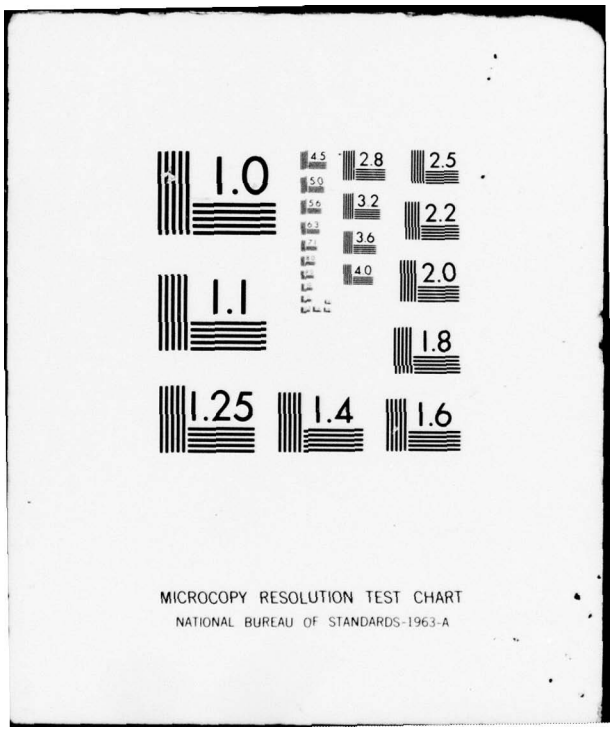
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Expedition X,
20-25 April 1965.

LA PARED Expedition,
30 April - 17 May 1965.

STUDENT TRAINING Cruise,
28 August - 6 September 1965

and

MUDDAUBER Expedition,
29 October - 16 December 1965.

(11) SIO Reference 78-4
15 February 1978

(12) 103 p.

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SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

Expedition X
20-25 April 1965

Sponsored by
National Science Foundation

LA PARED Expedition
30 April - 17 May 1965

Sponsored by
Office of Naval Research

STUDENT TRAINING Cruise
28 August - 6 September 1965

Sponsored by
Department of Scripps Institution of Oceanography
University of California

and

MUDDAUBER Expedition
29 October - 16 December 1965

Sponsored by
Marine Research Committee
State of California

Marine Life Research Group
Scripps Institution of Oceanography

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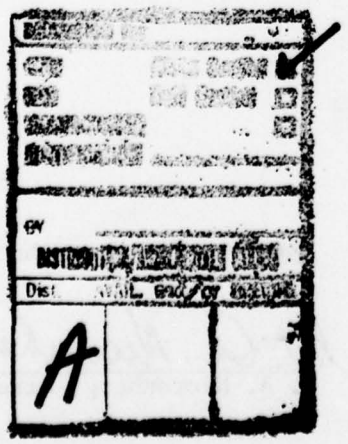
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INTRODUCTION

This report presents data collected during 1965 on Expedition "X", LA PARED Expedition, a STUDENT TRAINING CRUISE and MUDDAUBER Expedition.

Preceding the tabulated data for each cruise are: 1) a description of the principal objective and the sponsoring agency, 2) the hydrographic work carried out on the cruise, 3) a chart of the station positions, 4) a list of scientific personnel participating in the collection of data and 5) a list of publications utilizing the cruise data.

STANDARD PROCEDURES

Hydrographic Cast Data

Temperature was measured using paired deep-sea reversing thermometers and is reported to hundredths of a degree Celsius. Unprotected thermometers were included on most Nansen bottles lowered 100 meters or deeper, except for the shallow stations of the STUDENT CRUISE where they were included in the bottom two or three bottles of each cast.

Water samples for chemical and nutrient analysis were obtained from Nansen bottles.

Salinities were determined by two types of salinometers, three different Australian Autolabs (inductive) on Expedition X, LA PARED and the STUDENT CRUISE and a Washington bridge (conductive) on Expedition X and MUDDAUBER. The salinity values were recorded and are reported to three decimal places, provided accepted standards were met. If only one determination per sample was obtained, or there was doubt concerning the accuracy of the analytical results, the salinities are reported to two decimal places. All STD salinities are tabulated to hundredths.

Dissolved oxygen was determined by the Winkler method as modified by Carpenter (1965). Where phosphate, nitrite and nitrate data appear, the determinations were made by Beckman DU Spectrophotometer according to methods suggested by Strickland and Parsons (1968).

The observed data has been evaluated using the method described by Klein (1973). This involves consideration of their variation as functions of density or depth and their relations to each other and comparison with adjacent observations.

In situ Salinity/Temperature/Depth Recorder (STD) Data

With the exception of Expedition X, an STD was used on all cruises included in this report.* However, the 227 analog recordings made on LA PARED Expedition were not processed by the Data Collection and

* Original STD analogs are on file in SIO data archives.

Processing Group. The STUDENT TRAINING CRUISE and MUDDAUBER Expedition include STD data digitized at standard depths from the analog recordings.

TABULATED DATA

The data presented in this report was obtained by Nansen bottle casts and by the STD and appears in two forms:

1. Data from the sample bottle casts is tabulated with the observed levels of depth on the left of a page and standard depth values of temperature and oxygen interpolated from these observations on the right.

2. For each STD lowering, temperature and salinity values are read only at standard levels of depth and appear with computed values of DT and DD (see below) on the right of the page. Corrections may have been applied to the temperature and salinity values as discussed later in this report.

The time reported for bottle casts is the time of messenger release. When a station consists of more than one cast, the messenger times for the first and last casts are given. Multiple casts are indicated by a letter following all observed depths except the cast with the shallowest depth. For STD lowerings the time given is the "start down" time.

The bottom depth, listed in meters, was determined by applying corrections from Matthews (1939) tables to echo soundings.

The weather and dominant waves were coded using the National Oceanographic Data Center (NODC) recommended conversions.

The column headings from the computer are explained as follows:

Z	Depth	meters
T	Temperature	°C
S	Salinity	°/₀₀
O2	Dissolved oxygen	ml/L
PO4	"Reactive" inorganic phosphate-phosphorus	µg at/L
SiO3	"Reactive" inorganic silicate-silicon	µg at/L
NO2	"Reactive" nitrite-nitrogen	µg at/L
NO3	"Reactive" nitrate-nitrogen	µg at/L
DT	δT Thermosteric anomaly	cl/ton
SIGT	$\sigma_t = (\rho_{s,t,0} - 1)\ 10^3$ where $\rho_{s,t,0}$ is the density the parcel would have if moved isothermally to the sea surface.	g/L
DD	Geopotential anomaly, referred to the sea surface.	dyn. meters

FOOTNOTES

Data which appears to be in error without obvious reason is reported, but flagged uncertain with a U. Such data was not used in the determination of values at standard depths. Footnotes are used to indicate data which has required special processing.

EXPEDITION X

Expedition X, supported by a grant from the National Science Foundation, was planned for the insular, basin and coastal waters of southern California during the period of spring upwelling. It was an investigation of the local onshore-offshore occurrence of zooplankton.

Most of the Nansen bottle casts consisted of 18 bottles lowered to approximately 600 meters. The bathythermograph traces were used to influence the drawing of the property curves.

Salinity was determined about three weeks after collection, using both conductive and inductive salinometers. Many samples were questionable because of "chipped tops" on the bottles. These values are footnoted.

Personnel participating in the collection of data were:

Ship's Captain:

Davis, Laurence E.
RV Alexander Agassiz

Scientific personnel:

Brinton, Dr. E. (Chief scientist)
Bonner, P. H.
Davoll, P. J.
Ferreira, S. M.
Jerde, C. E.
Matsui, T.
Netzley, R. L.
Pine, J. S.
Venrick, E. L.

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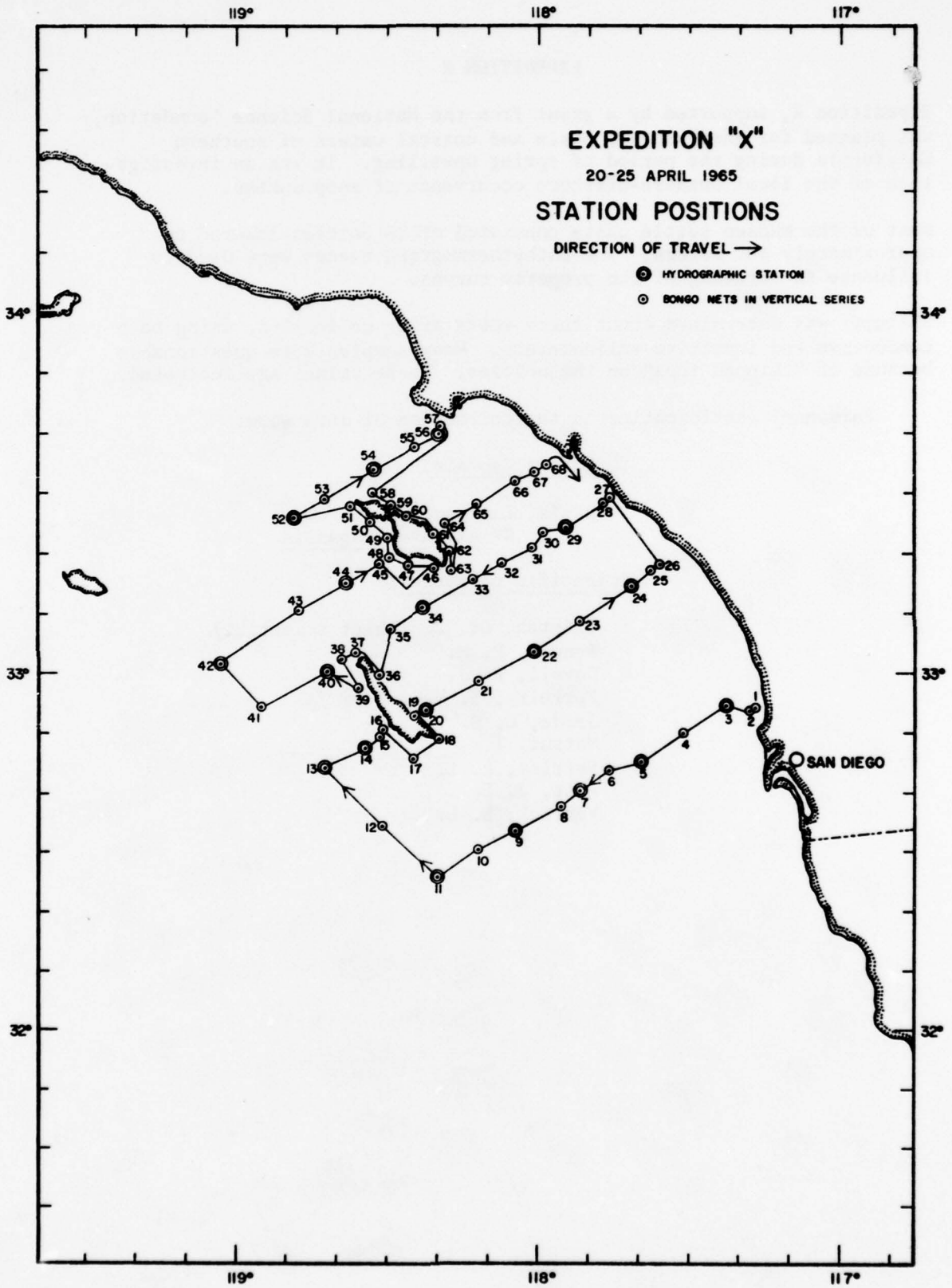

EXPEDITION "X"
20-25 APRIL 1965
STATION POSITIONS
DIRECTION OF TRAVEL →
HYDROGRAPHIC STATION
BONGO NETS IN VERTICAL SERIES
119°
118°
117°
34°
33°
32°
SAN DIEGO

FIGURE 1

RV ALEXANDER AGASSIZ EXPEDITION X (93.28) 3

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 54.8N	117 22.6W	04/20/65	0440 GMT	501M	090	05KT	0	290 02 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	17.28	33.42 A	6.08					367.4
10	15.04	33.423	6.42					318.7
30	12.18	33.495	4.82					257.9
44	11.08	33.585	4.35					231.9
54	10.66	33.649	3.91					220.1
69	10.12	33.763	3.60					202.8
83	9.89	33.821	3.30					194.8
98	9.63	33.876	3.14					186.7
124	9.36	34.007	2.63					172.7
144	9.02	34.073	2.38					162.6
173	8.98	34.120	2.08					158.6
202	8.85	34.153	1.91					154.2
235	8.72		1.70					
288	8.36	34.203	1.47					143.2
341	7.88	34.218	1.19					135.3
400	7.28	34.279	.90					122.5

Z	T	S	O2	SIGT	DT	DD
0	17.28	33.420	6.08	24.257	367.4	0
10	15.04	33.423	6.42	24.769	318.7	.034
20	14.00	33.440	5.90	25.003	296.4	.065
30	12.18	33.495	4.82	25.407	257.9	.093
50	10.81	33.624	4.08	25.759	224.5	.141
75	10.01	33.792	3.46	26.028	198.9	.195
100	9.61	33.887	3.10	26.169	185.6	.243
125	9.34	34.011	2.62	26.310	172.2	.288
150	9.01	34.090	2.31	26.424	161.3	.331
200	8.86	34.151	1.92	26.496	154.5	.411
250	8.63	34.193	1.63	26.564	148.0	.489
300	8.26	34.205	1.41	26.632	141.6	.564
400	7.28	34.279	.90	26.833	122.5	.702

RV ALEXANDER AGASSIZ EXPEDITION X (93.32) 5

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 45.2N	117 39.5W	04/20/65	0837 GMT	1055M	300	08KT	0	310 02 12

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	16.89	33.479	5.97					354.4
10	15.70	33.490	6.13					327.6
30	13.05	33.485	5.67					274.7
40	11.91	33.497	5.12					252.9
50	11.58	33.514	4.96					245.8
65	10.71	33.601	4.41					224.5
80	10.36	33.683	3.95					212.7
100	9.78	33.813	3.46					193.7
125	9.44	33.947	3.01					178.4
145	9.18	34.012	2.84					169.6
175	8.98	34.103	2.20					159.8
205	8.84	34.127	2.15					155.9
235	8.46	34.187	1.85					145.9
275	8.48	34.238	1.36					142.4
334	8.07	34.263	1.12					134.6
409	7.34	34.248	1.02					125.6
484	6.68	34.273	.65					115.1
564	6.14	34.310	.50					105.6

Z	T	S	O2	SIGT	DT	DD
0	16.89	33.479	5.97	24.394	354.4	0
10	15.70	33.490	6.13	24.675	327.6	.034
20	14.45	33.486	5.98	24.944	302.0	.066
30	13.05	33.485	5.67	25.230	274.7	.095
50	11.58	33.514	4.96	25.534	245.8	.147
75	10.48	33.656	4.12	25.842	216.6	.205
100	9.78	33.813	3.46	26.083	193.7	.257
125	9.44	33.947	3.01	26.244	178.4	.304
150	9.14	34.030	2.73	26.358	167.6	.348
200	8.87	34.124	2.16	26.474	156.6	.430
250	8.47	34.214	1.66	26.607	144.0	.508
300	8.35	34.254	1.21	26.657	139.2	.581
400	7.43	34.250	1.03	26.789	126.7	.720
500	6.56	34.280	.60	26.933	113.1	.847

RV ALEXANDER AGASSIZ EXPEDITION X (93.35) 7

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 40.5N	117 51.4W	04/20/65	1605 GMT	648M	300	08KT	1	280 03 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	16.34	33.521	5.86					339.2
10	15.43	33.534	6.02					318.7
30	14.39	33.538	6.03					297.0
41	12.64	33.541	5.22					262.9
50	12.12	33.587	4.66					250.1
64	11.22	33.639	4.36					230.4
80	10.59	33.658	4.06					218.3
100	9.96	33.746	3.91					201.5
125	9.47	33.901	3.34					182.3
144	9.09	34.005	2.89					168.8
174	8.66	34.059	2.52					158.3
204	8.27	34.068	2.28					151.9
234	8.16	34.138	1.87					145.2
273	8.28	34.219	1.27					140.9
333	7.80	34.260	.91					131.0
407	7.40	34.275	.72					124.4
482	6.80	34.272	.618					116.7
561	6.15	34.311	.448					105.7

Z	T	S	O2	SIGT	DT	DD
0	16.34	33.521	5.86	24.554	339.2	0
10	15.43	33.534	6.02	24.769	318.7	.033
20	15.20	33.530	6.03	24.816	314.2	.065
30	14.39	33.538	6.03	24.997	297.0	.095
50	12.12	33.587	4.66	25.490	250.1	.150
75	10.76	33.653	4.14	25.790	221.5	.209
100	9.96	33.746	3.91	26.001	201.5	.263
125	9.47	33.901	3.34	26.203	182.3	.311
150	8.99	34.023	2.79	26.375	166.0	.356
200	8.31	34.067	2.31	26.515	152.7	.437
250	8.21	34.175	1.61	26.615	143.2	.513
300	8.11	34.245	1.05	26.686	136.4	.585
400	7.44	34.275	.73	26.808	124.9	.722
500	6.65	34.277	.58	26.918	114.5	.848

A) POSSIBLE EVAPORATION. THE VALUE WAS ACCEPTED FOR INTERPOLATION AT STANDARD LEVELS OF DEPTH.
B) OXYGEN SAMPLES AT 482 AND 561 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO BE IN THE CORRECT ORDER.

RV ALEXANDER AGASSIZ — EXPEDITION X — (93.38) 9

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 33.6N	118 04.7W	04/20/65	2026 GMT	1812M	300	08KT	1	290 03 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	16.18	33.459	6.01					340.2	0	16.18	33.459	6.01	24.543	340.2	0
8	15.40	33.456	6.12					323.8	10	15.20	33.458	6.16	24.761	319.4	.033
25	14.56	33.449	6.29					307.0	20	14.90	33.456	6.21	24.824	313.4	.065
34	13.78	33.425	6.34					293.2	30	14.12	33.434	6.32	24.974	299.2	.095
47	13.34	33.465	5.87					281.7	50	13.15	33.466	5.74	25.196	278.0	.153
59	12.34	33.470	5.38					262.7	75	11.52	33.516	4.79	25.547	244.7	.219
80	11.38	33.535	4.63					240.8	100	11.03	33.619	4.22	25.716	228.6	.279
98	11.04	33.605	4.24					229.8	125	10.16	33.798	3.34	26.007	200.9	.333
113	10.48	33.717	3.68					212.1	150	9.70	33.952	2.83	26.205	182.1	.382
128	10.10	33.817	3.27					198.5	200	8.88	34.099	2.36	26.452	158.6	.468
151	9.68	33.957	2.82					181.4	250	8.66	34.181	1.74	26.551	149.3	.547
177	9.20	34.007	2.69					170.3	300	7.88	34.178	1.49	26.666	138.3	.622
199	8.88	34.095	2.38					158.9	400	7.16	34.275	.72	26.847	121.2	.757
237	8.88	34.185	1.81					152.2	500	6.37	34.307	.50	26.980	108.6	.879
281	8.05	34.159	1.64					142.0							
351	7.60	34.244	1.03					129.4							
425	6.93	34.285	.60					117.4							
507	6.32	34.308	.49					108.0							

RV ALEXANDER AGASSIZ — EXPEDITION X — (93.42) 11

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 25.8N	118 20.3W	04/21/65	0228 GMT	1129M	310	19KT	1	320 03 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	15.86	33.498	5.87					330.5	0	15.86	33.498	5.87	24.645	330.5	0
8	15.83	33.463	5.94					332.4	10	15.82	33.460	5.99	24.625	332.4	.033
22	15.10	33.452	6.26					317.8	20	15.25	33.453	6.23	24.747	320.8	.066
29	14.86	33.444	6.24					313.4	30	14.85	33.445	6.23	24.826	313.3	.098
40	14.74	33.447	6.17					310.8	50	14.18	33.436	6.21	24.962	300.3	.159
50	14.18	33.436	6.21					300.3	75	12.60	33.470	5.43	25.307	267.4	.231
67	13.44	33.452	6.01					284.6	100	11.59	33.519	4.59	25.536	245.7	.295
80	12.46	33.477	5.36					264.3	125	10.37	33.648	3.69	25.854	215.4	.353
91	11.90	33.500	5.03					252.5	150	9.80	33.825	3.06	26.089	193.1	.405
104	11.46	33.529	4.39					242.6	200	9.08	34.059	2.23	26.389	164.6	.496
120	10.62	33.604	3.77					222.8	250	8.56	34.098	1.80	26.502	153.9	.578
140	9.82	33.776	3.46					197.1	300	7.89	34.137	1.41	26.634	141.4	.654
157	9.78	33.845	2.77					191.3	400	6.98		.90			
186	9.28	34.037	2.38					169.3							
220	8.84	34.061	2.05					160.8							
272	8.34	34.125	1.63					148.7							
331	7.40	34.166	1.19					132.5							
402	6.98		.90												

RV ALEXANDER AGASSIZ — EXPEDITION X — (91.44) 13

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 44.2N	118 42.2W	04/21/65	0849 GMT	1036M	310	19KT	2	320 06 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	15.30	33.449	6.15					322.2	0	15.30	33.449	6.15	24.732	322.2	0
10	15.30	33.452	6.04					322.0	10	15.30	33.452	6.04	24.734	322.0	.032
34	14.35	33.428	6.30					304.3	20	15.18	33.450	6.06	24.759	319.6	.064
43	13.50	33.427	6.41					287.6	30	14.73	33.433	6.17	24.843	311.6	.096
56	12.84	33.497	5.55					269.9	50	13.11	33.461	6.00	25.201	277.6	.155
70	12.06	33.556	5.07					251.3	75	11.67	33.584	4.80	25.572	242.3	.220
94	10.50	33.710	3.92					213.0	100	10.40	33.750	3.81	25.929	208.4	.277
113	9.96	33.85 A	3.46					193.8	125	9.67	33.895	3.24	26.164	186.0	.327
132	9.54	33.912	3.13					182.6	150	9.22	33.985	2.80	26.309	172.3	.373
160	9.07	34.022	2.64					167.2	200	8.59	34.100	2.23	26.499	154.2	.456
188	8.74	34.083	2.35					157.7	250	8.12	34.165	1.72	26.620	142.7	.532
224	8.32	34.129	1.99					148.1	300	7.66	34.192	1.33	26.710	134.1	.604
252	8.11	34.167	1.70					142.3	400	6.95	34.280	.95	26.880	118.0	.735
300	7.66	34.192	1.33					134.1	500	6.38	34.331	.62	26.997	107.0	.854
360	7.20	34.243	1.05					124.1	600	5.90	34.351	.31	27.074	99.7	.965
454	6.64	34.32 A	.82					111.1							
542	6.16	34.336	.45B					103.9							
616	5.84	34.356	.28B					98.6							

A) POSSIBLE EVAPORATION. THE VALUE WAS ACCEPTED FOR INTERPOLATION AT STANDARD LEVELS OF DEPTH.
B) OXYGEN SAMPLES AT 542 AND 616 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO BE IN THE CORRECT ORDER.

RV ALEXANDER AGASSIZ EXPEDITION X (91.42) 14

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 47.8N	118 34.4W	04/21/65	1146 GMT	667M	320	14KT	1	320 06 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	14.90	33.485	6.07					311.3	0	14.90	33.485	6.07	24.847	311.3	0
9	14.88	33.470	6.13					311.9	10	14.87	33.471	6.13	24.842	311.7	.031
27	14.70	33.471	6.18					308.2	20	14.77	33.471	6.17	24.864	309.6	.062
36	14.28	33.452	6.30					301.1	30	14.60	33.465	6.19	24.896	306.6	.093
49	13.76	33.436	6.10					292.0	50	13.74	33.437	6.08	25.054	291.5	.153
62	13.43	33.455	5.84					284.2	75	12.78	33.490	5.55	25.288	269.3	.224
84	12.02	33.525	5.19					252.8	100	10.78	33.606	4.36	25.749	225.4	.286
101	10.72	33.612	4.31					223.9	125	10.00	33.788	3.84	26.026	199.1	.340
118	10.29	33.77 A	4.12					203.6	150	9.70	33.909	3.16	26.171	185.3	.388
134	9.80	33.805	3.46					194.6	200	8.67	34.118	2.03	26.501	154.0	.475
160	9.25	33.979	2.79					173.1	250	8.14	34.176	1.57	26.627	142.1	.551
189	8.83	34.090	2.19					158.5	300	7.45	34.210	1.19	26.754	130.0	.621
216	8.45	34.148	1.85					148.6	400	6.86	34.284	.65	26.895	116.6	.750
259	8.06	34.179	1.51					140.7	500	6.18	34.313	.49	27.008	105.9	.868
308	7.34	34.216	1.13					128.0							
383	7.00	34.279	.70					118.8							
462	6.37	34.298	.54					109.3							
542	6.05	34.331	.46					102.9							

RV ALEXANDER AGASSIZ EXPEDITION X (91.39) 20

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 53.9N	118 22.2W	04/21/65	2139 GMT	916M	320	08KT	1	320 03 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	15.46	33.509	6.21					321.2	0	15.46	33.509	6.21	24.743	321.2	0
8	15.36	33.512	6.28					318.8	10	15.34	33.513	6.27	24.773	318.3	.032
26	15.14	33.504	6.16					314.8	20	15.21	33.509	6.22	24.797	316.0	.064
52	13.50	33.497	5.69					282.5	30	15.09	33.500	6.14	24.817	314.1	.095
60	12.09	33.540	4.91					253.0	50	13.63	33.500	5.77	25.125	284.8	.155
73	11.78	33.56	4.77					246.0	75	11.75	33.566	4.72	25.543	245.0	.222
87	10.93	33.611	4.35					227.5	100	10.36	33.672	4.06	25.875	213.5	.280
100	10.36	33.672	4.06					213.5	125	9.79	33.784	3.65	26.058	196.1	.332
122	9.86	33.765	3.73					198.5	150	9.41	33.922	3.09	26.229	179.8	.379
139	9.53	33.870	3.29					185.5	200	8.81	34.086	2.49	26.453	158.6	.466
165	9.24	33.981	2.87					172.8	250	8.18	34.130	1.85	26.584	146.1	.544
191	8.96	34.08 A	2.58					161.2	300	7.78	34.196	1.27	26.696	135.5	.616
217	8.53	34.086	2.32					154.4	400	6.92	34.251	.75	26.862	119.8	.750
261	8.09	34.147	1.69					143.5	500	6.27	34.300	.48	26.987	107.9	.870
310	7.70	34.206	1.18					133.7							
386	7.02	34.244	.80					121.7							
465	6.48	34.283	.56					111.8							
549	5.99	34.324	.41					102.7							

RV ALEXANDER AGASSIZ EXPEDITION X (91.34) 22

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 03.7N	118 00.8W	04/22/65	0449 GMT	981M	290	08KT	4	300 04 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	16.05	33.471	5.95					336.5	0	16.05	33.471	5.95	24.582	336.5	0
10	16.00	33.478	6.02					334.9	10	16.00	33.478	6.02	24.598	334.9	.034
34	14.44	33.473	6.29					302.8	20	15.95	33.480	6.05	24.611	333.7	.067
43	13.52	33.486	5.96					283.6	30	15.60	33.480	6.15	24.689	326.2	.100
58	11.68	33.528	4.73					246.5	50	13.20	33.490	5.78	25.204	277.2	.161
73	10.74	33.629	4.08					222.9	75	10.68	33.640	4.03	25.794	221.2	.223
97	10.26	33.734	3.69					207.2	100	10.16	33.744	3.66	25.965	204.9	.277
116	9.67	33.796	3.52					193.2	125	9.57	33.828	3.48	26.130	189.2	.327
136	9.50	33.870	3.41					185.1	150	9.37	33.938	3.15	26.248	178.0	.373
165	9.24	34.008	2.83					170.8	200	8.90	34.110	2.12	26.458	158.1	.459
194	9.10	34.099	2.37					161.9	250	8.79	34.263	1.40	26.595	145.1	.537
233	8.92	34.246	1.51					148.3	300	8.11	34.230	1.30	26.674	137.6	.610
262	8.66	34.261	1.37					143.3	400	7.46	34.291	.76	26.817	124.0	.747
310	7.97	34.222	1.28					136.2	500	6.61	34.311	.55	26.950	111.4	.872
373	7.64	34.283	.85					127.1	600	5.86	34.353	.39	27.081	99.0	.985
470	6.91	34.299	.62					116.1							
558	6.09	34.337	.44					103.0							
633	5.76	34.364	.36					97.0							

A) POSSIBLE EVAPORATION. THE VALUE WAS ACCEPTED FOR INTERPOLATION AT STANDARD LEVELS OF DEPTH.

RV ALEXANDER AGASSIZ EXPEDITION X (91.29) 24

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 14.4N	117 41.5W	04/22/65	0952 GMT	787M	070	02KT	4	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	16.00	33.492	5.99					333.9	0	16.00	33.492	5.99	24.609	333.9	0
10	15.44	33.478	6.14					323.0	10	15.44	33.478	6.14	24.723	323.0	.033
30	13.20	33.499	5.81					276.6	20	14.48	33.480	6.07	24.933	303.1	.064
40	12.16	33.523	5.28					255.5	30	13.20	33.499	5.81	25.211	276.6	.093
50	11.83	33.532	5.02					248.9	50	11.83	33.532	5.02	25.502	248.9	.146
65	10.68	33.611	4.29					223.3	75	10.38	33.640	4.11	25.846	216.2	.204
80	10.30	33.654	4.04					213.8	100	9.96	33.797	3.37	26.040	197.7	.257
100	9.96	33.797	3.37					197.7	125	9.30	33.907	3.18	26.235	179.2	.304
125	9.30	33.907	3.18					179.2	150	9.07	33.982	2.86	26.331	170.2	.349
144	9.08	33.975	2.90					170.8	200	8.79	34.163	2.33	26.517	152.5	.431
174	8.76	34.019	2.72					162.8	250	8.42	34.180	1.60	26.587	145.8	.508
205	8.80	34.188	2.24					150.8	300	8.11	34.216	1.30	26.663	138.6	.581
235	8.50	34.165	1.78					148.1	400	7.51	34.246	.88	26.775	128.0	.720
275	8.30	34.211	1.38					141.8	500	6.75	34.278	.61	26.905	115.7	.849
334	7.84	34.215	1.25					134.9							
409	7.46	34.251	.83					127.0							
483	6.88	34.272	.66					117.7							
562	6.32	34.300	.43					108.6							

RV ALEXANDER AGASSIZ EXPEDITION X (90.30) 29

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 24.5N	117 54.6W	04/22/65	2025 GMT	611M	180	02KT	4	290 02 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	15.68	33.472	6.11					328.5	0	15.68	33.472	6.11	24.665	328.5	0
10	15.26	33.476	6.18					319.4	10	15.26	33.476	6.18	24.761	319.4	.032
29	13.68	33.473	5.95					287.7	20	15.00	33.480	6.15	24.821	313.7	.064
39	12.56	33.502	5.33					264.3	30	13.55	33.475	5.90	25.121	285.1	.094
49	11.81	33.559	4.62					246.6	50	11.74	33.564	4.57	25.543	245.0	.147
64	11.00	33.628	4.13					227.4	75	10.67	33.675	3.99	25.822	218.5	.206
78	10.60	33.690	3.95					216.1	100	9.86	33.895	2.95	26.134	188.8	.257
98	9.90	33.883	3.00					190.4	125	9.50	33.994	2.68	26.271	175.9	.303
123	9.52	33.988	2.69					176.6	150	9.34	34.054	2.49	26.344	168.9	.347
141	9.36	34.034	2.60					170.7	200	9.15	34.164	1.78	26.461	157.8	.430
172	9.31	34.101	2.15					165.0	250	8.87	34.212	1.42	26.542	150.1	.509
201	9.14	34.166	1.77					157.6	300	8.49	34.243	1.22	26.626	142.1	.585
230	9.00	34.189						153.7	400	7.51	34.264	.85	26.788	126.7	.726
268	8.74	34.230	1.35					146.8	500	6.76	34.301	.58	26.922	114.0	.853
328	8.24	34.246	1.13					138.3							
401	7.50	34.264	.85					126.6							
475	6.94	34.297	.65					116.7							
554	6.38	34.296	.43					109.6							

RV ALEXANDER AGASSIZ EXPEDITION X (90.37) 34

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 10.9N	118 22.8W	04/23/65	0800 GMT	1162M	270	05KT	0	280 03 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	15.26	33.494	6.12					318.1	0	15.26	33.494	6.12	24.775	318.1	0
10	15.28	33.482	6.17					319.4	10	15.28	33.482	6.17	24.762	319.4	.032
30	13.58	33.521	5.91					282.2	20	15.00	33.490	6.15	24.829	313.0	.064
40	13.16	33.529	5.56					273.6	30	13.58	33.521	5.91	25.152	282.2	.093
55	12.19	33.554	4.96					253.7	50	12.54	33.544	5.16	25.376	260.9	.148
70	11.20	33.595	4.43					233.3	75	10.60	33.630	4.12	25.801	220.5	.208
95	10.22	33.739	3.70					206.2	100	10.15	33.764	3.59	25.983	203.2	.262
116	9.93	33.840	3.28					194.1	125	9.79	33.885	3.15	26.136	188.6	.311
135	9.64	33.932	3.02					182.7	150	9.41	33.998	2.76	26.287	174.3	.357
155	9.34	34.015	2.69					171.8	200	8.89	34.087	2.40	26.441	159.7	.443
185	8.92	34.045	2.63					163.2	250	8.56	34.210	1.66	26.589	145.6	.521
220	8.87	34.147	2.04					154.9	300	8.12	34.259	1.19	26.695	135.6	.594
250	8.56	34.210	1.66					145.6	400	7.15	34.273	.73	26.846	121.3	.728
300	8.12	34.259	1.19					135.6	500	6.39	34.305	.51	26.974	109.1	.850
354	7.54	34.255	.92					127.8	600	5.80	34.345	.38	27.082	98.9	.961
439	6.86	34.291	.61					116.1							
524	6.22	34.310	.48					106.6							
610	5.76	34.351	.37					98.0							

RV ALEXANDER AGASSIZ EXPEDITION X (90.42) 40

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 00.5N	118 42.1W	04/23/65	1829 GMT	944M	330	05KT	0	290 07 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	15.59	33.479	5.98					326.1	0	15.59	33.479	5.98	24.691	326.1	0
10	15.33	33.477	6.02					320.8	10	15.33	33.477	6.02	24.747	320.8	.032
29	14.38	33.458	6.25					302.7	20	15.20	33.470	6.06	24.770	318.6	.064
39	13.28	33.471	5.90					280.1	30	14.27	33.459	6.23	24.961	300.4	.095
53	12.20	33.503	5.19					257.7	50	12.38	33.496	5.34	25.368	261.6	.152
68	11.70	33.553	4.76					245.1	75	11.53	33.580	4.67	25.595	240.1	.215
92	10.86	33.615	4.41					226.0	100	10.49	33.670	4.09	25.851	215.7	.272
113	9.94	33.779	3.53					198.8	125	9.66	33.877	3.21	26.152	187.1	.323
132	9.54	33.924	3.08					181.7	150	9.16	33.966	2.86	26.304	172.7	.369
151	9.14	33.967	2.85					172.3	200	8.49	34.076	2.40	26.495	154.6	.452
180	8.66	34.037	2.57					159.9	250	8.08	34.139	1.84	26.608	143.9	.529
214	8.40	34.098	2.28					151.6	300	7.67	34.199	1.32	26.715	133.7	.601
243	8.14	34.130	1.93					145.5	400	6.93	34.279	.74	26.882	117.9	.732
292	7.72	34.192	1.38					135.0	500	6.25	34.325	.49	27.009	105.8	.850
346	7.37	34.234	1.05					127.1	600	5.76	34.360	.40	27.099	97.3	.959
427	6.71	34.299	.62					113.5							
511	6.19	34.328	.48					104.9							
596	5.78	34.359	.40					97.6							

RV ALEXANDER AGASSIZ EXPEDITION X (89.46) 42

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 01.4N	119 03.2W	04/24/65	0025 GMT	1757M	310	08KT	1	290 04 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	15.43 A	33.499	6.10					321.3	0	15.43	33.499	6.10	24.742	321.3	0
9	15.16	33.500	6.21					315.5	10	15.14	33.502	6.21	24.806	315.2	.032
28	14.86	33.524	6.19					307.6	20	15.02	33.514	6.20	24.843	311.6	.063
52	12.20	33.556	5.01					253.8	30	14.15	33.540	5.93	25.049	292.0	.093
81	10.70	33.653	4.68					220.5	50	12.38	33.553	5.09	25.414	257.3	.149
105	9.92	33.789	3.61					197.7	75	10.93	33.629	4.75	25.740	226.2	.209
134	9.32	33.921	3.16					178.5	100	10.08	33.750	3.84	25.984	203.1	.264
159	9.08	34.020	2.71					167.5	125	9.46	33.890	3.22	26.196	183.0	.312
211	8.58	34.098	2.27					154.2	150	9.15	33.988	2.87	26.322	171.0	.357
316	7.55	34.222	1.18					130.4	200	8.69	34.089	2.34	26.475	156.4	.441
419	6.81	34.273	.69					116.8	250	8.18	34.151	1.85	26.601	144.6	.518
522	6.09	34.327	.56					103.7	300	7.70	34.207	1.34	26.716	133.6	.590
625	5.74	34.356	.42					97.4	400	6.94	34.267	.75	26.871	118.9	.722
728	5.23	34.390	.47					89.0	500	6.23	34.316	.57	27.005	106.2	.841
830	4.80	34.424	.48					81.7	600	5.82	34.350	.45	27.084	98.7	.951
933	4.40	34.449	.48					75.6	700	5.37	34.381	.45	27.162	91.3	1.054
1031	4.14	34.477	.60					70.9	800	4.92	34.415	.48	27.242	83.7	1.150
1255	3.84	34.498	.65					66.4	1000	4.21	34.469	.56	27.363	72.2	1.324
1557	3.76	34.504	.70					65.1	1200	3.89	34.496	.64	27.419	66.9	1.484
1667	3.75	34.505	.69					65.0	1500	3.78	34.503	.70	27.436	65.4	1.717

RV ALEXANDER AGASSIZ EXPEDITION X (89.39) 44

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 15.2N	118 38.3W	04/24/65	0448 GMT	1350M	300	05KT	1	270 03 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	15.62	33.485	6.09					326.3	0	15.62	33.485	6.09	24.689	326.3	0
10	15.51	33.488	6.17					323.8	10	15.51	33.488	6.17	24.716	323.8	.033
29	14.31	33.466	6.29					300.7	20	15.15	33.480	6.24	24.789	316.8	.065
39	13.92	33.484	6.29					291.6	30	14.26	33.468	6.29	24.968	299.7	.095
53	12.54	33.52 B	5.20					262.6	50	13.15	33.500	5.75	25.222	275.5	.153
68	11.78	33.571	4.69					245.1	75	11.41	33.599	4.43	25.632	236.6	.218
93	10.65	33.678	3.95					217.8	100	10.50	33.710	3.89	25.880	213.0	.274
112	9.98	33.774	3.74					199.8	125	9.56	33.830	3.52	26.133	188.9	.325
132	9.38	33.860	3.39					183.9	150	9.05	33.967	3.07	26.321	171.1	.371
151	9.04	33.972	3.05					170.4	200	8.86	34.122	2.23	26.474	156.6	.454
182	8.90	34.060	2.66					161.8	250	8.27	34.156	1.84	26.591	145.4	.532
216	8.77	34.162	1.90					152.3	300	8.08	34.236	1.27	26.683	136.7	.605
245	8.30	34.149	1.89					146.4	400	7.16	34.279	.78	26.850	120.9	.739
294	8.12	34.230	1.31					137.8	500	6.40	34.312	.50	26.979	108.7	.861
348	7.66	34.264	1.02					128.8	600	5.90	34.360	.38	27.081	99.0	.972
431	6.88	34.286	.67					116.7							
514	6.32	34.318	.48					107.2							
599	5.91	34.359	.38					99.2							

A) ALTERNATE VALUE, 15.58 DEGREES.
B) POSSIBLE EVAPORATION. THE VALUE WAS ACCEPTED FOR INTERPOLATION AT STANDARD LEVELS OF DEPTH.

RV ALEXANDER AGASSIZ EXPEDITION X (88.40) 52

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 26.1N	118 48.6W	04/24/65	1948 GMT	1313M	310	05KT	0	270 03 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	16.23	33.499	6.13					338.4
10	15.18	33.499	6.21					316.0
30	14.50	33.493	6.22					302.5
39	13.06	33.499	5.68					273.9
54	12.24	33.525	5.04					256.8
68	11.14	33.591	4.42					232.5
94	10.10	33.744	3.66					203.9
114	9.61	33.825	3.40					190.1
134	9.12	33.903	3.30					176.8
153	8.90	33.966	2.92					168.8
183	8.76	34.070	2.40					159.0
217	8.43	34.137	1.96					149.1
247	8.18	34.173	1.60					142.9
296	7.92	34.222	1.26					135.5
350	7.40	34.236	.98					127.3
433	6.85	34.263	.66					118.0
517	6.34	34.291	.46					109.5
601	5.90	34.330	.39					101.2

Z	T	S	O2	SIGT	DT	DD
0	16.23	33.499	6.13	24.562	338.4	0
10	15.18	33.499	6.21	24.797	316.0	.033
20	14.94	33.500	6.21	24.850	311.0	.064
30	14.50	33.493	6.22	24.939	302.5	.095
50	12.49	33.518	5.24	25.366	261.9	.152
75	10.77	33.634	4.17	25.773	223.2	.213
100	9.94	33.771	3.56	26.023	199.4	.266
125	9.32	33.869	3.35	26.202	182.4	.314
150	8.92	33.957	2.99	26.334	169.8	.359
200	8.60	34.109	2.17	26.503	153.8	.441
250	8.16	34.177	1.57	26.624	142.4	.517
300	7.88	34.224	1.24	26.703	134.9	.589
400	7.05	34.252	.77	26.844	121.4	.723
500	6.44	34.285	.49	26.953	111.2	.846
600	5.90	34.330	.39	27.057	101.3	.960

RV ALEXANDER AGASSIZ EXPEDITION X (88.36) 54

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 34.4N	118 32.5W	04/24/65	2355 GMT	888M	240	08KT	1	230 03 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	17.18		6.03					363.0
9	16.04	33.450	6.30					337.8
28	13.96	33.458	6.25					294.3
37	13.54	33.479	6.03					284.6
50	12.46	33.504	5.07					262.4
64	11.36	33.554	4.45					239.0
88	10.50	33.682	3.78					215.0
106	10.00	33.792	3.35					198.8
124	9.70	33.884	3.13					187.2
142	9.31	33.949	2.84					176.3
168	9.05	34.043	2.37					165.3
199	8.93	34.135	1.99					156.7
225	8.32	34.122	2.05					148.7
270	8.38	34.235	1.27					141.1
318	7.77	34.239	1.09					132.2
397	7.20	34.256	.72					123.1
476	6.62	34.289	.56					113.1
559	6.12	34.321	.36					104.5

Z	T	S	O2	SIGT	DT	DD
0	17.18	33.450	6.03	24.304	363.0	0
10	16.00	33.453	6.30	24.579	336.8	.035
20	14.20	33.450	6.27	24.969	299.6	.067
30	13.89	33.463	6.23	25.044	292.5	.097
50	12.46	33.504	5.07	25.361	262.4	.152
75	10.94	33.610	4.17	25.725	227.7	.214
100	10.15	33.756	3.47	25.976	203.8	.268
125	9.68	33.888	3.12	26.159	186.5	.318
150	9.20	33.979	2.69	26.307	172.4	.363
200	8.91	34.135	1.99	26.476	156.4	.447
250	8.35	34.191	1.65	26.606	144.0	.524
300	8.03	34.244	1.12	26.697	135.4	.596
400	7.18	34.257	.71	26.830	122.8	.731
500	6.46	34.299	.51	26.960	110.5	.855

RV ALEXANDER AGASSIZ EXPEDITION X (88.33) 56

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 40.5N	118 20.0W	04/25/65	0720 GMT	464M	270	08KT	0	310 02 12

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	16.20	33.448	6.61					341.4
10	14.62	33.457	6.65					307.6
30	12.02	33.525	4.64					252.8
44	10.96	33.595	4.30					229.2
54	10.68	33.625	4.11					222.2
68	9.89	33.746	3.50					200.4
83	9.56	33.836	3.33					188.5
98	9.47	33.892	3.02					183.0
123	9.48	33.942	2.88					179.4
143	9.21	34.005	2.62					170.6
173	9.02	34.082	2.23					162.0
202	8.82	34.118	2.04					156.3
238	8.52	34.182	1.47					147.1
292	8.20	34.208	1.32					140.5
347	7.96	34.220	1.13					136.2
405	7.62	34.237	.90					130.2

Z	T	S	O2	SIGT	DT	DD
0	16.20	33.448	6.61	24.530	341.4	0
10	14.62	33.457	6.65	24.885	307.6	.032
20	13.19	33.484	5.71	25.201	277.6	.062
30	12.02	33.525	4.64	25.461	252.8	.088
50	10.78	33.612	4.20	25.754	224.9	.136
75	9.69	33.793	3.40	26.083	193.7	.189
100	9.47	33.896	3.00	26.199	182.7	.236
125	9.46	33.948	2.86	26.242	178.6	.282
150	9.15	34.026	2.52	26.352	168.2	.326
200	8.83	34.116	2.05	26.473	156.7	.409
250	8.44	34.192	1.44	26.594	145.2	.487
300	8.16	34.210	1.29	26.650	139.9	.560
400	7.65	34.236	.92	26.745	130.8	.702

LA PARED EXPEDITION

The objective of LA PARED Expedition, supported by the Office of Naval Research, was to examine in greater detail an abrupt change in characteristics that had been observed at about 18°N on the SHELLBACK Expedition (Scripps Institution of Oceanography, University of California, 1965; Wooster and Cromwell, 1958): surface temperature increased sharply to the south, but subsurface temperature (100-300 m) decreased sharply, and oxygen at 250 m dropped from 3.0 to 0.2 ml/L in less than 60 miles.

In addition to the hydrographic cast data reported herein, the work on LA PARED included 227 STD lowerings, 56 bathythermograph lowerings, some carbon 14, tritium and borate sampling, 86 current measurements with the GEK, 34 drogue deployments, 14 net tows and 6 phytoplankton samplings.

The depth of the 28 Nansen bottle casts varied from 750 to approximately 4000 m; the casts consisted of 20 bottles, with 16 bottles being lowered for the overlapping deep cast on 2 stations.

As noted in the introduction, no data from the 227 STD analog recordings is tabulated in this report. However, features have been incorporated into the curves except in cases of poor agreement where bathythermograph features have been used.

Personnel participating in the collection of data were:

Ship's Captain:

Collinson, Barnes
RV Argo

Scientific personnel:

Wooster, Dr. W. S. (Chief scientist)
Anderson, M. C.
Berger, W. H.
Bradshaw, J. S.
Hester, F.
Houtermans, J. C.
Jerde, C. E.
Mantyla, A. W.
Muus, D. A.
Rosendahl, D. V.
Wirth, D.

Publications utilizing LA PARED data are:

Berger, W. H., 1970. Planktonic Foraminifera: Differential Production and Expatriation off Baja California. Limnol. Oceanogr., 15: 183-204.

Berger, W. H., 1971. Planktonic Foraminifera: Sediment Production in an Oceanic Front. J. Foram. Res., 1: 95-118.

Wooster, W. S., and J. H. Jones, 1966. Frontal Studies with *in situ* Salinometer. Second International Oceanographic Congress, Moscow, 1966, Abstracts of Papers, 398.

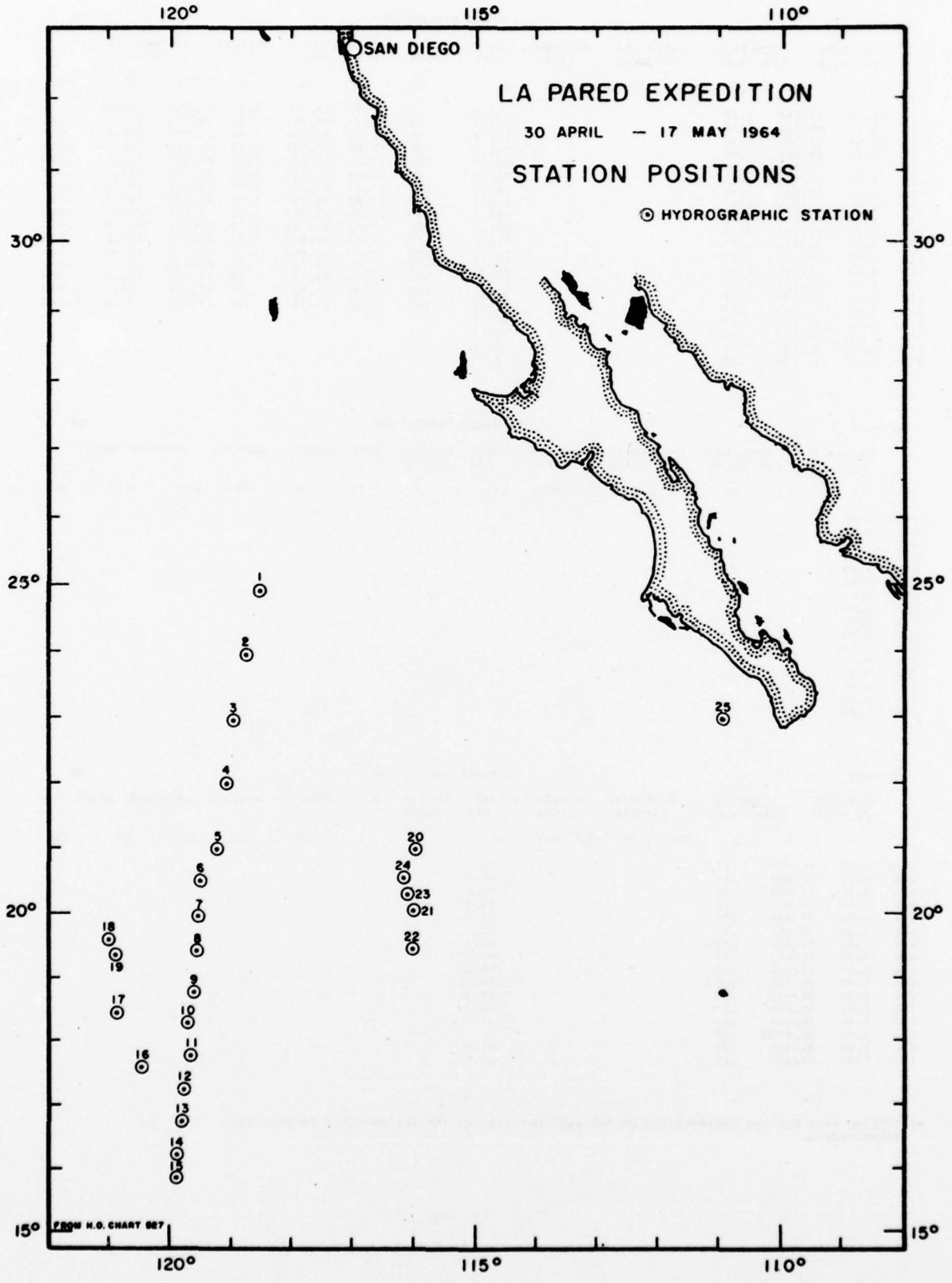

120°
115°
110°
SAN DIEGO
LA PARED EXPEDITION
30 APRIL — 17 MAY 1964
STATION POSITIONS
HYDROGRAPHIC STATION
30°
25°
20°
15°
1
2
3
4
5
6
7
8
9
10
11
12
13
14
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16
17
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25
FROM H.O. CHART 927

FIGURE 2

RV ARGO — LA PARED EXPEDITION — 1

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
24 55.0N	118 33.0W	04/30/65	1315 GMT	3892M	350	10KT	1	340 03 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	18.72	33.942	5.18					363.0	0	18.72	33.942	5.18	24.304	363.0	0
15	18.74	33.941	5.50					363.5	10	18.73	33.942	5.44	24.300	363.3	.036
30	18.64	33.934	5.38					361.6	20	18.71	33.939	5.46	24.305	362.9	.073
45	17.74	33.927	5.66					341.0	30	18.64	33.934	5.38	24.318	361.6	.109
59	17.47	33.917	5.51					335.5	50	17.62	33.922	5.63	24.559	338.7	.179
79	16.58	33.900	5.37					316.8	75	16.94	33.950	5.38	24.743	321.1	.262
99	14.04	33.603	5.52					285.2	100	13.97	33.601	5.50	25.133	284.0	.339
128	12.58	33.667	4.72					252.6	125	12.68	33.649	4.83	25.430	255.7	.407
152	11.15	33.756	4.14					220.5	150	11.26	33.748	4.19	25.774	223.1	.467
177	10.24	33.865	3,45					197.2	200	9.81	34.011	2.78	26.231	179.6	.570
202	9.79	34.024	2.72					178.2	250	9.06	34.226	1.57	26.522	152.0	.655
230	9.45	34.196	1.77					160.1	300	8.24	34.229	1.39	26.652	139.6	.731
259	8.88	34.226	1.54					149.2	400	7.01	34.289	.58	26.878	118.2	.865
303	8.20	34.228	1.38					139.1	500	6.64	34.414	.18	27.028	104.0	.983
352	7.30	34.234	.86					126.1	600	5.95	34.422	.17	27.124	94.9	1.090
401	7.01	34.290	.58					118.1	700	5.56	34.467	.22	27.208	86.9	1.190
475	6.88	34.414	.19					107.2							
553	6.10	34.400	.16					98.4							
651	5.84	34.451	.19					91.4							
756	5.11	34.479	.28					81.0							

RV ARGO — LA PARED EXPEDITION — Q1

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
24 55.0N	118 33.0W	04/30/65	1517 GMT	3815M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
594A	5.95														
603	5.98														
613	5.93														
622	5.94														
632	5.90														
642	5.86														
652	5.64														
662	5.65														
671	5.60														
681	5.50														
690	5.53														
700	5.43														
709	5.37														
719	5.30														
728	5.24														
738	5.20														

RV ARGO — LA PARED EXPEDITION — Q2

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
24 55.0N	118 33.0W	04/30/65	1638 GMT	3815M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
594A	6.02	34.410	.17					96.7							
604	6.01	34.409	.15					96.6							
614	6.05	34.427	.20					95.8							
624	5.99	34.436	.18					94.4							
634	5.90	34.434	.23					93.4							
644	5.88	34.441	.17					92.7							
654	5.80	34.452	.36U					90.9							
664	5.75	34.452	.17					90.3							
674	5.67	34.444	.20					90.0							
684	5.52	34.438	.36U					88.7							
694	5.52	34.449	.23					87.9							
702	5.42	34.456	.22					86.2							
712	5.40	34.448	.25					86.5							
722	5.34	34.493U	.27												
732	5.26	34.456	.27					84.4							
742	5.24	34.465	.25					83.5							

A) SPECIAL CAST FOR THE VERIFICATION OF THE PRESSURE FACTORS FOR THE UNPROTECTED REVERSING THERMOMETERS.

RV ARGO — LA PARED EXPEDITION — 2

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
23 57.0N	118 45.0W	04/30/65	2339 GMT	4218M	360	09KT	1	360 03 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.10	34.115	5.15	.31		.01		359.5	0	19.10	34.115	5.15	24.340	359.5	0
13	19.02	34.105	5.34	.29		.00		358.3	10	19.05	34.110	5.30	24.349	358.7	.036
26	18.84	34.072	5.45	.39		.00		356.4	20	18.94	34.086	5.41	24.359	357.7	.072
40	18.52	34.097	5.48	.27		.00		346.9	30	18.76	34.081	5.46	24.400	353.8	.107
58	17.92	33.981	5.37	.41		.02		341.3	50	18.20	34.039	5.42	24.508	343.5	.177
79	17.27	33.921	5.52	.32		.00		330.7	75	17.43	33.930	5.49	24.611	333.7	.263
101	15.56	33.869	5.32	.41		.02		297.0	100	15.65	33.871	5.33	24.978	298.8	.342
123	13.48	33.832	4.34	.89		.08		257.5	125	13.26	33.822	4.30	25.448	254.1	.412
146	11.28	33.764	4.00	1.34		.02		222.2	150	11.05	33.780	3.90	25.837	217.1	.472
168	10.34	33.878	3.44	1.65		.01		197.9	200	9.74	34.011	2.88	26.245	178.4	.573
194	9.80	33.984	3.01	1.90		.00		181.3	250	9.19	34.226	1.60	26.502	153.9	.658
220	9.57	34.101	2.40	2.18		.00		169.1	300	8.41	34.292	1.04	26.676	137.4	.733
250	9.19	34.226	1.60	2.53		.00		153.9	400	7.17	34.339	.43	26.896	116.6	.866
289	8.56	34.280	1.14	2.75		.00		140.4	500	6.57	34.403	.23	27.028	104.0	.983
337	7.93	34.318	.78	3.02		.00		128.5	600	6.00	34.436	.21	27.129	94.5	1.090
385	7.28	34.328	.50	3.24		.00		118.8	700	5.49	34.462	.26	27.212	86.6	1.189
459	6.85	34.384	.25	3.31		.00		109.0							
535	6.34	34.416	.21	3.35		.00		100.1							
637	5.82	34.445	.21	3.43		.00		91.7							
745	5.26	34.474	.31	3.52		.00		83.0							

RV ARGO — LA PARED EXPEDITION — 3

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
22 58.0N	118 57.0W	05/01/65	1046 GMT	4036M	360	10KT	1	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.68	34.334	4.81			.00		357.8	0	19.68	34.334	4.81	24.358	357.8	0
14	19.70	34.333	4.83			.00		358.4	10	19.69	34.333	4.82	24.353	358.3	.036
28	19.66	34.333	4.92			.01		357.4	20	19.68	34.333	4.87	24.356	358.0	.072
42	19.44	34.373	4.99			.00		349.1	30	19.65	34.342	4.93	24.372	356.4	.108
60	18.54	34.203	4.95			.00		339.7	50	19.04	34.299	4.98	24.496	344.7	.178
83	17.90	34.163	4.99			.01		327.6	75	18.35	34.220	4.98	24.608	334.0	.263
105	15.55	34.003	4.79			.09		287.0	100	16.26	34.050	4.86	24.978	298.8	.343
127	13.41	33.88 A	4.27			.05		252.6	125	13.56	33.888	4.32	25.439	254.9	.413
149	11.91	33.823	4.13			.01		228.9	150	11.85	33.824	4.10	25.724	227.8	.474
171	10.78	33.884	3.39			.00		204.8	200	9.83	34.025	2.76	26.239	178.8	.578
197	9.88	34.007	2.84			.00		180.9	250	9.17	34.252	1.43	26.527	151.6	.663
223	9.58	34.154	2.10			.00		165.3	300	8.68	34.346	.81	26.676	137.4	.737
253	9.12	34.261	1.36			.00		150.2	400	7.74	34.430	.30	26.885	117.6	.871
292	8.76								500	6.95	34.453	.16	27.016	105.1	.990
341	8.28	34.361	.62			.00		130.3	600	6.18	34.467	.17	27.130	94.4	1.098
390	7.82	34.424	.34			.01		119.1	700	5.57	34.477	.20	27.215	86.3	1.197
466	7.24	34.445	.16			.00		109.6							
543	6.58	34.461	.16			.00		99.8							
646	5.89	34.47 A	.18			.00		90.6							
754	5.28	34.486	.22			.00		82.3							

RV ARGO — LA PARED EXPEDITION — 4

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
22 00.0N	119 05.0W	05/01/65	1906 GMT	4189M	020	10KT	2	360 04 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.58	34.152	5.38					368.6	0	19.58	34.152	5.38	24.245	368.6	0
14	19.56	34.150	5.37			.00		368.2	10	19.57	34.152	5.37	24.248	368.3	.037
28	19.51	34.179	5.44			.01		364.9	20	19.55	34.156	5.40	24.256	367.5	.074
42	19.32	34.284	5.36			.01		352.6	30	19.50	34.201	5.43	24.302	363.2	.110
61	18.74	34.260	5.50			.01		340.3	50	18.95	34.210	5.38	24.450	349.0	.182
84	18.30	34.205	5.38			.00		333.9	75	18.68	34.280	5.44	24.572	337.4	.268
107	16.42	33.943	5.30					310.1	100	17.01	34.000	5.32	24.765	319.1	.351
130	13.80	33.830	4.69			.09		263.9	125	14.36	33.844	4.85	25.237	274.1	.426
153	12.38	33.796	4.21			.02		239.4	150	12.54	33.796	4.28	25.571	242.3	.491
177	10.72	33.927	3.37			.01		200.6	200	10.13	34.038	2.81	26.200	182.6	.599
205	10.07	34.059	2.71			.00		180.1	250	9.51	34.232	1.84	26.455	158.4	.687
233	9.66	34.166	2.18			.00		165.7	300	9.07	34.356	1.02	26.623	142.5	.765
265	9.40	34.284	1.56			.00		152.8	400	7.87	34.400	.52	26.842	121.6	.903
307	9.00	34.364	.94			.01		140.8	500	7.04	34.440	.23	26.994	107.3	1.025
357	8.44	34.383	.65			.02		131.0	600	6.36	34.462	.22	27.102	97.0	1.136
408	7.77	34.403	.50			.01		120.0	700	5.59	34.469	.24	27.206	87.1	1.236
487	7.12	34.435	.23			.01		108.7	800	5.03	34.483		27.284	79.8	1.329
568	6.62	34.460	.22			.02		100.4							
674	5.77	34.464	.23			.00		89.6							
784	5.10	34.483	.30			.00		80.6							

A) POSSIBLE EVAPORATION. THE VALUE WAS ACCEPTED FOR INTERPOLATION AT STANDARD LEVELS OF DEPTH.

RV ARGO — LA PARED EXPEDITION — 5

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
21 00.0N	119 14.0W	05/02/65	1316 GMT	3892M	010	10KT	1	350 04 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	21.90	34.025	5.03			.00		437.1	0	21.90	34.025	5.03	23.527	437.1	0
16	21.93	34.030	5.04			.00		437.5	10	21.92	34.030	5.04	23.523	437.4	.044
30	21.92	34.025	5.08			.00		437.6	20	21.93	34.029	5.05	23.522	437.6	.088
43	20.96	34.211	5.06			.00		399.1	30	21.92	34.025	5.08	23.521	437.6	.131
61	20.02	34.270	5.30			.00		370.9	50	20.45	34.290	5.27	24.122	380.3	.213
84	18.44	34.140	5.15			.00		341.9	75	19.11	34.194	5.24	24.398	354.0	.306
109	16.46	34.001	4.81			.10		306.8	100	17.40	34.080	4.99	24.733	322.1	.391
131	14.84	33.983	3.87			.09		273.6	125	15.24	33.972	4.17	25.146	282.8	.467
154	12.97	34.083	2.80			.01		229.3	150	13.26	34.058	2.99	25.631	236.7	.533
177	12.25	34.255	1.75			.00		203.3	200	10.72	34.220	1.81	26.238	179.0	.639
204	10.58	34.217	1.82			.00		176.8	250	9.72	34.343	1.12	26.505	153.6	.725
232	10.01	34.299	1.37			.00		161.4	300	9.33	34.463	.45	26.664	138.5	.801
264	9.55	34.374	.93			.00		148.5	400	8.13	34.479	.20	26.865	119.4	.936
305	9.30	34.472	.40			.00		137.4	500	7.08	34.461	.19	27.005	106.2	1.057
356	8.34	34.447	.33			.00		124.8	600	6.20	34.460	.18	27.121	95.2	1.166
406	8.12	34.484	.18			.00		118.9	700	5.64	34.469	.23	27.200	87.8	1.266
484	7.25	34.463	.19			.00		108.4							
564	6.45	34.458	.17			.00		98.4							
669	5.81	34.465	.22			.00		90.0							
778	5.24	34.480	.25			.01		82.3							

RV ARGO — LA PARED EXPEDITION — 6

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
20 31.0N	119 30.0W	05/02/65	1810 2028GMT	4199M	020	10KT	1	020 04 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	20.84	34.382	5.12			.00		383.6	0	20.84	34.382	5.12	24.087	383.6	0
15	20.82	34.382	5.13			.00		383.1	10	20.83	34.383	5.13	24.092	383.2	.038
30	20.81	34.378	5.08			.01		383.1	20	20.82	34.381	5.11	24.093	383.1	.077
45	20.10	34.395	5.23			.00		363.9	30	20.81	34.378	5.08	24.092	383.1	.115
64	18.83	34.261	5.38			.00		342.4	50	19.74	34.360	5.28	24.361	357.5	.189
88	18.53	34.314	5.39			.00		331.4	75	18.73	34.292	5.38	24.569	337.7	.277
113	16.07	34.048	5.17			.04		294.8	100	17.50	34.191	5.28	24.794	316.3	.359
137	13.50	33.987	3.67			.03		246.5	125	14.73	33.988	4.49	25.269	271.0	.434
161	11.94	34.156	2.30			.00		204.9	150	12.58	34.079	2.84	25.783	222.2	.496
186	10.61	34.122	2.29			.00		184.3	200	10.55	34.228	1.89	26.275	175.5	.598
215	10.48	34.322	1.37			.00		167.4	250	10.48	34.527	.57	26.519	152.3	.682
245	10.52	34.511	.65			.00		154.1	300	9.76	34.578	.24	26.682	136.8	.757
279	10.13	34.574	.28			.00		143.0	400	8.14	34.513	.16	26.891	117.0	.891
323	9.32	34.565	.19			.00		130.8	500	6.92	34.477	.20	27.039	103.0	1.008
377	8.49	34.531	.18			.01		120.8	600	6.14	34.464	.19	27.133	94.1	1.115
430	7.71	34.493	.13			.01		112.4	700	5.53	34.479	.25	27.222	85.7	1.213
513	6.80	34.476	.22			.01		101.5	800	4.95	34.499	.27	27.305	77.8	1.304
596	6.17	34.464	.19			.01		94.5	1000	4.19	34.524	.44	27.410	67.8	1.468
703	5.51	34.480	.25			.00		85.4	1200	3.63	34.552	.63	27.490	60.2	1.616
783A	5.05	34.496	.25					79.0	1500	2.87	34.596	1.19	27.596	50.2	1.811
812	4.89	34.500	.29			.00		77.0	2000	2.13	34.639	2.01	27.694	41.0	2.087
930A	4.41	34.515	.36					70.8	2500	1.81	34.658	2.37	27.734	37.1	2.331
1028A	4.11	34.528	.47					66.8	3000	1.60	34.673	2.82	27.762	34.5	2.560
1126A	3.84	34.541	.52					63.1	3500	1.53	34.679	3.00	27.772	33.6	2.784
1372A	3.16	34.579	.96					54.0	4000	1.58	34.681	3.09	27.770	33.7	3.012
1617A	2.64	34.608	1.40					47.3							
1863A	2.29	34.630	1.81					42.8							
2106A	2.03	34.644	2.14					39.8							
2401A	1.86	34.654	2.30					37.8							
2696A	1.72	34.665	2.53					35.9							
2991A	1.60	34.672	2.81					34.6							
3286A	1.54	34.677	3.00					33.8							
3432A	1.53	34.678	2.98					33.6							
3579A	1.53	34.679	3.03B					33.5							
3727A	1.55	34.680	3.06					33.6							
3874A	1.56	34.676	3.09					34.0							
4022A	1.58	34.682	3.09					33.7							
4172A	1.59	34.682	3.12					33.7							

A) CAST II.
B) ALTERNATE OXYGEN VALUE, 2.67.

RV ARGO — LA PARED EXPEDITION — 7

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
19 58.0N	119 31.0W	05/03/65	0143 GMT	4045M	030	16KT	1	350 04 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.45	34.015	4.79			.00		452.5	0	22.45	34.015	4.79	23.365	452.5	0
14	22.47	34.015	4.87			.00		453.1	10	22.46	34.015	4.84	23.361	452.9	.045
28	21.84	34.186	4.98			.01		423.9	20	22.44	34.020	4.92	23.372	451.9	.091
42	20.63	34.283	4.97					385.4	30	21.66	34.208	4.98	23.732	417.5	.134
61	19.88	34.392	5.18			.01		358.6	50	20.23	34.337	5.06	24.217	371.3	.213
84	19.14	34.352	5.14			.00		343.3	75	19.58	34.410	5.16	24.441	349.9	.304
108	18.66	34.289	5.26			.01		336.3	100	18.80	34.307	5.22	24.563	338.3	.391
131	17.64	34.167	5.21			.01		321.2	125	18.00	34.204	5.22	24.683	326.8	.475
154	15.30	34.025	4.18			.08		280.1	150	15.78	34.051	4.37	25.087	288.4	.553
178	12.10	33.848	3.75			.01		230.5	200	10.99	34.016	2.68	26.030	198.7	.677
206	10.88	34.078	2.38			.00		192.1	250	10.10	34.317	1.32	26.422	161.5	.769
234	10.44	34.249	1.73			.00		172.1	300	9.05	34.340	.88	26.614	143.3	.848
266	10.08	34.360	1.15			.00		158.0	400	8.06	34.457	.27	26.859	120.1	.986
308	8.96	34.360	.83			.01		140.5	500	7.13	34.482	.10	27.014	105.3	1.107
360	8.58	34.467	.29			.01		126.8	600	6.20	34.472	.16	27.131	94.3	1.215
411	7.91	34.449	.26			.00		118.5	700	5.45	34.478	.22	27.230	84.9	1.313
492	7.20	34.482	.10			.01		106.3	800	5.08	34.489		27.283	79.9	1.404
573	6.45	34.473	.14			.00		97.3							
679	5.58	34.476	.21			.00		86.5							
789	5.10	34.488	.25			.00		80.2							

RV ARGO — LA PARED EXPEDITION — 8

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
19 26.0N	119 34.0W	05/03/65	0940 GMT	4055M	040	12KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.52	33.988	4.89			.00		456.4	0	22.52	33.988	4.89	23.325	456.4	0
12	22.53	33.989	4.94			.00		456.6	10	22.53	33.990	4.93	23.323	456.5	.046
24	22.52	33.985	4.88			.01		456.6	20	22.52	33.987	4.90	23.323	456.6	.091
37	21.84	34.168	4.99			.00		425.2	30	22.34	34.050	4.92	23.423	447.0	.137
53	20.78	34.260	5.20			.00		390.9	50	21.08	34.260	5.17	23.930	398.6	.222
73	19.48	34.209	5.06			.00		362.0	75	19.42	34.207	5.09	24.329	360.6	.317
93	18.74	34.163	5.28			.00		347.4	100	18.21	34.122	5.22	24.567	337.9	.405
110	17.30	34.066	4.96			.05		320.8	125	15.71	34.049	3.98	25.102	287.0	.484
128	15.38	34.049	3.78			.13		280.0	150	13.21	33.989	3.21	25.589	240.7	.551
147	13.52	33.998	3.25			.02		246.1	200	10.74	34.101	2.32	26.142	188.1	.660
167	11.66	33.962	3.04			.00		214.2	250	10.00	34.370	1.07	26.480	156.0	.749
188	10.81	33.995	2.78			.01		197.1	300	9.35	34.440	.57	26.644	140.4	.826
212	10.67	34.200	1.82			.01		179.6	400	7.82	34.429	.31	26.873	118.7	.962
244	10.20	34.368	1.16			.01		159.4	500	6.95	34.467	.16	27.027	104.1	1.080
283	9.58	34.425	.71			.00		145.2	600	6.10	34.465	.19	27.138	93.6	1.187
321	9.04	34.449	.44			.00		135.1							
380	8.04	34.425	.36			.00		122.1							
442	7.44	34.445	.20			.00		112.3							
528	6.72	34.474	.14			.00		100.6							
626	5.88	34.455	.21			.00		91.6							

RV ARGO — LA PARED EXPEDITION — 9

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
18 48.0N	119 38.0W	05/03/65	1452 GMT	4257M	040	09KT	1	040 04 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.16	34.126	4.93			.00		436.7	0	22.16	34.126	4.93	23.531	436.7	0
14	22.18	34.124	4.94			.00		437.4	10	22.17	34.125	4.94	23.526	437.2	.044
28	21.78	34.165	4.94			.00		423.8	20	22.15	34.132	4.94	23.538	436.0	.087
41	20.40	34.339	5.09			.00		375.5	30	21.57	34.193	4.96	23.744	416.4	.130
59	19.26	34.270	5.17			.00		352.2	50	19.77	34.329	5.14	24.331	360.4	.208
80	18.06	34.160	5.29			.00		331.5	75	18.35	34.188	5.27	24.583	336.3	.296
103	16.42	34.045	5.11			.02		302.7	100	16.67	34.059	5.13	24.888	307.3	.377
124	13.98	33.999	3.60			.02		255.0	125	13.87	34.002	3.56	25.462	252.7	.448
146	12.23	34.078	2.77			.01		215.9	150	12.11	34.090	2.60	25.881	212.8	.507
167	12.18	34.289	1.67			.01		199.5	200	11.37	34.523	.67	26.355	167.8	.604
192	11.50	34.484	.84			.01		172.9	250	10.71	34.607	.29	26.541	150.3	.686
218	11.15	34.579	.41			.01		159.8	300	10.02	34.587	.22	26.645	140.4	.762
248	10.74	34.607	.29			.00		150.7	400	8.54	34.495	.25	26.816	124.2	.901
289	10.14	34.584	.25			.00		142.4	500	7.51	34.519	.10	26.988	107.8	1.025
336	9.60	34.580	.16			.01		134.1	600	6.71	34.517	.09	27.099	97.3	1.136
384	8.75	34.497	.28			.00		127.1	700	5.98	34.508	.14	27.189	88.8	1.238
459	7.90	34.517	.10			.00		113.3							
536	7.20	34.517	.10			.01		103.7							
637	6.44	34.515	.09			.00		94.0							
745	5.65	34.501	.20			.01		85.5							

RV ARGO — LA PARED EXPEDITION — 10

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
18 19.0N	119 43.0W	05/03/65	1946 GMT	4187M	030	13KT	1	360 06 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	22.62	34.110	4.41			.00		450.3	0	22.62	34.110	4.41	23.389	450.3	0
15	22.60	34.108	4.88			.00		449.9	10	22.61	34.109	4.76	23.392	450.0	.045
29	22.51	34.116	4.93			.00		446.8	20	22.58	34.105	4.90	23.397	449.4	.090
43	20.42	34.406	5.25			.00		371.2	30	22.50	34.120	4.95	23.430	446.3	.135
61	19.45	34.364	5.46			.00		350.0	50	19.91	34.343	5.36	24.304	362.9	.216
85	18.20	34.163	5.38			.00		334.6	75	18.77	34.254	5.41	24.528	341.6	.305
107	16.25	34.047	4.66			.18		298.8	100	16.92	34.069	4.96	24.838	312.1	.387
130	14.03	34.129	3.08			.03		246.5	125	14.47	34.095	3.45	25.409	257.8	.459
153	13.03	34.341	1.62			.01		211.5	150	13.10	34.307	1.80	25.855	215.4	.519
175	12.82	34.657	.57			.01		184.3	200	12.32	34.720	.38	26.328	170.4	.618
202	12.28	34.717	.37			.01		169.8	250	11.50	34.720	.25	26.484	155.6	.702
230	11.85	34.738	.38			.01		160.5	300	10.86	34.690	.21	26.578	146.7	.781
261	11.32	34.706	.18			.00		153.4	400	9.30	34.604	.25	26.778	127.7	.926
302	10.84	34.689	.21			.00		146.4	500	7.84	34.540	.21	26.956	110.9	1.053
352	10.02	34.646	.22			.08		135.9	600	6.97	34.516	.20	27.063	100.7	1.168
403	9.26	34.600	.25			.01		127.3	700	6.09	34.505	.25	27.171	90.4	1.273
482	8.03	34.546	.23			.02		113.0							
563	7.30	34.523	.16			.00		104.6							
666	6.38	34.507	.26			.00		93.8							
772	5.50	34.505	.15			.01		83.4							

RV ARGO — LA PARED EXPEDITION — 11

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
17 50.0N	119 47.0W	05/04/65	0234 GMT	3873M	040	17KT	1	020 06 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	23.91	33.905	4.79			.00		500.6	0	23.91	33.905	4.79	22.862	500.6	0
15	23.89	33.897	4.90			.01		500.7	10	23.90	33.900	4.85	22.861	500.6	.050
29	22.90	33.960	5.00			.01		468.7	20	23.78	33.900	4.97	22.896	497.4	.100
43	22.04	34.135	5.05			.00		432.9	30	22.83	33.972	5.00	23.225	465.9	.148
61	20.84	34.296	5.18			.01		389.8	50	21.58	34.213	5.10	23.757	415.1	.237
84	19.29	34.280	5.18			.01		352.2	75	19.88	34.290	5.18	24.272	366.0	.335
106	16.70	34.122	4.30			.33		303.3	100	17.46	34.159	4.64	24.779	317.7	.421
128	14.66	34.215	2.60			.03		252.9	125	14.89	34.189	2.85	25.390	259.5	.494
150	13.75	34.523	1.26			.02		212.1	150	13.75	34.523	1.26	25.890	212.1	.554
173	13.31	34.796	.66			.01		183.5	200	12.69	34.807	.31	26.324	170.8	.652
198	12.72	34.807	.32			.01		171.4	250	12.05	34.784	.19	26.431	160.6	.738
224	12.36	34.800	.23			.01		165.2	300	11.40	34.747	.12	26.524	151.9	.819
254	12.00	34.781	.18			.01		160.0	400	9.63	34.617	.09	26.735	131.8	.969
293	11.48	34.750	.11			.00		153.0	500	8.07	34.525	.11	26.911	115.1	1.101
340	10.88	34.716	.17			.01		145.1	600	7.03	34.524	.10	27.061	100.9	1.218
386	9.90	34.640	.09			.01		134.4	700	6.20	34.521	.10	27.171	90.5	1.323
457	8.65	34.541	.11			.01		122.4							
530	7.73	34.581U	.10			.01									
624	6.81	34.524	.10			.00		98.0							
728	6.00	34.519	.10			.01		88.3							

RV ARGO — LA PARED EXPEDITION — 12

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
17 17.0N	119 50.0W	05/04/65	1107 GMT	3982M	050	12KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	23.49	34.002	4.67			.00		481.9	0	23.49	34.002	4.67	23.058	481.9	0
15	23.51	34.001	4.89			.00		482.5	10	23.51	34.001	4.83	23.052	482.4	.048
35	23.51	34.006	5.06			.02		482.2	20	23.51	34.002	4.96	23.051	482.5	.097
50	23.50	34.003	4.91			.00		482.1	30	23.51	34.004	5.04	23.053	482.3	.145
70	21.69	34.281	5.20			.01		413.0	50	23.50	34.003	4.91	23.055	482.1	.242
99	18.08	34.182	5.02			.07		330.4	75	21.05	34.280	5.20	23.953	396.4	.352
119	15.52	34.216	3.02			.08		270.8	100	17.94	34.182	4.94	24.680	327.2	.443
148	13.64	34.452	.93			.01		215.1	125	14.93	34.230	2.49	25.413	257.4	.517
178	12.92	34.667	.22			.01		185.5	150	13.58	34.470	.85	25.885	212.5	.577
203	12.25	34.723	.13			.00		168.8	200	12.33	34.720	.14	26.328	170.4	.675
237	11.72	34.736	.06			.00		158.3	250	11.53	34.729	.06	26.486	155.5	.759
267	11.28	34.714	.07			.01		152.1	300	10.67	34.679	.14	26.604	144.2	.837
305	10.58	34.674	.15			.65		143.1	400	9.37	34.606	.07	26.770	128.5	.981
349	10.10	34.649	.08			.97		137.0	500	7.95	34.547	.11	26.947	111.7	1.110
412	9.18	34.595	.07			.01		126.4	600	6.86	34.518	.12	27.080	99.1	1.224
475	8.28	34.561	.09			.00		115.5	700	6.05	34.520	.10	27.188	88.8	1.327
565	7.18	34.521	.15			.00		103.1	800	5.37	34.524	.13	27.276	80.5	1.422
638	6.55	34.519	.08			.00		95.1							
746	5.71	34.521	.11			.00		84.7							
886	4.92	34.528	.15			.02		75.2							

RV ARGO — LA PARED EXPEDITION — 13

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
16 47.0N	119 52.0W	05/04/65	1612 GMT	4018M	040	14KT	1	020 07 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	24.14	33.976	4.34			.00		502.0	0	24.14	33.976	4.34	22.847	502.0	0
14	24.12	33.975	4.73			.00		501.5	10	24.13	33.976	4.66	22.851	501.6	.050
27	22.59	33.941	4.82			.00		461.7	20	24.01	33.970	4.78	22.881	498.8	.100
40	22.42	33.943	4.97			.00		456.9	30	22.55	33.942	4.85	23.281	460.6	.148
58	22.24	34.105	5.10			.00		440.4	50	22.32	33.998	5.06	23.388	450.3	.240
80	20.68	34.383	4.96			.00		379.4	75	21.18	34.345	4.99	23.966	395.2	.346
101	17.37	34.071	4.58			.17		322.1	100	17.54	34.085	4.60	24.704	324.8	.437
122	15.12	34.231	2.17			.04		261.2	125	14.83	34.230	2.06	25.435	255.3	.510
143	12.80	34.270	1.63			.01		212.3	150	12.75	34.391	1.23	25.990	202.6	.568
164	12.66	34.549	.44			.01		189.2	200	11.98	34.682	.13	26.365	166.9	.663
189	12.26	34.675	.18			.01		172.5	250	10.99	34.668	.06	26.538	150.5	.745
214	11.61	34.673	.10			.01		160.9	300	10.30	34.624	.06	26.625	142.2	.821
243	11.09	34.673	.07			.01		151.8	400	9.02	34.556	.11	26.788	126.8	.963
282	10.55	34.634	.05			.01		145.5	500	7.64	34.484	.10	26.942	112.2	1.091
328	9.94	34.609	.07			.31		137.3	600	6.69	34.464	.10	27.060	101.0	1.206
376	9.42	34.582	.08			.01		131.1	700	5.97	34.473	.10	27.161	91.4	1.311
448	8.20	34.508	.15			.00		118.2							
523	7.44	34.477	.08			.01		109.9							
621	6.50	34.463	.11			.00		98.6							
727	5.84	34.479	.10			.01		89.4							

RV ARGO — LA PARED EXPEDITION — 14

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
16 16.0N	119 55.0W	05/04/65	2054 GMT	4015M	040	20KT	1	030 08 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	24.32	34.008	4.78	.17		.00		504.8	0	24.32	34.008	4.78	22.818	504.8	0
15	24.30	34.010	4.83	.16		.00		504.1	10	24.31	34.007	4.81	22.821	504.5	.050
29	24.24	34.016	4.88	.17		.01		501.9	20	24.28	34.012	4.85	22.834	503.3	.101
43	23.88	34.054	4.88	.18		.00		489.0	30	24.21	34.019	4.88	22.857	501.0	.151
62	23.01	34.066	5.05	.21		.00		464.1	50	23.80	34.060	4.90	23.011	486.4	.250
85	20.52	34.446	5.20	.22		.00		370.8	75	21.32	34.360	5.18	23.940	397.6	.361
109	16.40	34.250	2.80	1.38		.21		287.3	100	18.05	34.352	3.83	24.784	317.3	.451
132	13.90	34.340	1.50	2.11		.02		228.4	125	14.42	34.060	1.85	25.392	259.4	.524
157	12.86	34.589	.48	2.63		.01		190.0	150	13.06	34.588	.71	26.080	194.0	.582
180	12.35	34.673	.18	2.72		.01		174.3	200	11.88	34.700	.08	26.398	163.8	.674
209	11.69	34.704	.06	2.77		.00		160.1	250	11.16	34.703	.04	26.535	150.8	.755
237	11.37	34.713	.02	2.92		.30		153.8	300	10.46	34.673	.07	26.636	141.2	.831
269	10.84	34.684	.08	2.86		.03		146.7	400	8.97	34.586	.07	26.818	124.0	.971
312	10.32	34.668	.06	2.92		1.13		139.2	500	7.70	34.523	.10	26.964	110.1	1.096
363	9.55	34.623	.06	3.05		.54		130.1	600	6.78	34.511	.09	27.085	98.6	1.209
414	8.76	34.571	.07	3.09		.01		121.8	700	5.98	34.507	.15	27.187	89.0	1.313
494	7.76	34.524	.10	3.21		.00		110.8	800	5.40	34.506	.16	27.258	82.2	1.408
574	7.02	34.513	.08	3.30		.00		101.6							
681	6.10	34.507	.15	3.44		.00		90.4							
792	5.45	34.506	.16	3.38		.06		82.8							

RV ARGO — LA PARED EXPEDITION — 15

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
15 55.0N	119 59.0W	05/05/65	0955 1221GMT	4093M	050	16KT		030 08 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	24.49	34.051	4.69			.00		506.5	0	24.49	34.051	4.69	22.800	506.5	0
14	24.53	34.051	4.78			.00		507.7	10	24.52	34.051	4.77	22.791	507.3	.051
27	24.44	34.060	4.75			.00		504.5	20	24.50	34.054	4.77	22.801	506.5	.101
41	24.35	34.080	4.77			.00		500.4	30	24.42	34.065	4.75	22.831	503.6	.152
59	22.71	34.098	5.01			.00		453.6	50	23.67	34.082	4.88	23.067	481.1	.251
81	20.09	34.278	5.12			.01		372.1	75	20.87	34.233	5.09	23.966	395.2	.361
104	16.71	34.206	3.44			.58		297.4	100	17.31	34.222	3.79	24.864	309.6	.450
125	13.99	34.241	2.02			.02		237.5	125	13.99	34.241	2.02	25.622	237.5	.519
147	13.23	34.670	.13			.01		191.2	150	13.11	34.693	.12	26.151	187.2	.573
168	12.44	34.744	.06			.20		170.8	200	11.78	34.749	.09	26.454	158.5	.662
195	11.86	34.747	.09			1.43		160.0	250	11.13	34.734	.06	26.563	148.1	.741
221	11.51	34.751	.06			1.55		153.4	300	10.43	34.680	.11	26.648	140.1	.816
251	11.12	34.733	.06			.67		147.9	400	9.15	34.627	.07	26.821	123.6	.955
289	10.58	34.693	.12			1.37		141.7	500	7.76	34.553	.06	26.979	108.6	1.080
335	9.96	34.647	.06			1.12		134.9	600	6.77	34.536	.08	27.106	96.6	1.191
382	9.41	34.640	.07			.51		126.6	700	6.09	34.534	.11	27.194	88.3	1.293
455	8.34	34.578	.05			.00		115.1	800	5.50	34.534	.16	27.268	81.3	1.388
530	7.41	34.542	.07			.00		104.7	1000	4.47	34.549	.40	27.399	68.9	1.558
631	6.54	34.537	.09			.00		93.6	1200	3.80	34.567	.75	27.483	60.9	1.709
741	5.86	34.532	.12			.01		85.6	1500	3.05	34.598	1.02	27.581	51.6	1.909
988A	4.52	34.548	.38					69.4	2000	2.17	34.637	1.92	27.689	41.4	2.191
1117A	4.06	34.558	.61					64.0	2500	1.81	34.658	2.48	27.733	37.2	2.437
1204A	3.79	34.566	.76					60.8	3000	1.64	34.672	2.80	27.758	34.9	2.668
1288A	3.49	34.585	.84					56.5	3500	1.56	34.673	2.99	27.765	34.2	2.895
1505A	3.04	34.597	1.03					51.6							
1721A	2.61	34.618	1.56					46.3							
1939A	2.24	34.632	1.83					42.3							
2160A	2.02	34.646	2.14					39.6							
2429A	1.85	34.655	2.42					37.6							
2700A	1.73	34.664	2.64					36.1							
2974A	1.65	34.672	2.79					34.9							
3250A	1.59	34.672	2.91					34.5							
3390A	1.57	34.675	2.96					34.1							
3533A	1.56	34.672	3.00					34.3							
3674A	1.57	34.674	3.03					34.2							
3819A	1.58	34.675	3.11					34.2							

RV ARGO — LA PARED EXPEDITION — 15

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
15 55.0N	119 59.0W	05/05/65	1543 GMT	3959M	040	14KT	2	360 10 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1438	13.56	34.696				.02		195.7	150	13.28	34.701		26.123	189.9	
157	13.02	34.709				.01		184.3	200	11.80	34.748		26.450	158.8	
172	12.51	34.735				.02		172.8	250	11.10	34.723		26.561	148.3	
186	12.08	34.747				1.16		164.0	300	10.34	34.678		26.662	138.7	
200	11.80	34.748				1.56		158.8	400	8.89	34.589		26.833	122.5	
214	11.69	34.750				1.68		156.7	500	7.58	34.553		27.005	106.2	
228	11.46	34.745				1.39		153.0	600	6.59	34.539		27.133	94.1	
242	11.21	34.731				1.30		149.6	700	5.91	34.532		27.216	86.2	
256	11.02	34.717				1.21		147.4							
270	10.84	34.706				1.35		145.1							
285	10.56	34.689				1.45		141.6							
298	10.37	34.679				1.60		139.2							
313	10.14	34.671				1.28		136.0							
327	10.00	34.659				1.36		134.6							
341	9.78	34.647				1.03		132.0							
355	9.56	34.631				.51		129.6							
369	9.41	34.627				.54		127.6							
384		34.612				.21									
398	8.92	34.589				.00		122.9							
412		34.583				.00									
426	8.52	34.576				.01		117.9							
769	5.62	34.527				.00		83.2							

A) CAST II.
B) SPECIAL CAST TO LOCATE THE NITRITE MAXIMUM.

RV ARGO — LA PARED EXPEDITION — 16

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
17 39.0N	120 32.0W	05/06/65	0325 GMT	4026M	030	16KT	1	020 06 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	23.82	34.137	4.65			.00		481.4	0	23.82	34.137	4.65	23.063	481.4	0
12	23.83	34.134	4.61			.00		481.9	10	23.83	34.134	4.62	23.058	481.8	.048
25	23.83	34.138	4.70			.00		481.6	20	23.83	34.137	4.66	23.060	481.7	.096
37	22.35	34.047	4.96			.00		447.5	30	23.80	34.130	4.70	23.064	481.3	.145
53	21.07	34.284	5.08			.00		396.6	50	21.19	34.228	5.06	23.874	403.9	.233
73	19.82	34.285	5.05			.01		364.9	75	19.66	34.272	5.03	24.314	362.0	.330
93	17.70	34.131	4.88			.08		325.3	100	16.58	34.100	4.48	24.942	302.2	.413
113	15.22	34.087	3.51			.06		273.9	125	14.37	34.345	2.13	25.622	237.5	.482
132	14.00	34.504	1.38			.02		218.4	150	13.28	34.523	.66	25.986	202.9	.538
151	13.25	34.520	.64			.01		202.6	200	12.24	34.717	.11	26.341	169.2	.633
172	12.64	34.644	.22			.01		181.9	250	11.42	34.718	.06	26.499	154.2	.717
193	12.34	34.703	.12			.00		172.0	300	10.72	34.689	.06	26.603	144.3	.795
219	11.97	34.739	.09			.00		162.5	400	9.08	34.592	.10	26.806	125.1	.937
251	11.40	34.717	.06			.00		154.0	500	7.77	34.538	.07	26.966	109.9	1.062
290	10.88	34.699	.06			.01		146.3	600	6.72	34.521	.08	27.100	97.2	1.175
330	10.21	34.655	.07			.21		138.3							
390	9.21	34.598	.11			.01		126.6							
453	8.41	34.561	.06			.00		117.4							
539	7.28	34.526	.07			.00		104.1							
631	6.52	34.523	.09			.02		94.4							

RV ARGO — LA PARED EXPEDITION — 17

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
18 29.0N	120 54.0W	05/06/65	1518 GMT	4450M	020	16KT	1	050 08 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	22.54	34.012	4.94			.00		455.2	0	22.54	34.012	4.94	23.337	455.2	0
15	22.54	34.004	4.94			.00		455.8	10	22.54	34.006	4.94	23.333	455.6	.046
29	22.54	34.004	5.01			.00		455.8	20	22.54	34.004	4.97	23.331	455.8	.091
43	22.51	34.003	5.00			.00		455.0	30	22.54	34.004	5.01	23.332	455.7	.137
61	22.54	34.006	4.90			.00		455.6	50	22.52	34.004	4.95	23.337	455.2	.228
85	20.78	34.322	5.09			.00		386.4	75	21.91	34.170	4.98	23.634	426.9	.339
108	18.60	34.199	5.13			.01		341.4	100	19.42	34.276	5.12	24.381	355.6	.438
131	15.90	34.191	3.11			.11		280.7	125	15.95	34.190	3.14	25.156	281.9	.518
154	14.08	34.391	1.57			.02		228.3	150	14.46	34.343	1.90	25.601	239.5	.584
177	12.98	34.584	.43			.01		192.7	200	12.47	34.696	.15	26.280	174.9	.690
204	12.42	34.707	.10			.01		173.1	250	11.69	34.730	.05	26.458	158.1	.776
232	12.01	34.729	.06			.03		164.0	300	10.75	34.681	.05	26.592	145.4	.856
265	11.40	34.723	.04			.09		153.6	400	9.39	34.603	.08	26.764	129.0	1.000
306	10.64	34.672	.05			.01		144.2	500	7.98	34.534	.09	26.932	113.1	1.130
357	9.86	34.619	.07			.01		135.3	600	6.86	34.523	.07	27.083	98.8	1.245
408	9.30	34.600	.08			.00		127.9	700	6.07	34.513	.09	27.180	89.6	1.348
488	8.14	34.538	.09			.00		115.2	800	5.41	34.510	.12	27.260	82.0	1.444
568	7.16	34.526	.07			.01		102.5							
673	6.28	34.516	.08			.00		91.9							
783	5.51	34.509	.12			.01		83.2							

RV ARGO — LA PARED EXPEDITION — 18

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
19 37.0N	121 00.0W	05/08/65	1359 GMT	4218M	050	10KT	1	030 06 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.42	34.053	4.46			.00		449.0	0	22.42	34.053	4.46	23.402	449.0	0
15	22.44	34.051	4.68			.00		449.7	10	22.44	34.052	4.62	23.397	449.5	.045
30	22.44	34.050	4.78			.00		449.7	20	22.44	34.051	4.72	23.395	449.7	.090
45	22.42	34.056	4.87			.00		448.8	30	22.44	34.050	4.78	23.394	449.7	.135
65	20.39	34.473	5.18			.00		365.5	50	21.95	34.171	4.96	23.622	428.0	.223
90	19.04	34.290	5.17			.00		345.4	75	19.90	34.400	5.18	24.351	358.5	.322
115	16.86	34.124	4.28			.01		306.7	100	18.34	34.220	4.98	24.611	333.7	.409
139	14.33	34.088	3.21			.32		255.5	125	15.78	34.093	3.81	25.120	285.2	.487
164	12.40	34.140	2.41			.02		214.5	150	13.35	34.093	2.86	25.639	235.9	.554
188	11.83	34.365	1.34			.01		187.6	200	11.54	34.434	1.02	26.255	177.3	.659
218	11.12	34.498	.73			.00		165.3	250	10.47	34.536	.51	26.528	151.5	.744
247	10.51	34.533	.52			.00		152.3	300	9.75	34.538	.30	26.653	139.6	.820
281	10.09	34.547	.38			.00		144.4	400	8.16	34.458	.21	26.845	121.4	.957
325	9.29	34.520	.22			.01		133.6	500	7.26	34.462	.14	26.979	108.6	1.079
379	8.48	34.484	.16			.00		124.1	600	6.39	34.480	.11	27.113	96.0	1.190
433	7.72	34.426	.29			.00		117.6	700	5.70	34.489	.11	27.208	86.9	1.290
517	7.17	34.476	.09			.00		106.4	800	5.13	34.503	.21	27.287	79.4	1.383
601	6.38	34.480	.11			.00		95.9							
710	5.64	34.490	.11			.01		86.2							
819	5.04	34.506	.24			.01		78.2							

RV ARGO — LA PARED EXPEDITION — 19

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
19 22.0N	120 54.0W	05/10/65	1304 GMT	4189M	040	07KT		040 04 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.52	34.026	4.72			.01		453.6	0	22.52	34.026	4.72	23.354	453.6	0
15	22.54	34.021	4.85			.01		454.5	10	22.54	34.022	4.81	23.346	454.4	.045
30	22.54	34.025	4.91			.01		454.2	20	22.54	34.023	4.87	23.345	454.4	.091
45	22.12	34.157	5.11			.00		433.4	30	22.54	34.025	4.91	23.347	454.2	.136
65	20.71	34.340	5.14			.00		383.3	50	21.82	34.221	5.12	23.696	420.9	.224
90	18.46	34.198	4.85			.06		338.2	75	19.92	34.280	5.02	24.254	367.7	.323
114	16.04	34.170	3.35			.18		285.3	100	17.42	34.167	4.32	24.794	316.3	.410
138	14.18	34.304	1.79			.02		236.7	125	15.11	34.222	2.59	25.368	261.6	.483
163	13.06	34.435	.97			.01		205.2	150	13.61	34.382	1.27	25.809	219.7	.544
187	11.68	34.374	1.29			.01		184.2	200	11.57	34.476	.95	26.282	174.8	.645
216	11.44	34.573	.44			.01		165.3	250	10.84	34.596	.31	26.508	153.3	.729
246	10.91	34.595	.32			.01		154.5	300	10.10	34.577	.23	26.624	142.3	.806
280	10.36	34.585	.27			.01		146.0	400	8.59	34.502	.19	26.813	124.4	.947
324	9.78	34.561	.19			.00		138.3	500	7.30	34.474	.18	26.983	108.3	1.071
380	8.83	34.501	.20			.00		128.0	600	6.41	34.456	.17	27.092	98.0	1.182
434	8.22	34.509	.18			.01		118.5	700	5.75	34.485	.19	27.199	87.8	1.284
517	7.08	34.464	.18			.01		106.1	800	5.26	34.507	.21	27.276	80.5	1.377
601	6.40	34.456	.17			.00		97.9							
710	5.69	34.489	.19			.00		86.8							
820	5.18	34.510	.21			.01		79.4							

RV ARGO — LA PARED EXPEDITION — 20

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
21 00.0N	116 00.0W	05/12/65	0026 GMT	3835M	360	10KT	1	360 04 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.03	34.211	4.96			.01		427.1	0	22.03	34.211	4.96	23.631	427.1	0
15	22.02	34.210	4.98			.00		426.9	10	22.02	34.211	4.97	23.633	427.0	.043
29	22.00	34.203	5.00			.01		426.9	20	22.01	34.208	4.99	23.633	426.9	.085
43	21.74	34.240	5.11			.01		417.3	30	21.98	34.206	5.00	23.641	426.2	.128
63	19.80	34.193	5.27			.00		371.0	50	20.97	34.230	5.20	23.937	398.0	.211
87	17.74	34.099	4.62			.11		328.5	75	18.90	34.152	5.08	24.420	351.9	.305
111	14.38	34.041	3.30			.07		260.0	100	15.72	34.050	3.81	25.100	287.1	.386
135	12.62	34.219	1.88			.01		212.7	125	13.15	34.124	2.46	25.703	229.8	.451
159	11.98	34.390	1.11			.01		188.4	150	12.40	34.380	1.28	26.050	196.8	.505
183	10.83	34.358	1.25			.00		170.6	200	11.08	34.500	1.05	26.391	164.4	.598
212	10.66	34.512	.60			.01		156.4	250	10.01	34.485	.54	26.567	147.7	.678
240	10.20	34.491	.55			.01		150.3	300	9.21	34.460	.45	26.682	136.8	.752
274	9.58	34.473	.50			.01		141.7	400	8.42	34.543	.09	26.871	118.9	.887
317	9.02	34.461	.40			.00		133.9	500	7.22	34.487	.14	27.005	106.2	1.007
369	8.82	34.567	.07			.00		123.0	600	6.39	34.480	.15	27.113	96.0	1.116
422	8.10	34.513	.10			.00		116.4	700	5.74	34.496	.13	27.208	86.9	1.217
504	7.18	34.487	.14			.00		105.7	800	5.16	34.499	.21	27.281	80.0	1.310
588	6.48	34.479	.15			.00		97.2							
695	5.77	34.495	.13			.00		87.3							
804	5.14	34.499	.21			.01		79.8							

RV ARGO — LA PARED EXPEDITION — 21

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
20 01.0N	116 02.0W	05/12/65	1342 GMT	3778M	330	07KT	1	340 03 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	23.32	33.971	4.67			.00		479.4	0	23.32	33.971	4.67	23.083	479.4	0
15	23.33	33.967	4.91			.00		480.0	10	23.33	33.969	4.85	23.080	479.8	.048
30	22.54	34.030	5.02			.01		453.9	20	23.32	33.960	4.95	23.075	480.2	.096
45	20.52	34.235	5.17			.00		386.1	30	22.54	34.030	5.02	23.351	453.9	.143
65	18.42	34.090	5.14			.02		345.1	50	19.99	34.221	5.16	24.191	373.7	.226
89	15.25	33.991	3.88			.22		281.5	75	17.16	34.048	4.67	24.766	318.9	.313
114	12.78	33.971	3.10			.02		233.9	100	13.72	33.920	3.45	25.431	255.7	.385
138	11.73	34.207	1.86			.01		197.4	125	11.72	33.970	2.64	25.862	214.7	.445
163	12.54	34.669	.26			.01		178.2	150	12.60	34.520	1.25	26.119	190.2	.496
188	12.00	34.685	.11			.00		167.1	200	11.89	34.716	.07	26.407	162.9	.587
217	11.77	34.752	.05			1.20		158.0	250	11.22	34.713	.04	26.532	151.1	.668
246	11.28	34.719	.04			.64		151.7	300	10.41	34.645	.06	26.623	142.4	.745
281	10.73	34.666	.06			.01		146.2	400	8.31	34.470	.24	26.832	122.6	.884
325	9.93	34.609	.07			.00		137.2	500	7.34	34.485	.09	26.987	107.9	1.007
379	8.58	34.474	.25			.00		126.3	600	6.51	34.482	.11	27.098	97.4	1.118
433	8.00	34.482	.18			.00		117.3	700	5.75	34.489	.13	27.202	87.6	1.220
518	7.17	34.485	.07			.00		105.7	800	5.19	34.501	.16	27.280	80.1	1.313
602	6.50	34.482	.11			.00		97.2							
710	5.68	34.490	.13			.00		86.6							
820	5.10	34.504	.17			.01		79.0							

RV ARGO — LA PARED EXPEDITION — 22

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
19 28.0N	116 01.0W	05/13/65	1217 GMT	3854M	350	10KT		350 02 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	23.64	33.965	4.77			.00		488.8	0	23.64	33.965	4.77	22.986	488.8	0
25	23.64	33.964	4.90			.00		488.8	10	23.64	33.965	4.83	22.986	488.8	.049
50	21.70	34.360	5.01			.02		407.6	20	23.64	33.965	4.88	22.985	488.8	.098
59	19.81	34.177	4.66			.07		372.5	30	23.14	33.970	4.92	23.134	474.6	.146
69	18.80	34.181	4.74			.09		347.5	50	21.70	34.360	5.01	23.836	407.6	.235
79	17.18	34.127	3.95			.30		313.7	75	17.80	34.138	4.36	24.680	327.2	.327
89	16.58	34.280	2.44			.50		289.1	100	15.96	34.448	1.17	25.352	263.2	.401
99	16.06	34.453	1.17A			.25		265.0	125	14.08	34.542	.50	25.836	217.2	.462
109	14.98	34.398	1.16			.04		246.1	150	13.12	34.625	.28	26.096	192.5	.514
118	14.28	34.504	.71			.02		224.0	200	11.87	34.709	.06	26.408	162.9	.606
128	14.03	34.552	.44			.02		215.5	250	11.24	34.719	.06	26.533	151.0	.687
177	12.12	34.682	.09			.01		169.5	300	10.56	34.670	.05	26.617	143.0	.763
187		34.706	.11			.01									
197	11.89	34.704	.06			.00		163.7							
207		34.706	.06			.00									
217	11.72	34.733	.07			.03		158.5							
227		34.736	.05			.45									
246	11.29	34.724	.04			.53		151.6							
271	10.96	34.691	.15			.03		148.3							
296	10.62	34.674	.05			.23		143.8							
331	10.10	34.642	.08			.02		137.5							
375	9.74	34.631	.07			.25		132.5							

RV ARGO — LA PARED EXPEDITION — 23

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
20 18.0N	116 09.0W	05/14/65	1605 GMT	3437M	360	12KT	1	350 04 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.97	34.004	4.86			.00		467.4	0	22.97	34.004	4.86	23.209	467.4	0
25	22.47	34.027	4.91			.01		452.2	10	22.97	34.000	4.88	23.206	467.7	.047
50	17.67	34.307	2.88			.52		311.7	20	22.32	34.011	4.90	23.398	449.4	.093
60	16.28	34.225	3.01			.40		286.5	30	22.41	34.050	4.90	23.403	448.9	.138
70	15.48	34.227	2.41			.15		269.1	50	17.67	34.307	2.88	24.842	311.7	.214
80	14.42	34.104	2.93			.06		256.1	75	14.93	34.160	2.67	25.360	262.4	.286
90	14.02	34.189	2.39			.03		241.9	100	13.58	34.178	2.22	25.658	234.1	.349
99	13.70	34.195	2.16			.02		235.1	125	11.82	34.120	2.70	25.960	205.4	.405
109	12.36	34.008	2.89			.02		223.4	150	12.15	34.614	.72	26.279	175.1	.453
119	11.36	33.929	3.07			.01		211.4	200	11.02	34.594	.23	26.474	156.5	.538
129	12.68	34.431	1.01			.01		198.3	250	10.42	34.601	.23	26.587	145.8	.616
178	11.44	34.611	.33			.01		162.5	300	9.36	34.501	.37	26.689	136.1	.690
187		34.664	.36			.01									
197	11.05	34.587	.23			.00		157.5							
207		34.647	.23			.00									
217	10.89	34.632	.23			.00		151.4							
226		34.661	.10			.01									
246	10.56	34.623	.17			.01		146.5							
270	9.70	34.493	.49			.00		142.1							
295	9.38	34.495	.40			.01		136.9							
330	9.24	34.535	.20			.00		131.8							
375	8.58	34.521	.17			.00		122.8							

RV ARGO — LA PARED EXPEDITION — 24

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
20 33.0N	116 11.0W	05/15/65	0850 GMT	3940M	020	13KT	1	350 06 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.07	34.158	4.92			.01		432.0	0	22.07	34.158	4.92	23.580	432.0	0
14	22.08	34.155	5.01			.01		432.5	10	22.08	34.156	4.99	23.576	432.4	.043
28	21.91	34.192	5.02			.00		425.3	20	22.02	34.173	5.01	23.604	429.7	.086
43	19.98	34.172	5.37			.00		377.1	30	21.88	34.192	5.03	23.659	424.5	.129
61	18.37	34.072	5.13			.00		345.2	50	19.30	34.139	5.28	24.306	362.7	.208
85	15.72	33.982	4.25			.25		292.1	75	16.85	34.004	4.69	24.806	315.2	.293
109	13.24	34.065	2.74			.03		235.8	100	14.07	34.017	3.31	25.433	255.5	.365
132	12.30	34.220	1.86			.00		206.7	125	12.53	34.177	2.06	25.868	214.1	.425
155	11.08	34.269	1.67			.01		181.5	150	11.32	34.258	1.70	26.160	186.4	.476
178	10.72	34.410	.98			.01		164.9	200	10.55	34.505	.55	26.490	155.0	.563
206	10.52	34.525	.47			.00		153.1	250	9.97	34.557	.31	26.631	141.6	.640
233	10.40	34.592	.27			.01		146.1	300	9.29	34.545	.25	26.736	131.7	.711
265	9.56	34.519	.36			.01		137.9	400	7.80	34.478	.21	26.915	114.7	.841
306	9.26	34.552	.23			.01		130.8	500	7.06	34.486	.18	27.027	104.1	.957
355	8.41	34.500	.20			.00		121.9	600	6.28	34.482	.18	27.128	94.5	1.065
405	7.74	34.477	.21			.00		114.0	700	5.65	34.494	.20	27.218	86.0	1.164
483	7.20	34.488	.18			.00		105.9							
561	6.56	34.479	.18			.00		98.2							
666	5.86	34.491	.17			.00		88.7							
774	5.24	34.498	.30			.01		81.0							

A) ALTERNATE OXYGEN VALUE, 1.03.

LATITUDE 22 59.0N | LONGITUDE 111 00.0W | MO/DAY/YR 05/17/65 | MESSENGER TIME 1859 GMT | BOTTOM 2052M | WIND 340 | SPEED 07KT | WEATHER 1 | DOMINANT WAVES 320 03 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	16.47	33.974	6.30	.32		.02		309.0	0	16.47	33.974	6.30	24.871	309.0	0
14	15.66	33.899	5.45	.43		.07		296.9	10	15.93	33.920	5.74	24.953	301.1	.031
28	15.42	33.907	5.16	.64		.20		291.2	20	15.51	33.898	5.26	25.030	293.8	.060
42	14.86	33.868	4.77			.29		282.4	30	15.37	33.902	5.13	25.063	290.6	.090
60	13.02	33.888	3.22	1.41		.19		244.6	50	14.20	33.870	4.22	25.292	268.9	.146
83	12.90	34.287	1.38	2.09		.03		213.0	75	12.94	34.183	1.91	25.791	221.5	.207
106	12.52	34.477	.88	2.44		.04		191.9	100	12.61	34.435	.95	26.053	196.6	.260
129	12.67	34.716	.29	2.82		.01		177.1	125	12.65	34.681	.38	26.234	179.3	.308
151	12.20	34.739	.10	2.76		.00		166.7	150	12.22	34.741	.10	26.363	167.1	.352
175	12.00	34.732	.13	2.75		.01		163.6	200	11.65	34.726	.12	26.461	157.8	.436
202	11.62	34.725	.12	2.82		.00		157.3	250	10.86	34.694	.09	26.581	146.4	.514
228	11.22	34.714	.04	2.84		.02		151.1	300	10.18	34.651	.08	26.668	138.1	.589
260	10.70	34.683	.12	2.86		.19		144.4	400	8.77	34.542	.16	26.817	124.1	.727
300	10.18	34.651	.08	3.09		.33		138.1	500	7.50	34.507	.11	26.981	108.5	.851
350	9.44	34.597	.13	3.04		.00		130.3	600	6.60	34.489	.13	27.092	98.0	.963
399	8.78	34.542	.16	3.11		.00		124.2	700	5.80	34.494	.16	27.199	87.8	1.065
474	7.80	34.520	.11			.00		111.7							
550	6.98	34.485	.13			.00		103.2							
647	6.27	34.497	.13			.00		93.2							
747	5.34	34.486	.21			.00		83.0							

STUDENT TRAINING CRUISE

This training cruise, supported by the Department of SIO of the University of California, consisted of a series of closely spaced STD lowerings in Sebastian Vizcaino Bay. In addition to the hydrographic cast and STD data reported herein, 144 drift bottles were released, 2 surface zooplankton samples were collected, and 36 double one-meter oblique net hauls and 11 chlorophyll casts to approximately 60 m were made.

A surface bucket temperature and salinity sample were obtained with each STD lowering, and 11 Nansen bottle casts of 6 to 10 bottles were made with phosphate, nitrate and nitrite determined for each cast.

The STD data is reported without correction, since the analog recordings and surface data agreed well. The Nansen cast data did not agree as well, but rapid changes were indicated when the STD was lowered more than once at a station.

Personnel participating in the collection of data were:

Ship's Captain:

Phinney, Alan W.
RV Argo

Scientific personnel:

McGowan, Dr. J. A. (Chief scientist)
Blankley, W. F.
Born, R. M.
Daniel, D. A.
Evans, M.
Felix, D. W.
Grenness, O.
Hacker, P. W.
Hart, J. T.
Krajewski, R. J.
Lawson, J. B.
Mantyla, A. W.
McGeary, D. F.
Monteiro, J. H.
Nierenberg, Dr. W. A.
Preslan, W. L.
Rodrigues, D. A.
Silver, E. A.
Wiebe, P. H.
Wilson, P. G.
Wirth, D.
Wooster, Dr. W. S.
Young, D. R.

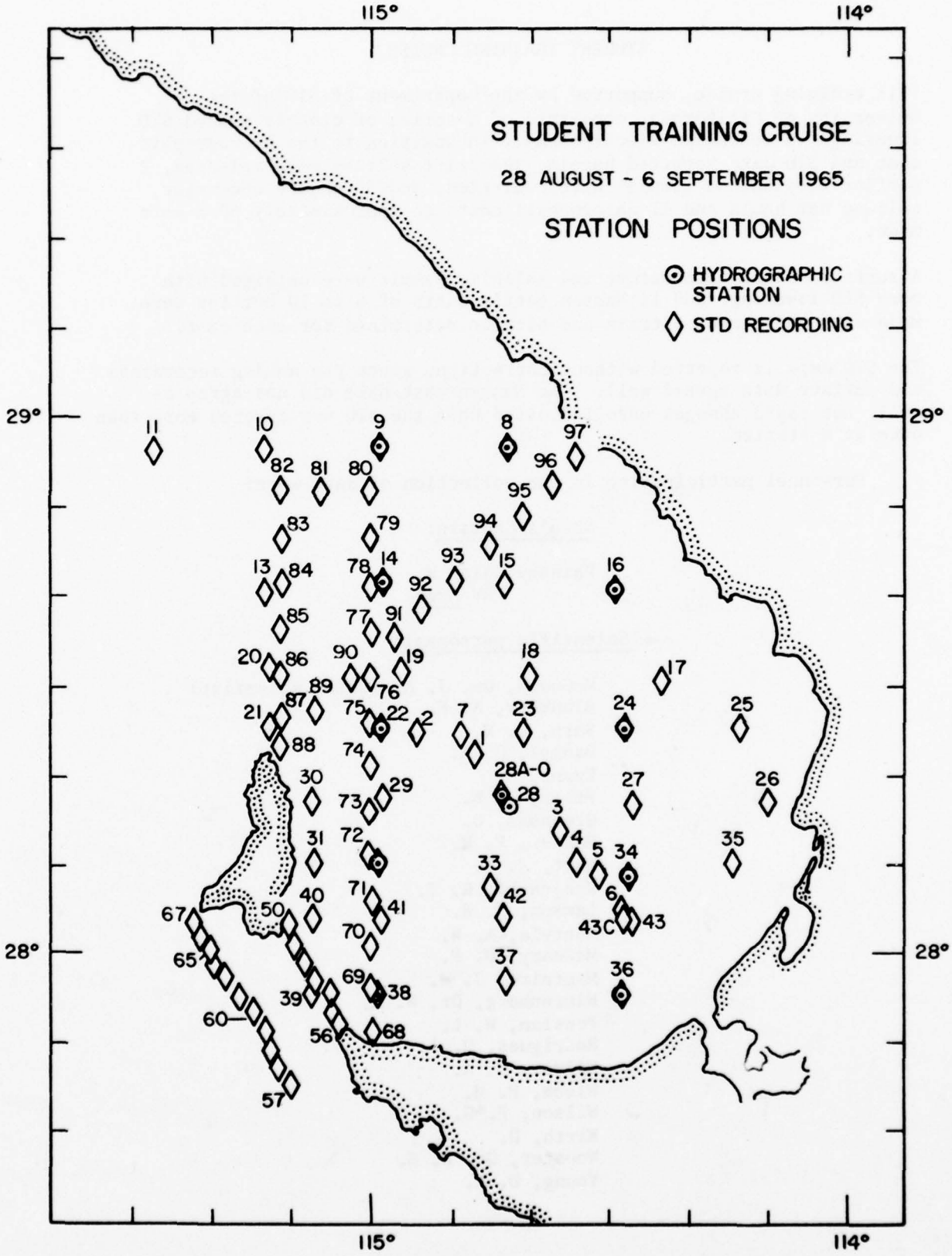

115°
114°
29°
28°
STUDENT TRAINING CRUISE
28 AUGUST - 6 SEPTEMBER 1965
STATION POSITIONS
HYDROGRAPHIC STATION
STD RECORDING
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43C
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FIGURE 3

6508 STUDENT TRAINING CRUISE

Station Positions

Chronological Order

Date 1965	Station	Latitude North	Longitude West
Aug. 28	43 A-B	28°04.0'	114°27.0'
29	42	28°04.0'	114°43.5'
29	41	28°04.0'	114°58.5'
29	40	28°04.0'	115°07.0'
29	39	27°56.0'	115°07.0'
29	38	27°56.0'	114°59.0'
29	37	27°57.0'	114°43.0'
29	36	27°55.5'	114°28.5'
29	43 C	28°04.0'	114°28.0'
29	35	28°10.5'	114°14.5'
29	35 A	28°10.0'	114°13.5'
30	34	28°10.0'	114°28.5'
30	33	28°10.5'	114°43.0'
30	32	28°10.5'	114°58.0'
30	31	28°10.0'	115°06.5'
30	30 B-C	28°17.5'	115°06.5'
30	29	28°17.5'	114°58.5'
30	28	28°17.5'	114°43.5'
30	27	28°17.5'	114°28.0'
30	26	28°17.0'	114°13.0'

Date 1965	Station	Latitude North	Longitude West
Aug. 30	25	28°25.5'	114°13.5
30	24	28°25.5'	114°28.0'
30	23 A-C	28°25.5'	114°43.0'
30	22	28°25.5'	114°58.5'
31	21	28°26.0'	115°12.5'
31	20	28°33.0'	115°27.5'
31	19	28°33.0'	114°58.5'
31	18	28°33.0'	114°43.0'
31	17	28°33.0'	114°28.5'
31	16	28°41.0'	114°29.0'
31	15	28°41.0'	114°43.5'
31	14	28°40.0'	114°58.0'
31	13	28°40.5'	115°13.0'
31	12	28°41.5'	115°26.0'
31	11	28°56.0'	115°27.5'
31	10	28°56.0'	115°13.0'
31	9	28°56.0'	114°58.5'
31	8	28°56.5'	114°42.5'
Sept. 1	7 A-I	28°23.0'	114°49.0'
1	1 A-D	28°22.5'	114°47.5'
2	2 A-D	28°25.0'	114°54.0'
2	3 A-D	28°14.0'	114°36.0'
2	4 A-D	28°10.5'	114°34.0'
2	5 A-D	28°09.0'	114°31.0'
3	6 A-D	28°04.5'	114°28.0'

Date 1965	Station	Latitude North	Longitude West
Sept. 3	28 A-L	28°18.0	114°43.0'
4	28 M	28°18.0'	114°43.0'
4	28 N-P	28°17.5'	114°43.0'
5	50	28°03.5'	115°10.5'
5	51	28°01.5'	115°09.0'
5	52	27°59.5'	115°08.0'
5	53	27°57.5'	115°07.0'
5	54	27°55.5'	115°05.5'
5	55	27°53.5'	115°04.5'
5	56	27°53.0'	115°04.0'
5	57	27°46.0'	115°10.0'
5	58	27°47.5'	115°11.0'
5	59	27°49.0'	115°12.0'
5	60	27°52.0'	115°13.5'
5	61	27°54.0'	115°14.5'
5	62	27°55.5'	115°16.0'
5	63	27°58.0'	115°18.0'
5	64	27°59.0'	115°19.5'
5	65	28°00.5'	115°20.0'
5	66	28°02.5'	115°21.0'
5	67	28°04.0'	115°22.0'
5	68	27°51.0'	115°00.5'
6	69	27°56.0'	115°00.0'
6	70	28°01.0'	115°00.0'
6	71	28°06.0'	115°00.0'

Date 1965	Station	Latitude North	Longitude West
Sept. 6	72	28°11.0'	115°00.0'
6	73	28°16.0'	115°00.0'
6	73 A	28°16.0'	115°00.0'
6	74	28°21.0'	115°00.0'
6	75	28°26.0'	115°00.0'
6	76	28°31.5'	115°00.0'
6	77	28°36.5'	115°00.0'
6	78	28°41.5'	115°00.0'
6	79	28°46.5'	115°00.0'
6	80	28°51.5'	115°00.0'
6	81	28°51.5'	115°05.5'
6	82	28°51.5'	115°11.5'
6	83	28°46.5'	115°11.5'
6	84	28°41.5'	115°11.5'
6	85	28°36.5'	115°11.5'
6	85 B	28°36.5'	115°11.5'
6	86	28°31.5'	115°11.5'
6	87	28°26.5'	115°11.5'
6	88	28°23.5'	115°11.5'
6	89	28°27.0'	115°07.0'
6	90	28°31.0'	115°02.5'
6	91	28°35.0'	114°57.5'
6	92	28°39.0'	114°53.5'
6	93	28°42.0'	114°49.5'
6	94	28°45.5'	114°45.0'

Date 1965	Station	Latitude North	Longitude West
Sept. 6	95	28°49.0'	114°41.0'
6	96	28°52.5'	114°37.0'
6	97	28°55.5'	114°34.0'

RV ARGO — 6508 STUDENT TRAINING CRUISE — 1 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 22.5N	114 47.5W	09/01/65	2007 GMT	101M	320	13KT	1	310 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.04	33.77		23.835	407.7	0
									10	18.68	33.67		24.107	381.8	.039
									20	17.66	33.61		24.311	362.3	.077
									30	16.98	33.62		24.481	346.1	.112
									50	14.95	33.60		24.924	303.9	.177
									75	12.95	33.65		25.378	260.7	.248
									100	11.94	33.95		25.805	220.1	.309

RV ARGO — 6508 STUDENT TRAINING CRUISE — 1 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 22.5N	114 47.5W	09/01/65	2104 GMT	101M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.16	33.78		23.811	410.0	0
									10	19.30	33.71		23.981	393.8	.040
									20	18.34	33.65		24.176	375.2	.079
									30	16.74	33.62		24.537	340.7	.115
									50	15.07	33.59		24.891	307.1	.180
									75	13.16	33.64		25.328	265.4	.252
									100	11.99	33.95		25.796	221.0	.313

RV ARGO — 6508 STUDENT TRAINING CRUISE — 1 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 22.5N	114 47.5W	09/01/65	2207 GMT	101M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.14	33.76		23.801	410.9	0
									10	18.90	33.69		24.067	385.6	.040
									20	18.38	33.62		24.143	378.3	.078
									30	16.60	33.58		24.539	340.6	.114
									50	14.57	33.61		25.014	295.4	.178
									75	12.98	33.64		25.364	262.0	.248
									100	12.06	33.95		25.783	222.2	.309

RV ARGO — 6508 STUDENT TRAINING CRUISE — 1 D

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 22.5N	114 47.5W	09/01/65	2250 GMT	97M	320	15KT	1	320 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.10	33.76		23.811	409.9	0
									10	18.94	33.64		24.019	390.2	.040
									20	18.24	33.61		24.170	375.7	.078
									30	16.75	33.57		24.497	344.6	.114
									50	14.85	33.59		24.938	302.5	.179
									75	13.19	33.63		25.315	266.7	.251
									100A	12.12	33.94		25.763	224.1	.313

RV ARGO — 6508 STUDENT TRAINING CRUISE — 2 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.0N	114 54.0W	09/02/65	0225 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.86	33.78		23.889	402.5	0
									10	19.80	33.76		23.890	402.5	.040
									20	18.29	33.62		24.165	376.2	.079
									30	16.76	33.58		24.502	344.1	.115
									50	14.97	33.60		24.920	304.3	.180
									75	13.29	33.62		25.287	269.4	.253

A) THE FATHOMETER READING DURING S/T/O 1A INDICATED A DEPTH OF 101 METERS.

RV ARGO — 6508 STUDENT TRAINING CRUISE — 2 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.0N	114 54.0W	09/02/65	0415 GMT	95M	330	16KT	1	320 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.80	33.78		23.905	401.0	0
									10	19.77	33.77		23.905	401.0	.000
									20	18.69	33.62		24.066	385.6	.079
									30	16.98	33.56		24.435	350.5	.116
									50	14.94	33.61		24.934	302.9	.182
									75	13.19	33.63		25.315	266.7	.254

RV ARGO — 6508 STUDENT TRAINING CRUISE — 2 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.0N	114 54.0W	09/02/65	0523 GMT	95M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.05	33.79		23.847	406.5	0
									10	19.85	33.78		23.892	402.2	.040
									20	18.12	33.57		24.169	375.8	.079
									30	16.58	33.58		24.544	340.1	.115
									50	14.90	33.62		24.951	301.4	.180
									75	13.21	33.63		25.310	267.1	.251

RV ARGO — 6508 STUDENT TRAINING CRUISE — 2 D

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.0N	114 54.0W	09/02/65	0613 GMT	95M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.80	33.78		23.905	401.0	0
									10	19.76	33.77		23.908	400.7	.040
									20	18.98	33.65		24.016	390.4	.080
									30	17.38	33.63		24.394	354.4	.117
									50	15.15	33.61		24.888	307.3	.183
									75	13.40	33.61		25.257	272.2	.256

RV ARGO — 6508 STUDENT TRAINING CRUISE — 3 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 14.0N	114 36.0W	09/02/65	0823 GMT	93M	320	11KT	1	320

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.98	33.77		23.850	406.2	0
									10	19.98	33.76		23.843	406.9	.041
									20	18.80	33.63		24.046	387.5	.080
									30	17.68	33.58		24.284	364.9	.118
									50	15.86	33.56		24.693	325.9	.187
									75	13.60	33.58		25.193	278.3	.263

RV ARGO — 6508 STUDENT TRAINING CRUISE — 3 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 14.0N	114 36.0W	09/02/65	0957 GMT	93M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.95	33.77		23.858	405.5	0
									10	19.85	33.73		23.854	405.9	.041
									20	18.25	33.67		24.213	371.6	.080
									30	17.57	33.59		24.318	361.6	.116
									50	15.90	33.57		24.691	326.1	.185
									75	13.40	33.61		25.257	272.2	.260

RV ARGO — 6508 STUDENT TRAINING CRUISE — 3 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 14.0N	114 36.0W	09/02/65	1103 GMT	93M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.93	33.77		23.864	405.0	0
									10	19.55	33.72		23.924	399.2	.040
									20	18.97	33.68		24.041	388.0	.080
									30	17.50	33.63		24.365	357.1	.117
									50	15.74	33.56		24.720	323.4	.185
									75	13.48	33.62		25.248	273.0	.260

RV ARGO — 6508 STUDENT TRAINING CRUISE — 3 D

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 14.0N	114 36.0W	09/02/65	1220 GMT	93M	340	11KT	1	320

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.90	33.76		23.864	404.9	0
									10	19.34	33.69		23.955	396.2	.040
									20	19.06	33.69		24.026	389.4	.079
									30	17.87	33.67		24.306	362.7	.117
									50	15.72	33.56		24.724	322.9	.186
									75	13.39	33.66		25.297	268.4	.260

RV ARGO — 6508 STUDENT TRAINING CRUISE — 4 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.5N	114 34.0W	09/02/65	1450 GMT	90M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.85	33.74		23.862	405.1	0
									10	19.35	33.70		23.960	395.7	.040
									20	19.00	33.67		24.026	389.4	.079
									30	17.67	33.52		24.240	369.0	.117
									50	15.58	33.56		24.755	320.0	.187
									75	13.45	33.73		25.339	264.4	.260

RV ARGO — 6508 STUDENT TRAINING CRUISE — 4 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.5N	114 34.0W	09/02/65	1531 GMT	90M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.70	33.74		23.900	401.4	0
									10	19.15	33.68		23.996	392.3	.040
									20	18.28	33.62		24.168	375.9	.078
									30	16.98	33.54		24.420	351.9	.115
									50	15.58	33.58		24.771	318.5	.182
									75	13.52	33.78		25.364	262.1	.255

RV ARGO — 6508 STUDENT TRAINING CRUISE — 4 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.5N	114 34.0W	09/02/65	1612 GMT	88M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.85	33.74		23.862	405.1	0
									10	19.10	33.68		24.009	391.1	.040
									20	18.95	33.68		24.047	387.5	.079
									30	17.28	33.59		24.387	355.0	.116
									50	15.73	33.58		24.737	321.7	.184
									75	13.67	33.73		25.294	268.7	.258

RV ARGO — 6508 STUDENT TRAINING CRUISE — 4 D

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.5N	114 34.0W	09/02/65	1651 GMT	88M	360	10KT	1	320 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.86	33.76		23.874	403.9	0
									10	19.41	33.70		23.945	397.2	.040
									20	19.29	33.70		23.975	394.3	.080
									30	17.47	33.62		24.365	357.2	.117
									50	15.50	33.57		24.781	317.5	.185
									75	13.81	33.71		25.250	272.9	.259

RV ARGO — 6508 STUDENT TRAINING CRUISE — 5 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 09.0N	114 31.0W	09/02/65	2059 GMT	82M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.36	33.75		23.735	417.2	0
									10	19.00	33.68		24.034	388.7	.040
									20	17.72	33.60		24.289	364.4	.078
									30	16.73	33.59		24.516	342.7	.113
									50	15.28	33.61		24.860	310.0	.179
									75	13.90	33.71		25.232	274.6	.252

RV ARGO — 6508 STUDENT TRAINING CRUISE — 5 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 09.0N	114 31.0W	09/02/65	2158	GMT	82M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.40	33.76		23.732	417.5	0
10	19.12	33.70		24.019	390.2	.040
20	18.06	33.59		24.199	373.0	.079
30	16.84	33.59		24.491	345.2	.115
50	15.26	33.62		24.872	308.8	.180
75	13.69	33.74		25.298	268.3	.253

RV ARGO — 6508 STUDENT TRAINING CRUISE — 5 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 09.0N	114 31.0W	09/02/65	2251	GMT	78M	310	09KT	1	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.48	33.74		23.696	420.9	0
10	19.16	33.69		24.001	391.9	.041
20	18.44	33.60		24.113	381.2	.079
30	16.82	33.59		24.496	344.7	.116
50	15.32	33.60		24.844	311.6	.182
75	13.70	33.72		25.281	270.0	.255

RV ARGO — 6508 STUDENT TRAINING CRUISE — 5 D

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 09.0N	114 31.0W	09/02/65	2331	GMT	80M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.25	33.76		23.772	413.7	0
10	19.26	33.70		23.983	393.6	.040
20	18.35	33.66		24.181	374.7	.079
30	17.23	33.58		24.391	354.6	.115
50	15.48	33.60		24.808	314.9	.183
75	13.84	33.72		25.252	272.7	.256

RV ARGO — 6508 STUDENT TRAINING CRUISE — 6 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.5N	114 28.0W	09/03/65	0258	GMT	75M	340	09KT	1	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.35	33.75		23.738	416.9	0
10	20.31	33.75		23.749	415.9	.042
20	19.10	33.70		24.024	389.7	.082
30	17.38	33.58		24.356	358.0	.119
50	15.54	33.60		24.795	316.2	.187

RV ARGO — 6508 STUDENT TRAINING CRUISE — 6 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.5N	114 28.0W	09/03/65	0400	GMT	69M	330	08KT		320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.31	33.75		23.749	415.9	0
10	20.23	33.75		23.770	413.9	.042
20	18.94	33.65		24.026	389.4	.082
30	17.49	33.59		24.337	359.8	.119
50	15.68	33.61		24.771	318.4	.187

RV ARGO — 6508 STUDENT TRAINING CRUISE — 6 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.5N	114 28.0W	09/03/65	0514	GMT	67M	340	03KT		320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.28	33.75		23.757	415.2	0
10	20.00	33.71		23.800	411.1	.041
20	18.96	33.68		24.044	387.7	.081
30	17.62	33.61		24.321	361.3	.119
50	15.91	33.65		24.750	320.4	.187

RV ARGO — 6508 STUDENT TRAINING CRUISE — 6 D

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.5N	114 28.0W	09/03/65	0610 GMT	69M	020	04KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.35	33.76		23.746	416.2	0
10	19.76	33.70		23.855	405.8	.041
20	18.96	33.67		24.036	388.5	.081
30	17.74	33.63		24.307	362.6	.119
50	15.82	33.63		24.755	320.0	.187

RV ARGO — 6508 STUDENT TRAINING CRUISE — 7 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.0N	114 49.0W	09/01/65	0425 GMT	104M	310	15KT	1	320 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.32	33.73		23.991	392.8	0
10	19.18	33.73		24.026	389.4	.039
20	18.60	33.66		24.119	380.6	.078
30	17.00	33.58		24.446	349.5	.114
50	15.04	33.61		24.912	305.0	.180
75	12.76	33.65		25.415	257.2	.251
100	12.00	33.94		25.786	221.9	.311

RV ARGO — 6508 STUDENT TRAINING CRUISE — 7 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.0N	114 49.0W	09/01/65	0503 GMT	104M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.41	33.73		23.968	395.0	0
10	19.31	33.73		23.993	392.6	.039
20	18.58	33.65		24.116	380.8	.078
30	16.78	33.58		24.497	344.6	.114
50	15.30	33.61		24.856	310.4	.180
75	12.68	33.65		25.431	255.7	.251
100	11.96	33.94		25.794	221.2	.312

RV ARGO — 6508 STUDENT TRAINING CRUISE — 7 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.0N	114 49.0W	09/01/65	0609 GMT	104M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.39	33.72		23.965	395.3	0
10	19.16	33.70		24.009	391.1	.039
20	18.57	33.65		24.119	380.6	.078
30	16.97	33.55		24.430	351.0	.115
50	15.39	33.59		24.820	313.8	.181
75	12.49	33.66		25.476	251.4	.252
100	11.90	33.95		25.813	219.4	.312

RV ARGO — 6508 STUDENT TRAINING CRUISE — 7 D

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.0N	114 49.0W	09/01/65	0731 GMT	104M	320	11KT	0	320 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.56	33.74		23.937	398.0	0
10	19.18	33.72		24.019	390.2	.039
20	18.64	33.69		24.132	379.4	.078
30	17.32	33.56		24.355	358.1	.115
50	15.77	33.58		24.728	322.5	.183
75	12.95	33.65		25.378	260.7	.257
100	11.97	33.94		25.792	221.4	.317

RV ARGO — 6508 STUDENT TRAINING CRUISE — 7 E

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.0N	114 49.0W	09/01/65	0904 GMT	104M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.95	33.80		23.881	403.3	0
10	19.04	33.72		24.054	386.8	.040
20	17.75	33.59		24.274	365.8	.077
30	16.67	33.60		24.538	340.7	.113
50	15.03	33.60		24.907	305.5	.177
75	12.54	33.67		25.474	251.6	.247

RV ARGO — 6508 STUDENT TRAINING CRUISE — 7 F

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.0N	114 49.0W	09/01/65	1022	GMT	104M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.89	33.80		23.897	401.8	0
10	18.89	33.71		24.085	383.9	.039
20	17.75	33.59		24.274	365.8	.077
30	16.89	33.59		24.479	346.3	.113
50	15.17	33.58		24.861	309.9	.178
75	12.47	33.64		25.464	252.5	.249
100	11.98	33.94		25.790	221.5	.309

RV ARGO — 6508 STUDENT TRAINING CRUISE — 7 G

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.0N	114 49.0W	09/01/65	1208	GMT	104M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.84	33.79		23.902	401.3	0
10	19.38	33.69		23.945	397.2	.040
20	18.10	33.55		24.159	376.8	.079
30	17.19	33.60		24.416	352.3	.115
50	15.24	33.59		24.853	310.6	.182
75	12.42	33.68		25.505	248.7	.252

RV ARGO — 6508 STUDENT TRAINING CRUISE — 7 H

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.0N	114 49.0W	09/01/65	1307	GMT	104M	320	14KT	1	320 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.69	33.79		23.941	397.6	0
10	19.28	33.70		23.978	394.0	.040
20	18.47	33.63		24.129	379.7	.078
30	17.11	33.60		24.435	350.5	.115
50	15.22	33.60		24.865	309.5	.181
75	12.75	33.62		25.394	259.2	.253

RV ARGO — 6508 STUDENT TRAINING CRUISE — 7 I

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.0N	114 49.0W	09/01/65	1407	GMT	104M	320	15KT	1	320 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.60	33.77		23.949	396.8	0
10	18.85	33.68		24.072	385.1	.039
20	18.30	33.61		24.155	377.1	.077
30	17.14	33.58		24.413	352.6	.114
50	15.24	33.68		24.923	304.0	.180
75	12.83	33.64		25.394	259.2	.251

RV ARGO — 6508 STUDENT TRAINING CRUISE — 8

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 56.5N	114 42.5W	08/31/65	2348	GMT	75M	340	11KT	2	320 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.49	33.82		23.754	415.4	0
10	19.77	33.80		23.928	398.8	.041
20	15.95	33.54		24.657	329.3	.077
30	15.14	33.54		24.837	312.2	.109
50	12.75	33.66		25.425	256.2	.166

RV ARGO — 6508 STUDENT TRAINING CRUISE — 8

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 56.5N	114 42.5W	08/31/65	2359	GMT	75M	340	11KT	2	320 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	20.50	33.780	5.71	.14		.03	.0	418.6
5	20.48	33.780	5.81	.14		.02	.0	418.0
10	19.88	33.767	5.90	.15		.01	.0	403.9
20	16.69	33.550	6.03	.28		.00	.0	344.7
30	15.24	33.488	5.98	.40		.01	.1	318.1
40	14.09	33.590	5.06	.78		.49	3.9	287.2
60	12.92	33.774	3.77	1.54		.04	15.1	251.1

Z	T	S	O2	SIGT	DT	DD
0	20.90	33.780	5.71	23.721	418.6	0
10	19.88	33.767	5.90	23.874	403.9	.041
20	16.69	33.550	6.03	24.495	344.7	.079
30	15.24	33.488	5.98	24.775	318.1	.112
50	13.00	33.689	4.32	25.398	258.8	.170

RV ARGO 6508 STUDENT TRAINING CRUISE 9

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 56.0N	114 58.5W	08/31/65	2045 GMT	93M	300	12KT	2	320 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	18.94	33.75	24.102	382.2	0
10	17.45	33.63	24.377	356.0	.037
20	16.75	33.65	24.558	338.8	.072
30	15.58	33.60	24.786	317.0	.105
50	14.05	33.62	25.131	284.2	.165
75	12.05	33.78	25.653	234.6	.230

RV ARGO 6508 STUDENT TRAINING CRUISE 9

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 56.0N	114 58.5W	08/31/65	2135 GMT	93M	300	12KT	2	320 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	19.02	33.707	5.76	.17		.00	.0	387.2
5	19.01	33.714	5.96	.13		.01	.0	386.5
10	18.74	33.695	5.99	.10		.00	.0	381.4
20	16.23	33.595	5.97	.40		.00	.1	331.4
30	15.57	33.569	5.78	.36		.00	.0	319.1
40	14.68	33.588	5.87	.43		.08	.8	299.2
59	13.26	33.627	5.14	.75		.09	6.2	268.3
79	11.95	33.699U	4.66	1.30		.02	13.9	

Z	T	S	SIGT	DT	DD
0	19.02	33.707	5.76	24.049	387.2	0
10	18.74	33.695	5.99	24.111	381.4	.038
20	16.23	33.595	5.97	24.636	331.4	.074
30	15.57	33.569	5.78	24.764	319.1	.107
50	13.30	33.607	5.54	25.275	270.5	.166
75	12.10	33.760	4.73	25.628	237.0	.230

RV ARGO 6508 STUDENT TRAINING CRUISE 10

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 56.0N	115 13.0W	08/31/65	1910 GMT	201M	340	09KT	2	340 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	19.27	33.70	23.981	393.8	0
10	19.25	33.70	23.986	393.3	.039
20	19.23	33.71	23.998	392.1	.079
30	17.30	33.53	24.336	359.9	.116
50	14.68	33.57	24.959	300.5	.183
75	13.28	33.63	25.296	268.5	.254
100	11.84	33.81	25.716	228.6	.317
125	11.15	34.00	25.990	202.5	.371
150	11.03	34.04	26.043	197.5	.422

RV ARGO 6508 STUDENT TRAINING CRUISE 11

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 56.0N	115 27.5W	08/31/65	1727 GMT	1271M	320	19KT	2	320 04 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	19.28	33.68	23.963	395.5	0
10	19.28	33.68	23.963	395.5	.040
20	19.18	33.68	23.988	393.1	.079
30	18.80	33.65	24.061	386.1	.118
50	17.23	33.60	24.407	353.2	.192
75	13.96	33.69	25.204	277.3	.272
100	13.01	33.80	25.482	250.8	.338
125	12.45	33.91	25.677	232.3	.399
150	11.74	34.10	25.959	205.5	.455
200	11.22	34.30	26.210	181.6	.554
250	10.71	34.44	26.411	162.5	.642
300	10.19	34.51	26.557	148.7	.723

RV ARGO 6508 STUDENT TRAINING CRUISE 12

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 41.5N	115 26.0W	08/31/65	1542 GMT	606M	330	15KT	1	320 04 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	19.53	33.70	23.914	400.2	0
10	19.51	33.70	23.919	399.7	.040
20	19.14	33.68	23.998	392.1	.080
30	18.53	33.68	24.152	377.5	.118
50	17.40	33.63	24.389	354.9	.192
75	15.01	33.84	25.096	287.6	.272
100	13.23	33.90	25.515	247.7	.340
125	12.28	33.90	25.702	229.9	.400
150	11.52	34.03	25.946	206.7	.456
200	10.43	34.23	26.297	173.4	.553
250	10.22	34.42	26.481	155.9	.638
300	9.96	34.50	26.588	145.7	.716

RV ARGO — 6508 STUDENT TRAINING CRUISE — 13

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 40.5N	115 13.0W	08/31/65	1420 GMT	190M	310	14KT	2	320 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.69	33.68		23.857	405.5	0
10	19.69	33.68		23.857	405.5	.041
20	19.66	33.68		23.865	404.8	.081
30	18.56	33.62		24.099	382.5	.121
50	16.58	33.55		24.521	342.3	.193
75	14.29	33.60		25.065	290.4	.273
100	12.93	33.65		25.382	260.4	.342
125	11.74	33.97		25.858	215.0	.402
150	11.54	34.04		25.950	206.3	.456

RV ARGO — 6508 STUDENT TRAINING CRUISE — 14

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 40.0N	114 58.0W	08/31/65	1230 GMT	127M	310	13KT	2	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	19.16	33.665	5.56	.29		.00	.0	393.7
5	19.14	33.665	5.56	.30		.01	.0	393.2
10	19.16	33.667	5.53	.26		.01	.0	393.5
20	19.03	33.665	5.52	.24		.00	.0	390.5
29	17.28	33.549	5.82	.32		.00	.0	358.0
40	15.70	33.457	5.65	.34		.00	.0	330.0
58	15.02	33.540	5.80	.38		.00	.0	309.7
78	13.20	33.634	5.09	.82		.12	6.4	266.6
96	11.95	33.741	3.70	1.51		.02	17.2	235.7

Z	T	S	O2	SIGT	DT	DD
0	19.16	33.665	5.56	23.982	393.7	0
10	19.16	33.667	5.53	23.983	393.5	.039
20	19.03	33.665	5.52	24.015	390.5	.079
30	17.11	33.537	5.81	24.388	355.0	.116
50	15.23	33.489	5.75	24.777	317.9	.184
75	13.49	33.618	5.25	25.244	273.5	.258

RV ARGO — 6508 STUDENT TRAINING CRUISE — 14

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 40.0N	114 58.0W	08/31/65	1250 GMT	127M	310	13KT	2	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	18.97	33.66		24.026	389.4	0
10	18.94	33.66		24.034	388.7	.039
20	18.78	33.66		24.074	384.9	.078
30	17.35	33.56		24.348	358.8	.115
50	15.26	33.44		24.734	322.0	.183
75	13.09	33.64		25.342	264.1	.257
100	11.51	33.88		25.831	217.6	.318

RV ARGO — 6508 STUDENT TRAINING CRUISE — 15

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 41.0N	114 43.5W	08/31/65	1045 GMT	101M	310	14KT	4	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.08	33.79		23.840	407.3	0
10	20.09	33.80		23.844	406.8	.041
20	15.83	33.58		24.715	323.8	.077
30	13.81	33.52		25.104	286.8	.108
50	12.51	33.66		25.472	251.8	.162
75	11.83	33.90		25.787	221.8	.222
100	11.68	33.93		25.839	216.9	.277

RV ARGO — 6508 STUDENT TRAINING CRUISE — 16

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 41.0N	114 29.0W	08/31/65	0905 GMT	88M	320	08KT	1	340 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	20.54	33.776	5.57	.20		.02	.0	419.9
5	20.54	33.774	5.49	.22		.02	.0	420.0
10	20.54	33.774	5.51	.30		.01	.0	420.0
20	16.64	33.585	5.91	.30		.02	.0	341.1
30	15.50	33.544	5.60	.48		.04	.3	319.4
40	14.58	33.534	5.56	.57		.26	.7	301.1
50	13.18	33.608	4.78	.88		.38	6.3	268.2
60	12.52	33.641	4.30	1.15		.18	11.3	253.4
80	12.24	33.843	2.14	2.07		.05	18.6	233.4

Z	T	S	O2	SIGT	DT	DD
0	20.54	33.776	5.57	23.707	419.9	0
10	20.54	33.774	5.51	23.706	420.0	.042
20	16.64	33.585	5.91	24.534	341.1	.080
30	15.50	33.544	5.60	24.761	319.4	.113
50	13.18	33.608	4.78	25.300	268.2	.172
75	12.31	33.809	2.83	25.625	237.2	.236

RV ARGO 6508 STUDENT TRAINING CRUISE 16

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 41.0N	114 29.0W	08/31/65	0912 GMT	88M	320	08KT	1	340 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.44	33.78		23.737	417.0	0
10	20.39	33.77		23.743	416.5	.042
20	16.35	33.55		24.574	337.3	.079
30	15.21	33.52		24.806	315.1	.112
50	12.98	33.61		25.341	264.2	.170
75	12.31	33.85		25.657	234.1	.233

RV ARGO 6508 STUDENT TRAINING CRUISE 17

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 33.0N	114 28.5W	08/31/65	0725 GMT	84M	320	10KT	4	340 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.08	33.75		23.809	410.2	0
10	20.07	33.75		23.812	409.9	.041
20	18.02	33.67		24.270	366.2	.080
30	16.68	33.71		24.620	332.9	.115
50	14.17	33.57		25.067	290.2	.177
75	12.92	33.80		25.500	249.1	.245

RV ARGO 6508 STUDENT TRAINING CRUISE 18

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 33.0N	114 43.0W	08/31/65	0545 GMT	101M	290	11KT	1	320 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.53	33.83		23.751	415.7	0
10	20.53	33.83		23.751	415.7	.042
20	20.16	33.72		23.765	414.3	.083
30	15.37	33.68		24.894	306.8	.119
50	13.19	33.67		25.345	263.8	.177
75	11.80	33.82		25.731	227.2	.238
100	11.08	34.04		26.034	198.4	.292

RV ARGO 6508 STUDENT TRAINING CRUISE 19

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 33.0N	114 58.5W	08/31/65	0418 GMT	127M	270	12KT	1	290 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	18.71	33.68		24.107	381.8	0
10	18.52	33.67		24.147	378.0	.038
20	17.18	33.61		24.426	351.3	.075
30	16.12	33.60		24.665	328.6	.109
50	14.95	33.63		24.947	301.7	.172
75	13.10	33.64		25.340	264.3	.243
100	11.56	33.90		25.838	217.0	.304

RV ARGO 6508 STUDENT TRAINING CRUISE 20

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 33.0N	115 27.5W	08/31/65	0244 GMT	142M	280	11KT	1	270 03

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.81	33.68		23.826	408.5	0
10	19.81	33.68		23.826	408.5	.041
20	19.51	33.68		23.904	401.1	.081
30	18.21	33.62		24.185	374.3	.120
50	16.65	33.56		24.512	343.1	.192
75	14.72	33.60		24.974	299.1	.273
100	12.82	33.72		25.458	253.1	.343

RV ARGO 6508 STUDENT TRAINING CRUISE 21

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 26.0N	115 12.5W	08/31/65	0129 GMT	119M	270	12KT	0	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.30	33.71		23.981	393.8	0
10	18.69	33.69		24.119	380.6	.039
20	18.30	33.67		24.201	372.8	.076
30	18.06	33.67		24.260	367.1	.114
50	15.82	33.61		24.740	321.4	.183
75	13.52	33.75		25.340	264.3	.256
100	12.86	33.92		25.604	239.2	.320

RV ARGO — 6508 STUDENT TRAINING CRUISE — 22

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.5N	114 58.5W	08/30/65	2243 GMT	125M	310	15KT	1	340 03 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.40	33.68		23.932	398.4	0
									10	19.10	33.68		24.009	391.1	.039
									20	18.71	33.63		24.069	385.4	.078
									30	17.69	33.61		24.304	362.9	.116
									50	15.97	33.55		24.660	329.0	.185
									75	13.92	33.62		25.158	281.6	.262
									100	12.18	33.74		25.597	239.9	.328

RV ARGO — 6508 STUDENT TRAINING CRUISE — 22

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.5N	114 58.5W	08/30/65	2320 GMT	125M	310	15KT	1	340 03 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.28	33.653	5.39	.32		.02	.0	397.5	0	19.28	33.653	5.39	23.942	397.5	0
5	19.24	33.637	5.29	.30		.02	.0	397.6	10	19.22	33.638	5.36	23.946	397.1	.040
10	19.22	33.638	5.36	.31		.00	.1	397.1	20	18.98	33.636	5.49	24.005	391.4	.079
20	18.98	33.636	5.49	.33		.01	.1	391.4	30	18.07	33.583	5.57	24.191	373.7	.118
30	18.07	33.583	5.57	.34		.00	.0	373.7	50	15.99	33.552	5.61	24.657	329.3	.188
39	17.05	33.569	5.62	.35		.01	.1	351.4	75	14.13	33.590	5.48	25.090	288.1	.266
58	15.32	33.547	5.61	.40		.00	.0	315.4	100	12.27	33.712	3.92	25.558	243.6	.333
78	13.93	33.600	5.46	.69		.14	2.0	283.3							
97	12.32	33.678	4.11	1.23		.03	12.3	247.0							
106	12.16	33.752	3.57	1.48		.00	15.6	238.6							

RV ARGO — 6508 STUDENT TRAINING CRUISE — 23 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.5N	114 43.0W	08/30/65	2009 GMT	108M	310	10KT	1	270 02 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.62					
									10	20.07					
									20	17.66					
									30	15.72					
									50	13.22					
									75	11.96					
									100	11.20					

RV ARGO — 6508 STUDENT TRAINING CRUISE — 23 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.5N	114 43.0W	08/30/65	2123 GMT	108M	310	10KT	1	270 02 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.65	33.82		23.712	419.5	0
									10	19.50	33.77		23.975	394.3	.041
									20	17.69	33.73		24.396	354.2	.078
									30	15.71	33.63		24.780	317.6	.112
									50	13.23	33.66		25.330	265.3	.170
									75	11.96	33.76		25.654	234.4	.233
									100	11.30	34.02		25.978	203.6	.288

RV ARGO — 6508 STUDENT TRAINING CRUISE — 24

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.5N	114 28.0W	08/30/65	1635 GMT	93M	340	03KT	1	320 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.86	33.73		23.851	406.1	0
									10	18.83	33.70		24.092	383.2	.039
									20	17.09	33.71		24.524	342.0	.076
									30	16.08	33.69		24.743	321.2	.109
									50	13.79	33.50		25.092	287.9	.170
									75	12.76	33.78		25.516	247.6	.237

RV ARGO 6508 STUDENT TRAINING CRUISE 24

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.5N	114 28.0W	08/30/65	1804 GMT	93M	340	03KT	1	320 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	20.04	33.724	5.57	.21		.00	.0	411.0	0	20.04	33.724	5.57	23.800	411.0	0
5	19.92	33.709	5.59	.20		.00	.0	409.1	10	19.83	33.708	5.62	23.842	407.0	.041
10	19.83	33.708	5.62	.23		.00	.0	407.0	20	17.22	33.677	5.48	24.468	347.3	.079
20	17.22	33.677	5.48	.46		.49	.6	347.3	30	16.63	33.699	5.08	24.623	332.5	.113
30	16.63	33.699	5.08	.59		1.03	1.6	332.5	50	13.92	33.453	5.93	25.029	293.9	.176
40	14.76	33.518	5.86	.48		.26	.3	306.0	75	13.04	33.551	3.51	25.282	269.9	.246
50	13.92	33.453	5.93	.53		.17	1.8	293.9							
60	13.58	33.556	5.37	.75		.28	4.0	279.7							
80	12.88	33.574	2.87	1.74		.02	13.9	265.0							
90	12.62	33.830	2.22	2.03		.17	17.7	241.3							

RV ARGO 6508 STUDENT TRAINING CRUISE 25

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.5N	114 13.5W	08/30/65	1612 GMT	45M	300	04KT	1	340 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.65	33.79		23.689	421.6	0
									10	19.50	33.71		23.929	398.7	.041
									20	16.01	33.58		24.674	327.7	.077
									30	15.04	33.63		24.928	303.5	.109
									50A	14.16	33.62		25.108	286.4	.168

RV ARGO 6508 STUDENT TRAINING CRUISE 26

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 17.0N	114 13.0W	08/30/65	1455 GMT	21M	330	04KT	1	270 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.05	33.82		23.604	429.7	0
									10	20.70	33.82		23.698	420.7	.043
									20	16.40	33.70		24.677	327.4	.080

RV ARGO 6508 STUDENT TRAINING CRUISE 27

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 17.5N	114 28.0W	08/30/65	1323 GMT	82M	340	08KT	1	320 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.11	33.76		23.809	410.2	0
									10	19.69	33.70		23.873	404.1	.041
									20	17.72	33.76		24.412	352.7	.079
									30	17.27	33.73		24.497	344.6	.114
									50	13.96	33.54		25.088	288.3	.177
									75	13.02	33.78		25.464	252.5	.245

RV ARGO 6508 STUDENT TRAINING CRUISE 28

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 17.5N	114 43.5W	08/30/65	1100 GMT	97M	330	09KT	4	320 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	18.89	33.70		24.077	384.6	0
									10	18.42	33.69		24.187	374.1	.038
									20	17.75	33.65		24.320	361.4	.075
									30	17.04	33.64		24.482	346.0	.110
									50	15.22	33.58		24.850	310.9	.176
									75	12.82	33.67		25.419	256.8	.248
									100	12.20	33.94		25.748	225.5	.308

A) THE S/T/D ANALOG RECORDING INDICATED A DEPTH OF MORE THAN 51 METERS.

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	1107 GMT	97M	080	06KT	1	320 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.62	33.79		23.697	420.9	0
									10	20.55	33.77		23.700	420.5	.042
									20	20.06	33.76		23.822	408.9	.084
									30	19.15	33.69		24.003	391.6	.124
									50	17.55	33.60		24.330	360.5	.199
									75	14.38	33.59		25.039	293.0	.281

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	1207 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.63	33.77		23.679	422.6	0
									10	20.33	33.74		23.736	417.2	.042
									20	19.89	33.72		23.836	407.6	.083
									30	19.01	33.67		24.024	389.7	.123
									50	17.93	33.59		24.231	369.9	.199
									75	14.45	33.56		25.001	296.6	.283

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	1311 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.70	33.79		23.675	422.9	0
									10	20.71	33.79		23.673	423.2	.042
									20	20.27	33.77		23.774	413.5	.084
									30	19.81	33.73		23.864	404.9	.125
									50	18.32	33.66		24.189	374.0	.203
									75	14.62	33.63		25.018	294.9	.287

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 D

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	1417 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.65	33.79		23.689	421.6	0
									10	20.28	33.76		23.764	414.4	.042
									20	19.05	33.68		24.021	389.9	.082
									30	18.81	33.68		24.082	384.1	.121
									50	17.68	33.60		24.299	363.4	.196
									75	14.07	33.60		25.111	286.1	.278

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 E

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	1507 GMT	97M	130	13KT	5	320 02 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.66	33.78		23.678	422.6	0
									10	20.22	33.76		23.780	412.9	.042
									20	19.18	33.67		23.981	393.8	.082
									30	18.83	33.68		24.077	384.6	.121
									50	17.49	33.60		24.345	359.1	.196
									75	14.02	33.59		25.114	285.8	.277

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 F

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	1608 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.65	33.78		23.681	422.4	0
									10	20.20	33.76		23.785	412.4	.042
									20	19.25	33.69		23.978	394.0	.082
									30	18.83	33.68		24.077	384.6	.121
									50	17.75	33.60		24.282	365.1	.196
									75	13.89	33.61		25.157	281.8	.278

RV ARGO 6508 STUDENT TRAINING CRUISE 28 G

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	1702 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.72	33.78		23.662	424.1	0
									10	20.21	33.75		23.775	413.4	.042
									20	19.58	33.70		23.901	401.4	.083
									30	18.87	33.66		24.051	387.0	.122
									50	17.80	33.57		24.247	368.4	.198
									75	13.99	33.59		25.120	285.2	.280

RV ARGO 6508 STUDENT TRAINING CRUISE 28 H

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	1804 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.70	33.78		23.668	423.6	0
									10	20.16	33.75		23.788	412.2	.042
									20	19.46	33.70		23.932	398.4	.082
									30	18.80	33.65		24.061	386.1	.122
									50	17.65	33.61		24.314	362.0	.197
									75	14.07	33.60		25.111	286.1	.278

RV ARGO 6508 STUDENT TRAINING CRUISE 28 I

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	1904 GMT	97M	110	02KT	5	320 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.72	33.77		23.655	424.9	0
									10	20.22	33.75		23.772	413.7	.042
									20	19.65	33.71		23.891	402.4	.083
									30	18.99	33.65		24.014	390.7	.123
									50	17.83	33.61		24.270	366.2	.198
									75	14.36	33.57		25.028	294.1	.281

RV ARGO 6508 STUDENT TRAINING CRUISE 28 J

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	2004 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.92	33.77		23.601	430.0	0
									10	20.27	33.75		23.759	414.9	.042
									20	19.73	33.73		23.885	402.9	.083
									30	19.19	33.68		23.986	393.3	.123
									50	17.90	33.61		24.253	367.8	.199
									75	14.37	33.59		25.041	292.8	.282

RV ARGO 6508 STUDENT TRAINING CRUISE 28 K

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	2103 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.82	33.77		23.628	427.4	0
									10	20.57	33.76		23.687	421.8	.042
									20	20.02	33.72		23.802	410.8	.084
									30	19.37	33.71		23.963	395.5	.125
									50	17.70	33.51		24.225	370.5	.201
									75	14.37	33.60		25.048	292.1	.285

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 L

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/03/65	2247 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	21.07	33.767	5.39	.27		.00	.6	434.1
5	20.84	33.761	5.31	.26		.01	.0	428.6
10	20.67	33.758	5.36	.24		.00	.0	424.5
15	20.16	33.729	5.39	.25		.01	.0	413.7
24	19.56	33.735	5.39	.31		.00	.0	398.3
34	19.02	33.648	5.47	.33		.00	.0	391.5
46	17.42	33.566	5.65	.36		.00	.0	360.0
61	15.10	33.495	5.84	.40		.12	1.5	314.7
75	14.17	33.587	5.52	.58		.10	10.1	289.0
84	12.99	33.664	4.31	1.09		.09	13.0	260.5
88	12.94	33.717	3.79	1.31		.07	16.9	255.6
92	12.88	33.806	2.87	1.86		.12	17.2	247.9
95	12.75	33.811	2.82	1.75				245.1

Z	T	S	O2	SIGT	DT	DD
0	21.07	33.767	5.39	23.558	434.1	0
10	20.67	33.758	5.36	23.659	424.5	.043
20	20.00	33.733	5.39	23.817	409.4	.085
30	19.22	33.691	5.43	23.986	393.3	.125
50	17.04	33.548	5.69	24.410	352.8	.200
75	14.17	33.587	5.52	25.081	289.0	.280

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 M

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.0N	114 43.0W	09/04/65	0238 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.94	33.76		23.588	431.2	0
10	20.57	33.77		23.695	421.1	.043
20	20.51	33.74		23.688	421.7	.085
30	19.63	33.71		23.896	401.9	.126
50	17.80	33.50		24.194	373.5	.204
75	14.52	33.60		25.017	295.1	.288

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 N

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 17.5N	114 43.0W	09/04/65	0304 GMT	97M	210	08KT	1	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.92	33.76		23.594	430.7	0
10	20.58	33.76		23.685	422.0	.043
20	20.43	33.74		23.709	419.7	.085
30	19.63	33.71		23.896	401.9	.126
50	17.87	33.57		24.230	370.0	.203
75	14.46	33.58		25.014	295.3	.287

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 O

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 17.5N	114 43.0W	09/04/65	0401 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.94	33.77		23.596	430.5	0
10	20.57	33.77		23.695	421.1	.043
20	20.54	33.77		23.703	420.3	.085
30	19.75	33.72		23.872	404.1	.126
50	17.60	33.57		24.295	363.8	.203
75	14.50	33.59		25.013	295.4	.286

RV ARGO — 6508 STUDENT TRAINING CRUISE — 28 P

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 17.5N	114 43.0W	09/04/65	0501 GMT	97M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.90	33.78		23.614	428.8	0
10	20.62	33.78		23.689	421.6	.043
20	20.58	33.80		23.715	419.1	.085
30	20.08	33.70		23.771	413.8	.126
50	17.25	33.53		24.348	358.7	.204
75	14.71	33.55		24.938	302.6	.287

RV ARGO — 6508 STUDENT TRAINING CRUISE — 29

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 17.5N	114 58.5W	08/30/65	0939 GMT	112M	340	09KT	0	360 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.82	33.78		23.636	426.7	0
									10	20.80	33.79		23.649	425.5	.043
									20	20.30	33.75		23.751	415.7	.085
									30	19.37	33.71		23.963	395.5	.125
									50	17.35	33.69		24.447	349.3	.200
									75	13.45	33.61		25.247	273.2	.278
									100	12.34	33.82		25.628	236.9	.343

RV ARGO — 6508 STUDENT TRAINING CRUISE — 30 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 17.5N	115 06.5W	08/30/65	0820 GMT	108M	340	08KT	0	360 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.30					
									10	20.31					
									20	19.12					
									30	18.02					
									50	15.56					
									75	14.43					
									100	12.91					

RV ARGO — 6508 STUDENT TRAINING CRUISE — 30 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 17.5N	115 06.5W	08/30/65	0846 GMT	108M	340	08KT	0	360 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.02	33.82		23.612	428.9	0
									10	20.21	33.77		23.790	412.0	.042
									20	19.77	33.68		23.837	407.5	.083
									30	18.03	33.70		24.290	364.3	.122
									50	15.62	33.55		24.739	321.5	.191
									75	14.10	33.78		25.244	273.5	.265
									100	12.88	33.90		25.585	241.0	.330

RV ARGO — 6508 STUDENT TRAINING CRUISE — 31

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.0N	115 06.5W	08/30/65	0710 GMT	86M		08KT	0	360 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.98	33.77		23.585	431.5	0
									10	20.10	33.69		23.758	415.0	.042
									20	18.93	33.69		24.059	386.3	.082
									30	18.32	33.73		24.242	368.9	.120
									50	16.50	33.71		24.662	328.9	.190
									75	14.05	33.74		25.224	275.4	.266

RV ARGO — 6508 STUDENT TRAINING CRUISE — 32

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.5N	114 58.0W	08/30/65	0429 GMT	99M	340	12KT	1	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.80	33.81		23.664	424.0	0
									10	20.79	33.80		23.659	424.5	.042
									20	20.46	33.78		23.732	417.5	.085
									30	20.27	33.76		23.767	414.2	.126
									50	18.87	33.70		24.082	384.1	.206
									75	14.72	33.74		25.082	288.9	.291

RV ARGO — 6508 STUDENT TRAINING CRUISE — 32

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.5N	114 58.0W	08/30/65	0502 GMT	99M	340	12KT	1	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	20.82	33.783	5.23	.18		.00	.0	426.5
5	20.82	33.775	5.25	.18		.00	.0	427.1
10	20.84	33.778	5.24	.20		.00	.0	427.4
20	20.58	33.770	5.26	.21		.00	.0	421.3
30	20.35	33.747	5.26	.24		.00	.0	417.2
40	20.18	33.741	5.30	.27		.00	.0	413.3
50	19.10	33.741	5.18	.34		.02	.0	386.7
60	17.14	33.707	5.07	.55		.65	.4	343.4
80	14.42	33.734	3.57	1.33		.67	10.3	283.2

Z	T	S	O2	SIGT	DT	DD
0	20.82	33.783	5.23	23.638	426.5	0
10	20.84	33.778	5.24	23.629	427.4	.043
20	20.58	33.770	5.26	23.692	421.3	.085
30	20.35	33.747	5.26	23.736	417.2	.127
50	19.10	33.741	5.18	24.055	386.7	.208
75	14.95	33.722	4.11	25.018	294.9	.294

RV ARGO — 6508 STUDENT TRAINING CRUISE — 33

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.5N	114 43.0W	08/30/65	0257 GMT	86M	340	12KT	1	300 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.91	33.81		23.634	426.8	0
10	20.93	33.81		23.629	427.4	.043
20	20.35	33.80		23.776	413.3	.085
30	20.07	33.79		23.842	407.0	.126
50	18.65	33.77		24.190	373.8	.204
75	17.48	33.77		24.477	346.5	.295

RV ARGO — 6508 STUDENT TRAINING CRUISE — 34

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.0N	114 28.5W	08/30/65	0002 GMT	80M	330	10KT	1	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	19.44	33.676	5.46	.32		.01	.0	399.7
5	19.43	33.676	5.65	.33		.01	.0	399.4
14	19.16	33.686	5.68	.32		.01	.0	392.1
24	17.93	33.737	5.36	.39		.07	.0	359.2
34	17.57	33.735	5.20	.46		1.21	.0	351.1
43	17.28	33.723	5.06	.58		1.05	.3	345.4
53	15.32	33.611	5.08	.66		1.05	1.3	310.8
68	13.77	33.645	4.33	1.12		.32	8.6	276.8
71	13.64	33.[illegible]	3.86	1.32		.22	10.5	271.1

Z	T	S	O2	SIGT	DT	DD
0	19.44	33.676	5.46	23.919	399.7	0
10	19.28	33.682	5.67	23.964	395.4	.040
20	18.43	33.716	5.50	24.204	372.5	.078
30	17.66	33.741	5.25	24.411	352.8	.115
50	15.96	33.641	5.07	24.732	322.2	.182

RV ARGO — 6508 STUDENT TRAINING CRUISE — 34

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.0N	114 28.5W	08/30/65	0055 GMT	80M	330	10KT	1	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	19.76	33.70		23.855	405.8	0
10	19.30	33.71		23.981	393.8	.040
20	17.95	33.76		24.356	358.0	.078
30	17.65	33.76		24.428	351.1	.113
50	15.20	33.52		24.808	314.9	.180
75	13.32	33.72		25.358	262.6	.253

RV ARGO — 6508 STUDENT TRAINING CRUISE — 35

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.5N	114 14.5W	08/29/65	1357 GMT	19M			2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	21.19	33.94		23.657	424.7	0
10	21.20	33.94		23.654	424.9	.042

RV ARGO — 6508 STUDENT TRAINING CRUISE — 35 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.0N	114 13.5W	08/29/65	2225 GMT	26M	320	09KT	1	360 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	21.55	33.87		23.506	439.1	0
10	20.99	33.88		23.666	423.8	.043
20	16.30	33.66		24.669	328.1	.081

RV ARGO 6508 STUDENT TRAINING CRUISE 36

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 55.5N	114 28.5W	08/29/65	0932 GMT	32M	360	10KT	0	360 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.91	33.81		23.634	426.8	0
									10	20.53	33.79		23.721	418.6	.042
									20	17.25	33.55		24.364	357.3	.081

RV ARGO 6508 STUDENT TRAINING CRUISE 36

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 55.5N	114 28.5W	08/29/65	1004 GMT	32M	360	10KT	0	360 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	21.02	33.790	5.34	.21			.0	431.1	0	21.02	33.790	5.34	23.589	431.1	0
5	21.04	33.790	5.44	.15			.0	431.6	10	21.04	33.790	5.38	23.584	431.6	.043
10	21.04	33.790	5.38	.21			.1	431.6	20	19.16	33.691	5.65	24.002	391.8	.084
15	20.22	33.753	5.76	.15			.0	413.4							
20	19.16	33.691	5.65	.24			.0	391.8							
25	16.29	33.667	5.26	.66			1.3	327.4							

RV ARGO 6508 STUDENT TRAINING CRUISE 37

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 57.0N	114 43.0W	08/29/65	0802 GMT	75M	200	04KT	0	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.62	33.80		23.704	420.2	0
									10	20.62	33.78		23.689	421.6	.042
									20	20.21	33.76		23.783	412.7	.084
									30	19.11	33.70		24.021	389.9	.124
									50	15.99	33.51		24.625	332.4	.197

RV ARGO 6508 STUDENT TRAINING CRUISE 38

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 56.0N	114 59.0W	08/29/65	0539 GMT	63M	190	07KT	0	160 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	20.32	33.713	5.01	.32		.01	.1	418.9	0	20.32	33.713	5.01	23.718	418.9	0
5	20.16	33.704	5.26	.22		.01	.1	415.5	10	19.45	33.686	5.35	23.924	399.2	.041
10	19.46	33.686	5.35	.23		.02	.1	399.2	20	18.55	33.629	5.37	24.108	381.7	.080
20	18.55	33.629	5.37	.30		.02	.1	381.7	30	17.64	33.588	5.67	24.299	363.4	.117
30	17.64	33.588	5.67	.34		.02	.0	363.4							
40	16.76	33.554	5.86	.38		.02	.0	346.0							

RV ARGO 6508 STUDENT TRAINING CRUISE 38

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 56.0N	114 59.0W	08/29/65	0605 GMT	63M	190	07KT	0	160 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.28	33.71		23.726	418.1	0
									10	19.39	33.68		23.935	398.2	.041
									20	18.46	33.63		24.131	379.5	.080
									30	17.49	33.54		24.299	363.5	.117
									50	15.62	33.57		24.754	320.1	.186

RV ARGO 6508 STUDENT TRAINING CRUISE 39

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 56.0N	115 07.0W	08/29/65	0432 GMT	41M	300	02KT	0	01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.75	33.89		23.738	416.9	0
									10	19.01	33.86		24.168	375.9	.040
									20	16.93	33.83		24.653	329.7	.075
									30	16.51	33.82		24.744	321.1	.108

RV ARGO — 6508 STUDENT TRAINING CRUISE — 40

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.0N	115 07.0W	08/29/65	0258 GMT	75M	130	03KT	0	01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	20.15	33.70	23.753	415.5	0
10	19.06	33.68	24.019	390.2	.040
20	18.45	33.63	24.134	379.2	.079
30	17.72	33.58	24.274	365.8	.116
50	16.21	33.74	24.751	320.3	.185

RV ARGO — 6508 STUDENT TRAINING CRUISE — 41

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.0N	114 58.5W	08/29/65	0155 GMT		080	09KT	0	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	21.16	33.79	23.552	434.7	0
10	20.12	33.75	23.799	411.2	.042
20	19.81	33.73	23.864	404.9	.083
30	18.88	33.69	24.072	385.1	.123
50	16.85	33.71	24.580	336.6	.195

RV ARGO — 6508 STUDENT TRAINING CRUISE — 42

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.0N	114 43.5W	08/29/65	0005 GMT	65M	340	10KT	0	330 01 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	20.96	33.82	23.628	427.4	0
10	20.71	33.80	23.680	422.4	.043
20	20.05	33.77	23.832	408.0	.084
30	19.60	33.73	23.919	399.7	.125
50	16.38	33.72	24.697	325.5	.197

RV ARGO — 6508 STUDENT TRAINING CRUISE — 43 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.0N	114 27.0W	08/28/65	2130 GMT	54M	310	11KT	0	330 01 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	19.74	33.72	23.875	403.9	0
10	19.21	33.70	23.996	392.3	.040
20	17.10	33.57	24.414	352.4	.077
30	15.70	33.50	24.682	326.9	.111

RV ARGO — 6508 STUDENT TRAINING CRUISE — 43 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.0N	114 27.0W	08/28/65	2157 GMT	54M	310	11KT	0	330 01 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	20.35	33.75	23.738	416.9	0
10	19.10	33.70	24.024	389.7	.040
20	17.19	33.58	24.401	353.7	.078
30	16.10	33.67	24.723	323.1	.111
50	14.65	33.55	24.950	301.4	.174

RV ARGO — 6508 STUDENT TRAINING CRUISE — 43 C

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.0N	114 28.0W	08/29/65	1150 GMT	73M	340	06KT	0	360 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	SIGT	DT	DD
0	20.22	33.76	23.780	412.9	0
10	20.24	33.76	23.775	413.4	.041
20	19.92	33.73	23.836	407.6	.082
30	18.74	33.69	24.107	381.7	.122
50	15.29	33.50	24.773	318.3	.192

RV ARGO 6508 STUDENT TRAINING CRUISE 50

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 03.5N	115 10.5W	09/05/65	1500 GMT	47M	220	05KT	6	180 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.52	33.80		23.993	392.6	0
									10	18.49	33.72		24.192	373.6	.038
									20	17.86	33.72		24.347	358.9	.075
									30	17.76	33.72		24.371	356.5	.111
									50A	15.93	33.72		24.800	315.7	.178

RV ARGO 6508 STUDENT TRAINING CRUISE 51

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 01.5N	115 09.0W	09/05/65	1522 GMT	54M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.51	34.30		23.564	433.6	0
									10	19.20	33.78		24.059	386.3	.041
									20	16.73	33.64		24.555	339.1	.077
									30	16.24	33.68		24.698	325.4	.111
									50	15.93	33.74		24.815	314.3	.175

RV ARGO 6508 STUDENT TRAINING CRUISE 52

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 59.5N	115 08.0W	09/05/65	1544 GMT	45M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.39	34.28		23.583	431.8	0
									10	22.35	34.28		23.594	430.7	.043
									20	21.63	34.22		23.749	415.9	.086
									30	20.50	34.06		23.934	398.3	.126

RV ARGO 6508 STUDENT TRAINING CRUISE 53

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 57.5N	115 07.0W	09/05/65	1604 GMT	41M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.52	34.28		23.546	435.3	0
									10	22.39	34.28		23.583	431.8	.043
									20	22.32	34.28		23.602	429.9	.087
									30	22.05	34.28		23.678	422.7	.129

RV ARGO 6508 STUDENT TRAINING CRUISE 54

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 55.5N	115 05.5W	09/05/65	1626 GMT	37M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.63	34.30		23.530	436.8	0
									10	22.60	34.30		23.538	436.0	.044
									20	22.56	34.31		23.557	434.2	.087
									30	22.30	34.30		23.623	427.9	.130

RV ARGO 6508 STUDENT TRAINING CRUISE 55

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 53.5N	115 04.5W	09/05/65	1651 GMT	19M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.93	34.30		23.444	445.0	0
									10	22.33	34.29		23.607	429.4	.044

A) THE S/T/D ANALOG RECORDING INDICATED A DEPTH OF MORE THAN 54 METERS.

RV ARGO — 6508 STUDENT TRAINING CRUISE — 56

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 53.0N	115 04.0W	09/05/65	1705	GMT	19M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	22.85	34.30		23.467	442.8	0
10	22.47	34.15		23.462	443.3	.044

RV ARGO — 6508 STUDENT TRAINING CRUISE — 57

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 46.0N	115 10.0W	09/05/65	1758	GMT	93M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	23.00	34.22		23.364	452.7	0
10	23.01	34.23		23.368	452.2	.045
20	22.00	34.13		23.578	432.2	.090
30	18.81	33.76		24.143	378.3	.130
50	17.34	33.88		24.595	335.3	.202
75	15.89	33.97		25.000	296.6	.281

RV ARGO — 6508 STUDENT TRAINING CRUISE — 58

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 47.5N	115 11.0W	09/05/65	1818	GMT	86M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	22.98	34.22		23.369	452.1	0
10	22.94	34.22		23.381	451.0	.045
20	22.61	34.18		23.445	444.9	.090
30	19.78	33.91		24.009	391.1	.132
50	18.40	34.00		24.428	351.1	.206
75	16.25	33.94		24.895	306.6	.289

RV ARGO — 6508 STUDENT TRAINING CRUISE — 59

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 49.0N	115 12.0W	09/05/65	1842	GMT	75M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	23.13	34.22		23.326	456.2	0
10	22.99	34.22		23.367	452.4	.045
20	22.79	34.21		23.416	447.6	.091
30	21.29	34.14		23.782	412.8	.134
50	19.17	34.15		24.349	358.7	.211
75	15.87	34.00		25.028	294.0	.293

RV ARGO — 6508 STUDENT TRAINING CRUISE — 60

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 52.0N	115 13.5W	09/05/65	1907	GMT	60M	240	06KT	2	230 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	23.15	34.26		23.351	453.9	0
10	23.03	34.27		23.393	449.9	.045
20	23.00	34.28		23.409	448.3	.090
30	22.00	34.23		23.654	424.9	.134
50	18.96	34.16		24.410	352.9	.212

RV ARGO — 6508 STUDENT TRAINING CRUISE — 61

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 54.0N	115 14.5W	09/05/65	1930	GMT	47M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	23.24	34.28		23.340	454.9	0
10	23.02	34.30		23.419	447.4	.045
20	22.27	34.26		23.601	430.0	.089
30	21.18	34.22		23.872	404.1	.131

RV ARGO 6508 STUDENT TRAINING CRUISE 62

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 55.5N	115 16.0W	09/05/65	1949 GMT	39M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.14	34.29		23.376	451.4	0
									10	23.02	34.29		23.411	448.2	.045
									20	22.00	34.25		23.669	423.5	.089
									30	19.25	34.20		24.366	357.0	.128

RV ARGO 6508 STUDENT TRAINING CRUISE 63

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 58.0N	115 18.0W	09/05/65	2008 GMT	47M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.12	34.28		23.375	451.6	0
									10	23.07	34.29		23.397	449.5	.045
									20	22.38	34.27		23.578	432.2	.089
									30	22.28	34.29		23.621	428.1	.132

RV ARGO 6508 STUDENT TRAINING CRUISE 64

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 59.0N	115 19.5W	09/05/65	2028 GMT	63M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.16	34.30		23.378	451.3	0
									10	23.02	34.30		23.419	447.4	.045
									20	22.41	34.27		23.569	433.0	.089
									30	20.58	34.10		23.943	397.4	.131
									50	19.48	34.10		24.231	369.9	.208

RV ARGO 6508 STUDENT TRAINING CRUISE 65

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 00.5N	115 20.0W	09/05/65	2048 GMT	69M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.19	34.30		23.370	452.1	0
									10	22.31	34.28		23.605	429.6	.044
									20	21.85	34.23		23.696	421.0	.087
									30	21.29	34.21		23.835	407.7	.128
									50	18.48	34.19		24.553	339.2	.203

RV ARGO 6508 STUDENT TRAINING CRUISE 66

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 02.5N	115 21.0W	09/05/65	2105 GMT	71M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.26	34.29		23.342	454.8	0
									10	22.13	34.30		23.671	423.3	.044
									20	21.96	34.30		23.718	418.8	.086
									30	21.67	34.31		23.806	410.4	.128
									50	18.60	34.18		24.516	342.8	.203

RV ARGO 6508 STUDENT TRAINING CRUISE 67

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 04.0N	115 22.0W	09/05/65	2126 GMT	56M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.82	34.30		23.476	442.0	0
									10	22.34	34.29		23.604	429.7	.044
									20	22.17	34.30		23.660	424.4	.086
									30	20.50	34.23		24.063	385.9	.127
									50	17.92	34.12		24.638	331.1	.199

RV ARGO 6508 STUDENT TRAINING CRUISE 68

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 51.0N	115 00.5W	09/05/65	2332 GMT	15M	290	10KT	2	230 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.24	34.11		23.496	440.0	0
									10	21.73	34.08		23.615	428.6	.043

RV ARGO 6508 STUDENT TRAINING CRUISE 69

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 56.0N	115 00.0W	09/06/65	0007 GMT	56M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.76	34.30		23.493	440.3	0
									10	22.63	34.31		23.537	436.1	.044
									20	22.38	34.30		23.601	430.0	.087
									30	22.17	34.30		23.660	424.4	.130
									50	21.14	34.12		23.807	410.3	.214

RV ARGO 6508 STUDENT TRAINING CRUISE 70

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 01.0N	115 00.0W	09/06/65	0042 GMT	75M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.43	33.78		23.470	442.5	0
									10	20.78	33.76		23.631	427.1	.043
									20	19.93	33.72		23.826	408.6	.085
									30	18.86	33.64		24.039	388.3	.125
									50	18.32	33.71		24.227	370.3	.201

RV ARGO 6508 STUDENT TRAINING CRUISE 71

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 06.0N	115 00.0W	09/06/65	0116 GMT	82M	040	02KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.38	33.78		23.484	441.2	0
									10	21.30	33.79		23.513	438.4	.044
									20	20.90	33.80		23.629	427.3	.087
									30	19.98	33.70		23.797	411.3	.129
									50	18.46	33.70		24.184	374.4	.208
									75	13.78	33.78		25.310	267.1	.289

RV ARGO 6508 STUDENT TRAINING CRUISE 72

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 11.0N	115 00.0W	09/06/65	0153 GMT	101M	340	07KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.40	33.79		23.486	441.0	0
									10	21.12	33.80		23.570	433.0	.044
									20	20.97	33.79		23.603	429.8	.087
									30	20.09	33.74		23.799	411.1	.129
									50	19.11	33.70		24.021	389.9	.209
									75	16.90	33.91		24.722	323.2	.299

RV ARGO 6508 STUDENT TRAINING CRUISE 73

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 16.0N	115 00.0W	09/06/65	0226 GMT	108M	330	09KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.57	33.90		23.523	437.5	0
									10	21.53	33.91		23.542	435.7	.044
									20	20.31	33.74		23.741	416.7	.086
									30	19.97	33.74		23.830	408.1	.128
									50	19.34	34.12		24.282	365.0	.205
									75	15.82	33.74		24.840	311.9	.290
									100	12.65	33.82		25.568	242.6	.360

RV ARGO — 6508 STUDENT TRAINING CRUISE — 73 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 16.0N	115 00.0W	09/06/65	0231 GMT	108M	330	09KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.52	33.91		23.544	435.4	0
									10	21.29	33.82		23.539	435.9	.044
									20	20.49	33.74		23.693	421.2	.086
									30	20.04	33.74		23.812	409.9	.128
									50	19.31	34.04		24.229	370.1	.206
									75	16.27	33.80		24.784	317.3	.293
									100	12.74	33.80		25.535	245.8	.364

RV ARGO — 6508 STUDENT TRAINING CRUISE — 74

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 21.0N	115 00.0W	09/06/65	0307 GMT	119M	300	10KT	2	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.90	33.91A		23.713	419.3	0
									10	20.71	33.88A		23.741	416.6	.042
									20	20.52	33.82A		23.746	416.2	.084
									30	19.72	33.88		24.002	391.8	.124
									50	18.92	34.10		24.374	356.3	.199
									75	16.05	33.60		24.680	327.1	.285
									100	13.05	33.74		25.427	256.0	.358

RV ARGO — 6508 STUDENT TRAINING CRUISE — 75

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 26.0N	115 00.0W	09/06/65	0337 GMT	125M	310	10KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.37	34.14		23.760	414.9	0
									10	21.35	34.13		23.758	415.1	.042
									20	20.28	34.06		23.992	392.7	.082
									30	20.23	34.07		24.013	390.7	.121
									50	19.54	34.07		24.193	373.5	.198
									75	16.32	33.88		24.833	312.5	.284
									100	13.57	33.61		25.222	275.5	.358

RV ARGO — 6508 STUDENT TRAINING CRUISE — 76

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 31.5N	115 00.0W	09/06/65	0415 GMT	131M	260	07KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.29	34.10		23.751	415.7	0
									10	19.44	33.97		24.143	378.3	.040
									20	19.07	33.97		24.237	369.3	.077
									30	18.65	33.90		24.290	364.3	.114
									50	17.57	33.93		24.578	336.9	.184
									75	15.85	33.93		24.979	298.7	.264
									100	12.89	33.65		25.390	259.6	.335
									125	11.53	33.97		25.897	211.3	.394

RV ARGO — 6508 STUDENT TRAINING CRUISE — 77

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 36.5N	115 00.0W	09/06/65	0452 GMT	129M	280	06KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.87	33.95		23.751	415.7	0
									10	20.65	34.10		23.924	399.2	.041
									20	18.24	33.92		24.407	353.2	.078
									30	17.27	34.00		24.703	324.9	.112
									50	16.47	33.96		24.860	310.0	.176
									75	15.13	33.94		25.146	282.7	.251
									100	12.67	33.66		25.441	254.8	.318
									125	11.19	34.00		25.983	203.2	.376

A) THE SALINITY RECORDING WAS ILLEGIBLE ABOVE 25 METERS. THE VALUE OF THE SURFACE SAMPLE, COLLECTED BY NANSEN BOTTLE, HAS BEEN TABULATED AND VALUES FOR 10 AND 20 METERS INTERPOLATED.

RV ARGO 6508 STUDENT TRAINING CRUISE 78

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 41.5N	115 00.0W	09/06/65	0527 GMT	116M	280	06KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.87	33.94		23.744	416.4	0
									10	19.56	33.91		24.066	385.6	.040
									20	19.16	33.92		24.176	375.2	.078
									30	17.00	33.62		24.476	346.5	.114
									50	14.47	93.60		25.027	294.1	.179
									75	13.15	33.64		25.330	265.2	.249
									100	11.71	33.81		25.740	226.3	.311

RV ARGO 6508 STUDENT TRAINING CRUISE 79

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 46.5N	115 00.0W	09/06/65	0608 GMT	101M	240	06KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.60	33.66		23.865	404.8	0
									10	18.55	33.68		24.147	377.9	.039
									20	17.59	33.67		24.374	356.3	.076
									30	16.49	33.60		24.580	336.7	.111
									50	14.11	33.58		25.088	288.3	.173
									75	12.57	33.72		25.506	248.5	.241
									100	11.39	33.93		25.892	211.8	.299

RV ARGO 6508 STUDENT TRAINING CRUISE 80

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 51.5N	115 00.0W	09/06/65	0645 GMT	99M	250	03KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.43	33.74		23.709	419.7	0
									10	19.49	33.71		23.932	398.4	.041
									20	17.48	33.57		24.324	361.0	.079
									30	15.75	33.63		24.771	318.5	.113
									50	13.58	33.58		25.197	277.9	.173
									75	11.75	33.89		25.794	221.1	.236

RV ARGO 6508 STUDENT TRAINING CRUISE 81

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 51.5N	115 05.5W	09/06/65	0719 GMT	119M	250	04KT	5	320 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.30	33.61		23.904	401.1	0
									10	17.56	33.60		24.328	360.7	.038
									20	17.33	33.59		24.375	356.2	.074
									30	17.19	33.61		24.424	351.5	.109
									50	14.60	33.57		24.977	298.9	.175
									75	12.96	33.63		25.360	262.4	.245
									100	12.09	33.92		25.754	225.0	.307

RV ARGO 6508 STUDENT TRAINING CRUISE 82

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 51.5N	115 11.5W	09/06/65	0753 GMT	173M	280	03KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.57	33.62		23.843	406.9	0
									10	19.65	33.65		23.845	406.7	.041
									20	18.16	33.60		24.182	374.6	.080
									30	17.85	33.62		24.273	365.9	.117
									50	15.88	33.49		24.634	331.5	.187
									75	14.47	33.59		25.020	294.8	.266
									100	13.55	33.88		25.435	255.3	.335
									125	12.74	33.90		25.612	238.4	.397
									150	12.07	33.96		25.788	221.7	.456

RV ARGO — 6508 STUDENT TRAINING CRUISE — 83

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 46.5N	115 11.5W	09/06/65	0830 GMT	192M	290	04KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.66	33.90		23.770	413.9	0
									10	20.63	33.90		23.778	413.2	.041
									20	19.31	33.80		24.046	387.5	.081
									30	17.90	33.70		24.322	361.2	.119
									50	15.34	33.64		24.870	309.1	.186
									75	15.10	33.99		25.191	278.4	.260
									100	13.46	33.90		25.468	252.1	.327
									125	12.68	33.96		25.655	234.4	.389
									150	11.95	34.00		25.842	216.5	.446

RV ARGO — 6508 STUDENT TRAINING CRUISE — 84

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 41.5N	115 11.5W	09/06/65	0905 GMT	168M	290	04KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.35	33.91		23.591	431.0	0
									10	21.33	33.90		23.589	431.2	.043
									20	19.95	33.68		23.790	412.0	.085
									30	18.92	33.76		24.115	381.0	.125
									50	15.56	33.66		24.836	312.2	.195
									75	13.89	33.79		25.295	268.6	.268
									100	13.59	33.92		25.457	253.2	.333
									125	12.59	33.91		25.650	234.9	.395
									150	11.92	33.98		25.832	217.5	.453

RV ARGO — 6508 STUDENT TRAINING CRUISE — 85

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 36.5N	115 11.5W	09/06/65	0940 GMT	153M	270	10KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.40	33.93		23.592	430.8	0
									10	21.18	33.88		23.614	428.7	.043
									20	20.08	34.14		24.106	381.9	.084
									30	18.00A	34.03		24.550	339.6	.120
									50	16.98	34.01		24.779	317.7	.186
									75	16.46	34.04		24.924	303.9	.264
									100	14.27	33.82		25.239	273.9	.337
									125	13.04	33.97		25.607	238.9	.402

RV ARGO — 6508 STUDENT TRAINING CRUISE — 85 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 36.5N	115 11.5W	09/06/65	0947 GMT	153M	270	10KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.41	33.97		23.620	428.2	0
									10	21.08	33.90		23.657	424.7	.043
									20	20.18	34.18		24.110	381.5	.083
									30	17.93	34.02		24.559	338.7	.119
									50	16.98	34.03		24.795	316.2	.185
									75	16.44	34.06		24.944	302.0	.263
									100	14.14	33.85		25.289	269.1	.335
									125	12.73	33.97		25.668	233.1	.398
									150	11.68	34.07		25.947	206.6	.454

RV ARGO — 6508 STUDENT TRAINING CRUISE — 86

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 31.5N	115 11.5W	09/06/65	1028 GMT	145M	220	04KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.94	33.89		23.687	421.8	0
									10	20.35	33.90		23.852	406.1	.041
									20	19.56	34.19		24.279	365.3	.080
									30	18.37	34.10		24.512	343.2	.116
									50	18.32	34.14		24.555	339.1	.184
									75	15.73	33.90		24.983	298.3	.264
									100	14.25	33.73		25.174	280.1	.337
									125	12.83	33.83		25.541	245.2	.404

A) THE S/T/D TEMPERATURE RECORDING WAS OFF-SCALE BETWEEN 25 AND 40 METERS. THIS VALUE HAS BEEN DETERMINED BY COMPARING THIS RECORDING WITH THE RECORDING FROM 858 LOWERED 7 MINUTES LATER.

RV ARGO — 6508 STUDENT TRAINING CRUISE — 87

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 26.5N	115 11.5W	09/06/65	1105 GMT	142M	310	09KT	5	270 01

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.80	34.35		23.519	437.8	0
									10	22.80	34.36		23.527	437.1	.044
									20	20.21	34.14		24.071	385.1	.085
									30	19.58	34.08		24.190	373.8	.123
									50	18.78	34.10		24.409	352.9	.196
									75	17.21	33.95		24.679	327.2	.281
									100	14.95	33.86		25.124	284.8	.359
									125	12.57	33.89		25.638	236.0	.424

RV ARGO — 6508 STUDENT TRAINING CRUISE — 88

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 23.5N	115 11.5W	09/06/65	1136 GMT	101M	260	07KT	4	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.63	34.36		23.575	432.5	0
									10	21.20	34.26		23.897	401.7	.042
									20	20.62	34.23		24.031	389.0	.081
									30	19.88	34.15		24.166	376.2	.120
									50	18.77	34.00		24.336	359.9	.194

RV ARGO — 6508 STUDENT TRAINING CRUISE — 89

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 27.0N	115 07.0W	09/06/65	1213 GMT	140M	300	08KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.18	34.28		23.642	426.1	0
									10	20.47	34.10		23.972	394.6	.041
									20	19.80	34.09		24.141	378.5	.080
									30	19.57	34.12		24.223	370.7	.117
									50	19.08	34.06		24.303	363.0	.191
									75	16.87	34.04		24.828	313.0	.276
									100	15.21	33.86		25.067	290.3	.352
									125	12.98	33.68		25.395	259.1	.421

RV ARGO — 6508 STUDENT TRAINING CRUISE — 90

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 31.0N	115 02.5W	09/06/65	1255 GMT	132M	310	07KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.30	34.04		23.703	420.3	0
									10	20.92	34.18		23.912	400.3	.041
									20	20.32	34.22		24.103	382.1	.080
									30	19.43	34.12		24.259	367.2	.118
									50	17.23	33.92		24.651	329.9	.188
									75	16.78	34.05		24.857	310.3	.268
									100	14.85	33.70		25.023	294.5	.344
									125	11.97	33.80		25.683	231.7	.411

RV ARGO — 6508 STUDENT TRAINING CRUISE — 91

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 35.0N	114 57.5W	09/06/65	1343 GMT	123M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.92	33.93		23.723	418.4	0
									10	20.92	33.98		23.761	414.8	.042
									20	19.75	34.04		24.116	380.9	.082
									30	19.09	34.04		24.285	364.7	.119
									50	17.57	34.00		24.631	331.8	.189
									75	14.91	33.80		25.087	288.4	.267
									100	12.25	33.77		25.607	238.9	.333

RV ARGO — 6508 STUDENT TRAINING CRUISE — 92

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 39.0N	114 53.5W	09/06/65	1425 GMT	116M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.48	33.80		23.742	416.6	0
10	19.68	33.70		23.875	403.8	.041
20	17.98	33.61		24.234	369.6	.080
30	16.05	33.51		24.611	333.7	.115
50	14.96	33.59		24.914	304.8	.179
75	12.41	33.68		25.506	248.5	.249
100	11.81	33.92		25.806	220.0	.308

RV ARGO — 6508 STUDENT TRAINING CRUISE — 93

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 42.0N	114 49.5W	09/06/65	1503 GMT	103M	340	08KT	5	270 02

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.99	33.80		23.605	429.6	0
10	20.92	33.80		23.624	427.8	.043
20	17.12	33.64		24.463	347.8	.082
30	15.39	33.66		24.874	308.6	.115
50	13.14	33.62		25.317	266.5	.172
75	12.02	33.77		25.651	234.8	.235
100	11.28	33.98		25.951	206.2	.291

RV ARGO — 6508 STUDENT TRAINING CRUISE — 94

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 45.5N	114 45.0W	09/06/65	1538 GMT	91M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	21.63	33.76		23.400	449.2	0
10	19.95	33.70		23.805	410.5	.043
20	17.32	33.70		24.462	347.9	.081
30	15.00	33.62		24.929	303.4	.114
50	13.05	33.64		25.350	263.4	.171
75	12.27	33.88		25.688	231.2	.233

RV ARGO — 6508 STUDENT TRAINING CRUISE — 95

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 49.0N	114 41.0W	09/06/65	1610 GMT	84M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	21.54	33.79		23.448	444.6	0
10	20.82	33.78		23.636	426.7	.044
20	18.45	33.72		24.202	372.7	.084
30	15.23	33.62		24.879	308.2	.118
50	13.24	33.59		25.274	270.6	.176
75	12.63	33.81		25.564	243.0	.240

RV ARGO — 6508 STUDENT TRAINING CRUISE — 96

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 52.5N	114 37.0W	09/06/65	1642 GMT	76M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	21.40	33.75		23.456	443.9	0
10	20.64	33.74		23.653	425.0	.043
20	18.44	33.71		24.197	373.2	.083
30	16.22	33.63		24.665	328.6	.119
50	14.06	33.56		25.083	288.8	.181
75	13.21	33.75		25.403	258.3	.249

RV ARGO — 6508 STUDENT TRAINING CRUISE — 97

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 55.5N	114 34.0W	09/06/65	1715 GMT	52M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	21.52	33.76		23.431	446.3	0
10	19.96	33.75		23.840	407.2	.043
20	18.07	33.58		24.189	373.9	.082
30	16.79	33.64		24.541	340.4	.118
50	15.82	33.62		24.748	320.7	.184

MUDDAUBER EXPEDITION

The MUDDAUBER Expedition, supported by the Marine Life Research Program of the University of California, was a study of the physical, chemical and biological factors affecting anaerobic sedimentation. In addition to the hydrographic cast and STD data reported herein, the expedition made 90 bathythermograph lowerings, collected 100 surface plankton samples and 19 plankton pump samples, made 66 oblique net hauls and collected 105 bottom core samples.

The depth of the 9 Nansen bottle casts varied from 600 to approximately 5900 m; the casts consisted of 18 bottles, with 20 bottles being lowered for the overlapping deep casts on 2 stations.

Temperature from the bottle casts and STD recordings agreed very well. The salinity sensor appeared to have drifted continuously. Adjustments resulted in some lowerings where no correction was needed, while others required varying corrections, the greatest being 0.2 ‰ for all ranges.

On stations 16-19 and 21-25 the recording range for temperature and salinity on the STD analog was set full scale (temperature, 0-30°C; salinity, 31-39 ‰). The accuracy of the digitized values must therefore be considered less than that at the normally used ranges.

Personnel participating in the collection of data were:

Ship's Captain:

Davis, Laurence E.
RV Alexander Agassiz

Scientific personnel:

Soutar, A. (in charge)
Bryan, W. R.
Ferreira, S. M.
Fleminger, Dr. A.
Hester, A. W.
Mead, R. V.
Rosendahl, D. V.
Sievers, H. A.

A publication utilizing MUDDAUBER data is:

Veeh, H. H., W. C. Burnett, A. Soutar, 1973. Contemporary Phosphorites on the Continental Margin of Peru. Science, 181: 844-845.

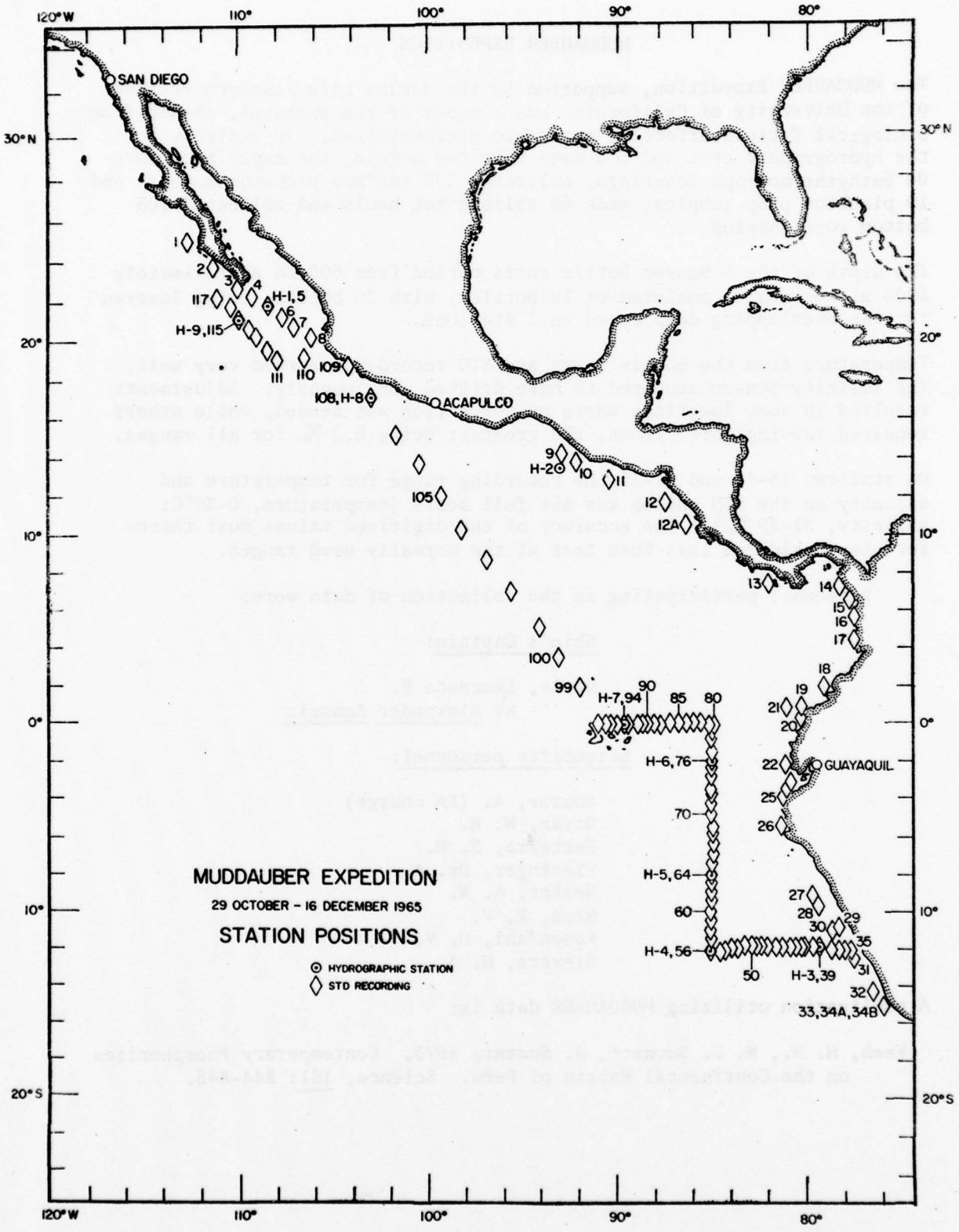

120° W
110°
100°
90°
80°
30° N
20°
10°
0°
10°
20° S
SAN DIEGO
ACAPULCO
GUAYAQUIL
H-1,5
H-9,115
108, H-8
H-2
H-7,94
H-6,76
H-5,64
H-4,56
H-3,39
MUDDAUBER EXPEDITION
29 OCTOBER - 16 DECEMBER 1965
STATION POSITIONS
HYDROGRAPHIC STATION
STD RECORDING

FIGURE 4

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 1

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
25 08.0N	112 43.0W	10/29/65	2311 GMT	520M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	25.75	34.66		22.876	499.2	0
									10	25.20	34.66		23.045	483.1	.049
									20	24.92	34.65		23.122	475.7	.097
									30	24.76	34.65		23.171	471.1	.145
									50	20.04	34.06		24.055	386.7	.231
									75	16.48	34.21		25.049	292.0	.316
									100	15.56	34.48		25.466	252.3	.385
									125	14.56	34.64		25.809	219.8	.445
									150	13.45	34.65		26.049	196.9	.498
									200	12.14	34.68		26.333	170.0	.592
									250	11.62	34.66		26.416	162.1	.677
									300	11.12	34.64		26.493	154.8	.760
									400	10.62	34.61		26.559	148.5	.919

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 2

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
23 46.0N	111 27.5W	10/30/65	0945 GMT	450M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	26.67	34.58		22.528	532.5	0
									10	26.67	34.58		22.528	532.5	.053
									20	26.62	34.58		22.544	531.0	.107
									30	22.23	34.18		23.552	434.7	.155
									50	19.28	34.10		24.283	365.0	.235
									75	16.32	34.24		25.109	286.3	.317
									100	14.19	34.43		25.726	227.6	.382
									125	13.43	34.55		25.976	203.8	.437
									150	12.89	34.74		26.232	179.5	.485
									200	12.07	34.73		26.385	165.0	.574
									250	11.45	34.70		26.479	156.1	.657
									300	10.51	34.66		26.618	142.9	.735
									400	9.54	34.61		26.745	130.9	.879

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 3

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
22 47.5N	110 00.0W	10/30/65	1900 GMT					

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	27.90	34.49		22.065	576.8	0
									10	27.69	34.50		22.141	569.5	.057
									20	27.49	34.56		22.251	559.0	.114
									30	26.87	34.45		22.367	547.9	.169
									50	22.32	34.17		23.519	437.8	.268
									75	17.43	34.10		24.741	321.3	.364
									100	15.37	34.28		25.355	262.9	.437
									125	13.67	34.41		25.819	218.8	.498
									150	13.03	34.60		26.096	192.5	.551
									200	12.29	34.70		26.319	171.3	.644
									250	11.42	34.70		26.484	155.6	.728
									300	10.79	34.67		26.576	146.9	.807
									400	9.26	34.59		26.775	128.0	.952
									500	7.71	34.52		26.960	110.4	1.080
									600	6.50	34.48		27.098	97.4	1.192

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 4

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
22 20.0N	109 16.0W	10/31/65	0003 GMT					

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	27.77	34.50		22.115	572.0	0
									10	27.49	34.49		22.198	564.1	.057
									20	27.42	34.47		22.206	563.3	.113
									30	26.28	34.51		22.598	525.8	.168
									50	21.88	34.12		23.604	429.7	.264
									75	15.92	34.15		25.132	284.1	.353
									100	13.75	34.30		25.718	228.4	.418
									125	12.63	34.55		26.137	188.6	.471
									150	12.67	34.74		26.276	175.4	.517
									200	12.03	34.76		26.416	162.1	.604
									250	11.27	34.73		26.535	150.8	.685
									300	10.63	34.68		26.612	143.5	.762
									400	8.95	34.56		26.802	125.5	.903
									500	7.82	34.54		26.960	110.5	1.030
									600	6.81	34.51		27.080	99.1	1.143

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 5

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
21 51.0N	108 30.8W	10/31/65	0505 GMT	2904M	330	02KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	28.48	34.31		21.740	607.9	0
									10	28.29	34.38		21.855	596.9	.060
									20	28.02	34.38		21.944	588.4	.120
									30	27.41	34.49		22.224	561.6	.177
									50	21.85	34.40		23.825	408.7	.275
									75	18.43	34.65		24.917	304.6	.364
									100	15.82	34.65		25.538	245.5	.434
									125	14.62	34.77		25.896	211.5	.492
									150	13.62	34.84		26.161	186.3	.542
									200	12.32	34.77		26.368	166.7	.633
									250	11.80	34.75		26.452	158.7	.717
									300	11.28	34.73		26.533	150.9	.798
									400	9.82	34.63		26.713	133.9	.948
									500	8.12	34.53		26.907	115.5	1.081
									600	7.22	34.51		27.023	104.5	1.201

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — H 1

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
21 51.0N	108 30.8W	10/31/65	0545 GMT	2904M	330	02KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	28.46	34.302						607.9	0	28.46	34.302		21.741	607.9	0
10	28.41	34.333	4.86					604.1	10	28.41	34.333	4.86	21.780	604.1	.061
30	27.38	34.499	4.32					560.0	20	27.90	34.415	4.59	22.011	582.0	.120
40	24.02	34.282	5.05					476.5	30	27.38	34.499	4.32	22.241	560.0	.177
55	21.06	34.562	3.74					376.3	50	21.87	34.438	4.35	23.848	406.5	.274
70	18.80	34.752U	2.26						75	18.08	34.703	1.93	25.044	292.4	.362
95	15.86	34.661	1.10					245.5	100	15.64	34.718	1.07	25.631	236.6	.429
115	15.16	34.855	1.54U					216.5	125	14.57	34.814	.93	25.942	207.1	.485
137	13.88	34.754	.86					197.7	150	13.48	34.806	.80	26.163	186.1	.535
155	13.36	34.830	.77					181.9	200	12.21	34.762	.20	26.384	165.1	.625
185	12.40	34.771	.20					168.1	250	11.86	34.771	.20	26.457	158.2	.709
221	12.08	34.764	.21					162.7	300	11.35	34.737	.20	26.525	151.7	.790
250	11.86	34.771	.20					158.2	400	9.95	34.658	.18	26.714	133.8	.940
301	11.34	34.735	.20					151.6	500	8.24	34.547	.21	26.902	116.0	1.074
355	10.66	34.696						142.8	600	7.20	34.524	.23	27.037	103.1	1.193
439	9.28	34.621	.18					126.0							
524	7.88	34.524	.22					112.5							
609	7.15	34.528	.23					102.2							

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 6

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
21 22.0N	107 45.0W	10/31/65	1114 GMT					

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	28.44	34.36		21.791	603.1	0
									10	28.43	34.36		21.794	602.8	.060
									20	28.36	34.38		21.832	599.1	.120
									30	28.03	34.41		21.963	586.6	.180
									50	25.62	34.49		22.788	507.7	.290
									75	18.44	34.35		24.685	326.6	.394
									100	16.21	34.70		25.487	250.3	.467
									125	14.22	34.74		25.958	205.5	.525
									150	13.30	34.76		26.165	185.9	.575
									200	12.33	34.80		26.389	164.6	.665
									250	11.55	34.75		26.499	154.2	.747
									300	11.00	34.72		26.577	146.8	.826
									400	9.30	34.61		26.784	127.1	.970
									500	7.83	34.54		26.959	110.6	1.098
									600	6.88	34.52		27.078	99.3	1.212

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 7

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
20 52.8N	107 00.0W	10/31/65	1618 GMT					

Z	T	S	O2	SIGT	DT	DD
0	28.83	34.26		21.587	622.6	0
10	28.83	34.26		21.587	622.6	.062
20	28.69	34.39		21.731	608.8	.124
30	28.72	34.50		21.803	601.9	.185
50	23.77	34.57		23.405	448.7	.290
75	17.52	34.38		24.934	303.0	.384
100	15.27	34.57		25.600	239.6	.453
125	14.02	34.72		25.985	203.0	.509
150	13.10	34.75		26.198	182.8	.558
200	12.18	34.78		26.403	163.4	.647
250	11.39	34.72		26.505	153.6	.729
300	10.73	34.69		26.602	144.4	.807
400	8.91	34.58		26.824	123.4	.948
500	7.56	34.52		26.982	108.4	1.072
600	6.32	34.50		27.138	93.6	1.181

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 8

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
20 19.6N	106 13.0W	10/31/65	2125 GMT	2302M				

Z	T	S	O2	SIGT	DT	DD
0	29.33	33.94		21.180	661.7	0
10	29.33	33.94		21.180	661.7	.066
20	29.20	34.12		21.358	644.6	.132
30	28.82	34.16		21.515	629.5	.195
50	26.37	34.15		22.299	554.4	.314
75A	16.70	34.54		25.251	272.8	.418
100	14.55	34.62		25.795	221.0	.480
125	13.33	34.76		26.159	186.5	.532
150	12.60	34.75		26.297	173.3	.578
200	11.90	34.76		26.441	159.7	.664
250	11.27	34.74		26.543	150.0	.744
300	10.52	34.69		26.639	140.9	.820
400	9.03	34.59		26.812	124.5	.960
500	7.63	34.53		26.980	108.6	1.084
600	6.66	34.52		27.108	96.4	1.195

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 9

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
14 26.0N	93 01.0W	11/04/65	1635 GMT	4400M				

Z	T	S	C2	SIGT	DT	DD
0	29.40	32.65		20.190	756.6	0
10	28.74	33.31		20.904	688.1	.072
20	27.00	33.52		21.627	618.8	.138
30	20.61	34.39		24.155	377.2	.188
50	16.69	34.73		25.399	258.7	.251
75	14.03	34.87		26.099	192.2	.308
100	13.32	34.88		26.254	177.5	.355
125	12.97	34.88		26.324	170.8	.399
150	12.63	34.85		26.369	166.5	.442
200	11.85	34.82		26.497	154.4	.525
250	11.39	34.80		26.567	147.7	.603
300	10.64	34.76		26.672	137.7	.678
400	8.58	34.64		26.923	114.0	.811

A) THE S/T/D TEMPERATURE RECORDING WAS ILLEGIBLE AT THIS DEPTH. THE VALUE HAS BEEN INTERPOLATED IN ORDER THAT DYNAMIC HEIGHT CALCULATIONS COULD BE COMPLETED.

RV ALEXANDER AGASSIZ MUDDAUBER EXPEDITION H 2

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
13 44.0N	93 03.0W	11/04/65	2220 0115GMT	5955M	290		0	340 07 07

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	C2	SIGT	CT	CD
0	28.36	33.480	4.46					663.8	0	28.36	33.480	4.46	21.157	663.8	0
10	25.88 A	33.937	4.33					555.2	10	25.88	33.937	4.33	22.291	555.2	.061
30	17.02	34.772	1.18					263.1	20	21.35	34.336	2.85	23.914	400.3	.109
51	15.07	34.835	.35					216.0	30	17.02	34.772	1.18	25.353	263.1	.142
101	13.51	34.874	.28					181.6	50	15.16	34.831	.36	25.824	218.3	.190
149	12.92	34.864	.35					171.0	75	13.99	34.872	.32	26.109	191.2	.243
200	12.18	34.830	.32					159.7	100	13.52	34.874	.28	26.210	181.7	.291
250	10.98	34.762	.27					143.4	125	13.17	34.874	.31	26.281	174.9	.337
300	9.84	34.696	.32					129.3	150	12.91	34.863	.35	26.324	170.8	.381
399	8.18	34.619	.28					109.7	200	12.18	34.830	.32	26.441	159.7	.466
497	7.02	34.591	.22					95.8	250	10.98	34.762	.27	26.613	143.4	.544
595	6.18	34.570	.31					86.7	300	9.84	34.696	.32	26.761	129.3	.616
797	5.03	34.569	.31					73.3	400	8.17	34.619	.28	26.970	109.5	.742
993	4.32	34.574	.56					65.4	500	6.99	34.591	.22	27.118	95.5	.852
1192	3.68	34.586	.86					58.2	600	6.14	34.571	.31	27.215	86.3	.951
1390	3.23	34.610	1.07					52.3	700	5.51	34.567	.31	27.293	78.9	1.042
1589	2.84	34.619	1.65					48.2	800	5.02	34.570	.31	27.353	73.2	1.127
1679B	2.69	34.632	1.63					45.9	1000	4.30	34.575	.57	27.438	65.1	1.285
1690	2.66	34.627	1.82					46.1	1200	3.66	34.588	.87	27.514	57.9	1.428
1923B	2.32	34.648	2.00					41.7	1500	3.01	34.615	1.42	27.599	50.0	1.620
2172B	2.03	34.657	2.28					38.8	2000	2.22	34.652	2.09	27.697	40.7	1.897
2418B	1.88	34.669	2.49					36.8	2500	1.86	34.671	2.56	27.741	36.5	2.141
2664B	1.84	34.673	2.66					36.2	3000	1.85	34.675	2.73	27.745	36.1	2.378
2911B	1.84	34.674	2.70					36.1	3500	1.89	34.675	2.74	27.742	36.4	2.624
3157B	1.86	34.676	2.77					36.1	4000	1.94	34.674	2.80	27.737	36.8	2.883
3400B	1.88	34.677	2.74					36.2	4500	2.00	34.677	2.83	27.734	37.1	3.155
3646B	1.90	34.672	2.74					36.7	5000	2.07	34.679	2.83	27.730	37.5	3.440
3843B	1.92	34.677	2.71					36.5	5500	2.13	34.674	2.59	27.721	38.3	3.741
4038B	1.94	34.673	2.82					36.9							
4233B	1.96	34.672	2.81					37.2							
4429B	2.00	34.677	2.83					37.1							
4627B	2.01	34.676	2.82					37.2							
4825B	2.04	34.672	2.82					37.7							
5024B	2.07	34.679	2.83					37.4							
5221B	2.09	34.676	2.87					37.8							
5418B	2.13	34.670	2.34					38.6							
5616B	2.14	34.680	2.98					37.5							
5818B	2.18	34.679	2.67					38.3							

RV ALEXANDER AGASSIZ MUDDAUBER EXPEDITION H 2

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
13 44.0N	93 03.0W	11/04/65	2305 GMT	5624M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD
									0	28.35	33.48		21.160	663.5	0
									10	21.80	34.49		23.907	400.8	.053
									20	18.97	34.57		24.720	323.4	.089
									30	17.22	34.72		25.266	271.4	.119
									50	15.43	34.80		25.741	226.2	.169
									75	14.12	34.86		26.072	194.7	.222
									100	13.61	34.89		26.202	182.4	.270
									125	13.34	34.89		26.257	177.1	.316
									150	13.04	34.88		26.310	172.1	.360
									200	12.36	34.85		26.422	161.5	.446
									250	11.10	34.77		26.597	144.9	.526
									300	10.02	34.71		26.742	131.2	.598
									400	8.28	34.63		26.961	110.3	.725
									500	7.07	34.59		27.107	96.5	.836
									600	6.25	34.57		27.202	87.5	.937
									700	5.62	34.57		27.282	80.0	1.029
									800	5.08	34.57		27.347	73.8	1.115
									1000	4.33	34.57		27.431	65.8	1.274
									1200	3.70	34.58		27.505	58.9	1.419
									1500	3.07	34.62		27.597	50.1	1.613

A) MEAN VALUE OF 25.98 AND 25.79 DEGREES.
B) CAST II.

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 10

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
13 54.5N	92 27.7W	11/05/65	0747 GMT	468M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	28.76	32.95		20.628	714.6	0
									10	28.53	32.93		20.689	708.7	.071
									20	27.99	33.00		20.918	686.8	.141
									30	23.47	34.27		23.266	462.0	.199
									50	19.05	34.68		24.783	317.3	.277
									75	15.18	34.82		25.812	219.4	.344
									100	13.84	34.89		26.154	187.0	.396
									125	13.34	34.89		26.257	177.1	.442
									150	13.05	34.89		26.316	171.6	.487
									200	12.46	34.86		26.410	162.6	.572
									250	11.94	34.83		26.487	155.3	.655
									300	11.13	34.78		26.600	144.6	.733
									400	9.40	34.69		26.830	122.8	.874

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 11

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
13 06.4N	90 31.3W	11/05/65	2304 GMT	468M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	28.95	32.65		20.340	742.2	0
									10	28.34	32.85		20.691	708.5	.073
									20	28.08	33.00		20.889	689.6	.143
									30	26.90	33.34		21.523	628.7	.209
									50	19.83	34.66		24.567	337.9	.305
									75	15.88	34.79		25.632	236.6	.378
									100	14.01	34.85		26.088	193.3	.432
									125	13.62	34.86		26.177	184.8	.480
									150	13.22	34.88		26.274	175.6	.526
									200	12.80	34.88		26.358	167.5	.614
									250	12.20	34.84		26.445	159.3	.699
									300	11.44	34.80		26.558	148.6	.779
									400	9.95	34.71		26.754	130.0	.927

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 12

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 50.6N	87 33.3W	11/06/65	2217 GMT	356M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	28.77	32.62		20.377	738.6	0
									10	28.37	32.66		20.539	723.1	.073
									20	28.33	32.71		20.590	718.3	.145
									30	27.78	33.35		21.249	655.0	.214
									50	21.55	34.38		23.892	402.2	.320
									75	18.15	34.69		25.017	295.1	.408
									100	15.79	34.80		25.660	233.9	.475
									125	15.09	34.85		25.855	215.4	.532
									150	14.61	34.88		25.983	203.2	.585
									200	13.45	34.88		26.227	180.0	.683
									250	12.53	34.84		26.381	165.4	.772
									300	12.18	34.82		26.434	160.4	.857

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 12 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
10 42.6N	86 32.3W	11/07/65	0831 GMT					

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	28.05	32.22		20.314	744.8	0
									10	27.60	32.88		20.954	683.3	.071
									20	24.93	33.72		22.418	543.0	.133
									30	22.10	34.42		23.770	413.9	.181
									50	19.88	34.57		24.485	345.7	.257
									75	17.32	34.81		25.311	267.1	.334
									100	15.07	34.87		25.875	213.5	.395
									125	14.28	34.91		26.077	194.3	.447
									150	14.02	34.91		26.132	189.1	.496
									200	13.25	34.89		26.276	175.4	.589
									250	12.59	34.85		26.377	165.8	.677
									300	12.05	34.84		26.474	156.6	.761
									400	9.94	34.71		26.755	129.9	.913

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 13

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
7 32.0N	82 04.0W	11/09/65	1711 GMT	459M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									CA	28.20	30.36		18.873	883.4	0
									1CA	28.18	30.93		19.306	841.7	.086
									2C	27.67	31.50		19.897	784.8	.168
									3C	27.37	32.13		20.465	730.2	.244
									5C	24.75	33.30		22.156	568.1	.374
									75	16.75	34.72		25.377	260.8	.478
									10C	15.42	34.84		25.774	223.1	.539
									125	14.81	34.88		25.939	207.3	.594
									150	14.02	34.90		26.124	189.8	.644
									200	13.42	34.88		26.233	179.4	.739
									25C	12.80	34.86		26.343	169.0	.829
									300	11.80	34.79		26.483	155.7	.914
									400	10.28	34.72		26.705	134.7	1.067

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 14

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
7 25.5N	78 25.0W	11/13/65	1004 GMT	580M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									CA	27.93	28.02		17.210	1043.8	0
									1CA	27.73	29.73		18.552	914.2	.098
									2C	27.67	31.44		19.852	789.1	.183
									3C	27.47	32.05		20.373	739.0	.260
									5C	16.95	34.70		25.315	266.7	.360
									75	15.22	34.91		25.872	213.7	.421
									10C	14.94	34.91		25.934	207.8	.474
									125	14.87	34.91		25.949	206.4	.527
									15C	14.66	34.89		25.980	203.5	.579
									200	13.99	34.89		26.123	189.9	.680
									25C	13.39	34.87		26.232	179.6	.776
									300	12.08	34.80		26.437	160.1	.864
									40C	9.31	34.65		26.814	124.3	1.014
									50C	8.12	34.59		26.954	111.0	1.140

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 15

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
6 48.3N	77 45.0W	11/13/65	1847 GMT	4C8M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									CA	27.66	27.02		16.549	1107.8	0
									1CA	27.81	28.50		17.607	1005.5	.106
									2CA	27.71	29.98		18.746	895.6	.201
									3C	27.51	31.45		19.911	783.5	.285
									5C	18.25	34.47		24.824	313.4	.395
									75	15.83	34.91		25.735	226.7	.463
									10C	15.31	34.93		25.868	214.1	.519
									125	15.02	34.92		25.924	208.8	.572
									15C	14.58	34.90		26.005	201.1	.625
									200	13.95	34.89		26.131	189.1	.725
									25C	12.95	34.82		26.282	174.8	.819
									30C	12.00	34.79		26.445	159.3	.906

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 16

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
5 41.0N	77 25.2W	11/14/65	0149 GMT	431M	220	02KT	6	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									CA	28.15B	26.98B		16.363	1125.8	0
									1CA	27.65	28.48		17.643	1002.0	.106
									2CA	27.60	29.98		18.781	892.2	.201
									3C	27.35	31.48		19.984	776.4	.285
									5C	20.25	33.66		23.696	420.9	.405
									75	15.70	34.96		25.803	220.3	.485
									10C	15.25	34.98		25.920	209.2	.540
									125	15.10	34.98		25.953	206.1	.592
									15C	14.90	34.98		25.997	201.9	.644
									20C	14.60	34.97		26.054	196.4	.747
									250	13.65	34.93		26.224	180.3	.844
									30C	12.95	34.90		26.344	168.9	.935
									400	10.05	34.70		26.729	132.4	1.094

A) THE SALINITY VALUES AT THESE DEPTHS WERE LOWER THAN THE RANGE OF THE S/T/D ANALOG RECORDING. THE VALUE OF THE WATER SAMPLE COLLECTED FROM THE SURFACE FOR CALIBRATION OF THE INSTRUMENT WAS TABULATED AND THE VALUES FOR OTHER DEPTHS WERE INTERPOLATED.
B) THE RANGE FOR THE ANALOG RECORDER WAS SET FULL-SCALE.

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 17

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
4 38.7N	77 32.2W	11/14/65	1105 GMT		180	08KT	6	220 04 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	27.4CA	A				
10	27.65					
20	27.3C					
30	27.2C	31.38		19.957	779.0	
50	21.0C	33.90		23.678	422.6	
75	15.6C	34.98		25.841	216.7	
100	15.35	35.C0		25.913	209.9	
125	15.35	35.01		25.920	209.1	
150	15.25	35.C1		25.943	207.0	
200	14.8C	34.98		26.019	199.8	
250	14.05	34.95		26.156	186.7	
300	13.2C	34.92		26.309	172.2	

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 18

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
2 C0.8N	79 03.0W	11/15/65	1312 GMT	971M	180	08KT	2	220 05 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	27.05A	A				
10	27.05					
20	27.05					
30	26.85					
50	16.6C	33.82		24.723	323.1	
75	16.0C	34.98		25.750	225.3	
100	15.65	35.C0		25.845	216.3	
125	15.35	35.01		25.920	209.1	
150	14.9C	34.97		25.989	202.6	
200	13.85	34.94		26.191	183.5	
250	13.15	34.90		26.304	172.7	
300	12.5C	34.87		26.410	162.6	
400	10.15	34.74		26.743	131.1	
500	8.75	34.65		26.904	115.8	
600	7.95	34.63		27.011	105.6	

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 19

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 52.6N	80 15.3W	11/16/65	0740 GMT	468M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	25.9CA	31.66A		20.573	719.9	0
10	25.95	31.80		20.663	711.3	.072
20	25.85	32.17		20.972	681.6	.141
30	25.85	32.25		21.032	675.8	.209
50	16.9C	33.54		24.439	350.1	.312
75	16.25	35.06		25.754	224.9	.384
100	16.1C	35.07		25.797	220.9	.441
125	15.4C	35.02		25.917	209.5	.496
150	15.05	35.00		25.979	203.6	.548
200	14.1C	34.98		26.169	185.5	.648
250	12.9C	34.91		26.362	167.2	.739
300	12.6C	34.90		26.414	162.3	.825
400	9.65	34.74		26.828	123.0	.976

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 20

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 20.7N	80 23.8W	11/16/65	1227 GMT	356M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	25.43	32.67A		21.476	633.2	0
10	25.43	32.67		21.476	633.2	.063
20	25.43	32.67		21.476	633.2	.127
30	25.43	32.70		21.499	631.1	.190
50	16.27	35.08		25.765	223.9	.276
75	15.68	35.06		25.885	212.5	.331
100	15.4E	35.04		25.914	209.7	.384
125	15.2C	35.02		25.961	205.3	.437
150	14.7E	34.98		26.023	199.4	.489
200	13.45	34.94		26.273	175.6	.585
250	12.6C	34.92		26.429	160.8	.672
300	11.5C	34.82		26.563	148.2	.753

A) THE RANGE FOR THE ANALOG RECORDER WAS SET FULL SCALE.

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 21

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 58.0S	81 04.9W	11/16/65	2310 GMT	487M				

Z	T	S	O2	SIGT	DT	CD
0	24.1CA	33.44A		22.455	539.5	0
10	24.1C	33.44		22.455	539.5	.054
20	23.75	33.46		22.572	528.3	.107
30	23.65	33.48		22.617	524.0	.160
50	16.8C	35.06		25.626	237.1	.237
75	16.15	35.08		25.793	221.3	.294
100	15.75	35.05		25.861	214.8	.349
125	15.05	35.02		25.995	202.1	.402
150	14.55	34.98		26.073	194.7	.453
200	14.05	34.98		26.179	184.5	.550
250	13.3C	34.94		26.304	172.7	.643
300	12.75	34.90		26.384	165.1	.731
400	10.1C	34.76		26.767	128.8	.886

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 22

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
2 14.3S	81 11.0W	11/17/65	0811 GMT	694M				

Z	T	S	O2	SIGT	DT	CD
0	23.25A	33.65A		22.861	500.7	0
10	23.25	33.65		22.861	500.7	.050
20	23.25	33.65		22.861	500.7	.100
30	22.7C	33.86		23.177	470.5	.149
50	17.1C	35.08		25.570	242.4	.220
75	15.95	35.09		25.846	216.2	.278
100	15.55	35.07		25.922	209.0	.332
125	14.85	35.00		26.023	199.4	.384
150	14.35	35.01		26.139	188.4	.433
200	13.6C	34.97		26.266	176.4	.527
250	13.35	34.96		26.309	172.2	.617
300	12.85	34.92		26.379	165.5	.705
400	10.1C	34.76		26.767	128.8	.861
500	9.15	34.70		26.879	118.1	.994
600	7.95	34.65		27.027	104.1	1.115

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 23

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
3 06.0S	80 58.8W	11/17/65	1754 GMT	416M	240	05KT	2	07 07

Z	T	S	O2	SIGT	DT	CD
0	22.35A	34.03A		23.405	448.8	0
10	22.35	34.03		23.405	448.8	.045
20	20.22	34.42		24.282	365.1	.086
30	17.0C	35.04		25.563	243.1	.116
50	16.1C	35.07		25.797	220.9	.163
75	15.45	35.06		25.936	207.6	.217
100	15.1C	35.03		25.991	202.4	.269
125	14.9C	35.04		26.043	197.5	.320
150	14.6C	35.02		26.093	192.8	.369
200	13.9C	34.98		26.211	181.5	.465
250	13.3C	34.96		26.320	171.2	.557
300	12.75	34.90		26.384	165.1	.645

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 24

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
3 27.7S	81 00.0W	11/17/65	2036 GMT	378M	250	14KT	1	220 06 06

Z	T	S	O2	SIGT	DT	CD
0	23.1CA	34.02A		23.184	469.8	0
10	22.15	34.11		23.521	437.6	.045
20	18.35	35.05		25.242	273.6	.081
30	17.7C	35.04		25.395	259.1	.108
50	16.7C	35.11		25.688	231.2	.157
75	15.7C	35.10		25.911	210.0	.213
100	15.35	35.09		25.982	203.3	.265
125	14.85	35.05		26.061	195.7	.316
150	14.6C	35.02		26.093	192.8	.365
200	13.7C	34.96		26.237	179.1	.461
250	13.0C	34.95		26.373	166.2	.550
300	12.65	34.92		26.419	161.8	.636

A) THE RANGE FOR THE ANALOG RECORDER WAS SET FULL SCALE.

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 25

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
3 52.5S	81 12.8W	11/18/65	0233 GMT	490M	2C0	19KT		200 05 05

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	21.9CA	34.30A		23.735	417.2	0
									1C	21.85	34.30		23.749	415.9	.042
									2C	17.9C	35.09		25.384	260.1	.076
									3C	16.4C	35.12		25.766	223.9	.100
									5C	15.6C	35.10		25.933	207.9	.143
									75	15.2C	35.07		26.000	201.6	.195
									100	14.65	35.04		26.097	192.3	.245
									125	14.3C	35.02		26.157	186.7	.293
									15C	14.15	35.CC		26.174	185.1	.340
									200	13.55	34.95		26.261	176.8	.433
									25C	12.85	34.94		26.395	164.1	.522
									300	12.7C	34.92		26.409	162.7	.607
									4CC	9.7C	34.76		26.835	122.3	.758

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 26

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
5 28.3S	81 21.0W	11/18/65	1325 GMT	412M				

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	18.03	35.1C		25.360	262.5	0
									1C	17.78	35.09		25.413	257.3	.026
									2C	17.5C	35.1C		25.489	250.1	.051
									3C	17.28	35.1C		25.542	245.1	.076
									5C	15.99	35.1C		25.845	216.3	.123
									75	15.45	35.C7		25.944	206.9	.176
									100	14.99	35.C4		26.023	199.4	.227
									125	14.73	35.01		26.057	196.2	.278
									150	14.41	34.99		26.111	191.1	.327
									2CC	13.99	34.97		26.184	184.1	.423
									25C	13.22	34.93		26.313	171.9	.516
									3CC	12.4E	34.9C		26.441	159.7	.602
									4CC	9.62	34.71		26.809	124.8	.752

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 27

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
9 08.4S	79 47.5W	11/20/65	0428 GMT					

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	18.85	35.17		25.208	276.9	0
									1C	18.64	35.16		25.253	272.6	.027
									2C	18.19	35.12		25.335	264.8	.054
									3C	17.57	35.04		25.426	256.1	.081
									5C	16.58	35.02		25.647	235.1	.130
									75	14.93	35.CC		26.005	201.1	.185
									1CC	14.32	34.98		26.122	190.0	.234
									125	13.77	34.97		26.230	179.7	.281
									15C	13.49	34.95		26.273	175.7	.327
									2CC	12.43	34.91		26.455	158.4	.413
									25C	11.98	34.88		26.518	152.4	.493
									3CC	11.23	34.83		26.620	142.7	.570
									4CC	9.34	34.71		26.856	120.3	.710
									5CC	8.1E	34.64		26.988	107.9	.832
									6CC	7.13	34.59		27.099	97.3	.944

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 28

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
9 42.5S	79 27.0W	11/20/65	1437 GMT	412M	18C	02KT	2	150 04 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	19.59	35.29		25.109	286.3	0
									1C	19.56	35.30		25.124	284.8	.029
									2C	19.5C	35.29		25.132	284.1	.057
									3C	19.06	35.23		25.200	277.6	.085
									5C	16.68	35.C6		25.654	234.4	.137
									75	15.28	35.04		25.959	205.5	.192
									100	14.75	35.CC		26.045	197.3	.243
									125	14.4C	34.99		26.113	190.9	.293
									15C	14.18	34.99		26.160	186.4	.341
									2CC	13.59	34.97		26.268	176.2	.434
									25C	12.45	34.90		26.443	159.5	.521
									3CC	11.57	34.85		26.573	147.2	.601

A) THE RANGE FOR THE ANALOG RECORDER WAS SET FULL SCALE.

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 29

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
10 48.9S	78 34.0W	11/21/65	0538 GMT	359M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.62	35.30		25.109	286.3	0
									10	19.60	35.30		25.114	285.8	.029
									20	19.49	35.30		25.143	283.1	.057
									30	19.43	35.29		25.151	282.3	.085
									50	17.60	35.10		25.465	252.4	.139
									75	16.57	35.05		25.672	232.7	.200
									100	14.43	34.98		26.099	192.2	.254
									125	13.50	34.95		26.271	175.9	.301
									150	13.07	34.93		26.343	169.0	.345
									200	12.73	34.92		26.403	163.3	.430
									250	12.38	34.90		26.457	158.2	.514
									300	11.75	34.86		26.547	149.7	.594

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 30

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 00.0S	78 15.0W	11/21/65	1017 GMT	446M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.70	35.30		25.088	288.3	0
									10	19.68	35.30		25.093	287.8	.029
									20	19.56	35.29		25.117	285.5	.058
									30	19.33	35.28		25.169	280.6	.086
									50	16.08	34.92		25.686	231.4	.137
									75	14.14	34.96		26.145	187.8	.190
									100	13.58	34.95		26.254	177.4	.237
									125	13.34	34.94		26.296	173.5	.281
									150	13.10	34.94		26.345	168.8	.325
									200	12.67	34.92		26.415	162.2	.410
									250	12.14	34.88		26.488	155.3	.492
									300	11.46	34.84		26.586	146.0	.571
									400	9.92	34.74		26.782	127.3	.716

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 31

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 26.8S	77 32.9W	11/22/65	0007 GMT	457M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.77	35.30		25.070	290.0	0
									10	19.24	35.28		25.192	278.4	.028
									20	18.22	35.10		25.313	266.9	.056
									30	16.28	35.00		25.701	230.0	.081
									50	14.70	34.95		26.017	200.0	.124
									75	13.87	34.97		26.209	181.7	.172
									100	13.59	34.95		26.252	177.6	.218
									125	13.52	34.96		26.274	175.5	.263
									150	13.18	34.94		26.329	170.4	.307
									200	12.93	34.92		26.363	167.1	.393
									250	12.66	34.89		26.394	164.2	.479
									300	11.68	34.81		26.521	152.1	.562
									400	10.03	34.74		26.763	129.1	.710

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 32

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
14 06.0S	76 32.5W	11/22/65	1825 GMT					

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	17.50	35.00		25.413	257.4	0
									10	16.06	34.98		25.737	226.6	.024
									20	15.53	34.95		25.834	217.4	.046
									30	14.77	34.90		25.963	205.1	.068
									50	13.80	34.95		26.209	181.8	.107
									75	13.52	34.95		26.267	176.2	.152
									100	13.17	34.93		26.323	170.9	.196
									125	12.90	34.91		26.362	167.2	.239
									150	12.82	34.91		26.378	165.7	.281
									200	12.54	34.90		26.425	161.2	.365
									250	11.92	34.85		26.507	153.5	.447

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 33

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
14 59.0S	75 57.3W	11/22/65	2259 GMT					

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0A	18.01	35.03		25.311	267.1	0
									1C	17.7C	34.98		25.349	263.5	.027
									2C	16.57	35.00		25.634	236.4	.052
									3C	15.58	34.93		25.807	219.9	.074
									5C	13.85	34.97		26.205	182.1	.115
									75	13.58	34.97		26.270	176.0	.160
									10C	13.44	34.96		26.291	174.0	.204
									125	13.32	34.94		26.300	173.1	.249
									15C	13.01	34.94		26.363	167.1	.292
									20C	12.37	34.90		26.459	158.0	.376
									25C	11.87	34.86		26.524	151.8	.456
									30C	11.53	34.85		26.580	146.5	.534

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 34 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
14 59.6S	75 58.6W	11/23/65	0258 GMT					

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	18.27	35.04		25.254	272.5	0
									1C	18.02	35.01		25.293	268.8	.027
									2C	16.8C	35.01		25.588	240.8	.053
									3C	16.13	35.CC		25.736	226.7	.076
									5C	14.33	34.94		26.089	193.1	.118
									75	13.75	34.96		26.227	180.0	.165
									10C	13.48	34.95		26.275	175.5	.210
									125	13.37	34.95		26.298	173.3	.255
									15C	13.0C	34.93		26.357	167.7	.298
									20C	12.52	34.91		26.437	160.1	.383
									25C	12.01	34.87		26.505	153.6	.464
									30C	11.57	34.84		26.565	147.9	.543
									4CC	1C.42	34.77		26.719	133.3	.691

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 34 B

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
14 59.6S	75 58.6W	11/23/65	0306 GMT					

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	18.23	35.03		25.257	272.3	0
									1C	18.12	35.01		25.269	271.1	.027
									2C	16.9C	34.98		25.541	245.2	.053
									3C	16.18	34.99		25.717	228.5	.077
									5C	14.60	34.96		26.047	197.2	.120
									75	13.78	34.97		26.228	179.9	.167
									100	13.49	34.95		26.273	175.7	.212
									125	13.38	34.95		26.295	173.5	.257
									150	13.0C	34.93		26.357	167.7	.300
									200	12.51	34.90		26.431	160.6	.385
									25C	11.97	34.87		26.513	152.9	.466
									300	11.57	34.84		26.565	147.9	.545

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 35

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 02.0S	77 42.0W	11/27/65	1721 GMT					

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.50	35.25		24.838	312.1	0
									1C	19.96	35.29		25.012	295.5	.030
									2C	19.82	35.28		25.041	292.7	.060
									3C	19.0C	35.20		25.193	278.3	.089
									5C	15.96	35.07		25.829	217.9	.138
									75	15.15	35.00		25.957	205.7	.192
									1CC	13.87	34.97		26.209	181.7	.241
									125	13.63	34.96		26.252	177.7	.287
									15C	13.61	34.96		26.256	177.3	.332

A) THE START DOWN TIME IS QUESTIONABLE.

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 36

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 00.0S	78 00.7W	11/27/65	2113 GMT	1620M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.70	35.35		24.861	309.9	0
10	20.12	35.35		25.016	295.2	.030
20	20.07	35.35		25.029	293.9	.060
30	20.02	35.34		25.034	293.4	.089
50	18.66	35.26		25.325	265.8	.145
75	15.60	34.98		25.841	216.7	.206
100	13.78	34.88		26.159	186.5	.257
125	13.03	34.85		26.289	174.1	.303
150	12.93	34.92		26.363	167.1	.347
200	12.41	34.89		26.443	159.5	.431
250	11.75	34.85		26.539	150.4	.511
300	11.27	34.81		26.597	144.9	.588
400	10.00	34.73		26.761	129.4	.733
500	8.37	34.62		26.940	112.4	.863
600	7.48	34.58		27.041	102.8	.980
700	6.54	34.54		27.140	93.4	1.088
800	5.83	34.52		27.216	86.2	1.189
1000	4.47	34.52		27.376	71.0	1.366
1200	3.77	34.54		27.466	62.5	1.520
1500	3.08	34.57		27.557	53.9	1.726

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 37

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 59.0S	78 23.0W	11/27/65	2347 GMT	2233M	140	08KT	1	170 06 06

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.42	35.33		24.921	304.2	0
10	19.98	35.32		25.030	293.8	.030
20	19.92	35.33		25.053	291.6	.059
30	19.78	35.29		25.059	291.0	.088
50	17.35	35.00		25.449	254.0	.143
75	14.65	34.78		25.897	211.4	.202
100	13.57	34.92		26.233	179.4	.251
125	13.00	34.92		26.349	168.4	.296
150	12.71	34.90		26.392	164.4	.338
200	12.22	34.87		26.465	157.5	.421
250	11.80	34.85		26.529	151.3	.501
300	11.17	34.81		26.616	143.1	.578
400	10.16	34.75		26.749	130.5	.723
500	8.60	34.63		26.912	115.0	.854
600	7.32	34.57		27.056	101.4	.972

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 38

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 59.5S	78 40.0W	11/28/65	0139 GMT	3336M	160	14KT	1	150 06 06

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	20.30	35.33		24.953	301.2	0
10	20.21	35.33		24.976	298.9	.030
20	19.98	35.33		25.037	293.1	.060
30	19.95	35.33		25.045	292.4	.089
50	17.70	35.05		25.402	258.4	.144
75	14.75	34.92		25.983	203.2	.203
100	13.47	34.88		26.223	180.4	.251
125	12.83	34.88		26.352	168.1	.295
150	12.69	34.91		26.404	163.3	.338
200	12.20	34.88		26.476	156.4	.420
250	11.73	34.85		26.543	150.1	.499
300	11.18	34.82		26.622	142.6	.576
400	9.96	34.73		26.768	128.7	.719
500	8.45	34.63		26.935	112.8	.849
600	7.12	34.55		27.069	100.2	.965

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — H 3

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 58.0S	79 21.7W	11/28/65	0636 1049GMT	6030M	180	14KT	2	

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CC
0	20.08	35.347	5.61					294.4	C	20.08	35.347	5.61	25.024	294.4	0
11	20.10	35.341	6.30					295.3	10	20.10	35.341	6.26	25.015	295.3	.030
35	20.05	35.339	5.61					294.2	20	20.08	35.340	6.04	25.018	294.9	.059
59	18.09	35.212	3.72					255.7	30	20.06	35.339	5.75	25.023	294.5	.089
88	15.35	35.024	.70					208.1	50	18.95	35.266	4.53	25.255	272.4	.146
118	13.64	34.939	.29					179.4	75	16.54	35.100	1.94	25.719	228.3	.209
147	12.87	34.930	.27					165.2	100	14.54	34.979	.54	26.074	194.5	.262
195	12.41	34.909	.35					158.1	125	13.40	34.934	.29	26.280	175.0	.309
244	11.94	34.879	.41					151.7	150	12.83	34.928	.27	26.391	164.4	.353
292	11.29	34.839	.35					143.1	200	12.37	34.906	.36	26.464	157.5	.435
389	10.06	34.758	.24					128.3	250	11.86	34.873	.41	26.536	150.7	.515
486	8.51	34.651	.44					112.1	300	11.19	34.833	.33	26.630	141.8	.592
584	7.29	34.583	.44					100.0	400	9.88	34.745	.26	26.792	126.4	.734
777	5.56	34.541	.64					81.4	500	8.32	34.640	.44	26.963	110.2	.861
972	4.48	34.546						69.2	600	7.12	34.577	.45	27.090	98.2	.974
1166	3.82	34.568	1.61					60.9	700	6.16	34.548	.53	27.197	88.0	1.077
1363	3.27	34.588	1.88					54.3	800	5.40	34.540	.69	27.285	79.7	1.171
1388A	3.27	34.592	1.87					54.0	1000	4.37	34.549	1.19	27.410	67.8	1.338
1564	2.87	34.614	2.13					48.8	1200	3.69	34.572	1.68	27.499	59.4	1.485
1582A	2.89	34.614	2.07					49.0	1500	2.99	34.609	2.09	27.595	50.3	1.680
1775A	2.56	34.632	2.28					44.9	2000	2.27	34.647	2.47	27.688	41.4	1.961
2018A	2.25	34.658U	2.83U						2500	1.92	34.672	3.09	27.737	36.9	2.209
2260A	2.08	34.663	2.73					38.7	3000	1.80	34.682	3.26	27.754	35.3	2.445
2501A	1.92	34.672	3.09					36.9	3500	1.81	34.687	3.23	27.757	34.9	2.683
2743A	1.81	34.682	3.17					35.3	4000	1.78	34.691	3.57	27.762	34.4	2.927
2986A	1.80	34.681	3.26					35.3	4500	1.78	34.695	3.82	27.766	34.1	3.177
3227A	1.79	34.684	3.25					35.0	5000	1.81	34.697	3.84	27.765	34.2	3.435
3468A	1.81	34.687	3.22					34.9	5500	1.88	34.695	3.76	27.758	34.8	3.705
3710A	1.81	34.687	3.33					34.9							
3953A	1.78	34.690	3.54					34.5							
4195A	1.79	34.692	3.66					34.4							
4440A	1.78	34.695	3.81					34.1							
4685A	1.78	34.693	3.84					34.2							
4932A	1.80	34.696	3.84					34.2							
5178A	1.84	34.696	3.84					34.4							
5424A	1.87	34.694	3.38U					34.8							
5670A	1.89	34.696	4.08U					34.8							
5917A	1.94	34.694	3.51					35.3							

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 39

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 58.0S	79 21.7W	11/28/65	0921 GMT	6049M				

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CC
									C	20.08	35.36		25.034	293.5	0
									10	20.08	35.36		25.034	293.5	.029
									20	20.03	35.36		25.047	292.2	.059
									30	19.87	35.32		25.059	291.1	.088
									50	18.58	35.26		25.345	263.9	.144
									75	15.75	34.99		25.815	219.2	.205
									100	13.92	34.92		26.160	186.3	.256
									125	13.12	34.91		26.317	171.4	.301
									150	12.73	34.94		26.419	161.8	.344
									200	12.27	34.90		26.478	156.2	.426
									250	11.69	34.86		26.558	148.6	.505
									300	11.13	34.81		26.623	142.4	.581
									400	9.87	34.73		26.783	127.3	.724
									500	8.42	34.64		26.948	111.6	.852
									600	7.20	34.56		27.065	100.5	.967
									700	5.97	34.53		27.207	87.1	1.071
									800	5.23	34.52		27.290	79.2	1.163
									1000	4.25	34.53		27.408	68.0	1.330
									1200	3.63	34.56		27.496	59.7	1.477
									1500	2.95	34.58		27.576	52.1	1.675

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 40

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 CO.0S	79 39.8W	11/28/65	1449	GMT	4937M	140	08KT	1	150 06 10

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	2C.18	35.3C		24.962	300.3	0
									1C	2C.12	35.30		24.978	298.8	.030
									2C	2C.08	35.3C		24.988	297.8	.060
									3C	19.96	35.32		25.035	293.3	.090
									5C	18.54	35.27		25.362	262.2	.145
									75	14.73	34.94		26.003	201.3	.204
									10C	13.65	34.95		26.240	178.8	.252
									125	12.98	34.91		26.346	168.8	.296
									15C	12.62	34.91		26.417	161.9	.338
									20C	11.99	34.88		26.517	152.5	.419
									25C	11.52	34.85		26.582	146.3	.497
									30C	1C.93	34.80		26.652	139.7	.572
									4CC	9.56	34.70		26.812	124.5	.711
									5CC	8.23	34.62		26.961	110.4	.837
									6CC	6.92	34.55		27.096	97.5	.951

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 41

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 59.7S	80 09.9W	11/28/65	1732	GMT	4688M	140	08KT	1	150 04 06

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	2C.57	35.37		24.911	305.2	0
									1C	2C.32	35.37		24.978	298.8	.030
									20	2C.26	35.37		24.994	297.3	.060
									3C	19.83	35.34		25.084	288.6	.089
									5C	17.63	35.11		25.465	252.4	.144
									75	16.55	35.07		25.692	230.8	.205
									10C	14.75	34.94		25.999	201.7	.259
									125	13.31	34.90		26.271	175.8	.307
									15C	12.78	34.90		26.378	165.7	.351
									200	12.25	34.89		26.474	156.5	.434
									25C	11.47	34.83		26.576	146.9	.513
									300	10.93	34.80		26.652	139.7	.588
									4CC	9.55	34.70		26.813	124.4	.727
									5CC	8.03	34.61		26.984	108.2	.852
									6CC	6.92	34.55		27.096	97.5	.964

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 42

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 59.7S	80 18.9W	11/28/65	1918	GMT	4713M	150	14KT	2	160 04 08

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.42	35.36		24.943	302.1	0
									1C	2C.17	35.35		25.002	296.4	.030
									20	19.07	35.24		25.205	277.1	.059
									3C	18.17	35.17		25.378	260.7	.086
									5C	17.53	35.18		25.543	245.0	.136
									75	15.53	34.99		25.865	214.4	.194
									10C	14.22	34.92		26.097	192.4	.246
									125	13.48	34.90		26.236	179.1	.293
									15C	12.66	34.84		26.355	167.8	.337
									200	11.92	34.86		26.514	152.7	.420
									25C	11.22	34.82		26.614	143.3	.497
									30C	1C.52	34.77		26.701	135.0	.569
									40C	9.28	34.69		26.850	120.9	.705
									50C	8.05	34.61		26.981	108.5	.828
									60C	6.98	34.56		27.096	97.6	.940

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 43

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 59.7S	80 36.0W	11/28/65	2128	GMT	4564M	150	14KT	1	150 10 11

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	2C.25	35.34		24.973	299.2	0
									1C	2C.18	35.32		24.977	298.9	.030
									2C	19.5C	35.27		25.117	285.5	.059
									3C	18.51	35.19		25.309	267.3	.087
									5C	17.63	35.24		25.565	242.9	.138
									75	16.04	35.04		25.787	221.8	.197
									10C	13.54	34.91		26.232	179.6	.248
									125	13.09	34.91		26.324	170.9	.292
									15C	12.67	34.87		26.377	165.8	.335
									200	12.13	34.87		26.482	155.8	.418
									25C	11.38	34.81		26.577	146.8	.496
									30C	1C.9C	34.80		26.657	139.2	.571
									40C	9.3C	34.69		26.847	121.2	.709
									50C	7.98	34.61		26.991	107.5	.832
									60C	6.91	34.56		27.106	96.7	.943

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 44

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 59.0S	80 57.1W	11/28/65	2345 GMT	4564M	160	14KT	1	160 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.30	35.37		24.983	298.3	0
									10	20.32	35.37		24.978	298.8	.030
									20	20.29	35.38		24.993	297.3	.060
									30	20.18	35.38		25.023	294.5	.089
									50	19.20	35.33		25.240	273.8	.147
									75	16.48	35.10		25.732	227.1	.210
									100	13.75	34.91		26.188	183.7	.262
									125	13.18	34.90		26.298	173.3	.307
									150	12.72	34.91		26.398	163.8	.350
									200	11.93	34.87		26.520	152.2	.431
									250	11.32	34.85		26.619	142.8	.508
									300	10.78	34.81		26.686	136.4	.581
									400	9.47	34.71		26.834	122.4	.718
									500	8.17	34.63		26.978	108.7	.842
									600	6.92	34.57		27.112	96.0	.954

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 45

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 58.0S	81 21.0W	11/29/65	0245 GMT	4599M	140	14KT	2	160 10 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.32					
									10	20.32					
									20	20.30					
									30	20.24					
									50	19.19					
									75	15.80					
									100	13.90					
									125	13.08					
									150	12.72					
									200	11.82					
									250	11.30					
									300	10.79					
									400	9.42					
									500	8.03					
									600	6.85					

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 45 A

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 58.0S	81 21.0W	11/29/65	0302 GMT	4599M	140	14KT	2	160 10 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.32	35.30		24.924	303.9	0
									10	20.32	35.30		24.924	303.9	.030
									20	20.30	35.30		24.930	303.4	.061
									30	20.22	35.29		24.943	302.1	.091
									50	19.13	35.36		25.281	269.9	.149
									75	15.63	35.02		25.865	214.4	.210
									100	13.80	34.91		26.178	184.7	.260
									125	13.02					
									150	12.65					
									200	11.81					
									250	11.28					
									300	10.80					

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 46

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 57.4S	81 42.0W	11/29/65	0602 GMT	4690M	170	14KT	1	170 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.34	35.40		24.995	297.1	0
									10	20.34	35.40		24.995	297.1	.030
									20	18.77	35.18		25.236	274.2	.058
									30	18.32	35.23		25.387	259.8	.085
									50	17.78	35.26		25.543	245.0	.136
									75	16.40	35.04		25.704	229.7	.196
									100	14.00	34.79		26.043	197.5	.250
									125	13.24	34.92		26.301	173.0	.297
									150	12.75	34.91		26.392	164.4	.340
									200	11.88	34.84		26.507	153.5	.422
									250	11.32	34.83		26.604	144.3	.499
									300	10.81	34.80		26.673	137.7	.573
									400	9.43	34.72		26.849	121.0	.710
									500	8.06	34.65		27.010	105.7	.831
									600	6.84	34.61		27.155	92.0	.939

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 47

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 56.6S	82 02.0W	11/29/65	0813 GMT	4724M	140	14KT	2	160 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	20.25	35.39		25.012	295.6	0
									10	20.25	35.39		25.012	295.6	.030
									20	20.25	35.39		25.012	295.6	.059
									30	18.90	35.25		25.256	272.3	.088
									50	17.87	35.21		25.483	250.7	.140
									75	16.69	35.13		25.705	229.6	.201
									100	13.92	34.88		26.130	189.3	.254
									125	12.87	34.86		26.329	170.3	.300
									150	12.40	34.88		26.437	160.1	.342
									200	11.85	34.88		26.543	150.0	.421
									250	11.33	34.86		26.625	142.2	.497
									300	10.82	34.81		26.679	137.1	.570
									400	9.64	34.75		26.837	122.1	.708
									500	8.35	34.65		26.966	109.9	.832
									600	7.00	34.58		27.109	96.3	.945

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 48

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 55.3S	82 22.4W	11/29/65	1052 GMT	4517M	160	14KT	2	160 08 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	20.24	35.29		24.938	302.6	0
									10	20.24	35.29		24.938	302.6	.030
									20	20.24	35.29		24.938	302.6	.061
									30	19.87	35.28		25.028	294.0	.091
									50	19.55	35.38		25.188	278.8	.148
									75	18.14	35.28		25.470	252.0	.215
									100	14.51	34.92		26.035	198.2	.272
									125	13.28	34.88		26.262	176.7	.320
									150	12.61	34.87		26.388	164.7	.363
									200	11.70	34.84		26.541	150.3	.444
									250	11.33	34.85		26.617	143.0	.520
									300	10.86	34.82		26.680	137.0	.593
									400	9.66	34.73		26.818	123.9	.732
									500	8.26	34.64		26.972	109.3	.857
									600	7.02	34.58		27.106	96.6	.969

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 49

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 54.3S	82 43.3W	11/29/65	1319 GMT	4688M	140	14KT	2	160 08 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	20.27	35.40		25.014	295.4	0
									10	20.27	35.40		25.014	295.4	.030
									20	20.28	35.41		25.019	294.9	.059
									30	20.17	35.41		25.048	292.1	.089
									50	19.45	35.35		25.191	278.5	.146
									75	16.92	35.12		25.643	235.5	.211
									100	14.47	34.91		26.036	198.2	.266
									125	13.34	34.89		26.257	177.1	.313
									150	12.47	34.86		26.408	162.8	.357
									200	11.72	34.87		26.560	148.4	.437
									250	11.12	34.84		26.648	140.0	.512
									300	10.42	34.78		26.727	132.6	.583
									400	9.11	34.70		26.886	117.5	.715
									500	7.80	34.61		27.018	105.0	.835
									600	6.83	34.57		27.125	94.9	.944

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 50

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 54.0S	82 57.5W	11/29/65	1455 GMT	4306M	140	08KT	2	160 08 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	20.17	35.40		25.040	292.8	0
									10	20.17	35.40		25.040	292.8	.029
									20	20.17	35.41		25.048	292.1	.059
									30	20.17	35.41		25.048	292.1	.088
									50	18.50	35.27		25.372	261.2	.144
									75	15.12	34.96		25.933	208.0	.203
									100	13.47	34.87		26.215	181.1	.252
									125	12.80	34.87		26.351	168.3	.296
									150	12.15	34.86		26.470	156.9	.338
									200	11.55	34.85		26.577	146.8	.416
									250	11.10	34.84		26.652	139.7	.490
									300	10.63	34.81		26.713	133.9	.562
									400	9.46	34.72		26.844	121.5	.697
									500	8.08	34.64		27.000	106.7	.820
									600	6.75	34.57		27.135	93.8	.929

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 51

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 52.7S	83 18.8W	11/29/65	1727 GMT	4391M	140	14KT	1	160 07 08

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.42	35.42		24.989	297.7	0
									10	20.30	35.42		25.021	294.7	.030
									20	20.30	35.42		25.021	294.7	.059
									30	20.29	35.42		25.024	294.4	.089
									50	19.53	35.39		25.201	277.6	.146
									75	15.54	34.97		25.847	216.1	.208
									100	13.67	34.91		26.205	182.1	.259
									125	12.95	34.90		26.344	168.9	.303
									150	12.50	34.90		26.433	160.4	.346
									200	11.82	34.87		26.541	150.2	.425
									250	11.31	34.85		26.621	142.6	.501
									300	10.73	34.81		26.695	135.6	.574
									400	9.43	34.73		26.857	120.3	.710
									500	8.17	34.65		26.994	107.3	.832
									600	7.11	34.59		27.101	97.1	.944

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 52

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 00.0S	83 41.0W	11/29/65	1958 GMT	4965M	130	08KT	1	160 08 09

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.26	35.42		25.032	293.7	0
									10	20.18	35.41		25.045	292.4	.029
									20	20.08	35.41		25.072	289.8	.058
									30	19.20	35.34		25.248	273.1	.087
									50	18.35	35.30		25.433	255.5	.140
									75	17.68	35.26		25.568	242.7	.203
									100	16.25	35.06		25.754	224.9	.262
									125	13.79	34.91		26.180	184.5	.314
									150	12.98	34.91		26.346	168.8	.359
									200	11.78	34.86		26.541	150.2	.441
									250	11.29	34.86		26.633	141.5	.517
									300	10.87	34.83		26.686	136.5	.589
									400	9.26	34.72		26.877	118.4	.724
									500	7.75	34.63		27.041	102.8	.843
									600	6.81	34.59		27.143	93.1	.950

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 53

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 02.0S	83 57.2W	11/29/65	2134 GMT	4198M	110	14KT	1	160 08 09

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.30	35.41		25.013	295.4	0
									10	20.28	35.41		25.019	294.9	.030
									20	20.10	35.41		25.067	290.3	.059
									30	20.08	35.41		25.072	289.8	.088
									50	19.03	35.34		25.292	268.9	.144
									75	17.98	35.27		25.502	248.9	.209
									100	15.30	34.93		25.870	213.9	.268
									125	13.67	34.93		26.220	180.7	.318
									150	12.79	34.86		26.345	168.8	.363
									200	12.02	34.89		26.519	152.3	.445
									250	11.38	34.86		26.616	143.1	.522
									300	10.83	34.84		26.701	135.1	.595
									400	9.35	34.74		26.878	118.3	.729
									500	7.95	34.65		27.027	104.1	.849
									600	6.83	34.60		27.148	92.6	.956

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 54

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 05.5S	84 21.2W	11/30/65	0016 GMT	4304M	120	08KT	2	160 08 09

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.28	35.39		25.004	296.3	0
									10	20.27	35.39		25.006	296.1	.030
									20	20.15	35.39		25.038	293.0	.059
									30	20.02	35.38		25.065	290.5	.088
									50	18.65	35.37		25.411	257.6	.144
									75	17.53	35.20		25.558	243.5	.207
									100	13.95	34.88		26.123	189.9	.262
									125	13.07	34.91		26.328	170.5	.307
									150	12.75	34.91		26.392	164.4	.350
									200	11.83	34.88		26.547	149.6	.431
									250	11.37	34.87		26.626	142.2	.507
									300	10.75	34.84		26.715	133.7	.579
									400	9.30	34.75		26.894	116.8	.712
									500	7.94	34.67		27.044	102.5	.830
									600	6.92	34.63		27.159	91.6	.936

RV ALEXANDER AGASSIZ — MUCCAUBER EXPECITICN — 55

LATITUDE	LCNGITUDE	MC/CAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 07.0S	84 32.8W	11/30/65	0226 GMT	4445M	130	14KT		160 09

Z	T	S	C2	PC4	SIC3	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	DD
									0	2C.08	35.40		25.064	290.6	0
									1C	2C.CE	35.4C		25.064	290.6	.029
									2C	19.64	35.37		25.157	281.7	.058
									3C	19.01	35.38		25.327	265.5	.085
									5C	18.7E	35.36		25.376	260.9	.138
									75	18.21	35.28		25.453	253.6	.203
									1CC	14.93	34.91		25.936	207.6	.261
									125	13.5C	34.9C		26.232	179.5	.311
									15C	12.97	34.93		26.363	167.1	.355
									2CC	11.92	34.86		26.514	152.7	.437
									25C	11.06	34.85		26.667	138.3	.512
									3CC	1C.47	34.82		26.749	130.5	.583
									4CC	9.48	34.7E		26.872	118.8	.715
									5CC	8.12	34.68		27.025	104.3	.835
									6CC	7.02	34.64		27.153	92.1	.943

RV ALEXANDER AGASSIZ — MUCCAUBER EXPECITICN — H 4

LATITUDE	LCNGITUDE	MC/CAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 08.2S	85 04.0W	11/30/65	0500 GMT	4580M	140	19KT		160 06 07

Z	T	S	C2	PC4	SIC3	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	DD
1	2C.18	35.418	5.50					291.8	0	2C.18	35.418	5.50	25.051	291.8	0
1C	2C.19	35.413	5.51					292.4	1C	2C.19	35.413	5.51	25.045	292.4	.029
28	2C.19	35.412	5.47					292.5	2C	2C.19	35.412	5.49	25.045	292.4	.059
56	19.39	35.347	5.14					277.2	3C	2C.1E	35.4C9	5.47	25.051	291.8	.088
74	18.65	35.295	4.44					263.C	5C	19.62	35.364	5.26	25.158	281.6	.145
89	17.06	35.151	3.33					236.4	75	18.57	35.288	4.39	25.369	261.5	.214
102	15.18	34.979	1.59					207.8	1CC	15.46	35.CO2	1.86	25.889	212.1	.274
129	13.2C	34.9C8	.22					173.1	125	13.3E	34.9C7	.28	26.266	176.3	.323
151	12.7C	34.875	.32					166.C	15C	12.71	34.876	.32	26.373	166.2	.367
178	11.93	34.844	.34					154.1	2CC	11.62	34.841	.41	26.556	148.8	.448
2C9	11.54	34.842	.44					147.3	25C	11.17	34.826	.45	26.629	141.9	.523
271	11.00	34.815	.45					139.8	3CC	1C.71	34.79E	.40	26.690	136.1	.596
372	9.88	34.745	.33					126.3	4CC	9.5C	34.718	.42	26.836	122.2	.733
470	8.54	34.654	.67					112.4	5CC	8.17	34.632	.65	26.979	108.7	.857
595	7.12	34.575	.60					98.3	6CC	7.07	34.574	.60	27.094	97.8	.969
740	5.81	34.532	.80					85.C	7CC	6.13	34.539	.73	27.193	88.3	1.072
896	5.02	34.546	.99					74.9	8CC	5.46	34.535	.85	27.274	80.7	1.166
1098	4.14	34.549	1.74					65.5	1CC0	4.55	34.548	1.31	27.390	69.7	1.337

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITICN — 56

LATITUDE	LCNGITUDE	MC/CAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 08.2S	85 04.0W	11/30/65	0550 GMT	4580M	140	19KT		160 06 07

Z	T	S	C2	PC4	SIC3	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	DD
									0	2C.11	35.42		25.072	289.9	0
									1C	2C.12	35.42		25.069	290.1	.029
									2C	2C.12	35.42		25.069	290.1	.058
									3C	2C.08	35.41		25.072	289.8	.087
									5C	19.39	35.37		25.222	275.6	.144
									75	17.65	35.23		25.552	244.1	.209
									1CC	14.5C	34.84		25.976	203.9	.266
									125	13.45	34.97		26.297	173.4	.314
									15C	12.59	34.89		26.408	162.9	.357
									2CC	11.71	34.88		26.570	147.5	.437
									25C	11.12	34.86		26.664	138.6	.511
									3CC	1C.64	34.84		26.735	131.8	.582
									4CC	9.35	34.73		26.870	119.0	.715
									5CC	8.06	34.68		27.034	103.5	.835
									6CC	6.94	34.62		27.149	92.6	.942

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 57

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 36.8S	85 03.4W	11/30/65	0911 GMT	5023M	140	19KT		160 06 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.12	35.41		25.061	290.8	0
									10	20.12	35.41		25.061	290.8	.029
									20	20.08	35.39		25.057	291.3	.058
									30	19.30	35.39		25.260	271.9	.087
									50	19.07	35.39		25.320	266.3	.141
									75	18.69	35.33		25.370	261.4	.207
									100	16.07	35.03		25.773	223.2	.268
									125	13.54	34.89		26.216	181.0	.320
									150	12.69	34.87		26.373	166.2	.364
									200	11.54	34.86		26.586	145.9	.444
									250	11.08	34.85		26.663	138.6	.518
									300	10.48	34.81		26.740	131.4	.589
									400	9.33	34.74		26.881	118.0	.721
									500	8.13	34.67		27.016	105.2	.841
									600	7.00	34.61		27.133	94.1	.950

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 58

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
11 04.4S	85 03.4W	11/30/65	1218 GMT	4422M	110	08KT	2	110 08 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.44	35.39		24.961	300.4	0
									10	20.45	35.39		24.958	300.7	.030
									20	20.45	35.39		24.958	300.7	.060
									30	20.03	35.40		25.077	289.3	.090
									50	19.83	35.41		25.138	283.6	.147
									75	18.56	35.26		25.345	263.9	.216
									100	14.67	34.93		26.008	200.8	.275
									125	13.12	34.88		26.294	173.6	.323
									150	12.78	34.92		26.393	164.2	.366
									200	11.90	34.90		26.549	149.4	.447
									250	11.37	34.87		26.626	142.2	.522
									300	10.92	34.84		26.685	136.6	.595
									400	9.68	34.76		26.838	122.0	.732
									500	8.25	34.67		26.997	106.9	.855
									600	7.12	34.63		27.132	94.2	.965

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 59

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
10 32.1S	85 03.4W	11/30/65	1545 GMT	4507M	130	08KT	1	140 06 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.56	35.37		24.913	304.9	0
									10	20.54	35.37		24.919	304.4	.030
									20	20.43	35.36		24.941	302.3	.061
									30	19.96	35.34		25.050	291.9	.091
									50	19.85	35.36		25.094	287.7	.149
									75	16.50	35.09		25.719	228.3	.214
									100	14.71	35.01		26.061	195.8	.268
									125	13.35	34.97		26.317	171.5	.314
									150	12.93	34.95		26.387	164.9	.357
									200	12.39	34.92		26.470	156.9	.440
									250	11.98	34.90		26.534	150.9	.520
									300	11.26	34.85		26.630	141.7	.596
									400	9.87	34.76		26.806	125.0	.738
									500	8.14	34.65		26.998	106.8	.862
									600	7.10	34.62		27.126	94.7	.972

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 60

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
10 00.2S	85 03.4W	11/30/65	1855 GMT	4391M	140	10KT	1	140 06 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.28	35.24		24.619	332.9	0
									10	21.04	35.25		24.692	325.9	.033
									20	21.00	35.25		24.703	324.9	.066
									30	20.28	35.26		24.905	305.7	.097
									50	19.75	35.30		25.075	289.5	.157
									75	17.00	35.06		25.579	241.6	.224
									100	14.18	34.97		26.144	187.9	.278
									125	13.35	34.95		26.302	172.9	.324
									150	12.93	34.94		26.379	165.6	.367
									200	12.32	34.91		26.476	156.4	.450
									250	11.79	34.88		26.555	148.9	.529
									300	11.22	34.84		26.630	141.8	.605
									400	9.93	34.75		26.788	126.8	.748
									500	8.29	34.66		26.983	108.3	.874
									600	7.05	34.60		27.118	95.5	.985

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 61

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
9 33.0S	85 00.0W	11/30/65	2203 GMT	5195M	140	14KT	1	140 05 07

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.84	35.29		24.502	344.1	0
									10	21.68	35.29		24.547	339.8	.034
									20	21.50	35.28		24.589	335.8	.068
									30	20.75	35.32		24.824	313.4	.101
									50	18.50	35.17		25.296	268.5	.159
									75	15.85	35.06		25.846	216.2	.220
									100	14.38	34.99		26.117	190.5	.272
									125	13.54	34.95		26.263	176.6	.318
									150	13.01	34.93		26.355	167.9	.362
									200	12.38	34.91		26.464	157.5	.446
									250	11.76	34.87		26.553	149.1	.525
									300	11.20	34.83		26.626	142.2	.602
									400	9.78	34.73		26.798	125.8	.743
									500	8.13	34.62		26.976	108.9	.870
									600	7.02	34.58		27.106	96.6	.982

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 62

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
9 00.0S	85 00.0W	12/01/65	0135 GMT	5038M	150	12KT	1	140 05 07

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.12	35.32		24.447	349.4	0
									10	22.03	35.32		24.472	347.0	.035
									20	21.91	35.32		24.506	343.8	.069
									30	21.67	35.30		24.557	338.8	.104
									50	18.05	35.14		25.385	260.0	.164
									75	14.35	34.99		26.123	189.9	.221
									100	13.71	34.97		26.243	178.5	.267
									125	13.14	34.94		26.337	169.6	.311
									150	12.77	34.93		26.403	163.3	.354
									200	12.37	34.91		26.466	157.3	.436
									250	11.80	34.88		26.553	149.1	.516
									300	11.28	34.85		26.627	142.1	.592
									400	9.80	34.73		26.795	126.1	.734
									500	8.22	34.63		26.971	109.5	.861
									600	6.91	34.58		27.121	95.2	.972

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 63

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
8 32.6S	85 00.0W	12/01/65	0454 GMT	4410M	120	08KT	1	

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.93	35.33		24.508	343.6	0
									10	21.85	35.30		24.507	343.6	.034
									20	21.68	35.31		24.562	338.4	.069
									30	21.03	35.33		24.756	319.9	.102
									50	18.75	35.23		25.279	270.1	.161
									75	14.65	35.00		26.086	195.3	.219
									100	13.42	34.95		26.287	174.3	.266
									125	12.86	34.95		26.401	163.5	.309
									150	12.62	34.94		26.441	159.7	.351
									200	12.11	34.91		26.517	152.5	.431
									250	11.79	34.88		26.555	148.9	.509
									300	10.93	34.82		26.667	138.2	.584
									400	9.28	34.71		26.866	119.4	.721
									500	7.93	34.63		27.014	105.3	.841
									600	6.87	34.58		27.127	94.6	.951

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — H 5

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
8 04.8S	85 00.0W	12/01/65	0830 GMT	4275M	110	14KT	1	160 04 04

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	22.10	35.298	5.30					350.4	0	22.10	35.298	5.30	24.436	350.4	0
10	22.11	35.298	5.32					350.7	10	22.11	35.298	5.32	24.433	350.7	.035
30	22.02	35.299	5.29					348.2	20	22.06	35.298	5.30	24.446	349.4	.070
59	18.02	35.216	2.54					253.8	30	22.02	35.299	5.29	24.459	348.2	.105
79	15.41	35.033	.76					208.7	50	19.49	35.247	3.55	25.102	287.0	.169
93	14.18	34.994	.64					186.1	75	15.89	35.067	1.04	25.843	216.5	.232
107	13.60	34.976	.64					175.9	100	13.83	34.984	.64	26.228	179.9	.283
136	13.20	34.951	.43					170.0	125	13.27	34.953	.51	26.320	171.2	.327
160	13.04	34.941	.41					167.6	150	13.11	34.946	.42	26.347	168.7	.371
189	12.70	34.922	.34					162.6	200	12.61	34.916	.35	26.425	161.2	.455
223	12.42	34.906	.39					158.5	250	12.13	34.889	.47	26.497	154.4	.537
290	11.66	34.864	.56					147.8	300	11.56	34.858	.54	26.582	146.4	.616
397	10.40	34.789	.25					131.6	400	10.34	34.785	.25	26.744	131.0	.763
504	8.38	34.656	.22					109.9	500	8.46	34.661	.22	26.958	110.7	.893
643	6.54	34.578	.33					90.6	600	7.02	34.595	.30	27.117	95.6	1.005
801	5.36	34.552	1.08					78.3	700	6.03	34.564	.59	27.225	85.3	1.105
969	4.56	34.557	1.29					69.2	800	5.37	34.552	1.08	27.299	78.4	1.197
1178	3.82	34.575	1.67					60.4	1000	4.43	34.559	1.34	27.411	67.7	1.363

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 64

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
8 04.8S	85 00.0W	12/01/65	0918 GMT	4275M	110	14KT	1	160 04 04

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.10	35.33		24.460	348.1	0
									10	22.10	35.33		24.460	348.1	.035
									20	22.08	35.33		24.466	347.6	.070
									30	21.28	35.29		24.657	329.3	.104
									50	17.82	35.20		25.488	250.3	.162
									75	14.90	35.00		26.012	200.4	.219
									100	13.67	34.98		26.259	177.0	.266
									125	13.27	34.97		26.333	169.9	.311
									150	13.05	34.95		26.363	167.2	.354
									200	12.61	34.94		26.443	159.6	.438
									250	12.14	34.91		26.511	153.1	.519
									300	11.63	34.88		26.585	146.1	.597
									400	10.41	34.79		26.736	131.7	.744
									500	8.60	34.66		26.935	112.8	.875
									600	7.00	34.60		27.125	94.9	.989

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 65

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
7 32.0S	84 59.2W	12/01/65	1300 GMT	4352M	130	15KT	1	160 06 07

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.09	35.31		24.448	349.3	0
									10	22.09	35.31		24.448	349.3	.035
									20	22.09	35.31		24.448	349.3	.070
									30	22.09	35.32		24.455	348.6	.105
									50	20.25	35.21		24.875	308.6	.171
									75	14.82	35.00		26.030	198.8	.235
									100	13.88	34.99		26.223	180.4	.283
									125	13.44	34.97		26.299	173.2	.328
									150	13.12	34.96		26.356	167.8	.371
									200	12.77	34.94		26.411	162.6	.456
									250	12.36	34.92		26.476	156.4	.539
									300	12.00	34.90		26.530	151.2	.619
									400	10.57	34.79		26.708	134.3	.771
									500	8.64	34.67		26.937	112.7	.903
									600	7.40	34.61		27.076	99.5	1.019

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 66

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
7 03.6S	84 58.1W	12/01/65	1602 GMT	4198M	150	15KT	0	160 07 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	22.33	35.31		24.380	355.7	0
									10	22.31	35.31		24.386	355.2	.036
									20	22.27	35.32		24.404	353.4	.071
									30	22.24	35.32		24.413	352.6	.106
									50	17.10	35.06		25.555	243.9	.166
									75	15.17	35.05		25.991	202.4	.223
									100	14.78	35.04		26.069	195.0	.273
									125	13.97	34.99		26.204	182.2	.321
									150	13.63	34.98		26.267	176.2	.367
									200	13.17	34.95		26.338	169.5	.456
									250	12.73	34.93		26.411	162.5	.542
									300	12.35	34.91		26.470	156.9	.625
									400	11.00	34.81		26.647	140.2	.782
									500	8.81	34.67		26.910	115.2	.919
									600	7.40	34.62		27.084	98.7	1.036

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 67

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
6 27.8S	84 58.2W	12/01/65	1944 GMT	4813M	140	17KT	1	160 06 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	22.57	35.12		24.168	375.9	0
									10	22.53	35.13		24.187	374.1	.038
									20	22.42	35.13		24.218	371.2	.075
									30	21.90	35.23		24.440	350.0	.111
									50	18.63	35.17		25.263	271.6	.173
									75	15.60	35.02		25.872	213.7	.235
									100	14.45	35.00		26.110	191.2	.286
									125	13.93	34.99		26.212	181.4	.333
									150	13.68	34.98		26.257	177.2	.379
									200	13.22	34.95		26.328	170.4	.468
									250	12.67	34.92		26.415	162.2	.554
									300	12.17	34.89		26.490	155.1	.637
									400	10.75	34.78		26.668	138.1	.792
									500	8.76	34.68		26.926	113.7	.928
									600	7.27	34.59		27.079	99.2	1.044

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 68

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
5 56.0S	84 59.1W	12/01/65	2253 GMT	4002M	150	17KT	2	160 07 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	22.20	34.94		24.136	379.0	0
									10	22.21	34.95		24.141	378.5	.038
									20	22.21	34.95		24.141	378.5	.076
									30	22.14	34.95		24.161	376.6	.114
									50	21.89	35.28		24.481	346.1	.186
									75	18.12	35.13		25.360	262.4	.263
									100	15.30	35.01		25.931	208.1	.322
									125	14.12	35.00		26.180	184.5	.372
									150	13.62	34.98		26.269	176.0	.418
									200	13.29	34.97		26.329	170.3	.507
									250	12.89	34.94		26.387	164.8	.594
									300	12.31	34.91		26.478	156.2	.678
									400	10.49	34.77		26.707	134.5	.832
									500	8.11	34.62		26.979	108.6	.962
									600	7.18	34.60		27.099	97.2	1.074

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 69

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
5 35.0S	84 59.9W	12/02/65	0127 GMT	3984M	160	19KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	22.09	35.07		24.266	366.6	0
									10	22.09	35.07		24.266	366.6	.037
									20	22.09	35.08		24.273	365.9	.073
									30	22.06	35.09		24.289	364.4	.110
									50	21.20	35.00		24.459	348.2	.182
									75	18.70	35.04		25.147	282.7	.261
									100	14.88	34.99		26.009	200.8	.322
									125	13.93	34.99		26.212	181.4	.371
									150	13.62	34.98		26.269	176.0	.416
									200	13.27	34.97		26.333	169.9	.505
									250	12.79	34.94		26.407	162.9	.591
									300	12.13	34.90		26.505	153.6	.674
									400	10.77	34.79		26.673	137.7	.828
									500	8.18	34.63		26.977	108.9	.961
									600	7.08	34.61		27.121	95.2	1.072

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 70

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
4 53.1S	85 00.0W	12/02/65	0530 GMT	4009M	150	14KT	1	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	22.17	35.08		24.251	368.0	0
									10	22.17	35.08		24.251	368.0	.037
									20	22.13	35.08		24.262	367.0	.074
									30	21.58	35.12		24.446	349.5	.110
									50	21.27	35.09		24.508	343.5	.179
									75	20.71	35.05		24.630	331.9	.264
									100	16.00	35.05		25.804	220.2	.334
									125	14.58	35.02		26.097	192.4	.386
									150	14.02	35.00		26.201	182.5	.434
									200	13.30	34.96		26.320	171.2	.525
									250	12.74	34.93		26.409	162.7	.612
									300	12.12	34.90		26.507	153.4	.694
									400	10.08	34.75		26.763	129.2	.844
									500	8.31	34.66		26.980	108.5	.971
									600	7.25	34.60		27.090	98.2	1.084

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 71

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
4 22.0S	85 01.0W	12/02/65	0902 GMT	3470M	170	19KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.70	35.05		24.359	357.7	0
									10	21.70	35.05		24.359	357.7	.036
									20	21.65	35.07		24.388	354.9	.071
									30	21.22	35.09		24.522	342.2	.106
									50	20.50	35.09		24.717	323.6	.173
									75	19.63	35.11		24.962	300.3	.252
									100	17.28	35.16		25.588	240.7	.320
									125	14.47	35.04		26.136	188.6	.375
									150	13.75	34.99		26.250	177.8	.422
									200	13.15	34.96		26.350	168.3	.511
									250	12.76	34.94		26.413	162.4	.596
									300	12.28	34.90		26.476	156.4	.679
									400	10.53	34.79		26.715	133.7	.833
									500	8.62	34.68		26.948	111.6	.965
									600	7.48	34.62		27.072	99.8	1.080

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 72

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
3 53.0S	85 01.4W	12/02/65	1144 GMT	3423M	180	16KT	1	160 07 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.54	35.18		24.502	344.1	0
									10	21.54	35.19		24.510	343.4	.034
									20	21.54	35.18		24.502	344.1	.069
									30	21.45	35.18		24.527	341.7	.103
									50	20.82	35.10		24.638	331.1	.171
									75	19.03	35.10		25.109	286.3	.249
									100	15.80	35.07		25.865	214.4	.312
									125	14.18	35.01		26.175	185.0	.363
									150	13.67	34.98		26.259	177.0	.409
									200	12.97	34.95		26.379	165.6	.497
									250	12.49	34.91		26.443	159.5	.581
									300	11.64	34.86		26.567	147.7	.661
									400	9.80	34.75		26.810	124.7	.805
									500	8.25	34.66		26.989	107.7	.930
									600	7.08	34.61		27.121	95.2	1.041

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 73

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
3 37.0S	85 02.3W	12/02/65	1428 GMT	3357M	160	08KT	1	160 07 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.32	35.09		24.494	344.8	0
									10	21.28	35.09		24.505	343.8	.034
									20	21.25	35.09		24.514	343.0	.069
									30	21.08	35.08		24.552	339.3	.103
									50	19.14	35.09		25.073	289.7	.166
									75	18.13	35.08		25.320	266.3	.236
									100	16.78	35.13		25.684	231.6	.299
									125	15.03	35.07		26.037	198.0	.354
									150	14.24	35.01		26.162	186.2	.403
									200	13.02	34.95		26.369	166.6	.493
									250	12.47	34.91		26.447	159.1	.578
									300	11.03	34.82		26.649	140.0	.656
									400	9.50	34.71		26.829	122.9	.795
									500	8.33	34.66		26.977	108.8	.920
									600	7.03	34.60		27.121	95.3	1.031

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 74

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
2 52.9S	85 03.8W	12/02/65	1729 GMT	3227M	150	09KT	1	160 07 08

Z	T	S	C2	PO4	SIO3	NC2	NO3	DT	Z	T	S	C2	SIGT	DT	DD
									0	21.67	35.06		24.375	356.2	0
									10	21.45	35.06		24.436	350.4	.035
									20	20.88	35.05		24.584	336.3	.070
									30	19.73	35.03		24.875	308.6	.102
									50	18.42	35.11		25.270	270.9	.160
									75	17.57	35.12		25.488	250.3	.226
									100	16.98	35.10		25.614	238.3	.288
									125	16.03	35.06		25.805	220.1	.346
									150	14.50	35.03		26.122	190.0	.398
									200	13.39	34.94		26.286	174.4	.492
									250	12.62	34.91		26.417	161.9	.579
									300	11.47	34.79		26.545	149.9	.660
									400	9.52	34.71		26.826	123.2	.805
									500	8.27	34.64		26.971	109.5	.930
									600	7.51	34.60		27.052	101.7	1.045

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 75

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
2 28.2S	85 03.8W	12/02/65	2049 GMT	2779M	170	09KT	1	160 06 08

Z	T	S	C2	PO4	SIO3	NC2	NO3	DT	Z	T	S	C2	SIGT	DT	DD
									0	21.98	35.08		24.304	363.0	0
									10	21.82	35.08		24.349	358.7	.036
									20	21.54	35.09		24.434	350.6	.072
									30	20.10	35.02		24.770	318.6	.105
									50	18.63	35.10		25.210	276.7	.165
									75	17.72	35.10		25.436	255.2	.232
									100	16.37	35.07		25.734	226.8	.293
									125	15.86	35.06		25.844	216.4	.349
									150	15.29	35.08		25.988	202.8	.403
									200	13.97	34.97		26.189	183.7	.502
									250	13.27	34.93		26.302	172.9	.594
									300	12.17	34.87		26.474	156.6	.680
									400	9.63	34.70		26.800	125.6	.829
									500	8.35	34.64		26.958	110.6	.956
									600	7.47	34.59		27.050	101.9	1.072

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — M 6

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
1 58.0S	85 02.2W	12/03/65	0005 GMT	2522M	170	14KT	1	150 05 05

Z	T	S	C2	PO4	SIO3	NC2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	21.96	35.106	5.34					360.5	0	21.96	35.106	5.34	24.329	360.5	0
10	21.94	35.102	5.38					360.3	10	21.94	35.102	5.38	24.332	360.3	.036
30	21.39	35.099	5.16					346.0	20	21.67	35.100	5.27	24.406	353.3	.072
59	17.92	35.118	3.01					258.6	30	21.39	35.099	5.16	24.482	346.0	.107
79	16.94	35.095	2.57					237.7	50	19.08	35.102	3.73	25.098	287.4	.170
94	16.10	35.104	2.50					218.4	75	17.10	35.101	2.61	25.587	240.8	.237
108	15.78	35.094	2.53					212.2	100	15.93	35.101	2.51	25.859	214.9	.295
138	15.42	35.080	2.54					205.5	125	15.57	35.089	2.54	25.932	208.0	.348
163	14.88	35.028	2.37					198.0	150	15.15	35.055	2.46	25.999	201.7	.401
192	14.70	35.014	2.42					195.3	200	14.50	35.005	2.21	26.103	191.8	.502
227	13.70	34.973	1.35					178.1	250	13.22	34.950	.92	26.328	170.4	.595
296	12.35	34.897	.46					157.9	300	12.25	34.889	.46	26.475	156.5	.681
404	9.72	34.739	.49					124.2	400	9.81	34.744	.49	26.803	125.3	.830
513	8.25	34.662	.62					107.5	500	8.38	34.670	.60	26.976	108.9	.956
651	6.90	34.604	.72					93.2	600	7.37	34.623	.66	27.090	98.1	1.069
809	5.36	34.579	1.41					76.3	700	6.38	34.592	.92	27.201	87.6	1.172
977	4.51	34.576	1.80					67.2	800	5.44	34.580	1.37	27.312	77.1	1.264
1187	3.76	34.596	1.88					58.2	1000	4.41	34.578	1.81	27.428	66.1	1.427

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 76

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
1 58.0S	85 02.2W	12/03/65	C051 GMT	2522M	170	14KT	1	150 05 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	21.85	35.10		24.355	358.1	0
									10	21.83	35.10		24.361	357.5	.036
									20	21.68	35.10		24.403	353.6	.071
									30	21.22	35.10		24.529	341.5	.106
									50	18.81	35.13		25.187	278.8	.169
									75	17.24	35.11		25.560	243.4	.234
									100	15.92	35.09		25.853	215.5	.292
									125	15.63	35.10		25.927	208.5	.346
									150	14.93	35.04		26.036	198.1	.398
									200	14.65	35.01		26.074	194.5	.499
									250	13.42	34.95		26.287	174.3	.594
									300	12.54	34.91		26.433	160.5	.682
									400	9.68	34.73		26.815	124.2	.832
									500	8.34	34.65		26.968	109.7	.958
									600	7.53	34.61		27.057	101.2	1.073

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 77

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
1 27.8S	85 02.9W	12/03/65	0410 GMT	2219M	160	15KT	1	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	21.93	35.14		24.363	357.3	0
									10	21.93	35.14		24.363	357.3	.036
									20	21.92	35.15		24.374	356.3	.071
									30	21.10	35.09		24.555	339.1	.106
									50	19.62	35.11		24.964	300.1	.171
									75	17.04	35.14		25.630	236.7	.238
									100	16.06	35.11		25.837	217.1	.296
									125	15.37	35.08		25.970	204.5	.349
									150	14.95	35.01		26.009	200.7	.401
									200	14.38	35.01		26.132	189.0	.501
									250	13.48	34.98		26.298	173.3	.595
									300	12.56	34.93		26.445	159.4	.681
									400	9.69	34.73		26.813	124.4	.831
									500	8.15	34.66		27.005	106.2	.955
									600	7.38	34.62		27.087	98.4	1.067

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 78

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 57.0S	85 01.2W	12/03/65	C7C2 GMT	2182M	170	17KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	22.37	34.32		23.619	428.3	0
									10	22.37	34.33		23.626	427.6	.043
									20	22.35	34.34		23.639	426.3	.086
									30	22.24	34.47		23.769	414.0	.128
									50	20.49	34.94		24.605	334.3	.203
									75	17.55	35.07		25.454	253.5	.277
									100	15.99	35.10		25.845	216.3	.336
									125	15.60	35.10		25.933	207.9	.390
									150	15.33	35.08		25.979	203.6	.443
									200	14.18	34.98		26.152	187.2	.543
									250	13.03	34.93		26.351	168.2	.635
									300	11.65	34.85		26.558	148.6	.718
									400	9.25	34.72		26.878	118.2	.859
									500	7.82	34.64		27.038	103.0	.978
									600	7.07	34.63		27.139	93.5	1.085

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 79

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 26.3S	85 00.9W	12/03/65	1020 GMT	2380M	170	19KT		160 05 04

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	24.40	33.43		22.358	548.8	0
									10	24.40	33.43		22.358	548.8	.055
									20	24.41	33.43		22.355	549.0	.110
									30	22.50	33.56		23.007	486.8	.162
									50	20.33	34.93		24.640	330.9	.244
									75	17.72	35.11		25.443	254.5	.317
									100	17.25	35.12		25.565	242.9	.380
									125	15.93	35.09		25.851	215.7	.439
									150	15.38	35.04		25.937	207.6	.493
									200	13.98	34.99		26.202	182.4	.593
									250	12.85	34.93		26.387	164.8	.683
									300	11.82	34.87		26.541	150.2	.765
									400	9.24	34.71		26.872	118.8	.907
									500	7.84	34.64		27.035	103.3	1.027
									600	7.07	34.61		27.123	95.0	1.135

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 80

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 03.0N	84 59.9W	12/03/65	1311 GMT	3323M	18C	18KT	2	170 09 09

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CC
									0	25.29	32.94		21.722	609.7	0
									10	25.29	32.94		21.722	609.7	.061
									20	23.25	33.46		22.717	514.4	.117
									30	20.95	34.45		24.109	381.5	.162
									50	19.70	34.84		24.738	321.6	.233
									75	18.04	35.08		25.342	264.1	.306
									100	17.05	35.10		25.597	239.9	.370
									125	15.82	35.07		25.861	214.8	.428
									150	15.58	35.09		25.930	208.2	.482
									200	13.90	34.99		26.219	180.8	.582
									250	12.76	34.93		26.405	163.1	.671
									300	11.90	34.87		26.526	151.6	.753
									400	9.31	34.72		26.869	119.1	.896
									500	8.12	34.66		27.009	105.8	1.017
									600	7.35	34.62		27.091	98.0	1.129

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 81

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 04.0N	85 19.4W	12/03/65	1537 GMT	3361M	19C	14KT	2	180 06 05

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CC
									0	25.12	33.17		21.947	588.2	0
									10	25.12	33.17		21.947	588.2	.059
									20	24.80	33.25		22.103	573.2	.117
									30	20.59	34.57		24.297	363.6	.164
									50	19.65	34.66		24.614	333.5	.234
									75	17.70	35.03		25.387	259.8	.309
									100	16.95	35.13		25.644	235.4	.371
									125	15.72	35.09		25.899	211.2	.428
									150	15.31	35.06		25.968	204.7	.481
									200	14.17	35.00		26.169	185.5	.581
									250	13.02	34.93		26.353	168.0	.673
									300	11.89	34.87		26.528	151.5	.756
									400	9.37	34.71		26.851	120.8	.900
									500	8.00	34.65		27.019	104.8	1.021
									600	7.19	34.61		27.106	96.6	1.131

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 82

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 07.0N	85 36.8W	12/03/65	1748 GMT	3135M	19C	19KT	1	180 07 06

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CC
									0	24.92	33.22		22.045	578.8	0
									10	24.90	33.22		22.051	578.2	.058
									20	24.82	33.24		22.090	574.5	.116
									30	20.95	34.60		24.223	370.7	.163
									50	19.85	34.96		24.790	316.7	.232
									75	17.85	35.05		25.366	261.9	.305
									100	17.08	35.09		25.582	241.3	.368
									125	15.70	35.11		25.919	209.3	.426
									150	15.12	35.05		26.002	201.4	.478
									200	14.03	34.99		26.191	183.4	.577
									250	12.84	34.92		26.381	165.4	.667
									300	11.75	34.86		26.547	149.7	.749
									400	9.36	34.72		26.860	119.9	.892
									500	7.91	34.64		27.025	104.3	1.012
									600	7.21	34.61		27.103	96.9	1.122

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 83

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 01.0N	85 58.6W	12/03/65	2033 GMT	2832M	18C	16KT	1	180 07 06

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CC
									0	24.64	33.53		22.362	548.4	0
									10	24.59	33.53		22.377	547.0	.055
									20	24.40	33.54		22.441	540.8	.109
									30	22.90	33.80		23.075	480.3	.160
									50	20.80	34.86		24.461	348.0	.243
									75	17.76	35.05		25.388	259.8	.320
									100	16.97	35.06		25.586	241.0	.383
									125	16.24	35.09		25.780	222.5	.442
									150	15.60	35.07		25.910	210.1	.497
									200	14.60	35.02		26.093	192.8	.601
									250	12.98	34.92		26.353	168.0	.694
									300	11.96	34.86		26.507	153.5	.778
									400	9.48	34.72		26.841	121.8	.923
									500	7.83	34.64		27.037	103.2	1.044
									600	7.10	34.61		27.119	95.4	1.153

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 84

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 02.0N	86 22.0W	12/03/65	2318 GMT	3003M	170	18KT	2	180 10 11

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0A	24.43	33.55		22.440	541.0	0
									10A	24.43	33.55		22.440	541.0	.054
									20A	24.35	33.77		22.630	522.8	.107
									30	22.68	34.03		23.311	457.7	.156
									50	19.50	35.01		24.919	304.4	.233
									75	17.50	35.04		25.443	254.5	.303
									100	16.74	35.09		25.663	233.6	.365
									125	15.95	35.10		25.854	215.5	.422
									150	15.81	35.10		25.886	212.4	.477
									200	14.65	35.03		26.090	193.1	.581
									250	13.12	34.94		26.341	169.2	.674
									300	12.25	34.88		26.467	157.3	.760
									400	9.42	34.72		26.850	120.9	.907
									500	7.72	34.63		27.045	102.4	1.027
									600	6.99	34.61		27.134	94.0	1.134

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 85

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 03.0N	86 43.3W	12/04/65	0127 GMT	2813M	180	15KT	1	180 10 11

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	24.23	33.70		22.612	524.5	0
									10	24.12	33.70		22.645	521.3	.052
									20	23.28	33.88		23.026	484.9	.103
									30	21.60	34.88		24.258	367.3	.145
									50	18.72	35.08		25.172	280.3	.210
									75	17.12	35.04		25.535	245.8	.277
									100	16.53	35.11		25.728	227.5	.337
									125	16.10	35.14		25.850	215.8	.393
									150	15.50	35.08		25.941	207.2	.447
									200	14.74	35.00		26.047	197.1	.551
									250	13.34	34.94		26.296	173.5	.646
									300	12.68	34.91		26.406	163.1	.734
									400	9.60	34.72		26.821	123.7	.886
									500	8.07	34.65		27.009	105.8	1.009
									600	6.91	34.60		27.137	93.7	1.118

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 86

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 03.5N	87 07.0W	12/04/65	0337 GMT	2583M	180	12KT	1	180 10 11

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	24.00	33.84		22.786	507.9	0
									10	24.00	33.84		22.786	507.9	.051
									20	23.72	33.89		22.906	496.4	.101
									30	22.30	34.46		23.744	416.3	.147
									50	19.58	35.06		24.936	302.7	.219
									75	17.38	35.01		25.449	253.9	.289
									100	16.55	34.98		25.623	237.4	.351
									125	16.23	35.10		25.790	221.6	.409
									150	15.66	35.01		25.851	215.8	.465
									200	15.18	35.04		25.981	203.4	.573
									250	13.51	34.96		26.277	175.3	.671
									300	12.82	34.93		26.393	164.2	.759
									400	9.52	34.73		26.842	121.7	.910
									500	7.67	34.62		27.045	102.4	1.031
									600	6.96	34.60		27.130	94.3	1.138

A) THE SALINITY VALUES AT THESE DEPTHS WERE OFF-SCALE ON THE S/T/D ANALOG RECORDING. THE VALUE OF THE WATER SAMPLE COLLECTED FROM THE SURFACE FOR CALIBRATION OF THE INSTRUMENT WAS TABULATED AND THE VALUES FOR OTHER DEPTHS WERE INTERPOLATED.

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 87

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
C 04.1N	87 26.2W	12/04/65	0611 GMT	2602M	190	1CKT	1	180 06

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	23.95	33.94		22.876	499.2	0
									10	23.96	33.95		22.881	498.8	.050
									20	23.88	33.96		22.912	495.8	.100
									30	23.47	34.05		23.100	477.9	.148
									50	20.40	34.83		24.546	339.9	.231
									75	18.44	35.06		25.227	275.1	.308
									100	16.73	34.99		25.589	240.7	.373
									125	16.04	35.03		25.780	222.5	.432
									150	15.80	35.04		25.842	216.6	.488
									200	14.50	35.02		26.114	190.7	.592
									250	13.47	34.97		26.292	173.8	.687
									300	12.80	34.93		26.397	163.9	.775
									400	10.00	34.75		26.776	127.9	.929
									500	7.92	34.64		27.024	104.4	1.054
									600	7.00	34.60		27.125	94.9	1.163

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 88

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
C 05.0N	87 42.0W	12/04/65	0828 GMT	2574M	180	15KT	2	180

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	23.90	33.89		22.853	501.4	0
									10	23.92	33.90		22.855	501.3	.050
									20	23.87	33.92		22.885	498.4	.100
									30	23.63	33.98		23.000	487.4	.150
									50	19.75	34.83		24.717	323.6	.231
									75	18.35	35.00		25.204	277.3	.307
									100	17.50	35.01		25.420	256.7	.374
									125	15.94	34.96		25.749	225.4	.435
									150	15.28	35.04		25.959	205.5	.490
									200	14.58	35.01		26.089	193.1	.592
									250	13.28	34.95		26.316	171.6	.687
									300	12.68	34.92		26.413	162.3	.774
									400	9.93	34.75		26.788	126.8	.927
									500	8.05	34.65		27.012	105.5	1.052
									600	6.91	34.61		27.145	92.9	1.160

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 89

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
C 05.5N	88 07.8W	12/04/65	1046 GMT	2473M	170	16KT	2	180

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.93	33.87		22.829	503.7	0
									10	23.92	33.87		22.832	503.4	.050
									20	23.92	33.87		22.832	503.4	.101
									30	23.87	33.89		22.862	500.6	.151
									50	19.50	34.77		24.736	321.8	.234
									75	18.52	35.00		25.161	281.3	.310
									100	17.58	35.01		25.401	258.5	.378
									125	15.53	34.99		25.865	214.4	.438
									150	15.09	35.04		26.001	201.5	.491
									200	14.57	35.02		26.099	192.2	.592
									250	13.43	34.96		26.293	173.8	.686
									300	12.29	34.86		26.443	159.5	.773
									400	9.30	34.73		26.878	118.2	.920
									500	8.09	34.65		27.006	106.1	1.041
									600	7.04	34.61		27.127	94.6	1.151

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 90

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
C 07.0N	88 25.6W	12/04/65	1318 GMT	2413M	160	14KT	2	170 08 07

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	24.07	33.81		22.743	512.0	0
									10	24.07	33.81		22.743	512.0	.051
									20	23.99	33.82		22.774	509.0	.102
									30	23.74	33.89		22.900	497.0	.153
									50	19.07	34.99		25.014	295.3	.232
									75	18.58	35.19		25.291	269.0	.303
									100	16.18	34.96		25.694	230.7	.366
									125	15.20	35.03		25.969	204.5	.422
									150	15.05	35.06		26.025	199.2	.473
									200	13.90	34.96		26.195	183.0	.571
									250	13.28	34.95		26.316	171.6	.663
									300	11.97	34.85		26.497	154.4	.748
									400	9.22	34.70		26.868	119.2	.893
									500	8.28	34.66		26.985	108.1	1.015
									600	7.08	34.61		27.121	95.2	1.126

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 91

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 07.7N	88 38.5W	12/04/65	1441 GMT	2425M	190	13KT	2	190 06 06

Z	T	S	C2	PC4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	24.21	33.80		22.694	516.7	0
									10	24.20	33.80		22.697	516.4	.052
									20	24.20	33.81		22.704	515.7	.103
									30	23.90	33.82		22.800	506.5	.155
									50	19.46	34.98		24.907	305.6	.236
									75	18.93	35.20		25.210	276.7	.309
									100	16.98	35.08		25.599	239.7	.375
									125	15.49	35.03		25.904	210.7	.432
									150	14.98	35.04		26.025	199.2	.484
									200	14.33	35.02		26.151	187.3	.583
									250	13.34	34.96		26.311	172.0	.676
									300	12.32	34.90		26.468	157.1	.762
									400	9.72	34.75		26.824	123.4	.910
									500	8.41	34.66		26.965	110.0	1.036
									600	7.10	34.60		27.111	96.2	1.149

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 92

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 08.0N	88 58.8W	12/04/65	1653 GMT	1956M	180	16KT	1	170 08 08

Z	T	S	C2	PC4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	24.43	33.89		22.696	516.4	0
									10	24.42	33.89		22.699	516.1	.052
									20	24.40	33.89		22.705	515.6	.103
									30	24.28	33.90		22.749	511.4	.155
									50	19.88	34.97		24.790	316.7	.238
									75	19.06	35.05		25.063	290.7	.314
									100	16.25	35.12		25.800	220.5	.379
									125	15.75	35.06		25.869	214.0	.434
									150	15.12	35.03		25.987	202.8	.487
									200	14.37	35.01		26.134	188.8	.588
									250	13.49	34.96		26.281	174.9	.682
									300	12.32	34.87		26.445	159.3	.769
									400	9.38	34.71		26.849	121.0	.917
									500	7.84	34.61		27.012	105.5	1.039
									600	6.72	34.59		27.155	92.0	1.147

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 93

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 02.5N	89 29.1W	12/04/65	1940 GMT	1863M	200	18KT	1	180 07 07

Z	T	S	C2	PC4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	24.28	34.08		22.884	498.5	0
									10	24.07	34.09		22.954	491.8	.050
									20	23.98	34.10		22.988	488.5	.099
									30	23.92	34.09		22.998	487.6	.148
									50	20.37	34.91		24.614	333.4	.230
									75	17.92	35.07		25.364	262.1	.305
									100	15.72	35.10		25.906	210.5	.365
									125	15.38	35.06		25.952	206.1	.418
									150	14.98	35.02		26.010	200.6	.469
									200	14.30	35.01		26.149	187.4	.569
									250	13.47	34.96		26.285	174.5	.663
									300	12.28	34.87		26.453	158.6	.750
									400	9.67	34.73		26.817	124.1	.899
									500	8.27	34.66		26.986	108.0	1.024
									600	7.02	34.61		27.130	94.4	1.134

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — P 7

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 00.0	89 40.0W	12/04/65	2244 GMT	1715M	180	19KT	1	190 06 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	23.86	34.172	5.54					480.0	0	23.86	34.172	5.54	23.078	480.0	0
10	23.78	34.170	5.00					477.9	10	23.78	34.170	5.00	23.100	477.9	.048
35	22.47	34.451	4.29					421.6	20	23.72	34.180	4.65	23.125	475.5	.096
66	19.66	34.936	3.66					313.7	30	23.66	34.189	4.39	23.150	473.0	.143
90	17.16	35.068	2.85					244.7	50	21.11	34.676	4.00	24.237	369.4	.228
105	15.77	35.033	2.79					216.4	75	19.08	34.958	3.32	24.989	297.7	.312
119	15.38	35.059	2.68					206.2	100	18.14	35.050	2.81	25.771	223.3	.377
155	14.92	35.018	2.73					199.5	125	15.27	35.042	2.68	25.963	205.1	.432
180	14.71	35.013	2.55					195.5	150	14.95	35.015	2.72	26.012	200.5	.484
214	13.58	34.959	1.90					176.8	200	14.05	34.980	2.15	26.179	184.6	.582
249	13.31	34.945	2.03					172.5	250	13.29	34.943	2.02	26.310	172.2	.675
319	11.33	34.832	.74					144.3	300	11.92	34.861	1.15	26.516	152.6	.759
438	9.00	34.701	.55					115.8	400	10.23	34.782	.61	26.761	129.3	.909
566	7.42	34.628	1.02					98.4	500	7.95	34.649	.75	27.026	104.2	1.034
710	6.13	34.589	1.29					84.6	600	7.09	34.616	1.09	27.125	94.9	1.143
874	4.76	34.590	1.73					68.8	700	6.21	34.592	1.27	27.224	85.5	1.243
1044	4.28	34.600	1.86					63.1	800	5.32	34.586	1.54	27.331	75.3	1.333
1259	3.69	34.601	1.99					57.2	1000	4.36	34.599	1.84	27.451	63.9	1.492
									1200	3.90	34.600	1.95	27.500	59.3	1.636

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 94

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 00.0	89 40.0W	12/04/65	2325 GMT	1715M	180	18KT	1	190 06 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.86	34.18		23.084	479.4	0
									10	23.86	34.18		23.084	479.4	.048
									20	23.73	34.19		23.130	475.0	.096
									30	23.67	34.19		23.147	473.4	.143
									50	21.33	34.71		24.203	372.6	.228
									75	19.45	34.92		24.863	309.7	.314
									100	16.05	35.04		25.785	222.0	.381
									125	15.35	35.07		25.966	204.8	.435
									150	15.00	35.04		26.021	199.6	.487
									200	13.73	34.94		26.216	181.1	.585
									250	13.21	34.94		26.322	171.0	.676
									300	11.91	34.86		26.516	152.6	.760
									400	10.15	34.75		26.751	130.3	.910
									500	8.30	34.66		26.982	108.4	1.038
									600	7.12	34.61		27.116	95.7	1.150

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 95

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 00.0	90 02.6W	12/05/65	0152 GMT	843M	160	17KT	1	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.76	34.29		23.196	468.7	0
									10	23.77	34.29		23.193	468.9	.047
									20	23.70	34.29		23.214	467.0	.094
									30	22.68	34.45		23.629	427.3	.139
									50	19.77	34.91		24.773	318.3	.213
									75	18.45	34.96		25.148	282.6	.289
									100	16.74	35.06		25.640	235.8	.355
									125	15.18	35.04		25.981	203.4	.410
									150	14.85	35.01		26.031	198.7	.462
									200	14.00	34.99		26.198	182.8	.560
									250	13.25	34.96		26.330	170.3	.651
									300	12.01	34.87		26.505	153.6	.735
									400	9.87	34.72		26.775	128.0	.884
									500	8.32	34.67		26.987	107.9	1.011
									600	6.97	34.61		27.137	93.7	1.121

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 96

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 00.0	90 20.0W	12/05/65	0423 GMT	676M	170	09KT	1	180 05 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.50	34.34		23.310	457.8	0
									10	23.46	34.33		23.314	457.4	.046
									20	23.36	34.34		23.351	453.9	.091
									30	23.28	34.35		23.381	451.0	.137
									50	20.17	34.94		24.690	326.2	.215
									75	19.15	34.92		24.941	302.3	.294
									100	17.49	35.04		25.446	254.3	.364
									125	15.33	35.02		25.932	208.0	.423
									150	14.97	35.03		26.020	199.7	.475
									200	14.30	35.00		26.142	188.1	.574
									250	13.22	34.95		26.328	170.4	.667
									300	12.28	34.88		26.461	157.8	.753
									400	9.31	34.71		26.861	119.9	.900
									500	8.43	34.66		26.962	110.3	1.023
									600	7.20	34.62		27.112	96.0	1.136

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 97

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 00.0	90 39.0W	12/05/65	0629 GMT	2210M	170	14KT	1	180 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.51	34.34		23.307	458.1	0
									10	22.95	34.37		23.492	440.5	.045
									20	22.77	34.45		23.604	429.8	.089
									30	22.18	34.60		23.884	403.0	.130
									50	20.18	35.00		24.733	322.1	.203
									75	18.85	34.92		25.017	295.0	.281
									100	17.43	35.02		25.445	254.3	.350
									125	15.43	35.04		25.926	208.7	.409
									150	14.87	35.02		26.034	198.3	.461
									200	14.40	35.00		26.120	190.1	.560
									250	12.98	34.94		26.369	166.6	.653
									300	12.01	34.88		26.513	152.9	.736
									400	9.13	34.71		26.890	117.1	.879
									500	8.00	34.65		27.019	104.8	.998
									600	7.07	34.62		27.131	94.3	1.107

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 98

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
0 00.0	91 00.2W	12/05/65	0843 GMT	2611M	170	18KT	1	180 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	23.26	34.34		23.380	451.1	0
									10	23.24	34.35		23.393	449.9	.045
									20	23.13	34.40		23.463	443.2	.090
									30	22.91	34.47		23.579	432.1	.134
									50	20.00	34.96		24.750	320.4	.209
									75	18.73	35.05		25.147	282.7	.285
									100	17.25	35.04		25.504	248.8	.352
									125	16.22	35.11		25.800	220.6	.412
									150	14.93	35.03		26.029	198.9	.465
									200	14.39	35.01		26.130	189.2	.565
									250	12.69	34.92		26.411	162.5	.656
									300	11.78	34.83		26.518	152.4	.738
									400	9.58	34.73		26.832	122.6	.884
									500	8.27	34.66		26.986	108.0	1.008
									600	7.13	34.62		27.122	95.1	1.119

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 99

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
2 00.0N	92 00.0W	12/06/65	1332 GMT	2275M	180	12KT	2	180 05 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	26.25	33.72		22.013	581.8	0
									10	26.25	33.72		22.013	581.8	.058
									20	26.25	33.73		22.021	581.1	.116
									30	26.26	33.73		22.018	581.4	.175
									50	24.53	34.10		22.825	504.1	.283
									75	18.90	34.90		24.989	297.7	.384
									100	15.90	34.97		25.766	223.9	.450
									125	14.74	34.93		25.993	202.2	.504
									150	14.50	35.00		26.099	192.2	.555
									200	14.05	34.99		26.157	183.8	.651
									250	13.00	34.91		26.342	169.1	.742
									300	11.97	34.83		26.482	155.9	.827
									400	9.34	34.70		26.848	121.1	.974
									500	7.80	34.63		27.034	103.5	1.094
									600	6.85	34.60		27.145	92.9	1.201

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 100

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
3 42.1N	93 11.2W	12/07/65	0131 GMT	2798M	190	18KT	5	190 09 09

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	26.62	33.91		22.040	579.2	0
									10	26.62	33.92		22.047	578.5	.058
									20	26.62	33.92		22.047	578.5	.116
									30	26.62	33.92		22.047	578.5	.174
									50	26.59	33.93		22.064	576.9	.290
									75	20.25	34.88		24.624	332.5	.404
									100	17.67	35.03		25.394	259.1	.479
									125	16.00	34.97		25.743	226.0	.540
									150	14.52	34.94		26.048	197.0	.594
									200	13.58	34.95		26.254	177.4	.690
									250	13.08	34.92		26.333	169.9	.780
									300	12.38	34.87		26.433	160.4	.866
									400	10.51	34.75		26.688	136.3	1.023
									500	8.20	34.63		26.974	109.2	1.155
									600	6.82	34.58		27.134	94.0	1.265

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 101

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
5 16.8N	94 08.4W	12/07/65	1332 GMT	3611M	200	13KT	6	180 08 06

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	27.15	33.11		21.271	652.9	0
									10	27.16	33.11		21.268	653.2	.065
									20	27.16	33.11		21.268	653.2	.131
									30	27.17	33.12		21.272	652.8	.196
									50	18.50	34.48		24.769	318.6	.294
									75	14.95	34.81		25.855	215.4	.361
									100	13.86	34.94		26.188	183.7	.411
									125	13.40	34.93		26.276	175.4	.457
									150	13.18	34.91		26.305	172.6	.501
									200	12.60	34.87		26.390	164.5	.588
									250	11.97	34.83		26.482	155.9	.671
									300	11.12	34.76		26.586	145.9	.750
									400	9.45	34.69		26.822	123.6	.892
									500	8.06	34.64		27.003	106.4	1.016
									600	7.12	34.60		27.108	96.4	1.126

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 102

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
7 05.2N	95 36.5W	12/08/65	0331 GMT	3630M	040	09KT	6	

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	27.94	32.99		20.927	685.9	0
									10	27.96	33.09		20.995	679.3	.068
									20	24.75	33.54		22.337	550.8	.130
									30	20.25	34.38		24.243	368.7	.176
									50	14.43	34.74		25.914	209.8	.234
									75	13.49	34.82		26.173	185.2	.284
									100	13.00	34.83		26.280	175.0	.329
									125	12.68	34.81		26.328	170.4	.373
									150	12.49	34.84		26.389	164.7	.416
									200	11.97	34.80		26.458	158.1	.499
									250	11.25	34.76		26.562	148.2	.578
									300	10.75	34.73		26.630	141.8	.654
									400	9.66	34.68		26.779	127.6	.796
									500	8.41	34.63		26.941	112.2	.925
									600	7.23	34.58		27.077	99.4	1.040

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 103

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
8 46.0N	96 49.2W	12/08/65	1538 GMT	3781M	090	16KT	1	090 12 08

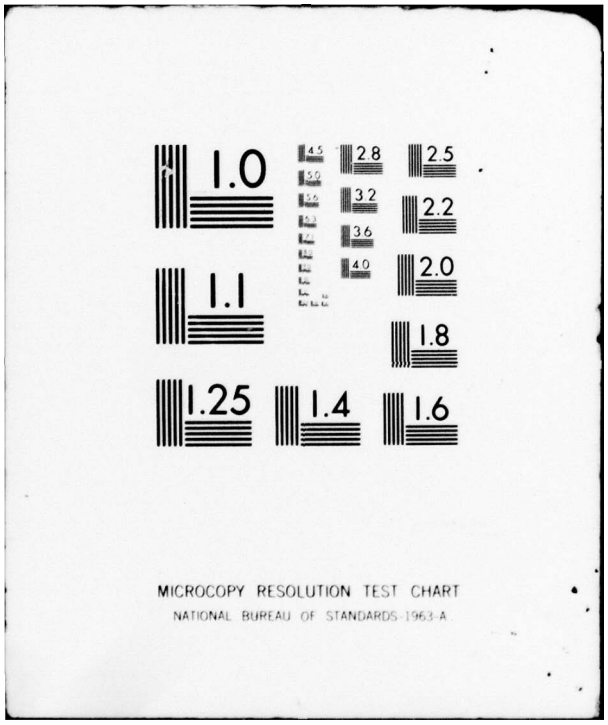
Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	27.57	33.17		21.181	661.5	0
									10	27.57	33.17		21.181	661.5	.066
									20	27.50	33.48		21.754	606.6	.130
									30	23.10	33.99		23.154	472.7	.184
									50	15.77	34.71		25.596	240.0	.255
									75	13.28	34.78		26.185	184.1	.309
									100	12.84	34.84		26.320	171.2	.354
									125	12.48	34.82		26.375	165.9	.397
									150	12.15	34.82		26.432	160.6	.438
									200	11.58	34.77		26.509	153.3	.519
									250	11.08	34.75		26.586	146.0	.596
									300	10.78	34.74		26.632	141.6	.672
									400	9.88	34.68		26.742	131.1	.816
									500	8.53	34.61		26.907	115.5	.948
									600	7.27	34.57		27.063	100.7	1.065

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PHYSICAL AND CHEMICAL DATA. EXPEDITION X, 20-25 APRIL 1965. LA --ETC(U)
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RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 104

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
10 27.0N	98 11.9W	12/09/65	0406 GMT	4091M	060	11KT	1	060 12 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	26.98	33.60		21.693	612.5	0
									10	26.96	33.60		21.699	611.8	.061
									20	22.05	34.27		23.670	423.4	.113
									30	17.80	34.53		24.980	298.5	.149
									50	14.08	34.75		25.996	202.0	.200
									75	13.04	34.76		26.218	180.9	.248
									100	12.41	34.75		26.335	169.8	.292
									125	12.16	34.77		26.399	163.7	.335
									150	11.75	34.77		26.469	157.0	.376
									200	11.25	34.76		26.562	148.2	.454
									250	10.77	34.73		26.626	142.2	.529
									300	10.28	34.71		26.697	135.4	.602
									400	9.02	34.63		26.845	121.3	.737
									500	7.83	34.59		26.998	106.9	.860
									600	6.91	34.56		27.106	96.7	.971

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 105

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
12 08.0N	99 14.7W	12/09/65	1550 GMT	3549M	080	16KT	1	10 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	28.64	33.88		21.365	643.9	0
									10	28.64	33.88		21.365	643.9	.064
									20	28.64	33.88		21.365	643.9	.129
									30	28.64	33.88		21.365	643.9	.193
									50	26.42	33.84		22.050	578.2	.316
									75	23.83	34.10		23.032	484.3	.449
									100	17.05	34.64		25.245	273.4	.545
									125	13.82	34.80		26.089	193.1	.604
									150	13.04	34.81		26.256	177.2	.651
									200	12.33	34.79		26.381	165.4	.739
									250	11.71	34.77		26.484	155.6	.822
									300	10.98	34.73		26.588	145.7	.901
									400	9.14	34.63		26.826	123.2	1.043
									500	8.00	34.59		26.972	109.3	1.167
									600	6.95	34.56		27.100	97.2	1.280

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 106

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
13 50.0N	100 28.1W	12/10/65	0352 GMT	3342M	090	06KT	1	090 06 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	28.49	33.81		21.362	644.2	0
									10	28.23	33.80		21.440	636.7	.064
									20	28.18	33.81		21.464	634.4	.128
									30	27.90	33.77		21.525	628.6	.191
									50	25.67	33.78		22.238	560.3	.310
									75	25.20	33.82		22.412	543.6	.449
									100	24.92	33.85		22.519	533.4	.584
									125	24.03	33.95		22.860	500.8	.715
									150	16.65	34.62		25.324	265.8	.812
									200	13.32	34.82		26.207	181.9	.926
									250	12.51	34.81		26.362	167.2	1.016
									300	11.88	34.78		26.460	157.9	1.101
									400	10.55	34.70		26.642	140.7	1.259
									500	8.66	34.60		26.879	118.1	1.397
									600	7.35	34.56		27.044	102.5	1.517

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 107

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
15 31.0N	101 42.2W	12/10/65	1653 GMT	3496M	320	04KT	0	320 02 08

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	29.12	33.71		21.078	671.4	0
									10	28.93	33.72		21.149	664.6	.067
									20	28.96	33.87		21.251	654.8	.133
									30	28.96	33.88		21.258	654.1	.198
									50	28.87	33.99		21.371	643.3	.328
									75	21.75	34.46		23.898	401.7	.460
									100	15.80	34.66		25.550	244.3	.541
									125	14.32	34.81		25.991	202.4	.598
									150	13.44	34.82		26.183	184.2	.647
									200	12.48	34.81		26.367	166.7	.737
									250	11.82	34.77		26.464	157.6	.821
									300	11.17	34.72		26.546	149.8	.901
									400	9.72	34.63		26.730	132.3	1.050
									500	8.37	34.56		26.893	116.8	1.183
									600	7.13	34.52		27.044	102.5	1.302

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — H 8

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
17 15.3N	103 00.0W	12/11/65	0516 GMT	4270M	300	08KT	1	

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT
0	28.47	34.099						622.8
11	28.46	34.088						623.3
39	28.26	34.142						613.1
64	21.73	34.428						403.5
82	18.44	34.511						314.9
96	16.38	34.597						261.5
109	15.14	34.727						225.4
128	13.76	34.783						193.2
147	13.33	34.830						181.4
170	12.76	34.833						170.2
193	12.42	34.817						165.1
216	12.23	34.814						161.8
244	11.96	34.800						157.9
278	11.60	34.781						152.8
326	10.88	34.743						143.1

Z	T	S	O2	SIGT	DT	DD
0	28.47	34.099		21.585	622.8	0
10	28.46	34.089		21.581	623.2	.062
20	28.40	34.106		21.614	620.0	.125
30	28.32	34.125		21.652	616.4	.186
50	25.62	34.231		22.594	526.3	.301
75	19.61	34.487		24.493	344.9	.411
100	15.95	34.640		25.500	249.1	.485
125	13.93	34.780		26.050	196.8	.542
150	13.25	34.832		26.231	179.6	.590
200	12.36	34.815		26.396	164.0	.678
250	11.90	34.797		26.469	157.1	.761
300	11.30	34.765		26.557	148.7	.841

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 108

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
17 15.3N	103 00.0W	12/11/65	0539 GMT	4270M	300	08KT	1	

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	28.52	34.10		21.569	624.3	0
10	28.52	34.11		21.577	623.6	.062
20	28.47	34.12		21.601	621.3	.125
30	28.45	34.13		21.615	619.9	.187
50	26.22	34.18		22.369	547.8	.304
75	19.80	34.51		24.460	348.1	.417
100	16.05	34.61		25.455	253.4	.492
125	13.98	34.77		26.032	198.5	.550
150	13.24	34.82		26.224	180.3	.598
200	12.44	34.82		26.383	165.2	.687
250	12.02	34.80		26.449	159.0	.771
300	11.44	34.76		26.527	151.5	.852
400	10.13	34.67		26.692	135.9	1.003
500	8.58	34.57		26.868	119.2	1.140
600	7.35	34.56		27.044	102.5	1.260

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 109

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
18 54.1N	104 16.5W	12/11/65	1747 GMT	464M	130	04KT	1	

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	27.81	34.21		21.884	594.1	0
10	27.75	34.21		21.904	592.2	.059
20	27.28	34.21		22.056	577.7	.118
30	24.67	34.32		22.949	492.3	.171
50	21.18	34.39		24.001	391.8	.260
75	17.28	34.50		25.083	288.8	.346
100	15.14	34.63		25.675	232.5	.412
125	13.85	34.76		26.052	196.7	.466
150	13.34	34.78		26.172	185.2	.515
200	12.78	34.78		26.285	174.5	.607
250	12.15	34.76		26.385	165.0	.695
300	11.83	34.74		26.438	159.9	.779
400	10.74	34.68		26.592	145.3	.940

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 110

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
19 17.6N	106 35.0W	12/14/65	0609 GMT	3603M	010	11KT	1	

Z	T	S	C2	PO4	SIO3	NO2	NO3	DT

Z	T	S	O2	SIGT	DT	DD
0	27.77	34.29		21.958	587.1	0
10	27.78	34.29		21.954	587.4	.059
20	27.78	34.29		21.954	587.4	.118
30	27.78	34.29		21.954	587.4	.176
50	23.65	34.40		23.312	457.6	.281
75	17.98	34.41		24.845	311.5	.378
100	15.17	34.57		25.622	237.5	.447
125	13.89	34.65		25.958	205.5	.503
150	13.18	34.75		26.182	184.3	.553
200	12.33	34.80		26.389	164.6	.643
250	11.60	34.77		26.505	153.6	.725
300	10.89	34.73		26.604	144.2	.803
400	9.35	34.64		26.800	125.7	.945
500	7.86	34.55		26.962	110.3	1.072
600	6.98	34.53		27.072	99.8	1.186

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 111

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
19 05.0N	108 00.2W	12/14/65	1533 GMT	3832M	110	07KT	2	320 07 06

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	27.37	34.32		22.109	572.6	0
									10	27.38	34.32		22.106	572.9	.057
									20	27.38	34.32		22.106	572.9	.115
									30	27.38	34.33		22.114	572.2	.172
									50	25.80	34.45		22.702	515.8	.281
									75	20.20	34.25		24.158	376.9	.393
									100	15.68	34.45		25.416	257.1	.473
									125	14.35	34.62		25.838	216.9	.533
									150	13.63	34.70		26.051	196.7	.586
									200	12.43	34.78		26.354	168.0	.679
									250	11.66	34.76		26.486	155.4	.763
									300	10.89	34.72		26.597	144.9	.842
									400	9.27	34.62		26.797	125.9	.984
									500	7.83	34.56		26.974	109.1	1.110
									600	6.82	34.53		27.094	97.7	1.223

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 112

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
19 37.8N	108 31.0W	12/14/65	2105 GMT	2857M	350	29KT	5	350 10 05

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	27.19	34.15		22.039	579.3	0
									10	27.17	34.16		22.053	578.0	.058
									20	27.15	34.16		22.060	577.3	.116
									30	27.14	34.16		22.063	577.0	.174
									50	23.65	34.29		23.228	465.6	.278
									75	18.22	34.27		24.679	327.3	.378
									100	15.83	34.41		25.352	263.2	.452
									125	14.16	34.61		25.871	213.8	.513
									150	13.42	34.71		26.102	191.9	.564
									200	12.41	34.77		26.350	168.3	.657
									250	11.72	34.76		26.475	156.5	.741
									300	10.82	34.70		26.594	145.2	.819
									400	9.43	34.61		26.763	129.2	.964
									500	8.30	34.56		26.904	115.8	1.095
									600	7.00	34.50		27.046	102.3	1.214

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 113

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
20 16.0N	109 07.0W	12/15/65	0540 GMT	2546M	010	19KT	6	360 07

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	26.27	34.49		22.586	527.0	0
									10	26.27	34.49		22.586	527.0	.053
									20	26.27	34.49		22.586	527.0	.105
									30	26.27	34.50		22.594	526.2	.158
									50	24.00	34.15		23.020	485.5	.260
									75	18.60	34.44		24.714	323.9	.361
									100	15.43	34.57		25.564	243.0	.433
									125	14.26	34.67		25.896	211.5	.491
									150	13.38	34.68		26.087	193.3	.542
									200	12.34	34.77		26.364	167.0	.635
									250	11.62	34.75		26.486	155.5	.718
									300	10.75	34.70		26.606	144.0	.796
									400	9.13	34.60		26.804	125.3	.938
									500	7.58	34.53		26.987	107.9	1.063
									600	6.45	34.51		27.128	94.5	1.173

RV ALEXANDER AGASSIZ — MUCCAUBER EXPEDITION — 114

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
20 38.0N	109 28.0W	12/15/65	0916 GMT	2866M	080	08KT	6	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									0	26.02	34.59		22.740	512.3	0
									10	26.03	34.60		22.744	511.9	.051
									20	26.05	34.60		22.738	512.5	.103
									30	26.05	34.60		22.738	512.5	.154
									50	22.60	34.25		23.501	439.6	.249
									75	17.40	34.39		24.970	299.5	.342
									100	15.87	34.72		25.581	241.4	.411
									125	13.42	34.35		25.824	218.3	.469
									150	12.71	34.55		26.121	190.1	.521
									200	12.26	34.79		26.395	164.1	.612
									250	11.82	34.78		26.471	156.8	.695
									300	11.02	34.70		26.558	148.6	.774
									400	9.78	34.63		26.720	133.2	.923
									500	8.13	34.55		26.922	114.1	1.055
									600	6.83	34.52		27.085	98.6	1.171

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — H 9

LATITUDE	LONGITUDE	MO/DAY/YR	PESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
21 09.5N	109 57.5W	12/15/65	1446 GMT	3191M	C2C	14KT	6	330 05 10

Z	T	S	C2	PC4	SIC3	NC2	NC3	DT
0	25.65	34.511	5.32					507.0
9	25.66	34.505	5.07					507.8
29	25.66	34.513	5.09					507.2
39	23.16	34.416	5.48					442.9
53	20.28	34.151	5.62					386.1
68	17.81	33.999	5.72					337.4
91	17.29	34.741	1.99					271.4
109	15.60	34.759	1.41					232.8
128	14.38	34.741	.95					208.7
147	13.99	34.810	.95					195.8
175	13.42	34.845	1.00					182.0
208	12.60	34.779	.61					171.2
236	12.28	34.782	.39					165.0
283	11.38	34.739	.42					152.0
336	10.56	34.688	.36					141.7
417		34.626	.35					
499		34.563	.34					
577		34.534	.35					

Z	T	S	O2	SIGT	DT	DD
0	25.65	34.511	5.32	22.795	507.0	0
10	25.66	34.506	5.07	22.787	507.7	.051
20	25.66	34.510	5.08	22.790	507.4	.102
30	25.44	34.505	5.13	22.855	501.3	.152
50	20.84	34.210	5.61	23.956	396.2	.242
75	17.65	34.060	4.66	24.658	329.3	.333
100	16.48	34.740	1.56	25.456	253.3	.407
125	14.52	34.744	1.01	25.898	211.3	.466
150	13.93	34.817	.96	26.079	194.1	.517
200	12.78	34.796	.72	26.297	173.4	.612
250	12.03	34.772	.40	26.426	161.2	.698
300	11.09	34.723	.40	26.562	148.2	.779

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 115

LATITUDE	LONGITUDE	MO/DAY/YR	PESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
21 09.5N	109 57.5W	12/15/65	1508 GMT	3191M	C2C	13KT	6	330 05 10

Z	T	S	C2	PC4	SIC3	NC2	NC3	DT

Z	T	S	O2	SIGT	DT	DD
0	25.63	34.52		22.808	505.8	0
10	25.65	34.52		22.801	506.4	.051
20	25.65	34.52		22.801	506.4	.101
30	25.65	34.52		22.801	506.4	.152
50	21.03	34.18		23.883	403.1	.243
75	17.65	34.00		24.612	333.6	.336
100	16.72	34.77		25.423	256.5	.410
125	14.97	34.77		25.820	218.7	.471
150	14.15	34.88		26.081	193.9	.523
200	12.84	34.80		26.289	174.2	.618
250	12.00	34.76		26.422	161.5	.704
300	11.29	34.74		26.539	150.4	.786
400	9.84	34.63		26.710	134.2	.936
500	8.39	34.56		26.890	117.1	1.070
600	7.38	34.53		27.016	105.2	1.191

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 116

LATITUDE	LONGITUDE	MO/DAY/YR	PESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
21 47.4N	110 34.8W	12/15/65	2049 GMT	3169M	360	07KT	1	360 10 11

Z	T	S	C2	PC4	SIC3	NC2	NC3	DT

Z	T	S	O2	SIGT	DT	DD
0	25.57	34.37		22.713	514.8	0
10	25.55	34.37		22.719	514.2	.051
20	24.42	34.57		23.212	467.1	.101
30	24.37	34.58		23.235	465.0	.147
50	23.74	34.54		23.391	450.1	.239
75	17.03	33.82		24.622	332.6	.337
100	15.08	34.15		25.319	266.3	.413
125	13.72	34.39		25.793	221.2	.475
150	12.75	34.42		26.013	200.4	.528
200	12.10	34.70		26.356	167.8	.623
250	11.36	34.70		26.495	154.5	.706
300	10.38	34.60		26.594	145.2	.784
400	8.98	34.55		26.789	126.7	.927
500	7.62	34.48		26.942	112.2	1.055
600	6.81	34.48		27.056	101.3	1.170

RV ALEXANDER AGASSIZ — MUDDAUBER EXPEDITION — 117

LATITUDE	LONGITUDE	MO/DAY/YR	PESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
22 20.5N	111 07.3W	12/16/65	0144 GMT	3282M	360	11KT		

Z	T	S	C2	PC4	SIC3	NC2	NC3	DT

Z	T	S	O2	SIGT	DT	DD
0	24.21	34.62		23.313	457.5	0
10	24.20	34.62		23.316	457.2	.046
20	24.17	34.61		23.317	457.1	.092
30	23.83	34.57		23.387	450.4	.137
50	18.60	33.85		24.264	366.8	.219
75	15.97	33.74		24.806	315.1	.305
100	13.83	33.93		25.416	257.1	.377
125	13.22	34.40		25.903	210.8	.436
150	12.62	34.45		26.061	195.8	.488
200	11.78	34.67		26.394	164.2	.580
250	10.83	34.60		26.514	152.8	.662
300	10.03	34.57		26.631	141.7	.739
400	8.80	34.55		26.818	123.9	.878
500	7.63	34.50		26.956	110.8	1.004
600	6.71	34.50		27.086	98.5	1.117

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER 78-4	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) DATA REPORT - Physical & Chemical Data Expedition X, LA PARED Expedition, Student Training Cruise and MUDDAUBER Expedition		5. TYPE OF REPORT & PERIOD COVERED 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s)		8. CONTRACT OR GRANT NUMBER(s) N00014-75-C-0152
9. PERFORMING ORGANIZATION NAME AND ADDRESS Scripps Institution of Oceanography La Jolla, CA 92093		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Office of Naval Research Arlington, VA 22217		12. REPORT DATE 15 FEB. 1978 13. NUMBER OF PAGES 106 pages
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release: distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

ABSTRACT

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report presents data collected during 1965 on Expedition "X", LA PARED Expedition, a STUDENT TRAINING CRUISE and MUDDAUBER Expedition.

Preceding the tabulated data for each cruise are: (1) a description of the principal objective and the sponsoring agency; (2) the hydrographic work carried out on the cruise; (3) a chart of the station positions; (4) a list of scientific personnel participating in the collection of data; and (5) a list of publications utilizing the cruise data.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE
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