CORRECTIONS MADE :

STATION POSITIONS ~~NB~~

UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

CCOFI Cruise 5411
(MLR 66)
10-16 November 1954

and

CCOFI Cruise 5412
(MLR 67)
30 November - 16 December 1954

SIO Reference 60-1
10 September 1959

UNIVERSITY OF CALIFORNIA

SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CCOFI CRUISE 5411
(MLR 66)
10-16 November 1954

and

CCOFI CRUISE 5412
(MLR 67)
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Sponsored by

Marine Research Committee

SIO Reference 60-1
10 September 1959

Approved for distribution:

Roger Revelle

Roger Revelle, Director

CONTENTS

INTRODUCTION

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

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

STANDARD PROCEDURES

Processing of the Cruise 5411 data only was carried out using the method described by Klein.[1/] Certain approximations have been introduced for the determination of the integrated pressure terms which may result in errors whose maximum values are less than 0.5 dynamic centimeter at 0 over 200 decibars, 1.0 dynamic centimeter at 0 over 500 decibars, and 2.0 dynamic centimeters at 0 over 1000 decibars. The 125-meter level was introduced into the integration to obtain greater accuracy in the determination of ΔD. The interpolated values at 125 meters are not tabulated.

To indicate degree of accuracy, temperatures are recorded in tenths of a degree when obtained by bucket thermometer, thermograph, or bathythermograph, while temperatures from reversing thermometers are recorded in hundredths of a degree. Extrapolated values and values interpolated between remote observations are entered within parentheses. A hyphen is used to indicate a missing observed value. The time is the time of messenger release. When more than one cast was made on a station, messenger times and wire angles are given in the order of increasing depth. A line is left blank between the observed data of each cast.

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

FOOTNOTES

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

Laboratory personnel, before titrating the salinity samples, note any possible imperfections in the sealing of the bottles as follows:

Loose bottle cap:	The cap is definitely loose so that it could be moved with very little applied pressure. The salinity values obtained from these samples may be usable depending on time and/or conditions of storage.
Possible evaporation:	Either the cap was sealed with less than usual pressure, the bottle edge chipped, the rubber washer cracked, or the bale broke on opening, etc.

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

In addition to footnotes, three special notations are used without footnotes because their meaning is always the same.

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

p: pretrip or posttrip.

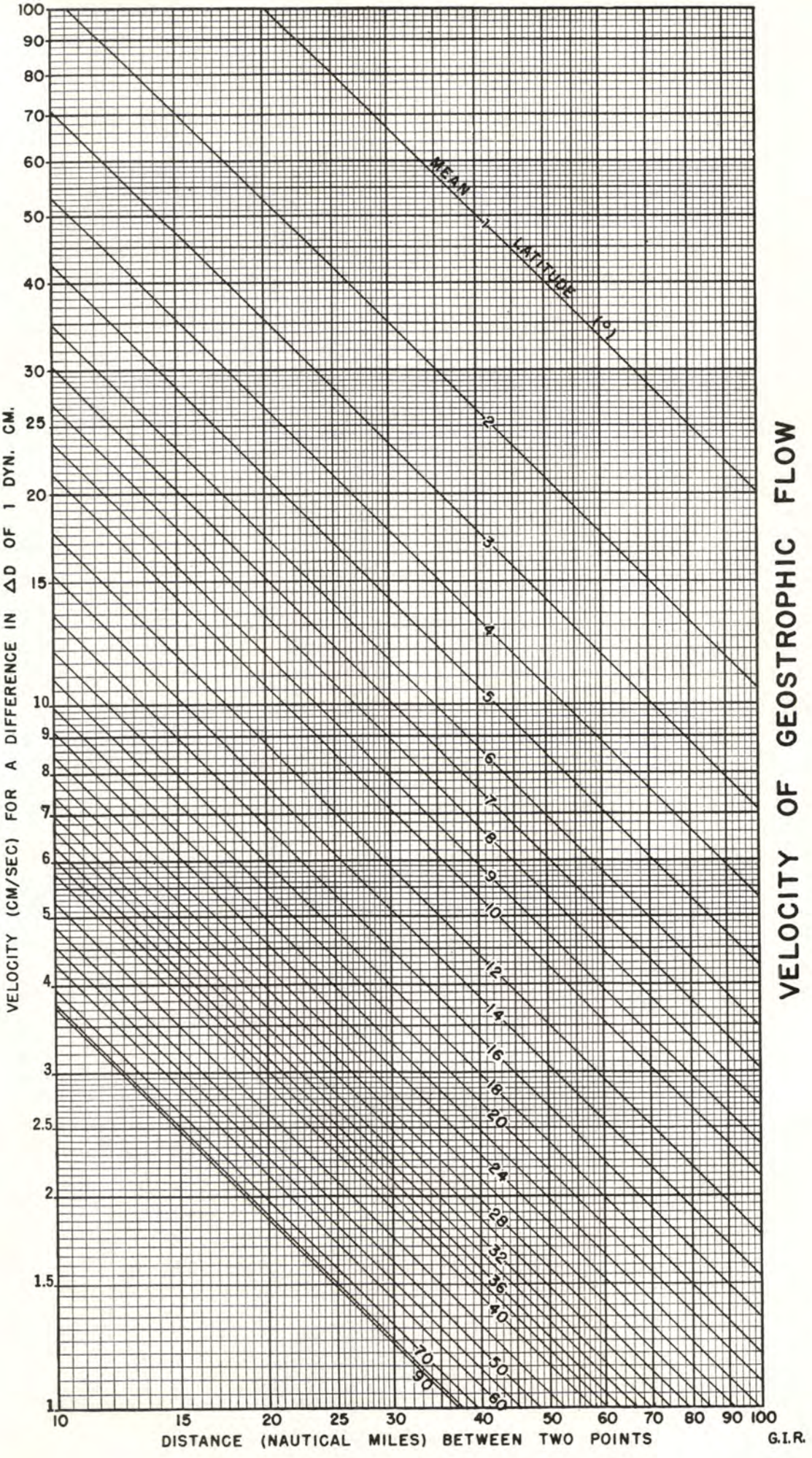
Values which are not drawn through because they seem to be in error without apparent reason are indicated by one of the following notations.

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

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

FORMAT

These data are typed in the format of the University of California Press publication, "Oceanic Observations of the Pacific." So that these pages can be used as copy for the 1954 volume, the first page of the Cruise 5411 data is numbered 277.


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

FIGURES

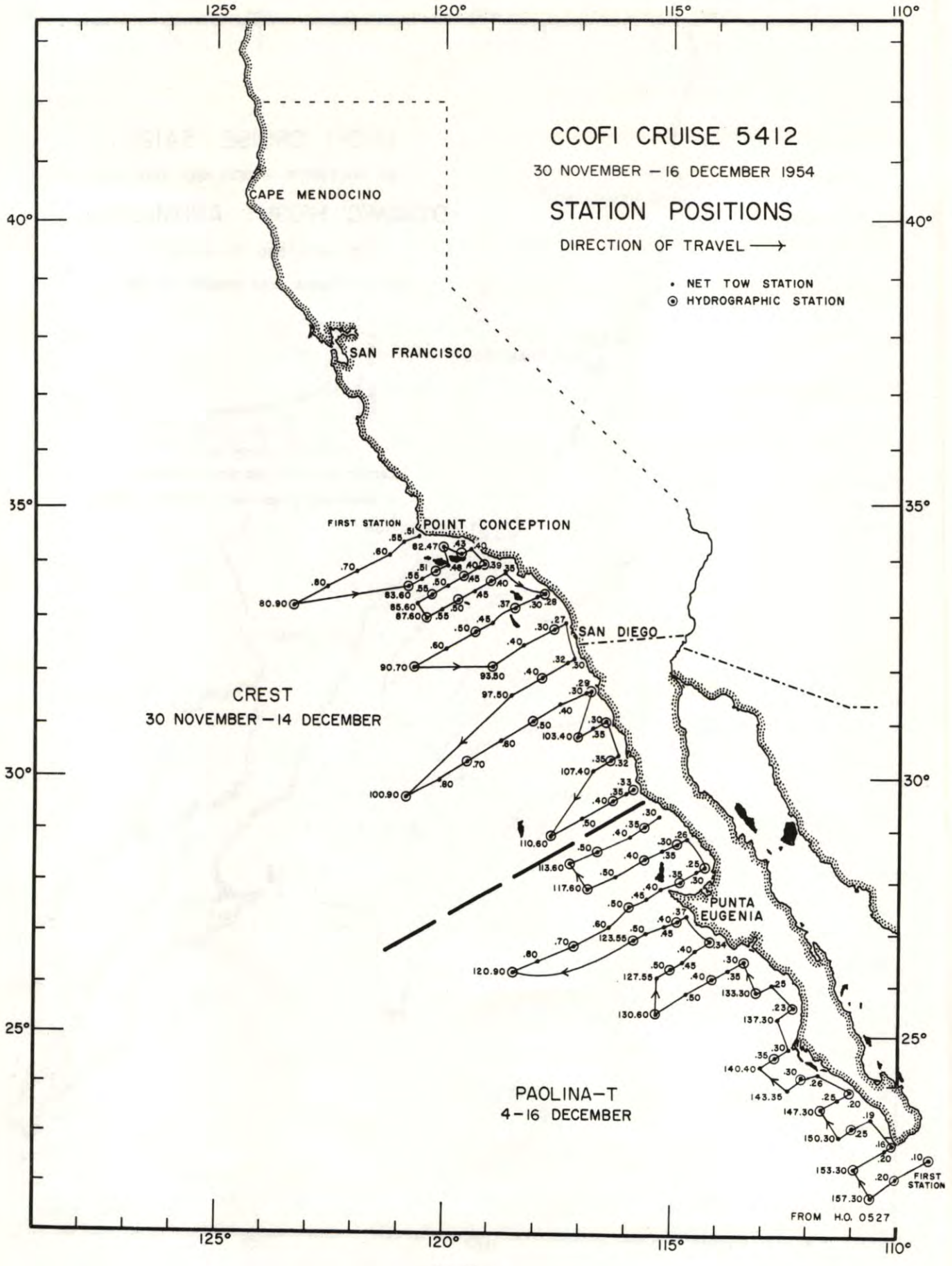

CCOFI CRUISE 5412
30 NOVEMBER – 16 DECEMBER 1954
STATION POSITIONS
DIRECTION OF TRAVEL ⟶
• NET TOW STATION
⊙ HYDROGRAPHIC STATION
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
FIRST STATION
SAN DIEGO
PUNTA EUGENIA
CREST
30 NOVEMBER – 14 DECEMBER
PAOLINA–T
4 – 16 DECEMBER
FIRST STATION
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°

FIGURE 1

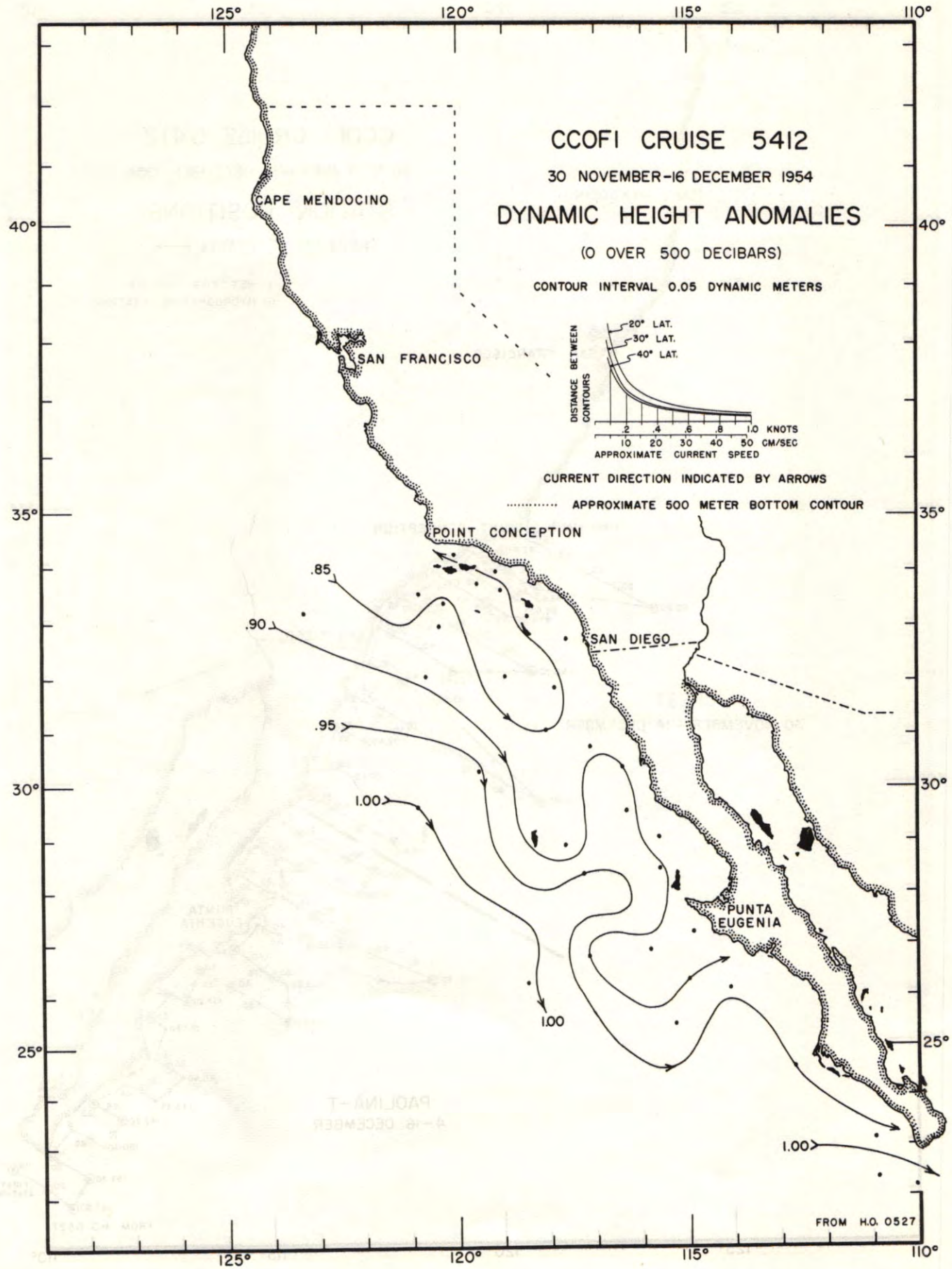

CCOFI CRUISE 5412
30 NOVEMBER-16 DECEMBER 1954
DYNAMIC HEIGHT ANOMALIES
(0 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.05 DYNAMIC METERS
20° LAT.
30° LAT.
40° LAT.
DISTANCE BETWEEN CONTOURS
.2 .4 .6 .8 1.0 KNOTS
10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
CURRENT DIRECTION INDICATED BY ARROWS
APPROXIMATE 500 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
.85
.90
.95
1.00
1.00
1.00
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°

FIGURE 2

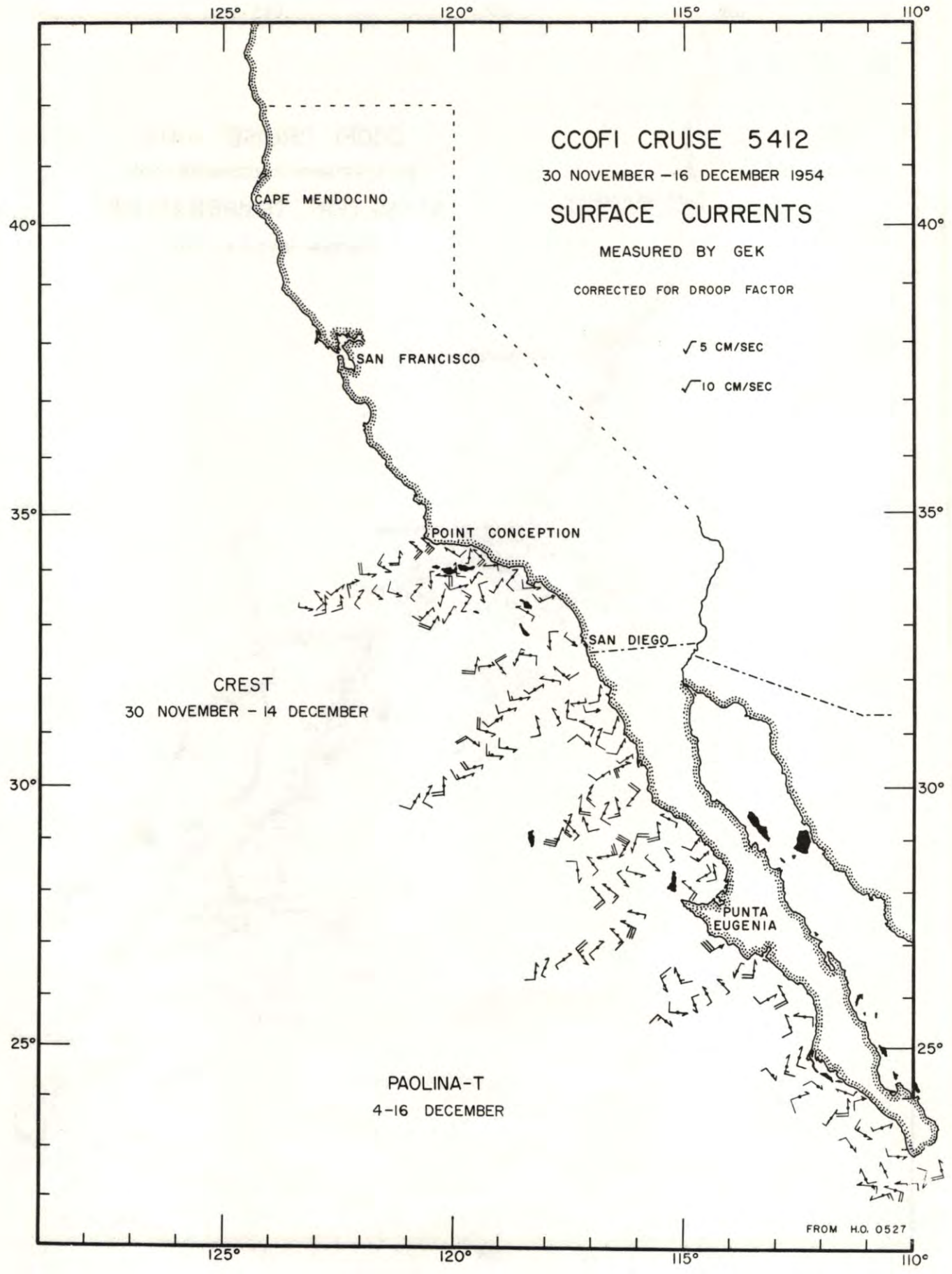

CCOFI CRUISE 5412
30 NOVEMBER – 16 DECEMBER 1954
SURFACE CURRENTS
MEASURED BY GEK
CORRECTED FOR DROOP FACTOR
5 CM/SEC
10 CM/SEC
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
CREST
30 NOVEMBER – 14 DECEMBER
PAOLINA-T
4–16 DECEMBER
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°

FIGURE 3

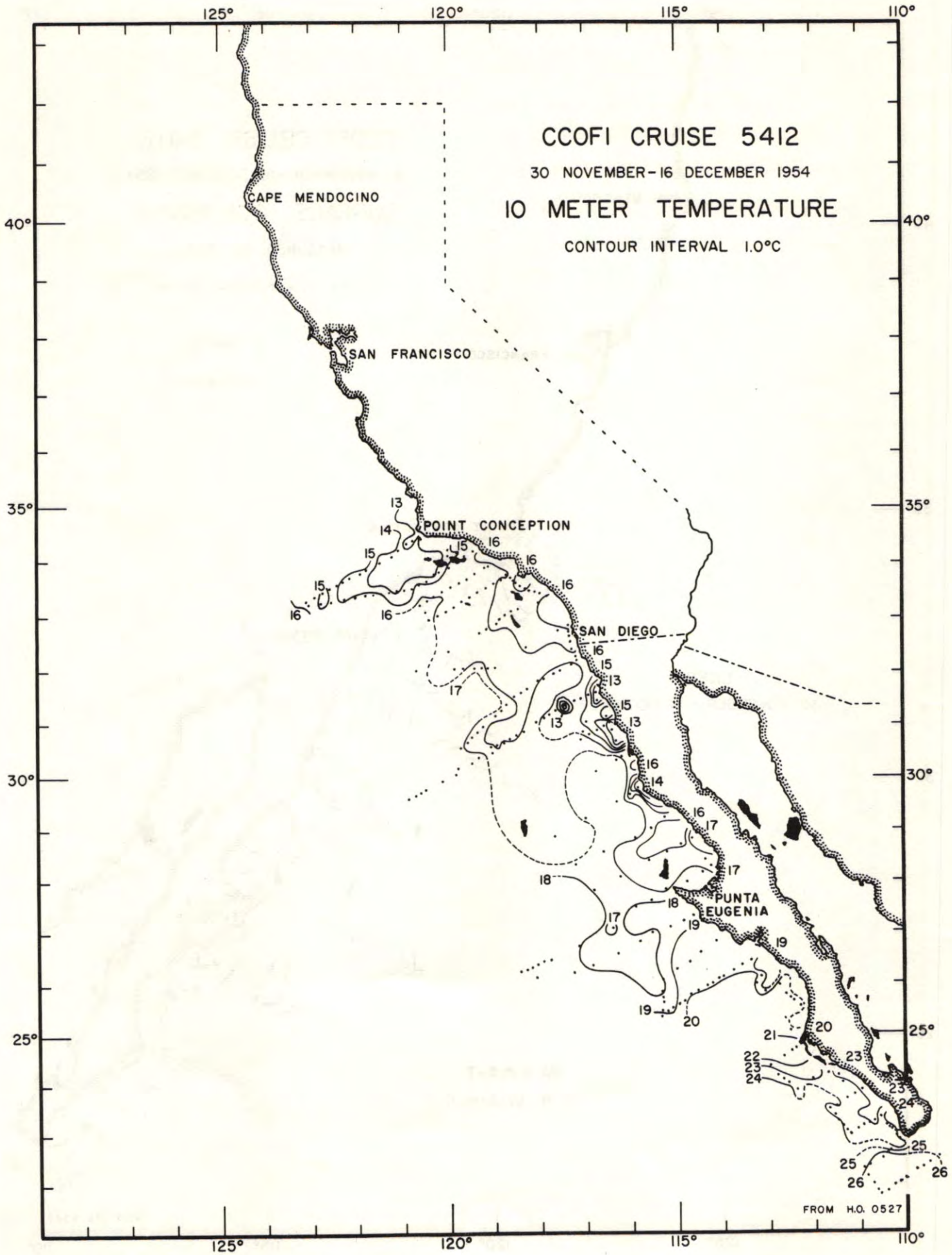

CCOFI CRUISE 5412
30 NOVEMBER-16 DECEMBER 1954
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°

FIGURE 4

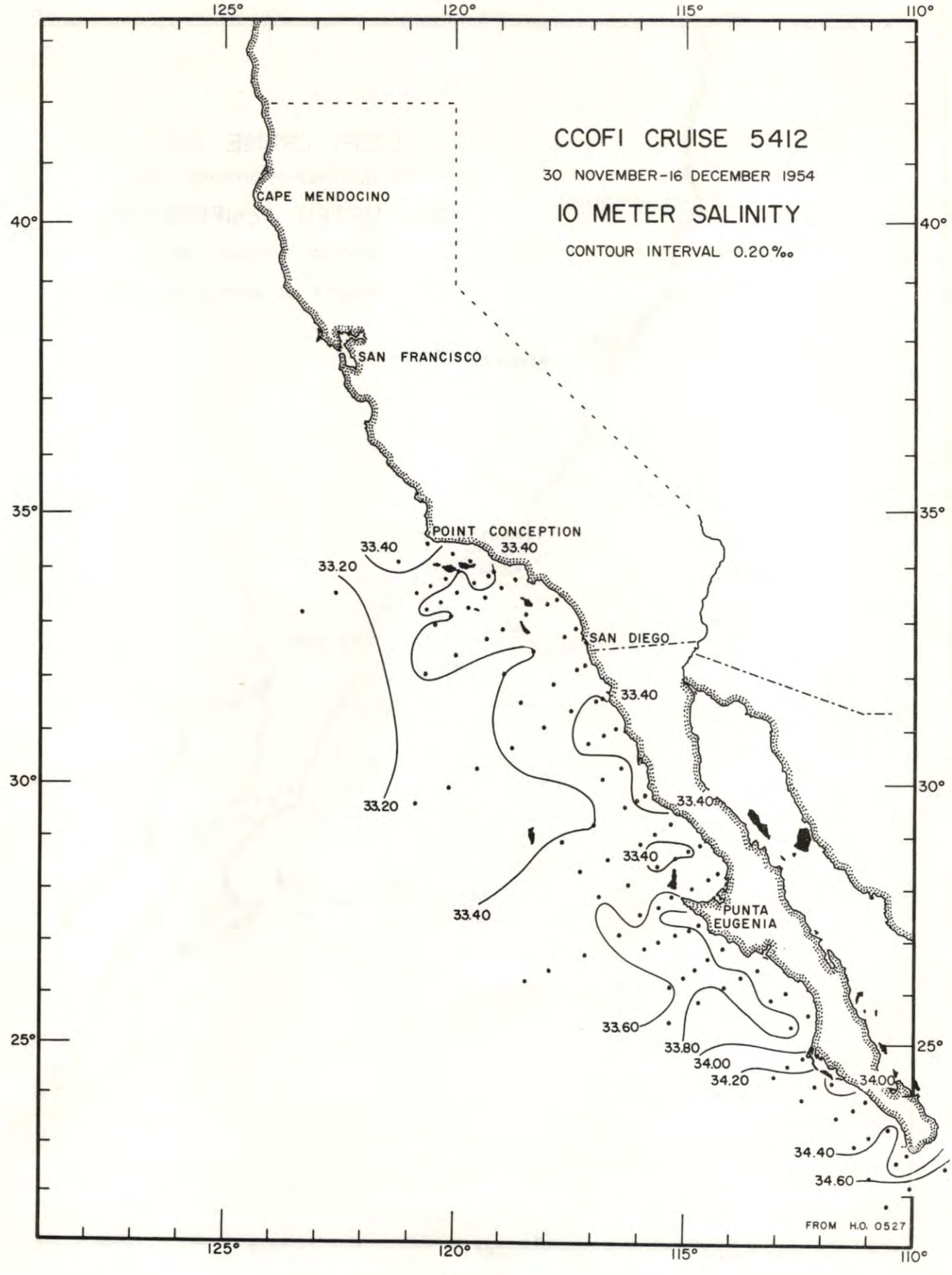

CCOFI CRUISE 5412
30 NOVEMBER-16 DECEMBER 1954
10 METER SALINITY
CONTOUR INTERVAL 0.20‰
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
33.20
33.40
33.60
33.80
34.00
34.20
34.40
34.60
FROM H.O. 0527

FIGURE 5

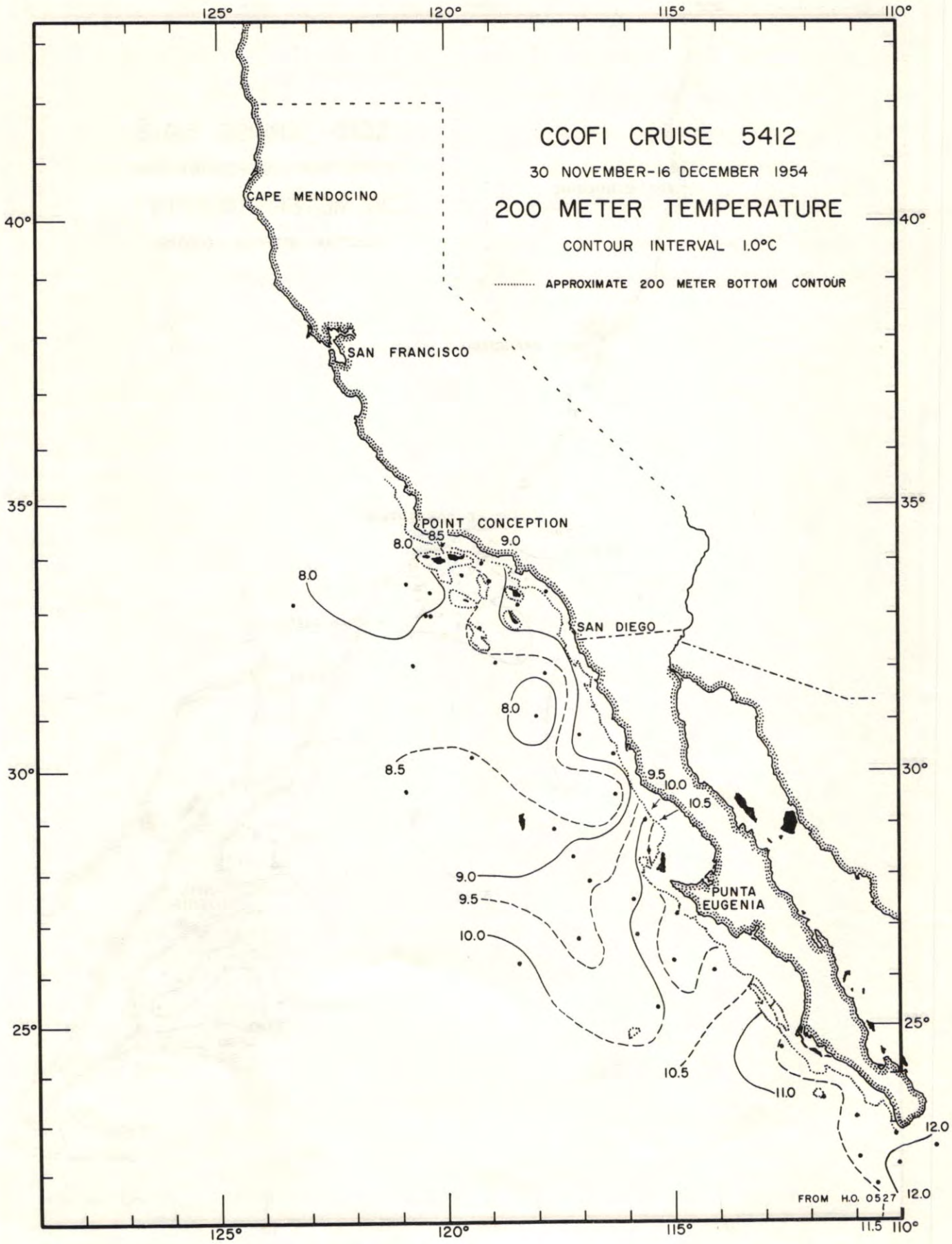

CCOFI CRUISE 5412
30 NOVEMBER-16 DECEMBER 1954
200 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°
8.0
8.5
9.0
9.5
10.0
10.5
11.0
12.0
11.5

FIGURE 6

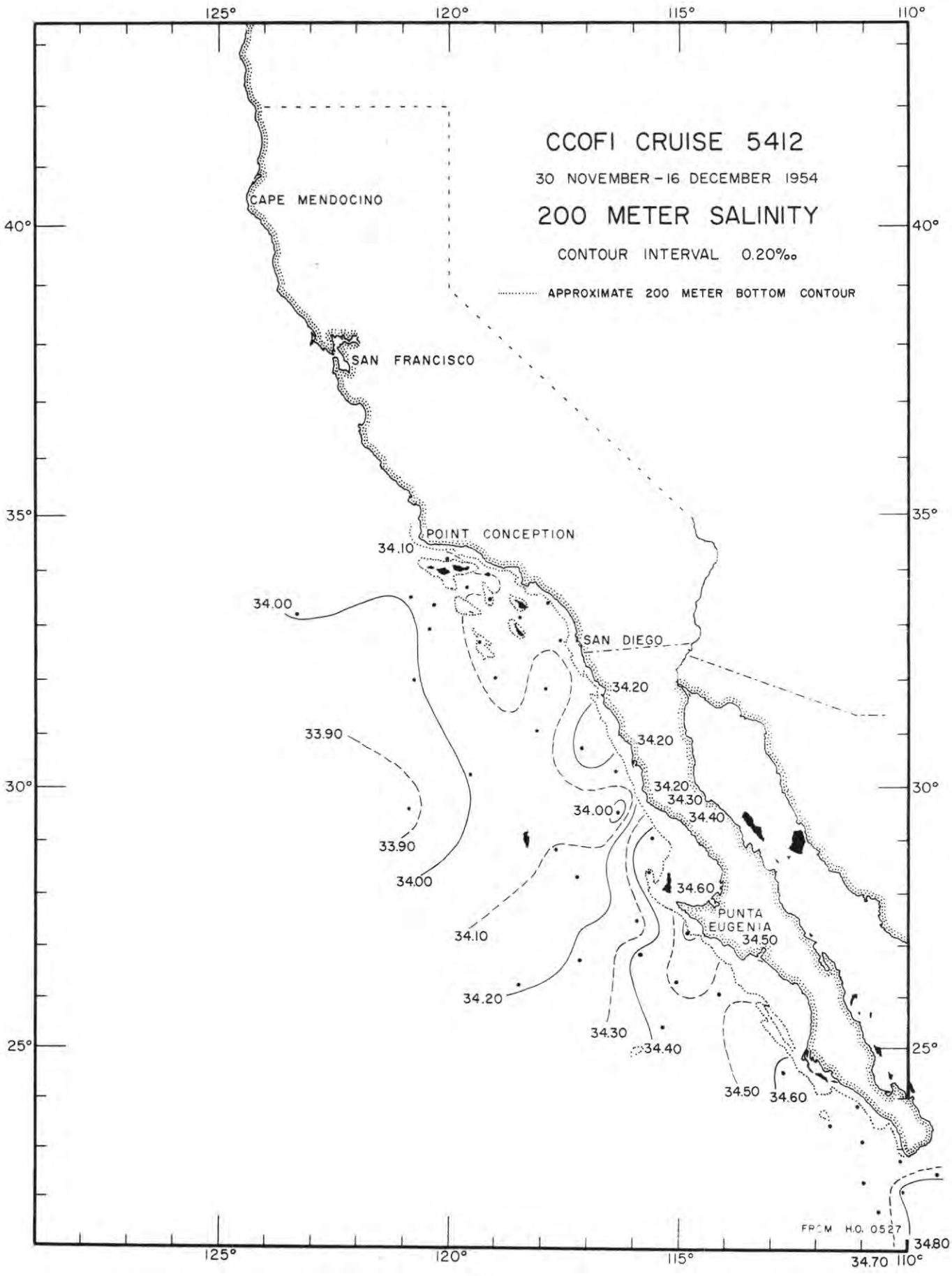

CCOFI CRUISE 5412
30 NOVEMBER - 16 DECEMBER 1954
200 METER SALINITY
CONTOUR INTERVAL 0.20‰
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
FROM H.O. 0527
125°
120°
115°
110°
40°
35°
30°
25°
34.10
34.00
33.90
34.20
34.30
34.40
34.60
34.50
34.80
34.70

FIGURE 7

PERSONNEL
Cruise 5412

SHIPS' CAPTAINS

Davis, Laurence E., R/V Crest
Haines, Robert B., R/V Paolina-T

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

R/V Crest

Smith, Alan C., Senior Marine Technician
Bryer, Bruce A., Marine Technician
O'Connell, Charles P., Fishery Research Biologist, U. S. Fish and Wildlife Service
Sibley, Slade W., Marine Technician

R/V Paolina-T

Schwartzlose, Richard A., Senior Marine Technician
Brown, Daniel M., Marine Technician
Reith, A. Dougall, Marine Technician
Taft, Bruce A., Fishery Aid, U. S. Fish and Wildlife Service

80.90

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} T_3 cm/g	ΔD dyn. m
CREST; December 3, 1954; 1759 GCT; 33°14'N, 123°12'W; sounding, 2300+ fm; wind, 190°, force 4; weather, cloudy; sea, rough; wire angle, 03°.								
0	16.1	33.04	0	16.1	33.04	24.24	369	0.00
10	16.02	33.04	10	16.02	33.04	24.26	367	0.04
25	15.89	33.03	20	15.94	33.03	24.27	366	0.07
51	15.08	33.11	30	15.84	33.04	24.30	363	0.11
61	12.60	33.13	50	15.20	33.11	24.49	345	0.18
71	11.35	33.09	75	11.10	33.09	25.29	269	0.26
81	10.78	33.19	100	9.74	33.44	25.80	221	0.32
101	9.70	33.44	150	8.57	33.81	26.27	176	0.42
126	9.00	33.60	200	8.11	34.01	26.50	154	0.50
155	8.50	33.85	250	7.47	34.08	26.65	140	0.58
203	8.07	34.01	300	6.88	34.13	26.77	128	0.65
272	7.18	34.10	400	6.03	34.20	26.94	112	0.77
372	6.27	34.18	500	5.38	34.28	27.08	99	0.88
501	5.37	34.28	600	4.98	34.33	27.17	91	0.99
685	4.71	34.37	700	4.67	34.38	27.24	84	1.08
909	4.15	34.49	800	4.41	34.44	27.32	76	1.17
1220	3.32	34.53	1000	3.89	34.51	27.43	66	1.33

SIO

CCOFI
5412

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

82.47

CREST; December 4, 1954; 1838 GCT; 34°16'N, 119°58'W; sounding, 300 fm; wind, 090°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.

0	15.7r	33.33	0	15.0	33.33	24.71	324	0.00
10	14.86	33.35	10	14.86	33.35	24.75	320	0.03
31	14.16	33.37	20	14.48	33.37	24.85	311	0.06
57	13.79	33.38	30	14.19	33.37	24.91	305	0.10
67	12.66	33.43	50	13.88	33.37	24.97	300	0.16
78	11.34	33.52	75	11.60	33.50	25.52	247	0.22
88	10.57	33.63	100	10.10	33.58	25.85	216	0.28
98	10.17	33.58	150	8.96	33.98	26.35	168	0.38
117	9.39	33.86	200	8.68	34.03	26.43	161	0.46
143	9.02	33.97	250	8.38	34.11	26.54	150	0.54
162	8.84	33.99	300	7.92	34.15	26.64	141	0.62
201	8.67	34.03	400	6.88	34.19	26.82	124	0.76
280	8.12	34.14	500	6.44	34.24	26.92	114	0.88
386	6.99	34.18						
507	6.42	34.24						

83.43

CREST; December 4, 1954; 2216 GCT; 34°08.5'N, 119°33.5'W; sounding, 130 fm; wind, 290°, force 2; weather, partly cloudy; sea, moderate; wire angle, 02°.

0	16.2	33.35	0	16.2	33.35	24.45	349	0.00
10	15.41	33.37	10	15.41	33.37	24.65	330	0.03
15	15.30	33.33	20	15.16	33.35	24.69	326	0.07
20	15.16	33.35	30	14.65	33.37	24.81	315	0.10
25	15.06	33.35	50	12.70	33.38	25.22	276	0.16
30	14.65	33.37						
35	14.20	33.36						
45	13.24	33.39						
56	12.02	33.35						
66	11.26	33.38						

83.51

CREST; December 4, 1954; 1320 GCT; 33°51.5'N, 120°08'W; sounding, 100 fm; wind, 280°, force 2; weather, clear; sea, moderate; wire angle, 00°.

0	14.8	33.39	0	14.8	33.39	24.80	316	0.00
10	14.72	33.38	10	14.72	33.38	24.80	316	0.03
15	14.16	33.40	20	12.78	33.41	25.23	275	0.06
20	12.78	33.41	30	12.34	33.34	25.26	272	0.09
30	12.34	33.34	50	10.71	33.43	25.63	237	0.14
35	12.25	33.36	75	9.73	33.61	25.93	208	0.20
45	11.27	33.40	100	9.60	33.64	25.98	204	0.25
55	10.33	33.51	150	9.01	33.94	26.31	172	0.34
66	9.96	33.57						
81	9.66	33.64						
100	9.60	33.64						
119	9.56	33.70						
153	8.94	33.95						

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

CREST; December 4, 1954; 0727 GCT; 33°34'N, 120°44.5'W; sounding, 820 fm; wind, 220°, force 4; weather, missing; sea, moderate; wire angle, 05°. 83.60

0	14.5	33.32	0	14.5	33.32	24.81	315	0.00
10	14.32	33.33	10	14.32	33.33	24.85	311	0.03
30	14.22	33.38	20	14.28	33.36	24.88	308	0.06
40	14.06	33.39	30	14.22	33.38	24.91	305	0.09
50	11.30	33.16	50	11.30	33.16	25.31	267	0.15
60	10.70	33.18	75	10.02	33.50	25.80	221	0.21
70	10.28	33.40	100	8.68	33.63	26.12	190	0.26
80	9.76	33.55	150	8.32	33.93	26.41	163	0.35
89	9.04	33.57	200	7.84	34.02	26.55	149	0.43
100	8.68	33.63	250	7.44	34.15	26.71	134	0.50
124	8.43	33.83	300	7.12	34.20	26.79	127	0.57
152	8.30	33.93	400	6.55	34.28	26.93	113	0.70
200	7.84	34.02	500	6.01	34.33	27.04	103	0.81
258	7.38	34.16	600	5.36	34.35	27.14	93	0.92
362	6.76	34.25						
481	6.12	34.32						
612	5.29	34.35						

CREST; December 5, 1954; 0336, 0353 GCT; 33°59'N, 119°04'W; sounding, 295 fm; wind, 310°, force 4; weather, partly cloudy; sea, moderate; wire angle, 02°, 02°. 85.39

0	15.9	33.38	0	15.9	33.38	24.55	340	0.00
10	15.84	33.40	10	15.84	33.40	24.57	338	0.03
31	15.61	33.39	20	15.74	33.40	24.60	335	0.07
40	12.78	33.27	30	15.62	33.39	24.62	333	0.10
52	11.88	33.31	50	12.02	33.29	25.28	270	0.16
			75	10.31	33.42	25.69	231	0.22
62	10.48	33.34	100	9.83	33.54	25.86	215	0.28
72	10.37	33.40	150	9.45	33.79	26.12	190	0.38
82	10.10	33.49	200	8.90	33.99	26.36	167	0.47
92	9.99	33.49	250	8.42	34.12	26.54	150	0.56
102	9.78	33.59	300	8.01	34.20	26.67	138	0.63
111	9.69	33.68	400	7.12	34.24	26.83	123	0.77
146	9.48	33.78	500	6.13	34.31	27.01	106	0.89
165	9.32	33.88						
204	8.82	34.00						
282	8.18	34.19						
387	7.25	34.23						
509	6.04	34.32						

CREST; December 5, 1954; 0826 GCT; 33°47'N, 119°31.5'W; sounding, 1000 fm; wind, 270°, force 1; weather, clear; sea, slight; wire angle, 00°. 85.45

0	15.3	33.41	0	15.3	33.41	24.70	325	0.00
10	15.20	33.38	10	15.20	33.38	24.70	325	0.03
30	15.14	33.38	20	15.16	33.38	24.71	324	0.06
40	14.32	33.36	30	15.14	33.38	24.71	324	0.10
50	11.78	33.38	50	11.78	33.38	25.39	260	0.16
61	11.31	33.39	75	9.97	33.48	25.79	222	0.22
71	10.20	33.48	100	9.37	33.68	26.05	197	0.27
76p	9.91	33.48	150	8.78	33.94	26.34	169	0.36
81	9.76	33.58	200	8.31	34.10	26.54	150	0.44
90	9.64	33.59	250	8.11	34.19	26.64	141	0.52
97p	9.45	33.63	300	7.74	34.23	26.73	132	0.59
124p	9.13	33.84	400	7.12	34.27	26.85	121	0.72
169p	8.47	34.01	500	6.54	34.31	26.96	110	0.84
221p	8.24	34.15						
314p	7.61	34.24						
423p	7.03	34.28						
540p	6.19	34.34						

SIO

CCOFI
5412

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

85.55

CREST; December 5, 1954; 1447 GCT; 33°26.5'N, 120°13.5'W; sounding, 620 fm; wind, 300°, force 4; weather, cloudy; sea, moderate; wire angle, 01°.

0	16.1	33.28	0	16.1	33.28	24.42	352	0.00
10	16.01	33.43	10	16.01	33.43	24.56	339	0.04
30	15.65	33.35	20	15.89	33.38	24.55	340	0.07
40	15.09	33.37	30	15.65	33.35	24.58	337	0.10
51	12.40	33.24	50	13.45	33.24	24.96	300	0.17
61	11.12	33.27	75	10.20	33.42	25.71	229	0.23
71	10.45	33.39	100	9.42	33.57	25.95	206	0.29
81	9.88	33.45	150	8.41	33.89	26.36	167	0.38
90	9.55	33.53	200	7.81	34.00	26.54	150	0.46
100	9.42	33.57	250	7.76	34.14	26.66	139	0.54
124	8.94	33.76	300	7.52	34.19	26.73	132	0.61
154	8.34	33.90	400	6.77	34.23	26.87	119	0.74
203	7.78	34.01	500	6.23	34.26	26.96	110	0.86
263	7.76	34.16	600	5.82	34.31	27.05	102	0.97
366	7.00	34.22						
487	6.30	34.27						
613	5.77	34.31						

87.40

CREST; December 6, 1954; 0832 GCT; 33°40'N, 118°58.5'W; sounding, 420 fm; wind, 280°, force 3; weather, clear; sea, moderate; wire angle, 10°.

0	15.7	33.41	0	15.7	33.41	24.61	334	0.00
10	15.58	33.41	10	15.58	33.41	24.64	331	0.03
30	13.73	33.36	20	15.43	33.40	24.67	328	0.07
40	11.96	33.34	30	13.73	33.36	25.00	297	0.10
51	11.25	33.34	50	11.28	33.34	25.45	254	0.15
59	10.34	33.45	75	9.97	33.52	25.82	219	0.21
70	10.04	33.50	100	9.69	33.69	26.00	202	0.26
79	9.88	33.58	150	9.16	34.03	26.35	168	0.36
89	9.75	33.66	200	8.67	34.10	26.49	155	0.44
98	9.70	33.68	250	8.22	34.15	26.59	146	0.52
123	9.30	33.85	300	7.89	34.20	26.68	137	0.59
151	9.15	34.03	400	7.25	34.31	26.86	120	0.72
199	8.69	34.10	500	6.43	34.33	26.99	108	0.84
258	8.18	34.15	600	5.89	34.39	27.11	96	0.96
359	7.52	34.30						
477	6.62	34.32						
604	5.88	34.39						

87.50

CREST; December 6, 1954; 0236 GCT; 33°20'N, 119°39.5'W; sounding, 40 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 03°.

0	15.5	33.46	0	15.5	33.46	24.70	325	0.00
10	15.41	33.43	10	15.41	33.43	24.69	326	0.03
15	15.40	33.47	20	15.32	33.43	24.71	324	0.06
20	15.32	33.43	30	14.43	33.43	24.90	306	0.10
25	15.03	33.44a)	50	11.63	33.53	25.54	245	0.15
30	14.43	33.43						
35	13.66	33.42						
40	13.24	33.44						
51	11.52	33.53						
61	11.02	33.42						

a) Mean value of 33.42 and 33.47‰.

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

CREST; December 5, 1954; 2035 GCT; 33°00'N, 120°21.5'W; sounding, 520 fm; wind, 120°, force 3; weather, cloudy; sea, moderate; wire angle, 20°. 87.60

0	16.9	33.43	0	16.9	33.43	24.35	359	0.00
10	16.46	33.44	10	16.46	33.44	24.46	348	0.04
29	16.45	33.40	20	16.46	33.42	24.45	349	0.07
39	16.42	33.46	30	16.45	33.40	24.44	350	0.10
48	16.14	33.38	50	15.37	33.33	24.63	332	0.17
57	13.20	33.24	75	11.33	33.28	25.40	259	0.25
66	12.04	33.55	100	9.70	33.48	25.84	217	0.31
76	11.30	33.28	150	8.56	33.83	26.29	174	0.41
86	10.36	33.32	200	8.09	34.04	26.53	151	0.49
94	9.92	33.42	250	7.79	34.14	26.65	140	0.56
111	9.20	33.57	300	7.48	34.19	26.73	132	0.64
133	8.94	33.80	400	6.68	34.25	26.89	117	0.76
150	8.56	33.83	500	(6.13)	(34.33)	(27.03)	(104)	(0.88)
185	8.20	33.97						
256	7.76	34.15						
353	7.00	34.22a)						
470	6.30	34.31						

CREST; December 6, 1954; 1812 GCT; 33°28.5'N, 117°46.5'W; sounding, 150 fm; wind, 290°, force 1; weather, partly cloudy; sea, slight; wire angle, 07°. 90.28

0	16.2	33.42	0	16.2	33.42	24.51	343	0.00
10	16.02	33.43	10	16.02	33.43	24.56	339	0.03
16	16.00	33.42	20	15.60	33.39	24.62	333	0.07
20	15.60	33.39	30	13.49	33.29	24.99	298	0.10
25	14.00	33.32	50	11.75	33.26	25.31	267	0.16
30	13.49	33.29	75	10.38	33.44	25.69	231	0.22
35	12.52	33.26	100	9.88	33.59	25.89	212	0.28
46	12.01	33.26	150	9.48	33.94	26.23	180	0.37
55	11.22	33.26	200	9.28	34.14	26.42	162	0.46
69	10.56	33.39	250	(8.52)	(34.17)	(26.56)	(148)	(0.54)
83	10.10	33.49						
102	9.88	33.60						
130	9.62	33.82						
163	9.40	34.00						
197	9.29	34.13						
247	8.57	34.17						

CREST; December 7, 1954; 1123 GCT; 33°11'N, 118°23.5'W; sounding, 650 fm; wind, 300°, force 5; weather, cloudy; sea, rough; wire angle, 17°. 90.37

0	16.5	33.46	0	16.5	33.46	24.47	347	0.00
10	16.49	33.47	10	16.49	33.47	24.48	346	0.04
31	14.22	33.32	20	16.50	33.40	24.42	352	0.07
40	12.62	33.28	30	14.57	33.33	24.80	316	0.10
49	11.75	33.26	50	11.68	33.26	25.32	266	0.16
59	10.94	33.29	75	10.13	33.41	25.71	229	0.22
68	10.50	33.36	100	9.94	33.60	25.89	212	0.28
77	10.09	33.43	150	9.75	33.96	26.20	183	0.38
86	10.06	33.54	200	9.49	34.11	26.36	167	0.47
96	9.98	33.58	250	8.40	34.09	26.52	152	0.55
119	9.84	33.69	300	7.93	34.11	26.61	144	0.63
146	9.78	33.93	400	7.22	34.23	26.80	126	0.77
194	9.54	34.11	500	6.48	34.34	26.99	108	0.89
250	8.40	34.09	600	(5.71)	(34.38)	(27.12)	(95)	(1.00)
351	7.56	34.15						
467	6.76	34.31						
591	5.76	34.38						

a) Mean value of 34.18 and 34.25‰.

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5412

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

90.50

CREST; December 7, 1954; 1929, 1949 GCT; 32°45.5'N, 119°16.5'W; sounding, 200 fm; wind, 300°, force 6; weather, partly cloudy; sea, rough; wire angle, 28°, 35°.

0	16.7r	33.41	0	15.8	33.41	24.59	336	0.00
10	15.79	33.44	10	15.79	33.44	24.62	333	0.03
14	15.79	33.40	20	15.78	33.40	24.59	336	0.07
19	15.78	33.40	30	15.68	33.44	24.64	331	0.10
23	15.79	33.42	50	11.23	33.44	25.54	245	0.16
28	15.78	33.45	75	9.95	33.57	25.87	214	0.22
32	15.54	33.41	100	9.58	33.67	26.00	202	0.27
41	11.96	33.36	150	9.08	33.88	26.25	178	0.36
49	11.29	33.44	200	8.71	34.15	26.52	152	0.45
58	10.82	33.34	250	8.00	34.14	26.62	143	0.52
70	10.13	33.56						
85	9.72	33.57						
105	9.55	33.72						
138	9.12	33.84						
170	9.08	34.04						
209	8.54	34.15						
267	7.88	34.14						

90.70

CREST; December 8, 1954; 0746 GCT; 32°05'N, 120°38'W; sounding, 1900 fm; wind, 310°, force 5; weather, partly cloudy; sea, very rough; wire angle, 25°.

0	16.4	33.47	0	16.4	33.47	24.50	344	0.00
10	16.40	33.41	10	16.40	33.41	24.46	348	0.04
24	16.41	33.43	20	16.41	33.43	24.47	347	0.07
53	14.65	33.39	30	16.25	33.42	24.50	344	0.10
62	13.48	33.29	50	14.90	33.40	24.78	318	0.17
70	12.51	33.32	75	12.12	33.35	25.31	267	0.24
82	11.68	33.38	100	10.12	33.47	25.76	224	0.31
100	10.12	33.47	150	8.80	33.80	26.23	180	0.41
122	9.45	33.61	200	8.08	33.99	26.49	155	0.49
147	8.85	33.78	250	7.48	34.07	26.64	141	0.57
193	8.18	33.97	300	6.99	34.09	26.73	132	0.64
260	7.37	34.08	400	6.34	34.16	26.87	119	0.77
354	6.58	34.09	500	5.88	34.32	27.05	102	0.89
482	5.96	34.31	600	5.38	34.33	27.12	95	0.99
654	5.14	34.34	700	4.99	34.36	27.19	89	1.09
875	4.41	34.46	800	4.63	34.43	27.29	79	1.18
1178	3.52	34.52	1000	4.02	34.49	27.40	69	1.35

93.30

CREST; December 9, 1954; 0522 GCT; 32°49.5'N, 117°31'W; sounding, 450 fm; wind, 310°, force 1; weather, cloudy; sea, slight; wire angle, 02°.

0	16.9	33.41	0	16.9	33.41	24.34	360	0.00
10	16.66	33.42	10	16.66	33.42	24.40	354	0.04
30	14.81	33.30	20	16.56	33.41	24.42	352	0.07
40	12.46	33.28	30	14.81	33.30	24.72	323	0.10
50	11.42	33.28	50	11.42	33.28	25.38	260	0.16
61	10.76	33.30	75	10.21	33.47	25.74	226	0.22
70	10.36	33.43	100	9.70	33.63	25.95	206	0.28
80	10.10	33.49	150	9.51	34.06	26.32	171	0.37
90	9.76	33.61	200	9.28	34.15	26.43	161	0.46
99	9.70	33.63	250	8.71	34.20	26.56	148	0.54
125	9.42	33.80	300	8.10	34.24	26.68	137	0.61
153	9.52	34.07	400	7.12	34.28	26.86	120	0.75
202	9.26	34.15	500	6.40	34.35	27.01	106	0.87
262	8.52	34.22	600	5.72	34.40	27.14	93	0.97
365	7.43	34.26						
486	6.50	34.34						
613	5.62	34.41						

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

93.50

CREST; December 8, 1954; 1849 GCT; 32°08'N, 118°55'W; sounding, 800 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 25°.

0	15.4	33.48	0	15.4	33.48	24.73	322	0.00
10	15.28	33.40	10	15.28	33.40	24.70	325	0.03
28	15.25	33.40	20	15.26	33.40	24.70	325	0.06
43	12.94	33.22	30	15.24	33.40	24.71	324	0.10
52	11.52	33.25	50	11.84	33.24	25.27	271	0.16
61	10.65	33.37	75	9.81	33.50	25.83	218	0.22
71	9.96	33.43	100	9.19	33.69	26.08	194	0.27
80	9.66	33.56	150	8.82	33.99	26.38	166	0.36
92	9.40	33.62	200	8.45	34.13	26.54	150	0.44
101	9.16	33.70	250	8.12	34.23	26.67	138	0.52
120	9.14	33.86	300	7.65	34.26	26.77	128	0.58
144	8.89	33.97	400	6.99	34.27	26.87	119	0.71
187	8.53	34.09	500	6.38	34.30	26.97	110	0.84
240	8.20	34.22	600	(5.78)	(34.37)	(27.10)	(97)	(0.95)
336	7.36	34.27						
453	6.68	34.27						
582	5.88	34.36						

97.40

CREST; December 9, 1954; 1910 GCT; 31°55.5'N, 117°50'W; sounding, 420 fm; wind, 040°, force 3; weather, cloudy; sea, slight; wire angle, 02°.

0	16.4	33.48	0	16.4	33.48	24.51	343	0.00
10	16.26	33.45	10	16.26	33.45	24.52	342	0.03
30	15.77	33.45	20	16.02	33.45	24.57	338	0.07
40	14.67	33.34	30	15.77	33.45	24.63	332	0.10
50	12.54	33.31	50	12.54	33.31	25.20	278	0.16
61	11.30	33.31	75	9.96	33.49	25.80	221	0.23
71	10.20	33.43	100	9.35	33.67	26.04	198	0.28
81	9.68	33.55	150	8.75	33.95	26.36	167	0.37
91	9.46	33.65	200	8.01	34.05	26.55	149	0.45
100	9.35	33.67	250	7.82	34.17	26.67	138	0.53
125	9.08	33.84	300	7.51	34.21	26.75	130	0.60
154	8.69	33.96	400	6.57	34.26	26.92	114	0.72
203	7.98	34.06	500	6.06	34.34	27.05	102	0.84
262	7.79	34.19	600	5.46	34.37	27.14	93	0.94
365	6.78	34.23						
486	6.14	34.33						
611	5.37	34.37						

100.29

CREST; December 12, 1954; 0358 GCT; 31°42'N, 116°43.5'W; sounding, 56 fm; wind, 310°, force 2; weather, clear; sea, moderate; wire angle, 03°.

0	12.4	33.42	0	12.4	33.42	25.31	267	0.00
10	12.10	33.40	10	12.10	33.40	25.35	263	0.03
15	11.69	33.48	20	11.62	33.48	25.50	249	0.05
20	11.62	33.48	30	11.26	33.52	25.60	240	0.08
25	11.48	-	50	10.94	33.58	25.70	230	0.12
30	11.26	33.52	75	10.82	33.68	25.80	221	0.18
35	11.16	33.55						
45	11.00	33.57						
56	10.90	33.60						
66	10.88	33.65						
81	10.74	33.70						

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

100.50

CREST; December 11, 1954; 1731 GCT; 31°05.5'N, 118°01'W; sounding, 880 fm; wind, 220°, force 3; weather, cloudy; sea, rough; wire angle, 07°.

0	15.2r	33.43	0	16.1	33.43	24.54	340	0.00
10	16.07	33.46	10	16.07	33.46	24.57	338	0.03
25	16.06	33.41	20	16.07	33.42	24.54	340	0.07
51	14.96	33.48	30	16.05	33.41	24.53	341	0.10
61	12.82	33.23	50	15.35	33.48	24.74	321	0.17
71	11.17	33.35	75	10.82	33.38	25.57	242	0.24
81	10.50	33.40	100	9.69	33.55	25.89	212	0.30
101	9.63	33.58	150	8.56	33.88	26.33	170	0.39
125	9.18	33.70	200	7.89	34.06	26.57	148	0.47
154	8.45	33.94	250	7.32	34.12	26.70	135	0.55
203	7.87	34.06	300	6.92	34.17	26.80	126	0.61
272	7.06	-	400	6.62	34.28	26.92	114	0.74
375	6.74	34.26	500	5.88	34.35	27.08	99	0.85
504	5.84	34.35	600	5.29	34.40	27.19	89	0.95
687	4.92	34.45	700	4.87	34.46	27.28	80	1.04
912	4.13	34.55	800	4.50	34.51	27.37	72	1.13
1222	3.36	34.63	1000	3.85	34.58	27.49	60	1.28

100.70

CREST; December 11, 1954; 0526 GCT; 30°20.5'N, 119°27'W; sounding, 2000+ fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 30°.

0	17.3	33.33	0	17.3	33.33	24.18	375	0.00
9	17.28	33.28	10	17.27	33.28	24.15	378	0.04
23	17.24	33.30	20	17.24	33.30	24.17	376	0.08
49	17.30	33.31	30	17.25	33.31	24.18	375	0.11
58	17.30	33.28	50	17.30	33.31	24.17	376	0.19
66	15.22	33.15	75	14.01	33.09	24.73	322	0.28
79	13.69	33.09	100	12.44	33.16	25.10	287	0.35
95	12.83	33.14	150	9.21	33.66	26.06	196	0.48
116	11.14	33.23	200	8.52	34.02	26.45	159	0.56
141	9.38	33.58	250	8.02	34.14	26.62	143	0.64
184	8.72	33.94	300	7.69	34.22	26.73	132	0.71
249	8.04	34.14	400	6.91	34.33	26.92	114	0.84
336	7.46	34.27	500	5.98	34.36	27.07	100	0.96
455	6.44	34.36	600	5.20	34.35	27.16	92	1.06
616	5.12	34.35	700	4.82	34.38	27.23	85	1.15
824	4.47	34.51	800	4.52	34.49	27.35	74	1.24
1119	3.69	34.58	1000	3.99	34.56	27.46	63	1.40

100.90

CREST; December 10, 1954; 1857 GCT; 29°41'N, 120°47'W; sounding, 1850 fm; wind, 270°, force 4; weather, cloudy; sea, rough; wire angle, 15°.

0	17.4	33.27	0	17.4	33.27	24.11	382	0.00
10	17.04	33.26	10	17.04	33.26	24.19	374	0.04
26	17.04	33.23	20	17.04	33.23	24.17	376	0.08
55	16.86	33.23	30	17.03	33.23	24.17	376	0.11
65	15.48	33.22	50	16.91	33.23	24.20	373	0.19
74	14.58	33.15	75	14.51	33.15	24.67	328	0.28
89	13.44	33.22	100	12.61	33.18	25.08	289	0.35
108	12.08	33.15	150	9.85	33.33	25.70	230	0.48
131	10.46	33.20	200	8.68	33.84	26.28	175	0.59
159	9.42	33.54	250	7.93	33.97	26.50	154	0.67
209	8.54	33.87	300	7.32	34.04	26.64	141	0.75
283	7.51	34.02	400	6.42	34.17	26.86	120	0.88
383	6.55	34.15	500	5.71	34.26	27.03	104	1.00
517	5.60	34.27	600	5.12	34.33	27.15	92	1.11
698	4.72	34.41	700	4.71	34.41	27.26	82	1.20
928	4.29	34.52	800	4.50	34.48	27.34	74	1.29
1234	3.36	34.55	1000	4.08	34.53	27.43	66	1.44

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

CREST; December 12, 1954; 1713 GCT; 31°06'N, 116°25'W; sounding, 37 fm; wind, 150°, force 2; weather, clear; sea, moderate; wire angle, 03°. 103.30

0	12.9	33.37	0	12.9	33.37	25.17	280	0.00
10	12.57	33.36	10	12.57	33.36	25.23	275	0.03
20	12.31	33.39	20	12.31	33.39	25.30	268	0.06
25	12.10	33.39	30	11.88	33.41	25.40	259	0.08
30	11.88	33.41	50	11.47	33.50	25.54	245	0.13
35	11.60	33.44						
40	11.50	33.48						
52	11.47	33.51						
62	11.42	33.53						

CREST; December 12, 1954; 1118 GCT; 30°45'N, 117°05.5'W; sounding, 960 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 11°. 103.40

0	17.2r	33.33	0	16.7	33.33	24.32	361	0.00
10	16.64	33.34	10	16.64	33.34	24.35	359	0.04
30	16.61	33.33	20	16.62	33.33	24.34	360	0.07
40	16.20	33.40	30	16.61	33.33	24.35	359	0.11
50	14.01	33.16	50	14.01	33.16	24.79	317	0.18
60	13.02	33.18	75	11.33	33.16	25.31	267	0.25
71	11.58	33.16	100	9.82	33.46	25.80	221	0.31
80	11.16	33.19	150	8.72	33.74	26.20	183	0.41
89	10.55	33.28	200	9.29	34.27	26.52	152	0.50
99	9.88	33.45	250	8.77	34.31	26.63	142	0.57
123	9.23	33.60	300	8.18	34.33	26.74	131	0.64
152	8.70	33.75	400	7.19	34.35	26.90	116	0.77
199	9.29	34.27	500	6.38	34.36	27.02	105	0.89
257	8.68	34.31	600	5.80	34.38	27.11	96	1.00
359	7.58	34.34						
476	6.55	34.36						
602	5.79	34.38						

CREST; December 13, 1954; 0003 GCT; 30°22'N, 116°19'W; sounding, 950 fm; wind, 220°, force 4; weather, clear; sea, moderate; wire angle, 20°. 107.35

0	17.2	33.45	0	17.2	33.45	24.30	363	0.00
10	17.10	33.48	10	17.10	33.48	24.35	359	0.04
28	16.81	33.48	20	16.99	33.48	24.37	357	0.07
38	16.17	33.40	30	16.75	33.48	24.43	351	0.11
47	15.61	33.32	50	15.42	33.29	24.58	337	0.18
56	13.64	33.21	75	11.50	33.27	25.36	262	0.25
65	12.99	33.21	100	10.06	33.45	25.75	225	0.31
73	11.64	33.26	150	9.12	33.86	26.23	180	0.42
83	11.25	33.27	200	9.14	34.12	26.43	161	0.50
91	10.54	33.39	250	8.76	34.35	26.67	138	0.58
113	9.62	33.51	300	8.38	34.36	26.73	132	0.65
139	9.14	33.80	400	7.54	34.35	26.85	121	0.78
183	9.18	34.00	500	6.57	34.34	26.98	109	0.90
237	8.88	34.34						
332	8.15	34.36						
446	7.06	34.34						
571	6.16	34.37						

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

110.33

CREST; December 14, 1954; 0449 GCT; 29°50'N, 115°52.5'W; sounding, 50 fm; wind, 320°, force 2; weather, clear; sea, rough; wire angle, 02°.

0	14.0	33.28	0	14.0	33.28	24.88	309	0.00
10	13.86	33.26	10	13.86	33.26	24.90	307	0.03
15	13.86	33.31	20	13.83	33.32	24.95	302	0.06
20	13.83	33.32	30	13.85	33.24	24.88	308	0.09
25	13.87	33.32	50	13.57	33.31	24.99	298	0.15
30	13.85	33.24	75	12.05	33.30	25.28	270	0.22
36	13.84	33.26						
46	13.66	33.32						
56	13.36	33.30						
66	12.71	33.32						
82	11.54	33.25						

110.40

CREST; December 13, 1954; 2345 GCT; 29°36'N, 116°19.5'W; sounding, 1150 fm; wind, 330°, force 4; weather, partly cloudy; sea, slight; wire angle, 21°.

0	17.5	33.48	0	17.5	33.48	24.25	368	0.00
10	17.42	33.53	10	17.42	33.53	24.31	362	0.04
24	17.35	33.45	20	17.37	33.48	24.28	365	0.07
47	15.32	33.32	30	17.32	33.41	24.24	369	0.11
56	14.12	33.30	50	14.79	33.31	24.74	321	0.18
67	12.64	33.37	75	12.32	33.45	25.35	263	0.25
75	12.32	33.45	100	10.21	33.42	25.70	230	0.32
93	10.56	33.40	150	8.89	33.77	26.19	184	0.42
116	9.69	33.56	200	8.43	33.99	26.44	160	0.51
144	8.98	33.74	250	8.01	34.08	26.57	148	0.58
190	8.51	33.95	300	7.62	34.14	26.68	137	0.66
253	8.00	34.08	400	6.91	34.29	26.89	117	0.79
349	7.20	34.22	500	6.49	34.36	27.01	106	0.91
468	6.62	34.34	600	5.69	34.39	27.13	94	1.02
639	5.39	34.40	700	5.04	34.41	27.22	86	1.12
850	4.48	34.44	800	4.63	34.43	27.29	79	1.20
1144	3.64	34.49	1000	4.01	34.47	27.39	70	1.37

110.60

CREST; December 13, 1954; 1258, 1341 GCT; 28°56.5'N, 117°39'W; sounding, 1930 fm; wind, 330°, force 4; weather, clear; sea, moderate; wire angle, 18°, 24°.

0	16.9	33.42	0	16.9	33.42	24.35	359	0.00
10	16.81	33.43	10	16.81	33.43	24.38	356	0.04
25	16.80	33.39	20	16.80	33.41	24.36	358	0.07
50	13.52	33.18	30	16.79	33.35	24.32	361	0.11
59	12.38	33.21	50	13.52	33.18	24.90	306	0.17
68	11.64	33.30	75	10.91	33.35	25.53	246	0.24
77	10.80	33.36	100	10.12	33.58	25.84	217	0.30
95	10.25	33.54	150	9.14	33.94	26.29	174	0.40
118	9.65	33.69	200	8.57	34.11	26.51	153	0.48
144	9.22	33.90	250	8.64	34.31	26.66	139	0.56
188	8.58	34.06	300	8.32	34.35	26.74	131	0.63
			400	7.19	34.39	26.93	113	0.76
243	8.66	34.30	500	6.29	34.42	27.08	99	0.87
338	7.94	34.37	600	5.62	34.46	27.20	88	0.97
455	6.63	34.40	700	5.08	34.46	27.26	82	1.06
624	5.50	34.46	800	4.61	34.45	27.31	77	1.15
832	4.49	34.45	1000	4.00	34.52	27.43	66	1.31
1129	3.70	34.57						

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

PAOLINA-T; December 16, 1954; 1945 GCT; 29°07'N, 115°33'W; sounding, 600 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 05°. 113.35

0	16.0	33.46	0	16.0	33.46	24.58	337	0.00
10	15.86	33.43	10	15.86	33.43	24.59	336	0.03
30	15.45	33.45	20	15.82	33.44	24.61	334	0.07
46	12.25	33.36	30	15.45	33.45	24.70	325	0.10
57	11.00	33.27	50	11.76	33.32	25.35	263	0.16
67	10.31	33.32	75	10.00	33.41	25.73	227	0.22
77	9.98	33.45	100	10.72	33.97	26.04	198	0.27
87	10.30	33.70	150	10.70	34.36	26.35	168	0.37
102	10.72	34.00	200	10.27	34.45	26.50	154	0.45
112	10.57	34.09	250	9.65	34.44	26.59	146	0.53
137	10.78	34.28	300	8.93	34.40	26.68	137	0.60
166	10.52	34.42	400	7.83	34.42	26.86	120	0.74
220	10.11	34.46	500	6.77	34.41	27.01	106	0.86
284	9.14	34.40	600	5.93	34.43	27.13	94	0.96
399	7.84	34.42						
529	6.48	34.41						
667	5.54	34.45						

PAOLINA-T; December 16, 1954; 0955 GCT; 28°39'N, 116°36'W; sounding, 1900 fm; wind, 320°, force 3; weather, cloudy; sea, slight; wire angle, 00°. 113.50

0	17.4	33.53	0	17.4	33.53	24.31	362	0.00
10	17.34	33.52	10	17.34	33.52	24.32	361	0.04

PAOLINA-T; December 16, 1954; 0350 GCT; 28°24'N, 117°15'W; sounding, 2060 fm; wind, 360°, force 4; weather, cloudy; sea, moderate; wire angle, 15°. 113.60

0	17.6	33.46	0	17.6	33.46	24.21	372	0.00
10	17.57	33.42	10	17.57	33.42	24.19	374	0.04
30	17.26	33.37	20	17.43	33.40	24.21	372	0.08
44	16.78	33.34	30	17.26	33.37	24.22	371	0.11
54	16.80	33.32	50	16.79	33.33	24.30	363	0.18
63	15.52	33.21	75	13.77	33.18	24.85	311	0.27
72	14.00	33.18	100	12.02	33.23	25.23	275	0.34
82	13.31	33.22	150	10.30	34.02	26.16	186	0.46
97	12.32	33.22	200	9.30	34.13	26.41	163	0.55
105	11.16	33.27	250	8.55	34.23	26.61	144	0.63
129	10.88	33.83	300	8.20	34.31	26.72	133	0.70
158	10.48	34.05	400	7.34	34.38	26.90	116	0.83
209	8.96	34.15	500	6.50	34.39	27.03	104	0.95
271	8.41	34.27	600	5.79	34.43	27.15	92	1.05
382	7.50	34.37						
510	6.42	34.40						
645	5.51	34.45						

PAOLINA-T; December 15, 1954; 0320 GCT; 28°48'N, 114°56'W; sounding, 55 fm; wind, 320°, force 4; weather, clear; sea, slight; wire angle, 08°. 117.30

0	16.2r	33.23	0	16.0	33.23	24.41	353	0.00
10	15.76	33.33	10	15.76	33.33	24.54	340	0.04
20	15.66	33.31	20	15.66	33.31	24.55	340	0.07
30	15.60	33.35	30	15.60	33.35	24.59	336	0.10
40	13.48	33.31	50	13.08	33.50	25.24	274	0.16
50	13.08	33.50	75	11.36	33.67	25.70	230	0.23
61	12.30	33.60	100	(10.97)	(33.73)	(25.81)	(220)	(0.28)
76	11.30	33.68						
92	11.04	33.72						

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

117.40

PAOLINA-T; December 15, 1954; 1027, 1055 GCT; 28°29'N, 115°37'W; sounding, 550 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 02°, 02°.

0	16.2	33.33	0	16.2	33.33	24.44	350	0.00
10	16.10	33.38	10	16.10	33.38	24.50	344	0.04
30	16.08	33.32	20	16.09	33.35	24.48	346	0.07
40	15.86	33.37	30	16.08	33.32	24.46	348	0.10
50	14.99	33.30	50	14.99	33.30	24.69	326	0.17
61	13.34	33.24	75	12.11	33.25	25.23	275	0.25
72	12.34	33.23	100	11.23	33.81	25.83	218	0.31
82	11.50	33.37	150	10.95	34.17	26.16	186	0.41
92	11.31	33.53	200	10.62	34.46	26.44	160	0.50
102	11.22	33.83	250	10.10	34.52	26.58	146	0.58
127	11.07	33.99	300	9.46	34.49	26.66	139	0.65
157	10.90	34.22	400	8.21	34.38	26.78	128	0.79
207	10.57	34.48	500	7.00	34.38	26.95	111	0.92
267	9.91	34.52	600	6.33	34.37	27.03	104	1.04
374	8.60	34.39						
496	7.04	34.38						
623	6.24	34.37						

117.60

PAOLINA-T; December 15, 1954; 2205 GCT; 27°54'N, 116°51'W; sounding, 1950 fm; wind, 340°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.

0	18.2	33.58	0	18.2	33.58	24.16	377	0.00
10	18.04	33.59	10	18.04	33.59	24.20	373	0.04

120.25

PAOLINA-T; December 14, 1954; 1915 GCT; 28°22'N, 114°17'W; sounding, 45 fm; wind, 170°, force 2; weather, clear; sea, slight; wire angle, 00°.

0	16.8	33.46	0	16.8	33.46	24.40	354	0.00
10	16.57	33.50	10	16.57	33.50	24.48	346	0.04
15	16.56	33.48	20	16.53	33.47	24.47	347	0.07
26	16.50	33.46	30	16.00	33.46	24.58	337	0.10
37	14.68	33.47	50	13.07	33.26	25.05	292	0.16
47	13.03	33.23	75	11.73	33.39	25.41	258	0.23
57	12.92	33.48						
67	12.35	33.38						
77	11.56	33.39						

120.35

PAOLINA-T; December 14, 1954; 1318 GCT; 28°03'N, 114°50'W; sounding, 46 fm; wind, 340°, force 3; weather, clear; sea, slight; wire angle, 00°.

0	17.2	33.51	0	17.2	33.51	24.34	360	0.00
10	17.20	33.51	10	17.20	33.51	24.34	360	0.04
15	17.17	33.51	20	17.10	33.52	24.38	356	0.07
20	17.10	33.52	30	17.12	33.51	24.36	358	0.11
30	17.12	33.51	50	16.79	33.46	24.40	354	0.18
41	17.10	33.51						
52	16.67	33.45						

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

120.50

PAOLINA-T; December 13, 1954; 2320 GCT; 27°32'N, 115°57'W; sounding, 1850 fm; wind, 330°, force 4; weather, partly cloudy; sea, moderate; wire angle, 20°.

0	18.1	33.53	0	18.1	33.53	24.14	379	0.00
10	18.00	33.52	10	18.00	33.52	24.16	377	0.04
30	17.88	33.50	20	17.97	33.51	24.16	377	0.08
44	17.62	33.44	30	17.88	33.50	24.17	376	0.11
54	15.28	33.22	50	15.33	33.27	24.59	336	0.18
63	14.76	33.40	75	12.62	33.25	25.13	284	0.26
72	12.94	33.24	100	11.41	33.69	25.70	230	0.33
81	12.13	33.39	150	10.83	34.17	26.18	184	0.43
95	11.20	33.54	200	9.97	34.26	26.40	164	0.52
104	11.57	33.78	250	10.00	34.47	26.56	148	0.60
128	10.56	33.89	300	9.42	34.45	26.64	141	0.68
154	10.84	34.19	400	7.93	34.37	26.81	125	0.82
204	9.98	34.26	500	7.00	34.37	26.94	112	0.94
263	9.96	34.48	600	6.10	34.40	27.09	98	1.06
366	8.32	34.38						
489	7.10	34.37						
625	5.90	34.41						

120.70

PAOLINA-T; December 13, 1954; 0920 GCT; 26°49'N, 117°08'W; sounding, 2000 fm; wind, 330°, force 4; weather, clear; sea, rough; wire angle, 26°.

0	18.0	33.49	0	18.0	33.49	24.14	379	0.00
10	18.00	33.54	10	18.00	33.54	24.18	375	0.04
24	18.01	33.55	20	18.02	33.55	24.18	375	0.08
51	16.53	33.38	30	18.01	33.52	24.16	377	0.11
60	14.65	33.28	50	16.73	33.39	24.36	358	0.19
69	13.32	33.31	75	12.80	33.36	25.18	280	0.27
82	12.25	33.41	100	11.00	33.59	25.70	230	0.33
98	11.08	33.58	150	9.91	34.16	26.33	170	0.43
121	10.13	33.78	200	9.36	34.22	26.47	157	0.52
146	9.87	34.15	250	8.58	34.27	26.63	142	0.59
194	9.45	34.22	300	8.07	34.33	26.76	129	0.66
261	8.44	34.28	400	7.27	34.42	26.95	111	0.79
355	7.62	34.40	500	6.56	34.44	27.06	101	0.90
481	6.68	34.44	600	5.87	34.47	27.17	91	1.01
650	5.57	34.48	700	5.30	34.50	27.27	81	1.10
865	4.54	34.59	800	4.81	34.55	27.36	73	1.18

120.90

PAOLINA-T; December 12, 1954; 1911, 2010 GCT; 26°17'N, 118°24'W; sounding, 2350 fm; wind, 360°, force 5; weather, partly cloudy; sea, rough; wire angle, 12°, 17°.

0	18.6	33.48	0	18.6	33.48	23.98	394	0.00
10	18.55	33.50	10	18.55	33.50	24.01	391	0.04
25	18.54	33.48	20	18.54	33.48	24.00	392	0.08
55	18.53	33.48	30	18.53	33.48	24.00	392	0.12
65	17.00	33.35	50	18.53	33.48	24.00	392	0.20
75	14.56	33.17	75	14.56	33.17	24.68	327	0.29
90	13.40	33.30	100	12.64	33.30	25.17	280	0.36
109	11.88	33.30	150	10.06	33.67	25.92	209	0.49
132	10.17	33.44	200	10.19	34.19	26.31	172	0.58
163	10.05	33.83	250	9.87	34.34	26.48	156	0.67
215	10.21	34.28	300	9.28	34.37	26.60	145	0.75
294	9.43	34.38	400	8.50	34.38	26.73	132	0.89
403	8.52	34.33	500	7.19	34.35	26.90	116	1.02
			600	6.25	34.35	27.03	104	1.14
291a)	9.26	34.36	700	5.59	34.40	27.15	92	1.25
398	8.41	34.43	800	5.03	34.45	27.26	82	1.34
540	6.72	34.34	1000	4.24	34.48	27.37	72	1.52
732	5.41	34.42						
969	4.35	34.48						
1282	3.48	34.49						

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

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

123.40

PAOLINA-T; December 11, 1954; 1303, 1339 GCT; 27°18'N, 114°53'W; sounding, 331 fm; wind, 360°, force 5; weather, cloudy; sea, rough; wire angle, 15°, 22°.

0	18.5	33.79	0	18.5	33.79	24.24	369	0.00
10	18.46	33.74	10	18.46	33.74	24.21	372	0.04
30	14.37	33.19	20	18.42	33.48	24.08	389	0.08
40	12.94	33.15	30	14.37	33.19	24.73	322	0.11
49	12.24	33.20	50	12.14	33.21	25.19	279	0.17
59	11.10	33.31	75	10.84	33.63	25.76	224	0.23
69	10.76	33.40	100	12.04	34.28	26.04	198	0.29
79	11.02	33.79	150	11.44	34.52	26.34	169	0.38
89	11.98	34.19	200	10.83	34.60	26.51	153	0.46
98	12.04	34.25	250	9.93	34.50	26.59	146	0.54
123	11.91	34.54	300	9.13	34.48	26.71	134	0.61
151	11.43	34.52	400	7.99	34.45	26.86	120	0.75
200	10.88	34.61	500	7.02	34.42	26.98	109	0.87
259	9.83	34.48	600	(6.08)	(34.42)	(27.11)	(96)	(0.98)
194a)	10.88	34.60						
250	9.88	34.51						
352	8.46	34.47						
468	7.37	34.42						
591	6.16	34.42						

123.55

PAOLINA-T; December 11, 1954; 2347 GCT; 26°53'N, 115°50'W; sounding, 2000 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 10°.

0	17.7	33.67	0	17.7	33.67	24.35	359	0.00
10	17.68	33.69	10	17.68	33.69	24.37	357	0.04
30	17.51	33.63	20	17.63	33.66	24.36	358	0.07
45	14.72	33.45	30	17.51	33.63	24.36	358	0.11
55	13.71	33.40	50	14.18	33.42	24.95	301	0.17
65	12.86	33.40	75	11.79	33.58	25.55	244	0.24
75	11.79	33.58	100	11.15	33.80	25.83	218	0.30
85	11.67	33.57	150	11.42	34.46	26.30	173	0.40
99	11.14	33.78	200	10.14	34.41	26.49	155	0.48
110	11.46	34.07	250	9.21	34.36	26.60	145	0.56
133	11.52	34.33	300	8.55	34.37	26.72	133	0.63
164	11.25	34.50	400	7.44	34.43	26.93	113	0.76
216	9.78	34.38	500	6.55	34.44	27.06	101	0.87
280	8.81	34.36	600	5.92	34.44	27.14	93	0.97
394	7.50	34.43						
524	6.38	34.44						
660	5.62	34.44						

127.34

PAOLINA-T; December 11, 1954; 0343 GCT; 26°56'N, 114°09'W; sounding, 50 fm; weather, partly cloudy; sea, rough; wire angle, 09°.

0	19.7	33.88	0	19.7	33.88	24.01	391	0.00
5	19.76	33.89	10	19.76	33.88	23.99	393	0.04
10	19.76	33.88	20	19.66	33.91	24.04	388	0.08
15	19.76	33.93	30	17.56	33.68	24.39	325	0.12
20	19.66	33.91						
25	19.17	33.87						
30	17.56	33.68						
35	15.94	33.48						
45	14.56	33.59						

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

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

PAOLINA-T; December 10, 1954; 1732 GCT; 26°23'N, 115°03'W; sounding, 3350 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 13°. 127.50

0	19.6	33.84	0	19.6	33.84	24.00	392	0.00
10	19.60	33.76	10	19.60	33.76	23.94	398	0.04
30	19.60	33.67	20	19.60	33.73	23.92	400	0.08
45	14.92	33.33	30	19.60	33.67	23.87	404	0.12
55	13.55	-	50	14.10	33.32	24.89	307	0.19
65	12.64	33.36	75	11.86	33.57	25.53	246	0.26
75	11.86	33.57	100	11.24	33.81	25.83	218	0.32
85	11.56	33.58	150	10.81	34.31	26.29	174	0.42
99	11.26	33.80	200	10.93	34.52	26.43	161	0.50
109	11.16	33.85	250	10.21	34.53	26.57	148	0.58
133	10.83	34.12	300	9.38	34.55	26.72	133	0.66
162	11.06	34.42	400	7.89	34.56	26.97	110	0.78
215	10.74	34.53	500	6.92	34.45	27.02	105	0.90
279	9.72	34.54	600	6.13	34.44	27.12	95	1.01
393	7.97	34.56						
523	6.74	34.44						
660	5.73	34.44						

PAOLINA-T; December 9, 1954; 0842 GCT; 26°31'N, 113°26'W; sounding, 44 fm; wind, 020°, force 2; weather, clear; sea, slight; wire angle, 00°. 130.30

0	19.7	33.96	0	19.7	33.96	24.07	385	0.00
10	19.66	33.93	10	19.66	33.93	24.06	386	0.04
15	19.68	33.93	20	19.66	33.97	24.09	383	0.08
20	19.66	33.97	30	19.65	33.95	24.07	385	0.12
25	19.66	33.93	50	19.50	33.95	24.11	382	0.19
30	19.65	33.95						
35	19.62	33.95						
40	19.59	33.97						
51	19.49	33.95						

PAOLINA-T; December 9, 1954; 1620, 1721 GCT; 26°11'N, 114°08'W; sounding, 1400 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 07°, 06°. 130.40

0	20.1	33.70	0	20.1	33.70	23.77	414	0.00
10	19.85	33.78	10	19.85	33.78	23.89	402	0.04
25	19.85	33.64	20	19.85	33.70	23.83	408	0.08
55	15.62	33.26	30	19.85	33.57	23.73	418	0.12
65	14.48	33.27	50	16.71	33.31	24.31	362	0.20
75	12.97	33.42	75	12.97	33.42	25.20	278	0.28
91	12.23	33.61	100	11.96	33.76	25.65	235	0.35
111	11.66	33.92	150	10.51	34.15	26.22	181	0.45
136	10.85	34.03	200	10.32	34.48	26.51	153	0.54
166	10.27	34.28	250	9.93	34.53	26.62	143	0.61
222	10.31	34.52	300	9.17	34.52	26.74	131	0.68
303	9.12	34.52	400	8.00	34.47	26.88	118	0.82
414	7.84	34.46	500	6.89	34.43	27.01	106	0.94
559	6.40	34.42	600	6.06	34.44	27.12	95	1.04
758	5.20	34.46	700	5.48	34.47	27.22	86	1.14
			800	4.98	34.49	27.30	78	1.23
554a)	6.34	34.44	1000	4.20	34.52	27.41	68	1.40
749	5.18	34.50						
991	4.22	34.52						
1307	3.46	34.58						

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

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

130.60

PAOLINA-T; December 10, 1954; 0620 GCT; 25°29'N, 115°23'W; sounding, 3350 fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 14°.

0	19.6	33.71	0	19.6	33.71	23.90	302	0.00
10	19.42	33.74	10	19.42	33.74	23.97	395	0.04
25	19.41	33.79	20	19.41	33.78	24.01	391	0.08
54	14.81	33.33	30	19.40	33.75	23.99	393	0.12
65	12.92	33.23	50	16.31	33.40	24.47	347	0.19
74	12.18	33.31	75	12.11	33.32	25.29	269	0.27
88	11.00	33.40	100	10.47	33.50	25.72	228	0.33
107	10.38	33.61	150	10.18	34.10	26.24	179	0.44
130	10.27	33.84	200	9.97	34.44	26.54	150	0.52
157	10.14	34.21	250	9.30	34.41	26.63	142	0.60
209	9.90	34.45	300	8.59	34.39	26.73	132	0.67
286	8.78	34.39	400	7.51	34.42	26.91	115	0.80
391	7.60	34.42	500	6.64	34.41	27.02	105	0.91
531	6.41	34.41	600	5.97	34.42	27.12	95	1.02
720	5.30	34.44	700	5.42	34.44	27.20	88	1.12
954	4.30	34.50	800	4.92	34.45	27.27	81	1.21
1265	3.48	34.53	1000	4.15	34.51	27.40	69	1.38

133.30

PAOLINA-T; December 9, 1954; 0245 GCT; 25°54'N, 113°07'W; sounding, 106 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 07°.

0	19.6	33.84	0	19.6	33.84	24.00	392	0.00
10	19.54	33.86	10	19.54	33.86	24.03	389	0.04
15	19.55	33.86	20	19.50	33.86	24.04	388	0.08
20	19.50	33.86	30	19.09	33.80	24.10	382	0.12
25	19.42	33.84	50	14.81	33.60	24.95	301	0.18
30	19.09	33.80	75	11.87	33.51	25.48	251	0.25
35	16.40	33.58	100	11.27	33.79	25.81	220	0.31
46	15.54	33.65	150	12.21	34.55	26.22	181	0.42
56	13.58	33.44						
66	12.52	33.39						
82	11.53	33.65						
101	11.27	33.80						
121	12.74	34.39						
155	12.10	34.57						

137.23

PAOLINA-T; December 8, 1954; 1718 GCT; 25°37'N, 112°20'W; sounding, 40 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.

0	20.9	33.87	0	20.9	33.87	23.68	422	0.00
5	20.84	33.86	10	20.82	33.87	23.70	421	0.04
10	20.82	33.87	20	20.82	33.87	23.70	421	0.08
15	20.82	33.87	30	20.50	33.90	23.81	410	0.13
20	20.82	33.87	50	15.31	33.39	24.68	327	0.20
25	20.80	33.92						
30	20.50	33.90						
41	17.75	33.66						
51	15.07	33.36						

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

PAOLINA-T; December 8, 1954; 0416 GCT; 24°37'N, 112°43'W; sounding, 525 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 08°. 140.35

0	23.1	34.35	0	23.1	34.35	23.43	446	0.00
10	22.44	34.17	10	22.44	34.17	23.49	441	0.04
30	21.01	33.84	20	21.14	34.03	23.74	417	0.09
46	17.57	33.48	30	21.01	33.84	23.63	427	0.13
56	16.80	33.84	50	16.95	33.61	24.48	346	0.21
67	15.22	33.93	75	15.00	34.12	25.31	267	0.28
77	14.97	34.16	100	13.62	34.23	25.69	231	0.35
87	14.40	34.27	150	12.31	34.50	26.16	186	0.45
101	13.58	34.23	200	11.57	34.62	26.39	164	0.54
111	12.82	34.14	250	10.76	34.65	26.57	148	0.62
135	12.44	34.39	300	10.05	34.64	26.68	137	0.70
165	12.17	34.57	400	8.52	34.54	26.85	121	0.83
224	11.13	34.64	500	7.17	34.51	27.03	104	0.95
283	10.33	34.65	600	6.31	34.50	27.14	93	1.06
399	8.54	34.54						
529	6.88	34.51						
665	5.92	34.49						

PAOLINA-T; December 7, 1954; 1447 GCT; 24°14'N, 112°04'W; sounding, 115 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 00°. 143.30

0	22.7	34.27	0	22.7	34.27	23.49	441	0.00
10	22.68	34.32	10	22.68	34.32	23.53	437	0.04
15	22.68	34.29	20	22.69	34.40	23.59	431	0.09
21	22.70	34.41	30	22.70	34.27	23.49	441	0.13
25	22.68	34.26	50	21.49	34.15	23.73	418	0.22
32	22.71	34.28	75	14.17	33.99	25.39	260	0.30
37	22.68	34.29	100	14.13	34.44	25.75	225	0.36
47	22.08	34.22	150	12.99	34.61	26.11	191	0.47
57	19.55	33.96						
67	15.98	33.90						
82	14.46	34.11						
102	14.10	34.46						
122	13.58	34.58						
157	12.87	34.61						

PAOLINA-T; December 7, 1954; 0540 GCT; 23°58'N, 111°01'W; sounding, 53 fm; wind, 300°, force 1; weather, clear; sea, calm; wire angle, 00°. 147.20

0	22.9	34.27	0	22.9	34.27	23.43	446	0.00
10	22.90	34.31	10	22.90	34.31	23.46	444	0.04
15	22.92	34.28	20	22.88	34.19	23.38	451	0.09
20	22.88	34.19	30	22.05	34.17	23.59	431	0.13
26	22.74	34.22	50	19.67	34.02	24.12	380	0.22
31	21.86	34.10	75	(16.41)	(34.15)	(25.02)	(295)	(0.30)
37	20.89	34.05						
47	19.99	34.02						
57	18.76	34.01						
72	16.54	34.14						

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

147.30

PAOLINA-T; December 6, 1954; 2230 GCT; 23°35'N, 111°47'W; sounding, 200 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 05°.

0	24.0	34.34	0	24.0	34.34	23.16	472	0.00
10	23.62	34.33	10	23.62	34.33	23.27	462	0.05
15	23.60	34.33	20	23.62	34.32	23.26	463	0.09
20	23.62	34.32	30	23.56	34.35	23.30	459	0.14
25	23.58	34.33	50	21.42	34.07	23.69	422	0.23
30	23.56	34.35	75	15.54	33.75	24.91	305	0.32
35	23.56	34.32	100	12.74	34.27	25.90	211	0.38
45	23.30	34.27	150	11.90	34.45	26.20	183	0.48
55	19.80	33.91	200	11.26	34.64	26.47	157	0.57
70	16.10	33.72	250	10.66	34.57	26.52	152	0.65
85	14.73	33.98						
105	12.92	34.29						
134	11.75	34.29						
169	12.02	34.64						
204	11.20	34.64						
254	10.63	34.56						

150.25

PAOLINA-T; December 6, 1954; 1205 GCT; 23°14'N, 111°02'W; sounding, 600 fm; wind, 330°, force 3; weather, clear; sea, slight; wire angle, 12°.

0	23.2	34.28	0	23.2	34.28	23.35	454	0.00
10	23.24	34.28	10	23.24	34.28	23.34	455	0.04
30	23.20	34.33	20	23.22	34.31	23.37	452	0.09
40	23.02	34.25	30	23.20	34.33	23.39	450	0.14
50	18.32	33.86	50	18.32	33.86	24.34	360	0.22
60	16.77	33.92	75	14.33	33.96	25.33	265	0.30
70	15.42	33.84	100	13.36	34.31	25.81	220	0.36
74	14.40	33.95	150	12.40	34.65	26.26	177	0.46
84	14.10	34.04	200	11.83	34.69	26.40	164	0.54
93	13.62	34.22	250	10.97	34.64	26.52	152	0.63
117	12.92	34.46	300	10.12	34.60	26.64	141	0.70
145	12.45	34.64	400	8.59	34.54	26.84	122	0.84
193	11.92	34.69	500	7.29	34.52	27.02	105	0.96
251	10.94	34.64	600	(6.40)	(34.51)	(27.14)	(93)	(1.07)
352	9.31	34.56						
470	7.63	34.52						
594	6.44	34.51						

153.16

PAOLINA-T; December 6, 1954; 0109 GCT; 22°54'N, 110°06'W; sounding, 200 fm; wind, 300°, force 1; weather, clear; sea, slight; wire angle, 00°.

0	24.5	34.28	0	24.5	34.28	22.97	490	0.00
10	23.96	34.28	10	23.96	34.28	23.13	475	0.05
15	23.93	34.29	20	23.94	34.36	23.20	468	0.10
20	23.94	34.36	30	23.89	34.36	23.21	467	0.14
25	23.92	34.39	50	19.72	33.91	24.02	390	0.23
30	23.89	34.36	75	15.38	33.82	25.00	297	0.32
36	23.88	34.40	100	13.71	34.11	25.58	242	0.38
46	20.54	33.93	150	12.17	34.50	26.19	184	0.49
57	18.96	33.88	200	11.64	34.63	26.39	164	0.58
72	15.80	33.81	250	10.58	34.66	26.61	144	0.66
87	14.19	33.96						
107	13.49	34.18						
137	12.32	34.42						
172	11.98	34.60						
207	11.54	34.63						
259	10.40	34.66						

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

PAOLINA-T; December 5, 1954; 1600 GCT; 22°25'N, 111°02'W; sounding, 1950 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 05°. 153.30

0	25.8	34.60	0	25.8	34.60	22.82	504	0.00
10	25.92	34.60	10	25.92	34.60	22.78	508	0.05
30	25.92	34.62	20	25.92	34.61	22.79	507	0.10
46	25.88	34.60	30	25.92	34.62	22.79	507	0.15
56	21.28	34.29	50	23.71	34.47	23.35	454	0.25
67	19.20	34.42	75	17.55	34.38	24.93	303	0.34
77	17.12	34.37	100	14.18	34.50	25.78	222	0.41
87	15.40	34.34	150	12.94	34.70	26.19	184	0.51
102	14.17	34.51	200	11.60	34.61	26.38	166	0.60
112	14.24	34.52	250	10.90	34.59	26.49	155	0.69
137	13.62	34.77	300	10.17	34.57	26.61	144	0.76
166	12.21	34.64	400	8.68	34.50	26.80	126	0.90
221	11.30	34.60	500	7.55	34.45	26.93	113	1.03
285	10.42	34.58	600	6.70	34.45	27.05	102	1.15
400	8.68	34.50						
531	7.26	34.45						
669	6.21	34.45						

PAOLINA-T; December 4, 1954; 2045 GCT; 22°35'N, 109°19'W; sounding, 1500 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 00°. 157.10

0	26.0	34.67	0	26.0	34.67	22.81	506	0.00
10	25.62	34.66	10	25.62	34.66	22.92	495	0.05
30	25.58	34.64	20	25.60	34.65	22.91	496	0.10
41	25.50	34.78	30	25.58	34.64	22.91	496	0.15
51	25.31	34.76	50	25.34	34.77	23.09	479	0.25
61	24.99	35.13r	75	18.97	34.12	24.38	356	0.35
70	20.36	34.15	100	15.98	34.58	25.45	254	0.43
80	18.01	34.11	150	13.47	34.75	26.12	190	0.54
90	16.62	34.34	200	12.25	34.80	26.40	164	0.63
100	15.98	34.58	250	11.40	34.73	26.51	153	0.71
125	14.19	34.67	300	10.69	34.71	26.62	143	0.79
155	13.33	34.77						
204	12.17	34.80						
263	11.20	34.72						
369	9.83	34.69						

PAOLINA-T; December 5, 1954; 0325 GCT; 22°15'N, 110°04'W; sounding, 1750 fm; wind, calm; weather, clear; sea, slight; wire angle, 05°. 157.20

0	26.5	34.70	0	26.5	34.70	22.67	519	0.00
10	26.34	34.70	10	26.34	34.70	22.72	514	0.05
31	26.42	34.80	20	26.41	34.74	22.73	513	0.10
42	26.18	34.80	30	26.42	34.80	22.77	510	0.15
52	21.38	34.13	50	22.26	34.26	23.60	430	0.25
62	18.16	33.79	75	16.41	34.12	25.00	297	0.34
72	17.08	34.10	100	14.67	34.69	25.82	219	0.40
82	15.12	34.15	150	13.28	34.84	26.23	180	0.51
92	15.23	34.64	200	12.42	34.82	26.39	164	0.60
102	14.58	34.70	250	11.53	34.75	26.50	154	0.68
127	13.70	34.76	300	10.72	34.69	26.60	145	0.76
157	13.16	34.85	400	9.10	34.62	26.82	124	0.90
206	12.32	34.81	500	7.66	34.56	27.00	107	1.02
265	11.31	34.73	600	6.79	34.53	27.10	97	1.13
370	9.64	34.64						
490	7.78	34.57						
616	6.68	34.53						

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157.30

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m
PAOLINA-T; December 5, 1954; 0947 GCT; 21°52'N, 110°38'W; sounding, 1800 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 00°.								
0	26.3	34.62	0	26.3	34.62	22.67	519	0.00
10	26.26	34.65	10	26.26	34.65	22.71	515	0.05
30	26.31	34.70	20	26.30	34.68	22.72	514	0.10
47	20.88	34.22	30	26.31	34.70	22.73	513	0.16
57	17.88	34.06	50	19.79	34.16	24.20	373	0.24
67	16.11	33.98	75	14.46	33.46	24.92	304	0.33
77	14.14	33.45	100	12.81	34.10	25.75	225	0.40
87	13.18	34.01	150	12.43	34.68	26.28	175	0.50
102	12.78	34.11	200	11.52	34.69	26.46	158	0.58
112	12.66	34.31	250	10.76	34.70	26.60	145	0.66
137	12.70	34.67	300	9.88	34.69	26.75	130	0.73
167	12.05	34.68	400	8.52	34.59	26.89	117	0.86
222	11.20	34.70						
287	10.12	34.70						
402	8.48	34.59						

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
80.51-C	XII-2	2015	34°27.5'	120°33.0'	46	100°	4	cloudy	rough	14.58	33.42
80.60-C	3	0215	34°09.0'	121°09.0'	1200	140°	4	cloudy	rough	13.76	33.45
80.80-C	3	1315	33°33.0'	122°31.0'	2170	200°	3	sky obscured	moderate	15.08	33.12
83.40-C	5	0015	34°14.0'	119°21.5'	12	290°	3	partly cloudy	slight	15.64	33.39
83.48-C	4	1600	33°58.0'	119°54.5'	140	300°	3	clear	smooth	14.98	33.40
83.55-C	4	1035	33°43.5'	120°24.0'	540	270°	4	cloudy	rough	14.90	33.33
85.40-C	5	0515	33°57.5'	119°10.5'	400	300°	4	partly cloudy	moderate	15.68	33.38
85.50-C	5	1145	33°37.0'	119°52.0'	170	280°	3	clear	smooth	15.44	33.44
85.60-C	5	1735	33°17.0'	120°33.5'	750	240°	3	cloudy	moderate	16.14	33.42
87.35-C	6	1230	33°51.0'	118°38.5'	320	280°	3	fog	moderate	16.02	33.43
87.45-C	6	0525	33°30.0'	119°18.5'	900	280°	5	clear	moderate	15.12	33.42
87.55-C	5	2330	33°10.0'	120°00.5'	250	320°	4	partly cloudy	moderate	15.29	33.40
90.30-C	6	1950	33°24.5'	117°55.0'	320	270°	2	cloudy	slight	16.02	33.48
90.45-C	7	1640	32°55.0'	118°56.0'	950	300°	6	partly cloudy	rough	16.66	33.48
90.60-C	8	0130	32°25.0'	119°56.0'	475	320°	6	partly cloudy	rough	15.67	33.45
93.27-C	9	0750	32°56.0'	117°19.0'	200	280°	1	overcast	slight	15.92	33.41
93.40-C	9	0000	32°30.0'	118°12.5'	820	310°	2	partly cloudy	moderate	16.61	33.40
97.30-C	9	1345	32°15.0'	117°08.5'	30	350°	1	fog	slight	15.88	33.43
97.32-C	9	1500	32°11.5'	117°16.0'	368	360°	1	drizzle	slight	16.92	33.48

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
97.50-C	XII-10	0000	31°34.5'	118°29.0'	1300	170°	4	overcast	slight	15.62	33.45
100.30-C	12	0300	31°40.5'	116°46.5'	250	360°	3	clear	slight	12.40	33.36
100.40-C	11	2215	31°23.5'	117°26.0'	1050	340°	2	partly cloudy	slight	16.24	33.44
100.60-C	11	1115	30°42.5'	118°44.5'	1600	320°	4	cloudy	rough	16.31	33.47
100.80-C	11	0000	30°00.0'	120°03.0'	2250	320°	5	partly cloudy	very rough	17.30	33.27
103.35-C	12	1425	30°55.0'	116°45.0'	1100	020°	1	clear	moderate	14.64	33.30
107.32-C	12	2200	30°26.0'	116°11.0'	285	180°	2	clear	slight	17.03	33.47
107.40-C	13	0330	30°10.0'	116°43.0'	1550	350°	2	clear	smooth	17.26	33.44
110.35-C	14	0320	29°46.0'	116°00.0'	650	320°	4	clear	slight	15.36	33.38
110.50-C	13	1850	29°17.5'	117°00.0'	1630	180°	4	partly cloudy	moderate	17.15	33.40
113.30-P	16	2310	29°23.0'	115°19.0'	35	320°	4	cloudy	moderate	16.38	33.47
113.40-P	16	1600	28°56.0'	115°55.0'	850	330°	4	cloudy	moderate	17.12	33.42
117.26-P	15	0040	28°56.0'	114°40.0'	42	320°	3	clear	slight	17.46	33.59
117.35-P	15	0650	28°39.0'	115°16.0'	138	320°	3	missing	slight	16.40	33.40
117.50-P	15	1650	28°09.0'	116°16.0'	2200	320°	2	cloudy	slight	17.28	33.44
120.30-P	14	1700	28°15.0'	114°28.0'	50	040°	4	clear	slight	17.40	33.55
120.40-P	14	0910	27°56.0'	115°17.0'	34	340°	5	missing	slight	16.70	33.61
120.45-P	14	0530	27°42.0'	115°32.0'	1600	030°	3	missing	slight	17.89	33.79
120.60-P	13	1725	27°08.0'	116°25.0'	2000	330°	4	partly cloudy	moderate	16.78	33.63

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
120.80-P	XII-13	0200	26°29.0'	117°53.0'	2200	020°	4	partly cloudy	rough	18.53	33.53
123.37-P	11	1000	27°24.0'	114°40.0'	38	320°	4	cloudy	slight	18.76	33.94
123.45-P	11	1650	27°11.0'	115°12.0'	2250	020°	5	cloudy	very rough	18.09	33.77
123.50-P	11	2005	27°03.0'	115°32.0'	2000	360°	4	cloudy	very rough	17.78	33.70
127.40-P	11	0000	26°45.0'	114°30.0'	1650	320°	5	cloudy	rough	19.52	33.78
127.45-P	10	2025	26°30.0'	114°48.0'	1750	320°	4	overcast	moderate	19.60	33.77
127.55-P	10	1335	26°12.0'	115°22.0'	1995	320°	4	cloudy	moderate	18.04	33.55
130.35-P	9	1220	26°21.0'	113°48.0'	500	320°	3	partly cloudy	moderate	19.53	33.75
130.50-P	10	0000	25°48.0'	114°44.0'	2000	340°	3	cloudy	rough	19.94	33.82
133.25-P	8	2245	26°03.0'	112°48.0'	45	320°	4	cloudy	rough	20.21	33.83
137.30-P	8	1310	25°24.0'	112°41.0'	106	320°	3	partly cloudy	rough	20.65	33.77
140.30-P	8	0730	24°47.0'	112°25.0'	53	040°	2	clear	moderate	21.44	34.01
140.40-P	8	0040	24°26.0'	113°02.0'	1700	320°	4	cloudy	rough	22.98	34.34
143.26-P	7	1200	24°18.0'	111°48.0'	48	320°	1	missing	slight	23.56	34.49
143.35-P	7	1815	24°00.0'	112°25.0'	1350	300°	2	cloudy	rough	23.85	34.38
147.25-P	7	0230	23°48.0'	111°22.0'	324	320°	4	missing	moderate	23.32	34.31
150.19-P	6	0745	23°24.0'	110°39.0'	130	320°	3	clear	slight	23.66	34.42
150.30-P	6	1600	23°02.0'	111°18.0'	1300	320°	3	clear	slight	23.74	34.39
153.20-P	5	2300	22°49.0'	110°17.0'	200	270°	1	clear	moderate	23.92	34.31

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