

UNIVERSITY OF CALIFORNIA    SCRIPPS INSTITUTION OF OCEANOGRAPHY

# data report

PHYSICAL AND CHEMICAL DATA

CalCOFI Cruise 7412  
25 November - 18 December 1974

CalCOFI Cruise 7501  
8 January - 15 February 1975

and

CalCOFI Cruise 7503  
24 February - 28 March 1975

SIO Reference 84-10  
12 March 1984

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Sponsored by  
Marine Research Committee

SIO Reference 84-10  
12 March 1984

Approved for distribution:

  
W. A. Nierenberg, Director



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## INTRODUCTION

The data in this report were collected during Cruises 7412\*, 7501, and 7503 of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *David Starr Jordan* of the National Marine Fisheries Service and the RV *Alexander Agassiz* of the Scripps Institution of Oceanography. The report preceding this one in the series was SIO Ref. 82-21 which included data for 1978.

These data were collected and processed by personnel of the Data Collection and Processing Group (DCPG\*\*), Marine Life Research Group (MLRG), and the Southwest Fisheries Center, National Marine Fisheries Service (NMFS).

## STANDARD PROCEDURES

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

Plessey Environmental Systems Model 9040 STDs were used for most stations by both the *Jordan* and the *Agassiz*. Temperature and salinity offset corrections were applied to the STD data based upon Nansen bottle data comparisons. At most stations, the maximum sampling depth was 1000 meters, bottom depth permitting. An 18-bottle Nansen cast replaced the STD cast on a few stations where the STD failed.

### *Hydrographic Cast Data*

The hydrographic casts consisted of 18 or fewer Nansen bottles cast to a maximum sampling depth of 1000 meters, bottom depth permitting. There was usually only one Nansen cast per CalCOFI line. Temperature, salinity, and oxygen were determined for all depths.

On STD lowerings, a Nansen bottle was usually placed on the wire a few meters above the STD and another bottle was lowered to a depth of 10 meters. Temperature and salinity were determined from both bottles on most stations; dissolved oxygen was occasionally determined from the 10-meter bottle. A 10-meter bottle was also taken on most net tow stations.

Paired protected reversing thermometers were used to determine temperatures which are recorded to hundredths of a Celsius degree. Sample bottles used below 100 meters were equipped with unprotected thermometers for determination of the depth of sampling.

All salinity samples were analyzed at sea using inductive type salinometers. The salinity values were recorded and are reported to three decimal places, provided accepted standards were met. If there was doubt concerning the accuracy of the analytical results, the salinities are reported to two decimal points. All STD salinities are tabulated to hundredths.

Dissolved oxygen was determined by the Winkler method as modified by Carpenter (1965), using the equipment and procedure outlined by Anderson (1971).

The observed data have 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 comparisons with adjacent observations.

## TABULATED DATA

The time reported is Greenwich Mean Time. For STD lowerings it is the "start down" time and for Nansen bottle casts it is the time of messenger release.

\* The first two digits represent the year and the second two digits the month of the cruise.

\*\* Now the Physical and Chemical Oceanographic Data Facility (PACODF).

Bottom depths, determined acoustically, have been corrected using Matthews (1939) tables and are reported in meters. The weather and dominant waves are coded using the National Oceanographic Data Center (NODC) method.

Data for all cruises presented in this report were obtained by bottle casts and by the STD, and appear in three forms:

1) Data from the sample bottle casts are tabulated with the observed levels of depth on the left of a page, and standard depth values of temperature, salinity and oxygen interpolated from those observations are on the right of a page. Additional computed values are also presented.

2) Data from the STD lowerings are presented with two stations printed side by side. Temperature and salinity are tabulated at closer standard intervals than the interpolated standard depth bottle data. Additional computed values are also presented.

3) Ten-meter temperature, salinity and occasionally oxygen data from net tow 10-meter bottles and STD 10-meter check bottles appear as separate sections.

The same parameters have been tabulated in this report as in previous reports. The decimal has been omitted from the CalCOFI station number so station 93.30 appears in the tabulated data as 93030. The CalCOFI station designations have been in use for over thirty years. The first part specifies a line normal to the general trend of the coast line (CalCOFI line). The second part specifies a station position relative to the coast on the CalCOFI line. On some closely-spaced special inshore stations, an additional superscript number may appear after the line number or station number to indicate a finer resolution of the non-standard station location.

The column headings are to be interpreted as follows:

Z	Depth	Meters
T	Temperature	°C
S	Salinity	‰
O2	Dissolved Oxygen	ml/L
DT	$\delta_T$ Thermosteric anomaly	cl/ton
SIGT or SIGMA T	$\sigma_t = (\rho_{s,t,0} - 1) 10^3$ where $\rho_{s,t,0}$ is the density the parcel of sea water would have if moved isothermally to the sea surface.	g/L
DD	Geopotential anomaly, referred to the sea surface.	dynamic meters

#### FOOTNOTES

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

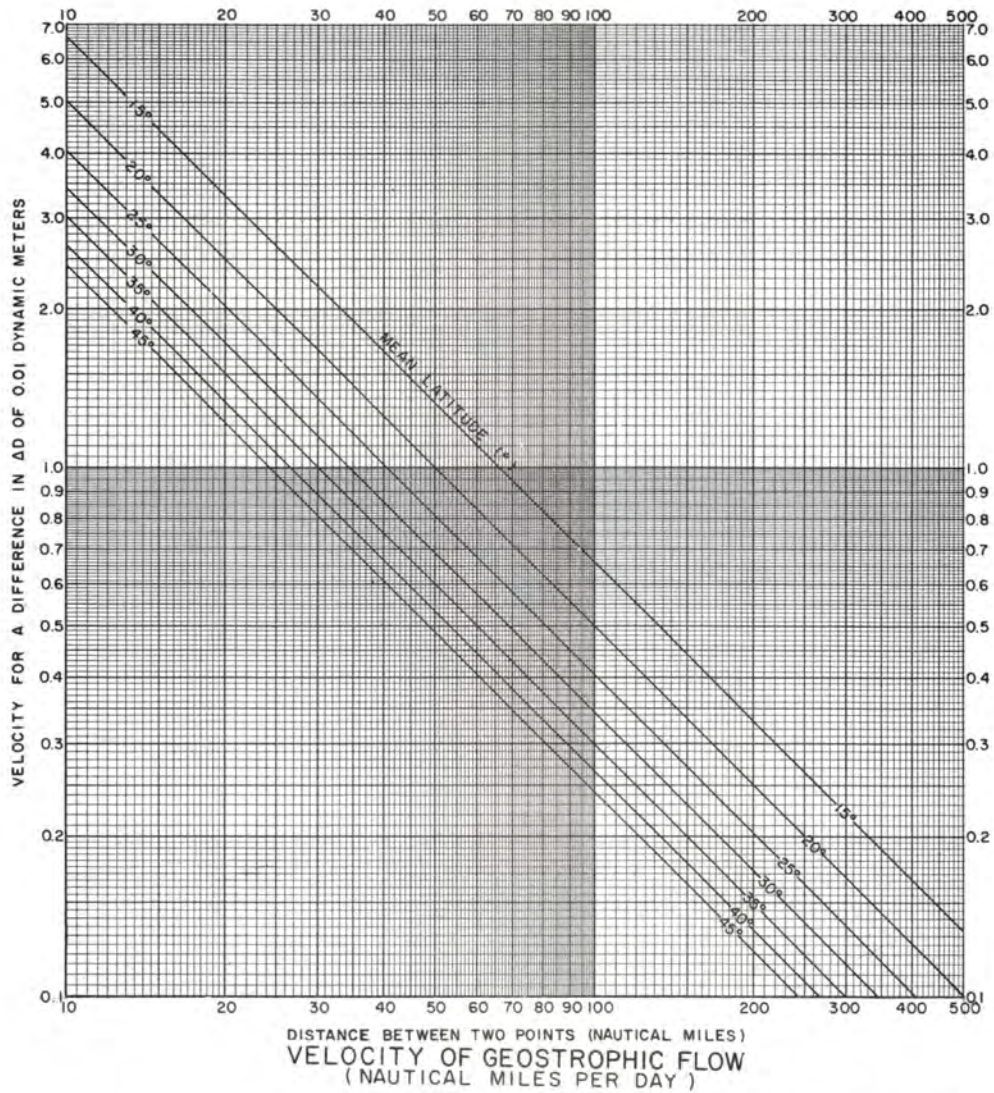
*P*: After depth values indicates the Nansen bottle posttripped.

*U*: Uncertain value. Values which are not used in interpolation because they seem to be in error without apparent reason.



#### LITERATURE CITED

- Anderson, G. C., compiler, 1971. "Oxygen Analysis," Marine Technician's Handbook, SIO Ref. No. 71-8, Sea Grant Pub. No. 9.
- Carpenter, J. H., 1965. The Chesapeake Bay Institute technique for the Winkler dissolved oxygen method. *Limnol. Oceanogr.*, 10: 141-143.
- Klein, Hans T., 1973. A new technique for processing physical oceanographic data. SIO Ref. No. 73-14.
- Matthews, D. J., 1939. Tables of the velocity of sound in pure water and seawater for use in echosounding and sound-ranging. Second Edition. Hydrographic Department, Admiralty, H. D. 282, 52 pp.
- Plessey Environmental Systems, 1974. Instruction Manual, *In situ* Salinity/Temperature/Depth Monitoring and Recording System, Model 9040.



cm/sec	0	1	2	3	4	5	6	7	8	9
0	<i>KNOTS</i> 0.02 <i>NM/DAY</i>	0.02 0.47	0.04 0.93	0.06 1.40	0.08 1.86	0.10 2.33	0.12 2.80	0.14 3.26	0.16 3.73	0.17 4.20
10	0.19 4.66	0.21 5.13	0.23 5.59	0.25 6.06	0.27 6.53	0.29 6.99	0.31 7.46	0.33 7.93	0.35 8.39	0.37 8.86
20	0.39 9.32	0.41 9.79	0.43 10.26	0.45 10.72	0.47 11.19	0.49 11.66	0.51 12.12	0.52 12.59	0.54 13.05	0.56 13.52
30	0.58 13.99	0.60 14.45	0.62 14.92	0.64 15.38	0.66 15.85	0.68 16.32	0.70 16.78	0.72 17.25	0.74 17.72	0.76 18.18
40	0.78 18.65	0.80 19.11	0.82 19.58	0.84 20.05	0.85 20.51	0.87 20.98	0.89 21.45	0.91 21.91	0.93 22.38	0.95 22.84
50	0.97 23.31	0.99 23.78	1.01 24.24	1.03 24.71	1.05 25.17	1.07 25.64	1.09 26.11	1.11 26.57	1.13 27.04	1.15 27.51
60	1.17 27.98	1.18 28.44	1.20 28.90	1.22 29.37	1.24 29.84	1.26 30.30	1.28 30.77	1.30 31.24	1.32 31.70	1.34 32.17
70	1.36 32.63	1.38 33.10	1.40 33.57	1.42 34.03	1.44 34.50	1.46 34.96	1.48 35.43	1.50 35.90	1.52 36.36	1.53 36.83
80	1.55 37.30	1.57 37.76	1.59 38.23	1.61 38.69	1.63 39.16	1.65 39.63	1.67 40.09	1.69 40.56	1.71 41.03	1.73 41.49
90	1.75 41.96	1.77 42.42	1.79 42.89	1.81 43.36	1.83 43.82	1.85 44.29	1.86 44.76	1.88 45.22	1.90 45.69	1.92 46.15
100	1.94 46.62	1.96 47.09	1.98 47.55	2.00 48.02	2.02 48.48	2.04 48.95	2.06 49.42	2.08 49.88	2.10 50.35	2.12 50.82

CONVERSION TABLE  
(CENTIMETERS / SECOND - KNOTS - NAUTICAL MILES / DAY)

1 cm/sec = 0.019 kts = 0.466 NAUTICAL MILES / DAY  
 1 kt = 24 NAUTICAL MILES / DAY = 51.48 cm/sec  
 1 NAUTICAL MILE / DAY = 0.042 kts = 2.14 cm/sec

## FIGURES

### Cruise 7503

1. CalCOFI Cruise 7503, station positions
2. Horizontal distribution of dynamic height anomaly (0 over 500 d-bar)
3. Horizontal distribution of dynamic height anomaly (200 over 500 d-bar)
4. Horizontal distribution of temperature at 10 meters
5. Horizontal distribution of salinity at 10 meters
6. Horizontal distribution of thermosteric anomaly at 10 meters
7. Horizontal distribution of temperature at 200 meters
8. Horizontal distribution of salinity at 200 meters
9. Horizontal distribution of thermosteric anomaly at 200 meters



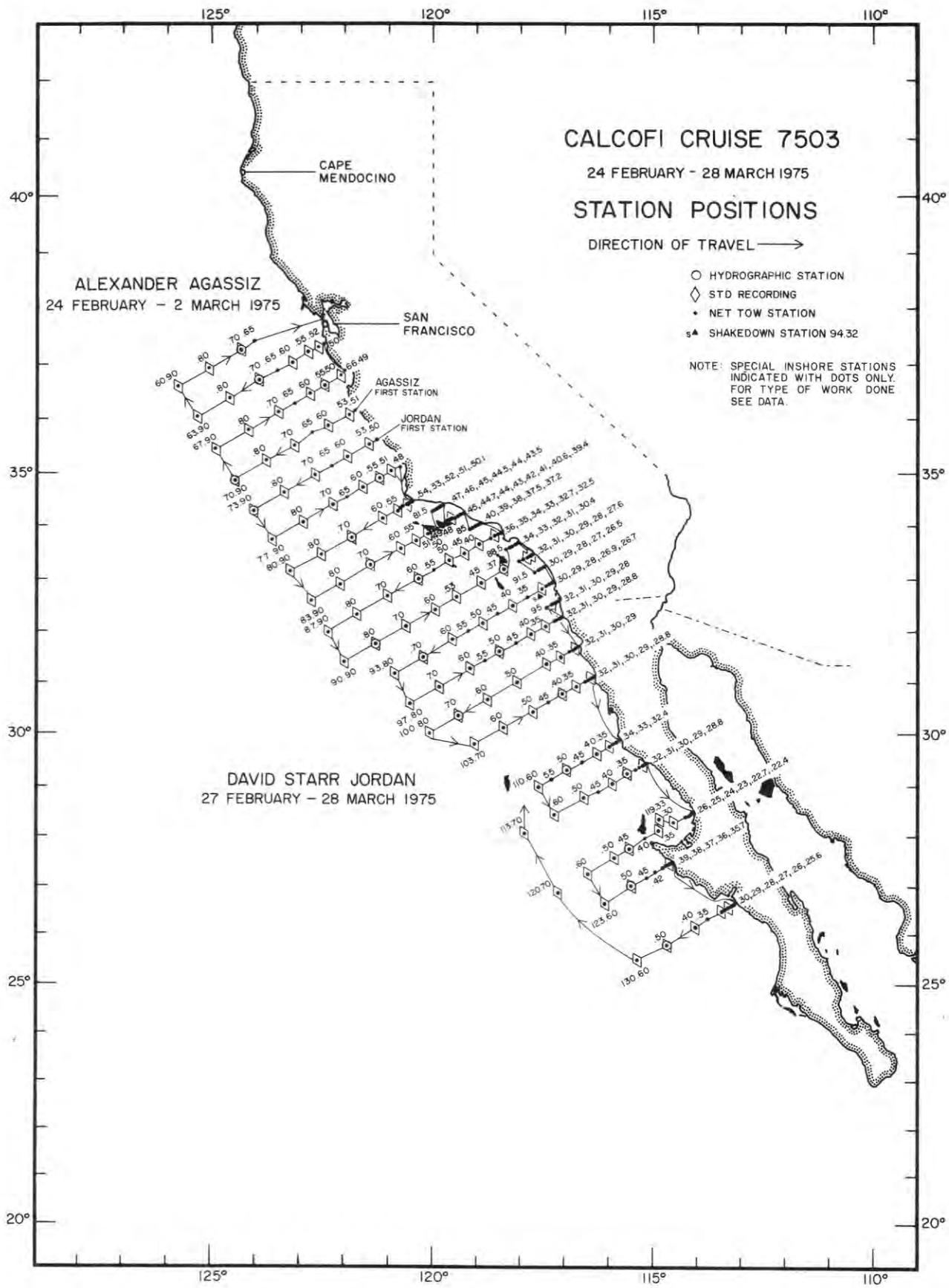


FIGURE 1

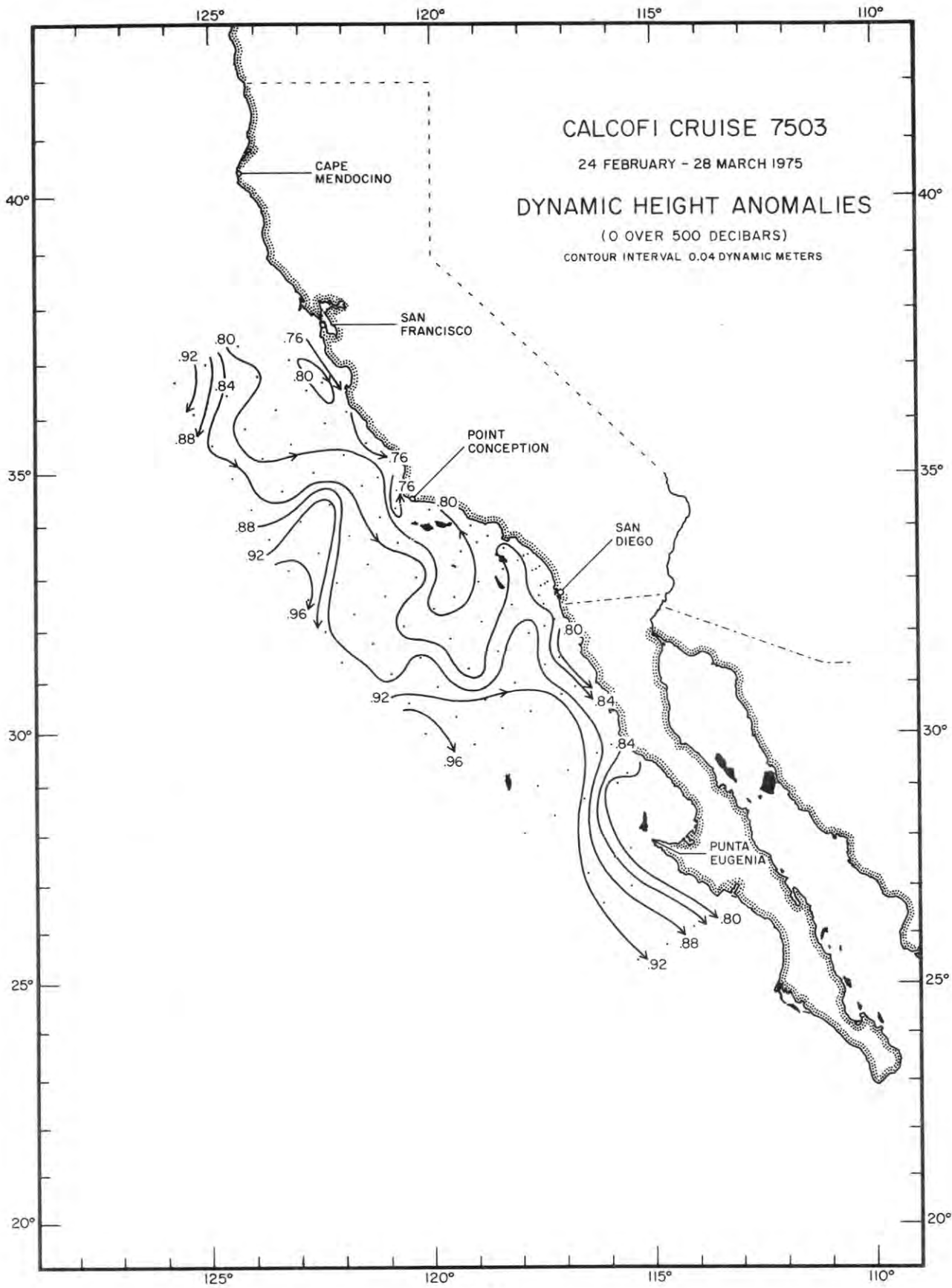


FIGURE 2

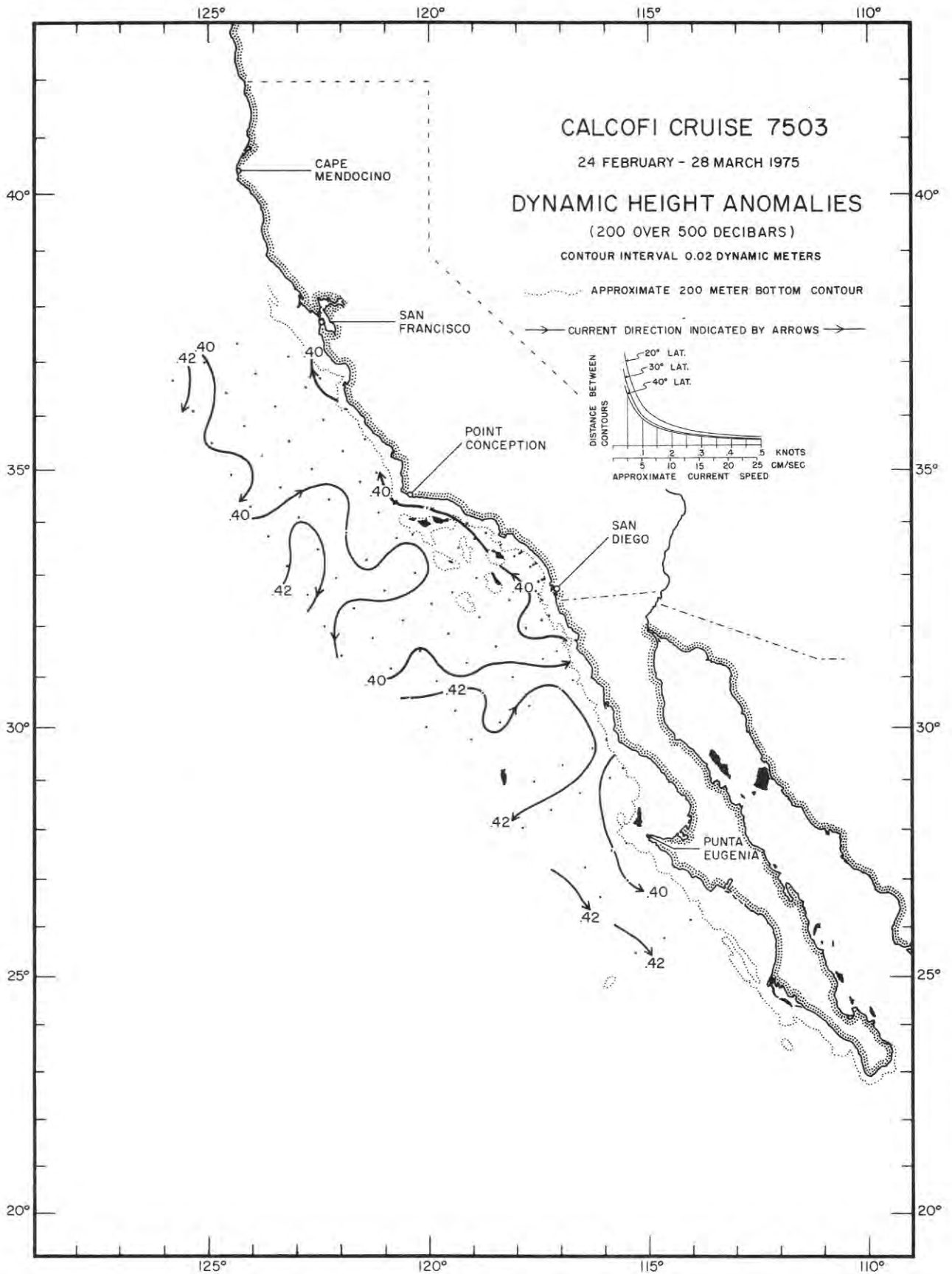


FIGURE 3



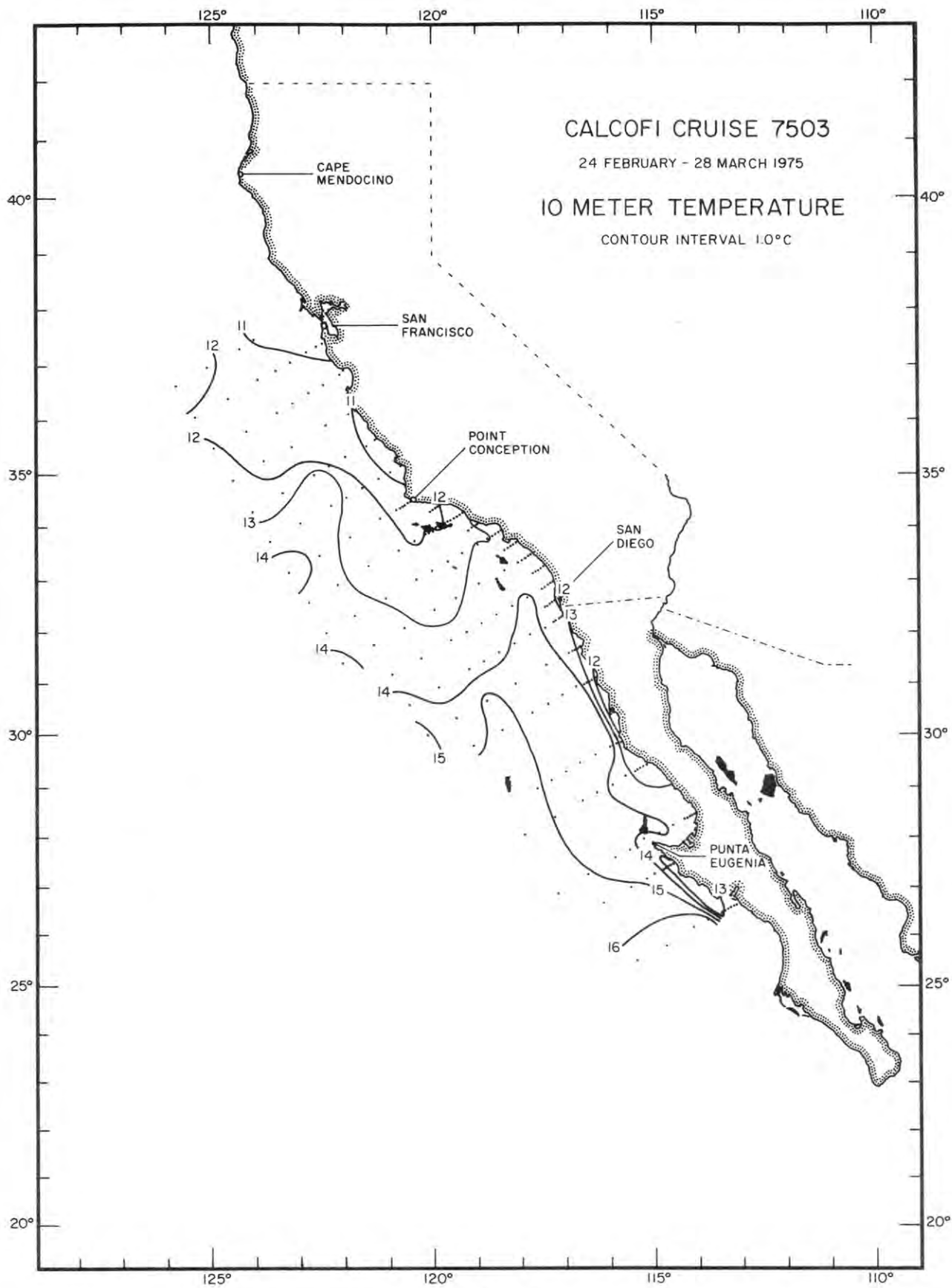


FIGURE 4

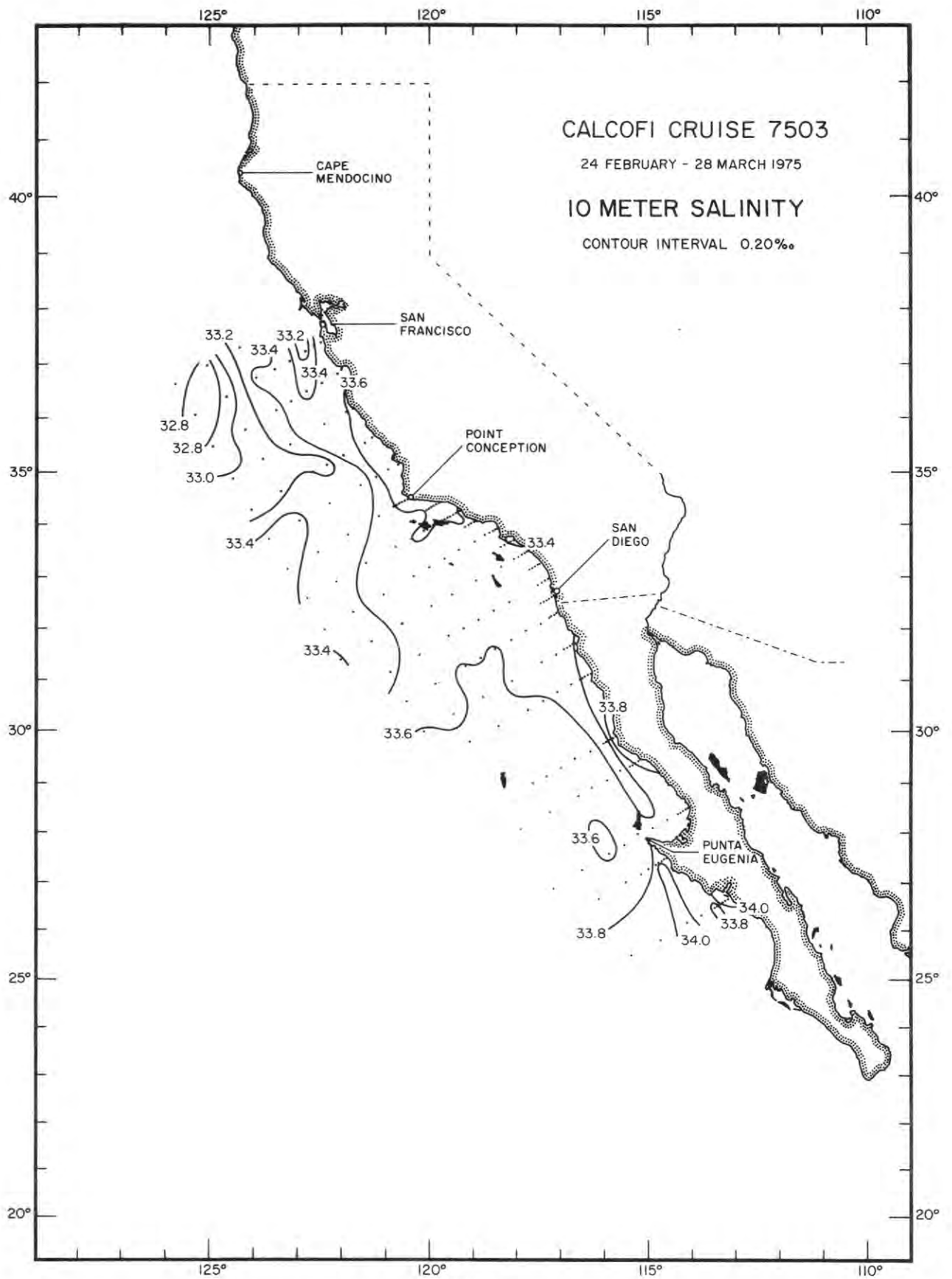


FIGURE 5

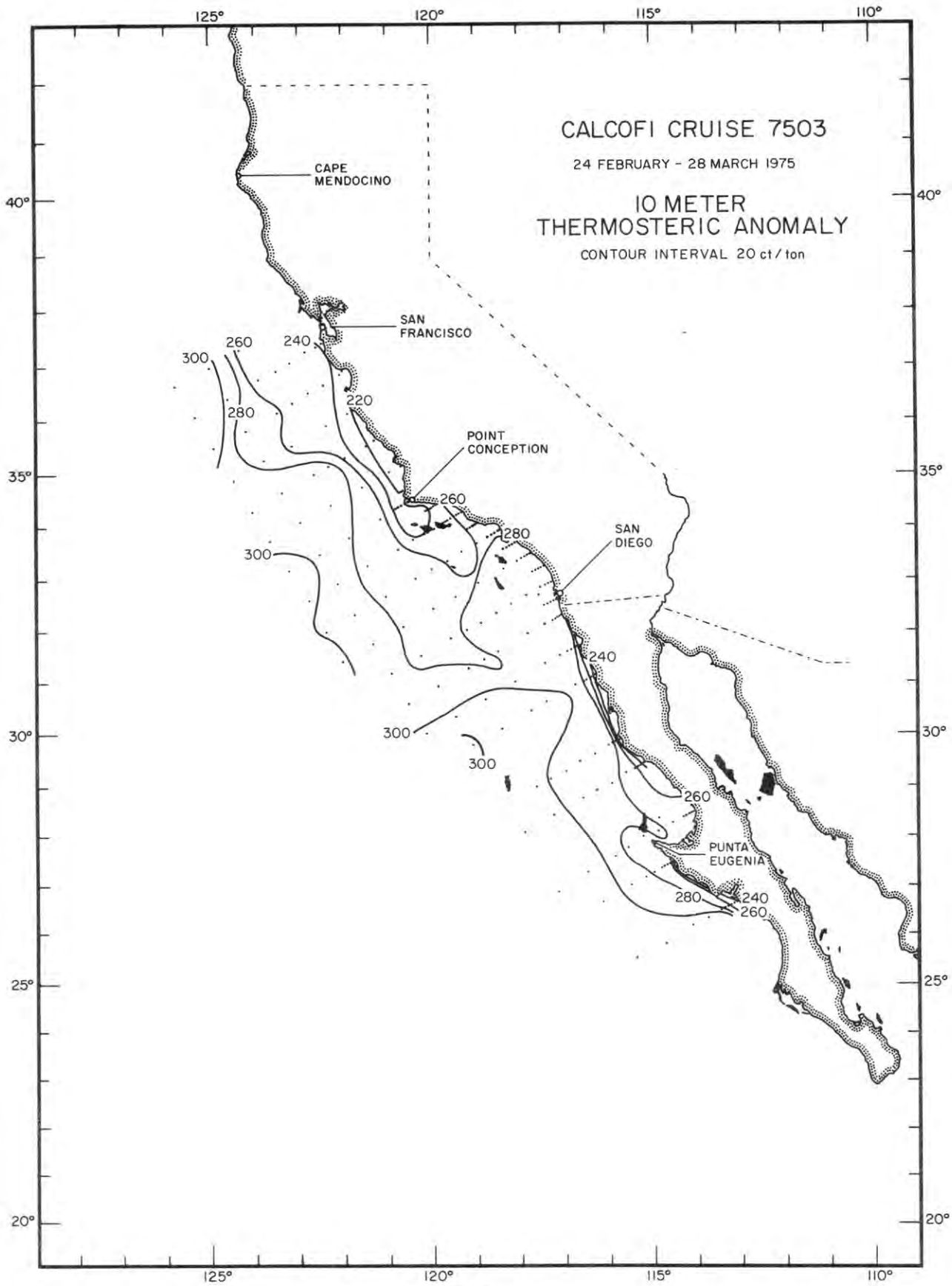


FIGURE 6



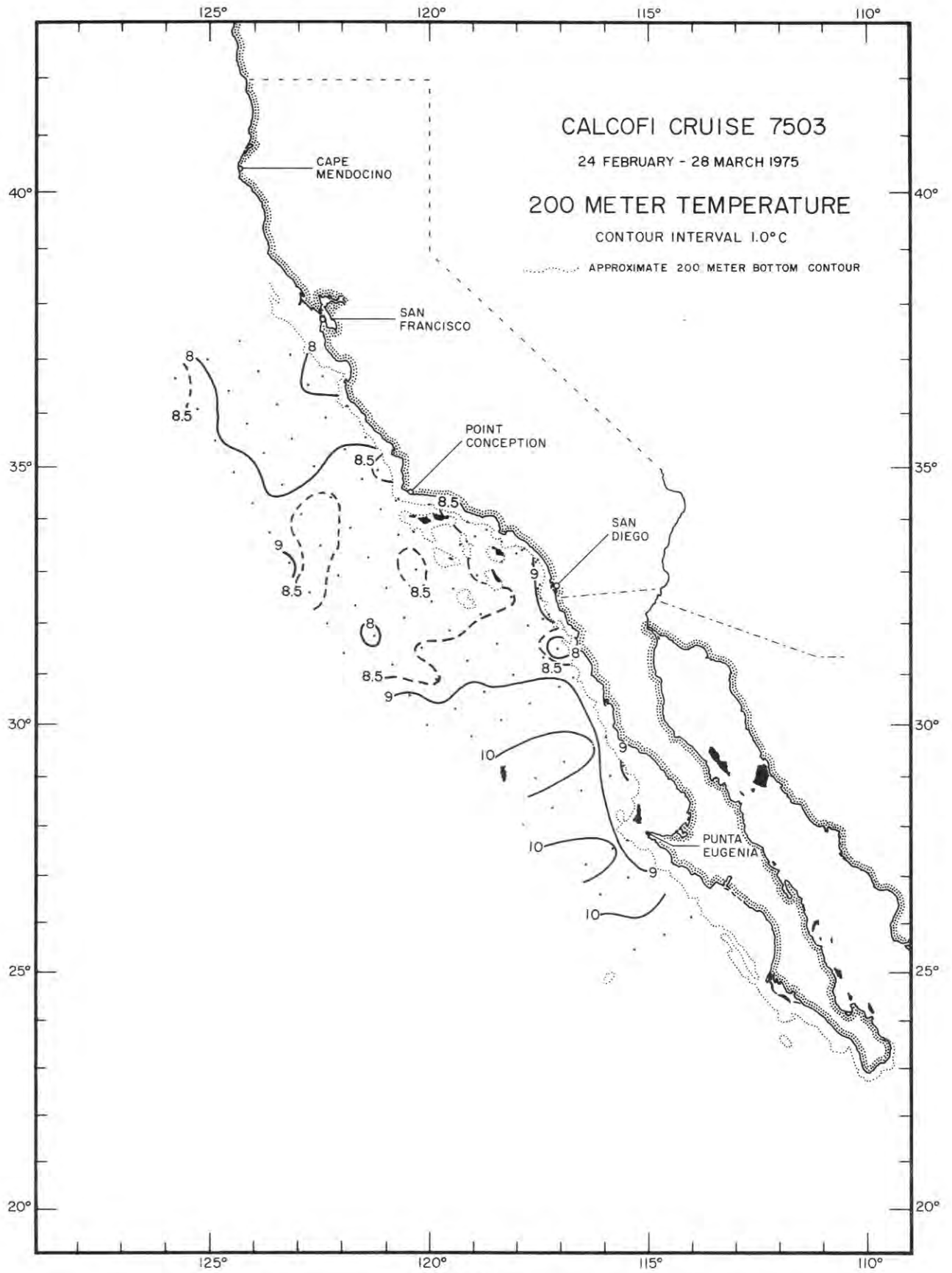


FIGURE 7

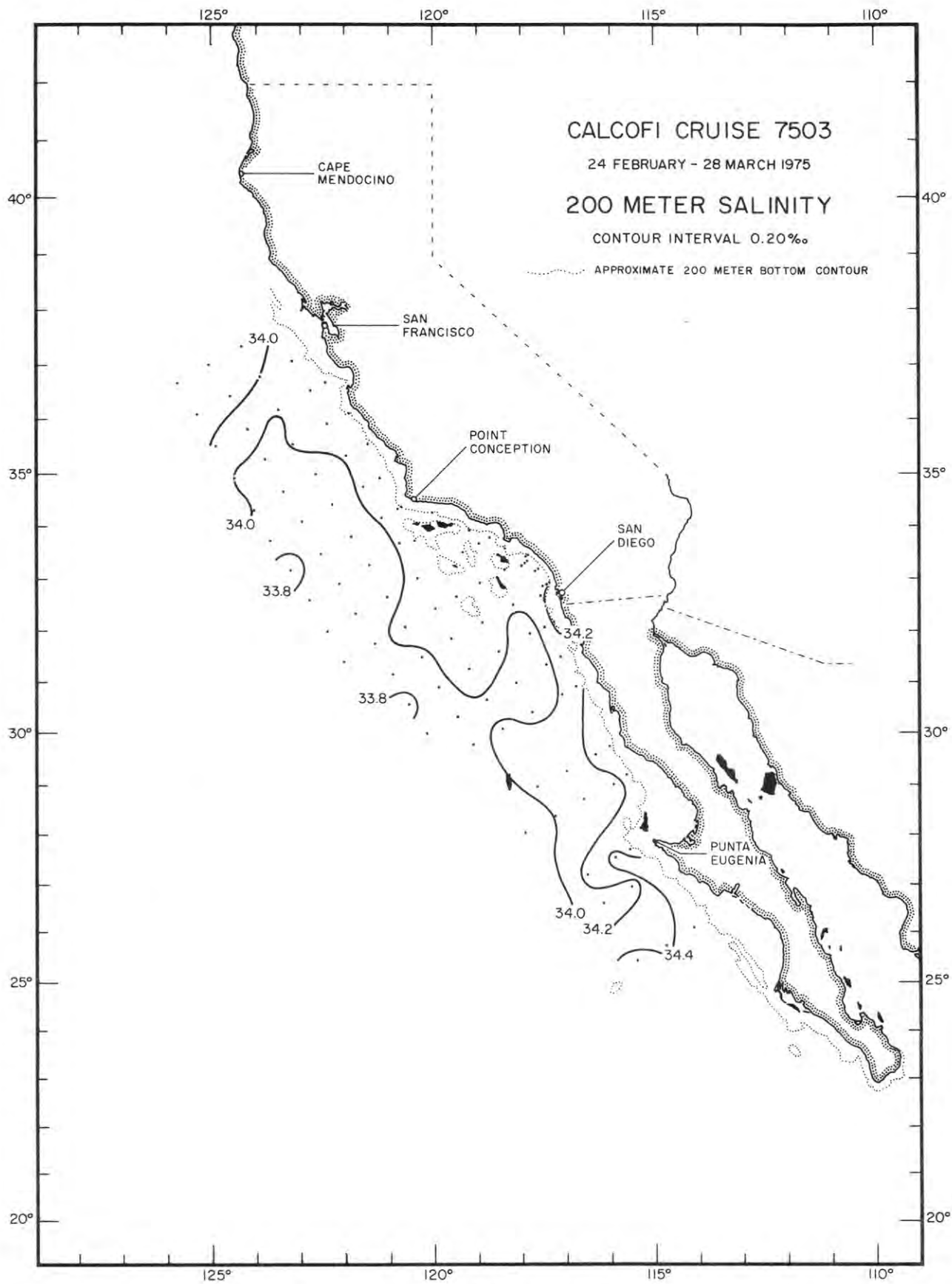


FIGURE 8

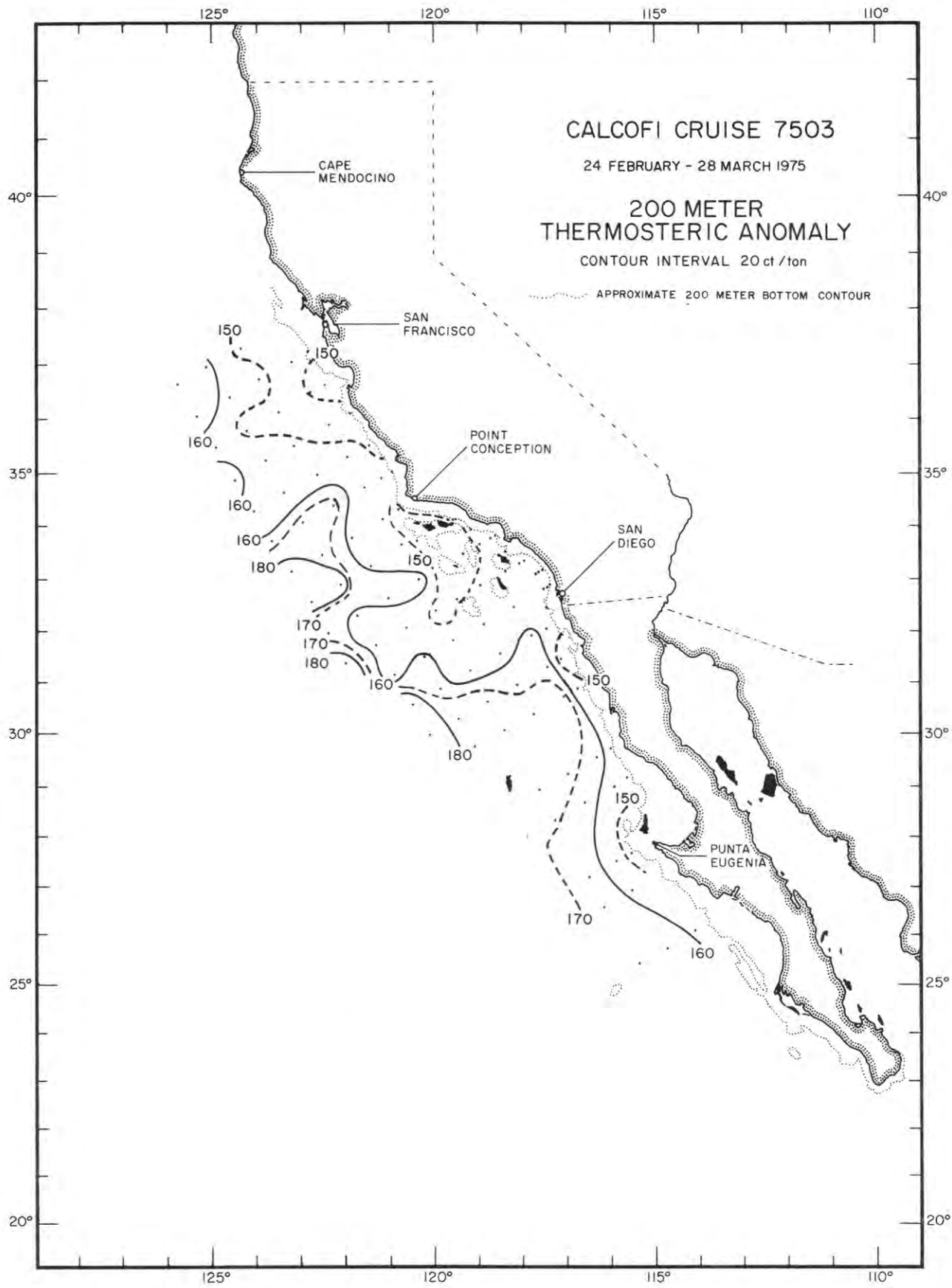


FIGURE 9



## PERSONNEL

Cruise 7503

### SHIPS' CAPTAINS

Davis, Laurence E., *RV Alexander Agassiz*  
Forster, Charles W., *RV David Starr Jordan*

### PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

#### *RV Alexander Agassiz*

Mead, Richard V. (in charge)	Marine Technician, SIO
Andrews, J.	Sea Grant Student, SDSU
Austin, R.	Sea Grant Student, SDSU
Beaupré, Marie-Claude	Sea Grant Student, SDSU
Greenbaum, Richard	Staff Research Associate, SIO
Kellogg, Durrant	Marine Technician, SIO
Kimura, Makoto	Fishery Biologist, NMFS
Patla, Susan M.	Marine Technician, SIO
Patrick, Ronald G.	Sea Grant Student, SDSU
Scheidt, V.	Sea Grant Student, SDSU
Singleton, James R.	Electronics Technician, SIO

#### *RV David Starr Jordan*

Metoyer, Jack (in charge)	Biological Technician, NMFS
Aguilera Alfaro, Roberto	Student, ECM
Davies, Edward	NUC
Endo Meguro, Roberto	Student, ECM
Fematt Hernandez, Hector	Student, ECM
Gruber, Dennis W.	Staff Research Associate, SIO
Martinez Henriguez, Xavier	Student, ECM
Patla, Susan M.	Marine Technician, SIO
Ramirez Aguilar, Isabella	Student, ECM
Snyder, Joseph	NMFS
Tsuchiya, Mizuki	Associate Research Oceanographer, SIO
Vargas Robles, Lucia	Student, ECM

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
37 17.0N		124 20.0W		3/ 2/75		1335 GMT		3824M		230		11KT		1		230 5 8	
Z	T	S	02	04	103	02	03	D1	Z	T	S	02	SIGT	DT	DD		
0	11.05	33.278	6.57					254.0	0	11.05	33.278	6.57	25.448	254.0	0.000		
10	11.05	33.280	6.55					253.9	10	11.05	33.280	6.55	25.450	253.9	0.025		
30	10.98	33.288	6.58					252.1	20	11.03	33.289	6.56	25.459	253.0	0.050		
59	10.56	33.384	6.21					238.0	30	10.98	33.288	6.58	25.468	252.1	0.076		
79	9.85	33.588	4.74					211.4	50	10.74	33.338	6.32	25.547	244.7	0.125		
93	9.24	33.742	3.57					190.5	75	10.01	33.543	5.08	25.833	217.4	0.184		
108	8.94	33.826	3.07					179.0	100	9.07	33.793	3.27	26.183	184.2	0.234		
137	8.56	33.932	2.87					166.2	125	8.72	33.906	2.95	26.325	170.7	0.279		
162	7.88	33.935	3.11					156.3	150	8.20	33.937	2.98	26.429	160.8	0.321		
192	7.47	33.957	3.08					149.0	200	7.37	33.957	3.07	26.567	147.8	0.400		
225	7.10	33.953	3.05					144.4	250	6.86	33.971	2.70	26.649	140.0	0.473		
298	6.46	34.023	1.85					130.9	300	6.44	34.026	1.82	26.748	130.6	0.543		
400	5.77	34.142	0.84					113.7	400	5.77	34.142	0.84	26.925	113.7	0.670		
507	4.91	34.176	0.61					101.5	500	4.95	34.174	0.61	27.047	102.2	0.783		
612	4.90	34.315	0.27					90.9	600	4.90	34.301	0.30	27.154	92.0	0.886		
747	4.46	34.387	0.34					80.9	700	4.63	34.370	0.31	27.239	84.0	0.981		
903	3.98	34.437	0.40					72.3	800	4.29	34.406	0.35	27.305	77.7	1.070		
1064	3.51	34.483	0.59					64.3	1000	3.69	34.465	0.49	27.414	67.4	1.231		

60070

RV ALEXANDER AGASSIZ

CALCOFI CRUISE 7503

60070

LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
37 17.0N		124 20.0W		03/02/75		1241 GMT		3824M		230		11KT		1		230 5 8	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD						
0	11.05	33.28	25.450	254.9	0.000	0	11.05	32.78	24.879	308.2	0.000						
10	11.06	33.28	25.448	254.1	0.025	10	11.06	32.78	24.879	308.2	0.030						
20	11.06	33.28	25.448	254.1	0.050	20	12.01	32.80	24.902	306.0	0.061						
30	10.85	33.28	25.485	250.5	0.076	30	11.93	32.81	24.925	303.8	0.092						
40	10.69	33.34	25.560	243.4	0.100	40	12.03	32.86	24.945	301.9	0.122						
50	10.61	33.37	25.597	239.8	0.125	50	11.95	32.86	24.960	300.5	0.152						
75	10.24	33.51	25.770	223.4	0.183	75	11.75	33.07	25.160	281.5	0.225						
100	9.18	33.77	26.148	187.5	0.235	100	10.06	33.21	25.567	242.7	0.291						
125	8.79	33.92	26.327	170.5	0.280	125	10.15	33.48	25.762	224.2	0.350						
150	8.07	33.95	26.460	157.8	0.322	150	8.95	33.65	26.091	192.9	0.403						
175	7.80	33.98	26.524	151.8	0.361	175	8.29	33.75	26.271	175.8	0.450						
200	7.28	33.96	26.583	146.2	0.399	200	7.95	33.84	26.392	164.3	0.493						
225	7.00	33.96	26.622	142.5	0.436	225	7.69	33.93	26.501	154.0	0.534						
250	6.68	33.96	26.665	138.4	0.472	250	7.31	33.95	26.571	147.4	0.573						
275	6.46	34.03	26.749	130.4	0.507	275	6.94	33.96	26.630	141.8	0.610						
300	6.45	34.06	26.774	128.1	0.540	300	6.58	33.97	26.686	136.4	0.646						
350	5.80	34.05	26.849	120.9	0.604	350	6.12	34.01	26.777	127.7	0.714						
400	5.63	34.10	26.910	115.2	0.666	400	5.38	34.02	26.876	118.3	0.778						
450	5.30	34.14	26.981	108.5	0.724	450	5.40	34.12	26.953	111.1	0.838						
500	5.00	34.17	27.040	102.9	0.780	500	5.17	34.18	27.012	105.5	0.895						
550	4.79	34.22	27.103	96.9	0.833	550	4.92	34.20	27.072	99.8	0.944						
600	5.00	34.31	27.150	92.4	0.883	600	4.58	34.20	27.110	96.2	1.001						
700	4.63	34.37	27.240	83.9	0.978	700	4.52	34.29	27.188	88.8	1.100						
800	4.32	34.41	27.305	77.7	1.067	800	4.03	34.34	27.280	80.1	1.191						
900	4.03	34.43	27.352	73.3	1.150	900	3.77	34.38	27.339	74.5	1.276						
1000	3.75	34.45	27.396	69.1	1.230	1000	3.68	34.45	27.403	68.4	1.356						

60090

RV ALEXANDER AGASSIZ

CALCOFI CRUISE 7503

60090

LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
36 37.0N		125 47.0W		03/02/75		0156 GMT		4474M		340		18KT		1		350 14 10	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD						
0	12.59	32.95	24.908	385.4	0.000	0	11.02	32.72	25.021	294.7	0.000						
10	12.58	32.95	24.910	385.3	0.030	10	10.41	33.24	25.531	246.2	0.027						
20	12.62	32.97	24.918	384.5	0.061	20	10.13	33.35	25.664	233.5	0.051						
30	12.74	33.05	24.956	380.9	0.091	30	9.62	33.68	25.817	218.9	0.073						
40	12.66	33.06	24.979	298.6	0.121	40	9.83	33.58	25.894	211.7	0.095						
50	12.63	33.05	24.985	298.1	0.151	50	9.62	33.63	25.934	207.8	0.116						
75	12.53	33.04	24.989	297.7	0.226	75	8.98	33.84	26.234	179.3	0.165						
100	11.67	33.20	25.275	270.5	0.297												
125	10.71	33.31	25.533	246.0	0.363												
150	9.83	33.56	25.878	213.2	0.421												
175	8.28	33.78	26.140	188.3	0.472												
200	8.87	33.86	26.268	176.1	0.518												
225	8.57	33.94	26.377	165.8	0.562												
250	8.28	33.97	26.444	159.3	0.604												
275	7.90	34.01	26.533	151.0	0.643												
300	7.65	34.03	26.585	146.0	0.682												
350	7.04	34.07	26.702	134.9	0.755												
400	6.81	34.12	26.773	128.1	0.823												
450	6.34	34.13	26.844	121.5	0.889												
500	6.00	34.18	26.927	113.6	0.951												
550	5.51	34.15	26.964	110.1	1.010												
600	5.19	34.19	27.033	103.5	1.067												
700	4.75	34.26	27.139	93.4	1.172												
800	4.52	34.34	27.228	85.0	1.269												
900	4.26	34.40	27.304	77.8	1.359												
1000	3.82	34.41	27.357	72.8	1.443												

63055						RV ALEXANDER AGASSIZ						CALCOFI CRUISE 7503						63060					
LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME	
37 13.0N		122 50.0W		03/01/75		0000 GMT		37 02.5N		123 11.0W		03/01/75		0253 GMT		37 02.5N		123 11.0W		03/01/75		0253 GMT	
BOTTOM		WIND	SPEED	WEATHER		DOMINANT WAVES		BOTTOM		WIND	SPEED	WEATHER		DOMINANT WAVES		BOTTOM		WIND	SPEED	WEATHER		DOMINANT WAVES	
285M		280	3KT	4		240 2 11		2595M		160	11KT	4		250 6 10		2595M		160	11KT	4		250 6 10	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	11.00	33.04	25.272	270.8	0.000	0	11.52	33.44	25.489	250.2	0.000	0	11.52	33.44	25.489	250.2	0.000	0	11.52	33.44	25.489	250.2	0.000
10	10.70	33.08	25.356	262.8	0.026	10	11.39	33.46	25.528	246.5	0.024	10	11.39	33.46	25.528	246.5	0.024	10	11.39	33.46	25.528	246.5	0.024
20	10.85	33.36	25.547	244.6	0.052	20	11.33	33.46	25.539	245.4	0.049	20	11.33	33.46	25.539	245.4	0.049	20	11.33	33.46	25.539	245.4	0.049
30	10.86	33.44	25.608	238.9	0.076	30	11.32	33.46	25.541	245.2	0.074	30	11.32	33.46	25.541	245.2	0.074	30	11.32	33.46	25.541	245.2	0.074
40	10.41	33.42	25.671	232.9	0.099	40	11.24	33.44	25.540	245.3	0.098	40	11.24	33.44	25.540	245.3	0.098	40	11.24	33.44	25.540	245.3	0.098
50	10.32	33.42	25.686	231.4	0.123	50	11.14	33.45	25.565	242.9	0.123	50	11.14	33.45	25.565	242.9	0.123	50	11.14	33.45	25.565	242.9	0.123
75	9.62	33.73	26.045	197.3	0.177	75	11.12	33.47	25.584	241.1	0.184	75	11.12	33.47	25.584	241.1	0.184	75	11.12	33.47	25.584	241.1	0.184
100	9.21	33.80	26.166	185.7	0.225	100	9.38	33.65	26.022	199.5	0.239	100	9.38	33.65	26.022	199.5	0.239	100	9.38	33.65	26.022	199.5	0.239
125	8.84	33.91	26.311	172.0	0.270	125	8.90	33.81	26.224	180.3	0.287	125	8.90	33.81	26.224	180.3	0.287	125	8.90	33.81	26.224	180.3	0.287
150	8.46	33.97	26.417	161.9	0.313	150	8.44	33.93	26.389	164.6	0.331	150	8.44	33.93	26.389	164.6	0.331	150	8.44	33.93	26.389	164.6	0.331
175	8.15	34.02	26.503	153.8	0.353	175	8.12	33.99	26.484	155.6	0.372	175	8.12	33.99	26.484	155.6	0.372	175	8.12	33.99	26.484	155.6	0.372
200	7.86	34.03	26.554	148.9	0.392	200	7.99	34.05	26.551	149.2	0.411	200	7.99	34.05	26.551	149.2	0.411	200	7.99	34.05	26.551	149.2	0.411
225	7.59	34.07	26.625	142.2	0.429	225	7.75	34.08	26.610	143.7	0.448	225	7.75	34.08	26.610	143.7	0.448	225	7.75	34.08	26.610	143.7	0.448
250	7.37	34.13	26.703	134.8	0.464	250	7.53	34.09	26.649	139.9	0.484	250	7.53	34.09	26.649	139.9	0.484	250	7.53	34.09	26.649	139.9	0.484
270	7.20	34.13	26.727	132.5	0.492	275	7.28	34.11	26.700	135.0	0.520	275	7.28	34.11	26.700	135.0	0.520	275	7.28	34.11	26.700	135.0	0.520
						300	7.07	34.13	26.745	130.8	0.554	300	7.07	34.13	26.745	130.8	0.554	300	7.07	34.13	26.745	130.8	0.554
						350	6.55	34.15	26.832	122.6	0.620	350	6.55	34.15	26.832	122.6	0.620	350	6.55	34.15	26.832	122.6	0.620
						400	6.15	34.17	26.900	116.1	0.682	400	6.15	34.17	26.900	116.1	0.682	400	6.15	34.17	26.900	116.1	0.682
						450	5.92	34.22	26.968	109.6	0.742	450	5.92	34.22	26.968	109.6	0.742	450	5.92	34.22	26.968	109.6	0.742
						500	5.66	34.25	27.024	104.3	0.798	500	5.66	34.25	27.024	104.3	0.798	500	5.66	34.25	27.024	104.3	0.798
						550	5.46	34.29	27.080	99.0	0.852	550	5.46	34.29	27.080	99.0	0.852	550	5.46	34.29	27.080	99.0	0.852
						600	5.29	34.31	27.116	95.6	0.904	600	5.29	34.31	27.116	95.6	0.904	600	5.29	34.31	27.116	95.6	0.904
						700	4.84	34.35	27.200	87.6	1.003	700	4.84	34.35	27.200	87.6	1.003	700	4.84	34.35	27.200	87.6	1.003
						800	4.50	34.39	27.270	81.0	1.096	800	4.50	34.39	27.270	81.0	1.096	800	4.50	34.39	27.270	81.0	1.096
						900	4.14	34.42	27.332	75.1	1.182	900	4.14	34.42	27.332	75.1	1.182	900	4.14	34.42	27.332	75.1	1.182
						1000	3.81	34.46	27.398	68.9	1.263	1000	3.81	34.46	27.398	68.9	1.263	1000	3.81	34.46	27.398	68.9	1.263

RV ALEXANDER AGASSIZ						CALCOFI CRUISE 7503						63070																	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND	SPEED	WEATHER		DOMINANT WAVES		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME							
36 44.0N		123 55.0W		3/ 1/75		0956 GMT		3824M		360	18KT	1		270 10 8		36 44.0N		123 55.0W		03/01/75		0842 GMT							
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD		
0	11.55	33.453	6.51					249.7	0	11.55	33.453	6.51	25.493	249.7	0.000	0	11.55	33.453	6.51	25.493	249.7	0.000	0	11.55	33.453	6.51	25.493	249.7	0.000
10	11.54	33.452	6.51					249.6	10	11.54	33.452	6.51	25.494	249.6	0.024	10	11.54	33.452	6.51	25.494	249.6	0.024	10	11.54	33.452	6.51	25.494	249.6	0.024
29	11.36	33.455	6.47					246.3	20	11.45	33.455	6.49	25.511	248.0	0.049	29	11.36	33.455	6.47	25.499	249.2	0.049	29	11.36	33.455	6.47	25.499	249.2	0.049
59	11.25	33.452	6.26					244.6	30	11.35	33.456	6.46	25.530	246.2	0.074	59	11.25	33.452	6.26	25.525	246.7	0.074	59	11.25	33.452	6.26	25.525	246.7	0.074
78	11.22	33.456	6.23					243.8	50	11.26	33.454	6.32	25.544	244.9	0.124	78	11.22	33.456	6.23	25.537	245.6	0.099	78	11.22	33.456	6.23	25.537	245.6	0.099
93	11.08	33.483	5.99					239.4	75	11.22	33.457	6.23	25.554	243.9	0.185	93	11.08	33.483	5.99	25.538	245.4	0.124	93	11.08	33.483	5.99	25.538	245.4	0.124
108	9.78	33.655	4.04					205.3	100	10.50	33.557	5.12	25.759	224.4	0.244	108	9.78	33.655	4.04	25.675	232.5	0.184	108	9.78	33.655	4.04	25.675	232.5	0.184
137	9.06	33.824	3.18					181.7	125	9.19	33.772	3.53	26.146	187.7	0.296	137	9.06	33.824	3.18	26.061	195.8	0.238	137	9.06	33.824	3.18	26.061	195.8	0.238
162	8.66	33.947	2.64					166.6	150	8.83	33.895	2.85	26.299	173.2	0.342	162	8.66	33.947	2.64	26.225	180.2	0.285	162	8.66	33.947	2.64	26.225	180.2	0.285
191	8.19	34.000	2.70					155.8	200	8.08	34.008	2.63	26.503	153.8	0.425	191	8.19	34.000	2.70	26.357	167.7	0.329	191	8.19	34.000	2.70	26.357	167.7	0.329
225	7.82	34.019	2.37					149.2	250	7.48	34.041	2.06	26.617	143.0	0.501	225	7.82	34.019	2.37	26.448	159.0	0.371	225	7.82	34.019	2.37	26.448	159.0	0.371
298	6.88	34.088	1.50					131.4	300	6.86	34.090	1.48	26.742	131.1	0.572	298	6.88	34.088	1.50	26.515	152.7	0.411	298	6.88	34.088	1.50	26.515	152.7	0.411
400	6.25	34.152	0.93					118.7	400	6.25	34.152	0.93	26.872	118.7	0.702	400	6.25	34.152	0.93	26.619	142.8	0.487	400	6.25	34.152	0.93	26.619	142.8	0.487
504	5.59	34.220	0.51					105.8	500	5.61	34.217	0.52	27.004	106.2	0.820	504	5.59	34.220	0.51	26.743	131.0	0.558	504	5.59	34.220	0.51	26.743	131.0	0.558
615	5.09	34.309	0.33					93.4	600	5.15	34.298	0.34	27.123	95.0	0.928	615	5.09	34.309	0.33	26.821	123.6	0.624	615	5.09	34.309	0.33	26.821	123.6	0.624
750	4.51	34.379	0.34					82.0	700	4.71	34.357	0.33	27.220	85.8	1.025	750	4.51	34.379	0.34	26.905	115.7	0.686	750	4.51	34.379	0.34	26.905	115.7	0.686
904	4.04	34.433	0.41					73.2	800	4.34	34.399	0.35	27.294	78.8	1.115	904	4.04	34.433	0.41	26.957	110.7	0.746	904	4.04	34.433	0.41	26.957	110.7	0.746
1069	3.57	34.476	0.60					65.4	1000	3.76	34.460	0.50	27.403	68.4	1.279	1069	3.57	34.476	0.60	27.030	103.8	0.802	1069	3.57	34.476	0.60	27.030	103.8	0.802

63070						RV ALEXANDER AGASSIZ					
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63090		RV ALEXANDER AGASSIZ				CALCOFI CRUISE 7503				67050	
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
36 03.0N	125 20.0W	03/01/75	2050 GMT		36 49.0N	122 04.5W	02/28/75	1612 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
4448M	180	20KT	1	200 13 12		99M	360	16KT	1	360 3 6	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	11.93	32.75	24.879	308.3	0.000	0	11.28	33.47	25.556	243.8	0.000
10	11.89	32.75	24.886	307.6	0.030	10	10.77	33.50	25.670	232.9	0.023
20	11.77	32.74	24.900	306.2	0.061	20	10.08	33.74	25.976	203.8	0.045
30	11.62	32.74	24.928	303.5	0.092	30	9.52	33.78	26.101	192.0	0.065
40	11.53	32.76	24.960	300.5	0.122	40	9.13	33.87	26.234	179.3	0.084
50	11.38	32.74	24.972	299.4	0.152	50	9.02	33.89	26.267	176.2	0.102
75	11.48	32.94	25.109	286.4	0.226	61	8.93	33.91	26.297	173.3	0.121
100	10.06	33.08	25.466	252.4	0.293						
125	8.82	33.39	25.747	225.6	0.354						
150	9.07	33.61	26.041	197.7	0.407						
175	8.69	33.83	26.272	175.7	0.455						
200	8.42	33.92	26.384	165.1	0.498						
225	7.94	33.94	26.472	156.7	0.539						
250	7.67	33.96	26.527	151.5	0.579						
275	7.57	34.00	26.573	147.1	0.617						
300	6.81	33.96	26.647	140.1	0.654						
350	6.34	33.98	26.726	132.7	0.725						
400	5.88	34.03	26.824	123.4	0.791						
450	5.94	34.17	26.926	113.6	0.853						
500	5.36	34.17	26.997	106.9	0.911						
550	5.12	34.18	27.034	103.5	0.967						
600	4.79	34.23	27.111	96.1	1.020						
700	4.67	34.33	27.203	87.3	1.119						
800	4.32	34.37	27.273	80.7	1.210						
900	4.05	34.42	27.342	74.2	1.296						
1000	3.80	34.45	27.391	69.5	1.376						

RV ALEXANDER AGASSIZ		CALCOFI CRUISE 7503				67055					
LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
36 38.0N	122 27.0W	2/28/75	1310 GMT		2447M	350	10KT	4			
Z	T	S	02	04	03	02	03	01	SIGT	DT	DD
0	11.42	33.373	6.64						253.4	0	0.000
10	11.47	33.491	6.38						245.5	10	0.024
30	11.32	33.556	6.24						238.2	20	0.049
59	11.31	33.556	6.12						238.0	30	0.073
79	11.14	33.581	5.74						233.2	50	0.121
94	10.67	33.659	4.73						219.5	75	0.180
109	10.02	33.725	3.96						204.0	100	0.236
138	9.15	33.887	3.02						178.4	125	0.287
163	8.79	33.967	2.64						167.0	150	0.333
192	8.53	34.016	2.39						159.5	200	0.417
226	8.33	34.057	2.20						153.6	250	0.496
299	7.57	34.107	1.71						139.2	300	0.570
400	6.65	34.187	0.96						121.1	400	0.706
506	5.91	34.234	0.56						108.5	500	0.827
612	5.26	34.309	0.33						95.3	600	0.937
747	4.71	34.371	0.34						84.7	700	1.037
901	4.31	34.420	0.35						76.8	800	1.129
1068	3.73	34.469	0.58						67.4	1000	1.300

67055		RV ALEXANDER AGASSIZ				CALCOFI CRUISE 7503				67060	
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
36 38.0N	122 27.0W	02/28/75	1220 GMT		36 29.0N	122 47.5W	02/28/75	0840 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
2447M	350	10KT	4			3068M	330	15KT	4		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	11.43	33.37	25.451	253.8	0.000	0	11.23	33.33	25.456	253.3	0.000
10	11.47	33.51	25.552	244.1	0.024	10	11.23	33.33	25.456	253.3	0.025
20	11.42	33.52	25.569	242.5	0.049	20	11.36	33.43	25.510	248.1	0.050
30	11.31	33.54	25.605	239.1	0.073	30	11.42	33.47	25.530	246.2	0.075
40	11.31	33.55	25.612	238.4	0.097	40	11.37	33.54	25.594	240.2	0.099
50	11.31	33.55	25.612	238.4	0.121	50	11.31	33.54	25.605	239.1	0.123
75	11.11	33.58	25.671	232.8	0.180	75	10.79	33.58	25.729	227.3	0.182
100	10.15	33.73	25.956	205.7	0.235	100	9.45	33.73	26.073	194.6	0.235
125	9.41	33.83	26.158	186.6	0.285	125	9.14	33.88	26.240	178.7	0.282
150	9.08	33.90	26.265	176.3	0.331	150	8.61	33.98	26.402	163.4	0.326
175	8.71	33.97	26.369	166.5	0.375	175	8.27	33.99	26.462	157.7	0.367
200	8.47	34.02	26.455	158.4	0.416	200	8.01	34.03	26.532	151.0	0.406
225	8.34	34.05	26.498	154.2	0.456	225	7.93	34.09	26.591	145.4	0.444
250	7.81	34.04	26.569	147.5	0.495	250	7.69	34.12	26.649	139.9	0.481
275	7.70	34.09	26.624	142.2	0.532	275	7.48	34.13	26.688	136.2	0.516
300	7.49	34.11	26.670	137.9	0.568	300	7.24	34.15	26.738	131.5	0.551
350	7.09	34.14	26.751	130.3	0.638	350	6.81	34.18	26.821	123.7	0.617
400	6.71	34.19	26.842	121.6	0.704	400	6.48	34.20	26.880	118.0	0.680
450	5.96	34.12	26.884	117.6	0.767	450	6.21	34.23	26.939	112.4	0.741
500	5.99	34.22	26.959	110.5	0.827	500	5.85	34.25	27.001	106.5	0.799
550	5.64	34.24	27.019	104.8	0.884	550	5.44	34.26	27.059	101.0	0.854
600	5.34	34.29	27.094	97.6	0.938	600	5.34	34.31	27.110	96.2	0.907
700	5.01	34.34	27.173	90.2	1.040	700	4.89	34.34	27.186	88.9	1.007
800	4.57	34.38	27.254	82.5	1.134	800	4.59	34.38	27.252	82.7	1.101
900	4.24	34.42	27.322	76.1	1.222	900	4.20	34.40	27.310	77.2	1.189
1000	3.92	34.43	27.363	72.2	1.305	1000	3.67	34.44	27.376	71.0	1.272



67070		RV ALEXANDER AGASSIZ				CALCIFI CRUISE 7503					67080	
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
36 08.0N	123 29.5W	02/28/75	0251 GMT			35 47.5N	124 11.5W	02/27/75	2141 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
3540M	320	15KT	4			3918M	360	12KT	2			
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	
0	11.54	33.28	25.361	262.3	0.000	0	11.51	33.09	25.219	275.8	0.000	
10	11.47	33.27	25.366	261.8	0.026	10	11.46	33.09	25.228	275.0	0.027	
20	11.43	33.29	25.389	259.7	0.052	20	11.30	33.09	25.257	272.2	0.054	
30	11.39	33.31	25.412	257.5	0.078	30	11.16	33.23	25.391	259.5	0.081	
40	11.19	33.33	25.463	252.6	0.103	40	11.14	33.25	25.410	257.6	0.107	
50	11.22	33.43	25.535	245.7	0.128	50	10.86	33.40	25.577	241.8	0.132	
75	5.63	33.66	25.989	202.6	0.185	75	9.35	33.68	26.050	196.8	0.187	
100	8.94	33.80	26.210	181.6	0.233	100	9.03	33.82	26.211	181.5	0.235	
125	8.60	33.90	26.341	169.2	0.278	125	8.70	33.90	26.325	170.7	0.280	
150	8.42	33.98	26.431	160.6	0.319	150	8.28	33.95	26.429	160.8	0.322	
175	8.10	33.98	26.479	156.0	0.360	175	7.93	33.98	26.505	153.6	0.362	
200	7.80	34.01	26.547	149.6	0.399	200	7.68	34.06	26.604	144.2	0.400	
225	7.60	34.05	26.608	143.8	0.436	225	7.19	34.01	26.635	141.3	0.436	
250	7.39	34.07	26.653	139.5	0.473	250	6.84	34.02	26.691	136.0	0.472	
275	7.22	34.10	26.701	135.0	0.508	275	6.62	34.03	26.728	132.4	0.506	
300	6.96	34.11	26.745	130.8	0.542	300	6.39	34.06	26.782	127.3	0.540	
350	6.42	34.11	26.817	124.0	0.609	350	6.36	34.12	26.833	122.4	0.605	
400	6.16	34.17	26.898	116.3	0.671	400	6.13	34.19	26.918	114.4	0.666	
450	5.81	34.21	26.974	109.1	0.730	450	5.80	34.20	26.968	109.7	0.725	
500	5.50	34.24	27.036	103.2	0.786	500	5.27	34.20	27.032	103.6	0.781	
550	5.19	34.29	27.112	96.0	0.839	550	5.02	34.24	27.092	97.8	0.835	
600	4.95	34.29	27.140	93.3	0.890	600	4.90	34.31	27.162	91.3	0.885	
700	4.63	34.35	27.224	85.4	0.986	700	4.59	34.37	27.244	83.5	0.980	
800	4.27	34.40	27.302	77.9	1.076	800	4.27	34.40	27.302	77.9	1.068	
900	2.97	34.43	27.358	72.7	1.159	900	4.02	34.43	27.353	73.2	1.151	
1000	3.68	34.46	27.411	67.6	1.237	1000	3.73	34.46	27.406	68.1	1.230	

67090		RV ALEXANDER AGASSIZ				CALCIFI CRUISE 7503					70053	
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
35 28.0N	124 55.5W	02/27/75	1607 GMT			36 06.5N	121 53.5W	02/26/75	1315 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
4308M	330	10KT	2			1110M	330	28KT	1	310 3 4		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	
0	12.02	32.81	24.908	305.4	0.000	0	11.26	33.53	25.606	239.0	0.000	
10	12.01	32.83	24.925	303.8	0.030	10	11.26	33.53	25.606	239.0	0.023	
20	11.76	32.81	24.957	300.8	0.060	20	11.27	33.53	25.604	239.2	0.047	
30	11.42	32.81	25.019	294.9	0.090	30	11.27	33.53	25.604	239.2	0.071	
40	11.05	32.96	25.201	277.5	0.119	40	11.21	33.53	25.615	238.2	0.095	
50	10.60	33.04	25.343	264.1	0.146	50	10.54	33.61	25.796	221.0	0.118	
75	9.75	33.35	25.728	227.5	0.208	75	9.58	33.78	26.091	192.9	0.170	
100	9.33	33.56	25.960	205.4	0.262	100	8.87	33.89	26.291	173.9	0.217	
125	9.03	33.76	26.164	186.0	0.312	125	8.49	33.95	26.397	163.8	0.259	
150	8.65	33.86	26.302	172.9	0.357	150	8.42	34.02	26.462	157.6	0.300	
175	8.10	33.89	26.409	162.7	0.400	175	8.22	34.03	26.500	154.0	0.340	
200	8.06	34.01	26.509	153.2	0.440	200	7.96	34.04	26.547	149.6	0.379	
225	7.76	34.02	26.561	148.3	0.479	225	7.84	34.07	26.589	145.7	0.417	
250	7.44	34.03	26.615	143.2	0.516	250	7.51	34.08	26.644	140.4	0.453	
275	7.24	34.05	26.659	139.0	0.553	275	7.29	34.09	26.683	136.7	0.489	
300	6.95	34.05	26.699	135.2	0.588	300	7.19	34.12	26.721	133.1	0.524	
350	6.35	34.08	26.803	125.3	0.655	350	6.89	34.16	26.794	126.2	0.591	
400	6.09	34.12	26.868	119.1	0.719	400	6.52	34.19	26.867	119.2	0.655	
450	5.62	34.14	26.942	112.1	0.780	450	6.31	34.22	26.918	114.4	0.717	
500	5.40	34.19	27.008	105.8	0.837	500	6.20	34.24	26.948	111.5	0.777	
550	5.18	34.23	27.066	100.4	0.892	550	5.79	34.26	27.016	105.1	0.834	
600	4.60	34.21	27.116	95.6	0.944	600	5.50	34.29	27.075	99.5	0.889	
700	4.41	34.31	27.216	86.1	1.041	700	5.09	34.34	27.164	91.1	0.992	
800	3.96	34.35	27.295	78.6	1.131	800	4.59	34.40	27.268	81.2	1.086	
900	3.76	34.40	27.355	72.9	1.214	900	4.24	34.42	27.322	76.1	1.173	
1000	3.59	34.45	27.412	67.6	1.292	1000	3.92	34.46	27.387	69.9	1.255	

70060		RV ALEXANDER AGASSIZ				CALCOP I CRUISE 7503					70070		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		LATITUDE	LONGITUDE	MO/DAY/YR	START TIME					
35 53.0N	122 23.0W	02/26/75	1706 GMT		35 30.0N	123 09.0W	02/26/75	2337 GMT					
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
3163M	340	16KT	1	330	5 5	3918M	350	17KT	1	330	3 6		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD		
0	11.58	33.52	25.539	245.3	0.000	0	11.64	33.38	25.420	256.7	0.000		
10	11.58	33.52	25.539	245.3	0.024	10	11.64	33.38	25.420	256.7	0.025		
20	11.58	33.52	25.539	245.3	0.049	20	11.63	33.43	25.461	252.8	0.051		
30	11.58	33.52	25.539	245.3	0.073	30	11.66	33.49	25.502	248.9	0.076		
40	11.58	33.52	25.539	245.3	0.098	40	11.63	33.50	25.515	247.7	0.101		
50	11.58	33.52	25.539	245.3	0.122	50	11.59	33.50	25.522	247.0	0.126		
75	10.18	33.61	25.858	215.1	0.180	75	10.32	33.68	25.888	212.2	0.183		
100	9.32	33.83	26.172	185.2	0.231	100	9.58	33.81	26.114	190.7	0.234		
125	8.89	33.89	26.288	174.2	0.276	125	9.24	33.91	26.248	178.0	0.281		
150	8.48	33.95	26.398	163.7	0.319	150	8.75	33.95	26.357	167.7	0.325		
175	8.08	34.02	26.514	152.8	0.360	175	8.25	34.01	26.480	155.9	0.366		
200	7.87	34.08	26.592	145.3	0.398	200	7.87	34.01	26.537	150.5	0.405		
225	7.53	34.07	26.634	141.4	0.434	225	7.60	34.04	26.600	144.6	0.443		
250	7.60	34.14	26.678	137.1	0.470	250	7.28	34.05	26.653	139.5	0.479		
275	7.39	34.16	26.724	132.8	0.505	275	6.92	34.04	26.695	135.5	0.515		
300	7.18	34.18	26.769	128.5	0.539	300	6.69	34.08	26.758	129.6	0.549		
350	6.83	34.20	26.833	122.4	0.604	350	6.39	34.16	26.861	119.8	0.614		
400	6.56	34.21	26.877	118.2	0.667	400	6.16	34.21	26.930	113.3	0.674		
450	6.27	34.21	26.916	114.6	0.728	450	5.76	34.24	27.004	106.2	0.732		
500	5.93	34.25	26.991	107.5	0.787	500	5.32	34.26	27.073	99.7	0.787		
550	5.62	34.29	27.061	100.8	0.842	550	5.12	34.30	27.128	94.4	0.838		
600	5.16	34.31	27.132	94.1	0.895	600	5.02	34.34	27.172	90.3	0.888		
700	4.67	34.34	27.211	86.6	0.992	700	4.63	34.40	27.263	81.6	0.981		
800	4.44	34.40	27.284	79.7	1.083	800	4.41	34.42	27.303	77.9	1.068		
900	4.11	34.44	27.351	73.3	1.168	900	4.16	34.43	27.338	74.6	1.153		
1000	3.84	34.46	27.395	69.2	1.248	1000	3.83	34.46	27.396	69.1	1.233		

70080		RV ALEXANDER AGASSIZ				CALCOP I CRUISE 7503					70090		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		LATITUDE	LONGITUDE	MO/DAY/YR	START TIME					
35 19.0N	123 47.0W	02/27/75	0438 GMT		34 52.5N	124 29.5W	02/27/75	1004 GMT					
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
4078M	010	15KT	1			4308M	360	11KT	2				
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD		
0	11.50	33.07	25.206	277.1	0.000	0	12.49	33.09	25.035	293.3	0.000		
10	11.50	33.07	25.206	277.1	0.027	10	12.49	33.09	25.035	293.3	0.029		
20	11.24	33.31	25.439	294.9	0.054	20	12.46	33.15	25.088	288.4	0.058		
30	11.20	33.32	25.454	293.5	0.079	30	12.32	33.16	25.122	285.1	0.087		
40	11.16	33.34	25.477	291.4	0.105	40	12.24	33.18	25.153	282.1	0.115		
50	11.20	33.41	25.524	246.9	0.130	50	12.07	33.20	25.200	277.6	0.143		
75	10.25	33.55	25.799	220.6	0.188	75	11.07	33.35	25.500	249.0	0.209		
100	9.15	33.72	26.114	190.8	0.240	100	9.94	33.57	25.867	214.2	0.268		
125	8.73	33.87	26.297	173.3	0.286	125	9.66	33.76	26.062	195.7	0.320		
150	8.32	33.92	26.399	163.6	0.329	150	9.17	33.89	26.243	178.4	0.367		
175	7.99	33.96	26.480	155.9	0.370	175	8.93	33.96	26.336	169.6	0.411		
200	7.79	33.99	26.533	150.9	0.409	200	8.70	34.00	26.404	163.2	0.454		
225	7.71	34.05	26.592	145.4	0.447	225	8.42	34.04	26.478	156.1	0.495		
250	7.39	34.06	26.646	140.2	0.484	250	8.20	34.07	26.535	150.7	0.534		
275	7.12	34.09	26.707	134.4	0.519	275	8.03	34.11	26.592	145.4	0.572		
300	6.88	34.11	26.756	129.8	0.553	300	7.84	34.13	26.635	141.2	0.609		
350	6.48	34.15	26.841	121.7	0.618	350	7.39	34.15	26.716	133.5	0.681		
400	6.08	34.17	26.909	115.3	0.680	400	6.71	34.12	26.787	126.8	0.749		
450	5.74	34.19	26.967	109.7	0.739	450	6.30	34.17	26.880	118.0	0.813		
500	5.33	34.20	27.025	104.3	0.796	500	6.00	34.20	26.942	112.1	0.874		
550	4.87	34.21	27.086	98.5	0.849	550	5.54	34.22	27.015	105.2	0.931		
600	4.81	34.27	27.140	93.3	0.900	600	5.29	34.27	27.085	98.6	0.986		
700	4.60	34.35	27.235	84.3	0.996	700	4.82	34.33	27.187	88.9	1.087		
800	4.31	34.39	27.290	79.1	1.085	800	4.40	34.37	27.265	81.5	1.180		
900	4.04	34.43	27.350	73.4	1.170	900	4.15	34.41	27.323	76.0	1.267		
1000	3.72	34.46	27.407	68.0	1.249	1000	3.86	34.44	27.377	70.9	1.349		

70090		RV ALEXANDER AGASSIZ				CALCOP I CRUISE 7503					70090				
LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
34 52.5N	124 29.5W	2/27/75	1100 GMT		4308M	360	11KT	2							
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
0	12.43	33.056	6.43					294.7	0	12.43	33.056	6.43	25.021	294.7	0.000
10	12.43	33.057	6.42					294.6	10	12.43	33.057	6.42	25.021	294.6	0.029
20	12.31	33.173	6.51					283.9	20	12.38	33.111	6.47	25.071	289.9	0.058
30	12.01	33.221	6.11					275.0	30	12.31	33.173	6.51	25.134	283.9	0.087
40	11.24	33.331	5.70					253.4	40	12.16	33.209	6.28	25.188	278.8	0.143
50	10.61	33.465	4.85					232.8	50	11.41	33.305	5.81	25.402	258.5	0.211
60	9.95	33.548	4.49					216.0	60	10.31	33.503	4.68	25.751	225.3	0.272
70	9.54	33.799	3.06					190.9	70	9.64	33.693	3.68	26.012	200.5	0.326
80	9.08	33.914	2.53					175.3	80	9.30	33.865	2.73	26.202	182.4	0.374
90	8.84	33.977	2.43					167.0	90	8.74	33.995	2.37	26.392	164.3	0.463
100	8.46	34.038	2.19					156.9	100	8.25	34.077	1.96	26.532	151.0	0.544
110	7.85	34.135	1.51					141.0	110	7.83	34.135	1.50	26.640	140.8	0.619
120	6.67	34.129	1.12					125.7	120	6.68	34.130	1.12	26.798	125.8	0.758
130	5.79	34.197	0.61					109.8	130	5.83	34.192	0.64	26.956	110.8	0.882
140	5.17	34.280	0.33					96.5	140	5.24	34.269	0.35	27.089	98.2	0.993
150	4.53	34.360	0.27					83.6	150	4.74	34.333	0.29	27.198	87.9	1.094
160	4.11	34.422	0.34					74.7	160	4.37	34.383	0.29	27.277	80.4	1.186
170	3.67	34.470	0.57					66.8	170	3.86	34.451	0.44	27.385	70.2	1.353

73053

RV DAVID STARR JORDAN

CALCOFI CRUISE 7503

73060

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
35 31.5N	121 28.5W	03/11/75	0813 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
741M	180	3KT			
Z	T	S	SIGMA T	DT	DD
0	10.89	33.68	25.789	221.7	0.000
10	10.84	33.69	25.805	220.1	0.022
20	10.84	33.68	25.797	220.8	0.044
30	10.82	33.69	25.809	219.7	0.066
40	10.41	33.70	25.888	212.2	0.087
50	9.86	33.75	26.021	199.6	0.108
75	5.08	33.87	26.242	178.5	0.156
100	8.77	33.95	26.353	168.0	0.199
125	8.46	34.01	26.448	159.0	0.241
150	8.21	34.03	26.502	153.9	0.281
175	8.16	34.09	26.556	148.7	0.319
200	7.88	34.10	26.606	144.0	0.357
225	7.59	34.12	26.664	138.5	0.393
250	7.36	34.14	26.713	133.9	0.428
275	7.20	34.16	26.751	130.2	0.462
300	7.04	34.16	26.773	128.1	0.495
350	6.67	34.19	26.847	121.1	0.560
400	6.33	34.21	26.908	115.4	0.622
450	5.98	34.24	26.976	108.9	0.681
500	5.78	34.26	27.017	105.0	0.737
550	5.42	34.29	27.085	98.6	0.792
600	5.24	34.31	27.122	95.0	0.843
665	4.99	34.35	27.183	89.3	0.908

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
35 18.0N	121 57.5W	03/ 1/75	1251 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
2410M	160	5KT	6		
Z	T	S	SIGMA T	DT	DD
0	11.85	33.52	25.489	250.1	0.000
10	11.80	33.55	25.522	247.0	0.024
20	11.73	33.55	25.535	245.8	0.049
30	11.50	33.55	25.578	241.7	0.073
40	11.27	33.54	25.612	238.5	0.098
50	11.08	33.56	25.662	233.7	0.121
75	10.85	33.59	25.726	227.6	0.179
100	10.57	33.64	25.814	219.2	0.236
125	9.66	33.82	26.109	191.2	0.288
150	8.96	33.92	26.300	173.0	0.334
175	8.37	33.98	26.439	159.9	0.376
200	8.03	34.03	26.529	151.3	0.416
225	7.77	34.05	26.583	146.2	0.454
250	7.43	34.07	26.648	140.0	0.491
275	7.24	34.10	26.698	135.2	0.526
300	7.10	34.13	26.741	131.2	0.561
350	6.44	34.11	26.815	124.2	0.627
400	6.04	34.15	26.898	116.3	0.690
450	5.86	34.20	26.960	110.4	0.749
500	5.62	34.24	27.021	104.6	0.806
550	5.36	34.26	27.068	100.1	0.860
600	5.32	34.31	27.113	95.9	0.913
700	5.04	34.37	27.193	88.3	1.012
800	4.70	34.40	27.256	82.4	1.106
900	4.37	34.44	27.324	76.0	1.194
1000	4.09	34.46	27.369	71.6	1.277

73070

RV DAVID STARR JORDAN

CALCOFI CRUISE 7503

73080

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 58.5N	122 39.5W	03/ 1/75	1912 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
4111M	080	9KT	1	280 6 12	
Z	T	S	SIGMA T	DT	DD
0	13.27	33.29	25.037	293.2	0.000
10	12.27	33.29	25.037	293.2	0.029
20	13.26	33.29	25.039	293.0	0.058
30	12.18	33.23	25.203	277.4	0.087
40	11.80	33.22	25.266	271.3	0.114
50	11.70	33.24	25.301	268.1	0.141
75	10.70	33.37	25.581	241.3	0.205
100	9.79	33.56	25.885	212.5	0.263
125	9.15	33.72	26.114	190.8	0.314
150	8.66	33.89	26.324	170.8	0.359
175	8.24	33.94	26.427	161.0	0.407
200	7.78	33.97	26.519	152.3	0.442
225	7.42	33.98	26.578	146.6	0.480
250	7.15	34.02	26.648	140.0	0.517
275	6.86	34.03	26.696	135.5	0.552
300	6.71	34.06	26.740	131.3	0.586
350	5.93	34.03	26.817	124.0	0.653
400	5.50	34.06	26.894	116.7	0.715
450	5.20	34.12	26.977	108.8	0.774
500	5.00	34.16	27.031	103.6	0.830
550	4.81	34.21	27.093	97.8	0.883
600	4.72	34.26	27.142	93.1	0.934
700	4.43	34.33	27.230	84.8	1.029
800	4.20	34.40	27.310	77.2	1.118
900	3.98	34.44	27.365	72.0	1.200
1000	3.75	34.48	27.420	66.8	1.278

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 38.0N	123 22.0W	03/ 2/75	0104 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
4309M	200	8KT	1	270 8 12	
Z	T	S	SIGMA T	DT	DD
0	12.34	33.14	25.103	286.9	0.000
10	12.25	33.13	25.112	286.0	0.028
20	12.02	33.14	25.163	281.1	0.057
30	11.63	33.45	25.476	251.4	0.083
40	11.58	33.49	25.516	247.5	0.108
50	11.58	33.50	25.524	246.8	0.133
75	11.42	33.51	25.561	243.3	0.195
100	9.63	33.66	25.989	202.6	0.251
125	8.69	33.82	26.265	176.5	0.299
150	8.49	33.92	26.373	166.1	0.342
175	8.13	33.95	26.451	158.7	0.384
200	7.85	33.98	26.516	152.5	0.423
225	7.49	34.00	26.584	146.1	0.462
250	7.11	34.01	26.646	140.2	0.498
275	6.94	34.03	26.685	136.5	0.534
300	6.78	34.08	26.746	130.7	0.568
350	6.29	34.08	26.811	124.6	0.635
400	5.69	34.08	26.886	117.4	0.698
450	5.13	34.11	26.977	108.8	0.757
500	4.93	34.18	27.055	101.4	0.812
550	4.72	34.21	27.103	96.9	0.864
600	4.57	34.25	27.151	92.3	0.914
700	4.28	34.32	27.238	84.0	1.009
800	4.05	34.38	27.310	77.2	1.097
900	3.80	34.44	27.383	70.3	1.178
1000	3.58	34.47	27.429	65.9	1.254

RV DAVID STARR JORDAN

CALCOFI CRUISE 7503

73090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSSENGER TIME			
34 17.0N	124 03.0W	3/ 2/75	0811 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
4117M	230	10KT				
Z	T	S	O2	SIGT	DT	DD
2	12.65	33.053	6.31	24.976	299.0	0.000
12	12.65	33.049	6.30	24.973	299.2	0.029
32	12.27	33.065	6.45	24.996	297.0	0.059
59	11.96	33.242	6.00	25.046	292.3	0.089
78	11.50	33.264	5.87	25.187	278.9	0.146
93	11.09	33.316	5.64	25.339	264.4	0.214
107	10.14	33.462	4.95	25.604	239.2	0.278
136	9.16	33.725	4.03	26.003	201.3	0.334
160	8.71	33.870	3.29	26.234	179.3	0.382
189	8.20	33.968	2.99	26.478	156.2	0.467
223	7.88	34.017	2.40	26.602	144.4	0.544
294	7.14	34.063	1.76	26.694	135.7	0.617
395	6.16	34.110	1.04	26.859	120.0	0.749
500	5.49	34.196	0.50	27.002	106.4	0.868
605	5.06	34.291	0.26	27.123	95.0	0.976
737	4.57	34.358	0.24	27.209	86.7	1.074
889	4.03	34.429	0.40	27.286	79.5	1.164
1051	3.54	34.482	0.56	27.417	67.1	1.327



73090		RV DAVID STARR JORDAN				CALCOFI CRUISE 7503				77051			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
34 17.0N	124 03.0W	03/ 2/75	0637 GMT			35 02.0N	120 56.5W	03/ 3/75	1307 GMT				
BOTTOM	WIND	SPEED	WEATHR	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
4117M	230	10KT				286M	360	9KT					
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD		
0	12.64	33.04	24.968	299.7	0.000	0	10.46	33.72	25.895	211.5	0.000		
10	12.64	33.04	24.968	299.7	0.029	10	10.46	33.72	25.895	211.5	0.021		
20	12.45	33.02	24.989	297.7	0.059	20	10.46	33.72	25.895	211.5	0.042		
30	12.36	33.07	25.045	292.4	0.089	30	10.46	33.72	25.895	211.5	0.063		
40	12.32	33.07	25.053	291.7	0.118	40	10.42	33.72	25.902	210.8	0.084		
50	12.31	33.10	25.078	289.3	0.147	50	10.31	33.74	25.937	207.6	0.105		
75	11.53	33.24	25.332	265.1	0.217	75	10.05	33.77	26.004	201.1	0.157		
100	10.45	33.44	25.679	232.1	0.280	100	9.51	33.88	26.180	184.4	0.205		
125	9.32	33.67	26.047	197.1	0.334	125	9.21	33.95	26.284	174.6	0.251		
150	8.75	33.84	26.271	175.8	0.381	150	9.04	33.98	26.334	169.8	0.295		
175	8.36	33.93	26.401	163.5	0.424	175	8.86	34.00	26.378	165.6	0.337		
200	8.13	34.00	26.491	154.9	0.465	200	8.41	34.08	26.511	153.0	0.378		
225	7.81	34.03	26.562	148.2	0.504	225	8.15	34.10	26.566	147.8	0.416		
250	7.51	34.05	26.621	142.6	0.541	250	7.94	34.13	26.621	142.6	0.454		
275	7.35	34.08	26.667	138.2	0.577	275	7.63	34.15	26.682	136.8	0.490		
300	7.06	34.08	26.707	134.4	0.613	300	7.44	34.16	26.717	133.5	0.525		
350	6.40	34.09	26.804	125.2	0.680								
400	6.05	34.13	26.881	117.9	0.743								
450	6.00	34.22	26.958	110.6	0.803								
500	5.49	34.20	27.005	106.1	0.860								
550	5.27	34.26	27.079	99.1	0.915								
600	5.01	34.27	27.117	95.5	0.967								
700	4.63	34.33	27.208	86.9	1.065								
800	4.37	34.38	27.276	80.5	1.156								
900	3.99	34.43	27.356	72.9	1.241								
1000	3.68	34.46	27.411	67.6	1.319								

RV DAVID STARR JORDAN		CALCOFI CRUISE 7503				77055									
LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME			BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES					
34 54.0N	121 12.5W	3/ 3/75	1013 GMT			574M	360	14KT							
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
3	11.66	33.553	5.94					244.3	0	11.66	33.553	5.94	25.550	244.3	0.000
11	11.66	33.551	5.84					244.4	10	11.66	33.552	5.84	25.549	244.4	0.024
30	11.57	33.557	5.83					242.4	20	11.63	33.554	5.83	25.556	243.8	0.048
46	11.43	33.560	5.60					239.8	30	11.57	33.557	5.83	25.570	242.4	0.073
53	11.26	33.563	5.59					238.3	50	11.39	33.562	5.59	25.605	239.1	0.121
68	10.96	33.611	4.87					227.9	75	10.39	33.692	4.21	25.884	212.6	0.178
82	9.86	33.776	3.59					197.6	100	9.63	33.842	3.14	26.178	189.3	0.229
97	9.66	33.835	3.18					190.1	125	9.36	33.901	2.93	26.219	180.7	0.275
121	9.45	33.883	3.00					183.3	150	8.97	33.991	2.55	26.353	168.0	0.320
139	9.08	33.964	2.69					171.6	200	8.34	34.094	1.97	26.531	151.1	0.401
168	8.83	34.021	2.36					163.6	250	7.87	34.133	1.65	26.632	141.5	0.476
197	8.38	34.089	2.00					151.9	300	7.49	34.162	1.38	26.711	134.1	0.547
226	8.09	34.117	1.79					145.7	400	6.80	34.212	0.86	26.847	121.2	0.681
263	7.77	34.140	1.59					139.5							
321	7.34	34.173	1.26					131.2							
375	6.94	34.207	0.95					123.3							
432	6.6	34.217	0.77					118.2							
489	5.99	34.246	0.54					108.5							

77055		RV DAVID STARR JORDAN				CALCOFI CRUISE 7503				77060			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
34 54.0N	121 12.5W	03/ 3/75	0916 GMT			34 44.0N	121 34.0W	03/ 3/75	0535 GMT				
BOTTOM	WIND	SPEED	WEATHR	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
574M	360	14KT				981M	350	16KT					
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD		
0	11.66	33.55	25.548	244.5	0.000	0	12.12	33.30	25.268	271.1	0.000		
10	11.67	33.55	25.546	244.7	0.024	10	12.12	33.30	25.268	271.1	0.027		
20	11.64	33.55	25.552	244.2	0.048	20	12.05	33.33	25.305	267.7	0.054		
30	11.57	33.55	25.565	242.9	0.073	30	12.03	33.43	25.386	259.9	0.080		
40	11.51	33.55	25.576	241.9	0.097	40	11.89	33.47	25.443	254.5	0.106		
50	11.47	33.56	25.591	240.5	0.121	50	11.87	33.50	25.470	251.9	0.131		
75	10.84	33.62	25.751	225.2	0.180	75	10.70	33.49	25.675	232.5	0.192		
100	9.74	33.80	26.080	194.0	0.233	100	9.46	33.67	26.025	199.2	0.247		
125	9.41	33.90	26.212	181.4	0.280	125	8.90	33.87	26.271	175.8	0.294		
150	8.94	34.01	26.374	166.1	0.324	150	8.69	33.94	26.358	167.5	0.338		
175	8.82	34.03	26.408	162.8	0.366	175	8.28	34.02	26.484	155.6	0.379		
200	8.52	34.07	26.486	155.4	0.407	200	8.05	34.03	26.526	151.6	0.418		
225	8.15	34.12	26.582	146.3	0.446	225	7.69	34.02	26.571	147.3	0.456		
250	7.94	34.13	26.621	142.6	0.483	250	7.57	34.07	26.628	141.9	0.493		
275	7.63	34.15	26.682	136.8	0.519	275	7.44	34.08	26.654	139.4	0.530		
300	7.43	34.16	26.718	133.3	0.554	300	7.19	34.12	26.721	133.1	0.565		
350	7.10	34.20	26.796	126.0	0.621	350	6.44	34.11	26.815	124.2	0.632		
400	6.73	34.22	26.863	119.6	0.686	400	6.29	34.17	26.881	117.9	0.695		
450	6.37	34.22	26.911	115.1	0.747	450	6.11	34.26	26.976	108.9	0.754		
500	5.89	34.27	27.011	105.5	0.806	500	5.92	34.28	27.015	105.2	0.811		
						550	5.67	34.29	27.055	101.4	0.866		
						600	5.42	34.32	27.109	96.3	0.919		
						700	4.99	34.37	27.199	87.8	1.019		
						800	4.62	34.41	27.272	80.8	1.111		
						874	4.19	34.44	27.343	74.1	1.175		



77070

RV DAVID STARR JORDAN

CALCULI CRUISE 7503

77080

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 24.0N	122 16.0W	03/ 2/75	2331 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
411M	340	12KT	1	280 6 12	
Z	T	S	SIGMA T	DT	DD
0	15.89	33.37	24.972	299.3	0.000
10	15.82	33.37	24.987	298.0	0.029
20	15.68	33.36	25.007	295.9	0.059
30	15.60	33.36	25.024	294.4	0.088
40	15.55	33.35	25.026	294.2	0.118
50	15.53	33.36	25.038	293.0	0.148
75	15.30	33.32	25.054	291.6	0.221
100	15.39	33.32	25.232	274.6	0.293
125	11.33	33.34	25.446	254.2	0.359
150	10.39	33.59	25.806	220.0	0.419
175	5.47	33.70	26.047	197.1	0.472
200	8.58	33.83	26.289	174.1	0.520
225	8.37	33.94	26.408	162.8	0.563
250	7.93	33.98	26.505	153.6	0.603
275	7.50	34.00	26.583	146.2	0.642
300	7.22	34.03	26.646	140.7	0.674
350	6.45	34.04	26.758	129.5	0.749
400	6.10	34.10	26.851	120.8	0.814
450	5.66	34.14	26.938	112.6	0.875
500	5.46	34.20	27.009	105.8	0.932
550	5.30	34.25	27.068	100.2	0.987
600	5.08	34.29	27.125	94.8	1.039
700	4.65	34.35	27.221	85.6	1.136
800	4.36	34.39	27.285	79.6	1.227
900	4.01	34.42	27.346	73.8	1.311
1000	3.78	34.46	27.401	68.6	1.391

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 04.0N	122 57.0W	03/ 2/75	1810 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
430M	330	8KT	1	270 10 10	
Z	T	S	SIGMA T	DT	DD
0	13.88	33.38	24.982	298.4	0.000
10	13.76	33.39	25.014	295.3	0.029
20	13.82	33.45	25.048	292.1	0.059
30	13.82	33.45	25.048	292.1	0.088
40	13.60	33.45	25.052	291.7	0.117
50	13.79	33.45	25.054	291.5	0.146
75	13.37	33.38	25.086	288.5	0.219
100	11.95	33.36	25.347	263.7	0.289
125	10.89	33.38	25.556	243.8	0.353
150	9.97	33.58	25.870	213.9	0.411
175	9.32	33.76	26.118	190.4	0.467
200	8.74	33.89	26.311	172.0	0.508
225	8.23	33.96	26.444	159.4	0.551
250	7.98	34.00	26.513	152.8	0.591
275	7.58	34.00	26.571	147.3	0.630
300	7.28	34.02	26.630	141.8	0.667
350	6.61	34.02	26.721	133.0	0.738
400	6.02	34.04	26.814	124.3	0.805
450	5.58	34.07	26.892	116.9	0.868
500	5.18	34.11	26.971	109.3	0.927
550	4.97	34.15	27.027	104.1	0.984
600	4.72	34.21	27.103	96.9	1.037
700	4.53	34.31	27.203	87.4	1.136
800	4.24	34.37	27.282	79.9	1.227
900	3.94	34.41	27.345	73.9	1.311
1000	3.55	34.44	27.408	67.9	1.390

77090

RV DAVID STARR JORDAN

RV ALF XANIER AGASSIZ

80051

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 43.0N	123 39.0W	03/ 2/75	1312 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
411M	320	9KT	1	320 5 7	
Z	T	S	SIGMA T	DT	DD
0	15.80	33.40	25.014	295.4	0.000
10	15.80	33.40	25.014	295.4	0.029
20	15.80	33.40	25.014	295.4	0.059
30	15.75	33.42	25.039	292.9	0.088
40	15.75	33.43	25.047	292.7	0.117
50	15.74	33.43	25.049	292.0	0.147
75	15.27	33.41	25.129	284.4	0.219
100	11.98	33.42	25.388	259.8	0.288
125	10.14	33.58	25.841	216.6	0.348
150	9.39	33.76	26.106	191.5	0.400
175	8.74	33.88	26.304	172.7	0.446
200	8.27	33.93	26.415	162.1	0.489
225	7.78	33.94	26.495	154.5	0.529
250	7.42	33.97	26.571	147.4	0.568
275	7.27	34.01	26.623	142.4	0.605
300	7.10	34.02	26.655	139.4	0.642
350	6.33	34.03	26.766	128.8	0.711
400	5.92	34.04	26.826	123.1	0.746
450	5.43	34.10	26.934	112.9	0.838
500	5.04	34.13	27.003	106.3	0.894
550	4.87	34.16	27.047	102.2	0.951
600	4.78	34.23	27.112	96.0	1.003
700	4.45	34.29	27.196	88.0	1.102
800	4.18	34.38	27.296	78.5	1.193
900	3.92	34.43	27.363	72.2	1.276
1000	3.68	34.46	27.411	67.6	1.354

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 25.5N	120 34.0W	02/25/75	2314 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
121M	320	24KT	1	320 5 7	
Z	T	S	SIGMA T	DT	DD
0	11.65	33.62	25.604	239.2	0.000
10	11.58	33.63	25.625	237.2	0.023
20	11.16	33.65	25.717	228.5	0.047
30	10.67	33.72	25.858	215.0	0.069
40	10.32	33.76	25.950	206.3	0.090
50	10.21	33.79	25.993	202.2	0.111
75	9.85	33.85	26.100	192.0	0.160
100	9.74	33.87	26.134	188.8	0.208
111	9.64	33.89	26.166	185.7	0.229

RV DAVID STARR JORDAN

80052

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 25.0N	120 36.0W	03/ 3/75	2335 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
242M	280	7KT	1	300 4 12	
Z	T	S	SIGMA T	DT	DD
0	12.20	33.63	25.508	248.3	0.000
10	11.75	33.64	25.601	239.5	0.024
20	11.59	33.64	25.631	236.7	0.048
30	11.42	33.66	25.677	232.2	0.071
40	10.99	33.68	25.771	223.3	0.094
50	10.44	33.74	25.911	210.0	0.116
75	10.00	33.82	26.052	196.6	0.167
100	9.76	33.86	26.123	189.8	0.216
125	9.50	33.91	26.205	182.0	0.263
150	9.15	33.98	26.317	171.5	0.308
175	8.94	34.01	26.374	166.1	0.351
200	8.48	34.08	26.500	154.0	0.392

80052<sup>1</sup> RV ALEXANDER AGASSIZ

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 24.4N	120 36.1W	02/25/75	2240 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
229M	320	22KT	2	320 6 8	
Z	T	S	SIGMA T	DT	DD
0	11.39	33.66	25.683	231.7	0.000
10	11.41	33.66	25.679	232.0	0.023
20	10.78	33.69	25.816	219.0	0.045
30	10.38	33.73	25.917	209.5	0.067
40	10.19	33.77	25.980	203.4	0.088
50	10.13	33.78	25.999	201.7	0.108
75	9.87	33.84	26.089	193.1	0.158
100	9.53	33.92	26.208	181.8	0.205
125	9.09	34.00	26.342	169.1	0.249
150	8.97	34.02	26.377	165.8	0.292
175	8.70	34.07	26.458	158.0	0.333
200	8.51	34.08	26.495	154.5	0.373

CAICOFI CRUISE 7503 80052<sup>4</sup>

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 23.8N	120 36.8W	02/25/75	2200 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
316M	320	20KT	1	320 5 7	
Z	T	S	SIGMA T	DT	DD
0	11.54	33.65	25.648	235.0	0.000
10	11.29	33.67	25.709	229.2	0.023
20	10.45	33.68	25.866	214.3	0.045
30	10.15	33.76	25.980	203.5	0.066
40	10.03	33.81	26.039	197.8	0.086
50	9.96	33.83	26.066	195.2	0.106
75	9.90	33.84	26.084	193.5	0.155
100	9.59	33.90	26.183	184.2	0.202
125	9.27	33.96	26.282	174.8	0.248
150	9.10	34.00	26.340	169.2	0.292
175	8.95	34.02	26.380	165.5	0.334
200	8.67	34.07	26.463	157.6	0.375
225	8.34	34.10	26.537	150.5	0.415
250	8.11	34.12	26.588	145.7	0.453
275	7.98	34.13	26.615	143.2	0.490
300	7.78	34.16	26.668	138.1	0.527

80052<sup>7</sup> RV ALEXANDER AGASSIZ

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 23.6N	120 39.1W	02/25/75	2107 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
430M	330	14KT	2	320 5 8	
Z	T	S	SIGMA T	DT	DD
0	11.14	33.60	25.682	231.8	0.000
10	11.07	33.63	25.727	227.5	0.022
20	10.66	33.64	25.798	220.7	0.045
30	9.91	33.76	26.020	199.6	0.066
40	10.05	33.82	26.043	197.4	0.086
50	10.00	33.82	26.052	196.6	0.106
75	9.97	33.82	26.057	196.1	0.155
100	9.64	33.90	26.174	185.0	0.203
125	9.29	33.96	26.279	175.1	0.249
150	9.12	33.99	26.329	170.3	0.293
175	9.06	34.01	26.355	167.9	0.336
200	8.58	34.08	26.485	155.5	0.377
225	8.45	34.09	26.512	152.9	0.417
250	8.27	34.11	26.556	148.8	0.455
275	7.88	34.14	26.637	141.0	0.493
300	7.74	34.15	26.666	138.3	0.529
350	7.30	34.18	26.753	130.1	0.599
400	6.83	34.21	26.841	121.7	0.665

CAICOFI CRUISE 7503 80053<sup>4</sup>

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 22.4N	120 42.0W	02/25/75	2008 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
532M	320	12KT	1	310 5 7	
Z	T	S	SIGMA T	DT	DD
0	11.20	33.60	25.671	232.8	0.000
10	11.17	33.60	25.676	232.3	0.023
20	11.07	33.60	25.694	230.6	0.046
30	10.03	33.59	25.868	214.1	0.068
40	10.11	33.78	26.002	201.4	0.089
50	10.05	33.80	26.028	198.9	0.109
75	9.89	33.82	26.070	194.9	0.159
100	9.76	33.86	26.123	189.8	0.207
125	9.33	33.95	26.264	176.5	0.254
150	9.06	33.99	26.339	169.4	0.298
175	8.71	34.05	26.441	159.7	0.339
200	8.33	34.10	26.539	150.4	0.379
225	8.18	34.12	26.577	146.7	0.417
250	8.00	34.13	26.612	143.4	0.455
275	7.78	34.15	26.660	138.9	0.491
300	7.57	34.18	26.714	133.8	0.526
350	7.11	34.18	26.779	127.6	0.594
400	6.72	34.20	26.848	121.0	0.659
450	6.41	34.22	26.905	115.6	0.721
500	6.04	34.25	26.977	108.8	0.781

80055 RV DAVIE STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 19.0N	120 48.0W	03/ 4/75	0309 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
768M	330	7KT			
Z	T	S	SIGMA T	DT	DD
0	11.56	33.55	25.566	242.8	0.000
10	11.42	33.59	25.623	237.4	0.024
20	11.27	33.66	25.705	229.6	0.047
30	10.54	33.69	25.858	215.1	0.069
40	10.09	33.80	26.021	199.6	0.090
50	9.84	33.84	26.094	192.6	0.110
75	9.36	33.95	26.259	176.9	0.156
100	9.07	34.00	26.345	168.8	0.200
125	8.83	34.05	26.422	161.4	0.242
150	8.60	34.08	26.482	155.8	0.282
175	8.36	34.11	26.542	150.1	0.321
200	8.05	34.15	26.620	142.7	0.358
225	7.90	34.16	26.650	139.8	0.395
250	7.83	34.16	26.661	138.8	0.431
275	7.68	34.17	26.690	136.0	0.466
300	7.54	34.18	26.718	133.3	0.501
350	7.14	34.20	26.791	126.5	0.568
400	6.91	34.22	26.838	122.0	0.633
450	6.60	34.22	26.880	118.0	0.697
500	6.10	34.25	26.959	109.6	0.757
550	5.91	34.26	27.001	106.5	0.814
600	5.65	34.30	27.065	100.5	0.870
700	5.14	34.36	27.174	90.2	0.973

CAICOFI CRUISE 7503 80060

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 09.0N	121 09.0W	03/ 4/75	0630 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
2222M	300	5KT			
Z	T	S	SIGMA T	DT	DD
0	12.49	33.42	25.290	269.0	0.000
10	12.46	33.42	25.296	268.5	0.026
20	12.23	33.42	25.340	264.3	0.053
30	12.03	33.45	25.401	258.5	0.079
40	11.80	33.48	25.468	252.2	0.105
50	11.69	33.49	25.496	249.5	0.130
75	11.32	33.50	25.572	242.3	0.192
100	10.18	33.69	25.920	209.2	0.249
125	9.63	33.87	26.153	187.0	0.299
150	9.02	33.91	26.283	174.7	0.345
175	8.68	33.98	26.391	164.4	0.388
200	8.40	34.01	26.458	158.1	0.429
225	8.12	34.03	26.516	152.6	0.469
250	7.90	34.04	26.556	148.7	0.508
275	7.66	34.09	26.630	141.7	0.545
300	7.48	34.11	26.672	137.7	0.581
350	6.86	34.17	26.806	125.0	0.649
400	6.42	34.22	26.904	115.7	0.712
450	6.20	34.25	26.956	110.8	0.772
500	6.05	34.27	26.991	107.5	0.830
550	5.70	34.29	27.051	101.8	0.886
600	5.49	34.31	27.092	97.9	0.939
700	5.03	34.37	27.194	88.2	1.040
800	4.62	34.41	27.272	80.8	1.132
900	4.29	34.45	27.340	74.4	1.219
1000	4.04	34.47	27.382	70.4	1.300

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
33 48.0N	121 51.0W	03/ 4/75	1257 GMT	3738M	020	7KT					
Z	T	S	DT	DT	Z	T	S	DT	DD		
3	12.30	33.210	6.32	281.0	0	12.30	33.210	6.32	25.165	281.0	0.000
12	12.32	33.205	6.43	281.8	10	12.31	33.208	6.41	25.159	281.6	0.028
30	11.91	33.269	6.32	269.7	20	12.16	33.230	6.38	25.205	277.2	0.056
58	11.63	33.323	6.00	260.7	30	11.91	33.269	6.32	25.284	269.7	0.083
76	11.32	33.377	5.74	251.4	50	11.70	33.310	6.10	25.354	263.0	0.137
90	10.81	33.406	5.42	240.5	75	11.34	33.375	5.75	25.470	252.0	0.201
103	10.16	33.497	4.83	223.1	100	10.31	33.474	4.97	25.729	227.4	0.262
132	9.29	33.738	3.53	191.6	125	9.45	33.685	3.76	26.037	198.0	0.315
154	8.81	33.829	3.63	177.6	150	8.88	33.817	3.61	26.230	179.7	0.363
182	8.36	33.940	3.84	162.7	200	8.13	33.968	3.50	26.464	157.5	0.449
215	7.97	33.978	3.11	154.3	250	7.51	34.016	2.44	26.592	145.3	0.527
283	7.11	34.047	1.93	137.5	300	6.94	34.063	1.72	26.710	134.2	0.599
381	6.27	34.120	1.08	121.3	400	6.09	34.124	0.99	26.871	118.9	0.730
484	5.42	34.153	0.72	108.8	500	5.36	34.172	0.65	26.998	106.8	0.849
586	5.15	34.280	0.35	96.3	600	5.08	34.291	0.34	27.125	94.7	0.956
717	4.51	34.361 A	0.34	83.3	700	4.59	34.353	0.34	27.230	84.8	1.053
868	4.20	34.448	0.53	73.6	800	4.31	34.413	0.43	27.307	77.5	1.141
1032	3.72	34.484	0.64	66.2	1000	3.82	34.482	0.62	27.414	67.4	1.303

A) AN ERROR OF +0.01 IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE. THE LISTED OBSERVED AND INTERPOLATED VALUES INCORPORATE THE CORRECTION.

80070						80080											
RV DAVID STARR JORDAN						RV DAVID STARR JORDAN											
CALCULATED CRUISE 7503						CALCULATED CRUISE 7503											
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME						
33 48.0N	121 51.0W	03/ 4/75	1151 GMT	33 28.0N	122 32.0W	03/ 4/75	1807 GMT	33 28.0N	122 32.0W	03/ 4/75	1807 GMT						
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
3738M	020	7KT			3738M	040	3KT	6	320 3 5	3738M	040	3KT	6	320 3 5			
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	12.34	33.26	25.196	278.1	0.000	0	13.80	33.36	24.983	298.3	0.000	0	13.80	33.36	24.983	298.3	0.000
10	12.33	33.25	25.190	278.6	0.027	10	13.80	33.36	24.983	298.3	0.029	10	13.80	33.36	24.983	298.3	0.029
20	12.33	33.25	25.190	278.6	0.055	20	13.80	33.36	24.983	298.3	0.059	20	13.80	33.36	24.983	298.3	0.059
30	12.15	33.29	25.255	272.4	0.083	30	13.80	33.36	24.983	298.3	0.089	30	13.80	33.36	24.983	298.3	0.089
40	11.85	33.29	25.311	267.0	0.110	40	13.76	33.35	24.983	298.3	0.119	40	13.76	33.35	24.983	298.3	0.119
50	11.73	33.33	25.365	262.0	0.136	50	13.56	33.33	25.009	295.8	0.149	50	13.56	33.33	25.009	295.8	0.149
75	11.77	33.45	25.450	252.8	0.201	75	13.58	33.35	25.020	294.7	0.223	75	13.58	33.35	25.020	294.7	0.223
100	10.65	33.42	25.629	236.8	0.263	100	12.52	33.37	25.246	273.2	0.295	100	12.52	33.37	25.246	273.2	0.295
125	8.44	33.71	26.059	195.9	0.318	125	11.35	33.41	25.496	249.4	0.361	125	11.35	33.41	25.496	249.4	0.361
150	8.88	33.87	26.235	179.3	0.365	150	9.98	33.49	25.798	220.7	0.420	150	9.98	33.49	25.798	220.7	0.420
175	8.46	33.93	26.386	164.9	0.409	175	9.36	33.66	26.033	198.4	0.473	175	9.36	33.66	26.033	198.4	0.473
200	8.11	33.96	26.462	157.6	0.450	200	8.76	33.82	26.253	177.5	0.521	200	8.76	33.82	26.253	177.5	0.521
225	7.77	34.01	26.552	149.2	0.490	225	8.59	33.93	26.366	166.8	0.565	225	8.59	33.93	26.366	166.8	0.565
250	7.47	34.04	26.619	142.8	0.527	250	8.18	33.96	26.452	158.6	0.607	250	8.18	33.96	26.452	158.6	0.607
275	7.29	34.06	26.660	138.9	0.563	275	7.84	33.99	26.526	151.6	0.647	275	7.84	33.99	26.526	151.6	0.647
300	7.00	34.05	26.692	135.8	0.599	300	7.49	34.00	26.584	146.1	0.685	300	7.49	34.00	26.584	146.1	0.685
350	6.60	34.10	26.786	126.9	0.667	350	6.72	34.01	26.699	135.2	0.758	350	6.72	34.01	26.699	135.2	0.758
400	6.19	34.14	26.871	118.9	0.731	400	6.11	34.05	26.810	124.6	0.826	400	6.11	34.05	26.810	124.6	0.826
450	5.89	34.16	26.925	113.8	0.792	450	5.51	34.07	26.900	116.1	0.889	450	5.51	34.07	26.900	116.1	0.889
500	5.38	34.18	27.003	106.3	0.850	500	5.22	34.12	26.975	109.1	0.948	500	5.22	34.12	26.975	109.1	0.948
550	5.28	34.23	27.054	101.5	0.905	550	5.04	34.16	27.027	104.1	1.004	550	5.04	34.16	27.027	104.1	1.004
600	5.08	34.29	27.125	94.8	0.957	600	4.91	34.22	27.089	98.1	1.058	600	4.91	34.22	27.089	98.1	1.058
700	4.56	34.34	27.224	85.4	1.055	700	4.67	34.30	27.185	89.1	1.158	700	4.67	34.30	27.185	89.1	1.158
800	4.34	34.42	27.311	77.1	1.143	800	4.27	34.36	27.271	80.9	1.251	800	4.27	34.36	27.271	80.9	1.251
900	4.15	34.45	27.355	73.0	1.227	900	3.91	34.40	27.340	74.4	1.336	900	3.91	34.40	27.340	74.4	1.336
980	3.45	34.47	27.394	69.3	1.291	1000	3.67	34.45	27.404	68.3	1.416	1000	3.67	34.45	27.404	68.3	1.416

80090						81043											
RV DAVID STARR JORDAN						RV DAVID STARR JORDAN											
CALCULATED CRUISE 7503						CALCULATED CRUISE 7503											
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME						
33 09.0N	123 13.0W	03/ 4/75	2255 GMT	34 24.0N	119 47.5W	03/ 6/75	2009 GMT	34 24.0N	119 47.5W	03/ 6/75	2009 GMT						
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
4309M	170	11KT	Z	130 4 10	32M	140	11KT	6	170 3 11	32M	140	11KT	6	170 3 11			
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	14.89	33.54	24.892	307.0	0.000	0	12.84	33.57	25.338	264.5	0.000	0	12.84	33.57	25.338	264.5	0.000
10	14.89	33.54	24.892	307.0	0.030	10	12.75	33.56	25.348	263.5	0.026	10	12.75	33.56	25.348	263.5	0.026
20	14.76	33.54	24.920	304.3	0.061	20	12.34	33.59	25.451	253.8	0.052	20	12.34	33.59	25.451	253.8	0.052
30	14.74	33.54	24.924	303.9	0.091	25	12.21	33.62	25.499	249.2	0.064	25	12.21	33.62	25.499	249.2	0.064
40	14.74	33.56	24.939	302.4	0.122												
50	14.78	33.58	24.946	301.8	0.152												
75	14.34	33.50	24.978	298.7	0.228												
100	13.86	33.45	25.040	292.9	0.302												
125	12.18	33.45	25.373	261.2	0.372												
150	11.15	33.56	25.649	234.9	0.435												
175	9.97	33.60	25.886	212.4	0.492												
200	9.12	33.78	26.165	185.8	0.542												
225	8.58	33.92	26.360	167.4	0.588												
250	8.10	33.98	26.479	156.0	0.629												
275	7.66	34.00	26.560	148.4	0.668												
300	7.22	34.01	26.630	141.7	0.706												
350	6.43	34.03	26.753	130.0	0.776												
400	6.17	34.11	26.850	120.9	0.841												
450	5.88	34.17	26.934	112.9	0.903												
500	5.69	34.21	26.989	107.7	0.961												
550	5.48	34.24	27.038	103.0	1.017												
600	5.24	34.29	27.106	96.5	1.070												
700	4.80	34.34	27.197	88.0	1.170												
800	4.50	34.39	27.270	81.0	1.262												
900	4.18	34.43	27.336	74.8	1.348												
1000	3.86	34.46	27.393	69.4	1.429												

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81044

RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME
34 23.0N	119 50.0W	03/ 6/75	2142 GMT

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
56M	120	9KT	2	160 4 13

Z	T	S	SIGMA T	DT	DD
0	12.08	33.54	25.267	271.2	0.000
10	12.06	33.53	25.264	271.6	0.027
20	12.57	33.58	25.399	258.7	0.053
30	12.17	33.59	25.483	250.7	0.079
40	11.92	33.62	25.554	244.0	0.104

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81044

CAICDFI CRUISE 7503

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME
34 22.0N	119 52.0W	03/ 7/75	0048 GMT

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
78M	130	14KT	6	130 3 12

Z	T	S	SIGMA T	DT	DD
0	12.19	33.58	25.472	251.8	0.000
10	12.18	33.58	25.474	251.6	0.025
20	12.10	33.60	25.504	248.7	0.050
30	11.87	33.63	25.571	242.4	0.074
40	11.31	33.67	25.705	229.6	0.098
50	10.62	33.74	25.883	212.7	0.120

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81045

RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME
34 21.0N	119 54.0W	03/ 7/75	0214 GMT

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
371M	120	14KT	2	300 4 10

Z	T	S	SIGMA T	DT	DD
0	12.14	33.64	25.528	246.5	0.000
10	12.13	33.63	25.527	247.0	0.024
20	11.76	33.65	25.607	238.9	0.049
30	11.32	33.67	25.703	229.7	0.072
40	10.88	33.69	25.798	220.7	0.095
50	10.62	33.74	25.883	212.7	0.118
75	10.03	33.85	26.070	194.9	0.158
100	9.79	33.92	26.165	185.9	0.216
125	9.49	33.99	26.269	176.0	0.262
150	9.24	34.09	26.388	164.7	0.305
175	9.00	34.12	26.450	158.8	0.346
200	8.76	34.15	26.511	153.0	0.386
214	8.69	34.15	26.522	151.9	0.408

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81046

CAICDFI CRUISE 7503

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME
34 19.0N	119 58.0W	03/ 7/75	0411 GMT

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
510M	130	15KT	6	

Z	T	S	SIGMA T	DT	DD
0	12.23	33.59	25.472	251.8	0.000
10	12.23	33.59	25.472	251.8	0.025
20	11.60	33.62	25.613	238.3	0.049
30	11.11	33.66	25.734	226.9	0.073
40	10.62	33.73	25.875	213.4	0.095
50	10.17	33.80	26.007	200.9	0.115
75	9.80	33.91	26.156	186.8	0.164
100	9.58	33.98	26.247	178.1	0.210
125	9.30	34.04	26.339	169.3	0.254
150	8.99	34.11	26.444	159.4	0.296
175	8.85	34.14	26.489	155.1	0.336
200	8.62	34.16	26.541	150.2	0.375
225	8.51	34.18	26.574	147.1	0.413
250	8.17	34.13	26.586	145.9	0.451
275	7.90	34.15	26.642	140.6	0.488
300	7.66	34.17	26.693	135.7	0.524
350	7.27	34.20	26.772	128.2	0.592
400	6.83	34.23	26.857	120.2	0.657
450	6.48	34.25	26.920	114.2	0.719
487	6.42	34.26	26.935	112.7	0.764

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81047

RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME
34 17.0N	120 02.5W	03/ 7/75	0605 GMT

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
569M	120	13KT	6	

Z	T	S	SIGMA T	DT	DD
0	11.97	33.64	25.560	243.4	0.000
10	11.95	33.64	25.564	243.1	0.024
20	11.85	33.64	25.582	241.3	0.048
30	11.49	33.67	25.672	232.7	0.072
40	11.32	33.70	25.727	227.5	0.095
50	10.79	33.72	25.837	217.0	0.117
75	9.86	33.81	26.068	195.1	0.169
100	9.59	33.92	26.231	179.8	0.216
125	8.19	33.98	26.310	172.1	0.261
150	8.82	34.04	26.416	162.0	0.303
175	8.56	34.09	26.495	154.5	0.344
200	8.27	34.11	26.540	150.2	0.383
225	8.18	34.13	26.585	146.0	0.421
250	7.99	34.15	26.629	141.8	0.458
275	7.79	34.17	26.674	137.5	0.494
300	7.62	34.18	26.707	134.4	0.529
350	7.16	34.21	26.796	126.0	0.597
400	6.81	34.23	26.860	119.9	0.661
450	6.48	34.25	26.920	114.2	0.723
500	6.40	34.26	26.938	112.5	0.783

4  
83039

CAICDFI CRUISE 7503

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME
34 14.5N	119 19.5W	03/ 7/75	1735 GMT

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
17M	140	16KT	2	150 5 5

Z	T	S	SIGMA T	DT	DD
0	13.34	33.56	25.231	274.7	0.000
10	13.34	33.55	25.223	275.4	0.027
20	13.32	33.56	25.235	274.3	0.055

6  
83040

RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME
34 12.5N	119 24.0W	03/ 7/75	1630 GMT

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
57M	120	17KT	2	110 6 8

Z	T	S	SIGMA T	DT	DD
0	12.01	33.58	25.312	266.9	0.000
10	12.99	33.58	25.316	266.6	0.026
20	12.91	33.58	25.332	265.1	0.053
30	12.80	33.58	25.353	263.0	0.079

6  
83041

CAICDFI CRUISE 7503

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME
34 11.5N	119 26.0W	03/07/75	1534 GMT

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
65M	120	14KT	1	120 6 4

Z	T	S	SIGMA T	DT	DD
0	12.76	33.56	25.346	263.7	0.000
10	12.74	33.56	25.350	263.4	0.026
20	12.67	33.56	25.363	262.0	0.052
30	12.27	33.56	25.441	254.7	0.078
40	11.61	33.57	25.573	242.2	0.103
50	11.15	33.62	25.695	230.5	0.127
57	10.59	33.71	25.865	214.4	0.142



83042			RV DAVID STARR JORDAN			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
34 09.5N	119 30.0W	03/ 7/75	1414 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
242M	140	15KT	1	140 6 5		
Z	T	S	SIGMA T	DT	DD	
0	12.42	33.61	25.451	253.8	0.000	
10	12.41	33.61	25.453	253.6	0.025	
20	12.29	33.62	25.483	250.7	0.050	
30	12.25	33.62	25.491	249.9	0.075	
40	12.10	33.62	25.520	247.2	0.100	
50	11.27	33.67	25.712	228.9	0.124	
75	10.23	33.78	25.981	205.3	0.178	
100	9.84	33.94	26.172	185.2	0.227	
125	9.42	34.08	26.351	168.2	0.272	
150	9.12	34.12	26.431	160.6	0.314	
175	8.87	34.17	26.510	153.1	0.354	
200	8.78	34.18	26.531	151.1	0.393	
214	8.74	34.18	26.538	150.5	0.415	

CALCIFI CRUISE 7503			83043		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 08.0N	119 34.0W	03/ 7/75	1241 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
251M	140	18KT			
Z	T	S	SIGMA T	DT	DD
0	12.17	33.63	25.514	247.7	0.000
10	12.17	33.63	25.514	247.7	0.024
20	12.16	33.63	25.516	247.6	0.049
30	12.14	33.63	25.520	247.2	0.074
40	12.02	33.65	25.558	243.6	0.099
50	11.95	33.66	25.616	238.0	0.123
75	10.46	33.76	25.926	208.6	0.179
100	9.89	33.90	26.133	188.9	0.229
125	9.48	34.05	26.318	171.4	0.275
150	8.90	34.11	26.458	158.0	0.317
175	8.68	34.15	26.524	151.8	0.356
200	8.56	34.16	26.550	149.3	0.395
213	8.48	34.17	26.570	147.4	0.414

83044			RV DAVID STARR JORDAN			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
34 05.5N	119 38.0W	03/ 7/75	1130 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
157M	140	15KT				
Z	T	S	SIGMA T	DT	DD	
0	12.03	33.64	25.548	244.5	0.000	
10	12.03	33.64	25.548	244.5	0.024	
20	12.02	33.64	25.550	244.3	0.048	
30	11.86	33.64	25.580	241.4	0.073	
40	11.64	33.67	25.645	235.3	0.097	
50	11.45	33.68	25.688	231.3	0.120	
75	10.50	33.77	25.927	208.5	0.175	
100	9.59	33.92	26.198	182.7	0.225	
125	9.17	34.03	26.352	168.1	0.269	
139	9.04	34.04	26.381	165.4	0.293	

CALCIFI CRUISE 7503			83044		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 04.0N	119 41.0W	03/ 7/75	1030 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
86M	150	16KT			
Z	T	S	SIGMA T	DT	DD
0	11.65	33.68	25.651	234.8	0.000
10	11.61	33.68	25.658	234.1	0.023
20	11.60	33.68	25.660	233.9	0.046
30	11.52	33.68	25.675	232.5	0.070
40	11.31	33.69	25.721	228.1	0.093
50	11.22	33.70	25.745	225.8	0.116
75	10.62	33.75	25.855	215.3	0.171

83045			RV DAVID STARR JORDAN			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
34 03.5N	119 42.5W	03/ 7/75	0926 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
84M	150	16KT				
Z	T	S	SIGMA T	DT	DD	
0	11.62	33.68	25.656	234.2	0.000	
10	11.62	33.68	25.656	234.2	0.023	
20	11.62	33.68	25.656	234.2	0.046	
30	11.54	33.67	25.663	233.6	0.070	
40	11.33	33.69	25.717	228.4	0.093	
50	11.24	33.70	25.741	226.1	0.116	
77	10.99	33.73	25.810	219.7	0.165	

CALCIFI CRUISE 7503			83051		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 52.0N	120 08.5W	03/ 6/75	0220 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
116M	160	11KT	2		
Z	T	S	SIGMA T	DT	DD
0	12.03	33.64	25.548	244.5	0.000
10	12.02	33.64	25.550	244.3	0.024
20	12.02	33.64	25.550	244.3	0.048
30	12.00	33.63	25.546	244.7	0.073
40	11.92	33.63	25.561	243.3	0.097
50	11.41	33.65	25.671	232.8	0.121
75	10.18	33.79	25.998	201.8	0.176
88	9.44	33.91	26.215	181.1	0.201

83055			RV DAVID STARR JORDAN			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
33 44.0N	120 24.0W	03/ 5/75	2322 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
525M	160	15KT	1	140 6 12		
Z	T	S	SIGMA T	DT	DD	
0	12.17	33.49	25.406	258.1	0.000	
10	12.04	33.51	25.446	254.2	0.025	
20	11.79	33.57	25.539	245.3	0.050	
30	11.60	33.60	25.598	239.8	0.074	
40	11.54	33.60	25.609	238.7	0.098	
50	11.24	33.60	25.664	233.5	0.122	
75	10.73	33.64	25.786	221.9	0.179	
100	9.92	33.66	25.941	207.2	0.234	
125	9.43	33.95	26.248	178.0	0.282	
150	8.55	33.99	26.419	161.8	0.325	
175	8.29	34.03	26.490	155.0	0.366	
200	8.12	34.11	26.578	146.6	0.404	
225	8.05	34.14	26.612	143.4	0.442	
250	7.82	34.16	26.662	138.7	0.478	
275	7.67	34.17	26.692	135.9	0.513	
300	7.44	34.19	26.740	131.2	0.548	
350	6.96	34.22	26.831	122.6	0.614	
400	6.72	34.24	26.880	118.0	0.677	
450	6.38	34.25	26.933	113.0	0.738	
500	6.10	34.27	26.985	108.1	0.796	
550	5.88	34.28	27.021	104.7	0.853	
600	5.74	34.30	27.054	101.5	0.908	
700	5.32	34.34	27.136	93.7	1.014	
800	4.73	34.40	27.252	82.7	1.111	

CALCIFI CRUISE 7503			83060		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 34.0N	120 45.0W	03/ 5/75	2000 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
1110M	170	13KT	1	130 6 13	
Z	T	S	SIGMA T	DT	DD
0	12.55	33.48	25.325	265.7	0.000
10	12.54	33.49	25.335	264.8	0.026
20	12.50	33.48	25.335	264.8	0.053
30	12.42	33.49	25.358	262.6	0.079
40	12.05	33.46	25.405	258.1	0.105
50	11.81	33.52	25.497	249.4	0.131
75	11.40	33.56	25.604	239.2	0.197
100	10.26	33.56	25.805	220.1	0.250
125	9.41	33.73	26.080	194.0	0.302
150	8.99	33.86	26.249	177.9	0.349
175	8.52	33.98	26.416	162.1	0.393
200	8.27	34.01	26.477	156.2	0.433
225	7.91	34.04	26.555	148.9	0.472
250	7.63	34.05	26.603	144.3	0.510
275	7.21	34.07	26.679	137.1	0.546
300	6.96	34.08	26.721	133.0	0.581
350	6.58	34.12	26.804	125.2	0.648
400	6.21	34.14	26.868	119.1	0.712
450	5.91	34.17	26.930	113.3	0.773
500	5.57	34.21	27.004	106.3	0.831
550	5.34	34.24	27.055	101.4	0.886
600	5.06	34.27	27.112	96.0	0.939
700	4.87	34.35	27.197	88.0	1.038
800	4.60	34.42	27.282	79.8	1.130
900	4.31	34.45	27.338	74.6	1.216
1000	4.07	34.47	27.379	70.7	1.297

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME			BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
33 15.0N		121 26.0W		3/ 5/75		1526			3926M		160		10KT		6		240 4 6	
Z	T	S	Q2	PO4	SI03	NO2	NO3	DT	Z	T	S	Q2	SIGT	DT	DD			
1	12.69	33.333	6.34					279.1	0	12.69	33.333	6.34	25.184	279.1	0.000			
11	12.67	33.420	6.44					272.3	10	12.67	33.414	6.43	25.249	272.9	0.027			
29	12.35	33.444	6.31					264.7	20	12.52	33.445	6.39	25.302	267.9	0.054			
57	12.17	33.429	6.16					261.8	30	12.34	33.447	6.30	25.337	264.6	0.081			
76	11.48	33.367	5.77					254.9	50	12.24	33.450	6.21	25.360	262.4	0.134			
90	10.55	33.359	5.32					239.7	75	11.53	33.372	5.79	25.433	255.5	0.199			
104	10.38	33.401	5.13					233.8	100	10.42	33.393	5.18	25.646	235.2	0.261			
133	9.87	33.669	3.97					205.7	125	10.05	33.590	4.29	25.863	214.6	0.318			
156	9.03	33.800	3.67					163.0	150	9.24	33.772	3.71	26.139	188.4	0.369			
184	8.65	33.892	3.49					170.5	200	8.47	33.931	3.29	26.384	165.1	0.459			
216	8.30	33.960	3.08					160.4	250	7.78	34.000	2.61	26.541	150.2	0.539			
286	7.26	34.031	2.12					140.7	300	7.15	34.052	1.92	26.672	137.7	0.614			
384	6.70	34.167	0.98					123.2	400	6.59	34.180	0.87	26.850	120.9	0.748			
486	5.96	34.233	0.55					109.1	500	5.83	34.241	0.54	26.995	107.1	0.868			
589	5.15	34.293	0.51					95.3	600	5.11	34.301	0.49	27.130	94.3	0.976			
719	4.92	34.381	0.31					86.2	700	4.93	34.369	0.33	27.205	87.2	1.074			
868	4.38	34.438	0.40					76.2	800	4.63	34.416	0.35	27.275	80.5	1.166			
1033	3.95	34.473	0.59					69.3	1000	4.02	34.469	0.54	27.383	70.3	1.334			

LATITUDE		LONGITUDE		MO/DAY/YR		START TIME			LATITUDE		LONGITUDE		MO/DAY/YR		START TIME						
33 15.0N		121 26.0W		03/ 5/75		1418 GMT			32 54.0N		122 07.0W		03/ 5/75		0910 GMT						
BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES			BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES		
3926M		160		10KT		6		240 4 6			4309M		150		9KT		6		240 4 6		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD										
0	12.69	33.26	25.128	284.5	0.000	0	13.26	33.22	24.985	298.1	0.000										
10	12.69	33.39	25.228	274.9	0.027	10	13.27	33.23	25.002	296.5	0.029										
20	12.66	33.43	25.265	271.4	0.055	20	12.55	33.22	25.105	286.7	0.058										
30	12.62	33.43	25.273	270.7	0.082	30	12.56	33.30	25.184	279.2	0.087										
40	12.33	33.44	25.336	264.6	0.109	40	12.31	33.34	25.263	271.6	0.114										
50	12.27	33.45	25.356	262.8	0.135	50	12.17	33.33	25.292	268.0	0.142										
75	12.02	33.43	25.388	259.8	0.201	75	11.47	33.31	25.397	258.9	0.208										
100	10.70	33.32	25.543	245.0	0.265	100	10.71	33.41	25.611	238.6	0.271										
125	9.97	33.60	25.886	212.4	0.322	125	9.69	33.56	25.901	211.0	0.327										
150	9.11	33.78	26.167	185.7	0.373	150	9.43	33.71	26.061	195.8	0.379										
175	8.63	33.91	26.344	168.9	0.418	175	8.81	33.87	26.285	174.5	0.426										
200	8.29	33.97	26.443	159.5	0.460	200	8.32	33.95	26.423	161.4	0.469										
225	7.91	33.99	26.518	152.6	0.500	225	7.98	33.98	26.497	154.3	0.509										
250	7.60	34.03	26.592	145.3	0.538	250	7.70	34.00	26.554	148.9	0.548										
275	7.23	34.05	26.660	138.6	0.575	275	7.45	34.02	26.606	144.0	0.584										
300	7.02	34.09	26.721	133.1	0.610	300	6.95	34.00	26.660	138.9	0.622										
350	6.87	34.17	26.804	125.2	0.677	350	6.58	34.06	26.757	129.7	0.692										
400	6.56	34.21	26.877	118.2	0.740	400	6.07	34.10	26.855	120.4	0.757										
450	6.13	34.23	26.949	111.4	0.801	450	5.80	34.16	26.936	112.7	0.818										
500	5.84	34.25	27.002	106.4	0.858	500	5.49	34.19	26.998	106.6	0.876										
550	5.60	34.27	27.047	102.1	0.914	550	5.25	34.22	27.050	101.9	0.931										
600	5.34	34.30	27.103	96.9	0.967	600	4.97	34.27	27.122	95.0	0.984										
700	4.95	34.38	27.211	86.6	1.066	700	4.68	34.35	27.218	85.4	1.081										
800	4.60	34.42	27.282	79.8	1.158	800	4.37	34.40	27.292	79.0	1.171										
900	4.25	34.45	27.344	74.0	1.243	900	4.12	34.44	27.350	73.4	1.256										
1000	3.97	34.48	27.397	68.9	1.324	1000	3.89	34.45	27.382	70.4	1.336										

LATITUDE		LONGITUDE		MO/DAY/YR		START TIME			LATITUDE		LONGITUDE		MO/DAY/YR		START TIME						
32 35.0N		122 46.0W		03/ 5/75		0411 GMT			34 02.5N		118 58.5W		03/ 8/75		0137 GMT						
BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES			BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES		
3926M		150		12KT		6		240 4 6			320		100		11KT		5		49		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD										
0	13.97	33.37	24.956	300.9	0.000	0	13.50	33.51	25.160	281.4	0.000										
10	13.96	33.37	24.958	300.7	0.030	10	13.50	33.51	25.160	281.4	0.028										
20	12.97	33.37	24.956	300.9	0.060	20	13.50	33.53	25.175	280.0	0.056										
30	12.95	33.37	24.960	300.5	0.090	35	13.50	33.53	25.175	280.0	0.070										
40	12.81	33.36	24.981	298.5	0.120																
50	12.70	33.37	25.011	295.6	0.150																
75	12.30	33.31	25.046	292.4	0.224																
100	12.44	33.19	25.122	285.1	0.296																
125	11.76	33.26	25.305	267.7	0.366																
150	10.51	33.42	25.653	234.5	0.450																
175	9.68	33.52	25.954	205.9	0.486																
200	8.99	33.83	26.225	180.2	0.535																
225	8.50	33.93	26.380	165.5	0.579																
250	8.13	33.96	26.459	157.9	0.620																
275	7.78	33.97	26.519	152.3	0.660																
300	7.30	33.99	26.603	144.3	0.698																
350	6.79	34.02	26.697	135.3	0.771																
400	6.39	34.09	26.805	125.1	0.839																
450	5.94	34.12	26.887	117.4	0.902																
500	5.71	34.18	26.963	110.2	0.962																
550	5.45	34.20	27.010	105.6	1.019																
600	5.15	34.24	27.077	99.3	1.074																
700	4.69	34.31	27.185	89.0	1.175																
800	4.39	34.38	27.274	80.7	1.268																
900	4.09	34.43	27.345	73.9	1.353																
1000	3.82	34.46	27.397	69.0	1.433																

85037<sup>5</sup> RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 02.0N	118 59.5W	03/ 8/75	0052 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
52M	120	12KT	5	49	
Z	T	S	SIGMA T	DT	DD
0	13.49	33.53	25.177	279.8	0.000
10	13.49	33.53	25.177	279.8	0.027
20	13.49	33.54	25.185	279.1	0.055
30	13.48	33.54	25.187	278.9	0.083

CALCIFI CRUISE 7503 85038

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
34 01.0N	119 02.5W	03/ 7/75	2331 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
22M	120	14KT	6	130 12 16	
Z	T	S	SIGMA T	DT	DD
0	13.34	33.54	25.215	276.2	0.000
10	13.34	33.56	25.231	274.7	0.027
20	13.32	33.57	25.242	273.6	0.055
30	13.28	33.57	25.251	272.8	0.082
40	12.63	33.60	25.402	258.4	0.109
50	12.25	33.63	25.499	249.2	0.134
75	10.84	33.73	25.836	217.1	0.193
100	10.28	33.82	26.004	201.2	0.245
125	9.90	33.91	26.139	188.4	0.295
150	9.33	34.05	26.342	169.0	0.340
175	9.18	34.11	26.413	162.3	0.382

85039 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 59.0N	119 06.5W	03/ 7/75	2132 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
667M	130	15KT	6	230 8 8	
Z	T	S	SIGMA T	DT	DD
0	13.29	33.58	25.256	272.3	0.000
10	13.30	33.58	25.254	272.5	0.027
20	13.24	33.58	25.266	271.3	0.054
30	13.06	33.57	25.295	268.6	0.081
40	12.67	33.58	25.379	260.6	0.108
50	11.21	33.62	25.685	231.5	0.132
75	10.54	33.74	25.897	211.3	0.188
100	9.95	33.89	26.115	190.6	0.239
125	9.55	34.01	26.275	175.4	0.285
150	9.37	34.06	26.343	168.9	0.329
175	9.26	34.11	26.400	163.5	0.371
200	8.94	34.16	26.491	154.9	0.412
225	8.72	34.19	26.549	149.4	0.451
250	8.42	34.21	26.611	143.5	0.489
275	8.20	34.21	26.645	140.3	0.525
300	8.04	34.22	26.676	137.3	0.561
350	7.72	34.25	26.747	130.6	0.631
400	7.14	34.24	26.822	123.5	0.699
450	6.78	34.26	26.887	117.3	0.761
500	6.45	34.28	26.947	111.6	0.827
550	6.20	34.28	26.980	108.5	0.851
600	5.82	34.32	27.060	101.0	0.937

CALCIFI CRUISE 7503 85040

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 57.0N	119 10.5W	03/ 7/75	2002 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
761M	130	14KT	2	240 8-10	
Z	T	S	SIGMA T	DT	DD
0	13.02	33.61	25.333	264.9	0.000
10	13.01	33.61	25.335	264.7	0.026
20	12.98	33.61	25.341	264.2	0.052
30	12.52	33.54	25.377	260.8	0.079
40	11.56	33.61	25.613	238.3	0.104
50	11.34	33.64	25.676	232.3	0.127
75	10.63	33.74	25.899	211.2	0.183
100	9.90	33.92	26.146	187.6	0.234
125	9.61	34.02	26.273	175.4	0.280
150	9.08	34.06	26.390	164.5	0.323
175	8.94	34.12	26.460	157.9	0.364
200	8.64	34.16	26.538	150.5	0.403
213	8.55	34.17	26.560	148.4	0.423

87032<sup>5</sup> RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 55.5N	118 26.5W	03/ 8/75	0514 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
19M	100	7KT	6		
Z	T	S	SIGMA T	DT	DD
0	13.68	33.42	25.054	291.5	0.000
10	13.69	33.55	25.152	282.2	0.028
16	13.65	33.55	25.160	281.4	0.045

CALCIFI CRUISE 7503 87032<sup>f</sup>

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 54.5N	118 28.0W	03/ 8/75	0632 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
30M	110	8KT	6		
Z	T	S	SIGMA T	DT	DD
0	13.72	33.51	25.115	285.7	0.000
10	13.70	33.53	25.134	283.9	0.028
20	13.58	33.55	25.174	280.1	0.056
25	13.54	33.56	25.190	278.6	0.070

87033 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 54.0N	118 29.0W	03/ 8/75	0814 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
47M	160	4KT	6		
Z	T	S	SIGMA T	DT	DD
0	13.70	33.50	25.111	286.1	0.000
10	13.69	33.50	25.113	285.9	0.028
20	13.64	33.55	25.162	281.2	0.057
30	13.14	33.55	25.263	271.6	0.084
40	12.98	33.54	25.287	269.3	0.111

CALCIFI CRUISE 7503 87034

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 52.0N	118 33.5W	03/ 8/75	1002 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
74M	210	6KT	6		
Z	T	S	SIGMA T	DT	DD
0	13.51	33.52	25.165	280.9	0.000
10	13.51	33.52	25.165	280.9	0.028
20	13.39	33.55	25.213	276.4	0.056
30	12.91	33.51	25.278	270.2	0.083
40	12.13	33.56	25.466	252.2	0.109
50	11.45	33.60	25.625	237.2	0.134
64	10.77	33.69	25.818	218.9	0.166

87035 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 50.0N	118 37.5W	03/18/75	1137 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
462M	200	8KT	2		
Z	T	S	SIGMA T	DT	DD
0	17.87	33.54	25.309	267.3	0.000
10	17.87	33.55	25.317	266.5	0.026
20	17.96	33.57	25.507	248.4	0.052
30	11.46	33.60	25.624	237.3	0.076
40	10.99	33.62	25.724	227.8	0.100
50	10.72	33.67	25.811	219.5	0.122
75	10.26	33.78	25.976	203.8	0.175
100	9.81	33.87	26.123	189.9	0.225
125	9.41	33.97	26.267	176.2	0.271
150	9.18	34.05	26.366	166.7	0.315
175	8.96	34.10	26.441	159.7	0.357
200	8.75	34.15	26.513	152.8	0.397
225	8.70	34.18	26.544	149.9	0.435
250	8.41	34.18	26.589	145.6	0.473
275	8.12	34.20	26.649	139.9	0.510
300	7.82	34.21	26.701	135.0	0.546
350	7.45	34.22	26.763	129.1	0.615
400	7.09	34.23	26.821	123.6	0.681
430	6.99	34.24	26.843	121.5	0.720

CAITHEI CRUISE 7503 87036

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 47.0N	118 43.5W	03/ 8/75	1353 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
425M	200	5KT	2		
Z	T	S	SIGMA T	DT	DD
0	13.37	33.48	25.163	281.1	0.000
10	13.29	33.54	25.225	275.2	0.027
20	12.85	33.55	25.321	266.2	0.054
30	12.69	33.56	25.360	262.4	0.081
40	12.39	33.56	25.418	256.9	0.107
50	11.97	33.57	25.506	248.6	0.132
75	10.69	33.67	25.816	219.0	0.191
100	10.15	33.78	25.995	202.0	0.244
125	9.46	33.91	26.212	181.4	0.293
150	9.26	34.01	26.326	170.6	0.338
175	8.97	34.08	26.423	161.3	0.380
200	8.72	34.11	26.486	155.4	0.420
225	8.56	34.16	26.550	149.3	0.459
250	8.52	34.15	26.579	146.5	0.497
275	8.06	34.17	26.634	141.3	0.535
300	7.90	34.20	26.682	136.8	0.571
350	7.36	34.22	26.775	127.9	0.639
400	6.84	34.23	26.855	120.3	0.704
450	6.47	34.25	26.921	114.1	0.766
500	6.23	34.26	26.960	110.4	0.826
550	5.97	34.29	27.017	105.0	0.883
600	5.76	34.32	27.067	100.7	0.938
700	5.29	34.36	27.156	91.8	1.042
800	5.12	34.38	27.192	88.5	1.141
900	5.01	34.40	27.220	85.7	1.238

87040 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 40.0N	118 58.0W	03/08/75	1116 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
870M	210	5KT	6	270 10 12	
Z	T	S	SIGMA T	DT	DD
0	12.54	33.55	25.182	279.3	0.000
10	12.53	33.55	25.184	279.1	0.027
20	12.36	33.55	25.219	275.8	0.055
30	12.92	33.55	25.307	267.5	0.082
40	12.12	33.58	25.485	250.5	0.108
50	11.58	33.60	25.601	239.4	0.133
75	10.81	33.67	25.795	221.0	0.191
100	9.97	33.78	26.026	199.1	0.244
125	9.37	33.90	26.219	180.8	0.292
150	9.02	34.02	26.369	166.9	0.346
175	8.88	34.06	26.422	161.4	0.378
200	8.61	34.10	26.496	154.5	0.418
225	8.21	34.14	26.588	145.7	0.457
250	8.04	34.16	26.629	141.8	0.494
275	7.80	34.18	26.681	136.9	0.530
300	7.65	34.19	26.710	134.1	0.565
350	7.18	34.21	26.793	126.3	0.633
400	6.80	34.23	26.861	119.8	0.697
450	6.53	34.26	26.921	114.1	0.759
500	6.25	34.28	26.973	109.1	0.818
550	5.97	34.31	27.033	103.5	0.875
600	5.64	34.34	27.098	97.4	0.928
700	5.29	34.38	27.172	90.3	1.030
800	5.09	34.39	27.203	87.4	1.128

CAITHEI CRUISE 7503 87045

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 30.0N	119 19.0W	03/08/75	2122 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
1664M	290	12KT	6	290 8 10	
Z	T	S	SIGMA T	DT	DD
0	12.50	33.58	25.412	257.4	0.000
10	12.46	33.58	25.420	256.7	0.025
20	12.40	33.59	25.439	254.9	0.051
30	12.38	33.59	25.443	254.5	0.076
40	11.18	33.63	25.698	230.3	0.101
50	10.54	33.68	25.850	215.8	0.123
75	9.49	33.81	26.129	189.3	0.174
100	9.19	33.94	26.279	175.0	0.220
125	8.89	34.03	26.397	163.8	0.263
150	8.64	34.09	26.483	155.6	0.304
175	8.46	34.10	26.519	152.3	0.343
200	8.13	34.11	26.577	146.8	0.381
225	7.94	34.14	26.621	142.5	0.418
250	7.71	34.14	26.662	138.7	0.454
275	7.57	34.16	26.698	135.2	0.490
300	7.41	34.18	26.737	131.6	0.524
350	7.03	34.22	26.822	123.5	0.591
400	6.73	34.25	26.886	117.4	0.654
450	6.51	34.27	26.931	113.1	0.716
500	6.12	34.29	26.998	106.8	0.773
550	5.87	34.32	27.053	101.6	0.828
600	5.58	34.35	27.113	95.9	0.881
700	5.33	34.37	27.159	91.5	0.983
800	4.79	34.41	27.253	82.6	1.079
900	4.42	34.44	27.318	76.4	1.167
1000	4.26	34.46	27.351	73.3	1.251



87050			RV DAVID STARR JORDAN			CALCOFI CRUISE 7503			87060		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
33 20.0N	119 39.5W	03/09/75	0042 GMT	33 00.0N	120 21.5W	03/09/75	0701 GMT				
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
71M	290	11KT	1	290 8 11	929M	330	14KT				
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	12.54	33.58	25.404	258.2	0.000	0	12.66	33.49	25.272	270.8	0.000
10	12.54	33.58	25.404	258.2	0.025	10	12.66	33.49	25.272	270.8	0.027
20	12.53	33.58	25.406	258.0	0.051	20	12.66	33.49	25.272	270.8	0.054
30	11.78	33.59	25.557	243.7	0.076	30	12.66	33.50	25.319	266.3	0.081
40	10.79	33.61	25.752	225.1	0.100	40	12.03	33.51	25.448	254.0	0.107
50	10.18	33.65	25.889	212.1	0.122	50	11.92	33.54	25.492	249.9	0.132
61	9.84	33.77	26.040	197.8	0.144	75	11.71	33.55	25.539	245.4	0.194
						100	11.27	33.60	25.658	236.1	0.259
						125	10.00	33.70	25.958	205.5	0.310
						150	9.54	33.86	26.160	186.4	0.360
						175	9.21	33.98	26.307	172.4	0.408
						200	8.85	34.05	26.419	161.7	0.448
						225	8.61	34.10	26.496	154.5	0.488
						250	8.26	34.13	26.573	147.1	0.528
						275	7.90	34.15	26.642	140.6	0.565
						300	7.71	34.17	26.686	136.4	0.601
						350	7.11	34.21	26.803	125.3	0.674
						400	6.75	34.22	26.860	119.9	0.733
						450	6.43	34.25	26.926	113.6	0.794
						500	6.01	34.28	27.004	106.2	0.863
						550	5.72	34.30	27.056	101.3	0.908
						600	5.54	34.31	27.086	98.4	0.961
						700	5.08	34.37	27.188	88.8	1.068
						800	4.71	34.40	27.254	82.5	1.157
						850	4.50	34.43	27.301	78.0	1.201

RV DAVID STARR JORDAN			CALCOFI CRUISE 7503			87060									
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES							
33 00.0N	120 21.5W	3/ 9/75	0806 GMT	929M	330	14KT									
Z	T	S	U2	U4	S103	M02	M03	DT	Z	T	S	U2	SIGT	DT	DD
2	12.81	33.500	6.29					269.1	0	12.81	33.500	6.29	25.290	269.1	0.000
12	12.81	33.498	6.20					269.2	10	12.81	33.500	6.21	25.289	269.2	0.026
31	12.77	33.508	6.25					267.7	20	12.79	33.503	6.22	25.295	268.6	0.053
55	11.95	33.552	5.84					249.5	30	12.77	33.509	6.24	25.303	267.8	0.080
69	11.81	33.546	5.78					247.5	50	12.12	33.545	5.93	25.456	253.3	0.133
84	11.69	33.596	5.86					241.7	75	11.77	33.566	5.81	25.538	245.5	0.195
98	11.31	33.610	5.42					234.0	100	11.20	33.619	5.29	25.683	231.6	0.255
127	9.89	33.779	3.63					197.9	125	9.98	33.765	3.75	26.011	200.5	0.310
151	9.48	33.916	3.20					181.3	150	9.48	33.912	3.20	26.208	181.8	0.359
175	9.14	34.025	2.80					168.0	200	8.82	34.071	2.55	26.439	159.9	0.446
208	8.73	34.077	2.49					158.0	250	8.33	34.133	2.01	26.563	148.0	0.525
271	8.15	34.155	1.77					143.7	300	7.80	34.179	1.48	26.679	137.1	0.598
365	7.07	34.218	0.97					124.2	400	6.82	34.234	0.81	26.861	119.8	0.733
460	6.46	34.256	0.63					113.5	500	6.14	34.275	0.50	26.983	108.2	0.853
559	5.70	34.305	0.38					100.7	600	5.50	34.326	0.41	27.103	96.8	0.963
682	5.19	34.364	0.48					90.4	700	5.11	34.372	0.49	27.185	89.1	1.063
830	4.64	34.417	0.60					80.5	800	4.74	34.408	0.57	27.257	82.3	1.157

87070			RV DAVID STARR JORDAN			CALCOFI CRUISE 7503			87080		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
32 39.5N	121 02.0W	03/09/75	1512 GMT	32 19.0N	121 44.0W	03/09/75	1843 GMT				
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
602M	320	12KT	1		611M	320	11KT	1			
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	12.95	33.50	25.262	271.5	0.000	0	13.67	33.34	24.994	257.2	0.000
10	12.95	33.50	25.262	271.7	0.027	10	13.07	33.34	24.994	247.2	0.029
20	12.95	33.50	25.262	271.7	0.054	20	13.05	33.34	24.998	246.8	0.059
30	12.83	33.50	25.288	269.4	0.081	30	13.58	33.30	25.013	245.5	0.089
40	12.51	33.51	25.356	262.8	0.108	40	12.97	33.35	25.143	243.1	0.118
50	12.26	33.51	25.404	258.2	0.134	50	12.53	33.40	25.267	241.2	0.146
75	11.31	33.51	25.581	241.6	0.192	75	11.98	33.44	25.403	238.3	0.212
100	9.81	33.51	25.842	218.7	0.254	100	10.55	33.49	25.701	230.0	0.274
125	8.80	33.80	26.070	194.0	0.306	125	9.60	33.63	26.003	201.2	0.328
150	8.32	33.88	26.211	181.5	0.354	150	8.85	33.61	26.232	179.6	0.376
175	8.29	33.96	26.278	175.1	0.400	175	8.47	33.91	26.369	166.5	0.420
200	8.40	33.94	26.403	163.3	0.443	200	8.21	33.47	26.455	158.3	0.462
225	8.11	34.02	26.509	153.2	0.483	225	7.85	33.98	26.546	144.7	0.501
250	7.73	34.04	26.581	144.4	0.522	250	7.31	34.00	26.610	143.6	0.539
275	7.53	34.05	26.618	142.9	0.559	275	7.00	34.02	26.664	138.1	0.575
300	7.29	34.09	26.683	136.7	0.595	300	6.75	34.05	26.726	132.6	0.610
350	6.87	34.15	26.788	126.7	0.663	350	6.64	34.08	26.791	126.4	0.677
400	6.36	34.17	26.872	118.7	0.727	400	6.19	34.15	26.879	118.1	0.741
450	6.01	34.21	26.949	111.5	0.788	450	6.06	34.19	26.952	111.2	0.801
500	5.81	34.26	26.998	106.8	0.846	500	5.55	34.22	27.014	105.3	0.858
550	5.58	34.28	27.058	101.1	0.901	550	5.39	34.25	27.057	101.2	0.913
600	5.30	34.31	27.115	95.7	0.954	600	5.17	34.29	27.115	95.7	0.966
700	6.85	34.37	27.210	86.7	1.052	700	4.76	34.37	27.225	85.3	1.063
800	6.52	34.41	27.283	79.7	1.144	800	4.51	34.41	27.284	74.6	1.154
900	4.18	34.44	27.344	74.0	1.229	900	4.10	34.45	27.360	72.5	1.238
1000	3.93	34.47	27.394	69.3	1.309	1000	3.83	34.48	27.412	67.6	1.317

87000      RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DY/YR	START TIME		
31 59.00	127 23.50	03/19/75	2351 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
62128	320	11KT	1	310 8 7	
Z	T	S	SIGMA T	DT	DD
1	12.67	33.32	24.979	298.7	0.000
10	12.60	33.32	24.981	298.5	0.029
20	12.47	33.31	25.012	295.6	0.059
30	12.30	33.29	25.031	293.8	0.089
40	12.18	33.27	25.118	285.4	0.118
50	12.03	33.28	25.155	281.9	0.146
75	12.10	33.45	25.388	259.7	0.214
100	10.82	33.48	25.646	235.2	0.277
125	9.81	33.60	25.912	209.9	0.333
150	9.19	33.75	26.131	189.1	0.383
175	8.71	33.85	26.285	174.5	0.430
200	8.28	33.92	26.405	163.1	0.473
225	7.90	33.97	26.501	153.0	0.513
250	7.57	33.97	26.549	149.4	0.552
275	7.24	33.98	26.604	144.2	0.590
300	6.97	34.02	26.673	137.7	0.626
350	6.62	34.09	26.775	128.0	0.695
400	6.33	34.13	26.845	121.3	0.760
450	6.06	34.15	26.908	115.3	0.822
500	5.81	34.19	26.983	108.2	0.881
550	5.58	34.24	27.062	100.7	0.936
600	5.02	34.27	27.116	95.6	0.989
700	4.71	34.34	27.207	87.0	1.087
800	4.43	34.39	27.277	80.3	1.179
900	4.04	34.43	27.350	73.4	1.264
1000	3.80	34.47	27.407	68.0	1.343

5 4  
88030      LAUREL CRUISE 7503

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 41.5N	118 07.0W	03/12/75	2135 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
198	160	8KT	1	140 2 6	
Z	T	S	SIGMA T	DT	DD
0	14.00	33.12	24.757	319.8	0.000
5	13.98	33.12	24.761	319.4	0.015
10	13.69	33.33	24.982	298.3	0.031
13	13.55	33.51	25.150	282.4	0.040

5 88031      RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DY/YR	START TIME		
33 40.50	118 09.50	03/12/75	2030 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
298	150	8KT	1	160 2 6	
Z	T	S	SIGMA T	DT	DD
0	12.90	33.13	24.785	317.1	0.000
10	12.68	33.31	24.949	299.6	0.030
20	12.17	33.54	25.249	272.9	0.059

5 88032      LAUREL CRUISE 7503

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 36.50	118 13.50	03/11/75	1910 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
390	360	8KT	2	280 4 13	
Z	T	S	SIGMA T	DT	DD
0	12.53	33.51	25.154	282.0	0.000
10	12.28	33.52	25.212	276.5	0.027
20	12.73	33.55	25.344	263.9	0.055
25	12.60	33.55	25.369	261.5	0.068

5 88033      RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DY/YR	START TIME		
33 36.00	118 17.50	03/11/75	1520 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
2428	030	8KT	0	270 8 13	
Z	T	S	SIGMA T	DT	DD
0	12.48	33.51	25.164	281.1	0.000
10	12.48	33.51	25.164	281.1	0.028
20	12.40	33.51	25.166	280.7	0.056
30	12.29	33.53	25.217	276.0	0.086
40	12.03	33.57	25.360	264.3	0.111
50	12.00	33.50	25.492	258.8	0.137
75	11.05	33.81	25.705	229.2	0.197
100	10.25	33.78	25.978	203.6	0.251
125	9.84	33.51	26.165	187.4	0.301
150	9.54	34.01	26.277	175.3	0.347
175	9.19	34.09	26.404	163.2	0.390
200	8.93	34.13	26.459	157.0	0.431
210	8.87	34.15	26.494	154.6	0.457

5 88034      LAUREL CRUISE 7503

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
33 24.00	118 22.00	03/11/75	1525 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
4028	310	8KT	1	270 0 24	
Z	T	S	SIGMA T	DT	DD
0	12.58	33.53	25.157	281.7	0.000
10	12.58	33.53	25.159	281.5	0.028
20	12.50	33.54	25.165	281.0	0.056
30	12.39	33.51	25.187	281.7	0.086
40	12.02	33.53	25.171	280.4	0.112
50	12.42	33.53	25.291	268.9	0.140
75	11.01	33.85	25.744	225.9	0.202
100	10.25	33.51	25.995	202.1	0.256
125	9.76	33.93	26.178	184.7	0.305
150	9.53	34.04	26.302	172.9	0.350
175	9.21	34.13	26.424	161.5	0.393
200	8.95	34.15	26.481	155.8	0.434
225	8.58	34.17	26.539	150.3	0.473
250	8.38	34.20	26.594	145.1	0.511
275	8.24	34.22	26.646	140.2	0.548
300	8.00	34.22	26.682	136.8	0.586
350	7.20	34.24	26.755	129.8	0.653
400	7.00	34.23	26.821	123.6	0.719
450	6.74	34.24	26.877	118.3	0.783
500	6.41	34.26	26.952	111.1	0.844

90027 <sup>6</sup>			RV DAVID STARR JORDAN			CALCOFI CRUISE 7503			90028		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
33 29.5N	117 45.5W	03/13/75	0035 GMT	33 28.5N	117 46.5W	03/13/75	0330 GMT				
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
39M	240	5KT	1	250 2 11	371M	220	3KT				
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	14.00	33.40	24.972	299.3	0.000	0	13.85	33.49	25.073	289.7	0.000
10	15.93	33.41	24.995	297.2	0.029	10	13.74	33.51	25.111	286.1	0.028
20	15.75	33.45	25.063	290.7	0.059	20	13.67	33.51	25.125	284.8	0.057
25	12.54	33.51	25.152	282.2	0.079	30	13.16	33.54	25.251	272.7	0.085
						40	12.71	33.53	25.332	265.0	0.112
						50	11.57	33.55	25.565	247.4	0.137
						75	11.04	33.68	25.762	224.2	0.196
						100	10.37	33.80	25.983	203.1	0.250
						125	9.66	33.93	26.161	186.3	0.299
						150	9.52	34.05	26.311	172.0	0.345
						175	9.25	34.10	26.394	164.1	0.388
						200	8.91	34.13	26.472	156.7	0.429
						225	8.76	34.16	26.519	152.2	0.468
						250	8.49	34.18	26.577	146.8	0.507
						275	8.22	34.20	26.634	141.4	0.544
						300	8.07	34.21	26.664	138.5	0.580
						326	7.97	34.21	26.679	137.1	0.615

90029			RV DAVID STARR JORDAN			CALCOFI CRUISE 7503			90030		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
33 27.0N	117 49.5W	03/13/75	0551 GMT	33 25.0N	117 53.5W	03/13/75	0742 GMT				
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
648M	240	5KT			648M	200	4KT				
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	14.03	33.48	25.028	294.0	0.000	0	13.85	33.49	25.073	289.7	0.000
10	13.85	33.48	25.065	290.5	0.029	10	13.85	33.50	25.081	289.0	0.028
20	13.65	33.48	25.106	286.6	0.058	20	13.41	33.51	25.178	279.7	0.057
30	12.39	33.53	25.198	277.9	0.086	30	12.54	33.52	25.358	262.6	0.084
40	12.29	33.54	25.422	256.5	0.114	40	11.83	33.54	25.509	248.3	0.110
50	11.52	33.60	25.613	238.4	0.138	50	11.32	33.56	25.618	237.9	0.134
75	10.65	33.72	25.862	214.7	0.195	75	10.27	33.64	25.866	214.3	0.191
100	10.04	33.81	26.037	198.0	0.247	100	9.90	33.80	26.053	196.5	0.243
125	9.69	33.96	26.213	181.3	0.295	125	9.75	33.94	26.187	183.8	0.291
150	9.41	34.03	26.314	171.8	0.339	150	9.37	34.03	26.320	171.2	0.336
175	9.14	34.11	26.420	161.7	0.382	175	9.03	34.09	26.422	161.5	0.378
200	8.95	34.16	26.489	155.1	0.422	200	8.78	34.14	26.500	154.0	0.419
225	8.67	34.18	26.549	149.4	0.462	225	8.47	34.17	26.572	147.2	0.457
250	8.27	34.19	26.618	142.8	0.499	250	8.40	34.20	26.606	144.0	0.495
275	8.06	34.21	26.663	138.6	0.536	275	8.21	34.21	26.643	140.5	0.532
300	7.93	34.22	26.693	135.8	0.571	300	8.01	34.24	26.696	135.4	0.567
350	7.55	34.23	26.756	129.7	0.600	350	7.55	34.25	26.772	128.3	0.636
400	7.30	34.24	26.800	125.6	0.617	400	7.10	34.25	26.835	122.2	0.702
450	6.85	34.24	26.838	118.2	0.671	450	6.76	34.27	26.898	116.3	0.765
500	6.45	34.28	26.947	111.6	0.712	500	6.38	34.27	26.948	111.5	0.825
550	6.05	34.28	26.999	106.7	0.891	550	6.06	34.27	26.990	107.6	0.883
600	5.74	34.31	27.062	100.8	0.948	600	5.80	34.30	27.046	102.2	0.940

90031			RV DAVID STARR JORDAN			CALCOFI CRUISE 7503			90032		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
33 23.0N	117 57.5W	03/13/75	0945 GMT	33 20.0N	118 03.0W	03/13/75	1142 GMT				
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
454M	200	4KT			450M	140	4KT				
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	13.79	33.54	25.124	284.9	0.000	0	13.88	33.57	25.128	284.5	0.000
10	13.79	33.54	25.124	284.9	0.028	10	13.88	33.57	25.128	284.5	0.028
20	13.59	33.56	25.180	279.5	0.056	20	13.73	33.55	25.144	283.0	0.056
30	12.97	33.56	25.305	267.7	0.084	30	12.78	33.54	25.327	265.6	0.084
40	12.60	33.56	25.377	260.8	0.110	40	12.27	33.53	25.418	256.9	0.110
50	12.22	33.57	25.458	253.1	0.136	50	11.53	33.53	25.556	243.7	0.135
75	10.65	33.69	25.839	216.9	0.195	75	10.82	33.60	25.739	226.4	0.194
100	10.11	33.80	26.017	199.9	0.248	100	10.24	33.75	25.956	205.7	0.249
125	9.81	33.90	26.146	187.7	0.297	125	9.93	33.91	26.134	188.9	0.299
150	9.47	34.01	26.288	174.2	0.343	150	9.57	33.98	26.248	178.0	0.345
175	9.22	34.07	26.376	165.9	0.388	175	9.29	34.05	26.349	168.4	0.389
200	8.78	34.10	26.469	157.0	0.427	200	8.78	34.05	26.430	160.7	0.431
225	8.53	34.12	26.524	151.8	0.467	225	8.42	34.08	26.509	153.2	0.472
250	8.52	34.17	26.564	148.0	0.505	250	8.30	34.13	26.567	147.7	0.510
275	8.35	34.18	26.598	144.7	0.543	275	8.02	34.19	26.656	139.3	0.547
300	7.95	34.20	26.674	137.5	0.580	300	7.92	34.21	26.686	136.4	0.583
350	7.47	34.23	26.768	128.7	0.649	350	7.41	34.20	26.753	130.1	0.652
400	7.09	34.26	26.845	121.3	0.715	400	7.10	34.25	26.835	122.2	0.719
						450	6.60	34.27	26.919	114.3	0.781
						500	6.25	34.26	26.958	110.6	0.841
						550	5.92	34.29	27.023	104.4	0.898
						600	5.66	34.31	27.072	99.8	0.953
						700	5.21	34.36	27.165	91.0	1.056

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES							
33 11.0N	118 22.5W	3/11/75	1155 GMT	1202M	290	14KT									
Z	T	S	U2	PD4	SI03	NO2	NO3	DT	Z	T	S	U2	SIGT	DT	DD
1	13.74	33.546	6.13					283.5	0	13.74	33.546	6.13	25.138	283.5	0.000
11	13.75	33.551	5.99					283.3	10	13.74	33.551	6.00	25.140	283.3	0.028
30	13.70	33.554	5.95					282.1	20	13.72	33.554	5.97	25.146	282.7	0.056
59	10.97	33.607	4.13					228.4	30	13.70	33.554	5.95	25.153	282.1	0.085
77	10.44	33.675	3.83					214.5	50	11.86	33.576	4.72	25.529	246.3	0.138
92	10.11	33.728	3.63					205.2	75	10.47	33.668	3.84	25.852	215.6	0.196
106	9.79	33.810	3.43					194.0	100	9.92	33.775	3.51	26.029	198.8	0.248
135	9.47	33.929	3.04					180.2	125	9.54	33.892	3.16	26.182	184.2	0.296
158	9.27	34.035	2.78					169.2	150	9.33	34.001	2.87	26.302	172.9	0.342
188	8.97	34.108	2.37					159.2	200	8.86	34.128	2.21	26.477	156.2	0.426
221	8.68	34.154	1.95					151.5	250	8.39	34.194	1.60	26.602	144.3	0.503
292	7.95	34.237	1.19					134.8	300	7.86	34.239	1.14	26.717	133.5	0.575
393	6.89	34.232	0.85					120.8	400	6.82	34.234	0.81	26.861	119.8	0.707
497	6.07	34.277	0.44					107.2	500	6.05	34.278	0.43	26.997	106.9	0.827
602	5.54	34.319	0.29					97.8	600	5.54	34.318	0.29	27.092	97.9	0.936
734	5.02	34.379	0.26					87.4	700	5.14	34.364	0.26	27.176	89.9	1.038
886	4.51	34.435	0.33					77.8	800	4.78	34.406	0.28	27.251	82.8	1.133
1050	4.15	34.465	0.37					71.8	1000	4.23	34.460	0.36	27.353	73.2	1.307

90037		RV DAVID STARR JORDAN				CALCIFI CRUISE 7503				90045	
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
33 11.0N	118 22.5W	03/11/75	1037 GMT	32 55.0N	118 56.0W	03/11/75	0600 GMT				
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
1202M	290	14KT			1750M	310	12KT				
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	13.73	33.54	25.136	283.7	0.000	0	13.67	33.56	25.164	281.1	0.000
10	13.73	33.54	25.136	283.7	0.028	10	13.67	33.56	25.164	281.1	0.028
20	13.74	33.54	25.134	283.9	0.056	20	13.57	33.55	25.176	279.9	0.056
30	13.69	33.52	25.129	284.4	0.085	30	13.27	33.55	25.247	273.1	0.083
40	12.22	33.51	25.412	257.5	0.112	40	12.52	33.55	25.385	260.0	0.110
50	11.16	33.54	25.632	234.6	0.137	50	11.74	33.53	25.518	247.4	0.136
75	10.48	33.64	25.830	217.8	0.194	75	10.50	33.67	25.849	215.9	0.194
100	9.92	33.76	26.019	199.8	0.247	100	10.00	33.77	26.013	200.3	0.246
125	9.57	33.88	26.170	185.4	0.295	125	9.50	33.94	26.229	179.8	0.295
150	9.38	34.01	26.303	172.8	0.341	150	9.09	34.00	26.342	169.1	0.339
175	9.07	34.09	26.415	162.1	0.383	175	8.88	34.06	26.422	161.4	0.381
200	8.80	34.14	26.497	154.3	0.424	200	8.56	34.08	26.488	155.2	0.421
225	8.47	34.16	26.564	148.0	0.463	225	8.30	34.13	26.567	147.7	0.460
250	8.24	34.18	26.615	143.1	0.500	250	8.10	34.14	26.605	144.1	0.498
275	8.20	34.23	26.660	138.4	0.537	275	7.64	34.16	26.688	136.2	0.534
300	7.94	34.24	26.707	134.4	0.572	300	7.43	34.17	26.726	132.6	0.569
350	7.48	34.24	26.774	126.1	0.640	350	6.94	34.19	26.810	124.6	0.636
400	6.77	34.24	26.873	118.7	0.705	400	6.58	34.23	26.891	117.0	0.699
450	6.39	34.26	26.934	112.6	0.766	450	6.29	34.26	26.952	111.1	0.759
500	5.97	34.28	27.009	105.7	0.824	500	5.99	34.29	27.014	105.2	0.816
550	5.68	34.30	27.061	100.8	0.879	550	5.69	34.31	27.068	100.2	0.871
600	5.49	34.37	27.100	97.1	0.932	600	5.46	34.34	27.120	95.3	0.923
700	5.11	34.37	27.185	89.1	1.033	700	5.03	34.38	27.202	87.4	1.023
800	4.79	34.40	27.245	83.3	1.127	800	4.68	34.42	27.273	80.7	1.115
900	4.41	34.44	27.319	76.4	1.216	900	4.44	34.44	27.316	76.7	1.202
1000	4.22	34.46	27.355	72.9	1.300	1000	4.16	34.47	27.370	71.6	1.286

90053		RV DAVID STARR JORDAN				CALCIFI CRUISE 7503				90060	
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
32 39.0N	119 28.5W	03/11/75	0133 GMT	32 25.0N	119 57.5W	03/10/75	2101 GMT				
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
1295M	290	14KT	1	290 6 7	892M	290	13KT	6	290 6 8		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	12.58	33.55	25.373	261.1	0.000	0	12.72	33.52	25.323	265.9	0.000
10	12.58	33.55	25.373	261.1	0.026	10	12.72	33.52	25.323	265.9	0.026
20	12.41	33.55	25.406	258.0	0.052	20	12.67	33.53	25.340	264.3	0.053
30	11.86	33.53	25.495	249.5	0.077	30	12.43	33.54	25.395	259.1	0.079
40	11.55	33.54	25.561	243.3	0.102	40	11.61	33.56	25.565	242.9	0.104
50	11.34	33.56	25.615	238.2	0.126	50	11.27	33.59	25.651	234.8	0.128
75	9.76	33.63	25.744	206.9	0.182	75	10.12	33.65	25.899	211.1	0.184
100	9.06	33.89	26.261	176.8	0.230	100	9.59	33.79	26.097	192.3	0.235
125	8.71	34.00	26.402	163.4	0.273	125	9.07	33.91	26.275	175.4	0.282
150	8.53	34.08	26.492	154.8	0.314	150	8.98	34.00	26.359	167.4	0.325
175	8.26	34.13	26.573	147.1	0.352	175	8.72	34.09	26.471	156.9	0.366
200	8.21	34.17	26.612	143.5	0.389	200	8.39	34.12	26.545	149.8	0.406
225	8.01	34.18	26.649	139.9	0.426	225	8.12	34.17	26.625	142.2	0.443
250	7.75	34.17	26.680	137.0	0.461	250	7.89	34.17	26.660	138.9	0.479
275	7.47	34.17	26.721	133.1	0.496	275	7.62	34.19	26.715	133.7	0.514
300	7.29	34.19	26.762	129.2	0.530	300	7.54	34.21	26.742	131.1	0.549
350	6.86	34.21	26.837	122.1	0.596	350	7.13	34.19	26.784	127.1	0.616
400	6.50	34.23	26.901	116.0	0.658	400	6.66	34.23	26.880	118.0	0.680
450	6.28	34.26	26.954	111.0	0.718	450	6.45	34.26	26.932	113.1	0.741
500	6.00	34.28	27.005	106.1	0.775	500	6.03	34.28	27.002	106.5	0.799
550	5.78	34.31	27.057	101.2	0.830	550	5.85	34.30	27.040	102.8	0.855
600	5.49	34.33	27.108	96.4	0.884	600	5.57	34.33	27.098	97.3	0.909
700	5.07	34.38	27.197	87.9	0.983	700	5.27	34.36	27.158	91.6	1.011
800	4.71	34.41	27.262	81.8	1.076	800	4.73	34.40	27.252	82.7	1.107
900	4.43	34.43	27.309	77.3	1.165						
1000	4.11	34.46	27.367	71.8	1.249						



90070						RV (DAVID) STARR JORDAN						CALCIFI CRUISE 7503						90080											
LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME							
32 03.0N		120 38.5W		03/10/75		1600 GMT		31 45.0N		121 19.5W		03/10/75		1010 GMT		31 45.0N		121 19.5W		03/10/75		1010 GMT							
BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
3920M		270		8KT		2		240 8 10		3642M		250		10KT		1		270 2 5		3642M		250		10KT		1		270 2 5	
Z	T	S	SIGMA T	DT	DI	Z	T	S	SIGMA T	DT	DI	Z	T	S	SIGMA T	DT	DI	Z	T	S	SIGMA T	DT	DI	Z	T	S	SIGMA T	DT	DI
0	13.15	33.47	25.199	277.7	0.000	0	13.39	33.29	25.013	295.5	0.000	0	13.39	33.29	25.013	295.5	0.000	0	13.39	33.29	25.013	295.5	0.000	0	13.39	33.29	25.013	295.5	0.000
10	13.15	33.47	25.199	277.7	0.027	10	13.39	33.29	25.013	295.5	0.029	10	13.39	33.29	25.013	295.5	0.029	10	13.39	33.29	25.013	295.5	0.029	10	13.39	33.29	25.013	295.5	0.029
20	13.15	33.47	25.199	277.7	0.055	20	13.39	33.29	25.013	295.5	0.059	20	13.39	33.29	25.013	295.5	0.059	20	13.39	33.29	25.013	295.5	0.059	20	13.39	33.29	25.013	295.5	0.059
30	13.15	33.47	25.199	277.7	0.083	30	13.39	33.29	25.013	295.5	0.088	30	13.39	33.29	25.013	295.5	0.088	30	13.39	33.29	25.013	295.5	0.088	30	13.39	33.29	25.013	295.5	0.088
40	12.97	33.47	25.235	274.3	0.111	40	13.21	33.29	25.049	292.1	0.118	40	13.21	33.29	25.049	292.1	0.118	40	13.21	33.29	25.049	292.1	0.118	40	13.21	33.29	25.049	292.1	0.118
50	12.50	33.49	25.331	265.2	0.138	50	12.48	33.30	25.199	277.7	0.146	50	12.48	33.30	25.199	277.7	0.146	50	12.48	33.30	25.199	277.7	0.146	50	12.48	33.30	25.199	277.7	0.146
75	12.16	33.52	25.431	259.7	0.203	75	11.94	33.60	25.380	260.6	0.214	75	11.94	33.60	25.380	260.6	0.214	75	11.94	33.60	25.380	260.6	0.214	75	11.94	33.60	25.380	260.6	0.214
100	10.23	33.52	25.779	222.5	0.263	100	10.77	33.45	25.631	236.6	0.277	100	10.77	33.45	25.631	236.6	0.277	100	10.77	33.45	25.631	236.6	0.277	100	10.77	33.45	25.631	236.6	0.277
125	9.30	33.67	26.051	196.7	0.316	125	9.48	33.63	25.990	202.5	0.332	125	9.48	33.63	25.990	202.5	0.332	125	9.48	33.63	25.990	202.5	0.332	125	9.48	33.63	25.990	202.5	0.332
150	8.97	33.86	26.252	177.6	0.364	150	8.83	33.83	26.250	177.8	0.380	150	8.83	33.83	26.250	177.8	0.380	150	8.83	33.83	26.250	177.8	0.380	150	8.83	33.83	26.250	177.8	0.380
175	8.76	34.04	26.425	161.1	0.407	175	8.46	33.92	26.378	165.7	0.424	175	8.46	33.92	26.378	165.7	0.424	175	8.46	33.92	26.378	165.7	0.424	175	8.46	33.92	26.378	165.7	0.424
200	8.36	34.06	26.503	153.8	0.447	200	7.93	33.96	26.489	155.1	0.465	200	7.93	33.96	26.489	155.1	0.465	200	7.93	33.96	26.489	155.1	0.465	200	7.93	33.96	26.489	155.1	0.465
225	7.99	34.08	26.580	146.5	0.486	225	7.65	34.01	26.569	147.5	0.504	225	7.65	34.01	26.569	147.5	0.504	225	7.65	34.01	26.569	147.5	0.504	225	7.65	34.01	26.569	147.5	0.504
250	7.71	34.09	26.623	142.4	0.523	250	7.15	33.97	26.609	143.8	0.541	250	7.15	33.97	26.609	143.8	0.541	250	7.15	33.97	26.609	143.8	0.541	250	7.15	33.97	26.609	143.8	0.541
275	7.27	34.11	26.702	134.9	0.559	275	6.94	34.02	26.677	137.3	0.577	275	6.94	34.02	26.677	137.3	0.577	275	6.94	34.02	26.677	137.3	0.577	275	6.94	34.02	26.677	137.3	0.577
300	7.06	34.17	26.739	131.4	0.593	300	6.86	34.08	26.735	131.8	0.612	300	6.86	34.08	26.735	131.8	0.612	300	6.86	34.08	26.735	131.8	0.612	300	6.86	34.08	26.735	131.8	0.612
350	6.65	34.15	26.818	123.8	0.659	350	6.44	34.11	26.815	124.2	0.678	350	6.44	34.11	26.815	124.2	0.678	350	6.44	34.11	26.815	124.2	0.678	350	6.44	34.11	26.815	124.2	0.678
400	6.22	34.20	26.914	114.8	0.727	400	6.03	34.15	26.899	116.2	0.741	400	6.03	34.15	26.899	116.2	0.741	400	6.03	34.15	26.899	116.2	0.741	400	6.03	34.15	26.899	116.2	0.741
450	5.96	34.23	26.971	109.3	0.780	450	5.58	34.18	26.979	108.6	0.800	450	5.58	34.18	26.979	108.6	0.800	450	5.58	34.18	26.979	108.6	0.800	450	5.58	34.18	26.979	108.6	0.800
500	5.69	34.27	27.036	103.2	0.837	500	5.50	34.24	27.036	103.2	0.856	500	5.50	34.24	27.036	103.2	0.856	500	5.50	34.24	27.036	103.2	0.856	500	5.50	34.24	27.036	103.2	0.856
550	5.42	34.30	27.093	97.8	0.890	550	5.36	34.29	27.092	97.9	0.909	550	5.36	34.29	27.092	97.9	0.909	550	5.36	34.29	27.092	97.9	0.909	550	5.36	34.29	27.092	97.9	0.909
600	5.21	34.33	27.162	93.2	0.941	600	5.22	34.32	27.133	94.1	0.961	600	5.22	34.32	27.133	94.1	0.961	600	5.22	34.32	27.133	94.1	0.961	600	5.22	34.32	27.133	94.1	0.961
700	4.87	34.39	27.228	85.0	1.038	700	4.79	34.38	27.230	84.9	1.057	700	4.79	34.38	27.230	84.9	1.057	700	4.79	34.38	27.230	84.9	1.057	700	4.79	34.38	27.230	84.9	1.057
800	4.58	34.41	27.277	80.4	1.129	800	4.44	34.42	27.300	78.2	1.147	800	4.44	34.42	27.300	78.2	1.147	800	4.44	34.42	27.300	78.2	1.147	800	4.44	34.42	27.300	78.2	1.147
900	4.26	34.45	27.343	74.1	1.214	900	4.18	34.45	27.354	73.1	1.231	900	4.18	34.45	27.354	73.1	1.231	900	4.18	34.45	27.354	73.1	1.231	900	4.18	34.45	27.354	73.1	1.231
1000	4.01	34.47	27.386	70.1	1.295	1000	3.90	34.48	27.405	68.2	1.310	1000	3.90	34.48	27.405	68.2	1.310	1000	3.90	34.48	27.405	68.2	1.310	1000	3.90	34.48	27.405	68.2	1.310

RV DAVID STARR JORDAN						CALCIFI CRUISE 7503						90080																	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME							
31 45.0N		121 19.5W		3/10/75		1114 GMT		31 45.0N		121 19.5W		3/10/75		1010 GMT		31 45.0N		121 19.5W		3/10/75		1010 GMT							
Z	T	S	DT	PD4	SI03	NO2	NO3	DT	Z	T	S	DT	SIGT	DT	DI	Z	T	S	SIGMA T	DT	DI	Z	T	S	SIGMA T	DT	DI		
0	13.52	33.298	6.24					297.4	0	13.52	33.298	6.24	24.992	297.4	0.000	0	13.52	33.298	6.24	24.992	297.4	0.000	0	13.52	33.298	6.24	24.992	297.4	0.000
10	13.40	33.295	6.10					295.3	10	13.40	33.295	6.10	25.014	295.3	0.029	10	13.40	33.295	6.10	25.014	295.3	0.029	10	13.40	33.295	6.10	25.014	295.3	0.029
20	13.41	33.299	6.21					295.2	20	13.40	33.299	6.13	25.015	295.3	0.059	20	13.40	33.299	6.13	25.015	295.3	0.059	20	13.40	33.299	6.13	25.015	295.3	0.059
30	12.28	33.339	5.97					271.2	30	13.37	33.300	6.20	25.021	294.6	0.088	30	13.37	33.300	6.20	25.021	294.6	0.088	30	13.37	33.300	6.20	25.021	294.6	0.088
40	11.92	33.444	5.72					256.9	50	12.65	33.316	6.08	25.176	279.9	0.146	40	11.92	33.444	5.72	25.176	279.9	0.146	40	11.92	33.444	5.72	25.176	279.9	0.146
50	11.28	33.464	5.34					244.2	75	11.96	33.434	5.75	25.400	258.6	0.214	50	11.28	33.464	5.34	25.400	258.6	0.214	50	11.28	33.464	5.34	25.400	258.6	0.214
106	10.40	33.523	4.61					225.1	100	10.75	33.496	4.91	25.669	233.0	0.276	106	10.40	33.523	4.61	25.669	233.0	0.276	106	10.40	33.523	4.61	25.669	233.0	0.276
135	9.29	33.733	3.71					191.9	125	9.60	33.657	3.96	25.991	202.4	0.331	135	9.29	33.733	3.71	25.991	202.4	0.331	135	9.29	33.733	3.71	25.991	202.4	0.331
158	8.76	33.872	3.20					173.6	150	8.92	33.829	3.34	26.235	179.2	0.379	158	8.76	33.872	3.20	26.235	179.2	0.379	158	8.76	33.872	3.20	26.235	179.2	0.379
188	8.24	33.962	3.05					159.3	200	8.09	33.979	2.94	26.479	156.0	0.464	188	8.24	33.962	3.05	26.479	156.0	0.464	188	8.24	33.962	3.05	26.479	156.0	0.464
221	7.87	33.997	2.74					151.5	250	7.47	34.028	2.39	26.607	143.9	0.541	221	7.87	33.997	2.74	26.607	143.9	0.541	221	7.87	33.997	2.74	26.607	143.9	0.541
293	6.91																												

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91027

RV DAVID STARR JORDAN

LATITUDE LONGITUDE MO/DAY/YR START TIME  
33 14.0N 117 30.5W 03/13/75 2041 GMT

BOTTOM WIND SPEED WEATHER DOMINANT WAVES  
56M 240 4KT 1 270 2 5

Z	T	S	SIGMA T	DT	DD
0	13.88	33.44	25.028	294.0	0.000
10	13.83	33.44	25.038	293.0	0.029
20	13.60	33.44	25.086	288.5	0.058
30	13.25	33.53	25.226	275.2	0.086
40	12.66	33.54	25.350	263.3	0.113
45	12.49	33.56	25.399	258.7	0.121

LAICOPI CRUISE 7503

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91028

LATITUDE LONGITUDE MO/DAY/YR START TIME  
33 12.0N 117 34.0W 03/13/75 1858 GMT

BOTTOM WIND SPEED WEATHER DOMINANT WAVES  
565M 250 5KT 2 240 2 8

Z	T	S	SIGMA T	DT	DD
0	13.84	33.47	25.059	291.0	0.000
10	13.78	33.47	25.072	289.8	0.029
20	13.61	33.47	25.106	286.5	0.057
30	12.66	33.50	25.319	266.3	0.085
40	11.82	33.54	25.511	248.1	0.111
50	11.25	33.63	25.645	231.5	0.135
75	10.57	33.72	25.876	213.3	0.191
100	10.22	33.81	26.007	200.8	0.243
125	9.82	33.92	26.160	186.3	0.292
150	9.57	34.00	26.264	176.5	0.338
175	9.18	34.12	26.421	161.6	0.381
200	8.97	34.15	26.478	156.1	0.422
225	8.61	34.17	26.550	149.3	0.461
250	8.48	34.20	26.594	145.1	0.499
275	8.26	34.22	26.643	140.5	0.536
300	8.01	34.22	26.681	136.9	0.572
350	7.81	34.24	26.755	129.8	0.641
400	7.22	34.25	26.819	123.8	0.708
450	6.76	34.26	26.890	117.0	0.771
500	6.39	34.27	26.947	111.6	0.832

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91029

RV DAVID STARR JORDAN

LATITUDE LONGITUDE MO/DAY/YR START TIME  
33 10.0N 117 38.0W 03/13/75 1912 GMT

BOTTOM WIND SPEED WEATHER DOMINANT WAVES  
756M 220 5KT 2

Z	T	S	SIGMA T	DT	DD
0	13.88	33.52	25.090	288.1	0.000
10	13.80	33.51	25.098	287.3	0.028
20	13.64	33.51	25.131	284.2	0.057
30	13.01	33.53	25.274	270.6	0.085
40	12.09	33.54	25.460	252.9	0.111
50	11.46	33.58	25.608	238.8	0.136
75	10.37	33.73	25.918	209.3	0.192
100	10.09	33.84	26.052	196.6	0.243
125	9.77	33.92	26.168	185.5	0.292
150	9.43	34.04	26.318	171.3	0.357
175	9.27	34.12	26.407	162.9	0.380
200	8.91	34.15	26.488	155.2	0.420
225	8.85	34.19	26.528	151.3	0.460
250	8.55	34.19	26.575	146.9	0.498
275	8.29	34.21	26.631	141.6	0.535
300	8.11	34.24	26.682	136.8	0.571
350	7.57	34.25	26.769	128.5	0.640
400	7.14	34.26	26.838	122.0	0.706
450	6.74	34.28	26.908	115.3	0.769
500	6.33	34.27	26.955	110.9	0.829
550	5.92	34.29	27.023	104.4	0.886
600	5.62	34.31	27.076	99.4	0.941
700	5.19	34.36	27.168	90.7	1.044

LAICOPI CRUISE 7503

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91030

LATITUDE LONGITUDE MO/DAY/YR START TIME  
33 08.0N 117 42.0W 03/13/75 1515 GMT

BOTTOM WIND SPEED WEATHER DOMINANT WAVES  
833M 200 6KT 2

Z	T	S	SIGMA T	DT	DD
0	13.89	33.54	25.103	286.9	0.000
10	13.89	33.54	25.103	286.9	0.028
20	13.21	33.54	25.241	273.7	0.056
30	12.79	33.54	25.325	265.8	0.083
40	12.40	33.55	25.408	257.8	0.110
50	11.90	33.56	25.511	248.0	0.135
75	10.64	33.69	25.841	216.7	0.193
100	9.93	33.81	26.056	196.2	0.246
125	9.58	33.95	26.223	180.3	0.293
150	9.48	34.04	26.310	172.1	0.338
175	9.23	34.12	26.413	162.3	0.381
200	8.95	34.16	26.489	155.1	0.421
225	8.61	34.17	26.550	149.3	0.460
250	8.34	34.18	26.600	144.8	0.498
275	8.06	34.18	26.642	140.6	0.535
300	8.01	34.24	26.696	135.4	0.571
350	7.55	34.26	26.780	127.5	0.635
400	6.98	34.24	26.844	121.4	0.704
450	6.59	34.27	26.921	114.1	0.766
500	6.16	34.28	26.985	108.0	0.825
550	5.92	34.31	27.039	102.9	0.882
600	5.67	34.32	27.078	99.2	0.936
700	5.16	34.36	27.171	90.4	1.039

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93026

RV DAVID STARR JORDAN

LATITUDE LONGITUDE MO/DAY/YR START TIME  
32 57.0N 117 17.5W 03/14/75 0017 GMT

BOTTOM WIND SPEED WEATHER DOMINANT WAVES  
34M 270 7KT 1 250 2 5

Z	T	S	SIGMA T	DT	DD
0	14.08	33.48	25.015	295.0	0.000
10	13.94	33.47	25.039	293.0	0.029
20	13.59	33.41	25.064	290.5	0.058
28	13.03	33.48	25.231	279.7	0.081

LAICOPI CRUISE 7503

9  
93026

LATITUDE LONGITUDE MO/DAY/YR START TIME  
32 57.0N 117 18.5W 03/14/75 0148 GMT

BOTTOM WIND SPEED WEATHER DOMINANT WAVES  
65M 260 5KT 1 270 2 5

Z	T	S	SIGMA T	DT	DD
0	14.22	33.53	25.027	294.1	0.000
10	13.87	33.52	25.092	287.9	0.029
20	13.61	33.51	25.158	281.6	0.057
30	12.64	33.55	25.362	262.2	0.084
40	12.35	33.60	25.456	253.2	0.110
50	11.53	33.63	25.634	236.3	0.135
59	11.38	33.68	25.700	230.0	0.156

93028

RV DAVID STARR JORDAN

CALCOPFI CRUISE 7503

93029

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 55.0N	117 22.0W	03/14/75	0304 GMT	593M	250	6KT		
Z	T	S	SIGMA T	DT	DD			
0	14.08	33.53	25.056	291.3	0.000			
10	14.05	33.53	25.062	290.7	0.029			
20	13.90	33.53	25.093	287.8	0.058			
30	13.21	33.53	25.234	274.4	0.086			
40	12.27	33.53	25.418	256.9	0.112			
50	11.30	33.58	25.637	236.0	0.137			
75	10.52	33.70	25.869	214.0	0.194			
100	10.12	33.83	26.039	197.8	0.246			
125	9.73	33.94	26.191	183.4	0.294			
150	9.54	34.07	26.323	170.8	0.339			
175	9.23	34.14	26.429	160.8	0.381			
200	9.04	34.18	26.491	153.0	0.422			
225	8.80	34.20	26.544	149.9	0.461			
250	8.66	34.24	26.597	146.8	0.499			
275	8.45	34.25	26.638	141.0	0.536			
300	8.22	34.25	26.673	137.7	0.572			
350	7.76	34.26	26.749	130.4	0.642			
400	7.16	34.26	26.835	123.3	0.708			
450	6.70	34.26	26.898	116.3	0.771			
500	6.22	34.28	26.977	108.8	0.830			

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 53.0N	117 26.5W	03/14/75	0500 GMT	593M	250	BKT		
Z	T	S	SIGMA T	DT	DD			
0	14.01	33.53	25.070	290.0	0.000			
10	13.69	33.52	25.129	284.4	0.028			
20	13.40	33.51	25.180	279.5	0.056			
30	12.47	33.53	25.379	260.6	0.084			
40	11.69	33.55	25.505	248.6	0.109			
50	11.56	33.59	25.597	239.8	0.134			
75	10.28	33.81	26.000	201.6	0.189			
100	9.90	33.90	26.131	189.1	0.238			
125	9.68	33.98	26.230	179.7	0.285			
150	9.37	34.09	26.367	166.7	0.329			
175	9.16	34.12	26.424	161.2	0.371			
200	8.97	34.16	26.486	155.4	0.411			
225	8.76	34.18	26.535	150.8	0.451			
250	8.71	34.21	26.566	147.8	0.489			
275	8.52	34.25	26.627	142.0	0.527			
300	8.20	34.25	26.676	137.4	0.563			
350	7.78	34.28	26.762	129.2	0.632			
400	7.35	34.27	26.816	124.0	0.699			
450	6.85	34.28	26.893	116.7	0.762			
500	6.50	34.28	26.941	112.2	0.823			

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RV DAVID STARR JORDAN

CALCOPFI CRUISE 7503

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LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 50.0N	117 31.0W	03/14/75	0652 GMT	779M	230	10KT		
Z	T	S	SIGMA T	DT	DD			
0	13.90	33.51	25.078	289.2	0.000			
10	13.90	33.51	25.078	289.2	0.028			
20	13.72	33.50	25.107	286.5	0.057			
30	12.96	33.50	25.260	271.9	0.085			
40	11.98	33.51	25.457	253.2	0.112			
50	11.12	33.53	25.631	236.6	0.136			
75	10.48	33.71	25.884	212.6	0.193			
100	9.95	33.88	26.107	191.4	0.244			
125	9.67	33.94	26.201	182.5	0.291			
150	9.37	34.05	26.336	169.7	0.336			
175	9.22	34.13	26.422	161.4	0.378			
200	8.97	34.15	26.478	156.1	0.419			
225	8.91	34.21	26.535	150.8	0.458			
250	8.71	34.22	26.574	147.0	0.496			
275	8.52	34.24	26.619	142.8	0.534			
300	8.17	34.22	26.657	139.2	0.570			
350	7.67	34.25	26.754	129.9	0.640			
400	7.20	34.25	26.821	123.6	0.707			
450	6.84	34.26	26.879	118.1	0.770			
500	6.53	34.26	26.921	114.1	0.832			
550	6.15	34.28	26.986	107.9	0.891			
600	5.62	34.31	27.076	99.4	0.947			
700	5.07	34.37	27.190	88.7	1.049			

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 30.0N	118 11.5W	03/14/75	1315 GMT	1849M	300	14KT		
Z	T	S	SIGMA T	DT	DD			
0	13.99	33.58	25.113	285.9	0.000			
10	13.99	33.58	25.113	285.9	0.028			
20	13.99	33.58	25.113	285.9	0.057			
30	13.99	33.58	25.113	285.9	0.085			
40	13.99	33.58	25.113	285.9	0.114			
50	13.66	33.58	25.140	283.3	0.143			
75	10.96	33.52	25.652	236.6	0.208			
100	10.15	33.63	25.878	213.1	0.264			
125	9.34	33.78	26.130	189.2	0.315			
150	8.90	33.87	26.271	175.8	0.361			
175	8.70	33.97	26.380	165.4	0.405			
200	8.27	34.01	26.477	156.2	0.446			
225	8.01	34.05	26.548	149.5	0.488			
250	7.89	34.10	26.605	144.1	0.523			
275	8.10	34.22	26.667	138.2	0.558			
300	7.87	34.24	26.717	133.4	0.594			
350	7.40	34.26	26.801	125.5	0.662			
400	6.92	34.28	26.884	117.6	0.726			
450	6.41	34.28	26.952	111.1	0.786			
500	5.97	34.28	27.009	105.7	0.843			
550	5.71	34.30	27.057	101.2	0.899			
600	5.40	34.32	27.111	96.1	0.952			
700	4.99	34.37	27.199	87.8	1.051			
800	4.61	34.41	27.273	80.7	1.143			
900	4.22	34.45	27.347	73.7	1.229			
1000	4.05	34.47	27.381	70.5	1.310			

93050 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
32 10.0N	118 52.5W	03/14/75	1916 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
1475M	300	16KT	1	300 15-10	
Z	T	S	SIGMA T	HT	DB
0	13.68	33.55	25.154	282.0	0.000
10	13.68	33.55	25.154	282.0	0.028
20	13.68	33.55	25.154	282.0	0.056
30	13.68	33.55	25.154	282.0	0.084
40	13.68	33.55	25.154	282.0	0.113
50	13.28	33.55	25.235	276.3	0.140
75	10.70	33.49	25.675	232.5	0.204
100	9.71	33.72	26.022	199.4	0.259
125	8.34	33.77	26.122	189.9	0.308
150	8.95	33.91	26.294	175.6	0.354
175	8.71	34.00	26.402	163.4	0.397
200	8.49	34.08	26.499	154.2	0.437
225	8.31	34.15	26.581	146.4	0.476
250	8.07	34.17	26.633	141.5	0.513
275	7.78	34.22	26.715	133.7	0.549
300	7.40	34.20	26.754	129.9	0.583
350	6.90	34.21	26.832	122.6	0.648
400	6.61	34.25	26.902	115.9	0.711
450	6.30	34.30	26.975	109.0	0.770
500	6.07	34.30	27.012	105.4	0.827
550	5.78	34.31	27.057	101.2	0.882
600	5.55	34.33	27.101	97.1	0.935
700	5.02	34.37	27.195	88.1	1.038
800	4.65	34.40	27.281	81.9	1.129
900	4.31	34.44	27.330	75.3	1.216
1000	4.06	34.47	27.380	70.6	1.298

CALCIFI CRUISE 7503 93060

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
31 51.0N	119 34.0W	03/15/75	0105 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
2227M	330	12KT	1	320 16-13	
Z	T	S	SIGMA T	HT	DB
0	13.26	33.53	25.224	275.4	0.000
10	13.26	33.53	25.224	275.4	0.027
20	13.26	33.53	25.224	275.4	0.055
30	13.26	33.53	25.224	275.4	0.082
40	13.23	33.53	25.230	274.8	0.110
50	12.61	33.49	25.321	266.1	0.137
75	11.03	33.58	25.686	231.4	0.200
100	10.21	33.73	25.946	206.7	0.255
125	9.85	33.81	26.069	195.0	0.306
150	9.01	33.92	26.292	173.8	0.352
175	8.80	34.02	26.404	163.2	0.395
200	8.43	34.10	26.523	151.8	0.436
225	8.22	34.14	26.587	145.8	0.474
250	8.05	34.15	26.620	142.7	0.511
275	7.66	34.17	26.693	135.7	0.547
300	7.45	34.19	26.739	131.4	0.581
350	7.09	34.22	26.813	124.3	0.648
400	6.74	34.24	26.877	118.3	0.711
450	6.20	34.25	26.956	110.8	0.772
500	5.89	34.29	27.027	104.0	0.829
550	5.60	34.31	27.079	99.1	0.883
600	5.28	34.32	27.125	94.7	0.935
700	4.87	34.38	27.220	85.7	1.032
800	4.56	34.41	27.274	80.2	1.123
900	4.27	34.45	27.342	74.2	1.200
1000	3.96	34.48	27.399	68.8	1.284

RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	MESSANGER TIME					
31 30.0N	120 14.0W	3/15/75	0719 0757 GMT					
Z	T	S	02	004	SIG3	002	003	DT
2	13.16	33.498	6.11					275.8
13	13.16	33.494	6.14					276.1
30	13.17	33.492	6.20					276.4
58	13.18	33.493	6.22					276.6
76	12.11	33.479	5.82					257.8
90	11.54	33.475	5.50					247.9
105	10.24	33.552	4.79					220.3
132	9.27	33.731	3.78					191.8
156	9.16	33.868	3.22					179.9
184	8.68	33.965	2.96					165.5
217	8.39	34.059	2.50					154.3
288	7.24	34.095	1.61					135.6
387	6.39	34.165	0.86					119.5
490	5.83	34.251	0.46					106.2
590	5.28	34.314	0.32					96.3
717	4.79	34.384	0.60					84.6
853	4.26	34.436	0.67					75.1
986	3.82	34.471	0.72					68.2

CALCIFI CRUISE 7503 93070

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
4117M	320	11KT				
Z	T	S	02	SIGT	DT	DB
0	13.16	33.498	6.11	25.219	275.8	0.000
10	13.16	33.496	6.13	25.217	276.0	0.027
20	13.16	33.494	6.16	25.214	276.3	0.055
30	13.17	33.492	6.20	25.212	276.4	0.082
50	13.17	33.494	6.21	25.212	276.5	0.138
75	12.17	33.481	5.84	25.397	258.9	0.205
100	10.68	33.520	5.04	25.700	230.1	0.267
125	9.39	33.686	4.00	26.047	197.1	0.321
150	9.16	33.838	3.33	26.203	182.3	0.369
200	8.53	34.016	2.74	26.442	159.6	0.456
250	7.87	34.088	2.05	26.598	144.8	0.534
300	7.10	34.103	1.49	26.719	133.3	0.606
400	6.30	34.177	0.79	26.884	117.6	0.737
500	5.78	34.258	0.44	27.015	105.2	0.854
600	5.33	34.320	0.33	27.119	95.3	0.961
700	4.86	34.376	0.55	27.217	86.0	1.059
800	4.45	34.418	0.65	27.297	78.5	1.149
1000	3.87	34.480	0.72	27.408	68.0	1.313

93080 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
31 30.0N	120 14.0W	03/15/75	0021 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
4117M	320	11KT			
Z	T	S	SIGMA T	HT	DB
0	13.18	33.50	25.217	276.0	0.000
10	13.18	33.50	25.217	276.0	0.027
20	13.18	33.50	25.217	276.0	0.055
30	13.18	33.50	25.217	276.0	0.082
40	13.18	33.50	25.217	276.0	0.110
50	13.18	33.50	25.217	276.0	0.138
75	12.58	33.48	25.319	266.3	0.208
100	11.23	33.47	25.585	242.4	0.270
125	9.72	33.62	25.943	207.0	0.327
150	9.17	33.74	26.126	189.6	0.377
175	8.89	33.94	26.327	170.5	0.423
200	8.55	33.99	26.419	161.8	0.465
225	8.40	34.06	26.497	154.4	0.506
250	7.86	34.06	26.578	146.7	0.545
275	7.42	34.08	26.657	139.2	0.581
300	7.21	34.10	26.702	134.9	0.617
350	6.66	34.13	26.801	125.5	0.689
400	6.40	34.18	26.875	118.5	0.748
450	6.14	34.22	26.940	112.3	0.809
500	5.89	34.24	26.988	107.8	0.867
550	5.61	34.27	27.046	102.2	0.923
600	5.38	34.32	27.113	95.4	0.976
700	4.90	34.38	27.217	86.0	1.074
800	4.46	34.41	27.290	79.1	1.165
900	4.15	34.45	27.355	73.0	1.249
1000	3.86	34.48	27.409	67.9	1.328

CALCIFI CRUISE 7503 93090

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
31 10.0N	120 54.5W	03/15/75	1235 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
6027M	340	11KT			
Z	T	S	SIGMA T	HT	DB
0	13.23	33.38	25.114	285.8	0.000
10	13.23	33.38	25.114	285.8	0.028
20	13.23	33.38	25.114	285.8	0.057
30	13.23	33.38	25.114	285.8	0.085
40	13.24	33.38	25.112	286.0	0.114
50	13.24	33.38	25.112	286.0	0.143
75	12.78	33.37	25.195	278.1	0.214
100	10.93	33.39	25.556	243.7	0.279
125	9.56	33.50	25.876	213.4	0.337
150	9.11	33.74	26.136	188.7	0.388
175	8.54	33.86	26.319	171.3	0.434
200	8.12	33.94	26.445	159.3	0.478
225	7.83	34.00	26.535	150.7	0.516
250	7.55	34.04	26.607	143.9	0.553
275	7.28	34.05	26.653	139.5	0.590
300	6.77	34.04	26.716	133.6	0.625
350	6.57	34.09	26.782	127.3	0.663
400	6.07	34.17	26.910	115.2	0.756
450	5.79	34.23	26.992	107.3	0.814
500	5.61	34.27	27.046	102.2	0.870
550	5.37	34.29	27.091	98.0	0.923
600	5.03	34.30	27.139	93.5	0.974
700	4.68	34.37	27.234	84.4	1.070
800	4.46	34.42	27.298	78.4	1.160
900	4.16	34.45	27.354	73.1	1.244
1000	3.87	34.48	27.408	68.0	1.323



LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
32 40.0N		117 34.0W		2/24/75		2312 GMT		1165M		300		9KT		1		300 1 3	
Z	T	S	02	04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DB		
0A	14.31	33.61	6.38					290.1	0	14.31	33.61	6.38	25.069	290.1	0.000		
10	13.84	33.60	6.43					281.5	10	13.84	33.60	6.43	25.160	281.5	0.028		
29	13.68	33.60	6.28					278.3	20	13.75	33.60	6.35	25.179	279.6	0.056		
58	11.62	33.53	4.70					245.3	30	13.62	33.59	6.23	25.200	277.6	0.084		
77	10.74	33.72	3.84					216.7	50	12.25	33.52	5.20	25.419	256.8	0.138		
91	10.28	33.82	3.56					201.2	75	10.81	33.69	3.91	25.815	219.1	0.198		
106	10.12	33.90	3.25					192.6	100	10.16	33.87	3.36	26.064	195.4	0.250		
134	9.87	33.97	2.93					183.4	125	9.95	33.95	3.01	26.161	186.2	0.298		
158	9.50	34.06	2.66					170.9	150	9.62	34.03	2.74	26.279	175.0	0.344		
187	9.26	34.11	2.41					163.5	200	9.19	34.14	2.20	26.440	159.8	0.430		
220	9.08	34.20	1.88					154.1	250	8.76	34.23	1.58	26.577	146.8	0.508		
291	8.26	34.25	1.32					138.2	300	8.16	34.25	1.26	26.684	136.6	0.582		
391	7.28	34.28	0.78					122.4	400	7.19	34.28	0.74	26.847	121.1	0.716		
495	6.57	34.30	0.43					109.1	500	6.33	34.30	0.41	26.979	108.6	0.838		
600	5.81	34.35	0.28					98.6	600	5.81	34.35	0.28	27.085	98.6	0.949		
733	5.01	34.39	0.25					86.5	700	5.19	34.38	0.25	27.183	89.3	1.051		
888	4.49	34.45	0.37					76.4	800	4.75	34.41	0.28	27.262	81.7	1.145		
1054	3.94	34.49	0.56					67.9	1000	4.11	34.48	0.49	27.382	70.4	1.315		

94032

RV ALEXANDER AGASSIZ

RV DAVID STARR JORDAN

94032

LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
32 40.0N		117 34.0W		02/24/75		2146 GMT		1165M		300		9KT		1		300 1 3	
Z	T	S	SIGMA T	DT	DB	Z	T	S	SIGMA T	DT	DB						
0A	14.31	33.56	25.031	293.7	0.000	0A	14.31	33.59	25.032	293.4	0.000						
10	13.76	33.56	25.145	282.8	0.028	10	14.19	33.56	25.056	291.3	0.029						
20	13.71	33.56	25.155	281.8	0.057	20	13.70	33.50	25.173	290.2	0.080						
30	13.66	33.56	25.166	280.9	0.085	30	13.64	33.48	25.165	289.0	0.088						
40	12.45	33.47	25.337	268.6	0.112	40	13.61	33.57	25.204	277.2	0.114						
50	11.93	33.49	25.491	253.7	0.138	50	11.82	33.55	25.503	248.8	0.163						
75	10.65	33.72	25.862	214.7	0.197	75	10.67	33.67	25.820	218.7	0.199						
100	10.11	33.88	26.080	194.0	0.249	100	10.26	33.84	26.027	199.0	0.251						
125	9.85	33.96	26.186	183.9	0.297	125	9.85	33.98	26.178	184.6	0.300						
150	9.53	34.03	26.294	173.6	0.342	150	9.47	34.06	26.327	170.5	0.345						
175	9.28	34.10	26.389	164.6	0.385	175	9.28	34.14	26.474	161.3	0.387						
200	9.05	34.14	26.458	158.1	0.426	200	8.89	34.17	26.507	153.4	0.428						
225	8.74	34.19	26.546	149.7	0.466	225	8.40	34.14	26.559	148.4	0.466						
250	8.52	34.23	26.611	143.5	0.504	250	8.38	34.10	26.597	144.9	0.504						
275	8.27	34.23	26.649	139.9	0.540	275	8.33	34.20	26.617	143.0	0.541						
300	8.12	34.24	26.680	137.0	0.576	300	8.15	34.25	26.683	136.6	0.578						
350	7.57	34.25	26.769	128.5	0.645	350	7.77	34.25	26.748	130.5	0.647						
400	7.08	34.26	26.846	121.2	0.711	400	7.27	34.26	26.820	123.7	0.714						
450	6.67	34.28	26.918	114.4	0.773	450	6.78	34.26	26.887	117.3	0.777						
500	6.30	34.29	26.975	109.0	0.832	500	6.30	34.26	26.951	111.3	0.835						
550	6.06	34.33	27.037	103.1	0.889	550	5.92	34.27	27.008	105.9	0.896						
600	5.77	34.34	27.082	98.9	0.943	600	5.69	34.29	27.052	101.7	0.951						
700	5.18	34.36	27.169	90.6	1.046	700	5.18	34.36	27.168	90.7	1.056						
800	4.71	34.40	27.254	82.5	1.141	800	4.79	34.40	27.245	83.3	1.151						
900	4.38	34.43	27.316	76.8	1.229	900	4.41	34.43	27.311	77.1	1.240						
1000	4.11	34.46	27.367	71.8	1.312	1000	4.11	34.46	27.367	71.8	1.324						

RV DAVID STARR JORDAN

CALCOFI CRUISE 7503

94032

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
32 40.0N		117 35.0W		2/28/75		0443 GMT		1165M		240		3KT		1		300 1 3	
Z	T	S	02	04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DB		
0A	14.49	33.597	6.83					294.6	0	14.49	33.597	6.83	25.071	294.6	0.000		
10	14.18	33.589	6.47					289.0	10	14.18	33.589	6.47	25.080	289.0	0.029		
29	13.64	33.579	6.23					279.1	20	13.94	33.586	6.35	25.127	284.6	0.057		
57	11.21	33.542	4.50					239.0	30	13.55	33.576	6.17	25.198	277.8	0.086		
77	10.67	33.655	3.97					219.8	50	11.89	33.538	4.95	25.493	249.7	0.139		
91	10.43	33.775	3.63					207.0	75	10.70	33.641	4.00	25.790	221.5	0.198		
105	10.22	33.857	3.32					197.4	100	10.29	33.832	3.42	26.010	200.6	0.251		
134	9.67	33.979	2.97					179.6	125	9.84	33.945	3.06	26.175	184.9	0.300		
157	9.23	34.077	2.56					167.0	150	9.42	34.049	2.68	26.326	170.5	0.345		
186	9.11	34.149	2.11					158.3	200	8.81	34.131	2.16	26.488	155.2	0.428		
219	8.29	34.097	2.30					151.5	250	8.31	34.162	1.96	26.590	145.6	0.505		
290	8.21	34.235	1.33					136.6	300	8.13	34.243	1.24	26.679	137.1	0.579		
391	7.32	34.260	0.77					124.4	400	7.23	34.262	0.73	26.826	123.1	0.715		
494	6.38	34.276	0.52					111.1	500	6.33	34.277	0.51	26.960	110.5	0.838		
598	5.69	34.292	0.38					101.5	600	5.67	34.293	0.37	27.056	101.3	0.951		
729	5.08	34.373	0.24					88.5	700	5.19	34.354	0.25	27.161	91.3	1.056		
881	4.48	34.429	0.42					77.9	800	4.78	34.402	0.30	27.248	83.1	1.151		
1043	4.04	34.477	0.54					69.9	1000	4.13	34.466	0.51	27.369	71.7	1.324		

A) A SHUTDOWN STATION.

95028		RV DAVID STARR JORDAN			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
32 37.0N	117 10.5W	03/17/75	1015 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
19M	100	5KT			
Z	T	S	SIGMA T	DT	DI
0	12.26	33.51	25.208	276.8	0.000
5	12.15	33.51	25.230	274.8	0.013
10	11.87	33.54	25.501	249.0	0.026
15	11.41	33.62	25.648	235.0	0.039

CALCIFI CRUISE 7503		95029			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
32 35.0N	117 14.5W	03/17/75	0900 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
47M	090	5KT			
Z	T	S	SIGMA T	DT	DI
0	13.43	33.52	25.182	279.4	0.000
10	13.41	33.53	25.194	278.2	0.027
20	11.72	33.56	25.545	244.8	0.054
30	11.21	33.64	25.700	230.1	0.077
34	11.00	33.67	25.761	224.2	0.087

95030		RV DAVID STARR JORDAN			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
32 33.0N	117 18.5W	03/17/75	0735 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
103M	320	10KT			
Z	T	S	SIGMA T	DT	DI
0	12.63	33.54	25.157	281.8	0.000
10	12.62	33.54	25.158	281.6	0.028
20	12.61	33.54	25.161	281.4	0.056
30	12.15	33.56	25.464	252.5	0.083
40	11.67	33.65	25.624	237.3	0.107
50	10.90	33.73	25.815	219.1	0.130
75	10.58	33.77	25.913	209.8	0.184
92	10.03	33.91	26.117	190.4	0.218

CALCIFI CRUISE 7503		95031			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
32 31.5N	117 22.5W	03/17/75	0609 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
417M	330	10KT			
Z	T	S	SIGMA T	DT	DI
0	13.89	33.56	25.118	285.4	0.000
10	13.89	33.56	25.118	285.4	0.028
20	13.84	33.55	25.121	285.1	0.057
30	12.61	33.51	25.336	264.6	0.084
40	12.16	33.55	25.454	253.4	0.110
50	11.62	33.60	25.594	240.1	0.135
75	10.58	33.78	25.921	209.1	0.191
100	10.05	33.83	26.051	196.7	0.243
125	9.52	34.01	26.280	175.0	0.290
150	9.36	34.10	26.373	166.1	0.333
175	9.11	34.18	26.479	156.0	0.374
200	8.98	34.23	26.539	150.4	0.413
225	8.71	34.24	26.589	145.6	0.451
250	8.59	34.26	26.624	142.3	0.488
275	8.42	34.27	26.658	139.1	0.525
300	8.26	34.27	26.682	136.7	0.561
319	8.20	34.27	26.691	135.9	0.582

95032		RV DAVID STARR JORDAN			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
32 29.0N	117 27.0W	03/17/75	0638 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
1092M	310	12KT			
Z	T	S	SIGMA T	DT	DI
0	12.92	33.56	25.112	286.0	0.000
10	12.92	33.56	25.112	286.0	0.028
20	12.92	33.56	25.112	286.0	0.057
30	12.92	33.56	25.112	286.0	0.085
40	12.03	33.55	25.285	269.5	0.113
50	11.88	33.53	25.492	249.9	0.139
75	10.65	33.65	25.808	219.8	0.198
100	10.01	33.88	26.097	192.3	0.250
125	9.54	33.90	26.191	183.4	0.298
150	9.46	34.08	26.344	168.8	0.343
175	9.23	34.12	26.413	162.3	0.385
200	9.01	34.20	26.511	154.0	0.425
225	8.91	34.22	26.542	150.0	0.464
250	8.79	34.24	26.577	146.8	0.502
275	8.47	34.24	26.639	141.3	0.540
300	8.15	34.27	26.699	135.2	0.576
350	7.75	34.27	26.758	129.5	0.615
400	7.32	34.27	26.820	123.7	0.711
450	6.88	34.29	26.891	116.4	0.774
500	6.51	34.30	26.955	110.9	0.835
550	6.12	34.33	27.030	103.8	0.892
600	5.70	34.34	27.090	98.0	0.946
700	5.17	34.38	27.186	89.0	1.048
800	4.80	34.39	27.236	84.2	1.143
900	4.47	34.43	27.305	77.7	1.233

CALCIFI CRUISE 7503		95032			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
32 12.0N	117 15.8W	03/16/75	2142 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
1362M	310	6KT			
Z	T	S	SIGMA T	DT	DI
0	13.97	33.57	25.110	286.2	0.000
10	13.94	33.57	25.116	285.6	0.028
20	13.88	33.57	25.128	284.5	0.057
30	13.86	33.57	25.132	284.1	0.085
40	12.98	33.55	25.295	268.6	0.113
50	12.20	33.56	25.454	253.4	0.139
75	11.17	33.57	25.653	234.5	0.200
100	9.71	33.68	25.991	202.4	0.256
125	9.56	33.92	26.203	182.2	0.304
150	9.52	34.05	26.311	172.0	0.349
175	9.34	34.16	26.426	161.0	0.392
200	9.27	34.22	26.485	155.5	0.432
225	9.06	34.25	26.542	150.1	0.471
250	8.84	34.26	26.585	146.0	0.510
275	8.79	34.26	26.593	145.3	0.547
300	8.52	34.27	26.643	140.5	0.584
350	7.88	34.30	26.763	129.1	0.655
400	7.27	34.30	26.851	120.7	0.720
450	6.74	34.30	26.924	113.8	0.782
500	6.41	34.31	26.976	108.9	0.841
550	6.11	34.32	27.023	104.4	0.898
600	5.72	34.34	27.088	98.3	0.953
700	5.26	34.38	27.175	90.0	1.055
800	4.80	34.40	27.244	83.5	1.150
900	4.37	34.43	27.316	76.7	1.239
1000	4.04	34.47	27.382	70.4	1.322

57035						RV DAVID STARR JORDAN						CALCULI CRUISE 7503						97040					
LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME	
32 02.50N		117 27.50W		03/16/75		1920 GMT		31 57.0N		117 48.0W		03/16/75		1620 GMT		31 57.0N		117 48.0W		03/16/75		1620 GMT	
BOTTOM		WIND	SPEED	WEATHER		DOMINANT WAVES		BOTTOM		WIND	SPEED	WEATHER		DOMINANT WAVES		BOTTOM		WIND	SPEED	WEATHER		DOMINANT WAVES	
1202M		250	5KT	2		49 2		1512M		270	6KT	2		280 4 8		1512M		270	6KT	2		280 4 8	
Z	T	S	SIGMA T	HT	DT	Z	T	S	SIGMA T	HT	DT	Z	T	S	SIGMA T	HT	DT	Z	T	S	SIGMA T	HT	DT
0	14.03	33.60	25.120	285.2	0.000	0	14.27	33.58	25.054	291.5	0.000	0	14.27	33.58	25.054	291.5	0.000	0	14.27	33.58	25.054	291.5	0.000
10	13.96	33.60	25.139	283.8	0.028	10	14.26	33.58	25.057	291.3	0.028	10	14.26	33.58	25.057	291.3	0.028	10	14.26	33.58	25.057	291.3	0.028
20	13.94	33.60	25.139	283.4	0.056	20	14.26	33.58	25.057	291.3	0.056	20	14.26	33.58	25.057	291.3	0.056	20	14.26	33.58	25.057	291.3	0.056
30	13.93	33.60	25.141	283.2	0.085	30	14.26	33.58	25.057	291.3	0.085	30	14.26	33.58	25.057	291.3	0.085	30	14.26	33.58	25.057	291.3	0.085
40	13.91	33.59	25.138	283.6	0.113	40	14.26	33.58	25.057	291.3	0.113	40	14.26	33.58	25.057	291.3	0.113	40	14.26	33.58	25.057	291.3	0.113
50	13.31	33.58	25.252	272.7	0.141	50	14.15	33.57	25.072	289.6	0.141	50	14.15	33.57	25.072	289.6	0.141	50	14.15	33.57	25.072	289.6	0.141
60	13.11	33.43	25.371	261.4	0.208	60	14.15	33.57	25.072	289.6	0.208	60	14.15	33.57	25.072	289.6	0.208	60	14.15	33.57	25.072	289.6	0.208
70	12.91	33.43	25.371	261.4	0.237	70	14.15	33.57	25.072	289.6	0.237	70	14.15	33.57	25.072	289.6	0.237	70	14.15	33.57	25.072	289.6	0.237
80	12.71	33.43	25.371	261.4	0.265	80	14.15	33.57	25.072	289.6	0.265	80	14.15	33.57	25.072	289.6	0.265	80	14.15	33.57	25.072	289.6	0.265
90	12.51	33.43	25.371	261.4	0.294	90	14.15	33.57	25.072	289.6	0.294	90	14.15	33.57	25.072	289.6	0.294	90	14.15	33.57	25.072	289.6	0.294
100	12.31	33.43	25.371	261.4	0.322	100	14.15	33.57	25.072	289.6	0.322	100	14.15	33.57	25.072	289.6	0.322	100	14.15	33.57	25.072	289.6	0.322
110	12.11	33.43	25.371	261.4	0.351	110	14.15	33.57	25.072	289.6	0.351	110	14.15	33.57	25.072	289.6	0.351	110	14.15	33.57	25.072	289.6	0.351
120	11.91	33.43	25.371	261.4	0.379	120	14.15	33.57	25.072	289.6	0.379	120	14.15	33.57	25.072	289.6	0.379	120	14.15	33.57	25.072	289.6	0.379
130	11.71	33.43	25.371	261.4	0.408	130	14.15	33.57	25.072	289.6	0.408	130	14.15	33.57	25.072	289.6	0.408	130	14.15	33.57	25.072	289.6	0.408
140	11.51	33.43	25.371	261.4	0.436	140	14.15	33.57	25.072	289.6	0.436	140	14.15	33.57	25.072	289.6	0.436	140	14.15	33.57	25.072	289.6	0.436
150	11.31	33.43	25.371	261.4	0.465	150	14.15	33.57	25.072	289.6	0.465	150	14.15	33.57	25.072	289.6	0.465	150	14.15	33.57	25.072	289.6	0.465
160	11.11	33.43	25.371	261.4	0.493	160	14.15	33.57	25.072	289.6	0.493	160	14.15	33.57	25.072	289.6	0.493	160	14.15	33.57	25.072	289.6	0.493
170	10.91	33.43	25.371	261.4	0.522	170	14.15	33.57	25.072	289.6	0.522	170	14.15	33.57	25.072	289.6	0.522	170	14.15	33.57	25.072	289.6	0.522
180	10.71	33.43	25.371	261.4	0.550	180	14.15	33.57	25.072	289.6	0.550	180	14.15	33.57	25.072	289.6	0.550	180	14.15	33.57	25.072	289.6	0.550
190	10.51	33.43	25.371	261.4	0.579	190	14.15	33.57	25.072	289.6	0.579	190	14.15	33.57	25.072	289.6	0.579	190	14.15	33.57	25.072	289.6	0.579
200	10.31	33.43	25.371	261.4	0.607	200	14.15	33.57	25.072	289.6	0.607	200	14.15	33.57	25.072	289.6	0.607	200	14.15	33.57	25.072	289.6	0.607
210	10.11	33.43	25.371	261.4	0.636	210	14.15	33.57	25.072	289.6	0.636	210	14.15	33.57	25.072	289.6	0.636	210	14.15	33.57	25.072	289.6	0.636
220	9.91	33.43	25.371	261.4	0.664	220	14.15	33.57	25.072	289.6	0.664	220	14.15	33.57	25.072	289.6	0.664	220	14.15	33.57	25.072	289.6	0.664
230	9.71	33.43	25.371	261.4	0.693	230	14.15	33.57	25.072	289.6	0.693	230	14.15	33.57	25.072	289.6	0.693	230	14.15	33.57	25.072	289.6	0.693
240	9.51	33.43	25.371	261.4	0.721	240	14.15	33.57	25.072	289.6	0.721	240	14.15	33.57	25.072	289.6	0.721	240	14.15	33.57	25.072	289.6	0.721
250	9.31	33.43	25.371	261.4	0.750	250	14.15	33.57	25.072	289.6	0.750	250	14.15	33.57	25.072	289.6	0.750	250	14.15	33.57	25.072	289.6	0.750
260	9.11	33.43	25.371	261.4	0.778	260	14.15	33.57	25.072	289.6	0.778	260	14.15	33.57	25.072	289.6	0.778	260	14.15	33.57	25.072	289.6	0.778
270	8.91	33.43	25.371	261.4	0.807	270	14.15	33.57	25.072	289.6	0.807	270	14.15	33.57	25.072	289.6	0.807	270	14.15	33.57	25.072	289.6	0.807
280	8.71	33.43	25.371	261.4	0.835	280	14.15	33.57	25.072	289.6	0.835	280	14.15	33.57	25.072	289.6	0.835	280	14.15	33.57	25.072	289.6	0.835
290	8.51	33.43	25.371	261.4	0.864	290	14.15	33.57	25.072	289.6	0.864	290	14.15	33.57	25.072	289.6	0.864	290	14.15	33.57	25.072	289.6	0.864
300	8.31	33.43	25.371	261.4	0.892	300	14.15	33.57	25.072	289.6	0.892	300	14.15	33.57	25.072	289.6	0.892	300	14.15	33.57	25.072	289.6	0.892
310	8.11	33.43	25.371	261.4	0.921	310	14.15	33.57	25.072	289.6	0.921	310	14.15	33.57	25.072	289.6	0.921	310	14.15	33.57	25.072	289.6	0.921
320	7.91	33.43	25.371	261.4	0.949	320	14.15	33.57	25.072	289.6	0.949	320	14.15	33.57	25.072	289.6	0.949	320	14.15	33.57	25.072	289.6	0.949
330	7.71	33.43	25.371	261.4	0.978	330	14.15	33.57	25.072	289.6	0.978	330	14.15	33.57	25.072	289.6	0.978	330	14.15	33.57	25.072	289.6	0.978
340	7.51	33.43	25.371	261.4	1.006	340	14.15	33.57	25.072	289.6	1.006	340	14.15	33.57	25.072	289.6	1.006	340	14.15	33.57	25.072	289.6	1.006
350	7.31	33.43	25.371	261.4	1.035	350	14.15	33.57	25.072	289.6	1.035	350	14.15	33.57	25.072	289.6	1.035	350	14.15	33.57	25.072	289.6	1.035
360	7.11	33.43	25.371	261.4	1.063	360	14.15	33.57	25.072	289.6	1.063	360	14.15	33.57	25.072	289.6	1.063	360	14.15	33.57	25.072	289.6	1.063
370	6.91	33.43	25.371	261.4	1.092	370	14.15	33.57	25.072	289.6	1.092	370	14.15	33.57	25.072	289.6	1.092	370	14.15	33.57	25.072	289.6	1.092
380	6.71	33.43	25.371	261.4	1.120	380	14.15	33.57	25.072	289.6	1.120	380	14.15	33.57	25.072	289.6	1.120	380	14.15	33.57	25.072	289.6	1.120
390	6.51	33.43	25.371	261.4	1.149	390	14.15	33.57	25.072	289.6	1.149	390	14.15	33.57	25.072	289.6	1.149	390	14.15	33.57	25.072	289.6	1.149
400	6.31	33.43	25.371	261.4	1.177	400	14.15	33.57	25.072	289.6	1.177	400	14.15	33.57	25.072	289.6	1.177	400	14.15	33.57	25.072	289.6	1.177
410	6.11	33.43	25.371	261.4	1.206	410	14.15	33.57	25.072	289.6	1.206	410	14.15	33.57	25.072	289.6	1.206	410	14.15	33.57	25.072	289.6	1.206
420	5.91	33.43	25.371	261.4	1.234	420	14.15	33.57	25.072	289.6	1.234	420	14.15	33.57	25.072	289.6	1.234	420	14.15	33.57	25.072	289.6	1.234
430	5.71	33.43	25.371	261.4	1.263	430	14.15	33.57	25.072	289.6	1.263	430	14.15	33.57	25.072	289.6	1.263	430	14.15	33.57	25.072	289.6	1.263
440	5.51	33.43	25.371	261.4	1.291	440	14.15	33.57	25.072	289.6	1.291	440	14.15	33.57	25.072	289.6	1.291	440	14.15	33.57	25.072	289.6	1.291
450	5.31	33.43	25.371	261.4	1.320	450	14.15	33.57	25.072	289.6	1.320	450	14.15	33.57	25.072	289.6	1.320	450	14.15	33.57	25.072	289.6	1.320
460	5.11	33.43	25.371	261.4	1.348	460	14.15	33.57	25.072	289.6	1.348	460	14.15	33.57	25.072	289.6	1.348	460	14.15	33.57	25.072	289.6	1.348
470	4.91	33.43	25.371	261.4	1.377	470	14.15	33.57	25.072	289.6	1.377	470	14.15	33.57	2								

97070 RV NAJID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
30 55.5N	119 51.0W	03/15/75	2242 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
3832M	310	9KT	1	330 8 10	
Z	T	S	SIGMA T	DT	DD
0	15.60	33.49	25.124	284.8	0.000
10	15.58	33.49	25.128	284.5	0.028
20	15.55	33.49	25.134	283.4	0.056
30	15.55	33.49	25.134	283.4	0.085
40	15.55	33.50	25.142	283.1	0.113
50	15.46	33.50	25.160	281.4	0.142
75	15.15	33.51	25.230	274.8	0.212
100	12.28	33.54	25.424	256.4	0.279
125	10.28	33.53	25.779	222.6	0.339
150	9.35	33.69	26.058	196.0	0.392
175	8.81	33.85	26.269	176.0	0.439
200	8.46	33.94	26.394	164.2	0.483
225	8.20	33.98	26.465	157.4	0.524
250	7.89	33.99	26.518	152.3	0.564
275	7.46	34.02	26.604	144.2	0.602
300	7.21	34.07	26.679	137.1	0.638
350	6.83	34.13	26.778	127.6	0.707
400	6.57	34.17	26.871	118.8	0.771
450	5.96	34.22	26.963	110.1	0.831
500	5.65	34.24	27.018	104.9	0.888
550	5.40	34.28	27.079	99.1	0.942
600	5.08	34.30	27.133	94.0	0.994
700	4.76	34.38	27.233	84.5	1.091
800	4.46	34.41	27.290	79.1	1.180
900	4.13	34.45	27.357	72.8	1.264
1000	3.91	34.47	27.396	69.1	1.344

CAICUPI CRUISE 7503 97080

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
30 35.0N	120 31.0W	03/15/75	1735 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
4116M	340	8KT	2	340 15 10	
Z	T	S	SIGMA T	DT	DD
0	14.18	33.51	25.019	294.8	0.000
10	14.18	33.51	25.019	294.8	0.029
20	14.18	33.51	25.019	294.8	0.059
30	14.18	33.51	25.019	294.8	0.088
40	14.18	33.51	25.019	294.8	0.118
50	13.96	33.49	25.050	291.9	0.147
75	13.61	33.44	25.083	288.7	0.220
100	12.92	33.38	25.176	280.0	0.292
125	12.13	33.41	25.352	263.2	0.360
150	11.33	33.45	25.531	246.1	0.425
175	10.00	33.49	25.795	221.0	0.484
200	9.05	33.76	26.161	186.3	0.536
225	8.06	33.87	26.308	172.3	0.582
250	8.24	33.98	26.459	158.0	0.624
275	7.78	34.00	26.542	150.0	0.664
300	7.32	34.03	26.632	141.5	0.701
350	6.70	34.09	26.764	129.0	0.771
400	6.32	34.14	26.854	120.5	0.837
450	6.07	34.19	26.926	113.7	0.898
500	5.76	34.23	26.996	107.0	0.956
550	5.54	34.28	27.063	100.7	1.011
600	5.35	34.32	27.117	95.5	1.064
700	4.92	34.37	27.207	87.0	1.183
800	4.52	34.42	27.291	79.0	1.256
900	4.14	34.45	27.356	72.9	1.334
1000	3.87	34.48	27.408	68.0	1.417

100030 RV NAJID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
31 40.5N	116 46.5W	03/19/75	0118 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
4368M	320	10KT	1	280 5 5	
Z	T	S	SIGMA T	DT	DD
0	15.91	33.56	25.114	285.8	0.000
10	15.73	33.58	25.144	283.0	0.028
20	15.25	33.52	25.414	257.3	0.055
30	11.05	33.58	25.683	231.7	0.080
40	10.63	33.67	25.825	218.0	0.102
50	10.38	33.79	25.964	205.0	0.123
75	9.93	33.91	26.134	188.9	0.173
100	9.60	34.06	26.306	172.5	0.219
125	9.27	34.19	26.461	157.7	0.260
150	9.13	34.24	26.523	151.9	0.300
175	8.99	34.26	26.561	146.8	0.338
200	8.77	34.28	26.611	143.5	0.376
225	8.71	34.28	26.621	142.6	0.412
250	8.50	34.29	26.661	138.7	0.449
275	8.31	34.28	26.685	136.7	0.484
300	8.07	34.28	26.719	133.3	0.519
350	7.59	34.29	26.797	125.8	0.587
400	7.23	34.31	26.866	119.5	0.651

CAICUPI CRUISE 7503 100035

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
31 30.5N	117 07.0W	03/19/75	0520 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
1295M	330	10KT			
Z	T	S	SIGMA T	DT	DD
0	13.81	33.59	25.158	281.6	0.000
10	13.60	33.59	25.160	281.4	0.028
20	13.59	33.59	25.162	281.2	0.056
30	12.90	33.49	25.264	271.5	0.084
40	11.95	33.58	25.517	247.5	0.110
50	11.70	33.63	25.694	230.6	0.136
75	10.40	33.72	25.906	210.5	0.189
100	9.83	33.88	26.127	189.5	0.240
125	9.67	34.00	26.247	178.1	0.286
150	9.15	34.07	26.387	164.8	0.330
175	8.33	34.01	26.468	157.1	0.371
200	7.94	34.04	26.550	149.3	0.410
225	8.24	34.19	26.623	142.4	0.447
250	7.98	34.20	26.670	138.0	0.483
275	8.14	34.29	26.716	133.5	0.518
300	8.04	34.29	26.731	132.1	0.553
350	7.45	34.29	26.818	123.9	0.620
400	6.91	34.31	26.909	115.2	0.687
450	6.72	34.33	26.950	111.3	0.742
500	6.33	34.34	27.010	105.6	0.800
550	6.01	34.35	27.059	101.0	0.855
600	5.74	34.37	27.109	96.3	0.908
700	5.18	34.40	27.200	87.6	1.008
800	4.76	34.42	27.265	81.5	1.101
900	4.44	34.45	27.324	75.9	1.189
1000	4.07	34.48	27.387	69.9	1.271



100040		RV DAVID STARR JORDAN				CALGIFI CRUISE 7503				100050							
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
31 21.5N	117 26.5W	03/19/75	0856 GMT	31 00.0N	118 07.0W	03/19/75	1400 GMT										
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
2222M	330	10KT			1669M	340	11KT	1	110 5 11								
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	14.06	33.57	25.091	288.0	0.000	0	14.36	33.57	25.028	294.0	0.000	0	14.36	33.57	25.028	294.0	0.000
10	14.06	33.57	25.091	288.0	0.028	10	14.36	33.57	25.028	294.0	0.029	10	14.36	33.57	25.028	294.0	0.029
20	14.07	33.57	25.089	288.2	0.057	20	14.35	33.57	25.030	293.8	0.058	20	14.35	33.57	25.030	293.8	0.058
30	14.07	33.57	25.089	288.2	0.086	30	14.34	33.57	25.032	293.6	0.088	30	14.34	33.57	25.032	293.6	0.088
40	14.08	33.52	25.090	288.1	0.115	40	14.35	33.57	25.030	293.8	0.117	40	14.35	33.57	25.030	293.8	0.117
50	13.56	33.54	25.171	280.4	0.144	50	14.35	33.57	25.030	293.8	0.147	50	14.35	33.57	25.030	293.8	0.147
75	11.64	33.44	25.466	252.3	0.211	75	13.16	33.45	25.182	279.4	0.219	75	13.16	33.45	25.182	279.4	0.219
100	10.36	33.61	25.827	218.0	0.270	100	11.90	33.45	25.426	256.2	0.286	100	11.90	33.45	25.426	256.2	0.286
125	8.89	33.83	26.078	194.1	0.322	125	10.51	33.50	25.716	228.6	0.348	125	10.51	33.50	25.716	228.6	0.348
150	9.55	33.92	26.205	182.1	0.370	150	10.00	33.71	25.966	204.8	0.402	150	10.00	33.71	25.966	204.8	0.402
175	9.36	34.05	26.337	169.5	0.414	175	9.34	33.82	26.161	186.3	0.457	175	9.34	33.82	26.161	186.3	0.457
200	8.58	33.98	26.391	164.4	0.457	200	8.75	33.93	26.341	169.2	0.497	200	8.75	33.93	26.341	169.2	0.497
225	8.01	34.03	26.532	151.0	0.497	225	8.39	33.96	26.420	161.6	0.540	225	8.39	33.96	26.420	161.6	0.540
250	7.67	34.03	26.582	146.3	0.536	250	7.91	34.00	26.523	151.8	0.580	250	7.91	34.00	26.523	151.8	0.580
275	7.30	34.07	26.666	138.3	0.572	275	7.71	34.04	26.584	146.1	0.618	275	7.71	34.04	26.584	146.1	0.618
300	6.95	34.09	26.731	132.2	0.607	300	7.38	34.07	26.655	139.4	0.655	300	7.38	34.07	26.655	139.4	0.655
350	6.77	34.15	26.802	125.4	0.674	350	6.93	34.12	26.757	129.7	0.725	350	6.93	34.12	26.757	129.7	0.725
400	6.72	34.24	26.880	118.0	0.738	400	6.49	34.13	26.824	123.3	0.791	400	6.49	34.13	26.824	123.3	0.791
450	6.36	34.28	26.956	110.8	0.798	450	6.07	34.17	26.910	115.2	0.854	450	6.07	34.17	26.910	115.2	0.854
500	6.99	34.32	27.038	103.0	0.855	500	5.77	34.21	26.979	108.6	0.913	500	5.77	34.21	26.979	108.6	0.913
550	5.73	34.34	27.087	98.4	0.908	550	5.44	34.23	27.035	103.3	0.969	550	5.44	34.23	27.035	103.3	0.969
600	5.58	34.37	27.129	94.4	0.960	600	5.22	34.28	27.101	97.1	1.022	600	5.22	34.28	27.101	97.1	1.022
700	5.11	34.41	27.216	86.1	1.098	700	4.77	34.36	27.221	85.6	1.121	700	4.77	34.36	27.221	85.6	1.121
800	4.68	34.43	27.282	79.9	1.150	800	4.50	34.42	27.293	78.8	1.211	800	4.50	34.42	27.293	78.8	1.211
900	4.32	34.45	27.337	74.7	1.236	900	4.15	34.46	27.363	77.2	1.295	900	4.15	34.46	27.363	77.2	1.295
1000	4.02	34.48	27.392	69.4	1.317	1000	3.89	34.48	27.406	68.2	1.374	1000	3.89	34.48	27.406	68.2	1.374

100060		RV DAVID STARR JORDAN				CALGIFI CRUISE 7503				100070							
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
30 40.5N	118 47.5W	03/19/75	1932 GMT	30 20.5N	119 27.5W	03/22/75	0045 GMT										
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
2980M	320	10KT	1	330 6 5	3926M	340	14KT	1	300 6 12								
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	15.01	33.67	24.965	299.9	0.000	0	14.29	33.43	24.935	302.9	0.000	0	14.29	33.43	24.935	302.9	0.000
10	15.01	33.67	24.965	299.9	0.030	10	14.29	33.43	24.935	302.9	0.030	10	14.29	33.43	24.935	302.9	0.030
20	14.99	33.67	24.970	299.4	0.060	20	14.30	33.44	24.940	302.3	0.060	20	14.30	33.44	24.940	302.3	0.060
30	14.99	33.67	24.970	299.5	0.090	30	14.28	33.44	24.945	301.9	0.090	30	14.28	33.44	24.945	301.9	0.090
40	14.97	33.67	24.974	299.1	0.120	40	14.03	33.41	24.974	299.1	0.121	40	14.03	33.41	24.974	299.1	0.121
50	14.96	33.67	24.976	298.9	0.150	50	13.72	33.42	25.046	292.3	0.150	50	13.72	33.42	25.046	292.3	0.150
75	14.90	33.66	24.982	298.4	0.225	75	13.02	33.40	25.171	280.4	0.222	75	13.02	33.40	25.171	280.4	0.222
100	12.77	33.50	25.298	268.3	0.296	100	12.17	33.43	25.369	261.6	0.291	100	12.17	33.43	25.369	261.6	0.291
125	11.39	33.57	25.613	238.4	0.360	125	11.17	33.44	25.552	244.1	0.354	125	11.17	33.44	25.552	244.1	0.354
150	10.54	33.72	25.881	212.8	0.417	150	10.25	33.62	25.854	215.5	0.413	150	10.25	33.62	25.854	215.5	0.413
175	9.45	33.77	26.104	191.6	0.469	175	9.65	33.79	26.087	193.3	0.465	175	9.65	33.79	26.087	193.3	0.465
200	9.22	33.95	26.282	174.7	0.515	200	9.32	33.92	26.242	178.5	0.512	200	9.32	33.92	26.242	178.5	0.512
225	8.84	34.06	26.429	160.9	0.558	225	8.93	33.99	26.360	167.4	0.556	225	8.93	33.99	26.360	167.4	0.556
250	8.65	34.09	26.482	155.8	0.599	250	8.48	34.01	26.445	159.2	0.598	250	8.48	34.01	26.445	159.2	0.598
275	8.30	34.14	26.575	147.0	0.638	275	7.98	34.03	26.537	150.6	0.638	275	7.98	34.03	26.537	150.6	0.638
300	7.91	34.17	26.617	142.9	0.676	300	7.58	34.06	26.619	142.8	0.676	300	7.58	34.06	26.619	142.8	0.676
350	6.95	34.10	26.738	131.4	0.747	350	7.03	34.10	26.728	132.5	0.747	350	7.03	34.10	26.728	132.5	0.747
400	6.58	34.14	26.820	123.7	0.813	400	6.55	34.15	26.832	122.6	0.814	400	6.55	34.15	26.832	122.6	0.814
450	6.08	34.16	26.901	116.0	0.876	450	5.91	34.16	26.922	114.0	0.876	450	5.91	34.16	26.922	114.0	0.876
500	5.71	34.19	26.971	109.4	0.936	500	5.56	34.20	26.997	106.9	0.934	500	5.56	34.20	26.997	106.9	0.934
550	5.40	34.24	27.048	102.1	0.992	550	5.33	34.23	27.048	102.0	0.990	550	5.33	34.23	27.048	102.0	0.990
600	5.19	34.27	27.091	97.5	1.045	600	5.08	34.28	27.117	95.5	1.047	600	5.08	34.28	27.117	95.5	1.047
700	4.77	34.36	27.216	86.1	1.144	700	4.72	34.36	27.221	85.6	1.140	700	4.72	34.36	27.221	85.6	1.140
800	4.40	34.43	27.306	77.6	1.234	800	4.41	34.41	27.295	78.6	1.230	800	4.41	34.41	27.295	78.6	1.230
900	4.17	34.45	27.353	73.2	1.318	900	4.21	34.46	27.356	72.8	1.314	900	4.21	34.46	27.356	72.8	1.314
1000	3.93	34.48	27.402	68.5	1.397	1000	3.91	34.48	27.404	68.3	1.393	1000	3.91	34.48	27.404	68.3	1.393

RV DAVID STARR JORDAN		CALGIFI CRUISE 7503				100070							
LATITUDE	LONGITUDE	MO/DAY/YR	MESSSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 20.5N	119 27.5W	3/20/75	0225 GMT	3926M	340	14KT	1	300 6 12					
Z	T	S	O2	PD4	SIG3	NO2							

10080		RV DAVID STARR JORDAN			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
30 00.00	120 07.00	03/20/75	0727 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
416M	330	11KT			
Z	T	S	SIGMA T	DT	DD
0	15.01	33.64	24.942	302.1	0.000
10	15.01	33.64	24.942	302.1	0.030
20	15.01	33.64	24.942	302.1	0.060
30	15.02	33.64	24.940	302.3	0.090
40	15.01	33.64	24.942	302.1	0.121
50	15.00	33.64	24.945	301.9	0.151
75	14.62	33.56	24.965	300.0	0.227
100	13.78	33.45	25.056	291.3	0.301
125	12.73	33.47	25.282	269.8	0.372
150	11.31	33.52	25.589	240.6	0.437
175	10.25	33.62	25.854	215.5	0.495
200	9.66	33.81	26.101	192.0	0.546
225	8.98	33.97	26.336	169.6	0.593
250	8.77	34.00	26.392	164.3	0.636
275	8.36	34.04	26.487	155.3	0.677
300	7.97	34.07	26.569	147.5	0.716
350	7.23	34.09	26.692	135.9	0.789
400	6.57	34.14	26.821	123.6	0.857
450	6.21	34.17	26.892	118.9	0.920
500	5.74	34.19	26.967	109.7	0.980
550	5.47	34.24	27.039	102.9	1.036
600	5.23	34.28	27.100	97.2	1.090
700	4.75	34.34	27.202	87.4	1.189
800	4.44	34.40	27.284	79.7	1.281
900	4.11	34.46	27.367	71.8	1.365
1000	3.84	34.48	27.411	67.7	1.443

CALCIFI CRUISE 7503		103030			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
31 06.0N	116 24.5W	03/21/75	1605 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
56M	330	8KT	1	320 5 9	
Z	T	S	SIGMA T	DT	DD
0	12.29	33.63	25.491	249.4	0.000
10	12.29	33.63	25.491	249.4	0.025
20	11.25	33.55	25.623	237.4	0.049
30	10.51	33.72	25.887	212.3	0.071
40	10.46	33.78	25.942	207.1	0.093
50	10.38	33.83	25.995	202.1	0.113

103035		RV DAVID STARR JORDAN			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
30 56.0N	116 45.0W	03/21/75	1100 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
1766M	330	13KT			
Z	T	S	SIGMA T	DT	DD
0	14.40	33.59	25.035	293.3	0.000
10	14.40	33.59	25.035	293.3	0.029
20	14.40	33.59	25.035	293.3	0.058
30	14.40	33.59	25.035	293.3	0.088
40	14.39	33.58	25.029	293.9	0.117
50	13.55	33.48	25.126	284.6	0.146
75	10.96	33.57	25.696	230.6	0.211
100	10.25	33.68	25.900	211.0	0.267
125	9.46	33.83	26.149	187.4	0.317
150	9.21	33.93	26.268	176.1	0.363
175	8.01	34.10	26.433	160.5	0.406
200	8.96	34.18	26.503	153.8	0.446
225	8.75	34.23	26.575	146.9	0.485
250	8.93	34.33	26.625	142.2	0.522
275	8.71	34.32	26.652	139.6	0.559
300	8.48	34.33	26.699	135.2	0.594
350	8.20	34.38	26.778	127.3	0.663
400	7.91	34.38	26.821	123.6	0.729
450	7.70	34.35	26.900	116.1	0.793
500	6.66	34.35	26.974	109.1	0.852
550	6.14	34.34	27.035	105.3	0.909
600	5.91	34.36	27.080	99.0	0.964
700	5.37	34.39	27.170	90.5	1.067
800	4.86	34.42	27.253	82.6	1.162
900	4.45	34.45	27.323	76.0	1.250
1000	4.13	34.47	27.373	71.3	1.333

CALCIFI CRUISE 7503		103040			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
30 46.0N	117 04.5W	03/21/75	0619 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
1856M	330	10KT			
Z	T	S	SIGMA T	DT	DD
0	14.58	33.60	25.004	296.3	0.000
10	14.58	33.60	25.004	296.3	0.029
20	14.58	33.60	25.004	296.3	0.054
30	14.58	33.60	25.004	296.3	0.089
40	14.58	33.60	25.004	296.3	0.118
50	14.55	33.59	25.003	296.4	0.148
75	13.57	33.49	25.130	284.3	0.221
100	11.79	33.50	25.485	250.5	0.288
125	10.51	33.71	25.879	213.1	0.347
150	10.28	33.87	26.043	197.5	0.399
175	10.00	33.97	26.169	185.5	0.448
200	9.55	34.07	26.322	171.0	0.493
225	9.43	34.15	26.404	163.2	0.536
250	8.74	34.10	26.475	156.4	0.577
275	8.02	34.09	26.577	146.7	0.616
300	8.21	34.23	26.659	139.0	0.653
350	7.91	34.26	26.727	132.5	0.724
400	6.99	34.21	26.819	123.8	0.791
450	6.63	34.26	26.907	115.4	0.854
500	6.07	34.26	26.981	108.5	0.913
550	6.15	34.35	27.042	102.7	0.970
600	5.80	34.37	27.102	97.0	1.024
700	5.25	34.39	27.184	89.1	1.125
800	4.60	34.42	27.282	79.8	1.218
900	4.29	34.45	27.340	74.4	1.303
1000	4.07	34.47	27.379	70.7	1.385

RV DAVID STARR JORDAN		CALCIFI CRUISE 7503			
LATITUDE	LONGITUDE	MO/DAY/YR	MESSNGER TIME		
30 46.0N	117 04.5W	3/21/75	0801 GMT		
Z	T	S	DT	DD	
3	14.56	33.600	5.91	255.9	
12	14.56	33.598	5.88	246.0	
30	14.56	33.597	5.88	236.1	
58	14.49	33.587	5.97	225.4	
77	13.51	33.500	5.82	282.4	
91	12.15	33.501	5.25	256.9	
104	11.53	33.519	4.92	244.5	
132	10.36	33.801	3.69	203.9	
155	10.00	33.948	3.17	187.2	
183	9.61	34.105	2.37	169.3	
215	8.66	34.025	2.99	160.8	
284	8.27	34.187	1.77	143.0	
381	7.00	34.214	1.04	123.6	
483	6.21	34.252	0.62	112.0	
585	6.00	34.352	0.39	100.7	
715	5.01	34.389	0.32	66.6	
865	4.42	34.437	0.42	76.7	
1026	4.01	34.479	0.62	69.4	

CALCIFI CRUISE 7503		103040			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
1856M	330	10KT			
Z	T	S	DT	DD	
0	14.56	33.600	5.91	255.9	
10	14.56	33.599	5.88	246.0	
20	14.56	33.599	5.88	236.1	
30	14.56	33.597	5.88	225.4	
40	14.51	33.591	5.95	215.7	
50	13.65	33.509	5.83	206.0	
75	11.68	33.511	5.01	196.3	
100	10.60	33.721	3.99	186.6	
125	10.05	33.921	3.26	176.9	
150	9.10	34.073	2.64	167.2	
200	8.46	34.111	2.55	157.5	
250	8.06	34.199	1.59	147.8	
300	6.83	34.219	0.94	138.1	
400	6.25	34.269	0.56	128.4	
500	5.89	34.358	0.38	118.7	
600	5.12	34.386	0.32	109.0	
700	4.62	34.417	0.35	99.3	
800	4.06	34.473	0.58	89.6	
1000	4.06	34.473	0.58	79.9	

103050

RV DAVID STARR JORDAN

CALCIFI CRUISE 7503

103060

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME					
30 26.0N	117 45.0W	03/21/75	0021 GMT	30 06.0N	118 25.0W	03/20/75	1900 GMT					
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
2042M	330	12KT	2	320 10 5	3737M	330	10KT	2	330 6 11			
Z	T	S	SIGMA T	HT	HT	HT	Z	T	S	SIGMA T	HT	HT
0	14.77	33.59	24.956	300.9	0.000	0	15.18	33.67	24.928	303.8	0.000	0
10	14.76	33.59	24.958	300.7	0.030	10	15.16	33.67	24.933	303.0	0.030	10
20	14.69	33.57	24.958	300.7	0.060	20	15.15	33.67	24.935	302.8	0.060	20
30	14.59	33.55	24.964	300.1	0.090	30	15.15	33.67	24.935	302.8	0.090	30
40	14.50	33.53	24.967	299.7	0.120	40	15.14	33.67	24.937	302.6	0.120	40
50	14.25	33.49	24.989	297.7	0.150	50	15.14	33.68	24.945	301.9	0.150	50
75	14.16	33.53	25.039	292.9	0.224	75	14.78	33.64	24.992	297.4	0.224	75
100	12.74	33.45	25.265	271.4	0.295	100	12.35	33.54	25.410	257.6	0.295	100
125	11.66	33.53	25.533	266.0	0.361	125	10.93	33.72	25.812	219.4	0.361	125
150	10.91	33.64	25.754	224.9	0.420	150	10.50	33.75	25.946	206.7	0.420	150
175	9.89	33.79	26.047	197.1	0.474	175	10.55	34.09	26.167	185.7	0.474	175
200	9.47	33.95	26.241	178.6	0.522	200	9.46	34.08	26.321	171.1	0.506	200
225	8.99	34.01	26.366	166.8	0.566	225	8.78	34.05	26.430	160.7	0.549	225
250	8.65	34.05	26.450	154.8	0.608	250	8.62	34.13	26.517	152.4	0.589	250
275	8.53	34.14	26.539	150.3	0.648	275	8.39	34.16	26.577	146.8	0.628	275
300	8.31	34.20	26.620	142.7	0.686	300	8.20	34.21	26.645	140.3	0.665	300
350	7.86	34.26	26.734	131.8	0.757	350	7.72	34.25	26.747	130.6	0.736	350
400	7.09	34.23	26.821	123.6	0.824	400	7.18	34.28	26.848	121.0	0.801	400
450	6.10	34.17	26.906	115.5	0.887	450	6.77	34.30	26.920	114.2	0.864	450
500	5.87	34.23	26.982	108.3	0.946	500	6.55	34.33	26.973	109.1	0.923	500
550	5.63	34.29	27.059	101.0	1.002	550	6.39	34.39	27.042	102.7	0.980	550
600	5.32	34.33	27.129	94.4	1.054	600	6.17	34.43	27.102	97.0	1.034	600
700	5.00	34.39	27.213	86.4	1.152	700	5.55	34.43	27.180	89.6	1.135	700
800	4.67	34.43	27.282	79.8	1.243	800	4.82	34.42	27.258	82.2	1.230	800
900	4.34	34.47	27.350	73.4	1.329	900	4.66	34.45	27.322	76.1	1.318	900
1000	4.07	34.48	27.387	69.9	1.409	1000	4.09	34.48	27.385	70.1	1.401	1000

103070

RV DAVID STARR JORDAN

CALCIFI CRUISE 7503

110035

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME					
29 47.0N	119 04.0W	03/20/75	1355 GMT	29 46.0N	116 00.0W	03/22/75	0442 GMT					
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
3737M	010	11KT	2	350 10 7	1296M	340	11KT	2	350 10 7			
Z	T	S	SIGMA T	HT	HT	HT	Z	T	S	SIGMA T	HT	HT
0	14.95	33.66	24.971	299.4	0.000	0	14.32	33.58	25.044	292.5	0.000	0
10	14.95	33.66	24.971	299.4	0.029	10	14.33	33.58	25.042	292.7	0.029	10
20	14.95	33.66	24.971	299.4	0.059	20	14.33	33.58	25.042	292.7	0.059	20
30	14.95	33.67	24.978	298.7	0.089	30	14.32	33.58	25.044	292.5	0.087	30
40	14.95	33.67	24.978	298.7	0.119	40	14.17	33.56	25.060	290.9	0.117	40
50	14.94	33.67	24.981	298.5	0.149	50	13.71	33.53	25.133	284.0	0.146	50
75	14.84	33.65	24.987	297.9	0.224	75	11.61	33.49	25.548	246.6	0.212	75
100	12.36	33.50	25.373	261.1	0.295	100	10.37	33.62	25.833	217.4	0.270	100
125	11.37	33.61	25.648	235.0	0.358	125	9.82	33.77	26.043	197.5	0.323	125
150	11.40	33.97	25.921	209.0	0.414	150	9.23	33.94	26.273	175.7	0.370	150
175	10.19	33.92	26.097	192.3	0.465	175	9.03	34.05	26.391	164.5	0.413	175
200	8.46	33.97	26.258	177.0	0.512	200	9.76	34.30	26.468	157.1	0.454	200
225	8.90	34.01	26.380	165.5	0.556	225	9.62	34.35	26.528	151.3	0.494	225
250	8.57	34.06	26.470	156.9	0.597	250	9.18	34.33	26.585	146.0	0.533	250
275	8.26	34.11	26.560	148.3	0.637	275	8.67	34.26	26.611	143.5	0.570	275
300	8.00	34.13	26.612	143.4	0.674	300	8.51	34.32	26.643	136.7	0.606	300
350	7.52	34.18	26.721	133.1	0.746	350	8.42	34.42	26.775	127.4	0.676	350
400	6.98	34.23	26.836	122.1	0.813	400	7.83	34.39	26.841	121.7	0.741	400
450	6.51	34.28	26.939	112.4	0.875	450	7.19	34.37	26.917	114.5	0.804	450
500	6.20	34.31	26.998	107.0	0.933	500	6.79	34.38	26.980	108.5	0.863	500
550	5.96	34.34	27.058	101.1	0.989	550	6.51	34.38	27.018	104.4	0.921	550
600	5.70	34.36	27.106	96.6	1.042	600	6.18	34.39	27.064	100.1	0.976	600
700	5.18	34.39	27.192	88.4	1.142	700	5.48	34.41	27.172	90.3	1.080	700
800	4.70	34.44	27.287	79.4	1.235	800	4.94	34.43	27.252	82.7	1.175	800
900	4.35	34.46	27.341	74.2	1.320	900	4.50	34.45	27.317	76.5	1.264	900
1000	3.99	34.48	27.395	69.1	1.401	1000	4.12	34.48	27.382	70.4	1.346	1000

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME					
29 46.0N	116 00.0W	03/22/75	0442 GMT	29 46.0N	116 00.0W	03/22/75	0442 GMT					
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
1296M	340	11KT	2	350 10 7	1296M	340	11KT	2	350 10 7			
Z	T	S	SIGMA T	HT	HT	HT	Z	T	S	SIGMA T	HT	HT
0	14.32	33.58	25.044	292.5	0.000	0	14.32	33.58	25.044	292.5	0.000	0
10	14.33	33.58	25.042	292.7	0.029	10	14.33	33.58	25.042	292.7	0.029	10
20	14.33	33.58	25.042	292.7	0.059	20	14.33	33.58	25.042	292.7	0.059	20
30	14.32	33.58	25.044	292.5	0.087	30	14.32	33.58	25.044	292.5	0.087	30
40	14.17	33.56	25.060	290.9	0.117	40	14.17	33.56	25.060	290.9	0.117	40
50	13.71	33.53	25.133	284.0	0.146	50	13.71	33.53	25.133	284.0	0.146	50
75	11.61	33.49	25.548	246.6	0.212	75	11.61	33.49	25.548	246.6	0.212	75
100	10.37	33.62	25.833	217.4	0.270	100	10.37	33.62	25.833	217.4	0.270	100
125	9.82	33.77	26.043	197.5	0.323	125	9.82	33.77	26.043	197.5	0.323	125
150	9.23	33.94	26.273	175.7	0.370	150	9.23	33.94	26.273	175.7	0.370	150
175	9.03	34.05	26.391	164.5	0.413	175	9.03	34.05	26.391	164.5	0.413	175
200	9.76	34.30	26.468	157.1	0.454	200	9.76	34.30	26.468	157.1	0.454	200
225	9.62	34.35	26.528	151.3	0.494	225	9.62	34.35	26.528	151.3	0.494	225
250	9.18	34.33	26.585	146.0	0.533	250	9.18	34.33	26.585	146.0	0.533	250
275	8.67	34.26	26.611	143.5	0.570	275	8.67	34.26	26.611	143.5	0.570	275
300	8.51	34.32	26.643	136.7	0.606	300	8.51	34.32	26.643	136.7	0.606	300
350	8.42	34.42	26.775	127.4	0.676	350	8.42	34.42	26.775	127.4	0.676	350
400	7.83	34.39	26.841	121.7	0.741	400	7.83	34.39	26.841	121.7	0.741	400
450	7.19	34.37	26.917	114.5	0.804	450	7.19	34.37	26.917	114.5	0.804	450
500	6.79	34.38	26.980	108.5	0.863	500	6.79	34.38	26.980	108.5	0.863	500
550	6.51	34.38	27.018	104.4	0.921	550	6.51	34.38	27.018	104.4	0.921	550

110040 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
29 36.5N	116 19.5W	03/22/75	0750 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
2042M	330	13KT			
Z	T	S	SIGMA T	DT	DD
0	14.89	33.64	24.968	299.7	0.000
10	14.89	33.64	24.968	299.7	0.029
20	14.90	33.64	24.966	299.9	0.060
30	14.88	33.63	24.963	300.2	0.090
40	14.73	33.62	24.987	297.8	0.170
50	14.70	33.55	25.046	292.3	0.149
75	12.90	33.43	25.218	275.9	0.221
100	11.15	33.58	25.664	233.5	0.285
125	10.20	33.78	25.987	202.8	0.340
150	10.30	34.04	26.172	185.2	0.389
175	10.15	34.13	26.268	176.1	0.435
200	10.04	34.28	26.387	164.7	0.479
225	9.71	34.29	26.467	157.7	0.520
250	9.59	34.34	26.526	151.6	0.560
275	9.54	34.36	26.549	149.3	0.599
300	9.66	34.62	26.576	146.8	0.638
350	9.10	34.42	26.668	138.1	0.717
400	8.46	34.39	26.786	130.7	0.783
450	8.01	34.42	26.837	122.0	0.850
500	7.21	34.36	26.908	117.5	0.913
550	6.31	34.33	27.005	106.1	0.973
600	5.99	34.36	27.070	100.0	1.028
700	5.39	34.40	27.175	90.0	1.131
800	4.85	34.42	27.254	82.8	1.226
900	4.39	34.45	27.329	75.4	1.314
1000	4.02	34.48	27.392	69.4	1.396

CALCOFI CRUISE 7503 110050

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
29 16.5N	116 59.0W	03/22/75	1336 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
3738M	320	11KT	1	320 # 11	
Z	T	S	SIGMA T	DT	DD
0	14.80	33.63	24.980	298.5	0.000
10	14.80	33.63	24.980	298.5	0.029
20	14.81	33.63	24.978	298.7	0.059
30	14.82	33.63	24.976	299.0	0.089
40	14.82	33.63	24.976	299.0	0.119
50	14.82	33.63	24.976	299.0	0.149
75	14.51	33.60	25.019	294.8	0.224
100	13.03	33.55	25.285	269.5	0.295
125	11.59	33.72	25.693	230.8	0.358
150	11.17	33.91	25.917	209.4	0.414
175	10.50	34.09	26.176	184.8	0.464
200	10.36	34.16	26.255	177.3	0.511
225	10.04	34.25	26.380	165.4	0.555
250	9.61	34.28	26.475	156.4	0.596
275	9.42	34.35	26.562	148.2	0.636
300	9.44	34.44	26.628	141.8	0.673
350	8.04	34.29	26.731	132.1	0.745
400	7.33	34.29	26.835	122.3	0.812
450	7.06	34.34	26.912	115.0	0.874
500	6.79	34.37	26.972	109.2	0.934
550	6.52	34.40	27.032	103.5	0.991
600	6.16	34.41	27.088	98.3	1.046
700	5.45	34.42	27.184	89.2	1.145
800	4.92	34.43	27.254	82.4	1.243
900	4.41	34.46	27.335	74.8	1.330
1000	4.14	34.48	27.380	70.8	1.412

RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	
29 16.5N	116 59.0W	3/22/75	1452 GMT	
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
3738M	320	11KT	1	320 # 11
Z	T	S	DT	DD
3	14.82	33.631	5.91	298.9
11	14.80	33.628	5.91	298.7
30	14.82	33.631	5.95	298.9
58	14.66	33.612	5.93	257.0
77	14.13	33.563		289.9
90	13.21	33.488	5.58	217.5
103	12.46	33.581	4.69	256.6
135	11.35	33.815	3.54	219.6
158	10.83	33.978	2.91	198.6
186	10.41	34.126	2.33	180.7
219	9.93	34.223	1.92	165.7
289	9.10	34.338	1.06	144.2
388	7.38	34.275	0.82	124.1
492	6.98	34.383	0.36	110.7
595	6.20	34.411	0.29	100.0
728	5.53	34.413	0.33	88.3
877	4.57	34.451	0.50	77.2
1041	4.03	34.484	0.68	69.2

CALCOFI CRUISE 7503 110050

BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
3738M	320	11KT	1	320 # 11
Z	T	S	DT	DD
0	14.82	33.631	5.91	298.9
10	14.80	33.629	5.91	298.7
20	14.81	33.630	5.92	298.8
30	14.82	33.631	5.95	298.9
50	14.70	33.618	5.93	297.5
75	14.21	33.572	5.74	250.9
100	12.61	33.553	4.90	253.6
125	11.61	33.743	3.80	257.0
150	10.98	33.924	3.11	259.6
200	10.20	34.175	2.13	262.9
250	9.56	34.291	1.50	264.9
300	8.89	34.332	1.00	266.3
400	7.30	34.286	0.76	268.3
500	6.93	34.387	0.35	269.6
600	6.26	34.411	0.29	270.7
700	5.52	34.413	0.32	271.6
800	4.92	34.430	0.40	272.5
1000	4.13	34.477	0.63	273.7

110060 RV DAVID STARR JORDAN

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
28 57.0N	117 36.5W	03/22/75	1959 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
3738M	320	9KT	2	330 # 8	
Z	T	S	SIGMA T	DT	DD
0	15.10	33.67	24.968	301.8	0.000
10	15.11	33.68	24.938	302.7	0.030
20	15.08	33.66	24.942	302.1	0.060
30	15.06	33.66	24.947	301.7	0.090
40	15.05	33.66	24.949	301.5	0.121
50	15.04	33.66	24.951	301.3	0.151
75	14.79	33.62	24.975	299.1	0.220
100	12.72	33.55	25.346	263.7	0.293
125	11.77	33.76	25.690	231.0	0.360
150	10.87	33.89	25.955	208.8	0.415
175	10.94	34.15	26.144	187.8	0.465
200	10.40	34.18	26.263	176.5	0.512
225	9.83	34.25	26.415	162.1	0.555
250	9.80	34.34	26.480	157.9	0.596
275	9.15	34.27	26.543	150.0	0.636
300	9.18	34.37	26.616	143.0	0.674
350	8.70	34.39	26.708	134.3	0.746
400	8.11	34.39	26.799	125.7	0.815
450	7.52	34.40	26.894	116.7	0.879
500	6.76	34.35	26.961	110.3	0.940
550	6.31	34.34	27.013	104.4	0.993
600	6.09	34.36	27.057	101.2	1.053
700	5.50	34.41	27.170	90.5	1.157
800	5.07	34.44	27.245	83.4	1.253
900	4.52	34.45	27.315	76.7	1.343
1000	4.09	34.48	27.385	70.1	1.425

CALCOFI CRUISE 7503 110060

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
29 22.0N	115 16.5W	03/23/75	2140 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
606M	330	12KT	0	330 # 13	
Z	T	S	SIGMA T	DT	DD
0	12.51	33.65	25.464	252.5	0.000
10	12.51	33.65	25.464	252.5	0.025
20	12.02	33.66	25.566	242.8	0.050
30	11.13	33.63	25.707	229.4	0.073
40	10.77	33.70	25.825	218.1	0.096
50	10.87	33.75	25.847	216.1	0.118





113070		RV DAV ID STARR JORDAN				CALCIFI CRUISE 7503				119033		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
28 02.0N	117 55.0W	03/28/75	1020 GMT			28 19.0N	114 53.0W	03/24/75	1439 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
3357M	310	5KT				110M	320	8KT	0	300	4 10	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	
0	15.39	33.68	24.890	307.1	0.000	0	13.68	33.59	25.185	279.1	0.000	
10	15.40	33.68	24.888	307.4	0.030	10	13.66	33.59	25.189	278.7	0.027	
20	15.40	33.68	24.888	307.4	0.061	20	13.66	33.59	25.189	278.7	0.055	
30	15.40	33.68	24.888	307.4	0.092	30	13.66	33.60	25.197	277.9	0.083	
40	15.40	33.68	24.888	307.4	0.123	40	13.66	33.59	25.189	278.7	0.111	
50	15.40	33.69	24.895	308.6	0.154	50	13.60	33.59	25.201	277.5	0.139	
75	13.90	33.52	25.086	288.5	0.228	75	11.60	33.64	25.592	240.4	0.204	
100	12.14	33.57	25.473	251.6	0.296	90	11.39	33.75	25.753	225.1	0.239	
125	11.26	33.67	25.714	226.7	0.357							
150	10.33	33.79	25.972	204.2	0.412							
175	9.77	33.95	26.192	183.3	0.461							
200	9.06	33.97	26.323	170.8	0.506							
225	8.79	34.02	26.405	163.1	0.549							
250	8.50	34.07	26.489	155.1	0.590							
275	8.17	34.11	26.571	147.4	0.629							
300	8.05	34.16	26.644	140.4	0.666							
350	7.38	34.20	26.757	129.7	0.737							
400	7.10	34.27	26.851	120.7	0.802							
450	6.63	34.29	26.931	113.2	0.864							
500	6.38	34.33	26.996	107.0	0.922							
550	6.04	34.35	27.056	101.3	0.978							
600	5.71	34.36	27.105	96.7	1.031							
700	5.17	34.39	27.194	88.2	1.132							
800	4.70	34.43	27.279	80.1	1.224							
900	4.27	34.46	27.350	73.4	1.310							
1000	3.92	34.48	27.403	68.5	1.390							

120030		RV DAV ID STARR JORDAN				CALCIFI CRUISE 7503				120035		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
28 13.0N	114 34.0W	03/24/75	1210 GMT			28 03.0N	114 54.0W	03/24/75	1641 GMT			
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
95M	320	8KT				80M	360	8KT	0	320	6 11	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	
0	12.64	33.67	25.255	272.4	0.000	0	16.41	33.72	25.120	285.2	0.000	
10	12.62	33.66	25.251	272.8	0.027	10	16.66	33.71	25.114	285.6	0.028	
20	12.60	33.66	25.255	272.4	0.054	20	16.41	33.71	25.125	284.8	0.057	
30	12.60	33.66	25.271	270.8	0.081	30	16.41	33.71	25.125	284.8	0.085	
40	12.65	33.66	25.294	259.2	0.108	40	16.41	33.77	25.133	284.0	0.114	
50	12.69	33.64	25.421	256.5	0.134	50	16.41	33.72	25.133	284.0	0.142	
67	11.78	33.71	25.650	234.9	0.176	67	13.27	33.67	25.230	265.3	0.189	

RV (DAVI) STARR JORDAN		CALCIFI CRUISE 7503				120045									
LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME			BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES					
27 43.0N	115 33.0W	3/24/75	2240 GMT			2416M	340	9KT	0	320	10 8				
Z	T	S	U2	U04	U03	U02	U03	DT	SIGT	DT	DD				
2	14.63	33.756	6.19					285.8	0	14.63	33.756	6.19	25.113	285.8	0.000
11	14.19	33.763	6.06					276.4	10	14.74	33.762	6.07	25.200	277.6	0.028
31	13.05	33.847	4.39					248.8	20	13.71	33.790	5.42	25.331	265.1	0.055
59	11.26	34.117	7.17					195.7	30	13.14	33.841	4.49	25.485	250.4	0.081
79	10.68	34.284	1.40					173.5	50	11.80	34.022	2.80	25.886	212.3	0.127
92	10.42	34.275	1.46					169.8	75	10.76	34.261	1.48	26.262	176.6	0.176
107	10.40	34.363	1.11					163.0	100	10.40	34.321	1.29	26.371	166.3	0.220
137	10.25	34.444	0.80					154.5	125	10.31	34.419	0.92	26.465	157.3	0.261
160	9.58	34.361	1.17					149.9	150	9.86	34.397	1.01	26.523	151.8	0.300
188	9.49	34.420	0.71					144.1	200	9.46	34.441	0.58	26.625	142.2	0.375
223	9.40	34.471	0.42					138.9	250	9.22	34.483	0.35	26.697	135.3	0.447
293	8.85	34.479	0.26					129.9	300	8.78	34.478	0.25	26.763	129.1	0.516
394	7.91	34.449	0.24					118.4	400	7.84	34.447	0.23	26.883	117.7	0.646
499	6.84	34.423	0.22					105.9	500	6.83	34.423	0.22	27.008	105.8	0.765
604	6.06	34.426	0.23					95.9	600	6.08	34.425	0.22	27.109	96.2	0.874
737	5.29	34.446	0.30					85.4	700	5.48	34.439	0.26	27.195	88.1	0.974
888	4.52	34.472	0.60					75.1	800	4.95	34.457	0.42	27.272	80.8	1.068
1052	3.89	34.499	0.68					66.7	1000	4.06	34.491	0.65	27.396	69.1	1.236

120045						CALCOP I CRUISE 7503											
RV DAVID STARR JORDAN						120050											
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME						
27 43.0N	115 33.0W	03/24/75	2130 GMT	27 33.0N	115 53.0W	03/25/75	0135 GMT	27 33.0N	115 53.0W	03/25/75	0135 GMT						
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
2416R	340	9KT	0	320 10 R	5212R	340	8KT	0	360 R R	2416R	340	9KT	0	320 10 R			
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	14.55	33.75	25.126	284.7	0.000	0	14.53	33.60	25.015	285.2	0.000	0	14.53	33.60	25.015	285.2	0.000
10	14.47	33.75	25.143	283.0	0.028	10	14.47	33.58	25.012	295.5	0.028	10	14.47	33.58	25.012	295.5	0.028
20	14.06	33.75	25.229	274.8	0.056	20	14.09	33.58	25.092	287.9	0.056	20	14.09	33.58	25.092	287.9	0.056
30	13.91	33.76	25.268	271.1	0.083	30	14.04	33.63	25.141	283.2	0.087	30	14.04	33.63	25.141	283.2	0.087
40	13.13	33.79	25.450	253.8	0.110	40	14.01	33.63	25.146	282.6	0.115	40	14.01	33.63	25.146	282.6	0.115
50	11.66	33.89	25.811	219.5	0.133	50	13.97	33.61	25.140	283.3	0.144	50	13.97	33.61	25.140	283.3	0.144
75	11.02	34.22	26.185	186.0	0.184	75	12.37	33.68	25.447	254.2	0.211	75	12.37	33.68	25.447	254.2	0.211
100	10.41	34.28	26.339	169.3	0.229	100	10.67	33.79	25.922	209.0	0.270	100	10.67	33.79	25.922	209.0	0.270
125	10.39	34.40	26.436	160.1	0.271	125	10.28	34.04	26.175	184.9	0.320	125	10.28	34.04	26.175	184.9	0.320
150	10.24	34.45	26.501	153.9	0.311	150	10.06	34.14	26.291	173.9	0.365	150	10.06	34.14	26.291	173.9	0.365
175	9.66	34.36	26.530	151.7	0.350	175	9.78	34.25	26.424	161.3	0.408	175	9.78	34.25	26.424	161.3	0.408
200	9.37	34.37	26.585	145.9	0.388	200	10.34	34.43	26.468	157.1	0.449	200	10.34	34.43	26.468	157.1	0.449
225	9.45	34.47	26.650	139.8	0.425	225	9.65	34.39	26.555	148.9	0.488	225	9.65	34.39	26.555	148.9	0.488
250	9.31	34.47	26.673	137.6	0.460	250	9.55	34.46	26.626	142.1	0.526	250	9.55	34.46	26.626	142.1	0.526
275	9.14	34.48	26.708	134.3	0.496	275	9.31	34.44	26.650	139.8	0.562	275	9.31	34.44	26.650	139.8	0.562
300	8.90	34.48	26.747	130.6	0.530	300	8.83	34.43	26.719	133.2	0.598	300	8.83	34.43	26.719	133.2	0.598
350	8.56	34.47	26.793	126.3	0.598	350	8.40	34.46	26.809	124.7	0.665	350	8.40	34.46	26.809	124.7	0.665
400	7.98	34.45	26.866	119.4	0.662	400	7.96	34.45	26.868	119.1	0.730	400	7.96	34.45	26.868	119.1	0.730
450	7.40	34.44	26.942	112.1	0.724	450	7.46	34.43	26.926	113.6	0.792	450	7.46	34.43	26.926	113.6	0.792
500	6.87	34.42	27.001	106.5	0.782	500	6.82	34.40	26.992	107.4	0.851	500	6.82	34.40	26.992	107.4	0.851
550	6.49	34.43	27.060	100.9	0.838	550	6.58	34.44	27.056	101.3	0.907	550	6.58	34.44	27.056	101.3	0.907
600	6.10	34.43	27.111	96.1	0.891	600	6.19	34.43	27.099	97.2	0.960	600	6.19	34.43	27.099	97.2	0.960
700	5.51	34.44	27.192	88.4	0.992	700	5.55	34.44	27.188	88.8	1.062	700	5.55	34.44	27.188	88.8	1.062
800	4.99	34.45	27.262	81.8	1.086	800	5.01	34.46	27.268	81.2	1.156	800	5.01	34.46	27.268	81.2	1.156
900	4.46	34.47	27.337	74.6	1.173	900	4.61	34.47	27.321	76.2	1.244	900	4.61	34.47	27.321	76.2	1.244
1000	4.10	34.49	27.392	69.5	1.255	1000	4.24	34.49	27.377	70.9	1.327	1000	4.24	34.49	27.377	70.9	1.327

120060						CALCOP I CRUISE 7503											
RV DAVID STARR JORDAN						120070											
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME						
27 13.0N	116 30.5W	03/25/75	0631 GMT	26 50. N	117 10. W	03/28/75	0002 GMT	26 50. N	117 10. W	03/28/75	0002 GMT						
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
5737R	340	11KT			5926R	320	9KT	2	330 R R	5926R	320	9KT	2	330 R R			
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	15.10	33.63	24.915	304.7	0.000	0	15.01	33.73	24.834	312.4	0.000	0	15.01	33.73	24.834	312.4	0.000
10	15.10	33.63	24.915	304.7	0.030	10	15.01	33.73	24.834	312.4	0.031	10	15.01	33.73	24.834	312.4	0.031
20	15.08	33.63	24.920	304.3	0.060	20	15.00	33.73	24.837	312.2	0.062	20	15.00	33.73	24.837	312.2	0.062
30	15.05	33.63	24.926	303.7	0.091	30	15.79	33.73	24.839	312.0	0.093	30	15.79	33.73	24.839	312.0	0.093
40	15.03	33.63	24.930	303.3	0.121	40	15.71	33.73	24.843	311.5	0.125	40	15.71	33.73	24.843	311.5	0.125
50	14.96	33.62	24.938	302.6	0.152	50	15.77	33.73	24.843	311.5	0.156	50	15.77	33.73	24.843	311.5	0.156
75	13.77	33.56	25.143	285.0	0.225	75	15.72	33.73	24.855	310.5	0.234	75	15.72	33.73	24.855	310.5	0.234
100	12.42	33.67	25.497	249.3	0.293	100	13.56	33.55	25.178	279.7	0.308	100	13.56	33.55	25.178	279.7	0.308
125	11.45	33.89	25.850	215.8	0.351	125	11.95	33.62	25.548	244.5	0.375	125	11.95	33.62	25.548	244.5	0.375
150	10.94	33.96	25.997	201.8	0.404	150	10.82	33.76	25.863	214.6	0.433	150	10.82	33.76	25.863	214.6	0.433
175	10.81	34.23	26.230	179.7	0.453	175	10.29	33.96	26.111	191.0	0.484	175	10.29	33.96	26.111	191.0	0.484
200	10.18	34.27	26.371	166.3	0.497	200	10.35	34.21	26.295	173.5	0.531	200	10.35	34.21	26.295	173.5	0.531
225	9.79	34.30	26.461	157.8	0.539	225	9.96	34.29	26.474	161.2	0.574	225	9.96	34.29	26.474	161.2	0.574
250	9.64	34.33	26.509	154.1	0.579	250	9.69	34.33	26.501	153.9	0.615	250	9.69	34.33	26.501	153.9	0.615
275	9.26	34.37	26.603	144.3	0.618	275	9.43	34.35	26.560	148.4	0.654	275	9.43	34.35	26.560	148.4	0.654
300	9.13	34.39	26.640	140.8	0.655	300	9.21	34.38	26.619	142.7	0.692	300	9.21	34.38	26.619	142.7	0.692
350	8.76	34.42	26.722	132.9	0.726	350	8.52	34.37	26.721	133.1	0.764	350	8.52	34.37	26.721	133.1	0.764
400	8.13	34.46	26.835	122.2	0.793	400	7.78	34.34	26.809	124.7	0.832	400	7.78	34.34	26.809	124.7	0.832
450	7.46	34.43	26.926	113.6	0.856	450	7.42	34.36	26.877	118.3	0.896	450	7.42	34.36	26.877	118.3	0.896
500	7.13	34.43	26.973	109.2	0.916	500	6.93	34.36	26.945	111.8	0.957	500	6.93	34.36	26.945	111.8	0.957
550	6.56	34.42	27.043	102.6	0.973	550	6.40	34.36	27.017	105.0	1.015	550	6.40	34.36	27.017	105.0	1.015
600	6.01	34.42	27.114	95.7	1.026	600	5.99	34.37	27.078	99.3	1.070	600	5.99	34.37	27.078	99.3	1.070
700	5.31	34.42	27.201	87.6	1.126	700	5.41	34.41	27.181	89.5	1.173	700	5.41	34.41	27.181	89.5	1.173
800	4.98	34.45	27.263	81.6	1.220	800	5.00	34.45	27.261	81.9	1.268	800	5.00	34.45	27.261	81.9	1.268
900	4.45	34.46	27.331	75.3	1.307	900	4.51	34.46	27.324	75.9	1.356	900	4.51	34.46	27.324	75.9	1.356
1000	4.09	34.49	27.393	69.4	1.389	1000	4.16	34.49	27.386	70.1	1.438	1000	4.16	34.49	27.386	70.1	1.438

123057		RV DAVID STARR JORDAN				CALCOFI CRUISE 7503				123050			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
27 24.0N	114 40.0W	03/26/75	0207 GMT			26 58.0N	115 31.0W	03/25/75	1630 GMT				
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
71M	300	10KT	0	300 3 7			3546M	340	10KT	2	320 9 10		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD		
0	17.82	34.04	25.705	229.6	0.000	0	15.22	33.73	24.966	299.9	0.000		
10	17.81	34.04	25.707	229.4	0.022	10	15.22	33.73	24.966	299.9	0.030		
20	17.74	34.04	25.721	228.1	0.045	20	15.22	33.73	24.966	299.9	0.060		
30	17.24	34.05	25.826	218.1	0.068	30	15.22	33.74	24.973	299.2	0.090		
40	11.72	34.12	25.978	203.6	0.089	40	15.16	33.74	24.987	297.9	0.120		
50	11.43	34.20	26.094	192.6	0.109	50	15.14	33.74	24.991	297.5	0.149		
						75	12.57	33.57	25.391	259.5	0.219		
						100	11.31	33.84	25.837	217.0	0.280		
						125	10.88	34.02	26.054	196.4	0.337		
						150	10.88	34.28	26.260	176.8	0.379		
						175	9.76	34.14	26.341	169.1	0.423		
						200	9.30	34.18	26.448	159.0	0.465		
						225	9.07	34.28	26.564	148.0	0.505		
						250	9.03	34.33	26.609	143.7	0.547		
						275	8.66	34.33	26.668	138.1	0.579		
						300	8.38	34.33	26.711	134.0	0.614		
						350	8.03	34.36	26.788	126.8	0.667		
						400	7.85	34.38	26.859	120.0	0.747		
						450	7.23	34.44	26.966	109.8	0.808		
						500	6.77	34.44	27.030	103.7	0.865		
						550	6.39	34.44	27.081	98.9	0.920		
						600	6.04	34.44	27.126	94.6	0.972		
						700	5.36	34.46	27.227	85.1	1.071		
						800	4.96	34.48	27.289	79.2	1.162		
						900	4.48	34.48	27.343	74.1	1.247		
						1000	4.16	34.49	27.386	70.1	1.329		

RV DAVID STARR JORDAN		CALCOFI CRUISE 7503				123050										
LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME			BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
26 58.0N	115 31.0W	3/25/75	1737 GMT			3546M	340	10KT	2	320 9 10						
Z	T	S	DT	DT4	SIGT	DT2	DT3	DT1	Z	T	S	DT	SIGT	DT	DD	
1	15.24	33.737	5.91						299.8	0	15.24	33.737	5.91	24.967	299.8	0.000
10	15.21	33.744	5.87						298.7	10	15.21	33.744	5.87	24.978	298.7	0.029
28	15.21	33.738	5.82						299.1	20	15.21	33.741	5.84	24.976	298.9	0.059
56	14.23	33.664	5.43						286.5	30	15.17	33.735	5.81	24.977	298.8	0.089
74	12.97	33.638	4.76						261.9	50	14.54	33.682	5.56	25.075	289.5	0.148
87	11.86	33.676	4.19						238.8	75	12.87	33.640	4.71	25.384	260.1	0.218
102	11.40	33.802	3.47						221.4	100	11.43	33.783	3.56	25.770	223.4	0.278
129	11.02	34.068	2.46						195.2	125	11.04	34.027	2.60	26.079	198.8	0.332
151	10.97	34.305	1.46						176.9	150	10.97	34.296	1.48	26.252	177.6	0.380
179	9.43	34.126	2.63						164.9	200	9.25	34.187	2.29	26.461	157.7	0.465
211	9.16	34.213	1.94						156.3	250	8.84	34.292	1.31	26.608	143.8	0.543
280	8.61	34.334	0.96						137.1	300	8.45	34.349	0.81	26.713	133.8	0.615
376	7.85	34.377	0.50						123.0	400	7.61	34.393	0.40	26.875	118.5	0.747
477	6.87	34.439	0.20						109.1	500	6.68	34.442	0.20	27.044	102.4	0.865
579	6.11	34.444	0.22						95.2	600	5.96	34.446	0.22	27.140	93.3	0.971
707	5.34	34.461	0.22						84.8	700	5.37	34.460	0.22	27.224	85.3	1.068
854	4.75	34.494	0.30						75.9	800	4.94	34.483	0.25	27.293	78.8	1.159
1014	4.12	34.502	0.61						68.8	1000	4.17	34.503	0.57	27.394	69.3	1.326

123050		RV DAVID STARR JORDAN				CALCOFI CRUISE 7503				130028			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
26 58.0N	115 09.0W	03/25/75	1120 GMT			26 53.0N	113 21.0W	1/3/26/75	1447 GMT				
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
3919M	350	12KT	1	230 2 8			50M	300	6KT	1	230 2 8		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD		
0	15.13	33.86	24.931	303.2	0.000	0	13.75	33.92	25.424	256.2	0.000		
10	15.12	33.86	24.934	303.0	0.000	10	13.75	33.93	25.432	255.5	0.025		
20	15.07	33.86	24.945	301.9	0.000	20	13.73	33.93	25.436	255.1	0.051		
30	14.95	33.67	24.978	298.7	0.090	30	12.59	33.93	25.665	233.4	0.075		
40	14.96	33.68	24.988	297.8	0.120	40	11.76	34.02	25.897	211.3	0.097		
50	14.94	33.69	24.996	297.0	0.150	50	11.72	34.07	25.940	207.3	0.119		
75	14.62	33.66	25.042	292.7	0.224								
100	12.09	33.66	25.358	262.6	0.296								
125	11.47	33.72	25.715	228.7	0.356								
150	10.78	34.02	26.072	194.7	0.410								
175	10.58	34.16	26.223	180.3	0.458								
200	9.48	34.13	26.380	165.4	0.502								
225	9.25	34.18	26.457	156.2	0.543								
250	9.03	34.26	26.554	148.0	0.583								
275	8.55	34.24	26.614	143.2	0.621								
300	8.06	34.26	26.689	136.1	0.657								
350	8.11	34.37	26.783	127.2	0.726								
400	7.71	34.40	26.866	119.3	0.791								
450	7.23	34.39	26.927	113.5	0.852								
500	6.76	34.39	26.992	107.3	0.911								
550	6.27	34.38	27.050	101.9	0.967								
600	6.09	34.44	27.120	95.2	1.021								
700	5.34	34.43	27.205	87.2	1.120								
800	4.73	34.44	27.284	79.4	1.212								
900	4.30	34.47	27.355	73.0	1.297								
1000	4.03	34.51	27.415	67.3	1.376								



LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
26 29.0N	113 29.0W	03/26/75	1651 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
2415M	310	9KT	2	270 3 10	
Z	T	S	SIGMA T	DT	DD
0	13.24	33.78	25.420	256.6	0.000
10	13.20	33.78	25.429	255.9	0.025
20	12.75	33.82	25.544	244.4	0.050
30	12.30	33.97	25.752	225.1	0.074
40	11.92	33.97	25.825	214.2	0.096
50	11.62	34.04	25.950	206.2	0.117
75	11.98	33.82	26.132	189.0	0.167

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
26 09.0N	114 07.0W	03/26/75	2140 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
2415M	320	9KT	0	300 4 8	
Z	T	S	SIGMA T	DT	DD
0	16.79	34.05	24.855	310.5	0.000
10	16.78	34.05	24.857	310.2	0.031
20	16.70	34.03	24.860	309.9	0.062
30	15.45	33.83	24.992	297.4	0.092
40	14.39	33.68	25.106	286.5	0.121
50	14.01	33.70	25.201	277.5	0.150
75	12.52	33.74	25.570	242.4	0.215
100	11.27	33.86	25.860	214.9	0.273
125	12.21	34.42	26.118	190.3	0.324
150	11.67	34.48	26.267	176.2	0.371
175	10.87	34.44	26.382	165.2	0.414
200	10.88	34.47	26.439	159.8	0.456
225	10.31	34.48	26.512	152.9	0.496
250	9.88	34.46	26.570	147.4	0.535
275	9.45	34.47	26.650	139.8	0.572
300	9.03	34.46	26.711	134.0	0.608
350	8.44	34.45	26.796	126.0	0.676
400	7.99	34.44	26.856	120.3	0.741
450	7.44	34.44	26.941	112.2	0.803
500	6.94	34.44	27.007	105.9	0.861
550	6.64	34.45	27.056	101.3	0.917
600	6.26	34.46	27.114	95.8	0.971
700	5.65	34.46	27.191	88.5	1.071
800	5.03	34.47	27.273	80.7	1.165
900	4.72	34.48	27.317	76.6	1.253
1000	4.27	34.50	27.382	70.4	1.336

LATITUDE	LONGITUDE	MO/DAY/YR	MESSANGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES							
25 47.0N	114 44.0W	3/27/75	0440 GMT	3738M	350	12KT									
Z	T	S	D2	D4	S103	N02	N13	D1	Z	T	S	D2	SIGT	DT	DD
1	16.27	33.894	5.73					310.3	0	16.27	33.894	5.73	24.856	310.3	0.000
11	16.28	33.899	5.73					310.2	10	16.27	33.899	5.73	24.857	310.2	0.031
29	16.28	33.898	5.84					310.3	20	16.28	33.899	5.78	24.857	310.3	0.062
57	16.15	33.897	5.75					307.5	30	16.27	33.899	5.83	24.858	310.2	0.093
76	13.87	33.654	5.11					278.1	50	16.18	33.898	5.77	24.878	308.2	0.155
90	12.81	33.677	4.46					256.1	75	14.00	33.665	5.15	25.176	279.9	0.229
105	12.04	33.767	3.84					235.3	100	12.25	33.730	4.05	25.575	241.4	0.295
132	11.69	34.116	2.27					203.3	125	11.72	34.022	2.66	25.901	211.0	0.352
155	11.26	34.307	1.56					181.7	150	11.35	34.273	1.68	26.165	185.8	0.402
184	10.55	34.444	0.94					166.3	200	10.76	34.471	0.79	26.426	161.1	0.491
217	10.55	34.481	0.72					156.8	250	10.08	34.489	0.58	26.557	148.6	0.571
288	9.52	34.478	0.49					140.3	300	9.32	34.469	0.46	26.670	137.9	0.645
388	8.02	34.413	0.35					127.2	400	7.88	34.413	0.32	26.851	120.7	0.781
493	6.98	34.431	0.21					107.1	500	6.91	34.431	0.21	27.003	106.3	0.902
597	6.18	34.435	0.26					96.7	600	6.16	34.435	0.25	27.107	96.4	1.012
731	5.40	34.459	0.25					85.7	700	5.56	34.453	0.25	27.196	88.0	1.112
879	4.67	34.478	0.37					76.2	800	5.04	34.468	0.29	27.270	81.0	1.206
1043	4.05	34.507	0.55					67.7	1000	4.19	34.499	0.49	27.389	69.7	1.375

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
25 47.0N	114 44.0W	03/27/75	0530 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
3737M	350	12KT			
Z	T	S	SIGMA T	DT	DD
0	16.31	33.90	24.851	310.8	0.000
10	16.29	33.90	24.850	310.3	0.031
20	16.30	33.90	24.853	310.6	0.062
30	16.31	33.90	24.851	310.8	0.093
40	16.23	33.90	24.859	309.1	0.124
50	16.10	33.91	24.889	307.2	0.155
75	16.30	33.65	25.102	286.9	0.230
100	17.02	33.78	25.859	234.0	0.295
125	11.82	34.07	25.921	209.1	0.351
150	11.40	34.24	25.131	189.1	0.402
175	11.04	34.39	26.505	172.5	0.448
200	10.48	34.38	26.405	163.1	0.491
225	10.49	34.49	26.986	155.4	0.532
251	10.12	34.46	26.530	151.2	0.572
275	8.88	34.47	26.577	146.8	0.610
300	8.36	34.46	26.657	139.1	0.648
350	8.64	34.44	26.757	129.7	0.718
400	7.93	34.41	26.841	121.6	0.784
450	7.63	34.44	26.909	115.2	0.847
500	7.04	34.43	26.985	106.0	0.907
550	6.62	34.44	27.051	101.8	0.963
600	6.30	34.44	27.093	97.8	1.017
700	5.69	34.44	27.170	90.5	1.120
800	5.06	34.46	27.262	81.8	1.216
900	4.85	34.48	27.325	75.9	1.304
1000	4.27	34.50	27.382	70.4	1.387

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
25 29.0N	115 23.5W	03/27/75	0919 GMT		
BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
3926M	300	9KT			
Z	T	S	SIGMA T	DT	DD
0	16.24	33.92	24.883	307.8	0.000
10	16.24	33.92	24.883	307.8	0.030
20	16.24	33.92	24.883	307.8	0.061
30	16.27	33.94	24.891	307.0	0.092
40	16.28	33.94	24.889	307.2	0.123
50	16.60	33.98	24.892	306.9	0.154
75	16.61	34.00	24.905	305.7	0.231
100	13.33	33.86	25.464	252.5	0.301
125	12.52	34.02	25.787	221.8	0.361
150	11.59	34.74	26.096	192.4	0.414
175	11.27	34.36	26.248	178.0	0.461
200	10.98	34.47	26.386	164.9	0.505
225	10.94	34.54	26.447	159.0	0.547
250	10.54	34.53	26.511	153.0	0.587
275	10.12	34.54	26.592	145.3	0.626
300	9.82	34.53	26.635	141.2	0.663
350	9.20	34.52	26.730	132.2	0.735
400	8.61	34.50	26.808	124.8	0.803
450	7.93	34.47	26.889	117.2	0.867
500	7.22	34.45	26.976	108.9	0.928
550	6.81	34.45	27.033	103.5	0.985
600	6.44	34.46	27.090	98.0	1.040
700	5.73	34.46	27.181	89.4	1.142
800	5.12	34.47	27.263	81.7	1.237
900	4.69	34.49	27.328	75.5	1.325
1000	4.30	34.51	27.386	70.0	1.407

Z	T	10 METER S	DATA 02	BT
60.065	05/02/75	1636GMT	37 27.0°	124 01.5W
		BOTTOM 3635M	WIND 290	PKT WEATHER 1
		DOMINANT WAVES	270 9 9	
60.080	05/02/75	0806GMT	36 57.0°	125 04.0W
		BOTTOM 4264M	WIND 220	1/KT WEATHER 0
		DOMINANT WAVES	230	
60.090	05/02/75	0226GMT	36 37.0°	125 47.0W
		BOTTOM 4474M	WIND 340	1-KT WEATHER 1
		DOMINANT WAVES	350 14 10	
63.050	02/28/75	2121GMT	37 25.5°	122 28.0W
		BOTTOM 32M	WIND 280	3KT WEATHER 4
		DOMINANT WAVES	240 1 5	
63.052	02/28/75	2230GMT	37 19.0°	122 36.0W
		BOTTOM 488M	WIND 220	5KT WEATHER 4
		DOMINANT WAVES	270 1 5	
63.055	02/29/75	0014GMT	37 15.0°	122 50.0W
		BOTTOM 288M	WIND 280	3KT WEATHER 4
		DOMINANT WAVES	240 2 11	
63.060	02/29/75	0319GMT	37 02.5°	123 11.0W
		BOTTOM 2595M	WIND 160	1/KT WEATHER 4
		DOMINANT WAVES	250 6 10	
63.065	02/01/75	0609GMT	36 53.0°	123 31.0W
		BOTTOM 3409M	WIND 020	1/KT WEATHER
		DOMINANT WAVES		
63.080	02/01/75	1529GMT	36 23.0°	124 36.0W
		BOTTOM 4110M	WIND 180	2/KT WEATHER 2
		DOMINANT WAVES	270 10 8	
63.090	02/01/75	2107GMT	36 03.0°	125 20.0W
		BOTTOM 4498M	WIND 180	2/KT WEATHER 1
		DOMINANT WAVES	200 12 12	
66.049	02/28/75	1720GMT	36 53.0°	122 01.5W
		BOTTOM 52M	WIND 020	1-KT WEATHER 1
		DOMINANT WAVES		
67.050	02/28/75	1625GMT	36 49.0°	122 04.5W
		BOTTOM 99M	WIND 360	1-KT WEATHER 1
		DOMINANT WAVES	360 2 8	
67.060	02/28/75	0914GMT	36 29.0°	122 47.5W
		BOTTOM 3068M	WIND 330	1-KT WEATHER 4
		DOMINANT WAVES		
67.065	02/28/75	0611GMT	36 18.0°	123 08.5W
		BOTTOM 3353M	WIND 350	1-KT WEATHER 4
		DOMINANT WAVES		
67.070	02/28/75	0319GMT	36 08.0°	123 29.5W
		BOTTOM 3540M	WIND 320	1-KT WEATHER 4
		DOMINANT WAVES		
67.080	02/27/75	2210GMT	35 47.5°	124 11.5W
		BOTTOM 3918M	WIND 360	1/KT WEATHER 2
		DOMINANT WAVES		
67.090	02/27/75	1634GMT	35 28.0°	124 55.5W
		BOTTOM 4308M	WIND 330	1-KT WEATHER 2
		DOMINANT WAVES		
70.051	02/28/75	1155GMT	36 11.5°	121 43.5W
		BOTTOM 84M	WIND 320	1-KT WEATHER 1
		DOMINANT WAVES	310 2 4	
70.053	02/28/75	1349GMT	36 06.5°	121 53.5W
		BOTTOM 1110M	WIND 320	2/KT WEATHER 1
		DOMINANT WAVES	310 3 4	
70.060	02/26/75	1735GMT	35 53.0°	122 23.0W
		BOTTOM 3163M	WIND 340	1/KT WEATHER 1
		DOMINANT WAVES	330 5 5	
70.070	02/27/75	0009GMT	35 30.0°	123 09.0W
		BOTTOM 3918M	WIND 350	1/KT WEATHER 1
		DOMINANT WAVES	230 2 6	
70.080	02/27/75	0506GMT	35 14.0°	123 47.0W
		BOTTOM 4078M	WIND 010	1-KT WEATHER 1
		DOMINANT WAVES		

RV ALVIN S. FARRIS 6000066

CALCOPFI CRUISE 7503

Z	T	10 METER S	DATA 02	BT
73.020	02/01/75	0630GMT	35 37.0°	121 17.0W
		BOTTOM 746M	WIND 140	1-KT WEATHER
		DOMINANT WAVES		
73.053	02/01/75	0827GMT	35 31.5°	121 28.4W
		BOTTOM 7418M	WIND 180	5KT WEATHER
		DOMINANT WAVES		
73.060	02/01/75	1310GMT	35 18.0°	121 57.5W
		BOTTOM 2410M	WIND 160	5KT WEATHER 5
		DOMINANT WAVES		

RV DAVID STARR JORDAN		CALCULATED CRUISE 7503		Z	T	10 METER DATA		DT
						S	02	
73.065	02/01/75 1615GMT 35 08.0W 122 19.0W BOTTOM 3919M WIND 150 7KT WEATHER 2 DOMINANT WAVES 49	10	12.00	33.094				284.2
73.070	02/01/75 1933GMT 34 58.5W 122 39.5W BOTTOM 4111M WIND 080 6KT WEATHER 1 DOMINANT WAVES 280 6 12	10	13.26	33.295				292.6
73.080	02/02/75 0119GMT 34 38.0W 123 22.0W BOTTOM 4309M WIND 200 6KT WEATHER 1 DOMINANT WAVES 270 8 12	10	12.46	33.122				290.4
77.048	02/03/75 1551GMT 35 08.5W 120 43.5W BOTTOM 30M WIND 040 7KT WEATHER 1 DOMINANT WAVES 100 2 10	10	10.56	33.762				210.1
77.051	02/03/75 1317GMT 35 02.0W 120 56.5W BOTTOM 288M WIND 360 6KT WEATHER DOMINANT WAVES	10	10.44	33.718				211.3
77.060	02/03/75 0554GMT 34 44.0W 121 34.0W BOTTOM 981M WIND 350 16KT WEATHER DOMINANT WAVES	10	12.16	33.301				271.6
77.065	02/03/75 0250GMT 34 33.5W 121 56.0W BOTTOM 3919M WIND 350 13KT WEATHER DOMINANT WAVES	10	12.86					
77.070	02/02/75 2347GMT 34 24.0W 122 16.0W BOTTOM 4117M WIND 340 12KT WEATHER 1 DOMINANT WAVES 280 6 12	10	13.76	33.371				296.7
77.080	02/02/75 1832GMT 34 04.0W 122 57.0W BOTTOM 4309M WIND 330 6KT WEATHER 1 DOMINANT WAVES 270 10 10	10	13.80	33.412				294.5
77.090	02/02/75 1326GMT 33 43.0W 123 39.0W BOTTOM 4117M WIND 320 6KT WEATHER DOMINANT WAVES	10	13.86	33.406				296.1
80.050 <sup>1</sup>	02/03/75 2151GMT 34 28.0W 120 29.5W BOTTOM 28M WIND 050 6KT WEATHER 1 DOMINANT WAVES 240 3 10	10	11.63	33.665				235.5
80.051	02/03/75 2247GMT 34 28.0W 120 32.5W BOTTOM 108M WIND 280 6KT WEATHER 1 DOMINANT WAVES 240 4 12	10	11.74	33.662				237.7
80.051 <sup>6</sup>	02/25/75 2324GMT 34 25.5W 120 34.0W BOTTOM 127M WIND 320 20KT WEATHER 1 DOMINANT WAVES 320 5 7	10	11.59	33.635				237.0
80.052	02/03/75 2346GMT 34 25.0W 120 36.0W BOTTOM 242M WIND 280 6KT WEATHER 1 DOMINANT WAVES 300 4 12	10	11.92	33.647				242.0
80.052 <sup>1</sup>	02/25/75 2250GMT 34 24.5W 120 36.0W BOTTOM 229M WIND 320 20KT WEATHER 2 DOMINANT WAVES 320 6 8	10	11.43	33.660				232.4
80.052 <sup>4</sup>	02/25/75 2214GMT 34 24.0W 120 37.0W BOTTOM 316M WIND 320 20KT WEATHER 1 DOMINANT WAVES 320 5 7	10	11.61	33.651				236.2
80.052 <sup>7</sup>	02/25/75 2122GMT 34 23.5W 120 39.0W BOTTOM 430M WIND 330 14KT WEATHER 2 DOMINANT WAVES 320 5 8	10	10.78	33.655				221.6
80.053	02/04/75 0058GMT 34 22.5W 120 40.0W BOTTOM 464M WIND 310 7KT WEATHER 2 DOMINANT WAVES 280 5 10	10	11.64	33.663				235.8
80.053 <sup>4</sup>	02/25/75 2027GMT 34 22.5W 120 42.0W BOTTOM 532M WIND 320 14KT WEATHER 1 DOMINANT WAVES 310 5 7	10	11.22	33.612				232.3
80.054	02/04/75 0203GMT 34 21.0W 120 44.0W BOTTOM 557M WIND 340 6KT WEATHER 1 DOMINANT WAVES 260 5 10	10	11.34	33.679				229.4
80.055	02/04/75 0330GMT 34 19.0W 120 46.0W BOTTOM 768M WIND 330 7KT WEATHER DOMINANT WAVES	10	11.46	33.595				237.7
80.060	02/04/75 0650GMT 34 09.0W 121 09.0W BOTTOM 2222M WIND 300 5KT WEATHER DOMINANT WAVES	10	12.18	33.428				262.8
80.080	02/04/75 1828GMT 33 28.0W 122 32.0W BOTTOM 4116M WIND 040 4KT WEATHER 0 DOMINANT WAVES 320 3 5	10	13.82	33.364				298.4
80.090	02/04/75 2309GMT 33 09.0W 123 13.0W BOTTOM 4309M WIND 170 11KT WEATHER 2 DOMINANT WAVES 130 4 10	10	14.88	33.541				306.7

RV ALEXANDER AGASSIZ

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					Z	T	10 METER DATA	DT
							S	02
85.040	03/07/75	2017GMT	33 57.0M	119 10.5W	10	12.98	33.605	264.5
		BOTTOM	741M	WIND 130 1KT				
		DOMINANT WAVES	240 6 10	WEATHER 2				
87.032 <sup>5</sup>	03/08/75	0520GMT	33 55.0M	118 26.5W	10	13.65	33.556	281.0
		BOTTOM	19M	WIND 100 7KT				
		DOMINANT WAVES		WEATHER 6				
87.033	03/08/75	0829GMT	33 54.0M	118 29.0W	10	13.68	33.527	283.7
		BOTTOM	47M	WIND 160 4KT				
		DOMINANT WAVES		WEATHER 6				
87.034	03/08/75	1011GMT	33 52.0M	118 33.5W	10	13.52	33.525	280.7
		BOTTOM	73M	WIND 210 4KT				
		DOMINANT WAVES		WEATHER 6				
87.035	03/08/75	1154GMT	33 50.0M	118 37.5W	10	12.87	33.525	268.3
		BOTTOM	482M	WIND 200 4KT				
		DOMINANT WAVES		WEATHER 2				
87.036	03/08/75	1406GMT	33 47.0M	118 43.5W	10	13.36	33.472	281.6
		BOTTOM	925M	WIND 200 4KT				
		DOMINANT WAVES		WEATHER 2				
87.040	03/08/75	1737GMT	33 40.0M	118 58.0W	10	13.54	33.543	279.8
		BOTTOM	870M	WIND 210 4KT				
		DOMINANT WAVES	220 10 12	WEATHER 6				
87.045	03/08/75	2145GMT	33 30.0M	119 19.0W	10	12.55	33.569	259.2
		BOTTOM	1664M	WIND 290 12KT				
		DOMINANT WAVES	290 8 10	WEATHER 6				
87.050	03/09/75	0055GMT	33 20.0M	119 39.5W	10	12.58	33.579	259.0
		BOTTOM	71M	WIND 290 14KT				
		DOMINANT WAVES	290 8 11	WEATHER 1				
87.055	03/09/75	0416GMT	33 10.0M	120 00.0W	10	12.60	33.451	268.8
		BOTTOM	1295M	WIND 300 14KT				
		DOMINANT WAVES		WEATHER 2				
87.070	03/09/75	1329GMT	32 39.5M	121 02.0W	10	12.96	33.499	272.0
		BOTTOM	4021M	WIND 220 12KT				
		DOMINANT WAVES		WEATHER				
87.080	03/09/75	1901GMT	32 19.0M	121 44.0W	10	13.70	33.345	297.4
		BOTTOM	4116M	WIND 320 14KT				
		DOMINANT WAVES	330 6 10	WEATHER 1				
87.090	03/10/75	0018GMT	31 59.0M	122 23.5W	10	13.68	33.309	299.7
		BOTTOM	4212M	WIND 220 14KT				
		DOMINANT WAVES	310 8 7	WEATHER 1				
88.030 <sup>6</sup>	03/12/75	2142GMT	33 41.5M	118 07.0W	10	13.72	33.288	302.0
		BOTTOM	19M	WIND 160 4KT				
		DOMINANT WAVES	140 2 6	WEATHER 1				
88.031 <sup>5</sup>	03/12/75	2028GMT	33 40.5M	118 09.5W	10	13.39	33.513	279.1
		BOTTOM	24M	WIND 150 4KT				
		DOMINANT WAVES	140 2 6	WEATHER 1				
88.032 <sup>5</sup>	03/11/75	1920GMT	33 38.5M	118 13.5W	10	13.56	33.503	283.1
		BOTTOM	39M	WIND 240 4KT				
		DOMINANT WAVES	280 4 13	WEATHER 2				
88.033 <sup>5</sup>	03/11/75	1748GMT	33 36.0M	118 17.5W	10	13.50	33.507	281.7
		BOTTOM	242M	WIND 030 4KT				
		DOMINANT WAVES	270 4 13	WEATHER 6				
88.034 <sup>5</sup>	03/11/75	1542GMT	33 34.0M	118 22.0W	10	13.60	33.530	281.9
		BOTTOM	507M	WIND 210 4KT				
		DOMINANT WAVES	270 8 24	WEATHER 1				
90.027 <sup>6</sup>	03/12/75	0051GMT	33 29.5M	117 45.5W	10	13.97	33.421	297.2
		BOTTOM	39M	WIND 240 4KT				
		DOMINANT WAVES	250 2 11	WEATHER 1				
90.028	03/12/75	0345GMT	33 28.5M	117 46.5W	10	13.72	33.489	287.3
		BOTTOM	271M	WIND 220 3KT				
		DOMINANT WAVES		WEATHER				
90.029	03/12/75	0604GMT	33 27.0M	117 49.5W	10	13.92	33.478	292.0
		BOTTOM	648M	WIND 240 4KT				
		DOMINANT WAVES		WEATHER				
90.030	03/12/75	0810GMT	33 25.0M	117 53.5W	10	13.85	33.489	289.8
		BOTTOM	648M	WIND 200 4KT				
		DOMINANT WAVES		WEATHER				
90.031	03/12/75	1001GMT	33 23.0M	117 57.5W	10	13.80	33.541	285.0
		BOTTOM	454M	WIND 200 4KT				
		DOMINANT WAVES		WEATHER				
90.032	03/12/75	1156GMT	33 20.0M	118 03.0W	10	13.88	33.562	285.1
		BOTTOM	750M	WIND 140 4KT				
		DOMINANT WAVES		WEATHER				
90.045	03/11/75	0618GMT	32 55.0M	118 56.0W	10	13.70	33.550	282.4
		BOTTOM	1756M	WIND 310 14KT				
		DOMINANT WAVES		WEATHER				
90.053	03/11/75	0150GMT	32 39.0M	119 28.5W	10	12.58	33.542	261.7
		BOTTOM	1295M	WIND 290 14KT				
		DOMINANT WAVES	290 6 7	WEATHER 1				

						Z	T	10 METER S	DATA 02	DT
90.060	02/10/75	2113GMT	32 25.0M	119 57.5W	BOTTOM 892M WIND 290 13KT WEATHER 6 DOMINANT WAVES 290 6 8	10	12.71	33.510		266.5
90.070	02/10/75	1626GMT	32 05.0M	120 38.5W	BOTTOM 3926M WIND 270 8KT WEATHER 2 DOMINANT WAVES 240 8 10	10	13.16	33.467		278.1
90.090	02/10/75	0519GMT	31 24.0M	122 01.0W	BOTTOM 3926M WIND 310 8KT WEATHER DOMINANT WAVES	10	14.22	33.404		303.4
<sup>5</sup> 91.026	02/13/75	2148GMT	33 14.5M	117 27.5W	BOTTOM 19M WIND 270 6KT WEATHER 1 DOMINANT WAVES 270 2 5	10	13.84	33.398		296.3
<sup>5</sup> 91.027	02/13/75	2050GMT	33 14.0M	117 30.5W	BOTTOM 56M WIND 240 4KT WEATHER 1 DOMINANT WAVES 250 2 5	10	13.73	33.448		290.5
<sup>5</sup> 91.028	02/13/75	1917GMT	33 12.0M	117 34.0W	BOTTOM 565M WIND 250 5KT WEATHER 2 DOMINANT WAVES 240 2 8	10	13.75	33.480		288.5
<sup>5</sup> 91.029	02/13/75	1724GMT	33 10.0M	117 38.0W	BOTTOM 796M WIND 220 4KT WEATHER 2 DOMINANT WAVES 220 2 6	10	13.82	33.523		286.7
<sup>5</sup> 91.030	02/13/75	1528GMT	33 08.0M	117 42.0W	BOTTOM 833M WIND 200 4KT WEATHER 2 DOMINANT WAVES 090 2 7	10	13.88	33.536		287.0
<sup>7</sup> 93.026	02/14/75	0021GMT	32 57.0M	117 17.5W	BOTTOM 34M WIND 270 7KT WEATHER 1 DOMINANT WAVES 250 2 5	10	13.96	33.452		294.7
<sup>9</sup> 93.026	02/14/75	0150GMT	32 57.0M	117 18.5W	BOTTOM 65M WIND 260 7KT WEATHER 1 DOMINANT WAVES 270 2 5	10	13.90	33.520		288.5
93.028	02/14/75	0319GMT	32 55.0M	117 22.0W	BOTTOM 593M WIND 250 6KT WEATHER DOMINANT WAVES	10	14.00	33.544		288.7
93.029	02/14/75	0516GMT	32 53.0M	117 26.5W	BOTTOM 593M WIND 250 6KT WEATHER DOMINANT WAVES	10	13.75	33.511		286.2
93.030	02/14/75	0710GMT	32 50.0M	117 31.0W	BOTTOM 778M WIND 230 10KT WEATHER 6 DOMINANT WAVES	10	13.94			
93.035	02/14/75	1040GMT	32 40.5M	117 51.5W	BOTTOM 630M WIND 300 14KT WEATHER DOMINANT WAVES	10	14.02	33.571		287.1
93.040	02/14/75	1330GMT	32 30.0M	118 11.5W	BOTTOM 1849M WIND 300 14KT WEATHER DOMINANT WAVES	10	13.99	33.579		286.0
93.045	02/14/75	1647GMT	32 20.0M	118 32.0W	BOTTOM 1664M WIND 300 13KT WEATHER 1 DOMINANT WAVES 310 10 7	10	13.66	33.541		287.3
93.050	02/14/75	1934GMT	32 10.0M	118 52.5W	BOTTOM 1479M WIND 300 14KT WEATHER 1 DOMINANT WAVES 300 15 10	10	13.70	33.547		282.6
93.055	02/14/75	2237GMT	32 00.0M	119 13.5W	BOTTOM 1670M WIND 220 13KT WEATHER 2 DOMINANT WAVES 310 16 12	10	13.83	33.560		284.2
93.060	02/15/75	0121GMT	31 51.0M	119 34.0W	BOTTOM 2227M WIND 230 12KT WEATHER 1 DOMINANT WAVES 320 16 13	10	13.26	33.530		275.4
93.080	02/15/75	1252GMT	31 10.0M	120 54.5W	BOTTOM 4021M WIND 240 10KT WEATHER DOMINANT WAVES	10	13.26	33.385		286.0
95.028	02/17/75	1021GMT	32 37.0M	117 10.5W	BOTTOM 19M WIND 100 8KT WEATHER DOMINANT WAVES	10	11.86	33.570		246.6
95.029	02/17/75	0915GMT	32 35.0M	117 14.5W	BOTTOM 47M WIND 090 8KT WEATHER DOMINANT WAVES	10	13.43	33.520		279.4
95.030	02/17/75	0743GMT	32 33.0M	117 18.5W	BOTTOM 103M WIND 320 10KT WEATHER DOMINANT WAVES	10	13.62	33.539		281.6
95.031	02/17/75	0626GMT	32 31.5M	117 22.5W	BOTTOM 417M WIND 330 10KT WEATHER DOMINANT WAVES	10	13.88	33.557		285.4
95.032	02/17/75	0449GMT	32 29.0M	117 27.0W	BOTTOM 1092M WIND 210 12KT WEATHER DOMINANT WAVES	10	13.90	33.560		285.6
<sup>R</sup> 97.028	02/17/75	0138GMT	32 18.0M	117 04.0W	BOTTOM 37M WIND 310 10KT WEATHER 1 DOMINANT WAVES 49 2	10	13.49	33.527		280.0

		10 METER DATA				
Z	T	S	02	DT		
97.029	03/17/75	0107GMT	32 17.5W	117 04.5W		
	BOTTOM	48M	WIND 310 1KT	WEATHER	282.2	
	Dominant Waves	49	2			
97.030	03/17/75	0020GMT	32 16.0W	117 07.0W		
	BOTTOM	56M	WIND 300 4KT	WEATHER 1	280.2	
	Dominant Waves	49	2			
97.031	03/16/75	2310GMT	32 13.0W	117 13.0W		
	BOTTOM	1202M	WIND 310 4KT	WEATHER 1	283.3	
	Dominant Waves	49	2			
97.032	03/16/75	2200GMT	32 12.0W	117 15.5W		
	BOTTOM	1387M	WIND 310 4KT	WEATHER 2	285.2	
	Dominant Waves	49	2			
97.035	03/16/75	1939GMT	32 05.5W	117 27.5W		
	BOTTOM	1202M	WIND 250 4KT	WEATHER 2	284.2	
	Dominant Waves	49	2			
97.040	03/16/75	1636GMT	31 57.0E	117 48.0W		
	BOTTOM	1572M	WIND 270 4KT	WEATHER 2	291.7	
	Dominant Waves	280	4 8			
97.045	03/16/75	1353GMT	31 46.0E	118 08.5W		
	BOTTOM	1757M	WIND 310 4KT	WEATHER 2	288.9	
	Dominant Waves	290	4 6			
97.055	03/16/75	0714GMT	31 26.0W	118 50.0W		
	BOTTOM	854M	WIND 310 7KT	WEATHER	276.3	
	Dominant Waves					
97.060	03/16/75	0411GMT	31 16.0W	119 10.0W		
	BOTTOM	3737M	WIND 320 10KT	WEATHER	281.7	
	Dominant Waves					
97.070	03/15/75	2301GMT	30 55.5W	119 51.0W		
	BOTTOM	3832M	WIND 310 4KT	WEATHER 1	284.9	
	Dominant Waves	330	8 10			
97.080	03/15/75	1757GMT	30 35.0W	120 31.0W		
	BOTTOM	4116M	WIND 340 4KT	WEATHER 2	294.2	
	Dominant Waves	340	15 10			
100.029	03/19/75	0042GMT	31 42.0E	116 43.5W		
	BOTTOM	108M	WIND 320 4KT	WEATHER 1	254.0	
	Dominant Waves	280	5 4			
100.030	03/19/75	0140GMT	31 40.5E	116 46.5W		
	BOTTOM	436M	WIND 320 4KT	WEATHER 1	279.3	
	Dominant Waves	280	5 5			
100.031	03/19/75	0257GMT	31 38.5E	116 50.5W		
	BOTTOM	93M	WIND	WEATHER	282.1	
	Dominant Waves					
100.032	03/19/75	0344GMT	31 36.5E	116 55.0W		
	BOTTOM	1202M	WIND 320 4KT	WEATHER	282.9	
	Dominant Waves					
100.035	03/19/75	0547GMT	31 30.5E	117 07.0W		
	BOTTOM	1295M	WIND 330 11KT	WEATHER	282.5	
	Dominant Waves					
100.040	03/19/75	0922GMT	31 21.5E	117 26.5W		
	BOTTOM	2222M	WIND 330 11KT	WEATHER	288.0	
	Dominant Waves					
100.050	03/19/75	1430GMT	31 00.0E	118 07.0W		
	BOTTOM	1669M	WIND 340 11KT	WEATHER 1	292.9	
	Dominant Waves	110	5 11			
100.060	03/19/75	1949GMT	30 40.5E	118 47.5W		
	BOTTOM	2980M	WIND 320 11KT	WEATHER 1	300.3	
	Dominant Waves	330	6 7			
100.080	03/20/75	0757GMT	30 00.0E	120 07.0W		
	BOTTOM	4116M	WIND 330 11KT	WEATHER	302.0	
	Dominant Waves					
103.028 <sup>R</sup>	03/21/75	1840GMT	31 07.5E	116 20.0W		
	BOTTOM	19M	WIND 320 4KT	WEATHER 0	234.1	
	Dominant Waves	300	6 8			
103.029	03/21/75	1800GMT	31 07.0E	116 21.0W		
	BOTTOM	32M	WIND 320 11KT	WEATHER 0	244.9	
	Dominant Waves	310	8 7			
103.030	03/21/75	1615GMT	31 06.0E	116 24.5W		
	BOTTOM	56M	WIND 330 4KT	WEATHER 1	247.9	
	Dominant Waves	320	5 9			
103.031	03/21/75	1507GMT	31 03.0E	116 29.0W		
	BOTTOM	93M	WIND 320 11KT	WEATHER 1	260.4	
	Dominant Waves	310	8 11			
103.032	03/21/75	1352GMT	31 01.0E	116 33.0W		
	BOTTOM	437M	WIND 310 4KT	WEATHER 1	276.6	
	Dominant Waves	320	8 10			
103.035	03/21/75	1127GMT	30 56.0E	116 45.0W		
	BOTTOM	1756M	WIND 330 13KT	WEATHER	293.6	
	Dominant Waves					

				10 METER DATA				
				Z	T	S	DT	
							02	
103.045	02/21/75	0333GMT	30 36.0	117 24.0W	10	14.82	33.607	300.6
		BOTTOM	2042M	WIND 330 10KT				
		DOMINANT WAVES	320 12 5					
103.050	02/21/75	0046GMT	30 26.0	117 45.0W	10	14.89	33.622	301.0
		BOTTOM	2790M	WIND 330 10KT				
		DOMINANT WAVES	320 10 6					
103.060	02/20/75	1923GMT	30 06.0	118 25.0W	10	15.16	33.675	302.7
		BOTTOM	3737M	WIND 330 11KT				
		DOMINANT WAVES	330 6 11					
103.070	02/20/75	1416GMT	29 47.0	119 04.0W	10	14.94	33.663	299.0
		BOTTOM	3737M	WIND 010 11KT				
		DOMINANT WAVES	350 10 7					
110.032 <sup>4</sup>	02/22/75	0224GMT	29 51.5	115 50.0W	10	11.97	33.828	279.6
		BOTTOM	41M	WIND 320 10KT				
		DOMINANT WAVES	330 8 7					
110.033	02/22/75	0257GMT	29 50.5	115 51.5W	10	12.78	33.644	257.9
		BOTTOM	82M	WIND 330 9KT				
		DOMINANT WAVES						
110.034	02/22/75	0343GMT	29 48.0	115 56.0W	10	13.68	33.577	280.0
		BOTTOM	742M	WIND 320 11KT				
		DOMINANT WAVES						
110.035	02/22/75	0505GMT	29 46.0	116 00.0W	10	14.30	33.580	292.1
		BOTTOM	1298M	WIND 340 10KT				
		DOMINANT WAVES						
110.040	02/22/75	0808GMT	29 36.5	116 19.5W	10	14.90	33.642	299.7
		BOTTOM	2042M	WIND 330 10KT				
		DOMINANT WAVES						
110.045	02/22/75	1108GMT	29 27.0	116 40.0W	10	14.78	33.616	299.2
		BOTTOM	1856M	WIND 330 14KT				
		DOMINANT WAVES						
110.055	02/22/75	1739GMT	29 06.5	117 19.0W	10	14.96	33.656	299.9
		BOTTOM	3738M	WIND 320 10KT				
		DOMINANT WAVES	320 4 6					
110.060	02/22/75	2017GMT	28 57.0	117 38.5W	10	15.11	33.667	302.2
		BOTTOM	3737M	WIND 320 9KT				
		DOMINANT WAVES	330 6 8					
113.028 <sup>8</sup>	02/23/75	2301GMT	29 25.0	115 12.5W	10	12.62	33.824	241.7
		BOTTOM	19M	WIND 290 11KT				
		DOMINANT WAVES	300 6 9					
113.029	02/23/75	2238GMT	29 24.5	115 13.5W	10	12.28	33.780	238.7
		BOTTOM	26M	WIND 290 11KT				
		DOMINANT WAVES	300 7 11					
113.030	02/23/75	2155GMT	29 22.0	115 18.5W	10	12.42	33.644	251.3
		BOTTOM	60M	WIND 330 10KT				
		DOMINANT WAVES	330 8 13					
113.031	02/23/75	2105GMT	29 20.5	115 21.5W	10	12.56	33.664	252.4
		BOTTOM	82M	WIND 330 11KT				
		DOMINANT WAVES	320 9 12					
113.032	02/23/75	2012GMT	29 18.5	115 25.5W	10	12.88	33.619	261.6
		BOTTOM	104M	WIND 330 10KT				
		DOMINANT WAVES	320 10 11					
113.040	02/23/75	1258GMT	29 00.0	115 56.0W	10	13.04	33.632	263.7
		BOTTOM	1856M	WIND 330 10KT				
		DOMINANT WAVES						
113.045	02/23/75	1007GMT	28 52.0	116 17.0W	10	14.86	33.640	299.0
		BOTTOM	2043M	WIND 320 10KT				
		DOMINANT WAVES						
113.050	02/23/75	0659GMT	28 42.0	116 36.0W	10	14.63	33.604	297.0
		BOTTOM	4498M	WIND 330 10KT				
		DOMINANT WAVES						
113.060	02/23/75	0142GMT	28 22.0	117 15.0W	10	14.99	33.633	302.2
		BOTTOM	3737M	WIND 310 7KT				
		DOMINANT WAVES	250 5 10					
113.070	02/28/75	2043GMT	28 02.0	117 55.0W	10	15.40	33.687	306.8
		BOTTOM	3357M	WIND 310 8KT				
		DOMINANT WAVES						
119.033	02/24/75	1454GMT	28 19.0	114 53.0W	10	13.66	33.591	278.6
		BOTTOM	110M	WIND 320 8KT				
		DOMINANT WAVES	300 4 10					
120.022 <sup>4</sup>	02/24/75	0649GMT	28 28.0	114 04.5W	10	13.60	33.737	266.7
		BOTTOM	17M	WIND 170 8KT				
		DOMINANT WAVES						
120.022 <sup>7</sup>	02/24/75	0725GMT	28 27.5	114 05.5W	10	13.53	33.733	265.7
		BOTTOM	21M	WIND 120 8KT				
		DOMINANT WAVES						
120.023	02/24/75	0758GMT	28 27.0	114 07.0W	10	13.58	33.739	266.2
		BOTTOM	21M	WIND 320 8KT				
		DOMINANT WAVES						



					Z	T	10 METER S	DATA 02	DT
170.024	03/24/75	0842GMT	28 25.5°	114 11.0W	10	13.70	33.723		269.7
		BOTTOM 30M	WIND 350	KT WEATHER					
		DOMINANT WAVES							
170.025	03/24/75	0930GMT	28 22.5°	114 15.0W	10	13.98	33.730		274.7
		BOTTOM 37M	WIND 330	KT WEATHER					
		DOMINANT WAVES							
170.026	03/24/75	1017GMT	28 21.0°	114 18.5W	10	14.20	33.723		279.6
		BOTTOM 39M	WIND 330	KT WEATHER					
		DOMINANT WAVES							
170.030	03/24/75	1223GMT	28 13.0°	114 34.0W	10	13.62	33.666		272.3
		BOTTOM 95M	WIND 320	KT WEATHER					
		DOMINANT WAVES							
170.035	03/24/75	1650GMT	28 03.0°	114 54.0W	10	14.44	33.718		284.8
		BOTTOM 80M	WIND 360	KT WEATHER U					
		DOMINANT WAVES 320 6 11							
120.040	03/24/75	1911GMT	27 56.5°	115 14.0W	10	13.53	33.699		268.2
		BOTTOM 43M	WIND 310	KT WEATHER U					
		DOMINANT WAVES 320 5 10							
120.050	03/25/75	0151GMT	27 33.0°	115 53.0W	10	14.46	33.589		294.6
		BOTTOM 4212M	WIND 340	KT WEATHER U					
		DOMINANT WAVES 360 8 8							
120.060	03/25/75	0656GMT	27 13.0°	116 30.5W	10	15.00	33.631		302.6
		BOTTOM 3737M	WIND 340	KT WEATHER					
		DOMINANT WAVES							
120.070	03/28/75	0021GMT	26 50.0°	117 10.0W	10	15.80	33.736		311.7
		BOTTOM 3926M	WIND 320	KT WEATHER Z					
		DOMINANT WAVES 330 8 9							
123.035 <sup>7</sup>	03/26/75	0336GMT	27 26.5°	114 35.0W	10	13.00	33.995		236.3
		BOTTOM 26M	WIND 280	KT WEATHER					
		DOMINANT WAVES							
123.036	03/26/75	0310GMT	27 26.0°	114 36.0W	10	12.88	34.005		233.3
		BOTTOM 47M	WIND 290	KT WEATHER					
		DOMINANT WAVES							
123.037	03/26/75	0217GMT	27 24.0°	114 40.0W	10	12.80	34.045		228.8
		BOTTOM 71M	WIND 300	KT WEATHER U					
		DOMINANT WAVES 300 3 7							
123.038	03/26/75	0119GMT	27 22.0°	114 45.0W	10	12.46	34.085		219.6
		BOTTOM 82M	WIND 310	KT WEATHER U					
		DOMINANT WAVES 310 4 7							
123.039	03/26/75	0026GMT	27 20.0°	114 48.0W	10	13.22	33.805		254.4
		BOTTOM 110M	WIND 300	KT WEATHER U					
		DOMINANT WAVES 310 6 8							
123.042	03/25/75	2227GMT	27 14.0°	114 59.5W	10	14.27	33.756		278.6
		BOTTOM 2602M	WIND 330	KT WEATHER 1					
		DOMINANT WAVES 310 6 8							
123.045	03/25/75	2039GMT	27 08.0°	115 10.5W	10	14.98	33.700		297.1
		BOTTOM 4309M	WIND 220	KT WEATHER 1					
		DOMINANT WAVES 320 6 10							
123.060	03/25/75	1146GMT	26 38.0°	116 09.0W	10	15.08	33.666		301.7
		BOTTOM 3926M	WIND 350	KT WEATHER					
		DOMINANT WAVES							
120.025 <sup>6</sup>	03/26/75	1237GMT	26 37.5°	113 11.5W	10	13.99	34.154		243.8
		BOTTOM 21M	WIND 270	KT WEATHER					
		DOMINANT WAVES							
120.026	03/26/75	1310GMT	26 37.0°	113 13.0W	10	13.95	33.999		254.4
		BOTTOM 32M	WIND 260	KT WEATHER					
		DOMINANT WAVES							
120.027	03/26/75	1356GMT	26 35.0°	113 17.0W	10	13.54	33.881		255.0
		BOTTOM 47M	WIND 270	KT WEATHER Z					
		DOMINANT WAVES 270 2 10							
120.028	03/26/75	1451GMT	26 33.0°	113 21.0W	10	13.76	33.932		255.5
		BOTTOM 56M	WIND 300	KT WEATHER 1					
		DOMINANT WAVES 250 2 8							
120.029	03/26/75	1614GMT	26 30.5°	113 26.0W	10	13.64	33.893		256.1
		BOTTOM 69M	WIND 320	KT WEATHER 1					
		DOMINANT WAVES 280 3 9							
120.030	03/26/75	1700GMT	26 29.0°	113 29.0W	10	12.98	33.784		251.4
		BOTTOM 78M	WIND 310	KT WEATHER Z					
		DOMINANT WAVES 270 3 10							
120.035	03/26/75	1922GMT	26 18.5°	113 48.5W	10	16.14	33.864		309.7
		BOTTOM 567M	WIND 300	KT WEATHER Z					
		DOMINANT WAVES 330 2 8							
120.040	03/26/75	2200GMT	26 09.0°	114 07.0W	10	16.78	34.058		309.6
		BOTTOM 2415M	WIND 320	KT WEATHER U					
		DOMINANT WAVES 300 4 8							
120.060	03/27/75	0945GMT	25 29.0°	115 23.5W	10	16.24	33.930		307.1
		BOTTOM 3926M	WIND 300	KT WEATHER					
		DOMINANT WAVES							

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