UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

CCOFI Cruise 6301-2
10 January - 23 February 1963

USCG Station November
16 October - 3 November 1962

and

USCG Station November
17 February - 9 March 1963

SIO Reference 64-2
5 March 1963

UNIVERSITY OF CALIFORNIA

SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CCOFI Cruise 6301-2

10 January - 23 February 1963

Sponsored by

Marine Research Committee

SIO Reference 64-2

5 March 1963

Approved for distribution:

Roger Revelle

Roger Revelle, Director

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INTRODUCTION

The data presented in this report were collected by the RV Black Douglas of the Bureau of Commercial Fisheries and the RV Alexander Agassiz of the Scripps Institution of Oceanography on Cruise 6301-2 of the California Cooperative Oceanic Fisheries Investigations program. Also included in this report are the data collected at Station November for the October-November 1962 cruise of the USCGC Pontchartrain and the February-March 1963 cruise of the USCGC Gresham of the United States Coast Guard. The first two figures in this cruise numbering system represent the year of the cruise; the last two figures, the month. In the case of quarterly cruises the last figures are hyphenated. The cruises preceding this one in the series are 6207-8 (Scripps Institution report, SIO Ref. 62-23) and 6210-11 and 6212 (SIO Ref. 63-25).

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

STANDARD PROCEDURES

Processing of the data was carried out using the method described by Klein.[1/] The 125-meter level was introduced into the integration to obtain greater accuracy in the determination of ΔD.

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. The salinity values obtained by salinometer are recorded to three decimal places, provided they meet accepted standards. The values recorded "have a reproducibility of ±0.004‰ salinity at the 95 per cent probability level, and a probable accuracy of ±0.01‰ salinity or better at the same level of probability."[2/] The values are recorded to two decimal places when obtained by chlorinity titration, or by salinometer where only one determination per sample was obtained, or where there is doubt concerning the accuracy of a particular sample, or of all samples on

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

2/ Quotation from Department of Oceanography, University of Washington, Tech. Rep. No. 66, UW Ref. 60-18, October 1960

a station. The accuracy of all samples obtained by salinometer and recorded to two decimal places is believed to be equal to or better than those obtained by manual titration.

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.

On stations where more than one cast is lowered, the various property curves may not agree perfectly. This discrepancy may be caused by changes in geographical position, real property changes with time, slight error in measurement, or a combination of these factors. Stations with overlapping casts have the following footnote: Overlapping casts; reconciliation of property curves when necessary.

FOOTNOTES

Laboratory personnel 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, two 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 the following notation.

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.

PERSONNEL

SHIPS' CAPTAINS

Forster, Charles W., RV Black Douglas
Hilditch, CDR, USCGC Pontchartrain
Miller, Frank, RV Alexander Agassiz
Parks, CDR, USCGC Gresham

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

RV Alexander Agassiz

Lawson, Jan B., Senior Marine Technician
*Bottom, Kenneth S., Senior Marine Technician
Brennen, Robert E., Senior Marine Technician
**Burt, Wayne V., Dr., Observer
***Carlucci, Angelo F., Dr., Marine Biology Department
Crowe, Fred J., Laboratory Assistant
****Ernst, Richard K., Marine Technician
Hart, Joe T., Senior Marine Technician
Hixson, D. Paul, Marine Technician
***Malley, Nuri, Dr., Observer
*Mead, Richard V., Principal Marine Technician
Rosendahl, Donald V., Electronics Technician
**Schwartzlose, Richard A., Laboratory Business Officer
**Sessions, Meredith H., Electronics Technician
Wagner, Vaughn M., Fishery Aid, Bureau of Commercial Fisheries
Welles, George L., Marine Technician
***Wyllie, John G., Laboratory Technician
*****Young, Anthony W., Marine Technician

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*San Diego to San Diego via Cedros Island
**Monterey to San Francisco
***San Francisco to San Diego
****San Diego to San Diego via San Francisco
*****San Diego to San Francisco

RV Black Douglas

Leg I

Farrar, Lloyd J., Fishery Technician, Bureau of Commercial Fisheries
Hodnett, Haley L., Senior Marine Technician
Paloma, Pedro A., Fishery Aid, Bureau of Commercial Fisheries

Leg II

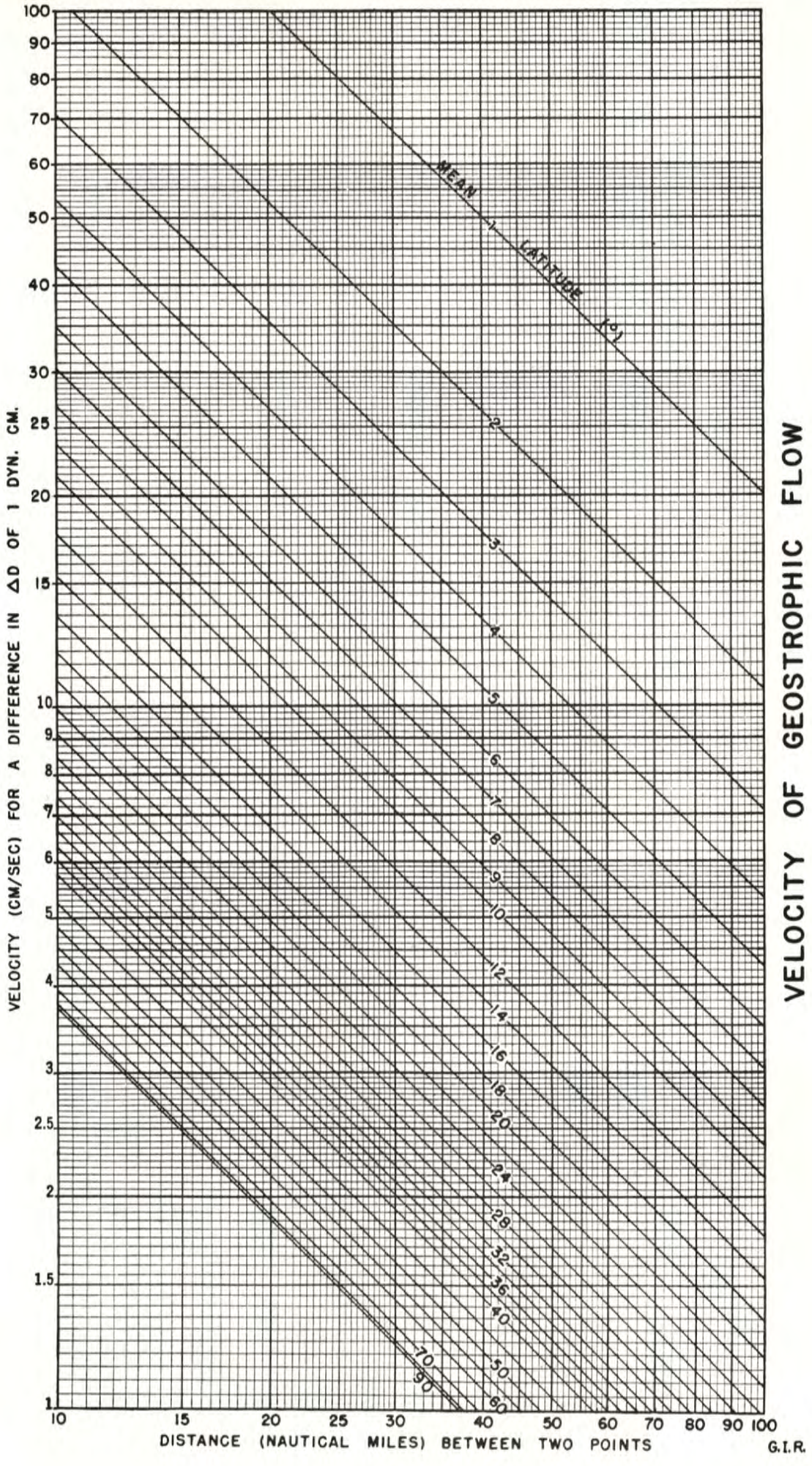
Farrar, Lloyd J., Fishery Technician, Bureau of Commercial Fisheries
Paloma, Pedro A., Fishery Aid, Bureau of Commercial Fisheries

USCGC Gresham

Pine, James S., Senior Marine Technician

USCGC Pontchartrain

Hester, Arthur W., Senior Marine Technician


VELOCITY OF GEOSTROPHIC FLOW
VELOCITY (CM/SEC) FOR A DIFFERENCE IN ΔD OF 1 DYN. CM.
DISTANCE (NAUTICAL MILES) BETWEEN TWO POINTS
MEAN LATITUDE (°)
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.

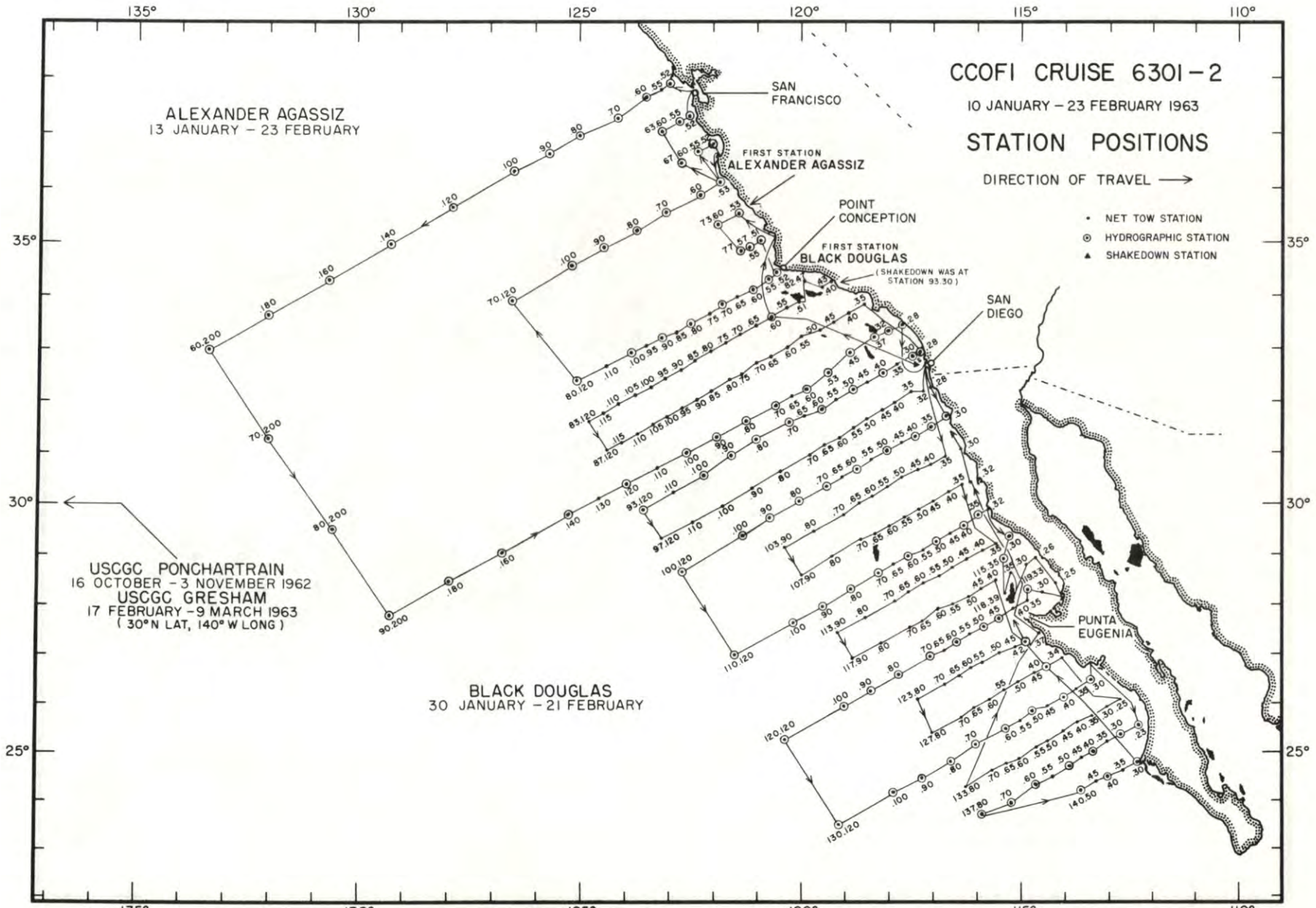

CCOFI CRUISE 6301 – 2
10 JANUARY – 23 FEBRUARY 1963
STATION POSITIONS
DIRECTION OF TRAVEL
NET TOW STATION
HYDROGRAPHIC STATION
SHAKEDOWN STATION
ALEXANDER AGASSIZ
13 JANUARY – 23 FEBRUARY
SAN FRANCISCO
FIRST STATION
ALEXANDER AGASSIZ
POINT CONCEPTION
FIRST STATION
BLACK DOUGLAS
(SHAKEDOWN WAS AT STATION 93.30)
SAN DIEGO
PUNTA EUGENIA
USCGC PONCHARTRAIN
16 OCTOBER – 3 NOVEMBER 1962
USCGC GRESHAM
17 FEBRUARY – 9 MARCH 1963
(30° N LAT, 140° W LONG)
BLACK DOUGLAS
30 JANUARY – 21 FEBRUARY
135°
130°
125°
120°
115°
110°
35°
30°
25°

FIGURE 1

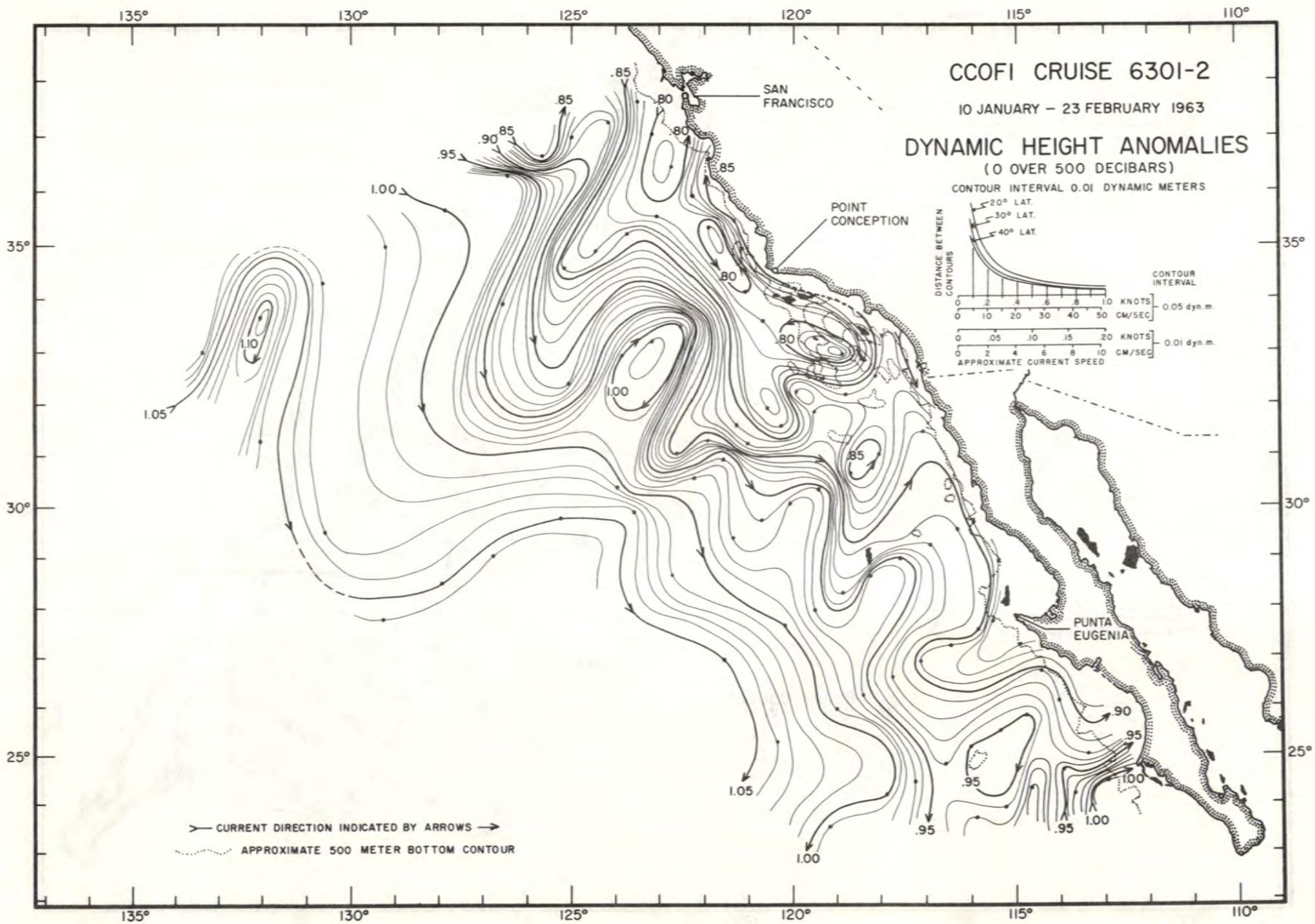

CCOFI CRUISE 6301-2
10 JANUARY – 23 FEBRUARY 1963
DYNAMIC HEIGHT ANOMALIES
(0 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.01 DYNAMIC METERS
SAN FRANCISCO
POINT CONCEPTION
PUNTA EUGENIA
20° LAT.
30° LAT.
40° LAT.
DISTANCE BETWEEN CONTOURS
CONTOUR INTERVAL
KNOTS
CM/SEC
0.05 dyn.m.
0.01 dyn.m.
APPROXIMATE CURRENT SPEED
CURRENT DIRECTION INDICATED BY ARROWS
APPROXIMATE 500 METER BOTTOM CONTOUR
135°
130°
125°
120°
115°
110°
35°
30°
25°

FIGURE 2

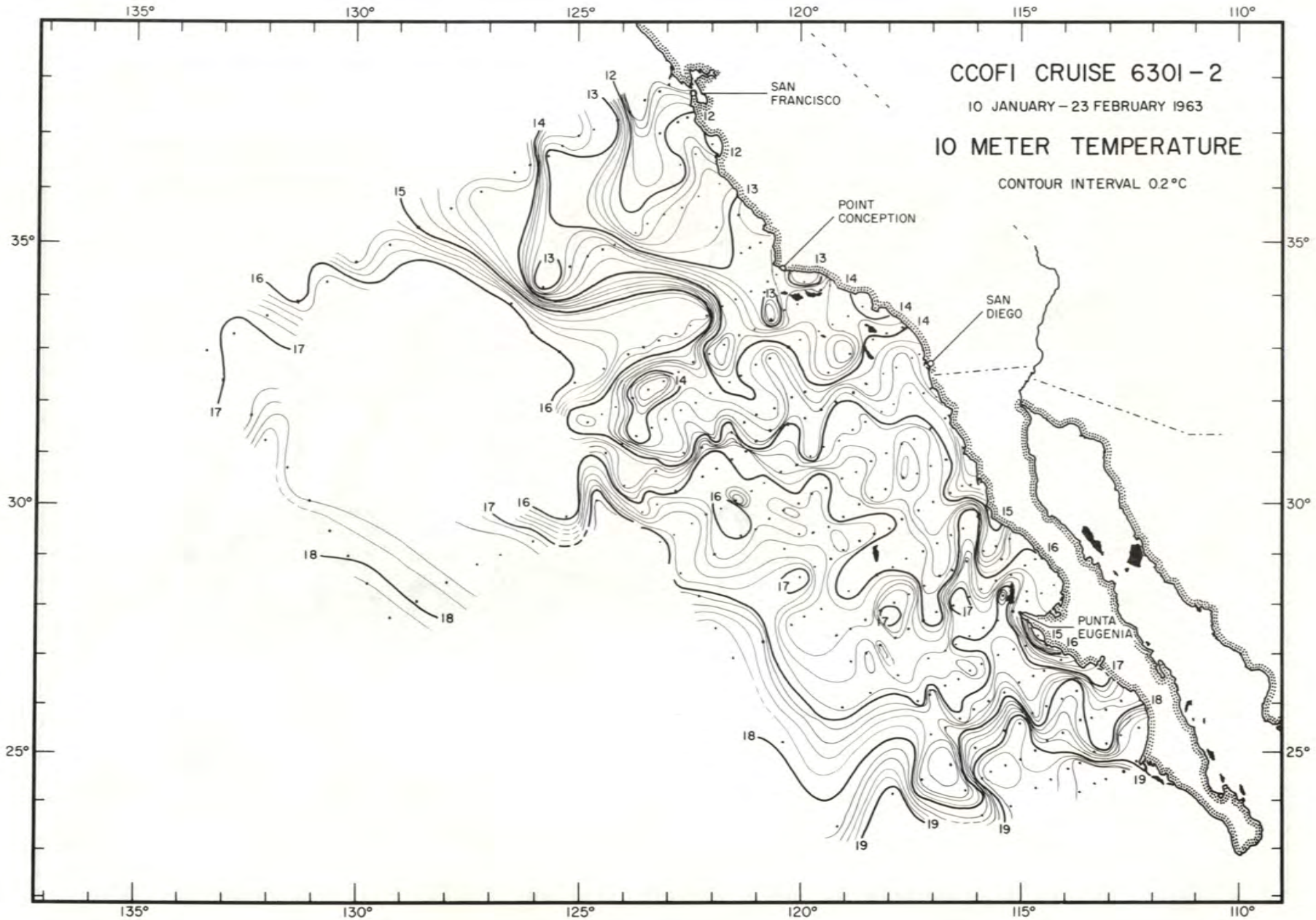

CCOFI CRUISE 6301-2
10 JANUARY - 23 FEBRUARY 1963
10 METER TEMPERATURE
CONTOUR INTERVAL 0.2°C
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
135°
130°
125°
120°
115°
110°
35°
30°
25°

FIGURE 3

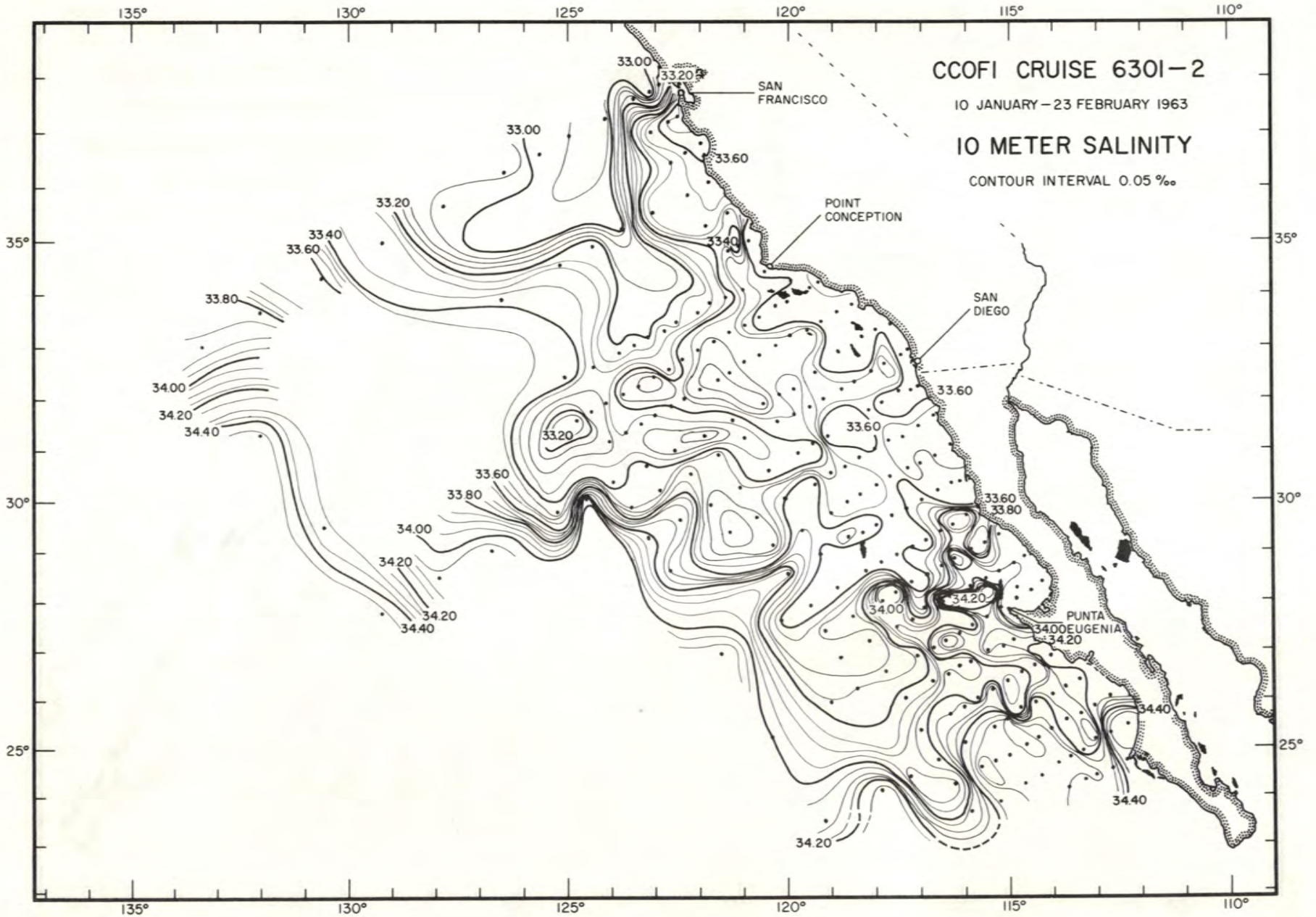

CCOFI CRUISE 6301–2
10 JANUARY – 23 FEBRUARY 1963
10 METER SALINITY
CONTOUR INTERVAL 0.05 ‰
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
135°
130°
125°
120°
115°
110°
35°
30°
25°
33.00
33.20
33.40
33.60
33.80
34.00
34.20
34.40

FIGURE 4

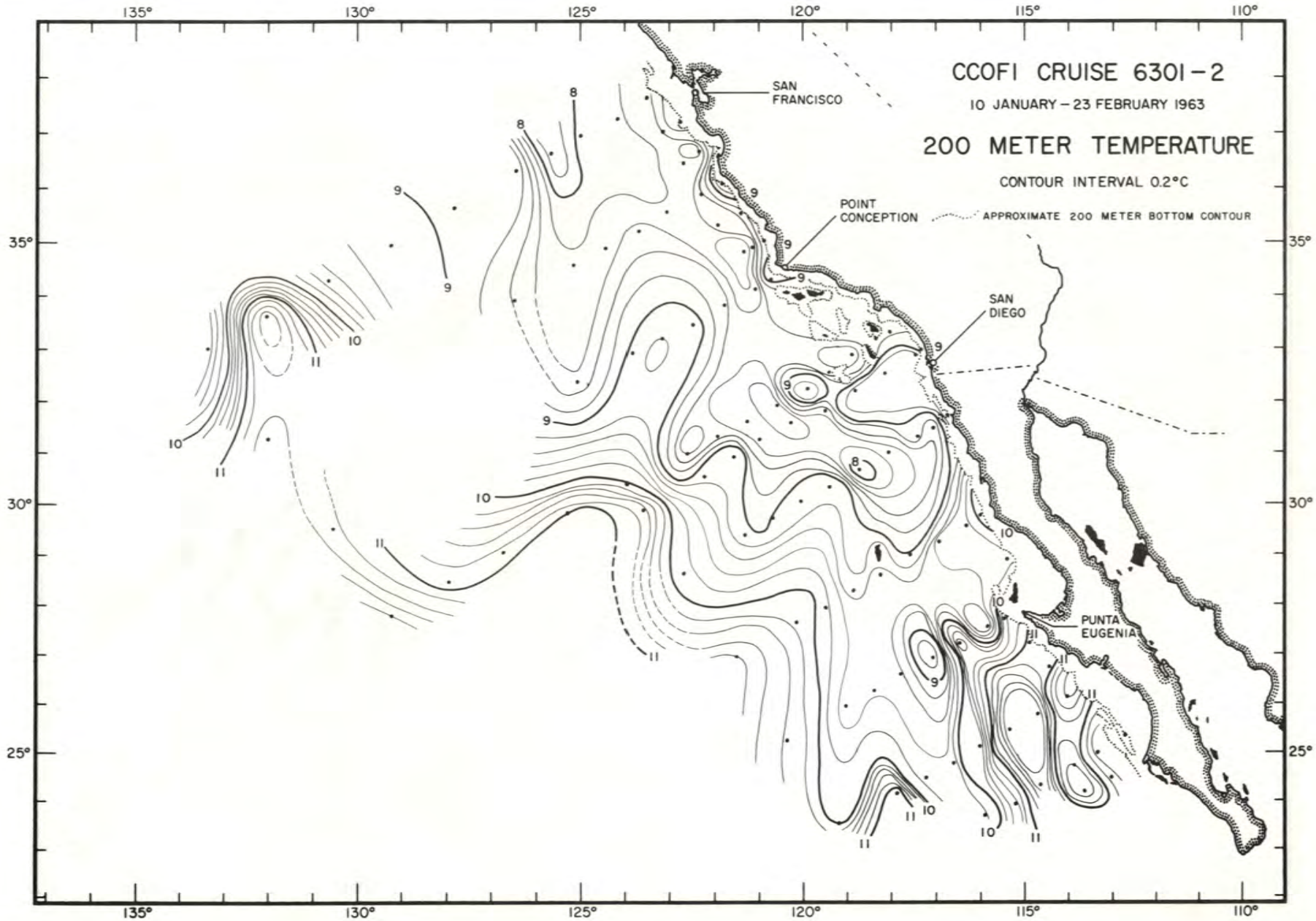

CCOFI CRUISE 6301-2
10 JANUARY - 23 FEBRUARY 1963
200 METER TEMPERATURE
CONTOUR INTERVAL 0.2°C
APPROXIMATE 200 METER BOTTOM CONTOUR
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
135°
130°
125°
120°
115°
110°
35°
30°
25°

FIGURE 5

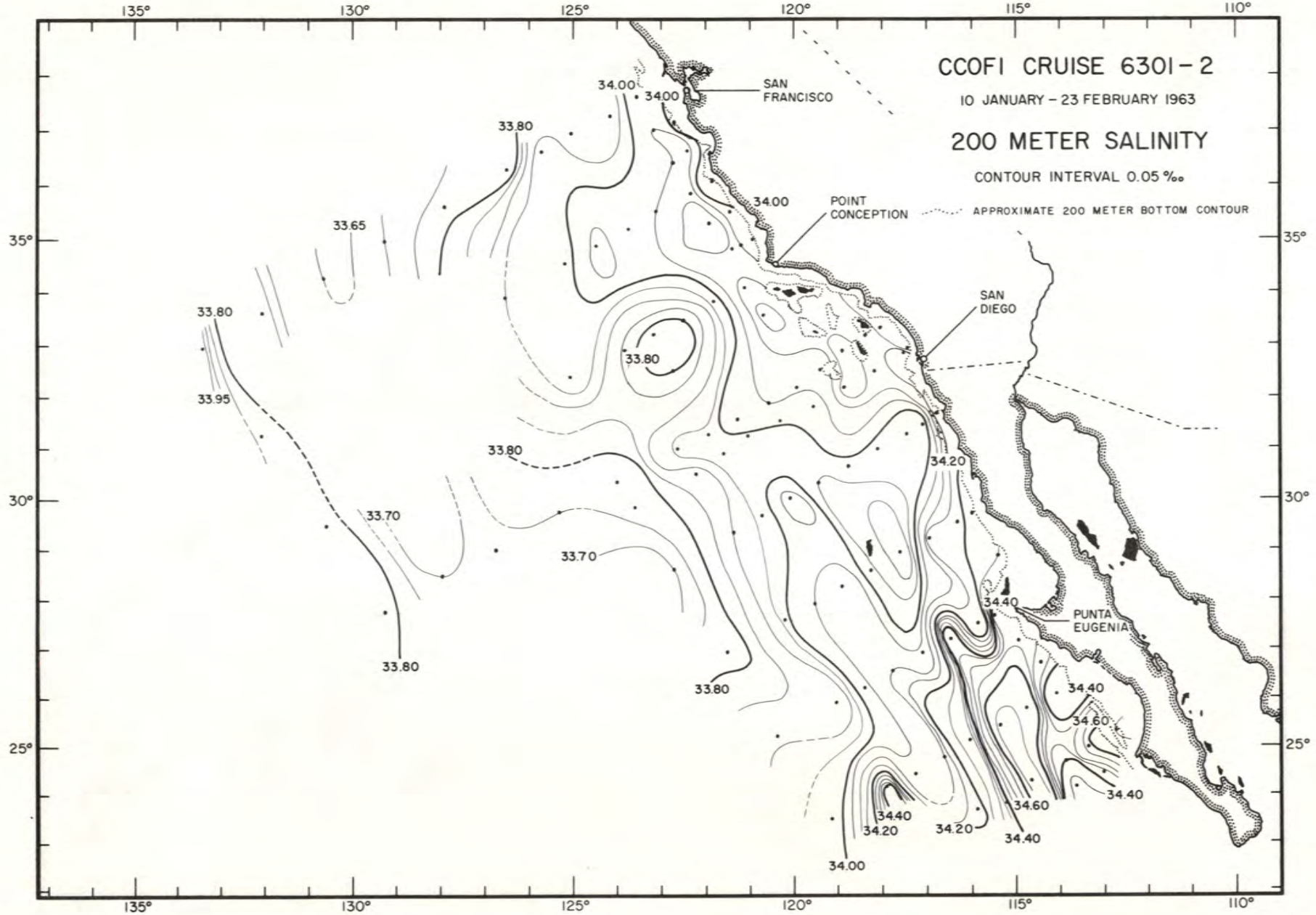

CCOFI CRUISE 6301-2
10 JANUARY - 23 FEBRUARY 1963
200 METER SALINITY
CONTOUR INTERVAL 0.05 ‰
APPROXIMATE 200 METER BOTTOM CONTOUR
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
135°
130°
125°
120°
115°
110°
35°
30°
25°
34.00
33.80
33.65
33.95
33.70
34.20
34.40
34.60

FIGURE 6

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
ALEXANDER AGASSIZ; January 24, 1963; 0030 GCT; 37°53.5'N, 123°01.5'W; sounding, 35 fm; wind, 220°, force 1; weather, partly cloudy; sea, moderate; wire angle, 03°.														60.52
1	11.50	33.178a)	6.39	0.43	6	0.16	269	0	(11.50)	(33.18)	(6.39)	(25.29)	(269)	(0.00)
11	11.09	33.096a)	6.38	0.54	8	0.19	268	10	11.10	33.10	6.38	25.30	268	0.03
31	11.07	33.228a)	5.82	0.72	10	0.32	258	20	11.00	33.16	6.02	25.36	262	0.05
51	10.85	33.509a)	5.60	1.03	16	0.20	234	30	11.07	33.23	5.83	25.41	258	0.08
								50	10.85	33.50	5.60	25.66	234	0.13
ALEXANDER AGASSIZ; January 24, 1963; 0925, 0656 GCT; 37°39'N, 123°38'W; sounding, 1700 fm; wind, 120°, force 1; weather, overcast; sea, moderate; wire angle, 00°, 03°.														60.60
0	11.09	33.172	6.60	0.64	4	0.22	263	0	11.09	33.17	6.60	25.36	263	0.00
10	11.10	33.171	6.57	0.60	5	0.18	263	10	11.10	33.17	6.57	25.35	263	0.03
31	11.24	33.329	5.93	0.80	7	0.29	254	20	11.17	33.22	6.36	25.38	260	0.05
56	10.79	33.328	5.45	0.96	12	0.23	246	30	11.23	33.32	5.95	25.45	254	0.08
65	10.76	33.414	5.29	1.27	15	0.12	239	50	11.20	33.33	5.83	25.46	253	0.13
75	10.13	33.430	4.63	1.41	20	0.04	228	75	10.13	33.43	4.63	25.73	228	0.19
90	9.86	33.547	4.38	1.41	24	0.03	215	100	10.07	33.68	3.95	25.93	208	0.24
106	10.00	33.718	3.62	1.71	28	0.03	204	125	9.42	33.84	3.11	26.16	186	0.29
130	9.30	33.856	3.04	1.77	35	0.01	183	150	8.98	33.92	2.90	26.30	173	0.34
150	8.98	33.922	2.90	1.97	38	0.00	173	200	8.31	34.02	2.94	26.48	156	0.42
175	8.62	33.976	2.96	1.83	39	0.00	164	250	7.54	34.04	2.56	26.61	144	0.50
205	8.24	34.024	2.94	1.85	41	0.00	155	300	6.83	34.05	2.16	26.72	134	0.57
235	7.82	34.039	2.71	1.96	49	-	148	400	6.28	34.17	1.11	26.88	118	0.70
275	7.15	34.045	2.35	2.53b)	57	-	138	500	5.79	34.23	0.63	26.99	107	0.82
335	6.50	34.066	1.81	2.30b)	65	-	128	600	5.09	34.28	0.42	27.12	96	0.93
411	6.44	34.200	0.95	2.79	76	-	118	700	4.69	34.34	0.34	27.21	87	1.03
486	5.99	34.220	0.81	2.93	84	-	111	800	4.35	34.39	0.40	27.29	80	1.12
566	5.32	34.244	0.63	2.96	87	-	101	1000	3.80	34.45	0.54	27.39	70	1.28
								1200	3.34	34.50	0.78	27.48	62	1.43
450c)	5.94	34.199	0.99	-	-	-	111	1500	2.70	34.56	1.17	27.58	51	1.63
524	5.54	34.242	0.54	-	-	-	104	2000	2.02	34.61	1.77	27.68	42	1.91
600	5.09	34.276	0.42	-	-	-	96	2500	1.78	34.65	2.40	27.73	37	2.15
700	4.69	34.336	0.34	-	-	-	87							
802	4.34	34.387	0.41	-	-	-	80							
1003	3.79	34.452	0.55	-	-	-	69							
1205	3.32	34.503	0.80	-	-	-	61							
1455	2.80	34.546	1.11	-	-	-	53							
1706	2.34	34.582	1.45	-	-	-	47							
1955	2.07	34.606	1.71	-	-	-	43							
2204	1.90	34.633	2.10	-	-	-	40							
2454	1.80	34.646	2.34	-	-	-	38							
2701	1.70	34.657	2.50	-	-	-	36							
2802	1.68	34.663	2.56	-	-	-	36							

a) All salinity samples appear to have been reversed; they are assumed to be listed in correct order.
b) Samples may have been reversed.
c) Overlapping casts; reconciliation of property curves when necessary.

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
60.70	ALEXANDER AGASSIZ; January 24, 1963; 1500 GCT; 37°16'N, 124°14'W; sounding, 2175 fm; wind, 300°, force 3; weather, cloudy; sea, very rough; wire angle, 10°.													
1	12.98	32.943	6.22	0.38	4	0.05	313	0	(12.98)	(32.94)	(6.22)	(24.82)	(313)	(0.00)
11	13.00	32.938	6.16	0.39	2	0.05	314	10	13.00	32.94	6.16	24.82	314	0.03
31	12.96	32.954	6.17	0.44	2	0.07	312	20	12.98	32.94	6.16	24.82	313	0.06
60	12.64	32.960	6.07	0.51	4	0.13	306	30	12.96	32.95	6.17	24.84	312	0.09
70	11.84	33.095	5.96	0.78	6	0.04	281	50	12.84	32.96	6.14	24.87	309	0.16
85	10.50	33.138	5.49	1.01	11	0.02	255	75	11.05	33.10	5.73	25.31	267	0.23
100	9.92	33.328	5.08	1.27	16	0.03	232	100	9.92	33.33	5.08	25.68	232	0.29
115	9.46	33.491	4.75	1.47	21	0.02	213	125	9.45	33.58	4.50	25.96	206	0.35
140	9.44	33.706	3.97	1.62	27	0.02	196	150	9.40	33.78	3.58	26.12	190	0.40
160	9.26	33.841	3.24	1.82	31	0.01	184	200	8.18	33.91	3.29	26.41	162	0.49
189	8.36	33.870	3.36	1.88	37	0.01	168	250	7.34	33.97	3.01	26.58	146	0.57
217	7.93	33.966	3.16	2.02	43	0.01	155	300	6.66	33.99	2.62	26.69	136	0.64
247	7.40	33.970	3.04	1.97	48	0.01	147	400	5.95	34.08	1.12	26.85	121	0.77
297	6.70	33.988	2.68	2.16	56	0.01	137	500	5.44	34.18	0.60	27.00	107	0.89
350	6.17	-	-	-	-	-		600	5.01	34.28		27.13	95	1.00
433	5.82	34.117	0.82	2.76	78	0.02	116							
517	5.34	34.191	0.54	2.84	91	0.01	105							
602	5.00	34.278	-	2.83	106	0.00	95							
60.80	ALEXANDER AGASSIZ; January 24, 1963; 2317 GCT; 36°57.5'N, 125°04'W; sounding, 2325 fm; wind, 360°, force 4; weather, cloudy; sea, very rough; wire angle, 07°.													
1	13.42	32.952	6.49	0.42	2	0.01	321	0	(13.42)	(32.95)	(6.49)	(24.74)	(321)	(0.00)
11	13.40	32.952	6.12	0.41	2	0.01	321	10	13.40	32.95	6.15	24.75	321	0.03
31	13.38	32.953	6.11	0.44	2	0.01	320	20	13.39	32.95	6.12	24.75	321	0.06
61	11.13	32.998	5.80	0.80	6	0.03	276	30	13.38	32.95	6.11	24.75	320	0.10
71	10.14	33.016	5.69	0.99	10	0.01	258	50	12.95	32.98	6.00	24.86	310	0.16
86	9.97	33.167	5.34	1.15	13	0.02	245	75	10.09	33.04	5.64	25.43	256	0.23
101	9.72	33.382	4.83	1.51	20	0.01	225	100	9.72	33.37	4.88	25.75	226	0.29
116	9.34	33.509	4.51	1.62	23	0.01	209	125	9.12	33.57	4.39	26.00	201	0.35
141	8.78	33.683	4.12	1.77	34	0.01	188	150	8.66	33.75	3.85	26.21	181	0.39
160	8.54	33.805	3.55	1.86	38	0.00	175	200	8.03	33.93	3.15	26.45	159	0.48
190	8.17	33.904	3.23	1.97	45	0.00	163	250	7.26	34.00	2.45	26.62	143	0.56
220	7.74	33.969	2.94	2.02	50	0.00	152	300	6.61	33.99	2.33	26.70	135	0.63
250	7.26	34.001	2.45	2.12	57	-	143	400	5.96	34.09	1.43	26.86	120	0.76
299	6.62	33.992	2.34	2.30	64	0.00	135	500	5.26	34.16	0.84	27.00	107	0.88
355	6.19	34.051	1.75	2.41	75	0.04	126	600	4.76	34.22	0.56	27.11	97	0.99
439	5.74	34.126	1.17	2.76	88	0.00	115							
523	5.11	34.169	0.75	2.80	103	0.00	104							
608	4.72	34.220	0.54	2.73	115	0.00	96							
60.90	ALEXANDER AGASSIZ; January 25, 1963; 1435 GCT; 36°37'N, 125°46'W; sounding, 2450 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 26°.													
1	12.94	32.973	6.22	0.46	2	0.03	310	0	(12.94)	(32.97)	(6.22)	(24.85)	(311)	(0.00)
9	12.94	32.973	6.19	0.50	3	0.03	310	10	12.94	32.97	6.19	24.85	311	0.03
32	12.56	33.023	6.20	0.54	4	0.07	300	20	12.60	32.98	6.20	24.93	303	0.06
60	10.84	32.924	5.97	0.72	6	0.03	277	30	12.57	33.02	6.20	24.97	300	0.09
69	10.44	33.163	5.47	1.10	13	0.02	252	50	12.50	33.03	6.20	24.99	298	0.15
87	9.72	33.448	4.70	1.47	21	0.01	220	75	10.08	33.31	5.03	25.64	236	0.22
100	9.15	33.506	4.66	1.53	25	0.01	207	100	9.15	33.51	4.66	25.95	206	0.27
114	8.97	33.661	-	1.68	30	0.02	192	125	8.82	33.75	3.80	26.19	184	0.32
141	8.56	33.836	3.38	1.84	37	0.01	173	150	8.39	33.87	3.24	26.35	168	0.37
159	8.24	33.901	3.17	1.89	40	0.00	164	200	7.70	33.98	3.01	26.54	150	0.45
186	7.92	33.962	3.06	1.90	44	0.00	155	250	7.13	34.02	2.63	26.65	140	0.52
217	7.43	33.988	2.93	1.99	49	0.01	146	300	6.58	34.03	2.09	26.73	132	0.59
244	7.18	34.014	2.69	2.07	52	0.00	141	400	5.70	34.10	1.44	26.90	116	0.72
287	6.76	34.029	2.18	2.19	59	0.00	134	500	5.37	34.22	0.80	27.04	103	0.84
346	5.95	34.037	1.83	2.39	70	0.00	124	600	(4.90)	(34.28)	(0.51)	(27.14)	(94)	(0.94)
436	5.60	34.148	1.19	2.71	80	0.00	111							
520	5.28	34.231	0.71	2.78	92	0.00	101							
593	4.94	34.278	0.52	2.85	102	0.00	94							

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ALEXANDER AGASSIZ; January 25, 1963; 2220 GCT; 36°18'N, 126°31'W; sounding, 2500 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 20°. 60.100

2	14.46	33.057	5.83	0.35	3	0.00	334	0	(14.46)	(33.06)	(5.83)	(24.61)	(333)	(0.00)
11	14.47	33.057	5.88	0.33	4	0.01	334	10	14.47	33.06	5.88	24.61	334	0.03
49	14.45	33.059	5.80	0.33	1	0.01	333	20	14.47	33.06	5.84	24.61	334	0.07
82	14.44	33.056	5.78	0.32	2	0.00	333	30	14.46	33.06	5.82	24.61	333	0.10
101	11.53	32.976	5.91	0.60	4	0.03	285	50	14.45	33.06	5.80	24.62	333	0.17
115	10.88	33.043	5.68	0.87	8	0.02	269	75	14.44	33.06	5.79	24.62	333	0.25
134	10.13	33.174	5.38	0.96	11	0.03	247	100	11.70	32.98	5.91	25.10	287	0.33
153	9.39	33.265	5.13	1.10	15	0.01	228	125	10.52	33.11	5.52	25.41	258	0.40
172	9.20	33.486	4.88	1.12	18	0.02	209	150	9.47	33.25	5.18	25.70	231	0.46
200	8.98	33.783	3.68	1.68	32	0.01	184	200	8.98	33.78	3.68	26.19	184	0.56
229	8.30	33.887	3.26	1.73	37	0.02	166	250	8.12	33.95	2.97	26.45	159	0.65
254	8.08	33.955	2.93	1.84	46	0.02	158	300	7.21	33.98	2.72	26.61	144	0.73
288	7.48	33.986	2.74	1.89	48	0.01	147	400	5.84	34.04	1.65	26.84	122	0.87
331	6.56	33.983	2.65	2.02	49	0.02	135	500	5.33	34.13	1.03	26.97	110	0.99
384	5.99	34.028	1.78	2.29	60	0.01	125	600	4.90	34.21	0.57	27.08	99	1.10
466	5.42	34.092	1.29	2.46	72	0.01	113							
554	5.20	34.198	0.63	2.61	86	0.01	103							
628	4.69	34.220	0.52	2.67	100	0.01	96							

ALEXANDER AGASSIZ; January 26, 1963; 0649 GCT; 35°37'N, 127°56'W; sounding, 2610 fm; wind, 350°, force 4; weather, cloudy; sea, moderate; wire angle, 20°. 60.120

1	14.46	33.009	6.10	0.40	2	0.00	337	0	(14.46)	(33.01)	(6.10)	(24.58)	(337)	(0.00)
10	14.47	33.007	6.07	0.39	2	0.00	338	10	14.47	33.01	6.07	24.57	337	0.03
43	14.34	32.985	6.07	0.42	1	0.00	337	20	14.47	33.00	6.07	24.57	338	0.07
71	14.44	33.071	5.98	0.44	2	0.00	332	30	14.47	33.00	6.07	24.57	338	0.10
90	14.40	33.647	6.10	0.37	3	0.14	289	50	14.34	33.00	6.05	24.59	335	0.17
105	13.08	33.527	5.84	0.54	5	0.09	272	75	14.60	33.22	5.99	24.71	325	0.25
119	11.23	33.267	5.74	0.93	7	0.02	258	100	14.30	33.65	6.09	25.10	287	0.33
138	10.43	33.407	5.29	1.10	11	0.01	234	125	10.93	33.29	5.63	25.48	251	0.40
157	9.92	33.550	5.33	1.11	12	0.01	215	150	10.08	33.50	5.33	25.79	222	0.46
184	9.50	33.685	5.13	1.22	17	0.00	199	200	8.99	33.78	4.85	26.19	184	0.56
207	8.80	33.830	4.71	1.48	26	0.00	177	250	8.34	33.98	4.34	26.44	159	0.65
230	8.50	33.940	4.47	1.61	31	0.00	165	300	7.60	34.01	2.95	26.58	147	0.73
263	8.22	33.983	4.26	1.67	35	0.00	158	400	6.54	34.07	1.78	26.77	128	0.87
298	7.66	34.005	3.03	2.19	48	0.00	148	500	5.53	34.14	1.01	26.95	111	1.00
345	7.01	34.029	2.23	2.45	58	0.00	138							
409	6.45	34.073	1.72	2.69	69	0.00	127							
489	5.62	34.133	1.09	3.18	86	0.00	113							
572	5.16	34.218	0.68	3.24	100	0.00	101							

ALEXANDER AGASSIZ; January 26, 1963; 1508 GCT; 34°56.5'N, 129°18.5'W; sounding, 2605 fm; wind, 360°, force 3; weather, cloudy; sea, rough; wire angle, 01°. 60.140

2	15.66	33.340	5.66	0.33	2	0.00	338	0	(15.66)	(33.34)	(5.66)	(24.57)	(338)	(0.00)
12	15.72	33.340	5.55	0.33	4	0.00	339	10	15.71	33.34	5.57	24.56	339	0.03
32	15.72	33.351	5.66	0.34	2	0.00	338	20	15.72	33.34	5.59	24.56	339	0.07
62	15.97	33.438	5.69	0.32	3	0.01	337	30	15.72	33.35	5.65	24.56	338	0.10
72	16.18	33.523	5.63	0.33	3	0.00	336	50	15.80	33.38	5.68	24.57	338	0.17
87	14.36	33.552	5.94	0.36	3	0.03	295	75	16.17	33.53	5.63	24.60	335	0.25
103	13.40	33.529	5.75	0.42	3	0.12	278	100	13.62	33.54	5.80	25.16	282	0.33
118	12.34	33.414	5.59	0.57	4	0.04	267	125	12.40	33.44	5.58	25.32	266	0.40
143	10.80	33.379	5.29	0.87	10	0.01	242	150	10.33	33.39	5.17	25.66	234	0.46
163	9.74	33.433	4.99	1.12	14	0.00	221	200	9.01	33.70	4.51	26.12	190	0.57
193	9.10	33.634	4.59	1.34	22	0.00	196	250	8.30	33.91	3.65	26.39	164	0.66
223	8.75	33.855	4.25	1.48	27	0.01	175	300	7.63	33.96	3.46	26.53	151	0.74
253	8.24	33.908	3.63	1.72	33	0.00	163	400	6.09	33.98	2.55	26.76	130	0.89
303	7.60	33.965	3.44	1.81	42	0.00	150	500	5.20	34.03	1.61	26.91	116	1.02
358	6.68	33.972	3.06	1.99	53	0.00	138	600	4.93	34.17	0.74	27.05	102	1.13
443	5.63	33.992	2.15	2.32	71	0.00	123							
528	5.08	34.057	1.38	2.63	86	0.00	112							
613	4.92	34.189	0.64	2.84	100	0.00	101							

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

60.160 ALEXANDER AGASSIZ; January 27, 1963; 0135 GCT; 34°16.5'N, 130°42'W; sounding, 2800 fm; wind, 060°, force 3; weather, cloudy; sea, very rough; wire angle, 03°.

1	16.26	33.628	5.73	0.30	2	0.00	330	0	(16.26)	(33.63)	(5.73)	(24.66)	(329)	(0.00)
11	16.28	33.625	5.75	0.30	1	0.00	330	10	16.28	33.63	5.75	24.65	330	0.03
41	16.28	33.637	5.72	0.30	2	0.00	329	20	16.28	33.63	5.74	24.65	330	0.07
67	16.30	33.665	5.65	0.31	2	0.00	328	30	16.28	33.63	5.73	24.65	330	0.10
87	16.10	33.643	5.76	0.34	2	0.01	325	50	16.29	33.66	5.67	24.67	328	0.17
101	13.96	33.468	6.01	0.41	2	0.06	294	75	16.30	33.66	5.67	24.67	328	0.25
116	13.17	33.427	5.97	0.48	3	0.11	281	100	14.15	33.48	6.01	25.00	296	0.33
136	13.44	33.783	5.68	0.50	4	0.03	260	125	13.28	33.58	5.86	25.26	272	0.40
156	11.34	33.509	5.44	0.84	7	0.02	242	150	12.00	33.59	5.50	25.52	248	0.46
181	10.02	33.514	5.27	1.08	11	0.01	220	200	9.54	33.65	5.10	26.00	202	0.58
206	9.44	33.698	5.02	1.27	17	0.02	197	250	8.70	33.94	4.24	26.36	168	0.67
231	9.06	33.841	4.58	1.51	24	0.01	180	300	8.03	33.99	3.93	26.50	154	0.76
262	8.50	33.961	4.13	1.69	32	0.01	163	400	6.35	33.99	2.80	26.73	132	0.90
297	8.08	33.992	3.96	1.80	38	0.01	155	500	5.47	34.05	1.57	26.89	117	1.03
348	7.10	33.982	3.52	2.07	49	0.01	142							
413	6.22	33.988	2.65	2.41	63	0.01	131							
487	5.58	34.041	1.70	2.82	79	0.01	119							
567	4.80	34.094	1.15	2.94	98	0.00	106							

60.180 ALEXANDER AGASSIZ; January 27, 1963; 1108 GCT; 33°36.5'N, 132°04'W; sounding, 2750 fm; wind, 120°, force 2; weather, cloudy; sea, missing; wire angle, 03°.

1	16.78	33.845	5.60	0.25	2	0.00	325	0	(16.78)	(33.84)	(5.60)	(24.70)	(326)	(0.00)
11	16.80	33.843	5.63	0.28	2	0.00	326	10	16.79	33.84	5.63	24.69	326	0.03
41	16.80	33.848	5.68	0.27	2	0.00	325	20	16.80	33.84	5.64	24.69	326	0.07
66	16.80	33.845	5.55	0.27	2	0.00	326	30	16.80	33.85	5.66	24.70	325	0.10
85	16.84	33.850	5.59	0.27	2	0.00	326	50	16.80	33.85	5.62	24.70	325	0.16
101	16.85	33.863	5.65	0.28	2	0.00	325	75	16.82	33.85	5.57	24.69	326	0.25
116	16.78	33.913	5.60	0.26	2	0.00	320	100	16.85	33.86	5.65	24.70	326	0.33
136	15.68	34.154	5.64	0.24	3	0.17	279	125	16.33	34.03	5.62	24.95	302	0.41
156	14.75	34.090	5.63	0.32	4	0.03	264	150	15.00	34.11	5.63	25.31	268	0.48
182	13.18	33.901	5.39	0.51	6	0.01	247	200	11.75	33.78	5.36	25.71	229	0.61
206	11.40	33.760	5.33	0.70	8	0.00	225	250	9.80	33.81	4.81	26.08	194	0.71
232	10.35	33.743	5.12	0.96	12	0.00	208	300	8.94	33.99	4.30	26.36	168	0.81
263	9.46	33.873	4.60	1.26	22	0.01	184	400	7.09	33.98	3.42	26.62	142	0.97
297	9.00	33.985	4.33	1.40	27	0.00	169	500	5.99	34.04	1.90	26.82	124	1.11
347	7.88	34.004	3.43	1.84	39	0.00	151							
411	6.96	33.979	3.42	1.89	47	0.00	141							
487	6.17	34.035	2.03	2.33	68	0.00	127							
566	5.10	34.053	1.52	2.58	83	0.00	113							

60.200 ALEXANDER AGASSIZ; January 27, 1963; 2105 GCT; 32°56.5'N, 133°27'W; sounding, 2500 fm; wind, 110°, force 5; weather, cloudy; sea, high; wire angle, 20°.

1	16.90	33.868	5.66	0.30	3	0.00	326	0	(16.90)	(33.87)	(5.66)	(24.69)	(326)	(0.00)
10	16.91	33.868	5.69	0.29	2	0.00	326	10	16.91	33.87	5.69	24.69	326	0.03
48	16.92	33.868	5.67	0.30	3	0.00	327	20	16.91	33.87	5.69	24.69	326	0.07
82	16.91	33.865	5.59	0.31	3	0.00	327	30	16.92	33.87	5.68	24.69	327	0.10
101	14.09	33.556	5.93	0.47	4	0.07	290	50	16.92	33.87	5.67	24.69	327	0.16
115	13.18	33.603	5.59	0.61	5	0.02	269	75	16.91	33.87	5.60	24.69	326	0.25
134	11.84	33.671	5.27	0.81	8	0.00	239	100	14.15	33.56	5.93	25.06	291	0.32
153	10.50	33.684	4.89	1.12	14	0.00	215	125	12.27	33.65	5.39	25.51	248	0.39
172	9.80	33.763	3.52	1.72	25	0.00	198	150	10.68	33.68	4.98	25.83	218	0.45
201	9.29	33.969	2.10	2.18	38	0.00	174	200	9.31	33.97	2.11	26.28	175	0.55
229	9.12	34.046	1.76	2.38	42	0.00	166	250	9.04	34.08	1.68	26.41	162	0.64
255	9.02	34.083	1.66	2.33	42	0.00	162	300	8.82	34.16	1.39	26.51	153	0.72
288	8.84	34.137	1.43	2.50	44	0.00	155	400	8.44	34.24	1.10	26.63	142	0.87
331	8.72	34.192	1.30	2.61	47	0.00	149	500	7.79	34.26	0.88	26.74	131	1.02
384	8.51	34.231	-	2.68	50	0.01	143	600	6.61	34.26	0.69	26.91	115	1.15
466	8.10	34.262	0.93	2.81	55	0.01	135							
553	7.20	34.260	0.80	2.91	81	0.00	123							
625	6.29	34.260	0.61	3.02	82	0.00	111							

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ALEXANDER AGASSIZ; January 20, 1963; 1107 GCT; 37°18.5'N, 122°37'W; sounding, 47 fm; wind, 100°, force 2; weather, clear; sea, missing; wire angle, 01°. 63.52

1	12.00	33.663	5.84	0.68	10	242	0	(12.00)	(33.66)	(5.84)	(25.57)	(243)	(0.00)
11	12.01	33.649	5.93	0.71	10	244	10	12.01	33.65	5.93	25.56	243	0.02
31	11.98	33.643	5.71	0.73	4	243	20	12.00	33.64	5.82	25.55	244	0.05
51	11.39	33.658	4.32	1.24	20	232	30	11.99	33.64	5.72	25.56	244	0.07
76	11.02	33.661	4.20	1.44	28	225	50	11.40	33.66	4.33	25.68	232	0.12
							75	11.03	33.66	4.21	25.75	226	0.18

ALEXANDER AGASSIZ; January 20, 1963; 0906 GCT; 37°12.5'N, 122°49.5'W; sounding, 140 fm; wind, 040°, force 1; weather, clear; sea, missing; wire angle, 01°. 63.55

1	12.11	33.653	5.66	0.62	10	245	0	(12.11)	(33.65)	(5.66)	(25.54)	(245)	(0.00)
12	12.14	33.656	5.71	0.64	8	245	10	12.14	33.65	5.70	25.53	246	0.02
31	12.12	33.655	5.67	0.65	9	245	20	12.13	33.66	5.69	25.54	245	0.05
57	12.06	33.656	5.65	0.72	9	244	30	12.12	33.66	5.67	25.55	245	0.07
66	11.78	33.649	5.08	0.90	13	239	50	12.08	33.66	5.65	25.55	244	0.12
77	10.98	33.697	3.89	-	-	222	75	11.08	33.68	4.06	25.75	225	0.18
92	10.24	33.773	3.41	-	-	204	100	10.15	33.79	3.29	26.00	201	0.24
106	10.10	33.796	3.22	-	-	200	125	9.88	33.84	3.02	26.09	193	0.29
127	9.86	33.838	3.01	-	-	193	150	9.60	33.88	2.97	26.17	186	0.33
147	9.64	33.865	2.99	-	-	188	200	8.78	33.99	2.55	26.38	165	0.42
172	8.92	33.970	2.61	-	-	169							
202	8.77	33.990	2.51	-	-	165							
227	8.70	34.001	2.39	-	-	163							

ALEXANDER AGASSIZ; January 20, 1963; 0443, 0217 GCT; 37°02.5'N, 123°11.5'W; sounding, 1360 fm; wind, 070°, force 3; weather, clear; sea, missing; wire angle, 05°, 15°. 63.60

1	11.97	33.573	6.05	0.71	8	248	0	(11.97)	(33.57)	(6.05)	(25.51)	(249)	(0.00)
11	11.99	33.574	6.08	0.74	8	249	10	11.99	33.57	6.08	25.50	249	0.02
31	11.99	33.567	6.04	0.75	8	249	20	11.99	33.57	6.06	25.50	249	0.05
61	10.88	33.632	4.12	0.97	19	225	30	11.99	33.57	6.04	25.50	249	0.07
71	10.73	33.652	4.10	1.47	20	221	50	11.99	33.57	6.04	25.50	249	0.12
86	9.90	33.616	4.07	-	-	210	75	10.00	33.62	4.08	25.90	211	0.18
102	9.34	33.681	4.02	-	-	197	100	9.30	33.67	4.03	26.05	197	0.23
117	9.47	33.895	3.01	-	-	183	125	9.40	33.92	2.89	26.23	180	0.28
142	9.14	33.950	2.76	-	-	174	150	8.98	33.98	2.69	26.34	169	0.33
161	8.78	34.008	2.60	-	-	164	200	8.40	34.05	2.37	26.49	155	0.41
191	8.52	34.039	2.38	-	-	158	250	7.79	34.11	1.88	26.63	142	0.48
221	8.13	34.064	2.37	-	-	150	300	7.27	34.15	1.42	26.73	132	0.56
252	7.76	34.109	1.84	-	-	142	400	6.37	34.19	1.00	26.89	117	0.69
306	7.20	34.155	1.39	-	-	131	500	5.87	34.24	0.74	26.99	108	0.80
361	6.54	34.166	1.17	-	-	121	600	5.25	34.30	0.47	27.11	96	0.91
445	6.11	34.216	0.87	-	-	112	700	4.72	34.34	0.60	27.21	87	1.01
529	5.60	34.263	0.63	-	-	103	800	4.43	34.38	0.50	27.27	81	1.10
613	5.31	34.311	0.49	-	-	96	1000	3.77	34.45	0.64	27.39	69	1.27
							1200	3.29	34.50	0.91	27.48	61	1.42
438a)	6.29	34.211	0.88	-	-	115	1500	2.71	34.56	1.22	27.58	52	1.61
511	5.84	34.244	0.71	-	-	107	2000	2.02	34.61	1.91	27.68	42	1.89
585	5.28	34.287	0.44	-	-	97							
683	4.80	34.338	0.62	-	-	88							
783	4.48	34.368	0.49	-	-	83							
880	4.20	34.408	0.55	-	-	77							
1028	3.68	34.459	0.68	-	-	68							
1274	3.14	34.516	0.99	-	-	59							
1469	2.76	34.548	1.18	-	-	53							
1667	2.44	34.577	1.48	-	-	48							
1865	2.16	34.599	1.72	-	-	44							
2063	1.98	34.617	2.03	-	-	41							
2262	1.85	34.636	2.26	-	-	39							
2361	1.82	34.638	2.36	-	-	39							

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

SIO

CCOFI 6301-2

	OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
67.50	ALEXANDER AGASSIZ; January 18, 1963; 2010 GCT; 36°49'N, 122°04.5'W; sounding, 54 fm; wind, 100°, force 1; weather, cloudy; sea, moderate; wire angle, 00°.														
	1	11.94	33.629	5.66	0.77	11		244	0	(11.94)	(33.63)	(5.66)	(25.56)	(244)	(0.00)
	11	11.86	33.629	5.57	0.80	16		242	10	11.86	33.63	5.58	25.57	242	0.02
	30	11.85	33.632	5.52	0.80	11		242	20	11.85	33.63	5.55	25.57	242	0.05
	51	11.86	33.627	5.55	0.84	10		242	30	11.85	33.63	5.52	25.57	242	0.07
	76	11.68	33.632	5.15	0.98	15		239	50	11.86	33.63	5.55	25.57	242	0.12
	91	11.11	33.685	4.17	-	-		225	75	11.69	33.63	5.18	25.60	239	0.18
67.55	ALEXANDER AGASSIZ; January 18, 1963; 1720, 1526 GCT; 36°39'N, 122°26'W; sounding, 1150 fm; wind, 330°, force 4; weather, cloudy; sea, very rough; wire angle, 18°, 20°.														
	1	12.46	33.582	6.13	0.50	6		257	0	(12.46)	(33.58)	(6.13)	(25.42)	(257)	(0.00)
	11	12.46	33.585	6.13	0.52	7		256	10	12.46	33.58	6.13	25.42	257	0.03
	35	12.48	33.588	5.89	0.55	1u		257	20	12.47	33.58	5.95	25.42	257	0.05
	64	10.42	33.689	3.80	1.33	21		213	30	12.48	33.59	5.91	25.42	256	0.08
	73	10.26	33.714	3.79	1.41	21		209	50	12.50	33.59	5.88	25.42	257	0.13
	93	9.66	33.821	3.23	-	-		191	75	10.22	33.72	3.78	25.94	208	0.19
	107	9.44	33.893	3.03	-	-		182	100	9.55	33.86	3.13	26.16	187	0.24
	121	9.16	33.937	2.79	-	-		175	125	9.08	33.94	2.74	26.30	173	0.28
	150	8.64	34.006	2.58	-	-		162	150	8.64	34.01	2.58	26.42	162	0.32
	168	8.41	34.040	2.47	-	-		156	200	8.20	34.07	2.15	26.53	151	0.40
	197	8.22	34.070	2.17	-	-		151	250	7.75	34.12	1.76	26.64	141	0.48
	231	7.93	34.102	2.12	-	-		145	300	7.33	34.16	1.46	26.73	132	0.55
	260	7.66	34.130	1.59	-	-		139	400	6.62	34.21	0.98	26.87	119	0.68
	309	7.26	34.164	1.43	-	-		131	500	5.85	34.24	0.71	26.99	107	0.80
	370	6.86	34.198	1.11	-	-		123	600	5.21	34.29	0.57	27.11	96	0.91
	465	6.04	34.222	0.90	-	-		111	700	4.78	34.35	0.47	27.21	87	1.01
	552	5.51	34.260	0.78	-	-		102	800	4.34	34.40	0.46	27.30	79	1.10
	626	5.06	34.307	0.69	-	-		93	1000	3.90	34.45	0.57	27.38	71	1.26
									1200	3.41	34.50	0.77	27.47	62	1.41
	428a)	6.43	34.215	0.68	-	-		116	1500	2.84	34.54	1.12	27.55	54	1.62
	498	5.85	34.247	0.58	-	-		107							
	569	5.33	34.278	0.49	-	-		98							
	667	4.98	34.320	0.45	-	-		91							
	765	4.48	34.387	0.45	-	-		81							
	862	4.17	34.423	0.50	-	-		75							
	959	4.00	34.443	0.52	-	-		72							
	1162	3.51	34.490	0.73	-	-		64							
	1360	3.08	34.522	0.97	-	-		58							
	1559	2.74	34.550	1.20	-	-		53							
	1758	2.38	34.580	1.46	-	-		47							
	1860	2.21	34.593	1.69	-	-		45							
67.60	ALEXANDER AGASSIZ; January 19, 1963; 0637 GCT; 36°29'N, 122°47.5'W; sounding, 1640 fm; wind, 350°, force 5; weather, cloudy; sea, very rough; wire angle, 28°.														
	3	11.82	33.498	6.13	0.79	8		251	0	(11.82)	(33.50)	(6.13)	(25.48)	(251)	(0.00)
	11	11.84	33.495	6.11	0.79	8		252	10	11.84	33.50	6.11	25.48	251	0.03
	34	11.83	33.498	6.05	0.83	8		251	20	11.84	33.50	6.08	25.48	251	0.05
	61	10.32	33.649	3.91	1.62	25		215	30	11.84	33.50	6.05	25.48	251	0.08
	70	9.96	33.687	3.81	1.72	27		206	50	11.00	33.58	4.81	25.69	231	0.12
	88	9.46	33.784	3.42	-	-		191	75	9.79	33.71	3.71	26.00	201	0.18
	100	9.30	33.849	3.19	-	-		184	100	9.30	33.85	3.19	26.19	183	0.23
	114	9.07	33.918	2.90	-	-		175	125	9.00	33.94	2.79	26.31	172	0.27
	141	8.91	33.963	2.69	-	-		169	150	8.81	33.98	2.68	26.37	166	0.31
	159	8.70	33.995	2.68	-	-		164	200	8.32	34.05	2.32	26.50	154	0.40
	186	8.46	34.034	2.44	-	-		157	250	7.87	34.09	2.03	26.60	145	0.47
	217	8.15	34.070	2.21	-	-		150	300	7.18	34.12	1.60	26.72	133	0.54
	245	7.92	34.086	2.06	-	-		146	400	6.06	34.14	1.25	26.89	117	0.67
	292	7.28	34.114	1.65	-	-		135	500	5.53	34.22	0.76	27.02	105	0.79
	350	6.66	34.128	1.40	-	-		126	600	(5.01)	(34.30)	(0.50)	(27.14)	(93)	(0.90)
	441	5.72	34.155	1.09	-	-		112							
	524	5.46	34.249	0.66	-	-		102							
	594	5.06	34.298	0.49	-	-		94							

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

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ALEXANDER AGASSIZ; January 18, 1963; 0959 GCT; 36°06.5'N, 121°54'W; sounding, 520 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 42°. 70.53

1	12.69	33.558	5.86	0.75	6	263	0	(12.69)	(33.56)	(5.86)	(25.36)	(262)	(0.00)
19	12.68	33.556	5.82	0.63	6	263	10	12.68	33.56	5.85	25.36	262	0.03
41	12.29	33.663	4.74	0.96	13	248	20	12.68	33.56	5.82	25.36	262	0.05
49	12.24	33.654	4.65	1.00	14	247	30	12.65	33.56	5.68	25.37	262	0.08
61	11.66	33.675	4.37	1.22	17	235	50	12.24	33.65	4.65	25.52	248	0.13
76	11.34	33.705	3.96	-	-	228	75	11.37	33.70	4.00	25.72	228	0.19
98	10.49	33.765	3.42	-	-	209	100	10.43	33.77	3.39	25.94	207	0.24
118	10.10	33.819	3.17	-	-	198	125	9.99	33.85	3.03	26.08	194	0.30
135	9.88	33.868	2.96	-	-	191	150	9.73	33.89	2.86	26.15	187	0.34
156	9.68	33.899	2.85	-	-	186	200	9.24	33.98	2.53	26.30	173	0.44
188	9.39	33.960	2.60	-	-	177	250	8.49	34.08	2.10	26.50	154	0.52
229	8.82	34.044	2.36	-	-	162	300	7.80	34.14	1.67	26.65	140	0.60
264	8.29	34.101	1.98	-	-	150	400	6.81	34.16	1.16	26.80	125	0.73
303	7.77	34.140	1.65	-	-	140	500	6.23	34.25	0.64	26.95	111	0.86
378	6.96	34.142	1.27	-	-	128	600	5.44	34.32	0.46	27.11	97	0.97
457	6.53	34.231	0.76	-	-	116							
537	5.92	34.269	0.57	-	-	106							
628	5.30	34.336	0.43	-	-	94							
654	5.21	34.345	0.45	-	-	92							
673	5.06	34.359	0.42	-	-	89							

ALEXANDER AGASSIZ; January 18, 1963; 0104 GCT; 35°53'N, 122°22.5'W; sounding, 493 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 28°. 70.60

1	12.72	33.554	6.04	0.56	5	263	0	(12.72)	(33.55)	(6.04)	(25.35)	(264)	(0.00)
10	12.72	33.542	6.08	0.57	6	264	10	12.72	33.54	6.08	25.34	265	0.03
34	12.70	33.547	6.04	0.57	5	264	20	12.72	33.54	6.06	25.34	265	0.05
62	11.77	33.569	4.84	1.10	14	245	30	12.71	33.54	6.04	25.34	264	0.08
72	10.92	33.634	4.22	1.35	20	226	50	12.54	33.56	5.80	25.39	260	0.13
90	10.35	33.779	3.40	-	-	205	75	10.60	33.71	3.76	25.86	215	0.19
104	9.96	33.826	3.18	-	-	196	100	10.06	33.81	3.25	26.03	198	0.24
117	9.74	33.868	2.99	-	-	189	125	9.67	33.89	2.89	26.16	186	0.29
144	9.47	33.930	2.77	-	-	180	150	9.30	33.93	2.72	26.25	178	0.34
162	8.78	33.926	2.66	-	-	170	200	8.57	34.08	2.27	26.49	155	0.42
189	8.62	34.026	2.46	-	-	160	250	8.23	34.13	1.82	26.58	147	0.50
220	8.48	34.131	1.97	-	-	150	300	7.37	34.12	1.56	26.70	136	0.57
247	8.28	34.136	1.84	-	-	147	400	6.61	34.21	0.87	26.87	119	0.71
291	7.47	34.113	1.65	-	-	137	500	6.11	34.27	0.64	26.98	108	0.83
351	7.00	34.180	1.14	-	-	126	600	5.34	34.30	0.47	27.10	97	0.94
442	6.36	34.231	0.76	-	-	114							
527	5.97	34.286	0.60	-	-	105							
600	5.34	34.298	0.47	-	-	97							

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

70.70 ALEXANDER AGASSIZ; January 17, 1963; 1848, 1657 GCT; 35°33'N, 123°06'W; sounding, 2075 fm; wind, 350°, force 6; weather, cloudy; sea, very rough; wire angle, 23°, 31°.

1	12.41	33.543	6.10	0.61	6	259	0	(12.41)	(33.54)	(6.10)	(25.40)	(259)	(0.00)
10	12.40	33.539	6.01	0.64	6	259	10	12.40	33.54	6.01	25.40	259	0.03
33	12.40	33.549	6.04	0.65	6	258	20	12.40	33.54	6.03	25.40	259	0.05
61	10.97	33.520	4.60	1.19	16	235	30	12.40	33.55	6.04	25.41	258	0.08
70	10.60	33.592	4.11	1.44	21	223	50	12.40	33.55	6.04	25.41	258	0.13
88	9.97	33.685	3.70	-	-	206	75	10.43	33.63	3.93	25.83	218	0.19
103	9.27	33.707	3.69	-	-	194	100	9.39	33.70	3.69	26.06	196	0.24
117	8.96	33.792	3.67	-	-	183	125	8.96	33.83	3.67	26.23	180	0.29
144	8.96	33.934	3.65	-	-	172	150	8.90	33.95	3.57	26.33	170	0.33
163	8.68	33.990	3.16	-	-	164	200	8.25	34.05	2.48	26.51	153	0.42
191	8.33	34.035	2.59	-	-	155	250	7.75	34.10	1.78	26.63	142	0.49
222	8.04	34.075	2.10	-	-	148	300	7.22	34.13	1.34	26.72	133	0.56
251	7.74	34.099	1.78	-	-	142	400	6.39	34.17	1.06	26.87	119	0.69
296	7.26	34.131	1.36	-	-	133	500	5.66	34.22	0.54	27.00	107	0.81
356	6.66	34.140	1.17	-	-	125	600	5.08	34.30	0.50	27.13	94	0.92
448	6.12	34.219	0.74	-	-	112	700	4.76	34.36	0.45	27.22	86	1.02
533	5.37	34.244	0.50	-	-	101	800	4.43	34.39	0.48	27.28	80	1.11
607	5.04	34.309	0.51	-	-	93	1000	3.77	34.46	0.62	27.40	69	1.27
							1200	3.24	34.51	0.85	27.49	60	1.42
402a)	6.46	34.184	1.02	-	-	119	1500	2.72	34.56	1.18	27.58	52	1.61
469	5.82	34.189	0.72	-	-	111	2000	2.06	34.61	1.80	27.68	43	1.89
538	5.46	34.258	0.47	-	-	101	2500	1.79	34.64	2.35	27.72	38	2.14
722	4.68	34.365	0.45	-	-	85							
908	4.05	34.431	0.54	-	-	73							
1094	3.50	34.485	0.69	-	-	64							
1329	2.98	34.532	1.07	-	-	56							
1564	2.62	34.564	1.22	-	-	50							
1800	2.26	34.588	1.51	-	-	46							
2035	2.02	34.615	1.88	-	-	42							
2273	1.88	34.633	2.18	-	-	40							
2514	1.78	34.646	2.41	-	-	38							
2709	1.70	34.655	2.55	-	-	37							
2807	1.66	34.656	2.66	-	-	36							

70.80 ALEXANDER AGASSIZ; January 17, 1963; 1139 GCT; 35°14'N, 123°46.5'W; sounding, 2200 fm; wind, 330°, force 5; weather, cloudy; sea, rough; wire angle, 26°.

1	12.12	33.003	6.20	0.51	4	293	0	(12.12)	(33.00)	(6.20)	(25.04)	(293)	(0.00)
10	12.10	33.002	6.19	0.50	4	293	10	12.10	33.00	6.19	25.04	293	0.03
32	11.78	33.133	6.23	0.61	6	277	20	12.00	33.01	6.19	25.07	290	0.06
41	11.55	33.126	6.04	0.69	6	274	30	11.79	33.13	6.23	25.20	278	0.09
56	10.92	33.186	5.71	0.87	3	259	50	10.97	33.18	5.73	25.39	260	0.14
69	10.04	33.191	5.30	-	-	244	75	9.80	33.30	4.85	25.68	232	0.20
92	9.94	33.576	4.24	-	-	214	100	10.09	33.64	4.21	25.90	211	0.26
110	9.41	33.667	3.93	-	-	199	125	9.55	33.84	3.12	26.14	188	0.31
128	9.56	33.955	3.03	-	-	180	150	9.20	33.93	2.70	26.27	176	0.36
155	9.11	33.946	2.68	-	-	173	200	8.44	34.03	2.48	26.47	157	0.44
182	8.71	33.999	2.58	-	-	163	250	7.75	34.09	1.90	26.62	143	0.52
217	8.18	34.062	2.29	-	-	151	300	7.29	34.12	1.58	26.71	134	0.59
246	7.80	34.092	1.92	-	-	144	400	6.33	34.18	0.96	26.88	118	0.72
291	7.37	34.114	1.67	-	-	136	500	5.74	34.26	0.66	27.02	105	0.84
350	6.82	34.163	1.03	-	-	125	600	(5.24)	(34.33)	(0.41)	(27.14)	(94)	(0.94)
440	6.04	34.198	0.90	-	-	113							
523	5.64	34.287	0.56	-	-	101							
597	5.26	34.325	0.41	-	-	94							

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

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ALEXANDER AGASSIZ; January 17, 1963; 0449, 0127 GCT; 34°54.5'N, 124°30'W; sounding, 2350 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 33°, 28°. 70.90

1	13.61	33.227	6.18	0.33	2	304	0	(13.61)	(33.23)	(6.18)	(24.92)	(304)	(0.00)
9	13.62	33.222	6.13	0.35	2	305	10	13.62	33.22	6.13	24.91	305	0.03
30	13.24	33.298	6.16	0.42	3	292	20	13.60	33.22	6.13	24.92	305	0.06
55	11.58	33.396	5.42	0.98	11	255	30	13.24	33.30	6.16	25.05	292	0.09
62	11.02	33.463	5.00	1.24	17	240	50	12.50	33.36	5.90	25.24	274	0.15
79	10.17	33.583	4.26	-	-	217	75	10.31	33.56	4.39	25.80	221	0.21
91	9.92	33.669	3.86	-	-	207	100	9.63	33.72	3.64	26.04	198	0.26
102	9.57	33.732	3.59	-	-	196	125	9.19	33.85	3.15	26.21	182	0.31
124	9.20	33.846	3.17	-	-	182	150	8.86	33.93	2.85	26.32	171	0.36
139	9.04	33.885	2.99	-	-	177	200	8.28	34.06	2.22	26.51	153	0.44
160	8.70	33.983	2.71	-	-	165	250	7.68	34.07	2.08	26.61	143	0.51
187	8.42	34.044	2.38	-	-	156	300	7.23	34.11	1.73	26.71	134	0.59
211	8.14	34.068	2.13	-	-	150	400	6.00	34.12	1.19	26.88	118	0.72
249	7.70	34.073	2.09	-	-	144	500	5.40	34.20	0.76	27.02	105	0.83
303	7.20	34.106	1.71	-	-	134	600	4.98	34.29	0.50	27.14	94	0.94
388	6.19	34.109	1.36	-	-	121	700	4.51	34.34	0.43	27.23	85	1.04
469	5.55	34.159	0.91	-	-	110	800	4.22	34.39	0.50	27.30	78	1.12
539	5.26	34.245	0.60	-	-	100	1000	3.71	34.46	0.75	27.41	68	1.29
							1200	3.25	34.51	0.96	27.49	60	1.43
405a)	5.90	34.135	1.10	-	-	116	1500	2.70	34.55	1.30	27.57	52	1.63
472	5.51	34.184	0.85	-	-	108	2000	2.02	34.61	1.90	27.68	42	1.91
539	5.26	34.244	0.62	-	-	100	2500	1.78	34.64	2.48	27.72	38	2.15
723	4.43	34.344	0.43	-	-	84							
908	3.98	34.434	0.65	-	-	73							
1096	3.46	34.488	0.84	-	-	64							
1334	3.01	34.527	1.10	-	-	57							
1571	2.59	34.564	1.37	-	-	50							
1812	2.24	34.588	1.58	-	-	46							
2052	1.98	34.617	1.99	-	-	41							
2294	1.84	34.630	2.18	-	-	39							
2534	1.77	34.642	2.52	-	-	38							
2731	1.68	34.651	2.54	-	-	37							
2821	1.67	34.655	2.60	-	-	36							

ALEXANDER AGASSIZ; January 16, 1963; 1936 GCT; 34°32.5'N, 125°12'W; sounding, 2450 fm; wind, 350°, force 2; weather, cloudy; sea, moderate; wire angle, 20°. 70.100

1	13.40	33.278	6.16	0.38	2	297	0	(13.40)	(33.28)	(6.16)	(25.00)	(296)	(0.00)
10	13.38	33.274	6.18	0.40	4	297	10	13.38	33.27	6.18	25.00	297	0.03
29	12.97	33.269	6.21	0.47	4	289	20	13.36	33.27	6.18	25.00	296	0.06
38	12.79	33.269	6.18	0.48	4	286	30	12.96	33.27	6.20	25.08	289	0.09
53	12.52	33.362	6.24	0.60	6	274	50	12.58	33.34	6.23	25.21	277	0.15
66	11.58	33.498	5.22	-	-	247	75	10.54	33.57	4.41	25.76	224	0.21
90	10.30	33.623	4.13	-	-	216	100	10.02	33.68	3.88	25.94	207	0.26
108	9.76	33.736	3.58	-	-	199	125	9.49	33.79	3.36	26.11	191	0.31
127	9.47	33.794	3.33	-	-	190	150	9.01	33.92	2.91	26.29	174	0.36
144	9.11	33.880	3.03	-	-	178	200	8.23	33.99	3.68	26.47	157	0.44
172	8.78	33.987	2.68	-	-	165	250	7.32	33.98	3.73	26.59	145	0.52
203	8.17	33.989	3.75	-	-	156	300	6.48	33.97	3.27	26.70	135	0.59
231	7.64	33.981	3.77	-	-	150	400	6.11	34.15	1.11	26.89	117	0.72
277	6.87	33.969	3.61	-	-	140	500	5.57	34.23	0.68	27.02	105	0.84
327	6.13	33.983	2.71	-	-	130							
406	6.11	34.164	1.04	-	-	116							
484	5.68	34.221	0.74	-	-	107							
564	5.23	34.262	0.54	-	-	99							

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

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

70.120 ALEXANDER AGASSIZ; January 16, 1963; 1119, 0823 GCT; 33°54'N, 126°32'W; sounding, 2557 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 24°, 21°.

0	15.92	33.391	5.71	0.26	2	340	0	15.92	33.39	5.71	24.55	340	0.00
10	15.92	33.384	5.75	0.28	2	340	10	15.92	33.38	5.75	24.54	340	0.03
28	16.12	33.473	5.81	0.26	2	338	20	16.01	33.43	5.79	24.56	339	0.07
55	15.10	33.24	5.76	0.40	2	333	30	16.11	33.47	5.80	24.57	338	0.10
64	13.70	32.996	6.04	0.54	4	323	50	15.25	33.27	5.77	24.61	334	0.17
78	12.68	33.085	5.94	-	-	297	75	12.75	33.07	5.96	24.97	300	0.25
92	12.14	33.157	5.89	-	-	282	100	11.70	33.16	5.78	25.24	274	0.32
106	10.94	33.164	5.54	-	-	261	125	9.80	33.42	4.83	25.77	223	0.38
129	9.76	33.433	4.78	-	-	222	150	9.49	33.67	4.10	26.02	200	0.44
147	9.54	33.649	4.14	-	-	202	200	8.59	33.95	2.96	26.38	165	0.53
173	8.88	33.807	3.92	-	-	180	250	7.87	34.00	2.71	26.53	151	0.61
199	8.60	33.948	2.99	-	-	166	300	7.07	34.02	2.38	26.66	139	0.69
226	8.16	33.988	2.87	-	-	156	400	6.08	34.09	1.40	26.85	121	0.82
271	7.60	34.015	2.57	-	-	146	500	5.49	34.17	0.89	26.98	108	0.94
320	6.74	34.028	2.21	-	-	134	600	4.80	34.21	0.61	27.09	98	1.05
399	6.04	34.087	1.49	-	-	121	700	4.36	34.29	0.43	27.21	87	1.15
478	5.60	34.166	0.87	-	-	110	800	4.02	34.35	0.39	27.29	79	1.24
559	5.06	34.184	0.83	-	-	103	1000	3.47	34.45	0.57	27.42	66	1.40
							1200	3.05	34.50	0.86	27.50	59	1.54
428a)	5.98	34.105	1.15	-	-	119	1500	2.63	34.56	1.28	27.59	51	1.73
499	5.54	34.161	0.99	-	-	110	2000	1.99	34.61	1.81	27.68	42	2.01
569	4.94	34.195	0.62	-	-	100	2500	1.72	34.64	2.40	27.73	38	2.25
759	4.16b)	34.329	0.38	-	-	82							
950	3.59	34.43	0.52	-	-	69							
1138	3.17	34.490	0.74	-	-	61							
1380	2.80	34.541	1.13	-	-	54							
1621	2.47	34.575	1.38	-	-	48							
1865	2.14	34.590	1.65	-	-	45							
2106	1.90	34.621	1.97	-	-	41							
2352	1.78	34.631	2.18	-	-	39							
2597	1.70	34.646	2.46	-	-	37							
2795	1.62	34.655	2.58	-	-	36							
2895	1.61	34.657	2.69	-	-	36							

70.200 ALEXANDER AGASSIZ; January 28, 1963; 1108 GCT; 31°13'N, 132°02.5'W; sounding, 2650 fm; wind, 150°, force 5; weather, partly cloudy; sea, missing; wire angle, 27°.

1	17.90	34.479	5.44	0.20	2	305	0	(17.90)	(34.48)	(5.44)	(24.92)	(304)	(0.00)
9	17.91	34.484	5.40	0.21	2	304	10	17.91	34.48	5.40	24.92	305	0.03
45	17.92	34.480	5.45	0.20	2	305	20	17.91	34.48	5.42	24.92	305	0.06
76	17.96	34.491	5.43	0.20	2	305	30	17.91	34.48	5.43	24.92	305	0.09
95	18.06	34.546	5.44	0.18	3	303	50	17.93	34.48	5.45	24.91	305	0.15
107	17.29	34.434	5.49	-	-	294	75	17.96	34.49	5.43	24.91	305	0.23
125	16.31	34.418	5.38	-	-	273	100	18.09	34.56	5.46	24.93	303	0.31
142	15.54	34.330	5.27	-	-	263	125	16.31	34.42	5.38	25.25	273	0.38
158	13.98	34.106	5.21	-	-	247	150	14.76	34.22	5.23	25.44	255	0.45
183	12.10	33.881	5.14	-	-	228	200	11.45	33.84	5.05	25.81	220	0.57
209	11.12	33.834	5.00	-	-	214	250	9.87	33.88	4.74	26.12	190	0.67
230	10.19	33.839	4.92	-	-	198	300	8.88	33.99	4.35	26.37	167	0.76
261	9.72	33.917	4.66	-	-	185	400	7.07	34.00	3.03	26.64	141	0.92
299	8.92	33.992	4.36	-	-	167	500	6.08	34.08	1.51	26.84	122	1.06
346	7.86	33.990	3.55	-	-	152							
422	6.81	34.001	2.81	-	-	137							
504	6.03	34.079	1.46	-	-	122							
575	5.40	34.140	0.90	-	-	110							

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

b) Mean value of 4.11 and 4.20°C.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED			SIO
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD	CCOFI
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m	6301-2
ALEXANDER AGASSIZ; January 13, 1963; 0155 GCT; 35°32'N, 121°29'W; sounding, 397 fm; wind, 040°, force 1; weather, partly cloudy; sea, very rough; wire angle, 08°.															73.53
1	13.16	33.431	6.19	0.52	4		281	0	(13.16)	(33.43)	(6.19)	(25.17)	(281)	(0.00)	
11	13.20	33.429	6.02	0.50	4		282	10	13.20	33.43	6.02	25.16	282	0.03	
31	13.08	33.438	6.02	0.54	5		279	20	13.18	33.43	6.02	25.16	281	0.06	
55	11.48	33.556	4.71	1.13	15		241	30	13.10	33.44	6.02	25.19	279	0.08	
65	11.16	33.563	4.29	1.28	16		235	50	11.75	33.54	5.03	25.52	247	0.14	
75	10.17	33.624	4.12	-	-		214	75	10.17	33.62	4.12	25.87	214	0.20	
91	9.90	33.695	3.92	-	-		204	100	9.71	33.74	3.75	26.04	198	0.25	
106	9.62	33.754	3.69	-	-		196	125	9.53	33.79	3.61	26.11	191	0.30	
125	9.53	33.793	3.61	-	-		191	150	9.08	33.92	3.07	26.28	175	0.34	
145	9.17	33.907	3.15	-	-		177	200	8.78	34.04	2.45	26.42	161	0.43	
170	8.88	33.975	2.81	-	-		168	250	8.45	34.11	2.06	26.53	151	0.51	
199	8.79	34.041	2.46	-	-		162	300	7.86	34.13	1.87	26.63	142	0.58	
229	8.62	34.093	2.16	-	-		155	400	6.85	34.20	1.00	26.83	123	0.72	
269	8.28	34.119	1.99	-	-		148	500	6.34	34.26	0.70	26.95	112	0.85	
324	7.52	34.135	1.72	-	-		136	600	5.55	34.33	0.53	27.10	97	0.96	
399	6.86	34.201	1.01	-	-		123	700	(5.04)	(34.37)	(0.52)	(27.19)	(88)	(1.06)	
474	6.49	34.244	0.80	-	-		115								
548	6.00	34.290	0.58	-	-		105								
623	5.38	34.345	0.52	-	-		94								
699	5.04	34.374	0.52	-	-		88								
ALEXANDER AGASSIZ; January 13, 1963; 0654 GCT; 35°18'N, 121°57.5'W; sounding, 1200 fm; wind, 060°, force 3; weather, clear; sea, very rough; wire angle, 24°.															73.60
1	12.78	33.546	6.05	0.53	6		265	0	(12.78)	(33.55)	(6.05)	(25.33)	(265)	(0.00)	
10	12.79	33.544	6.07	0.54	6		266	10	12.79	33.54	6.07	25.32	266	0.03	
28	12.78	33.547	6.10	0.55	6		265	20	12.78	33.54	6.08	25.33	266	0.05	
56	10.47	33.658	3.98	1.34	21		216	30	12.77	33.55	6.10	25.34	265	0.08	
65	10.32	33.716	3.85	1.47	24		210	50	10.90	33.63	4.34	25.75	226	0.13	
79	9.95	33.783	3.56	-	-		199	75	10.08	33.76	3.65	25.99	202	0.18	
92	9.57	33.839	3.53	-	-		188	100	9.49	33.86	3.37	26.17	186	0.23	
106	9.46	33.872	3.12	-	-		184	125	9.43	33.93	2.77	26.23	180	0.28	
129	9.40	33.943	2.73	-	-		178	150	8.99	34.00	2.51	26.36	168	0.32	
147	9.03	33.986	2.55	-	-		169	200	8.41	34.13	1.91	26.55	149	0.40	
177	8.64	34.083	2.17	-	-		156	250	8.07	34.18	1.54	26.64	141	0.48	
201	8.40	-	2.98	-	-			300	7.27	34.16	1.45	26.74	131	0.55	
228	8.26	34.157	1.75	-	-		145	400	6.63	34.23	0.81	26.88	118	0.68	
273	7.77	34.192	1.37	-	-		136	500	5.93	34.28	0.60	27.01	105	0.79	
322	6.95	34.137	1.51	-	-		129								
399	6.64	34.227	0.82	-	-		118								
478	6.08	34.264	0.65	-	-		108								
559	5.64	34.314	0.52	-	-		99								
ALEXANDER AGASSIZ; January 13, 1963; 1743 GCT; 35°02'N, 120°56'W; sounding, 138 fm; wind, 040°, force 4; weather, clear; sea, moderate; wire angle, 03°.															77.51
0	13.20	33.637	6.02	0.54	7		266	0	13.20	33.64	6.02	25.32	266	0.00	
10	13.18	33.639	6.05	0.56	7		266	10	13.18	33.64	6.05	25.32	266	0.03	
30	13.19	33.638	5.99	0.57	7		266	20	13.19	33.64	6.02	25.32	266	0.05	
50	13.14	33.632	5.69	0.62	8		266	30	13.19	33.64	5.99	25.32	266	0.08	
75	11.62	33.656	4.28	1.15	17		236	50	13.14	33.63	5.69	25.32	266	0.13	
100	10.62	33.742	3.64	-	-		213	75	11.62	33.66	4.28	25.64	236	0.20	
125	10.10	33.776	3.48	-	-		202	100	10.62	33.74	3.64	25.88	213	0.25	
150	9.68	33.875	2.98	-	-		188	125	10.10	33.78	3.48	26.00	201	0.31	
190	8.92	34.010	2.40	-	-		166	150	9.68	33.88	2.98	26.15	187	0.35	
229	8.62	-	-	-	-			200	8.81	(34.02)	(2.37)	(26.40)	(163)	(0.44)	

SIO

CCOFI 6301-2

	OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
	Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
77.55	ALEXANDER AGASSIZ; January 13, 1963; 1445 GCT; 34°54'N, 121°13'W; sounding, 310 fm; wind, 040°, force 2; weather, clear; sea, rough; wire angle, 04°.														
	1	13.14	33.389	6.05	0.44	1		283	0	(13.14)	(33.39)	(6.05)	(25.14)	(283)	(0.00)
	11	13.17	33.391	6.09	0.42	4		284	10	13.17	33.39	6.09	25.13	284	0.03
	32	13.20	33.416	5.97	0.46	2		283	20	13.19	33.40	6.04	25.14	284	0.06
	42	13.13	33.454	5.87	0.47	5		279	30	13.20	33.40	5.98	25.13	284	0.09
	52	12.80	33.496	5.71	0.60	6		269	50	12.93	33.49	5.76	25.26	272	0.14
	62	11.54	33.385	5.37	-	-		255	75	10.67	33.45	4.84	25.65	235	0.20
	71	10.76	33.420	4.93	-	-		239	100	10.17	33.65	3.96	25.89	212	0.26
	86	10.46	33.543	4.52	-	-		225	125	9.39	33.81	3.31	26.15	188	0.31
	101	10.14	33.656	3.91	-	-		211	150	8.89	33.93	2.98	26.32	171	0.36
	116	9.66	33.758	3.48	-	-		196	200	8.37	34.05	2.31	26.49	155	0.44
	140	9.08	33.884	3.11	-	-		178	250	7.75	34.07	2.22	26.60	144	0.52
	170	8.61	34.010	2.63	-	-		161	300	7.62	34.18	1.27	26.71	134	0.59
	205	8.33	34.057	2.29	-	-		154	400	6.48	34.18	0.94	26.86	120	0.72
	255	7.72	34.068	2.21	-	-		144	500	5.99	34.27	0.60	27.00	107	0.84
	304	7.60	34.193	1.21	-	-		133							
	409	6.40	34.182	0.92	-	-		118							
	510	5.96	34.280	0.54	-	-		106							
77.57	ALEXANDER AGASSIZ; January 13, 1963; 1231 GCT; 34°50'N, 121°21.5'W; sounding, 260 fm; wind, 050°, force 2; weather, clear; sea, rough; wire angle, 02°.														
	2	13.08	33.478	5.91	0.46	4		276	0	(13.08)	(33.48)	(5.91)	(25.22)	(276)	(0.00)
	12	13.10	33.483	5.93	0.46	4		276	10	13.10	33.48	5.93	25.22	276	0.03
	32	13.08	33.478	5.93	0.48	4		276	20	13.10	33.48	5.93	25.22	276	0.06
	53	12.72	33.496	5.63	0.61	2		268	30	13.09	33.48	5.93	25.22	276	0.08
	78	10.00	33.589	4.25	1.20	21		214	50	13.00	33.48	5.83	25.24	274	0.14
	103	9.31	33.850	3.16	-	-		184	75	10.14	33.57	4.36	25.83	217	0.20
	128	8.88	33.943	2.90	-	-		170	100	9.36	33.83	3.24	26.17	186	0.25
	168	8.35	34.036	2.58	-	-		155	125	8.90	33.94	2.91	26.33	171	0.30
	207	8.07	34.099	1.99	-	-		147	150	8.55	34.00	2.74	26.43	161	0.34
	258	7.66	34.177	1.56	-	-		135	200	8.12	34.09	2.05	26.56	148	0.42
	308	7.26	34.211	0.98	-	-		127	250	7.72	34.17	1.60	26.68	137	0.49
	413	6.52	34.233	0.70	-	-		116	300	7.32	34.21	1.02	26.77	128	0.56
									400	6.59	34.23	0.72	26.89	117	0.69
80.52	ALEXANDER AGASSIZ; January 13, 1963; 2253 GCT; 34°25.5'N, 120°35.5'W; sounding, 125 fm; wind, 330°, force 5; weather, clear; sea, moderate; wire angle, 12°.														
	2	13.44	33.658	6.00	0.50	6		269	0	(13.44)	(33.66)	(6.00)	(25.29)	(269)	(0.00)
	12	13.40	33.652	6.04	0.51	5		269	10	13.41	33.65	6.03	25.29	269	0.03
	31	13.30	33.649	5.89	0.52	5		267	20	13.34	33.65	5.98	25.30	268	0.05
	51	13.24	33.647	5.74	0.56	6		266	30	13.30	33.65	5.90	25.31	267	0.08
	75	12.30	33.625	5.00	0.91	11		251	50	13.25	33.65	5.76	25.32	266	0.13
	100	10.76	33.687	3.91	-	-		219	75	12.30	33.62	5.00	25.48	251	0.20
	124	10.61	33.745	3.51	-	-		212	100	10.76	33.69	3.91	25.82	219	0.26
	155	10.03	33.865	2.90	-	-		194	125	10.60	33.75	3.48	25.89	212	0.31
									150	10.16	33.85	2.98	26.05	197	0.36

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ALEXANDER AGASSIZ; January 14, 1963; 0148 GCT; 34°18.5'N, 120°48.5'W; sounding, 410 fm; wind, 300°, force 5; weather, clear; sea, rough; wire angle, 35°. 80.55

1	13.00		5.97	0.51	4		0	(13.00)		(5.97)	
9	13.01		5.91	0.52	5		10	13.01		5.91	
26	13.03		5.94	0.52	5		20	13.02		5.93	
46	12.60		5.22	0.73	9		30	13.03		5.92	
54	11.46		4.55	1.02	13		50	11.60		4.60	
63	10.82		4.22	-	-		75	10.20		3.96	
75	10.20		3.96	-	-		100	9.83		3.02	
88	9.85		3.22	-	-		125	9.63		2.73	
105	9.82		2.96	-	-		150	9.42		2.58	
121	9.68		2.78	-	-		200	9.01		1.66	
141	9.54		2.62	-	-		250	8.31		1.44	
166	9.24		2.51	-	-		300	7.78		1.23	
191	9.11		1.81	-	-		400	6.93		0.87	
225	8.67		1.45	-	-		500	6.29		0.61	
273	8.02		1.43	-	-		600	5.57		0.43	
339	7.48		1.03	-	-						
408	6.86		0.84	-	-						
477	6.40		0.66	-	-						
548	6.02		0.53	-	-						
619	5.38		0.39	-	-						

ALEXANDER AGASSIZ; January 14, 1963; 0459 GCT; 34°08.5'N, 121°08'W; sounding, 815 fm; wind, 320°, force 5; weather, clear; sea, rough; wire angle, 34°. 80.60

1	13.12	33.507	5.95	0.49	4	274	0	(13.12)	(33.51)	(5.95)	(25.24)	(274)	(0.00)
9	13.13	33.501	6.08	0.48	4	275	10	13.13	33.50	6.08	25.23	275	0.03
29	13.10	33.516	6.04	0.50	4	273	20	13.13	33.51	6.06	25.23	274	0.05
36	11.82	33.456	5.20	0.84	5	254	30	13.09	33.51	6.03	25.24	274	0.08
48	11.32	33.463	4.94	1.05	12	245	50	11.24	33.48	4.88	25.57	242	0.13
55	10.71	33.563	4.40	-	-	227	75	9.92	33.68	3.90	25.96	206	0.19
76	9.90	33.683	3.88	-	-	205	100	9.15	33.84	3.24	26.21	182	0.24
90	9.50	33.754	3.54	-	-	194	125	9.01	33.93	3.18	26.30	173	0.28
102	9.13	33.860	3.23	-	-	180	150	8.77	34.01	2.51	26.40	164	0.33
123	9.02	33.923	3.20	-	-	174	200	8.22	34.11	1.96	26.56	148	0.41
146	8.82	34.008	2.55	-	-	164	250	7.72	34.14	1.61	26.66	139	0.48
177	8.38	34.012	2.47	-	-	158	300	7.02	34.12	1.46	26.74	131	0.55
203	8.20	34.114	1.90	-	-	148	400	6.08	34.14	1.09	26.88	118	0.68
244	7.80	34.145	1.63	-	-	140	500	5.87	34.30	0.52	27.04	103	0.80
301	7.00	34.121	1.46	-	-	131							
390	6.12	34.137	1.13	-	-	118							
474	5.94	34.273	0.58	-	-	106							
548	5.66	34.327	0.50	-	-	99							

ALEXANDER AGASSIZ; January 14, 1963; 1236 GCT; 33°48.5'N, 121°51'W; sounding, 1950 fm; wind, 340°, force 5; weather, partly cloudy; sea, very rough; wire angle, 37°. 80.70

3	13.74	33.260	6.15	0.45	2	305	0	(13.74)	(33.26)	(6.15)	(24.92)	(305)	(0.00)
9	13.76	33.256	6.08	0.45	4	305	10	13.76	33.26	6.08	24.91	305	0.03
30	13.76	33.260	6.10	0.46	2	305	20	13.76	33.26	6.09	24.91	305	0.06
53	13.78	33.265	6.00	0.43	3	305	30	13.76	33.26	6.10	24.91	305	0.09
61	13.78	33.269	6.11	0.46	2	305	50	13.77	33.26	6.02	24.91	305	0.15
75	12.42	33.267	5.85	-	-	279	75	12.42	33.27	5.85	25.19	279	0.23
86	11.32	33.265	5.56	-	-	260	100	10.60	33.32	5.17	25.56	243	0.29
97	10.66	33.296	5.22	-	-	246	125	9.49	33.56	4.84	25.93	208	0.35
117	9.72	33.495	4.85	-	-	216	150	9.03	33.82	4.41	26.21	182	0.40
131	9.32	33.608	4.84	-	-	202	200	8.67	33.97	4.28	26.38	165	0.49
149	9.04	33.814	4.41	-	-	182	250	8.01	33.99	3.70	26.50	154	0.57
171	8.88	33.823	4.43	-	-	179	300	7.12	33.98	3.22	26.62	143	0.64
191	8.72	33.948	4.26	-	-	167	400	6.04	34.06	1.68	26.83	123	0.78
221	8.48	33.988	4.35	-	-	161							
261	7.81	33.992	3.44	-	-	151							
325	6.75	33.980	3.10	-	-	138							
390	6.11	34.048	1.84	-	-	125							
449	5.68	34.114	1.15	-	-	115							

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OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

80.80 ALEXANDER AGASSIZ; January 14, 1963; 1858 GCT; 33°27.5'N, 122°32.5'W; sounding, 2200 fm; wind, 330°, force 3; weather, cloudy; sea, rough; wire angle, 16°.

1	15.33	33.229	5.86	0.34	2	339	0	(15.33)	(33.23)	(5.86)	(24.56)	(339)	(0.00)
10	15.34	33.242	5.88	0.35	3	338	10	15.34	33.24	5.88	24.56	338	0.03
59	15.34	33.224	5.85	0.35	2	339	20	15.34	33.24	5.87	24.56	338	0.07
93	13.57	33.282	5.83	0.54	3	300	30	15.34	33.23	5.86	24.56	339	0.10
112	12.80	33.325	5.72	0.64	5	282	50	15.34	33.22	5.85	24.55	340	0.17
126	11.86	33.398	5.35	-	-	259	75	15.34	33.22	5.84	24.55	340	0.26
145	10.88	33.480	5.07	-	-	236	100	13.27	33.30	5.81	25.04	293	0.33
170	9.93	33.588	4.65	-	-	213	125	11.90	33.40	5.37	25.39	260	0.40
193	9.24	33.745	4.35	-	-	190	150	10.67	33.50	5.00	25.69	231	0.47
226	8.59	33.928	3.62	-	-	167	200	9.08	33.80	4.19	26.19	184	0.57
269	7.88	34.006	2.99	-	-	151	250	8.18	33.98	3.23	26.47	157	0.66
335	6.98	34.048	2.16	-	-	136	300	7.44	34.03	2.65	26.61	143	0.74
402	6.34	34.095	1.51	-	-	124	400	6.35	34.09	1.52	26.81	125	0.88
479	5.91	34.153	1.02	-	-	115	500	5.82	34.17	0.93	26.94	112	1.00
557	5.50	34.225	0.69	-	-	104	600	5.34	34.27	0.57	27.08	99	1.11
625	5.24	34.298	0.52	-	-	96	700	4.87	34.35	0.51	27.20	88	1.21
675	5.00	34.334	0.52	-	-	91							
725	4.76	34.360	0.49	-	-	86							

80.90 ALEXANDER AGASSIZ; January 15, 1963; 0219, 0012 GCT; 33°10'N, 123°12'W; sounding, 2300 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 10°, 18°.

2	15.34	33.202	5.81	0.32	2	341	0	(15.34)	(33.20)	(5.81)	(24.53)	(341)	(0.00)
12	15.38	33.199	5.75	0.34	2	342	10	15.37	33.20	5.75	24.53	342	0.03
48	15.37	33.202	5.71	0.32	3	342	20	15.38	33.20	5.74	24.52	342	0.07
77	15.36	33.204	5.75	0.33	6	341	30	15.37	33.20	5.73	24.53	342	0.10
97	13.88	33.174	6.02	0.48	4	314	50	15.37	33.20	5.71	24.53	342	0.17
111	12.21	33.125	5.82	-	-	286	75	15.36	33.20	5.75	24.53	342	0.26
126	11.70	33.280	5.64	-	-	265	100	13.67	33.16	6.00	24.85	310	0.34
146	11.09	33.463	5.04	-	-	241	125	11.70	33.28	5.65	25.33	265	0.41
166	10.14	33.531	4.87	-	-	220	150	10.88	33.48	4.98	25.63	236	0.48
195	9.30	33.747	4.15	-	-	191	200	9.20	33.78	4.10	26.15	187	0.58
219	8.84	33.895	3.98	-	-	173	250	8.33	33.98	3.57	26.44	159	0.67
245	8.43	33.971	3.67	-	-	161	300	7.69	34.06	2.43	26.60	144	0.75
281	7.68	34.002	3.01	-	-	149	400	6.79	34.19	1.11	26.83	123	0.89
320	7.70	34.113	1.82	-	-	141	500	6.13	34.23	0.76	26.95	111	1.01
369	7.02	34.163	1.36	-	-	128	600	5.42	34.26	0.57	27.06	101	1.13
439	6.60	34.211	0.96	-	-	119	700	4.87	34.32	0.44	27.17	90	1.23
522	5.94	34.220	0.79	-	-	110	800	4.48	34.37	0.39	27.26	82	1.32
607	5.34	34.269	0.61	-	-	99	1000	3.85	34.44	0.58	27.38	71	1.49
							1200	3.34	34.50	0.84	27.48	62	1.64
527a)	5.90	34.244	0.60	-	-	108	1500	2.81	34.55	1.23	27.57	53	1.84
623	5.32	34.281	0.49	-	-	98	2000	2.09	34.61	1.79	27.67	43	2.13
745	4.67	34.338	0.39	-	-	87	2500	1.78	34.64	2.35	27.72	38	2.38
867	4.26	34.398	0.38	-	-	78	3000	(1.61)	(34.66)	(2.77)	(27.75)	(36)	(2.61)
1113	3.54	34.479	0.77	-	-	65							
1359	3.02	34.526	1.00	-	-	57							
1606	2.64	34.567	1.39	-	-	50							
1856	2.26	34.594	1.59	-	-	45							
2102	2.00	34.623	1.95	-	-	41							
2352	1.85	34.640	2.26	-	-	39							
2599	1.73	34.647	2.51	-	-	37							
2850	1.64	34.660	2.71	-	-	36							
2950	1.62	34.662	2.77	-	-	35							

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

SIO

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OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

80.100

ALEXANDER AGASSIZ; January 15, 1963; 0758 GCT; 32°53'N, 123°53'W; sounding, 2400 fm; wind, 320°, force 3; weather, overcast; sea, missing; wire angle, 10°.

1	15.20	33.220	5.78	0.34	2	337	0	(15.20)	(33.22)	(5.78)	(24.58)	(337)	(0.00)
11	15.22	33.214	5.89	0.37	5	338	10	15.22	33.21	5.88	24.57	338	0.03
31	15.22	33.217	5.78	0.35	2	337	20	15.22	33.21	5.83	24.57	338	0.07
60	15.22	33.208	5.79	0.35	2	338	30	15.22	33.22	5.79	24.57	337	0.10
71	14.94	33.175	5.88	0.40	2	335	50	15.22	33.21	5.79	24.57	338	0.17
84	13.70	33.205	5.85	-	-	308	75	14.40	33.18	5.88	24.72	323	0.25
100	12.82	33.143	5.93	-	-	296	100	12.82	33.14	5.93	25.01	296	0.33
115	12.26	33.291	5.59	-	-	274	125	11.87	33.39	5.39	25.38	260	0.40
140	11.36	33.476	5.22	-	-	245	150	10.73	33.49	5.10	25.67	233	0.46
160	10.06	33.520	4.84	-	-	220	200	9.06	33.84	3.91	26.22	181	0.57
190	9.24	33.790	3.91	-	-	187	250	8.55	34.02	2.61	26.44	160	0.65
219	8.80	33.916	3.90	-	-	171	300	7.63	34.02	2.58	26.58	147	0.73
249	8.56	34.015	2.61	-	-	160	400	6.49	34.09	1.55	26.79	126	0.88
299	7.64	34.024	2.58	-	-	146	500	5.79	34.19	0.78	26.96	110	1.00
354	6.98	34.065	1.91	-	-	134	600	5.29	34.27	0.50	27.08	99	1.11
439	6.14	34.126	1.27	-	-	119							
523	5.69	34.209	0.68	-	-	108							
608	5.24	34.278	0.49	-	-	97							

80.120

ALEXANDER AGASSIZ; January 15, 1963; 1858, 1633 GCT; 32°22'N, 125°05.5'W; sounding, 2355 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 02°, 02°.

1	15.83	33.414	5.83	0.28	2	336	0	(15.83)	(33.41)	(5.83)	(24.58)	(336)	(0.00)
11	15.88	33.413	5.81	0.30	2	337	10	15.88	33.41	5.81	24.57	337	0.03
31	15.88	33.427	5.79	0.30	2	336	20	15.88	33.42	5.80	24.58	337	0.07
56	13.56	33.198	6.02	0.46	4	306	30	15.88	33.43	5.79	24.59	336	0.10
66	13.06	33.205	6.10	0.61	5	295	50	14.00	33.23	5.96	24.84	312	0.17
76	13.00	33.354	5.88	-	-	283	75	13.01	33.33	5.93	25.12	285	0.24
91	11.76	33.360	5.41	-	-	260	100	11.08	33.38	5.17	25.52	247	0.31
106	10.70	33.398	5.04	-	-	239	125	9.59	33.55	4.77	25.91	210	0.37
131	9.48	33.568	4.70	-	-	207	150	9.29	33.76	3.68	26.12	190	0.42
151	9.28	33.770	3.60	-	-	189	200	8.47	33.97	3.04	26.42	162	0.51
172	9.02	33.905	2.81	-	-	175	250	7.79	34.04	2.65	26.57	147	0.59
207	8.38	33.979	3.06	-	-	160	300	6.72	34.00	2.71	26.69	136	0.66
237	8.08	34.053	2.50	-	-	150	400	5.98	34.08	1.57	26.85	121	0.79
277	7.11	33.997	2.94	-	-	141	500	5.41	34.17	0.92	26.99	107	0.91
338	6.29	34.015	2.28	-	-	129	600	5.13	34.32	0.47	27.14	93	1.02
413	5.92	34.093	1.46	-	-	119	700	4.73	34.37	0.49	27.23	85	1.11
488	5.44	34.144	1.01	-	-	110	800	4.38	34.42	0.57	27.31	78	1.20
568	5.34	34.293	0.50	-	-	97	1000	3.74	34.47	0.78	27.41	68	1.36
							1200	3.30	34.51	1.05	27.49	60	1.51
552a)	5.28	34.282	0.57	-	-	98	1500	2.76	34.57	1.40	27.59	51	1.70
651	4.90	34.345	0.47	-	-	89	2000	2.07	34.61	1.90	27.68	43	1.98
775	4.48	34.402	0.55	-	-	80	2500	1.78	34.65	2.48	27.73	37	2.23
899	3.99	34.443	0.63	-	-	72	3000	1.60	34.66	2.81	27.75	35	2.46
1149	3.40	34.503	0.99	-	-	62							
1399	2.93	34.557	1.27	-	-	54							
1649	2.52	34.586	1.59	-	-	48							
1901	2.16	34.600	1.80	-	-	44							
2152	1.94	34.627	2.14	-	-	40							
2402	1.81	34.644	2.38	-	-	38							
2652	1.72	34.649	2.55	-	-	37							
2903	1.63	34.657	2.76	-	-	36							
3003	1.60	34.661	2.81	-	-	35							

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

SIO

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6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

80.200 ALEXANDER AGASSIZ; January 29, 1963; 0053 GCT; 29°29'N, 130°36'W; sounding, 2500 fm; wind, 190°, force 5; weather, rain; sea, rough; wire angle, 13°.

1	17.85	34.309	5.53	0.49	1	316	0	(17.85)	(34.31)	(5.53)	(24.80)	(316)	(0.00)
10	17.88	34.324	-	0.59	1	315	10	17.88	34.32	(5.53)	24.80	316	0.03
49	18.04	34.570	-	0.34	2	301	20	17.97	34.35	(5.52)	24.80	316	0.06
83	18.02	34.627	5.43	0.34	2	297	30	18.01	34.43	(5.50)	24.85	311	0.09
104	16.50	34.383	5.49	0.28	2	280	50	18.04	34.58	(5.44)	24.96	300	0.16
118	15.80	34.291	5.39	0.40	2	271	75	18.03	34.62	(5.43)	24.99	297	0.23
137	14.94	34.177	5.42	-	-	261	100	17.00	34.46	5.49	25.12	285	0.30
156	13.82	34.062	5.26	-	-	247	125	15.45	34.24	5.41	25.31	268	0.37
176	12.58	33.894	5.20	-	-	236	150	14.20	34.10	5.31	25.47	252	0.44
205	11.06	33.803	5.04	-	-	216	200	11.28	33.81	5.09	25.82	219	0.56
234	9.72	33.859	4.62	-	-	189	250	9.40	33.89	4.54	26.21	182	0.66
259	9.23	33.905	4.51	-	-	178	300	8.37	33.97	3.90	26.43	161	0.75
293	8.52	33.961	4.02	-	-	164	400	6.61	34.01	2.57	26.71	134	0.90
338	7.58	33.992	3.34	-	-	148	500	5.65	34.10	1.40	26.91	115	1.03
392	6.72	34.005	2.69	-	-	136	600	5.08	34.20	0.70	27.05	102	1.15
475	5.84	34.067	1.63	-	-	120							
563	5.26	34.175	0.88	-	-	105							
637	4.89	34.231	0.56	-	-	97							

83.60 BLACK DOUGLAS; January 31, 1963; 0922 GCT; 33°33.5'N, 120°44'W; sounding, 1800 fm; wind, 110°, force 6; weather, overcast; sea, very rough; wire angle, 22°.

2	12.58	33.63	5.65			255	0	(12.58)	(33.63)	(5.65)	(25.43)	(255)	(0.00)
12	12.56	33.61	5.58			256	10	12.56	33.61	5.60	25.42	256	0.03
31	12.48	33.64	5.32			253	20	12.52	33.62	5.47	25.44	255	0.05
41	12.00	33.67	4.52			242	30	12.49	33.64	5.37	25.46	253	0.08
56	11.22	33.69	3.94			227	50	11.58	33.68	4.18	25.66	234	0.13
70	10.74	33.72	3.48			216	75	10.61	33.75	3.35	25.89	212	0.18
96	9.92	33.86	2.78			192	100	9.78	33.89	2.69	26.14	188	0.23
113	9.44	33.97	2.45			177	125	9.28	34.01	2.32	26.32	171	0.28
134	9.16	34.03	2.24			168	150	8.97	34.06	2.08	26.41	163	0.32
153	8.94	34.07	2.06			162	200	8.60	34.16	1.75	26.54	150	0.40
180	8.73	34.12	1.88			155	250	8.10	34.19	1.30	26.64	140	0.47
214	8.42	34.18	1.60			146	300	7.86	34.23	0.98	26.71	134	0.55
241	8.18	34.18	1.36			142	400	7.39	34.27	0.64	26.81	125	0.68
287	7.90	34.23	1.05			135	500	6.60	34.28	0.49	26.93	114	0.81
338	7.72	34.23	0.82			132	600	(5.68)	(34.33)		(27.09)	(99)	(0.92)
419	7.28	34.28	0.60			122							
500	6.60	34.28	0.49			114							
582	5.84	34.32	0.39			101							

90.28 ALEXANDER AGASSIZ; February 2, 1963; 1241 GCT; 33°28.5'N, 117°46'W; sounding, 42 fm; wind, 210°, force 2; weather, fog; sea, missing; wire angle, 00°.

0	14.26	33.625	6.93	0.47		288	0	14.26	33.62	6.93	25.09	288	0.00
10	13.98	33.629	6.48	0.52		282	10	13.98	33.63	6.48	25.15	282	0.03
30	13.74	33.607	6.08	0.58		279	20	13.84	33.62	6.22	25.17	280	0.06
50	13.10	33.574	5.39	0.82		269	30	13.74	33.61	6.08	25.19	279	0.08
							50	13.10	33.57	5.39	25.29	269	0.14

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
ALEXANDER AGASSIZ; February 2, 1963; 0956 GCT; 33°20.5'N, 118°03'W; sounding, 410 fm; wind, 300°, force 3; weather, light fog; sea, missing; wire angle, 02°.														90.32
1	13.97	33.609	6.06	0.50			283	0	(13.97)	(33.61)	(6.06)	(25.14)	(283)	(0.00)
11	13.90	33.614	6.05	0.51			282	10	13.91	33.61	6.05	25.15	282	0.03
31	13.86	33.620	6.02	0.59			280	20	13.89	33.62	6.03	25.16	281	0.06
56	13.78	33.615	5.94	0.50			279	30	13.87	33.62	6.02	25.17	281	0.08
66	13.62	33.599	-	0.62			277	50	13.80	33.62	5.97	25.18	279	0.14
76	12.53	33.539	5.03	1.00			261	75	12.64	33.54	5.15	25.35	263	0.21
91	11.57	33.614	4.28	-			238	100	11.05	33.64	4.10	25.73	227	0.27
106	10.68	33.674	3.97	-			219	125	9.95	33.80	3.40	26.04	197	0.32
131	9.77	33.839	3.27	-			192	150	9.30	33.92	2.95	26.25	178	0.37
152	9.28	33.932	2.92	-			177	200	8.72	34.07	2.42	26.46	158	0.46
177	8.96	34.009	2.57	-			166	250	8.21	34.14	1.80	26.59	146	0.54
207	8.67	34.083	2.34	-			157	300	7.66	34.18	2.40	26.70	135	0.61
237	8.34	34.134	1.89	-			148	400	7.13	34.29	0.70	26.86	120	0.74
278	7.90	34.163	1.57	-			140	500	6.39	34.33	0.45	26.99	107	0.86
337	7.28	34.209	1.13	-			128							
412	7.10	34.300	0.65	-			119							
487	6.48	34.327	0.49	-			109							
567	5.99	34.363	0.36	-			100							
ALEXANDER AGASSIZ; February 2, 1963; 0401 GCT; 33°11'N, 118°23'W; sounding, 635 fm; wind, 280°, force 3; weather, fog; sea, moderate; wire angle, 04°.														90.37
1	14.14	33.578	5.98	0.53	4		289	0	(14.14)	(33.58)	(5.98)	(25.08)	(289)	(0.00)
11	14.01	33.635	6.03	0.52	3		282	10	14.02	33.63	6.02	25.15	283	0.03
31	13.92	33.645	6.01	0.48	2		280	20	13.97	33.64	6.02	25.16	281	0.06
56	12.72	33.545	5.04	0.96	7		264	30	13.93	33.64	6.01	25.17	280	0.08
71	11.78	33.544	4.80	1.14	11		247	50	13.40	33.60	5.65	25.25	273	0.14
87	10.94	33.618	4.32	-	-		227	75	11.57	33.56	4.70	25.57	242	0.21
102	10.34	33.694	3.92	-	-		212	100	10.44	33.68	4.00	25.87	214	0.26
126	9.70	33.848	3.19	-	-		190	125	9.72	33.84	3.21	26.11	191	0.31
146	9.37	33.910	3.05	-	-		180	150	9.29	33.92	3.02	26.25	178	0.36
166	9.01	33.988	2.80	-	-		169	200	8.72	34.13	2.01	26.50	154	0.45
196	8.76	34.117	2.09	-	-		155	250	8.24	34.21	1.54	26.64	141	0.52
247	8.27	34.206	1.56	-	-		142	300	7.86	34.26	1.27	26.73	132	0.59
303	7.83	34.258	1.26	-	-		132	400	7.10	34.30	0.67	26.87	119	0.72
382	7.23	34.285	0.74	-	-		121	500	6.33	34.34	0.50	27.01	106	0.84
483	6.46	34.334	0.52	-	-		108	600	5.74	34.38	0.44	27.12	96	0.95
589	5.79	34.375	0.45	-	-		97	700	5.30	34.40	0.43	27.19	89	1.05
738	5.16	34.418	0.43	-	-		86	800	4.88	34.44	0.44	27.27	81	1.14
894	4.48	34.469	0.46	-	-		75	1000	4.26	34.48	0.50	27.37	72	1.31
1049	4.18	34.487	0.51	-	-		71							
1134	4.09	-	-	-	-									
ALEXANDER AGASSIZ; February 2, 1963; 0614 GCT;[a] 33°11'N, 118°23'W; sounding, 635 fm; wind, 280°, force 3; weather, fog; sea, moderate; wire angle, 04°.														90.37
437	6.74	34.290	0.58				115							
440	6.73	34.291	0.58				114							
443	6.71	34.292	0.58				114							
468	6.50	34.302	0.51				111							
471	6.50	34.311	0.52				110							
474	6.48	34.312	0.48				110							
498	6.33	34.321	0.50				107							
501	6.32	34.322	0.45				107							
504	6.31	34.325	0.51				107							
529	6.12	34.333	0.47				104							
532	6.10	34.329	0.45				104							
535	6.10	34.335	0.51				103							
560	5.89	34.347	0.41				100							
563	5.89	34.347	0.43				100							
566	5.86	34.348	0.49				99							
591	5.74	34.356	0.41				97							
594	5.73	34.356	0.41				97							
597	5.72	34.358	0.35				97							

a) Test cast.

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

90.45 ALEXANDER AGASSIZ; February 1, 1963; 2140 GCT; 32°54.5'N, 118°55.5'W; sounding, 940 fm; wind, 240°, force 3; weather, fog; sea, very rough; wire angle, 02°.

1	13.28	33.631	6.06	0.54	4	268	0	(13.28)	(33.63)	(6.06)	(25.30)	(268)	(0.00)
11	13.18	33.637	6.12	0.57	4	266	10	13.19	33.64	6.11	25.32	266	0.03
32	12.36	33.695	5.57	0.85	8	246	20	13.02	33.64	6.04	25.36	263	0.05
42	10.82	33.664	4.13	1.41	17	222	30	12.57	33.68	5.73	25.48	251	0.08
57	10.27	33.736	3.65	1.65	22	207	50	10.50	33.71	3.80	25.88	213	0.13
72	9.95	33.775	3.56	-	-	199	75	9.89	33.78	3.52	26.04	198	0.18
97	9.46	33.862	3.12	-	-	185	100	9.38	33.88	3.05	26.20	182	0.23
117	9.00	33.955	2.63	-	-	171	125	8.88	33.98	2.67	26.36	167	0.27
137	8.66	34.005	2.67	-	-	162	150	8.48	34.04	2.50	26.47	157	0.31
157	8.40	34.058	2.37	-	-	155	200	8.28	34.17	1.67	26.60	145	0.39
186	8.30	34.127	1.84	-	-	148	250	7.88	34.22	1.09	26.70	135	0.46
222	8.18	34.199	1.40	-	-	141	300	7.50	34.25	1.05	26.78	128	0.53
252	7.86	34.228	1.08	-	-	134	400	6.64	34.28	0.62	26.92	114	0.65
303	7.48	34.256	1.03	-	-	127	500	6.09	34.31	0.55	27.02	105	0.77
359	6.90	34.267	0.74	-	-	118	600	5.62	34.34	0.50	27.10	97	0.88
444	6.40	34.296	0.56	-	-	110							
529	5.96	34.322	0.56	-	-	103							
614	5.58	34.349	0.47	-	-	96							

90.53 ALEXANDER AGASSIZ; February 1, 1963; 1559 GCT; 32°31.5'N, 119°24.5'W; sounding, 500 fm; wind, 180°, force 3; weather, fog; sea, very rough; wire angle, 18°.

2	13.60	33.510	6.04	0.52	3	283	0	(13.60)	(33.51)	(6.04)	(25.14)	(283)	(0.00)
12	13.58	33.515	6.05	0.50	3	283	10	13.59	33.52	6.05	25.15	283	0.03
30	13.29	33.545	6.02	0.54	3	275	20	13.46	33.53	6.04	25.18	279	0.06
59	12.23	33.530	5.20	0.93	8	256	30	13.29	33.54	6.02	25.22	275	0.08
69	11.67	33.534	4.96	1.12	12	246	50	12.77	33.54	5.60	25.33	265	0.14
84	10.92	33.596	4.44	1.34	16	228	75	11.27	33.54	4.73	25.61	239	0.20
98	10.42	33.703	3.93	-	-	212	100	10.33	33.72	3.84	25.92	209	0.26
112	9.86	33.810	3.36	-	-	195	125	9.60	33.84	3.20	26.13	189	0.31
135	9.46	33.872	3.10	-	-	184	150	9.41	33.88	3.05	26.20	183	0.36
154	9.38	33.883	3.00	-	-	182	200	8.50	34.07	2.22	26.49	155	0.44
182	8.84	34.016	2.43	-	-	164	250	7.89	34.11	1.90	26.61	143	0.52
209	8.33	34.079	2.15	-	-	152	300	7.70	34.20	1.29	26.71	134	0.59
238	7.94	34.084	2.02	-	-	146	400	7.15	34.28	0.72	26.85	121	0.72
285	7.77	34.179	1.45	-	-	137	500	6.23	34.31	0.53	27.00	107	0.84
336	7.52	34.249	0.96	-	-	128	600	(5.70)	(34.35)		(27.10)	(97)	(0.95)
417	7.01	34.286	0.67	-	-	118							
499	6.24	34.311	0.54	-	-	107							
582	5.76	34.338	0.43	-	-	99							

90.60 ALEXANDER AGASSIZ; February 1, 1963; 1053 GCT; 32°12'N, 119°56'W; sounding, 700 fm; wind, 210°, force 2; weather, fog; sea, rough; wire angle, 15°.

1	14.24	33.427	6.05	0.47	3	302	0	(14.24)	(33.43)	(6.05)	(24.94)	(302)	(0.00)
11	14.24	33.423	6.07	0.47	2	302	10	14.24	33.42	6.06	24.94	303	0.03
31	14.06	33.463	5.99	0.51	3	296	20	14.19	33.44	6.05	24.96	300	0.06
60	13.13	33.494	5.52	0.74	5	276	30	14.08	33.46	6.00	25.00	297	0.09
79	11.16	33.445	5.03	1.20	12	244	50	13.50	33.49	5.71	25.14	283	0.15
94	10.76	33.550	4.79	1.17	14	229	75	11.30	33.45	5.12	25.54	246	0.21
108	10.58	33.701	3.89	-	-	215	100	10.50	33.61	4.50	25.80	220	0.27
133	10.32	33.910	2.45	-	-	195	125	10.42	33.87	2.80	26.02	200	0.33
152	10.10	33.968	2.29	-	-	187	150	10.13	33.96	2.31	26.14	188	0.38
175	9.82	34.020	2.26	-	-	179	200	9.38	34.06	2.32	26.34	169	0.47
203	9.35	34.069	2.33	-	-	168	250	9.07	34.16	1.87	26.47	157	0.55
250	9.07	34.157	1.87	-	-	157	300	8.53	34.22	1.37	26.60	144	0.63
307	8.46	34.229	1.31	-	-	143	400	7.44	34.26	0.91	26.80	126	0.77
390	7.58	34.263	0.93	-	-	128	500	6.00	34.22	0.72	26.96	111	0.89
492	6.06	34.215	0.74	-	-	112	600	5.46	34.31	0.50	27.10	98	1.01
594	5.48	34.307	0.51	-	-	98	700	5.04	34.38	0.48	27.20	88	1.11
744	4.88	34.389	0.47	-	-	85	800	4.67	34.41	0.50	27.27	81	1.20
904	4.34	34.447	0.58	-	-	75	1000	4.08	34.47	0.67	27.38	71	1.37
1057	3.93	34.483	0.73	-	-	68							
1135	3.69	34.484	0.82	-	-	66							

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
ALEXANDER AGASSIZ; February 1, 1963; 0455 GCT; 31°54'N, 120°35.5'W; sounding, 2100 fm; wind, 210°, force 3; weather, fog; sea, very rough; wire angle, 08°.														90.70
1	14.06	33.566	6.05	0.47	3		288	0	(14.06)	(33.57)	(6.05)	(25.09)	(288)	(0.00)
11	14.04	33.573	6.02	0.52	5		287	10	14.04	33.57	6.03	25.09	288	0.03
31	13.90	33.574	5.99	0.51	3		285	20	13.98	33.57	6.01	25.11	286	0.06
60	12.82	33.596	5.06	0.97	8		262	30	13.91	33.57	6.00	25.12	285	0.09
70	11.48	33.590	4.53	1.39	14		238	50	13.73	33.58	5.85	25.17	281	0.14
85	10.49	33.652	3.99	-	-		217	75	11.18	33.60	4.37	25.67	233	0.21
100	9.80	33.718	3.73	-	-		201	100	9.80	33.72	3.73	26.01	201	0.26
115	9.51	33.858	3.03	-	-		186	125	9.35	33.90	2.86	26.22	181	0.31
138	9.11	33.955	2.68	-	-		173	150	8.88	33.99	2.61	26.37	167	0.35
157	8.72	34.012	2.60	-	-		163	200	8.08	34.05	2.50	26.54	151	0.44
186	8.36	34.056	2.58	-	-		154	250	7.42	34.09	1.82	26.66	138	0.51
214	7.80	34.049	2.38	-	-		147	300	6.78	34.11	1.42	26.77	129	0.58
243	7.50	34.088	1.88	-	-		140	400	6.11	34.17	0.90	26.90	116	0.71
292	6.86	34.104	1.50	-	-		130	500	5.54	34.26	0.60	27.05	102	0.82
346	6.42	34.128	1.17	-	-		123	600	(5.04)	(34.33)	(0.30)	(27.16)	(91)	(0.92)
429	5.93	34.198	0.80	-	-		111							
513	5.47	34.268	0.58	-	-		101							
598	5.04	34.325	0.30	-	-		92							
ALEXANDER AGASSIZ; February 1, 1963; 0006 GCT; 31°35'N, 121°18'W; sounding, 2100 fm; wind, 210°, force 4; weather, fog; sea, very rough; wire angle, 16°.														90.80
3	14.46	33.367	6.01	0.39	0		311	0	(14.46)	(33.37)	(6.01)	(24.85)	(311)	(0.00)
12	14.48	33.367	6.14	0.51	1		311	10	14.48	33.37	6.12	24.85	311	0.03
31	14.13	33.438	6.00	0.46	0		299	20	14.41	33.39	6.11	24.88	308	0.06
60	13.74	33.627	5.96	0.61	1		278	30	14.19	33.43	6.02	24.96	301	0.09
69	13.68	33.628	5.87	0.81	2		276	50	13.60	33.50	6.00	25.13	284	0.15
85	11.58	33.476	5.04	-	-		249	75	13.35	33.61	5.70	25.27	271	0.22
99	10.56	33.570	4.40	-	-		224	100	10.48	33.58	4.39	25.78	222	0.28
113	9.72	33.638	4.07	-	-		206	125	9.47	33.74	3.73	26.08	194	0.34
137	9.28	33.839	3.40	-	-		184	150	9.05	33.93	3.27	26.29	174	0.38
155	8.95	33.956	3.16	-	-		170	200	8.31	34.04	2.65	26.49	155	0.47
183	8.64	34.053	2.30	-	-		158	250	7.45	34.04	2.42	26.62	143	0.54
211	8.08	34.036	2.72	-	-		152	300	7.02	34.11	1.67	26.74	132	0.61
241	7.53	34.024	2.58	-	-		145	400	6.43	34.22	0.80	26.90	116	0.74
288	7.14	34.104	1.74	-	-		134	500	5.78	34.29	0.59	27.04	103	0.86
340	6.56	34.124	1.37	-	-		125	600	(5.18)	(34.34)		(27.15)	(92)	(0.96)
421	6.38	34.250	0.68	-	-		113							
502	5.77	34.289	0.58	-	-		103							
585	5.26	34.338	0.47	-	-		93							
ALEXANDER AGASSIZ; January 31, 1963; 1925 GCT; 31°17'N, 121°58.5'W; sounding, 2250 fm; wind, 200°, force 5; weather, fog; sea, very rough; wire angle, 35°.														90.90
1	14.64	33.234	5.99	0.43	1		324	0	(14.64)	(33.23)	(5.99)	(24.71)	(325)	(0.00)
9	14.63	33.236	6.01	0.44	1		324	10	14.63	33.24	6.01	24.72	324	0.03
30	14.60	33.237	6.04	0.41	1		323	20	14.62	33.24	6.03	24.72	323	0.06
53	14.24	33.276	5.99	0.44	2		313	30	14.60	33.24	6.04	24.72	323	0.10
78	13.61	33.403	5.86	0.57	2		291	50	14.26	33.27	6.00	24.82	314	0.16
85	12.87	33.409	5.61	0.75	4		277	75	13.63	33.36	5.90	25.02	295	0.24
89	13.40	33.683	5.56	-	-		267	100	13.10	33.73	5.33	25.41	258	0.31
96	13.33	33.765	5.41	-	-		260	125	10.01	33.58	4.41	25.86	215	0.37
108	11.38	33.434	4.98	-	-		248	150	9.38	33.76	3.75	26.11	191	0.42
131	9.84	33.625	4.27	-	-		209	200	8.56	33.96	2.90	26.39	164	0.51
152	9.34	33.766	3.69	-	-		190	250	7.78	34.04	2.38	26.57	147	0.59
176	8.90	33.885	3.31	-	-		175	300	6.83	34.03	2.24	26.70	135	0.66
198	8.58	33.952	2.97	-	-		165	400	5.86	34.09	1.41	26.87	119	0.79
232	8.19	34.035	2.42	-	-		153	500	(5.37)	(34.24)	(0.63)	(27.05)	(102)	(0.91)
279	7.14	34.035	2.30	-	-		139							
353	6.24	34.030	2.06	-	-		128							
422	5.70	34.126	1.03	-	-		114							
483	5.42	34.215	0.63	-	-		104							

SIO

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OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

90.100 ALEXANDER AGASSIZ; January 31, 1963; 1431 GCT; 30°58'N, 122°40'W; sounding, 2250 fm; wind, 170°, force 4; weather, cloudy; sea, high; wire angle, 22°.

2	14.41	33.278	5.99	0.44	2	316	0	(14.41)	(33.28)	(5.99)	(24.79)	(316)	(0.00)
11	14.42	33.279	6.02	0.41	1	317	10	14.42	33.28	6.02	24.79	317	0.03
34	14.31	33.282	6.03	0.43	2	314	20	14.41	33.28	6.02	24.79	316	0.06
62	13.80	33.477	5.79	0.56	3	290	30	14.36	33.28	6.03	24.80	315	0.09
72	13.18	33.418	5.70	0.69	4	282	50	14.04	33.44	5.87	24.99	297	0.16
91	11.50	33.352	5.32	0.96	8	256	75	12.87	33.40	5.67	25.20	278	0.23
104	10.78	33.458	5.03	-	-	236	100	11.00	33.42	5.15	25.57	243	0.29
118	10.31	33.565	4.42	-	-	221	125	10.07	33.61	4.37	25.88	213	0.35
144	9.38	33.716	4.15	-	-	195	150	9.21	33.78	3.80	26.15	187	0.40
161	8.97	33.877	3.27	-	-	176	200	8.40	33.96	3.16	26.42	162	0.49
188	8.59	33.937	3.28	-	-	166	250	7.63	34.01	2.60	26.57	147	0.57
219	8.08	33.988	2.97	-	-	155	300	7.39	34.10	1.77	26.68	137	0.64
247	7.66	34.006	2.69	-	-	148	400	6.26	34.15	1.00	26.87	119	0.78
291	7.48	34.090	1.87	-	-	139	500	5.46	34.21	0.68	27.02	105	0.90
350	6.82	34.123	1.35	-	-	128	600	(5.00)	(34.31)	(0.42)	(27.15)	(92)	(1.00)
441	5.84	34.164	0.82	-	-	113							
524	5.32	34.231	0.61	-	-	102							
594	5.02	34.300	0.44	-	-	93							

90.120 ALEXANDER AGASSIZ; January 31, 1963; 0552 GCT; 30°21'N, 123°59.5'W; sounding, 2400 fm; wind, 180°, force 5; weather, cloudy; sea, very rough; wire angle, 28°.

1	15.39	33.380	5.80	0.46	1	329	0	(15.39)	(33.38)	(5.80)	(24.66)	(329)	(0.00)
9	15.39	33.378	5.80	0.42	2	329	10	15.39	33.38	5.80	24.66	329	0.03
32	15.38	33.371	5.80	0.39	2	330	20	15.38	33.38	5.80	24.66	329	0.07
58	14.62	33.245	5.85	0.45	2	323	30	15.38	33.37	5.80	24.65	330	0.10
67	14.54	33.269	5.94	0.47	2	320	50	15.26	33.35	5.80	24.66	329	0.16
85	13.79	33.341	5.82	-	-	300	75	14.28	33.29	5.93	24.83	313	0.25
98	13.39	33.439	5.73	-	-	285	100	13.31	33.45	5.70	25.15	282	0.32
112	12.68	33.485	5.44	-	-	268	125	14.20	34.01	5.34	25.40	259	0.39
139	13.13	33.902	5.29	-	-	246	150	12.44	33.85	5.27	25.63	237	0.45
157	12.02	33.812	5.22	-	-	232	200	10.01	33.78	4.37	26.02	200	0.56
183	10.82	33.767	4.96	-	-	214	250	8.77	33.96	4.21	26.36	167	0.66
214	9.37	33.801	3.91	-	-	188	300	7.83	33.99	3.75	26.53	152	0.74
241	8.92	33.946	4.22	-	-	171	400	6.32	34.03	2.04	26.77	129	0.88
285	8.12	33.983	3.85	-	-	156	500	5.57	34.13	1.11	26.94	112	1.01
341	7.00	33.995	2.93	-	-	140	600	(4.99)	(34.26)		(27.11)	(96)	(1.12)
432	6.04	34.059	1.63	-	-	123							
515	5.47	34.143	1.03	-	-	110							
586	5.06	34.240	0.67	-	-	98							

90.140 ALEXANDER AGASSIZ; January 30, 1963; 2117 GCT; 29°45'N, 125°19.5'W; sounding, 2400 fm; wind, 180°, force 5; weather, cloudy; sea, very rough; wire angle, 38°.

2	15.83	33.409	5.87	0.44		336	0	(15.83)	(33.41)	(5.87)	(24.58)	(336)	(0.00)
10	15.84	33.409	5.84	-		337	10	15.84	33.41	5.84	24.58	336	0.03
42	15.86	33.429	5.82	0.47		335	20	15.84	33.41	5.84	24.58	336	0.07
69	17.14	33.890	5.55	0.38		330	30	15.84	33.41	5.83	24.58	336	0.10
85	16.93	33.878	5.77	0.48		326	50	16.50	33.65	5.69	24.62	333	0.17
96	14.74	33.589	5.90	0.47		300	75	17.14	33.89	5.57	24.65	330	0.25
112	14.60	33.796	5.82	-		282	100	14.40	33.64	5.85	25.07	290	0.33
128	14.63	33.992	6.21	-		269	125	14.77	33.98	6.11	25.26	272	0.40
144	13.67	33.920	6.36	-		255	150	13.22	33.88	6.17	25.50	249	0.47
168	12.03	33.774	5.32	-		235	200	11.00	33.75	5.17	25.82	218	0.59
190	11.34	33.730	5.24	-		226	250	9.06	33.94	4.43	26.30	173	0.69
211	10.56	33.787	5.04	-		208	300	8.00	33.98	3.70	26.49	155	0.77
238	9.38	33.914	4.59	-		180	400	6.60	34.03	2.22	26.73	132	0.92
274	8.51	33.968	4.07	-		163	500	5.68	34.17	0.93	26.96	111	1.05
317	7.68	33.987	3.50	-		150							
388	6.75	34.015	2.44	-		135							
465	5.84	34.116	1.21	-		117							
533	5.58	34.209	0.72	-		107							

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
ALEXANDER AGASSIZ; January 30, 1963; 1118 GCT; 29°00'N, 126°45.5'W; sounding, 2200 fm; wind, 170°, force 6; weather, missing; sea, high; wire angle, 37°.														90.160
1	17.42	34.070	5.66	0.34	2		323	0	(17.42)	(34.07)	(5.66)	(24.72)	(323)	(0.00)
10	17.44	34.068	5.48	0.40	1		324	10	17.44	34.07	5.48	24.72	324	0.03
50	17.44	34.070	5.64	0.49	2		324	20	17.44	34.07	5.52	24.72	324	0.06
79	17.44	34.073	5.45	0.33	2		323	30	17.44	34.07	5.56	24.72	324	0.10
95	17.46	34.068	5.59	0.34	2		324	50	17.44	34.07	5.64	24.72	324	0.16
107	16.12	33.959	5.65	-	-		302	75	17.44	34.07	5.48	24.72	324	0.24
123	15.62	34.017	5.55	-	-		287	100	17.44	34.07	5.60	24.72	324	0.33
142	14.36	33.928	5.27	-	-		268	125	15.55	34.01	5.55	25.11	286	0.40
161	13.32	33.913	5.34	-	-		248	150	13.92	33.92	5.30	25.39	260	0.47
190	11.20	33.738	4.86	-	-		223	200	10.85	33.74	4.81	25.84	217	0.59
227	9.92	33.795	4.71	-	-		197	250	9.19	33.87	4.39	26.22	180	0.69
285	8.27	33.966	3.78	-	-		160	300	8.03	33.98	3.47	26.49	155	0.78
344	7.52	34.024	2.64	-	-		145	400	6.94	34.11	1.68	26.75	131	0.93
412	6.82	34.126	1.54	-	-		128	500	5.96	34.19	0.97	26.94	112	1.06
480	6.13	34.175	1.08	-	-		116	600	5.20	34.26	0.62	27.09	98	1.17
542	5.66	34.219	0.78	-	-		107							
587	5.28	34.249	0.66	-	-		100							
634	5.00	34.287	0.53	-	-		94							
ALEXANDER AGASSIZ; January 30, 1963; 0238 GCT; 28°26'N, 127°59.5'W; sounding, 2250 fm; wind, 190°, force 5; weather, overcast; sea, high; wire angle, 32°.														90.180
2	17.60	34.069	5.57	0.33	2		327	0	(17.60)	(34.07)	(5.57)	(24.68)	(327)	(0.00)
10	17.61	34.064	5.57	0.34	2		328	10	17.61	34.06	5.57	24.67	328	0.03
31	17.62	34.065	5.57	0.34	2		328	20	17.61	34.06	5.57	24.67	328	0.07
56	18.02	34.273	5.55	0.31	2		322	30	17.62	34.06	5.57	24.66	329	0.10
66	18.06	34.300	5.52	0.33	2		321	50	17.93	34.22	5.55	24.71	324	0.16
82	18.10	34.379	5.47	0.30	2		317	75	18.08	34.35	5.48	24.77	318	0.24
94	18.12	34.389	-	-	-		316	100	18.11	34.39	5.48	24.80	316	0.32
105	17.79	34.345	5.51	-	-		312	125	15.90	34.03	5.59	25.04	292	0.40
128	15.82	34.030	5.59	-	-		291	150	14.73	34.02	5.35	25.29	269	0.47
144	15.14	34.077	5.39	-	-		273	200	10.84	33.70	4.73	25.81	219	0.60
165	13.46	33.854	5.23	-	-		255	250	8.97	33.86	3.79	26.25	178	0.70
192	11.28	33.702	4.92	-	-		227	300	7.84	34.01	2.67	26.54	150	0.78
216	10.10	33.712	4.35	-	-		206	400	6.88	34.18	1.08	26.81	125	0.93
256	8.80	33.891	3.64	-	-		173	500	6.30	34.27	0.60	26.96	111	1.05
310	7.68	34.038	2.43	-	-		146							
392	6.90	34.164	1.15	-	-		126							
470	6.56	34.268	0.62	-	-		114							
539	5.90	34.264	0.58	-	-		106							
ALEXANDER AGASSIZ; January 29, 1963; 1811 GCT; 27°43.5'N, 129°15.5'W; sounding, 2450 fm; wind, 190°, force 5; weather, cloudy; sea, high; wire angle, 25°.														90.200
1	18.26	34.488	5.38	0.20	3		312	0	(18.26)	(34.49)	(5.38)	(24.84)	(312)	(0.00)
10	18.28	34.488	5.52	0.23	3		313	10	18.28	34.49	5.52	24.83	313	0.03
55	18.24	34.490	5.42	0.20	2		312	20	18.27	34.49	5.52	24.83	312	0.06
87	18.60	34.711	5.27	0.17	2		304	30	18.26	34.49	5.52	24.84	312	0.09
105	18.38	34.660	5.41	0.17	2		303	50	18.24	34.49	5.47	24.84	312	0.16
119	17.08	34.436	5.43	-	-		289	75	18.39	34.61	5.31	24.90	307	0.23
137	16.34	34.379	5.37	-	-		277	100	18.48	34.68	5.31	24.93	304	0.31
159	14.92	34.185	5.22	-	-		260	125	16.81	34.41	5.41	25.13	285	0.39
181	12.98	33.922	5.33	-	-		241	150	15.60	34.28	5.38	25.30	268	0.46
213	11.12	33.774	5.06	-	-		219	200	11.80	33.81	5.20	25.72	228	0.58
254	9.56	33.880	4.30	-	-		185	250	9.68	33.86	4.40	26.14	189	0.69
318	8.08	33.995	3.70	-	-		155	300	8.47	33.97	3.87	26.42	162	0.78
382	6.87	34.019	2.57	-	-		136	400	6.64	34.03	2.35	26.73	133	0.93
455	6.06	34.057	1.82	-	-		124	500	5.64	34.12	1.48	26.92	114	1.06
530	5.38	34.161	1.22	-	-		108	600	5.08	34.24	0.72	27.09	99	1.17
596	5.10	34.227	0.75	-	-		100	700	(4.68)	(34.31)	(0.54)	(27.19)	(89)	(1.27)
643	4.82	34.282	0.55	-	-		93							
691	4.69	34.309	0.54	-	-		89							

SIO

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6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

93.28 BLACK DOUGLAS; February 4, 1963; 0552 GCT; 32°54.5'N, 117°22'W; sounding, 300 fm; wind, direction missing, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.

1	14.52	33.63	6.62		293	0	(14.52)	(33.63)	(6.62)	(25.04)	(293)	(0.00)
11	14.21	33.63	6.44		287	10	14.25	33.63	6.47	25.10	287	0.03
21	13.94	33.65	6.27		280	20	13.96	33.65	6.28	25.17	280	0.06
31	13.74	33.66	6.21		275	30	13.75	33.66	6.22	25.22	275	0.09
40	13.54	33.65	5.61		272	50	13.16	33.63	5.06	25.32	266	0.14
50	13.16	33.63	5.06		266	75	11.23	33.63	4.08	25.69	231	0.20
60	12.12	33.55	4.62		253	100	10.46	33.81	3.05	25.96	205	0.26
70	11.46	33.60	4.24		237	125	9.95	33.91	2.63	26.13	189	0.31
85	10.80	33.68	3.71		220	150	9.61	34.01	2.21	26.26	176	0.35
100	10.46	33.81	3.05		205	200	8.98	34.07	2.16	26.41	162	0.44
114	10.10	33.87	2.85		195	250	8.74	34.19	1.52	26.55	150	0.52
140	9.72	33.97	2.37		181	300	8.21	34.21	1.23	26.64	141	0.59
168	9.36	34.04	2.07a)		170	400	7.23	34.27	0.61	26.83	122	0.73
202	8.96	34.07	2.16		162	500	(6.45)	(34.32)	(0.31)	(26.98)	(109)	(0.85)
250	8.74	34.19	1.52		150							
298	8.22	34.20	1.25		141							
401	7.22	34.27	0.60		122							
499	6.46	34.32	0.32		109							

93.30 BLACK DOUGLAS; January 30, 1963; 0345 GCT; 32°50.5'N, 117°31'W; sounding, 450 fm; wind, 180°, force 2; weather, overcast; sea, slight; wire angle, 00°.b)

1	14.28	33.65	6.33		287
11	14.18	33.64	6.52		285
21	14.13	33.64	6.12		284
31	14.10	33.65	5.99		283
40	14.07	33.64	5.98		283
50	13.54	33.61	5.50		275
60	12.79	33.65	4.99		258
70	12.33	33.65	4.16		249
80	11.70	33.68	3.70		236
90	11.03	33.72	3.47		221
99	10.64	33.79	3.22		209
110	10.34	33.82	3.04		202
120	10.08	33.88	2.89		194
130	9.72	33.98	2.59		180
139	9.51	33.99	2.44		176
149	9.44	-	-		
160	9.28	34.05	2.16		168
170	9.20	34.07	2.12		166

93.30 BLACK DOUGLAS; February 4, 1963; 0807 GCT; 32°50.5'N, 117°31'W; sounding, 420 fm; wind, direction missing, force 1; weather, fog; sea, slight; wire angle, 00°.

0	14.72	33.62	6.54		298	0	14.72	33.62	6.54	24.99	298	0.00
11	14.44	33.62	6.44		292	10	14.46	33.62	6.46	25.04	292	0.03
31	13.91	33.64	6.38		280	20	14.03	33.63	6.41	25.14	283	0.06
55	12.24	33.54	4.91		256	30	13.93	33.64	6.40	25.17	280	0.09
65	11.56	33.54	4.70		244	50	13.00	33.59	5.54	25.32	266	0.14
75	11.14	33.56	4.53		235	75	11.14	33.56	4.53	25.65	235	0.20
90	10.56	33.70	4.01		215	100	10.28	33.79	3.37	25.98	203	0.26
105	10.18	33.84	3.09		198	125	9.86	33.94	2.72	26.17	186	0.31
129	9.80	33.96	2.65		183	150	9.59	34.05	2.16	26.30	173	0.35
149	9.60	34.04	2.19		174	200	9.25	34.16	1.65	26.44	160	0.44
172	9.46	34.13	1.80		165	250	8.94	34.25	1.21	26.56	148	0.52
203	9.22	34.17	1.62		159	300	8.35	34.26	1.03	26.66	139	0.59
231	9.06	34.22	1.39		152	400	7.23	34.26	0.84	26.83	123	0.73
270	8.78	34.27	1.10		144	500	6.19	34.31	0.40	27.00	106	0.85
327	7.96	34.25	0.98		134							
400	7.23	34.26	0.84		123							
474	6.40	34.31	0.45		109							
553	5.89	34.32	0.31		102							

a) Alternate value, 2.16 ml/L, not used in interpolation.
b) Shakedown station.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

BLACK DOUGLAS; February 4, 1963; 1530, 1340 GCT; 32°30.5'N, 118°12.5'W; sounding, 900 fm; wind, direction missing, force 1; weather, partly cloudy; sea, slight; wire angle, 08°, 00°. 93.40

0	14.50	33.55	6.05		298	0	14.50	33.55	6.05	24.98	298	0.00
10	14.42	33.55	6.14		297	10	14.42	33.55	6.14	25.00	297	0.03
30	13.98	33.59	6.02		285	20	14.07	33.57	6.07	25.09	288	0.06
53	12.63	33.54	5.11		263	30	13.98	33.59	6.02	25.12	285	0.09
63	11.88	33.56	4.64		248	50	13.10	33.56	4.42	25.28	270	0.14
73	11.58	33.62	4.23		238	75	11.51	33.63	4.11	25.64	236	0.21
88	10.88	33.82	3.20		211	100	10.58	33.85	2.65	25.98	204	0.26
101	10.57	33.85	2.63		204	125	10.22	33.94	2.45	26.11	191	0.31
127	10.20	33.94	2.41		191	150	10.18	34.03	1.95	26.18	184	0.36
146	10.21	34.02	2.07		185	200	9.35	34.12	1.92	26.39	164	0.45
170	9.90	34.23u	1.69			250	8.64	34.18	1.68	26.55	149	0.53
199	9.36	34.11	1.94		165	300	8.13	34.21	1.27	26.66	139	0.60
227	9.04	34.18	1.71		155	400	7.12	34.26	0.75	26.84	122	0.74
268	8.36	34.18	1.62		145	500	6.48	34.32	0.38	26.97	109	0.86
326	7.96	34.26	0.99		133	600	5.73	34.35	0.26	27.09	98	0.97
398	7.09	34.25	0.88		122	700	5.21	34.38	0.26	27.18	89	1.07
471	6.66	34.31	0.41		112	800	4.81	34.42	0.29	27.26	82	1.17
551	5.99	34.33	0.30		102	1000	4.09	34.48	0.45	27.39	70	1.34
						1200	3.51	34.53	0.73	27.48	61	1.49
403a)	7.14	34.29	0.60		120	1500	2.83	34.57	1.09	27.58	52	1.69
506	6.45	34.32	0.41		109							
604	5.78	34.36	0.23		98							
705	5.19	34.38	0.27		89							
804	4.79	34.42	0.29		82							
907	4.40	34.45	0.38		76							
1003	4.07	34.48	0.46		70							
1101	3.76	34.55b)	0.59		62							
1215	3.46	34.53	0.74		60							
1318	3.24	34.54	0.85		58							
1423	3.04	34.56	0.99		54							
1527	2.79	34.58	1.14		51							
1635	2.69	34.58	1.22		50							

BLACK DOUGLAS; February 4, 1963; 2128 GCT; 32°11'N, 118°52.5'W; sounding, 800 fm; wind, 270°, force 1; weather, cloudy; sea, moderate; wire angle, 00°. 93.50

1	15.12	33.51	6.04		314	0	(15.12)	(33.51)	(6.04)	(24.82)	(314)	(0.00)
6	14.80	33.53	6.04		306	10	14.76	33.52	6.00	24.90	306	0.03
11	14.75	33.52	6.00		306	20	14.10	33.56	5.93	25.07	290	0.06
31	14.00	33.60	5.91		285	30	14.01	33.60	5.91	25.12	285	0.09
40	13.94	33.63	5.91		281	50	13.62	33.60	5.68	25.20	277	0.15
50	13.62	33.60	5.68		277	75	11.40	33.54	5.01	25.59	241	0.21
65	12.10	33.50	5.27		256	100	10.62	33.62	4.61	25.79	222	0.27
80	11.34	33.56	4.97		238	125	9.94	33.75	3.90	26.01	201	0.32
99	10.66	33.62	4.62		222	150	9.61	33.86	3.35	26.15	188	0.37
125	9.94	33.75	3.90		201	200	9.21	34.17	1.67	26.46	158	0.46
173	9.31	34.00	2.57		172	250	8.39	34.16	1.60	26.58	147	0.54
203	9.17	34.18	1.66		157	300	7.94	34.23	1.02	26.70	135	0.61
231	8.57	34.14	1.83		151	400	6.99	34.29	0.49	26.88	118	0.74
270	8.25	34.21	1.29		141	500	6.48	34.32	0.35	26.97	109	0.86
328	7.59	34.24	0.88		130							
401	6.98	34.29	0.49		118							
475	6.63	34.31	0.38		112							
555	6.06	34.34	0.31		102							

a) Overlapping casts; reconciliation of property curves when necessary.
b) Loose bottle cap; value does not fall on property curve.

SIO

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OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
93.60	BLACK DOUGLAS; February 5, 1963; 0540, 0328 GCT; 31°50.5'N, 119°34'W; sounding, 1350 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 00°, 00°.													
1	14.82	33.55	6.02				305	0	(14.82)	(33.55)	(6.02)	(24.91)	(305)	(0.00)
11	14.59	33.47	6.03				306	10	14.60	33.48	6.03	24.91	305	0.03
21	14.54	33.46	6.01				306	20	14.55	33.46	6.01	24.90	306	0.06
31	14.30	33.53	6.12				296	30	14.32	33.53	6.12	25.01	296	0.09
50	13.48	33.52	5.96				280	50	13.48	33.52	5.96	25.17	280	0.15
75	13.12	33.60	5.85				268	75	13.12	33.60	5.85	25.31	268	0.22
100	10.73	33.51	4.85				232	100	10.73	33.51	4.85	25.68	232	0.28
125	9.87	33.67	4.31				206	125	9.87	33.67	4.31	25.96	206	0.34
144	9.32	33.76	3.97				190	150	9.21	33.80	3.83	26.17	186	0.39
172	8.82	33.90	3.37				172	200	8.45	34.01	3.00	26.45	159	0.47
201	8.44	34.01	2.95				159	250	8.21	34.12	2.13	26.57	147	0.55
231	8.42	34.09	2.23				152	300	7.87	34.22	1.40	26.70	135	0.62
270	7.94	34.15	2.04				141	400	7.14	34.30	0.60	26.87	119	0.76
330	7.83	34.27	0.89				131	500	6.28	34.33	0.35	27.01	106	0.88
403	7.14	34.30	0.61				119	600	5.75	34.35	0.31	27.09	98	0.99
477	6.44	34.32	0.38				109	700	5.23	34.39	0.31	27.19	89	1.09
555	5.96	34.34	0.33				101	800	4.72	34.43	0.33	27.28	80	1.18
789	4.72	34.43	0.36				80	1000	4.06	34.49	0.46	27.40	69	1.35
								1200	3.46	34.54	0.71	27.50	60	1.49
412a)	7.00	34.31	0.52				116	1500	2.81	34.59	1.09	27.60	50	1.69
664	5.44	34.38	0.30				92	2000	2.11	34.63	1.80	27.69	41	1.96
910	4.36	34.46	0.36				74							
1003	4.04	34.49	0.47				69							
1100	3.68	34.53	0.63				62							
1202	3.45	34.54	0.72				60							
1299	3.19	34.56	0.82				56							
1401	3.00	34.57	1.00				53							
1508	2.80	34.60	1.10				49							
1605	2.60	34.61	1.26				47							
1713	2.45	34.61	1.43				46							
1825	2.33	34.51u	0.87u											
1923	2.18	34.63	1.74				42							
2035	2.08	34.63	1.87				41							
2152	1.98	34.67u	2.02											
2251	1.91	34.62	2.07				41							
93.70	BLACK DOUGLAS; February 5, 1963; 1144 GCT; 31°33'N, 120°19.5'W; sounding, 2000 fm; wind, 090°, force 1; weather, partly cloudy; sea, moderate; wire angle, 00°.													
1	15.00	33.43	6.05				317	0	(15.00)	(33.43)	(6.05)	(24.78)	(317)	(0.00)
8	15.02	33.43	6.05				318	10	15.00	33.43	6.05	24.78	317	0.03
14	14.73	33.42	6.04				313	20	14.20	33.42	6.02	24.95	302	0.06
31	13.80	33.50	6.01				288	30	13.82	33.49	6.01	25.08	289	0.09
50	13.79	33.62	5.83				279	50	13.79	33.62	5.83	25.18	279	0.15
70	11.66	33.46	4.97				251	75	11.03	33.50	4.70	25.62	237	0.21
80	10.66	33.56	4.39				227	100	10.04	33.73	3.45	25.97	204	0.27
99	10.06	33.73	3.48				204	125	9.39	33.88	2.80	26.20	183	0.32
124	9.40	33.88	2.81				183	150	8.92	33.98	2.62	26.35	168	0.36
144	8.98	33.96	2.73				170	200	8.17	34.01	3.06	26.49	155	0.45
174	8.68	34.02	2.31				161	250	7.39	34.05	2.43	26.64	141	0.52
205	8.06	34.00	3.07				154	300	7.01	34.15	1.49	26.77	129	0.59
233	7.56	34.02	2.73				146	400	6.38	34.24	0.58	26.92	114	0.72
272	7.19	34.09	2.01b)				135	500	5.74	34.30	0.34	27.05	102	0.83
332	6.84	34.19	0.97				123							
405	6.34	34.25	0.55				113							
477	5.87	34.28	0.38				105							
556	5.52	34.33	0.30				97							

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

b) Alternate value, 2.35 ml/L, not used in interpolation.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

BLACK DOUGLAS; February 5, 1963; 1705 GCT; 31°14.5'N, 121°02'W; sounding, 2000 fm; wind, 280°, force 2; weather, clear; sea, rough; wire angle, 04°. 93.80

1	14.98	33.33	6.12a)	324	0	(14.98)	(33.33)	(6.12)	(24.71)	(324)	(0.00)	
11	14.57	33.33	6.15	316	10	14.60	33.33	6.15	24.79	316	0.03	
31	14.16	33.35	6.15	306	20	14.30	33.34	6.15	24.86	310	0.06	
40	14.13	33.42	5.97	300	30	14.18	33.35	6.15	24.90	307	0.09	
50	13.66	33.47	5.82	288	50	13.66	33.47	5.82	25.10	288	0.15	
65	12.46	33.42	5.37	269	75	11.89	33.41	5.28	25.40	259	0.22	
80	11.57	33.41	5.22	253	100	10.53	33.51	4.65	25.72	228	0.28	
99	10.55	33.51	4.68	229	125	9.88	33.69	4.08	25.97	204	0.34	
123	9.94	33.67	4.12	207	150	9.12	33.84	3.68	26.21	181	0.39	
144	9.28	33.80	3.74	187	200	8.37	33.99	3.10	26.45	159	0.47	
172	8.73	33.92	3.50	170	250	7.57	34.02	2.76	26.59	146	0.55	
201	8.36	33.99	3.09	159	300	6.79	34.05	2.09	26.72	133	0.62	
230	7.91	34.01	2.99	151	400	6.20	34.17	0.82	26.89	117	0.75	
268	7.26	34.03	2.49	141	500	5.79	34.26	0.50	27.02	105	0.87	
326	6.46	34.06	1.77	128								
400	6.20	34.17	0.82	117								
474	5.90	34.24	0.56	108								
553	5.50	34.33	0.29	97								

BLACK DOUGLAS; February 5, 1963; 2205 GCT; 30°53.5'N, 121°36'W; sounding, 2200 fm; wind, 280°, force 2; weather, partly cloudy; sea, moderate; wire angle, 03°. 93.90

1	16.56	33.46	5.83	348	0	(16.56)	(33.46)	(5.83)	(24.46)	(348)	(0.00)	
11	15.96	33.46	5.85	335	10	15.97	33.46	5.85	24.59	336	0.03	
35	15.98	33.56	5.79	329	20	15.97	33.52	5.82	24.64	331	0.07	
50	15.87	33.55	5.82	327	30	15.98	33.55	5.79	24.66	329	0.10	
60	15.69	33.53	5.79	324	50	15.87	33.55	5.82	24.68	327	0.17	
75	14.60	33.42	5.81	310	75	14.60	33.42	5.81	24.86	310	0.25	
109	12.98	33.53	5.52	270	100	13.20	33.53	5.60	25.24	274	0.32	
114	12.30	33.42	5.41	266	125	11.48	33.53	5.08	25.57	243	0.39	
125	11.48	33.53	5.08	243	150	10.10	33.64	4.54	25.89	212	0.44	
145	10.26	33.62	4.56	216	200	9.03	33.97	3.51	26.33	170	0.54	
174	9.63	33.79	4.43	193	250	8.24	34.02	3.02	26.49	155	0.62	
202	9.00	33.97	3.50	170	300	7.65	34.10	1.78	26.64	141	0.70	
231	8.52	33.97	3.65	163	400	6.81	34.14	1.51	26.79	127	0.84	
268	7.98	34.05	2.34	149	500	6.16	34.26	0.47	26.97	110	0.96	
327	7.43	34.11	1.60	137								
399	6.83	34.14	1.52	127								
473	6.32	34.25	0.53	112								
553	5.72	34.26	0.41	104								

BLACK DOUGLAS; February 6, 1963; 0333 GCT; 30°31'N, 122°14.5'W; sounding, 2200 fm; wind, 320°, force 3; weather, fog; sea, rough; wire angle, 10°. 93.100

1	16.10	33.52	5.83	334	0	(16.10)	(33.52)	(5.83)	(24.61)	(334)	(0.00)	
11	16.10	33.52	5.77	334	10	16.10	33.52	5.78	24.61	334	0.03	
21	15.80	33.52	5.76	328	20	15.82	33.52	5.76	24.67	328	0.07	
49	15.66	33.56	5.84	322	30	15.72	33.54	5.82	24.71	324	0.10	
64	16.28	33.78	5.76	319	50	15.67	33.56	5.83	24.74	322	0.16	
74	16.31	33.78	5.74	320	75	16.30	33.78	5.75	24.76	319	0.24	
89	15.18	33.68	5.90	303	100	13.90	33.61	5.77	25.15	282	0.32	
112	13.08	33.59	5.55	268	125	13.00	33.67	5.31	25.38	260	0.39	
118	13.25	33.65	5.41	266	150	11.40	33.66	4.94	25.68	232	0.45	
143	11.88	33.67	5.11	240	200	9.12	33.87	3.89	26.24	179	0.56	
171	10.00	33.64	4.38	210	250	8.11	34.02	3.64	26.51	153	0.64	
200	9.12	33.87	3.89	179	300	7.31	34.06	2.65	26.66	139	0.72	
228	8.60	33.97	3.92	164	400	6.55	34.11	1.25	26.80	126	0.85	
266	7.78	34.03	3.36	148	500	6.00	34.24	0.50	26.97	109	0.98	
324	7.08	34.08	2.15	135								
396	6.58	34.10	1.30	127								
469	6.22	34.22	0.60	113								
548	5.50	34.26	0.42	102								

a) Mean value of 6.01 and 6.23 ml/L.

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

93.120 BLACK DOUGLAS; February 6, 1963; 1348 GCT; 29°51'N, 123°36'W; sounding, 2200 fm; wind, 320°, force 2; weather, fog; sea, rough; wire angle, 00°.

0	16.13	33.46	5.89				339	0	16.13	33.46	5.89	24.55	339	0.00
10	16.14	33.45	5.88				340	10	16.14	33.45	5.88	24.54	340	0.03
30	16.44	33.67	5.78				330	20	16.15	33.56	5.86	24.63	332	0.07
39	16.36	33.67	5.78				329	30	16.44	33.67	5.78	24.64	330	0.10
49	16.54	33.74	5.75				328	50	16.54	33.74	5.75	24.68	328	0.17
64	16.40	33.70	5.72				327	75	16.24	33.69	5.77	24.71	325	0.25
79	16.14	33.68	5.86				323	100	16.06	34.12	5.73	25.08	289	0.33
98	16.06	34.12	5.76				289	125	15.37	34.21	5.51	25.30	268	0.40
124	15.39	34.21	5.52				268	150	13.80	34.10	5.40	25.55	244	0.46
143	14.26	34.07	5.43				255	200	10.64	33.79	4.98	25.92	209	0.58
172	11.70	33.82	5.28				225	250	9.03	33.95	4.47	26.31	172	0.67
202	10.53	33.79	4.94				208	300	8.17	34.00	3.73	26.48	156	0.76
229	9.44	33.88	4.53				183	400	6.69	33.98	3.24	26.68	137	0.91
268	8.76	33.99	4.34				165	500	5.80	34.14	0.88	26.92	114	1.04
327	7.68	34.00	3.38				149							
399	6.70	33.98	3.25				137							
475	5.95	34.11	1.10				118							
554	5.54	34.21	0.55				106							

94.30 ALEXANDER AGASSIZ; January 10, 1963; 2319 GCT; 32°42.5'N, 117°26'W; sounding, 245 fm; wind, 300°, force 4; weather, cloudy; sea, slight; wire angle, 09°.[a]

2	14.88	33.625	5.90	0.22	2	301
7	14.86	33.618	5.48	0.21	2	301
12	14.86	33.616	5.85	0.25	3	301
17	14.81	33.620	5.97	0.29	3	300
22	14.80	33.627	6.05	0.26	3	299
28	14.64	33.634	6.07	-	-	295
33	14.22	33.634	5.74	-	-	287
38	13.60	33.589	5.34	-	-	278
43	13.40	33.583	5.21	-	-	274
48	13.02	33.598	4.87	-	-	266
53	12.80	33.612	4.68	-	-	261
58	12.50	33.620	-	-	-	255
63	11.98	33.616	4.26	-	-	245
68	11.82	33.639	4.14	-	-	241
73	11.82	33.647	4.02	-	-	240
78	11.65	33.678	3.77	-	-	235
83	11.57	33.688	3.70	-	-	233
89	11.43	33.754	-	-	-	226

100.30 ALEXANDER AGASSIZ; February 6, 1963; 1756 GCT; 31°40.5'N, 116°46.5'W; sounding, 240 fm; wind, 350°, force 2; weather, clear; sea, very rough; wire angle, 11°.

1	15.24	33.543	6.25	0.33	2	314	0	(15.24)	(33.54)	(6.25)	(24.82)	(314)	(0.00)
11	14.73	33.543	6.20	0.38	3	304	10	14.74	33.54	6.21	24.92	304	0.03
30	14.06	33.616	5.95	0.42	7	285	20	14.30	33.59	6.17	25.06	291	0.06
51	12.66	33.463	5.30	0.82	6	269	30	14.06	33.62	5.95	25.13	284	0.09
76	11.52	33.564	4.56	1.14	14	241	50	12.70	33.47	5.33	25.29	269	0.15
100	10.71	33.720	3.77	-	-	216	75	11.53	33.56	4.57	25.58	242	0.21
125	10.59	33.816	3.26	-	-	207	100	10.71	33.72	3.77	25.85	216	0.27
164	9.96	34.021	2.22	-	-	181	125	10.59	33.82	3.26	25.95	206	0.32
203	9.49	34.173	1.67	-	-	162	150	10.19	33.93	2.59	26.10	192	0.37
254	9.10	34.251	1.32	-	-	151	200	9.52	34.16	1.70	26.40	164	0.46
303	8.62	34.291	1.00	-	-	140	250	9.13	34.25	1.37	26.53	151	0.54
408	7.38	34.316	0.76	-	-	121	300	8.65	34.29	1.03	26.64	141	0.62
							400	7.48	34.31	0.77	26.83	123	0.76

a) Shakedown station.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED			SIO
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD	CCOFI
m	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m	6301-2
ALEXANDER AGASSIZ; February 6, 1963; 2133 GCT; 31°30'N, 117°07'W; sounding, 640 fm; wind, 280°, force 2; weather, clear; sea, very rough; wire angle, 18°.															100.35
2	15.32	33.524	6.00	0.37	4		317	0	(15.32)	(33.52)	(6.00)	(24.78)	(317)	(0.00)	
11	14.99	33.523	6.01	0.35	4		310	10	15.01	33.52	6.01	24.85	311	0.03	
30	14.76	33.520	6.04	0.36	3		306	20	14.85	33.52	6.03	24.88	308	0.06	
50	14.30	33.559	5.94	0.39	3		294	30	14.76	33.52	6.04	24.90	306	0.09	
74	12.22	33.444	5.16	0.89	9		262	50	14.30	33.56	5.94	25.03	294	0.15	
98	10.83	33.594	4.67	-	-		227	75	12.05	33.44	5.10	25.39	260	0.22	
121	10.16	33.686	4.19	-	-		209	100	10.80	33.60	4.65	25.74	226	0.28	
145	9.47	33.801	3.82	-	-		190	125	10.08	33.70	4.15	25.94	207	0.34	
178	8.85	33.914	3.54	-	-		172	150	9.34	33.82	3.78	26.16	186	0.39	
215	8.60	34.021	2.91	-	-		160	200	8.67	33.97	3.26	26.38	165	0.48	
286	8.58	34.264	1.38	-	-		142	250	8.59	34.15	2.03	26.54	151	0.56	
381	7.75	34.351	0.84	-	-		124	300	8.51	34.29	1.25	26.66	139	0.63	
476	6.65	34.325	0.65	-	-		111	400	7.50	34.35	0.79	26.86	120	0.77	
572	6.06	34.349	0.62	-	-		102	500	6.47	34.33	0.64	26.98	108	0.89	
667	5.46	34.384	0.51	-	-		92	600	5.88	34.36	0.57	27.08	99	1.00	
764	4.99	34.410	0.54	-	-		85	700	5.26	34.39	0.50	27.18	89	1.10	
860	4.63	34.437	0.76	-	-		79	800	4.86	34.42	0.62	27.25	83	1.20	
956	4.26	34.465	0.73	-	-		73	1000	4.07	34.48	0.78	27.39	70	1.37	
1052	3.86	34.499	0.83	-	-		66								
1150	3.57	34.472u	0.78u	-	-										
ALEXANDER AGASSIZ; February 7, 1963; 0103 GCT; 31°19'N, 117°29'W; sounding, 1090 fm; wind, 280°, force 4; weather, cloudy; sea, very rough; wire angle, 24°.															100.40
0	15.61	33.529	5.88	0.44	2		323	0	15.61	33.53	5.88	24.73	323	0.00	
9	15.60	33.523	5.88	0.41	2		323	10	15.59	33.52	5.88	24.72	323	0.03	
27	15.26	33.525	5.97	0.43	3		316	20	15.33	33.52	5.95	24.78	318	0.06	
53	14.60	33.533	5.84	0.49	3		302	30	15.20	33.53	5.96	24.82	314	0.10	
62	13.86	33.449	6.70	0.62	4		293	50	14.65	33.53	5.85	24.94	303	0.16	
76	12.86	33.443	5.45	-	-		274	75	12.89	33.44	5.46	25.23	275	0.23	
89	12.23	33.538	4.92	-	-		256	100	11.56	33.64	4.24	25.64	236	0.30	
102	11.48	33.647	4.18	-	-		234	125	10.75	33.73	3.78	25.85	216	0.35	
124	10.76	33.724	3.79	-	-		216	150	10.18	33.82	3.40	26.02	200	0.40	
142	10.37	33.800	3.40	-	-		204	200	8.90	33.96	3.40	26.34	169	0.50	
169	9.64	33.854	3.41	-	-		188	250	8.40	34.10	2.35	26.53	151	0.58	
195	8.88	33.930	3.49	-	-		171	300	7.82	34.17	1.80	26.67	138	0.66	
223	9.16	34.128	2.21	-	-		161	400	6.82	34.22	1.02	26.85	121	0.79	
268	7.87	34.078	2.37	-	-		146	500	6.30	34.31	0.64	26.99	108	0.91	
318	7.76	34.206	1.44	-	-		134								
395	6.84	34.218	1.04	-	-		121								
473	6.44	34.298	0.66	-	-		110								
552	5.98	34.336	0.63	-	-		102								

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
100.50	ALEXANDER AGASSIZ; February 7, 1963; 0611 GCT; 31°01'N, 118°07'W; sounding, 940 fm; wind, 280°, force 4; weather, overcast; sea, very rough; wire angle, 09°.													
1	15.63	33.590	5.94	0.38	2		319	0	(15.63)	(33.59)	(5.94)	(24.77)	(319)	(0.00)
11	15.32	33.603	5.94	0.39	2		311	10	15.38	33.60	5.94	24.83	313	0.03
30	14.24	33.631	6.03	0.42	3		287	20	14.42	33.63	6.00	25.06	291	0.06
40	14.14	33.624	5.81	0.45	3		286	30	14.24	33.63	6.03	25.10	287	0.09
55	12.68	33.527	5.19	0.91	8		265	50	13.06	33.55	5.35	25.28	270	0.15
70	11.82	33.562	4.95	-	-		247	75	11.59	33.58	4.77	25.58	241	0.21
95	10.86	33.612	4.26	-	-		226	100	10.70	33.62	4.22	25.78	223	0.27
115	10.23	33.625	4.14	-	-		215	125	9.94	33.66	4.10	25.94	208	0.32
135	9.66	33.724	4.04	-	-		198	150	9.25	33.82	3.83	26.18	185	0.37
155	9.13	33.850	3.75	-	-		181	200	8.36	33.98	3.30	26.44	160	0.46
186	8.60	33.955	3.48	-	-		165	250	7.54	34.04	2.54	26.61	144	0.54
220	8.01	34.015	3.03	-	-		152	300	7.10	34.14	1.56	26.75	130	0.61
250	7.54	34.037	2.54	-	-		144	400	6.44	34.22	0.98	26.90	116	0.74
300	7.10	34.136	1.56	-	-		131	500	5.96	34.32	0.54	27.04	103	0.85
355	6.71	34.180	1.23	-	-		122	600	5.50	34.37	0.46	27.14	94	0.96
440	6.22	34.254	0.81	-	-		111	700	4.94	34.41	0.38	27.24	84	1.06
524	5.84	34.340	0.55	-	-		100	800	4.57	34.43	0.53	27.29	79	1.14
608	5.36	34.367	0.48	-	-		92	1000	3.98	34.48	0.69	27.40	69	1.31
								1200	3.45	34.52	0.96	27.48	61	1.46
451a)	6.17	34.262	0.61	-	-		110	1500	2.84	(34.58)	(1.32)	(27.59)	(51)	(1.65)
527	5.88	34.327	0.44	-	-		101							
600	5.50	34.372	0.42	-	-		93							
700	4.94	34.407	0.38	-	-		84							
801	4.56	34.432	0.54	-	-		79							
900	4.24	34.461	0.60	-	-		73							
1000	3.98	34.483	0.69	-	-		69							
1198	3.46	34.525	0.94	-	-		61							
1396	3.06	34.559	1.16	-	-		55							
1495	2.86	34.575	1.32	-	-		52							
1594	2.68	34.554u	1.39u	-	-									
100.60	ALEXANDER AGASSIZ; February 7, 1963; 1309 GCT; 30°40.5'N, 118°47'W; sounding, 1500 fm; wind, 260°, force 3; weather, overcast; sea, moderate; wire angle, 03°.													
1	15.67	33.540	5.83	0.38	2		323	0	(15.67)	(33.54)	(5.83)	(24.72)	(323)	(0.00)
11	15.66	33.538	5.82	0.37	2		323	10	15.66	33.54	5.82	24.72	323	0.03
31	14.40	33.600	5.95	0.39	3		293	20	15.15	33.56	5.89	24.85	311	0.06
41	13.69	33.549	5.63	0.58	4		282	30	14.48	33.60	5.94	25.03	294	0.09
56	12.54	33.487	5.16	0.81	8		265	50	12.95	33.50	5.32	25.26	272	0.15
71	11.88	33.583	4.99	-	-		246	75	11.67	33.60	4.91	25.58	241	0.22
97	10.42	33.658	4.10	-	-		215	100	10.30	33.68	4.00	25.89	212	0.27
117	9.72	33.800	3.54	-	-		194	125	9.57	33.84	3.40	26.14	188	0.32
137	9.36	33.890	3.30	-	-		181	150	9.11	33.93	3.40	26.28	175	0.37
156	8.99	33.940	3.41	-	-		172	200	7.96	33.99	3.31	26.51	153	0.45
186	8.20	33.975	3.43	-	-		158	250	7.46	34.02	2.80	26.60	144	0.53
221	7.70	34.010	3.06	-	-		148	300	7.09	34.09	1.90	26.71	134	0.60
252	7.45	34.015	2.77	-	-		144	400	6.40	34.21	0.87	26.90	116	0.73
302	7.08	34.092	1.89	-	-		134	500	5.87	34.27	0.68	27.01	105	0.85
357	6.62	34.190	1.02	-	-		121	600	5.35	34.36	0.54	27.15	93	0.95
442	6.18	34.234	0.76	-	-		112							
527	5.72	34.291	0.62	-	-		102							
611	5.28	34.362	0.51	-	-		92							

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

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
ALEXANDER AGASSIZ; February 7, 1963; 1841 GCT; 30°20'N, 119°27'W; sounding, 2000 fm; wind, 310°, force 3; weather, drizzle; sea, rough; wire angle, 18°.														100.70
1	16.16	33.626	5.78	0.36	2		328	0	(16.16)	(33.63)	(5.78)	(24.68)	(327)	(0.00)
10	16.16	33.627	5.69	0.35	2		328	10	16.16	33.63	5.69	24.68	327	0.03
29	15.96	33.625	5.69	0.38	2		323	20	16.10	33.63	5.69	24.69	326	0.07
58	15.88	33.653	5.66	0.37	2		320	30	15.95	33.63	5.68	24.73	323	0.10
67	15.84	33.647	5.71	0.37	2		319	50	15.91	33.65	5.67	24.75	320	0.16
81	15.01	33.527	5.70	-	-		310	75	15.50	33.59	5.70	24.80	316	0.24
96	13.36	33.465	5.60	-	-		282	100	13.41	33.49	5.56	25.16	281	0.32
111	13.14	33.638	5.23	-	-		265	125	11.73	33.61	4.95	25.58	241	0.38
134	11.20	33.603	4.81	-	-		233	150	10.46	33.65	4.26	25.84	217	0.44
153	10.32	33.689	4.14	-	-		212	200	9.15	33.95	3.08	26.29	174	0.54
180	9.38	33.885	3.32	-	-		182	250	8.32	34.02	2.78	26.48	156	0.63
208	9.06	33.978	3.00	-	-		170	300	7.54	34.07	2.20	26.63	142	0.70
237	8.58	34.021	2.85	-	-		160	400	7.12	34.21	0.96	26.80	126	0.84
282	7.73	34.035	2.57	-	-		147	500	6.13	34.28	0.60	26.99	108	0.96
333	7.34	34.150	1.54	-	-		133							
413	7.04	34.227	0.86	-	-		123							
493	6.20	34.278	0.63	-	-		109							
576	5.57	34.330	0.58	-	-		97							
ALEXANDER AGASSIZ; February 8, 1963; 0000 GCT; 30°02'N, 120°04'W; sounding, 2200 fm; wind, 300°, force 3; weather, fog; sea, high; wire angle, 10°.														100.80
1	16.53	33.610	5.76	0.40	2		337	0	(16.53)	(33.61)	(5.76)	(24.58)	(337)	(0.00)
11	16.14	33.597	5.73	0.41	2		329	10	16.15	33.60	5.74	24.66	329	0.03
40	16.20	33.696	5.66	0.39	2		323	20	16.17	33.64	5.70	24.68	327	0.07
66	15.46	33.534	5.70	0.42	2		319	30	16.20	33.68	5.67	24.71	325	0.10
85	15.02	33.473	5.79	0.43	3		315	50	15.98	33.65	5.68	24.73	322	0.16
100	13.91	33.497	5.66	-	-		290	75	15.27	33.50	5.75	24.78	318	0.24
115	12.30	33.500	5.28	-	-		260	100	13.91	33.50	5.66	25.07	290	0.32
135	11.13	33.636	4.60	-	-		229	125	11.66	33.57	4.92	25.56	243	0.39
154	10.19	33.673	4.47	-	-		211	150	10.39	33.66	4.52	25.86	215	0.45
179	9.26	33.900	3.18	-	-		179	200	9.09	34.07	2.25	26.40	164	0.54
203	9.08	34.095	2.12	-	-		162	250	8.94	34.24	1.30	26.55	149	0.62
228	9.06	34.191	1.64	-	-		154	300	8.66	34.30	1.00	26.64	140	0.70
258	8.90	34.260	1.18	-	-		147	400	7.90	34.32	0.78	26.78	128	0.84
292	8.71	34.293	1.01	-	-		142	500	6.64	34.30	0.60	26.94	113	0.97
341	8.32	34.306	0.86	-	-		135							
405	7.86	34.321	0.77	-	-		127							
479	6.88	34.296	0.65	-	-		116							
559	6.02	34.316	0.47	-	-		104							
ALEXANDER AGASSIZ; February 8, 1963; 0501 GCT; 29°41'N, 120°46'W; sounding, 1800 fm; wind, 270°, force 3; weather, light fog; sea, high; wire angle, 17°.														100.90
1	16.10	33.443	5.80	0.40	2		340	0	(16.10)	(33.44)	(5.80)	(24.55)	(340)	(0.00)
11	16.08	33.443	5.93	0.40	1		339	10	16.08	33.44	5.92	24.55	339	0.03
44	15.28	33.407	6.02	0.42	2		325	20	16.03	33.44	5.94	24.56	338	0.07
73	14.90	33.367	5.97	0.42	3		320	30	15.56	33.43	6.00	24.66	329	0.10
92	13.86	33.365	5.97	0.62	3		299	50	15.20	33.40	6.00	24.72	324	0.17
106	12.68	33.394	5.65	-	-		274	75	14.87	33.37	5.97	24.76	319	0.25
120	12.20	33.614	4.50	-	-		250	100	12.78	33.36	5.77	25.19	279	0.32
140	10.51	33.540	4.78	-	-		226	125	11.79	33.59	4.55	25.55	244	0.39
159	9.96	33.741	4.80	-	-		202	150	10.20	33.65	4.80	25.89	212	0.45
186	9.13	33.883	4.32	-	-		178	200	9.01	33.97	3.45	26.33	170	0.54
209	8.94	34.010	2.91	-	-		166	250	8.41	34.12	2.28	26.54	150	0.63
232	8.68	34.076	2.61	-	-		157	300	7.52	34.08	2.19	26.64	141	0.70
266	8.16	34.132	2.06	-	-		146	400	6.63	34.16	1.38	26.83	123	0.84
303	7.48	34.079	2.20	-	-		140	500	6.40	34.32	0.66	26.99	108	0.96
351	6.98	34.098	1.82	-	-		132	600	(5.67)	(34.35)		(27.10)	(97)	(1.07)
417	6.54	34.180	1.18	-	-		120							
498	6.42	34.320	0.67	-	-		108							
580	5.80	34.347	0.55	-	-		99							

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	NO_2-N µg at/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
100.100	ALEXANDER AGASSIZ; February 8, 1963; 1016 GCT; 28°20'N, 121°22.5'W; sounding, 1500 fm; wind, 270°, force 2; weather, cloudy; sea, very rough; wire angle, 09°.													
1	15.95	33.384	5.82	0.38	0		341	0	(15.95)	(33.38)	(5.82)	(24.53)	(341)	(0.00)
11	15.94	33.376	5.84	0.39	2		341	10	15.94	33.38	5.84	24.54	341	0.03
45	15.43	33.443	5.92	0.41	2		325	20	15.50	33.38	5.90	24.63	331	0.07
76	15.34	33.563	5.71	0.45	3		315	30	15.46	33.42	5.91	24.67	328	0.10
96	13.24	33.360	5.70	0.73	4		288	50	15.45	33.45	5.92	24.70	325	0.17
111	12.34	33.471	5.34	-	-		263	75	15.50	33.57	5.75	24.78	318	0.25
125	11.45	33.525	5.21	-	-		243	100	13.04	33.36	5.67	25.14	284	0.32
145	10.52	33.632	4.84	-	-		219	125	11.45	33.52	5.21	25.56	243	0.39
165	9.99	33.758	4.74	-	-		201	150	10.39	33.66	4.82	25.86	215	0.45
195	9.12	33.885	4.25	-	-		178	200	9.05	33.90	4.20	26.27	176	0.55
220	8.78	33.931	4.00	-	-		170	250	8.19	33.98	3.86	26.47	157	0.63
244	8.28	33.977	3.91	-	-		159	300	7.29	33.99	3.13	26.60	144	0.71
279	7.72	33.986	3.55	-	-		150	400	6.50	34.13	1.34	26.82	123	0.85
319	6.96	34.004	2.76	-	-		139	500	5.85	34.24	0.75	26.99	107	0.97
369	6.66	34.079	1.82	-	-		129	600	5.29	34.31	0.53	27.12	96	1.08
439	6.27	34.187	0.97	-	-		116							
523	5.70	34.253	0.69	-	-		105							
608	5.26	34.318	0.51	-	-		95							
100.120	ALEXANDER AGASSIZ; February 8, 1963; 1902 GCT; 28°37.5'N, 122°41'W; sounding, 2275 fm; wind, 190°, force 2; weather, overcast; sea, very rough; wire angle, 10°.													
1	16.75	33.702	5.82	0.37	2		335	0	(16.75)	(33.70)	(5.82)	(24.60)	(335)	(0.00)
11	16.72	33.694	5.72	0.38	2		335	10	16.72	33.70	5.73	24.60	334	0.03
45	16.73	33.850	5.73	0.40	2		324	20	16.65	33.68	5.73	24.60	334	0.07
76	16.68	33.864	5.62	0.39	2		322	30	16.66	33.72	5.73	24.63	332	0.10
95	14.58	33.674	5.82	0.63	3		291	50	16.72	33.86	5.70	24.73	323	0.17
110	14.62	33.888	5.77	-	-		276	75	16.68	33.86	5.63	24.73	322	0.25
125	13.98	33.870	5.52	-	-		264	100	14.57	33.74	5.82	25.11	286	0.32
145	13.04	33.842	5.39	-	-		248	125	13.98	33.87	5.52	25.34	264	0.39
165	11.36	33.718	5.17	-	-		227	150	12.70	33.82	5.33	25.56	244	0.46
195	10.00	33.688	4.62	-	-		206	200	9.89	33.70	4.60	25.98	204	0.57
219	9.50	33.814	4.52	-	-		189	250	8.75	33.94	4.32	26.35	168	0.67
244	8.86	33.937	4.39	-	-		170	300	7.76	33.99	3.20	26.54	151	0.75
280	8.14	33.977	3.80	-	-		157	400	6.61	34.13	1.40	26.81	125	0.89
319	7.40	34.010	2.87	-	-		144	500	5.86	34.24	0.75	26.99	107	1.01
368	6.81	34.082	1.85	-	-		131	600	5.31	34.32	0.56	27.12	95	1.12
438	6.34	34.180	1.04	-	-		118							
517	5.74	34.256	0.69	-	-		105							
606	5.28	34.327	0.59	-	-		94							
110.35	ALEXANDER AGASSIZ; February 11, 1963; 0432 GCT; 29°46'N, 115°59.5'W; sounding, 610 fm; wind, 280°, force 4; weather, clear; sea, very rough; wire angle, 27°.													
1	15.97	33.894	5.80	0.43	2		304	0	(15.97)	(33.89)	(5.80)	(24.92)	(304)	(0.00)
10	16.00	33.901	5.72	0.43	3		304	10	16.00	33.90	5.72	24.92	304	0.03
28	15.76	33.937	5.69	0.52	3		296	20	15.84	33.93	5.70	24.98	298	0.06
45	15.16	33.833	5.57	0.55	4		291	30	15.74	33.93	5.67	25.00	296	0.09
69	14.54	34.044	3.24	1.37	16		263	50	15.02	33.85	5.35	25.10	287	0.15
91	12.90	34.012	2.58	-	-		233	75	14.10	34.04	3.00	25.44	254	0.22
113	11.29	33.904	2.91	-	-		212	100	12.80	33.97	2.60	25.65	234	0.28
134	10.50	33.891	2.98	-	-		200	125	10.60	33.89	2.98	26.00	201	0.33
156	10.50	34.097	2.16	-	-		184	150	10.50	34.04	2.45	26.14	189	0.38
177	10.58	34.243	1.64	-	-		175	200	10.10	34.24	1.47	26.36	167	0.47
220	9.74	34.252	-	-	-		161	250	9.58	34.34	1.17	26.53	152	0.56
262	9.53	34.368	1.09	-	-		149	300	9.01	34.39	0.80	26.66	139	0.63
306	8.92	34.397	0.75	-	-		137	400	7.74	34.38	0.60	26.85	121	0.77
349	8.33	34.381	0.69	-	-		130	500	6.82	34.37	0.50	26.97	110	0.89
436	7.40	34.382	0.54	-	-		116	600	6.07	34.38	0.45	27.08	100	1.00
525	6.61	34.366	0.47	-	-		107	700	5.47	34.42	0.46	27.18	89	1.11
614	5.97	34.388	0.43	-	-		98	800	4.97	34.45	0.53	27.26	82	1.20
704	5.44	34.416	0.48	-	-		89	1000	(4.17)	(34.46)	(0.61)	(27.36)	(72)	(1.37)
885	4.58	34.468	0.58	-	-		76							
979	4.23	34.466	0.61	-	-		73							

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ALEXANDER AGASSIZ; February 10, 1963; 2349 GCT; 29°33'N, 116°19.5'W; sounding, 1140 fm; wind, 260°, force 4; weather, overcast; sea, very rough; wire angle, 11°. 110.40

2	16.06	33.919	5.87	0.50	2	304	0	(16.06)	(33.92)	(5.87)	(24.92)	(304)	(0.00)
12	16.07	33.910	5.90	0.48	1	305	10	16.07	33.91	5.90	24.91	305	0.03
31	15.58	33.825	5.92	0.52	1	301	20	15.77	33.85	5.91	24.94	303	0.06
61	15.29	33.840	5.51	0.54	1	293	30	15.58	33.82	5.92	24.95	301	0.09
71	15.05	33.824	5.65	0.66	3	290	50	15.45	33.83	5.75	24.99	297	0.15
86	14.15	33.842	4.49	-	-	270	75	14.90	33.82	5.53	25.10	287	0.22
101	12.58	33.881	3.34	-	-	237	100	12.67	33.87	3.38	25.60	239	0.29
115	11.62	33.905	2.96	-	-	218	125	11.07	33.86	3.12	25.90	211	0.35
138	10.57	33.834	3.33	-	-	205	150	10.52	33.94	2.90	26.06	196	0.40
157	10.48	33.999	2.66	-	-	191	200	9.79	34.18	1.97	26.37	167	0.49
186	10.04	34.126	2.13	-	-	175	250	9.04	34.25	1.50	26.55	150	0.57
216	9.54	34.229	1.82	-	-	159	300	8.77	34.32	1.05	26.64	141	0.65
244	9.10	34.248	1.55	-	-	151	400	7.44	34.32	0.57	26.84	122	0.79
294	8.82	34.317	1.09	-	-	142	500	6.73	34.38	0.60	26.99	108	0.91
347	8.12	34.305	0.92	-	-	132	600	5.87	34.38	0.48	27.10	97	1.02
429	7.16	34.340	0.45	-	-	116							
516	6.63	34.378	0.65	-	-	107							
602	5.85	34.376	0.47	-	-	97							

ALEXANDER AGASSIZ; February 10, 1963; 1710 GCT; 29°13'N, 116°58'W; sounding, 1870 fm; wind, 260°, force 3; weather, partly cloudy; sea, rough; wire angle, 08°. 110.50

1	15.52	33.583	6.09	0.39	2	317	0	(15.52)	(33.58)	(6.09)	(24.78)	(317)	(0.00)
11	15.50	33.576	5.96	0.40	3	317	10	15.50	33.58	5.97	24.79	317	0.03
36	16.12	33.939	5.91	0.51	4	304	20	15.50	33.58	5.97	24.79	317	0.06
46	16.14	34.033	5.73	0.51	4	297	30	15.40	33.59	5.90	24.82	314	0.10
60	16.28	34.108	5.70	0.60	4	295	50	16.19	34.06	5.70	25.00	297	0.16
75	16.00	34.043	5.64	-	-	294	75	16.00	34.04	5.64	25.03	294	0.23
101	12.06	33.487	5.40	-	-	256	100	12.08	33.49	5.40	25.42	256	0.30
120	11.56	33.667	4.17	-	-	234	125	11.32	33.68	4.13	25.71	229	0.36
140	10.49	33.730	4.01	-	-	211	150	10.00	33.77	3.80	26.01	200	0.42
169	9.46	33.902	3.30	-	-	182	200	9.68	34.16	2.02	26.37	166	0.51
198	9.70	34.155	2.04	-	-	167	250	8.93	34.23	1.70	26.55	150	0.59
237	9.20	34.238	1.75	-	-	153	300	8.33	34.30	1.18	26.70	136	0.66
268	8.54	34.224	1.59	-	-	144	400	7.46	34.34	0.70	26.86	120	0.80
317	8.24	34.325	0.99	-	-	132	500	6.64	34.38	0.47	27.00	107	0.92
381	7.62	34.334	0.76	-	-	123	600	5.83	34.38	0.50	27.11	97	1.03
481	6.82	34.378	0.47	-	-	109							
569	6.04	34.379	0.52	-	-	99							
643	5.56	34.392	0.44	-	-	93							

ALEXANDER AGASSIZ; February 10, 1963; 1158 GCT; 28°57'N, 117°38.5'W; sounding, 2000 fm; wind, 240°, force 4; weather, partly cloudy; sea, very rough; wire angle, 26°. 110.60

1	15.86	33.598	5.78	0.37	1	323	0	(15.86)	(33.60)	(5.78)	(24.72)	(323)	(0.00)
9	15.90	33.592	5.81	0.37	1	324	10	15.90	33.59	5.80	24.71	325	0.03
32	15.92	33.603	5.78	0.38	1	324	20	15.91	33.60	5.79	24.71	324	0.06
59	15.48	33.615	5.77	0.35	2	314	30	15.92	33.60	5.78	24.71	324	0.10
68	15.24	33.627	5.86	0.40	2	308	50	15.90	33.60	5.78	24.71	324	0.16
86	13.77	33.554	5.64	-	-	284	75	14.40	33.58	5.76	25.03	294	0.24
100	12.90	33.509	5.45	-	-	270	100	12.90	33.51	5.45	25.28	270	0.31
113	11.81	33.537	5.13	-	-	248	125	11.21	33.56	4.92	25.64	236	0.38
141	10.55	33.616	4.67	-	-	221	150	10.26	33.66	4.50	25.88	213	0.43
159	9.96	33.705	4.30	-	-	205	200	9.01	33.88	3.73	26.26	177	0.53
186	9.26	33.839	3.79	-	-	184	250	8.23	34.04	2.70	26.51	153	0.62
217	8.72	33.930	3.61	-	-	169	300	7.59	34.10	2.00	26.65	140	0.69
246	8.28	34.026	2.80	-	-	155	400	6.64	34.18	1.22	26.84	122	0.83
290	7.72	34.094	2.10	-	-	142	500	6.08	34.25	0.74	26.97	109	0.95
349	6.90	34.115	1.64	-	-	130	600	(5.61)	(34.35)	(0.53)	(27.11)	(96)	(1.06)
440	6.44	34.221	0.93	-	-	116							
523	5.95	34.262	0.67	-	-	107							
592	5.64	34.338	0.53	-	-	98							

SIO

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OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
110.70	ALEXANDER AGASSIZ; February 10, 1963; 0646 GCT; 28°36'N, 118°17'W; sounding, 2070 fm; wind, 250°, force 5; weather, cloudy; sea, very rough; wire angle, 24°.													
1	15.99	33.583	5.77	0.38	2		327	0	(15.99)	(33.58)	(5.77)	(24.68)	(327)	(0.00)
10	16.00	33.580	5.76	0.37	2		327	10	16.00	33.58	5.76	24.68	327	0.03
33	15.67	33.592	5.83	0.37	2		320	20	16.00	33.58	5.76	24.68	327	0.07
62	15.23	33.557	5.86	0.39	2		313	30	15.85	33.59	5.80	24.72	324	0.10
71	15.42	33.678	5.84	0.42	2		308	50	15.25	33.56	5.85	24.83	313	0.16
90	13.61	33.445	5.66	-	-		288	75	15.61	33.73	5.84	24.88	308	0.24
104	12.56	33.476	5.45	-	-		266	100	12.73	33.46	5.52	25.27	271	0.31
118	12.14	33.654	4.35	-	-		245	125	12.11	33.77	3.68	25.63	236	0.38
146	12.08	34.070	2.17	-	-		214	150	11.93	34.07	2.21	25.90	211	0.43
164	10.70	33.961	2.77	-	-		198	200	9.50	33.96	2.95	26.24	178	0.53
193	9.60	33.948	2.99	-	-		181	250	8.45	34.08	2.37	26.50	154	0.62
226	9.11	34.097	2.50	-	-		162	300	8.26	34.22	1.55	26.64	141	0.69
255	8.38	34.085	2.33	-	-		152	400	7.32	34.27	0.90	26.82	124	0.83
303	8.24	34.222	1.51	-	-		140	500	6.74	34.36	0.54	26.97	109	0.96
365	7.60	34.242	1.12	-	-		130	600	5.99	34.38	0.40	27.09	99	1.07
461	6.96	34.343	0.61	-	-		113							
549	6.44	34.379	0.47	-	-		104							
623	5.75	34.389	0.38	-	-		95							
110.80	ALEXANDER AGASSIZ; February 10, 1963; 0154 GCT; 28°16'N, 118°54'W; sounding, 2150 fm; wind, 180°, force 5; weather, rain; sea, very rough; wire angle, 30°.													
1	15.92	33.557	5.81	0.34	2		327	0	(15.92)	(33.56)	(5.81)	(24.68)	(327)	(0.00)
9	15.92	33.560	5.85	0.34	2		327	10	15.92	33.56	5.85	24.68	327	0.03
31	15.69	33.538	5.87	0.33	2		324	20	15.91	33.56	5.85	24.68	327	0.07
58	14.80	33.617	5.64	0.49	5		300	30	15.70	33.54	5.87	24.71	324	0.10
67	13.92	33.526	5.55	0.57	5		289	50	15.30	33.62	5.77	24.86	310	0.16
83	12.63	33.523	5.23	-	-		264	75	13.75	33.53	5.52	25.12	285	0.24
96	12.16	33.521	5.15	-	-		256	100	12.30	33.59	5.05	25.46	253	0.30
109	12.10	33.669	4.57	-	-		244	125	11.33	33.69	4.20	25.72	228	0.37
135	10.78	33.707	3.99	-	-		218	150	10.17	33.79	3.53	26.00	202	0.42
151	10.14	33.801	3.49	-	-		200	200	9.25	34.08	2.37	26.38	166	0.51
176	9.64	33.996	2.67	-	-		178	250	8.73	34.13	2.00	26.50	154	0.60
206	9.17	34.084	2.32	-	-		164	300	8.44	34.25	1.29	26.64	141	0.67
233	8.91	34.116	2.13	-	-		158	400	7.10	34.26	0.97	26.84	122	0.81
276	8.49	34.177	1.71	-	-		147	500	6.21	34.30	0.39	26.99	107	0.93
332	8.37	34.348	0.77	-	-		133							
420	6.81	34.249	1.00	-	-		119							
501	6.20	34.304	0.38	-	-		107							
571	5.71	34.347	0.45	-	-		98							
110.90	ALEXANDER AGASSIZ; February 9, 1963; 2118 GCT; 27°55.5'N, 119°31'W; sounding, 2200 fm; wind, 200°, force 4; weather, overcast; sea, very rough; wire angle, 19°.													
2	16.31	33.595	5.81	0.34	0		333	0	(16.31)	(33.60)	(5.81)	(24.62)	(333)	(0.00)
11	16.30	33.589	5.76	0.33	2		333	10	16.30	33.59	5.76	24.62	333	0.03
44	15.86	33.613	5.80	0.33	2		322	20	16.19	33.60	5.78	24.65	330	0.07
72	14.92	33.519	5.66	0.43	3		309	30	16.04	33.61	5.79	24.69	326	0.10
91	13.62	33.552	5.49	0.59	5		281	50	15.80	33.61	5.78	24.74	321	0.16
106	12.38	33.568	5.07	-	-		256	75	14.73	33.52	5.64	24.91	305	0.24
121	11.66	33.563	5.06	-	-		244	100	13.30	33.56	5.37	25.24	274	0.32
139	10.77	33.628	4.70	-	-		224	125	11.49	33.58	5.00	25.60	239	0.38
158	10.04	33.756	3.89	-	-		202	150	10.20	33.68	4.20	25.91	210	0.44
186	10.00	33.988	2.67	-	-		184	200	9.82	34.05	2.38	26.26	177	0.54
210	9.66	34.089	2.30	-	-		171	250	8.83	34.12	2.11	26.48	156	0.62
234	8.96	34.082	2.47	-	-		161	300	8.04	34.18	1.58	26.65	140	0.70
269	8.65	34.171	1.81	-	-		150	400	7.02	34.25	1.00	26.85	121	0.83
307	7.92	34.182	1.51	-	-		138	500	6.19	34.31	0.48	27.00	106	0.96
355	7.54	34.237	1.18	-	-		129	600	(5.59)	(34.38)	(0.26)	(27.14)	(94)	(1.06)
422	6.76	34.260	0.89	-	-		117							
505	6.16	34.319	0.45	-	-		105							
590	5.64	34.368	0.26	-	-		95							

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
ALEXANDER AGASSIZ; February 9, 1963; 1623 GCT; 27°38'N, 120°11'W; sounding, 2200 fm; wind, 190°, force 2; weather, overcast; sea, very rough; wire angle, 10°.														110.100
1	16.27	33.603	5.76	0.38	2		332	0	(16.27)	(33.60)	(5.76)	(24.63)	(332)	(0.00)
11	16.28	33.600	5.78	0.38	2		332	10	16.28	33.60	5.78	24.63	332	0.03
45	15.91	33.592	5.81	0.38	2		325	20	16.27	33.60	5.78	24.63	332	0.07
75	15.46	33.549	5.79	0.38	2		318	30	16.14	33.60	5.80	24.66	329	0.10
95	15.40	33.625	5.88	0.44	3		311	50	15.86	33.59	5.80	24.72	324	0.17
109	13.88	33.549	5.35	-	-		286	75	15.46	33.55	5.79	24.77	318	0.25
125	12.24	33.555	5.19	-	-		255	100	15.35	33.62	5.87	24.85	311	0.33
145	11.39	33.634	4.62	-	-		234	125	12.24	33.56	5.19	25.45	254	0.40
165	10.65	33.723	3.95	-	-		214	150	11.19	33.65	4.47	25.71	229	0.46
194	10.13	33.929	2.91	-	-		191	200	10.13	33.98	2.74	26.15	187	0.56
218	10.13	34.117	2.19	-	-		177	250	9.36	34.14	2.10	26.41	163	0.65
243	9.41	34.113	2.30	-	-		166	300	8.64	34.20	1.66	26.57	148	0.73
278	9.33	34.247	1.55	-	-		154	400	7.03	34.20	1.24	26.81	125	0.88
318	7.95	34.154	1.78	-	-		141	500	6.19	34.28	0.68	26.98	108	1.00
367	7.34	34.163	1.52	-	-		132	600	5.57	34.34	0.49	27.11	97	1.11
436	6.70	34.238	0.91	-	-		118							
520	6.04	34.288	0.62	-	-		106							
605	5.55	34.338	0.49	-	-		97							
ALEXANDER AGASSIZ; February 9, 1963; 0731 GCT; 26°57'N, 121°32'W; sounding, 2150 fm; wind, 210°, force 4; weather, cloudy; sea, slight; wire angle, 07°.														110.120
1	18.06	34.135	5.62	0.36	1		333	0	(18.06)	(34.14)	(5.62)	(24.62)	(333)	(0.00)
11	17.85	34.138	5.52	0.31	1		328	10	17.85	34.14	5.52	24.67	328	0.03
46	17.69	34.128	5.51	0.34	1		325	20	17.79	34.14	5.51	24.68	327	0.07
76	17.59	34.128	5.47	0.30	1		323	30	17.74	34.13	5.51	24.69	326	0.10
95	17.58	34.118	5.58	0.34	0u		323	50	17.67	34.13	5.51	24.71	325	0.16
110	16.77	34.049	5.69	-	-		310	75	17.60	34.13	5.47	24.72	323	0.25
125	15.48	33.994	5.48	-	-		286	100	17.57	34.12	5.50	24.72	323	0.33
145	14.64	33.950	5.15	-	-		272	125	15.48	33.99	5.48	25.11	286	0.40
165	13.42	33.841	5.09	-	-		256	150	14.40	33.93	5.12	25.30	268	0.47
195	10.97	33.773	4.21	-	-		216	200	10.80	33.78	4.15	25.88	213	0.60
220	10.13	33.836	3.86	-	-		198	250	9.07	33.94	3.66	26.30	173	0.70
245	9.16	33.930	3.76	-	-		175	300	8.35	34.07	2.66	26.51	153	0.78
281	8.64	34.029	3.01	-	-		160	400	7.25	34.18	1.45	26.76	129	0.93
320	8.05	34.095	2.33	-	-		147	500	6.37	34.26	0.73	26.94	112	1.05
370	7.44	34.133	1.78	-	-		136	600	5.70	34.33	0.53	27.08	99	1.17
440	6.98	34.238	1.00	-	-		122							
524	6.14	34.273	0.66	-	-		108							
609	5.64	34.335	0.50	-	-		98							
ALEXANDER AGASSIZ; February 11, 1963; 1057 GCT; 29°22'N, 115°18.5'W; sounding, 35 fm; wind, 280°, force 5; weather, overcast; sea, very rough; wire angle, 12°.														113.30
1	15.79	33.923	5.65	0.44	4		298	0	(15.79)	(33.92)	(5.65)	(24.98)	(298)	(0.00)
11	15.80	33.912	5.64	0.46	4		299	10	15.80	33.91	5.64	24.97	299	0.03
21	15.72	33.907	5.55	0.52	4		298	20	15.74	33.91	5.57	24.99	298	0.06
30	15.16	33.899	4.81	0.78	7		286	30	15.16	33.90	4.81	25.11	286	0.09
40	14.34	33.854	3.64	1.30	16		273	50	13.87	33.85	3.09	25.35	264	0.14
50	13.87	33.848	3.09	1.61	24		264							

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OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

115.35 ALEXANDER AGASSIZ; February 11, 1963; 1432 GCT; 28°54.5'N, 115°27'W; sounding, 600 fm; wind, 280°, force 5; weather, partly cloudy; sea, very rough; wire angle, 30°.

1	15.65	33.890	5.93	0.44	4	297	0	(15.65)	(33.89)	(5.93)	(24.99)	(297)	(0.00)
9	15.66	33.885	5.86	0.43	3	298	10	15.66	33.89	5.85	24.99	298	0.03
30	15.55	33.910	5.77	0.47	4	294	20	15.61	33.90	5.82	25.01	296	0.06
56	15.05	33.923	5.11	0.70	7	282	30	15.55	33.91	5.77	25.03	294	0.09
65	14.52	33.934	4.17	1.02	12	271	50	15.60	33.98	5.60	25.07	290	0.15
81	13.06	33.841	3.47	-	-	249	75	13.60	33.87	3.72	25.42	257	0.22
94	12.48	33.968	2.72	-	-	229	100	12.23	34.01	3.40	25.80	221	0.28
105	12.02	34.058	2.14	-	-	214	125	11.10	34.08	1.96	26.06	196	0.33
131	10.90	34.093	1.93	-	-	191	150	10.58	34.13	1.85	26.19	183	0.38
148	10.60	34.124	1.89	-	-	184	200	9.77	34.25	1.57	26.43	161	0.47
174	10.32	34.215	1.63	-	-	173	250	9.38	34.30	1.22	26.53	151	0.55
203	9.70	34.256	1.56	-	-	160	300	8.98	34.38	0.83	26.66	139	0.62
230	9.57	34.253	1.49	-	-	158	400	8.00	34.39	0.58	26.82	124	0.76
272	9.16	34.353	0.94	-	-	144	500	6.88	34.39	0.44	26.98	109	0.88
328	8.78	34.394	0.73	-	-	135							
416	7.80	34.387	0.54	-	-	122							
497	6.90	34.394	0.45	-	-	109							
565	6.28	34.392	0.36	-	-	101							

119.33 ALEXANDER AGASSIZ; February 14, 1963; 2349 GCT; 28°19'N, 114°53'W; sounding, 62 fm; wind, 300°, force 6; weather, cloudy; sea, very rough; wire angle, 24°.

1	16.30	33.950	5.80	0.42	3	307	0	(16.30)	(33.95)	(5.80)	(24.89)	(307)	(0.00)
10	16.31	33.939	5.78	0.41	3	308	10	16.31	33.94	5.78	24.88	308	0.03
29	16.26	33.955	5.75	0.45	3	306	20	16.29	33.95	5.76	24.89	307	0.06
47	16.02	33.940	5.51	0.48	3	302	30	16.25	33.95	5.74	24.90	306	0.09
70	15.74	33.921	5.45	0.60	4	297	50	15.98	33.94	5.50	24.96	301	0.15
92	15.00	33.885	4.29	1.06	12	284	75	15.62	33.92	5.41	25.02	295	0.23

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
ALEXANDER AGASSIZ; February 15, 1963; 0915, 0617 GCT; 27°42'N, 115°32.5'W; sounding, 1260 fm; wind, 360°, force 5; weather, partly cloudy; sea, rough; wire angle, 31°, 37°.														120.45
1	17.04	34.151	5.64	0.43	2		309	0	(17.04)	(34.15)	(5.64)	(24.87)	(309)	(0.00)
9	17.06	34.147	5.65	0.43	2		309	10	17.06	34.15	5.65	24.87	309	0.03
52	15.52	33.885	5.09	0.71	5		295	20	17.06	34.15	5.65	24.87	309	0.06
83	11.43	33.649	4.47	1.18	14		233	30	17.05	34.15	5.65	24.87	309	0.09
99	11.02	33.763	3.76	1.46	20		218	50	16.20	33.99	5.32	24.95	302	0.15
111	10.82	33.858	3.21	-	-		207	75	12.45	33.68	4.70	25.50	249	0.22
128	10.08a)	33.894	3.17	-	-		192	100	11.00	33.78	3.65	25.85	216	0.28
148	10.38	34.186	1.87	-	-		176	125	10.12	33.88	3.17	26.08	194	0.33
167	10.82	34.436	0.91	-	-		165	150	10.44	34.22	1.71	26.29	174	0.38
197	10.54	34.514	0.58	-	-		154	200	10.52	34.52	0.55	26.51	153	0.46
235	10.20	34.548	0.49	-	-		146	250	10.07	34.55	0.50	26.61	144	0.54
294	9.66	34.541	0.54	-	-		138	300	9.57	34.54	0.52	26.69	137	0.61
353	8.95	34.519	0.37	-	-		129	400	8.23	34.49	0.34	26.86	120	0.75
420	8.12	34.489	0.43	-	-		119	500	6.98	34.44	0.35	27.00	107	0.87
489	7.16	34.456	0.36	-	-		108	600	6.07	34.40	0.34	27.09	98	0.98
550	6.48	34.402	0.40	-	-		103	700	5.41	34.41	0.38	27.18	90	1.08
594	6.14	34.404	0.34	-	-		99	800	4.98	34.45	0.48	27.26	82	1.18
642	5.82	34.394	0.35	-	-		95	1000	4.23	34.49	0.74	27.38	71	1.35
								1200	3.67	34.55	0.87	27.48	61	1.50
364b)	8.44	34.503	0.36	-	-		122	1500	2.98	34.58	1.22	27.57	52	1.70
428	7.84	34.459	0.31	-	-		117	2000	2.22	34.63		27.68	42	1.98
492	7.02	34.429	0.38	-	-		108							
577	6.21	34.408	0.35	-	-		99							
666	5.58	34.413	0.32	-	-		91							
753	5.16	34.433	0.43	-	-		85							
842	4.82	34.465	0.50	-	-		79							
1021	4.16	34.499	0.77	-	-		69							
1200	3.67	34.546	0.87	-	-		61							
1380	3.24	34.568	1.08	-	-		56							
1561	2.87	34.588	1.30	-	-		51							
1742	2.57	34.608	1.64	-	-		47							
1928	2.31	34.631	-	-	-		43							
2024	2.18	34.628	-	-	-		42							
ALEXANDER AGASSIZ; February 15, 1963; 1225 GCT; 27°33'N, 115°52.5'W; sounding, 2050 fm; wind, 310°, force 5; weather, cloudy; sea, rough; wire angle, 23°.														120.50
2	16.92	33.978	5.69	0.38	2		319	0	(16.92)	(33.98)	(5.69)	(24.77)	(319)	(0.00)
12	16.86	33.975	5.65	0.38	2		318	10	16.87	33.98	5.65	24.78	317	0.03
35	16.84	33.975	5.66	0.39	2		317	20	16.85	33.98	5.65	24.79	317	0.06
62	16.80	34.164	5.46	0.47	2		302	30	16.84	33.98	5.65	24.79	317	0.10
71	16.43	34.146	5.27	0.65	4		296	50	17.17	34.11	5.65	24.81	315	0.16
90	12.40	33.718	3.93	-	-		246	75	15.00	33.99	4.69	25.21	276	0.23
104	11.32	33.677	4.26	-	-		229	100	11.56	33.68	4.20	25.67	233	0.30
116	10.84	33.746	3.81	-	-		216	125	10.58	33.82	3.52	25.95	206	0.35
142	10.10	33.914	3.12	-	-		191	150	9.87	33.95	2.91	26.17	185	0.40
159	9.71	34.001	2.67	-	-		179	200	9.33	34.17	1.95	26.44	160	0.49
185	9.52	34.136	2.16	-	-		166	250	9.03	34.30	1.30	26.59	146	0.57
215	9.18	34.211	1.75	-	-		155	300	8.53	34.36	0.88	26.71	134	0.64
243	9.06	34.287	1.36	-	-		147	400	7.72	34.40	0.56	26.86	119	0.77
286	8.69	34.348	0.94	-	-		137	500	6.82	34.39	0.43	26.98	108	0.90
344	8.06	34.373	0.69	-	-		126	600	(6.03)	(34.40)		(27.10)	(98)	(1.01)
433	7.48	34.410	0.47	-	-		115							
516	6.67	34.391	0.41	-	-		106							
588	6.10	34.401	0.33	-	-		98							

a) Mean value of 9.96 and 10.21°C.
b) Overlapping casts; reconciliation of property curves when necessary.

SIO

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OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

120.60 ALEXANDER AGASSIZ; February 15, 1963; 1752 GCT; 27°13'N, 116°30.5'W; sounding, 2050 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 33°.

0	17.03	34.180	5.69	0.43	1	306	0	17.03	34.18	5.69	24.90	306	0.00
8	17.02	34.177	5.65	0.43	1	306	10	17.02	34.18	5.66	24.90	306	0.03
29	17.03	34.182	5.66	0.46	1	306	20	17.02	34.18	5.66	24.90	306	0.06
55	16.92	34.273	5.49	0.48	2	297	30	17.03	34.18	5.66	24.90	306	0.09
63	16.16	34.186	4.94	0.68	5	287	50	17.03	34.18	5.66	24.90	306	0.15
80	13.40	33.912	3.11	-	-	250	75	14.25	33.98	3.62	25.37	262	0.23
93	12.44	33.988	2.50	-	-	226	100	12.33	34.01	2.80	25.78	223	0.29
105	12.25	34.029	3.01	-	-	220	125	11.79	34.14	1.95	25.98	203	0.34
130	11.62	34.167	1.77	-	-	198	150	10.99	34.24	1.68	26.21	182	0.39
146	11.04	34.222	1.73	-	-	184	200	10.75	34.44	0.98	26.40	163	0.48
169	10.82	34.302	1.44	-	-	175	250	9.61	34.40	0.96	26.57	148	0.56
199	10.76	34.435	0.99	-	-	164	300	8.98	34.40	0.85	26.67	138	0.63
224	10.40	34.480	0.74	-	-	154	400	7.92	34.40	0.57	26.84	122	0.77
265	9.28	34.356	1.08	-	-	146	500	6.91	34.42	0.36	27.00	107	0.89
319	8.82	34.413	0.74	-	-	134							
404	7.88	34.401	0.56	-	-	122							
484	7.06	34.412	0.39	-	-	110							
552	6.39	34.421	0.29	-	-	100							

120.70 ALEXANDER AGASSIZ; February 15, 1963; 2330 GCT; 26°54.5'N, 117°08.5'W; sounding, 2010 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 13°.

2	16.74	33.760	5.72	0.34	3	331	0	(16.74)	(33.76)	(5.72)	(24.64)	(331)	(0.00)
13	16.74	33.762	5.70	0.37	2	330	10	16.74	33.76	5.71	24.64	331	0.03
32	16.62	33.746	5.77	0.38	3	329	20	16.71	33.76	5.72	24.65	330	0.07
42	16.48	33.756	5.70	0.37	2	325	30	16.64	33.75	5.76	24.66	329	0.10
56	15.85	33.824	5.70	0.45	3	306	50	15.80	33.78	5.70	24.87	309	0.16
71	14.26	33.715	5.16	0.71	6	281	75	13.70	33.67	4.98	25.24	274	0.24
95	12.19	33.654	4.51	-	-	246	100	11.50	33.67	4.33	25.67	233	0.30
115	10.64	33.732	3.97	-	-	214	125	10.49	33.85	3.27	25.99	202	0.36
134	10.38	33.932	2.83	-	-	195	150	10.13	34.00	2.71	26.17	185	0.40
154	10.04	34.001	2.70	-	-	184	200	8.74	34.06	2.79	26.44	159	0.49
183	9.12	34.002	3.08	-	-	169	250	8.65	34.26	1.48	26.61	143	0.57
218	8.56	34.131	2.28	-	-	151	300	8.49	34.33	1.01	26.69	136	0.64
248	8.65	34.249	1.50	-	-	144	400	7.68	34.40	0.52	26.87	119	0.78
297	8.51	34.324	1.03	-	-	136	500	6.58	34.39	0.40	27.02	105	0.89
350	8.13	34.374	0.75	-	-	127	600	5.80	34.41	0.39	27.13	94	1.00
433	7.32	34.402	0.43	-	-	114							
517	6.41	34.388	0.40	-	-	103							
602	5.78	34.412	0.39	-	-	94							

120.80 ALEXANDER AGASSIZ; February 16, 1963; 0457 GCT; 26°33'N, 117°49'W; sounding, 2150 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 25°.

1	16.48	33.705	5.61	0.35	2	329	0	(16.48)	(33.70)	(5.61)	(24.66)	(329)	(0.00)
9	16.49	33.708	5.81	0.34	2	329	10	16.49	33.71	5.80	24.66	329	0.03
27	16.47	33.707	5.77	0.37	2	328	20	16.48	33.71	5.79	24.67	328	0.07
36	16.06	33.663	5.76	0.39	2	323	30	16.42	33.71	5.77	24.68	327	0.10
49	15.61	33.667	5.91	0.39	3	313	50	15.60	33.67	5.90	24.84	312	0.16
61	15.49	33.679	5.80	0.42	3	309	75	14.70	33.63	5.71	25.00	297	0.24
82	13.97	33.603	5.62	-	-	284	100	12.70	33.64	4.99	25.42	257	0.31
99	12.77	33.635	5.01	-	-	258	125	10.74	33.67	4.40	25.81	220	0.37
115	11.36	33.647	4.52	-	-	232	150	11.00	34.02	2.55	26.03	198	0.42
132	10.58	33.701	4.30	-	-	215	200	9.41	34.10	2.32	26.37	167	0.52
156	11.06	34.095	2.19	-	-	194	250	8.58	34.17	1.87	26.56	149	0.60
187	9.78	34.075	2.46	-	-	174	300	8.33	34.30	1.11	26.70	136	0.67
213	9.14	34.127	2.15	-	-	160	400	7.50	34.38	0.60	26.88	118	0.80
255	8.53	34.177	1.81	-	-	148	500	6.73	34.41	0.48	27.01	106	0.92
301	8.32	34.309	1.09	-	-	135							
373	7.70	34.360	0.64	-	-	122							
446	7.19	34.396	0.57	-	-	113							
521	6.49	34.416	0.40	-	-	102							

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ALEXANDER AGASSIZ; February 16, 1963; 0928 GCT; 26°14'N, 118°26'W; sounding, 2200 fm; wind, 310°, force 4; weather, cloudy; sea, very rough; wire angle, 23°. 120.90

2	16.79	33.747	5.70	0.33	2	333	0	(16.79)	(33.75)	(5.70)	(24.62)	(332)	(0.00)
11	16.79	33.752	5.73	0.35	2	332	10	16.79	33.75	5.72	24.62	332	0.03
35	16.70	33.755	5.75	0.37	2	330	20	16.76	33.75	5.73	24.63	332	0.07
62	16.57	33.755	5.66	0.37	2	327	30	16.72	33.76	5.74	24.65	330	0.10
71	16.20	33.717	5.77	0.37	3	322	50	16.70	33.76	5.74	24.65	330	0.17
90	14.70	33.654	5.72	-	-	295	75	15.99	33.70	5.77	24.77	318	0.25
103	14.29	33.730	5.45	-	-	281	100	14.42	33.70	5.57	25.11	286	0.32
117	12.96	33.655	5.05	-	-	261	125	12.23	33.66	4.80	25.53	247	0.39
144	10.96	33.691	4.22	-	-	222	150	10.60	33.72	4.06	25.87	214	0.45
163	10.02	33.821	3.67	-	-	197	200	9.59	34.04	2.68	26.29	174	0.55
190	9.81	34.018	2.81	-	-	179	250	8.65	34.17	1.90	26.54	150	0.63
222	9.04	34.107	2.38	-	-	160	300	7.97	34.19	1.57	26.66	139	0.71
250	8.65	34.174	1.90	-	-	150	400	7.54	34.36	0.65	26.86	120	0.84
296	8.00	34.189	1.62	-	-	139	500	6.73	34.40	0.41	27.00	106	0.96
356	7.74	34.296	1.01	-	-	128	600	5.97	34.43	0.40	27.13	95	1.07
450	7.20	34.401	0.44	-	-	112							
535	6.37	34.405	0.41	-	-	101							
607	5.93	34.430	0.40	-	-	94							

ALEXANDER AGASSIZ; February 16, 1963; 1430 GCT; 25°55.5'N, 119°02'W; sounding, 2270 fm; wind, 330°, force 4; weather, cloudy; sea, very rough; wire angle, 26°. 120.100

1	16.80	33.766	5.74	0.38	2	331	0	(16.80)	(33.77)	(5.74)	(24.64)	(331)	(0.00)
10	16.76	33.760	5.73	0.38	2	331	10	16.76	33.76	5.73	24.64	331	0.03
45	16.72	33.758	5.72	0.41	2	330	20	16.74	33.76	5.73	24.64	331	0.07
77	16.01	33.689	5.75	0.44	3	320	30	16.73	33.76	5.73	24.65	330	0.10
94	16.28a)	33.895	5.67	0.47	3	311	50	16.71	33.76	5.73	24.65	330	0.17
107	14.64	33.688	5.45	-	-	291	75	16.02	33.69	5.75	24.76	320	0.25
125	12.38	33.627	5.16	-	-	252	100	15.85	33.84	5.60	24.91	305	0.33
142	12.03	33.633	4.69	-	-	245	125	12.38	33.63	5.16	25.47	252	0.40
159	11.60	33.754	3.60	-	-	228	150	11.86	33.66	4.35	25.60	240	0.46
186	9.78	33.818	3.58	-	-	193	200	9.48	33.88	3.38	26.18	184	0.57
212	9.26	33.943	3.15	-	-	176	250	8.62	34.10	2.33	26.49	155	0.65
236	8.84	34.058	2.66	-	-	161	300	8.25	34.23	1.40	26.65	140	0.73
266	8.42	34.153	1.97	-	-	148	400	7.58	34.36	0.67	26.85	121	0.87
306	8.24	34.249	1.33	-	-	138	500	6.56	34.38	0.52	27.01	106	0.99
354	8.03	34.338	0.84	-	-	128	600	(5.82)	(34.40)		(27.12)	(95)	(1.09)
431	7.24	34.372	0.60	-	-	115							
512	6.46	34.383	0.50	-	-	104							
580	5.96	34.401	0.57	-	-	97							

a) Mean value of 16.12 and 16.33°C.

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

120.120 ALEXANDER AGASSIZ; February 17, 1963; 0001 GCT; 25°13'N, 120°23'W; sounding, 2260 fm; wind, 320°, force 3; weather, partly cloudy; sea, very rough; wire angle, 20°.

2	17.93	33.997	5.53	0.32	2	340	0	(17.93)	(34.00)	(5.53)	(24.54)	(340)	(0.00)
11	17.96	33.997	5.60	0.32	2	341	10	17.96	34.00	5.59	24.54	341	0.03
44	17.90	34.025	5.59	0.34	2	338	20	17.96	34.00	5.59	24.54	341	0.07
72	17.59	33.987	5.56	0.33	2	333	30	17.94	34.02	5.59	24.56	339	0.10
92	17.49	34.004	5.63	0.35	2	330	50	17.83	34.02	5.57	24.58	336	0.17
106	15.94	33.833	5.52	0.39	2	308	75	17.57	33.99	5.58	24.62	333	0.25
120	14.86	33.751	5.30	-	-	291	100	16.80	33.94	5.60	24.77	319	0.34
139	13.66	33.736	4.87	-	-	268	125	14.55	33.74	5.20	25.12	285	0.41
158	12.10	33.711	4.52	-	-	241	150	12.77	33.72	4.69	25.47	252	0.48
186	10.74	33.839	3.52	-	-	207	200	10.38	33.89	3.31	26.04	198	0.60
209	10.16	33.934	3.18	1.79	30	191	250	9.59	34.19	1.95	26.41	163	0.69
211a)	10.10	33.941	3.21	1.91	31	189	300	9.34	34.38	0.97	26.60	145	0.77
233	9.73	34.077	2.57	-	-	173	400	8.02	34.36	0.80	26.79	127	0.91
266	9.51	34.276	1.54	-	-	155	500	6.78	34.33	0.62	26.94	112	1.04
304	9.32	34.387	0.95	-	-	144	600	(5.87)	(34.37)		(27.09)	(98)	(1.15)
353	8.67	34.381	0.82	-	-	135							
419	7.78	34.351	0.80	2.83	64	124							
421a)	7.76	34.350	0.76	2.90	64	124							
500	6.78	34.334	0.62	-	-	112							
582	6.01	34.360	0.55	-	-	100							

123.42 ALEXANDER AGASSIZ; February 23, 1963; 2127 GCT; 27°14'N, 114°59'W; sounding, 825 fm; wind, 310°, force 5; weather, partly cloudy; sea, very rough; wire angle, 26°.

1	16.36	34.000	5.61	0.51	4	305	0	(16.36)	(34.00)	(5.61)	(24.92)	(305)	(0.00)
10	16.30	33.992	5.57	0.52	4	304	10	16.30	33.99	5.57	24.92	304	0.03
27	16.20	33.992	5.62	0.51	4	302	20	16.22	33.99	5.60	24.94	302	0.06
53	14.16	33.861	5.00	0.94	7	269	30	16.20	33.99	5.60	24.95	302	0.09
62	12.84	33.686	4.83	-	-	256	50	16.20	33.99	5.60	24.95	302	0.15
75	11.79	33.681	4.23	-	-	237	75	11.79	33.68	4.23	25.62	237	0.22
88	11.07	33.747	3.78	-	-	220	100	10.55	33.85	3.25	25.98	203	0.28
101	10.53	33.856	3.24	-	-	203	125	12.06	34.42	0.97	26.15	188	0.32
122	12.08	34.394	1.02	-	-	190	150	11.63	34.53	0.67	26.31	172	0.37
140	11.70	34.483	0.79	-	-	177	200	11.08	34.54	0.60	26.42	161	0.46
166	11.54	34.563	0.56	-	-	168	250	10.37	34.55	0.48	26.56	149	0.54
192	11.24	34.546	0.62	-	-	164	300	9.77	34.55	0.40	26.66	139	0.61
219	10.66	34.537	0.56	-	-	155	400	8.42	34.47	0.41	26.81	124	0.75
262	10.26	34.552	0.44	-	-	147	500	7.07	34.43	0.34	26.98	108	0.87
310	9.62	34.546	0.39	-	-	137							
386	8.62	34.485	0.42	-	-	126							
463	7.52	34.437	0.36	-	-	114							
540	6.68	34.432	0.34	-	-	103							

127.40 ALEXANDER AGASSIZ; February 23, 1963; 1643 GCT; 26°43'N, 114°29'W; sounding, 1625 fm; wind, 340°, force 2; weather, overcast; sea, rough; wire angle, 09°.

1	17.25	34.021	5.80	0.37	2	323	0	(17.25)	(34.02)	(5.80)	(24.72)	(323)	(0.00)
11	17.26	34.017	5.67	0.39	2	323	10	17.26	34.02	5.67	24.72	323	0.03
30	17.24	34.018	5.68	0.38	3	323	20	17.25	34.02	5.68	24.72	323	0.06
60	15.55	33.834	5.37	0.58	3	299	30	17.24	34.02	5.68	24.73	323	0.10
71	14.42	33.784	4.81	-	-	280	50	17.20	34.01	5.67	24.73	323	0.16
86	13.86	34.054	2.72	-	-	249	75	13.80	33.80	4.90	25.32	266	0.24
101	13.33	34.242	1.69	-	-	224	100	13.48	34.24	1.78	25.73	228	0.30
116	12.43	34.282	1.46	-	-	205	125	12.30	34.34	1.16	26.04	198	0.35
140	12.47	34.459	0.89	-	-	192	150	12.44	34.52	0.75	26.15	187	0.40
160	12.26	34.541	0.65	-	-	182	200	11.04	34.48	0.90	26.38	165	0.49
190	11.16	34.463	1.00	-	-	169	250	10.01	34.46	0.75	26.55	149	0.57
219	10.84	34.548	0.60	-	-	157	300	9.34	34.46	0.60	26.66	139	0.65
250	10.01	34.456	0.75	-	-	150	400	8.20	34.45	0.40	26.83	123	0.78
299	9.36	34.464	0.61	-	-	139	500	7.06	34.42	0.42	26.97	109	0.91
354	8.72	34.474	0.45	-	-	128	600	6.21	34.43	0.33	27.10	97	1.02
438	7.77	34.436	0.38	-	-	118							
523	6.82	34.421	0.44	-	-	106							
607	6.18	34.433	0.32	-	-	97							

a) New type nonmetallic water sampler placed two meters below Nansen bottle for testing.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
ALEXANDER AGASSIZ; February 19, 1963; 1209 GCT; 26°28'N, 113°28.5'W; sounding, 45 fm; wind, 340°, force 4; weather, clear; sea, moderate; wire angle, 10°.														130.30
1	17.04	34.173	5.60	0.43	4		307	0	(17.04)	(34.17)	(5.60)	(24.89)	(307)	(0.00)
11	17.06	34.189	5.56	0.44	4		306	10	17.06	34.19	5.57	24.90	306	0.03
30	16.91	34.161	5.50	0.48	4		305	20	17.01	34.18	5.52	24.90	306	0.06
50	15.06	34.037	3.89	1.05	13		274	30	16.91	34.16	5.50	24.91	305	0.09
75	11.88	34.037	2.44	1.70	30		213	50	15.06	34.04	3.89	25.24	274	0.15
								75	11.88	34.04	2.44	25.89	212	0.21
ALEXANDER AGASSIZ; February 19, 1963; 0613, 0428 GCT; 26°07.5'N, 114°04.5'W; sounding, 1130 fm; wind, 350°, force 5; weather, missing; sea, very rough; wire angle, 26°, 39°.														130.40
0	18.09	34.141	5.56	0.33	1		334	0	18.09	34.14	5.56	24.61	334	0.00
9	18.11	34.137	5.62	0.33	0u		334	10	18.11	34.14	5.62	24.61	334	0.03
28	18.10	34.142	5.57	0.36	1		334	20	18.10	34.14	5.57	24.61	334	0.07
55	16.74	34.062	5.57	0.46	2		309	30	18.10	34.14	5.57	24.61	334	0.10
64	16.03	34.048	5.27	0.58	4		294	50	17.60	34.12	5.57	24.72	324	0.17
77	14.44	33.889	4.04	-	-		272	75	14.60	33.90	4.17	25.23	275	0.24
91	13.22	33.914	3.36	-	-		246	100	11.60	33.80	3.53	25.75	225	0.30
104	11.46	33.810	3.54	-	-		222	125	11.24	34.08	2.36	26.04	198	0.36
127	11.20	34.082	2.31	-	-		197	150	10.55	34.11	2.21	26.18	184	0.41
145	10.60	34.084	2.27	-	-		187	200	10.40	34.39	1.09	26.43	161	0.49
172	10.50	34.280	1.52	-	-		171	250	9.96	34.44	0.89	26.54	150	0.58
200	10.40	34.389	1.09	-	-		161	300	9.13	34.40	0.80	26.65	140	0.65
228	10.19	34.447	0.92	-	-		153	400	8.10	34.43	0.48	26.83	123	0.79
273	9.64	34.427	0.84	-	-		146	500	7.04	34.42	0.32	26.98	109	0.91
322	8.66	34.376	0.83	-	-		135	600	6.18	34.43	0.37	27.10	97	1.02
399	8.14	34.433	0.50	-	-		123	700	5.62	34.45	0.38	27.19	89	1.12
478	7.30	34.426	0.37	-	-		112	800	5.14	34.46	0.42	27.25	83	1.22
558	6.53	34.424	0.30	-	-		102	1000	4.28	34.51	0.55	27.39	70	1.39
								1200	3.68	34.54	0.84	27.47	62	1.54
357a)	8.52	34.418	0.57	-	-		130	1500	2.99	34.58	1.34	27.57	52	1.74
417	7.90	34.434	0.40	-	-		119	2000	2.20	(34.64)		(27.69)	(41)	(2.03)
478	7.22	34.416	0.31	-	-		111							
561	6.51	34.423	0.37	-	-		102							
647	5.84	34.439	0.41	-	-		92							
733	5.49	34.452	0.36	-	-		87							
821	5.03	34.469	0.44	-	-		81							
910	4.68	34.484	0.53	-	-		76							
1000	4.28	34.506	0.55	-	-		70							
1181	3.73	34.538	0.80	-	-		62							
1362	3.30	34.570	1.04	-	-		56							
1545	2.88	34.595	1.38	-	-		50							
1728	2.58	34.617	1.59	-	-		46							
1911	2.30	34.632	1.88	-	-		43							
2003	2.19	34.593u	1.61u	-	-									

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

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
130.50	ALEXANDER AGASSIZ; February 18, 1963; 2242 GCT; 25°49.5'N, 114°45.5'W; sounding, 1925 fm; wind, 340°, force 3; weather, partly cloudy; sea, rough; wire angle, 31°.													
1	17.56	33.967	5.61	0.38	2		334	0	(17.56)	(33.97)	(5.61)	(24.61)	(334)	(0.00)
9	17.50	33.968	5.63	0.39	2		333	10	17.49	33.97	5.63	24.63	332	0.03
26	17.34	33.975	5.64	0.41	2		328	20	17.38	33.98	5.64	24.66	329	0.07
52	17.30	33.968	5.64	0.40	2		328	30	17.33	33.97	5.64	24.67	328	0.10
61	17.26	33.961	5.67	0.40	2		328	50	17.30	33.97	5.64	24.67	328	0.17
73	16.52	33.930	5.61	0.47	3		313	75	16.15	33.96	4.92	24.93	303	0.24
85	15.56	34.033	3.73	-	-		285	100	13.47	33.84	3.97	25.42	257	0.32
97	14.02	33.836	4.11	-	-		268	125	12.24	34.05	2.62	25.83	218	0.38
117	12.13	33.912	3.20	-	-		226	150	12.08	34.28	1.53	26.03	198	0.43
132	12.36	34.180	2.09	-	-		211	200	11.96	34.64	0.49	26.34	170	0.52
155	12.02	34.310	1.43	-	-		195	250	11.02	34.66	0.34	26.53	152	0.61
179	12.15	34.528	0.90	-	-		181	300	10.14	34.56	0.43	26.60	144	0.68
203	11.90	34.651	0.44	-	-		168	400	8.85	34.50	0.40	26.77	128	0.83
242	11.19	34.666	0.32	-	-		154	500	7.48	34.46	0.33	26.95	112	0.95
287	10.34	34.576	0.41	-	-		146							
358	9.29	34.511	0.45	-	-		134							
430	8.53	34.488	0.35	-	-		125							
506	7.38	34.452	0.33	-	-		111							
130.60	ALEXANDER AGASSIZ; February 18, 1963; 1714 GCT; 25°29'N, 115°23'W; sounding, 2000 fm; wind, 360°, force 3; weather, cloudy; sea, rough; wire angle, 10°.													
1	18.98	34.324	5.41	0.40	2		341	0	(18.98)	(34.32)	(5.41)	(24.53)	(342)	(0.00)
10	18.96	34.320	5.47	0.40	2		341	10	18.96	34.32	5.47	24.53	341	0.03
30	18.94	34.322	5.44	0.41	2		341	20	18.95	34.32	5.46	24.53	341	0.07
60	18.76	34.276	5.47	0.41	2		340	30	18.94	34.32	5.44	24.54	341	0.10
69	15.94	33.948	4.56	0.90	8		299	50	18.89	34.30	5.46	24.53	341	0.17
85	15.32	34.258	2.77	-	-		263	75	15.53	34.05	3.76	25.14	283	0.25
99	15.74	34.56 a)	1.54	-	-		250	100	15.74	34.56	1.52	25.49	250	0.32
114	15.11	34.690	1.27	-	-		227	125	13.74	34.54	1.20	25.90	211	0.38
138	12.97	34.471	1.11	-	-		201	150	12.74	34.54	0.83	26.11	191	0.43
157	12.61	34.593	0.63	-	-		185	200	11.83	34.66	0.47	26.38	166	0.52
187	12.02	34.653	0.43	-	-		170	250	11.25	34.68	0.30	26.50	154	0.60
216	11.65	34.672	0.48	-	-		162	300	10.48	34.64	0.28	26.61	144	0.68
246	11.32	34.680	0.32	-	-		155	400	8.88	34.54	0.38	26.80	126	0.82
295	10.60	34.651	0.26	-	-		145	500	7.79	34.52	0.31	26.95	112	0.95
350	9.28	34.519	0.47	-	-		134	600	(6.61)	(34.48)	(0.27)	(27.08)	(99)	(1.06)
433	8.60	34.557	0.32	-	-		120							
515	7.59	34.513	0.30	-	-		109							
599	6.62	34.481	0.27	-	-		99							
130.70	ALEXANDER AGASSIZ; February 18, 1963; 1214 GCT; 25°09'N, 116°02'W; sounding, 2060 fm; wind, 350°, force 4; weather, cloudy; sea, rough; wire angle, 08°.													
1	18.72	34.221	5.47	0.38	2		343	0	(18.72)	(34.22)	(5.47)	(24.52)	(343)	(0.00)
11	18.74	34.222	5.46	0.36	2		343	10	18.74	34.22	5.46	24.51	343	0.03
36	17.52	33.989	5.68	0.40	3		331	20	18.74	34.22	5.46	24.51	343	0.07
46	16.63	33.928	5.67	0.42	3		316	30	18.30	34.13	5.52	24.55	339	0.10
61	16.69	34.014	5.64	0.43	3		311	50	16.64	33.94	5.66	24.81	315	0.17
76	16.62	34.038	5.56	-	-		308	75	16.63	34.04	5.57	24.88	308	0.25
102	13.24	33.675	5.06	-	-		264	100	13.85	33.72	5.20	25.25	273	0.32
121	11.81	33.688	4.45	-	-		237	125	11.69	33.70	4.39	25.66	234	0.38
141	11.02	33.763	4.11	-	-		218	150	10.53	33.85	3.70	25.98	203	0.44
171	9.98	34.010	2.77	-	-		182	200	10.16	34.27	1.62	26.37	166	0.53
200	10.16	34.273	1.62	-	-		166	250	9.97	34.46	0.77	26.56	149	0.61
240	10.12	34.463	0.83	-	-		151	300	9.16	34.46	0.60	26.69	136	0.69
270	9.54	34.461	0.66	-	-		142	400	8.21	34.46	0.41	26.84	122	0.82
319	8.97	34.456	0.58	-	-		133	500	7.01	34.43	0.42	26.99	108	0.95
383	8.40	34.464	0.42	-	-		124	600	6.12	34.45	0.37	27.12	95	1.06
482	7.23	34.431	0.43	-	-		111							
571	6.35	34.446	0.38	-	-		98							
646	5.83	34.450	0.34	-	-		91							

a) An error of -3 ohms has been assumed. The listed observed and interpolated values incorporate the correction.

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m
ALEXANDER AGASSIZ; February 18, 1963; 0706 GCT; 24°49'N, 116°39'W; sounding, 2150 fm; wind, 340°, force 4; weather, clear; sea, very rough; wire angle, 20°.														130.80
1	17.11	33.992	5.68	0.40	2		322	0	(17.11)	(33.99)	(5.68)	(24.73)	(322)	(0.00)
10	17.13	33.988	5.74	0.42	3		323	10	17.13	33.99	5.74	24.73	323	0.03
34	17.12	33.995	5.72	0.41	2		322	20	17.13	33.99	5.73	24.73	323	0.06
62	16.65	33.905	5.71	0.41	2		318	30	17.12	33.99	5.72	24.73	322	0.10
72	16.34	34.039	5.64	0.49	3		301	50	17.12	33.99	5.71	24.73	322	0.16
91	13.60	33.723	4.65	-	-		268	75	15.10	33.80	5.46	25.05	292	0.24
105	12.42	33.714	4.11	-	-		246	100	13.00	33.72	4.30	25.42	257	0.31
120	11.48	33.687	4.24	-	-		231	125	11.38	33.72	4.10	25.73	227	0.37
148	11.07	33.949	2.64	-	-		205	150	11.04	33.96	2.58	25.98	204	0.42
166	10.84	34.048	2.40	-	-		194	200	9.62	34.10	2.54	26.33	170	0.52
195	9.58	34.046	2.72	-	-		173	250	9.89	34.37	1.17	26.50	154	0.60
227	10.20	34.351	1.36	-	-		161	300	8.98	34.35	1.05	26.63	141	0.68
258	9.74	34.370	1.12	-	-		152	400	7.85	34.39	0.59	26.84	122	0.82
305	8.91	34.351	1.02	-	-		140	500	6.79	34.41	0.40	27.00	106	0.94
366	8.24	34.367	0.74	-	-		129	600	6.01	34.42	0.44	27.11	96	1.05
460	7.17	34.410	0.43	-	-		111							
546	6.41	34.408	0.39	-	-		102							
616	5.90	34.435	0.46	-	-		93							
ALEXANDER AGASSIZ; February 17, 1963; 2108 GCT; 24°10'N, 117°55.5'W; sounding, 2125 fm; wind, 330°, force 4; weather, cloudy; sea, very rough; wire angle, 28°.														130.90
2	17.26	33.872	5.69	0.29	2		334	0	(17.26)	(33.87)	(5.69)	(24.61)	(334)	(0.00)
11	17.26	33.870	5.69	0.29	2		334	10	17.26	33.87	5.69	24.61	334	0.03
35	17.12	33.841	5.73	0.31	2		333	20	17.20	33.86	5.70	24.61	334	0.07
62	17.05	33.823	5.67	0.33	2		333	30	17.13	33.84	5.72	24.61	333	0.10
71	16.68	33.799	5.79	0.34	2		326	50	17.08	33.83	5.69	24.62	333	0.17
90	14.87	33.703	5.58	0.47	3		295	75	16.25	33.78	5.76	24.77	318	0.25
104	13.85	33.626	5.39	-	-		280	100	14.12	33.64	5.45	25.13	284	0.32
118	13.08	33.705	4.98	-	-		259	125	12.58	33.72	4.82	25.50	249	0.39
146	11.18	33.732	4.27	-	-		223	150	11.06	33.74	4.19	25.80	220	0.45
164	10.58	33.833	3.67	-	-		205	200	9.73	34.06	2.83	26.28	175	0.55
191	9.69	33.975	3.20	-	-		180	250	9.66	34.34	1.34	26.51	153	0.64
225	9.92	34.269	1.99	-	-		162	300	9.80	34.53	0.51	26.64	141	0.71
252	9.65	34.340	1.33	-	-		153	400	8.18	34.46	0.44	26.84	122	0.85
300	9.80	34.528	0.51	-	-		141	500	7.05	34.44	0.42	26.99	107	0.97
360	8.70	34.485	0.45	-	-		127	600	6.00	34.42	0.41	27.12	96	1.08
454	7.58	34.443	0.43	-	-		114							
538	6.63	34.442	0.42	-	-		102							
609	5.92	34.416	0.41	-	-		95							
ALEXANDER AGASSIZ; February 18, 1963; 0202 GCT; 24°25'N, 117°17'W; sounding, 1550 fm; wind, 350°, force 4; weather, partly cloudy; sea, rough; wire angle, 23°.														130.100
0	19.04	34.285	5.54	0.30	2		346	0	19.04	34.28	5.54	24.48	346	0.00
8	19.06	34.262	5.45	0.30	1		348	10	19.05	34.26	5.45	24.46	348	0.03
26	19.00	34.261	5.45	0.33	1		347	20	19.02	34.26	5.45	24.47	347	0.07
53	18.66	34.204	5.41	0.31	2		342	30	18.98	34.26	5.45	24.48	346	0.10
63	18.28	34.135	5.57	0.33	2		338	50	18.72	34.21	5.43	24.51	343	0.17
75	17.59	34.011	5.58	0.34	2		331	75	17.58	34.01	5.58	24.64	331	0.26
89	16.84	33.946	5.63	-	-		319	100	16.42	33.97	5.42	24.88	308	0.34
102	16.33	33.978	5.36	-	-		306	125	13.00	33.70	4.77	25.41	258	0.41
123	13.14	33.693	4.85	-	-		261	150	11.84	33.90	3.64	25.79	222	0.47
139	12.39	33.850	4.02	-	-		236	200	11.06	34.40	1.21	26.32	171	0.57
162	11.28	33.943	3.25	-	-		209	250	11.18	34.63	0.46	26.47	157	0.66
187	10.83	34.227	2.05	-	-		180	300	9.72	34.55	0.41	26.67	138	0.73
211	11.29	34.521	0.82	-	-		167	400	8.78	34.51	0.40	26.79	127	0.87
252	11.16	34.635	0.45	-	-		156	500	7.40	34.47	0.33	26.97	110	1.00
298	9.74	34.557	0.41	-	-		138							
371	9.12	34.525	0.41	-	-		131							
446	8.15	34.487	0.37	-	-		119							
527	7.08	34.463	0.32	-	-		106							

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

130.120 ALEXANDER AGASSIZ; February 17, 1963; 1202 GCT; 23°30'N, 119°10'W; sounding, 2275 fm; wind, 300°, force 4; weather, partly cloudy; sea, rough; wire angle, 13°.

1	18.17	34.088	5.58	0.29	3	339	0	(18.17)	(34.09)	(5.58)	(24.55)	(339)	(0.00)
10	18.18	34.084	5.53	0.30	2	340	10	18.18	34.08	5.53	24.54	340	0.03
30	18.07	34.072	5.53	0.31	3	338	20	18.12	34.08	5.53	24.56	339	0.07
59	17.45	33.926	5.57	0.32	4	334	30	18.07	34.07	5.53	24.56	338	0.10
69	17.16	33.869	5.63	0.31	3	332	50	18.00	34.05	5.53	24.56	338	0.17
83	16.70	33.791	5.67	-	-	327	75	17.03	33.84	5.64	24.64	331	0.25
99	15.49	33.773	5.67	-	-	302	100	15.30	33.76	5.64	24.97	299	0.33
114	14.12	33.774	5.15	-	-	274	125	12.72	33.72	4.90	25.48	251	0.40
138	11.90	33.704	4.64	-	-	237	150	11.42	33.72	4.30	25.72	228	0.46
157	11.19	33.748	4.01	-	-	222	200	10.00	33.97	3.09	26.17	186	0.57
187	10.36	33.917	3.27	-	-	195	250	9.02	34.14	2.15	26.46	158	0.66
215	9.67	34.019	2.90	-	-	177	300	7.86	34.18	1.75	26.67	138	0.73
245	9.13	34.141	2.21	-	-	159	400	7.28	34.24	0.65	26.80	125	0.87
293	7.89	34.157	1.86	-	-	140	500	6.62	34.41	0.41	27.03	104	0.99
346	7.74	34.304	1.03	-	-	127	600	(5.90)	(34.43)	(0.40)	(27.14)	(94)	(1.10)
428	7.04	34.358	0.53	-	-	113							
512	6.54	34.418	0.40	-	-	102							
596	5.94	34.436	0.40	-	-	94							

137.23 ALEXANDER AGASSIZ; February 20, 1963; 1240 GCT; 25°33'N, 112°20'W; sounding, 42 fm; wind, 330°, force 3; weather, clear; sea, moderate; wire angle, 05°.

1	18.90	34.503	5.20	0.55	4	327	0	(18.90)	(34.50)	(5.20)	(24.68)	(327)	(0.00)
11	18.93	34.506	5.19	0.55	5	327	10	18.93	34.51	5.19	24.68	327	0.03
31	18.92	34.507	5.20	0.58	5	327	20	18.92	34.51	5.20	24.69	326	0.07
51	15.96	34.146	3.16	1.37	14	285	30	18.92	34.51	5.20	24.69	326	0.10
76	14.12	34.376	0.77	2.20	37	230	50	16.10	34.16	3.30	25.10	287	0.16
							75	14.17	34.37	0.80	25.68	232	0.23

137.30 ALEXANDER AGASSIZ; February 20, 1963; 1544 GCT; 25°21'N, 112°46.5'W; sounding, 145 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 09°.

1	18.62	34.497	5.43	0.51	4	320	0	(18.62)	(34.50)	(5.43)	(24.75)	(320)	(0.00)
11	18.64	34.496	5.42	0.49	4	321	10	18.64	34.50	5.42	24.75	320	0.03
31	18.48	34.475	5.38	0.52	4	318	20	18.60	34.48	5.42	24.74	321	0.06
50	16.27	34.155	3.41	1.25	13	291	30	18.49	34.48	5.40	24.77	318	0.10
75	13.94	34.121	2.56	-	-	245	50	16.27	34.16	3.41	25.06	291	0.16
100	13.36	34.418	0.99	-	-	212	75	13.94	34.12	2.56	25.54	245	0.22
124	12.94	34.541	0.60	-	-	195	100	13.36	34.42	0.99	25.89	212	0.28
164	12.04	34.644	0.32	-	-	171	125	12.93	34.55	0.59	26.08	194	0.33
204	11.42	34.647	0.29	-	-	160	150	12.34	34.63	0.40	26.26	177	0.38
							200	11.48	34.65	0.29	26.43	160	0.47

137.40 ALEXANDER AGASSIZ; February 20, 1963; 2054 GCT; 25°00'N, 113°23.5'W; sounding, 1540 fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, 16°.

1	18.52	34.222	5.62	0.37	2	338	0	(18.52)	(34.22)	(5.62)	(24.57)	(338)	(0.00)
10	18.34	34.190	5.67	0.42	3	336	10	18.34	34.19	5.67	24.59	336	0.03
29	18.10	34.176	5.65	0.40	2	331	20	18.10	34.18	5.65	24.64	331	0.07
39	17.58	34.113	5.48	0.46	3	324	30	18.10	34.18	5.65	24.64	331	0.10
55	15.74	33.853	5.35	0.62	5	302	50	16.38	33.94	5.41	24.87	309	0.16
69	14.47	33.794	4.74	-	-	280	75	14.19	33.80	4.40	25.24	274	0.24
92	13.46	33.966	3.28	-	-	247	100	13.32	33.97	3.25	25.55	244	0.30
111	12.10	33.934	3.12	-	-	224	125	12.62	34.29	1.55	25.94	208	0.36
130	12.67	34.327	1.39	-	-	206	150	12.21	34.42	1.19	26.12	190	0.41
149	12.21	34.411	1.22	-	-	191	200	11.50	34.56	0.60	26.36	167	0.50
177	12.28	34.635	0.57	-	-	176	250	11.16	34.64	0.43	26.49	155	0.59
210	11.36	34.545	0.60	-	-	166	300	9.97	34.55	0.47	26.63	142	0.66
239	11.30	34.642	0.43	-	-	158	400	7.98	34.48	0.45	26.89	117	0.80
288	10.26	34.570	0.46	-	-	145	500	7.07	34.44	0.40	26.99	108	0.92
340	8.98	34.497	0.49	-	-	131	600	(6.24)	(34.46)		(27.12)	(96)	(1.03)
411	7.84	34.472	0.43	-	-	116							
504	7.04	34.444	0.40	-	-	107							
587	6.37	34.460	0.36	-	-	97							

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ALEXANDER AGASSIZ; February 21, 1963; 0213 GCT; 24°41.5'N, 113°56'W; sounding, 1875 fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, 13°. 137.49

1	19.56	34.333	5.46	0.38	2	355	0	(19.56)	(34.33)	(5.46)	(24.39)	(355)	(0.00)
10	19.52	34.331	5.42	0.38	2	354	10	19.52	34.33	5.42	24.40	354	0.04
45	19.42	34.329	5.41	0.36	2	352	20	19.51	34.33	5.42	24.40	354	0.07
75	17.82	34.085	5.47	0.42	2	331	30	19.48	34.33	5.42	24.41	353	0.11
94	14.06	33.790	4.44	0.89	8	272	50	19.39	34.33	5.41	24.43	351	0.18
109	12.55	33.765	3.84	-	-	245	75	17.82	34.08	5.47	24.63	332	0.26
124	11.36	33.834	3.31	-	-	218	100	13.50	33.78	4.21	25.37	262	0.34
143	12.50	34.451	1.05	-	-	193	125	11.37	33.86	3.27	25.84	217	0.40
162	10.86	34.240	1.79	-	-	180	150	11.60	34.32	1.30	26.16	187	0.45
192	10.66	34.370	1.20	-	-	167	200	10.60	34.40	1.10	26.40	164	0.54
216	10.42	34.437	0.94	-	-	158	250	9.91	34.45	0.80	26.56	149	0.62
240	10.05	34.441	0.90	-	-	152	300	9.47	34.53	0.42	26.69	136	0.69
276	9.64	34.503	0.56	-	-	140	400	8.52	34.51	0.43	26.83	123	0.83
314	9.38	34.530	0.41	-	-	134	500	7.18	34.46	0.32	26.99	108	0.95
363	8.90	34.506	0.59	-	-	129	600	6.49	34.49	0.27	27.11	96	1.06
431	8.16	34.514	0.31	-	-	117							
515	7.02	34.452	0.32	-	-	106							
600	6.49	34.488	0.27	-	-	97							

ALEXANDER AGASSIZ; February 21, 1963; 0816 GCT; 24°17.5'N, 114°41'W; sounding, 2000 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 17°. 137.60

1	19.31	34.325	5.49	0.42	1	349	0	(19.31)	(34.32)	(5.49)	(24.44)	(350)	(0.00)
10	19.32	34.329	5.53	0.45	-	349	10	19.32	34.33	5.53	24.45	349	0.03
29	19.30	34.322	5.46	0.42	2	349	20	19.31	34.32	5.46	24.44	350	0.07
58	15.34	33.750	5.64	0.59	3	301	30	19.30	34.32	5.46	24.45	350	0.11
68	14.22	33.790	4.55	0.94	8	275	50	19.00	34.28	5.46	24.49	345	0.17
83	13.46	33.999	2.99	-	-	245	75	13.79	33.87	3.73	25.38	261	0.25
97	13.22	34.191	2.17	-	-	226	100	13.20	34.24	1.98	25.78	222	0.31
111	13.10	34.399	1.34	-	-	209	125	12.94	34.49	0.92	26.03	199	0.37
136	12.76	34.555	0.64	-	-	191	150	12.45	34.62	0.54	26.23	180	0.41
155	12.36	34.635	0.51	-	-	177	200	11.72	34.69	0.46	26.42	162	0.50
183	12.00	34.680	0.27	-	-	167	250	11.02	34.68	0.25	26.54	150	0.58
212	11.52	34.691	0.57	-	-	158	300	9.87	34.62	0.30	26.70	135	0.66
242	11.16	34.692	0.25	-	-	152	400	8.15	34.52	0.36	26.89	117	0.79
289	10.08	34.635	0.27	-	-	138	500	6.95	34.50	0.35	27.05	102	0.91
343	9.14	34.588	0.36	-	-	126	600	(6.11)	(34.50)	(0.33)	(27.17)	(91)	(1.01)
425	7.76	34.499	0.35	-	-	113							
509	6.88	34.497	0.35	-	-	101							
593	6.17	34.498	0.33	-	-	92							

ALEXANDER AGASSIZ; February 21, 1963; 1746 GCT; 23°54.5'N, 115°18.5'W; sounding, 2110 fm; wind, 310°, force 4; weather, cloudy; sea, rough; wire angle, 32°. 137.70

1	19.20	34.271	5.41	0.34	2	351	0	(19.20)	(34.27)	(5.41)	(24.43)	(351)	(0.00)
9	19.22	34.269	5.44	0.35	3	351	10	19.22	34.27	5.45	24.43	351	0.04
25	18.46	34.121	5.51	0.35	2	344	20	19.21	34.27	5.45	24.43	351	0.07
33	17.79	33.998	5.55	0.36	2	337	30	17.85	34.01	5.51	24.57	338	0.10
46	17.78	33.990	5.63	0.37	2	337	50	17.76	33.98	5.65	24.57	338	0.17
58	17.56	33.950	5.65	0.37	2	335	75	16.53	33.98	5.66	24.86	310	0.25
77	16.49	33.978	5.66	-	-	309	100	13.90	33.73	5.23	25.25	273	0.33
93	15.30	33.865	5.42	-	-	292	125	11.64	33.79	3.80	25.74	227	0.39
108	12.90	33.665	5.01	-	-	259	150	10.88	34.02	2.80	26.05	196	0.44
124	11.68	33.783	3.83	-	-	228	200	10.56	34.39	1.24	26.40	164	0.54
146	10.96	33.977	2.98	-	-	201	250	9.98	34.50	0.71	26.58	146	0.62
172	10.67	34.238	1.97	-	-	177	300	9.39	34.51	0.58	26.69	136	0.69
195	10.58	34.365	1.36	-	-	166	400	8.26	34.53	0.30	26.89	117	0.82
233	10.31	34.516	0.74	-	-	150	500	(6.99)	(34.49)		(27.04)	(103)	(0.94)
275	9.54	34.477	0.69	-	-	141							
341	9.16	34.577	0.34	-	-	127							
410	8.10	34.522	0.30	-	-	116							
479	7.20	34.494	0.33	-	-	105							

SIO

CCOFI 6301-2

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

137.80 ALEXANDER AGASSIZ; February 21, 1963; 2233 GCT; 23°41'N, 115°55'W; sounding, 2020 fm; wind, 310°, force 4; weather, cloudy; sea, moderate; wire angle, 18°.

1	18.69	34.160	-	0.35	1	346	0	(18.69)	(34.16)		(24.48)	(346)	(0.00)
10	18.20	34.064	5.53	0.35	2	342	10	18.20	34.06	5.53	24.52	342	0.03
34	17.86	34.021	5.60	0.39	2	337	20	18.02	34.04	5.56	24.55	339	0.07
44	17.10	33.855	5.65	0.38	2	332	30	17.93	34.03	5.58	24.57	338	0.10
59	16.70	33.836	5.76	0.40	2	324	50	16.89	33.84	5.71	24.67	328	0.17
73	16.44	33.944	5.62	0.48	4	310	75	16.40	33.94	5.60	24.86	310	0.25
96	13.52	33.728	4.82	-	-	266	100	13.11	33.74	4.60	25.42	257	0.32
115	12.18	33.810	3.81	-	-	235	125	11.69	33.86	3.43	25.78	222	0.38
133	11.32	33.890	3.22	-	-	214	150	10.43	33.96	3.10	26.09	193	0.43
162	10.06	34.001	3.00	-	-	184	200	9.75	34.17	2.26	26.37	167	0.53
190	9.69	34.108	2.54	-	-	170	250	9.83	34.44	1.00	26.56	148	0.61
228	10.08	34.406	1.37	-	-	155	300	9.36	34.50	0.49	26.69	136	0.68
258	9.73	34.460	0.86	-	-	145	400	7.82	34.43	0.52	26.87	119	0.81
305	9.30	34.508	0.48	-	-	135	500	6.66	34.42	0.50	27.03	104	0.93
368	8.37	34.459	0.52	-	-	124	600	6.08	34.47	0.31	27.15	93	1.04
464	6.89	34.393	0.52	-	-	109							
551	6.42	34.456	-	-	-	98							
624	5.88	34.470	0.26	-	-	90							

140.30 ALEXANDER AGASSIZ; February 22, 1963; 2141 GCT; 24°45'N, 112°24'W; sounding, 58 fm; wind, 340°, force 3; weather, partly cloudy; sea, moderate; wire angle, 10°.

1	19.18	34.469	5.52	0.52	4	336	0	(19.18)	(34.47)	(5.52)	(24.59)	(336)	(0.00)
10	18.94	34.477	5.38	0.54	5	329	10	18.94	34.48	5.38	24.66	329	0.03
30	18.74	34.459	5.25	0.65	6	326	20	18.85	34.47	5.32	24.67	328	0.07
51	15.61	34.278	1.95	1.94	24	268	30	18.74	34.46	5.25	24.69	326	0.10
75	13.70	34.398	1.12	2.37	29	220	50	15.75	34.28	2.05	25.27	271	0.16
							75	13.70	34.40	1.12	25.81	220	0.22

140.40 ALEXANDER AGASSIZ; February 22, 1963; 1631 GCT; 24°29'N, 113°03.5'W; sounding, 1850 fm; wind, 360°, force 3; weather, cloudy; sea, very rough; wire angle, 20°.

1	19.78	34.314	5.37	0.33	1	362	0	(19.78)	(34.31)	(5.37)	(24.31)	(362)	(0.00)
10	19.76	34.312	5.35	0.38	2	361	10	19.76	34.31	5.35	24.32	362	0.04
29	19.75	34.312	5.37	0.38	2	361	20	19.75	34.31	5.36	24.32	361	0.07
52	19.74	34.312	5.31	0.37	2	361	30	19.75	34.31	5.37	24.32	361	0.11
61	19.73	34.302	5.36	0.37	1	361	50	19.74	34.31	5.32	24.32	361	0.18
71	18.46	34.185	5.41	0.42	2	339	75	18.12	34.14	5.44	24.60	334	0.27
85	17.58	34.064	5.48	-	-	327	100	15.83	33.89	5.03	24.95	301	0.35
99	16.01	33.905	5.08	-	-	304	125	13.34	33.82	4.13	25.43	256	0.42
122	13.48	33.815	4.29	-	-	259	150	11.70	34.08	2.42	25.95	206	0.48
140	12.67	34.025	2.73	-	-	228	200	11.27	34.41	1.10	26.29	174	0.57
163	11.18	34.124	2.22	-	-	194	250	10.49	34.51	0.63	26.50	154	0.66
190	11.28	34.348	1.40	-	-	179	300	10.00	34.53	0.48	26.60	144	0.74
217	11.19	34.499	0.77	-	-	166	400	8.68	34.49	0.35	26.79	127	0.88
255	10.41	34.514	0.60	-	-	152	500	7.43	34.48	0.31	26.97	110	1.01
310	9.90	34.535	0.45	-	-	142							
380	9.02	34.517	0.34	-	-	130							
451	7.77	34.442	0.36	-	-	117							
529	7.32	34.503	0.28	-	-	106							

OBSERVED							COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	PO_4-P	SiO_3-Si	NO_2-N	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

ALEXANDER AGASSIZ; February 22, 1963; 1120 GCT; 24°11'N, 113°39.5'W; sounding, 1900 fm; wind, 260°, force 4; weather, clear; sea, moderate; wire angle, 03°. 140.50

1	19.61	34.293	5.41	0.32	2	359	0	(19.61)	(34.29)	(5.41)	(24.34)	(359)	(0.00)
11	19.62	34.296	5.39	-	2	359	10	19.62	34.30	5.39	24.35	359	0.04
31	19.62	34.304	5.34	0.32	3	359	20	19.62	34.30	5.37	24.35	359	0.07
61	19.50	34.274	5.35	0.32	2	358	30	19.62	34.30	5.35	24.35	359	0.11
72	18.68	34.218	5.52	0.36	2	342	50	19.60	34.30	5.35	24.35	358	0.18
86	16.32	33.911	5.34	0.42	4	310	75	18.65	34.22	5.52	24.53	341	0.27
101	14.84	33.855	4.37	-	-	283	100	14.90	33.85	4.43	25.13	285	0.35
116	13.70	33.977	3.36	-	-	251	125	13.17	34.04	2.91	25.64	236	0.41
141	12.32	34.099	2.41	-	-	216	150	11.40	34.11	2.31	26.03	199	0.47
161	10.85	34.130	2.22	-	-	188	200	10.44	34.34	1.42	26.38	165	0.56
190	10.43	34.269	1.66	-	-	170	250	10.07	34.48	0.70	26.55	149	0.64
220	10.46	34.441	1.01	-	-	158	300	9.33	34.49	0.52	26.69	136	0.72
251	10.06	34.485	0.69	-	-	148	400	8.19	34.47	0.41	26.85	121	0.85
301	9.32	34.490	0.51	-	-	136	500	7.04	34.45	0.40	27.00	107	0.97
356	8.74	34.485	0.43	-	-	128	600	6.20	34.45	0.41	27.11	96	1.08
440	7.70	34.460	0.40	-	-	115							
526	6.82	34.443	0.39	-	-	104							
610	6.12	34.446	0.42	-	-	95							

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
60.55-G	I-24	0300	37°47.5'	123°15.0'	50	200°	1	clear	moderate	11.50	32.985
80.65-G	14	0810	33°59.0'	121°30.0'	1415	340°	6	clear	rough	13.52	33.348
80.75-G	14	1530	33°40.0'	122°08.0'	2125	330°	4	cloudy	rough	15.42	33.294
80.85-G	14	2200	33°18.0'	122°52.5'	2340	330°	4	cloudy	rough	15.52	33.289
80.95-G	15	0540	33°01.0'	123°34.0'	1900	320°	3	cloudy	missing	15.40	33.232
80.110-G	15	1205	32°38.0'	124°28.0'	2400	300°	3	cloudy	missing	15.82	33.332
82.47-B	30	2115	34°15.0'	119°58.0'	300	090°	5	drizzle	rough	12.64	33.60
83.40-B	30	1645	34°13.5'	119°22.0'	12	090°	4	sky obscured	moderate	13.60	33.66
83.43-B	30	1835	34°08.0'	119°34.0'	135	090°	6	sky obscured	moderate	13.40	33.64
83.51-B	31	0133	33°52.0'	120°07.5'	50	090°	4	drizzle	rough	13.54	33.64
83.55-B	31	0405	33°44.0'	120°24.5'	500	090°	6	drizzle	rough	13.22	33.64
83.65-B	31	1300	33°24.0'	121°06.0'	1900	140°	6	drizzle	very rough	13.36	33.57
83.70-B	31	1555	33°14.5'	121°26.0'	2100	140°	6	drizzle	very rough	13.78	33.48
83.75-B	31	1840	33°04.5'	121°47.0'	2100	210°	5	fog	very rough	13.36	33.51
83.80-B	31	2125	32°54.0'	122°07.5'	2200	210°	5	fog	very rough	13.43	33.49
83.85-B	II-1	0050	32°44.0'	122°27.5'	2100	210°	4	fog	very rough	14.70	33.41
83.90-B	1	0330	32°34.0'	122°48.5'	2100	220°	6	fog	very rough	14.16	33.34
83.95-B	1	0630	32°24.5'	123°09.0'	2100	230°	5	overcast	very rough	13.36	33.50
83.100-B	1	0915	32°14.0'	123°28.5'	2300	220°	5	fog	very rough	13.22	33.50

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
83.105-B	II-1	1210	32°04.0'	123°49.0'	2300	210°	4	fog	very rough	13.60	33.46
83.110-B	1	1505	31°54.0'	124°10.0'	2150	240°	5	fog	very rough	14.76	33.31
83.115-B	1	1750	31°44.0'	124°30.0'	2000	240°	5	fog	very rough	14.94	33.28
83.120-B	1	2030	31°34.0'	124°50.5'	2000+	240°	4	fog	very rough	14.78	33.14
87.35-B	3	2045	33°50.0'	118°37.5'	300	-	1	partly cloudy	moderate	14.34	33.61
87.40-B	3	1805	33°40.0'	118°58.0'	330	320°	1	partly cloudy	moderate	13.74	33.64
87.45-B	3	1535	33°30.0'	119°19.0'	917	320°	2	partly cloudy	moderate	13.61	33.62
87.50-B	3	1305	33°20.0'	119°39.5'	40	320°	2	partly cloudy	moderate	13.56	33.49
87.55-B	3	1040	33°12.0'	120°01.0'	650	320°	4	partly cloudy	rough	13.88	33.50
87.60-B	3	0745	33°00.5'	120°21.0'	340	320°	4	partly cloudy	rough	14.00	33.46
87.65-B	3	0520	32°50.5'	120°42.0'	2100	320°	3	partly cloudy	moderate	14.69	33.48
87.70-B	3	0230	32°41.0'	121°03.0'	2100	320°	4	cloudy	very rough	14.34	33.49
87.75-B	2	2330	32°30.5'	121°23.5'	2200	340°	3	fog	very rough	14.14a)	33.53
87.80-B	2	2135	32°22.0'	121°40.0'	2100	-	1	fog	rough	13.90	33.59
87.85-B	2	1850	32°10.0'	122°04.0'	2100	-	1	fog	rough	14.04	33.53
87.90-B	2	1625	32°00.0'	122°24.0'	2100	-	1	fog	rough	14.26	33.44
87.95-B	2	1345	31°50.0'	122°44.0'	2300	330°	2	fog	rough	14.46	33.40

a) Alternate value, 14.64°C.

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

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
87.100-B	II-2	1120	31°40.0'	123°04.0'	2200	360°	2	fog	moderate	14.26	33.35
87.105-B	2	0835	31°30.0'	123°24.0'	2200	220°	3	fog	rough	14.17	33.31
87.110-B	2	0545	31°19.5'	123°44.0'	2100	250°	1	fog	rough	13.95	33.35
87.115-B	2	0300	31°09.5'	124°05.0'	2350	220°	3	fog	rough	14.97	33.29
87.120-B	2	0025	30°59.5'	124°25.0'	2200	270°	4	fog	very rough	15.76	-
90.65-G	1	0802	32°03.0'	120°16.0'	2000	220°	3	fog	high	14.64	33.450
90.110-G	I-31	1010	30°40.0'	123°19.0'	2400	170°	5	cloudy	missing	15.46	33.425
90.130-G	31	0153	30°03.5'	124°38.0'	2400	180°	6	cloudy	high	17.20	33.990
93.35-B	II-4	1045	32°40.5'	117°51.5'	350	040°	2	cloudy	slight	14.17a)	33.46
93.45-B	4	1800	32°20.0'	118°33.0'	650	120°	2	cloudy	moderate	14.28	33.55
93.55-B	5	0015	32°00.0'	119°13.5'	850	320°	1	cloudy	moderate	14.96	33.51
93.65-B	5	0830	31°42.0'	119°56.0'	2000	calm		cloudy	moderate	14.66	33.45
93.110-B	6	0830	30°11.0'	122°55.5'	2300	calm		fog	rough	16.00	33.42
97.30-G	5	0803	32°16.0'	117°07.0'	30	150°	1	partly cloudy	slight	14.26	33.637
97.32-B	8	1447	32°11.5'	117°16.5'	720	270°	3	fog	rough	14.60b)	33.64
97.35-B	8	1233	32°09.5'	117°34.5'	800	310°	4	fog	moderate	14.86	33.61

a) Alternate value, 14.38°C.

b) Alternate value, 14.77°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
97.40-B	II-8	0925	31°56.0'	117°58.5'	900	310°	2	fog	moderate	14.66a)	33.61
97.45-B	8	0735	31°49.0'	118°12.5'	750	300°	3	fog	moderate	14.78	33.56
97.50-B	8	0450	31°38.5'	118°34.0'	1000	310°	2	fog	rough	15.38	-
97.55-B	8	0210	31°27.5'	118°52.0'	600	310°	3	fog	rough	15.10	-
97.60-B	7	2350	31°15.5'	119°10.0'	1800	310°	2	fog	rough	15.26	33.61
97.65-B	7	2045	31°05.5'	119°31.0'	1900	320°	3	fog	rough	15.09	33.39
97.70-B	7	1820	30°55.5'	119°50.5'	1920	320°	3	fog	rough	14.77	33.38
97.80-B	7	1345	30°36.0'	120°30.5'	2100	280°	2	fog	moderate	15.58	33.38
97.90-B	7	0855	30°16.0'	121°10.5'	2000	320°	2	fog	moderate	16.04	33.47
97.100-B	7	0405	29°55.0'	121°50.5'	2000	340°	2	fog	rough	15.87	33.42
97.110-B	6	2310	29°35.5'	122°30.0'	2300	340°	4	cloudy	rough	16.70	33.73
97.120-B	6	1830	29°16.0'	123°11.0'	-	350°	4	cloudy	rough	17.02	33.83
100.45-G	7	0340	31°11.0'	117°47.0'	1000+	280°	3	cloudy	very rough	15.60	33.531
100.55-G	7	1045	30°51.0'	118°26.0'	1000	300°	4	overcast	moderate	15.42	33.558
100.65-G	7	1550	30°31.0'	119°06.5'	1700	310°	3	overcast	moderate	15.63	33.467
103.30-B	23	0935	31°05.0'	116°24.5'	38	320°	1	cloudy	moderate	14.18	33.57
103.35-B	12	0620	30°55.0'	116°45.0'	970	300°	4	drizzle	very rough	15.06	33.51

a) Alternate value, 14.92°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
103.40-B	II-12	0835	30°45.0'	117°05.5'	1000	290°	4	cloudy	very rough	15.26	33.57
103.45-B	12	1125	30°38.0'	117°25.0'	1200	300°	4	partly cloudy	rough	15.60a)	33.54
103.50-B	12	1405	30°30.0'	117°45.5'	1550	320°	5	partly cloudy	very rough	15.80	33.59
103.55-B	12	1650	30°19.0'	118°06.5'	1180	280°	4	partly cloudy	very rough	15.38	33.52
103.60-B	12	1920	30°09.0'	118°25.0'	2000	300°	5	squalls	very rough	15.22	33.51
103.65-B	12	2145	29°59.5'	118°42.0'	1700	320°	3	cloudy	very rough	15.92	33.53
103.70-B	13	0030	29°47.0'	119°03.5'	1750	220°	3	cloudy	very rough	15.99	33.55
103.80-B	13	0510	29°27.0'	119°43.5'	1800	320°	3	overcast	very rough	16.29	33.65
103.90-B	13	0945	29°07.5'	120°23.0'	2100	320°	2	cloudy	very rough	16.49	33.42
107.32-B	23	0450	30°26.0'	116°11.0'	320	320°	4	cloudy	very rough	14.36	33.57
107.35-B	14	1800	30°21.5'	116°22.5'	900	330°	4	sky obscured	rough	14.50	33.57
107.40-B	14	1510	30°12.0'	116°42.0'	1550	330°	4	sky obscured	rough	14.78	33.57
107.45-B	14	1230	30°02.0'	117°03.0'	800	330°	4	sky obscured	rough	15.31	33.62
107.50-B	14	1015	29°51.5'	117°21.5'	1200	320°	5	cloudy	rough	15.26	33.60
107.55-B	14	0740	29°41.5'	117°42.0'	1660	320°	4	sky obscured	moderate	15.84	33.56
107.60-B	14	0455	29°32.0'	118°01.5'	1950	320°	3	sky obscured	moderate	16.01	33.62
107.65-B	14	0235	29°22.0'	118°21.0'	1800	330°	3	cloudy	rough	16.20	33.62

a) Alternate value, 15.96°C.

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
107.70-B	II-13	2350	29°16.0'	118°42.5'	1700	330°	4	cloudy	rough	16.26	33.69
107.80-B	13	1845	28°54.5'	119°21.0'	2000	340°	2	cloudy	moderate	16.21	33.60
107.90-B	13	1350	28°34.5'	120°00.0'	2000	-	1	cloudy	moderate	17.11	33.88
110.32-G	11	0610	29°51.5'	115°48.5'	18	280°	4	clear	very rough	15.00	33.609
110.45-G	10	2115	29°24.0'	116°40.0'	1600	270°	4	cloudy	very rough	15.64	33.674
110.55-G	10	1450	29°04.0'	117°15.0'	2100	240°	2	partly cloudy	rough	15.81	33.604
110.65-G	10	0940	28°47.0'	117°57.5'	1940	240°	4	partly cloudy	very rough	15.88	33.562
113.35-B	15	0225	29°11.5'	115°38.0'	650	300°	5	cloudy	rough	15.16	33.69
113.40-B	15	0510	29°02.0'	115°57.0'	1000	320°	5	cloudy	very rough	15.06	33.70
113.45-B	15	0740	28°53.0'	116°17.5'	1300	320°	5	cloudy	very rough	16.66	34.18
113.50-B	15	1015	28°43.0'	116°36.5'	1900	320°	5	cloudy	very rough	15.70	33.74
113.55-B	15	1255	28°32.5'	116°57.0'	1900	320°	5	cloudy	very rough	15.60	33.60
113.60-B	15	1505	28°23.5'	117°16.5'	2000	330°	5	cloudy	very rough	15.79	33.58
113.65-B	15	1735	28°13.0'	117°35.5'	2000	340°	6	cloudy	very rough	16.78	34.12
113.70-B	15	2010	28°02.5'	117°55.0'	1800	340°	5	cloudy	very rough	16.93	34.07
113.80-B	16	0105	27°42.5'	118°33.5'	2100	340°	5	cloudy	very rough	16.34	33.74
113.90-B	16	0540	27°23.0'	119°12.0'	2000	340°	4	cloudy	very rough	16.36	33.73
117.26-G	13	1240	28°56.0'	114°41.5'	20	240°	3	clear	rough	16.02	33.940
117.30-G	13	1105	28°48.0'	114°56.5'	40	340°	2	clear	rough	16.16	33.947

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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
117.35-G	II-12	2125	28°38.0'	115°16.0'	108	320°	4	partly cloudy	very rough	16.43	33.948
117.40-B	17	1125	28°28.0'	115°35.5'	500	280°	4	squalls	very rough	16.20	33.97
117.45-B	17	0855	28°18.0'	115°56.0'	2100	280°	4	overcast	very rough	16.03	33.99
117.50-B	17	0635	28°09.5'	116°12.5'	2400	320°	4	cloudy	very rough	16.88	34.23
117.55-B	17	0345	28°00.0'	116°36.5'	2000	320°	4	cloudy	very rough	17.14	34.34
117.60-B	17	0030	27°51.0'	116°57.0'	2000	330°	4	cloudy	very rough	15.92	33.70
117.65-B	16	2150	27°40.0'	117°17.0'	2000	340°	4	overcast	very rough	16.00	33.82
117.70-B	16	1915	27°31.0'	117°35.5'	2000	340°	4	sky obscured	very rough	16.42a)	33.95
117.80-B	16	1425	27°11.0'	118°13.0'	2100	330°	4	cloudy	very rough	16.20	33.67
117.90-B	16	0945	26°51.0'	118°51.0'	2200	340°	5	cloudy	very rough	16.51	33.69
118.39-G	11	1900	28°12.0'	115°24.0'	63	280°	5	partly cloudy	high	17.42	34.340
120.25-G	13	1635	28°24.5'	114°16.0'	35	360°	4	partly cloudy	rough	16.11	33.931
120.30-G	14	2125	28°13.5'	114°34.0'	51	310°	5	cloudy	rough	16.18	33.939
120.35-G	15	0145	28°03.0'	114°54.0'	45	300°	5	partly cloudy	rough	16.28	33.940
120.40-G	15	0340	27°56.5'	115°14.0'	23	300°	6	partly cloudy	rough	16.40	33.953
120.55-G	15	1530	27°24.0'	116°12.0'	2100	310°	5	cloudy	rough	16.90	34.082
120.65-G	15	2110	27°03.0'	116°48.0'	2100	350°	4	cloudy	rough	16.60	34.055

a) Alternate value, 16.61°C.

Station	Date	Time GCT	Latitude North	Longitude West	Sounding (fm)	Wind Dir	Wind Force	Weather	Sea	10 Meters T	10 Meters S
123.37-B	II-22	0610	27°24.0'	114°40.0'	44	320°	1	partly cloudy	moderate	14.92	34.07
123.42-B	17	1950	27°14.0'	114°59.0'	940	320°	5	partly cloudy	very rough	16.68	34.18
123.45-B	17	2130	27°09.0'	115°11.0'	2200	320°	5	cloudy	high	17.28	34.14
123.50-B	18	0015	27°00.5'	115°31.0'	1900	330°	5	cloudy	very rough	17.28	34.16
123.55-B	18	0240	26°50.0'	115°55.0'	2000	320°	5	cloudy	very rough	16.73	33.94
123.60-B	18	0445	26°42.0'	116°11.0'	2100	320°	5	partly cloudy	very rough	16.48	33.92
123.65-B	18	0710	26°32.0'	116°29.0'	2100	320°	5	partly cloudy	very rough	16.82	33.96
123.70-B	18	0935	26°22.0'	116°47.0'	2000	320°	4	cloudy	very rough	16.81	33.81
123.80-B	18	1405	26°03.0'	117°22.5'	2000	320°	4	partly cloudy	very rough	16.83	33.82
127.34-B	19	1830	26°55.0'	114°06.5'	44	360°	3	clear	moderate	16.26	34.26
127.40-B	19	1545	26°43.5'	114°29.0'	1600	320°	3	partly cloudy	rough	17.28	34.03
127.45-B	19	1335	26°37.0'	114°46.5'	1800	320°	4	cloudy	rough	17.22	33.99
127.50-B	19	1045	26°27.0'	115°06.0'	2100	320°	4	partly cloudy	very rough	17.28	33.94
127.55-B	19	0810	26°16.0'	115°25.0'	2000	320°	5	cloudy	rough	17.90	34.12
127.60-B	19	0525	26°04.0'	115°46.0'	2000	320°	4	cloudy	rough	17.23	33.96
127.65-B	19	0230	25°51.5'	116°08.0'	2000	340°	3	partly cloudy	rough	17.24	34.07
127.70-B	18	2350	25°42.5'	116°24.0'	2100	340°	3	partly cloudy	rough	17.04	34.05
127.80-B	18	1905	25°22.0'	117°01.5'	2000	360°	2	partly cloudy	rough	17.48	33.98
130.35-G	19	1000	26°17.0'	113°46.5'	275	230°	3	clear	moderate	18.16	34.189

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
130.45-G	II-19	0135	25°56.5'	114°25.0'	2010	320°	3	partly cloudy	very rough	17.97	34.210
130.55-G	18	2010	25°38.0'	115°03.5'	2020	350°	3	partly cloudy	rough	19.26	34.351
133.25-B	20	0515	26°04.5'	112°48.0'	44	320°	3	partly cloudy	rough	17.63	34.22
133.30-B	20	0745	25°54.5'	113°07.5'	105	300°	4	partly cloudy	very rough	17.86	34.24
133.35-B	20	1025	25°44.5'	113°26.5'	550	300°	5	partly cloudy	very rough	17.86	34.12
133.40-B	20	1310	25°35.5'	113°46.5'	1650	300°	4	partly cloudy	very rough	18.16	34.17
133.45-B	20	1535	25°25.0'	114°05.0'	2000	300°	4	cloudy	very rough	18.66	34.25
133.50-B	20	1810	25°13.0'	114°25.5'	2000	320°	5	cloudy	very rough	18.88	34.34
133.55-B	20	2015	25°04.5'	114°43.0'	2100	320°	4	cloudy	very rough	19.08	34.38
133.60-B	20	2230	24°52.0'	115°02.0'	2000	320°	5	cloudy	very rough	19.20	34.32
133.65-B	21	0050	24°46.0'	115°21.5'	2000	320°	5	partly cloudy	very rough	19.52	34.31
133.70-B	21	0310	24°37.0'	115°41.0'	2000	320°	5	cloudy	very rough	19.52	34.37
133.80-B	21	0720	24°15.0'	116°17.0'	2000	340°	5	cloudy	very rough	17.34	33.89
137.35-G	20	1840	25°11.5'	113°05.0'	590	310°	4	partly cloudy	rough	17.86	34.084
137.45-G	20	2350	24°51.0'	113°40.0'	2000	310°	4	partly cloudy	rough	19.68	34.314
137.55-G	21	0545	24°29.0'	114°20.0'	2100	310°	4	partly cloudy	rough	19.35	34.320
140.35-G	22	1930	24°35.5'	112°43.5'	600	340°	2	partly cloudy	moderate	19.60	34.300
140.45-G	22	1445	24°22.5'	113°20.0'	1900	350°	3	cloudy	very rough	19.69	34.291

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m

USCGC PONTCHARTRAIN; October 16, 1962; 2145 GCT; 30°00'N, 140°00'W; sounding, missing; wind, 120°, force 5; weather, cloudy; sea, very rough; wire angle, 69°. a) H-1

4	22.79										
10	22.79										
20	22.78										
24	22.78										
30	22.76										
40	22.20										
50	19.47										
58	18.77										
70	18.02										
80	17.59										
90	16.97										
110	16.57										
126	16.06										
162	14.30										
203	12.60										
256	10.60										

USCGC PONTCHARTRAIN; October 17, 1962; 1937 GCT; 30°03'N, 139°57'W; sounding, 2200 fm; wind, 100°, force 4; weather, cloudy; sea, rough; wire angle, 18°. H-2

2	22.58	35.18	4.42	372	0	(22.58)	(35.18)	(4.42)	(24.21)	(372)	(0.00)
11	22.58	35.18	4.45	372	10	22.58	35.18	4.45	24.21	372	0.04
30	22.58	35.18	4.47	372	20	22.58	35.18	4.46	24.21	372	0.07
59	19.22	34.79	5.12	313	30	22.58	35.18	4.47	24.21	372	0.11
68	18.38	34.71	5.06	299	50	22.58	35.18	4.47	24.21	372	0.19
83	17.70	34.72	4.98	282	75	18.04	34.72	5.01	25.07	290	0.27
97	17.18	34.63	5.05	277	100	17.09	34.63	5.03	25.23	275	0.34
110	16.80	34.62	4.91	269	125	16.28	34.56	4.86	25.36	262	0.41
133	15.94	34.51	4.84	258	150	14.83	34.38	4.76	25.55	244	0.47
152	14.68	34.36	4.74	243	200	12.03	34.10	4.68	25.90	211	0.59
180	12.80	34.13	4.68	223	250	10.78	34.09	4.62	26.13	190	0.69
208	11.76	34.09	4.68	207	300	9.92	34.10	4.46	26.28	175	0.79
236	11.02	34.08	4.64	194	400	7.90	34.02	3.75	26.54	150	0.95
284	10.20	34.11	4.54	178	500	6.15	33.99	2.50	26.76	130	1.10
339	9.12	34.06	4.21	165	600	(4.98)	(34.07)	(1.24)	(26.96)	(110)	(1.23)
421	7.49	34.01	3.56	145							
507	6.06	33.99	2.41	129							
593	5.05	34.06	1.31	112							

USCGC PONTCHARTRAIN; October 18, 1962; 2013 GCT; 30°05'N, 139°57'W; sounding, 2400 fm; wind, 060°, force 3; weather, partly cloudy; sea, rough; wire angle, 38°. H-3

2	22.61	35.25	4.52	368	0	(22.61)	(35.25)	(4.52)	(24.25)	(368)	(0.00)
10	22.60	35.24	4.54	368	10	22.60	35.24	4.54	24.25	368	0.04
25	22.58	35.24	4.52	368	20	22.59	35.24	4.53	24.25	368	0.07
32	22.57	35.24	4.52	367	30	22.57	35.24	4.52	24.26	367	0.11
44	22.58	35.29	4.45	364	50	22.58	35.29	4.45	24.29	364	0.18
55	21.34	35.12	4.86	343	75	18.38	34.77	5.14	25.02	295	0.27
75	18.38	34.77	5.14	295	100	17.17	34.70	4.90	25.26	272	0.34
90	17.48	34.70	5.00	279	125	16.09	34.58	4.71	25.42	256	0.41
105	17.00	34.70	4.84	268	150	14.60	34.38	4.60	25.60	240	0.47
121	16.31	34.61	4.74	259	200	11.68	34.07	4.75	25.95	207	0.58
144	14.92	34.42	4.59	243	250	10.89	34.14	4.62	26.15	188	0.68
172	13.17	34.21	4.68	224	300	10.10	34.10	4.55	26.25	178	0.78
196	11.78	34.06	4.76	209	400	8.21	34.02		26.49	155	0.95
234	11.14	34.16	4.65	191	500	(6.25)	(33.97)		(26.73)	(132)	(1.10)
278	10.46	34.11	4.59	183							
346	9.30	34.08	4.39	166							
418	7.84	34.01	-	150							
494	6.36	33.97	-	134							

a) Shakedown station.

USCG STATION NOVEMBER	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
H-4	USCGC PONTCHARTRAIN; October 19, 1962; 1943 GCT; 30°02'N, 140°00'W; sounding, 2400 fm; wind, 070°, force 4; weather, partly cloudy; sea, moderate; wire angle, 44°.											
	2	22.46	35.20	4.68	367	0	(22.46)	(35.20)	(4.68)	(24.26)	(367)	(0.00)
	10	22.44	35.20	4.64	367	10	22.44	35.20	4.64	24.27	367	0.04
	23	22.44	35.20	4.61	367	20	22.44	35.20	4.61	24.27	367	0.07
	37	22.45	35.22	4.62	365	30	22.44	35.20	4.61	24.27	367	0.11
	44	22.20	35.23	4.65	358	50	20.96	35.05	4.98	24.56	338	0.18
	51	20.79	35.03	5.01	335	75	18.54	34.78	5.19	24.99	298	0.26
	69	18.97	34.82	5.20	305	100	16.97	34.65	5.07	25.27	271	0.33
	83	17.95	34.73	5.14	287	125	16.55	34.66	4.79	25.38	261	0.40
	96	17.00	34.61	5.10	274	150	14.56	34.36	4.70	25.59	240	0.46
	110	16.94	34.74	4.94	264	200	12.08	34.09	4.80	25.89	212	0.58
	131	16.34	34.61	4.76	260	250	10.95	34.14	4.71	26.14	189	0.68
	155	14.10	34.30	4.69	235	300	10.16	34.15	4.62	26.28	175	0.78
	178	12.97	34.17	4.76	223	400	8.27	34.02	3.93	26.49	156	0.95
	213	11.65	34.06	4.81	207	500	(6.04)	(33.97)		(26.76)	(130)	(1.10)
	254	10.86	34.14	4.70	187							
	319	9.84	34.15	4.54	170							
	389	8.50	34.04	4.03	157							
	463	6.86	33.98	3.10	139							
H-5	USCGC PONTCHARTRAIN; October 20, 1962; 2000 GCT; 30°00'N, 139°54'W; sounding, 2420 fm; wind, 100°, force 4; weather, drizzle; sea, moderate; wire angle, 40°.											
	0	22.27	35.18	4.51	363	0	22.27	35.18	4.51	24.30	363	0.00
	8	22.27	35.18	4.60	363	10	22.27	35.18	4.61	24.30	363	0.04
	24	22.32	35.21	4.63	363	20	22.30	35.20	4.62	24.31	363	0.07
	32	22.36	35.26	4.60	360	30	22.35	35.25	4.61	24.33	361	0.11
	43	22.41	35.31	4.57	358	50	22.40	35.31	4.57	24.36	358	0.18
	54	21.56	35.11	4.76	350	75	18.15	34.72	5.26	25.04	293	0.26
	73	18.34	34.74	5.27	296	100	16.96	34.59	5.08	25.23	275	0.33
	87	17.37	34.62	5.18	282	125	16.39	34.56	4.94	25.34	264	0.40
	103	16.85	34.59	5.05	272	150	14.89	34.39	4.75	25.54	245	0.47
	117	16.69	34.58	5.01	270	200	12.02	34.13	4.70	25.93	208	0.58
	140	15.61	34.48	4.81	253	250	10.67	34.12	4.68	26.17	185	0.68
	166	13.67	34.24	4.69	231	300	9.77	34.11	4.47	26.32	172	0.78
	188	12.52	34.16	4.69	215	400	7.76	34.02	3.73	26.56	148	0.94
	227	11.18	34.11	4.75	195							
	268	10.32	34.12	4.60	180							
	335	9.14	34.10	4.31	162							
	405	7.65	34.02	3.68	147							
	480	6.12	34.30u	2.28								
H-6	USCGC PONTCHARTRAIN; October 21, 1962; 1950 GCT; 30°09'N, 139°55'W; sounding, missing; wind, 090°, force 4; weather, cloudy; sea, missing; wire angle, 33°.											
	1	22.56	35.36	4.48	358	0	(22.56)	(35.36)	(4.48)	(24.35)	(358)	(0.00)
	8	22.53	35.35	4.51	358	10	22.53	35.35	4.51	24.35	358	0.04
	34	22.52	35.35	4.53	358	20	22.52	35.35	4.52	24.36	358	0.07
	50	22.46	35.34	4.55	357	30	22.52	35.35	4.53	24.36	358	0.11
	62	19.72	34.92	5.02	316	50	22.46	35.34	4.55	24.37	357	0.18
	70	18.68	34.80	5.07	300	75	18.28	34.77	5.08	25.05	292	0.26
	78	18.04	34.75	5.08	288	100	17.05	34.63	4.99	25.24	274	0.33
	95	17.20	34.64	5.00	277	125	16.16	34.52	4.93	25.36	262	0.40
	110	16.73	34.60	4.96	269	150	14.96	34.38	4.73	25.52	247	0.47
	126	16.12	34.52	4.93	261	200	11.72	34.07	4.75	25.94	207	0.58
	150	14.96	34.38	4.73	247	250	10.74	34.12	4.63	26.16	187	0.68
	178	12.45	34.10	4.68	218	300	9.83	34.12	4.50	26.31	172	0.77
	202	11.66	34.07	4.75	206	400	7.92	34.03	3.80	26.55	150	0.94
	244	10.84	34.11	4.65	189	500	6.01	34.01	2.20	26.79	126	1.09
	290	10.00	34.12	4.53	174							
	362	8.76	34.07	4.19	159							
	437	7.10	34.00	3.34	141							
	515	5.78	34.01	1.96	124							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED			USCG STATION NOVEMBER
Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m	
USCGC PONTCHARTRAIN; October 22, 1962; 1938 GCT; 30°00'N, 139°55'W; sounding, 2500 fm; wind, 150°, force 3; weather, cloudy; sea, moderate; wire angle, 11°.												H-7
1	22.46	35.21	4.48	366	0	(22.46)	(35.21)	(4.48)	(24.27)	(366)	(0.00)	
10	22.43	35.20	4.54	366	10	22.43	35.20	4.54	24.27	366	0.04	
30	22.40	35.21	4.53	365	20	22.42	35.21	4.54	24.28	365	0.07	
59	22.48	35.35	4.50	357	30	22.40	35.21	4.53	24.28	365	0.11	
69	19.93	34.92	4.98	322	50	22.60	35.32	4.52	24.31	362	0.18	
84	18.51	34.78	5.06	297	75	19.32	34.86	5.04	24.85	311	0.27	
99	17.60	34.74	5.00	279	100	17.57	34.74	5.00	25.20	278	0.34	
114	16.96	34.65	4.90	271	125	16.67	34.64	4.84	25.33	265	0.41	
136	16.34	34.61	4.78	260	150	15.00	34.42	4.69	25.54	245	0.48	
157	14.30	34.32	4.64	238								
185	12.69	34.15	4.65	219								
USCGC PONTCHARTRAIN; October 23, 1962; 1957 GCT; 29°58'N, 139°58'W; sounding, 2290 fm; wind, 150°, force 4; weather, drizzle; sea, missing; wire angle, 33°.												H-8
2	22.34	35.26	4.50	360	0	(22.34)	(35.26)	(4.50)	(24.34)	(360)	(0.00)	
10	22.36	35.27	4.55	359	10	22.36	35.27	4.55	24.34	359	0.04	
27	22.42	35.35	4.55	355	20	22.40	35.32	4.55	24.37	357	0.07	
52	22.41	35.35	4.54	355	30	22.42	35.35	4.55	24.38	355	0.11	
61	20.56	35.08	4.84	326	50	22.41	35.35	4.54	24.39	355	0.18	
73	18.99	34.86	5.07	303	75	18.78	34.84	5.07	24.97	299	0.26	
86	18.06	34.80	5.02	285	100	17.69	34.79	4.97	25.21	277	0.33	
98	17.75	34.79	4.98	278	125	16.69	34.65	4.81	25.34	265	0.40	
119	16.96	34.68	4.85	268	150	15.29	34.47	4.70	25.52	247	0.47	
135	16.22	34.60	4.77	258	200	11.99	34.10	4.68	25.91	210	0.58	
160	14.52	34.36	4.66	239	250	10.89	34.12	4.66	26.13	189	0.69	
184	12.60	34.13	4.64	219	300	9.81	34.09	4.47	26.29	174	0.78	
210	11.68	34.08	4.70	206	400	7.72	34.03	3.59	26.57	147	0.95	
252	10.84	34.12	4.65	188	500	5.93	34.02	2.11	26.81	125	1.09	
300	9.81	34.09	4.47	174								
374	8.25	34.05	3.89	153								
450	6.78	33.99	2.95	137								
531	5.46	34.03	1.61	119								
USCGC PONTCHARTRAIN; October 25, 1962; 2012 GCT; 29°55'N, 139°58'W; sounding, 2300 fm; wind, 200°, force 2; weather, cloudy; sea, moderate; wire angle, 24°.												H-9
1	22.32	35.18	4.55	365	0	(22.32)	(35.18)	(4.55)	(24.28)	(365)	(0.00)	
11	22.25	35.20	4.57	362	10	22.25	35.20	4.57	24.32	362	0.04	
27	22.24	35.21	4.59	361	20	22.24	35.20	4.58	24.32	361	0.07	
56	21.63	35.12	4.73	351	30	22.24	35.21	4.60	24.33	361	0.11	
65	20.00	34.84	4.99	329	50	22.18	35.21	4.62	24.35	359	0.18	
80	18.48	34.65	5.16	306	75	18.93	34.70	5.12	24.83	313	0.27	
93	17.56	34.63	5.16	286	100	17.35	34.61	5.06	25.15	282	0.34	
106	17.15	34.60	4.99	279	125	16.19	34.45	4.98	25.30	268	0.41	
130	15.90	34.41	4.96	265	150	14.67	34.24	4.79	25.48	251	0.48	
149	14.72	34.25	4.80	252	200	11.99	34.06	4.70	25.88	213	0.59	
175	12.86	34.06	4.70	229	250	10.93	34.08	4.74	26.09	193	0.70	
204	11.88	34.06	4.70	211	300	9.98	34.11	4.52	26.28	175	0.79	
235	11.26	34.07	4.79	199	400	7.96	34.01	3.82	26.52	152	0.96	
280	10.28	34.11	4.59	180	500	5.90	33.99	2.01	26.79	127	1.11	
333	9.45	34.09	4.39	168								
414	7.62	34.00	3.68	148								
496	5.96	33.99	2.10	127								
578	5.14	34.08	1.12	111								

USCG STATION NOVEMBER	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
H-10	USCGC PONTCHARTRAIN; October 26, 1962; 1938 GCT; 29°58'N, 140°02'W; sounding, missing; wind, 190°, force 4; weather, partly cloudy; sea, rough; wire angle, 27°.											
	3	22.54	35.33	4.39	360	0	(22.54)	(35.33)	(4.39)	(24.34)	(360)	(0.00)
	13	22.50	35.33	4.48	359	10	22.52	35.33	4.46	24.34	359	0.04
	31	22.41	35.32	4.46	357	20	22.47	35.33	4.47	24.36	358	0.07
	61	22.20	35.30	4.48	353	30	22.42	35.32	4.46	24.36	357	0.11
	71	19.64	34.97	4.90	311	50	22.30	35.32	4.46	24.40	354	0.18
	85	18.42	34.83	4.93	291	75	19.12	34.90	4.92	24.93	303	0.26
	99	17.86	34.80	4.88	280	100	17.81	34.79	4.87	25.18	280	0.34
	113	17.30	34.75	4.79	271	125	16.68	34.67	4.68	25.36	263	0.40
	136	16.15	34.60	4.60	256	150	15.53	34.54	4.53	25.52	247	0.47
	157	15.19	34.51	4.52	242	200	12.06	34.11	4.58	25.91	210	0.59
	185	12.57	34.13	4.59	218	250	11.12	34.11	4.60	26.08	194	0.69
	215	11.70	34.10	4.55	205	300	10.09	34.11	4.46	26.26	177	0.79
	243	11.25	34.11	4.61	196	400	7.68	34.01	3.53	26.56	148	0.95
	290	10.34	34.12	4.52	180	500	5.98	34.00	2.10	26.79	127	1.10
	342	8.90	34.05	4.09	163	600	(5.08)	(34.08)	(1.00)	(26.96)	(111)	(1.22)
	425	7.18	34.00	3.27	142							
	506	5.90	34.00	2.02	126							
	591	5.15	34.08	1.08	111							
H-11	USCGC PONTCHARTRAIN; October 27, 1962; 1949 GCT; 30°00'N, 140°01'W; sounding, missing; wind, 190°, force 5; weather, cloudy; sea, very rough; wire angle, 38°.											
	1	22.04	34.93	4.56	375	0	(22.04)	(34.93)	(4.56)	(24.17)	(375)	(0.00)
	9	22.04	34.94	4.54	375	10	22.04	34.94	4.54	24.18	375	0.04
	26	22.04	34.96	4.50	373	20	22.01	34.96	4.52	24.20	372	0.07
	52	21.48	35.09	4.71	349	30	22.15	35.00	4.50	24.20	373	0.11
	60	19.36	34.68	4.99	325	50	22.00	35.09	4.55	24.31	363	0.19
	72	18.63	34.77	5.01	301	75	18.51	34.76	5.01	24.98	299	0.27
	85	18.10	34.73	5.02	291	100	17.32	34.65	4.93	25.19	279	0.34
	98	17.35	34.65	4.94	279	125	16.88	34.63	4.81	25.28	270	0.41
	119	17.09	34.64	4.86	274	150	15.54	34.46	4.72	25.46	253	0.48
	136	16.37	34.59	4.77	262	200	12.35	34.08	4.63	25.83	218	0.60
	160	14.86	34.36	4.70	246	250	11.12	34.10	4.70	26.07	195	0.70
	185	12.94	34.11	4.61	227	300	9.88	34.11	4.44	26.30	173	0.80
	210	12.01	34.07	4.66	213	400	7.82	34.02	3.70	26.55	149	0.97
	251	11.09	34.10	4.70	194	500	5.85	34.00	2.14	26.80	125	1.11
	297	9.93	34.11	4.46	174							
	369	8.54	34.05	4.02	157							
	442	6.81	33.98	3.16	139							
	520	5.54	34.01	1.78	121							
H-12	USCGC PONTCHARTRAIN; October 29, 1962; 1945 GCT; 30°12'N, 140°03'W; sounding, 2450 fm; wind, 080°, force 2; weather, cloudy; sea, high; wire angle, 08°.											
	1	22.35	35.35	4.56	353	0	(22.35)	(35.35)	(4.56)	(24.40)	(353)	(0.00)
	11	22.36	35.36	4.57	353	10	22.36	35.36	4.57	24.41	353	0.04
	31	22.34	35.35	4.58	353	20	22.35	35.35	4.58	24.40	353	0.07
	60	22.22	35.32	4.60	352	30	22.34	35.35	4.58	24.41	353	0.11
	70	18.89	34.65	5.16	316	50	22.29	35.33	4.59	24.41	353	0.18
	85	17.72	34.51	5.23	298	75	18.47	34.60	5.20	24.87	309	0.26
	100	16.58	34.45	5.17	277	100	16.58	34.45	5.17	25.21	277	0.33
	114	16.10	34.40	5.14	270	125	15.76	34.36	5.10	25.33	265	0.40
	139	15.33	34.30	5.02	261	150	14.97	34.26	4.97	25.43	256	0.47
	157	14.70	34.24	4.92	252	200	12.35	34.00	4.74	25.77	224	0.59
	188	13.02	34.06	4.74	232	250	10.47	33.96	4.60	26.08	194	0.70
	216	11.54	33.95	4.73	213	300	9.73	34.05	4.40	26.28	175	0.79
	246	10.54	33.95	4.61	196	400	7.77	34.01	3.75	26.55	149	0.96
	295	9.82	34.04	4.43	178	500	5.95	33.99	2.40	26.78	127	1.11
	348	8.87	34.05	4.15	162	600	(5.05)	(34.09)	(0.97)	(26.97)	(109)	(1.23)
	432	7.10	33.98	3.36	142							
	514	5.76	33.99	2.18	125							
	599	5.06	34.09	0.99	110							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m	
USCGC PONTCHARTRAIN; October 31, 1962; 1927 GCT; 30°01'N, 139°57'W; sounding, 2100 fm; wind, 100°, force 2; weather, cloudy; sea, rough; wire angle, 14°.												H-13
0	22.26	35.31	4.54	354	0	22.26	35.31	4.54	24.40	354	0.00	
10	22.28	35.31	4.59	354	10	22.28	35.31	4.59	24.39	354	0.04	
45	22.26	35.31	4.58	354	20	22.28	35.31	4.59	24.39	354	0.07	
75	19.24	34.90	5.11	306	30	22.27	35.31	4.59	24.40	354	0.11	
94	18.24	34.79	5.03	290	50	22.26	35.31	4.59	24.40	354	0.18	
107	17.07	34.65	4.97	273	75	19.24	34.90	5.11	24.90	306	0.26	
142	-	34.50	4.86		100	17.75	34.73	5.00	25.15	283	0.33	
161	14.84	34.38	4.79	245	125	16.28	34.56	4.90	25.36	262	0.40	
190	12.76	34.15	4.73	220	150	15.39	34.45	4.83	25.48	251	0.47	
213	11.78	34.09	4.73	207	200	12.33	34.12	4.73	25.86	215	0.59	
USCGC PONTCHARTRAIN; November 1, 1962; 1939 GCT; 30°11'N, 140°09'W; sounding, 2500 fm; wind, 150°, force 2; weather, cloudy; sea, rough; wire angle, 21°.												H-14
1	22.41	35.36	4.47	354	0	(22.41)	(35.36)	(4.47)	(24.40)	(354)	(0.00)	
11	22.40	35.37	4.50	353	10	22.40	35.37	4.50	24.41	353	0.04	
30	22.38	35.36	4.50	353	20	22.39	35.36	4.50	24.40	354	0.07	
58	22.38	35.36	4.51	353	30	22.38	35.36	4.50	24.40	353	0.11	
67	22.36	35.35	4.45	354	50	22.38	35.36	4.50	24.40	353	0.18	
81	19.16	34.88	5.01	305	75	21.20	35.16	4.65	24.58	337	0.26	
95	18.23	34.79	5.00	290	100	18.01	34.77	4.97	25.11	286	0.34	
110	-	34.75	4.92		125	16.99	34.68	4.80	25.29	269	0.41	
132	16.70	34.65	4.77	265	150	15.80	34.58	4.62	25.49	250	0.48	
152	15.69	34.57	4.61	249	200	12.50	34.13	4.61	25.84	217	0.60	
180	13.72	34.27	4.62	230	250	11.06	34.09	4.62	26.08	194	0.70	
208	12.13	34.09	4.61	213	300	10.23	34.11	4.54	26.24	179	0.80	
237	11.27	34.08	4.63	199	400	8.06	34.02	3.73	26.52	153	0.97	
285	10.52	34.11	4.61	184	500	6.14	33.99	2.23	26.76	130	1.12	
338	9.43	34.09	4.34	168	600	(5.10)	(34.07)		(26.95)	(112)	(1.25)	
420	7.64	34.00	3.54	148								
503	6.09	33.99	2.21	129								
586	5.24	34.06	1.18	114								
USCGC PONTCHARTRAIN; November 2, 1962; 1928 GCT; 29°56'N, 140°04'W; sounding, missing; wind, 200°, force 4; weather, cloudy; sea, rough; wire angle, 33°.												H-15
1	22.33	35.36	4.43	352	0	(22.33)	(35.36)	(4.43)	(24.42)	(352)	(0.00)	
9	22.35	35.36	4.48	353	10	22.35	35.36	4.48	24.41	353	0.04	
25	22.34	35.36	4.48	352	20	22.34	35.36	4.48	24.41	352	0.07	
51	22.32	35.36	4.48	352	30	22.33	35.36	4.48	24.42	352	0.11	
59	22.32	35.36	4.44	352	50	22.32	35.36	4.48	24.42	352	0.18	
71	20.75	35.10	4.78	329	75	19.47	34.94	5.00	24.87	309	0.26	
83	19.01	34.89	5.05	301	100	18.21	34.83	4.95	25.11	286	0.33	
95	-	34.81	4.98		125	16.91	34.67	4.82	25.30	268	0.41	
115	17.48	34.76	4.86	274	150	16.25	34.62	4.62	25.42	257	0.47	
130	16.70	34.64	4.79	265	200	12.81	34.16	4.58	25.80	221	0.59	
154	16.14	34.61	4.58	255	250	11.23	34.10	4.59	26.05	197	0.70	
178	14.10	34.32	4.51	234	300	10.22	34.11	4.51	26.24	179	0.80	
201	12.78	34.16	4.58	220	400	8.21	34.05	3.79	26.52	152	0.97	
242	11.42	34.10	4.59	200	500	(6.21)	(33.98)	(2.43)	(26.74)	(131)	(1.12)	
286	10.48	34.11	4.55	183								
354	9.22	34.08	4.26	165								
425	7.66	34.03	3.50	146								
498	6.26	33.98	2.47	132								

USCG	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
STATION NOVEMBER	Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
H-16	USCGC PONTCHARTRAIN; November 3, 1962; 1934 GCT; 30°00'N, 140°00'W; sounding, missing; wind, 180°, force 1; weather, cloudy; sea, rough; wire angle, 20°.											
	1	22.46	35.40	4.45	353	0	(22.46)	(35.40)	(4.45)	(24.41)	(353)	(0.00)
	10	22.45	35.41	4.48	352	10	22.45	35.41	4.48	24.42	352	0.04
	29	22.44	35.42	4.50	351	20	22.44	35.41	4.49	24.42	351	0.07
	58	22.36	35.40	4.49	350	30	22.44	35.42	4.50	24.43	351	0.11
	66	19.42	34.94	4.96	307	50	22.40	35.41	4.49	24.44	350	0.18
	80	18.86	35.01	4.71	289	75	19.06	35.00	4.77	25.02	294	0.26
	93	18.09	34.90	-	278	100	17.79	34.87	4.73	25.24	274	0.33
	107	-	34.85	4.74		125	16.68	34.68	4.70	25.36	262	0.40
	130	16.44	34.64	4.68	260	150	15.59	34.57	4.52	25.53	246	0.46
	148	15.70	34.58	4.53	248	200	12.10	34.13	4.58	25.91	210	0.58
	177	13.54	34.27	4.52	227							
	204	11.9 a)	34.12	4.59	207							
	230	11.40	34.10	4.60	199							

a) Temperature inferred from pressure thermometer and wire depth.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
USCGC GRESHAM; February 17, 1963; 1934 GCT; 29°59'N, 140°05'W; sounding, 2000+ fm; wind, 150°, force 2; weather, partly cloudy; sea, moderate; wire angle, 14°.											1
0	18.12	34.71	5.4	293	0	18.12	34.71	5.4	25.04	293	0.00
11	18.10	34.68	5.5	295	10	18.10	34.68	5.5	25.02	295	0.03
45	17.91	34.70	5.4	289	20	18.00	34.69	5.4	25.05	292	0.06
74	17.92	34.72	5.4	288	30	17.93	34.69	5.4	25.07	290	0.09
93	17.91	34.72	5.4	287	50	17.91	34.70	5.4	25.08	289	0.15
108	17.87	34.70	5.3	288	75	17.92	34.72	5.4	25.10	288	0.22
121	17.60	34.66	5.4	284	100	17.90	34.72	5.4	25.10	287	0.29
140	15.65	34.40	5.4	260	125	17.10	34.59	5.4	25.19	278	0.36
159	14.24	34.21	5.4	245	150	15.58	34.39	5.4	25.39	259	0.43
189	11.82	-	5.4		200	11.53	33.98	5.3	25.91	211	0.55
212	11.26	33.99	5.3	205	250	10.40	34.03	5.3	26.15	188	0.65
235	10.76	34.01	5.3	195	300	9.40	34.06	4.9	26.34	169	0.74
269	9.94	34.06	-	178	400	7.39	34.01	3.9	26.61	144	0.91
306	9.30	34.06	4.8	168	500	5.77	34.01	2.2	26.82	124	1.05
356	8.39	34.03	4.4	157	600	(5.00)	(34.10)	(1.1)	(26.98)	(108)	(1.17)
423	6.91	34.00	3.6	138							
507	5.68	34.01	2.2	123							
593	5.04	34.09	1.2	109							
USCGC GRESHAM; February 18, 1963; 1951 GCT; 30°01'N, 140°00'W; sounding, 2000+ fm; wind, 190°, force 5; weather, cloudy; sea, very rough; wire angle, 15°.											2
1	17.93	34.65	5.4	293	0	(17.93)	(34.65)	(5.4)	(25.04)	(293)	(0.00)
11	17.95	34.66	5.4	293	10	17.95	34.65	5.4	25.04	293	0.03
49	17.90	34.73u	5.4		20	17.94	34.65	5.4	25.04	293	0.06
82	17.90	34.71	5.4	288	30	17.92	34.66	5.4	25.05	292	0.09
101	17.85	34.70	-	287	50	17.90	34.68	5.4	25.07	290	0.15
117	17.72	34.68	5.4	286	75	17.90	34.71	5.4	25.09	288	0.22
133	15.75	34.40	5.4	262	100	17.85	34.70	5.4	25.10	287	0.29
153	14.97	34.35	5.3	249	125	17.59	34.66	5.4	25.13	284	0.36
173	13.28	34.12	5.3	232	150	15.10	34.36	5.3	25.48	251	0.43
200	11.81	-	5.5		200	11.81	33.98	5.5	25.85	216	0.55
228	10.71	33.97	5.3	197	250	10.29	34.04	5.1	26.17	185	0.65
257	10.16	34.06	5.1	182	300	9.45	34.07	4.9	26.34	169	0.75
285	9.64	34.07	5.0	172	400	7.70	34.01	4.0	26.56	148	0.91
327	9.09	34.07	4.8	164	500	(5.85)	(33.99)		(26.80)	(126)	(1.05)
381	8.08	34.03	4.3	152							
463	6.44	33.98	3.1	134							
USCGC GRESHAM; February 20, 1963; 0013 GCT; 30°06'N, 140°08'W; sounding, 2000+ fm; wind, direction missing, force 1; weather, partly cloudy; sea, rough; wire angle, 05°.											3
0	18.80	34.71	5.4	309	0	18.80	34.71	5.4	24.87	309	0.00
10	17.99	34.70	5.4	291	10	17.99	34.70	5.4	25.06	291	0.03
45	17.91	34.71	5.5	288	20	17.97	34.70	5.5	25.07	290	0.06
75	17.86	34.72	5.3	286	30	17.95	34.71	5.5	25.08	289	0.09
96	17.89	34.72	5.4	287	50	17.91	34.71	5.5	25.09	288	0.15
110	17.85	34.72	5.3	286	75	17.86	34.72	5.4	25.11	286	0.22
124	16.42	34.50	5.5	269	100	17.89	34.72	5.5	25.10	287	0.29
144	14.64	34.28	5.3	248	125	16.34	34.49	5.5	25.30	268	0.36
163	12.92	34.10	5.3	227	150	14.08	34.22	5.3	25.59	241	0.43
193	11.05	33.94	5.2	205	200	10.95	33.95	5.2	25.99	203	0.54
217	10.74	34.002	5.3	195	250	10.10	34.04	5.1	26.21	182	0.64
241	10.22	34.029	5.2	185	300	9.37	34.07	4.8	26.35	168	0.73
275	9.78	34.071	5.0	175	400	7.38	34.00	3.9	26.60	145	0.89
315	9.09	34.071	4.7	164	500	5.72	34.00	2.2	26.82	124	1.03
364	8.21	34.034	4.4	154	600	4.96	34.10	1.0	26.99	108	1.15
432	6.70	33.980	3.4	137							
518	5.50	34.015	1.9	120							
601	4.95	34.106	1.0	107							

USCG STATION NOVEMBER	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
4	USCGC GRESHAM; February 21, 1963; 0104 GCT; 30°01'N, 140°00'W; sounding, 2000+ fm; wind, direction missing, force 1; weather, partly cloudy; sea, rough; wire angle, 04°.											
	1	18.40	34.704	5.4	300	0	(18.40)	(34.70)	(5.4)	(24.96)	(300)	(0.00)
	10	18.10	34.700	5.6	293	10	18.10	34.70	5.6	25.04	293	0.03
	45	18.03	34.704	5.5	291	20	18.08	34.70	5.6	25.04	293	0.06
	76	18.00	34.705	5.5	290	30	18.06	34.70	5.6	25.05	292	0.09
	95	18.00	34.706	5.5	290	50	18.02	34.71	5.5	25.06	291	0.15
	111	17.98	34.706	5.4	290	75	18.01	34.71	5.5	25.07	290	0.22
	123	17.88	34.694	5.5	288	100	18.00	34.71	5.5	25.07	290	0.29
	144	15.93	34.406	5.5	266	125	17.86	34.69	5.5	25.09	288	0.37
	163	14.46	34.238	5.4	247	150	15.49	34.36	5.4	25.39	260	0.44
	193	11.85	33.972	5.4	217	200	11.60	33.97	5.3	25.88	213	0.56
	217	11.06	33.988	5.3	202	250	10.36	34.03	5.4	26.15	187	0.66
	242	10.46	34.012	5.4	190	300	9.68	34.09	5.1	26.32	172	0.75
	276	10.08	34.094	5.3	178							
	317	9.34	34.083	4.9	167							
5	USCGC GRESHAM; February 21, 1963; 1910 GCT; 29°55'N, 139°55'W; sounding, 2000+ fm; wind, 170°, force 3; weather, partly cloudy; sea, very rough; wire angle, 13°.											
	1	18.08	34.689	5.5	293	0	(18.08)	(34.69)	(5.5)	(25.03)	(293)	(0.00)
	11	18.05	34.691	5.5	293	10	18.05	34.69	5.5	25.04	293	0.03
	44	17.98	34.705	5.5	290	20	18.02	34.69	5.5	25.05	292	0.06
	74	17.96	34.707	5.5	289	30	18.00	34.70	5.5	25.06	291	0.09
	93	17.94	34.718	5.4	288	50	17.96	34.71	5.5	25.08	289	0.15
	108	17.96	34.720	5.5	288	75	17.95	34.71	5.4	25.08	289	0.22
	121	17.88	34.717	5.5	287	100	17.95	34.72	5.4	25.09	288	0.29
	140	16.82	34.564	5.4	274	125	17.80	34.71	5.5	25.12	285	0.36
	160	14.88	34.305	5.5	251	150	15.95	34.44	5.4	25.35	264	0.43
	189	12.76	34.089	5.3	225	200	12.72	34.09	5.3	25.76	224	0.56
	212	11.28	33.962	5.5	208	250	10.52	34.05	5.3	26.14	188	0.66
	237	10.72	34.017	5.4	194	300	9.70	34.09	5.1	26.31	172	0.76
	270	10.22	34.089	5.3	180	400	7.80	34.02	4.2	26.56	149	0.92
	309	9.56	34.089	5.0	170	500	5.99	33.99	2.6	26.78	128	1.07
	358	8.71	34.059	4.7	159	600	(5.06)	(34.08)	(1.1)	(26.96)	(110)	(1.19)
	425	7.26	34.000	3.9	143							
	508	5.86	33.996	2.4	126							
	594	5.10	34.074	1.2	111							
6	USCGC GRESHAM; February 22, 1963; 1937, 2007 GCT; 30°01'N, 139°52'W; sounding, 2000+ fm; wind, 150°, force 3; weather, overcast; sea, rough; wire angle, 13°, 18°.											
	0	18.18	34.714	5.4	294	0	18.18	34.71	5.4	25.02	294	0.00
	10	18.17	34.721	5.4	293	10	18.17	34.72	5.4	25.03	293	0.03
	44	17.94	34.716	5.4	288	20	18.06	34.72	5.4	25.06	291	0.06
	72	17.93	34.717	5.5	288	30	17.97	34.72	5.4	25.08	289	0.09
	93	17.91	34.739	5.3	286	50	17.94	34.72	5.4	25.09	288	0.15
	107	17.94	34.728	5.4	287	75	17.93	34.73	5.4	25.10	287	0.22
	121	17.90	34.718	5.4	287	100	17.93	34.73	5.4	25.10	287	0.29
	140	17.56	34.665	5.4	283	125	17.87	34.71	5.4	25.10	287	0.36
						150	16.06	34.44	5.4	25.32	266	0.43
	158	14.28	34.207	5.4	246	200	11.43	33.99	5.3	25.93	208	0.55
	185	12.16	33.997	5.4	221							
	210	10.98	33.988	5.3	200							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

USCGC GRESHAM; February 23, 1963; 1919 GCT; 30°05'N, 139°54'W; sounding, 2000+ fm; wind, 200°, force 3; weather, cloudy; sea, very rough; wire angle, 22°. 7

1	18.28	34.720	5.5	296	0	(18.28)	(34.72)	(5.5)	(25.01)	(296)	(0.00)
11	18.28	34.726	5.5	296	10	18.28	34.72	5.5	25.01	296	0.03
43	18.04	34.711	5.5	291	20	18.25	34.72	5.5	25.01	295	0.06
70	18.02	34.711	5.4	290	30	18.16	34.72	5.5	25.04	293	0.09
89	17.99	34.723	5.3	289	50	18.03	34.71	5.5	25.06	291	0.15
103	17.97	34.715	5.4	289	75	18.01	34.71	5.4	25.07	290	0.22
115	17.93	34.717	5.4	288	100	17.98	34.72	5.4	25.08	289	0.29
133	17.42	34.647	5.4	281	125	17.79	34.70	5.4	25.11	286	0.37
150	15.74	34.430	5.4	260	150	15.74	34.43	5.4	25.39	260	0.44
178	13.25	34.142	5.4	230	200	11.90	34.03	5.3	25.87	213	0.56
200	11.90	34.026	5.3	214	250	10.25	34.02	5.2	26.16	186	0.66
223	10.80	33.967	5.2	199	300	9.42	34.09	4.8	26.36	168	0.75
253	10.18	34.030	5.2	184	400	7.53	34.03	4.0	26.60	144	0.91
290	9.60	34.091	4.8	170							
337	8.76	34.078	4.6	158							
402	7.49	34.028	4.0	144							

USCGC GRESHAM; February 24, 1963; 1922 GCT; 30°04'N, 139°49'W; sounding, 2000+ fm; wind, 200°, force 2; weather, cloudy; sea, rough; wire angle, 18°. 8

2	18.28	34.758	5.4	293	0	(18.28)	(34.76)	(5.4)	(25.04)	(293)	(0.00)
11	18.28	34.758	5.4	293	10	18.28	34.76	5.4	25.04	293	0.03
43	17.99	34.734	5.4	288	20	18.21	34.75	5.4	25.05	292	0.06
72	17.94	34.735	5.4	287	30	18.11	34.74	5.4	25.06	290	0.09
92	17.93	34.736	5.4	287	50	17.97	34.73	5.4	25.09	288	0.15
106	17.90	34.738	5.4	286	75	17.93	34.74	5.4	25.11	286	0.22
119	17.85	34.735	5.5	285	100	17.91	34.74	5.4	25.11	286	0.29
138	16.28	34.520	5.3	265	125	17.83	34.73	5.4	25.13	285	0.36
156	13.94	34.201	5.3	239	150	14.50	34.27	5.3	25.54	246	0.43
183	12.03	34.017	5.3	217	200	11.29	33.99	5.3	25.96	206	0.55
206	11.06	33.991	5.3	202	250	10.27	34.06	5.1	26.19	183	0.64
230	10.54	34.023	5.2	190	300	9.57	34.10	4.9	26.34	169	0.74
263	10.09	34.080	5.1	179	400	7.30	34.02	3.9	26.63	142	0.90
302	9.52	34.103	4.9	168							
350	8.43	34.064	4.4	155							
415	6.99	34.018	3.7	138							

USCGC GRESHAM; February 26, 1963; 0130 GCT; 30°00'N, 140°00'W; sounding, 2000+ fm; wind, 080°, force 2; weather, partly cloudy; sea, very rough; wire angle, 12°. 9

0	18.72	34.823	5.4	299	0	18.72	34.82	5.4	24.97	299	0.00
10	18.27	-	-		10	18.27	(34.77)		(25.05)	(292)	(0.03)
45	18.21	34.765	5.5	291	20	18.23	(34.77)		(25.06)	(291)	(0.06)
75	17.94	34.741	5.4	286	30	18.22	(34.77)		(25.06)	(291)	(0.09)
94	17.87	34.725	5.4	286	50	18.20	34.76	5.5	25.06	291	0.15
109	17.81	34.720	5.4	285	75	17.94	34.74	5.4	25.11	287	0.22
122	17.75	34.717	5.4	284	100	17.84	34.72	5.4	25.12	286	0.29
142	17.10	34.643	5.4	274	125	17.73	34.72	5.4	25.14	283	0.36
161	15.10	34.393	5.3	249	150	16.21	34.53	5.3	25.36	263	0.43
191	12.52	34.123	5.3	218	200	11.92	34.06	5.3	25.89	212	0.55
216	11.06	33.990	5.4	202	250	10.25	34.04	5.1	26.18	184	0.66
240	10.41	34.015	5.1	189	300	9.69	34.09	5.0	26.31	172	0.75
274	9.96	34.086	5.0	176	400	7.68	34.04	4.2	26.59	146	0.91
314	9.52	34.097	4.9	169	500	5.84	34.04	2.6	26.84	122	1.05
363	8.66	34.102	4.6	155	600	5.08	34.11	1.1	26.98	108	1.17
431	6.98	34.010	3.8	139							
517	5.65	34.049	2.4	119							
601	5.08	34.109	1.1	108							

USCG STATION NOVEMBER	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
10	USCGC GRESHAM; February 26, 1963; 1923 GCT; 29°53.5'N, 140°01'W; sounding, 2000+ fm; wind, 120°, force 4; weather, cloudy; sea, rough; wire angle, 33°.											
	1	18.30	34.767	5.6	293	0	(18.30)	(34.77)	(5.6)	(25.04)	(293)	(0.00)
	8	18.31	34.769	5.6	293	10	18.31	34.77	5.6	25.04	293	0.03
	43	18.34	34.824	5.6	290	20	18.32	34.79	5.6	25.05	292	0.06
	72	18.00	34.779u	5.5		30	18.33	34.80	5.6	25.06	291	0.09
	88	17.98	34.704	5.5	290	50	18.25	34.79	5.5	25.07	290	0.15
	100	18.00	34.729	5.5	289	75	18.00	34.74	5.5	25.09	288	0.22
	115	17.74	34.684	5.4	286	100	18.00	34.73	5.5	25.08	289	0.29
	131	17.30	34.631	5.5	280	125	17.49	34.65	5.5	25.15	283	0.36
	148	15.98	34.449	5.5	264	150	15.81	34.43	5.5	25.37	261	0.43
	173	14.30	34.245	5.4	243	200	11.73	33.98	5.4	25.87	214	0.55
	196	12.05	34.001	5.4	218	250	10.33	34.05	5.2	26.17	185	0.66
	217	10.92	33.956	5.4	202	300	9.60	34.08	5.0	26.32	171	0.75
	245	10.42	34.034	5.3	188	400	7.48	34.01	4.0	26.59	145	0.91
	284	9.82	34.078	5.1	175	500	5.71	33.99	2.6	26.81	124	1.05
	329	9.13	34.077	4.9	164							
	402	7.44	34.007	4.0	145							
	484	5.90	33.979	2.9	127							
	549	5.34	34.046	1.5	116							
11	USCGC GRESHAM; February 27, 1963; 1912 GCT; 29°56'N, 140°02'W; sounding, 2000+ fm; wind, 130°, force 4; weather, cloudy; sea, moderate; wire angle, 28°.											
	0	18.81	34.929	5.4	293	0	18.81	34.93	5.4	25.03	293	0.00
	9	18.81	34.935	5.5	293	10	18.81	34.94	5.5	25.04	293	0.03
	44	18.82	34.942	5.4	293	20	18.81	34.94	5.4	25.04	293	0.06
	74	18.71	34.913	5.4	292	30	18.81	34.94	5.4	25.04	293	0.09
	92	18.56	34.857	5.4	293	50	18.83	34.95	5.4	25.05	292	0.15
	105	18.06	34.744	5.4	289	75	18.70	34.91	5.4	25.05	292	0.22
	121	17.66	34.672	5.4	285	100	18.50	34.84	5.4	25.04	292	0.29
	138	15.88	34.428	5.5	263	125	17.35	34.62	5.4	25.16	282	0.37
	155	14.85	34.307	5.3	250	150	15.16	34.34	5.3	25.45	254	0.43
	180	12.84	34.067	5.3	228	200	11.64	34.00	5.4	25.90	211	0.55
	205	11.44	33.997	5.4	208	250	10.24	34.02	5.2	26.17	186	0.66
	226	10.76	33.978	5.3	197	300	9.49	34.09	5.0	26.35	169	0.75
	257	10.13	34.033	5.1	183	400	7.41	34.00	4.0	26.60	145	0.91
	295	9.58	34.091	5.1	170	500	5.69	33.98	2.6	26.81	125	1.05
	342	8.73	34.060	4.7	159							
	416	7.06	33.989	3.8	141							
	497	5.73	33.980	2.7	125							
	564	5.20	34.073	1.3	112							
12	USCGC GRESHAM; February 28, 1963; 1902 GCT; 30°00'N, 140°01'W; sounding, 2000+ fm; wind, 110°, force 2; weather, cloudy; sea, moderate; wire angle, 28°.											
	0	18.52	34.807	5.4	295	0	18.52	34.81	5.4	25.02	295	0.00
	10	18.51	34.812	5.5	295	10	18.51	34.81	5.5	25.02	295	0.03
	46	18.48	34.804	5.4	295	20	18.50	34.81	5.5	25.02	295	0.06
	77	18.09	34.734	5.5	290	30	18.49	34.81	5.5	25.02	294	0.09
	93	17.92	34.718	5.5	288	50	18.46	34.80	5.4	25.02	294	0.15
	105	17.72	34.671	5.5	286	75	18.12	34.74	5.4	25.06	291	0.22
	121	17.69	34.682	5.4	285	100	17.78	34.68	5.5	25.10	287	0.29
	138	16.00	34.468	5.4	263	125	17.63	34.68	5.4	25.14	284	0.37
	154	14.81	34.308	5.3	249	150	15.42	34.39	5.3	25.43	256	0.44
	180	13.34	34.150	5.3	231	200	12.36	34.06	5.3	25.81	220	0.56
	205	12.08	34.035	5.3	216	250	10.67	34.05	5.3	26.11	191	0.66
	226	11.12	34.015	5.3	201	300	9.52	34.07	4.9	26.33	171	0.75
	256	10.56	34.057	5.2	188	400	7.58	34.01	4.0	26.58	147	0.92
	293	9.67	34.073	5.0	173	500	5.76	34.00	2.2	26.81	124	1.06
	341	8.84	34.048	4.6	162							
	415	7.22	33.998	3.8	143							
	495	5.82	33.997	2.3	125							
	561	5.22	34.057	1.4	114							

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

USCGC GRESHAM; March 1, 1963; 1917 GCT; 30°00'N, 140°00'W; sounding, 2000+ fm; wind, 090°, force 4; weather, partly cloudy; sea, rough; wire angle, 33°. 13

1	18.64	34.862	5.3	294	0	(18.64)	(34.86)	(5.3)	(25.02)	(294)	(0.00)
9	18.63	34.857	5.3	294	10	18.63	34.86	5.3	25.03	294	0.03
43	18.61	34.855	5.3	294	20	18.62	34.86	5.3	25.03	294	0.06
73	18.40	34.820	5.2	292	30	18.61	34.86	5.3	25.03	294	0.09
90	18.34	34.800	5.2	292	50	18.58	34.85	5.3	25.03	294	0.15
102	18.55	34.888	5.2	290	75	18.39	34.82	5.2	25.06	291	0.22
119	18.24	34.831	5.2	287	100	18.53	34.88	5.2	25.07	290	0.29
134	15.68	34.444	5.2	258	125	17.20	34.66	5.2	25.22	275	0.37
151	14.51	34.298	5.2	244	150	14.58	34.31	5.2	25.55	244	0.43
176	12.64	34.087	5.2	223	200	11.68	34.02	5.2	25.91	210	0.55
200	11.68	34.021	5.2	210	250	10.31	34.05	5.0	26.18	185	0.65
222	10.95	33.991	5.2	200	300	9.36	34.08	4.8	26.36	167	0.74
251	10.30	34.052	5.0	184	400	7.58	34.02	3.9	26.59	146	0.90
289	9.58	34.088	4.9	170	500	5.70	33.98	2.5	26.81	125	1.04
336	8.60	34.038	4.4	159							
412	7.38	34.012	3.8	144							
495	5.78	33.980	2.6	126							
567	5.14	34.054	1.5	113							

USCGC GRESHAM; March 2, 1963; 1900 GCT; 29°57.5'N, 140°03'W; sounding, 2000+ fm; wind, 100°, force 3; weather, cloudy; sea, moderate; wire angle, 30°. 14

0	18.28u	34.837	5.41		0	18.6	34.84	5.41	25.02	295	0.00
9	18.56	34.840	5.42	294	10	18.56	34.84	5.42	25.03	294	0.03
45	18.58	34.840	5.41	294	20	18.56	34.84	5.42	25.03	294	0.06
74	18.53	34.837	5.36	293	30	18.57	34.84	5.42	25.03	294	0.09
92	18.50	34.834	5.39	293	50	18.57	34.84	5.41	25.03	294	0.15
105	18.34	34.821	5.38	290	75	18.53	34.84	5.36	25.04	293	0.22
121	17.44	34.700	5.36	278	100	18.44	34.83	5.38	25.05	292	0.30
138	16.09	34.497	5.33	262	125	17.17	34.66	5.35	25.23	275	0.37
156	14.52	34.364	5.13	239	150	14.91	34.40	5.17	25.55	245	0.43
182	13.57	34.283	5.16	226	200	12.08	34.09	5.27	25.89	212	0.55
209	11.46	34.019	5.29	206	250	10.50	34.06	5.21	26.15	187	0.65
231	10.73	34.044	5.22	192	300	9.77	34.09	5.00	26.30	173	0.74
263	10.36	34.072	5.20	184	400	7.83	34.01	4.13	26.54	150	0.91
303	9.72	34.091	4.99	172	500	5.86	34.00	2.37	26.80	125	1.06
353	8.88	34.051	4.63	162	600	(5.03)	(34.10)		(26.98)	(109)	(1.18)
430	7.14	33.991	3.69	142							
516	5.66	34.002	2.16	123							
588	5.11	34.092	1.32	110							

USCGC GRESHAM; March 3, 1963; 1857 GCT; 29°52'N, 140°08'W; sounding, 2000+ fm; wind, 130°, force 3; weather, cloudy; sea, moderate; wire angle, 18°. 15

1	18.63	34.841	5.53	295	0	(18.63)	(34.84)	(5.53)	(25.01)	(296)	(0.00)
11	18.59	34.843	5.55	294	10	18.59	34.84	5.55	25.02	295	0.03
49	18.59	34.847	5.53	294	20	18.59	34.84	5.54	25.02	295	0.06
82	18.56	34.847	5.48	293	30	18.59	34.84	5.54	25.02	295	0.09
100	18.64	34.922	5.36	290	50	18.59	34.85	5.53	25.03	294	0.15
115	18.63	35.001	5.35	284	75	18.56	34.85	5.49	25.04	293	0.22
133	16.89	34.648	5.28	269	100	18.64	34.92	5.36	25.07	290	0.30
151	15.38	34.477	5.23	249	125	17.67	34.80	5.31	25.22	276	0.37
170	14.27	34.324	5.20	237	150	15.46	34.49	5.23	25.50	249	0.43
197	12.21	34.127	5.21	212	200	12.05	34.11	5.23	25.91	210	0.55
225	11.26	34.061	5.32	200	250	10.67	34.05	5.30	26.11	191	0.65
248	10.70	34.050	5.32a)	191	300	9.92	34.10	5.19	26.28	175	0.75
281	10.20	34.096	5.24	179	400	7.98	34.02	4.18	26.53	151	0.92
323	9.54	34.087	5.08	170	500	6.05	33.99	2.88	26.77	128	1.06
375	8.52	34.045	4.49	157	600	5.07	34.08	1.25	26.96	110	1.19
455	6.83	33.984	3.54	139							
541	5.50	34.000	2.23	121							
613	5.02	34.103	1.06	108							

a) Mean value of 5.23 and 5.40 ml/L.

USCG STATION NOVEMBER	OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
	Z m	T °C	S ‰	O_2 ml/L	δ_T cl/ton	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T cl/ton	ΔD dyn m
16	USCGC GRESHAM; March 4, 1963; 1915 GCT; 29°59.5'N, 139°59'W; sounding, 2000+ fm; wind, 170°, force 1; weather, cloudy; sea, moderate; wire angle, 08°.											
	1	18.65	34.834	5.46	296	0	(18.65)	(34.83)	(5.46)	(25.00)	(297)	(0.00)
	10	18.57	34.834	5.53	295	10	18.57	34.83	5.53	25.02	295	0.03
	45	18.56	34.836	5.44	294	20	18.57	34.83	5.51	25.02	295	0.06
	75	18.55	34.840	5.48	294	30	18.56	34.84	5.49	25.03	294	0.09
	94	18.50	34.850	5.40	292	50	18.56	34.84	5.45	25.03	294	0.15
	110	18.40	34.841	5.37	290	75	18.55	34.84	5.48	25.03	294	0.22
	123	18.16	34.811	5.34	287	100	18.47	34.85	5.39	25.06	291	0.30
	143	15.82	34.440	5.38	261	125	18.07	34.80	5.34	25.12	285	0.37
	162	14.99	34.368	5.29	249	150	15.48	34.41	5.36	25.43	256	0.44
	191	13.37	34.242	5.14	225	200	12.81	34.18	5.18	25.82	219	0.56
	217	11.78	34.054	5.29	210	250	10.52	34.00	5.34	26.10	192	0.66
	241	10.73	33.992	5.37	196	300	9.69	34.05	5.00	26.28	175	0.76
	275	10.15	34.044	5.17	183							
	315	9.36	34.052	4.89	169							
	365	8.40	34.033	4.42	156							
17	USCGC GRESHAM; March 5, 1963; 1855 GCT; 29°58.5'N, 139°57.5'W; sounding, 2000+ fm; wind, 100°, force 1; weather, cloudy; sea, moderate; wire angle, 10°.											
	0	18.83	34.923	5.54	294	0	18.83	34.92	5.54	25.02	295	0.00
	10	18.82	34.923	5.54a)	294	10	18.82	34.92	5.54	25.02	294	0.03
	44	18.80	34.932	5.55	293	20	18.81	34.92	5.54	25.03	294	0.06
	73	18.88	34.961	5.48	293	30	18.80	34.93	5.55	25.04	293	0.09
	94	18.84	34.947	5.48	293	50	18.81	34.93	5.54	25.03	293	0.15
	108	18.38	34.858	5.46	288	75	18.88	34.96	5.48	25.04	293	0.22
	121	18.36	34.856	5.53	288	100	18.40	34.86	5.47	25.08	289	0.29
	140	17.70	34.770	5.43	279	125	18.30	34.85	5.52	25.10	287	0.37
	160	15.12	34.390	5.36	250	150	16.46	34.58	5.40	25.34	265	0.44
	189	13.44	34.230	5.27	227	200	12.60	34.14	5.35	25.83	218	0.56
	213	11.60	34.027	5.44	208	250	10.62	34.04	5.41	26.12	191	0.67
	237	10.82	34.005	5.43	197	300	9.98	34.09	5.28	26.27	176	0.76
	270	10.40	34.081	5.37	184	400	8.08	34.02	4.37	26.51	153	0.93
	309	9.82	34.093	5.23	174	500	6.00	33.98	2.85	26.77	129	1.08
	359	8.90	34.063	4.82	162	600	(5.04)	(34.09)	(1.17)	(26.97)	(109)	(1.20)
	427	7.50	34.004	4.03	146							
	510	5.85	33.982	2.69	127							
	596	5.08	34.082	1.22	110							
18	USCGC GRESHAM; March 7, 1963; 0044 GCT; 29°57'N, 139°58'W; sounding, 2000+ fm; wind, 060°, force 4; weather, overcast; sea, rough; wire angle, 27°.											
	0	18.80	34.874	5.53	297	0	18.80	34.87	5.53	24.99	297	0.00
	9	18.80	34.874	5.52	297	10	18.80	34.88	5.52	25.00	297	0.03
	45	18.64	34.891	5.48	292	20	18.77	34.88	5.52	25.01	296	0.06
	76	18.52	34.868	5.45	291	30	18.72	34.89	5.51	25.03	294	0.09
	94	18.43	34.826	5.45	292	50	18.62	34.89	5.48	25.05	292	0.15
	107	17.86	34.755	5.48	284	75	18.53	34.87	5.45	25.06	291	0.22
	123	15.72	34.451	5.43	258	100	18.34	34.81	5.45	25.06	291	0.29
	140	14.34	34.288	5.33	241	125	15.55	34.43	5.42	25.43	256	0.36
	157	13.16	34.186	5.28	225	150	13.59	34.22	5.30	25.69	231	0.43
	183	12.29	34.143	5.25	212	200	11.49	34.09	5.29	26.00	202	0.54
	208	11.22	34.086	5.29	197	250	10.42	34.09	5.26	26.19	184	0.63
	230	10.81	34.098	5.27	189	300	9.58	34.08	5.04	26.32	171	0.73
	260	10.25	34.092	5.26	181	400	7.77	34.02	4.25	26.56	148	0.89
	299	9.60	34.082	5.07	171	500	6.02	33.98	2.93	26.77	129	1.04
	348	8.72	34.054	4.69	160							
	423	7.36	34.001	4.03	144							
	505	5.95	33.975	2.83	128							
	573	5.16	34.046	1.63	114							

a) Alternate value, 5.43 ml/L, not used in interpolation.

OBSERVED				COMPUTED	INTERPOLATED				COMPUTED		
Z	T	S	O_2	δ_T	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	cl/ton	m	°C	‰	ml/L	g/L	cl/ton	dyn m

USCGC GRESHAM; March 7, 1963; 1905 GCT; 30°04'N, 140°02'W; sounding, 2000+ fm; wind, 080°, force 3; weather, cloudy; sea, moderate; wire angle, 14°. 19

0	18.60	34.850	5.49	294	0	18.60	34.85	5.49	25.03	294	0.00
10	18.60	34.853	5.48	294	10	18.60	34.85	5.48	25.03	294	0.03
43	18.58	34.855	5.40	293	20	18.60	34.85	5.46	25.03	294	0.06
74	18.59	34.880	5.42	292	30	18.59	34.85	5.44	25.03	294	0.09
93	18.64	34.978u	5.40		50	18.58	34.86	5.40	25.04	293	0.15
107	18.52	34.872	5.39	291	75	18.59	34.88	5.42	25.05	292	0.22
119	18.18	34.819	5.35	286	100	18.61	34.88	5.40	25.05	292	0.29
139	16.00	34.511	5.31	260	125	17.64	34.74	5.33	25.18	280	0.37
158	14.22	34.240	5.36	242	150	14.96	34.35	5.34	25.50	249	0.43
187	12.04	34.018	5.31	217	200	11.37	34.00	5.34	25.95	206	0.55
210	11.08	34.003	5.36	201	250	10.48	34.05	5.29	26.15	188	0.65
234	10.73	34.025	5.32	194	300	9.69	34.08	5.02	26.31	172	0.74
267	10.20	34.068	5.22	182	400	7.65	34.02	4.22	26.58	147	0.91
305	9.60	34.077	4.99	171	500	5.83	33.99	2.50	26.80	126	1.05
353	8.60	34.053	4.62	158	600	(5.11)	(34.07)		(26.95)	(112)	(1.18)
419	7.28	34.006	3.97	143							
502	5.80	33.994	2.42	125							
587	5.17	34.067	1.34	113							

USCGC GRESHAM; March 8, 1963; 1855 GCT; 30°02'N, 140°03'W; sounding, 2000+ fm; wind, 090°, force 4; weather, overcast; sea, moderate; wire angle, 17°. 20

0	18.55	34.867	5.37	292	0	18.55	34.87	5.37	25.05	291	0.00
10	18.54	34.866	5.36	292	10	18.54	34.87	5.36	25.06	291	0.03
48	18.54	34.866	5.44	292	20	18.54	34.87	5.38	25.06	291	0.06
81	18.60	34.895	5.39	291	30	18.54	34.87	5.40	25.06	291	0.09
100	17.78	34.681	5.48	287	50	18.54	34.87	5.44	25.06	291	0.15
115	17.65	34.668	5.47	285	75	18.59	34.89	5.40	25.06	291	0.22
132	16.96	34.597	5.33	274	100	17.78	34.68	5.48	25.10	287	0.29
152	15.21	34.407	5.28	250	125	17.36	34.64	5.40	25.17	280	0.36
170	13.20	34.119	5.29	231	150	15.40	34.43	5.28	25.46	253	0.43
198	11.22	33.957	5.38	207	200	11.17	33.96	5.38	25.96	206	0.55
226	10.64	33.999	5.26	194	250	10.39	34.04	5.25	26.16	187	0.65
250	10.39	34.044	5.25	186	300	9.53	34.07	4.93	26.32	171	0.74
285	9.84	34.071	5.04	176	400	7.49	34.01	3.98	26.59	145	0.91
326	9.00	34.063	4.75	163	500	5.84	33.99	2.52	26.80	126	1.05
379	7.92	34.028	4.20	150	600	5.03	34.10	1.17	26.98	109	1.17
461	6.36	33.979	3.15	133							
549	5.38	34.033	1.74	117							
622	4.92	34.137	0.78	105							

USCGC GRESHAM; March 9, 1963; 1908 GCT; 30°01'N, 139°57'W; sounding, 2000+ fm; wind, 060°, force 5; weather, overcast; sea, rough; wire angle, 35°. 21

1	18.52	34.859	5.44	292	0	(18.52)	(34.86)	(5.44)	(25.05)	(291)	(0.00)
8	18.53	34.863	5.53	292	10	18.53	34.86	5.52	25.05	292	0.03
42	18.52	34.865	5.41	291	20	18.53	34.86	5.50	25.05	292	0.06
70	18.56	34.859	5.44	293	30	18.52	34.86	5.47	25.05	291	0.09
86	18.58	34.858	5.45	293	50	18.52	34.86	5.42	25.05	291	0.15
99	18.55	34.857	5.47	292	75	18.57	34.86	5.44	25.04	293	0.22
114	18.38	34.859	5.30	288	100	18.55	34.86	5.47	25.05	292	0.29
130	17.86	34.773	5.36	282	125	18.08	34.81	5.33	25.13	285	0.37
145	15.85	34.492	5.29	258	150	15.20	34.40	5.31	25.48	251	0.43
170	13.68	34.166	5.38	237	200	11.86	34.01	5.30	25.87	214	0.55
194	12.16	34.031	5.29	218	250	10.54	34.04	5.24	26.13	189	0.66
214	11.36	33.982	5.34	207	300	9.65	34.06	4.97	26.30	173	0.75
244	10.65	34.031	5.27	192	400	7.31	34.00	3.84	26.61	144	0.91
281	10.01	34.061	5.09	179	500	5.84	33.98	2.63	26.79	127	1.06
328	9.04	34.063	4.72	164							
404	7.22	33.995	3.79	143							
486	6.01	33.980	2.81	129							
557	5.25	34.058	1.50	114							

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