	16.15	33.45		24.54	340	0.03
32	16.10	33.42		20	16.14	33.43		24.54	341	0.07
41	15.80	33.46		30	16.12	33.43		24.53	341	0.10
55	11.67	33.46		50	13.40	33.46		25.15	283	0.16
64	10.26	33.46		75	9.92	33.59		25.88	213	0.23
73	9.98	33.57		100	9.18	33.74		26.13	189	0.28
92	9.32	33.69		150	8.54	33.97		26.41	163	0.37
110	9.00	33.80		200	8.08	34.11		26.58	147	0.44
124	8.72	33.87		250	7.60	34.18		26.71	134	0.52
148	8.54	33.96		300	7.40	34.26		26.80	126	0.58
185	8.30	34.09		400	6.72	34.29		26.93	114	0.71
223	7.76	34.13		500	5.99	34.30		27.03	104	0.82
278	7.51	34.23		600	5.52	34.37		27.14	93	0.93
363	7.00	34.29								
471	6.18	34.29								
616	5.45	34.38								

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

7750

STRANGER; July 16, 1957; 0300 GCT; 35°03.5'N, 120°51.5'W; sounding, 65 fm; wind, 320°, force 4; weather, clear; sea, high; wire angle, 00°.

0	13.82	33.58	6.16	0	13.82	33.58	6.16	25.15	283	0.00
9	13.80	33.60	6.07	10	13.80	33.60	6.04	25.17	281	0.03
29	11.58	33.60	4.52	20	13.71	33.60	6.00	25.20	278	0.06
48	10.55	33.64	3.93	30	11.52	33.60	4.50	25.61	238	0.08
70	9.95	33.71	3.49	50	10.49	33.64	3.91	25.83	218	0.13
93	9.53	33.89	2.67	75	9.84	33.74	3.36	26.02	200	0.18
				100	(9.43)	(33.93)	(2.45)	(26.23)	(180)	(0.23)

7755

STRANGER; July 15, 1957; 2346 GCT; 34°55'N, 121°13'W; sounding, 324 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 18°.

0	13.89	33.51	5.94	0	13.89	33.51	5.94	25.08	289	0.00
9	13.84	33.50	5.91	10	13.83	33.50	5.91	25.08	289	0.03
28	11.00	33.52	4.85	20	12.27	33.50	5.38	25.40	259	0.06
36	10.66	33.55	4.51	30	10.92	33.53	4.79	25.67	233	0.08
45	10.40	33.58	4.19	50	10.36	33.61	4.20	25.83	218	0.12
54	10.29	33.62	4.24	75	9.42	33.75	4.36	26.09	193	0.18
63	9.96	33.76 ^{a)}	3.86	100	9.03	33.95	2.48	26.32	171	0.22
76	9.40	33.75	3.36	150	8.58	34.00	2.20	26.43	161	0.31
89	9.12	33.93	2.68	200	8.12	34.07	1.81	26.55	150	0.39
102	9.01	33.96	2.45	250	7.78	34.16	1.68	26.67	138	0.46
124	8.91	34.00	2.46	300	7.67	34.26	0.89	26.76	129	0.53
151	8.55	34.00	2.17	400	7.13	34.29	0.70	26.87	119	0.66
181	8.33	34.05	1.90	500	6.12	34.25	0.62	26.97	110	0.78
226	7.85	34.09	1.72							
297	7.68	34.25	0.93							
387	7.22	34.29	0.72							
505	6.08	34.25	0.62							

7760

STRANGER; July 15, 1957; 2039 GCT; 34°47'N, 121°32.5'W; sounding, missing; wind, 320°, force 6; weather, partly cloudy; sea, very rough; wire angle, 17°.

0	14.08	33.51	5.94	0	14.08	33.51	5.94	25.04	293	0.00
9	14.04	33.53	6.78 ^u	10	14.03	33.53	5.93	25.07	290	0.03
28	11.76	33.56	5.26	20	12.86	33.55	5.65	25.32	266	0.06
41	10.66	33.59	4.36	30	11.61	33.57	5.14	25.57	243	0.08
51	10.12	33.66	3.93	50	10.13	33.65	4.02	25.90	212	0.13
60	10.01	33.69	3.77	75	9.59	33.73	3.83	26.05	197	0.18
69	9.72	33.71	3.95	100	9.04	33.83	3.04	26.22	181	0.23
87	9.36	33.78	3.38	150	8.69	33.99	2.30	26.41	163	0.31
100	9.04	33.83	3.04	200	8.17	34.00	2.12	26.49	155	0.39
115	8.98	33.89	2.87	250	7.60	34.10	1.61	26.65	140	0.47
137	8.80	33.98	2.46	300	7.17	34.17	1.36	26.74	132	0.54
165	8.57	34.00	2.21	400	6.68	34.21	0.84	26.87	119	0.67
201	8.16	34.00	2.10	500	5.92	34.24	0.63	26.99	108	0.79
250	7.60	34.10	1.61							
328	7.25	34.19	1.24							
425	6.45	34.22	0.75							
559	5.56	34.26	0.57							

a) Loose bottle cap; value falls on property curve.

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

STRANGER; July 15, 1957; 1448 GCT; 34°24.5'N, 122°16'W; sounding, missing; wind, 320°, force 7; weather, cloudy; sea, high; wire angle, 11°.

77.70

0	15.43	33.58	6.59	0	15.43	33.58	6.59	24.81	315	0.00
9	15.43	33.57	6.63	10	15.43	33.57	6.63	24.80	316	0.03
33	13.70	33.51	5.96	20	15.28	33.57	6.57	24.83	313	0.06
43	11.90	33.61	4.90	30	14.33	33.53	6.22	25.00	297	0.09
57	10.97	33.68	4.22	50	11.41	33.65	4.57	25.67	233	0.15
66	10.25	33.73	3.58	75	9.87	33.81	3.02	26.07	195	0.20
75	9.87	33.81	3.02	100	8.91	33.87	2.90	26.28	176	0.25
94	9.12	33.86	2.94	150	8.21	34.03	2.40	26.50	154	0.33
112	8.68	33.90	2.79	200	7.77	34.15	1.60	26.66	139	0.41
125	8.72	33.96	3.44	250	7.34	34.18	1.22	26.75	131	0.47
148	8.22	34.02	2.41	300	6.87	34.21	0.99	26.84	122	0.54
185	7.81	34.13	1.76	400	6.10	34.26	0.68	26.98	109	0.66
221	7.61	34.17	1.40	500	5.69	34.24	0.39	27.01	106	0.77
276	7.10	34.19	1.11	600	5.15	34.34	0.29	27.16	92	0.87
358	6.34	34.28 ^{a)}	0.72							
465	5.82	34.23	0.44							
604	5.14	34.34	0.28							

STRANGER; July 15, 1957; 0909 GCT; 34°04.5'N, 122°57'W; sounding, missing, wind, 320°, force 6; weather, clear; sea, rough; wire angle, 20°.

77.80

0	17.26	33.22	5.72	0	17.26	33.22	5.72	24.12	381	0.00
9	17.25	33.22	5.70	10	17.24	33.22	5.70	24.12	381	0.04
27	16.71	33.22	5.78	20	17.08	33.22	5.72	24.15	378	0.08
41	15.26	33.22	6.00	30	16.43	33.22	5.82	24.31	362	0.11
50	14.21	33.19	6.28	50	14.21	33.19	6.28	24.77	319	0.18
59	13.40	33.32	6.37	75	11.81	33.29	6.27	25.33	266	0.26
68	12.35	33.33	6.38	100	10.05	33.30	5.57	25.64	236	0.32
85	10.95	33.24	6.02	150	8.73	33.66	4.59	26.13	189	0.43
97	10.18	33.28	5.63	200	8.15	33.97	3.30	26.47	157	0.52
110	9.80	33.37	5.29	250	7.28	34.04	2.42	26.64	141	0.59
132	9.05	33.46	4.97	300	6.82	34.06	1.79	26.73	132	0.66
157	8.65	33.71	4.43	400	5.90	34.16	0.97	26.92	114	0.79
191	8.28	33.95	3.44	500	5.39	34.27	0.54	27.08	99	0.90
237	7.42	34.03	2.67							
310	6.77	34.07	1.76							
401	5.89	34.16	0.97							
532	5.28	34.29	0.44							

STRANGER; July 15, 1957; 0350 GCT; 33°41.5'N, 123°40.5'W; sounding, missing; wind, 330°, force 5; weather, clear; sea, rough; wire angle, 15°.

77.90

0	18.37	33.21	5.65	0	18.37	33.21	5.65	23.82	407	0.00
9	18.34	33.21	5.64	10	18.31	33.21	5.64	23.83	406	0.04
28	17.58	33.19	5.64	20	18.01	33.20	5.64	23.92	400	0.08
42	17.02	33.22	5.76	30	17.50	33.19	5.66	24.03	389	0.12
51	15.68	33.42	6.02	50	15.76	33.41	6.02	24.61	334	0.19
60	15.25	33.45	6.03							
82p	13.43	33.44	6.24							
104p	11.56	33.40	6.00							
134p	9.43	33.32	5.59							
175p	8.64	33.72	4.50							
241p	7.74	33.98	2.98							
326p	6.54	34.04	2.01							
450p	5.77	34.15	0.80							

a) The use of this value results in an unusual density structure but nevertheless value was accepted in drawing the property curve.

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

8055

PAOLINA-T; July 10, 1957; 0411 GCT; 34°19'N, 120°48.5'W; sounding, 450 fm; wind, 270°, force 5; weather, clear; sea, very rough; wire angle, 05°.

0	14.30	33.57		0	14.30	33.57		25.04	293	0.00
10	13.74	33.54		10	13.74	33.54		25.14	284	0.03
30	13.25	33.55		20	13.50	33.55		25.19	279	0.06
44	12.58	33.56		30	13.25	33.55		25.24	274	0.08
52	11.45	33.63 ^{a)}		50	11.88	33.60		25.54	245	0.14
60	10.31	33.59		75	9.72	33.71		26.01	201	0.19
68	9.96	33.64		100	9.19	33.91		26.26	177	0.25
83	9.43	33.77		150	8.96	34.07		26.43	161	0.32
95	9.28	33.86		200	8.60	34.18		26.57	148	0.40
106	9.08	33.96		250	8.25	34.25		26.67	139	0.48
125	9.00	34.02		300	7.85	34.27		26.74	131	0.55
149	8.96	34.07		400	7.25	34.29		26.85	121	0.68
182	8.67	34.14		500	6.55	34.31		26.97	110	0.80
227	8.44	34.23								
298	7.86	34.27								
388	7.35	34.29								
519	6.40	34.32								

8060

PAOLINA-T; July 10, 1957; 0835 GCT; 34°09'N, 121°09'W; sounding, 1330 fm; wind, 330°, force 4; weather, clear; sea, high; wire angle, 23°.

0	15.76	33.55	5.74	0	15.76	33.55	5.74	24.71	324	0.00
13	15.74	33.53	5.62	10	15.75	33.53	5.68	24.70	325	0.03
31	12.01	33.40	5.25	20	15.00	33.49	5.47	24.84	312	0.06
40	11.56	33.49	4.98	30	12.10	33.40	5.26	25.35	264	0.09
48	10.30	33.44	4.57	50	10.17	33.43	4.55	25.72	228	0.14
56	9.65	33.40	4.49	75	9.25	33.69	3.40	26.07	195	0.20
64	9.16	33.58	3.97	100	9.00	33.91	2.53	26.29	174	0.24
76	9.26	33.71	3.31	150	7.98	34.01	2.30	26.53	152	0.32
89	9.24	33.86	1.82 ^u	200	8.01	34.16	1.33	26.63	142	0.40
102	8.94	33.92	2.48	250	7.70	34.23	0.95	26.74	131	0.47
123	8.62	33.95	2.43	300	7.35	34.29	0.74	26.83	123	0.53
148	7.98	34.00	2.44	400	6.79	34.29	0.75	26.91	115	0.66
178	8.08	34.14	1.53	500	6.37	34.29	0.58	26.97	109	0.77
220	7.93	34.18	1.13							
290	7.40	34.29	0.74							
379 ^{b)}	6.88	34.29	0.76							
500	6.37	34.29	0.58							

8070

STRANGER; July 14, 1957; 1218 GCT; 33°48'N, 121°50'W; sounding, missing; wind, 330°, force 5; weather, overcast; sea, rough; wire angle, 20°.

0	16.59	33.58	5.77	0	16.59	33.58	5.77	24.55	340	0.00
9	16.58	33.58	6.02	10	16.57	33.58	6.02	24.55	340	0.03
27	14.62	33.58	6.38	20	15.80	33.58	6.20	24.73	323	0.07
40	11.06	33.55	4.77	30	13.88	33.58	6.09	25.14	284	0.10
49	10.48	33.55	4.44	50	10.40	33.55	4.41	25.78	223	0.15
58	9.80	33.60	4.13	75	9.50	33.75	2.80	26.08	194	0.20
67	9.54	33.70	3.39	100	9.17	33.95	2.37	26.29	174	0.25
84	9.41	33.89	2.58	150	8.65	34.13	1.58	26.51	153	0.33
96	9.20	33.94	2.43	200	8.26	34.22	1.25	26.64	141	0.40
108	9.04	33.99	2.15	250	7.82	34.23	1.06	26.72	134	0.47
128	8.80	34.06	2.12	300	6.96	34.20	1.09	26.82	124	0.54
152	8.62	34.13	1.57	400	6.00	34.20	0.68	26.95	112	0.66
185	8.35	34.20	1.35	500	5.59	34.30	0.38	27.08	99	0.77
231	8.08	34.23	1.05							
302	6.92	34.20	1.09							
390	6.02	34.20	0.71							
518	5.56	34.31	0.34							

- a) Possible evaporation; value falls on property curve.
b) Depth uncertain, possibly 364 meters.

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

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STRANGER; July 14, 1957; 1748 GCT; 33°26'N, 122°30'W; sounding, missing; wind, 340°, force 5; weather, overcast; sea, moderate; wire angle, 12°.

8080

0	16.85	33.38	5.72	0	16.85	33.38	5.72	24.33	361	0.00
9	16.81	33.33	5.70	10	16.81	33.33	5.70	24.30	364	0.04
28	16.55	33.31	5.67	20	16.66	33.31	5.67	24.32	361	0.07
42	16.56	33.34	5.78	30	16.55	33.31	5.70	24.35	359	0.11
51	15.28	33.25	5.93	50	15.64	33.27	5.90	24.52	342	0.18
59	13.54	33.29	6.24	75	12.84	33.32	6.25	25.14	283	0.26
68	13.30	33.33	6.26	100	10.84	33.28	5.82	25.49	250	0.32
85	11.77	33.29	6.12	150	8.95	33.70	3.89	26.14	189	0.44
98	11.00	33.28	5.83	200	8.16	33.95	2.82	26.45	159	0.52
111	9.66	33.28	5.75	250	7.41	34.08	2.31	26.66	139	0.60
132	9.28	33.50	4.69	300	6.83	34.13	1.76	26.78	128	0.67
158	8.79	33.75	3.70	400	6.13	34.22	0.89	26.94	112	0.79
193	8.23	33.93	2.92	500	5.51	34.29	0.54	27.08	100	0.90
241	7.56	34.07	2.41							
316	6.72	34.14	1.64							
412	6.05	34.22	0.83							
543	5.23	34.31	0.46							

STRANGER; July 14, 1957; 2244 GCT; 33°09'N, 123°13'W; sounding, missing; wind, 340°, force 3; weather, overcast; sea, moderate; wire angle, 07°.

8090

0	17.95	33.29	5.74	0	17.95	33.29	5.74	24.00	392	0.00
9	17.60	33.32	5.61	10	17.59	33.33	5.61	24.11	381	0.04
29	17.56	33.37	5.80	20	17.58	33.35	5.70	24.13	379	0.08
38	16.24	33.44	5.98	30	17.54	33.37	5.80	24.16	377	0.11
48	15.64	33.51	6.02	50	15.55	33.51	6.03	24.73	323	0.18
58	15.10	33.53	6.10	75	14.68	33.59	6.23	24.98	299	0.26
67	14.92	33.58	6.18	100	12.01	33.25	6.27	25.25	273	0.34
81	14.41	33.58	6.28	150	9.76	33.48	5.62	25.84	217	0.46
95	12.38	33.28	6.33	200	8.63	33.75	3.99	26.22	181	0.56
109	11.45	33.22	6.14	250	7.73	34.00	2.81	26.56	149	0.65
132	10.28	33.37	6.23	300	7.09	34.03	2.24	26.67	138	0.72
160	9.50	33.53	5.08	400	6.23	34.11	1.30	26.85	121	0.86
192	8.79	33.69	4.20	500	5.61	34.20	0.67	27.00	107	0.98
238	7.91	34.00	2.97							
313	6.95	34.04	2.16							
406	6.20	34.12	1.25							
528	5.44	34.22	0.55							

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

82.47

PAOLINA-T; July 11, 1957; 0420, 0440 GCT; 34°15'N, 119°58'W; sounding, 310 fm; wind, 220°, force 4; weather, clear; sea, very rough; wire angle, 06°, 06°.

0	16.70	33.62	6.52	0	16.70	33.62	6.52	24.55	340	0.00
10	15.96 ^{a)}	33.58	7.06	10	15.96	33.58	7.06	24.69	326	0.03
				20	14.80	33.55	6.43	24.93	303	0.06
30	13.40	33.60 ^{b)}	5.22	30	13.40	33.54	5.22	25.21	277	0.09
40	12.06	33.54	4.59	50	11.04	33.57	4.06	25.67	233	0.14
50	11.04	33.57	4.06	75	10.10	33.67	3.24	25.92	209	0.20
60	-	33.59	3.78	100	9.55	33.95	2.35	26.22	181	0.25
70	10.22	33.64	3.32	150	9.23	34.09	1.96	26.39	165	0.34
85	9.85	33.76	3.00	200	8.91	34.14	1.37	26.48	156	0.42
99	9.57	33.94	2.47	250	8.61	34.17	1.12	26.56	149	0.50
113	9.44	34.04	2.18	300	8.10	34.21	0.83	26.66	139	0.57
137	9.39	34.02 ^u	2.13	400	7.30	34.22	0.48	26.79	127	0.71
166	9.02	34.19 ^r	1.72	500	6.70	34.24	0.38	26.88	118	0.84
200	8.91	34.14	1.37							
249	8.61	34.17	1.12							
325	7.84	34.22 ^{c)}	0.70							
423	7.16	34.22	0.40							
550	6.40	34.26	0.35							

82.47

PAOLINA-T; July 11, 1957; 0647 GCT;^{d)} 34°15'N, 119°58'W; sounding, 310 fm; wind, 220°, force 4; weather, clear; sea, very rough; wire angle, 00°.

357	7.58	34.22								
362	7.55	-								
367	7.52	34.25								
372	7.54	34.23								
377	7.52	34.23								
382	7.49	34.23 ^{c)}								
386	7.48	34.22								
391	7.48	34.22								
394	7.48	34.23								
399	7.42	34.23								
403	7.41	34.23								
408	7.35	34.24								
412	7.32	34.23								
417	7.33	34.23								
422	7.22	34.23								
426	7.18	34.23								

83.43

PAOLINA-T; July 11, 1957; 1045 GCT; 34°08'N, 119°34'W; sounding, 136 fm; wind, calm; weather, partly cloudy; sea, moderate; wire angle, 00°.

1	19.32	33.60	5.59	0	(19.33)	(33.60)	(5.59)	(23.88)	(403)	(0.00)
11	18.93 ^{e)}	33.65	5.64	10	18.93	33.65	5.64	24.02	390	0.04
30	13.78	33.45	6.45	20	16.75	33.55	6.02	24.48	346	0.08
50	10.76	33.51	4.30	30	13.78	33.45	6.45	25.06	291	0.11
75	9.86	33.77	3.05	50	10.76	33.51	4.30	25.68	232	0.16
99	-	33.87	2.47	75	9.86	33.77	3.05	26.03	199	0.21
121	9.44	33.96	2.16	100	9.57	33.88	2.45	26.17	185	0.26
159	-	34.13	1.85	150	9.42	34.09	2.06	26.35	168	0.35
197	8.84	34.23	0.92	200	(8.79)	(34.24)	(0.85)	(26.58)	(147)	(0.43)

a) Mean value between 15.89° and 16.02°.

b) Possible evaporation; value does not fall on property curve.

c) Possible evaporation; value falls on property curve.

d) Special cast.

e) Alternate value of 19.12° possible.

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

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PAOLINA-T; July 10, 1957; 1624 GCT; 33°35'N, 120°46'W; sounding, 830 fm; wind, 330°, force 4; weather, partly cloudy; sea, very rough; wire angle, 00°.

836C

0	16.14	33.57 ^{a)}	5.76	0	16.14	33.51	5.76	24.64	331	0.00
10	16.08	33.51	5.29	10	16.08	33.51	5.29	24.60	335	0.03
31	13.92	33.37	6.01	20	15.49	33.47	5.92	24.71	325	0.07
41	11.96	33.30	5.53	30	13.97	33.37	6.01	24.96	301	0.10
51	10.98	33.40	4.95	50	11.00	33.39	4.98	25.54	245	0.15
60	-	33.48	4.60	75	10.03	33.69	3.43	25.92	207	0.21
70	10.20	33.62	3.88	100	9.22	33.84	2.63	26.20	183	0.26
83	9.70	33.77	2.90	150	8.16	33.99	2.33	26.49	156	0.34
99	9.23	33.84	2.67	200	7.70	34.09	1.86	26.63	142	0.42
113	8.68	33.85	2.38	250	7.15	34.11	1.48	26.72	134	0.49
136	8.33	33.96	2.39	300	6.95	34.18	0.96	26.80	125	0.56
165	7.98	34.02	2.16	400	6.49	34.24	0.48	26.91	115	0.68
198	7.71	34.09	1.87	500	5.95	34.28	0.36	27.01	105	0.80
246	7.19	34.10	1.54							
323	6.85	34.22	0.87							
419	6.38	34.25	0.43							
545	5.69	34.30	0.34							

STRANGER; July 14, 1957; 0334 GCT; 33°10.5'N, 121°28.5'W; sounding, missing; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 17°.

837O

0	16.87	33.41	5.81	0	16.87	33.41	5.81	24.35	359	0.00
9	16.86	33.40	5.75	10	16.85	33.40	5.76	24.34	360	0.04
27	16.60	33.40	5.84	20	16.73	33.40	5.79	24.37	356	0.07
40	14.12	33.28	6.19	30	16.47	33.40	5.89	24.43	351	0.11
49	12.22	33.31	5.68	50	12.17	33.32	5.65	25.28	270	0.17
58	11.38	33.38	5.40	75	9.88	33.37	5.37	25.72	228	0.23
67	10.40	33.33	5.60	100	8.98	33.63	3.90	26.11	191	0.28
84	9.41	33.49	4.86	150	8.49	33.97	2.32	26.42	162	0.37
97	9.00	33.65	4.11	200	7.92	34.06	1.88	26.57	147	0.45
111	8.91	33.75	3.53	250	7.60	34.12	1.62	26.66	139	0.52
134	8.64	33.92	2.50	300	7.11	34.18	1.19	26.78	128	0.59
159	8.38	34.00	2.22	400	6.39	34.29	0.61	26.97	110	0.72
194	7.97	34.05	1.91	500	5.80	34.33	0.42	27.07	100	0.83
244	7.61	34.11	1.64							
321	6.92	34.20	1.02							
419	6.28	34.30	0.56							
554	5.43	34.34	0.33							

STRANGER; July 13, 1957; 2157 GCT; 32°55'N, 122°04.5'W; sounding, missing; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 11°.

838O

0	17.05	33.33	5.64	0	17.05	33.33	5.64	24.24	369	0.00
9	16.94	33.31	5.59	10	16.93	33.31	5.60	24.26	367	0.04
28	16.75	-	5.62	20	16.83	33.30	5.61	24.28	366	0.07
43	13.72	33.21	6.11	30	16.74	33.30	5.62	24.29	364	0.11
52	13.40	33.28	6.10	50	13.48	33.27	6.11	24.99	298	0.18
61	12.91	33.26	6.19	75	12.03	33.28	5.92	25.27	271	0.25
71	12.25	33.28	5.96	100	10.39	33.26	5.48	25.55	244	0.31
89	11.26	33.27	5.79	150	9.00	33.65	4.20	26.08	194	0.42
103	10.12	33.26	5.34	200	8.25	33.90	2.72	26.40	164	0.51
117	9.54	33.39	5.03	250	7.38	34.02	2.17	26.62	143	0.59
141	9.15	33.57	4.45	300	6.82	34.06	1.84	26.73	132	0.66
168	8.72	33.77	3.55	400	6.11	34.18	1.07	26.92	115	0.79
205	8.20	33.92	2.63	500	5.63	34.24	0.61	27.02	105	0.91
255	7.32	34.03	2.12							
334	6.52	34.09	1.59							
432	5.98	34.21	0.83							
568	5.24	34.27	0.39							

a) Possible evaporation; value does not fall on property curve.

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

8390

STRANGER; July 10, 1957; 2111 GCT; 32°35'N, 122°48'W; sounding, missing; wind, 320°, force 6; weather, partly cloudy; sea, high; wire angle, 26°.

0	17.30	33.30	5.63	0	17.30	33.30	5.63	24.16	376	0.00
8	17.29	33.30	5.62	10	17.28	33.31	5.61	24.16	376	0.04
31	17.19	33.31	5.54	20	17.25	33.31	5.58	24.17	375	0.08
39	16.86	33.30	5.59	30	17.19	33.31	5.55	24.19	374	0.11
52	14.20	33.31	5.49u	50	14.38	33.31	5.99	24.83	313	0.18
61	13.88	-	6.08	75	12.75	33.31	6.17	25.16	282	0.26
70	13.18	33.31	6.21	100	10.51	33.46	4.70	25.68	232	0.32
87	11.65	33.32	5.59	150	9.18	33.90	2.15	26.25	178	0.42
105	10.08	33.52	4.33	200	8.80	34.11	1.56	26.47	157	0.51
117	9.48	33.62	3.86	250	8.59	34.20	1.22	26.58	146	0.58
140	9.22	33.85	2.29	300	8.35	34.24	0.99	26.65	140	0.66
176	8.99	34.04	1.80	400	7.78	34.29	0.74	26.78	128	0.80
210	8.76	34.13	1.46	500	7.01	34.32	0.54	26.90	116	0.93
264	8.53	34.22	1.15	600	(6.03)	(34.33)	(0.35)	(27.04)	(103)	(1.04)
345	8.10	34.27	0.86							
451	7.42	34.31	0.64							
591	6.15	34.33	0.34							

8736

PAOLINA-T; July 11, 1957; 1925, 1935 GCT; 33°50'N, 118°37.5'W; sounding, 212 fm; wind, 220°, force 3; weather, cloudy; sea, slight; wire angle, 00°, 00°.

0	19.91	33.58	5.95	0	19.91	33.58	5.95	23.73	418	0.00
10	19.05	33.56	5.82	10	19.05	33.56	5.82	23.93	399	0.04
				20	17.35	33.51	5.98	24.32	362	0.08
30	13.86	33.42	6.48	30	13.86	33.42	6.48	25.02	295	0.11
50	11.06	33.46	3.58	50	11.06	33.46	3.58	25.59	241	0.16
75	10.08	33.64	3.60	75	10.08	33.64	3.60	25.90	211	0.22
98	9.88	33.68	3.32	100	9.87	33.68	3.30	25.97	205	0.28
124	9.77	33.78	3.12	150	9.45	33.91	2.67	26.22	181	0.37
162	9.29	33.98	2.42	200	9.11	34.14	1.86	26.44	159	0.46
201	9.11	34.14	1.85	250	9.04	34.22	1.44	26.52	152	0.54
250	9.04	34.22	1.44	300	(8.75)	(34.25)	(1.29)	(26.60)	(145)	(0.62)
299	8.77	34.25	1.30							

8740

PAOLINA-T; July 11, 1957; 2343 GCT; 33°41'N, 118°59.5'W; sounding, 450 fm; wind, 250°, force 4; weather, cloudy; sea, slight; wire angle, 24°.

0	19.24	33.58	5.69	0	19.24	33.58	5.69	23.89	402	0.00
7	18.76	33.59	5.87	10	18.41	33.59	5.98	24.11	381	0.04
27	14.39	33.54	6.41	20	16.25	33.55	6.30	24.60	335	0.07
36	13.09	33.57	5.60	30	13.80	33.55	6.15	25.13	284	0.11
45	12.06	33.51	5.17	50	11.54	33.51	4.94	25.54	245	0.16
54	-	33.49	4.88	75	9.98	33.60	3.77	25.89	212	0.22
62	10.53	33.51	4.42	100	9.51	33.83	2.95	26.15	188	0.27
73	10.01	33.58	3.84							
85	9.62	34.04r	3.18							
97	9.51	33.82	2.95							
116	9.49	33.87	2.93							
138	9.52	34.07	2.13							

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

PAOLINA-T; July 12, 1957; 0430 GCT; 33°30'N, 119°19'W; sounding, 920 fm; wind, 270°, force 2; weather, fog; sea, rough; wire angle, 00°.

8745

0	17.88	33.62	5.76	0	17.88	33.62	5.76	24.26	367	0.00
11	15.52	33.60	5.86	10	15.60	33.60	5.85	24.79	317	0.03
31	11.96	33.68	4.65	20	13.90	33.63	5.48	25.18	280	0.06
40	10.36	33.75	3.38	30	12.10	33.68	4.69	25.58	242	0.09
50	9.69	33.77	2.97	50	9.69	33.77	2.97	26.07	195	0.13
59	-	33.83	2.72	75	9.35	33.90	2.51	26.23	180	0.18
70	9.38	33.87	2.62	100	9.03	33.98	2.03	26.33	170	0.23
84	9.22	33.95	2.33	150	8.75	34.11	1.53	26.49	155	0.31
98	9.04	33.97	2.08	200	8.38	34.19	1.24	26.61	144	0.38
112	8.92	34.01	1.88	250	8.25	34.25	1.02	26.68	137	0.46
136	8.86	34.08	1.65	300	7.95	34.28	0.91	26.74	131	0.52
164	8.66	34.14	1.47	400	7.10	34.31	0.49	26.88	118	0.65
197	8.38	34.19	1.24	500	6.55	34.33	0.32	26.98	109	0.77
245	8.25	34.25	1.07							
323	7.79	34.29	0.82							
419	6.98	34.32	0.43							
545	6.33	34.34	0.28							

PAOLINA-T; July 12, 1957; 0635 GCT; a) 33°30'N, 119°19'W; sounding, 920 fm; wind, 270°, force 2; weather, fog; sea, rough; wire angle, 00°.

8745

924	4.56	34.45								
942	4.53	34.43								
961	4.49	34.43								
980	4.46	34.42								
998	4.39	34.45								
1016	4.38	34.45								
1036	-	34.45								
1054	4.33	34.45								
1073	4.30	34.45								
1091	4.28	34.44								
1110	4.23	34.45								
1130	4.27	34.49								
1149	4.23	34.52r								
1169	4.21	34.48								
1187	4.24	34.47								
1208	4.20	34.47								
1228	4.19	34.47								

PAOLINA-T; July 12, 1957; 1520 GCT; 33°14.5'N, 120°02'W; sounding, 530 fm; wind, calm; weather, clear; sea, moderate; wire angle, 05°.

8755

0	16.90	36.56	6.00	0	16.90	36.56	6.00	24.45	349	0.00
10	16.46	33.57	6.13	10	16.46	33.57	6.13	24.56	339	0.03
30	12.52	33.57	4.96	20	14.80	33.57	5.83	24.94	303	0.07
39	12.18	33.57	4.70	30	12.52	33.57	4.96	25.40	259	0.10
49	11.37	33.60	4.21	50	11.30	33.61	4.16	25.66	234	0.14
58	10.20	33.68	3.45	75	9.40	33.77	2.96	26.11	191	0.20
68	9.60	33.73	3.21	100	9.10	33.85	2.47	26.22	180	0.24
83	9.20	33.80	2.72	150	8.75	34.08	1.75	26.46	158	0.33
97	9.10	33.84	2.58	200	8.40	34.15	1.44	26.57	148	0.41
111	8.98	33.94	2.23	250	7.99	34.20	1.18	26.67	138	0.48
134	8.80	34.02	1.88	300	7.65	34.23	0.92	26.75	131	0.55
163	8.70	34.11	1.63	400	6.85	34.27	0.60	26.89	117	0.68
197	8.43	34.27r	1.44	500	6.30	34.31	0.41	27.00	107	0.79
243	8.05	34.19	1.21							
321	7.47	34.25	0.82							
416	6.71	34.27	0.54							
544	6.07	34.34	0.32 ^{b)}							

a) Special cast.

b) Value of 0.86 rejected; assumed to be transcribing error on data sheet.

SIO

CCOFI
5707

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

8760

PAOLINA-T; July 12, 1957; 1947 GCT; 33°02'N, 120°28.5'W; sounding, 645 fm; wind, 210°, force 2; weather, clear; sea, very rough; wire angle, 00°.

0	17.42	33.66	5.74	0	17.42	33.66	5.74	24.41	353	0.00
10	16.60	33.62	5.89	10	16.60	33.62	5.89	24.57	338	0.03
30	14.24	33.55	5.56	20	15.43	33.58	5.78	24.81	315	0.07
40	13.49	33.58	5.21	30	14.24	33.55	5.56	25.04	293	0.10
50	10.88	33.53	4.44	50	10.88	33.53	4.44	25.67	233	0.15
60	10.19	33.55	4.11	75	9.81	33.65	3.50	25.95	206	0.20
70	9.96	33.60	3.79	100	9.25	33.83	2.55	26.19	184	0.26
85	9.55	33.77	2.83	150	8.49	34.00	1.92	26.44	160	0.34
99	9.26	33.83	2.56	200	7.99	34.13	1.45	26.62	143	0.42
113	8.94	33.87	2.47	250	7.74	34.18	1.16	26.69	136	0.49
138	8.58	33.98	2.09	300	7.32	34.23	0.77	26.79	127	0.56
168	8.36	34.04	1.67	400	6.65	34.30	0.54	26.94	113	0.68
202	7.97	34.14	1.45	500	6.15	34.33	0.46	27.02	104	0.79
250	7.74	34.18	1.16							
326	7.14	34.25	0.59							
424	6.50	34.32	0.53							
551	5.91	34.33	0.38							

8770

STRANGER; July 9, 1957; 2313 GCT; 32°42.5'N, 121°03.5'W; sounding, missing, wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 26°.

0	16.47	33.58	5.71	0	16.47	33.58	5.71	24.58	337	0.00
8	16.46	33.55	5.72	10	16.46	33.55	5.73	24.55	340	0.03
39	16.52	33.55	5.86	20	16.48	33.55	5.78	24.55	340	0.07
52	12.20	33.48	5.03	30	16.50	33.55	5.81	24.55	340	0.10
60	11.86	33.53	5.07	50	12.43	33.48	5.04	25.35	264	0.16
69	11.20	33.53	4.65	75	10.72	33.53	4.47	25.70	230	0.22
87	10.06	33.52	4.15	100	9.68	33.62	3.52	25.96	206	0.28
105	9.59	33.68	3.25	150	8.58	33.93	2.63	26.38	166	0.37
118	9.42	33.73	2.83	200	8.05	34.07	1.74	26.56	149	0.45
138	8.67	33.85	2.80	250	7.60	34.17	1.19	26.70	135	0.53
174	8.44	34.00	2.01	300	7.32	34.25	0.76	26.81	125	0.59
208	7.96	34.09	1.64	400	6.70	34.31	0.38	26.94	112	0.72
261	7.54	34.19	1.05	500	6.11	34.36	0.23	27.06	102	0.83
339	7.06	34.29	0.60							
441	6.42	34.33	0.27							
575	5.75	34.39	0.19							

8780

STRANGER; July 10, 1957; 0512 GCT; 32°22.5'N, 121°45'W; sounding, 2160 fm; wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 23°.

0	16.71	33.46	5.67	0	16.71	33.46	5.67	24.43	351	0.00
9	16.70	33.40	5.79	10	16.70	33.40	5.80	24.38	356	0.03
32	16.69	33.39	5.84	20	16.69	33.39	5.82	24.38	356	0.07
40	16.19	33.35	5.74	30	16.69	33.39	5.84	24.38	356	0.11
53	13.45	33.26	5.93	50	14.10	33.28	5.85	24.86	310	0.17
61	12.19	33.28	6.44	75	11.04	33.30	5.58	25.47	252	0.24
70	11.34	33.30	5.69	100	9.74	33.38	4.93	25.76	225	0.30
88	10.33	33.32	5.32	150	8.72	33.80	3.35	26.25	178	0.41
103	9.58	33.41	4.74	200	8.08	33.98	2.29	26.48	156	0.49
115	9.32	33.46	4.42	250	7.52	34.06	1.95	26.63	142	0.57
135	8.89	33.64	3.85	300	7.26	34.16	1.30	26.74	131	0.64
168	8.50	33.92	2.64	400	6.30	34.18	0.74	26.90	117	0.77
200	8.08	33.98	2.29	500	5.60	34.26	0.42	27.05	103	0.88
251	7.50	34.06	1.94							
325	7.15	34.18	1.04							
426	6.03	34.18	0.67							
558	5.38	34.33	0.29							

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

STRANGER; July 10, 1957; 1227 GCT; 31°57'N, 122°24'W; sounding, missing; wind, 320°, force 5; weather, clear; sea, high; wire angle, 06°.

8790

0	17.34	33.39	5.61	0	17.34	33.39	5.61	24.22	370	0.00
9	17.32	33.44	5.59	10	17.31	33.44	5.60	24.27	366	0.04
33	16.42	33.39	5.77	20	17.30	33.44	5.60	24.27	366	0.07
43	15.70	33.39	5.91	30	16.83	33.41	5.67	24.36	358	0.11
57	14.41	33.31	5.71	50	15.19	33.36	5.85	24.69	326	0.18
67	12.69	33.27	5.88	75	11.80	33.26	5.68	25.30	268	0.25
76	11.70	33.26	5.65	100	10.33	33.35	5.06	25.63	236	0.32
95	10.45	33.31	5.15	150	8.90	33.72	3.60	26.16	187	0.42
114	10.05	33.49	4.37	200	8.25	33.99	2.07	26.46	158	0.51
127	9.50	33.54	4.08	250	7.58	34.04	1.85	26.60	145	0.59
151	8.84	33.72	3.57	300	7.02	34.05	1.87	26.69	136	0.66
187	8.40	33.93	2.39	400	6.70		0.65			
224	7.98	34.05	1.82	500	6.12		0.40			
280	7.15	34.02	1.94							
365	6.84	34.18	0.90							
473	6.26	34.47r	0.42							
618	5.45	34.37a)	0.30							

PAOLINA-T; July 16, 1957; 1522 GCT; 33°24'N, 117°55'W; sounding, 320 fm; wind, 180°, force 1; weather, overcast; sea, slight; wire angle, 00°.

9030

0	21.10	33.61	4.90	0	21.10	33.61	4.90	23.43	446	0.00
10	20.16	33.60	5.27	10	20.16	33.60	5.27	23.67	423	0.04
30	15.16	33.51	6.14	20	18.50	33.58	5.70	24.08	384	0.08
40	13.64	33.42	6.60	30	15.16	33.51	6.14	24.81	315	0.12
49	12.80	33.44	6.80	50	12.79	33.44	6.78	25.25	273	0.18
59	-	33.44	5.58	75	10.98	33.48	4.45	25.62	237	0.24
68	11.36	33.46	4.77	100	10.09	33.61	3.68	25.87	214	0.30
84	10.55	33.50b)	4.13	150	9.55	34.02	2.19	26.28	175	0.40
98	10.12	33.61	3.68	200	9.27	34.12	1.90	26.41	163	0.48
113	9.72	33.63	3.80	250	8.30	34.17	1.70	26.60	145	0.56
137	9.58	33.87	2.54	300	7.99	34.19	1.26	26.66	139	0.64
166	9.52	34.09	2.00	400	7.46	34.29	0.69	26.81	125	0.77
200	9.27	34.12	1.90	500	(6.88)	(34.33)	(0.42)	(26.93)	(113)	(0.90)
248	8.31	34.25c)	1.75							
297	8.00	34.18	1.29							
400	7.46	34.29	0.69							
498	6.88	34.33	0.43							

PAOLINA-T; July 15, 1957; 1428 GCT; 33°09'N, 118°28'W; sounding, 670 fm; wind, 270°, force 3; weather, clear; sea, rough; wire angle, 00°.

9037

0	19.46	33.61	5.47	0	19.46	33.61	5.47	23.86	405	0.00
10	17.13	33.60	5.85	10	17.13	33.60	5.85	24.43	351	0.04
30	13.32	33.49	5.86	20	14.95	33.55	5.85	24.89	307	0.07
40	12.18	33.49	5.18	30	13.32	33.49	5.86	25.18	279	0.10
51	11.26	33.48	4.77	50	11.30	33.48	4.79	25.56	244	0.15
60	10.67	33.58	3.98	75	10.45	33.58	3.69	25.79	221	0.21
70	10.60	33.57	3.78	100	9.67	33.75	3.73	26.05	197	0.26
83	10.10	33.61	3.58	150	8.79	33.96	2.50	26.36	167	0.36
98	9.70	33.74	3.84	200	8.55	34.10	2.32	26.51	153	0.44
113	9.44	33.78	2.98	250	7.99	34.21	1.56	26.68	137	0.51
136	9.14	33.93	2.51	300	7.80	34.25	0.94	26.74	131	0.58
164	8.46	33.99	2.50	400	7.10	34.30	0.58	26.87	119	0.71
198	8.56	34.09	2.39	500	6.50	34.33	0.40	26.98	109	0.83
246	8.00	34.20	1.60							
323	7.70	34.27	0.82							
421	6.96	34.31	0.53							
550	6.23	34.34	0.35							

- a) Loose bottle cap; value falls on property curve.
 b) Possible evaporation; value falls on property curve.
 c) Loose bottle cap; value does not fall on property curve.

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

9045

PAOLINA-T; July 15, 1957; 0743 GCT; ^{a)} 32°55'N, 118°56'W; sounding, 820 fm; wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 10°.

989	4.30	34.44
1008	4.27	34.43
1025	4.22	34.45
1044	4.16	34.45
1062	4.10	34.45
1082	4.06	34.49
1101	4.03	34.48
1120	4.00	34.41r
1139	3.96	34.48
1158	3.95	34.48
1177	3.91	34.49
1196	3.91	34.47
1215	3.88	34.49
1236	3.85	34.51
1254	3.85	34.51
1275	3.82	34.49
1295	3.80	34.50

9045

PAOLINA-T; July 15, 1957; 0935 GCT; 32°55'N, 118°56'W; sounding, 820 fm; wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 06°.

1	18.7	33.64	5.55	0	18.7	(33.64)	(5.55)	(24.09)	(383)	(0.00)
10	18.65	33.63	5.64	10	18.65	33.63	5.64	24.08	384	0.04
30	14.68	33.57	6.12	20	17.10	33.59	5.88	24.44	350	0.08
45	11.68	33.58	4.55	30	14.68	33.57	6.12	24.96	301	0.11
53	10.97	33.64	4.03	50	11.19	33.62	4.19	25.69	231	0.16
63	-	33.64	3.54	75	9.88	33.69	3.38	25.97	205	0.22
73	9.95	33.68	3.42	100	9.08	33.81	2.81	26.20	183	0.26
92	9.26	33.76	3.00	150	8.67	34.02	1.96	26.42	161	0.35
105	8.99	33.86	2.71	200	8.28	34.21	1.43	26.63	142	0.43
120	8.88	33.90	2.42	250	7.95	34.25	1.19	26.71	134	0.50
144	8.72	34.00	2.05	300	7.58	34.28	0.93	26.80	126	0.57
172	8.47	34.13	1.65	400	6.95	34.32	0.56	26.91	115	0.69
210	8.22	34.22	1.35	500	6.38	34.35	0.38	27.01	105	0.81
262	7.87	34.25	1.14	600	(5.79)	(34.37)		(27.11)	(97)	(0.91)
342	7.28	34.31	0.71							
442	6.72	34.33	0.47							
582	5.90	34.37	0.28							

9060

PAOLINA-T; July 14, 1957; 1824 GCT; 32°36'N, 119°55.5'W; sounding, 600 fm; wind, 320°, force 6; weather, overcast; sea, high; wire angle, 30°.

0	17.34	33.66	5.73	0	17.34	33.66	5.73	24.43	351	0.00
8	17.20	33.64	5.89	10	17.16	33.63	5.90	24.45	348	0.04
26	14.91	33.58	5.97	20	16.50	33.61	5.92	24.58	337	0.07
35	13.32	33.58	5.25	30	13.95	33.58	5.57	25.13	285	0.10
45	12.90	33.58	5.15	50	12.53	33.57	5.02	25.40	259	0.15
53	12.17	33.56	4.88	75	10.52	33.65	3.81	25.83	218	0.21
60	11.18	33.58	4.52	100	9.27	33.85	2.57	26.19	183	0.26
73	10.60	33.64	3.88	150	8.78	34.04	2.03	26.43	161	0.35
84	9.85	33.68	3.36	200	7.88	34.09	1.79	26.60	145	0.43
95	9.39	33.79	2.83	250	7.42	34.11	1.40	26.68	137	0.50
112	9.12	33.93	2.32	300	7.25	34.16	0.92	26.74	131	0.57
135	8.94	33.96	2.23	400	6.75	34.30	0.52	26.92	114	0.70
159	8.64	34.07	1.86							
196	7.94	34.09	1.80							
256	7.38	34.12	1.36							
333	7.12	34.28	0.72							
440	6.50	34.31	0.41							

a) Special cast.

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

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PAOLINA-T; July 14, 1957; 0845 GCT; ^{a)} 32°12.5'N, 120°34'W; sounding, 2050 fm; wind, 340°, force 6; weather, cloudy; sea, high; wire angle, 08°.

90.70

908	4.24	34.43
928	4.18	34.45
946	4.12	34.47
967	4.06	34.46
986	3.98	34.47
1007	3.90 ^{b)}	34.49
1025	-	34.47
1046	3.85	34.47
1065	3.79	34.49
1072	3.78	34.49
1093	3.64	34.51
1114	3.58 ^{c)}	34.50
1136	3.54	34.50
1159	3.53	34.51
1181	3.47	34.51
1204	3.42	34.50
1218	3.36	34.52

PAOLINA-T; July 14, 1957; 1047 GCT; 32°12.5'W; 120°34'W; sounding, 2050 fm; wind, 340°, force 6; weather, cloudy; sea, high; wire angle, 00°.

90.70

0	18.0	33.44	5.63	0	18.0	33.44	5.63	24.11	381	0.00
13	17.94	33.41	5.55	10	17.96	33.41	5.60	24.10	382	0.04
33	15.80	33.39	6.17	20	17.88	33.41	5.59	24.11	382	0.08
49	13.68	33.19	6.12	30	16.38	33.40	6.05	24.45	349	0.11
58	13.24	33.27	5.71	50	13.65	33.19	6.12	24.89	307	0.18
63	-	33.30	5.26	75	11.98	33.29	5.00	25.29	269	0.25
72	12.24	33.29	5.12	100	10.06	33.33	3.94	25.65	235	0.32
86	11.08	33.28	4.31	150	8.98	33.77	2.46	26.18	184	0.42
100	10.06	33.33	3.94	200	8.45	33.97	1.84	26.42	162	0.51
115	9.62	33.48	2.66	250	7.70	34.09	1.65	26.63	142	0.59
139	9.15	33.71	2.54	300	7.11	34.13	1.57	26.74	132	0.66
167	8.70	33.85	2.25	400	6.10	34.19	0.84	26.92	114	0.78
199	8.46	33.97	1.84	500	5.61	34.28	0.44	27.06	101	0.90
247	7.73	34.09	1.66							
323	6.86	34.14	1.50							
417	5.96	34.20	0.68							
542	5.56	34.31 ^{d)}	0.40							

- a) Special cast.
b) Mean value between 3.94° and 3.87°.
c) Mean value between 3.63° and 3.52°.
d) Possible evaporation, value falls on property curve.

S10

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

9080

PAOLINA-T; July 13, 1957; 2335 GCT; 31°44'N, 121°23.5'W; sounding, 2060 fm; wind, 360°, force 4; weather, cloudy; sea, very rough; wire angle, 08°.

0	17.84	33.46	5.54	0	17.84	33.46	5.54	24.15	377	0.00
10	17.79	33.46	5.58	10	17.79	33.46	5.58	24.17	376	0.04
31	16.27	33.48	5.85	20	17.40	33.47	5.69	24.27	366	0.07
45	13.15	33.28	5.84	30	16.29	33.48	5.84	24.53	341	0.11
54	12.78	33.33	5.70	50	12.96	33.30	5.77	25.11	286	0.17
63	11.69	33.30	5.36	75	10.90	33.33	4.32	25.52	248	0.24
73	10.97	33.32	4.32	100	9.88	33.55	3.87	25.86	215	0.30
89	10.44	33.48	4.21	150	9.01	33.86	2.60	26.24	179	0.40
104	9.67	33.58	3.71	200	8.16	33.98	2.12	26.47	157	0.48
117	9.38	33.68	3.26	250	7.21	34.06	1.67	26.67	138	0.56
139	9.22	33.80	2.75	300	6.75	34.08	1.31	26.75	131	0.63
165	8.70	33.91	2.49	400	6.10	34.14	0.79	26.89	118	0.76
201	8.15	33.98	2.11	500	5.65	34.25	0.50	27.03	104	0.87
250	7.21	34.06	1.67							
327 ^{b)}	6.59	34.08 ^{a)}	1.16							
422 ^{b)}	5.97	34.17	0.67							
556 ^{c)}	5.48	34.28	0.41							

9090

PAOLINA-T; July 13, 1957; 1355 GCT; 31°23'N, 122°02.5'W; sounding, 2340 fm; wind, 340°, force 4; weather, partly cloudy; sea, very rough; wire angle, 15°.

0	17.44	33.35	5.31	0	17.44	33.35	5.31	24.16	377	0.00
10	17.45	33.36	5.45	10	17.45	33.36	5.45	24.17	376	0.04
29	17.44	33.37	5.36	20	17.45	33.37	5.40	24.17	376	0.08
39	17.41	33.37	5.61	30	17.44	33.37	5.36	24.18	375	0.11
48	15.84	33.42	5.68	50	15.71	33.42	5.77	24.62	333	0.18
57	-	33.40	6.10	75	15.00	33.54	5.82	24.87	309	0.26
66	15.04	33.48	5.95	100	12.57	33.38	5.58	25.25	273	0.34
79	14.56	33.52	5.80	150	9.99	33.52	4.44	25.82	219	0.46
92	13.30	33.45	5.69	200	8.78	33.91	2.52	26.33	171	0.56
105	12.13	33.35	5.50	250	8.30	34.07	1.85	26.52	152	0.64
127	10.54	33.47	4.85	300	7.70	34.15	1.30	26.67	138	0.72
153	9.86	33.52	4.37	400	7.10	34.23	0.66	26.83	123	0.85
183	8.90	33.82	2.78	500	6.42	34.29	0.48	26.96	111	0.98
229	8.58	34.03	2.10							
297	7.75	34.14	1.34							
389	7.18	34.23	0.69							
516	6.29	34.30	0.46							

9330

PAOLINA-T; July 18, 1957; 2305 GCT; 32°49'N, 117°30.5'W; sounding, 420 fm; wind, 220°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°.

0	21.60	33.66	5.58	0	21.60	33.66	5.58	23.33	455	0.00
10	20.63	33.63	5.58	10	20.63	33.63	5.58	23.57	433	0.04
30	14.46	33.46	5.64	20	17.58	33.55	5.62	24.28	365	0.08
40	12.56	33.35 ^{a)}	5.87	30	14.46	33.46	5.64	24.92	305	0.12
50	11.72	33.45	6.10	50	11.72	33.45	6.10	25.46	253	0.17
59	10.94	33.46	6.29	75	10.23	33.57	5.98	25.82	219	0.23
69	10.49	33.54	6.04	100	9.75	33.81	5.45	26.09	193	0.28
83	9.94	33.64	5.90	150	9.43	34.00	3.45	26.28	175	0.38
98	9.76	33.80	5.54	200	9.33	34.21	2.47	26.47	157	0.46
112	9.70	33.86	5.14	250	9.15	34.27	1.94	26.55	149	0.54
137	9.50	33.95	4.23	300	8.99	34.30	1.44	26.60	145	0.62
164	9.40	34.08	2.94	400	7.96	34.29	0.78	26.75	131	0.76
198	9.35	34.20	2.49	500	6.96	34.31	0.47	26.91	116	0.89
247	9.16	34.27	1.99							
324	8.89	34.31	1.16							
420	7.69	34.29	0.69							
547	6.57	34.33	0.33							

a) Possible evaporation, value falls on property curve.

b) Depth uncertain, possibly 406 meters.

c) Depth uncertain, possibly 529 meters.

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

PAOLINA-T; July 19, 1957; 0635 GCT; 32°30'N, 118°13'W; sounding, 800 fm; wind, 270°, force 2; weather, partly cloudy; sea, slight; wire angle, 11°.

9340

0	19.81	33.65	5.32	0	19.81	33.65	5.32	23.80	411	0.00
10	19.50	33.61	5.40	10	19.50	33.61	5.40	23.85	406	0.04
30	17.04	33.55	5.87	20	18.40	33.58	5.62	24.11	381	0.08
39	16.22	33.54	6.10	30	17.04	33.55	5.87	24.41	353	0.12
48	15.44	33.55	6.05	50	15.30	33.55	6.01	24.81	315	0.18
58	-	33.56	5.87	75	13.21	33.45	5.86	25.17	280	0.26
67	13.67	33.46	5.90	100	11.20	33.41	4.92	25.52	247	0.33
81	12.94	33.45	5.82	150	9.47	33.73	3.38	26.07	195	0.44
95	11.68	33.38	5.24	200	9.23	34.07	2.15	26.37	167	0.53
110	10.42	33.49	4.36	250	8.70	34.22	0.72	26.58	147	0.61
133	9.82	33.61	3.81	300	8.62	34.33	0.64	26.68	137	0.68
162	9.27	33.84	2.97	400	7.21	34.25	0.80	26.83	123	0.82
194	9.27	34.04	2.28	500	6.52	34.29	0.61	26.95	111	0.94
241	8.73	34.18	1.63							
317	8.58	34.34	0.62							
414	7.00	34.25	0.81							
541	6.38	34.33	0.57							

PAOLINA-T; July 19, 1957; 1440 GCT; 32°11'N, 118°59.5'W; sounding, 840 fm; wind, 320°, force 2; weather, overcast; sea, rough; wire angle, 00°.

9350

0	19.29	33.61	5.43	0	19.29	33.61	5.43	23.90	401	0.00
10	19.30	33.60	5.40	10	19.30	33.60	5.40	23.89	402	0.04
30	16.88	33.51	5.90	20	18.00	33.54	5.67	24.17	375	0.08
40	16.04	33.55	6.02	30	16.88	33.51	5.90	24.42	352	0.12
49	15.44	33.51	6.05	50	15.39	33.51	6.05	24.76	320	0.18
59	14.44	33.49	5.99	75	12.72	33.45	5.64	25.27	271	0.26
68	13.56	33.46	5.90	100	9.91	33.61	3.66	25.90	211	0.32
83	11.38	33.43	4.96	150	8.96	33.89	2.74	26.28	175	0.42
97	10.04	33.59	3.68	200	8.31	34.01	2.30	26.47	157	0.50
111	9.30	33.68	3.64	250	7.65	34.09	2.10	26.64	141	0.58
136	9.08	33.83	3.07	300	7.20	34.15	1.48	26.75	131	0.65
164	8.78	33.93	2.56	400	6.95	34.33	0.56	26.93	113	0.77
198	8.36	34.00	2.30	500	6.42	34.34	0.35	27.00	107	0.89
246	7.70	34.09	2.14							
323	7.08	34.18	1.18							
421 ^{a)}	6.86	34.34	0.55							
548 ^{b)}	6.06	34.34	0.35							

PAOLINA-T; July 19, 1957; 2206 GCT; 31°51'N, 119°40'W; sounding, 1760 fm; wind, 290°, force 3; weather, overcast; sea, rough; wire angle, 10°.

9360

0	18.04	33.46	5.35	0	18.04	33.46	5.35	24.11	382	0.00
10	17.57	33.56	5.48	10	17.57	33.56	5.48	24.30	363	0.04
30	17.25	33.56	5.56	20	17.39	33.56	5.53	24.34	359	0.07
40	14.65	33.41	6.11	30	17.25	33.56	5.56	24.37	357	0.11
49	14.12	33.40	6.05	50	14.08	33.40	6.04	24.95	301	0.18
58	13.07	33.37	5.94	75	11.50	33.33	5.43	25.41	258	0.24
68	12.02	33.33	5.60	100	10.18	33.41	4.75	25.70	230	0.31
82	11.06	33.34	5.26	150	8.91	33.77	3.34	26.19	183	0.41
96	10.46	33.38	4.88	200	8.40	33.95	2.63	26.41	163	0.50
109	9.68	33.51	4.45	250	7.90	34.08	2.32	26.59	145	0.58
132	9.24	33.68	3.54	300	7.30	34.16	2.16	26.74	131	0.65
159	8.75	33.82	3.23	400	6.72	34.29	0.66	26.92	115	0.78
191	8.48	33.92	2.73	500	6.12	34.35	0.41	27.05	103	0.89
236	8.04	34.05	2.37							
309	7.25	34.17	2.13							
402	6.70	34.29	0.62							
531	5.94	34.36	0.40 ^{c)}							

a) Depth uncertain, possibly 409 meters.

b) Depth uncertain, possibly 525 meters.

c) Value of 1.03 rejected; assumed to be transcribing error on data sheet.

S10

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

9370

PAOLINA-T; July 20, 1957; 0543 GCT; 31°29'N, 120°20.5'W; sounding, 2050 fm; wind, 330°, force 4; weather, overcast; sea, very rough; wire angle, 08°.

0	18.74	33.62	5.44	0	18.74	33.62	5.44	24.05	387	0.00
10	18.74	33.59	5.46	10	18.74	33.59	5.46	24.03	389	0.04
30	18.74	33.62	5.43	20	18.74	33.60	5.44	24.04	388	0.08
40	16.38	33.40	6.02	30	18.74	33.62	5.43	24.05	387	0.12
49	14.70	33.34	6.30	50	14.66	33.35	6.30	24.79	317	0.19
58	14.06	33.37	6.33	75	12.80	33.37	5.92	25.19	279	0.26
68	13.30	33.39	6.16	100	11.53	33.35	5.36	25.42	257	0.33
81	12.40	33.35	5.72	150	9.51	33.63	3.82	25.97	203	0.45
96	11.76	33.35	5.45	200	8.59	33.89	2.87	26.34	169	0.54
109	11.00	33.35	5.10	250	7.81	34.05	2.06	26.58	147	0.62
133	9.94	33.52	4.36	300	7.30	34.09	1.60	26.69	136	0.69
161	9.29	33.69	3.54	400	6.30	34.17	1.08	26.89	117	0.83
194	8.67	33.86	2.98	500	5.75	34.29	0.50	27.04	103	0.94
241	7.90	34.04	2.14							
316	7.13	34.11	1.45							
412	6.20	34.18	1.01							
539	5.62	34.33	0.38							

9380

PAOLINA-T; July 20, 1957; 1400 GCT; 31°07.5'N, 121°00.5'W; sounding, 2100 fm; wind, 320°, force 3; weather, overcast; sea, very rough; wire angle, 00°.

0	19.06	33.58	5.39	0	19.06	33.58	5.39	23.95	397	0.00
10	19.06	33.58	5.30	10	19.06	33.58	5.30	23.95	397	0.04
30	18.22	33.58	5.50	20	19.01	33.58	5.32	23.96	396	0.08
40	16.56	33.40	5.78	30	18.22	33.58	5.50	24.15	377	0.12
50	15.14	33.35	6.03	50	15.14	33.35	6.03	24.69	326	0.19
59	13.76	33.33	6.25	75	12.52	33.36	5.80	25.24	274	0.26
69	13.01	33.35	6.01	100	11.30	33.35	5.16	25.46	253	0.33
83	11.90	33.37	5.53	150	9.32	33.68	3.77	26.05	197	0.44
97	11.48	33.35	5.22	200	8.50	33.93	2.54	26.38	166	0.54
111	10.40	33.37	4.92	250	7.52	34.00	2.24	26.58	147	0.62
135	9.53	33.57	4.26	300	6.95	34.03	1.75	26.69	136	0.69
164	9.10	33.78	3.24	400	6.10	34.12	1.07	26.87	119	0.82
197	8.56	33.92	2.56	500	5.65	34.20	0.65	26.98	108	0.94
246	7.58	34.00	2.28							
322	6.72	34.05	1.51							
418	5.98	34.13	0.91							
546	5.47	34.23	0.46							

9390

PAOLINA-T; July 20, 1957; 2050 GCT; 30°49.5'N, 121°35'W; sounding, 2250 fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 08°.

0	17.75	33.35	5.32	0	17.75	33.35	5.32	24.09	383	0.00
10	17.58	33.39	5.38	10	17.58	33.39	5.38	24.17	376	0.04
30	17.54	33.40	6.75u	20	17.57	33.39	5.38	24.17	375	0.08
40	16.68	33.39	7.25u	30	17.54	33.40	5.39	24.18	375	0.11
50	14.78	33.24	5.65	50	14.78	33.24	5.65	24.69	327	0.18
59	13.10	33.29	4.66	75	11.98	33.27	3.94	25.27	271	0.26
68	12.36	33.26	4.00	100	10.42	33.31	3.02	25.58	241	0.32
83	11.46	33.29	3.88	150	9.10	33.65	2.14	26.07	195	0.43
97	10.54	33.30	3.02	200	8.26	33.96	1.65	26.44	160	0.52
111	10.18	33.36	2.99	250	7.68	34.06	1.22	26.61	144	0.60
134	9.29	33.52	2.44	300	7.40	34.17	1.13	26.72	133	0.67
163	8.98	33.78	1.98	400	6.82	34.26	0.84	26.88	118	0.80
196	8.33	33.94	1.70	500	6.10	34.31	0.58	27.02	105	0.92
243	7.71	34.05	1.24							
320	7.32	34.20	1.09							
418	6.70	34.27	0.79							
544	5.76	34.34	0.38							

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

PAOLINA-T; July 22, 1957; 2130 GCT; 2130 GCT; 32°10'N, 117°15.5'W; sounding, 732 fm; wind, 300°, force 4; weather, partly cloudy; sea, moderate; wire angle, 28°.

97.32

0	20.16	33.59	5.61	0	20.16	33.59	5.61	23.67	423	0.00
8	20.02	33.57	5.67	10	19.96	33.57	5.69	23.71	420	0.04
26	15.02	33.43	6.50	20	17.30	33.48	6.22	24.30	363	0.08
39	12.08	33.43	5.90	30	13.90	33.43	6.39	25.02	295	0.11
48	11.88	33.43	5.57	50	11.82	33.43	5.49	25.43	256	0.17
57	11.23	33.46	4.72	75	10.52	33.57	4.12	25.77	223	0.23
66	10.89	33.49	4.58	100	10.04	33.74	3.25	25.97	204	0.28
83	10.22	33.66	3.62	150	9.99	34.01	2.07	26.21	182	0.38
97	10.08	33.73	3.24	200	9.96	34.18	1.50	26.35	169	0.47
107	9.98	33.75	3.30	250	10.15	34.37	0.95	26.45	159	0.56
129	9.92	33.87	3.87	300	9.65	34.40	0.79	26.57	148	0.63
153	9.99	34.04	2.03	400	8.15	34.31	0.93	26.73	132	0.78
186	9.88	34.15	1.59	500	7.00	34.30	0.65	26.89	117	0.91
231	10.22	34.34	1.11							
302	9.60	34.40	0.78							
394	8.22	34.31	0.95							
526	6.72	34.30	0.52							

PAOLINA-T; July 22, 1957; 1608, 1640 GCT; 31°56.5'N, 117°45'W; sounding, 870 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 12°, 12°.

97.40

0	19.88	33.62	5.32	0	19.88	33.62	5.32	23.76	415	0.00
10	19.88	33.63	5.50	10	19.88	33.63	5.50	23.77	414	0.04
29	15.26	33.45	5.20	20	17.10	33.53	5.23	24.38	355	0.08
43	13.18	33.35	6.33	30	15.22	33.45	5.24	24.75	320	0.11
54	12.28	33.43	6.00	50	12.60	33.41	6.22	25.27	271	0.17
62	11.52	33.42	5.12	75	11.05	33.46	4.71	25.59	241	0.24
73	11.16	33.45	4.78	100	10.16	33.64	3.87	25.89	212	0.29
92	10.28	33.56	4.04	150	9.42	33.91	2.69	26.22	181	0.39
105	10.05	33.68	3.78	200	9.35	34.13	1.92	26.41	163	0.48
119	9.54	33.75	3.46	250	9.50	34.31	1.13	26.53	152	0.56
				300	9.10	34.34	0.95	26.61	144	0.64
142	9.46	33.87	2.84	400	7.95	34.30	0.92	26.75	130	0.78
170	9.33	33.98	2.51	500	6.98	34.31	0.64	26.91	116	0.91
208	9.37	34.18	1.76	600	(6.15)	(34.35)		(27.05)	(103)	(1.02)
260	9.53	34.36	0.88							
340	8.64	34.32 ^{a)}	1.01							
442	7.47	34.30 ^{a)}	0.82							
583	6.28	34.34	0.44							

PAOLINA-T; July 22, 1957; 0822 GCT; 31°36.5'N, 118°24'W; sounding, 560 fm; wind, 290°, force 4; weather, cloudy; sea, very rough; wire angle, 13°.

97.50

0	19.80	33.64	5.25	0	19.80	33.64	5.25	23.80	411	0.00
10	19.82	33.62 ^{a)}	5.17	10	19.82	33.62	5.17	23.78	413	0.04
29	16.24	33.51 ^{a)}	5.86	20	19.81	33.62	5.18	23.78	413	0.08
43	14.02	33.44	6.25	30	16.10	33.51	5.90	24.60	335	0.12
53	13.19	33.39	5.87	50	13.51	33.41	6.02	25.08	289	0.18
63	11.95	33.37	5.41	75	11.14	33.41	4.78	25.54	245	0.25
72	11.32	33.40	4.98	100	9.86	33.53	3.94	25.85	216	0.31
91	10.26	33.48	4.01	150	8.82	33.93	2.72	26.33	170	0.40
105	9.65	33.57	3.88	200	8.37	34.05	2.13	26.50	155	0.49
119	9.22	33.73	3.60	250	7.78	34.06	1.95	26.59	145	0.56
143	8.93	33.90	2.90	300	7.21	34.08	1.68	26.69	137	0.64
171	8.60	34.00	2.40	400	6.30	34.16	0.89	26.88	118	0.77
209	8.29	34.06	2.10	500	5.85	34.24	0.42	27.00	107	0.89
261	7.61	34.06	1.91	600	(5.59)	(34.37)		(27.13)	(95)	(0.99)
342	6.74	34.12	1.26							
442	6.00	34.20	0.67							
582	5.62	34.34	0.33							

a) Possible evaporation; value falls on property curve.

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

9760

PAOLINA-T; July 22, 1957; 0045 GCT; 31°15.5'N, 119°04'W; sounding, 1100 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 08°.

0	19.06	33.67	5.46	0	19.06	33.67	5.46	24.01	391	0.00
10	18.65	33.61	5.58	10	18.65	33.61	5.58	24.07	385	0.04
30	15.96	33.48	6.13	20	17.40	33.55	5.93	24.33	360	0.08
54	13.02	33.33	6.00	30	15.96	33.48	6.13	24.61	334	0.11
63	12.34	33.33	5.75	50	13.48	33.35	6.07	25.04	293	0.17
73	11.59	33.32	5.41	75	11.41	33.32	5.38	25.41	257	0.24
82	10.64	33.33	5.23	100	10.18	33.49	4.39	25.77	223	0.30
96	10.24	33.43 ^{a)}	4.68	150	8.97	33.92	2.71	26.30	173	0.40
109	9.99	33.60	3.80	200	8.19	34.01	2.37	26.50	155	0.49
127	9.36	33.73	3.44	250	7.61	34.09	1.27	26.63	142	0.56
145	9.02	33.89	2.81	300	7.28	34.17	1.16	26.75	131	0.63
168	8.74	33.96	2.58	400	6.58	34.27	0.67	26.93	114	0.76
197	8.31	34.00	2.48							
236	7.75	34.07	1.31							
310	7.18	34.18	1.12							
403	6.56	34.27	0.64							

9770

PAOLINA-T; July 21, 1957; 1741 GCT; 30°54'N, 119°43'W; sounding, 1800 fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 08°.

0	18.61	33.47	5.43	0	18.61	33.47	5.43	23.97	395	0.00
10	18.60	33.48	5.46	10	18.60	33.48	5.46	23.98	394	0.04
30	18.32	33.55	5.51	20	18.52	33.51	5.49	24.03	389	0.08
40	16.49	33.49	5.84	30	18.32	33.55	5.51	24.11	382	0.12
49	15.51	33.42	6.12	50	15.46	33.41	6.12	24.67	328	0.19
58	14.81	33.40	6.04	75	13.69	33.38	6.00	25.02	295	0.27
69	13.88	33.39	6.04	100	11.88	33.36	5.28	25.36	263	0.34
83	13.44	33.37	5.95	150	9.85	33.62	4.29	25.92	209	0.46
96	11.98	33.35	5.37	200	8.37	33.91	3.20	26.39	165	0.55
110	11.66	33.39	5.18	250	7.80	34.00	2.56	26.54	151	0.63
132	10.52	33.48	4.62	300	7.32	34.06	1.96	26.66	139	0.71
160	9.52	33.71	4.11	400	6.30	34.13	1.04	26.85	121	0.84
192	8.52	33.89	3.34	500	5.65	34.23	0.58	27.02	105	0.96
237	7.92	33.98	2.70							
311	7.22	34.07	1.82							
405	6.28	34.14	1.03							
531	5.45	34.27	0.46							

9780

PAOLINA-T; July 21, 1957; 1015 GCT; 30°36'N, 120°27'W; sounding, 2010 fm; wind, 320°, force 2; weather, overcast; sea, rough; wire angle, 00°.

0	19.16	33.48	5.34	0	19.16	33.48	5.34	23.84	407	0.00
10	19.16	33.51	5.34	10	19.16	33.51	5.34	23.86	405	0.04
30	19.10	33.49	5.43	20	19.15	33.50	5.37	23.86	405	0.08
40	16.80	33.31	5.75	30	19.10	33.49	5.43	23.86	405	0.12
50	16.24	33.40	5.86	50	16.24	33.40	5.86	24.48	346	0.20
61	14.82	33.38	6.12	75	13.45	33.29	6.23	25.00	297	0.28
69	13.64	33.31	6.21	100	12.46	33.29	6.13	25.19	278	0.35
83	13.21	33.28	6.24	150	9.64	33.53	3.96	25.88	213	0.47
98	12.56	33.29	6.16	200	8.74	33.87	2.72	26.30	173	0.57
112	11.48	33.34	5.82	250	7.98	34.03	2.13	26.54	151	0.65
136	10.06	33.43	4.54	300	7.25	34.06	1.66	26.67	139	0.73
164	9.32	33.64	3.59	400	6.35	34.13	1.05	26.85	121	0.86
198	8.77	33.86	2.76	500	5.75	34.20	0.61	26.98	109	0.99
246	8.03	34.02	2.18							
323	6.91	34.07	1.47							
420	6.22	34.14	0.95							
549	5.47	34.23	0.48							

a) Possible evaporation; value falls on property curve.

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

PAOLINA-T; July 21, 1957; 0237 GCT; 30°17.5'N, 121°12'W; sounding, 2000 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 09°.

9790

0	19.26	33.71	5.32	0	19.26	33.71	5.32	23.99	393	0.00
11	19.25	33.62	5.26	10	19.25	33.62	5.27	23.93	399	0.04
31	19.13	33.61	5.24	20	19.23	33.61	5.24	23.93	399	0.08
45	15.83	33.41	6.07	30	19.14	33.61	5.24	23.95	397	0.12
55	14.24	33.37	6.10	50	14.95	33.39	6.10	24.76	320	0.19
64	13.10	33.33	6.29	75	12.64	33.32	5.88	25.19	279	0.26
74	12.65	33.32	5.91	100	11.22	33.41	4.97	25.52	247	0.33
93	11.69	33.39	5.22	150	9.24	33.70	3.38	26.08	194	0.44
108	10.72	33.44	4.69	200	8.51	33.93	2.61	26.38	165	0.53
122	10.16	33.51	3.86	250	7.75	34.01	2.31	26.55	149	0.62
145	9.33	33.67	3.44	300	7.28	34.07	1.88	26.67	139	0.69
175	8.98	33.83	2.88	400	6.40	34.19	0.79	26.89	117	0.82
211	8.30	33.96	2.52	500	5.75	34.30	0.47	27.06	101	0.94
264	7.56	34.02	2.23	600	(5.30)	(34.39)		(27.19)	(89)	(1.04)
346	6.88	34.14	1.18							
446	6.02	34.24	0.57							
590	5.34	34.38	0.34							

PAOLINA-T; July 25, 1957; 0402 GCT; 31°34.5'N, 116°58.5'W; sounding, 675 fm; wind, 210°, force 3; weather, cloudy; sea, rough; wire angle, 04°.

10033

0	15.92	33.44		0	15.92	33.44		24.59	335	0.00
10	15.94	33.46		10	15.94	33.46		24.60	335	0.03
30	13.07	33.46		20	15.25	33.46		24.76	320	0.07
40	11.72	33.45		30	13.07	33.46		25.21	277	0.10
50	11.10	33.44		50	11.10	33.44		25.57	243	0.15
60	11.46r	33.46		75	10.70	33.63		25.78	223	0.21
69	10.72	33.57		100	9.98	33.71		25.97	204	0.26
84	10.68	33.71		150	10.15	34.05		26.21	182	0.36
98	9.98	33.71		200	10.33	34.30		26.36	167	0.45
114	10.22	33.87		250	10.42	34.51		26.53	152	0.53
138	10.04	33.97		300	9.61	34.43		26.60	145	0.60
166	10.46	34.19		400	7.82	34.32		26.79	127	0.75
200	10.33	34.30		500	6.80	34.31		26.93	114	0.87
248	10.45	34.52								
324	9.20	34.40								
421	7.44	34.31								
548	6.53	34.31								

PAOLINA-T; July 25, 1957; 0942 GCT; 31°21'N, 117°32.5'W; sounding, 1100 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 06°.

10040

0	19.94	33.66	5.53	0	19.94	33.66	5.53	23.78	413	0.00
10	19.88	33.68	5.49	10	19.88	33.68	5.49	23.80	411	0.04
30	18.56	33.58	5.67	20	19.62	33.66	5.53	23.86	405	0.08
40	16.30	33.49	6.06	30	18.56	33.58	5.67	24.07	385	0.12
50	15.07	33.49	6.27	50	15.07	33.49	6.27	24.81	315	0.19
60	14.08	33.42	6.11	75	12.23	33.41	5.29	25.33	265	0.26
69	13.03	33.39	6.10	100	10.33	33.59	3.84	25.82	219	0.33
84	11.24	33.48	4.38	150	9.59	33.97	2.52	26.23	179	0.43
98	10.40	33.57	3.95	200	9.08	34.14	1.97	26.45	159	0.51
112	10.10	33.73	3.30	250	7.99	34.13	1.93	26.62	143	0.59
136	9.80	33.87	2.88	300	7.30	34.13	1.36	26.72	134	0.66
164	9.40	34.05	2.25	400	6.41	34.23	0.88	26.91	115	0.79
198	9.12	34.14	1.97	500	6.00	34.31	0.47	27.03	104	0.91
245	8.04	34.13	1.96							
321	7.06	34.14	1.19							
418	6.32	34.25	0.82							
545	5.84	34.35	0.34							

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

100.50

PAOLINA-T; July 25, 1957; 1725 GCT; 31°03'N, 118°19.5'W; sounding, 950 fm; wind, 320°, force 3; weather, overcast; sea, very rough; wire angle, 08°.

1	19.44	33.73	5.52	0	(19.44)	(33.73)	(5.52)	(23.96)	(396)	(0.00)
11	19.46	33.71	5.33	10	19.45	33.71	5.35	23.95	397	0.04
30	16.28	33.62	5.66	20	19.09	33.70	5.36	24.03	389	0.08
39	17.74	33.48	5.90	30	16.28	33.62	5.66	24.64	331	0.12
49	13.80	33.42	6.39	50	13.69	33.42	6.38	25.05	292	0.18
58	-	33.46	6.13	75	11.08	33.47	4.74	25.59	241	0.24
67	11.57	33.43	5.45	100	10.15	33.67	3.80	25.91	210	0.30
80	10.79	33.50	4.38	150	9.56	33.91	2.82	26.19	183	0.40
94	10.14	33.56	3.93	200	8.42	34.10	2.23	26.53	152	0.49
108	10.16	33.82	3.18	250	7.95	34.15	1.70	26.64	141	0.56
131	10.19	33.90	2.63	300	7.30	34.17	1.23	26.74	131	0.63
157	9.29	33.91	2.84	400	6.63	34.25	0.65	26.90	117	0.76
191	8.57	34.08	2.36	500	6.05	34.32	0.41	27.03	104	0.88
237	8.10	34.14	1.84							
311	7.20	34.18	1.12							
405	6.60	34.25	0.65							
530	5.85	34.34	0.36							

100.60

PAOLINA-T; July 25, 1957; 2349 GCT; 30°41'N, 118°47'W; sounding, 1520 fm; wind, 260°, force 2; weather, missing; sea, rough; wire angle, 10°.

0	18.09	33.46	5.57	0	18.09	33.46	5.57	24.09	383	0.00
10	18.07	33.46	5.52	10	18.07	33.46	5.52	24.10	383	0.04
30	17.78	33.49	5.60	20	17.93	33.48	5.55	24.14	379	0.08
40	17.68	33.49	5.68	30	17.78	33.49	5.60	24.19	373	0.11
49	15.08	33.42	6.06	50	15.00	33.42	6.05	24.77	319	0.18
58	14.41	33.42	6.04	75	13.22	33.37	5.90	25.11	286	0.26
67	13.69	33.39	6.01	100	11.59	33.39	5.36	25.44	255	0.33
81	12.90	33.37	5.81	150	9.22	33.72	3.80	26.10	192	0.44
95	11.80	33.37	5.39	200	8.71	34.00	2.39	26.41	163	0.53
109	11.32	33.46	5.08	250	8.15	34.11	1.90	26.57	147	0.61
132	9.27	33.58	4.18	300	7.38	34.13	1.80	26.70	135	0.68
159	9.05	33.80	3.68	400	6.35	34.18	1.03	26.89	118	0.82
191	8.79	33.96	2.63	500	5.90	34.30	0.51	27.03	104	0.93
237	8.35	34.10	1.95							
313	7.19	34.13	1.74							
407	6.31	34.19	0.97							
533	5.78	34.34	0.41							

103.35

PAOLINA-T; July 27, 1957; 1925 GCT; 30°59.5'N, 116°44.5'W; sounding, 1000 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 11°.

0	20.69	33.65	5.43	0	20.69	33.65	5.43	23.57	433	0.00
10	19.13	33.58	5.86	10	19.13	33.58	5.86	23.93	399	0.04
29	13.12	33.39	6.00	20	14.90	33.42	5.98	24.81	315	0.08
38	12.26	33.46	5.33	30	13.11	33.39	6.00	25.15	283	0.11
48	11.42	33.48	4.70	50	11.33	33.49	4.56	25.57	242	0.16
58	10.92	33.61	4.02	75	10.56	33.71	3.30	25.87	214	0.22
67	10.62	33.66	3.60	100	10.47	33.92	2.20	26.05	197	0.27
80	10.54	33.73	3.24	150	10.54	34.03	1.61	26.13	189	0.37
94	10.46	33.89	2.40	200	10.29	34.19	1.40	26.29	174	0.46
108	10.51	33.99u	1.95	250	10.10	34.33	1.05	26.44	160	0.54
130	10.56	34.00u	1.88	300	9.35	34.34	1.03	26.57	148	0.62
159	10.48	34.05	1.42	400	8.40	34.36	0.71	26.73	132	0.77
191	10.30	34.14	1.56	500	7.38	34.34	0.47	26.87	119	0.90
237	10.26	34.33	1.06							
314	9.15	34.34	1.01							
409	8.31	34.36	0.68							
536	6.99	34.33	0.40							

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

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PAOLINA-T; July 27, 1957; 1550 GCT; 30°49.5'N, 117°04'W; sounding, 1040 fm; wind, direction missing, force 1; weather, overcast; sea, moderate; wire angle, 00°.

10340

1	19.35	33.58	5.56	0	(19.49)	(33.59)	(5.53)	(23.84)	(407)	(0.00)
11	18.48	33.56	5.73	10	18.52	33.56	5.73	24.06	387	0.04
31	17.38	33.57	5.93	20	17.99	33.57	5.85	24.20	373	0.08
41	16.13	33.47	6.05	30	17.42	33.57	5.93	24.34	359	0.11
50	14.52	33.46	6.41	50	14.52	33.46	6.41	24.91	305	0.18
58	13.07	33.41	5.19	75	11.62	33.49	4.79	25.51	248	0.25
68	12.23	33.45	5.30	100	10.20	33.67	3.69	25.90	211	0.31
84	10.85	33.58	4.10	150	9.39	34.04	2.85	26.33	171	0.41
98	10.25	33.65	3.72	200	9.90	34.35	1.07	26.48	156	0.49
113	9.90	33.77	3.38	250	9.30	34.35	1.03	26.58	147	0.57
137	9.46	33.87	3.16	300	8.72	34.36	0.81	26.68	137	0.64
165	9.38	34.11	2.39	400	7.72	34.35	0.58	26.83	123	0.77
199	9.90	34.35	1.08	500	6.65	34.33	0.45	26.96	111	0.90
247	9.35	34.35	1.03							
325	8.45	34.36	0.73							
423	7.47	34.35	0.52							
551	6.03	34.31	0.36							

PAOLINA-T; July 27, 1957; 0910 GCT; 30°24.5'N, 117°42'W; sounding, 1050 fm; wind, 320°, force 2; weather, missing; sea, rough; wire angle, 03°.

10350

0	19.67	33.68	5.35	0	19.67	33.68	5.35	23.86	405	0.00
10	19.68	33.68	5.44	10	19.68	33.68	5.44	23.86	405	0.04
30	16.25	33.40	6.06	20	18.09	33.55	5.77	24.15	377	0.08
40	14.96	33.32	6.17	30	16.25	33.40	6.06	24.48	346	0.12
50	14.25	33.32	6.30	50	14.25	33.32	6.30	24.86	310	0.18
60	13.31	33.35	6.04	75	11.78	33.34	5.57	25.37	262	0.25
70	12.10	33.33	5.74	100	10.53	33.37	4.92	25.61	239	0.32
84	11.20	33.37	5.25	150	9.00	33.75	3.55	26.16	187	0.42
98	10.63	33.36	4.95	200	8.32	33.93	3.15	26.42	162	0.51
113	9.70	33.48	4.65	250	7.90	34.13	1.83	26.63	141	0.59
137	9.12	33.63	3.93	300	7.52	34.23	1.11	26.76	129	0.66
165	8.86	33.82	3.32	400	6.50	34.24	0.74	26.91	115	0.79
199	8.33	33.93	3.15	500	6.01	34.29	0.47	27.01	106	0.90
246	7.95	34.12	1.89							
323	7.33	34.25	0.96							
419	6.37	34.24	0.68							
547	5.85	34.33	0.36							

PAOLINA-T; July 27, 1957; 0205 GCT; 29°59.5'N, 118°18'W; sounding, 1900 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 00°.

10360

0	19.06	33.59 ^{a)}	5.34	0	19.06	33.59	5.34	23.95	397	0.00
10	18.82	33.60 ^{a)}	5.35	10	18.82	33.60	5.35	24.01	391	0.04
30	17.26	33.48 ^{b)}	5.75	20	18.19	33.53	5.51	24.12	381	0.08
40	15.92	33.52 ^{b)}	5.99	30	17.26	33.48	5.75	24.30	363	0.11
50	14.76	33.46	5.90	50	14.76	33.46	5.90	24.86	310	0.18
60	14.02	33.47	6.12	75	13.27	33.47	5.64	25.17	280	0.26
69	13.54	33.47	5.81	100	11.82	33.54	4.92	25.51	249	0.32
83	12.91	33.48	5.31	150	9.82	33.79	3.46	26.05	197	0.44
98	11.93	33.54	4.92	200	8.61	33.97	3.00	26.39	164	0.53
112	11.10	33.54	4.88	250	8.08	34.14	2.20	26.61	143	0.61
135	10.32	33.69	3.58	300	7.80	34.22	1.26	26.71	134	0.68
164	9.40	33.86 ^{a)}	3.34	400	7.05	34.29	0.74	26.87	119	0.81
196	8.68	33.95 ^{a)}	3.08	500	6.45	34.33	0.45	26.99	107	0.93
243	8.09	34.13	2.34							
319	7.67	34.23	1.09							
415	6.95	34.45 ^{r)}	0.71							
542	6.18	34.35	0.35							

a) Possible evaporation; value falls on property curve.

b) Loose bottle cap; value falls on property curve.

S10

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5707

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

103.70

PAOLINA-T; July 26, 1957; 1929 GCT; 29°40'N, 118°49.5'W; sounding, 1800 fm; wind, 320°, force 3; weather, missing; sea, very rough; wire angle, 00°.

0	19.80	33.70	5.30	0	19.80	33.70	5.30	23.84	407	0.00
10	19.73	33.69	5.32	10	19.73	33.69	5.32	23.85	406	0.04
30	18.37	33.55	5.56	20	19.51	33.67	5.35	23.89	402	0.08
40	16.83	33.46	5.86	30	18.37	33.55	5.56	24.10	383	0.12
50	15.67	33.46	6.12	50	15.67	33.46	6.12	24.66	329	0.19
60	14.02	33.40	6.14	75	13.09	33.35	5.80	25.12	285	0.27
70	13.41	33.35	5.94	100	11.66	33.35	5.47	25.39	259	0.34
84	12.48	33.35	5.61	150	9.42	33.67	4.02	26.03	199	0.45
99	11.73	33.35	5.50	200	8.68	33.97	3.50	26.38	165	0.55
113	10.84	33.38	4.82	250	7.89	33.99	2.91	26.53	152	0.63
137	9.72	33.58	4.29	300	7.28	34.04	2.11	26.65	140	0.70
166	9.18	33.74	3.82	400	6.30	34.14	1.05	26.86	120	0.84
200	8.68	33.97	3.50	500	5.65	34.21	0.64	27.00	107	0.96
249	7.89	33.99	2.94							
326	6.97	34.07	1.76							
424	6.05	34.16	0.90							
552	5.34	34.24	0.49							

103.75

ORCA; July 30, 1957; 1757 GCT; 30°20'N, 116°23'W; sounding, 1000 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 12°.

0	20.73	33.73	5.08	0	20.73	33.73	5.08	23.62	427	0.00
10	20.64	33.73	5.02	10	20.64	33.73	5.02	23.65	425	0.04
30	19.20	33.65	5.28	20	20.35	33.72	5.05	23.71	419	0.08
59	14.98	33.52	5.66	30	19.20	33.65	5.28	23.96	395	0.13
68	14.31	33.48	5.59	50	15.85	33.55	5.52	24.68	327	0.20
78	12.65	33.42	5.27	75	13.15	33.43	5.41	25.17	281	0.27
92	11.60	33.50	4.64	100	11.25	33.54	4.50	25.62	238	0.34
107	10.93	33.57	4.39	150	9.45	33.71	3.43	26.07	195	0.45
121	10.12	33.64	4.04	200	9.25	34.05	2.15	26.35	168	0.54
141	9.60	33.69	3.63	250	8.80	34.19	1.50	26.54	151	0.62
160	9.32	33.78	3.23	300	8.25	34.22	1.15	26.64	141	0.70
189	9.34	34.02	2.36	400	7.30	34.27	0.70	26.82	124	0.84
214	9.10	34.09	1.98	500	(6.90)	(34.35)		(26.95)	(112)	(0.96)
268	8.63	34.21	1.29							
351	7.60	34.22	0.95							
460	7.02	34.32	0.38							

107.40

ORCA; July 30, 1957; 2219 GCT; 30°10.5'N, 116°42'W; sounding, 900 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 14°.

0	20.20	33.59	5.07	0	20.20	33.59	5.07	23.66	425	0.00
13	19.82	33.60	5.06	10	19.95	33.60	5.06	23.73	417	0.04
32	16.98	33.44	5.66	20	19.35	33.58	5.10	23.87	404	0.08
46	14.72	33.34	6.02	30	17.25	33.55	5.59	24.29	364	0.12
57	14.33	33.35	6.00	50	14.59	33.34	6.02	24.81	315	0.19
66	13.04	33.31	5.75	75	12.66	33.37	5.46	25.22	275	0.26
75	12.66	33.37	5.46	100	10.99	33.36	4.80	25.53	247	0.33
95	11.12	33.34	5.00	150	9.75	33.77	3.45	26.05	197	0.44
109	10.78	33.51	4.38	200	9.10	33.96	2.70	26.30	173	0.53
123	10.22	33.60	3.84	250	8.40	34.07	2.25	26.50	154	0.62
147	9.83	33.75	3.46	300	8.05	34.24	1.90	26.69	136	0.69
176	9.22	33.86	3.11	400	7.60	34.32	0.65	26.82	124	0.83
214	9.06	34.01	2.54	500	(6.50)	(34.34)		(26.99)	(108)	(0.95)
267	8.15	34.11	2.12							
350	7.93	34.30	0.83							
454	7.07	34.33	0.48							

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

ORCA; July 31, 1957; 0533 GCT; 29°50'N, 117°23.5'W; sounding, 1500 fm; wind, 330°, force 4;
weather, clear; sea, moderate; wire angle, 05°.

10750

0	20.40	33.69	5.21	0	20.40	33.69	5.21	23.68	423	0.00
11	20.38	33.71	5.10	10	20.39	33.71	5.10	23.70	421	0.04
31	17.71	33.58	5.38	20	19.15	33.65	5.20	23.96	396	0.08
41	17.30	33.58	5.73	30	17.70	33.58	5.35	24.27	367	0.12
51	14.64	33.47	5.94	50	15.00	33.49	5.93	24.83	313	0.19
61	12.78	33.42	5.50	75	11.33	33.48	4.60	25.56	244	0.26
71	11.51	33.46	4.75	100	10.26	33.71	3.30	25.92	209	0.32
85	10.92	33.54	4.25	150	9.95	34.13	1.60	26.30	173	0.41
100	10.26	33.71	3.30	200	9.85	34.28	1.22	26.43	160	0.50
115	9.99	33.91	2.38	250	9.75	34.31	1.05	26.48	156	0.58
140	10.00	34.09	1.66	300	9.30	34.33	0.90	26.57	148	0.66
170	9.88	34.29	1.50	400	8.15	34.34	0.60	26.75	130	0.80
204	9.84	34.26	1.18							
253	9.72	34.31	1.02							
333	8.96	34.34	0.80							
433	7.80	34.34	0.49							

ORCA; July 31, 1957; 1218 GCT; 29°29'N, 118°07.5'W; sounding, 2000+ fm; wind, 330°, force 3;
weather, clear; sea, slight; wire angle, 15°.

10760

0	20.63	33.77	4.83	0	20.63	33.77	4.83	23.68	423	0.00
10	20.62	33.75	5.18	10	20.62	33.75	5.18	23.67	424	0.04
30	19.47	33.69	4.68	20	20.45	33.74	5.09	23.70	421	0.08
40	17.60	33.56	5.20	30	19.47	33.69	4.68	23.93	399	0.13
49	15.74	33.48	5.39	50	15.65	33.48	5.41	24.68	327	0.20
59	14.26	33.43	5.95	75	12.65	33.43	5.35	25.27	271	0.27
68	13.37	33.41	5.91	100	10.50	33.64	3.89	25.82	218	0.34
82	12.02	33.48	4.83	150	9.10	33.83	3.70	26.21	182	0.44
96	10.83	33.63	3.69	200	9.25	34.19	1.60	26.47	157	0.52
111	9.86	33.66	4.34	250	8.70	34.27	1.40	26.62	143	0.60
134	9.30	33.73	4.06	300	8.30	34.30	0.90	26.70	136	0.67
162	8.98	33.93	3.08	400	7.30	34.33	0.45	26.87	120	0.80
195	9.28	34.18	1.62							
243	8.75	34.26	1.44							
321	8.14	34.31	0.75							
419	7.10	34.33	0.42							

ORCA; July 31, 1957; 1815 GCT; 29°11'N, 118°43'W; sounding, 2000+ fm; wind, 340°, force 4;
weather, partly cloudy; sea, rough; wire angle, 15°.

10770

0	20.47	33.71	5.19	0	20.47	33.71	5.19	23.67	423	0.00
10	20.38	33.73	5.22	10	20.38	33.73	5.22	23.72	419	0.04
30	18.40	33.52	5.53	20	20.10	33.70	5.25	23.76	414	0.08
59	14.18	33.41	6.00	30	18.40	33.52	5.53	24.06	386	0.12
68	13.22	34.44	5.56	50	15.45	33.43	5.90	24.69	326	0.20
77	12.48	33.37	5.46	75	12.65	33.38	5.50	25.23	275	0.27
91	11.16	33.34	5.14	100	10.75	33.40	4.75	25.58	241	0.34
104	10.63	33.44	4.66	150	9.20	33.71	3.58	26.09	193	0.45
118	10.11	33.51	4.43	200	8.40	33.88	3.35	26.36	168	0.54
135	9.52	33.60	4.10	250	8.25	34.12	2.05	26.57	148	0.62
151	9.20	33.71	3.58	300	7.75	34.19	1.55	26.69	136	0.69
204	8.36	33.91	3.30	400	6.90	34.28	0.70	26.89	117	0.82
253	8.24	34.13	2.06							
332	7.43	34.22	1.28							
433	6.70	34.31	0.46							

SIO

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

10780

ORCA; August 1, 1957; 0051 GCT; 28°51.5'N, 119°22.5'W; sounding, 2000+ fm; wind, 350°, force 4;
weather, partly cloudy; sea, rough; wire angle, 17°.

0	20.07	33.64	5.20	0	20.07	33.64	5.20	23.73	418	0.00
10	20.01	33.62	5.25	10	20.01	33.62	5.25	23.73	418	0.04
30	18.79	33.56	5.51	20	19.98	33.61	5.26	23.74	417	0.08
44	17.20	33.54	5.76	30	18.79	33.56	5.51	23.99	393	0.12
53	16.54	33.57	5.88	50	16.75	33.56	5.85	24.48	346	0.20
63	15.67	33.53	5.79	75	15.30	33.56	5.65	24.83	313	0.28
72	15.37	33.54	5.64	100	14.30	33.62	5.50	25.08	289	0.36
91	14.86	33.64	5.80	150	10.55	33.52	4.55	25.72	228	0.49
104	13.84	33.60	5.29	200	9.62	33.95	2.95	26.22	181	0.59
118	12.34	33.53	5.21	250	8.10	34.00	2.92	26.49	155	0.68
141	10.89	33.48	4.74	300	7.30	34.02	2.45	26.63	142	0.75
168	10.06	33.68	4.32	400	6.25	34.11	1.15	26.84	122	0.89
206	9.49	33.98	2.75							
257	7.95	34.00	2.92							
338	6.83	34.05	1.79							
437	5.88	34.15	0.85							

10790

ORCA; August 1, 1957; 0717 GCT; 28°30'N, 120°00'W; sounding, 2000+ fm; wind, 340°, force 4;
weather, cloudy; sea, rough; wire angle, 12°.

0	19.28	33.55	5.32	0	19.28	33.55	5.32	23.87	405	0.00
10	19.28	33.53	5.30	10	19.28	33.53	5.30	23.85	406	0.04
30	18.98	33.57	5.30	20	19.19	33.55	5.30	23.88	403	0.08
45	17.30	33.40	5.70	30	18.98	33.57	5.30	23.96	396	0.12
55	16.36	33.40	5.67	50	16.82	33.40	5.68	24.35	359	0.20
65	15.14	33.30	5.85	75	14.36	33.40	5.83	24.90	307	0.28
75	14.36	33.40	5.83	100	13.47	33.55	5.50	25.20	278	0.36
93	13.65	33.48	5.73	150	9.72	33.53	4.10	25.88	213	0.48
107	13.26	33.58	5.18	200	8.68	33.84	3.03	26.28	175	0.58
121	11.82	33.46	5.26	250	7.99	34.01	2.22	26.53	152	0.66
146	9.88	33.49	4.26	300	7.35	34.05	1.75	26.65	140	0.74
174	9.12	33.71	3.26	400	6.45	34.13	0.97	26.83	123	0.88
212	8.46	33.89	2.92	500	(5.90)	(34.31)		(27.04)	(103)	(0.99)
265	7.80	34.04	2.00							
347	6.82	34.07	1.40							
451	6.14	34.22	0.55							

11035

ORCA; August 3, 1957; 1157 GCT; 29°49'N, 116°00'W; sounding, 750 fm; wind, 340°, force 1;
weather, overcast; sea, smooth; wire angle, 20°.

0	20.60	33.73		0	20.60	33.73		23.66	425	0.00
9	17.82	33.60		10	17.70	33.60		24.29	364	0.04
28	15.40	33.56		20	16.35	33.57		24.59	336	0.07
38	14.10	33.53		30	15.15	33.55		24.85	311	0.11
47	12.77	33.52		50	12.65	33.55		25.37	262	0.16
56	12.44	33.68		75	11.50	33.69		25.69	232	0.23
64	11.99	33.67		100	10.90	33.80		25.88	213	0.28
77	11.42	33.69		150	10.70	34.12		26.17	186	0.38
90	10.73	33.68		200	10.10	34.21		26.33	170	0.47
104	10.90	33.83		250	9.52	34.31		26.51	153	0.56
126	10.61	34.00		300	9.59	34.45		26.61	143	0.63
143	10.72	34.09		400	8.30	34.42		26.79	126	0.77
185	10.40	34.20								
231	9.49	34.22								
305	9.59	34.46								
402	8.30	34.42								

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

ORCA; August 3, 1957; 0830 GCT; 29°36'N, 116°19.5'W; sounding, 1200 fm; wind, 340°, force 2;
weather, cloudy; sea, slight; wire angle, 10°.

11040

0	21.06	33.69		0	21.06	33.69		23.50	439	0.00
10	20.80	33.68		10	20.80	33.68		23.57	433	0.04
30	19.34	33.64		20	20.25	33.67		23.71	420	0.09
40	18.16	33.58		30	19.34	33.64		23.92	400	0.13
50	16.32	33.51		50	16.32	33.51		24.55	340	0.20
59	14.87	33.49		75	13.15	33.52		25.23	275	0.28
68	13.72	33.48		100	11.53	33.53		25.56	244	0.34
83	12.68	33.55		150	10.50	33.97		26.09	193	0.45
98	11.74	33.53		200	9.95	34.27		26.41	163	0.54
113	10.88	33.55		250	9.83	34.52		26.63	142	0.62
137	10.74	33.89		300	9.01	34.42		26.68	137	0.69
166	10.13	34.08		400	7.68	34.34		26.82	124	0.83
201	9.94	34.27								
250	9.83	34.52								
329	8.48	34.36								
431	7.36	34.33								

ORCA; August 3, 1957; 0154 GCT; 29°16'N, 116°59'W; sounding, 1985 fm; wind, 330°, force 2;
weather, overcast; sea, moderate; wire angle, 05°.

11050

0	21.33	33.68	5.16	0	21.33	33.68	5.16	23.42	447	0.00
10	20.88	33.66	4.92	10	20.88	33.66	4.92	23.53	437	0.04
30	18.69	33.58	5.61	20	19.98	33.63	5.15	23.74	417	0.09
40	17.57	33.55	5.79	30	18.69	33.58	5.61	24.03	389	0.13
50	16.86	33.55	5.07	50	16.86	33.55	5.07	24.45	349	0.20
60	15.60	33.51	5.87	75	14.35	33.50	5.57	24.98	299	0.28
69	14.84	33.51	5.51	100	12.05	33.45	4.35	25.40	259	0.35
84	13.58	33.48	5.73	150	10.30	33.93	2.74	26.09	193	0.47
98	12.18	33.45	4.36	200	9.55	34.14	2.00	26.38	166	0.56
113	10.76	33.52	4.27	250	9.30	34.34	1.05	26.57	147	0.64
138	10.50	33.80	3.30	300	9.02	34.37	0.82	26.64	141	0.71
167	10.02	34.02	2.29	400	8.05	34.37	0.54	26.79	127	0.85
201	9.54	34.14	2.00							
251	9.30	34.34	1.04							
331	8.85	34.38	0.73							
431	7.62	34.35	0.47							

ORCA; August 2, 1957; 1942 GCT; 28°57'N, 117°38'W; sounding, 2000+ fm; wind, 340°, force 2;
weather, overcast; sea, rough; wire angle, 03°.

11060

0	21.64	33.74	5.09	0	21.64	33.74	5.09	23.38	451	0.00
10	21.49	33.77	5.12	10	21.49	33.77	5.12	23.45	445	0.04
31	17.49	33.58	5.87	20	21.25	33.76	5.18	23.50	439	0.09
41	15.26	33.55	6.00	30	17.99	33.59	5.80	24.22	371	0.13
50	14.40	33.52	6.05	50	14.40	33.52	6.05	24.98	299	0.20
60	12.76	33.47	5.60	75	11.55	33.56	4.23	25.57	242	0.26
70	12.01	33.51	4.72	100	10.73	33.76	3.10	25.88	213	0.32
84	10.98	33.65	3.59	150	9.95	34.11	2.00	26.28	175	0.42
98	10.78	33.74	3.16	200	9.55	34.29	1.22	26.50	155	0.50
113	10.36	33.94	2.56	250	9.19	34.36	0.80	26.61	144	0.58
138	10.04	34.04	2.18	300	8.80	34.40	0.55	26.70	135	0.65
167	9.78	34.19	1.76	400	7.90	34.43	0.30	26.86	120	0.78
201	9.54	34.29	1.21							
251	9.18	34.36	0.79							
331	8.58	34.42	0.45							
432	7.55	34.43	0.27							

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

110.70

ORCA; August 2, 1957; 0246 GCT; 28°38.5'N, 118°20.5'W; sounding, 2000+ fm; wind, 350°, force 2; weather, overcast; sea, rough; wire angle, 05°.

0	20.60	33.75	5.10	0	20.60	33.75	5.10	23.67	423	0.00
10	20.52	33.75	5.20	10	20.52	33.75	5.20	23.69	421	0.04
30	19.54	33.61	5.41	20	20.25	33.72	5.25	23.74	417	0.08
45	16.85	33.45	5.84	30	19.54	33.61	5.41	23.85	407	0.12
55	15.87	33.44	5.96	50	16.40	33.44	5.89	24.48	346	0.20
65	14.86	33.44	6.01	75	13.82	33.42	5.95	25.02	295	0.28
75	13.82	33.42	5.95	100	11.85	33.39	5.22	25.40	259	0.35
95	12.32	33.39	5.44	150	9.85	33.71	4.25	25.99	203	0.47
109	10.94	33.40	4.85	200	8.90	34.02	2.50	26.39	165	0.56
124	10.35	33.49	4.56	250	7.90	34.05	2.30	26.57	147	0.64
148	9.85	33.69	4.27	300	7.10	34.07	2.00	26.70	135	0.71
178	9.40	33.93	2.96	400	6.15	34.18	0.90	26.91	115	0.84
217	8.52	34.04	2.36	500	(5.85)	(34.31)		(27.05)	(102)	(0.96)
271	7.53	34.06	2.23							
356	6.44	34.11	1.32							
463	5.97	34.26	0.52							

110.80

ORCA; August 1, 1957; 2022 GCT; 28°16'N, 118°57'W; sounding, 2000+ fm; wind, 360°, force 4; weather, cloudy; sea, rough; wire angle, 20°.

0	20.32	33.65	5.29	0	20.32	33.65	5.29	23.67	423	0.00
9	20.22	33.64	5.28	10	20.20	33.64	5.30	23.70	421	0.04
28	19.96	33.68	5.33	20	20.05	33.65	5.32	23.74	417	0.08
43	18.60	33.85	5.67	30	19.90	33.69	5.33	23.81	410	0.13
51	17.16	33.66	5.80	50	17.25	33.67	5.80	24.45	349	0.20
61	16.38	33.66	5.83	75	15.95	33.71	5.73	24.79	317	0.28
69	16.15	33.68	5.74	100	14.34	33.67	5.61	25.11	286	0.36
87	15.37	33.76	5.73	150	10.35	33.53	4.33	25.76	224	0.49
100	14.34	33.67	5.61	200	9.05	33.86	3.50	26.24	179	0.59
113	12.63	33.46	5.41	250	8.20	33.97	3.05	26.45	159	0.68
134	10.86	33.39	5.07	300	7.30	34.03	2.29	26.64	141	0.76
160	10.10	33.64	3.87	400	6.35	34.17	1.05	26.87	119	0.89
195	9.12	33.84	3.52							
244	8.32	33.96	3.13							
321	6.96	34.06	1.95							
419	6.30	34.18	0.96							

110.90

ORCA; August 1, 1957; 1312 GCT; 27°51'N, 119°36'W; sounding, 2000+ fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°.

0	20.70	33.75	5.13	0	20.70	33.75	5.13	23.64	426	0.00
14	20.70	33.74	5.00	10	20.70	33.74	5.00	23.63	427	0.04
34	20.08	33.75	5.32	20	20.62	33.74	5.05	23.67	424	0.08
50	17.93	33.61	5.45	30	20.30	33.75	5.22	23.75	416	0.13
60	17.13	33.70	5.74	50	17.93	33.61	5.45	24.25	369	0.21
69	16.39	33.67	5.92	75	16.10	33.66	5.85	24.72	324	0.29
79	15.96	33.66	5.78	100	15.52	33.80	5.69	24.96	301	0.37
99	15.54	33.80	5.69	150	11.10	33.53	4.70	25.64	236	0.51
113	14.10	33.68	5.57	200	9.55	33.83	2.55	26.14	189	0.61
127	12.44	33.55	5.25	250	8.60	34.05	2.36	26.46	158	0.70
152	11.01	33.54	4.65	300	7.55	34.07	2.23	26.63	142	0.78
180	9.84	33.68	3.98	400	6.30	34.12	1.30	26.85	121	0.92
219	9.26	33.99	2.20	500	(5.65)	(34.22)		(27.01)	(106)	(1.04)
273	8.08	34.07	2.48							
356	6.66	34.09	1.62							
462	5.86	34.18	0.86							

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

BLACK DOUGLAS; July 23, 1957; 2315 GCT; 29°12'N, 115°39'W; sounding, 850 fm; wind, 320°, force 6; weather, partly cloudy; sea, very rough; wire angle, 18°.

11335

0	17.92	33.55	5.93	0	17.92	33.55	5.93	24.19	373	0.00
9	17.92	33.57	5.98	10	17.91	33.57	5.98	24.22	371	0.04
27	17.22	33.58	6.08	20	17.70	33.57	6.01	24.27	366	0.07
41	12.14	33.58	4.22	30	16.69	33.58	5.94	24.52	342	0.11
54	11.02	33.69	3.31	50	11.37	33.65	3.66	24.69	231	0.17
67	10.42	33.75	2.57	75	10.21	33.82	2.24	26.02	200	0.22
84	10.40	33.98	1.56	100	10.36	34.08	1.28	26.19	184	0.27
97	10.32	34.04	1.32	150	10.62	34.33	0.83	26.34	170	0.36
111	10.52	34.19	1.08	200	10.45	34.40	0.64	26.43	161	0.44
133	10.64	34.28	1.00	250	10.30	34.49	0.44	26.52	152	0.52
159	10.60	34.34	0.80	300	10.09	34.52	0.44	26.58	146	0.60
195	10.46	34.39	0.74	400	8.82	34.45	0.45	26.74	132	0.74
243	10.24	34.46	0.58	500	7.58	34.40	0.42	26.89	118	0.87
319	9.83	34.51	0.43							
413	8.68	34.44	0.45							
546	6.90	34.38	0.39							

BLACK DOUGLAS; July 23, 1957; 1839 GCT; 28°59.5'N, 115°58.5'W; sounding, 700 fm; wind, 330°, force 6; weather, partly cloudy; sea, very rough; wire angle, 02°.

11340

0	18.84	33.60	5.63	0	18.84	33.60	5.63	24.01	391	0.00
9	18.80	33.58	5.68	10	18.80	33.58	5.68	24.01	391	0.04
28	17.30	33.57	6.02	20	18.52	33.58	5.75	24.08	384	0.08
42	15.13	33.49	6.13	30	16.95	33.56	6.07	24.44	350	0.11
60	12.86	33.49	5.14	50	14.08	33.49	5.82	25.02	295	0.18
69	11.72	33.58	4.23	75	11.31	33.67	3.86	25.70	230	0.24
87	10.70	33.85	3.17	100	10.74	34.06	3.21	26.11	191	0.30
101	10.74	34.07	1.81	150	11.00	34.33	0.95	26.28	175	0.39
115	11.06	34.22	1.31	200	11.16	34.58	0.37	26.44	160	0.48
137	11.08	34.28	1.08	250	10.90	34.61	0.29	26.51	153	0.56
164	11.34	34.51	0.53	300	10.57	34.60	0.26	26.56	148	0.64
200	11.16	34.58	0.37	400	9.58	34.55	0.27	26.69	136	0.78
250	10.90	34.61	0.29	500	8.25	34.46	0.28	26.84	122	0.92
328	10.34	34.59	0.25							
424 ^{a)}	9.28	34.54	0.29							
559 ^{a)}	7.40	34.40	0.27							

BLACK DOUGLAS; July 23, 1957; 1042 GCT; 28°42'N, 116°37.5'W; sounding, 1900 fm; wind, 330°, force 5; weather, missing; sea, moderate; wire angle, 00°.

11350

0	21.29	33.80		0	21.29	33.80		23.53	397	0.00
10	21.34	33.78		10	21.34	33.78		23.49	440	0.04
29	18.61	33.64		20	21.20	33.77		23.53	397	0.09
43	16.55	33.57		30	18.55	33.63		24.12	380	0.13
52	14.30	33.54		50	14.98	33.55		24.88	308	0.20
62	13.02	33.49		75	11.65	33.55		25.54	245	0.27
71	12.00	33.53		100	10.66	33.67		25.82	218	0.33
89	10.95	33.57		150	9.99	34.05		26.24	179	0.42
102	10.61	33.71		200	10.61	34.45		26.44	160	0.51
116	10.34	33.86		250	10.45	34.55		26.55	150	0.59
138	10.00	34.02		300	9.67	34.50		26.64	141	0.67
165	9.25	33.96		400	8.28	34.40		26.79	127	0.81
201	10.60	34.46		500	7.13					
251	10.40	34.55								
328	9.24	34.47								
424	7.96	34.38								
560	6.67	-								

a) Alternate depth of 549 meters rejected.

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

11360

BLACK DOUGLAS; July 23, 1957; 0251 GCT; 28°16'N, 117°20'W; sounding, 2000+ fm; wind, 330°, force 4; weather, partly cloudy; sea, moderate; wire angle, 14°.

0	21.46	33.80	5.20	0	21.46	33.80	5.20	23.48	442	0.00
9	21.44	33.78	5.22	10	21.43	33.78	5.23	23.47	443	0.04
28	17.66	33.59	5.86	20	21.24	33.77	5.24	23.51	439	0.09
42	15.65	33.52	6.12	30	17.42	33.58	5.89	24.34	359	0.13
51	14.34	33.51	6.19	50	14.42	33.51	6.18	24.97	300	0.19
60	13.42	33.55	5.44	75	12.29	33.57	4.40	25.46	254	0.26
68	12.72	33.55	4.83	100	10.90	33.79	3.22	25.86	214	0.32
85	11.64	33.66	3.70	150	9.93	34.07	2.30	26.25	178	0.42
98	10.94	33.77	3.27	200	8.99	34.21	1.82	26.52	152	0.51
111	10.69	33.87	2.92	250	9.05	34.30	0.83	26.58	146	0.58
134	10.32	34.00	2.52	300	8.35	34.33	0.73	26.72	134	0.66
160	9.64	34.10	2.17	400	7.26	34.40	0.42	26.94	113	0.78
195	9.02	34.21	1.84	500	6.47	34.42	0.41	27.06	101	0.89
243	8.99	34.26	1.06							
319	8.00	34.34	0.71							
414	7.16	34.41	0.39							
548	5.98	34.42	0.47							

11370

BLACK DOUGLAS; July 22, 1957; 2035 GCT; 27°56.5'N, 117°57'W; sounding, 2000 fm; wind, 340°, force 4; weather, partly cloudy; sea, moderate; wire angle, 12°.

0	20.51	33.64		0	20.51	33.64		23.61	429	0.00
9	20.44	33.64		10	20.44	33.64		23.63	427	0.04
27	18.77	33.66		20	20.10	33.65		23.72	419	0.08
41	17.64	33.68		30	18.45	33.67		24.16	377	0.12
49	16.58	33.55		50	16.54	33.55		24.54	341	0.20
58	15.54	33.51		75	14.12	33.49		25.03	294	0.28
67	14.84	33.53		100	11.67	33.59		25.57	242	0.34
84	13.26	33.46		150	10.69	34.10		26.14	188	0.45
97	11.86	33.54		200	10.70	34.40		26.37	166	0.54
111	11.25	33.91		250	10.40	34.47		26.49	155	0.62
133	10.69	33.89		300	9.85	34.49		26.60	145	0.70
160	10.70	34.18		400	8.67	34.47		26.78	128	0.84
196	10.72	34.38		500	7.45	34.43		26.92	114	0.97
245	10.44	34.47								
323	9.58	34.49								
419	8.42	34.46								
554	6.68	34.40								

11380

BLACK DOUGLAS; July 22, 1957; 1348 GCT; 27°39'N, 118°32.5'W; sounding, 2000+ fm; wind, 330°, force 4; weather, partly cloudy; sea, moderate; wire angle, 11°.

0	20.60	33.74	5.31	0	20.60	33.74	5.31	23.66	424	0.00
9	20.62	33.76	5.25	10	20.62	33.76	5.26	23.67	423	0.04
27	18.74	33.69	5.57	20	20.49	33.76	5.27	23.70	420	0.08
40	17.67	33.60	5.86	30	18.50	33.67	5.64	24.15	378	0.12
48	16.54	33.57	6.01	50	16.28	33.57	6.03	24.60	334	0.20
56	15.62	33.57	6.08	75	13.09	33.52	5.25	25.25	273	0.27
64	14.47	33.51	6.03	100	11.40	33.61	3.80	25.64	236	0.34
81	12.30	33.53	4.66	150	10.66	34.28	1.26	26.30	174	0.44
94	11.64	33.56	4.18	200	10.53	34.46	0.70	26.46	158	0.52
107	11.12	33.73	3.26	250	10.19	34.50	0.54	26.55	149	0.60
128	10.66	34.09	1.89	300	9.68	34.49	0.45	26.63	142	0.68
154	10.66	34.31	1.18	400	8.38	34.43	0.34	26.79	126	0.82
189	10.59	34.45	0.74	500	7.07	34.38	0.33	26.95	112	0.94
237	10.30	34.50	0.58							
312	9.58	34.49	0.42							
405	8.32	34.43	0.31							
538	6.60	34.37	0.33							

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

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BLACK DOUGLAS; July 21, 1957; 0801 GCT; 28°28'N, 115°35.5'W; sounding, 500 fm; wind, 310°, force 3; weather, clear; sea, moderate; wire angle, 15°.

11740

0	19.68	33.60		0	19.68	33.60		23.80	411	0.00
9	19.07	33.59		10	19.05	33.59		23.96	396	0.04
27	15.56	33.46		20	17.42	33.53		24.31	363	0.08
41	13.57	33.42		30	15.00	33.45		24.80	316	0.11
50	12.65	33.40		50	12.65	33.40		25.25	273	0.17
59	11.53	33.42		75	10.54	33.45		25.67	232	0.23
68	10.82	33.44		100	10.08	33.79		26.01	201	0.29
85	10.54	33.69		150	9.96	34.21		26.28	175	0.38
97	10.18	33.78		200	10.38	34.38		26.43	161	0.47
109	9.97	33.86 ^{a)}		250	10.28	34.44		26.49	156	0.55
130	9.95	34.00		300	10.17	34.58		26.62	143	0.63
155	10.18	34.23		400	8.67	34.43		26.75	131	0.77
188	10.44	34.38		500	7.88	34.43		26.87	119	0.90
233	10.29	34.40								
304	10.14	34.59								
392	8.78	34.43								
518	7.78	34.43								

BLACK DOUGLAS; July 21, 1957; 1424 GCT; 28°10.5'N, 116°17'W; sounding, 2500 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 10°.

11750

0	21.51	33.86	5.19	0	21.51	33.86	5.19	23.51	439	0.00
9	21.53	33.86	5.14	10	21.53	33.86	5.15	23.51	439	0.04
28	19.23	33.64	5.57	20	21.48	33.85	5.16	23.52	438	0.09
41	17.45	33.57	5.88	30	19.00	33.63	5.61	23.99	393	0.13
50	16.43	33.53	6.03	50	16.43	33.53	6.03	24.54	341	0.20
59	15.28	33.51	5.91	75	13.01	33.47	5.53	25.22	276	0.28
68	13.94	33.48 ^{a)}	5.81	100	10.87	33.59	4.06	25.70	230	0.34
86	11.47	33.46	4.81	150	10.19	34.13	1.96	26.26	176	0.45
99	10.88	33.56	4.20	200	9.88	34.31	1.24	26.45	159	0.53
113	10.15	33.70	3.28	250	9.04	34.31	1.11	26.59	146	0.61
135	10.30	33.97 ^{a)}	2.38	300	8.80	34.38	0.70	26.69	137	0.68
162	10.12	34.18	1.74	400	7.93	34.51	0.38	26.93	114	0.81
199	9.89	34.31	1.26	500	6.95	34.47	0.28	27.04	104	0.93
249	9.04	34.31	1.13							
327	8.63	34.42	0.52							
423	7.64	34.53	0.36							
557	6.50	34.43	0.22							

BLACK DOUGLAS; July 21, 1957; 2002, 2022 GCT; 27°53'N, 116°53'W; sounding, 2000 fm; wind, 340°, force 4; weather, partly cloudy; sea, moderate; wire angle, 10°, 10°.

11760

0	21.46	33.84		0	21.46	33.84		23.51	439	0.00
10	21.30	33.82		10	21.30	33.82		23.54	436	0.04
29	15.06	33.54		20	19.99	33.75		23.82	409	0.09
43	12.88	33.56		30	14.98	33.54		24.88	309	0.12
52	11.96	33.60		50	12.11	33.59		25.50	249	0.18
62	11.30	33.65		75	10.77	33.87		25.96	205	0.23
71	10.88	33.82		100	10.45	34.03		26.15	188	0.28
90	10.50	34.00		150	10.01	34.29		26.41	163	0.37
				200	9.95	34.51		26.60	145	0.45
104	10.41	34.05		250	9.30	34.51		26.70	135	0.52
118	10.25	34.12		300	8.79	34.49		26.78	128	0.59
141	10.20	34.25		400	7.95	34.47		26.89	117	0.72
167	9.74	34.34		500	7.13	34.44		27.00	107	0.84
203	9.95	34.52								
252	9.26	34.51								
329	8.52	34.48								
425	7.78	34.47								
560	6.37	34.42								

a) Possible evaporation; value falls on property curve.

S10

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

11770

BLACK DOUGLAS; July 22, 1957; 0225 GCT; 27°31.5'N, 117°34'W; sounding, 2000+ fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 11°.

0	21.22	33.76	5.28	0	21.22	33.76	5.28	23.51	439	0.00
9	21.20	33.77	5.29	10	21.19	33.77	5.29	23.53	437	0.04
28	17.46	33.60	5.86	20	19.92	33.69	5.50	23.81	410	0.09
42	16.29	33.60	6.01	30	17.31	33.60	5.89	24.39	344	0.12
51	15.34	33.54	6.01	50	15.42	33.55	6.01	24.78	318	0.19
60	14.45	33.51	6.14	75	12.89	33.49	5.71	25.28	271	0.26
68	13.32	33.48	5.91	100	11.10	33.48	5.14	25.59	240	0.33
85	12.35	33.54	5.45	150	9.87	34.01	2.49	26.20	182	0.44
98	11.21	33.48	5.15	200	9.60	34.27	1.38	26.44	160	0.52
111	10.63	33.50	5.05	250	9.39	34.38	0.83	26.59	145	0.60
132	9.80	33.71	3.71	300	8.78	34.40	0.65	26.70	135	0.68
157	9.88	34.09	2.10	400	7.93	34.42	0.37	26.85	121	0.81
191	10.23	34.31	1.30	500	6.85	34.41	0.27	27.00	107	0.93
237	9.82	34.39	0.93							
311	8.64	34.40	0.61							
404	7.89	34.42	0.35							
535	6.40	34.40	0.25							

11780

BLACK DOUGLAS; July 22, 1957; 0822 GCT; 27°08'N, 118°11'W; sounding, 2200 fm; wind, 330°, force 4; weather, missing; sea, moderate; wire angle, 10°.

0	21.14	33.78		0	21.14	33.78		23.55	435	0.00
9	21.14	33.75		10	21.12	33.75		23.53	436	0.04
28	18.64	33.58		20	19.93	33.66		23.78	413	0.09
42	16.45	33.57		30	18.46	33.58		24.09	383	0.13
51	14.85	33.50		50	14.98	33.51		24.85	311	0.20
61	14.16	33.46		75	12.92	33.48		25.26	272	0.27
70	13.30	33.49 ^{a)}		100	11.09	33.53		25.63	236	0.33
88	11.94	33.46		150	9.69	33.95		26.21	182	0.44
102	10.94	33.55		200	9.29	34.18		26.45	159	0.52
115	10.52	23.69		250	8.65	34.27		26.62	143	0.60
137	9.92	33.87		300	8.42	34.35		26.72	133	0.67
164	9.46	34.05		400	7.61	34.37		26.85	121	0.81
200	9.29	34.18		500	6.68	34.38		27.00	107	0.93
250	8.65	34.27								
328	8.26	34.36								
425	7.36	34.37								
561	6.12	34.38								

11839

BLACK DOUGLAS; July 21, 1957; 0507 GCT; 28°18.5'N, 115°24'W; sounding, 135 fm; wind, 330°, force 3; weather, clear; sea, moderate; wire angle, 05°.

0	20.80	33.73		0	20.80	33.73		23.60	430	0.00
9	20.76	33.73		10	20.75	33.73		23.61	429	0.04
28	19.52	33.66		20	20.63	33.72		23.64	426	0.09
46	17.06	33.57		30	19.45	33.66		23.90	401	0.13
68	13.16	33.53		50	16.18	33.55		24.62	333	0.20
90	11.34	33.60		75	12.52	33.54		25.38	261	0.27
112	10.84	33.66		100	11.07	33.63		25.72	229	0.34
138	10.98	33.95								

11933

BLACK DOUGLAS; July 20, 1957; 1112 GCT; 28°19'N, 114°53'W; sounding, 60 fm; wind, 290°, force 4; weather, clear; sea, moderate; wire angle, 15°.

0	20.16	33.65	3.47u	0	20.16	33.65	5.43	23.71	419	0.00
9	20.20	33.65	5.47	10	20.18	33.65	5.48	23.70	420	0.04
28	19.54	33.64	5.59	20	20.08	33.65	5.49	23.73	418	0.08
46	16.64	33.55	5.92	30	19.39	33.64	5.60	23.90	401	0.12
69	13.32	33.49	5.61	50	15.98	33.53	5.90	24.64	331	0.20
90	11.29	33.67	3.33	75	12.75	33.52	5.31	25.31	267	0.27
				100	(10.25)	(33.81)		(26.00)	(202)	(0.33)

a) Possible evaporation; value falls on property curve.

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

BLACK DOUGLAS; July 20, 1957; 0156 GCT; 27°43'N, 115°33'W; sounding, 1100 fm; wind, 320°, force 5; weather, partly cloudy; sea, moderate; wire angle, 22°.

12045

0	21.14	33.78	5.27	0	21.14	33.78	5.27	23.55	435	0.00
9	21.14	33.77	5.28	10	21.14	33.77	5.27	23.54	435	0.04
27	19.42	33.93	5.51	20	20.10	33.87	5.44	23.89	403	0.09
40	18.82	33.98	5.52	30	19.25	33.95	5.52	24.18	375	0.12
48	16.96	33.75	5.83	50	16.60	33.73	5.83	24.66	329	0.19
56	15.72	33.71	5.70	75	12.93	33.83	3.31	25.51	248	0.27
64	13.36	33.54	5.26	100	12.03	34.11	0.74	25.91	211	0.33
80	12.74	33.96	1.78	150	11.91	34.27	0.30	26.05	195	0.43
90	12.30	34.04	0.96	200	11.70	34.37	0.66	26.17	185	0.52
102	12.00	34.14	0.70	250	11.55	34.53	0.77	26.33	170	0.62
120	12.00	34.27	0.39	300	10.58	34.52	0.59	26.49	155	0.70
143	11.96	34.27	0.30	400	9.33	34.54	0.29	26.72	133	0.85
173	11.75	34.31	0.46	500	(7.70)	(34.41)		(26.87)	(119)	(0.98)
216	11.50	34.41	0.78							
283	10.80	34.51	0.67							
371	9.75	34.56	0.29							
498	7.76	34.41	0.36							

BLACK DOUGLAS; July 19, 1957; 2209 GCT; 27°31'N, 115°52.5'W; sounding, 2000 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 16°.

12050

0	21.64	33.78	5.32	0	21.64	33.78	5.32	23.41	448	0.00
9	21.53	33.78	5.22	10	21.50	33.79	5.23	23.45	444	0.04
28	19.52	33.93	5.57	20	21.01	33.83	5.26	23.62	428	0.09
41	17.44	33.75	5.83	30	19.22	33.91	5.61	24.16	377	0.13
60	15.49	33.57	6.00	50	16.49	33.65	5.93	24.62	332	0.20
68	14.73	33.55 ^{a)}	6.00	75	13.96	33.55	5.80	25.10	287	0.28
85	12.72	33.55	5.32	100	11.48	33.59	4.45	25.61	239	0.34
98	11.54	33.58	4.55	150	12.17	34.43	0.15	26.14	189	0.45
112	11.24	33.91	2.74	200	12.16	34.70	0.19	26.35	168	0.54
134	11.72	33.19 ^{a)}	0.81	250	11.75	34.70	0.15	26.43	161	0.63
160	12.18	34.50 ^{a)}	0.14	300	10.93	34.64	0.29	26.53	152	0.71
195	12.16	34.69	0.19	400	8.82	34.47	0.43	26.75	131	0.85
243	11.80	34.70	0.13	500	7.31	34.43	0.32	26.95	112	0.98
319	10.55	34.60 ^{a)}	0.37							
414	8.53	34.45	0.43							
550	6.79	34.43	0.25							

BLACK DOUGLAS; July 19, 1957; 1705 GCT; 27°14'N, 116°27.5'W; sounding, 2000 fm; wind, 350°, force 3; weather, cloudy; sea, moderate; wire angle, 03°.

12060

0	21.26	33.77		0	21.26	33.77		23.50	439	0.00
9	21.26	33.70		10	21.26	33.70		23.46	444	0.04
28	18.30	33.57		20	19.95	33.63		23.77	414	0.09
43	16.76	33.55		30	18.03	33.56		24.18	375	0.13
52	15.16	33.48		50	15.52	33.49		24.72	323	0.20
61	14.51	33.48		75	12.91	33.40		25.20	278	0.27
70	13.33 ^{b)}	33.41		100	11.41	33.47		25.53	246	0.34
89	12.01	33.40		150	9.78	33.89		26.12	188	0.45
102	11.30	33.49		200	9.76	34.27		26.45	159	0.54
116	10.42	33.51		250	8.90	34.26		26.58	147	0.62
138	10.11 ^{c)}	33.86		300	8.41	34.29		26.67	138	0.69
165	9.81	34.01		400	7.45	34.37		26.88	119	0.82
202	9.73	34.28		500	6.85	34.40		26.99	108	0.94
251	8.94	34.27								
329	7.88	34.27								
426	7.38	34.39 ^{a)}								
562	6.24	34.40								

a) Possible evaporation; value falls on property curve.

b) Alternate value of 13.61° rejected.

c) Alternate value of 10.31° rejected.

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

12070

BLACK DOUGLAS; July 19, 1957; 1114 GCT; 26°53.5'N, 117°08'W; sounding, 2000 fm; wind, 290°, force 3; weather, cloudy; sea, moderate; wire angle, 09°.

0	21.41	33.82	5.20	0	21.41	33.82	5.20	23.50	439	0.00
9	21.41	33.76	5.25	10	21.41	33.76	5.26	23.46	443	0.04
28	17.25	33.55	5.91	20	21.00	33.74	5.34	23.56	434	0.09
42	14.47	33.42	6.21	30	16.81	33.53	5.98	24.45	349	0.13
52	13.60	33.49	6.09	50	13.77	33.47	6.12	25.08	289	0.19
61	12.52	33.49	5.28	75	11.31	33.49	4.44	25.57	242	0.26
70	11.62	33.48	4.64	100	10.58	33.65	3.78	25.82	219	0.32
88	10.69	33.57	4.00	150	9.40	34.02	2.45	26.29	174	0.42
102	10.54	33.68	3.60	200	8.77	34.17	1.84	26.53	151	0.50
115	9.82	33.73	3.35	250	9.40	34.44	0.35	26.63	141	0.57
137	9.48	33.88	2.78	300	8.90	34.44	0.35	26.71	134	0.64
164	9.36	34.14	2.02	400	7.59	34.46	0.21	26.94	113	0.77
199	8.78	34.17	1.85	500	6.41	34.44	0.21	27.08	99	0.88
247	9.41	34.43	0.45							
323	8.56	34.42	0.35							
418	7.38	34.47	0.18							
551	5.86	34.42	0.23							

12080

BLACK DOUGLAS; July 19, 1957; 0455 GCT; 26°32.5'N, 117°48.5'W; sounding, 2000 fm; wind, 330°, force 4; weather, partly cloudy; sea, moderate; wire angle, 17°.

0	21.02	33.70		0	21.02	33.70		23.52	438	0.00
9	20.89	33.68		10	20.89	33.68		23.55	435	0.04
27	18.24	33.59		20	19.60	33.63		23.87	405	0.09
40	16.89	33.56		30	18.01	33.59		24.20	372	0.12
48	15.82	33.49		50	15.72	33.48		24.67	328	0.19
57	14.98	33.42		75	13.06	33.43		25.19	279	0.27
64	14.32	33.46		100	11.00	33.53		25.64	235	0.34
79	12.50	33.42		150	9.81	33.88		26.13	189	0.44
90	11.68	33.48		200	9.03	34.05		26.40	164	0.53
102	10.90	33.53		250	8.88	34.25		26.57	148	0.61
122	10.20	33.62		300	8.50	34.36		26.72	133	0.69
145	9.88	33.86		400	7.67	34.42		26.89	118	0.82
177	9.38	33.98		500	6.56	34.37		27.01	106	0.93
222	8.77	34.14								
291	8.60	34.35								
381	7.84	34.42								
512	6.40	34.36								

12342

BLACK DOUGLAS; July 18, 1957; 0340 GCT; 27°13.5'N, 114°59.5'W; sounding, 1000 fm; wind, 270°, force 5; weather, clear; sea, rough; wire angle, 12°.

0	20.18	33.69	5.40	0	20.18	33.69	5.40	23.74	417	0.00
9	20.14	33.68	5.47	10	20.13	33.68	5.47	23.75	416	0.04
28	14.44	33.63	5.50	20	17.09	33.66	5.48	24.48	346	0.08
41	12.94	33.58	4.87	30	14.15	33.63	5.48	25.08	289	0.11
49	12.36	33.62	4.46	50	12.25	33.62	4.44	25.49	250	0.16
58	11.37	33.61	4.28	75	10.60	33.55	4.54	25.74	226	0.22
67	10.72	33.55	4.59	100	11.32	33.97	2.20	25.93	208	0.28
84	10.90	33.75	3.38	150	10.87	34.23	1.44	26.22	181	0.38
98	11.32	33.96	2.22	200	10.78	34.43	0.70	26.39	164	0.47
111	11.28	34.06	1.88	250	10.45	34.48	0.64	26.49	155	0.55
133	11.07	34.20	1.59	300	9.79	34.47	0.53	26.60	145	0.62
160	10.75	34.25	1.34	400	8.68	34.42	0.40	26.74	132	0.77
198	10.78	34.43	0.85	500	7.72	34.42	0.24	26.88	118	0.90
245	10.50	34.48	0.66							
322	9.52	34.47	0.49							
420	8.50	34.41	0.36							
555	7.24	34.43	0.19							

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

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BLACK DOUGLAS; July 18, 1957; 0749 GCT; 26°58'N, 115°30.5'W; sounding, 2000 fm; wind, 270°, force 5; weather, cloudy; sea, rough; wire angle, 08°.

12350

0	18.90	33.65	5.94	0	18.90	33.65	5.94	24.03	388	0.00
9	18.28	33.63	6.00	10	18.25	33.63	6.00	24.18	374	0.04
28	16.22	33.58	6.06	20	16.79	33.59	6.06	24.50	344	0.07
41	15.15	33.57	5.95	30	16.17	33.58	6.05	24.64	330	0.11
50	13.88	33.53	5.77	50	13.88	33.53	5.77	25.10	287	0.17
59	13.02	33.58	5.10	75	11.89	33.63	4.40	25.57	243	0.24
68	12.18	33.60	4.74	100	11.06	33.79	3.30	25.84	217	0.29
85	11.48	33.68	3.81	150	10.67	34.11	2.18	26.16	186	0.40
98	11.10	33.78	3.35	200	10.02	34.25	1.45	26.38	166	0.49
111	10.83	33.87	2.94	250	9.65	34.35	1.11	26.52	152	0.57
133	10.80	34.03	2.64	300	9.13	34.40	0.72	26.65	140	0.64
160	10.57	34.16	1.81	400	8.05	34.40	0.43	26.82	124	0.78
195	10.02	34.23	1.66	500	7.25	34.42	0.27	26.95	112	0.90
244	9.73	34.34	1.16							
321	8.94	34.42	0.60							
416	7.86	34.39	0.41							
552	6.99	34.44	0.22							

BLACK DOUGLAS; July 18, 1957; 1323 GCT; 26°37'N, 116°06.5'W; sounding, 2000 fm; wind, 320°, force 2; weather, cloudy; sea, rough; wire angle, 10°.

12360

0	21.83	33.82		0	21.83	33.82		23.38	450	0.00
9	21.84	33.78		10	21.83	33.78		23.36	453	0.04
28	19.18	33.77		20	21.72	33.78		23.39	450	0.09
47	18.44	33.73		30	19.09	33.77		24.07	385	0.13
52	17.36	33.71		50	18.19	33.73		24.27	366	0.21
61	16.73	33.68		75	15.90	33.65		24.76	320	0.29
70	16.24	33.68		100	13.81	33.49		25.08	290	0.37
88	14.76	33.53		150	10.32	33.57		25.80	221	0.50
102	13.69	33.48		200	9.18	33.95		26.29	174	0.60
113	12.74	33.49		250	9.87	34.42		26.55	150	0.68
136	11.00	33.48		300	9.10	34.42		26.67	138	0.76
162	9.81	33.68		400	8.28	34.44		26.81	125	0.90
197	9.20	33.93		500	7.27	34.43		26.96	111	1.02
246	9.96	34.42								
321	8.98	34.43								
415	8.14	34.44								
548	6.76	34.43								

BLACK DOUGLAS; July 18, 1957; 1845 GCT; 26°18.5'N, 116°47'W; sounding, 2000 fm; wind, 300°, force 2; weather, cloudy; sea, rough; wire angle, 06°.

12370

0	21.96	33.93	5.18	0	21.96	33.93	5.18	23.44	445	0.00
9	21.88	33.93 ^{a)}	5.10	10	21.87	33.93	5.11	23.46	443	0.04
28	19.92	34.02	5.46	20	21.13	33.97	5.21	23.69	421	0.09
42	18.34	33.86 ^{a)}	5.77	30	19.80	34.01	5.48	24.09	383	0.13
51	17.59	33.75	5.84	50	17.63	33.75	5.84	24.43	351	0.20
60	17.28	33.73	5.85	75	16.38	33.67	5.87	24.66	329	0.29
69	16.80	33.69	5.89	100	13.52	33.58	5.39	25.21	277	0.36
86	15.10	33.63	5.80	150	10.71	33.73	3.69	25.85	216	0.49
100	13.52	33.58	5.39	200	9.66	34.03	2.33	26.27	176	0.59
113	12.48	33.62	4.73	250	9.45	34.34	1.22	26.55	150	0.67
135	11.34	33.66	4.08	300	8.90	34.36	0.80	26.66	140	0.75
161	10.34	33.78	3.44	400	7.75	34.35	0.48	26.83	123	0.88
197	9.70	34.02	2.36	500	6.80	34.35	0.29	26.96	110	1.01
247	9.48	34.33	1.29							
323	8.62	34.37	0.65							
420	7.50	34.35	0.43							
556	6.38	34.36	0.20							

a) Possible evaporation; value falls on property curve.

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

12380

BLACK DOUGLAS; July 19, 1957; 0006 GCT; 25°58.5'N, 117°26.5'W; sounding, 2000 fm; wind, 300°, force 2; weather, partly cloudy; sea, rough; wire angle, 04°.

0	21.99	33.86	4.00u	0	21.99	33.86	5.14	23.38	451	0.00
9	21.58	33.86	5.22	10	21.56	33.86	5.23	23.49	440	0.04
28	20.38	34.11 ^{a)}	5.43	20	21.28	33.87	5.27	23.58	432	0.09
43	18.80	33.95	5.73	30	20.30	33.92	5.46	23.88	403	0.13
52	17.84	34.02u	5.79	50	18.00	33.92	5.77	24.46	348	0.20
62	17.12	33.86	5.83	75	16.22	33.77	5.83	24.77	319	0.29
71	16.54	33.81	5.83	100	14.21	33.60	5.54	25.09	288	0.37
90	14.92	33.60	5.80	150	10.53	33.74	3.68	25.90	211	0.49
104	13.85	33.60	5.40	200	9.82	34.15	2.22	26.34	169	0.59
117	12.50	33.64	4.80	250	8.96	34.20	1.76	26.52	152	0.67
139	11.07	33.68	4.05	300	8.37	34.29	1.16	26.69	137	0.75
165	9.93	33.86	3.17	400	7.69	34.36	0.49	26.84	122	0.88
201	9.82	34.16	2.18	500	6.88	34.38	0.29	26.97	110	1.00
251	8.96	34.20	1.76							
327	8.16	34.33	0.83							
424	7.53	34.37	0.35							
559	6.30	34.38	0.24							

12740

BLACK DOUGLAS; July 17, 1957; 1621 GCT; 26°43.5'N, 114°29.5'W; sounding, 1700 fm; wind, 290°, force 3; weather, cloudy; sea, rough; wire angle, 12°.

0	20.32	33.71	5.42	0	20.32	33.71	5.42	23.72	419	0.00
9	20.25	33.73	5.50	10	20.25	33.73	5.51	23.75	416	0.04
28	18.87	33.98	5.64	20	19.77	33.86	5.55	23.97	395	0.08
42	17.12	33.83	5.80	30	18.79	33.98	5.65	24.31	362	0.12
50	16.08	33.70	5.95	50	16.08	33.70	5.95	24.75	321	0.19
59	14.78	33.60	5.87	75	13.42	33.58	5.36	25.23	275	0.26
68	13.86	33.56	5.68	100	12.00	33.74	3.60	25.63	237	0.33
85	12.76	33.65	4.70	150	12.68	34.65	0.40	26.20	182	0.43
98	12.05	33.73	3.66	200	11.98	34.75	0.17	26.42	162	0.52
110	11.56	33.82	3.14	250	11.21	34.70	0.14	26.52	152	0.60
131	12.22	34.37	1.12	300	10.62	34.67	0.15	26.62	143	0.68
158	12.76	34.69	0.30	400	9.35	34.60	0.12	26.77	129	0.82
192	12.15	34.76	0.18	500	7.88	34.48	0.18	26.91	115	0.95
237	11.39	34.73	0.14							
314	10.46	34.67	0.15							
408	9.22	34.59	0.11							
542	7.11	34.42	0.22							

12750

BLACK DOUGLAS; July 17, 1957; 1035 GCT; 26°23.5'N, 115°08'W; sounding, 2000 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 18°.

0	21.43	33.78		0	21.43	33.78		23.46	443	0.00
9	21.42	33.79		10	21.42	33.79		23.48	441	0.04
28	19.84	34.08 ^{b)}		20	20.80	33.95		23.76	414	0.09
41	19.20	34.10		30	19.78	34.09		24.14	379	0.13
50	18.54	34.00 ^{b)}		50	18.54	34.00		24.39	355	0.20
59	17.03	33.80		75	15.63	33.71		24.87	310	0.28
68	16.23	33.74		100	12.68	33.65		25.43	256	0.36
86	14.12	33.67		150	10.98	34.13		26.12	190	0.47
100	12.68	33.65		200	10.49	34.39		26.42	160	0.56
113	11.73	33.74		250	9.93	34.43		26.54	150	0.64
134	11.32	34.02		300	9.47	34.47		26.65	140	0.71
160	10.76	34.19		400	8.37	34.47		26.82	124	0.85
194	10.54	34.38		500	7.30	34.46		26.98	109	0.97
241	10.01	34.42								
315	9.32	34.48								
407	8.28	34.47								
538	6.90	34.46								

a) Possible evaporation; value does not fall on property curve.

b) Possible evaporation; value falls on property curve.

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

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BLACK DOUGLAS; July 17, 1957; 0437 GCT; 26°03.5'N, 115°46.5'W; sounding, 2100 fm; wind, 300°, force 4; weather, partly cloudy; sea, rough; wire angle, 07°.

1276C

0	22.04	34.06	5.07	0	22.04	34.06	5.07	23.51	439	0.00
9	22.04	34.07	5.10	10	22.03	34.07	5.10	23.53	437	0.04
28	20.78	34.25	5.32	20	21.59	34.15	5.19	23.70	420	0.09
43	20.08	34.15	5.38	30	20.67	34.24	5.33	24.02	389	0.13
52	19.78	34.12	5.39	50	19.83	34.13	5.38	24.15	377	0.20
62	19.45	34.13	5.49	75	17.50	33.97	5.40	24.56	339	0.29
71	18.47	34.04	5.47	100	14.57	33.74	4.63	25.08	289	0.37
80	15.84	33.78	5.03	150	11.41	33.91	2.45	25.87	214	0.50
104	14.28	33.73	4.41	200	10.63	34.27	1.37	26.30	173	0.60
117	13.16	33.73	3.83	250	10.31	34.42	0.80	26.47	157	0.68
140	11.72	33.83	2.80	300	9.70	34.48	0.57	26.62	143	0.76
167	11.06	34.05	1.95	400	8.65	34.46	0.25	26.78	128	0.90
203	10.60	34.31	1.34	500	7.49	34.42	0.18	26.91	115	1.03
253	10.24	34.42	0.80							
331	9.38	34.50	0.41							
427	8.30	34.44	0.21							
563	6.84	34.42	0.16							

BLACK DOUGLAS; July 16, 1957; 2236, 2300 GCT; 25°44'N, 116°24.5'W; sounding, 2100 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 12°, 12°.

1277O

0	22.36	33.99	5.15	0	22.36	33.99	5.15	23.37	452	0.00
9	22.28	33.98	5.18	10	22.27	33.97	5.17	23.39	450	0.04
28	19.86	33.89	5.55	20	22.23	33.97	5.18	23.40	449	0.09
42	17.92	33.79	5.74	30	19.55	33.87	5.58	24.04	388	0.13
51	16.40	33.71	5.95	50	16.50	33.71	5.94	24.66	329	0.20
60	14.46	33.64	5.38	75	13.32	33.71	4.19	25.35	264	0.28
69	13.76	33.68	4.61	100	12.15	33.97	2.33	25.78	222	0.34
87	12.40	33.81	3.38	150	11.12	34.21	1.51	26.16	186	0.44
100	12.15	33.97	2.33	200	10.46	34.42	1.00	26.44	160	0.53
114	11.30	33.96	2.53	250	9.63	34.42	0.79	26.58	146	0.61
136	11.20	34.19	1.51	300	9.49	34.53	0.40	26.69	136	0.68
				400	8.13	34.47	0.23	26.85	121	0.82
163	10.60	34.23	1.57	500	7.07	34.44	0.20	26.98	108	0.94
199	10.48	34.42	1.01							
248	9.64	34.42	0.81							
325	9.39	34.55	0.22							
421	7.88	34.45 ^{a)}	0.24							
556	6.70	34.44	0.18							

BLACK DOUGLAS; July 16, 1957; 1725 GCT; 25°24.5'N, 117°01'W; sounding, 2100 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 25°.

1278O

0	22.02	34.02		0	22.02	34.02		23.48	441	0.00
8	22.03	34.05		10	22.03	34.05		23.51	439	0.04
26	20.28	33.93		20	21.83	34.03		23.55	435	0.09
38	19.16	33.92		30	19.85	33.92		24.00	392	0.13
45	18.13	33.89		50	17.20	33.82		24.59	336	0.20
53	16.47	33.77		75	13.92	33.68		25.20	277	0.28
60	15.20	33.66 ^{a)}		100	11.64	33.71		25.67	233	0.34
76	13.82	33.68		150	10.81	34.24		26.24	179	0.45
86	12.29	33.68		200	10.27	34.39		26.45	159	0.53
98	11.64	33.70		250	9.62	34.44		26.60	145	0.61
117	11.62	33.97		300	9.10	34.47		26.70	135	0.68
139	10.96	34.16		400	7.82	34.42		26.86	120	0.82
170	10.70	34.35		500	(6.72)	(34.41)		(27.02)	(105)	(0.94)
212	10.02	34.39								
278	9.36	34.47								
361	8.30	34.42								
479	6.94	34.41 ^{a)}								

a) Possible evaporation; value falls on property curve.

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

13035

BLACK DOUGLAS; July 15, 1957; 0600 GCT; 26°19'N, 113°48.5'W; sounding, 160 fm; wind, 280°, force 5; weather, partly cloudy; sea, rough; wire angle, 10°.

0	19.68	34.08		0	19.68	34.08		24.16	376	0.00
10	19.70	34.08		10	19.70	34.08		24.15	377	0.04
28	15.10 ^{a)}	33.84		20	18.90	34.03		24.32	361	0.07
47	12.76	34.12		30	14.79	33.85		25.15	282	0.11
71	12.88	34.52		50	12.77	34.17		25.81	220	0.16
94	12.93	34.64		75	12.89	34.53		26.08	194	0.21
118	12.56	34.60		100	12.93	34.65		26.16	187	0.26
155	12.36	34.69		150	12.42	34.67		26.28	176	0.35
191	12.34	34.76		200	12.22	34.75		26.38	166	0.44
237	11.68	34.70								

13040

BLACK DOUGLAS; July 15, 1957; 0915 GCT; 26°09'N, 115°07.5'W; sounding, 1100 fm; wind, 280°, force 4; weather, clear; sea, rough; wire angle, 16°.

0	20.02	34.02	5.56	0	20.02	34.02	5.56	24.03	389	0.00
9	20.03	34.02	5.26	10	20.01	34.01	5.26	24.03	389	0.04
28	15.78	33.72	5.19	20	19.30	33.95	5.25	24.16	376	0.08
42	13.99	33.78	4.06	30	15.51	33.72	5.10	24.90	307	0.11
51	13.12	33.87	3.10	50	13.13	33.87	3.14	25.51	248	0.17
60	12.42	33.94	1.99	75	12.52	34.28	0.70	25.96	206	0.22
69	12.38	34.12	1.05	100	12.70	34.60	0.09	26.16	186	0.27
86	12.81	34.60	0.10	150	12.40	34.73	0.10	26.33	171	0.36
99	12.72	34.60	0.10	200	11.87	34.71	0.14	26.42	162	0.45
112	12.50	34.60	0.09	250	11.26	34.71	0.12	26.52	152	0.53
135	12.54	34.69	0.08	300	10.68	34.68	0.10	26.60	144	0.60
161	12.28	34.75 ^{b)}	0.12	400	9.15	34.56	0.13	26.77	129	0.75
196	11.92	34.72	0.14	500	7.84	34.50	0.15	26.93	114	0.87
246	11.34	34.85 ^{c)}	0.12							
322	10.40	34.66	0.09							
418	8.84	34.54	0.15							
554	7.30	34.49	0.15							

13050

BLACK DOUGLAS; July 15, 1957; 1527 GCT; 25°49'N, 114°46'W; sounding, 2000 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 05°.

0	20.86	33.74		0	20.86	33.74		23.59	431	0.00
9	20.88	33.77		10	20.87	33.77		23.61	429	0.04
28	19.27	33.89		20	20.42	33.83		23.77	414	0.08
42	18.20	33.86		30	19.23	33.89		24.13	379	0.12
51	17.42	33.84		50	17.47	33.85		24.54	341	0.20
60	16.20	33.64		75	14.33	33.58		25.04	293	0.28
69	14.78	33.59		100	12.24	33.64		25.50	249	0.35
87	13.40	33.57		150	11.19	34.25		26.17	185	0.45
100	12.24	33.64		200	10.53	34.43		26.44	160	0.54
113	11.42	33.80		250	10.35	34.57		26.58	147	0.62
136	11.36	34.13		300	9.97	34.59		26.66	139	0.69
162	11.02	34.34 ^{b)}		400	8.65	34.53		26.83	123	0.83
199	11.54	34.43		500	7.50	34.48		26.96	111	0.95
249	10.37	34.57								
325	9.54	34.57								
421	8.40	34.52 ^{b)}								
554	6.86	34.45								

a) Alternate value of 14.99° rejected.

b) Possible evaporation; value falls on property curve.

c) This value rejected; value of 34.71‰, obtained from second titration of sample seven days later, was used in interpolation.

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

BLACK DOUGLAS; July 16, 1957; 0106 GCT; 25°29'N, 115°24'W; sounding, 2000 fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, 20°.

13060

0	22.10	33.98	5.10	0	22.10	33.98	5.10	23.43	446	0.00
9	21.86	34.01	5.17	10	21.84	34.01	5.17	23.53	437	0.04
27	20.58	34.00	5.42	20	21.63	34.01	5.21	23.59	431	0.09
41	19.04	33.87	5.59	30	20.11	33.97	5.48	23.97	395	0.13
50	18.02	33.82	5.84	50	18.02	33.82	5.84	24.38	356	0.20
59	17.36	33.77	5.75	75	16.40	33.71	5.74	24.71	324	0.29
68	16.94	33.77 ^{a)}	5.81	100	12.61	33.69	4.29	25.48	251	0.36
85	14.74	33.64	5.30	150	11.29	34.17	1.88	26.10	192	0.47
98	12.76	33.68	4.41	200	10.05	34.40	1.50	26.49	155	0.56
110	12.01	33.75	3.64	250	9.80	34.44	0.86	26.57	148	0.64
132	11.57	34.00	2.36	300	9.25	34.47	0.61	26.68	137	0.71
158	11.16	34.26 ^{a)}	1.63	400	8.52	34.51	0.22	26.83	123	0.85
193	10.20	34.40 ^{a)}	1.57	500	7.50	34.48	0.20	26.96	110	0.97
241	9.85	34.43	0.93							
316	9.12	34.48	0.54							
410	8.46	34.51	0.19							
544	6.93	34.46	0.21							

BLACK DOUGLAS; July 16, 1957; 0618 GCT; 25°08.5'N, 116°02'W; sounding, 2000 fm; wind, 270°, force 4; weather, partly cloudy; sea, rough; wire angle, 13°.

13070

0	22.56	34.05 ^{a)}	5.11	0	22.56	34.05	5.11	23.36	453	0.00
9	22.58	34.02	5.07	10	22.57	34.02	5.07	23.34	455	0.04
28	19.54	33.91	5.44	20	21.11	33.97	5.21	23.70	420	0.09
42	18.42	33.84	5.76	30	19.39	33.91	5.49	24.10	382	0.13
51	16.70	33.69	5.81	50	16.88	33.70	5.81	24.57	338	0.20
60	15.92	33.80 ^{u)}	5.72	75	14.75	33.67	5.26	25.02	295	0.28
69	15.24	33.69	5.50	100	12.58	33.67	4.07	25.46	253	0.35
87	13.54	33.61	4.54	150	11.17	34.13	1.71	26.10	192	0.46
101	12.54	33.67	4.04	200	10.51	34.41	0.91	26.42	162	0.55
114	11.62	33.78	3.13	250	9.63	34.44	0.75	26.60	145	0.63
136	11.20	34.05	2.00	300	8.97	34.44	0.52	26.70	135	0.70
163	11.06	34.22	1.39	400	7.88	34.40	0.30	26.84	122	0.84
199	10.54	34.40	0.92	500	6.96	34.40	0.20	26.98	109	0.96
249	9.64	34.44	0.77							
326	8.66	34.43	0.44							
422	7.66	34.39	0.26							
556	6.48	34.42	0.16							

BLACK DOUGLAS; July 16, 1957; 1137 GCT; 24°48.5'N, 116°40'W; sounding, 2200 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 28°.

13080

0	22.36	34.04		0	22.36	34.04		23.40	449	0.00
8	22.37	34.04		10	22.35	34.03		23.41	448	0.04
25	20.06	33.96		20	21.70	34.01		23.57	433	0.09
38	19.20	33.98		30	19.69	33.97		24.07	385	0.13
45	18.28	33.86		50	17.83	33.86		24.46	348	0.20
53	17.56	33.86		75	15.38	33.66		24.88	308	0.28
61	17.02	33.80		100	12.28	33.51		25.40	259	0.36
75	15.38	33.66		150	10.45	33.91		26.05	197	0.47
86	13.92	33.53		200	10.53	34.37		26.41	163	0.56
96	12.64	33.49		250	9.78	34.45		26.58	147	0.64
113	11.54	33.62		300	9.20	34.44		26.67	138	0.72
132	11.09	33.79		400	8.05	34.43		26.84	122	0.85
159	10.08	33.96								
197	10.53	34.36								
254	9.71	34.45								
331	8.90	34.44								
448	7.37	34.42								

a) Possible evaporation; value falls on property curve.

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

13330

BLACK DOUGLAS; July 14, 1957; 0433 GCT; 25°54.5'N, 113°07.5'W; sounding, 100 fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, missing.

0	21.08 ^{a)}	33.87	4.60	0	21.08	33.87	4.60	23.63	427	0.00
10	21.04	33.86	5.40	10	21.04	33.86	5.40	23.63	427	0.04
29	15.92 ^{a)}	33.84	5.29	20	20.85	33.86	5.40	23.71	421	0.08
48	13.54	34.02	2.75	30	15.80	33.84	5.24	24.93	304	0.12
71	13.30	34.39	1.07	50	13.49	34.04	2.66	25.57	242	0.18
94	13.30	34.58	0.55	75	13.08	34.40	1.00	25.93	209	0.23
116	13.02	34.66	0.29	100	13.25	34.60	0.46	26.06	196	0.28
142	13.01	34.78	0.15	150	(13.01)	(34.80)		(26.25)	(178)	(0.38)

13340

BLACK DOUGLAS; July 13, 1957; 2135, 2210 GCT; 25°34.5'N, 113°45.5'W; sounding, 1600 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 20°, 20°.

0	20.84	33.69		0	20.84	33.69		23.56	434	0.00
9	20.67	33.70		10	20.66	33.70		23.62	428	0.04
27	17.04	33.62 ^{a)}		20	18.22	33.65		24.20	372	0.08
41	15.73	33.69 ^{a)}		30	16.71	33.63		24.55	340	0.12
50	14.10	33.58 ^{a)}		50	14.10	33.58		25.09	288	0.18
59	13.34	33.64		75	12.00	33.71		25.60	240	0.25
68	12.27	33.64		100	10.99	33.85		25.90	210	0.31
85	12.16	33.95		150	11.25	34.54		26.39	164	0.40
98	11.10	33.85 ^{a)}		200	10.18	34.51		26.56	148	0.48
111	10.81	33.95		250	9.78	34.56		26.67	138	0.56
132	10.46	34.07 ^{a)}		300	9.41	34.56		26.73	133	0.62
				400	8.27	34.51		26.87	119	0.76
145	11.36	34.55 ^{a)}		500	7.10	34.44		26.98	109	0.87
176	10.56	34.45								
221	9.98	34.55								
292	9.52	34.56								
382	8.50	34.52								
512	6.96	34.43								

13345

BLACK DOUGLAS; July 13, 1957; 1819 GCT; 25°24.5'N, 114°04.5'W; sounding, 2000 fm; wind, 310°, force 4; weather, overcast; sea, rough; wire angle, missing.

0	21.10	33.71	5.40	0	21.10	33.71	5.40	23.50	439	0.00
9	21.05	33.75	5.63	10	21.04	33.75	5.66	23.56	434	0.04
28	16.14	33.70	6.39	20	19.20	33.73	6.02	24.02	390	0.08
43	13.70	33.77	4.90	30	15.83	33.70	6.34	24.81	315	0.12
52	12.88	33.71	4.15	50	13.05	33.72	4.30	25.41	257	0.18
61	12.30	33.75	3.66	75	11.60	33.75	3.28	25.71	229	0.24
70	11.82	33.75	3.36	100	10.66	33.87	2.88	25.98	203	0.29
89	10.94	33.78	3.08	150	10.08	34.17	1.83	26.31	172	0.39
102	10.62	33.89	2.73	200	9.44	34.25	1.55	26.48	156	0.47
115	11.02	34.13	1.70	250	9.38	34.40	0.76	26.62	143	0.55
138	10.50	34.20	1.65	300	8.93	34.45	0.43	26.72	133	0.62
165	9.62	34.13	2.05	400	7.95	34.44	0.25	26.87	119	0.75
201	9.42	34.25	1.52	500	6.89	34.42	0.24	27.00	107	0.87
251	9.38	34.42	0.62							
328	8.66	34.46	0.33							
424	7.68	34.43	0.24							
559	6.36	34.42	0.24							

a) Possible evaporation; value falls on property curve.

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

BLACK DOUGLAS; July 13, 1957; 1455 GCT; 25°14.5'N, 114°24'W; sounding, 2000+ fm; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 24°.

133.50

0	21.26	33.78	5.37	0	21.26	33.78	5.37	23.51	439	0.00
9	21.20	33.75	5.37	10	21.19	33.75	5.36	23.51	439	0.04
27	16.90	33.72	5.48	20	19.29	33.73	5.47	24.02	392	0.08
40	15.78	33.78	4.91	30	16.57	33.73	5.38	24.66	329	0.12
48	13.94	33.58	5.37	50	13.85	33.59	5.36	25.15	283	0.18
57	13.55	33.76	4.88	75	11.92	33.68	4.03	25.60	240	0.25
65	12.72	33.66	4.39	100	(10.90)	(33.78)	(3.53)	(25.87)	(214)	(0.31)
82	11.53	33.69	3.89							
94	11.04	33.75	3.61							

BLACK DOUGLAS; July 13, 1957; 0834, 0931 GCT; 24°54.5'N, 115°01.5'W; sounding, 2200 fm; wind, 340°, force 3; weather, overcast; sea, moderate; wire angle, 10°, 10°.

133.60

0	22.25	34.04		0	22.25	34.04		23.43	446	0.00
10	22.26	34.04		10	22.26	34.04		23.43	446	0.04
28	19.66	33.91		20	20.47	33.94		23.85	406	0.07
43	19.90	34.20		30	19.66	33.91		24.05	387	0.13
52	18.90	34.02		50	19.08	34.05		24.30	364	0.20
61	18.44	34.01		75	17.20	33.89		24.63	332	0.29
71	17.66	33.94		100	14.18	33.63		25.10	287	0.37
89	15.34	33.66		150	11.36	33.89		25.88	213	0.49
103	13.84	33.62		200	11.60	34.48		26.28	175	0.59
117	13.08	33.77		250	10.59	34.65		26.60	145	0.67
138	11.44	33.82		300	9.92	34.65		26.71	134	0.75
166	11.28	34.27		400	8.62	34.59		26.88	118	0.88
				500	7.50	34.55		27.01	106	1.00
241	10.78	34.65								
319	9.70	34.64								
415	8.40	34.58								
552	7.02	34.53								

BLACK DOUGLAS; July 13, 1957; 0255 GCT; 24°35.5'N, 115°39'W; sounding, 2000 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 30°.

133.70

0	22.60	34.07		0	22.60	34.07		23.36	453	0.00
8	22.60	34.09		10	22.57	34.11		23.41	449	0.04
25	20.22	34.22		20	20.78	34.21		23.98	394	0.09
37	19.83	34.21		30	20.02	34.21		24.17	375	0.12
45	19.50	34.20		50	19.29	34.17		24.33	360	0.20
53	19.16	34.15 ^{a)}		75	16.75	33.85		24.72	324	0.28
60	18.54	34.07		100	14.23	33.75		25.19	278	0.36
76	16.70	33.85		150	10.82	33.81		25.91	210	0.48
88	15.65	33.81		200	10.49	34.23		26.29	174	0.58
101	14.16	33.74		250	9.68	34.40		26.57	148	0.66
120	11.94	33.68		300	8.98	34.42		26.69	136	0.74
145	10.94	33.78		400	7.78	34.43		26.88	118	0.87
177	10.45	34.06		500	6.85	34.45		27.03	104	0.99
222	10.06	34.38								
292	9.05	34.42								
382	7.96	34.43								
509	6.78	34.45								

a) Possible evaporation; value falls on property curve.

SIO
CCOFI
5707

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O ₂	Z	T	S	O ₂	σ _t	ΔT	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10 ⁵ cm ³ /g	dyn. m

13380

BLACK DOUGLAS; July 12, 1957; 2127 GCT; 24°14'N, 116°18'W; sounding, 2100 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 06°.

0	22.98	34.20	5.08	0	22.98	34.20	5.08	23.36	453	0.00
9	22.80	34.20	5.06	10	22.77	34.20	5.06	23.41	448	0.04
27	20.14	34.03	5.47	20	20.87	34.07	5.34	23.84	407	0.09
43	19.69	34.14	5.47	30	20.03	34.04	5.47	24.04	388	0.13
52	19.40	34.05	5.48	50	19.50	34.05	5.47	24.21	372	0.20
62	19.02	34.04	5.51	75	17.53	33.83	5.73	24.51	343	0.29
71	17.93	33.87	5.68	100	15.00	33.69	5.71	24.98	299	0.38
90	16.23	33.75	5.85	150	11.05	33.72	3.91	25.79	221	0.50
103	14.60	33.67	5.64	200	10.01	34.13	2.14	26.29	174	0.60
116	13.52	33.76	4.95	250	9.68	34.32	1.46	26.50	154	0.69
138	11.69	33.66	4.47	300	9.10	34.41	0.91	26.66	139	0.77
166	10.43	33.86	3.16	400	8.04	34.42	0.37	26.84	123	0.90
201	10.00	34.14	2.13	500	7.25	34.46	0.23	26.98	109	1.02
252	9.67	34.33	1.41							
326	8.77	34.42	0.61							
421	7.88	34.42	0.33							
554	6.83	34.51	0.18							

13723

BLACK DOUGLAS; July 11, 1957; 0730 GCT; 25°34'N, 112°18.5'W; sounding, 40 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 02°.

0	22.80	34.20	3.83	0	22.80	34.20	3.83	23.40	449	0.00
9	21.02	34.05	4.61	10	20.77	34.03	4.61	23.83	408	0.04
28	15.62	33.74	3.46	20	18.00	33.83	4.10	24.39	354	0.08
48	15.85	34.43	1.29	30	15.28	33.79	3.27	25.00	297	0.11

13730

BLACK DOUGLAS; July 11, 1957; 1118 GCT; 25°20'N, 112°45.5'W; sounding, 100+ fm; wind, 280°, force 3; weather, partly cloudy; sea, moderate; wire angle, 13°.

0	22.56	34.05	5.14	0	22.56	34.05	5.14	23.36	455	0.00
9	21.95	34.02	5.42	10	21.71	34.02	5.45	23.58	432	0.04
28	17.46	34.09	5.47	20	19.24	34.06	5.47	24.26	367	0.08
46	15.40	34.05	3.74	30	17.07	34.08	5.32	24.81	315	0.12
70	14.28	34.30	2.08	50	15.15	34.07	3.42	25.24	273	0.18
92	13.74	34.56	0.65	75	14.12	34.36	1.77	25.69	231	0.24
114	13.61	34.70	0.34	100	13.70	34.60	0.51	25.96	205	0.30
141	13.07	34.69	0.33	150	(12.88)	(34.68)	(0.33)	(26.19)	(184)	(0.40)

13740

BLACK DOUGLAS; July 11, 1957; 1704 GCT; 25°00'N, 113°23.5'W; sounding, 1200 fm; wind, 310°, force 3; weather, cloudy; sea, moderate; wire angle, 05°.

0	21.20	33.77		0	21.20	33.77		23.57	437	0.00
10	21.14	33.75		10	21.14	33.75		23.57	437	0.04
28	17.66	33.68		20	19.80	33.71		23.86	406	0.09
43	15.92	33.65		30	17.48	33.67		24.40	353	0.12
52	14.86	33.64		50	15.08	33.64		24.93	304	0.19
61	13.82	33.57		75	13.01	33.68		25.39	260	0.26
69	13.32	33.65		100	12.06	33.96		25.78	222	0.32
87	12.34	33.73		150	12.29	34.59		26.23	180	0.42
100	12.06	33.96		200	11.85	34.69		26.40	164	0.51
113	12.38	34.25		250	11.15	34.70		26.54	151	0.59
136	12.54	34.54		300	10.48	34.67		26.63	142	0.67
162	12.08	34.61		400	9.03	34.57		26.80	126	0.81
198	11.86	34.69		500	7.70	34.50		26.95	112	0.93
247	11.20	34.70								
323	10.16	34.65								
419	8.76	34.55								
555	7.01	34.47								

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

BLACK DOUGLAS; July 12, 1957; 0530 GCT; 24°20'N, 114°39.5'W; sounding, 2100 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 05°.

13760

0	22.46	34.00		0	22.46	34.00		23.35	454	0.00
9	22.47	34.04		10	22.46	34.05		23.38	451	0.04
28	20.84	34.35		20	21.24	34.31		23.94	398	0.09
43	20.37	34.29		30	20.79	34.35		24.07	385	0.13
52	19.97	34.24		50	20.07	34.25		24.21	372	0.20
61	18.60	34.10		75	17.33	33.95		24.65	330	0.29
70	17.84	34.00		100	12.92	33.69		25.41	258	0.37
89	14.88	33.75		150	11.27	34.12		26.05	197	0.48
102	12.77	33.68		200	10.94	34.57		26.47	157	0.57
116	12.07	33.69		250	10.20	34.56		26.60	145	0.65
131p	11.31	33.86		300	9.55	34.52		26.68	137	0.72
138	11.22	33.89		400	8.29	34.46		26.83	123	0.86
168p	11.45	34.44								
227p	10.64	34.58								
305p	9.48	34.52								
420p	8.02	34.45								

BLACK DOUGLAS; July 12, 1957; 1050 GCT; 23°59.5'N, 115°17.5'W; sounding, 2100 fm; wind, 310°, force 2; weather, cloudy; sea, moderate; wire angle, 02°.

13770

0	23.16	34.38		0	23.16	34.38		23.44	445	0.00
9	23.13	34.36		10	23.12	34.35		23.43	446	0.04
28	20.31	34.14		20	20.84	34.18		23.93	399	0.09
42	19.67	34.07		30	20.22	34.13		24.06	386	0.13
52	19.41	34.14 ^{a)}		50	19.48	34.09		24.23	370	0.20
62	18.79	34.01		75	16.91	33.77		24.61	334	0.29
71	17.47	33.81		100	15.21	33.85		25.06	291	0.37
90	15.58	33.71		150	12.21	34.23		25.97	204	0.50
104	15.09	33.94		200	11.32	34.47		26.33	170	0.59
117	14.76	34.14		250	10.57	34.56		26.55	151	0.67
139	12.86	34.14 ^{b)}		300	9.95	34.58		26.65	140	0.75
166	11.64	34.33		400	8.70	34.53		26.82	124	0.89
202	11.31	34.48								
251	10.56	34.56								
329	9.60	34.58								
426	8.32	34.51								
563	-	34.43								

BLACK DOUGLAS; July 12, 1957; 1544 GCT; 23°39'N, 115°56'W; sounding, 2100 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 08°.

13780

0	23.30	34.14	5.10	0	23.30	34.14	5.10	23.22	467	0.00
10	23.30	34.14	5.11	10	23.30	34.14	5.11	23.22	467	0.05
29	20.42	34.09	5.18	20	21.54	34.10	5.13	23.68	422	0.09
43	20.30	34.22	5.19	30	20.40	34.10	5.18	23.99	393	0.13
52	19.74	34.16	5.44	50	19.98	34.19	5.34	24.17	376	0.21
61	19.01	34.09	5.50	75	17.64	34.04	5.21	24.65	330	0.30
70	18.12	34.04	5.43	100	14.87	34.16	3.43	25.37	262	0.37
88	16.28	34.11	4.14	150	13.05	34.67	0.50	26.14	188	0.49
100p	14.87	34.16	3.43	200	11.09	34.60	0.54	26.46	158	0.58
112p	14.28	34.05	2.88	250	10.85	34.65	0.44	26.55	150	0.66
130p	14.20	34.65	1.07	300	9.65	34.56	0.30	26.68	137	0.73
153p	12.84	34.67	0.44	400	8.33	34.51	0.22	26.86	120	0.86
184p	11.37	34.60	0.58							
225p	10.87	34.60	0.44							
290p	9.85	34.57	0.31							
371p	8.70	34.52	0.21							
482p	7.35	34.49	0.28							

a) Loose bottle cap; value does not fall on property curve.

b) Loose bottle cap; value falls on property curve.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters		50 Meters	
						Dir	Force			T	S	T	S
67.50-S	18	1445	36°49.0'	122°04.5'	54	calm		overcast	rough	-	33.70	11.86	33.57
70.52-S	17	1507	36°08.5'	121°50.0'	380	100°	3	fog	very rough	11.18	33.60	10.12	33.68
80.51 83.65-S	14	0635	33°24.5'	121°05.0'	-	340°	5	cloudy	rough	16.34	33.49	11.54	33.30
83.40 83.75-S	14	0050	33°03.0'	121°45.0'	-	340°	5	overcast	rough	17.01	33.42	13.42	33.17
83.51 83.85-S	13	1855	32°45.0'	122°25.0'	-	320°	4	cloudy	moderate	17.10	33.30	14.38	33.42
83.55 87.65-S	9	2016	32°51.0'	120°43.0'	-	320°	5	clear	rough	16.37	33.57	12.12	33.51
83.65 87.75-S	10	0245	32°33.5'	121°23.0'	-	320°	6	clear	very rough	17.00	33.40	14.30	33.37
83.75 87.85-S	10	0921	32°10.0'	122°04.0'	-	320°	6	clear	high	16.96	33.37	14.20	33.37
83.85 80.51-P	9	2340	34°26.5'	120°31.5'	33	320°	5	clear	rough	15.80	33.57	11.21	33.55
87.50 83.40-P	11	1300	34°14.0'	119°22.0'	12	270°	2	cloudy	slight	18.41 ^{a)}	33.58	-	-
87.65 83.51-P	10	2320	33°52.0'	120°07.5'	56	320°	2	partly cloudy	moderate	16.22	33.57	10.50	33.62
87.75 83.55-P	10	2050	33°47.0'	120°23.0'	510	320°	4	overcast	very rough	16.91	33.52	10.10	33.60
87.85 87.50-P	12	1030	33°20.0'	119°39.5'	48	calm		cloudy	rough	16.92	33.59	9.44	33.73
90.28-P	16	1745	33°27.5'	117°46.5'	210	180°	1	overcast	slight	20.95	33.58	11.34	33.44
90.50-P	15	0320	32°44.5'	119°17.0'	133	320°	5	clear	very rough	17.72	33.62	11.00	33.56
90.55-P	14	2200	32°34.5'	119°37.0'	600	320°	4	partly cloudy	rough	17.43	33.64	10.26	33.55
90.65-P	14	1440	32°26.0'	120°13.0'	1950	340°	6	overcast	high	17.34	33.46	13.70	33.30

a) Mean value between 18.55° and 18.27°.

TEMPERATURE AND SALINITY AT 10 AND 50 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters		50 Meters	
						Dir	Force			T	S	T	S
90.75-P	14	0350	31°57.5'	120°59.0'	1960	340°	5	cloudy	very rough	17.68	33.44	12.84	33.41
90.85-P	13	1900	31°30.5'	121°45.5'	2160	340°	4	cloudy	very rough	17.34	33.40	13.08	33.28
93.27-P	16	2315	32°54.5'	117°18.5'	175	220°	3	cloudy	moderate	20.57	33.57	18.64	33.49
93.35-P	19	0220	32°38.0'	117°52.0'	260	250°	4	partly cloudy	slight	19.74	33.37	14.59	33.59
93.45-P	19	1100	32°20.5'	118°36.0'	937	260°	3	cloudy	slight	19.37	33.62	15.65	33.58
93.55-P	19	1805	32°02.0'	119°19.0'	930	270°	3	overcast	rough	17.69	33.58	13.04	33.54
93.65-P	20	0200	31°40.0'	119°59.5'	2000	330°	4	overcast	very rough	18.10	33.46	15.41	33.37
93.75-P	20	1010	31°18.0'	120°41.0'	2020	290°	3	overcast	very rough	18.70	33.59	15.88	33.49
93.85-P	20	1740	30°56.0'	121°21.5'	2060	330°	4	overcast	rough	17.73	33.49	15.02	33.31
97.30-P	22	2245	32°15.0'	117°08.0'	30	300°	4	partly cloudy	slight	17.33	33.60	-	-
97.45-P	22	1205	31°48.0'	118°02.5'	780	320°	4	partly cloudy	very rough	19.92	33.66	13.70	33.42
97.55-P	22	0445	31°26.5'	118°44.0'	425	330°	3	cloudy	moderate	19.96	33.73	11.09	33.48
97.65-P	21	2100	31°05.0'	119°24.0'	2005	330°	3	cloudy	rough	17.84	33.48	14.94	33.43
97.75-P	21	1400	30°45.0'	120°05.0'	2030	320°	4	missing	rough	19.14	33.59	15.44	33.35
97.85-P	21	0630	30°26.0'	120°49.5'	2070	330°	4	cloudy	very rough	19.08	33.60	16.34	33.48
100.29-P	25	0000	31°42.0'	116°43.5'	75	210°	1	partly cloudy	rough	13.04 ^{a)}	33.43	10.72	33.59
100.45-P	25	1330	31°12.0'	117°56.0'	1000	320°	1	overcast	very rough	20.18	33.67	15.76	33.48

a) Mean value between 12.87° and 13.22°.

TEMPERATURE AND SALINITY AT 10 AND 50 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters		50 Meters	
						Dir	Force			T	S	T	S
100.55-P	VII-25	2058	30°53.0'	118°45.0'	1410	320°	4	overcast	very rough	17.84	33.51	14.20	33.39
100.65-P	26	0326	30°28.0'	119°06.0'	1700	320°	4	missing	rough	18.98	33.61	17.12	33.57
100.75-P	26	0900	30°05.0'	119°42.0'	1920	320°	4	missing	very rough	19.18	33.57	17.04	33.70
103.30-P	27	2205	31°05.0'	116°25.0'	48	320°	3	partly cloudy	moderate	16.62	33.48	-	-
103.45-P	27	1217	30°37.5'	117°23.5'	1300	-	1	overcast	rough	19.66	33.68	14.20	33.40
103.55-P	27	0535	30°11.5'	118°00.5'	1083	320°	3	overcast	rough	19.06	33.62	14.38	33.41
103.65-P	26	2230	29°46.5'	118°38.0'	1850	320°	2	overcast	slight	19.72	33.69	17.30	33.59
103.75-P	26	1548	29°30.5'	119°10.0'	1900	320°	4	missing	very rough	19.62	33.68	16.54	33.62
107.32-O	30	1545	30°26.0'	116°11.0'	380	340°	4	overcast	moderate	20.11	33.66	13.18	33.45
107.45-O	31	0150	30°00.5'	117°03.0'	1300	320°	3	clear	slight	19.71	33.64	14.99	33.48
107.55-O	31	0900	29°40.0'	117°45.5'	1800	320°	4	clear	moderate	20.37	33.73	16.86	33.59
107.65-O	31	1500	29°21.0'	118°22.0'	2000+	320°	3	partly cloudy	moderate	20.28	33.73	18.06	33.63
107.75-O	31	2140	29°01.0'	119°02.5'	2000+	320°	4	partly cloudy	rough	19.90	33.64	17.19	33.71
107.85-O	VIII-1	0415	28°38.0'	119°42.0'	2000+	350°	4	missing	rough	19.63	33.64	16.13	33.51
110.33-O	3	1330	29°50.0'	115°52.0'	50	320°	2	missing	moderate	17.53	33.60	12.15	33.57
110.45-O	3	0505	29°26.0'	116°39.0'	700	350°	2	overcast	slight	21.10	33.80	15.54	33.55
110.55-O	2	2245	29°06.5'	117°18.5'	2000+	340°	2	overcast	rough	21.40	33.82	14.15	33.55
110.65-O	2	0610	28°46.5'	117°58.0'	2000+	350°	2	missing	rough	20.90	33.74	15.38	33.57
110.75-O	1	2330	28°26.0'	118°38.0'	2000+	350°	4	cloudy	rough	20.18	33.64	16.92	33.53

TEMPERATURE AND SALINITY AT 10 AND 50 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters		50 Meters	
						Dir	Force			T	S	T	S
110.85-O	VIII-1	1638	28°05.0'	119°15.5'	2000+	350°	3	cloudy	rough	20.62	-	18.14	33.78
113.30-B	VII-24	0355	29°23.0'	115°21.5'	38	290°	6 ^{a)}	clear	very rough	14.45	33.57	11.14	33.73
113.45-B	23	1435	28°50.5'	116°20.0'	1150	340°	6	overcast	very rough	20.59	33.77	16.74	33.58
113.55-B	23	0640	28°29.0'	116°56.5'	2000+	330°	5	missing	moderate	21.30	33.81	15.85	33.57
113.65-B	22	2350	28°11.5'	117°28.5'	2100	340°	4	cloudy	moderate	20.23	33.62	16.94	33.77
113.75-B	22	1720	27°48.5'	118°14.0'	2000+	330°	4	cloudy	moderate	20.73	33.72	16.34	33.58
117.26-B	20	2030	28°56.0'	114°40.5'	41	280°	3	partly cloudy	moderate	17.84	33.61	12.28	33.58
117.30-B	20	2300	28°48.0'	114°56.5'	55	260°	3	partly cloudy	moderate	18.94	33.57	12.68	33.47
117.35-B	21	0155	28°38.0'	115°16.0'	110	270°	3	clear	moderate	19.90	33.64	11.84	33.39
117.45-B	21	1115	28°18.0'	115°55.0'	1700	320°	3	cloudy	moderate	21.23	33.77	18.90	33.96
117.55-B	21	1645	28°04.0'	116°33.0'	2100	340°	4	cloudy	rough	21.30	33.78	14.16	33.57
117.65-B	21	2315	27°42.5'	117°13.0'	2000+	320°	3	partly cloudy	moderate	21.66	33.79	14.27	33.55
117.75-B	22	0520	27°18.0'	117°52.0'	2100	340°	4	partly cloudy	moderate	21.08	33.78	15.34	33.48
120.25-B	20	1600	28°23.0'	114°14.5'	27	290°	2	cloudy	moderate	20.92	33.71	12.81	33.54
120.30-B	20	1300	28°13.0'	114°34.0'	52	290°	4	cloudy	moderate	20.50	33.71	13.47	33.49
120.35-B	20	0820	28°03.0'	114°54.0'	46	330°	4	clear	moderate	20.20	33.67	16.48	33.56

a) Wind force varies from 6 to 7.

TEMPERATURE AND SALINITY AT 10 AND 50 METERS (NET-TOW STATIONS)

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind		Weather	Sea	10 Meters		50 Meters	
						Dir	Force			T	S	T	S
120.40-B	20	0530	27°56.5'	115°14.0'	21	330°	5	clear	moderate	21.15	33.70	15.60 ^{a)}	33.51 ^{a)}
120.55-B	19	1940	27°23.0'	116°09.0'	2000	340°	4	partly cloudy	rough	20.11	33.65	17.79	33.68
120.65-B	19	1350	27°04.0'	116°48.0'	2000	300°	3	cloudy	moderate	20.99	33.75	15.11	33.48
120.75-B	19	0820	26°43.5'	117°28.0'	2000	330°	3	cloudy	moderate	20.82	33.68	14.56	33.49
123.37-B	18	0040	27°24.0'	114°39.5'	41	300°	2	clear	rough	16.54	33.57	13.08	33.86
123.55-B	18	1030	26°48.0'	115°49.5'	2000	310°	2	overcast	moderate	21.68	33.84	17.36	33.78
127.34-B	17	1930	26°55.5'	114°06.0'	45	300°	3	cloudy	moderate	17.01	34.08	13.30	34.20
127.45-B	17	1330	26°33.5'	114°48.0'	2000	290°	3	cloudy	rough	19.64	33.66	17.68	33.82
127.55-B	17	0740	26°13.5'	115°27.0'	2000	340°	3	cloudy	moderate	22.10	34.21	19.72	34.14
130.30-B	15	0305	26°29.0'	113°29.0'	43	300°	4	partly cloudy	rough	19.48	34.04	13.91	34.51
130.45-B	15	1225	25°59.0'	114°25.5'	2000+	280°	4	partly cloudy	rough	19.11	33.72	15.80	33.68
130.55-B	15	1815	25°39.0'	115°04.0'	2000	320°	4	partly cloudy	rough	21.40	33.91	18.50	33.97
133.25-B	14	0715	26°00.5'	112°43.0'	40	310°	4	cloudy	rough	21.82	34.20	13.63	34.04
133.35-B	14	0055	25°44.5'	113°26.5'	320	310°	4	cloudy	moderate	20.84	33.93	14.51	33.74
137.35-B	11	1400	25°10.0'	113°04.5'	700	320°	3	partly cloudy	moderate	19.18	33.73	13.47	33.80
137.45-B	11	2025	24°47.5'	113°44.0'	1800	330°	4	partly cloudy	moderate	21.38	33.91	18.30	33.89

a) Depth, 30 meters.

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