UNIVERSITY OF CALIFORNIA

SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

CalCOFI Cruise 7805
13 May - 11 June 1978

CalCOFI Cruise 7807
21 June - 17 July 1978

CalCOFI Cruise 7808
31 July - 27 August 1978

CRUCERO JD-7805
13 de mayo - 11 de junio 1978

CRUCERO AH-7807, JD-7807
21 de junio - 17 de julio 1978

CRUCERO AH-7808, JD-7808
31 de julio - 27 de augosto 1978

Sponsored by

Marine Research Committee

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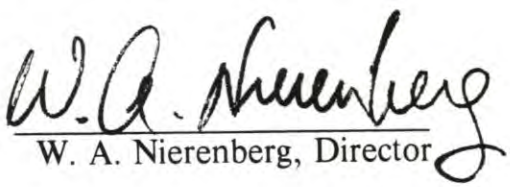

W. A. Nierenberg, Director

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INTRODUCTION

The data in this report were collected during Cruises 7805*, 7807, and 7808 of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *David Starr Jordan* of the National Marine Fisheries Service, and the RV *Alejandro de Humboldt* of the Instituto Nacional de Pesca of the Mexican Federal Government. In addition, tritium data from Cruises 7801, 7803, 7804 and 7808 are included in this report. The report preceding this one in the series was SIO Ref. 82-21, which included data for 1977 and 1978.

These data were collected and processed by personnel of the Data Collection and Processing Group, Marine Life Research Group (DCPG**, MLRG) of Scripps Institution of Oceanography, the Southwest Fisheries Center, National Marine Fisheries Service (NMFS), and the Instituto Nacional de Pesca (INP), various branches.

STANDARD PROCEDURES

Hydrographic Cast Data

Most of the hydrographic casts consisted of 18 Nansen bottles. At most stations the maximum sampling depth was 500 meters, bottom depth permitting. Temperature, salinity, oxygen and nutrients were determined for all depths on each station.

At selected stations 10-meter bottles were cast with samples being taken for temperature, salinity, oxygen and nutrients.

In general, paired protected reversing thermometers were used to determine temperatures which were recorded in hundredths of a Celsius degree. Unless otherwise noted, temperatures determined using *unprotected* (pressure) thermometers or surface "bucket" thermometers were

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

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

INTRODUCCION

Los datos de este informe fueron obtenidos durante los cruceros 7805*, 7807, y 7808 realizados dentro del programa de cooperación cientifico-técnico entre CalCOFI (California Cooperative Oceanic Fisheries Investigations) y el Instituto Nacional de Pesca del Departamento de Pesca** de México, a bordo del BI *David Starr Jordan*, del National Maarine Fisheries Service de los Estados Unidos y el BI *Alejandro de Humboldt*, del Departamento de Pesca, México. Además los datos de tritio de los cruceros 7801, 7803, 7804 y 7808 se incluyen en este reporte. El informe precendente a éste en la serie era el SIO Ref. 82-21, que incluye datos para 1977 y 1978.

Estos datos fueron colectados y procesados por el personal del Data Collection and Processing Group del Marine Life Research Group (DCPG***, MLRG) del Scripps Institution of Oceanography, y por el personal del Southwest Fisheries Center del National Marine Fisheries Service (NMFS), y del Instituto Nacional de la Pesca (INP) del Departamento de Pesca.

METODOS

Obtención de Datos Hidrográficos

El mayor número de lances realizados se efectuaron con 18 botellas, muestreándose la mayoría de las estaciones hasta una profundidad máxima de 500 metros, cuando la profundidad lo permitía. Se determinó en todas las profundidades de cada estación temperatura, salinidad, oxígeno y nutrientes. Se seleccionaron también estaciones para el muestreo a 10 metros de profundidad, para la toma de estos datos.

Para determinar temperatura se utilizaron por lo general termómetros de inversión dobles, registrándose ésta en grados centígrados, con aproximación centesímos. La temperatura superficial se determinó empleando termómetros de cubeta no pretegidos, registrándola en décimas

* Los primeros dos dígitos representan el año y los dos que siguen, el mes en que se efectuó el crucero.

** Ahora llamado la Secretaría de Pesca.

*** Ahora llamado Physical and Chemical Oceanographic Data Facility (PACODF).

recorded to tenths of a degree. Sample bottles used below 100 meters were equipped with unprotected thermometers for depth determination.

Salinity values on both ships for all cruises included were determined using models 6220 and 6230 Hytech or Plessey (now Grundy Environmental Systems, Inc.) inductive salinometers, an Autolab inductive salinometer, and a Guildline model 8400 Autosal inductive salinometer. Except for a few major malfunctions when salinometers could no longer be used, problems consisted of bubbles in the cells, excessive drift (samples were rerun) and stirring motor breakdowns. All samples were analyzed at sea.

The salinity values were recorded and reported to three decimal places, provided accepted standards were met. If only one determination per sample was obtained, or there was doubt concerning the accuracy of the analytical results, the salinities were reported to two decimal places.

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

Phosphate, silicate, nitrite and nitrate were determined using an automated analyzer consisting of the following components:

Sampler: A.H. Thomas Model 253 Little Dipper with a 20-position sampling rack.

Proportioning Pump: Technicon® Auto-Analyzer® II Proportioning Pump with air bar.

Detectors: Hitachi Model 100-10 spectrophotometers with flow-through cell adaptors.

Recorders: Hitachi Model 056 two-pen recorders with felt tip pens.

The procedures used are basically those described in Atlas *et al.* (1971). There were very few problems associated with the silicate and nitrate analyses. In general, these data were processed in a routine manner. Nitrites tend to vary between poor and very poor after the first week of each cruise, depending on whether or not contamina-

de grados. Para profundidades mayores de 100 metros se equiparon con termómetros no protegidos.

La salinidad fue determinada utilizando salinómetros de inducción modelos 6220 y 6230 Hytech o Plessey (ahora Grundy Environmental Systems, Inc.), un salinómetro inducción Autolab, y un salinómetro de inducción Autosal modelo 8400. Excepto por algunos malos funcionamientos en que ya se podían utilizar los salinómetros, problemas consistían de la formación de burbujas en las celdas, excesivas partículas y mal funcionamiento del motor (estos muestreos se hicieron de nuevo). Todas las muestras fueron analizadas a bordo.

Los valores de salinidad se registraron y se reportaron en milésimas de aproximación, de acuerdo con el procedimiento estándar aceptado. Cuando sólo se realizó una determinación por muestra ó había una duda respecto a la confiabilidad de los datos, la salinidad se reportpo en centésimos.

El oxígeno disuelto fue determinado por el método Winkler modificado por Carpenter (1965) usando el equipo y procedimientos descritas por Anderson (1971).

Fosfato, silicato, nitrito y nitrato se determinaron con la ayuda del analizador automático con las siguientes especificaciones:

Muestredor: A.H. Thomas Modelo 253 Little Dipper con una roseta muestreadora con 20 posiciones.

Bomba abastecedora: Technicon® Auto-Analyzer® II Bomba Abastecedora con barra de aire.

Sensores: Hitachi Modelo 100-10 espectrofotómetros con adaptadores que permiten el flujo libre por las celdas.

Registradores: Hitachi Modelo 056 dos registradores que consisten de plumas con puntas de fieltro.

Los procedimientos usados son básicamente los descritos en Atlas *et al.* (1971). Los silicatos y nitratos fueron procesados con poca dificultad y de

tion occurred when the sample bottles were not routinely cleaned with hydrochloric acid. When contamination was evident, the typically "high" nitrite values were omitted for the station and the tabulated nitrate value is nitrate plus nitrite. This tabulated value is probably closer to the correct value than had a correction with the "high" nitrite been made.

Phosphate data are less reliable than the other measurements due to a number of problems including: poor sensitivity, poorly defined peaks, a serious memory effect and a very slow response time. Temperature control at the elevated temperature required for the analysis was also a problem at times. The initially calculated phosphate values were often unreasonable. Adjustments were made based on two factors: one, expedition phosphate data show that there is very little phosphate variation at a depth of 500 meters (approx. 2.8 to 3.1 μg-at/L) and two, a plot of phosphate vs. nitrate is essentially linear and constant, and the cruise nitrates are believed to be acceptable. The phosphate factors and baselines were adjusted to bring the phosphate results into reasonable agreement with the historical 500-m phosphate range and the phosphate-nitrate relationship.

The observed data have been evaluated using standard DCPG techniques (Klein, 1973). This involves consideration of their variation as functions of density or depth and their relations to each other, and comparison with concurrent bathythermogram (BT or XBT) or CTDO observations and with previous or adjacent observations.

Chlorophyll samples were collected from the first 12 levels of 18 bottle casts or all levels of shallow casts.

Chlorophyll samples were analyzed on all cruises by fluorometer using the technique of Owen (1974).

Secchi disk observations were made on most stations occurring between 0900 and 1600 Pacific

manera rutinaria. Las muestras para determinar nitritos fueron contaminados en varios de los cruceros. Los nitritos tendían a variarse, siendo entre malos y muy malos, después de las primeras semanas de cada crucero, dependiendo de si la contaminación ocurrío cuando las botellas muestreadoras no fueron limpiadas rutinamente con ácido hidroclórico. Cuando la contaminación era muy evidente, los valores típicamente "altos" de nitrito eran suprimidos para aquella estción y el valor tabulado de nitrato es probablemente más cercano al valor correcto que si le hubiera hecho una corrección con el valor "alto" del nitrito.

Los datos fosfatos son menos confiables que las otras medidas debido a una serie de problemas que incluyen lo siguiente: mala sensibilidad, picos mal definidos, un serio efecto de memoria, y un lento tiempo de respuesta. El mantenimiento de la temperatura a la temperatura elevada requerida por el análisis también resultó roblemático a veces. Los valores de fosfatos que se calculaban inicialmente eran a menudo irrazonables. Se hicieron ajustes, basándose en dos factores: datos de fosfato de expedición muestran que hay muy poca variación de fosfato a una profundidad de 500 metros (approx. 2.8 a 3.1 μg-at/L) y, un diagrama de fosfato contra nitrato es escencialmente linear y constante, y se cree que los nitratos de los cruceros son aceptables. Los factores de fosfato y las líneas de base fueron ajustados para que estuvieran los resultados de fosfato de acuerdo con el rango fosfático histórico de 500 metros y la relación fosfato-nitrato.

Los datos observados fueron evaluados usando las técnicas estándares del Data Collection and Processing Group (DCPG) (Klein, 1973). Estas técnicas consideran sus variaciones en función de la densidad ó profundidad y las relaciones de una con otra y en comparación con batitermogramas simultáneos (BT ó XBT) ó con CTDO, así como con observaciones previas.

Las muestras fueron colectadas de los primeros 12 niveles de un lance de 18 botellas ó de todos los niveles en los muestreos realizados a poca profundidad.

Las muestras de clorofila en todos los cruceros se analizaron por fluorometría utilizando la tecnica de Owen (1974).

Standard Time (PST, +8) for all cruises. These data are tabulated following the chlorophyll data.

Tritium samples were collected at selected stations along CalCOFI lines 63, 77, 83 and 93 (or 97) spanning the period from January through August, 1978. All samples were drawn into gallon glass bottles filled with argon and returned to the laboratory for the tritium analysis by the method outlined by Bainbridge (1965). All samples were analyzed by personnel at the Mount Soledad Tritium Laboratory. The results which are tabulated at the end of this report give the tritium concentrations and one sigma counting error.

Data collected with an *in situ* Conductivity/Temperature/Depth/Oxygen recorder (CTDO) during the cruises in this report will appear in a separate report.

Starting with Cruise 7712, the standard CalCOFI oblique tow, 300 meters of wire out, depth permitting, was made with an open Bongo frame with a 505 μ net on the starboard side and a 333 μ net on the port side. Starboard samples were preserved in formalin; port samples were preserved in an alcohol solution for otolith studies.

Periodically, a heretofore standard 1-m CalCOFI tow was taken in order to extend the comparisons between the Bongo and 1-m net tows made during the 1975 CalCOFI cruises.

Manta (neuston) surface tows were made on all net-tow stations, weather conditions permitting, and on selected stations vertical phytoplankton tows were made to a depth of 100 m (depth permitting).

TABULATED DATA

The time for bottle casts is reported in Greenwich Mean Time. It is the time of the messenger release. Secchi disk observations are reported in local time (PST).

When more than one cast was lowered on a station, the messenger times for the first and last casts are given. Multiple casts, excluding the surface casts, are indicated by a footnote letter following the observed depth.

Las observaciones con disco Secchi se efectuaron en todas las estaciones realizadas entre las 0900 y las 1600 horas tiempo del Pacífico (PST) para todos los cruceros. Estos datos son tabulados por separado y siguen a los datos de clorofila.

Muestras de tritio fueron colectadas en ciertas estaciones de las líneas CalCOFI 63, 77, 83 y 93 (ó 97) durante el periódo de Enero 1978 a Agosto del mismo año. Todas las muestras se pusieron en botellas de vidrio de un galon conteniendo argon y se regresaron al laboratorio para el análisis del tritio utilizando la técnica descrita por Bainbridge (1965). Todas las muestras se analizaron en el laboratorio de tritio de Mt. Soledad. Los resultados que se tabulan al final de este informe dan las concentraciones del tritio y la desviación estándar.

Los datos colectados con una unidad de conductividad/temperatura/profundidad/oxigeno (CTDO) *in situ* durante los cruceros que aquí se reportan aparecerán en un reporte por separado.

Inciándose con el crucero 7712 se hizo un arrastre oblicuo estándar de CalCOFI, cuando ésto fuera permitido por una profundidad equivalente a un filar de 300 metros de cable. Se hizo con un marco abierto Bongo con una red de 505μ en el lado estribor y una red de 333μ en el lado babor. Las muestras del lado babor fueron preservados en una solución de alcohol para estudios de otolitos.

Periódicamente los arrastres CalCOFI de 1 metro que eran estándares hasta la fecha se hicieron para poder extender las comparaciones que se hicieron durante los cruceros CalCOFI de 1975.

También se hicieron arrastres superficiales Manta (neuston) y en estaciones selectas se hicieron arrastres verticales de fitoplancton hasta una profundidad de 100 metros (si la profundidad lo permitía).

DATOS TABULADOS

El tiempo registrado para los lances de botella fue el tiempo del meridiano de Greenwich. Es la hora del envío del mensajero. Las observaciones del disco de Secchi son registradas en tiempo local (hora del Pacífico).

Bottom depths, determined acoustically, have been corrected using Matthews' (1939) tables and are reported in meters. On the *Humboldt*, the echo sounding units had a rated maximum sounding range of 1000 meters. Depths greater than this are from the navigational charts and, after conversion to meters, have been listed to the nearest five 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 or from separate lowerings to obtain the Secchi disk data. The data appear in two 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 these observations on the right. Computed values of thermosteric anomaly (DT) are included with the observed levels and computed values of sigma-t (SIGT), thermosteric anomaly (DT) and geopotential anomaly (DD) are included with the interpolated levels.

2. Chlorophyll, phaeophytin, Secchi disk, and tritium data appear as separate sections.

With the addition of chlorophyll-a, phaeophytin, Secchi disk observations and tritium, 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 90.65 appears in the tabulated data as 90065. [The CalCOFI station designations have been in use for over 20 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.] The column headings are to be interpreted as follows:

Cuando se realizó más de un lance por estación se anota la hora del envío del primer mensajero y del último. Multiples lances, excluyendo a lances superficiales, se señalan con una letra al calce después de la profundidad observada.

Cuando la profundidad del fondo se determinó acústicamente, fue corregida utilizando las tablas de Matthews (1939), registrándola en metros. En el BI *Humboldt*, las profundidades mayores de 1000 metros no fueron registradas por la ecosonda, así que éstas se obtuvieron de cartas de navegación y después de ser convertidas a metros, fueron listadas con aproximación a cinco metros. El tiempo y oleaje dominante se codificaron usando el método del National Oceanographic Data Center (NODC).

Los datos de todos los cruceros presentados en este informe se obtuvieron de lances con botellas ó de bajadas separadas para obtener los datos del disco Secchi. Estos datos se registran en dos formas:

1. Los datos provenientes de lances con botellas y tabulados en niveles de profundidad se ubicaron al margen izquierdo de la página y los valores de profundidades estándares correspondientes a temperatura, salinidad, oxígeno, interpolados de estas observaciones, al lado derecho. Valores computados de la anomalía termostérica (DT) se incluyen con los niveles observados, y los valores computados de sigma-t (SIGT), anomalía termostérica (DT), y anomalía geopotencial (DD) se incluyen con los niveles interpolados.

2. Clorofila, feofitina, datos del disco Secchi, y tritio aparecen en una sección separada.

Con la adición de clorofila-a, feofitina, observaciones del disco Secchi, y tritio, los mismos parámetros son tabulados en este informe como en reportes previos. El punto decimal de las estaciones de CalCOFI se omitió, así que los datos de la estación número 90.65 se registran como 90065. [Las designaciones de estaciones CalCOFI han estado en uso durante más de veinte años. La

Z	Depth	Meters
T	Temperature	°C
S	Salinity	‰
O2	Dissolved Oxygen	ml/L
PO4	"Reactive" inorganic phosphate-phosphorous	μg-at/L
SIO3	"Reactive" inorganic silicate-silicon	μg-at/L
NO2	"Reactive" nitrite-nitrogen	μg-at/L
NO3	"Reactive" nitrate-nitrogen	μg-at/L
DT	δ_T = Thermosteric anomaly	cl/ton
SIGT	$\sigma_t = (\rho_{s,t,0} - 1)\ 10^3$ where $\rho_{s,t,0}$ is the density the parcel would have if moved isothermally to the sea surface.	g/L
DD	Geopotential anomaly, referred to the sea surface.	dyn. meters
CHL.A	Chlorophyll-a	mg/m^3
PHAEO	Phaeophytin	mg/m^3
TU ± σTU	Tritium (± sigma counting error)	TU

Z	Profundidad	Metros
T	Temperatura	°C
S	Salinidad	‰
O2	Oxeno	ml/L
PO4	Fosfato-fósforo inorgánico "reactivo"	μg-at/L
SIO3	Silicato-Silicio inorgánico "reactivo"	μg-at/L
NO2	Nitrito-nitrógeno "reactivo"	μg-at/L
NO3	Nitrato-nitrógeno "reactivo"	μg-at/L
DT	δ_T = Anomalía termostérica	cl/ton
SIGT	$\sigma_t = (\rho_{s,t,0} - 1)\ 10^3$ donde $\rho_{s,t,0}$ es la densidad que tendría la parcela si ésta se moviera isotérmicamente hasta la superficie del mar.	g/L
DD	Anomalía geopotencial, referida a la superficie del mar.	metros din.
CHL.A	Clorofila-a	mg/m^3
PHAEO	Feofitina	mg/m^3
TU ± σTU	Tritium (± error de conteo del sigma)	TU

primera parte especifica una línea normal a la tendencia general de la costa (Línea CalCOFI). La segunda parte especifica la posición de una estación relativo a la costa en la linea CalCOFI.] Los símbolos del encabezado de las columnas se deben interpretar de la siguiente manera:

Z	Depth	Meters
T	Temperature	°C
S	Salinity	‰
O2	Dissolved Oxygen	ml/L
PO4	"Reactive" inorganic phosphate-phosphorous	μg-at/L
SIO3	"Reactive" inorganic silicate-silicon	μg-at/L
NO2	"Reactive" nitrite-nitrogen	μg-at/L
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SIGT	$\sigma_t = (\rho_{s,t,0} - 1)\ 10^3$ where $\rho_{s,t,0}$ is the density the parcel would have if moved isothermally to the sea surface.	g/L
DD	Geopotential anomaly, referred to the sea surface.	dyn. meters
CHL.A	Chlorophyll-a	mg/m^3
PHAEO	Phaeophytin	mg/m^3
TU ± σTU	Tritium (± sigma counting error)	TU

Z	Profundidad	Metros
T	Temperatura	°C
S	Salinidad	‰
O2	Oxeno	ml/L
PO4	Fosfato-fósforo inorgánico "reactivo"	μg-at/L
SIO3	Silicato-Silicio inorgánico "reactivo"	μg-at/L
NO2	Nitrito-nitrógeno "reactivo"	μg-at/L
NO3	Nitrato-nitrógeno "reactivo"	μg-at/L
DT	δ_T = Anomalía termostérica	cl/ton
SIGT	$\sigma_t = (\rho_{s,t,0} - 1)\ 10^3$ donde $\rho_{s,t,0}$ es la densidad que tendría la parcela si ésta se moviera isotérmicamente hasta la superficie del mar.	g/L
DD	Anomalía geopotencial, referida a la superficie del mar.	metros din.
CHL.A	Clorofila-a	mg/m^3
PHAEO	Feofitina	mg/m^3
TU ± σTU	Tritium (± error de conteo del sigma)	TU

FOOTNOTES

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

NOTAS AL CALCE

Los datos que aparecen con errores sin explicación obvia son reportados, pero se les señala con una U. Estos datos no fueron utilizados en la determinación de datos a profundidades estándares. Se utilizan las notas al calce para indicar los datos que han requerido un procesamiento especial.

LITERATURE CITED / LITERATURA CITADA

Anderson, G.C., compiler, 1971. "Oxygen Analysis," Marine Technician's Handbook, SIO Ref. No. 71-8, Sea Grant Pub. No. 9.

Atlas, Elliott L., John C. Callaway, Richard D. Tomlinson, Louis I. Gordon, Lynda Barstow, and P. Kilho Park, 1971. A practical manual for use of the Technicon^{R} AutoAnalyzer^{R} in sea water nutrient analysis; revised. OSU Technical Report 215, Ref. No. 71-22.

AutoLab Ind. Pty. Ltd., Sydney, 1960. Inductively Coupled Salinometer MK 111, Model 601, Operating Inst. and Ills. Parts List.

Bainbridge, A., 1965. Determination of natural tritium. *Rev. Sci. Inst., 36*: 1779-1782.

Bissett Berman Corporation, 1967. Operation and Maintenance Manual, Laboratory Salinometer Model 6220.

Bissett Berman Corporation, 1970. Instruction Manual, Laboratory Salinometer Model 6230N.

Brown, N. L., and B. V. Hamon, 1961. An Inductive Salinometer. *Deep-Sea Res., 8*(1): 65-75.

Carpenter, J. H., 1965. The Chesapeake Bay Institute technique for Winkler dissolved oxygen method. *Limnol. Oceanogr., 10*: 141-143.

Guildline Instruments Larchmont, N.Y., 1976. Technical Manual for 'Autosal' Laboratory Salinometer Model 8400.

Holm-Hansen, O., C. J. Lorenzen, R. W. Holmes, and J. D. H. Strickland, 1965. Fluorometric determination of chlorophyll. *J. Cons. perm. int. Explor. Mer, 30*: 3-15.

Klein, Hans T., 1973. A new technique for processing physical oceanographic data. SIO Ref. No. 73-14.

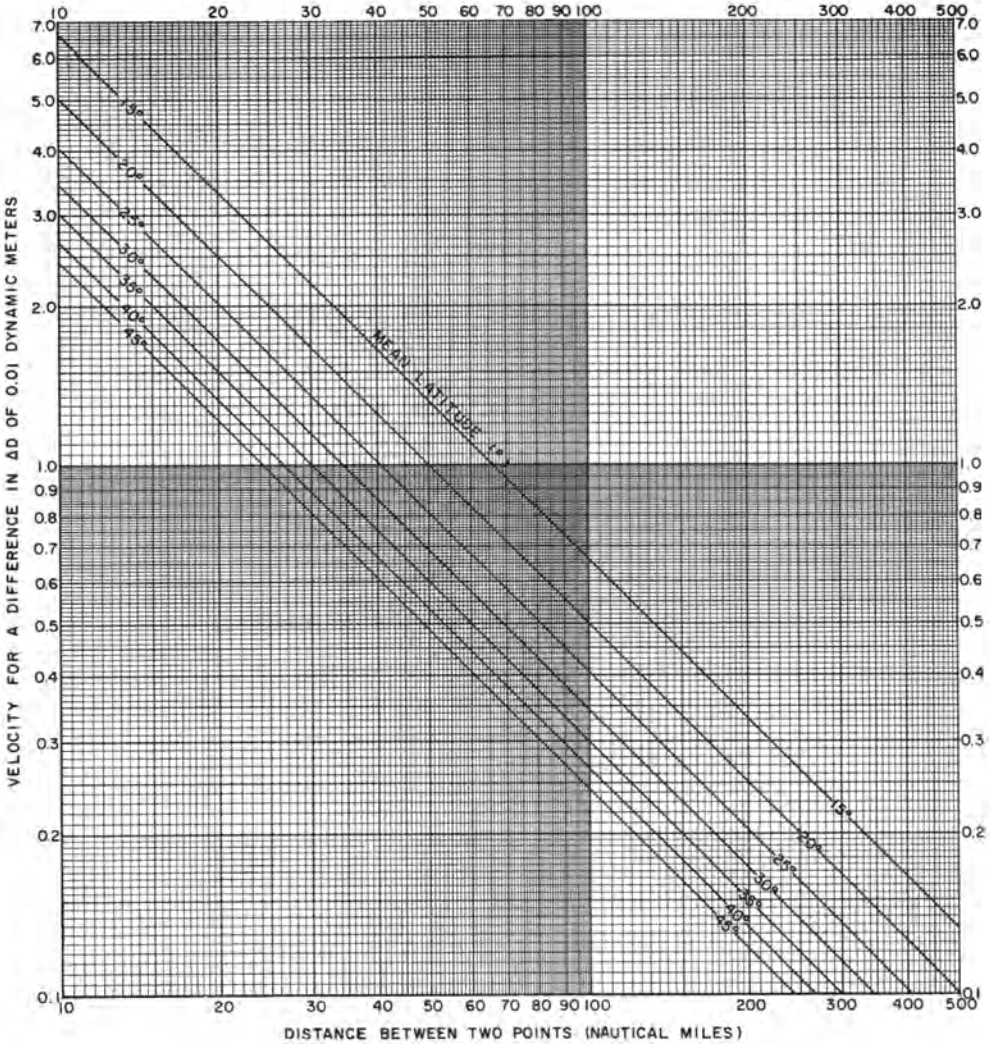
Matthews, D. J., 1939. Tables of the velocity of sound in pure water and seawater for use in echo-sounding and sound-ranging. Second Edition. Hydrographic Department, Admiralty, H. D. 282: 52 pp.

Owen, R. W. Jr., and C. K. Sanchez, 1974. Phytoplankton Pigment and Production Measurements in the California Current Region, 1969-72. U. S. Dept. of Commerce, Nov. 1974. Data Rep. 91.

Strickland, J. D. H., and T. R. Parsons, 1968. A Practical Handbook of Seawater Analysis. *Fish. Res. Board of Canada, Bull. No. 167*: 311 pp.

Sverdrup, H. U., M. W. Johnson, and R. H. Fleming, 1942. *The Oceans: their Physics, Chemistry, and General Biology*. Prentice-Hall, New Jersey, 1087 pp.

Yentsch, C. S., and D. W. Menzel, 1963. A method for the determination of phytoplankton, chlorophyll and phaeophytin by fluorescence. *Deep-Sea Res., 10*: 221-231.



VELOCITY OF GEOSTROPHIC FLOW
(NAUTICAL MILES PER DAY)

cm/sec	0	1	2	3	4	5	6	7	8	9
0	KNOTS / N.M/DAY	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 7807

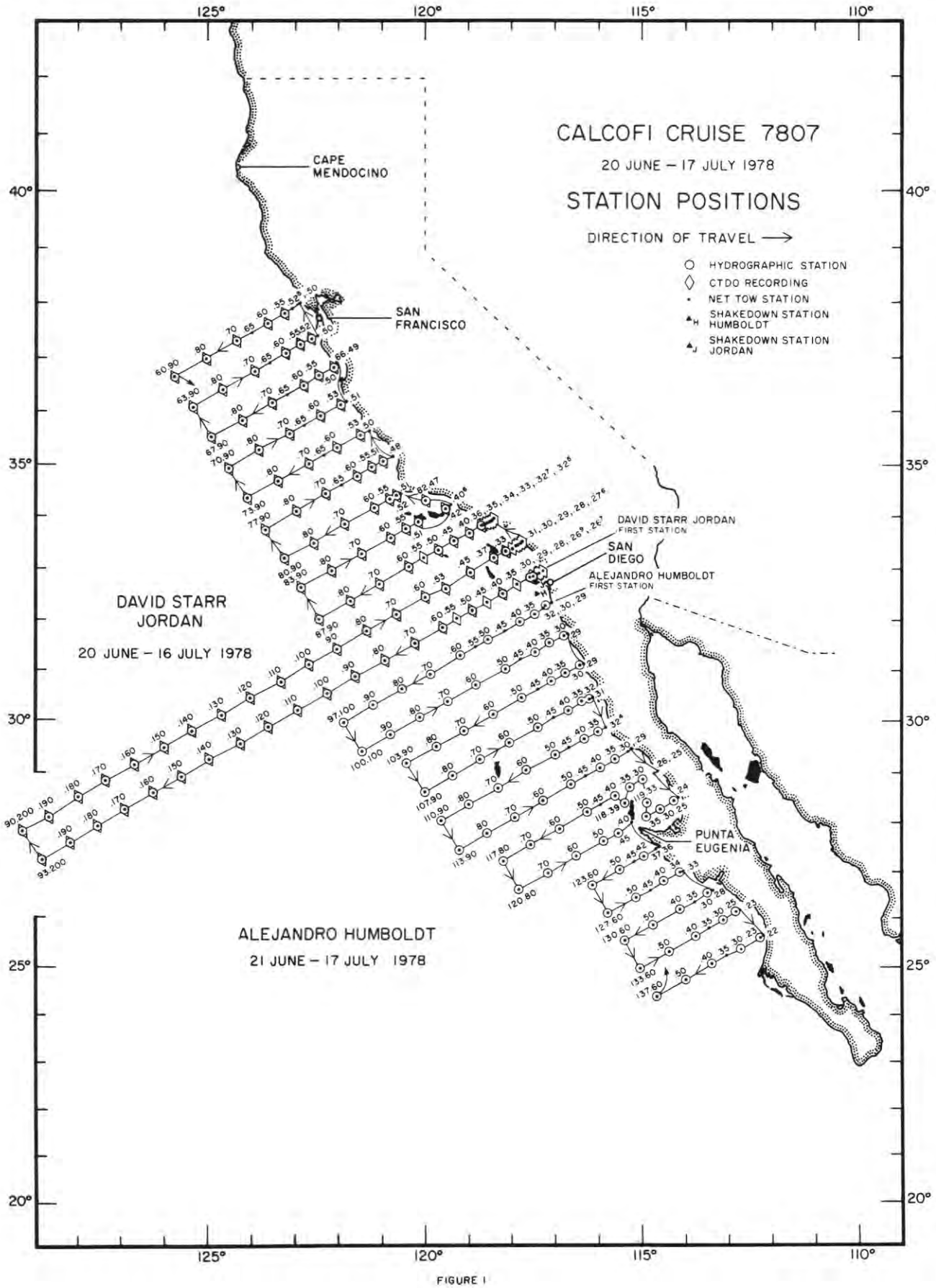

CALCOFI CRUISE 7807
20 JUNE – 17 JULY 1978
STATION POSITIONS
DIRECTION OF TRAVEL ⟶
HYDROGRAPHIC STATION
CTDO RECORDING
NET TOW STATION
SHAKEDOWN STATION HUMBOLDT
SHAKEDOWN STATION JORDAN
CAPE MENDOCINO
SAN FRANCISCO
DAVID STARR JORDAN FIRST STATION
SAN DIEGO
ALEJANDRO HUMBOLDT FIRST STATION
PUNTA EUGENIA
DAVID STARR JORDAN
20 JUNE – 16 JULY 1978
ALEJANDRO HUMBOLDT
21 JUNE – 17 JULY 1978
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 1

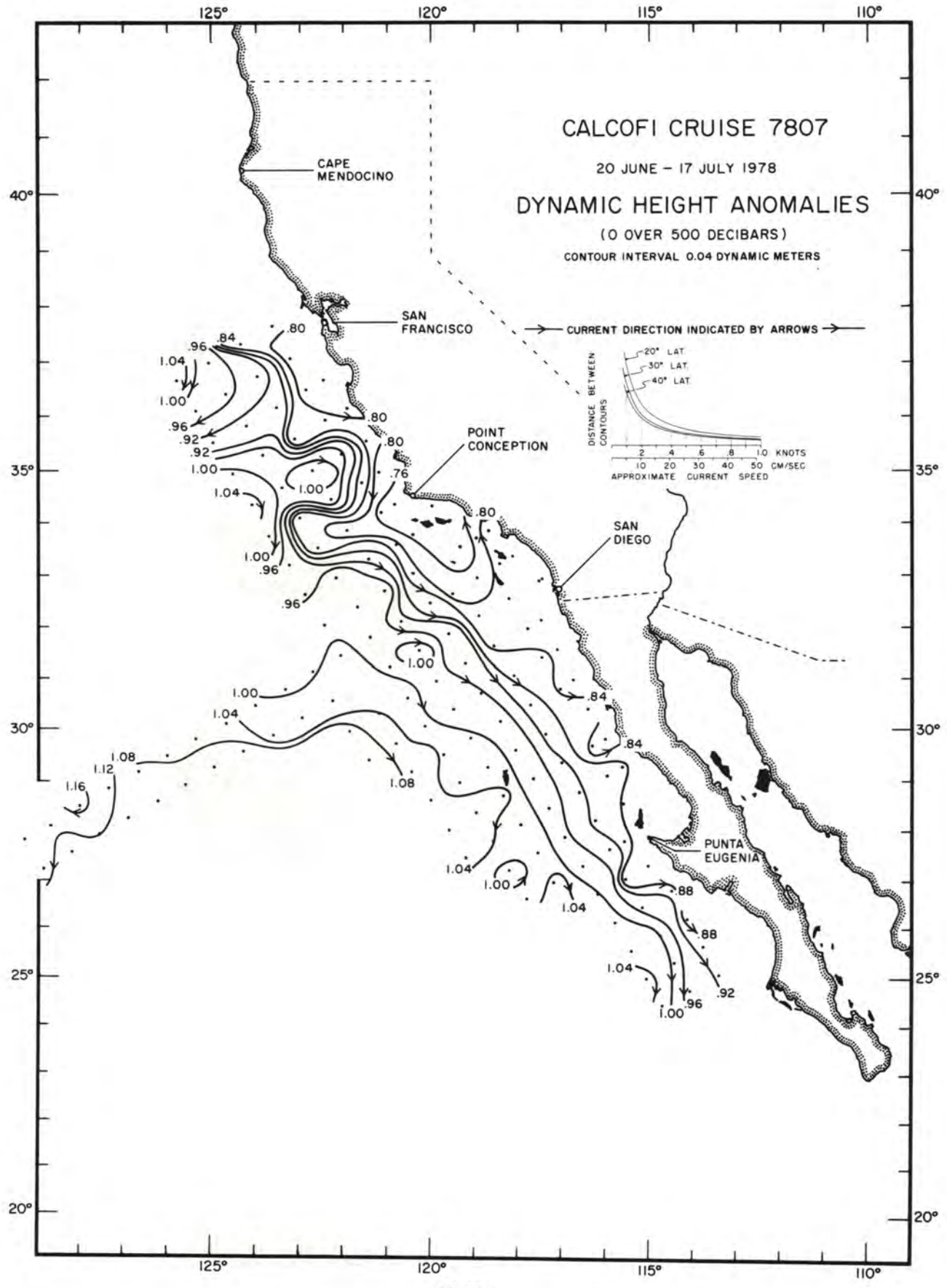

CALCOFI CRUISE 7807
20 JUNE – 17 JULY 1978
DYNAMIC HEIGHT ANOMALIES
(0 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.04 DYNAMIC METERS
CURRENT DIRECTION INDICATED BY ARROWS
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
2 4 6 8 10 KNOTS
10 20 30 40 50 CM/SEC
APPROXIMATE CURRENT SPEED
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 2

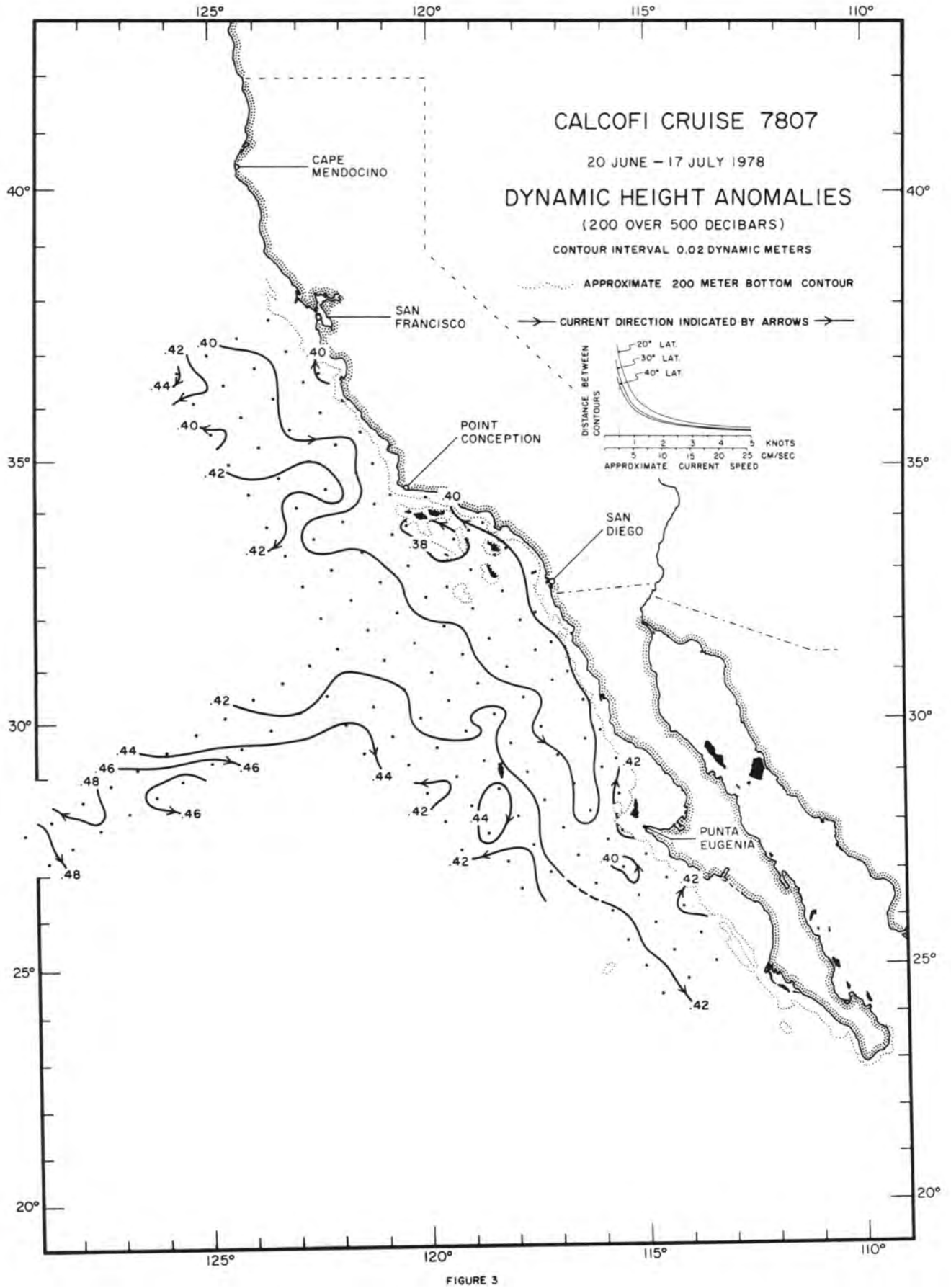

CALCOFI CRUISE 7807
20 JUNE – 17 JULY 1978
DYNAMIC HEIGHT ANOMALIES
(200 OVER 500 DECIBARS)
CONTOUR INTERVAL 0.02 DYNAMIC METERS
APPROXIMATE 200 METER BOTTOM CONTOUR
CURRENT DIRECTION INDICATED BY ARROWS
DISTANCE BETWEEN CONTOURS
20° LAT.
30° LAT.
40° LAT.
KNOTS
CM/SEC
APPROXIMATE CURRENT SPEED
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 3

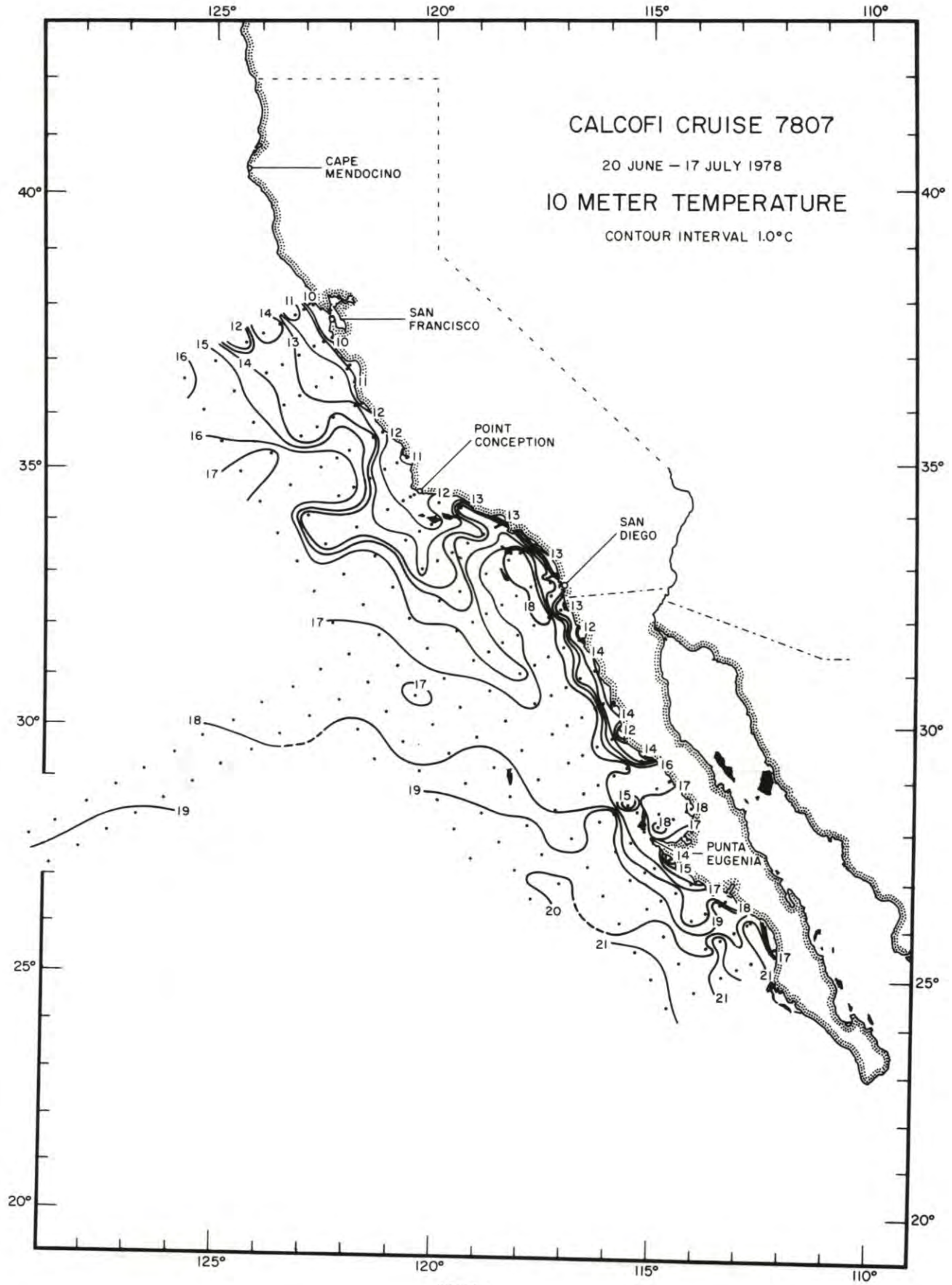

CALCOFI CRUISE 7807
20 JUNE – 17 JULY 1978
10 METER TEMPERATURE
CONTOUR INTERVAL 1.0°C
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 4

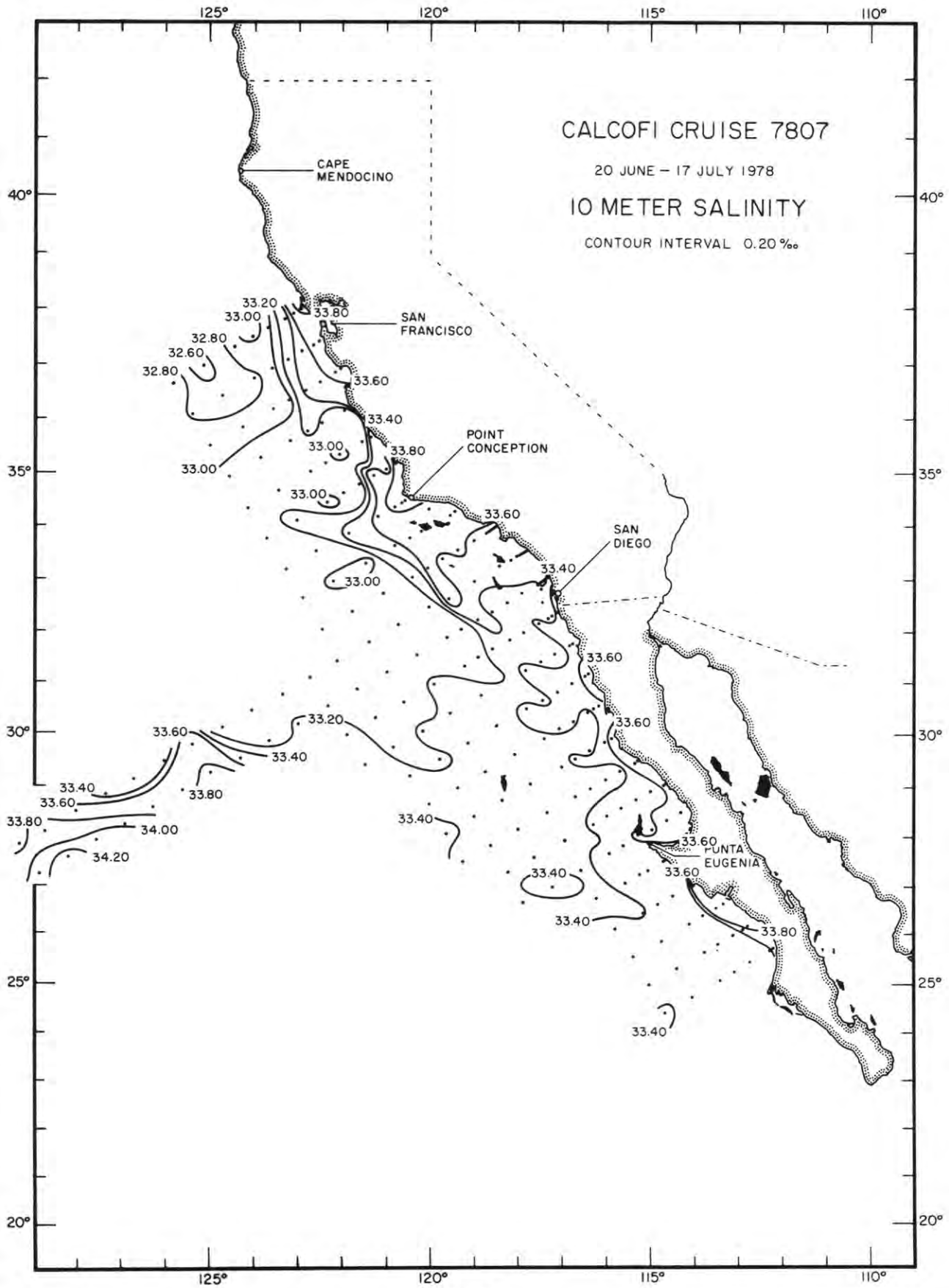

CALCOFI CRUISE 7807
20 JUNE – 17 JULY 1978
10 METER SALINITY
CONTOUR INTERVAL 0.20 ‰
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
33.20
33.00
33.80
32.80
32.60
33.60
33.40
33.00
33.80
33.00
33.00
33.60
33.40
33.00
33.60
33.60
33.20
33.60
33.40
33.40
33.60
33.80
33.80
34.00
34.20
33.40
33.60
33.40
33.60
33.80
33.40

FIGURE 5

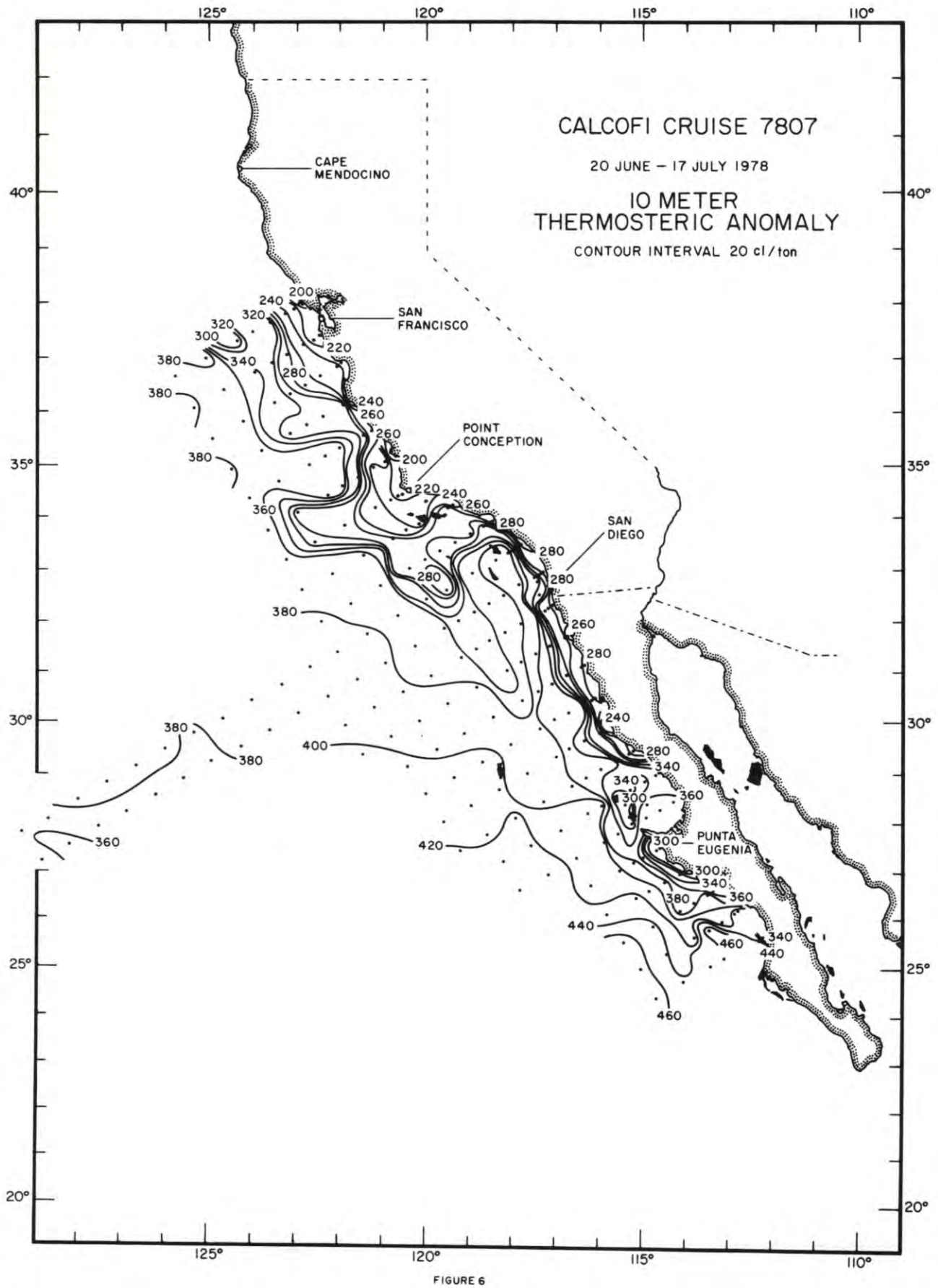

CALCOFI CRUISE 7807
20 JUNE – 17 JULY 1978
10 METER
THERMOSTERIC ANOMALY
CONTOUR INTERVAL 20 cl/ton
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 6

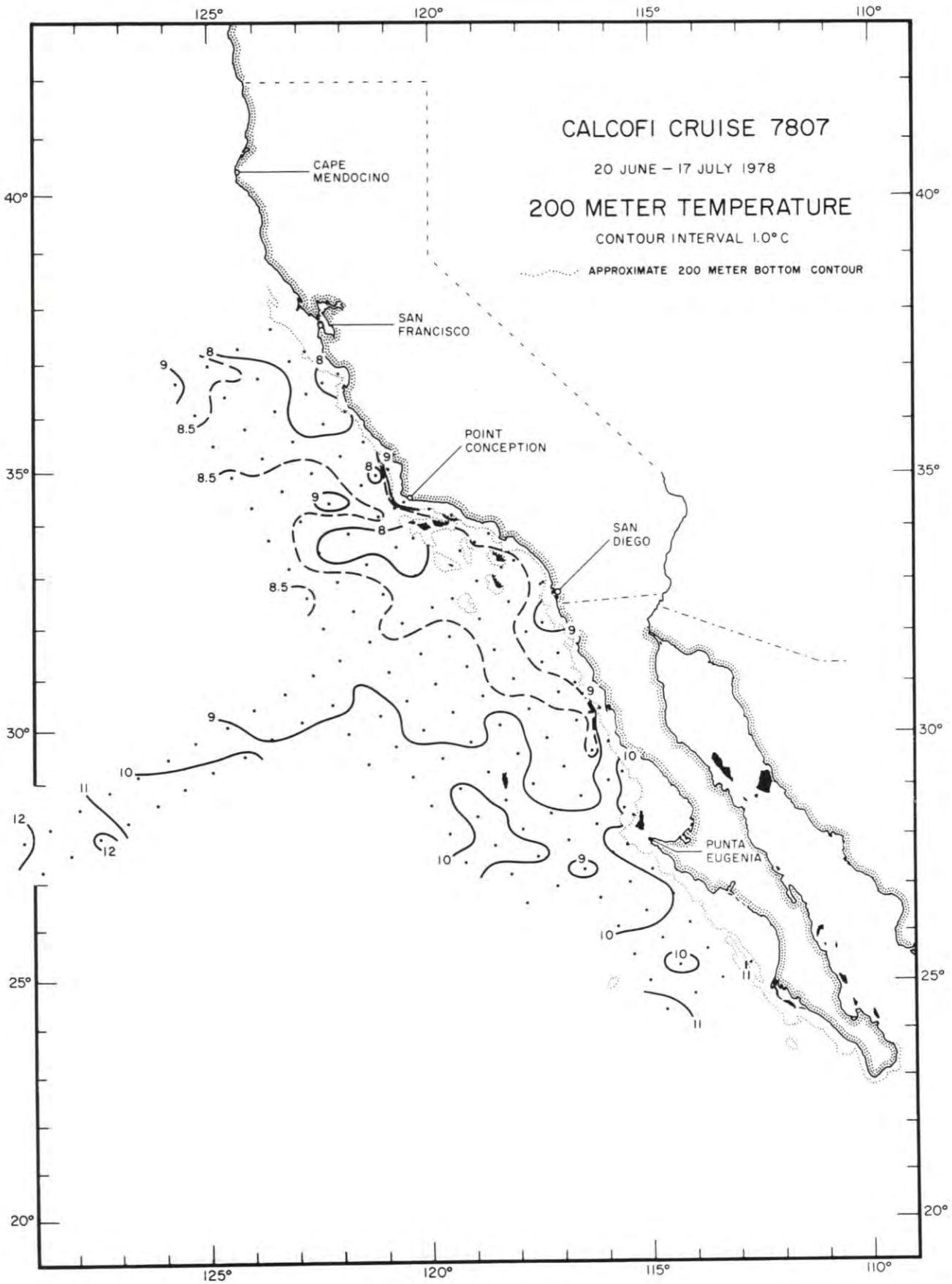

CALCOFI CRUISE 7807
20 JUNE – 17 JULY 1978
200 METER TEMPERATURE
CONTOUR INTERVAL 1.0° C
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°

FIGURE 7

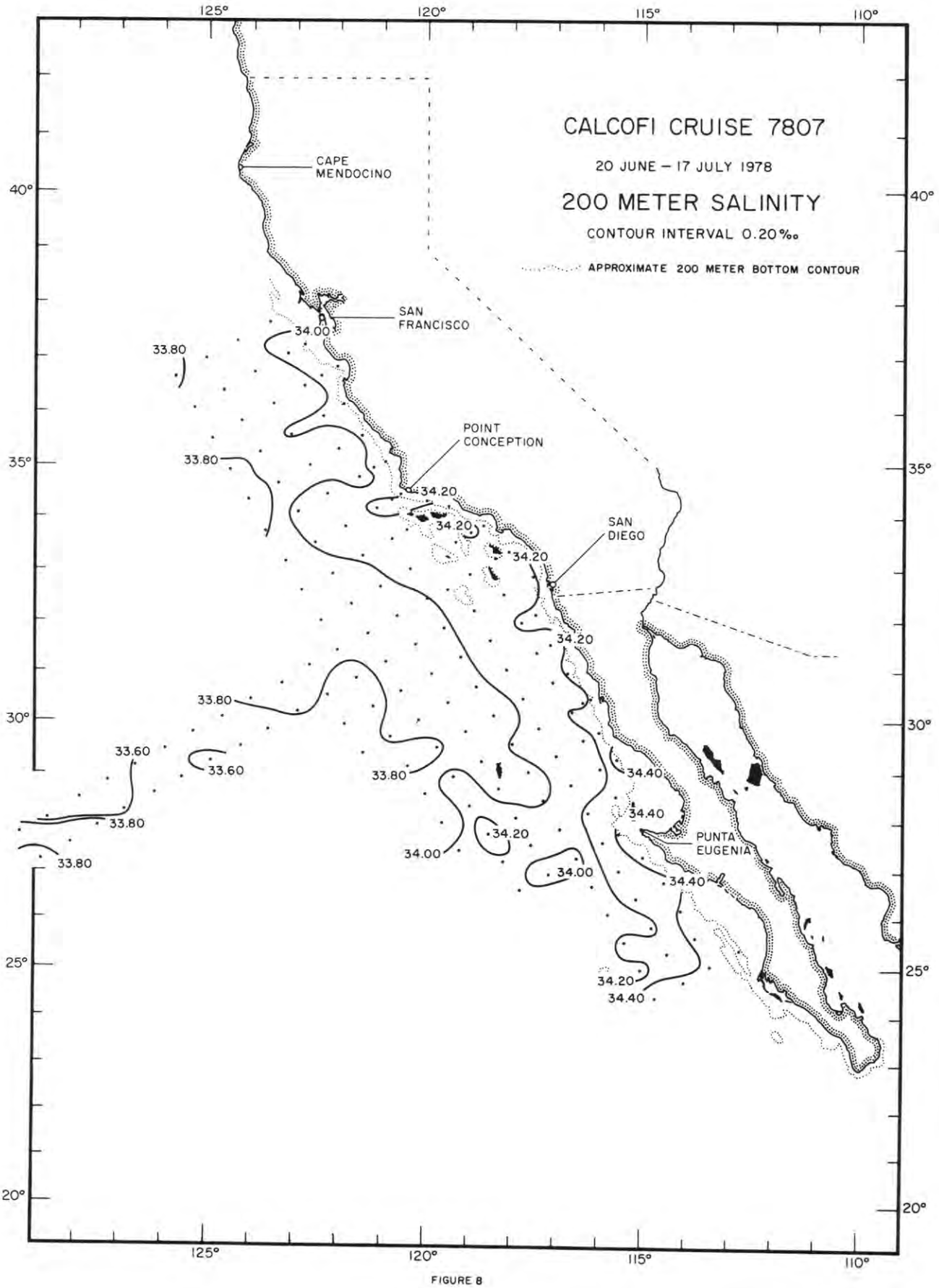

CALCOFI CRUISE 7807
20 JUNE – 17 JULY 1978
200 METER SALINITY
CONTOUR INTERVAL 0.20‰
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
33.60
33.80
34.00
34.20
34.40

FIGURE 8

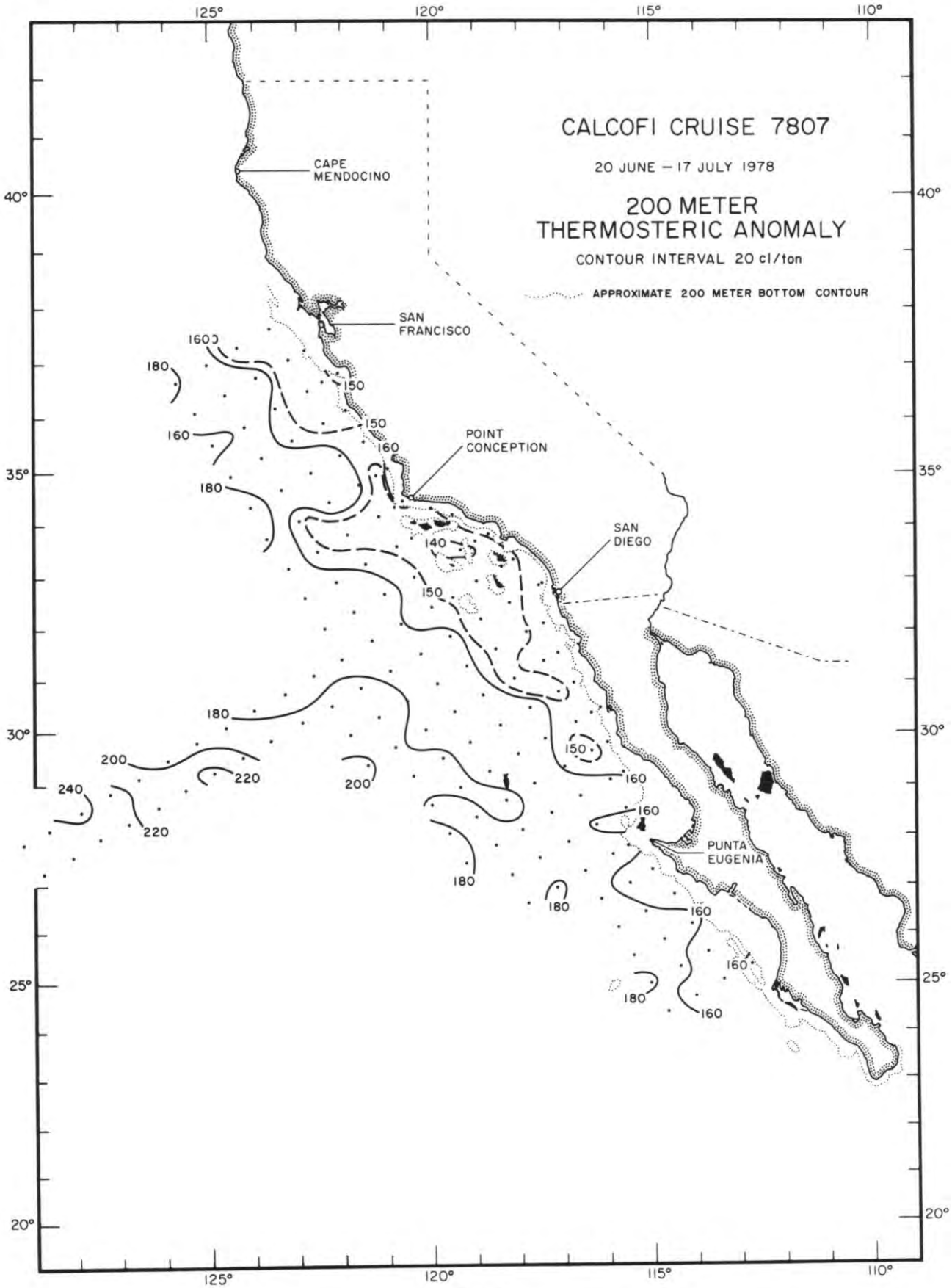

CALCOFI CRUISE 7807
20 JUNE – 17 JULY 1978
200 METER
THERMOSTERIC ANOMALY
CONTOUR INTERVAL 20 cl/ton
APPROXIMATE 200 METER BOTTOM CONTOUR
CAPE MENDOCINO
SAN FRANCISCO
POINT CONCEPTION
SAN DIEGO
PUNTA EUGENIA
125°
120°
115°
110°
40°
35°
30°
25°
20°
140
150
160
180
200
220
240

FIGURE 9

PERSONNEL

Cruise 7807

SHIP'S CAPTAINS

Ferreira, Manuel	RV David Starr Jordan
Zatarain, José M.	RV Alejandro de Humboldt

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

RV David Starr Jordan:

Thrailkill, James R. (in charge)	Fishery Biologist NMFS
Baumert, Judith	Fishery Biologist NMFS-Seattle
Charter, Richard L.	Computer Specialist NMFS
Costello, James P.	Staff Research Associate DCPG*
Devonald, F. Kim	Graduate Student SIO
Lehmann, Virginia D.	Staff Research Associate DCPG
MacLeod, John S.	Marine Technician DCPG
McMillan, Jane A.	Industry Economist NMFS
Mead, Richard V.	Marine Technician DCPG
Rosas, Armando C.	Oceanologist INP
Schmitt, James A.	Electronics Technician DCPG
Stallard, Martha O.	Staff Research Associate DCPG
Stevens, Elizabeth G.	Biological Technician NMFS
Sweet, Paul R.	Marine Technician DCPG
Young, Cindy	Fishery Biologist NMFS-Seattle

RV Alejandro de Humboldt:

Sandoval, Eliseo S. (in charge)	Oceanographer INP
Flerx, William C.	Biological Technician NMFS
Gonzalez, Miguel A.	Marine Technician INP
Johnson, Frank W.	Marine Technician DCPG
Masten, Douglas M.	Staff Research Associate DCPG
Muus, David A. (senior DCPG observer)	Staff Research Associate DCPG
Rowe, Raymond A.	Marine Technician DCPG
Valdez, Miguel A.	Marine Technician INP
Vasquez, Eduardo	Laboratory Aid INP
Wolfe, Margaret S.	Marine Technician DCPG

* DCPG: Now Physical & Chemical Oceanographic Data Facility (PACODF)

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 60055

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
37 47.0N	123 15.0W	07/15/78	1523 GMT	121M	310	16KT	2	350 3 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	10.68	33.377	5.64	1.16	11.		11.7	240.4	0	10.68	33.377	5.64	25.591	240.4	0.000
10	10.66	33.378	5.67	1.16	11.		11.8	240.0	10	10.66	33.378	5.67	25.595	240.0	0.024
29	10.59	33.377	5.67	1.14	11.		11.9	239.0	20	10.64	33.378	5.67	25.599	239.7	0.048
39	10.49	33.374	5.57	1.14	12.		12.4	237.5	30	10.59	33.377	5.67	25.607	239.0	0.072
53	9.90	33.355A	5.09	1.27	15.		15.1	229.4	50	10.06	33.354	5.24	25.679	232.1	0.119
67	9.00	33.479	3.86	1.62	25.		22.2	206.3	75	8.67	33.561	3.37	26.066	195.3	0.173
81	8.50	33.619	3.07	1.86	35.		25.7	188.5	100	8.41	33.742	2.40	26.247	178.1	0.220
100	8.41	33.742	2.40	2.09	41.		27.8	178.1							
119	8.33	33.791	2.32	2.11	42.		28.8	173.3							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 60060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
37 37.0N	123 37.0W	07/15/78	1903 GMT	3164M	310	16KT	1	330 3 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	14.26	32.998	6.51	0.33	1.		0.5	333.9	0	14.26	32.998	6.51	24.609	333.9	0.000
11	14.08	32.998	6.53	0.00	1.		0.6	330.3	10	14.11	32.997	6.53	24.641	330.9	0.033
29	13.35	33.075	6.23	0.65	2.		4.8	310.4	20	13.71	33.001	6.42	24.724	323.0	0.066
39	11.87	32.997	5.96	0.74	6.		5.9	288.9	30	13.22	33.067	6.21	24.875	308.5	0.098
48	10.63	33.009	5.60	0.93	11.		9.1	266.8	50	10.52	33.039	5.56	25.355	262.9	0.155
62	10.16	33.227	5.36	1.27	15.		13.3	243.0	75	9.34	33.293	5.04	25.750	225.3	0.216
76	9.28	33.296	5.01	1.30	18.		15.7	224.1	100	8.76	33.498	4.55	26.001	201.4	0.270
95	8.91	33.462	4.65	1.49	23.		20.0	206.2	125	8.15	33.691	3.90	26.245	178.3	0.318
118	8.27	33.627	4.14	1.61	27.		22.2	184.7	150	7.99	33.866	3.18	26.407	162.9	0.361
137	8.02	33.793	3.50	1.89	35.		26.6	168.8	200	7.50	33.985	2.93	26.572	147.2	0.440
166	7.96	33.924B	2.95	2.08	39.		28.8	158.2	250	7.27	34.072	2.01	26.671	137.8	0.513
193	7.56	33.973	3.02	2.07	42.		29.1	149.0	300	6.59	34.068	1.56	26.762	129.2	0.582
221	7.36	34.020	2.55	2.11	46.		31.2	142.8	400	5.57	34.089	1.07	26.909	115.3	0.709
258	7.24	34.082	1.88	2.44	51.		34.0	136.6	500	5.19	34.174	0.63	27.021	104.7	0.824
314	6.34	34.058	1.51	2.61	62.		37.7	126.8							
384	5.66	34.078	1.15	2.84	74.		40.7	117.2							
454	5.34	34.133	0.81	2.98	81.		42.7	109.4							
530	5.12	34.202	0.54	3.13	89.		44.1	101.8							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 60070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
37 17.0N	124 21.0W	07/16/78	0157 GMT	3919M	320	20KT	1	320 4 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	14.68	33.102	6.70	0.33	1.		1.1	334.7	0	14.68	33.102	6.70	24.601	334.7	0.000
10	11.72	32.899	6.44	0.59	8.		5.1	293.5	10	11.72	32.899	6.44	25.033	293.5	0.031
29	11.31	32.899	6.20	0.72	10.		7.0	286.4	20	11.50	32.899	6.32	25.074	289.7	0.061
38	10.85	32.970	5.87	0.86	12.		9.1	273.3	30	11.26	32.905	6.16	25.121	285.1	0.089
48	10.48	33.077	5.69	1.01	14.		11.4	259.3	50	10.37	33.115	5.63	25.441	254.7	0.144
61	9.73	33.326	5.24	1.23	17.		14.9	228.9	75	9.17	33.497	4.84	25.937	207.5	0.202
75	9.17	33.497	4.84	1.41	20.		18.0	207.5	100	8.84	33.642	4.38	26.103	191.8	0.252
95	8.88	33.609	4.46	1.56	24.		20.6	194.9	125	8.49	33.763	3.81	26.252	177.7	0.299
117	8.66	33.740	4.07	1.77	30.		24.2	181.9	150	8.05	33.845	3.22	26.381	165.3	0.342
137	8.22	33.792	3.43	1.89	34.		26.6	171.7	200	7.52	33.986	3.01	26.569	147.5	0.422
165	7.90	33.906	3.09	2.02	38.		28.2	158.7	250	6.96	34.001	2.62	26.660	138.9	0.495
192	7.62	33.981	3.01	2.04	41.		28.9	149.2	300	6.33	34.009	2.09	26.750	130.4	0.564
220	7.27	33.985	3.02	2.06	44.		29.4	144.2	400	5.21	34.032	1.27	26.906	115.5	0.692
257	6.89	34.005	2.50	2.25	50.		32.3	137.7	500	4.73	34.113	0.84	27.026	104.2	0.806
312	6.16	34.008	1.99	2.45	60.		35.9	128.4							
382	5.30	34.013	1.41	2.74	75.		40.4	117.9							
452	5.02	34.088	0.93	2.92	83.		42.5	109.2							
529	4.51	34.118	0.78	3.08	95.		44.0	101.6							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 60080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 56.5N	125 04.0W	07/16/78	0822 GMT	4111M	330	25KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	15.32	32.590	5.97	0.38	5.		0.1	385.3	0	15.32	32.590	5.97	24.070	385.3	0.000
10	15.32	32.592	5.95	0.37	5.		0.1	385.2	10	15.32	32.592	5.95	24.071	385.2	0.039
29	15.25	32.601	5.98	0.36	5.		0.1	383.0	20	15.28	32.597	5.97	24.083	384.0	0.077
39	14.83	32.618	6.09	0.36	5.		0.1	373.2	30	15.20	32.600	5.99	24.103	382.1	0.115
48	15.02	32.735	6.04	0.34	5.		0.1	368.5	50	14.96	32.741	6.05	24.263	366.9	0.191
62	14.36	32.786	6.14	0.25	5.		0.0	351.4	75	13.81	33.047	6.21	24.739	321.5	0.277
76	13.77	33.067	6.21	0.28	4.		0.0	319.1	100	12.22	33.148	5.92	25.132	284.1	0.353
95	12.70	33.147	5.98	0.30	5.		0.2	292.9	125	10.00	33.189	5.30	25.560	243.4	0.420
119	10.41	33.152	5.53	0.70	9.		7.8	252.6	150	9.00	33.380	4.65	25.873	213.7	0.478
136	9.43	33.273	4.89	1.12	17.		15.0	228.1	200	8.52	33.845	3.37	26.310	172.1	0.576
164	8.78	33.498	4.43	1.38	23.		19.0	201.6	250	7.74	33.982	3.50	26.534	150.9	0.658
192	8.62	33.793	3.41	1.70	30.		24.5	177.4	300	7.06	34.014	2.71	26.655	139.4	0.733
220	8.23	33.931	3.28	1.78	34.		25.8	161.5	400	6.21	34.095	1.17	26.833	122.5	0.869
257	7.63	33.985	3.54	1.85	38.		26.3	149.1	500	5.61	34.156	0.72	26.957	110.8	0.991
313	6.92	34.020	2.37	2.18	50.		32.5	137.0							
382	6.37	34.087	1.30	2.60	63.		37.6	125.1							
452	5.81	34.118	0.94	2.79	73.		39.6	116.0							
527	5.56	34.182	0.60	2.91	81.		41.3	108.3							

A) AN ERROR OF -0.1 (3.87 PPT) IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.
B) AN ERROR OR -0.01 (0.391 PPT) IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 60090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 37.0N	125 47.0W	07/16/78	1422 GMT	4493M	340	25KT	2	360 8 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.19	32.974	5.82	0.32	4.		0.0	375.7	0	16.19	32.974	5.82	24.170	375.7	0.000
11	16.19	32.976	5.80	0.33	4.		0.0	375.6	10	16.19	32.976	5.80	24.172	375.6	0.038
29	16.18	32.978	5.81	0.31	3.		0.0	375.2	20	16.19	32.978	5.80	24.173	375.4	0.075
39	16.18	32.978	5.80	0.31	3.		0.0	375.2	30	16.18	32.978	5.81	24.176	375.2	0.113
48	16.15	32.978	5.82	0.29	4.		0.0	374.5	50	16.12	32.977	5.82	24.188	374.0	0.188
61	15.98	32.972	5.85	0.29	4.		0.0	371.3	75	14.54	32.935	6.17	24.502	344.1	0.278
75	14.54	32.935	6.17	0.28	4.		0.0	344.1	100	12.60	32.916	6.03	24.880	308.1	0.360
94	12.98	32.903	6.07	0.36	5.		0.3	316.1	125	11.09	33.037	5.51	25.253	272.5	0.433
117	11.48	32.952	5.76	0.59	7.		5.1	285.4	150	10.20	33.381	4.40	25.677	232.3	0.497
136	10.66	33.184	5.08	1.00	13.		12.0	254.4	200	9.12	33.786	3.18	26.171	185.4	0.603
164	9.83	33.560	3.77	1.49	21.		20.2	213.1	250	8.58	33.955	2.66	26.387	164.8	0.693
191	9.31	33.757	3.22	1.72	27.		24.0	190.4	300	7.93	34.031	2.50	26.545	149.8	0.774
219	8.77	33.830	3.12	1.78	30.		25.4	176.9	400	6.65	34.065	1.65	26.752	130.2	0.919
257	8.55	33.981	2.55	2.05	36.		28.5	162.4	500	6.01	34.153	0.81	26.905	115.7	1.049
313	7.71	34.033	2.48	2.20	43.		31.4	146.6							
383	6.81	34.052	1.85	2.46	54.		35.8	133.2							
454	6.25	34.114	1.08	2.78	66.		40.0	121.5							
531	5.90	34.178	0.72	2.99	75.		42.4	112.5							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 63052

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
37 19.0N	122 36.0W	07/15/78	0607 GMT	86M	350	11KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	12.04	33.724	6.18	1.14	8.		7.9	238.5	0	12.04	33.724	6.18	25.612	238.5	0.000
11	11.01	33.771	5.90	1.27	9.		8.5	216.9	10	11.09	33.767	5.93	25.821	218.6	0.023
20	10.55	33.790	5.54	1.67	19.		16.7	207.8	20	10.55	33.790	5.54	25.935	207.8	0.044
30	9.70	33.748	4.37	2.06	31.		22.6	197.1	30	9.70	33.748	4.37	26.047	197.1	0.065
49	9.07	33.827	2.99	2.57	65.		26.9	181.6	50	9.05	33.832	2.90	26.218	180.9	0.102
73	8.65	33.921	1.42	2.57	65.		27.1	168.3	75	8.61	33.925	1.40	26.359	167.4	0.146

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 63055

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
37 13.0N	122 50.0W	07/15/78	0240 GMT	307M	320	18KT	4	310 3 3

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	11.89	33.519	6.03	0.80	7.		8.5	250.9	0	11.89	33.519	6.03	25.482	250.9	0.000
10	11.67	33.507	5.89	0.91	8.		9.4	247.8	10	11.67	33.507	5.89	25.513	247.8	0.025
30	9.86	33.537	4.84	1.32	16.		16.7	215.3	20	10.77	33.522	5.38	25.688	231.2	0.049
43	9.58	33.642	4.56	1.48	21.		19.4	203.1	30	9.86	33.537	4.84	25.856	215.3	0.071
52	9.38	33.694	4.25	1.62	23.		21.6	196.2	50	9.42	33.683	4.32	26.042	197.6	0.113
66	9.33	33.801	3.82	1.77	27.		23.6	187.5	75	9.17	33.837	3.55	26.203	182.3	0.161
80	9.06	33.850	3.42	1.83	29.		24.7	179.7	100	8.77	33.888	3.20	26.305	172.6	0.205
99	8.78	33.882	3.24	1.88	31.		25.7	173.2	125	8.64	34.018	2.34	26.427	161.0	0.248
123	8.65	34.012	2.38	2.10	37.		29.2	161.6	150	8.45	34.051	2.20	26.482	155.8	0.288
141	8.54	34.047	2.16	2.23	40.		30.0	157.4	200	7.80	34.028	2.60	26.561	148.3	0.365
174	8.15	34.041	2.44	2.16	40.		29.6	152.2	250	7.25	34.105	1.75	26.701	135.0	0.438
203	7.76	34.027	2.62	2.17	42.		30.7	147.7							
242	7.29	34.097	1.78	2.45	52.		34.2	136.1							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 63060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
37 03.4N	123 10.5W	07/14/78	2153 GMT	2316M	310	17KT	2	300 3 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	13.05	33.364	6.21	0.60	5.		5.0	283.5	0	13.05	33.364	6.21	25.138	283.5	0.000
10	12.93	33.364	6.22	0.65	5.		5.1	281.3	10	12.93	33.364	6.22	25.162	281.3	0.028
30	10.28	33.465	5.22	1.16	15.		14.1	227.4	20	11.75	33.397	5.85	25.412	257.4	0.055
39	9.38	33.524	4.55	1.43	20.		18.6	208.8	30	10.28	33.465	5.22	25.729	227.4	0.080
48	9.00	33.586	4.46	1.48	23.		19.6	198.4	50	9.00	33.610	4.41	26.052	196.6	0.122
62	8.97	33.726	4.01	1.57	27.		21.1	187.6	75	8.97	33.837	3.39	26.234	179.4	0.169
76	8.97	33.844	3.34	1.81	30.		24.7	178.8	100	8.75	33.916	2.87	26.330	170.2	0.213
94	8.81	33.901	2.95	1.91	33.		26.2	172.2	125	8.54	33.974	2.63	26.409	162.7	0.256
117	8.59	33.953	2.71	2.00	36.		27.5	165.1	150	8.34	34.024	2.44	26.477	156.3	0.296
135	8.47	33.998	2.54	2.08	37.		28.3	160.0	200	7.82	34.062	2.30	26.586	145.9	0.373
161	8.23	34.035	2.41	2.14	39.		29.2	153.8	250	6.98	34.028	2.22	26.678	137.2	0.446
190	7.84	34.036	2.56	2.15	42.		29.9	148.2	300	7.16	34.143	1.30	26.743	131.0	0.515
215	7.76	34.095	1.91	2.31	47.		31.9	142.7	400	6.57	34.219	0.75	26.885	117.6	0.644
251	6.96	34.026	2.23	2.34	51.		33.1	137.1	500	5.77	34.241	0.45	27.004	106.3	0.762
305	7.18	34.154	1.18	2.63	58.		35.7	130.4							
375	6.70	34.206	0.82	2.82	66.		38.1	120.3							
445	6.29	34.235	0.64	2.93	73.		39.6	113.0							
521	5.53	34.240	0.37	3.04	85.		42.5	103.6							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 63070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 42.5N	123 55.0W	07/14/78	1440 GMT	3919M	350	13KT	1	340 4 8

P	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	13.99	32.787	6.12	0.30	3.		0.0	344.0	0	13.99	32.787	6.12	24.503	344.0	0.000
10	13.98	32.789	6.19	0.29	3.		0.0	343.6	10	13.98	32.789	6.19	24.507	343.6	0.034
29	13.71	32.840	6.26	0.30	3.		0.0	334.6	20	13.84	32.809	6.24	24.550	339.5	0.069
52	13.79	32.977	6.24	0.24	3.		0.0	326.1	30	13.71	32.845	6.26	24.604	334.4	0.102
62	13.47	33.004	6.26	0.47	3.		2.9	318.0	50	13.78	32.962	6.24	24.680	327.1	0.169
71	13.43	33.039	6.19	0.58	3.		4.0	314.6	75	13.35	33.030	6.16	24.821	313.7	0.249
85	12.70	32.964	6.09	0.56	5.		3.3	306.4	100	10.21	33.098	5.33	25.454	253.5	0.321
99	10.25	33.079	5.37	0.82	11.		10.0	255.4	125	9.27	33.275	4.85	25.748	225.5	0.381
122	9.39	33.259	4.86	1.12	17.		15.3	228.5	150	8.81	33.539	4.27	26.027	199.0	0.435
141	8.76	33.386	4.81	1.21	19.		16.7	209.7	200	8.49	33.907	2.95	26.363	167.1	0.528
164	8.88	33.757	3.36	1.47	28.		23.6	183.9	250	8.00	33.995	2.75	26.507	153.5	0.610
193	8.55	33.889	3.00	1.79	32.		27.2	169.2	300	7.13	34.007	2.67	26.641	140.7	0.686
219	8.34	33.941	2.87	1.87	35.		27.6	162.3	400	5.79	34.036	1.55	26.840	121.9	0.822
256	7.92	34.003	2.73	1.96	40.		29.4	151.8	500	5.54	34.187	0.62	26.990	107.6	0.942
312	6.90	34.003	2.66	2.07	49.		31.7	138.0							
381	5.89	34.006	1.85	2.43	65.		37.6	125.3							
450	5.68	34.127	0.85	2.80	76.		41.7	113.8							
525	5.47	34.208	0.51	3.00	85.		43.5	105.3							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 63080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 23.0N	124 38.5W	07/14/78	0837 GMT	4111M	330	15KT		

P	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	15.15	32.653	5.96	0.34	4.		0.1	377.2	0	15.15	32.653	5.96	24.155	377.2	0.000
12	15.14	32.656	5.96	0.33	4.		0.0	376.7	10	15.14	32.655	5.96	24.159	376.8	0.038
30	15.03	32.666	6.02	0.30	4.		0.0	373.7	20	15.09	32.661	5.99	24.173	375.4	0.075
40	14.82	32.724	6.14	0.33	4.		0.0	365.2	30	15.03	32.666	6.02	24.191	373.7	0.113
48	14.06	32.797	6.23	0.31	4.		0.0	344.6	50	14.01	32.818	6.23	24.523	342.1	0.185
63	13.71	32.919	6.21	0.30	4.		0.0	328.8	75	12.52	32.940	6.25	24.914	304.9	0.266
77	12.29	32.941	6.26	0.29	5.		0.0	300.6	100	10.51	33.027	5.47	25.348	263.5	0.337
95	10.66	32.971	5.60	0.74	10.		12.7	270.1	125	9.96	33.329	4.87	25.676	232.4	0.400
118	10.23	33.259	5.06	1.06	13.		13.1	241.8	150	9.27	33.557	4.16	25.967	204.7	0.455
137	9.51	33.438	4.54	1.35	19.		17.6	217.1	200	8.38	33.847	4.19	26.333	170.0	0.551
164	9.09	33.667	3.90	1.59	25.		21.8	193.7	250	7.88	34.001	2.97	26.529	151.4	0.633
191	8.51	33.799	4.26	1.46	27.		20.7	175.3	300	7.09	33.992	3.12	26.635	141.3	0.708
218	8.18	33.930	4.05	1.56	32.		22.5	160.9	400	5.86	34.001	1.98	26.804	125.2	0.846
255	7.83	34.005	2.81	1.85	40.		27.7	150.4	500	5.61	34.164	0.84	26.962	110.3	0.970
310	6.91	33.984	3.19	1.89	46.		28.4	139.6							
379	6.08	33.995	2.23	2.26	59.		34.7	128.4							
449	5.50	34.042	1.43	2.65	72.		39.7	118.0							
525	5.67	34.224	0.54	2.81	82.		39.1	106.4							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 63090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 03.0N	125 20.0W	07/14/78	0238 GMT	4689M	010	16KT	1	360 3 6

P	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	15.59	32.669	5.91	0.29	3.		0.1	385.2	0	15.59	32.669	5.91	24.071	385.2	0.000
11	15.52	32.660	5.94	0.28	3.		0.0	384.4	10	15.53	32.661	5.94	24.078	384.5	0.038
29	15.32	32.677	5.96	0.27	3.		0.0	378.9	20	15.42	32.669	5.95	24.108	381.6	0.077
53	13.93	32.807	6.37	0.28	3.		0.0	341.3	30	15.27	32.680	5.98	24.150	377.7	0.115
62	13.57	32.830A	6.34	0.28	3.		0.0	332.7	50	14.10	32.788	6.34	24.481	346.1	0.187
70	13.35	32.827	6.29	0.30	3.		0.1	328.7	75	13.19	32.831	6.24	24.699	325.3	0.272
84	12.74	32.853	6.13	0.38	4.		1.1	315.3	100	11.34	32.973	5.84	25.159	281.5	0.348
98	11.45	32.947	5.92	0.55	6.		3.8	285.3	125	10.11	33.288	4.75	25.619	237.8	0.414
121	10.39	33.250	4.86	1.05	14.		13.5	245.0	150	9.14	33.569	3.98	25.998	201.8	0.469
140	9.20	33.428	4.37	1.35	20.		18.7	213.1	200	8.60	33.854	3.19	26.304	172.7	0.564
163	9.06	33.697	3.52	1.65	26.		23.2	191.1	250	7.99	34.024	2.59	26.531	151.2	0.647
191	8.69	33.804	3.32	1.77	29.		25.0	177.6	300	7.07	34.015	2.73	26.655	139.4	0.722
218	8.43	33.947	2.92	1.91	34.		27.4	163.2	400	6.26	34.095	1.26	26.827	123.1	0.858
255	7.91	34.029	2.56	2.10	41.		29.9	149.7	500	5.47	34.147	0.77	26.967	109.8	0.981
311	6.88	34.007	2.76	2.18	49.		31.6	137.5							
380	6.39	34.078	1.46	2.61	63.		37.3	126.0							
451	5.89	34.128	0.95	2.86	65.		40.6	116.2							
525	5.23	34.152	0.74	2.98	84.		42.7	106.8							

A) AN ERROR OF 0.01 (-0.389 PPT) IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 67050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 48.0N	122 05.0W	07/12/78	1712 GMT	380M	310	8KT	2	290 2 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	12.39	33.614	6.77	0.50	2.		3.0	252.9	0	12.39	33.614	6.77	25.460	252.9	0.000
10	11.98	33.618	6.38	0.66	4.		5.4	245.2	10	11.98	33.618	6.38	25.541	245.2	0.025
29	9.66	33.598	4.41	1.51	19.		18.5	207.6	20	10.75	33.597	5.31	25.749	225.4	0.048
43	9.33	33.653	4.27	1.55	22.		20.4	198.4	30	9.64	33.606	4.40	25.946	206.7	0.070
57	9.21	33.762	3.96	1.72	27.		23.0	188.5	50	9.25	33.707	4.14	26.087	193.3	0.110
71	9.12	33.828	3.39	1.77	29.		24.1	182.2	75	9.07	33.846	3.27	26.226	180.1	0.157
85	8.93	33.883	3.06	1.91	32.		25.8	175.3	100	8.86	33.908	2.92	26.306	172.5	0.202
104	8.85	33.912	2.90	1.96	33.		26.5	172.0	125	8.65	33.955	2.78	26.377	165.8	0.245
127	8.63	33.959	2.77	1.99	35.		27.6	165.2	150	8.49	33.984	2.63	26.424	161.3	0.286
154	8.47	33.988	2.60	2.04	36.		28.0	160.7	200	8.12	34.060	2.17	26.540	150.3	0.366
186	8.24	34.050	2.25	2.17	41.		29.7	152.8	250	7.47	34.109	1.73	26.673	137.7	0.439
217	7.94	34.069	2.07	2.26	45.		31.1	147.1	300	7.38	34.148	1.45	26.717	133.6	0.509
251	7.46	34.110	1.72	2.42	51.		33.1	137.5							
287	7.41	34.136	1.52	2.52	53.		34.1	134.8							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 67055

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 39.0N	122 26.0W	07/12/78	2125 GMT	2037M	330	20KT	2	350 4 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	12.50	33.600	6.15	0.63	6.		6.4	255.9	0	12.50	33.600	6.15	25.428	255.9	0.000
10	12.38	33.587	6.11	0.67	5.		6.7	254.7	10	12.38	33.587	6.11	25.441	254.7	0.026
29	9.59	33.625	4.38	1.38	20.		18.3	204.5	20	10.90	33.587	5.21	25.714	228.7	0.050
39	9.56	33.664	4.27	1.51	21.		19.3	201.2	30	9.59	33.629	4.37	25.972	204.2	0.071
48	9.56	33.676	4.26	1.55	21.		19.5	200.3	50	9.47	33.678	4.24	26.030	198.7	0.112
62	8.86	33.724	3.94	1.56	26.		22.1	186.0	75	8.74	33.873	3.26	26.298	173.2	0.159
76	8.73	33.882	3.20	1.75	32.		25.7	172.4	100	8.78	33.990	2.54	26.383	165.2	0.201
95	8.81	33.979	2.59	1.92	36.		27.3	166.4	125	8.57	34.032	2.35	26.449	158.9	0.242
118	8.63	34.016	2.44	1.90	37.		27.8	161.0	150	8.40	34.072	2.13	26.506	153.5	0.282
136	8.48	34.055	2.22	2.06	39.		28.9	155.9	200	8.16	34.124	1.78	26.583	146.2	0.359
164	8.34	34.085	2.06	2.15	42.		29.7	151.6	250	7.90	34.152	1.59	26.644	140.4	0.432
193	8.19	34.119	1.81	2.26	45.		31.0	147.0	300	7.49	34.176	1.36	26.722	133.0	0.503
220	8.08	34.134	1.73	2.16	46.		30.6	144.3	400	7.02	34.219	0.96	26.823	123.4	0.637
257	7.85	34.156	1.56	2.35	50.		32.1	139.4	500	6.24	34.254	0.62	26.955	111.0	0.760
312	7.40	34.181	1.31	2.50	56.		33.4	131.4							
382	7.13	34.213	1.02	2.69	61.		35.5	125.4							
453	6.62	34.235	0.78	2.87	69.		37.4	117.1							
529	5.99	34.268	0.52	3.03	80.		39.8	106.9							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 67060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 28.0N	122 47.0W	07/13/78	0148 GMT	2974M	320	19KT	2	320 3 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	13.97	33.317	6.07	0.50	3.		3.4	304.7	0	13.97	33.317	6.07	24.915	304.7	0.000
11	12.42	33.450	6.12	0.71	6.		6.8	265.5	10	12.54	33.438	6.11	25.295	268.6	0.029
29	11.71	33.611	5.93	0.87	6.		7.9	240.9	20	11.96	33.545	6.02	25.489	250.2	0.055
39	10.91	33.673	5.42	1.12	8.		10.6	222.5	30	11.64	33.622	5.89	25.607	238.9	0.079
48	9.92	33.592	4.65	1.39	16.		16.1	212.2	50	9.75	33.592	4.52	25.916	209.6	0.124
62	9.11	33.646	4.00	1.54	24.		21.7	195.6	75	9.09	33.735	3.76	26.135	188.7	0.174
76	9.09	33.740	3.75	1.66	26.		23.7	188.3	100	8.63	33.877	3.25	26.319	171.3	0.220
95	8.70	33.862	3.33	1.77	31.		25.8	173.4	125	8.33	33.924	3.16	26.401	163.5	0.262
118	8.41	33.908	3.11	1.83	33.		26.9	165.8	150	8.02	33.961	3.53	26.477	156.2	0.303
137	8.19	33.948	3.32	1.79	34.		26.3	159.7	200	7.32	33.974	3.49	26.589	145.7	0.379
165	7.81	33.968	3.71	1.70	35.		25.5	152.8	250	6.79	34.016	2.36	26.694	135.7	0.452
194	7.43	33.974	3.60	1.79	39.		26.9	147.2	300	6.60	34.065	1.61	26.759	129.5	0.520
221	6.95	33.979	3.01	2.00	46.		30.0	140.5	400	5.38	34.058	1.25	26.906	115.6	0.647
259	6.78	34.029	2.17	2.27	53.		33.7	134.5	500	5.17	34.189	0.53	27.034	103.4	0.762
314	6.50	34.070	1.49	2.52	60.		36.8	127.9							
384	5.41	34.031	1.39	2.68	73.		40.0	117.8							
454	5.30	34.140	0.75	2.91	82.		42.2	108.5							
527	5.08	34.209	0.48	3.07	90.		43.4	100.8							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 67070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 08.0N	123 29.5W	07/13/78	0857 GMT	3541M	350	18KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	13.84	32.872	6.33	0.40	3.		0.4	334.8	0	13.84	32.872	6.33	24.599	334.8	0.000
10	13.82	32.867	6.32	0.37	3.		0.1	334.8	10	13.82	32.867	6.32	24.600	334.8	0.033
29	13.63	32.884	5.80U	0.36	3.		0.2	329.8	20	13.74	32.875	6.32	24.621	332.8	0.067
52	13.19	32.903	6.30	0.38	4.		0.6	320.0	30	13.61	32.885	6.31	24.656	329.4	0.100
61	12.47	32.954	6.17	0.44	4.		1.4	302.9	50	13.23	32.902	6.30	24.746	320.9	0.165
70	11.57	32.959	6.27	0.46	6.		1.1	286.4	75	11.00	32.973	6.05	25.221	275.7	0.240
84	10.10	33.035	5.49	0.83	12.		8.8	256.3	100	9.48	33.282	4.76	25.719	228.3	0.304
98	9.53	33.246	4.85	1.13	18.		14.3	231.6	125	9.16	33.638	3.86	26.047	197.1	0.357
121	9.19	33.602	3.95	1.48	25.		20.7	200.1	150	8.86	33.780	3.44	26.207	181.9	0.405
139	9.06	33.726	3.62	1.65	28.		23.7	188.9	200	8.26	33.971	2.89	26.449	159.0	0.492
162	8.62	33.829	3.27	1.76	32.		25.4	174.7	250	7.72	34.054	2.31	26.593	145.2	0.570
190	8.37	33.943	3.03	1.83	36.		26.8	162.6	300	7.29	34.095	1.79	26.688	136.3	0.643
218	8.06	34.010	2.63	1.92	41.		28.0	153.2	400	6.43	34.160	0.96	26.855	120.4	0.776
255	7.67	34.058	2.27	2.09	47.		30.5	144.2	500	5.49	34.182	0.63	26.992	107.4	0.896
310	7.21	34.101	1.68	2.35	55.		33.9	134.8							
379	6.63	34.153	1.07	2.56	66.		37.0	123.4							
450	5.95	34.170	0.78	2.73	76.		39.7	113.7							
525	5.26	34.188	0.58	2.85	89.		42.3	104.4							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 67080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
35 48.0N	124 12.0W	07/13/78	1455 GMT	3919M	350	20KT	2	350 4 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	15.53	32.867	5.92	0.29	3.		0.0	369.5	0	15.53	32.867	5.92	24.236	369.5	0.000
12	15.52	32.867	5.90	0.29	3.		0.0	369.2	10	15.52	32.867	5.90	24.238	369.2	0.037
29	15.51	32.868	5.91	0.28	3.		0.0	369.0	20	15.52	32.867	5.90	24.238	369.2	0.074
39	15.47	32.864	5.96	0.28	3.		0.0	368.4	30	15.51	32.868	5.92	24.241	369.0	0.111
68	12.55	32.848	6.36	0.37	4.		0.9	312.1	50	12.40	32.898	6.31	24.904	305.8	0.179
62	11.50	32.980	5.73	0.60	7.		4.5	283.7	75	10.59	33.086	5.50	25.379	260.6	0.250
77	10.47	33.102	5.47	0.87	11.		10.0	257.3	100	9.49	33.321	4.75	25.748	225.5	0.311
94	9.71	33.271	4.89	1.20	16.		15.3	232.6	125	9.00	33.544	4.06	26.001	201.5	0.365
118	9.04	33.470	4.31	1.51	23.		20.9	207.6	150	8.81	33.735	3.50	26.179	184.6	0.414
136	8.97	33.653	3.68	1.66	26.		23.1	193.0	200	8.22	33.926	3.41	26.420	161.7	0.502
164	8.62	33.789	3.33	1.78	30.		25.5	177.7	250	7.56	34.007	2.83	26.580	146.6	0.581
192	8.29	33.895	3.66	1.71	32.		25.1	165.0	300	6.97	34.026	2.35	26.678	137.2	0.654
220	8.02	33.989	2.72	1.98	39.		26.5	154.2	400	5.93	34.072	1.28	26.850	120.9	0.788
257	7.45	34.005	2.85	2.06	43.		30.1	145.1	500	5.45	34.159	0.67	26.978	108.7	0.908
311	6.86	34.031	2.17	2.32	53.		34.4	135.4							
380	6.06	34.053	1.47	2.60	65.		38.8	123.8							
450	5.70	34.122	0.90	2.83	77.		41.6	114.4							
522	5.34	34.172	0.62	2.98	85.		43.2	106.5							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 67090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
35 28.0N	124 55.0W	07/13/78	2037 GMT	4309M	350	14KT	1	360 3 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.04	32.944	5.87	0.28	3.		0.0	374.7	0	16.04	32.944	5.87	24.181	374.7	0.000
11	16.00	32.944	5.88	0.28	3.		0.0	373.8	10	16.00	32.944	5.88	24.190	373.8	0.037
30	15.94	32.944	5.89	0.25	3.		0.0	372.5	20	15.98	32.944	5.88	24.195	373.4	0.075
39	15.88	32.940	6.01	0.25	3.		0.0	371.5	30	15.94	32.944	5.89	24.204	372.5	0.112
49	12.93	32.888	6.39	0.33	4.		0.5	316.2	50	12.79	32.895	6.38	24.826	313.2	0.181
63	11.91	33.002	6.03	0.55	6.		3.8	289.2	75	11.16	33.073	5.72	25.270	271.0	0.254
77	11.04	33.083	5.67	0.74	9.		7.2	268.2	100	9.86	33.264	4.96	25.642	235.6	0.318
96	9.97	33.213	5.08	1.08	15.		13.5	241.0	125	9.14	33.504	4.39	25.948	206.6	0.374
119	9.42	33.483	4.47	1.37	20.		18.4	212.4	150	8.48	33.657	3.93	26.169	185.5	0.424
138	8.56	33.541	4.22	1.51	26.		20.7	195.2	200	8.10	33.982	2.81	26.481	155.9	0.510
165	8.39	33.784	3.52	1.70	31.		24.3	174.7	250	7.46	34.033	2.43	26.615	143.2	0.587
193	8.19	33.960	2.88	1.89	37.		27.3	158.8	300	6.75	34.047	1.94	26.724	132.8	0.658
220	7.82	34.017	2.68	1.97	42.		28.8	149.3	400	6.04	34.118	0.99	26.872	118.8	0.789
256	7.39	34.033	2.38	2.11	48.		30.7	142.2	500	5.41	34.189	0.58	27.007	106.0	0.907
311	6.60	34.051	1.82	2.39	58.		34.5	130.6							
380	6.16	34.098	1.14	2.65	69.		38.5	121.6							
451	5.74	34.164	0.72	2.91	79.		40.7	111.7							
526	5.22	34.195	0.56	2.93	90.		41.6	103.4							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 70053

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
36 06.5N	121 54.0W	07/12/78	0735 GMT	1092M	310	28KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	13.19	33.160	6.03	0.65	4.		3.7	301.2	0	13.19	33.160	6.03	24.953	301.2	0.000
11	13.20	33.157	6.05	0.64	3.		3.8	301.6	10	13.20	33.158	6.05	24.949	301.5	0.030
30	12.17	33.243	6.03	0.70	5.		4.5	276.2	20	12.92	33.180	6.04	25.021	294.7	0.060
40	10.84	33.365	5.56	1.08	9.		10.3	244.0	30	12.17	33.243	6.03	25.215	276.2	0.089
54	9.98	33.487	4.83	1.36	15.		15.7	220.9	50	10.16	33.460	5.03	25.745	225.8	0.139
68	9.27	33.539	4.35	1.49	21.		18.6	206.0	75	9.19	33.584	4.18	26.002	201.4	0.193
92	9.08	33.701	4.00	1.57	25.		21.0	191.1	100	8.80	33.747	4.11	26.191	183.5	0.241
110	8.46	33.803	4.20	1.56	27.		21.5	174.3	125	8.36	33.895	3.82	26.375	166.0	0.285
129	8.33	33.910	3.69	1.70	31.		23.9	164.5	150	8.25	33.962	3.25	26.443	159.5	0.327
147	8.27	33.954	3.33	1.78	33.		25.4	160.4	200	7.65	34.019	2.72	26.576	146.9	0.405
175	8.04	34.016	2.72	2.01	39.		28.2	152.5	250	7.16	34.044	2.24	26.665	138.4	0.478
207	7.54	34.017	2.72	2.07	43.		29.4	145.5	300	6.81	34.070	1.85	26.735	131.8	0.547
235	7.31	34.044	2.38	2.23	47.		30.9	140.4	400	6.50	34.214	0.82	26.888	117.3	0.677
281	6.89	34.045	1.99	2.33	53.		33.0	134.8	500	6.09	34.262	0.52	26.981	108.5	0.796
332	6.72	34.123A	1.60	2.53	59.		34.6	126.7							
410	6.47	34.224	0.72	2.88	70.		38.4	116.1							
490	6.15	34.260	0.54	3.03	77.		39.7	109.4							
571	5.48	34.264	0.39	2.97	87.		40.2	101.2							

A) IT IS ASSUMED THAT TWO DIGITS WERE REVERSED IN RECORDING THE CONDUCTIVITY RATIO. THE LISTED OBSERVED AND INTERPOLATED VALUES INCORPORATE THE CORRECTION OF 0.036 PPT.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 70060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
35 53.0N	122 22.5W	07/12/78	0156 GMT	3028M	320	18KT	2	310 4 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	14.06	33.190	6.20	0.39	1.		2.0	315.8	0	14.06	33.190	6.20	24.799	315.8	0.000
10	14.03	33.192	6.20	0.39	1.		2.2	315.1	10	14.03	33.192	6.20	24.807	315.1	0.032
29	13.10	33.306	6.04	0.61	3.		4.7	288.7	20	13.75	33.248	6.12	24.907	305.5	0.063
39	11.74	33.348	5.75	0.82	5.		7.3	260.8	30	12.97	33.309	6.01	25.111	286.1	0.092
48	10.92	33.459	5.46	1.08	7.		10.4	238.4	50	10.82	33.474	5.43	25.641	235.7	0.145
62	10.34	33.535	5.13	1.27	11.		13.3	223.2	75	9.54	33.611	4.31	25.966	204.8	0.200
75	9.54	33.611	4.31	1.49	20.		19.5	204.8	100	8.92	33.725	3.88	26.155	186.9	0.249
95	8.99	33.690	4.02	1.59	25.		22.0	190.5	125	8.67	33.868	3.25	26.305	172.6	0.295
117	8.75	33.837	3.39	1.77	30.		25.4	176.0	150	8.39	33.939	3.01	26.405	163.2	0.337
135	8.57	33.897	3.13	1.82	33.		26.0	168.9	200	7.71	34.003	2.95	26.556	148.8	0.417
163	8.21	33.966	2.97	1.94	36.		27.7	158.6	250	7.27	34.044	2.38	26.651	139.7	0.491
190	7.83	33.990	3.08	1.91	39.		28.0	151.5	300	6.47	34.037	1.93	26.754	130.0	0.560
217	7.52	34.023	2.68	2.07	44.		30.5	144.7	400	5.70	34.129	0.95	26.924	113.9	0.687
253	7.24	34.045	2.36	2.23	49.		32.0	139.3	500	5.36	34.203	0.53	27.024	104.4	0.802
308	6.33	34.036	1.85	2.50	60.		35.7	128.4							
380	5.69	34.086	1.17	2.84	74.		40.1	117.0							
452	5.73	34.220	0.53	3.07	80.		41.6	107.4							
529	5.09	34.194	0.53	3.23	89.		43.5	102.1							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 70070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
35 33.0N	123 06.0W	07/11/78	1932 GMT	3731M	330	13KT	1	330 5 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	13.31	33.117	6.20	0.47	3.		2.8	306.6	0	13.31	33.117	6.20	24.896	306.6	0.000
12	13.15	33.109	6.22	0.50	3.		3.2	304.1	10	13.21	33.110	6.22	24.910	305.2	0.031
30	12.11	33.084	6.06	0.64	6.		4.3	286.8	20	12.69	33.097	6.16	25.002	296.4	0.061
40	11.94	33.177	6.00	0.75	6.		5.9	276.9	30	12.11	33.084	6.06	25.104	286.8	0.090
49	11.57	33.217	5.89	0.82	6.		7.1	267.4	50	11.51	33.216	5.87	25.317	266.5	0.145
63	10.57	33.205	5.49	0.98	10.		9.5	251.3	75	9.44	33.233	5.04	25.688	231.3	0.208
77	9.27	33.243	4.97	1.22	17.		14.6	227.9	100	8.89	33.474	4.52	25.963	205.1	0.263
96	8.92	33.453	4.60	1.49	23.		19.3	207.0	125	8.72	33.621	4.17	26.105	191.6	0.313
120	8.78	33.570	4.19	1.55	25.		20.7	196.3	150	8.55	33.843	3.55	26.304	172.7	0.359
138	8.57	33.758	4.05	1.60	27.		21.5	179.3	200	8.10	34.020	2.54	26.510	153.1	0.442
166	8.53	33.923	2.83	2.01	34.		26.9	166.4	250	7.32	34.013	2.67	26.618	142.9	0.518
194	8.18	34.015	2.52	2.17	39.		28.7	154.5	300	6.82	34.067	1.90	26.730	132.2	0.589
223	7.79	34.018	2.70	2.20	41.		29.1	148.8	400	6.08	34.136	0.99	26.882	117.8	0.719
260	7.16	34.013	2.66	2.33	47.		30.3	140.7	500	5.77	34.236	0.46	27.000	106.7	0.837
316	6.73	34.092	1.55	2.75	58.		35.0	129.2							
385	6.12	34.117	1.11	3.02	68.		38.7	119.7							
455	5.98	34.206	0.62	3.22	77.		40.6	111.4							
529	5.59	34.245	0.43	3.35	85.		40.9	103.9							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 70080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
35 13.5N	123 47.5W	07/11/78	1329 GMT	4117M	340	23KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.08	33.184	5.64	0.26	3.		0.0	380.0	0	17.08	33.184	5.64	24.125	380.0	0.000
10	17.07	33.183	5.67	0.25	3.		0.0	379.9	10	17.07	33.183	5.67	24.127	379.9	0.038
29	17.08	33.186	5.69	0.24	3.		0.0	379.9	20	17.08	33.185	5.68	24.126	379.9	0.076
38	17.03	33.176	5.71	0.23	3.		0.0	379.5	30	17.07	33.185	5.69	24.128	379.7	0.114
47	14.42	32.828	6.26	0.29	3.		0.0	349.5	50	14.18	32.828	6.25	24.495	344.7	0.187
61	13.54	32.829	6.23	0.22	4.		0.0	332.1	75	12.31	32.910	6.08	24.931	303.2	0.268
74	12.38	32.900	6.10	0.40	4.		1.2	305.2	100	10.71	33.109	5.51	25.377	260.8	0.339
93	11.16	33.068	5.64	0.62	7.		5.5	271.4	125	9.54	33.213	5.18	25.656	234.2	0.402
116	9.84	33.182	5.27	0.96	12.		11.2	241.2	150	9.13	33.446	4.54	25.904	210.7	0.458
135	9.30	33.261	5.04	1.13	15.		14.1	227.0	200	8.39	33.838	3.92	26.325	170.7	0.555
163	9.02	33.616	4.12	1.47	22.		19.9	196.5	250	7.72	33.991	3.49	26.544	149.9	0.637
191	8.51	33.789	3.97	1.59	27.		22.9	176.1	300	7.15	34.011	2.84	26.642	140.7	0.712
219	8.15	33.921	3.79	1.63	31.		24.4	161.1	400	6.00	34.065	1.36	26.836	122.2	0.848
256	7.64	33.997	3.42	1.84	37.		27.1	148.3	500	5.33	34.146	0.77	26.982	108.3	0.969
312	7.02	34.009	2.66	2.16	47.		31.6	139.1							
383	6.18	34.058	1.50	2.62	63.		37.8	124.9							
451	5.57	34.093	1.08	2.86	74.		40.8	115.0							
525	5.27	34.181	0.61	3.05	85.		42.6	105.0							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 70090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 53.0N	124 30.0W	07/11/78	0645 GMT	4117M	330	20KT	1	340 8 8

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.18	33.181	5.69	0.22	4.		0.0	382.5	0	17.18	33.181	5.69	24.099	382.5	0.000
10	17.17	33.186	5.69	0.22	3.		0.0	381.9	10	17.17	33.186	5.69	24.105	381.9	0.038
29	17.20	33.185	5.70	0.23	3.		0.0	382.6	20	17.17	33.185	5.69	24.105	382.0	0.076
53	17.15	33.178	5.75	0.19	3.		0.0	382.0	30	17.20	33.185	5.70	24.098	382.6	0.115
62	17.02	33.163	5.72	0.21	3.		0.0	380.2	50	17.16	33.179	5.75	24.103	382.1	0.191
71	15.76	33.039	6.01	0.19	3.		0.0	361.8	75	15.10	33.045	6.07	24.465	347.6	0.283
85	13.52	33.109	6.22	0.27	4.		0.0	311.2	100	11.84	33.111	5.79	25.176	279.9	0.362
99	11.92	33.109	5.80	0.50	6.		2.3	281.6	125	10.22	33.222	5.37	25.549	244.4	0.428
122	10.41	33.199	5.50	0.89	11.		10.4	249.1	150	9.27	33.405	4.71	25.849	216.0	0.487
141	9.43	33.351	4.72	1.22	18.		16.4	222.3	200	8.52	33.764	3.50	26.248	178.1	0.587
163	9.16	33.476	4.69	1.44	23.		19.8	209.0	250	7.99	33.992	2.88	26.505	153.6	0.671
191	8.62	33.676	3.81	1.57	27.		22.4	186.1	300	7.27	34.030	2.49	26.640	140.8	0.747
218	8.35	33.921	2.98	1.77	33.		26.0	164.0	400	6.08	34.078	1.41	26.836	122.2	0.884
255	7.93	33.991	2.86	1.82	38.		27.3	152.8	500	5.62	34.200	0.58	26.990	107.6	1.005
311	7.10	34.035	2.38	2.08	48.		30.6	138.2							
380	6.22	34.054	1.64	2.38	61.		36.4	125.7							
451	5.84	34.146	0.90	2.75	72.		39.8	114.2							
526	5.52	34.225	0.48	2.79	83.		39.4	104.6							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 73053

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
35 31.5N	121 28.5W	07/09/78	2333 GMT	713M	340	13KT	2	330 6 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	14.26	32.952	6.21	0.45	3.		0.3	337.2	0	14.26	32.952	6.21	24.574	337.2	0.000
9	14.12	33.195	6.21	0.49	2.		1.7	316.6	10	14.06	33.192	6.20	24.800	315.7	0.033
28	12.26	33.118	5.96	0.61	5.		3.9	287.0	20	13.03	33.148	6.10	24.975	299.0	0.063
37	11.19	33.151	5.76	0.79	8.		7.5	265.7	30	12.00	33.121	5.92	25.152	282.2	0.093
47	10.85	33.225	5.60	0.93	10.		9.8	254.5	50	10.65	33.240	5.48	25.490	250.1	0.146
61	9.91	33.304	5.01	1.18	15.		14.2	233.3	75	9.49	33.445	4.65	25.845	216.3	0.205
75	9.49	33.445	4.65	1.38	19.		18.0	216.3	100	8.90	33.624	4.26	26.078	194.1	0.256
93	8.82	33.539	4.60	1.31	21.		17.9	199.2	125	9.06	33.874	3.08	26.248	178.0	0.303
117	9.19	33.827	3.32	1.70	28.		23.6	183.4	150	8.74	33.962	2.68	26.367	166.7	0.347
135	8.85	33.913	2.88	1.82	32.		25.5	171.9	200	8.04	34.019	2.62	26.520	152.2	0.428
163	8.66	33.988	2.60	1.92	34.		27.0	163.5	250	7.23	34.038	2.43	26.650	139.8	0.503
191	8.18	34.005	2.70	1.96	37.		28.0	155.3	300	6.72	34.058	1.90	26.738	131.5	0.573
219	7.74	34.045	2.43	2.14	43.		30.2	146.1	400	6.22	34.188	0.83	26.906	115.6	0.702
257	7.13	34.034A	2.43	2.17	48.		31.7	138.7	500	5.81	34.276	0.44	27.027	104.1	0.817
313	6.63	34.071	1.70	2.43	57.		34.9	129.5							
382	6.29	34.168	0.95	2.76	68.		38.0	118.0							
452	6.01	34.236	0.59	2.91	75.		40.0	109.5							
527	5.69	34.296	0.39	3.06	84.		41.1	101.2							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 73060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
35 16.7N	122 01.0W	07/10/78	0442 GMT	2595M	330	18KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	15.89	32.923	5.87	0.20	3.		0.0	373.0	0	15.89	32.923	5.87	24.199	373.0	0.000
11	15.88	32.923	5.89	0.19	3.		0.0	372.8	10	15.88	32.923	5.89	24.201	372.8	0.037
30	15.90	32.919	5.90	0.18	3.		0.0	373.5	20	15.89	32.921	5.89	24.197	373.1	0.075
53	14.66	32.911	6.18	0.20	3.		0.0	348.3	30	15.90	32.919	5.90	24.193	373.5	0.112
63	13.38	32.838	6.33	0.21	3.		0.0	328.4	50	14.94	32.913	6.13	24.400	353.8	0.185
72	13.05	32.847	6.33	0.23	3.		0.0	321.5	75	12.77	32.883	6.24	24.822	313.6	0.269
86	11.57	33.032B	5.83	0.39	6.		2.4	281.1	100	10.44	33.091	5.56	25.410	257.6	0.341
100	10.44	33.091	5.56	0.69	10.		7.9	257.6	125	9.22	33.267	5.05	25.750	225.3	0.402
123	9.28	33.238	5.08	1.01	16.		13.4	228.4	150	8.81	33.595	4.56	26.070	194.9	0.455
142	8.86	33.518	4.79	1.16	20.		15.9	201.3	200	8.34	33.852	3.96	26.344	168.9	0.547
165	8.76	33.698	4.16	1.41	24.		19.8	186.5	250	7.64	33.978	3.50	26.546	149.8	0.629
193	8.43	33.819	4.03	1.58	28.		22.0	172.7	300	7.04	33.991	2.96	26.642	140.7	0.704
221	8.05	33.937	3.73	1.67	33.		23.7	158.5	400	6.37	34.114	1.24	26.828	123.0	0.841
258	7.53	33.980	3.44	1.79	38.		25.8	148.1	500	5.59	34.158	0.70	26.961	110.4	0.963
314	6.90	33.995	2.76	2.08	48.		29.7	138.6							
384	6.52	34.106	1.40	2.64	55.		36.7	125.5							
454	5.86	34.129	0.90	2.90	73.		39.9	115.7							
528	5.48	34.180	0.62	2.95	82.		39.4	107.5							

A) AN ERROR OF -0.01 (0.392 PPT) IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.
B) AN ERROR OF +0.01 (-0.390 PPT) IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 73070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 58.0N	122 40.0W	07/10/78	1135 GMT	4111M	320	25KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	16.28	33.015	5.81	0.21	3.		0.0	374.7
10	16.28	33.019	5.78	0.22	3.		0.0	374.4
38	16.31	33.023	5.80	0.17	3.		0.0	374.7
62	16.28	33.020	5.81	0.26	3.		0.0	374.3
80	16.05	33.026	5.84	0.25	3.		0.0	368.9
94	13.47	33.061	6.08	0.26	4.		0.0	313.8
108	11.65	33.148	5.58	0.58	7.		4.9	273.9
126	10.42	33.259	4.89	1.00	12.		12.5	244.9
145	9.90	33.412	4.45	1.25	16.		17.0	225.2
168	9.34	33.572	4.12	1.46	20.		20.1	204.6
192	8.85	33.758	3.90	1.55	25.		22.1	183.4
214	8.59	33.893	3.39	1.79	29.		25.5	169.5
241	8.20	34.025	2.69	2.04	36.		29.0	154.1
274	7.75	34.058	2.33	2.23	42.		31.1	145.3
320	7.22	34.068	1.99	2.45	49.		34.3	137.4
379	6.59	34.095	1.42	2.70	58.		37.5	127.2
449	6.12	34.148	0.90	2.97	67.		40.5	117.4
525	5.64	34.196	0.58	3.08	78.		42.4	108.1

Z	T	S	O2	SIGT	DT	DD
0	16.28	33.015	5.81	24.181	374.7	0.000
10	16.28	33.019	5.78	24.184	374.4	0.037
20	16.29	33.021	5.79	24.183	374.5	0.075
30	16.30	33.022	5.79	24.182	374.6	0.112
50	16.30	33.021	5.80	24.181	374.7	0.188
75	16.11	33.025	5.83	24.227	370.3	0.281
100	12.60	33.096	5.91	25.019	294.8	0.365
125	10.46	33.254	4.93	25.532	246.0	0.433
150	9.77	33.448	4.36	25.800	220.5	0.492
200	8.75	33.811	3.73	26.249	178.0	0.593
250	8.07	34.042	2.56	26.533	151.0	0.678
300	7.44	34.066	2.13	26.643	140.5	0.753
400	6.43	34.110	1.24	26.816	124.1	0.890
500	5.79	34.181	0.66	26.954	111.0	1.014

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 73080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 38.0N	123 22.0W	07/10/78	1749 GMT	4117M	350	20KT	2	330 8 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	16.48	33.053	5.79	0.23	3.		0.0	376.2
10	16.47	33.050	5.76	0.23	3.		0.0	376.2
29	16.48	33.056	5.76	0.19	3.		0.0	376.0
57	15.86	33.024	5.89	0.20	3.		0.0	365.0
67	14.91	33.008	6.05	0.21	3.		0.0	346.3
81	13.39	33.054	6.08	0.25	4.		0.0	312.7
95	11.54	33.049	5.78	0.47	6.		3.3	279.3
109	10.82	33.087	5.57	0.66	8.		6.5	264.2
132	9.92	33.204	5.15	0.91	13.		11.1	240.9
151	9.38	33.365	4.79	1.15	17.		15.2	220.5
179	9.02	33.677	4.06	1.43	22.		20.3	191.9
207	8.60	33.866	3.64	1.65	28.		23.3	171.7
234	8.16	33.964	3.41	1.72	33.		25.0	158.0
282	7.53	34.028	2.76	2.07	43.		29.2	144.5
333	7.02	34.071	1.86	2.41	52.		33.9	134.5
412	6.29	34.098	1.27	2.62	64.		37.8	123.2
490	5.77	34.149	0.83	2.97	77.		40.6	113.2
568	5.44	34.224	0.51	3.04	86.		42.3	103.7

Z	T	S	O2	SIGT	DT	DD
0	16.48	33.053	5.79	24.165	376.2	0.000
10	16.47	33.050	5.76	24.165	376.2	0.038
20	16.48	33.054	5.76	24.166	376.1	0.075
30	16.46	33.055	5.76	24.170	375.7	0.113
50	16.02	33.032	5.86	24.254	367.8	0.188
75	14.08	33.034	6.07	24.675	327.6	0.275
100	11.21	33.060	5.70	25.251	272.8	0.350
125	10.16	33.161	5.28	25.512	248.0	0.416
150	9.40	33.356	4.81	25.789	221.6	0.476
200	8.71	33.829	3.72	26.269	176.1	0.577
250	7.93	33.995	3.22	26.516	152.5	0.661
300	7.34	34.046	2.43	26.642	140.6	0.736
400	6.39	34.095	1.32	26.809	124.8	0.874
500	5.72	34.158	0.78	26.945	111.9	0.998

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 73090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 18.5N	124 04.0W	07/10/78	2329 GMT	4309M	350	25KT	1	340 8 8

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	16.97	33.183U	5.71	0.17	3.		0.1	
11	16.98	33.167	5.71	0.16	3.		0.1	379.0
30	16.98	33.165	5.71	0.15	3.		0.1	379.2
53	16.96	33.177	5.73	0.15	3.		0.1	377.8
62	16.98	33.179	5.72	0.15	3.		0.1	378.1
71	15.72	33.186	5.98	0.12	3.		0.1	350.2
85	15.31	33.311	5.96	0.11	3.		0.1	332.4
99	14.21	33.260	5.95	0.14	3.		0.1	313.7
122	12.24	33.159	5.84	0.27	5.		1.6	283.6
140	10.56	33.173	5.54	0.56	9.		6.5	253.5
164	9.33	33.314	5.00	0.93	16.		13.8	223.5
191	8.98	33.633	4.13	1.32	22.		20.1	194.6
219	8.69	33.877	3.45	1.56	29.		23.9	172.2
255	8.19	33.982	2.98	1.84	36.		27.6	157.1
311	7.44	34.022	2.63	2.02	44.		30.4	143.7
380	6.60	34.054	1.82	2.37	57.		35.1	130.4
450	5.71	34.086	1.21	2.68	73.		39.7	117.2
524	5.44	34.158	0.74	2.91	82.		42.1	108.7

Z	T	S	O2	SIGT	DT	DD
0	16.97	33.167	5.71	24.138	378.8	0.000
10	16.97	33.167	5.71	24.138	378.8	0.038
20	16.98	33.166	5.71	24.135	379.1	0.076
30	16.98	33.165	5.71	24.134	379.2	0.114
50	16.96	33.176	5.73	24.147	377.9	0.190
75	15.54	33.226	5.97	24.508	343.5	0.280
100	14.13	33.255	5.95	24.834	312.5	0.363
125	11.94	33.155	5.80	25.190	278.6	0.438
150	9.92	33.216	5.34	25.595	240.1	0.503
200	8.89	33.725	3.88	26.159	186.4	0.611
250	8.26	33.977	3.03	26.453	158.6	0.700
300	7.58	34.021	2.69	26.588	145.8	0.778
400	6.32	34.061	1.63	26.793	126.3	0.919
500	5.53	34.143	0.87	26.956	110.8	1.044

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 77051

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
35 02.0N	120 56.5W	07/09/78	1331 GMT	301M	340	7KT	4	310 7 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	11.52	33.525	6.37	0.82	0.		9.0	243.9
11	11.39	33.509	6.30	0.78	0.		8.1	242.8
29	11.06	33.623	5.56	1.07	9.		12.5	228.7
44	10.87	33.680	5.42	1.18	11.		14.5	221.3
52	10.66	33.721	5.16	1.28	13.		15.9	214.7
66	10.54	33.718	5.04	1.32	13.		16.4	213.0
81	10.42	33.755	4.77	1.38	15.		17.5	208.2
98	10.44	33.785	4.68	1.47	17.		17.9	206.3
121	10.00	33.889	3.52	1.71	23.		21.9	191.5
139	9.67	33.987	2.58	1.95	29.		25.3	179.0
171	9.35	34.071	2.21	2.14	34.		27.6	167.8
200	9.25	34.114	1.95	2.14	35.		28.2	163.1
239	8.73	34.173	1.63	2.28	41.		29.9	150.8

Z	T	S	O2	SIGT	DT	DD
0	11.52	33.525	6.37	25.555	243.9	0.000
10	11.40	33.512	6.31	25.565	242.9	0.024
20	11.23	33.558	5.94	25.634	236.4	0.048
30	11.05	33.627	5.55	25.719	228.2	0.072
50	10.71	33.712	5.22	25.845	216.3	0.116
75	10.46	33.739	4.88	25.910	210.1	0.170
100	10.41	33.793	4.60	25.960	205.4	0.222
125	9.92	33.912	3.29	26.137	188.6	0.272
150	9.53	34.025	2.45	26.290	174.0	0.318
200	9.25	34.114	1.95	26.406	163.1	0.404

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 77055

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 54.5N	121 13.0W	07/09/78	1005 GMT	556M	320	13KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	12.25	33.744	7.26	0.45	2.		3.9	240.8	0	12.25	33.744	7.26	25.588	240.8	0.000
9	11.56	33.631	6.84	0.66	2.		7.6	236.7	10	11.47	33.625	6.75	25.642	235.6	0.024
28	10.15	33.525	5.19	1.29	14.		14.5	220.8	20	10.69	33.563	5.86	25.734	226.9	0.047
38	9.75	33.573	4.87	1.44	19.		16.8	210.9	30	10.03	33.527	5.12	25.818	218.9	0.069
47	9.92	33.706	4.14	1.58	22.		18.9	203.8	50	9.93	33.734	3.96	25.996	201.9	0.112
61	9.99	33.826	3.44	1.74	25.		21.2	196.0	75	9.62	33.858	3.00	26.145	187.8	0.161
75	9.62	33.858	3.00	1.84	28.		23.9	187.8	100	9.36	34.021	2.27	26.315	171.7	0.206
94	9.43	34.003	2.37	2.00	32.		25.8	174.1	125	9.17	34.056	2.08	26.373	166.2	0.249
117	9.20	34.043	2.12	2.11	36.		27.5	167.6	150	8.96	34.081	2.02	26.426	161.2	0.290
136	9.13	34.071	2.04	2.16	37.		28.1	164.4	200	7.98	34.053	2.32	26.555	148.9	0.369
164	8.72	34.081	2.01	2.16	40.		28.6	157.5	250	7.26	34.028	2.44	26.639	140.9	0.444
192	8.06	34.051	2.32	2.15	42.		29.3	150.2	300	7.12	34.104	1.84	26.717	133.5	0.514
220	7.82	34.058	2.27	2.18	45.		30.4	146.3	400	6.81	34.233	0.77	26.863	119.7	0.646
257	7.14	34.023	2.46	2.24	50.		31.4	139.7	500	6.16	34.259	0.54	26.968	109.7	0.767
313	7.12	34.126	1.58	2.53	57.		34.1	131.7							
383	6.92	34.226	0.85	2.77	66.		36.7	121.7							
453	6.42	34.241	0.63	2.89	74.		38.1	114.2							
527	6.04	34.271	0.50	2.94	81.		39.5	107.3							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 77060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 44.0N	121 34.0W	07/09/78	0424 GMT	916M	320	15KT	2	290 6 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
3	14.40	32.946	6.16	0.35	3.		0.7	340.5	0	14.40	32.946	6.16	24.540	340.5	0.000
12	13.92	33.048	6.24	0.42	3.		1.5	323.5	10	14.01	33.031	6.23	24.687	326.5	0.033
31	13.65	33.083	6.23	0.45	3.		1.7	315.6	20	13.80	33.064	6.24	24.755	320.0	0.066
40	13.50	33.138	6.16	0.48	3.		2.1	308.7	30	13.65	33.083	6.23	24.801	315.6	0.098
50	13.07	33.146	6.14	0.55	4.		3.2	299.9	50	13.07	33.146	6.14	24.966	299.9	0.159
63	11.07	33.048	5.69	0.72	8.		6.6	271.3	75	10.66	33.227	5.53	25.478	251.2	0.229
77	10.59	33.249	5.52	0.95	9.		10.4	248.4	100	10.71	33.589	5.45	25.751	225.3	0.289
95	10.80	33.556	5.56	1.13	7.		12.6	229.3	125	9.62	33.564	4.86	25.917	209.5	0.344
119	9.98	33.596	4.94	1.34	15.		15.7	212.8	150	9.10	33.687	3.97	26.097	192.4	0.394
136	9.03	33.528	4.67	1.31	20.		17.6	203.1	200	8.30	33.954	2.93	26.429	160.8	0.484
163	9.16	33.838	3.30	1.77	29.		24.3	182.1	250	7.68	34.053	2.33	26.599	144.7	0.563
191	8.50		2.88	1.93	34.		27.0		300	7.20	34.105	1.69	26.708	134.3	0.635
218	7.97	33.990	3.02	1.95	38.		27.5	153.4	400	6.35	34.177	0.86	26.879	118.1	0.766
253	7.66	34.058	2.25	2.20	45.		30.8	144.1	500	5.71	34.217	0.50	26.992	107.4	0.885
308	7.12	34.110	1.62	2.42	55.		34.0	132.9							
375	6.60	34.171	1.01	2.70	65.		36.9	121.7							
445	5.95		0.66	2.89	76.		39.9								
519	5.68	34.231	0.47	3.04	83.		41.0	106.0							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 77070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 24.2N	122 16.0W	07/08/78	2037 GMT	4015M	340	20KT	2	330 8 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.11	32.989	5.82	0.27	3.		0.0	372.9	0	16.11	32.989	5.82	24.200	372.9	0.000
10	16.11	32.984	5.81	0.26	3.		0.0	373.3	10	16.11	32.984	5.81	24.196	373.3	0.037
29	16.11	32.986	5.77	0.25	3.		0.0	373.1	20	16.11	32.985	5.79	24.197	373.2	0.075
38	16.09	32.982	5.85	0.26	3.		0.0	373.0	30	16.11	32.986	5.78	24.198	373.1	0.112
47	16.08	32.990	5.82	0.25	4.		0.0	372.2	50	15.83	32.992	5.87	24.265	366.7	0.186
61	14.63	33.002	6.09	0.24	3.		0.0	341.0	75	13.43	33.137	6.12	24.887	307.4	0.271
75	13.43	33.137	6.12	0.20	4.		0.0	307.4	100	10.71	33.283	5.55	25.512	247.9	0.341
93	10.73	33.094	5.76	0.71	9.		7.1	262.2	125	10.40	33.690	4.46	25.882	212.7	0.399
116	10.67	33.620	4.93	1.17	12.		13.5	222.3	150	9.87	33.863	3.02	26.108	191.3	0.450
134	10.11	33.731	3.95	1.50	20.		19.0	205.0	200	9.30	34.043	2.12	26.341	169.2	0.542
162	9.75	33.952	2.46	1.83	29.		24.8	182.9	250	8.86	34.119	1.77	26.472	156.8	0.626
190	9.38	34.028	2.18	2.01	33.		26.8	171.4	300	8.41	34.172	1.49	26.584	146.1	0.704
217	9.19	34.062	2.04	2.15	36.		27.5	166.0	400	7.50	34.219	1.11	26.755	129.9	0.848
254	8.82	34.126	1.74	2.21	41.		29.1	155.7	500	6.46	34.213	0.78	26.893	116.8	0.978
310	8.32	34.179	1.45	2.41	46.		31.2	144.4							
380	7.70	34.222	1.15	2.65	54.		34.1	132.4							
449	6.99	34.205	1.00	2.80	61.		36.6	124.1							
524	6.21	34.222	0.64	2.95	73.		38.9	113.0							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 77080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 04.0N	122 57.0W	07/08/78	1420 GMT	4213M	340	17KT	2	330 6 8

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	13.61	33.303	6.34	0.37	1.		1.7	298.7	0	13.61	33.303	6.34	24.978	298.7	0.000
11	13.60	33.299	6.35	0.34	1.		1.1	298.8	10	13.60	33.300	6.35	24.977	298.8	0.030
29	13.45	33.440	6.40	0.42	0.		1.9	285.6	20	13.52	33.370	6.37	25.047	292.2	0.059
39	11.93	33.412	5.82	0.82	4.		7.0	259.4	30	13.32	33.439	6.35	25.142	283.2	0.088
48	10.65	33.396	5.37	1.10	9.		11.5	238.5	50	10.44	33.396	5.28	25.648	235.1	0.140
63	9.58	33.396	4.78	1.26	16.		16.0	221.3	75	9.34	33.510	4.43	25.920	209.2	0.196
76	9.33	33.520	4.41	1.43	20.		19.2	208.3	100	9.17	33.652	3.92	26.058	196.1	0.247
95	9.20	33.611	4.11	1.55	22.		21.0	199.5	125	8.89	33.810	3.29	26.225	180.2	0.295
118	9.01	33.787	3.32	1.76	27.		24.4	183.6	150	8.65	33.924	2.98	26.352	168.2	0.339
137	8.70	33.843	3.27	1.85	29.		25.8	174.8	200	8.44	34.105	1.94	26.527	151.6	0.420
165	8.60	34.009	2.55	2.04	35.		28.5	161.1	250	8.03	34.113	1.88	26.594	145.1	0.497
193	8.48	34.097	1.96	2.26	40.		30.7	152.8	300	6.91	34.013	2.47	26.676	137.4	0.569
221	8.28	34.111	1.87	2.17	42.		30.1	148.8	400	6.52	34.141	1.04	26.829	122.9	0.705
258	7.93	34.108	1.88	2.30	44.		32.4	144.1	500	5.70	34.203	0.57	26.982	108.4	0.826
314	6.58	33.987	2.62	2.28	51.		33.6	135.1							
384	6.60	34.123	1.21	2.68	61.		38.6	125.2							
455	6.11	34.181	0.72	2.97	71.		41.5	114.8							
529	5.40	34.211	0.54	3.11	84.		44.4	104.2							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 77090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 43.0N	123 39.0W	07/08/78	0755 GMT	4117M	340	20KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.56	33.039	5.75	0.35	4.		0.5	379.0	0	16.56	33.039	5.75	24.135	379.0	0.000
10	16.55	33.037	5.75	0.34	4.		0.5	379.0	10	16.55	33.037	5.75	24.136	379.0	0.038
29	16.56	33.036	5.78	0.34	4.		0.5	379.3	20	16.56	33.036	5.76	24.133	379.3	0.076
57	16.32	33.021	5.82	0.33	4.		0.5	375.1	30	16.55	33.036	5.78	24.135	379.0	0.114
67	15.98	33.022	5.91	0.33	4.		0.5	367.7	50	16.38	33.025	5.81	24.166	376.1	0.190
81	15.08	32.990	6.05	0.30	4.		0.5	351.1	75	15.47	32.991	6.00	24.344	359.1	0.282
95	14.61	33.200	6.03	0.30	4.		0.5	326.1	100	13.89	33.193	5.99	24.836	312.2	0.366
109	12.44	33.179	5.86	0.39	5.		0.9	285.8	125	10.79	33.180	5.44	25.418	256.9	0.438
132	10.33	33.194	5.24	0.87	11.		9.6	248.2	150	9.46	33.328	4.90	25.758	224.6	0.499
151	9.43	33.337	4.88	1.13	16.		14.5	223.4	200	8.82	33.790	3.73	26.221	180.6	0.602
179	9.15	33.660	3.91	1.48	23.		20.4	195.2	250	8.15	33.989	3.14	26.479	156.1	0.688
207	8.71	33.822	3.70	1.59	27.		22.5	176.6	300	7.49	34.035	2.71	26.612	143.5	0.765
235	8.41	33.965	3.13	1.84	33.		25.9	161.6	400	6.86	34.158	1.07	26.797	125.9	0.906
281	7.64	34.004	3.17	1.91	39.		27.8	147.8	500	5.92	34.187	0.67	26.943	112.1	1.031
332	7.32	34.088	1.82	2.35	50.		33.0	137.2							
411	6.77	34.165	1.02	2.71	61.		37.2	124.3							
490	6.00	34.184	0.70	2.91	74.		40.0	113.3							
568	5.51	34.215	0.51	3.03	84.		41.6	105.2							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 80052

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 24.0N	120 36.7W	07/06/78	2152 GMT	297M	300	19KT	1	300 6 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	11.15	33.838	4.40	1.45	19.		17.2	214.4	0	11.15	33.838	4.40	25.865	214.4	0.000
10	11.11	33.820	4.37	1.43	19.		17.3	215.0	10	11.11	33.820	4.37	25.858	215.0	0.021
28	10.76	33.858	4.07	1.55	21.		18.5	206.3	20	10.92	33.836	4.21	25.905	210.6	0.043
41	10.71	33.876	3.99	1.64	21.		19.2	204.1	30	10.75	33.863	4.05	25.956	205.8	0.064
50	10.70	33.876	3.99	1.64	22.		19.5	203.9	50	10.70	33.876	3.99	25.975	203.9	0.105
63	10.26	33.878	3.37	1.71	24.		21.5	196.5	75	9.98	33.894	2.82	26.114	190.8	0.154
77	9.94	33.898	2.74	1.77	26.		23.6	189.9	100	9.72	33.969	2.58	26.216	181.1	0.201
95	9.75	33.958	2.59	1.86	28.		24.6	182.4	125	9.58	34.004	2.45	26.265	176.4	0.247
117	9.63	33.995	2.52	1.96	31.		25.3	177.8	150	9.42	34.049	2.20	26.327	170.5	0.291
135	9.52	34.015	2.34	2.03	33.		26.4	174.6	200	9.16	34.109	2.02	26.415	162.1	0.376
167	9.31	34.086	2.09	2.05	35.		27.6	166.1							
194	9.20	34.104	2.04	2.04	36.		28.1	163.0							
233	8.88	34.139	1.85	2.19	39.		29.3	155.6							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 80055

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 19.0N	120 48.0W	07/07/78	0122 GMT	824M	320	12KT	2	320 6 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	11.95	33.741	5.65	0.97	13.		12.1	235.6	0	11.95	33.741	5.65	25.642	235.6	0.000
11	11.78	33.816	5.59	1.02	13.		12.8	227.0	10	11.80	33.810	5.60	25.725	227.7	0.023
29	11.54	33.854	5.37	0.92	10.		12.8	220.0	20	11.64	33.846	5.49	25.781	222.4	0.046
39	11.50	33.853	5.27	0.97	11.		13.4	219.3	30	11.54	33.854	5.37	25.806	220.0	0.068
48	11.27	33.858	4.83	1.16	14.		15.2	215.0	50	11.09	33.866	4.56	25.897	211.3	0.111
62	9.95	33.940	2.87	1.75	27.		23.2	186.9	75	9.51	34.014	2.28	26.286	174.4	0.160
76	9.49	34.019	2.27	1.95	32.		26.6	173.8	100	9.16	34.122	1.93	26.427	161.1	0.202
95	9.20	34.107	1.98	2.14	36.		28.3	162.8	125	8.92	34.155	1.73	26.491	154.9	0.242
118	9.01	34.152	1.78	2.20	39.		29.2	156.6	150	8.60	34.160	1.59	26.544	149.9	0.281
137	8.75	34.156	1.66	2.22	42.		30.2	152.4	200	8.29	34.201	1.42	26.624	142.3	0.356
165	8.47	34.168	1.53	2.31	45.		31.1	147.4	250	8.12	34.215	1.29	26.660	138.9	0.428
193	8.31	34.197	1.43	2.40	47.		31.9	142.9	300	7.84	34.237	1.08	26.720	133.2	0.498
221	8.23	34.208	1.38	2.43	48.		32.2	140.9	400	7.01	34.238	0.79	26.838	122.0	0.632
258	8.09	34.217	1.26	2.46	51.		33.0	138.3	500	6.21	34.248	0.55	26.954	111.1	0.755
314	7.74	34.243	1.02	2.57	55.		34.3	131.4							
384	7.18	34.238	0.84	2.74	61.		36.5	124.2							
454	6.48	34.240	0.65	2.84	71.		38.6	115.0							
529	6.12	34.255	0.50	2.93	77.		40.5	109.4							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 80060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 09.0N	121 09.0W	07/07/78	0551 GMT	2130M	330	18KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	12.61	33.720	6.07	0.67	6.		7.2	249.1
10	12.56	33.716	6.01	0.77	6.		7.5	248.5
29	11.57	33.741	5.05	1.28	16.		13.2	228.8
38	11.22	33.753	4.94	1.36	18.		15.2	221.9
47	11.14	33.798	4.51	1.47	19.		16.0	217.2
61	10.33	33.819	3.73	1.68	24.		20.5	202.0
75	9.56	33.950	2.72	1.93	29.		24.8	180.0
93	9.25	34.002	2.50	1.98	32.		25.2	171.4
117	9.22	34.091	2.21	2.16	34.		27.3	164.3
136	9.11	34.137	1.99	2.18	36.		26.8	159.2
164	8.90	34.189	1.72	2.30	40.		28.6	152.2
192	8.63	34.222	1.53	2.42	43.		29.7	145.7
219	8.32	34.207	1.44	2.48	46.		30.9	142.3
256	8.09	34.243	1.21	2.64	50.		32.6	136.3
312	7.36	34.244	0.90	2.81	59.		35.2	126.1
382	6.83	34.246	0.76	2.95	66.		37.6	119.0
453	6.31	34.240	0.63	2.99	73.		38.6	112.9
528	6.04	34.274	0.49	3.17	78.		40.6	107.0

Z	T	S	O2	SIGT	DT	DD
0	12.61	33.720	6.07	25.499	249.1	0.000
10	12.56	33.716	6.01	25.506	248.5	0.025
20	12.09	33.726	5.51	25.603	239.3	0.049
30	11.52	33.742	5.04	25.722	228.0	0.073
50	11.00	33.800	4.36	25.863	214.6	0.117
75	9.56	33.950	2.72	26.227	180.0	0.167
100	9.24	34.032	2.41	26.343	169.0	0.211
125	9.18	34.113	2.12	26.416	162.1	0.253
150	9.01	34.166	1.85	26.484	155.6	0.293
200	8.53	34.218	1.50	26.600	144.6	0.370
250	8.13	34.236	1.25	26.676	137.4	0.442
300	7.52	34.246	0.96	26.773	128.2	0.511
400	6.69	34.243	0.73	26.887	117.4	0.639
500	6.11	34.257	0.54	26.974	109.1	0.759

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 80070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 48.5N	121 51.0W	07/07/78	1222 GMT	3738M	320	16KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	13.51	33.409	6.53	0.27	0.		1.1	289.0
11	13.48	33.443	6.59	0.20	0.		0.3	285.9
30	12.82	33.453	6.39	0.50	1.		3.2	272.7
39	10.58	33.280	5.32	1.07	9.		10.9	246.0
49	9.87	33.286	5.06	1.20	14.		13.6	234.0
63	10.57	33.678	4.41	1.54	18.		17.7	216.4
77	9.27	33.637	3.91	1.63	23.		20.7	198.7
95	9.25	33.808	3.22	1.88	27.		23.9	185.7
118	9.00	33.904	2.91	1.99	31.		26.2	174.8
137	8.36	33.954	2.97	2.11	35.		28.1	161.6
165	8.19	34.053	2.36	2.30	40.		30.5	151.8
194	7.95	34.075	2.14	2.40	43.		31.8	146.8
222	7.88	34.118	1.82	2.54	47.		33.3	142.6
259	7.59	34.158	1.47	2.54	52.		34.7	135.7
315	6.88	34.149	1.24	2.89	61.		38.3	126.9
384	6.30	34.172	0.87	3.00	70.		40.9	117.8
454	5.96	34.221	0.65	3.35	77.		42.5	110.0
528	5.69	34.299	0.38	3.35	86.		44.1	101.0

Z	T	S	O2	SIGT	DT	DD
0	13.51	33.409	6.53	25.081	289.0	0.000
10	13.48	33.438	6.59	25.108	286.4	0.029
20	13.17	33.448	6.50	25.179	279.7	0.057
30	12.82	33.453	6.39	25.252	272.7	0.085
50	9.92	33.315	5.02	25.672	232.8	0.136
75	9.48	33.644	3.98	26.002	201.4	0.190
100	9.23	33.837	3.11	26.192	183.3	0.239
125	8.76	33.923	2.94	26.334	169.9	0.283
150	8.28	34.014	2.71	26.479	156.1	0.325
200	7.93	34.084	2.07	26.586	145.9	0.402
250	7.68	34.151	1.54	26.676	137.4	0.474
300	7.08	34.154	1.29	26.764	129.1	0.543
400	6.21	34.181	0.81	26.901	116.0	0.671
500	5.78	34.266	0.49	27.023	104.5	0.787

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 80080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 28.7N	122 32.0W	07/07/78	1816 GMT	3926M	330	13KT	2	330 5 8

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	13.50	33.185	6.24	0.45	1.		2.0	305.2
11	13.43	33.174	6.24	0.47	1.		2.0	304.7
29	12.63	33.426	6.10	0.71	2.		4.2	271.1
39	11.68	33.385	5.60	0.99	3.		7.3	257.0
48	10.59	33.299	5.41	1.06	8.		10.5	244.7
62	9.97	33.322	5.11	1.11	12.		12.6	232.9
77	9.65	33.451	4.43	1.37	18.		17.1	218.4
95	9.21	33.631	3.99	1.55	22.		20.2	198.2
119	8.81	33.796	3.66	1.70	27.		23.0	180.0
137	8.74	33.881	3.20	1.88	30.		25.3	172.6
165	8.50	33.968	2.83	2.03	34.		27.3	162.6
193	8.16	34.025	2.55	2.16	39.		29.1	153.5
220	7.51	34.021	2.74	2.17	43.		29.7	144.7
258	6.79	33.972	3.05	2.17	47.		30.5	138.9
313	6.66	34.091	1.48	2.67	60.		36.5	128.4
384	5.99	34.103	1.09	2.94	70.		40.1	119.2
454	5.72	34.180	0.64	3.12	79.		41.7	110.3
530	5.30	34.250	0.42	3.29	91.		43.1	100.2

Z	T	S	O2	SIGT	DT	DD
0	13.50	33.185	6.24	24.910	305.2	0.000
10	13.44	33.176	6.24	24.915	304.8	0.031
20	13.16	33.313	6.17	25.076	289.4	0.060
30	12.55	33.424	6.05	25.282	269.8	0.088
50	10.45	33.304	5.38	25.574	242.1	0.140
75	9.68	33.430	4.52	25.801	220.5	0.198
100	9.10	33.672	3.92	26.084	193.6	0.250
125	8.78	33.828	3.51	26.257	177.2	0.297
150	8.64	33.927	3.00	26.355	167.8	0.341
200	8.00	34.024	2.58	26.529	151.3	0.422
250	6.91	33.980	3.03	26.650	139.8	0.496
300	6.69	34.063	1.91	26.745	130.8	0.566
400	5.92	34.119	0.98	26.889	117.2	0.695
500	5.48	34.224	0.47	27.026	104.2	0.811

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 80090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 09.0N	123 13.0W	07/08/78	0027 GMT	4117M	330	18KT	2	330 10 8

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	16.43	33.057	5.81	0.30	2.		0.1	374.9	0	16.43	33.057	5.81	24.179	374.9	0.000
10	16.43	33.054	5.76	0.31	2.		0.0	375.1	10	16.43	33.054	5.76	24.177	375.1	0.038
28	16.41	33.055	5.83	0.33	2.		0.0	374.6	20	16.42	33.055	5.79	24.180	374.8	0.075
37	16.25	33.050	5.86	0.30	2.		0.0	371.5	30	16.37	33.054	5.84	24.190	373.8	0.113
47	15.28	33.043	6.05	0.35	2.		0.0	351.3	50	14.90	33.054	6.12	24.516	342.7	0.184
61	13.53	33.104	6.26	0.41	1.		0.8	311.8	75	12.34	33.129	5.88	25.094	287.7	0.264
74	12.44	33.129	5.91	0.64	2.		3.5	289.5	100	10.33	33.184	5.30	25.501	249.0	0.331
93	10.73	33.147	5.41	0.83	9.		9.2	258.3	125	9.48	33.393	4.64	25.806	220.0	0.390
116	9.71	33.304	4.98	1.16	14.		14.5	230.2	150	9.16	33.622	3.83	26.036	198.1	0.443
135	9.30	33.493	4.25	1.34	20.		18.9	209.8	200	8.74	33.920	3.05	26.335	169.7	0.537
163	9.09	33.721	3.54	1.67	26.		22.9	189.7	250	8.07	34.018	2.79	26.514	152.8	0.619
189	8.91	33.891	3.04	1.84	30.		25.6	174.4	300	7.56	34.097	1.94	26.651	139.8	0.695
217	8.45	33.945	3.06	1.91	34.		26.8	163.6	400	6.42	34.151	1.02	26.850	120.9	0.831
254	8.03	34.026	2.74	2.04	38.		29.2	151.6	500	5.62	34.205	0.57	26.993	107.3	0.951
309	7.47	34.107	1.78	2.41	50.		33.6	137.8							
380	6.63	34.140	1.16	2.77	63.		38.5	124.3							
450	5.96	34.179	0.74	3.00	75.		41.3	113.2							
527	5.49	34.217	0.52	3.18	85.		43.7	104.8							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 82047

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 16.5N	119 59.0W	07/06/78	1602 GMT	552M	040	9KT	1	230 4 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	14.5	33.727	6.38	0.38	2.		1.2	285.3	0	14.50	33.727	6.38	25.119	285.3	0.000
11	11.88	33.730	4.99	0.98	10.		10.7	235.1	10	12.10	33.725	5.12	25.601	239.5	0.026
30	10.95	33.844	3.88	1.53	19.		17.1	210.5	20	11.44	33.783	4.35	25.769	223.5	0.049
39	10.29	33.826	3.12	1.66	22.		21.2	200.9	30	10.95	33.844	3.88	25.906	210.5	0.071
49	10.15	33.874	3.06	1.77	24.		22.0	195.0	50	10.12	33.880	3.03	26.078	194.1	0.112
64	9.67	33.985	2.50	1.93	29.		25.5	179.1	75	9.36	34.100	2.07	26.377	165.7	0.157
78	9.29	34.128	1.97	2.13	35.		28.4	162.6	100	9.24	34.169	1.82	26.449	159.0	0.198
96	9.25	34.169	1.82	2.15	36.		28.6	159.0	125	9.15	34.169	1.73	26.464	157.5	0.238
119	9.19	34.160	1.79	2.21	37.		29.2	158.7	150	8.89	34.196	1.53	26.528	151.5	0.278
138	9.04	34.189	1.60	2.25	39.		29.5	154.3	200	8.63	34.238	1.35	26.601	144.5	0.353
166	8.70	34.202	1.46	2.37	42.		31.2	148.2	250	8.15	34.207	1.19	26.651	139.8	0.426
194	8.64	34.229	1.37	2.46	43.		31.5	145.3	300	7.53	34.186	0.96	26.725	132.8	0.497
221	8.54	34.258A	1.27	2.53	45.		32.0	141.7	400	6.77	34.240	0.41	26.873	118.7	0.628
258	8.02	34.190	1.17	2.65	51.		33.9	139.3	500	6.48	34.281	0.17	26.944	112.0	0.750
314	7.39	34.194	0.88	2.77	52.		35.4	130.2							
384	6.87	34.235	0.48	2.98	73.		36.3	120.3							
453	6.54	34.254	0.25	3.19	88.		32.8	114.7							
527	6.45	34.291A	0.16	3.39	95.		30.1	110.8							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 83042

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
34 10.0N	119 29.5W	07/06/78	1122 GMT	236M	250	9KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	15.38	33.650	6.53	0.50	3.		0.8	309.1	0	15.38	33.650	6.53	24.869	309.1	0.000
11	15.02	33.682	6.67	0.49	3.		0.6	299.2	10	15.05	33.679	6.65	24.964	300.1	0.030
30	14.26	33.738	7.17	0.43	2.		0.3	279.7	20	14.76	33.706	6.91	25.048	292.1	0.060
44	12.77	33.627B	5.88	0.78	6.		5.2	259.0	30	14.26	33.738	7.17	25.179	279.7	0.089
53	10.94	33.573	4.34	1.35	14.		14.1	230.4	50	11.53	33.580	4.84	25.596	240.0	0.141
66	10.17	33.714	3.55	1.63	21.		18.1	207.2	75	10.05	33.744	3.49	25.984	203.1	0.197
78	10.04	33.750	3.47	1.76	22.		20.3	202.4	100	9.70	33.913	2.89	26.176	184.9	0.246
95	9.71	33.873	3.05	1.91	25.		22.6	188.1	125	9.45	34.038	2.49	26.314	171.8	0.291
116	9.64	34.017	2.50	2.08	30.		24.8	176.3	150	9.19	34.138	2.12	26.434	160.4	0.333
134	9.25	34.054	2.48	2.35	32.		26.3	167.5	200	9.13	34.190	1.72	26.484	155.6	0.414
162	9.15	34.180	1.84	2.40	38.		28.0	156.6							
185	9.14	34.185	1.76	2.43	38.		28.5	156.1							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 83051

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 52.0N	120 08.5W	07/05/78	1248 GMT	177M	330	30KT		320 10 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	11.94	33.780	4.91	0.93	12.		10.8	232.5	0	11.94	33.780	4.91	25.674	232.5	0.000
11	11.59	33.769	4.35	1.17	15.		15.2	227.1	10	11.65	33.775	4.42	25.725	227.7	0.023
29	9.81	33.949	2.69	1.76	28.		24.0	184.0	20	10.68	33.845	3.46	25.955	205.9	0.045
39	9.63	34.012	2.52	1.90	30.		25.4	176.5	30	9.78	33.957	2.66	26.196	183.0	0.064
53	9.51	34.069	2.29	1.96	33.		26.4	170.4	50	9.53	34.060	2.33	26.318	171.4	0.100
68	9.44	34.083C	2.22	2.00	33.		26.7	168.3	75	9.41	34.088	2.20	26.360	167.4	0.142
81	9.38	34.092C	2.19	2.00	34.		27.1	166.7	100	9.32	34.103	2.16	26.386	164.9	0.184
99	9.32	34.102	2.17	2.13	34.		27.1	165.0	125	9.23	34.126	2.02	26.418	161.9	0.226
122	9.23	34.125	2.03	2.08	36.		27.6	161.9	150	9.18	34.130	1.98	26.429	160.8	0.267
146	9.20	34.126	1.99	2.12	36.		27.8	161.4							

A) THE SALINITY SAMPLES AT 221 AND 527 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.
B) IT IS ASSUMED THAT TWO DIGITS WERE REVERSED IN RECORDING THE CONDUCTIVITY RATIO. THE LISTED OBSERVED AND INTERPOLATED VALUES INCORPORATE THE CORRECTION OF 0.352 PPT.
C) THE SALINITY SAMPLES AT 68 AND 81 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 83055

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 44.0N	120 24.5W	07/05/78	0933 GMT	925M	320	30KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	12.5	33.721	5.83	0.52	4.		6.7	247.0
11	12.41	33.718	5.81	0.63	4.		7.7	245.6
21	12.43	33.719	5.86	0.79	4.		6.4	245.9
40	12.23	33.723	5.56	0.83	7.		7.8	242.0
49	11.77	33.735	4.78	1.31	14.		14.0	232.8
58	10.02	33.848	3.14	1.70	25.		22.6	194.9
72	9.40	33.955	2.60	1.94	30.		25.8	177.2
87	9.21	34.006	2.36	1.99	32.		25.8	170.5
129	8.68	34.069	2.16	2.16	38.		28.7	157.8
147	8.47	34.101	2.02	2.13	41.		28.4	152.3
175	8.17	34.122	1.88	2.16	44.		30.2	146.4
203	7.82	34.126	1.75	2.21	48.		31.7	141.2
231	7.62	34.164	1.44	2.32	52.		33.0	135.6
268	7.28	34.187	1.18	2.45	57.		35.4	129.3
324	6.96	34.211	0.97	2.56	62.		36.4	123.3
394	6.59	34.268	0.62	2.76	70.		38.5	114.3
463	6.13	34.298	0.42	2.76	78.		38.9	106.3
537	5.79	34.332	0.31	2.92	85.		41.4	99.7

Z	T	S	O2	SIGT	DT	DD
0	12.50	33.721	5.83	25.522	247.0	0.000
10	12.41	33.718	5.81	25.536	245.7	0.025
20	12.43	33.719	5.86	25.534	245.9	0.049
30	12.34	33.721	5.72	25.553	244.0	0.074
50	11.58	33.745	4.59	25.714	228.8	0.121
75	9.34	33.969	2.53	26.277	175.3	0.172
100	9.04	34.031	2.27	26.374	166.1	0.215
125	8.73	34.065	2.17	26.450	158.8	0.256
150	8.44	34.105	2.00	26.526	151.6	0.296
200	7.86	34.125	1.77	26.630	141.8	0.371
250	7.44	34.178	1.29	26.731	132.2	0.441
300	7.08	34.201	1.05	26.800	125.7	0.508
400	6.55	34.271	0.60	26.928	113.5	0.633
500	5.94	34.315	0.35	27.041	102.8	0.747

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 83060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 33.7N	120 44.8W	07/05/78	0456 GMT	2037M	320	27KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	13.88	33.596	6.59	0.38	1.		0.4	282.5
11	13.87	33.595	6.60	0.37	1.		0.6	282.4
30	13.84	33.585	6.61	0.35	1.		0.1	282.5
39	13.07	33.504	6.28	0.59	2.		2.2	273.6
49	11.55	33.415	5.43	1.08	6.		7.8	252.5
63	10.14	33.382	4.52	1.34	16.		14.3	231.2
77	9.87	33.505	4.13	1.47	19.		16.7	217.8
95	9.47	33.681	3.58	1.72	24.		21.5	198.5
119	9.09	33.833A	3.04	1.86	29.		24.0	181.4
137	8.72	33.940A	2.79	1.97	33.		25.8	168.0
165	8.26	33.963	2.70	2.07	36.		27.5	159.5
193	7.88	34.012	2.48	2.22	41.		28.9	150.5
222	7.66	34.048	2.19	2.26	45.		29.9	144.8
258	7.41	34.056	1.85	2.41	49.		31.8	140.8
315	6.97	34.123	1.15	2.66	59.		34.7	130.0
384	6.65	34.184	0.82	2.82	65.		37.2	121.3
455	6.26	34.237	0.50	3.00	74.		39.3	112.5
529	5.85	34.267	0.36	3.03	83.		39.1	105.3

Z	T	S	O2	SIGT	DT	DD
0	13.88	33.596	6.59	25.149	282.5	0.000
10	13.87	33.595	6.60	25.150	282.4	0.028
20	13.86	33.591	6.60	25.149	282.5	0.057
30	13.84	33.585	6.61	25.148	282.5	0.085
50	11.42	33.408	5.35	25.483	250.7	0.138
75	9.91	33.490	4.17	25.811	219.5	0.197
100	9.39	33.717	3.45	26.073	194.6	0.250
125	8.97	33.873	2.94	26.263	176.6	0.297
150	8.49	33.960	2.73	26.405	163.1	0.340
200	7.82	34.023	2.41	26.555	148.9	0.419
250	7.47	34.055	1.93	26.631	141.6	0.494
300	7.08	34.103	1.33	26.723	132.9	0.565
400	6.56	34.198	0.74	26.867	119.2	0.696
500	6.01	34.259	0.39	26.987	107.9	0.816

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 83070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 14.5N	121 26.0W	07/04/78	2315 GMT	3642M	330	29KT	2	340 12 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	16.16	32.990	5.86	0.28	3.	0.02	0.0	373.9
10	16.14	32.987	5.83	0.28	3.	0.00	0.1	373.7
28	16.13	32.988	5.86	0.28	3.	0.00	0.1	373.4
38	15.10	33.029	6.07	0.29	1.	0.00	0.0	348.6
51	13.84	33.040	6.20	0.38	2.	0.07	0.6	322.5
65	12.20	33.139	5.87	0.63	4.	0.18	4.2	284.4
88	10.24	33.252	5.02	1.04	13.	0.26	12.0	242.5
107	9.68	33.524	4.17	1.40	19.	0.04	18.3	213.4
126	9.27	33.679	3.71	1.56	24.	0.03	21.4	195.6
144	9.25	33.862	2.98	1.75	29.	0.02	24.5	181.7
173	8.87	33.972	2.58	1.94	34.	0.02	26.9	167.8
205	8.29	34.030	2.49	2.05	38.	0.00	28.8	155.0
234	8.07	34.049	2.33	2.15	42.	0.01	29.9	150.5
281	7.51	34.088	1.82	2.34	50.	0.00	32.9	139.8
332	7.01	34.126	1.34	2.52	58.	0.04	35.7	130.3
412	6.27	34.175	0.80	2.77	71.	0.00	39.6	117.2
490	5.75	34.233	0.47	2.96	83.	0.02	41.7	106.6
569	5.35	34.284	0.33	3.03	92.	0.00	43.0	98.2

Z	T	S	O2	SIGT	DT	DD
0	16.16	32.990	5.86	24.189	373.9	0.000
10	16.14	32.987	5.83	24.191	373.7	0.037
20	16.13	32.988	5.85	24.193	373.5	0.075
30	15.95	32.996	5.90	24.241	369.0	0.112
50	13.94	33.039	6.19	24.707	324.5	0.182
75	11.21	33.177	5.54	25.342	264.1	0.256
100	9.82	33.423	4.47	25.773	223.2	0.317
125	9.28	33.672	3.73	26.055	196.3	0.370
150	9.19	33.897	2.85	26.245	178.3	0.417
200	8.37	34.025	2.49	26.473	156.6	0.503
250	7.89	34.062	2.17	26.575	146.9	0.581
300	7.32	34.103	1.63	26.690	136.1	0.654
400	6.37	34.168	0.87	26.869	119.0	0.786
500	5.69	34.240	0.44	27.013	105.5	0.904

A) THE SALINITY SAMPLES AT 119 AND 137 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 83080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 54.0N	122 08.0W	07/04/78	1703 GMT	4117M	330	25KT	2	330 12 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
3	16.25	32.981	5.85	0.20	3.		0.0	376.5	0	16.25	32.981	5.85	24.162	376.5	0.000
12	16.24	32.973	5.84	0.18	3.		0.0	376.9	10	16.24	32.975	5.84	24.159	376.8	0.038
30	16.26	32.975	5.85	0.19	3.		0.0	377.2	20	16.25	32.974	5.84	24.156	377.0	0.075
54	16.19	32.993	5.87	0.19	2.		0.0	374.3	30	16.26	32.975	5.85	24.155	377.2	0.113
63	15.44	32.993	6.02	0.19	2.		0.0	358.3	50	16.20	32.991	5.87	24.180	374.8	0.189
72	14.47	32.972	6.07	0.19	2.		0.0	340.0	75	14.06	32.979	6.05	24.636	331.4	0.277
86	12.71	33.027	5.95	0.34	4.		2.1	301.9	100	11.99	33.064	5.85	25.111	286.1	0.355
100	11.99	33.064	5.85	0.39	5.		2.8	286.1	125	10.69	33.207	5.41	25.456	253.3	0.423
124	10.73	33.197	5.43	0.80	9.		10.1	254.6	150	9.84	33.470	4.57	25.807	219.9	0.483
163	10.10	33.391	4.87	1.07	14.		14.7	229.9	200	8.76	33.950	2.90	26.356	167.8	0.582
166	9.30	33.650	3.87	1.43	22.		21.6	198.2	250	7.84	34.032	2.62	26.559	148.5	0.663
194	8.87	33.920	2.99	1.70	30.		26.7	171.7	300	7.04	34.027	2.38	26.669	138.1	0.736
223	8.31	34.011	2.70	1.89	36.		29.5	156.7	400	6.14	34.110	1.13	26.854	120.5	0.871
260	7.68	34.031	2.61	2.02	41.		31.6	146.3	500	5.57	34.204	0.54	26.999	106.7	0.990
316	6.82	34.026	2.24	2.21	52.		35.0	135.3							
387	6.22	34.097	1.25	2.56	64.		40.9	122.5							
458	5.82	34.166	0.73	2.73	76.		43.2	112.5							
533	5.36	34.231	0.45	2.95	86.		45.8	102.3							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 83090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 34.5N	122 50.0W	07/04/78	1110 GMT	3738M	330	30KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	16.62	33.061	5.74	0.34	3.		0.1	378.8	0	16.62	33.061	5.74	24.138	378.8	0.000
11	16.63	33.066	5.75	0.36	3.		0.1	378.6	10	16.63	33.066	5.75	24.140	378.6	0.038
30	15.77	33.018	5.91	0.35	3.		0.1	363.5	20	16.41	33.049	5.83	24.177	375.0	0.076
40	14.77	32.999	6.17	0.35	2.		0.1	344.0	30	15.77	33.018	5.91	24.298	363.5	0.113
54	14.04	33.036	6.07	0.41	3.		0.2	326.7	50	14.20	33.023	6.10	24.641	330.8	0.182
68	13.54	33.066	6.10	0.47	2.		0.8	314.8	75	13.09	33.080	6.02	24.911	305.1	0.262
91	11.91	33.116	5.74	0.74	6.		4.5	280.9	100	11.32	33.131	5.61	25.286	269.4	0.334
110	10.72	33.170	5.40	1.00	10.		9.3	256.4	125	9.98	33.333	4.83	25.675	232.4	0.398
128	9.87	33.370	4.70	1.31	16.		15.0	227.8	150	9.47	33.605	3.83	25.973	204.1	0.453
147	9.54	33.571	3.92	1.56	21.		19.0	207.7	200	8.45	33.943	3.19	26.398	163.7	0.547
175	8.84	33.839	3.30	1.82	29.		24.2	177.2	250	7.54	33.977	3.28	26.560	148.4	0.627
208	8.33	33.956	3.15	1.94	33.		26.0	161.1	300	6.94	34.003	2.59	26.664	138.5	0.700
236	7.75	33.971	3.35	1.96	37.		26.5	151.8	400	6.26	34.133	1.03	26.857	120.3	0.835
282	7.15	33.991	2.88	2.13	45.		30.2	142.2	500	5.75	34.221	0.53	26.990	107.6	0.955
333	6.60	34.032	2.01	2.44	55.		33.9	132.0							
412	6.22	34.151	0.90	2.83	69.		39.0	118.4							
491	5.81	34.214	0.56	3.00	79.		41.1	108.8							
569	5.26	34.262	0.38	3.06	91.		42.2	98.8							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 87036

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 49.0N	118 40.0W	07/02/78	1323 GMT	851M	310	9KT	0	250 4 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	15.85	33.557	6.64	0.24	4.		0.4	325.8	0	15.85	33.557	6.64	24.694	325.8	0.000
10	15.85	33.557	6.40	0.23	4.		0.4	325.8	10	15.85	33.557	6.40	24.694	325.8	0.033
29	11.37	33.521	4.66	0.97	13.		10.9	241.6	20	12.18	33.524	5.08	25.431	255.7	0.062
39	10.92	33.565	3.96	1.44	16.		15.5	230.6	30	11.31	33.524	4.59	25.591	240.4	0.087
48	10.57	33.644	3.52	1.56	19.		18.6	218.9	50	10.45	33.651	3.53	25.843	216.5	0.132
62	9.82	33.680	3.69	1.40	21.		17.9	204.1	75	9.64	33.754	3.45	26.060	195.8	0.184
76	9.64	33.760	3.43	1.60	23.		21.3	195.3	100	9.51	33.883	3.11	26.182	184.3	0.232
95	9.51	33.861	3.17	1.66	26.		22.6	185.8	125	9.42	33.965	2.84	26.262	176.7	0.278
118	9.52	33.951	2.90	1.73	27.		23.3	179.3	150	9.16	34.019	2.63	26.346	168.7	0.322
136	9.24	33.982	2.75	1.87	30.		24.8	172.7	200	8.82	34.148	2.08	26.500	154.1	0.404
164	9.10	34.057	2.51	1.96	34.		26.0	165.0	250	8.74	34.258	1.62	26.599	144.7	0.481
192	8.80	34.120	2.26	2.04	37.		27.1	155.8	300	8.43	34.262	1.29	26.651	139.8	0.555
220	8.91	34.214	1.67	2.28	40.		28.7	150.5	400	7.21	34.278	0.73	26.843	121.6	0.691
257	8.68	34.262	1.61	2.40	44.		30.3	143.5	500	6.54	34.300	0.49	26.952	111.2	0.814
312	8.34	34.258	1.19	2.46	48.		31.4	138.8							
381	7.37	34.275	0.78	2.71	59.		34.8	124.0							
451	6.86	34.285	0.63	2.80	66.		36.1	116.5							
524	6.39	34.310	0.41	2.90	75.		37.3	108.6							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 87040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 40.0N	118 58.0W	07/02/78	1740 GMT	888M	320	7KT	0	280 3 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	18.73	33.551	5.84	0.27	3.		0.0	391.5	0	18.73	33.551	5.84	24.004	391.5	0.000
12	13.13	33.449	6.12	0.56	4.		2.5	278.8	10	14.00	33.450	6.06	25.011	295.6	0.034
31	11.00	33.476	4.66	1.09	12.		12.7	238.5	20	12.23	33.454	5.71	25.366	261.8	0.062
40	10.47	33.567	4.08	1.35	17.		16.4	222.9	30	11.11	33.474	4.78	25.589	240.6	0.087
50	10.04	33.635	3.77	1.50	20.		19.2	210.9	50	10.04	33.635	3.77	25.902	210.9	0.133
64	9.74	33.742	3.50	1.57	23.		20.9	198.2	75	9.76	33.833	3.18	26.103	191.8	0.183
78	9.76	33.853	3.09	1.74	25.		22.6	190.3	100	9.47	33.951	2.82	26.242	178.6	0.230
97	9.53	33.941	2.84	1.80	28.		23.2	180.2	125	9.11	34.038	2.58	26.369	166.5	0.274
120	9.12	34.013	2.67	1.94	32.		25.6	168.5	150	9.05	34.142	2.08	26.460	157.9	0.315
139	9.08	34.099	2.31	1.99	35.		26.0	161.6	200	8.73	34.220	1.54	26.571	147.3	0.393
167	8.97	34.190	1.79	2.19	39.		28.4	153.2	250	8.50	34.277	1.16	26.651	139.7	0.467
195	8.70	34.202	1.64	2.27	42.		29.3	148.2	300	7.71	34.248	1.00	26.747	130.7	0.537
223	8.86	34.299	1.12	2.43	46.		30.2	143.4	400	6.82	34.287	0.57	26.904	115.8	0.666
259	8.33	34.260	1.18	2.51	49.		31.5	138.5	500	6.28	34.314	0.38	26.997	107.0	0.784
315	7.51	34.250	0.90	2.63	59.		34.0	127.7							
385	6.91	34.282	0.60	2.80	68.		36.4	117.3							
455	6.52	34.300	0.47	2.48U	74.		35.8U	111.0							
530	6.12	34.323	0.32	2.91	82.		38.6	104.3							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 87045

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 30.0N	119 19.0W	07/02/78	2211 GMT	1664M	290	19KT	0	280 5 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	15.91	33.568	6.21	0.32	1.		0.4	326.3	0	15.91	33.568	6.21	24.688	326.3	0.000
11	15.87	33.941	6.23	0.31	1.		0.4	298.3	10	15.87	33.887	6.23	24.941	302.3	0.031
29	9.66	33.979	2.78	1.54	28.		22.5	179.4	20	12.81	33.951	4.54	25.639	235.9	0.058
39	9.34	34.014	2.56	1.81	31.		25.2	171.9	30	9.63	33.983	2.76	26.241	178.7	0.079
48	9.16	34.040	2.39	1.94	33.		27.0	167.2	50	9.14	34.044	2.36	26.368	166.6	0.114
62	9.07	34.062	2.25	1.95	35.		27.2	164.2	75	8.97	34.083	2.17	26.426	161.1	0.155
76	8.96	34.084	2.16	1.93	35.		26.7	160.9	100	8.81	34.136	2.00	26.493	154.8	0.195
94	8.87	34.129	2.06	2.05	36.		28.5	156.2	125	8.57	34.160	1.76	26.549	149.4	0.234
118	8.62	34.151	1.82	2.14	40.		29.3	150.8	150	8.34	34.180	1.56	26.601	144.5	0.271
136	8.49	34.172	1.67	2.22	43.		29.8	147.4	200	8.03	34.195	1.31	26.659	139.0	0.343
164	8.19	34.184	1.46	2.29	46.		30.9	142.1	250	7.76	34.228	1.10	26.724	132.9	0.413
192	8.06	34.192	1.35	2.35	49.		31.6	139.7	300	7.40	34.249	0.90	26.793	126.3	0.480
219	7.95	34.205	1.23	2.39	50.		32.1	137.2	400	6.66	34.287	0.50	26.925	113.8	0.606
256	7.72	34.232	1.08	2.47	54.		33.2	132.0	500	5.99	34.333	0.32	27.049	102.1	0.720
311	7.32	34.252	0.85	2.56	59.		34.6	125.0							
380	6.82	34.277	0.57	2.72	68.		36.7	116.6							
448	6.30	34.311	0.37	2.88	78.		38.4	107.5							
523	5.88	34.341	0.30	2.93	87.		38.0	100.1							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 87050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 20.0N	119 39.5W	07/03/78	0142 GMT	73M	300	32KT	0	290 12 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	14.93	33.582	6.23	0.58	1.		1.0	304.7	0	14.93	33.582	6.23	24.916	304.7	0.000
12	14.93	33.582	6.29	0.59	0.		1.0	304.7	10	14.93	33.582	6.28	24.916	304.7	0.030
20	14.91	33.580	6.24	0.58	0.		1.1	304.4	20	14.91	33.580	6.24	24.918	304.4	0.061
30	14.64	33.593	6.14	0.70	1.		2.4	297.9	30	14.64	33.593	6.14	24.987	297.9	0.091
49	10.96	33.813	3.93	1.56	19.		17.7	213.0	50	10.90	33.820	3.90	25.896	211.5	0.142

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 87060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 00.0N	120 21.5W	07/03/78	0950 GMT	836M	310	33KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	12.96	33.281	6.08	0.67	1.		3.1	287.9	0	12.96	33.281	6.08	25.092	287.9	0.000
10	12.96	33.278	6.10	0.68	1.		3.1	288.1	10	12.96	33.278	6.10	25.090	288.1	0.029
33	12.58	33.233	6.00	0.73	4.		3.9	284.4	20	12.79	33.259	6.06	25.107	286.5	0.058
42	11.39	33.142	5.56	0.92	8.		7.5	269.8	30	12.63	33.239	6.01	25.124	284.9	0.086
56	10.38	33.191	5.12	1.14	12.		11.2	249.2	50	10.70	33.154	5.28	25.415	257.2	0.141
69	10.22	33.278	4.83	1.22	14.		12.8	240.2	75	10.15	33.355	4.60	25.665	233.4	0.202
92	9.93	33.587	3.90	1.55	20.		19.0	212.7	100	9.81	33.671	3.62	25.967	204.7	0.257
111	9.64	33.762	3.31	1.79	25.		22.4	195.2	125	9.41	33.834	3.12	26.161	186.2	0.307
129	9.34	33.849	3.09	1.84	28.		24.1	184.1	150	8.96	33.920	2.97	26.300	173.0	0.352
157	8.82	33.938	2.94	1.97	31.		25.8	169.6	200	8.00	34.022	2.68	26.527	151.5	0.435
184	8.20	34.002	2.80	2.05	36.		27.7	155.8	250	7.52	34.088	1.97	26.650	139.9	0.510
221	7.82	34.042	2.45	2.17	41.		29.5	147.5	300	7.36	34.201	1.15	26.761	129.3	0.579
269	7.52	34.085	1.99	2.36	47.		31.9	140.1	400	6.60	34.258	0.66	26.911	115.1	0.707
296	7.38	34.196	1.19	2.62	55.		34.6	130.0	500	5.83	34.312	0.40	27.052	101.7	0.822
357	6.96	34.234	0.85	2.77	62.		36.5	121.6	600	5.41	34.354	0.30	27.137	93.7	0.926
451	6.17	34.286	0.50	2.98	75.		40.0	107.7							
536	5.63	34.329	0.36	3.06	85.		41.2	98.1							
687	5.40	34.356	0.30	3.11	90.		41.8	93.4							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 87070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 39.5N	121 02.0W	07/03/78	1638 GMT	3926M	330	25KT	2	330 10 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	16.33	33.055	5.82	0.13	3.		0.1	372.8	0	16.33	33.055	5.82	24.200	372.8	0.000
11	16.33	33.060	5.80	0.16	3.		0.1	372.5	10	16.33	33.060	5.80	24.204	372.5	0.037
30	16.34	33.058	5.80	0.12	3.		0.1	372.8	20	16.33	33.059	5.80	24.203	372.5	0.075
58	15.38	33.034	5.94	0.17	1.		0.1	354.1	30	16.34	33.058	5.80	24.200	372.8	0.112
67	15.18	33.029	5.95	0.22	1.		0.1	350.3	50	15.70	33.041	5.90	24.331	360.4	0.185
81	13.60	32.992	6.11	0.23	3.		0.2	321.3	75	14.36	33.001	6.06	24.591	335.6	0.273
95	12.26	33.074	5.82	0.42	5.		2.9	290.2	100	11.75	33.088	5.67	25.174	280.1	0.350
109	10.92	33.115	5.38	0.74	9.		8.1	263.8	125	10.20	33.209	5.05	25.544	244.9	0.417
132	10.01	33.278	4.88	1.04	14.		13.0	236.8	150	9.38	33.605	4.06	25.988	202.8	0.473
151	9.35	33.623	4.02	1.41	21.		19.3	201.0	200	8.58	33.933	3.07	26.370	166.4	0.567
179	9.02	33.793	3.55	1.66	26.		22.5	183.3	250	7.71	34.023	2.57	26.571	147.4	0.648
207	8.42	33.971	2.93	1.90	33.		26.5	161.3	300	7.12	34.061	1.86	26.685	136.5	0.721
235	7.91	34.008	2.75	2.01	38.		28.3	151.2	400	6.32	34.132	1.00	26.848	121.1	0.855
281	7.36	34.047	2.12	2.27	47.		31.9	140.8	500	5.98	34.245	0.47	26.981	108.4	0.975
333	6.74	34.085	1.46	2.55	57.		35.7	129.8							
413	6.27	34.142	0.94	2.74	68.		38.8	119.7							
492	6.01	34.237	0.50	2.93	76.		40.6	109.4							
572	5.59	34.301	0.34	2.99	86.		41.8	99.7							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 87080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 19.5N	121 43.0W	07/03/78	2221 GMT	4117M	340	22KT	1	330 14 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.49	33.080	5.80	0.24	3.		0.0	374.5	0	16.49	33.080	5.80	24.183	374.5	0.000
10	16.50	33.079	5.82	0.24	3.		0.0	374.8	10	16.50	33.079	5.82	24.180	374.8	0.037
28	16.49	33.078	5.83	0.24	3.		0.0	374.7	20	16.49	33.078	5.83	24.181	374.7	0.075
51	16.17	33.070	5.86	0.22	2.		0.0	368.3	30	16.46	33.077	5.83	24.187	374.1	0.113
60	15.61	33.077	5.96	0.20	1.		0.0	355.8	50	16.18	33.071	5.86	24.245	368.5	0.187
69	14.77	33.015	6.06	0.19	3.		0.0	342.9	75	14.30	33.027	6.06	24.623	332.6	0.275
82	13.72	33.062	6.07	0.26	3.		0.1	318.5	100	11.87	33.164	5.56	25.210	276.7	0.352
96	12.12	33.144A	5.66	0.51	6.		4.1	282.6	125	10.67	33.267	4.98	25.506	248.5	0.418
118	11.08	33.238A	5.15	0.91	10.		4.9	257.4	150	9.73	33.473	4.28	25.827	218.0	0.477
137	10.05	33.336	4.68	1.13	15.		8.6	233.2	200	8.77	33.880	3.32	26.299	173.2	0.576
159	9.58	33.574	4.01	1.49	21.		19.4	208.2	250	7.92	34.008	2.74	26.529	151.4	0.660
187	8.98	33.807	3.54	1.67	27.		23.2	181.7	300	7.29	34.045	2.16	26.648	140.1	0.735
214	8.56	33.938	3.10	1.79	32.		26.0	165.7	400	6.43	34.144	1.00	26.843	121.6	0.871
250	7.92	34.008	2.74	2.04	39.		28.9	151.4	500	5.75	34.221	0.50	26.990	107.6	0.991
306	7.23	34.047	2.09	2.30	49.		32.8	139.1							
375	6.61	34.119	1.20	2.67	63.		37.5	125.7							
444	6.14	34.182	0.74	2.83	72.		39.8	115.1							
519	5.62	34.231	0.44	3.04	83.		42.3	105.3							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 87090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 59.0N	122 24.0W	07/04/78	0417 GMT	4213M	340	27KT	1	330 12

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	17.02	33.097	5.76	0.21	4.	0.02	0.0	385.0	0	17.02	33.097	5.76	24.073	385.0	0.000
11	17.02	33.095	5.72	0.23	4.	0.02	0.0	385.1	10	17.02	33.095	5.72	24.071	385.1	0.039
29	17.03	33.097	5.72	0.24	4.	0.01	0.0	385.2	20	17.02	33.096	5.72	24.072	385.1	0.077
38	17.04	33.097	5.73	0.24	4.	0.01	0.0	385.5	30	17.03	33.097	5.72	24.070	385.2	0.116
52	16.66	33.078	5.83	0.24	4.	0.03	0.0	378.4	50	16.71	33.081	5.81	24.132	379.4	0.192
66	14.73	33.008	6.05	0.23	4.	0.00	0.0	342.6	75	13.93	33.017	6.00	24.692	326.0	0.281
89	12.88	33.072	5.93	0.38	5.	0.20	1.0	301.8	100	11.77	33.143	5.45	25.212	276.5	0.357
108	11.04	33.209	5.06	0.88	12.	0.04	10.8	258.9	125	10.24	33.359	4.50	25.652	234.6	0.421
126	10.21	33.368	4.47	1.18	17.	0.03	15.8	233.4	150	9.32	33.598	3.91	25.992	202.3	0.477
145	9.39	33.555	4.06	1.38	22.	0.03	19.7	206.6	200	8.56	33.892	3.56	26.341	169.2	0.571
173	9.16	33.762	3.36	1.57	27.	0.02	23.7	187.8	250	7.89	33.980	3.34	26.512	153.0	0.654
206	8.42	33.912	3.64	1.60	31.	0.02	24.7	165.6	300	7.29	34.014	2.44	26.625	142.3	0.730
234	8.10	33.962	3.56	1.52	34.	0.02	25.6	157.3	400	6.54	34.122	1.05	26.812	124.5	0.868
282	7.47	34.005	2.75	1.99	43.	0.01	30.4	145.4	500	5.66	34.185	0.53	26.974	109.2	0.991
334	6.99	34.033	1.90	2.27	53.	0.01	34.6	136.9							
414	6.44	34.141	0.92	2.55	67.	0.06	39.3	121.9							
492	5.71	34.178	0.56	2.80	80.	0.02	42.4	110.3							
571	5.39	34.268	0.34	2.96	89.	0.00	44.0	99.9							

A) THE SALINITY SAMPLES AT 96 AND 118 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90033

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 18.5N	118 07.0W	07/01/78	1220 GMT	759M	310	4KT	0	49

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	18.54	33.420	5.72	0.36	3.		0.1	396.5	0	18.54	33.420	5.72	23.952	396.5	0.000
10	18.44	33.417	5.75	0.37	3.		0.1	394.4	10	18.44	33.417	5.75	23.974	394.4	0.040
29	13.60	33.305	6.44	0.50	2.		0.8	298.4	20	16.17	33.335	6.11	24.450	349.0	0.077
38	11.87	33.308	5.46	0.95	8.		7.5	266.0	30	13.39	33.304	6.34	25.024	294.4	0.109
47	10.63	33.347	4.77	1.28	13.		13.4	241.8	50	10.59	33.397	4.62	25.622	237.5	0.162
61	10.44	33.501	4.23	1.51	16.		16.9	227.3	75	10.09	33.621	3.83	25.882	212.7	0.219
76	10.06	33.628	3.81	1.70	19.		19.9	211.8	100	9.59	33.762	3.45	26.075	194.5	0.270
94	9.64	33.717	3.54	1.85	23.		21.7	198.5	125	9.35	33.942	2.94	26.255	177.4	0.317
117	9.48	33.890	3.15	2.01	27.		24.9	183.2	150	8.94	34.020	2.60	26.381	165.4	0.361
135	9.17	33.994	2.70	2.16	31.		26.5	170.7	200	8.37	34.124	2.06	26.552	149.2	0.441
164	8.76	34.031	2.56	2.29	34.		28.9	161.8	250	7.87	34.142	1.74	26.641	140.7	0.516
190	8.48	34.111	2.15	2.52	39.		31.0	151.7	300	7.53	34.177	1.38	26.718	133.4	0.586
219	8.16	34.134	1.93	2.63	43.		32.7	145.4	400	6.99	34.287	0.58	26.880	118.1	0.718
255	7.83	34.143	1.71	2.77	47.		34.5	140.1	500	6.45	34.307	0.40	26.970	109.5	0.838
311	7.47	34.188	1.29	2.95	53.		36.4	131.8							
382	7.12	34.278	0.65	3.24	61.		39.3	120.4							
454	6.63	34.298	0.46	3.21	69.		40.0	112.5							
530	6.38	34.311	0.38	3.51	74.		43.3	108.4							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90037

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
33 11.0N	118 22.5W	07/01/78	0829 GMT	1202M	290	14KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.40	33.482	5.69	0.33	3.		0.0	388.7	0	18.40	33.482	5.69	24.034	388.7	0.000
11	18.38	33.479	5.71	0.33	3.		0.0	388.5	10	18.38	33.480	5.71	24.036	388.5	0.039
29	12.71	33.384	5.92	0.55	5.		3.6	275.7	20	14.00	33.389	5.81	24.964	300.0	0.073
38	11.48	33.413	5.01	0.96	11.		9.9	251.4	30	12.55	33.385	5.83	25.252	272.7	0.102
48	11.14	33.497	4.62	1.17	14.		13.0	239.4	50	11.04	33.514	4.50	25.633	236.5	0.153
62	10.47	33.613	3.81	1.43	18.		17.3	219.5	75	10.17	33.727	3.38	25.951	206.2	0.209
76	10.15	33.735	3.36	1.54	22.		19.2	205.3	100	9.64	33.896	2.99	26.171	185.3	0.258
94	9.80	33.872	3.00	1.78	25.		22.6	189.6	125	9.01	33.959	2.89	26.323	170.9	0.303
117	9.18	33.938	2.97	1.78	29.		23.9	175.0	150	8.63	34.015	2.64	26.426	161.1	0.345
136	8.81	33.986	2.77	1.88	32.		25.3	165.9	200	8.22	34.132	1.87	26.580	146.5	0.424
164	8.50	34.043	2.49	2.03	37.		27.4	157.1	250	8.03	34.226	1.28	26.682	136.8	0.497
192	8.27	34.113	1.98	2.22	42.		29.6	148.5	300	7.72	34.260	0.92	26.756	129.8	0.566
220	8.13	34.174	1.64	2.34	45.		30.4	142.0	400	6.86	34.285	0.57	26.896	116.5	0.694
257	8.01	34.235	1.20	2.53	50.		32.4	135.8	500	6.15	34.322	0.36	27.020	104.8	0.812
314	7.60	34.262	0.86	2.67	56.		34.0	128.1							
384	7.00	34.280	0.62	2.83	64.		37.0	118.7							
454	6.44	34.305	0.43	2.92	73.		39.6	109.6							
530	5.99	34.333	0.33	2.91	80.		39.5	102.0							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90045

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 54.5N	118 55.5W	07/01/78	0228 GMT	1710M	310	19KT	1	290 5 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.16	33.403	5.88	0.21	0.		0.0	365.9	0	17.16	33.403	5.88	24.273	365.9	0.000
11	17.14	33.403	5.89	0.21	0.		0.0	365.4	10	17.14	33.403	5.89	24.278	365.4	0.037
27	12.12	33.514	5.66	0.64	7.		6.6	255.3	20	14.71	33.407	5.76	24.828	313.0	0.071
36	10.65	33.695	4.06	1.17	14.		15.9	216.5	30	11.52	33.578	5.13	25.596	239.9	0.098
45	10.25	33.760	3.45	1.46	22.		20.0	205.1	50	10.10	33.788	3.30	26.009	200.7	0.142
58	9.95	33.823	3.20	1.55	24.		21.9	195.6	75	9.82	33.897	2.95	26.143	188.0	0.191
71	9.87	33.874	3.03	1.65	25.		23.1	190.5	100	9.45	34.021	2.58	26.300	173.1	0.237
89	9.60	33.979	2.69	1.74	28.		25.0	178.5	125	9.22	34.111	2.21	26.408	162.9	0.280
110	9.34	34.054	2.48	1.85	32.		26.4	168.9	150	9.01	34.160	1.96	26.480	156.0	0.320
127	9.21	34.118	2.17	1.99	35.		27.8	162.1	200	8.19	34.150	1.83	26.599	144.7	0.397
152	8.99	34.162	1.95	2.08	38.		29.0	155.5	250	7.90	34.221	1.27	26.698	135.3	0.469
177	8.68	34.203	1.71	2.20	41.		30.1	147.8	300	7.39	34.241	0.93	26.788	126.8	0.537
201	8.17	34.147	1.84	2.21	45.		31.8	144.6	400	6.74	34.279	0.61	26.908	115.4	0.663
235	8.05	34.210	1.42	2.39	49.		33.1	138.2	500	6.10	34.322	0.37	27.026	104.2	0.779
285	7.51	34.234	1.01	2.56	57.		35.6	128.9							
350	7.06	34.262	0.74	2.69	63.		38.0	120.8							
416	6.64	34.284	0.57	2.83	70.		39.6	113.7							
489	6.18	34.317	0.39	2.92	80.		40.8	105.5							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90053

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 34.8N	119 29.5W	06/30/78	2037 GMT	648M	240	20KT	1	300 4 5

Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	14.17	33.68	6.96	0.40	0.		3.1	282.1	0	14.17	33.68	6.96	25.153	282.1	0.000
10	14.01	33.68	6.99	0.40	0.		3.2	278.9	10	14.01	33.68	6.99	25.186	278.9	0.028
28	13.18	33.68	5.73	0.79	5.		7.1	262.8	20	13.54	33.68	6.29	25.284	269.6	0.056
37	13.08	33.67	5.77	0.82	6.		7.2	261.6	30	13.17	33.68	5.74	25.357	262.7	0.082
46	12.54	33.65	5.39	0.99	9.		8.9	253.0	50	12.45	33.64	5.32	25.470	252.0	0.134
60	11.97	33.63	5.00	1.13	12.		11.3	244.1	75	9.70	33.73	3.53	26.032	198.6	0.191
74	9.73	33.71	3.59	1.54	23.		21.1	200.4	100	9.08	33.91	2.90	26.270	176.0	0.238
92	9.18	33.88	3.00	1.78	29.		24.7	179.3	125	8.88	33.94	2.73	26.331	170.1	0.282
114	8.99	33.92	2.83	1.85	31.		25.6	173.5	150	8.65	34.00	2.52	26.411	162.6	0.324
133	8.80	33.96	2.66	1.91	35.		26.4	167.7	200	8.16	34.08	2.23	26.549	149.5	0.403
160	8.56	34.02	2.45	2.00	36.		27.6	159.7	250	7.83	34.15	1.63	26.652	139.6	0.478
187	8.26	34.06	2.38	2.01	36.		27.9	152.3	300	7.22	34.18	1.21	26.762	129.3	0.547
214	8.07	34.10	2.03	2.17	43.		30.3	146.7	400	6.46	34.26	0.61	26.933	113.0	0.673
251	7.82	34.15	1.62	2.32	48.		32.4	139.4	500	5.94	34.31	0.35	27.037	103.2	0.788
305	7.16	34.18	1.17	2.53	58.		35.2	128.2							
374	6.60	34.25	0.71	2.75	68.		38.2	115.8							
443	6.26	34.28 A	0.49	2.88	75.		40.3	109.3							
518	5.83	34.32 A	0.32	2.98	84.		40.9	101.1							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 25.0N	119 57.5W	06/30/78	1511 GMT	1077M	310	20KT	1	310 3 3

Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	15.14	33.145	6.12	0.24	1.		0.1	341.0	0	15.14	33.145	6.12	24.535	341.0	0.000
10	15.07	33.155	6.18	0.26	1.		0.1	338.8	10	15.07	33.155	6.18	24.557	338.8	0.034
29	13.66	33.158	6.13	0.35	1.		1.0	310.3	20	14.58	33.156	6.15	24.664	328.7	0.067
38	12.16	33.198	5.66	0.66	5.		5.6	279.3	30	13.49	33.163	6.08	24.894	306.7	0.099
48	11.33	33.152	5.45	0.79	8.		8.3	268.1	50	11.34	33.180	5.41	25.320	266.2	0.157
62	11.59	33.366	5.23	1.05	9.		9.5	256.8	75	11.23	33.376	5.10	25.492	249.9	0.222
76	11.19	33.373	5.09	1.10	11.		11.1	249.4	100	10.31	33.465	4.45	25.722	228.0	0.282
94	10.44	33.415	4.71	1.17	15.		14.7	233.7	125	9.57	33.688	3.61	26.021	199.6	0.336
117	9.94	33.625	3.75	1.46	21.		20.8	210.1	150	8.87	33.846	3.26	26.256	177.2	0.384
135	9.12	33.759	3.49	1.60	25.		24.0	187.4	200	8.22	33.995	2.82	26.473	156.7	0.469
163	8.78	33.902	3.09	1.74	30.		26.3	171.6	250	7.55	34.071	2.07	26.632	141.6	0.545
190	8.39	33.979	2.88	1.81	34.		28.3	160.2	300	7.17	34.132	1.44	26.733	132.0	0.616
218	7.93	34.017	2.66	1.92	39.		30.2	150.9	400	6.47	34.233	0.65	26.908	115.4	0.745
255	7.50	34.079	1.97	2.14	47.		33.8	140.3	500	5.84	34.298	0.34	27.040	102.9	0.860
310	7.11	34.142	1.35	2.41	55.		37.0	130.4							
379	6.61	34.217	0.77	2.64	66.		40.4	118.3							
449	6.16	34.265	0.46	2.80	74.		42.2	109.2							
524	5.70	34.313	0.32	2.89	84.		44.1	100.1							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 04.5N	120 38.5W	06/30/78	0807 GMT	3738M	310	15KT		

Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.03	33.078	5.89	0.35	2.		0.2	364.7	0	16.03	33.078	5.89	24.286	364.7	0.000
11	16.01	33.077	5.94	0.36	2.		0.2	364.3	10	16.01	33.077	5.93	24.290	364.3	0.036
29	14.60	33.188	6.28	0.33	1.		0.2	326.8	20	15.42	33.123	6.10	24.457	348.4	0.072
39	14.20	33.213	6.39	0.36	0.		0.3	316.9	30	14.55	33.192	6.30	24.696	325.6	0.106
48	13.89	33.240	6.21	0.46	0.		0.7	308.8	50	13.76	33.261	6.20	24.915	304.7	0.169
62	13.06	33.395	6.13	0.64	1.		3.0	281.4	75	13.08	33.452	6.18	25.200	277.6	0.242
76	13.08	33.456	6.18	0.57	2.		3.5	277.3	100	12.68	33.499	5.77	25.314	266.8	0.311
94	12.97	33.527	5.94	0.78	4.		4.7	270.1	125	10.66	33.439	4.70	25.641	235.7	0.374
118	11.36	33.418	5.06	1.02	12.		10.7	249.0	150	9.35	33.712	3.64	26.076	194.4	0.429
136	9.66	33.514	4.15	1.39	20.		17.2	213.8	200	8.42	33.986	2.69	26.436	160.2	0.519
164	9.04	33.837	3.26	1.72	28.		23.3	180.4	250	7.71	34.065	2.21	26.604	144.2	0.597
192	8.60	33.957	2.82	1.92	33.		26.2	164.9	300	7.15	34.082	1.76	26.698	135.3	0.669
220	8.00	34.042	2.41	2.11	41.		28.6	150.0	400	6.74	34.203	0.92	26.848	121.1	0.803
257	7.66	34.065	2.17	2.23	45.		30.8	143.5	500	6.05	34.278	0.46	26.998	106.8	0.923
313	7.01	34.090	1.63	2.44	55.		33.7	133.0							
383	6.84	34.189	1.03	2.71	62.		36.2	123.4							
452	6.38	34.239	0.64	2.90	71.		38.9	113.8							
526	5.86	34.300	0.39	3.02	82.		40.0	102.9							

A) THE SALINITY SAMPLES AT 443 AND 518 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 44.5N	121 19.5W	06/30/78	0137 GMT	3738M	320	15KT	2	310 4 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.48	33.121	5.65	0.33	2.		0.0	393.6	0	17.48	33.121	5.65	23.982	393.6	0.000
10	17.18	33.112	5.72	0.32	2.		0.0	387.5	10	17.18	33.112	5.72	24.047	387.5	0.039
29	16.77	33.091	5.84	0.31	2.		0.0	379.9	20	16.97	33.102	5.79	24.089	383.5	0.078
38	16.46	33.080	5.85	0.32	2.		0.0	373.9	30	16.74	33.090	5.84	24.132	379.3	0.116
47	16.03	33.067	5.95	0.33	2.		0.0	365.5	50	15.92	33.080	5.96	24.312	362.2	0.190
61	15.46	33.103A	5.97	0.28	1.		0.0	350.7	75	14.39	32.975	6.09	24.565	338.1	0.278
74	14.53	32.970	6.11	0.28	2.		0.0	341.3	100	11.21	33.182	5.34	25.344	263.9	0.354
93	11.86	33.127	5.57	0.64	6.		5.2	279.2	125	9.98	33.346	4.71	25.686	231.4	0.417
115	10.30	33.286	4.89	1.03	12.		12.5	240.9	150	9.34	33.612	4.05	26.000	201.6	0.471
133	9.81	33.400	4.57	1.19	16.		15.5	224.6	200	8.65	33.937	3.09	26.363	167.1	0.565
160	9.10	33.737	3.75	1.52	24.		21.2	188.7	250	7.98	34.013	2.89	26.523	151.9	0.647
187	8.80	33.884	3.35	1.69	28.		23.8	173.3	300	7.50	34.054	2.24	26.626	142.2	0.723
214	8.48	33.980	2.86	1.87	33.		26.4	161.5	400	6.37	34.115	1.22	26.829	122.9	0.860
251	7.97	34.013	2.89	1.99	38.		27.6	151.7	500	5.77	34.233	0.50	26.998	106.8	0.981
304	7.46	34.056	2.17	2.22	46.		31.0	141.5							
372	6.57	34.082	1.53	2.52	59.		35.3	127.9							
441	6.14	34.170	0.82	2.70	70.		38.1	116.0							
515	5.67	34.247	0.46	2.98	97.		41.0	104.7							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 23.2N	122 01.2W	06/29/78	1856 GMT	4022M	330	12KT	2	330 3 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.35	33.077	5.65	0.21	2.		0.0	393.9	0	17.35	33.077	5.65	23.979	393.9	0.000
11	17.28	33.074	5.66	0.19	3.		0.0	392.5	10	17.29	33.074	5.66	23.991	392.8	0.039
29	17.20	33.078	5.68	0.21	3.		0.0	390.4	20	17.23	33.076	5.67	24.007	391.3	0.079
39	17.17	33.076	5.74	0.23	3.		0.0	389.9	30	17.20	33.079	5.69	24.017	390.4	0.118
48	17.14	33.068	5.73	0.21	2.		0.0	389.8	50	16.97	33.063	5.76	24.059	386.3	0.196
62	15.63	33.028	5.96	0.21	3.		0.0	359.8	75	14.61	32.991	6.03	24.529	341.5	0.287
76	14.53	32.988	6.04	0.23	3.		0.0	340.0	100	11.75	33.079	5.77	25.166	280.9	0.365
94	12.33	33.063	5.86	0.39	4.		1.8	292.3	125	10.11	33.170	5.33	25.527	246.5	0.432
118	10.45	33.135	5.44	0.71	9.		7.7	254.5	150	9.48	33.397	4.66	25.809	219.7	0.491
137	9.70	33.249	5.09	1.00	13.		12.2	234.1	200	8.84	33.855	3.51	26.269	176.0	0.591
164	9.34	33.566	4.17	1.37	21.		18.5	205.0	250	8.02	34.003	2.88	26.510	153.2	0.676
192	8.96								300	7.35	34.041	2.25	26.637	141.1	0.752
220	8.51	33.945	3.28	1.71	30.		25.0	164.5	400	6.42	34.117	1.13	26.822	123.5	0.889
255	7.94	34.007	2.82	1.96	38.		28.4	151.7	500	5.74	34.200	0.58	26.976	108.9	1.011
312	7.21	34.046	2.10	2.24	48.		32.6	138.9							
380	6.59	34.105	1.28	2.83	61.		37.3	126.5							
451	6.04	34.149	0.85	2.74	71.		39.7	116.4							
526	5.60	34.234	0.44	2.94	83.		41.3	104.8							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90100

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 05.0N	122 39.0W	06/29/78	1320 GMT	4117M	330	8KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.65	33.132	5.62	0.29	3.		0.1	396.7	0	17.65	33.132	5.62	23.950	396.7	0.000
11	17.63	33.134	5.63	0.34	3.		0.1	396.1	10	17.63	33.134	5.63	23.956	396.1	0.040
29	17.41	33.158	5.66	0.32	3.		0.0	389.3	20	17.52	33.147	5.64	23.992	392.7	0.079
39	17.39	33.161	5.66	0.34	3.		0.0	388.7	30	17.41	33.158	5.66	24.027	389.3	0.118
48	17.39	33.168	5.69	0.35	3.		0.0	388.2	50	17.18	33.151	5.73	24.077	384.6	0.196
62	15.57	33.049	6.00	0.37	3.		0.0	357.0	75	14.54	33.064	6.06	24.601	334.6	0.286
76	14.47	33.067	6.07	0.40	3.		0.0	333.0	100	12.48	33.210	5.65	25.130	284.3	0.364
95	12.86	33.148	5.83	0.58	5.		1.9	295.8	125	10.96	33.389	4.80	25.551	244.3	0.431
118	11.32	33.389	4.98	1.02	9.		9.9	250.4	150	9.85	33.466	4.33	25.802	220.4	0.490
137	10.41	33.388	4.55					235.2	200	8.71	33.918	3.18	26.338	169.5	0.589
165	9.32	33.606	4.05	1.48	20.		19.5	201.8	250	7.88	34.033	2.63	26.554	148.9	0.670
193	8.86	33.882	3.28	1.75	27.		24.0	174.3	300	7.26	34.077	1.97	26.679	137.1	0.744
221	8.27	33.983	2.96	1.90	33.		27.0	158.2	400	6.19	34.144	0.95	26.875	118.5	0.877
258	7.79	34.041	2.53	2.17	40.		29.9	147.1	500	5.68	34.258	0.45	27.029	104.0	0.994
315	7.07	34.086	1.78	2.36	51.		34.1	134.1							
384	6.29	34.124	1.08	2.57	65.		37.9	121.3							
454	5.92	34.216	0.62	2.86	75.		41.1	109.9							
528	5.54	34.277	0.40	3.13	84.		43.6	100.9							

A) AN ERROR OF -0.02 (0.391 PPT) IN THE AUTOSAL CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90110

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 44.3N	123 17.2W	06/29/78	0732 GMT	3832M	320	9KT	2	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	17.94	33.132	5.64	0.45	3.		0.2	403.4
11	17.41	33.098	5.71	0.48	3.		0.1	393.7
29	17.23	33.100	5.73	0.51	3.		0.1	389.5
53	16.69	33.066	5.83	0.51	3.		0.1	379.9
62	15.45	32.974	6.07	0.53	3.		0.1	360.0
72	14.95	33.017	6.03	0.51	3.		0.1	346.4
86	13.55	32.999	6.14	0.51	3.		0.3	319.9
100	12.39	33.121	5.72	0.61	6.		3.8	289.1
123	10.39	33.319	4.74	1.01	13.		12.2	239.9
142	9.72	33.452	4.45	1.15	17.		14.7	219.4
164	9.07	33.652	4.18	1.32	22.		18.4	194.5
192	8.71	33.871	3.58	1.56	27.		22.6	172.9
221	8.26	33.965	3.39	1.75	32.		24.1	159.4
258	7.74	34.006	2.99	1.96	38.		27.3	149.0
313	6.92	34.040	2.10	2.27	51.		31.8	135.5
383	6.44	34.137	1.08	2.70	64.		36.9	122.2
454	6.25	34.243	0.58	2.91	72.		39.0	111.9
530	5.72	34.303	0.35	3.03	82.		39.9	101.1

Z	T	S	O2	SIGT	DT	DD
0	17.94	33.132	5.64	23.880	403.4	0.000
10	17.44	33.100	5.71	23.975	394.3	0.040
20	17.32	33.099	5.72	24.004	391.6	0.079
30	17.21	33.100	5.73	24.030	389.1	0.118
50	16.76	33.071	5.82	24.113	381.1	0.196
75	14.67	33.011	6.07	24.532	341.3	0.286
100	12.39	33.121	5.72	25.079	289.1	0.366
125	10.30	33.334	4.70	25.623	237.4	0.432
150	9.46	33.524	4.36	25.911	210.0	0.489
200	8.59	33.907	3.51	26.348	168.5	0.585
250	7.85	34.002	3.09	26.534	150.9	0.667
300	7.10	34.032	2.32	26.665	138.5	0.741
400	6.39	34.165	0.92	26.864	119.6	0.875
500	5.97	34.286	0.40	27.014	105.3	0.994

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90120

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 25.1N	123 59.9W	06/29/78	0145 GMT	4213M	330	4KT	1	330 3 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	17.99	33.126	5.62	0.35	3.	0.00	0.0	405.0
11	17.53	33.117	5.65	0.35	3.	0.00	0.0	395.1
29	17.42	33.126	5.64	0.35	3.	0.00	0.0	391.9
39	17.36	33.121	5.68	0.35	3.	0.00	0.0	390.9
48	17.35	33.121	5.69	0.35	3.	0.00	0.0	390.7
62	16.06	33.050	5.57	0.36	3.	0.00	0.0	367.4
76	14.58	33.062	6.06	0.37	3.	0.00	0.0	335.6
95	13.28	33.068	6.07	0.44	4.	0.01	0.3	309.6
117	10.78	33.196	5.18	0.89	10.	0.10	9.5	255.5
136	10.07	33.450	4.34	1.25	16.	0.05	16.4	225.1
164	9.26	33.698	3.73	1.50	23.	0.04	21.5	194.0
192	8.83	33.870	3.29	1.68	28.	0.02	24.4	174.8
219	8.38	33.947	3.34	1.74	32.	0.02	25.6	162.5
256	7.89	34.007	2.99	1.86	38.	0.02	28.3	151.0
312	7.09	34.046	2.05	2.24	51.	0.01	33.5	137.3
381	6.36	34.084	1.33	2.55	64.	0.05	38.3	125.1
452	6.20	34.210	0.68	2.71	72.	0.01	40.4	113.8
528	5.83	34.271	0.42	2.85	81.	0.05	41.9	104.7

Z	T	S	O2	SIGT	DT	DD
0	17.99	33.126	5.62	23.863	405.0	0.000
10	17.56	33.118	5.65	23.959	395.8	0.040
20	17.47	33.122	5.64	23.984	393.5	0.080
30	17.41	33.126	5.64	24.003	391.7	0.119
50	17.22	33.111	5.66	24.036	388.5	0.197
75	14.68	33.060	6.02	24.568	337.8	0.288
100	12.68	33.079	5.91	24.991	297.6	0.368
125	10.39	33.302	4.81	25.582	241.3	0.436
150	9.62	33.589	3.98	25.935	207.8	0.493
200	8.69	33.899	3.30	26.326	170.6	0.589
250	7.97	34.000	3.07	26.516	152.6	0.672
300	7.26	34.041	2.26	26.650	139.9	0.748
400	6.30	34.117	1.13	26.839	121.9	0.884
500	5.99	34.257	0.46	26.989	107.7	1.004

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90130

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 04.3N	124 38.7W	06/28/78	1916 GMT	4594M	330	4KT	2	340 4 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	17.99	33.117	5.66	0.36	3.	0.00	0.1	405.6
11	17.25	33.102	5.73	0.36	3.	0.00	0.1	389.8
29	17.07	33.087	5.73	0.38	3.	0.00	0.1	386.8
39	16.93	33.070	5.77	0.36	3.	0.00	0.0	385.0
48	16.62	33.025	5.80	0.38	3.	0.00	0.0	381.4
62	15.66	32.955	5.96	0.37	3.	0.00	0.0	365.7
75	15.35	33.078	5.94	0.35	3.	0.00	0.1	350.2
95	13.83	33.039	5.99	0.43	3.	0.03	0.5	322.4
118	12.58	33.199	5.78	0.42	5.	0.06	1.1	286.9
137	11.48	33.159	5.71	0.61	7.	0.08	3.5	270.2
165	9.69	33.290	5.10	0.94	14.	0.10	10.9	230.9
194	9.18	33.591	4.36	1.32	20.	0.02	17.8	200.7
222	8.79	33.843	3.65	1.59	27.	0.06	22.4	176.2
258	8.31	33.988	3.12	1.83	34.	0.01	26.0	158.4
314	7.43	34.042	2.41	2.20	46.	0.01	30.6	142.1
383	6.22	34.035	1.77	2.50	62.	0.04	36.3	127.1
451	5.72	34.129	0.94	2.81	76.	0.04	40.8	114.1
525	5.58	34.248	0.45	2.97	86.	0.00	41.8	103.5

Z	T	S	O2	SIGT	DT	DD
0	17.99	33.117	5.66	23.856	405.6	0.000
10	17.30	33.104	5.73	24.011	390.9	0.040
20	17.16	33.095	5.73	24.038	388.3	0.079
30	17.06	33.087	5.73	24.056	386.6	0.118
50	16.48	33.009	5.82	24.130	379.5	0.195
75	15.35	33.078	5.94	24.437	350.2	0.286
100	13.54	33.075	5.95	24.817	314.1	0.370
125	12.18	33.188	5.76	25.170	280.5	0.445
150	10.58	33.194	5.47	25.465	252.4	0.512
200	9.09	33.652	4.20	26.070	194.9	0.626
250	8.42	33.969	3.22	26.423	161.4	0.717
300	7.66	34.029	2.57	26.583	146.2	0.796
400	6.05	34.053	1.55	26.821	123.6	0.936
500	5.63	34.214	0.57	27.000	106.7	1.057

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90140

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 45.1N	125 19.6W	06/28/78	1325 GMT	3262M	330	7KT	2	350 4 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.77	33.673	5.47	0.34	3.		0.2	383.6	0	18.77	33.673	5.47	24.087	383.6	0.000
10	18.58	33.688	5.52	0.33	3.		0.2	378.0	10	18.58	33.688	5.52	24.146	378.0	0.038
29	18.56	33.690	5.53	0.36	2.		0.2	377.4	20	18.57	33.689	5.53	24.150	377.7	0.076
52	18.52	33.691	5.54	0.35	2.		0.2	376.4	30	18.56	33.690	5.53	24.153	377.4	0.114
62	18.13	33.703	5.65	0.36	2.		0.2	366.3	50	18.52	33.691	5.54	24.163	376.4	0.189
71	17.94	33.806	5.67	0.35	2.		0.1	354.4	75	17.84	33.833	5.67	24.439	350.1	0.281
85	17.54	33.863	5.66	0.35	3.		0.1	341.0	100	16.94	33.825	5.66	24.649	330.1	0.366
99	17.00	33.833	5.66	0.37	3.		0.1	330.9	125	14.73	33.579	5.65	24.957	300.8	0.446
122	15.07	33.609	5.67	0.44	3.		0.1	305.6	150	12.34	33.492	5.41	25.375	260.9	0.517
140	13.09	33.482	5.50	0.63	5.		2.9	275.6	200	9.66	33.712	4.54	26.025	199.2	0.634
163	11.55	33.503	5.26	0.80	8.		6.3	246.0	250	8.70	33.960	3.96	26.372	166.2	0.728
192	9.89	33.647	4.65	1.19	15.		13.7	207.6	300	7.68	34.008	3.10	26.564	148.0	0.809
218	9.30	33.850	4.33	1.42	20.		18.2	183.4	400	6.31	34.066	1.59	26.797	126.0	0.951
255	8.61	33.967	3.90	1.75	29.		22.4	164.3	500	5.46	34.161	0.77	26.979	108.7	1.074
311	7.46	34.010	2.89	2.12	42.		29.0	144.9							
381	6.54	34.052	1.80	2.52	59.		35.2	129.8							
452	5.79	34.110	1.13	2.80	74.		39.8	116.3							
530	5.33	34.197	0.59	2.99	88.		41.7	104.5							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90150

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 25.1N	125 59.2W	06/28/78	0747 GMT	4122M	310	10KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.28	33.310	5.56	0.44	3.	0.00	0.0	398.4	0	18.28	33.310	5.56	23.933	398.4	0.000
11	18.26	33.311	5.57	0.48	3.	0.00	0.0	397.8	10	18.26	33.311	5.57	23.937	397.9	0.040
29	18.26	33.343	5.57	0.47	3.	0.00	0.0	395.5	20	18.26	33.325	5.57	23.948	396.9	0.080
53	18.27	33.421	5.59	0.43	3.	0.00	0.0	390.1	30	18.26	33.347	5.57	23.965	395.3	0.119
62	17.68	33.392	5.68	0.45	3.	0.00	0.1	378.5	50	18.27	33.412	5.59	24.012	390.8	0.198
71	15.99	33.233	5.89	0.46	3.	0.00	0.1	352.5	75	16.00	33.346	5.87	24.497	344.5	0.291
85	16.03	33.565	5.81	0.42	3.	0.00	0.0	329.1	100	14.96	33.525	5.79	24.865	309.5	0.373
100	14.96	33.525	5.79	0.44	3.	0.00	0.0	309.5	125	12.49	33.309	5.62	25.205	277.1	0.447
123	12.67	33.309	5.65	0.64	5.	0.12	1.2	280.5	150	10.89	33.363	5.28	25.544	244.9	0.513
142	11.20	33.308	5.37	0.86	8.	0.40	5.5	254.3	200	9.24	33.716	4.25	26.096	192.4	0.624
165	10.46	33.490	5.08	1.01	11.	0.33	8.5	228.5	250	8.47	33.965	3.54	26.413	162.4	0.715
193	9.36	33.655	4.37	1.43	18.	0.03	16.8	198.8	300	7.66	34.004	3.01	26.564	148.0	0.795
221	9.00	33.882	3.95	1.60	23.	0.11	20.0	176.4	400	6.40	34.056	1.70	26.778	127.8	0.938
258	8.31	33.972	3.43	1.88	30.	0.01	24.6	159.6	500	5.51	34.141	0.80	26.957	110.7	1.063
314	7.46	34.007	2.88	2.11	40.	0.00	28.4	145.1							
384	6.59	34.045	1.90	2.52	53.	0.05	34.2	130.9							
453	5.85	34.097	1.13	2.85	66.	0.04	39.0	118.0							
527	5.37	34.168	0.68	2.91	78.	0.00	40.5	107.1							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90160

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 05.1N	126 38.7W	06/28/78	0158 GMT	4508M	320	10KT	1	350 5 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.42	33.312	5.60	0.44	3.	0.00	0.0	401.5	0	18.42	33.312	5.60	23.899	401.5	0.000
10	18.27	33.313	5.63	0.43	3.	0.00	0.0	397.9	10	18.27	33.313	5.63	23.937	397.9	0.040
29	18.06	33.306	5.63	0.40	3.	0.00	0.0	393.5	20	18.09	33.309	5.63	23.978	394.0	0.080
38	18.04	33.307	5.67	0.39	3.	0.00	0.0	393.0	30	18.06	33.307	5.63	23.984	393.5	0.119
48	17.95	33.305	5.65	0.39	3.	0.00	0.0	391.1	50	17.90	33.337	5.66	24.045	387.6	0.197
62	17.52	33.545	5.76	0.34	3.	0.00	0.0	363.7	75	17.13	33.605	5.81	24.434	350.6	0.290
76	17.10	33.605	5.81	0.33	3.	0.00	0.0	349.8	100	15.71	33.538	5.83	24.710	324.3	0.375
94	16.33	33.619	5.79	0.32	3.	0.00	0.0	331.7	125	13.56	33.362	5.79	25.034	293.4	0.453
117	13.97	33.345	5.88	0.38	4.	0.00	0.0	302.7	150	13.15	33.620	5.42	25.315	266.7	0.524
136	13.23	33.441	5.62	0.49	5.	0.15	1.7	281.3	200	10.09	33.600	4.95	25.866	214.3	0.646
164	13.08	33.793	5.25	0.53	6.	0.10	3.9	252.6	250	9.25	33.938	4.45	26.268	176.2	0.746
192	10.36		5.05						300	8.19	34.009	4.03	26.489	155.1	0.832
219	9.82	33.784	4.72	1.11	17.	0.00	14.5	196.4	400	6.38	34.028	1.99	26.759	129.6	0.979
256	9.14	33.957	4.40	1.40	23.	0.00	19.1	173.0	500	5.44	34.105	1.05	26.937	112.6	1.106
312	7.93	34.008	3.89	1.83	35.	0.02	24.6	151.5							
381	6.66	34.018	2.28	2.39	55.	0.02	34.0	133.8							
450	5.79	34.063	1.44	2.81	71.	0.00	39.5	119.8							
525	5.35	34.127	0.92	3.01	84.	0.00	42.5	110.0							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90170

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 45.8N	127 18.0W	06/27/78	1955 GMT	4508M	360	10KT	1	350 4 8

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.59	33.365	5.60	0.28	3.	0.00	0.1	401.7	0	18.59	33.365	5.60	23.898	401.7	0.000
11	18.28	33.362	5.61	0.24	3.	0.00	0.1	394.6	10	18.30	33.363	5.61	23.968	395.0	0.040
38	18.22	33.390	5.62	0.24	3.	0.00	0.1	391.2	20	18.26	33.372	5.61	23.984	393.5	0.079
62	18.22	33.897	5.72	0.17	3.	0.00	0.0	354.3	30	18.24	33.382	5.62	23.997	392.2	0.119
80	18.03	33.917	5.70	0.15	3.	0.00	0.0	348.4	50	18.22	33.650	5.67	24.206	372.3	0.195
94	17.72	33.950	5.69	0.13	3.	0.00	0.0	338.8	75	18.10	33.907	5.71	24.432	350.8	0.286
108	16.87	33.833	5.71	0.16	3.	0.00	0.0	328.0	100	17.39	33.905	5.70	24.602	334.6	0.373
127	15.65	33.774	5.65	0.23	4.	0.02	0.1	305.7	125	15.79	33.781	5.66	24.877	308.4	0.454
146	13.84	33.604	5.53	0.32	5.	0.06	2.0	281.2	150	13.55	33.585	5.51	25.206	277.0	0.528
169	12.32	33.516	5.41	0.54	7.	0.02	5.0	258.8	200	10.33	33.507	5.03	25.753	225.0	0.655
192	10.68	33.444	5.15	0.88	11.	0.01	9.4	235.5	250	9.37	33.920	4.55	26.234	179.3	0.759
215	9.87	33.665	4.81	1.05	15.	0.00	13.3	206.0	300	8.20	33.997	3.85	26.477	156.2	0.845
243	9.50	33.890	4.61	1.19	19.	0.00	16.4	183.5	400	6.70	34.025	2.21	26.714	133.8	0.996
276	8.83	33.982	4.28	1.42	25.	0.00	20.2	166.5	500	5.67	34.144	0.86	26.939	112.5	1.125
322	7.66	33.996	3.41	1.91	39.	0.00	26.6	148.7							
382	6.93	34.010	2.53	2.25	50.	0.01	37.8	137.9							
451	6.09	34.081	1.36	2.73	68.	0.01	38.5	122.1							
527	5.51	34.181	0.70	2.94	82.	0.13	41.6	107.8							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90180

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 25.1N	127 57.5W	06/27/78	1411 GMT	4218M	350	13KT	2	360 3 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.78	33.715	5.47	0.30	3.	0.00	0.1	380.8	0	18.78	33.715	5.47	24.117	380.8	0.000
11	18.78	33.715	5.49	0.30	3.	0.00	0.1	380.8	10	18.78	33.715	5.49	24.117	380.8	0.038
39	19.09	33.913	5.47	0.29	2.	0.00	0.1	373.9	20	18.86	33.762	5.49	24.132	379.4	0.076
62	19.15	34.028	5.46	0.28	2.	0.00	0.1	367.0	30	18.97	33.832	5.48	24.157	376.9	0.114
81	19.07	34.077	5.50	0.29	2.	0.00	0.0	361.5	50	19.12	33.968	5.47	24.223	370.6	0.189
95	18.90	34.134	5.52	0.30	3.	0.00	0.0	353.3	75	19.11	34.062	5.49	24.297	363.6	0.281
109	18.33	34.083	5.56	0.31	3.	0.00	0.0	343.4	100	18.72	34.120	5.54	24.441	349.9	0.371
127	17.66	34.070	5.51	0.31	3.	0.00	0.1	328.7	125	17.76	34.077	5.52	24.644	330.6	0.457
146	15.70	33.807	5.55	0.36	3.	0.01	0.0	304.4	150	15.40	33.798	5.52	24.977	298.8	0.537
169	14.11	33.763	5.35	0.47	5.	0.09	1.4	274.8	200	11.67	33.504	5.31	25.511	248.0	0.676
193	12.12	33.492	5.36	0.60	7.	0.09	3.3	257.0	250	9.68	33.771	4.50	26.067	195.2	0.789
216	10.83	33.545	5.12	0.88	11.	0.02	8.7	230.6	300	8.41	33.957	3.63	26.415	162.1	0.881
244	9.85	33.737	4.61	1.14	16.	0.06	13.8	200.3	400	6.80	34.043	2.08	26.715	133.7	1.035
276	9.02	33.888	4.04	1.50	24.	0.01	20.0	176.3	500	5.80	34.123	1.05	26.907	115.5	1.165
324	7.86	34.000	3.23	1.96	37.	0.02	26.5	151.1							
383	7.00	34.033	2.30	2.29	50.	0.05	32.0	137.1							
452	6.25	34.077	1.51	2.61	64.	0.03	37.4	124.3							
526	5.58	34.152	0.84	2.87	80.	0.00	41.5	110.7							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90190

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 00.5N	128 39.8W	06/27/78	0634 GMT	4314M	010	15KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	18.93	33.856	5.55	0.31	3.	0.00	0.1	374.2	0	18.93	33.856	5.55	24.186	374.2	0.000
11	18.84	33.853	5.52	0.33	3.	0.00	0.0	372.2	10	18.85	33.853	5.52	24.205	372.4	0.037
30	18.86	33.861	5.53	0.33	3.	0.00	0.0	372.1	20	18.85	33.857	5.52	24.207	372.2	0.075
54	18.84	33.957	5.51	0.33	3.	0.00	0.0	364.7	30	18.86	33.861	5.53	24.208	372.1	0.112
63	18.80	33.957	5.58	0.33	3.	0.00	0.0	363.7	50	18.84	33.941	5.51	24.272	366.0	0.186
72	17.88	33.859	5.68	0.33	3.	0.00	0.0	349.1	75	17.68	33.839	5.68	24.481	346.0	0.275
86	17.20	33.799	5.66	0.36	3.	0.00	0.0	337.9	100	16.81	33.798	5.67	24.658	329.2	0.361
100	16.81	33.798	5.67	0.38	3.	0.00	0.0	329.2	125	16.49	33.905	5.57	24.813	314.5	0.442
124	16.57	33.916	5.57	0.38	4.	0.02	0.0	315.3	150	14.52	33.664	5.55	25.067	290.3	0.518
143	14.92	33.685	5.56	0.45	4.	0.21	0.5	296.9	200	11.12	33.595	5.14	25.681	231.9	0.651
166	13.65	33.649	5.48	0.54	5.	0.04	2.4	274.1	250	9.63	33.926	4.57	26.196	183.0	0.757
194	11.39	33.558	5.21	0.79	9.	0.02	7.2	239.2	300	8.54	34.024	4.07	26.447	159.1	0.845
221	10.46	33.763	4.89	1.04	13.	0.01	11.7	208.3	400	6.60	34.018	2.40	26.722	133.0	0.997
258	9.43	33.958	4.48	1.32	20.	0.01	17.4	177.4	500	5.61	34.105	1.16	26.916	114.6	1.127
315	8.26	34.024	3.90	1.75	32.	0.01	23.3	155.0							
385	6.84	34.016	2.63	2.23	50.	0.00	31.6	136.3							
453	5.93	34.045	1.67	2.61	66.	0.00	37.7	122.8							
526	5.55	34.151	0.94	2.85	79.	0.00	41.5	110.5							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 90200

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 45.1N	129 15.5W	06/27/78	0124 GMT	4314M	010	17KT	2	360 5 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.93	33.772	5.51	0.22	3.	0.00	0.1	380.3	0	18.93	33.772	5.51	24.122	380.3	0.000
10	18.93	33.775	5.53	0.22	3.	0.00	0.1	380.1	10	18.93	33.775	5.53	24.125	380.1	0.038
38	18.87	33.770	5.59	0.21	3.	0.00	0.0	379.0	20	18.91	33.773	5.55	24.129	379.7	0.076
61	18.67	34.056	5.63	0.15	3.	0.00	0.0	353.4	30	18.89	33.772	5.57	24.133	379.3	0.114
79	18.48	34.112	5.63	0.14	3.	0.00	0.0	344.8	50	18.78	33.918	5.61	24.272	366.0	0.189
93	18.25	34.145	5.59	0.13	3.	0.00	0.0	337.0	75	18.53	34.107	5.63	24.478	346.4	0.278
106	18.06	34.217	5.53	0.12	3.	0.00	0.0	327.3	100	18.17	34.189	5.56	24.630	331.9	0.364
124	17.23	34.134	5.48	0.13	3.	0.01	0.0	314.2	125	17.20	34.133	5.48	24.821	313.7	0.446
143	16.61	34.109	5.40	0.17	4.	0.20	0.1	302.1	150	16.11	34.069	5.35	25.027	294.1	0.523
165	14.86	33.970	5.24	0.30	6.	0.03	2.1	274.9	200	12.37	33.810	5.01	25.615	238.2	0.658
188	13.13	33.858	5.07	0.46	6.	0.01	5.0	248.8	250	10.11	33.875	4.40	26.076	194.4	0.769
212	11.71	33.780	4.93	0.65	9.	0.01	8.2	228.4	300	8.70	34.023	3.63	26.421	161.5	0.860
240	10.53	33.834	4.58	0.97	14.	0.01	13.2	204.2	400	7.10	34.054	2.35	26.683	136.8	1.015
272	9.31	33.968	3.99	1.36	23.	0.00	19.9	174.8	500	5.90	34.088	1.49	26.868	119.2	1.150
318	8.42	34.037	3.43	1.75	33.	0.01	24.7	156.4							
381	7.38	34.054	2.57	2.14	46.	0.00	30.5	140.5							
454	6.38	34.060	1.81	2.47	61.	0.00	36.0	127.2							
534	5.61	34.119	1.33	2.80	77.	0.00	40.8	113.5							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93029

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 52.7N	117 26.6W	06/21/78	1144 GMT	611M	310	10KT	0	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	20.50	33.534	5.53	0.56	5.	0.00	0.0	436.3	0	20.50	33.534	5.53	23.535	436.3	0.000
10	16.10	33.367	6.34	0.66	4.	0.00	0.0	345.1	10	16.10	33.367	6.34	24.491	345.1	0.039
28	11.60	33.401	4.98	1.09	12.	0.31	9.7	254.4	20	13.10	33.371	5.75	25.133	284.0	0.071
37	10.73	33.411	4.66	1.26	14.	0.18	13.6	238.8	30	11.36	33.404	4.89	25.490	250.0	0.097
47	9.94	33.449	4.51	1.39	16.	0.10	15.7	223.1	50	9.96	33.503	4.32	25.811	219.5	0.144
62	10.05	33.686	3.53	1.56	20.	0.05	19.6	207.3	75	9.79	33.794	3.31	26.067	195.2	0.197
75	9.79	33.794	3.31	1.63	24.	0.04	21.4	195.2	100	9.21	33.946	3.07	26.281	174.9	0.243
93	9.25	33.906	3.12	1.73	28.	0.04	23.7	178.5	125	9.19	34.058	2.47	26.372	166.3	0.286
118	9.10	34.005	2.77	1.85	31.	0.04	25.4	168.8	150	9.30	34.171	1.84	26.442	159.6	0.328
136	9.34	34.138	1.99	2.03	34.	0.03	27.3	162.7	200	8.88	34.210	1.50	26.540	150.3	0.407
164	9.26	34.196	1.70	2.13	37.	0.04	28.3	157.2	250	8.55	34.257	1.27	26.628	142.0	0.482
191	8.93								300	8.27	34.270	1.09	26.681	136.9	0.554
220	8.79	34.240	1.43	2.25	41.	0.04	32.8	146.7	400	7.53	34.271	0.84	26.792	126.4	0.692
257	8.49	34.258	1.24	2.25	45.	0.05	34.7	141.0	500	6.80	34.292	0.55	26.910	115.2	0.820
314	8.20	34.272	1.05	2.33	49.	0.05	35.9	135.7							
384	7.63	34.273	0.87	2.33	55.	0.05	34.6	127.6							
454	7.17	34.271	0.73	2.64	60.	0.05	35.7	121.6							
529	6.54	34.315	0.41	2.71	71.	0.02	38.9	110.1							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93030

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 50.5N	117 31.0W	06/21/78	1455 GMT	796M	300	7KT	0	300 3 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	19.81	33.460	5.20A	0.37	4.	0.02	0.1	424.4	0	19.81	33.460	5.20	23.660	424.4	0.000
10	15.20	33.279	6.39A	0.39	2.	0.02	0.1	332.4	10	15.20	33.279	6.39	24.624	332.4	0.038
29	12.68	33.297	5.47A	0.70	7.	0.23	5.3	281.5	20	13.87	33.286	5.91	24.912	305.0	0.070
39	11.68	33.364	4.39A	0.93	11.		10.2	258.5	30	12.58	33.304	5.36	25.184	279.1	0.099
48	10.62	33.375		1.10	14.		13.8	239.6	50	10.44	33.390	4.27	25.642	235.6	0.151
62	9.79	33.510	4.13A	1.28	18.	0.04	17.6	216.2	75	9.85	33.644	3.76	25.940	207.3	0.206
74	9.85	33.631	3.81	1.39	21.	0.02	19.7	208.2	100	9.80	33.899	2.96	26.147	187.6	0.256
93	9.92	33.871	2.95	1.64	25.	0.00	23.1	191.6	125	9.23	33.940	2.97	26.273	175.6	0.302
117	9.40	33.919	3.00	1.67	28.	0.00	24.2	179.8	150	8.87	33.994	2.84	26.373	166.2	0.346
134	9.05	33.962	2.93	1.71	30.	0.01	25.4	171.3	200	8.59	34.119	2.13	26.514	152.8	0.427
162	8.78	34.016	2.74	1.86	34.	0.00	26.8	163.2	250	8.54	34.278	1.21	26.646	140.2	0.502
189	8.59								300	8.18	34.278	1.05	26.701	135.0	0.573
236	8.58	34.241	1.44	2.21	44.	0.00	31.1	143.6	400	7.19	34.254	0.86	26.827	123.0	0.708
255	8.52	34.289	1.14	2.37	47.	0.00	31.9	139.1	500	6.52	34.308	0.45	26.961	110.4	0.832
310	8.08	34.275	1.03	2.42	51.	0.00	33.2	133.8							
380	7.35	34.243	0.95	2.43	58.	0.00	35.5	126.1							
450	6.83	34.291	0.61	2.65	67.	0.00	37.8	115.6							
525	6.38	34.311	0.39	2.72	76.	0.02	39.7	108.4							

A) THE OXYGEN VALUES FOR THESE LEVELS ARE PROBABLY LESS RELIABLE THAN NORMAL, THE RESULT OF AN EQUIPMENT MALFUNCTION ON THE OXYGEN TITRATION APPARATUS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 30.0N	118 11.5W	06/22/78	0657 GMT	1757M	280	16KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	17.55	33.334	5.79	0.73	4.	0.00	0.0	379.7	0	17.55	33.334	5.79	24.128	379.7	0.000
11	17.53	33.335	5.82	0.74	4.	0.00	0.0	379.2	10	17.53	33.335	5.82	24.134	379.2	0.038
31	12.38	33.456	5.60	1.19	10.	0.28	7.8	264.3	20	15.67	33.382	5.72	24.599	334.8	0.074
40	10.85	33.349	4.86	1.39	14.	0.35	11.5	245.4	30	12.73	33.446	5.61	25.265	271.5	0.104
50	10.41	33.352	4.78	1.45	16.	0.17	12.7	237.8	50	10.41	33.352	4.78	25.618	237.8	0.155
64	9.86	33.451	4.54	1.55	18.	0.06	15.4	221.7	75	9.66	33.554	4.20	25.903	210.8	0.212
79	9.61	33.594	4.06	1.67	21.	0.05	17.9	207.1	100	9.38	33.794	3.45	26.135	188.7	0.262
97	9.42	33.770	3.52	1.81	28.	0.03	20.6	191.2	125	9.00	33.931	3.09	26.303	172.8	0.308
122	9.04	33.921	3.11	1.84	32.	0.02	23.3	174.1	150	8.61	33.987	2.90	26.408	162.8	0.350
139	8.79	33.962	3.00		33.	0.02	24.8	167.4	200	8.30	34.127	2.05	26.564	148.0	0.430
166	8.39	34.026	2.70		37.	0.00	24.8	156.7	250	7.96	34.188	1.50	26.663	138.6	0.503
195	8.31	34.113	2.14		42.	0.01	28.3	149.1	300	7.56	34.224	1.08	26.750	130.4	0.573
223	8.27	34.181	1.69		46.	0.01	29.5	143.5	400	6.73	34.278	0.57	26.909	115.3	0.701
260	7.83	34.186	1.45		51.	0.00	31.0	136.9	500	6.04	34.317	0.36	27.030	103.8	0.817
316	7.47	34.241	0.94		59.	0.00	33.1	127.9							
384	6.87	34.273	0.62		68.	0.00	35.4	117.5							
454	6.30	34.296	0.45		77.	0.00	43.4	108.6							
529	5.92	34.332	0.32		84.	0.00	44.8	101.3							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 10.0N	118 52.5W	06/22/78	1626 GMT	1295M	320	24KT	1	310 7 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	16.92	33.479	5.91	0.19	0.	0.00	0.0	354.9	0	16.92	33.479	5.91	24.388	354.9	0.000
12	16.90	33.479	5.94	0.21	0.	0.00	0.0	354.5	10	16.90	33.479	5.93	24.393	354.5	0.035
30	14.57	33.487	6.05	0.33	0.	0.09	1.9	304.3	20	16.12	33.483	5.99	24.575	337.1	0.070
40	13.28	33.463	5.68	0.63	4.	0.20	5.7	280.6	30	14.57	33.487	6.05	24.920	304.3	0.102
54	11.35	33.407	4.91	1.02	12.	0.37	11.6	249.6	50	11.83	33.417	5.12	25.414	257.3	0.159
68	11.05	33.472	4.68	1.10	14.	0.36	13.7	239.7	75	10.69	33.513	4.46	25.695	230.6	0.220
90	9.83	33.627	3.89	1.34	21.	0.18	19.9	208.2	100	9.43	33.729	3.53	26.076	194.3	0.273
109	9.13	33.820	3.22	1.77	27.	0.05	24.4	183.0	125	8.72	33.946	2.77	26.358	167.6	0.319
128	8.67	33.965	2.70	1.72	34.	0.02	27.6	165.4	150	8.48	34.042	2.32	26.470	156.9	0.360
146	8.53	34.033	2.37	1.85	37.	0.02	29.1	158.3	200	8.23	34.153	1.67	26.595	145.1	0.437
175	8.21	34.084	2.06	2.01	42.	0.01	30.8	149.8	250	7.93	34.205	1.27	26.681	136.9	0.510
207	8.24	34.169	1.57	2.14	45.	0.01	32.3	144.0	300	7.57	34.232	1.01	26.755	129.9	0.579
235	8.04	34.195	1.35	2.25	49.	0.01	33.5	139.2	400	6.85	34.276	0.57	26.891	117.0	0.708
281	7.71	34.222	1.13	2.39	54.	0.01	35.1	132.6	500	6.20	34.313	0.39	27.007	106.0	0.826
331	7.33	34.246	0.82	2.51	59.	0.01	37.0	125.6							
412	6.77	34.281	0.54	2.67	68.	0.00	39.8	115.6							
492	6.25	34.310	0.40	2.78	76.	0.00	42.3	106.9							
570	5.72	34.346	0.28	2.92	86.	0.00	44.5	97.9							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 50.0N	119 34.0W	06/23/78	0148 GMT	2222M	320	24KT	1	310 8 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.24	33.087	5.87	0.19	2.	0.01	0.0	368.5	0	16.24	33.087	5.87	24.245	368.5	0.000
9	16.27	33.086	5.91	0.17	2.	0.01	0.0	369.3	10	16.26	33.086	5.91	24.240	369.1	0.037
26	16.05	33.088	5.94	0.17	2.	0.00	0.1	364.4	20	16.14	33.087	5.93	24.268	366.4	0.074
35	15.90	33.095	5.99	0.15	2.	0.00	0.1	360.6	30	15.98	33.092	5.96	24.308	362.6	0.110
48	15.84	33.097	6.06	0.17	2.	0.00	0.1	359.2	50	15.81	33.100	6.06	24.352	358.4	0.183
61	15.63	33.110	6.01	0.17	2.	0.00	0.1	353.8	75	13.84	33.108	5.96	24.781	317.5	0.267
82	12.77	33.119	5.94	0.41	5.	0.13	2.0	296.3	100	11.15	33.148	5.42	25.330	265.3	0.341
100	11.15	33.148	5.42	0.73	8.	0.12	8.0	265.3	125	9.70	33.458	4.50	25.821	218.6	0.402
117	10.00	33.352	4.76	1.09	14.	0.03	14.3	231.2	150	9.29	33.746	3.77	26.112	190.9	0.454
135	9.46	33.585	4.20	1.44	20.	0.04	19.0	205.5	200	8.67	33.992	2.94	26.402	163.4	0.544
161	9.22	33.840	3.50	1.56	25.	0.02	22.4	182.9	250	7.87	34.033	2.59	26.556	148.8	0.624
192	8.80	33.978	3.00	1.77	31.	0.02	25.4	166.3	300	7.27	34.080	1.92	26.679	137.1	0.698
265	7.64	34.031	2.49	2.07	43.	0.02	29.9	145.8	400	6.45	34.184	0.89	26.872	118.8	0.831
316	7.12	34.102	1.65	2.40	54.	0.02	33.5	133.5	500	5.80	34.263	0.45	27.017	105.1	0.949
395	6.49	34.180	0.92	2.69	67.	0.02	37.2	119.6							
476	5.93	34.245	0.52	2.87	78.	0.02	39.6	107.9							
558	5.57	34.301	0.35	2.96	87.	0.02	41.2	99.5							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 30.0N	120 14.0W	06/23/78	0839 GMT	3926M	310	25KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.77	33.108	5.77	0.41	2.	0.00	0.2	378.6	0	16.77	33.108	5.77	24.140	378.6	0.000
11	16.76	33.107	5.78	0.40	2.	0.00	0.1	378.5	10	16.76	33.107	5.78	24.141	378.5	0.038
29	16.78	33.107	5.75	0.39	2.	0.00	0.1	378.9	20	16.77	33.107	5.76	24.139	378.7	0.076
39	16.74	33.107	5.77	0.38	2.	0.00	0.1	378.0	30	16.78	33.107	5.75	24.136	378.9	0.114
48	16.41	33.105	5.83	0.37	2.	0.00	0.1	370.9	50	16.37	33.108	5.84	24.230	370.0	0.189
62	16.16	33.107	5.88	0.35	2.	0.00	0.1	365.4	75	15.64	33.054	5.99	24.354	358.2	0.280
76	15.58	33.049	6.00	0.37	3.	0.00	0.1	357.2	100	12.82	33.071	5.98	24.957	300.7	0.363
95	13.39	33.081	6.04	0.40	3.	0.01	0.2	310.8	125	10.62	33.133	5.44	25.412	257.5	0.434
118	11.07	33.078	5.63	0.70	7.	0.03	5.8	269.1	150	9.72	33.375	4.75	25.752	225.1	0.495
136	10.09	33.239	5.13	0.94	12.	0.01	11.3	241.0	200	8.95	33.853	3.80	26.250	177.9	0.597
164	9.51	33.514	4.41	1.24	18.	0.01	16.3	211.5	250	8.10	33.992	3.07	26.488	155.2	0.682
192	9.07	33.807	3.93	1.46	24.	0.01	21.0	183.1	300	7.34	34.040	2.27	26.637	141.1	0.759
220	8.64	33.926	3.49	1.63	28.	0.00	23.9	167.8	400	6.88	34.224	0.84	26.846	121.3	0.895
257	7.98	34.001	2.97	1.83	37.	0.00	27.2	152.7	500	5.88	34.243	0.51	26.992	107.5	1.016
313	7.20	34.051	2.05	2.17	48.	0.00	32.7	138.4							
382	7.03	34.211	0.97	2.53	58.	0.00	36.2	124.2							
452	6.35	34.233	0.65	2.69	67.	0.01	38.9	113.9							
526	5.63	34.247	0.46	2.81		0.00	41.7	104.2							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 10.0N	120 54.5W	06/23/78	1523 GMT	3926M	350	20KT	1	340 8 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.25	33.118	5.64	0.50	2.	0.00	0.1	388.6	0	17.25	33.118	5.64	24.035	388.6	0.000
10	17.24	33.119	5.65	0.49	2.	0.00	0.1	388.3	10	17.24	33.119	5.65	24.038	388.3	0.039
29	17.25	33.119	5.62	0.50	2.	0.00	0.1	388.6	20	17.25	33.119	5.63	24.035	388.6	0.078
38	17.24	33.121	5.70	0.51	2.	0.00	0.1	388.2	30	17.25	33.119	5.63	24.035	388.6	0.117
48	15.65	32.982	5.69	0.51	2.	0.00	0.1	363.6	50	15.52	32.970	5.73	24.317	361.7	0.192
62	15.14	32.960	5.98	0.51	2.	0.00	0.1	354.5	75	14.58	33.052	5.97	24.584	336.3	0.280
75	14.58	33.052	5.97	0.50	2.	0.00	0.1	336.3	100	12.25	33.091	5.71	25.082	288.8	0.358
94	12.89	33.116		0.75	4.	0.06	0.4	298.7	125	10.20	33.181	5.13	25.520	247.2	0.426
117	10.64	33.079	5.54	0.91	8.	0.04	6.7	261.8	150	9.51	33.483	4.30	25.870	213.9	0.484
136	9.80	33.345	4.58	1.32	14.	0.02	14.3	228.5	200	8.66	33.934	3.39	26.359	167.5	0.581
163	9.34	33.596	4.14	1.56	20.	0.03	18.9	202.8	250	7.93	33.999	3.13	26.519	152.3	0.663
191	8.77	33.898	3.36	1.76	27.	0.01	23.0	171.8	300	7.28	34.036	2.21	26.643	140.5	0.739
219	8.44	33.963	3.53	1.89	30.	0.00	24.2	162.1	400	6.42	34.137	0.61	26.839	121.9	0.875
256	7.83	34.003	3.01	2.02	37.	0.00	27.1	150.5	500	5.82	34.221	0.43	26.981	108.4	0.996
312	7.15	34.044	1.98	2.34	48.	0.03	32.1	138.2							
382	6.56	34.120	0.77	2.64	61.	0.06	36.7	125.0							
452	6.06	34.182	0.39	2.90	71.	0.00	40.3	114.2							
527	5.73	34.241	0.45	2.94	81.	0.00	41.5	105.8							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 50.0N	121 34.5W	06/23/78	2205 GMT	4117M	350	20KT	1	360 8 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.69	33.137	5.63	0.24	3.	0.00	0.1	397.3	0	17.69	33.137	5.63	23.944	397.3	0.000
10	17.69	33.136	5.66	0.25	2.	0.00	0.1	397.3	10	17.69	33.136	5.66	23.943	397.3	0.040
29	17.64	33.135	5.66	0.26	2.	0.00	0.1	396.3	20	17.66	33.136	5.66	23.949	396.8	0.080
57	16.68	33.066	5.85	0.22	2.	0.00	0.0	379.7	30	17.63	33.134	5.66	23.956	396.2	0.119
66	15.99	33.041	5.93	0.22	2.	0.00	0.0	366.5	50	17.05	33.089	5.79	24.058	386.4	0.198
80	15.41	33.082	5.94	0.22	2.	0.00	0.0	351.2	75	15.62	33.064	5.94	24.366	357.0	0.291
95	14.04	33.112	6.02	0.24	3.	0.00	0.0	321.1	100	13.45	33.102	6.04	24.855	310.5	0.375
108	12.54	33.086	6.08	0.32	4.	0.08	0.6	294.4	125	11.36	33.109	5.78	25.261	271.8	0.449
132	11.01	33.139	5.58	0.60	8.	0.03	6.5	263.5	150	10.00	33.315	5.05	25.659	234.0	0.513
151	9.95	33.327	5.02	0.90	13.	0.01	12.6	232.3	200	9.05	33.716	4.16	26.127	189.5	0.620
168A	9.55	33.585	4.55	1.20	18.	0.01	17.0	206.9	250	8.28	33.945	3.47	26.425	161.2	0.710
179	9.38	33.617	4.42	1.15	19.	0.01	17.6	201.9	300	7.56	34.048	2.63	26.612	143.5	0.788
262A	8.10	33.998	3.29	1.60	35.	0.04	26.3	154.7	400	6.51	34.122	1.20	26.815	124.2	0.927
357A	6.88	34.072	1.70	2.10	56.	0.03	35.3	132.6							
450A	6.23	34.189	0.78	2.43	70.	0.00	39.4	115.7							

A) THESE NANSEN BOTTLES PRETRIPPED CAUSING THE DEPTHS TO BE UNCERTAIN.

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93100

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 30.0N	122 14.0W	06/24/78	0413 GMT	4117M	350	22KT	1	350 7 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	17.47	33.108	5.65	0.29	4.	0.00	0.1	394.3
11	17.46	33.104	5.67	0.27	4.	0.00	0.1	394.4
30	17.47	33.107	5.66	0.29	4.	0.00	0.1	394.4
39	17.20	33.097	5.71	0.29	4.	0.00	0.1	389.1
48	15.85	33.008	5.96	0.31	4.		0.1	365.9
63	15.63	33.033	5.94	0.31	4.	0.00	0.1	359.4
76	14.90	32.965	6.01	0.33	4.	0.00	0.1	349.2
95	13.78	33.193	5.96	0.35	4.	0.01	0.2	310.1
118	11.33	33.097	5.69	0.54	7.	0.09	4.4	272.1
138	10.35	33.165	5.42	0.76	10.	0.03	8.6	250.7
165	9.41	33.409	4.87	1.03	17.	0.02	14.6	217.7
194	9.00	33.734	4.12	1.31	23.	0.01	20.0	187.4
221	8.60	33.911	3.51	1.48	30.	0.01	23.8	168.3
258	8.09	34.001	3.21	1.64	37.	0.01	26.3	154.3
315	7.57	34.119	1.71	2.18	49.	0.06	31.6	138.3
386	6.64	34.139	1.15	2.47	61.	0.01	36.5	124.5
456	6.14	34.197	0.71	2.64	70.	0.01	38.8	114.0
531	5.68	34.242	0.45	2.75	82.	0.02	40.8	105.2

Z	T	S	O2	SIGT	DT	DD
0	17.47	33.108	5.65	23.975	394.3	0.000
10	17.46	33.105	5.67	23.974	394.4	0.039
20	17.46	33.106	5.67	23.974	394.4	0.079
30	17.47	33.107	5.66	23.974	394.4	0.118
50	15.82	33.012	5.96	24.282	365.1	0.195
75	14.97	32.969	6.00	24.437	350.3	0.285
100	13.24	33.178	5.91	24.957	300.8	0.366
125	10.91	33.109	5.60	25.342	264.1	0.438
150	9.87	33.260	5.20	25.637	236.0	0.501
200	8.91	33.783	3.97	26.201	182.5	0.607
250	8.19	33.990	3.27	26.474	156.6	0.694
300	7.70	34.094	2.12	26.628	142.0	0.771
400	6.52	34.150	1.05	26.836	122.2	0.908
500	5.86	34.226	0.53	26.981	108.5	1.030

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93110

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 09.5N	122 55.0W	06/24/78	1042 GMT	4309M	350	20KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	17.77	33.218	5.55	0.40	3.		0.0	393.2
11	17.75	33.219	5.55	0.37	3.		0.0	392.7
29	17.79	33.220	5.57	0.36	3.		0.0	393.5
57	17.54	33.389	5.67	0.33	3.		0.0	375.5
66	16.72	33.311	5.79	0.33	3.		0.0	362.7
80	16.88	33.703	5.66	0.28	3.		0.0	337.7
94	15.40	33.466	5.81	0.32	3.		0.1	322.9
108	13.35	33.168	5.92	0.41	3.		0.2	303.6
132	11.12	33.178	5.49	0.70	8.		6.1	262.5
150	10.02	33.230	5.19	0.89	12.		9.7	240.6
178	9.35	33.543	4.48	1.15	18.		15.3	206.9
206	8.91	33.863	3.58	1.52	26.		22.0	176.5
234	8.37	33.974	3.23	1.66	33.		24.7	160.3
281	7.72	34.039	2.58	1.92	42.		28.6	146.3
332	7.06	34.080	1.77	2.24	54.		33.2	134.4
412	6.51	34.190	0.87	2.57	67.		37.6	119.1
491	6.17	34.253	0.52	2.73	75.		39.5	110.2
571	5.63		0.37	2.80	87.		41.7	

Z	T	S	O2	SIGT	DT	DD
0	17.77	33.218	5.55	23.987	393.2	0.000
10	17.75	33.219	5.55	23.992	392.7	0.039
20	17.77	33.220	5.56	23.988	393.1	0.079
30	17.78	33.220	5.57	23.985	393.4	0.118
50	17.60	33.311	5.64	24.097	382.6	0.196
75	16.82	33.564	5.71	24.477	346.4	0.288
100	14.52	33.323	5.88	24.804	315.3	0.371
125	11.64	33.175	5.65	25.262	271.8	0.445
150	10.02	33.230	5.19	25.590	240.6	0.510
200	9.00	33.803	3.76	26.203	182.3	0.617
250	8.13	34.007	3.02	26.496	154.5	0.703
300	7.46	34.055	2.27	26.632	141.6	0.780
400	6.57	34.173	0.97	26.848	121.1	0.916
500	6.14	34.260	0.46	26.972	109.3	1.038

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93120

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 49.0N	123 35.0W	06/24/78	1722 GMT	4117M	020	24KT	1	010 7 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	17.58	33.143	5.64	0.39	2.	0.00	0.0	394.3
11	17.55	33.141	5.66	0.38	2.	0.00	0.1	393.8
30	17.30	33.109	5.70	0.40	2.	0.00	0.0	390.4
39	17.10	33.092	5.72	0.40	2.	0.00	0.0	387.2
53	15.68	32.997	5.98	0.42	2.	0.00	0.0	363.1
66	14.94	32.922	6.09	0.43	2.	0.00	0.0	353.2
90	14.21	32.982	6.09	0.47	2.	0.00	0.0	334.0
109	13.15	33.140	5.90	0.54	4.	0.08	0.8	301.9
127	11.44	33.151	5.62	0.71	7.	0.06	4.7	270.0
146	10.20	33.238	5.02	1.06	12.	0.01	11.6	242.9
173	9.19	33.501	4.63	1.30	18.	0.00	16.7	207.5
206	8.93	33.846	3.29	1.69	27.	0.00	23.9	178.1
234	8.38	33.961	3.20	1.83	32.	0.00	25.9	161.4
280	7.77	34.004	2.83	1.98	39.	0.00	28.7	149.6
331	7.13	34.034	2.18	2.28	50.	0.00	32.3	138.7
410	6.15	34.097	1.20	2.64	67.	0.00	38.1	121.6
490	5.58	34.159	0.75	2.84	80.	0.00	41.2	110.2
572	5.31	34.266	0.39	2.90	90.	0.00	42.4	99.1

Z	T	S	O2	SIGT	DT	DD
0	17.58	33.143	5.64	23.975	394.3	0.000
10	17.56	33.142	5.66	23.980	393.9	0.039
20	17.46	33.129	5.68	23.992	392.7	0.079
30	17.30	33.109	5.70	24.016	390.4	0.118
50	16.01	33.019	5.92	24.244	368.7	0.194
75	14.66	32.922	6.09	24.467	347.4	0.284
100	13.73	33.071	6.01	24.775	318.1	0.368
125	11.63	33.148	5.66	25.243	273.6	0.443
150	10.00	33.272	4.97	25.625	237.2	0.507
200	8.95	33.792	3.52	26.201	182.5	0.614
250	8.15	33.988	3.10	26.479	156.1	0.700
300	7.52	34.017	2.59	26.594	145.2	0.778
400	6.26	34.089	1.31	26.821	123.6	0.918
500	5.53	34.170	0.70	26.977	108.8	1.040

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93130

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 29.0N	124 14.0W	06/24/78	2302 GMT	4404M	020	24KT	1	020 6 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.34	33.422	5.55	0.23	2.	0.00	0.1	391.6	0	18.34	33.422	5.55	24.003	391.6	0.000
10	18.33	33.424	5.56	0.24	2.	0.00	0.0	391.3	10	18.33	33.424	5.56	24.007	391.3	0.039
29	18.34	33.460	5.55	0.24	2.	0.00	0.0	388.9	20	18.34	33.443	5.55	24.020	390.0	0.078
39	18.49	33.658	5.58	0.22	2.	0.00	0.0	378.0	30	18.35	33.481	5.55	24.044	387.8	0.117
53	18.55	33.704	5.58	0.22	2.	0.00	0.0	376.1	50	18.54	33.695	5.58	24.162	376.5	0.194
67	18.35	33.713	5.60	0.21	2.	0.00	0.0	370.7	75	18.25	33.755	5.62	24.279	365.4	0.287
90	17.76	33.808	5.66	0.19	2.	0.00	0.0	350.1	100	16.95	33.772	5.66	24.604	334.3	0.375
109	16.11	33.718	5.66	0.22	3.	0.00	0.0	319.7	125	14.82	33.601	5.63	24.953	301.1	0.456
128	14.56	33.579	5.62	0.30	3.	0.13	0.5	297.4	150	12.17	33.501	5.30	25.416	257.1	0.526
146	12.45	33.503	5.34	0.51	6.	0.02	4.3	262.1	200	10.08	33.711	4.68	25.953	206.0	0.644
174	11.03	33.549	5.09	0.73	9.	0.02	9.1	233.7	250	8.65	33.985	4.06	26.399	163.7	0.739
207	9.87	33.763	4.57	1.04	16.	0.00	15.0	198.7	300	7.63	33.998	3.34	26.563	148.1	0.819
235	9.04	33.947	4.26	1.29	23.	0.00	19.4	172.2	400	6.42	34.066	1.60	26.783	127.2	0.962
282	7.95	33.997	3.59	1.65	34.	0.01	25.0	152.6	500	5.87	34.207	0.63	26.964	110.1	1.086
333	7.15	33.999	2.85	1.97	45.	0.01	29.6	141.6							
412	6.32	34.083	1.39	2.42	63.	0.01	37.0	124.7							
491	5.92	34.197	0.68	2.68	76.	0.00	40.2	111.4							
569	5.45	34.255	0.43	2.79	87.	0.00	42.4	101.5							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93140

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 10.6N	124 56.3W	06/25/78	0524 GMT	3930M	010	23KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.80	33.840	5.55	0.31	3.	0.00	0.1	372.2	0	18.80	33.840	5.55	24.207	372.2	0.000
11	18.80	33.837	5.52	0.35	3.	0.00	0.1	372.4	10	18.80	33.837	5.52	24.205	372.4	0.037
44	18.81	33.835	5.51	0.34	3.	0.00	0.1	372.8	20	18.80	33.837	5.52	24.205	372.4	0.075
71	18.78	34.066	5.55	0.32	3.	0.00	0.1	355.3	30	18.81	33.836	5.51	24.201	372.8	0.112
90	18.31	34.006	5.48	0.35	3.	0.01	0.1	348.5	50	18.80	33.878	5.52	24.235	369.5	0.186
103	17.82	33.985	5.58	0.33	3.	0.00	0.1	338.6	75	18.71	34.060	5.53	24.397	354.1	0.277
118	16.51	33.795	5.64	0.39	3.	0.01	0.1	322.8	100	17.97	33.996	5.55	24.532	341.2	0.365
135	15.91	33.934	5.44	0.41	4.	0.04	0.1	299.6	125	16.31	33.860	5.56	24.821	313.7	0.448
154	13.23	33.562	5.43	0.58	6.	0.00	2.8	272.4	150	13.84	33.646	5.43	25.196	278.0	0.523
181	11.36	33.516	5.21	0.86	9.	0.00	7.4	241.7	200	10.50	33.566	4.89	25.769	223.5	0.650
205	10.32	33.589	4.79	1.10	14.	0.00	12.1	218.8	250	9.02	33.881	3.88	26.261	176.8	0.752
229	9.60	33.763	4.23	1.33	20.	0.00	16.5	194.5	300	8.18	33.981	3.38	26.469	157.0	0.838
262	8.73	33.930	3.73	1.65	27.	0.00	22.0	168.8	400	6.53	34.052	1.84	26.757	129.7	0.987
299	8.20	33.980	3.40	1.83	33.	0.00	25.0	157.4	500	5.63	34.155	0.89	26.953	111.1	1.113
344	7.13	34.020	2.51	2.24	48.	0.00	31.0	139.7							
410	6.47	34.057	1.75	2.51	60.	0.02	35.3	128.5							
489	5.71	34.145	0.97	2.86	76.		39.8	112.8							
569	5.31	34.201	0.61	2.87	88.		41.1	104.0							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93150

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 50.4N	125 33.6W	06/25/78	1232 GMT	4411M	030	25KT	1	020 8 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.86	33.763	5.51	0.35	2.	0.00	0.1	379.2	0	18.86	33.763	5.51	24.133	379.2	0.000
11	18.87	33.761	5.50	0.37	2.	0.00	0.1	379.6	10	18.87	33.762	5.50	24.129	379.6	0.038
39	18.88	33.763	5.52	0.35	2.	0.00	0.0	379.7	20	18.87	33.762	5.50	24.130	379.6	0.076
62	18.80	33.817	5.51	0.34	2.	0.00	0.0	373.9	30	18.88	33.762	5.51	24.127	379.8	0.114
80	18.35	33.757	5.61	0.32	2.	0.00	0.0	367.5	50	18.84	33.780	5.52	24.150	377.6	0.190
94	16.83	33.702	5.73	0.33	2.	0.00	0.0	336.7	75	18.47	33.774	5.57	24.237	369.3	0.284
108	16.08	33.710	5.70	0.35	3.	0.00	0.0	319.6	100	16.47	33.705	5.72	24.666	328.5	0.372
126	15.01	33.677	5.60	0.39	3.	0.07	0.1	299.4	125	15.07	33.680	5.61	24.961	300.4	0.451
144	14.36	33.640	5.54	0.40	4.	0.01	0.5	288.8	150	13.80	33.589	5.50	25.159	281.5	0.525
166	12.17	33.478	5.37	0.60	7.	0.03	3.5	258.9	200	10.35	33.666	4.91	25.872	213.7	0.651
189	10.65	33.528	5.15	0.77	11.	0.05	7.3	228.8	250	9.16	33.951	4.44	26.292	173.8	0.750
211	10.16	33.808	4.68	1.09	15.	0.00	13.0	200.1	300	7.94	34.003	3.44	26.522	152.0	0.834
238	9.48	33.919	4.56	1.20	19.	0.03	15.4	181.1	400	6.66	34.050	1.95	26.739	131.4	0.981
270	8.65	33.986	4.16	1.51	26.	0.02	20.5	163.5	500	5.66	34.129	0.94	26.929	113.4	1.109
315	7.64	34.005	3.06	1.93	40.	0.03	26.4	147.7							
374	7.01	34.032	2.34	2.33	50.	0.05	31.9	137.3							
444	6.10	34.086	1.35	2.75	67.	0.01	38.0	121.8							
518	5.58	34.142	0.88	2.94	79.	0.00	40.9	111.5							

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93160

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 30.4N	126 12.8W	06/25/78	1845 GMT	4314M	010	21KT	1	020 8 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	18.80	33.737	5.52	0.53	3.	0.00	0.1	379.7
11	18.79	33.736	5.52	0.53	3.	0.05	0.0	379.5
29	18.78	33.731	5.54	0.52	3.	0.00	0.1	379.6
52	18.37	33.700	5.61	0.52	3.	0.00	0.1	372.2
61	17.86	33.653	5.79	0.52	3.	0.00	0.1	363.7
70	17.84	33.752	5.71	0.50	3.	0.04	0.0	356.0
84	17.82	33.901	5.67	0.48	3.	0.00	0.1	344.7
99	17.40	33.951	5.64	0.54	3.	0.00	0.1	331.4
121	16.05	33.848	5.62	0.56	3.	0.06	0.1	308.9
140	13.75	33.579	5.53	0.70	5.	0.12	2.2	281.2
164	11.86	33.517	5.31	1.31	8.	0.02	6.3	250.5
192	10.31	33.634	4.95	1.11	13.	0.00	11.4	215.4
221	9.75	33.812	4.69	1.30	17.	0.00	15.0	193.2
259	8.81	33.933	3.95	1.64	26.	0.00	21.4	169.8
315	7.72	34.002	3.15	2.03	39.	0.00	27.7	149.0
386	6.78	34.042	2.02	2.39	55.	0.01	34.2	133.6
455	5.90	34.102	1.18	2.74	71.	0.00	39.3	118.2
526	5.40	34.171	0.73	2.88	85.	0.01	42.4	107.3

Z	T	S	O2	SIGT	DT	DD
0	18.80	33.737	5.52	24.129	379.7	0.000
10	18.79	33.736	5.52	24.130	379.5	0.038
20	18.79	33.734	5.53	24.129	379.7	0.076
30	18.77	33.731	5.54	24.131	379.4	0.114
50	18.41	33.703	5.60	24.200	372.9	0.190
75	17.83	33.805	5.69	24.419	352.0	0.281
100	17.36	33.947	5.64	24.642	330.8	0.367
125	15.58	33.788	5.61	24.930	303.3	0.447
150	12.86	33.527	5.45	25.300	268.1	0.519
200	10.11	33.685	4.89	25.929	208.4	0.640
250	9.04	33.913	4.14	26.283	174.7	0.738
300	7.98	33.992	3.35	26.507	153.4	0.823
400	6.58	34.053	1.82	26.751	130.3	0.970
500	5.54	34.146	0.85	26.957	110.7	1.096

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93170

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 10.4N	126 52.0W	06/26/78	0051 GMT	4314M	020	24KT	1	020 9 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	19.20		5.47	0.18	2.	0.02	0.0	
11	19.21	33.990	5.48	0.18	2.	0.02	0.0	371.2
30	19.21	33.986	5.47	0.18	2.	0.00	0.1	371.5
39	19.15	33.959	5.50	0.18	2.	0.00	0.1	372.0
53	18.98	33.933	5.52	0.18	2.	0.00	0.0	369.8
67	17.55	33.765	5.72	0.16	3.	0.00	0.0	348.4
90	17.29	33.883	5.64	0.15	3.	0.00	0.0	333.9
109	16.39	33.822	5.64	0.18	3.	0.00	0.0	318.2
127	15.00	33.684	5.58	0.27	4.	0.14	0.3	298.7
145	13.74	33.591	5.48	0.40	5.	0.03	2.1	280.1
172	12.00	33.472	5.36	0.58	7.	0.02	5.1	256.3
205	10.58	33.615	5.02	0.84	11.	0.01	10.1	221.2
232	9.66	33.787	4.47	1.18	18.	0.00	16.1	193.6
278	8.60	33.954	3.77	1.58	28.	0.00	22.7	165.2
329	7.74	34.001	3.17	1.97	39.	0.02	28.0	149.4
407	6.32	34.027	1.97	2.47	59.	0.01	35.3	128.9
485	5.55	34.084	1.18	2.83	75.	0.00	40.3	115.5
562	5.20	34.184	0.61	3.00	89.	0.04	42.5	104.0

Z	T	S	O2	SIGT	DT	DD
0	19.20	33.990	5.47	24.220	371.0	0.000
10	19.21	33.990	5.48	24.217	371.2	0.037
20	19.21	33.988	5.48	24.216	371.4	0.074
30	19.21	33.986	5.47	24.214	371.5	0.112
50	19.02	33.939	5.52	24.227	370.3	0.186
75	17.46	33.823	5.69	24.522	342.1	0.276
100	16.89	33.866	5.64	24.690	326.1	0.360
125	15.16	33.700	5.59	24.955	300.9	0.439
150	13.39	33.560	5.46	25.220	275.7	0.512
200	10.76	33.582	5.09	25.736	226.7	0.640
250	9.19	33.869	4.17	26.224	180.3	0.744
300	8.21	33.985	3.51	26.467	157.2	0.831
400	6.44	34.025	2.08	26.749	130.5	0.980
500	5.45	34.100	1.05	26.932	113.1	1.107

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93180

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 51.0N	127 31.0W	06/26/78	0748 GMT	4698M	010	20KT	2	020 9 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	19.31	34.082	5.45	0.52	3.	0.00	0.1	367.0
11	19.33	34.082	5.46	0.52	3.	0.00	0.1	367.5
39	19.36	34.082	5.46	0.52	3.	0.00	0.1	368.2
62	19.30	34.274	5.50	0.49	3.	0.00	0.1	352.8
81	19.41	34.432	5.48	0.47	3.	0.01	0.0	344.0
95	18.87	34.355	5.48	0.45	3.	0.01	0.0	336.5
109	18.42	34.300	5.50	0.46	3.	0.06	0.0	329.7
128	17.14	34.167	5.43	0.50	3.	0.08	0.0	309.8
146	16.31	34.160	5.25	0.56	4.	0.22	0.5	291.8
170	15.00	34.113	5.05	0.65	5.	0.07	2.8	267.3
193	12.47	33.837	4.87	0.89	8.	0.06	7.1	238.0
216	11.32	33.886	4.58	1.10	12.	0.06	11.2	213.8
244	10.12	33.904	4.24	1.37	18.	0.07	16.0	192.3
276	8.99	33.986	4.07	1.59	25.	0.07	20.5	168.6
322	8.10	34.015	3.56	1.87	35.	0.06	24.9	153.4
382	7.19	34.042	2.53	2.23	48.	0.06	30.9	138.9
451	6.27	34.108	1.41	2.62	65.	0.07	37.0	122.2
525	5.57	34.150	0.92	2.87	78.	0.06	40.8	110.8

Z	T	S	O2	SIGT	DT	DD
0	19.31	34.082	5.45	24.262	367.0	0.000
10	19.33	34.082	5.46	24.257	367.5	0.037
20	19.34	34.082	5.46	24.254	367.7	0.074
30	19.35	34.082	5.46	24.252	368.0	0.110
50	19.33	34.157	5.48	24.314	362.0	0.184
75	19.38	34.384	5.49	24.474	346.7	0.273
100	18.73	34.337	5.49	24.603	334.4	0.359
125	17.35	34.185	5.45	24.825	313.3	0.441
150	16.15	34.158	5.21	25.086	288.5	0.517
200	12.04	33.838	4.79	25.700	230.0	0.649
250	9.88	33.919	4.21	26.149	187.4	0.756
300	8.46	34.009	3.84	26.448	159.0	0.845
400	6.93	34.059	2.20	26.709	134.3	0.997
500	5.77	34.140	1.00	26.924	113.9	1.127

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93190

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 30.4N	128 09.9W	06/26/78	1319 GMT	4122M	010	21KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
3	19.52	34.356	5.40	0.37	3.	0.00	0.1	352.3
12	19.55	34.355	5.40	0.36	3.	0.00	0.1	353.1
30	19.59	34.356	5.41	0.37	3.	0.00	0.0	354.0
53	19.55	34.354	5.41	0.36	3.	0.00	0.0	353.1
62	19.31	34.283	5.45	0.35	3.	0.00	0.0	352.4
71	18.18	34.105	5.60	0.34	3.	0.00	0.0	338.3
85	17.60	34.018	5.67	0.35	3.	0.00	0.0	331.1
98	17.65	34.138	5.58	0.33	3.	0.00	0.0	323.5
121	17.51	34.266	5.43	0.35	3.	0.00	0.0	311.0
139	15.13	33.836	5.46	0.47	4.	0.11	0.8	290.3
162	13.19	33.650	5.37	0.18	6.	0.01	3.1	265.2
189	12.09	33.792	5.00	0.33	8.	0.00	6.4	234.4
217	10.66	33.825	4.70	1.08	13.	0.00	12.0	207.0
253	9.49	33.945	4.29	1.41	21.	0.00	17.4	179.3
308	8.20	34.008	3.63	1.85	34.	0.01	24.5	155.3
377	7.10	34.036	2.45	2.28	49.	0.01	31.6	138.2
448	6.20	34.091	1.46	2.43	66.	0.00	38.0	122.7
523	5.59	34.157	0.85	2.87	80.	0.01	40.6	110.5

Z	T	S	O2	SIGT	DT	DD
0	19.52	34.356	5.40	24.416	352.3	0.000
10	19.54	34.355	5.40	24.409	352.9	0.035
20	19.57	34.355	5.40	24.402	353.6	0.071
30	19.59	34.356	5.41	24.398	354.0	0.106
50	19.56	34.354	5.41	24.406	353.3	0.177
75	17.91	34.058	5.62	24.594	335.3	0.264
100	17.64	34.145	5.56	24.726	322.7	0.347
125	17.03	34.176	5.43	24.894	306.8	0.426
150	14.07	33.705	5.44	25.194	278.2	0.500
200	11.52	33.808	4.88	25.774	223.0	0.628
250	9.57	33.935	4.33	26.214	181.3	0.731
300	8.36	34.005	3.73	26.460	157.8	0.819
400	6.78	34.052	2.09	26.724	132.8	0.970
500	5.74	34.137	0.99	26.925	113.7	1.099

RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93200

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 10.4N	128 48.7W	06/26/78	1908 GMT	4411M	030	18KT	2	030 4 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	19.16	34.042	5.46	0.38	2.		0.1	366.2
12	19.16	34.042	5.47	0.37	2.		0.1	366.2
30	19.19	34.041	5.49	0.35	2.		0.1	367.0
54	19.16	34.167	5.51	0.33	2.		0.0	357.2
63	19.12	34.165	5.50	0.32	2.		0.0	356.3
72	18.97	34.137	5.50	0.30	2.		0.0	354.8
86	17.93	33.928	5.65	0.27	2.		0.0	345.3
100	17.75	33.985	5.62	0.28	3.		0.0	337.0
123	16.79	33.948	5.57	0.27	3.		0.0	317.9
143	15.75	33.938	5.40	0.32	4.		0.1	295.9
165	14.38	33.875	5.21	0.33	5.		0.9	272.0
193	12.36	33.749	5.12	0.58	8.		5.6	242.4
220	10.96	33.791	4.79	0.83	12.		10.3	214.6
258	9.76	33.934	4.06	1.33	20.		18.2	184.4
314	8.53	34.047	3.08	1.86	35.		25.4	157.2
383	7.81	34.127	1.97	2.24	47.		31.1	141.0
453	6.94	34.167	1.25	2.57	60.		36.1	126.3
529	6.17	34.220	0.68	2.70	75.		39.5	112.7

Z	T	S	O2	SIGT	DT	DD
0	19.16	34.042	5.46	24.270	366.2	0.000
10	19.16	34.042	5.47	24.270	366.2	0.037
20	19.17	34.042	5.48	24.267	366.5	0.073
30	19.19	34.041	5.49	24.261	367.0	0.110
50	19.16	34.144	5.51	24.346	359.0	0.183
75	18.75	34.089	5.53	24.408	353.0	0.272
100	17.75	33.985	5.62	24.577	337.0	0.359
125	16.69	33.948	5.56	24.799	315.8	0.442
150	15.34	33.923	5.33	25.088	288.3	0.518
200	11.95	33.750	5.05	25.649	234.9	0.652
250	9.96	33.903	4.22	26.123	189.9	0.760
300	8.78	34.027	3.32	26.412	162.4	0.851
400	7.60	34.138	1.77	26.678	137.2	1.007
500	6.44	34.199	0.87	26.885	117.6	1.141

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RV DAVID STARR JORDAN — CALCOFI CRUISE 7807 — 93 029

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 45.8N	117 25.8W	06/21/78	0004 GMT	464M	310	12KT	0	300 3 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0A	20.75	33.497	5.58	0.48	3.	0.00	0.1	445.3
11	16.29	33.353	6.34	0.48	3.	0.00	0.1	350.2
20	12.93	33.308	5.88	0.78	5.	0.22	4.4	265.4
30	11.46	33.342	5.08	1.08	9.	0.60	9.6	256.3
40	10.06	33.390	4.65	1.34	13.	0.11	14.7	229.4
49	10.39	33.603	3.88	1.49	15.	0.10	17.6	219.0
58	10.06	33.679	4.76U					208.0
68	9.88	33.794	3.29	1.74	21.	0.01	21.8	196.6
77	9.73	33.910	2.93	1.89	23.	0.02	23.7	185.6
86	9.85	33.993	2.41	2.01	26.	0.00	24.8	181.4
95	9.78	34.013	2.38	2.04	27.	0.00	25.2	178.8
105	9.59	34.027	2.46	1.99	27.	0.00	25.4	174.8
114	9.40	34.004	2.65	1.95	27.	0.01	25.2	173.5
123	9.37	34.045	2.52	2.01	28.	0.01	25.7	170.0
131	9.43	34.073	2.39	2.03	28.	0.01	26.0	168.9
140	9.50	34.102	2.13	2.05	30.	0.01	26.7	167.8
149	9.42	34.118	2.07	2.11	30.	0.03	27.0	165.4
158	9.34	34.122	2.08	2.10	31.	0.00	27.4	163.8

Z	T	S	O2	SIGT	DT	DD
0	20.75	33.497	5.58	23.440	445.3	0.000
10	16.68	33.362	6.33	24.354	358.2	0.040
20	12.93	33.308	5.88	25.118	285.4	0.072
30	11.46	33.342	5.08	25.424	256.3	0.100
50	10.37	33.615	3.83	25.830	217.7	0.147
75	9.75	33.885	3.02	26.145	187.8	0.198
100	9.69	34.023	2.40	26.262	176.7	0.244
125	9.38	34.053	2.49	26.336	169.6	0.288
150	9.41	34.119	2.07	26.383	165.2	0.331

A) A SHAKEDOWN STATION.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 95031

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 30.1N	117 24.2W	06/21/78	2056 GMT	1100M	320	12KT	0	320 5 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1A	19.6	33.491	5.99	0.29	4.	0.00	0.1	417.0
10	15.04	33.384	6.70	0.36	2.	0.00	0.1	321.4
20	13.13	33.279	6.31	0.45	4.	0.08	1.8	291.3
29	12.10	33.309	5.54	0.76	8.	0.32	6.9	270.1
39	11.45	33.319	5.07	0.98	10.	0.42	9.9	257.8
49	10.88	33.463	4.50	1.10	14.	0.22	14.4	237.5
58	10.04	33.597	4.03	1.38	18.	0.05	17.9	213.7
68	10.21	33.803	3.08	1.64	22.	0.04	21.2	201.2
77	9.89	33.876	2.83		25.	0.05	23.2	190.7
87	9.55	33.898	3.07	1.94	26.	0.02	23.2	183.7
96	9.55	33.967	2.88	1.92	28.	0.02	24.0	178.6
106	9.54	34.000	2.76	2.06	30.	0.03	24.6	176.0
116	9.41	34.0358	2.81	2.08	31.	0.05	24.5	171.4
125	9.24	34.053	2.60	2.14	33.	0.02	25.5	167.4
135	9.15	34.088	2.50	2.21	34.	0.03	26.4	163.5
145	9.24	34.142	2.15	2.35	36.	0.02	27.1	160.8
154	9.13	34.144	2.15	2.36	36.	0.00	27.4	159.0
164	9.00	34.143	2.13	2.35	37.	0.01	27.8	157.1

Z	T	S	O2	SIGT	DT	DD
0	19.60	33.491	5.99	23.738	417.0	0.000
10	15.04	33.384	6.70	24.740	321.4	0.037
20	13.13	33.279	6.31	25.056	291.3	0.068
30	12.02	33.308	5.49	25.293	268.7	0.096
50	10.77	33.477	4.46	25.652	234.7	0.146
75	9.98	33.867	2.89	26.092	192.8	0.200
100	9.55	33.981	2.82	26.254	177.5	0.247
125	9.24	34.053	2.60	26.360	167.4	0.290
150	9.19	34.143	2.15	26.438	160.0	0.332

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 97030

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 16.0N	117 07.0W	06/23/78	0045 GMT	50M	350	15KT	1	320 3 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	15.45	33.418	6.96	0.48	10.	0.00	0.1	327.5
10	13.16	33.383	6.29	0.63	10.	0.08	3.8	284.2
20	11.65	33.509	5.14	0.99	14.	0.10	9.3	247.3
30	10.26	33.696	3.50	1.61	20.	0.13	19.6	210.0

Z	T	S	O2	SIGT	DT	DD
0	15.45	33.418	6.96	24.676	327.5	0.000
10	13.16	33.383	6.29	25.131	284.2	0.031
20	11.65	33.509	5.14	25.518	247.3	0.057
30	10.26	33.696	3.50	25.912	210.0	0.080

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 97035

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
32 05.5N	117 27.5W	06/23/78	0543 GMT	1260M	320	13KT	0	320 4 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	18.79	33.476	5.94	0.29	4.	0.02	0.0	398.4
11	18.59	33.464	6.01	0.17	4.	0.01	0.1	394.5
31	11.97	33.330	5.68	0.68	4.	0.32	6.4	266.2
41	11.25	33.344	5.10	0.86	10.	0.38	10.1	252.5
56	10.53	33.525	4.16	1.22	16.	0.39	15.5	227.0
71	10.05	33.760	3.43	1.47	22.	0.07	20.3	201.8
96	9.98	33.929	2.94	1.70	25.	0.03	22.5	188.2
116	9.82	33.996	2.70	1.89	27.	0.01	23.5	180.7
136	9.58	34.092	2.38	1.93	30.	0.02	25.5	169.8
156	9.43	34.132	2.16		33.	0.02	26.6	164.5
186	9.26	34.192	1.89	2.06	37.	0.04	27.6	157.4
221	9.00	34.218	1.75	2.28	41.	0.03	28.8	151.5
251	8.7 C	34.256	1.37	2.45	45.	0.02	30.2	144.2
300	8.42	34.325	0.94	2.67	52.	0.03	31.6	135.0
355	7.89	34.327	0.67	2.66	56.	0.01	33.2	127.2
439	7.01	34.317	0.53	2.97	64.	0.01	36.2	116.1
523	6.31	34.341	0.32		74.	0.01	38.3	105.3
607	5.75	34.363	0.28	3.10	82.	0.01	40.4	96.9

Z	T	S	O2	SIGT	DT	DD
0	18.79	33.476	5.94	23.932	398.4	0.000
10	18.61	33.466	6.00	23.969	394.9	0.040
20	16.15	33.371	5.86	24.484	345.8	0.077
30	12.32	33.330	5.70	25.254	272.5	0.108
50	10.78	33.439	4.53	25.621	237.6	0.159
75	10.04	33.806	3.31	26.034	198.3	0.214
100	9.95	33.944	2.89	26.156	186.7	0.262
125	9.71	34.041	2.55	26.273	175.7	0.308
150	9.47	34.123	2.22	26.377	165.8	0.352
200	9.17	34.204	1.84	26.489	155.1	0.434
250	8.71	34.255	1.38	26.601	144.5	0.511
300	8.42	34.325	0.94	26.701	135.0	0.583
400	7.41	34.320	0.58	26.847	121.2	0.717
500	6.49	34.333	0.37	26.985	108.1	0.839
600	5.79	34.361	0.28	27.096	97.5	0.949

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 97040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 56.0N	117 48.0W	06/23/78	0947 GMT	1480M	320	18KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	17.67	33.381	5.75	0.24	2.	0.00	0.0	379.0
9	17.66	33.379	5.89	0.25	2.	0.01	0.0	379.0
29	13.12	33.367	6.14	0.52	3.	0.22	4.9	284.6
33	12.24	33.350	5.60	0.77	7.	0.38	7.7	269.6
53	10.95	33.366	4.93	0.99	11.	0.31	12.2	245.8
67	10.29	33.538	4.20	1.25	17.	0.14	16.9	222.1
91	9.68	33.843	3.23	1.62	24.	0.05	22.2	189.8
111	9.64	33.919	3.03	1.81	26.	0.04	23.4	183.6
131	9.38	34.033	2.63	1.82	30.	0.04	22.9	171.1
150	9.30	34.127	2.24	2.03	34.	0.08	23.8	162.9
180	9.04	34.178	1.92	2.12	36.	0.01	27.7	155.1
214	8.69	34.223	1.66	2.27	40.	0.03	29.6	146.5
244	8.33	34.246	1.29	2.44	44.	0.01	31.3	139.5
293	8.03	34.273	1.06	2.55	48.	0.00	32.7	133.2
348	7.54	34.291	0.78	2.66	55.	0.01	34.5	125.1
432	6.87	34.324	0.49	2.81	65.	0.03	36.8	113.7
516	6.28	34.338	0.37	2.87	73.	0.07	38.6	105.2
600	5.76	34.354	0.31	2.98	80.	0.01	39.8	97.7

Z	T	S	O2	SIGT	DT	DD
0	17.67	33.381	5.75	24.135	379.0	0.000
10	17.66	33.379	5.90	24.136	379.0	0.038
20	16.14	33.377	6.03	24.490	345.2	0.074
30	12.88	33.363	6.02	25.172	280.3	0.106
50	11.14	33.365	5.03	25.500	249.1	0.159
75	10.02	33.652	3.81	25.919	209.3	0.216
100	9.66	33.888	3.12	26.162	186.2	0.266
125	9.46	33.998	2.76	26.281	174.9	0.312
150	9.30	34.127	2.24	26.408	162.9	0.355
200	8.84	34.207	1.77	26.543	150.0	0.435
250	8.29	34.250	1.25	26.663	138.6	0.509
300	7.97	34.276	1.02	26.731	132.2	0.579
400	7.11	34.312	0.58	26.883	117.8	0.710
500	6.39	34.336	0.38	27.000	106.7	0.829
600	5.76	34.354	0.31	27.094	97.7	0.938

A) A SHAKEDOWN STATION.
B) AN ERROR OF 0.001 (0.039 PPT) IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.
C) TEMPERATURE INFERRED FROM PRESSURE THERMOMETER AND WIRE DEPTH.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 97050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 36.0N	118 30.5W	06/23/78	1720 GMT	1905M	330	7KT	1	300 6 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.27	33.312	6.00	0.10	0.	0.02	0.1	352.8	0	16.27	33.312	6.00	24.411	352.8	0.000
11	16.27	33.312	6.03	0.02	0.	0.01	0.2	352.8	10	16.27	33.312	6.03	24.411	352.8	0.035
31	11.87	33.414	5.41	0.86	8.	0.36	9.5	258.2	20	16.27	33.312	5.89	24.411	352.8	0.071
61	11.00	33.521	4.62	1.10	14.	0.40	14.3	235.2	30	12.50	33.404	5.47	25.276	270.4	0.102
55	10.32	33.627	3.77	1.37	19.	0.38	18.8	216.1	50	10.51	33.595	4.02	25.790	221.6	0.151
70	9.96	33.705	3.55	1.56	23.	0.26	21.2	204.5	75	9.78	33.723	3.54	26.014	200.3	0.204
95	9.11	33.792	3.51	1.87	26.	0.05	23.3	184.8	100	9.02	33.814	3.46	26.209	181.7	0.252
115	8.83	33.880	3.29	1.95	29.	0.04	24.9	174.0	125	8.73	33.916	3.19	26.333	170.0	0.297
135	8.67	33.952	3.05	2.06	32.	0.02	25.9	166.3	150	8.64	34.024	2.60	26.432	160.5	0.339
155	8.63	34.046	2.45	2.26	37.	0.02	28.0	158.8	200	8.30	34.115	2.00	26.555	148.9	0.418
188	8.43	34.104	2.08	2.35	41.	0.04	29.5	151.5	250	7.88	34.152	1.69	26.647	140.2	0.492
219	8.10	34.128	1.90	2.31	46.	0.01	30.9	145.0	300	7.49	34.207	1.24	26.748	130.6	0.562
249	7.89	34.151	1.70	2.38	49.	0.02	31.9	140.3	400	6.60	34.281	0.53	26.928	113.5	0.689
298	7.50	34.204	1.26	2.56	55.	0.02	34.1	131.0	500	5.97	34.324	0.36	27.044	102.5	0.804
353	7.08	34.267	0.72	2.72	63.	0.02	35.9	120.7	600	5.49	34.348	0.45	27.123	95.0	0.909
437	6.25	34.285	0.47	2.80	75.	0.03	38.8	108.8							
522	5.90	34.336	0.34	2.94	83.	0.01	40.2	100.7							
606	5.45	34.347	0.47	2.98	88.	0.00	40.5	94.6							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 97060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 15.5N	119 10.0W	06/24/78	0038 GMT	3550M	330	21KT	1	310 6 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
2	16.38	33.135	5.87	0.26	3.	0.00	0.1	368.1	0	16.38	33.135	5.87	24.250	368.1	0.000
12	16.36	33.134	5.93	0.30	3.	0.00	0.1	367.7	10	16.36	33.134	5.92	24.254	367.7	0.037
32	16.16	33.132	6.09	0.26	3.	0.01	0.0	363.5	20	16.28	33.133	6.00	24.271	366.1	0.074
61	14.25	33.142	6.14	0.33	4.	0.01	0.1	323.1	30	16.18	33.132	6.08	24.293	364.0	0.110
70	13.25	33.140	6.01	0.41	5.	0.08	0.9	303.8	50	15.27	33.140	6.12	24.501	344.1	0.181
84	11.85	33.182	5.59	0.67	8.	0.25	5.8	274.9	75	12.72	33.151	5.88	25.037	293.1	0.261
99	10.65	33.253	5.11	0.97	12.	0.08	11.2	249.1	100	10.64	33.259	5.10	25.506	248.6	0.329
113	10.49	33.287	4.99	1.05	14.	0.07	12.2	244.0	125	10.17	33.380	4.74	25.680	232.0	0.390
136	9.86	33.480	4.49	1.26	17.	0.04	16.0	219.5	150	9.60	33.575	4.26	25.928	208.5	0.446
155	9.52	33.610	4.17	1.45	21.	0.03	18.8	204.6	200	8.75	33.978	3.06	26.379	165.5	0.541
182	9.04	33.892	3.39	1.80	29.	0.03	23.1	176.3	250	7.85	34.030	2.63	26.555	148.9	0.622
209	8.60	33.999	2.95	2.05	35.	0.02	26.0	161.8	300	7.10	34.074	1.93	26.697	135.4	0.695
236	8.1 A	34.016	2.81	2.14	40.	0.01	27.5	153.3	400	6.25	34.167	1.00	26.884	117.6	0.826
281	7.36	34.061	2.16	2.37	50.	0.02	30.8	139.7	500	6.04	34.299	0.45	27.015	105.3	0.944
330	6.76	34.093	1.60	2.68	58.	0.00	34.4	129.5							
407	6.22	34.175	0.95	2.96	69.	0.02	36.8	116.6							
486	6.10	34.287	0.48	3.07	75.	0.01	38.3	106.8							
567	5.64	34.321	0.33	3.20	81.	0.02	39.8	98.8							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 97070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 55.0N	119 50.5W	06/24/78	0833 GMT	3740M	330	20KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.07	33.206	5.73	0.28	5.		0.0	378.2	0	17.07	33.206	5.73	24.144	378.2	0.000
10	17.07	33.203	5.85	0.27	5.		0.0	378.4	10	17.07	33.203	5.85	24.142	378.4	0.038
29	17.06	33.202	5.74	0.27	5.		0.1	378.3	20	17.06	33.202	5.80	24.144	378.3	0.076
56	14.65	33.132	6.22	0.34	5.		0.1	331.9	30	17.05	33.202	5.76	24.145	378.1	0.114
65	13.83	33.156	6.20	0.38	5.		0.1	313.8	50	16.90	33.190	6.11	24.172	375.5	0.189
79	12.86	33.133	5.83	0.50	7.		2.3	296.9	75	13.10	33.141	5.95	24.955	300.9	0.274
92	12.22	33.165	5.69	0.61	8.		4.2	282.8	100	11.50	33.166	5.52	25.281	270.0	0.346
106	10.94	33.168	5.37	0.87	11.		8.3	260.2	125	10.00	33.382	4.83	25.710	229.1	0.409
128	9.93	33.426	4.75	1.12	18.		13.1	224.6	150	9.44	33.638	4.25	26.003	201.3	0.464
146	9.53	33.607	4.33	1.38	22.		17.7	204.9	200	8.56	33.924	3.51	26.367	166.8	0.557
172	8.99	33.779	3.85	1.63	27.		21.1	183.9	250	7.89	34.034	2.86	26.554	149.0	0.638
198	8.59	33.917	3.54	1.78	32.		24.1	167.7	300	7.36	34.088	2.08	26.672	137.8	0.712
224	8.18	33.983	3.15	1.94	36.		26.7	156.9	400	6.36	34.161	0.95	26.865	119.5	0.846
268	7.71	34.060B	2.66	2.10	43.		29.3	144.6	500	5.77	34.262	0.46	27.021	104.7	0.964
320	7.15	34.100	1.72	2.45	54.		33.7	134.1							
392	6.43	34.153	1.01	2.77	70.		37.8	120.9							
471	5.89	34.233	0.56	2.96	83.		40.4	108.3							
554	5.66	34.315	0.35	3.06	89.		41.4	99.5							

A) TEMPERATURE INFERRED FROM PRESSURE THERMOMETER AND WIRE DEPTH.
B) AN ERROR OF 0.001 (0.039 PPT) IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 97080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 35.0N	120 31.0W	06/24/78	1501 1550 GMT	3950M	340	22KT	1	310 7 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	16.94	33.121	5.75	0.28	2.	0.01	0.2	381.5
12	16.94	33.124	5.79	0.30	3.	0.00	0.1	381.3
31	16.92	33.119	5.79	0.33	3.	0.00	0.1	381.2
60	16.79	33.120	5.80	0.35	3.	0.00	0.0	378.2
70	15.94	33.077	5.98	0.29	3.	0.04	0.0	362.8
74A	14.90	33.054	6.05	0.28	3.	0.01	0.0	342.7
87A	13.57	33.061	6.12	0.32	3.	0.02	0.0	315.7
100A	12.18	33.052	5.99	0.34	4.	0.09	0.9	290.4
122A	10.73	33.103	5.51	0.70	8.	0.03	7.6	261.5
140A	10.03	33.334	4.96	1.02	13.	0.02	13.0	233.0
166A	9.55	33.615	4.42	1.34	19.	0.06	17.3	204.6
193A	9.10	33.783	3.97	1.51	25.	0.03	20.9	185.3
220A	8.54	33.918	3.52	1.71	32.	0.04	24.0	167.0
265A	7.84	34.011	2.89	1.97	40.	0.02	28.3	150.0
315A	7.29	34.061	2.10	2.37	51.	0.03	32.2	138.8
393A	6.62	34.132	1.25	2.58	62.	0.03	36.6	124.8
471A	5.96	34.193	0.70	2.79	75.	0.01	39.7	112.1
554A	5.47	34.233	0.53	2.95	85.	0.00	41.2	103.4

Z	T	S	SIGT	DT	DD
0	16.94	33.121	24.110	381.5	0.000
10	16.94	33.123	24.111	381.3	0.038
20	16.94	33.122	24.111	381.4	0.076
30	16.92	33.120	24.113	381.2	0.115
50	16.83	33.120	24.135	379.1	0.191
75	14.74	33.054	24.550	339.5	0.281
100	12.18	33.052	25.066	290.4	0.360
125	10.59	33.137	25.420	256.7	0.429
150	9.81	33.454	25.799	220.6	0.490
200	8.96	33.823	26.225	180.2	0.592
250	8.05	33.992	26.497	154.4	0.677
300	7.44	34.049	26.631	141.7	0.754
400	6.56	34.138	26.822	123.5	0.891
500	5.76	34.210	26.980	108.5	1.014

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 97090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 15.5N	121 10.5W	06/24/78	2128 2220 GMT	3960M	360	28KT	1	310 6 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	17.55	33.127	5.66	0.29	2.	0.01	0.2	394.8
11	17.54	33.126	5.65	0.27	3.	0.00	0.2	394.6
36	17.45	33.130	5.70	0.31	3.	0.00	0.2	392.3
64A	15.75	33.017	5.97	0.32	3.	0.00	0.2	363.1
73A	15.33	33.028	6.01	0.28	3.	0.02	0.5	353.5
92A	13.90	33.087	6.06	0.29	3.	0.02	0.3	320.2
107A	12.52	33.077	5.99	0.37	4.	0.08	0.6	294.7
121A	11.58	33.095	5.75	0.68	6.	0.11	4.1	276.6
151A	10.31	33.391	4.90	1.05U	12.U	0.02U	12.1U	233.3
170A	9.81	33.562	4.50	1.33	16.	0.01	16.1	212.7
199A	9.11	33.768	4.01	1.46	24.	0.05	19.8	186.6
233A	8.69	33.908	3.53	1.67	29.	0.02	23.8	169.9
266B	8.07	34.008	2.86	1.98	37.	0.02	27.7	153.5
315B	7.27	34.060	2.10	2.32	48.	0.00	32.4	138.6
379B	6.61	34.116	1.34	2.60	58.	0.00	36.6	125.9
477B	5.96	34.209	0.68	2.83	71.	0.01	39.7	110.9
565B	5.62	34.298	0.40	3.02	80.	0.02	41.6	100.3
639B	5.27	34.348	0.29	3.04	86.	0.01	42.8	92.5

Z	T	S	SIGT	DT	DD
0	17.55	33.127	23.970	394.8	0.000
10	17.54	33.126	23.972	394.6	0.039
20	17.51	33.128	23.980	393.8	0.079
30	17.47	33.130	23.991	392.8	0.118
50	17.45	33.123	23.991	392.8	0.197
75	15.21	33.036	24.436	350.4	0.291
100	13.15	33.083	24.900	306.2	0.373
125	11.36	33.126	25.274	270.6	0.446
150	10.34	33.379	25.651	234.7	0.510
200	9.10	33.774	26.164	186.0	0.617
250	8.38	33.965	26.426	161.1	0.706
300	7.49	34.051	26.624	142.3	0.784
400	6.44	34.135	26.835	122.3	0.921
500	5.86	34.234	26.987	107.9	1.042
600	5.46	34.325	27.108	96.5	1.152

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 97100

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 55.0N	121 50.0W	06/25/78	0352 GMT	3925M	350	28KT	1	350 7 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	18.33	33.368	5.61	0.27	3.	0.00	0.1	395.3
11	18.34	33.366	5.58	0.21	3.	0.00	0.1	395.7
35	18.32	33.369	5.66	0.27	3.	0.00	0.1	395.0
65	17.38	33.363	5.78	0.26	3.	0.00	0.0	373.7
75	17.42	33.478	5.81	0.22	3.	0.02	0.1	366.3
94	16.35	33.495	5.86	0.22	3.	0.04	0.1	341.2
109	14.01	33.216	6.05	0.34	4.	0.00	0.1	312.9
124	13.09	33.317	5.75	0.41	5.	0.10	1.5	287.7
154	10.73	33.259	5.49	0.80	10.	0.04	8.9	250.0
173	9.71	33.364	5.16	1.17	15.	0.03	13.2	225.7
203	9.25	33.702	4.21	1.51	22.	0.06	19.0	193.6
237	8.87	33.877	3.99	1.68	27.	0.03	21.2	174.9
267	8.21	33.987	3.72	1.88	33.	0.03	24.1	157.0
316	7.46	34.017	2.89	2.26	43.	0.01	28.7	144.4
381	6.64	34.056	1.83	2.63	58.	0.01	33.8	130.7
479	5.91	34.154	0.95	3.06	75.	0.00	38.7	114.4
568	5.45	34.234	0.53	3.33	85.	0.00	40.2	103.1
642	5.19	34.317	0.31	3.24	93.	0.00	41.6	94.0

Z	T	S	SIGT	DT	DD
0	18.33	33.368	23.964	395.3	0.000
10	18.34	33.367	23.961	395.7	0.040
20	18.33	33.368	23.963	395.5	0.079
30	18.32	33.369	23.966	395.2	0.119
50	17.81	33.366	24.090	383.4	0.197
75	17.42	33.478	24.269	366.3	0.291
100	15.41	33.370	24.648	330.1	0.379
125	13.01	33.316	25.108	286.3	0.457
150	11.04	33.268	25.443	254.6	0.525
200	9.26	33.668	26.056	196.3	0.639
250	8.59	33.933	26.368	166.6	0.732
300	7.68	34.006	26.562	148.2	0.813
400	6.47	34.074	26.783	127.2	0.956
500	5.79	34.173	26.948	111.6	1.082
600	5.32	34.268	27.080	99.1	1.194

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 100030

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 40.5N	116 46.5W	06/27/78	2001 GMT	125M	300	4KT	0	260 3 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	14.31	33.419	6.10	0.35	8.	0.10	3.3	304.0
10	13.15	33.434	6.01	0.48	9.	0.16	5.4	280.3
25	11.52	33.441	5.06	0.82	13.	0.30	10.9	250.1
35	11.13	33.517	4.62	1.00	15.	0.06	13.1	237.7
45	10.54	33.594	4.04	1.23	17.	0.07	16.4	222.1
60	10.44	33.726	3.50	1.37	20.	0.03	18.6	210.7
75	10.11	33.852	3.05	1.63	25.	0.02	21.3	196.0
100	10.00	33.904	2.90	1.74	27.	0.00	22.1	190.4

Z	T	S	SIGT	DT	DD
0	14.31	33.419	24.923	304.0	0.000
10	13.15	33.434	25.172	280.3	0.029
20	11.99	33.432	25.396	259.0	0.056
30	11.30	33.476	25.557	243.7	0.081
50	10.51	33.647	25.830	217.7	0.128
75	10.11	33.852	26.059	196.0	0.180
100	10.00	33.904	26.118	190.4	0.229

A) CAST II.
B) CAST III.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 100035

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 30.5N	117 07.0W	06/27/78	1413 GMT	1150M	330	18KT	1	320 3 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	17.29	33.377	5.85	0.33	3.	0.00	0.1	370.7
10	16.70	33.363	6.08	0.39	3.	0.04	0.1	358.5
29	12.80	33.406	5.65	0.94	9.	0.16	6.6	275.8
39	12.13	33.498	5.30	1.22	14.	0.19	10.2	256.7
54	11.05	33.453	4.71	1.22	13.	0.17	12.9	241.1
69	10.43	33.524	4.33	1.42	16.	0.10	15.9	225.5
94	9.75	33.760	3.62	1.69	22.	0.02	20.5	197.1
114	9.70	33.810	3.48	1.79	22.	0.02	21.1	192.6
133	9.36	33.902	3.21	1.77	27.	0.01	21.7	180.5
153	9.05	33.994	2.95	2.00	30.	0.02	24.7	168.9
183	9.12	34.127	2.22	2.09	36.	0.08	25.0	160.1
218	8.39	34.149	1.96	2.40	44.	0.00	29.5	147.6
268	8.19	34.177	1.70		45.	0.00	30.6	142.6
297	7.75	34.224	1.22	2.91	50.	0.00	33.0	133.0
351	6.96	34.214	0.93	3.00	60.	0.07	35.4	123.1
433	6.55	34.258	0.62	3.18	74.	0.04	39.4	114.5
513	6.06	34.309	0.41					104.7
593	5.64	34.341	0.44	3.23	81.	0.02	40.1	97.3

Z	T	S	O2	SIGT	DT	DD
0	17.29	33.377	5.85	24.223	370.7	0.000
10	16.70	33.363	6.08	24.351	358.5	0.036
20	14.66	34.387	5.84	25.593	240.3	0.066
30	12.70	33.391	5.62	25.227	275.1	0.092
50	11.32	33.470	4.86	25.548	244.5	0.144
75	10.22	33.583	4.14	25.831	217.6	0.203
100	9.73	33.779	3.57	26.066	195.3	0.255
125	9.52	33.861	3.33	26.164	186.0	0.303
150	9.09	33.981	2.99	26.328	170.4	0.348
200	8.79	34.145	2.06	26.504	153.7	0.431
250	8.18	34.180	1.68	26.625	142.3	0.507
300	7.70	34.224	1.20	26.729	132.4	0.578
400	6.66	34.236	0.73	26.885	117.6	0.708
500	6.14	34.301	0.43	27.005	106.2	0.826
600	5.62	34.345	0.44	27.105	96.8	0.935

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 100040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 21.0N	117 27.0W	06/27/78	0947 1023 GMT	2050M	270	16KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	17.85	33.372	5.72	0.35	4.		0.1	383.9
10	17.85	33.372	6.03	0.34	4.	0.00	0.1	383.9
30	15.08	33.309	6.36	0.34	2.	0.00	0.1	327.7
60	11.76	33.317	5.21	0.93	10.	0.26	8.3	263.4
70	11.15	33.393	4.63	1.16	13.	0.21	11.4	247.2
85	10.26	33.545	4.13	1.50	18.	0.16	16.0	221.1
100	10.22	33.739	3.47	1.77	22.	0.00	19.4	206.1
115	10.07	33.890	2.95	1.97	26.	0.00	21.9	192.5
140	9.35	33.920	3.12	1.99	30.	0.01	22.6	179.0
160	9.13	34.002	2.76	2.09	33.	0.04	24.7	169.5
188	8.94	34.080	2.40	2.15	37.	0.07	26.2	160.9
216	8.58	34.120	2.09	2.30	40.	0.00	29.0	152.5
240A	8.09	34.138	1.86	2.40	46.	0.00	31.2	144.1
288A	7.33	34.180	1.29	2.50	55.	0.00	34.2	130.5
342A	7.01	34.233	0.83	2.74	60.	0.00	36.6	122.3
426A	6.41	34.267	0.54	2.73	71.	0.01	36.5	112.1
510A	5.91	34.332	0.35	2.96	80.	0.08	40.4	101.1
594A	5.47	34.339	0.40	2.97	85.	0.00	41.4	95.5

Z	T	S	O2	SIGT	DT	DD
0	17.85	33.372	5.72	24.085	383.9	0.000
10	17.85	33.372	6.03	24.085	383.9	0.038
20	17.85	33.372	6.27	24.085	383.9	0.077
30	15.08	33.309	6.36	24.674	327.7	0.112
50	12.69	33.316	5.75	25.172	280.3	0.174
75	10.80	33.439	4.45	25.617	238.0	0.239
100	10.22	33.739	3.47	25.952	206.1	0.295
125	9.79	33.914	2.98	26.161	186.3	0.344
150	9.22	33.959	2.96	26.290	174.0	0.390
200	8.81	34.101	2.26	26.466	157.4	0.474
250	7.90	34.146	1.74	26.640	140.9	0.551
300	7.24	34.193	1.17	26.772	128.3	0.621
400	6.60	34.258	0.60	26.911	115.1	0.748
500	5.97	34.325	0.36	27.046	102.3	0.863
600	5.45	34.341	0.41	27.122	95.1	0.968

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 100050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 00.5N	118 07.0W	06/27/78	0052 GMT	1760M	320	24KT	2	310 5 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	15.61	33.201	6.08	0.49	1.	0.01	0.1	346.7
11	15.61	33.205	6.07	0.42	1.	0.00	0.1	346.4
31	15.13	33.300	6.19	0.45	1.	0.00	0.1	329.4
41	13.82	33.239	5.95	0.63	3.	0.03	1.2	307.5
56	13.12	33.297	5.73	0.99	7.	0.29	4.6	289.8
71	11.12	33.186	5.28	1.08	10.	0.19	8.6	262.0
96	10.04	33.440	4.40	1.50	17.	0.00	16.5	225.4
116	9.71	33.689	3.67	1.86	24.	0.01	20.5	201.7
136	9.01	33.857	3.38	2.01	28.	0.03	23.6	178.4
156	8.87	33.962	3.05	2.01	31.	0.04	23.0	168.5
185	8.21	34.087	2.28	2.35	41.	0.02	28.5	149.6
217	7.94	34.122	1.94	2.29	47.	0.04	28.7	143.2
244	7.75	34.133	1.79	2.49	50.	0.03	31.4	139.7
288	7.46	34.177	1.39	2.70	54.	0.02	32.6	132.5
335	6.64	34.170	1.18	2.80	62.	0.03	35.6	122.2
486	6.35	34.227	0.75	2.89	70.	0.03	37.3	114.3
487	5.91	34.273	0.50		77.	0.05	38.3	105.6
548	5.62	34.329	0.35		85.	0.00	40.8	97.9

Z	T	S	O2	SIGT	DT	DD
0	15.61	33.201	6.08	24.474	346.7	0.000
10	15.61	33.205	6.07	24.477	346.4	0.035
20	15.39	33.244	6.12	24.556	339.0	0.069
30	15.15	33.291	6.18	24.643	330.6	0.103
50	13.39	33.277	5.82	25.003	296.4	0.165
75	10.94	33.235	5.15	25.435	255.3	0.235
100	9.97	33.492	4.24	25.802	220.4	0.295
125	9.38	33.773	3.51	26.118	190.4	0.347
150	8.90	33.935	3.16	26.322	171.0	0.392
200	8.05	34.112	2.08	26.591	145.5	0.473
250	7.72	34.140	1.74	26.661	138.9	0.546
300	7.25	34.176	1.33	26.756	129.8	0.615
400	6.36	34.221	0.79	26.914	114.8	0.743
500	5.80	34.290	0.44	27.039	103.0	0.858

A) CAST II.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 100060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 40.5N	118 47.5W	06/26/78	1854 GMT	2829M	310	27KT	1	310 6 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	17.51	33.251	5.66	0.29	4.	0.00	0.0	384.9
10	17.50	33.250	5.72	0.27	4.	0.00	0.0	384.7
30	17.48	33.248	5.78	0.28	4.	0.00	0.0	384.4
39	16.73	33.190	5.85	0.20	4.	0.00	0.0	371.8
54	15.82	33.161	5.98	0.21	4.	0.00	0.0	354.1
68	14.32	33.119	6.11	0.29	5.	0.00	0.0	326.2
92	11.19	33.125	5.59	0.70	8.	0.08	6.4	267.6
112	10.28	33.279	5.08	0.99	11.	0.02	11.9	241.1
131	9.89	33.616	4.14	1.38	19.	0.01	17.6	209.9
151	9.65	33.767	3.63	1.62	23.	0.00	20.6	195.0
180	9.03	33.925	3.19	1.74	28.	0.01	23.1	173.7
214	8.51	34.015	2.95	2.00	35.	0.00	26.5	159.3
243	7.98	34.026	2.74	2.10	39.	0.00	28.2	150.9
292	7.88	34.132	1.86	2.42	47.	0.00	31.1	141.6
346	7.25	34.180	1.26	2.59	57.	0.02	33.0	129.4
429	6.76	34.251	0.73	2.82	65.	0.00	36.6	117.7
510	6.09	34.316		2.88	78.	0.01	38.7	104.5
595	5.60	34.358	0.25	3.00	84.	0.00	40.8	95.5

Z	T	S	O2	SIGT	DT	DD
0	17.51	33.251	5.66	24.074	384.9	0.000
10	17.50	33.250	5.72	24.076	384.7	0.038
20	17.49	33.249	5.75	24.078	384.5	0.077
30	17.48	33.248	5.78	24.079	384.4	0.116
50	16.08	33.167	5.94	24.343	359.2	0.190
75	13.33	33.120	6.01	24.894	306.7	0.274
100	10.69	33.167	5.42	25.426	256.2	0.345
125	9.98	33.510	4.44	25.814	219.2	0.405
150	9.66	33.763	3.65	26.064	195.5	0.457
200	8.72	33.990	3.03	26.393	164.2	0.549
250	7.97	34.043	2.62	26.549	149.4	0.629
300	7.80	34.141	1.75	26.651	139.8	0.704
400	6.91	34.227	0.88	26.844	121.4	0.840
500	6.17	34.309	0.46	27.006	106.1	0.960
600	5.57	34.364	0.24	27.126	94.8	1.068

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 100070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 20.5N	119 27.5W	06/26/78	1145 GMT	3800M	340	26KT		320 6 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	17.67	33.221	5.64	0.26	3.	0.01	0.0	390.7
11	17.67	33.219	5.75	0.26	3.	0.00	0.0	390.9
30	17.67	33.220	5.61	0.25	3.	0.00	0.0	390.8
60	15.95	33.151	5.97	0.23	3.	0.00	0.0	357.6
70	14.40	33.102	6.14	0.24	4.	0.00	0.0	329.0
84	13.12	33.076	6.16	0.29	5.	0.00	0.0	306.0
99	11.49	33.160	5.54	0.69	9.	0.04	5.9	270.2
113	10.47	33.320	4.89	1.10	13.	0.02	12.2	241.2
137	9.71	33.480	4.61	1.16	17.	0.02	14.0	217.2
157	9.28	33.662	4.27	1.29	22.	0.04	17.8	197.0
185	8.87	33.820	3.65	1.54	27.	0.10	21.9	179.1
213	8.55	33.942	3.24	1.79	33.	0.00	25.3	165.3
240	8.08	34.006	2.83	1.90	36.	0.02	27.9	153.8
288	7.36	34.065	2.07	2.16	47.	0.01	31.3	139.5
339	6.79	34.088	1.55	2.42	55.	0.00	35.2	130.2
421	6.24	34.206	0.73	2.64	68.	0.01	36.2	114.6
504	5.87	34.286	0.41	2.95	78.	0.11	40.0	104.1
585	5.50	34.343	0.29	3.00	87.	0.02	41.0	95.5

Z	T	S	O2	SIGT	DT	DD
0	17.67	33.221	5.64	24.013	390.7	0.000
10	17.67	33.220	5.75	24.011	390.8	0.039
20	17.67	33.220	5.70	24.012	390.8	0.078
30	17.67	33.220	5.61	24.012	390.8	0.117
50	17.67	33.220	5.78	24.012	390.8	0.196
75	13.90	33.086	6.15	24.752	320.2	0.285
100	11.40	33.172	5.49	25.302	267.9	0.359
125	10.00	33.406	4.69	25.731	227.2	0.422
150	9.41	33.600	4.40	25.978	203.7	0.476
200	8.70	33.892	3.42	26.319	171.3	0.572
250	7.92	34.023	2.66	26.541	150.2	0.654
300	7.21	34.071	1.93	26.680	137.0	0.728
400	6.35	34.173	0.92	26.877	118.4	0.861
500	5.89	34.283	0.42	27.022	104.5	0.978
600	5.46	34.360	0.28	27.136	93.8	1.084

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 100080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 01.0N	120 06.9W	06/26/78	0137 GMT	3620M	350	23KT	0	330 6 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
2	17.63	33.204	5.73	0.26	4.	0.00	0.0	391.0
12	17.63	33.204	5.83	0.15	4.	0.00	0.0	391.0
38	17.60	33.204	5.76	0.16	4.	0.03	0.0	390.3
68	15.29	33.133	6.11	0.14	4.	0.03	0.0	345.0
78	14.21	33.059	6.21	0.12	5.	0.03	0.0	328.4
98	12.00	33.076	5.97	0.25	7.	0.14	1.6	285.4
113	11.18	33.228	5.46	0.53	9.	0.04	7.1	259.9
129	10.72	33.362	5.13	0.61	13.	0.02	10.0	242.2
159	9.60	33.568	4.58	1.03	20.	0.02	16.2	208.9
179	9.03	33.800	4.12	0.91	26.	0.03	15.1	183.0
209	8.80	33.909A	3.71	1.35	30.	0.02	22.2	171.4
243	8.29	33.983	3.00		36.	0.07	21.2	158.5
273	7.80	34.034	2.56	1.91	44.	0.02	28.7	147.8
323	7.19	34.076	1.96	2.12	53.	0.01	31.9	136.4
387	6.60	34.125	1.36	2.51	62.	0.03	35.4	125.1
487	5.84	34.249	0.52	2.82	80.	0.03	39.0	106.5
577	5.46	34.315	0.36	2.85	88.	0.05	38.1	97.2
653	5.18	34.361	0.32	3.03	94.	0.01	41.6	90.6

Z	T	S	O2	SIGT	DT	DD
0	17.63	33.204	5.73	24.009	391.0	0.000
10	17.63	33.204	5.82	24.009	391.0	0.039
20	17.62	33.204	5.82	24.012	390.8	0.078
30	17.61	33.204	5.79	24.014	390.6	0.117
50	16.97	33.196	5.86	24.159	376.8	0.194
75	14.54	33.080	6.19	24.612	333.6	0.284
100	11.86	33.095	5.90	25.158	281.6	0.361
125	10.82	33.331	5.20	25.531	246.2	0.428
150	9.94	33.500	4.75	25.814	219.3	0.487
200	8.84	33.839	3.83	26.256	177.2	0.587
250	8.17	33.997	2.89	26.482	155.8	0.673
300	7.45	34.060	2.22	26.638	141.0	0.749
400	6.49	34.141	1.23	26.834	122.4	0.886
500	5.77	34.260	0.50	27.019	104.9	1.006
600	5.37	34.330	0.35	27.123	95.0	1.113

A) AN ERROR OF 0.001 (0.039 PPT) IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 100090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 40.5N	120 47.0W	06/25/78	1843 GMT	3960M	350	23KT	0	330 6 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.84	33.182	5.66	0.27	3.	0.00	0.1	397.4	0	17.84	33.182	5.66	23.942	397.4	0.000
8	17.83	33.183	5.71	0.26	3.	0.00	0.0	397.1	10	17.83	33.183	5.71	23.945	397.1	0.040
28	17.80	33.182	5.69	0.27	3.	0.00	0.0	396.5	20	17.82	33.182	5.70	23.947	397.0	0.079
56	17.64	33.172	5.67	0.26	3.	0.00	0.0	393.6	30	17.79	33.182	5.69	23.954	396.3	0.119
66	16.53	33.134	5.89	0.20	3.	0.00	0.0	371.5	50	17.67	33.175	5.67	23.976	394.2	0.199
80	15.86	33.246	5.94	0.20	3.	0.00	0.0	348.8	75	16.11	33.207	5.92	24.366	357.0	0.293
94	13.96	33.190	6.02	0.28	4.	0.00	0.0	313.8	100	13.37	33.196	5.95	24.944	302.0	0.376
108	12.72	33.207	5.82	0.44	5.	0.07	1.3	288.9	125	11.67	33.176	5.62	25.258	272.1	0.448
132	11.30	33.172	5.52	0.65	9.	0.01	5.4	266.1	150	10.27	33.295	5.11	25.598	239.8	0.513
150	10.27	33.295	5.11	0.92	13.	0.01	10.6	239.8	200	9.05	33.806	3.85	26.196	182.9	0.620
178	9.41	33.626	4.34	1.07	21.	0.03	16.9	201.7	250	8.26	33.978	3.23	26.454	158.5	0.708
206	8.98	33.842	3.73	1.65	27.	0.00	22.3	179.1	300	7.51	34.020	2.81	26.598	144.8	0.786
234	8.53	33.948	3.30	2.01	32.	0.00	25.4	164.6	400	6.54	34.116	1.39	26.806	125.1	0.926
280	7.78	34.006	3.11	2.06	40.	0.00	27.1	149.6	500	5.89	34.219	0.58	26.972	109.3	1.049
332	7.13	34.041	2.25	2.48	52.	0.01	32.0	138.2	600	5.38	34.307	0.34	27.104	96.8	1.159
412	6.46	34.130	1.27	2.76	68.	0.01	35.4	123.0							
496	5.91	34.215	0.60	3.11	78.	0.02	39.4	109.9							
582	5.46	34.289	0.36	3.25	87.	0.00	41.2	99.1							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 100100

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 20.0N	121 26.4W	06/25/78	0956 GMT	4230M	350	28KT		330 6 8

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	18.36	33.294	5.60	0.15	2.	0.00	0.3	401.4	0	18.36	33.294	5.60	23.901	401.4	0.000
9	18.36	33.290	5.65	0.15	2.	0.01	0.2	401.7	10	18.36	33.291	5.65	23.898	401.7	0.040
28	18.36		5.61	0.29	2.	0.01	0.1		20	18.36	33.293	5.64	23.900	401.5	0.080
56	17.84	33.347	5.65	0.12	2.	0.00	0.1	385.4	30	18.36	33.296	5.61	23.901	401.3	0.121
65	17.52	33.417	5.78	0.11	2.	0.00	0.1	373.0	50	18.36	33.300	5.64	23.905	401.0	0.201
79	17.42	33.514	5.77	0.04	2.	0.00	0.0	363.7	75	17.44	33.491	5.77	24.273	365.9	0.297
92	17.00	33.545	5.79	0.09	2.	0.00	0.0	351.9	100	16.65	33.559	5.78	24.512	343.1	0.387
106	16.28	33.572	5.78	0.01	2.	0.00	0.0	334.0	125	13.94	33.386	5.90	24.975	299.1	0.468
128	13.53	33.351	5.91	0.13	4.	0.12	0.6	293.6	150	11.85	33.308	5.52	25.326	265.7	0.539
165	12.15	33.297	5.60	0.34	6.	0.02	4.3	271.8	200	9.73	33.655	4.63	25.968	204.6	0.659
171	10.85	33.420	5.20	0.56	10.	0.00	8.4	240.1	250	8.65	33.928	3.72	26.355	167.9	0.754
197	9.83	33.631	4.70	0.99	15.	0.00	15.0	207.9	300	7.80	34.013	2.93	26.549	149.5	0.836
222	9.14	33.809	4.14	1.37	22.	0.00	19.9	184.0	400	6.76	34.111	1.50	26.774	128.1	0.980
265	8.44	33.965	3.52	1.69	31.	0.00	24.4	162.0	500	6.15	34.205	0.77	26.927	113.6	1.107
312	7.60	34.021	2.72	1.97	42.	0.00	28.5	146.0							
387	6.85	34.096	1.65	2.45	55.	0.00	34.3	130.4							
465	6.36	34.178	0.95	2.72	66.	0.00	37.3	118.1							
549	5.88	34.232	0.67	2.97	75.	0.00	38.6	108.3							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 103030

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
31 06.0N	116 24.5W	06/28/78	0406 GMT	60M	310	15KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	14.28	33.613	7.21		13.		3.8	289.2	0	14.28	33.613	7.21	25.078	289.2	0.000
10	13.31	33.612	6.88	0.79	14.		5.3	270.3	10	13.31	33.612	6.88	25.277	270.3	0.028
20	12.39	33.577	5.44	1.02	16.		10.1	255.6	20	12.39	33.577	5.44	25.431	255.6	0.054
30	11.71	33.586	4.54	1.20	16.		12.8	242.7	30	11.71	33.586	4.54	25.567	242.7	0.079
49	10.60	33.690	3.25	1.73	21.		18.2	216.0	50	10.56	33.692	3.24	25.857	215.2	0.125

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 103035

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 56.0N	116 45.0W	06/28/78	0719 GMT	1775M	330	12KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	15.74	33.453	6.05	0.50	5.		0.5	331.1	0	15.74	33.453	6.05	24.639	331.1	0.000
7	15.22	33.470	6.02		6.		0.8	318.9	10	14.96	33.481	5.96	24.831	312.7	0.032
23	14.12	33.520	5.66	0.69	9.		3.4	292.8	20	14.27	33.513	5.73	25.002	296.4	0.063
31	14.06	33.520	5.60	0.64	9.		3.5	291.6	30	14.07	33.519	5.61	25.050	291.9	0.092
43	12.78	33.477	5.19	0.71	10.		5.8	270.2	50	11.87	33.470	4.74	25.447	254.1	0.147
55	11.29	33.465	4.42	0.99	12.		12.5	244.3	75	10.73	33.616	3.88	25.767	223.7	0.207
74	10.75	33.608	3.91	1.22	16.		15.9	224.6	100	10.12	33.805	3.52	26.021	199.6	0.260
90	10.47	33.733	3.58	1.37	18.		18.1	210.7	125	9.48	33.891	3.49	26.194	183.1	0.309
105	9.93	33.834	3.49	1.37	21.		18.7	194.5	150	9.30	34.045	2.74	26.343	169.0	0.354
120	9.54	33.863	3.60	1.48	23.		20.4	186.1	200	8.87	34.203	1.80	26.535	150.7	0.435
143	9.35	34.007	2.93	1.49	28.		20.9	172.5	250	8.62	34.296	1.14	26.648	140.0	0.510
170	9.15	34.130	2.26	1.91	35.		26.7	160.3	300	8.22	34.313	0.93	26.723	132.9	0.581
193	8.91	34.186	1.91	2.11	40.		28.2	152.6	400	7.32	34.314	0.63	26.855	120.4	0.713
231	8.74	34.267	1.37	2.33	45.		30.5	144.0	500	6.40	34.341	0.41	27.002	106.4	0.833
274	8.44	34.320	0.93	2.41	51.		30.7	135.7							
341	7.84	34.290	0.92					129.3							
410	7.23	34.319	0.58					118.8							
488	6.49	34.328	0.42					108.5							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 103040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 46.0N	117 04.4W	06/28/78	1133 GMT	1761M	310	15KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.56	33.405	5.70	0.22	4.	0.02	0.0	374.8	0	17.56	33.405	5.70	24.180	374.8	0.000
9	17.56	33.405	5.83	0.19	4.	0.00	0.1	374.8	10	17.56	33.405	5.85	24.180	374.8	0.037
28	13.35	33.158	6.16	0.29	3.	0.01	0.2	304.3	20	15.78	33.261	6.02	24.483	345.9	0.074
38	12.83	33.263	5.67	0.43	9.	0.15	4.1	286.8	30	13.19	33.176	6.08	24.964	300.1	0.106
52	11.30	33.336	5.03	0.75	13.	0.07	9.8	254.0	50	11.52	33.326	5.12	25.400	258.6	0.162
66	10.71	33.467	4.48	0.98		0.19	13.4	234.3	75	10.30	33.506	4.25	25.757	224.7	0.223
90	9.72	33.567	3.98	1.19	19.	0.01	17.1	210.9	100	9.52	33.662	3.81	26.009	200.7	0.276
114	9.34	33.793	3.58	1.41	24.	0.00	20.6	188.2	125	9.21	33.854	3.39	26.210	181.7	0.325
129	9.16	33.872	3.32	1.45	28.	0.00	22.3	179.6	150	8.86	33.962	3.04	26.348	168.5	0.369
148	8.89	33.952	3.08	1.62	30.	0.03	22.5	169.6	200	8.24	34.106	2.18	26.557	148.7	0.450
177	8.53	34.069	2.48	1.84	37.	0.00	26.5	155.6	250	8.08	34.170	1.64	26.632	141.6	0.525
211	8.14	34.116	2.06	1.96	41.	0.01	28.1	146.5	300	7.61	34.207	1.24	26.731	132.2	0.595
240	8.13	34.157	1.74	2.12	43.	0.00	30.0	143.3	400	6.50	34.259	0.64	26.924	113.9	0.724
288	7.75	34.204	1.32	2.32	49.	0.00	31.7	134.4	500	5.77	34.323	0.36	27.069	100.1	0.837
341	7.09	34.215	0.99	2.48	58.	0.01	34.5	124.7	600	5.40	34.352	0.40	27.137	93.7	0.941
424	6.30	34.279	0.53	2.72	72.	0.01	37.8	109.8							
507	5.73	34.326	0.36	2.88	84.	0.03	39.5	99.5							
592	5.42	34.349	0.39	2.88	87.	0.00	40.1	94.2							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 103050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 26.0N	117 44.5W	06/28/78	2022 GMT	2700M	320	14KT	1	320 2 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.25	33.431	5.78	0.28	1.	0.00	0.1	365.8	0	17.25	33.431	5.78	24.274	365.8	0.000
11	16.91	33.414	5.86	0.33	1.	0.00	0.1	359.5	10	16.95	33.418	5.85	24.333	360.2	0.036
31	15.58	33.261	6.10	0.36	2.	0.00	0.1	341.7	20	16.50	33.360	6.00	24.394	354.4	0.072
41	14.10	33.175	6.01	0.49	3.	0.07	0.6	317.7	30	15.68	33.272	6.09	24.512	343.2	0.107
55	13.29	33.309	5.75	0.78	6.	0.19	2.9	292.1	50	13.53	33.260	5.85	24.962	300.3	0.172
70	11.83	33.202	5.53	0.94	9.	0.35	5.8	273.1	75	11.47	33.206	5.41	25.317	266.5	0.243
95	10.42	33.349	4.80	1.19	15.	0.07	12.9	238.2	100	10.22	33.422	4.61	25.705	229.6	0.305
114	9.80	33.619	4.14	1.49	21.	0.03	17.6	208.3	125	9.64	33.691	3.97	26.011	200.6	0.360
134	9.57	33.731	3.86	1.64	24.	0.05	19.7	196.4	150	9.41	33.842	3.46	26.167	185.7	0.409
153	9.38	33.861	3.38	1.75	27.	0.04	22.1	183.8	200	8.82	34.016	2.69	26.397	163.8	0.498
182	9.11	33.976	2.92	1.89	31.	0.02	24.2	171.1	250	7.78	34.054	2.42	26.585	146.0	0.577
216	8.50	34.035	2.54	2.09	37.	0.01	27.3	157.7	300	7.46	34.109	1.87	26.674	137.6	0.650
244	7.84	34.047	2.48	2.16	44.	0.00	28.9	147.4	400	6.62	34.199	0.94	26.862	119.8	0.784
292	7.56	34.106	1.94	2.33	51.	0.00	31.3	139.1	500	6.25	34.305	0.45	26.994	107.3	0.904
345	6.91	34.124	1.47	2.52	60.	0.00	34.5	129.1	600	5.56	34.349	0.32	27.115	95.7	1.013
426	6.54	34.238	0.72	2.86	71.	0.00	37.0	115.9							
508	6.21	34.310	0.44	2.88	81.	0.00	38.6	106.4							
591	5.60	34.346	0.32	2.96	92.	0.00	40.5	96.5							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 103060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 06.0N	118 25.0W	06/29/78	0158 GMT	3400M	350	11KT	2	350 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.71	33.237	5.65	0.31	3.		0.2	390.5	0	17.71	33.237	5.65	24.015	390.5	0.000
10	17.69	33.226	5.70	0.24	3.		0.2	390.8	10	17.69	33.226	5.70	24.012	390.8	0.039
30	16.88	33.231	5.86	0.24	3.		0.1	372.1	20	17.30	33.228	5.79	24.106	381.8	0.078
40	16.77	33.223	5.86	0.21	2.		0.1	370.3	30	16.88	33.231	5.86	24.208	372.1	0.116
55	15.07	33.218	6.11	0.20	2.		0.1	334.2	50	15.71	33.219	6.03	24.465	347.7	0.188
70	13.85	33.184	6.08	0.21	3.		0.1	312.1	75	13.42	33.202	6.00	24.939	302.5	0.269
94	11.98	33.251	5.43	0.53	7.		6.7	272.2	100	11.66	33.309	5.13	25.361	262.3	0.341
114	11.07	33.456	4.47	0.91	13.		12.9	241.2	125	10.66	33.526	4.23	25.710	229.2	0.403
134	10.39	33.581	4.09	1.15	16.		16.2	220.6	150	10.09	33.731	3.76	25.967	204.7	0.458
153	10.05	33.758	3.70	1.45	21.		20.0	202.0	200	9.24	33.960	2.93	26.287	174.4	0.554
183	9.46	33.890	3.22	1.70	27.		22.2	182.9	250	8.57	34.046	2.64	26.460	157.9	0.639
217	9.05	34.014	2.70	1.93	33.		25.8	167.4	300	7.81	34.084	2.24	26.604	144.3	0.717
246	8.64	34.044	2.65	2.01	37.		27.2	159.0	400	6.86	34.215	0.92	26.841	121.8	0.856
295	7.87	34.076	2.32	2.20	44.		29.9	145.6	500	6.20	34.304	0.45	27.000	106.7	0.976
348	7.36	34.165	1.40	2.52	56.		33.3	132.0	600	5.65	34.355	0.29	27.108	96.4	1.085
432	6.59	34.238	0.75	2.84	70.		37.6	116.5							
516	6.12	34.318	0.40	3.02	80.		39.3	104.7							
602	5.64	34.355	0.29	3.17	89.		40.7	96.2							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 103070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 46.4N	119 04.8W	06/29/78	0829 GMT	3500M	300	13KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.99	33.232	5.66	0.24	3.	0.03	0.1	397.3	0	17.99	33.232	5.66	23.944	397.3	0.000
10	17.99	33.238	5.68	0.23	3.	0.02	0.1	396.8	10	17.99	33.238	5.68	23.949	396.8	0.040
30	17.69	33.206	5.69	0.22	3.	0.00	0.1	392.3	20	17.86	33.224	5.68	23.970	394.8	0.079
59	15.81	33.066	5.99	0.22	3.	0.00	0.1	360.8	30	17.69	33.206	5.69	23.997	392.3	0.119
69	14.75	33.093	6.08	0.24	4.	0.02	0.1	336.8	50	17.53	33.201	5.88	24.031	389.0	0.197
84	13.64	33.216	6.05	0.29	4.	0.06	0.1	305.7	75	14.30	33.144	6.07	24.713	324.0	0.287
99	12.10	33.248	5.52	0.51	5.	0.11	4.8	274.6	100	12.03	33.249	5.50	25.245	273.3	0.362
113	11.32	33.259	5.32	0.69	8.	0.04	7.4	260.0	125	10.74	33.340	5.16	25.551	244.3	0.427
138	10.23	33.452	4.96	0.88	12.	0.02	12.0	227.5	150	9.89	33.535	4.73	25.849	215.9	0.485
157	9.72	33.581	4.58	1.09	16.	0.02	15.5	209.8	200	8.91	33.871	3.50	26.270	175.9	0.585
186	9.11	33.791	3.72	1.49	23.	0.04	21.3	184.9	250	8.26	33.998	2.88	26.469	157.0	0.670
216	8.71	33.939	3.31	1.68	28.	0.06	24.0	167.9	300	7.48	34.047	2.32	26.624	142.4	0.748
245	8.34	33.991	2.93	1.86	33.	0.02	26.1	158.6	400	6.42	34.142	1.15	26.842	121.6	0.885
293	7.58	34.041	2.42	2.11	42.	0.04	29.6	144.2	500	5.75	34.245	0.55	27.009	105.8	1.004
347	6.87	34.088	1.64	2.42	53.	0.05	34.0	131.3	600	5.43	34.338	0.32	27.122	95.1	1.112
430	6.23	34.173	0.95	2.54	63.			116.9							
513	5.68	34.258	0.50	2.95	80.	0.00	39.6	104.0							
598	5.45	34.336	0.33	3.09	85.	0.00	40.9	95.5							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 103080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 26.5N	119 43.0W	06/29/78	1400 GMT	3740M	340	12KT	2	340 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	17.81	33.182	5.64	0.27	2.	0.00	0.0	396.8	0	17.81	33.182	5.64	23.950	396.8	0.000
11	17.81	33.181	5.68	0.24	2.	0.00	0.0	396.8	10	17.81	33.181	5.68	23.949	396.8	0.040
31	17.69	33.182	5.81	0.28	2.	0.04	0.0	394.0	20	17.77	33.182	5.74	23.959	395.8	0.079
61	17.28	33.148	5.75	0.24	2.	0.04	0.0	387.1	30	17.70	33.182	5.80	23.976	394.2	0.119
71	16.50	33.108	5.87	0.15	2.	0.04	0.0	372.7	50	17.43	33.161	5.78	24.024	389.7	0.198
86	14.97	33.153	5.97	0.22	2.	0.03	0.0	336.9	75	16.13	33.116	5.91	24.292	364.1	0.292
100	13.23	33.170	5.94	0.30	4.	0.03	0.1	301.2	100	13.23	33.170	5.94	24.953	301.2	0.376
119	11.87	33.122	5.72	0.43	6.	0.08	3.3	279.7	125	11.52	33.146	5.60	25.262	271.8	0.448
140	10.77	33.267	5.23	0.83	10.	0.05	8.9	250.1	150	10.37	33.402	4.88	25.663	233.6	0.512
160	10.05	33.536	4.55	1.10	15.	0.04	13.3	218.4	200	9.25	33.795	3.87	26.157	186.6	0.619
189	9.55	33.709	4.12	1.41	19.	0.03	17.9	197.7	250	8.26	33.992	3.16	26.465	157.4	0.707
219	8.73	33.927	3.47	1.56	26.	0.03	22.4	169.1	300	7.44	34.048	3.28	26.630	141.8	0.784
249	8.28	33.991	3.16	1.92	30.	0.03	24.9	157.8	400	6.59	34.185	1.07	26.854	120.6	0.921
298	7.46	34.045	3.34	2.15	41.	0.04	29.8	142.3	500	5.97	34.278	0.47	27.008	105.9	1.040
352	7.01	34.126	1.48	2.46	52.	0.03	34.2	130.3	600	5.47	34.340	0.33	27.119	95.4	1.148
436	6.31	34.222	0.77	2.81	65.	0.02	37.9	114.2							
520	5.88	34.293	0.41	3.03	74.	0.01	39.8	103.7							
606	5.44	34.343	0.32	3.16	83.	0.00	41.9	94.8							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 103090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 06.0N	120 23.5W	06/29/78	1949 GMT	3925M	360	14KT	2	340 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	18.18	33.206	5.63	0.25	3.		0.0	403.6	0	18.18	33.206	5.63	23.878	403.6	0.000
10	18.18	33.205	5.67	0.26	3.		0.0	403.7	10	18.18	33.205	5.67	23.877	403.7	0.040
30	18.05	33.197	5.72	0.26	3.		0.1	401.2	20	18.12	33.202	5.70	23.889	402.5	0.081
60	17.01	33.187	5.84	0.24	3.		0.0	378.2	30	18.05	33.197	5.72	23.903	401.2	0.121
70	16.35	33.138	5.97	0.25	3.		0.0	367.2	50	18.05	33.197	5.77	23.903	401.2	0.201
85	15.15	33.136	6.01	0.28	3.		0.1	341.8	75	16.00	33.138	5.98	24.339	359.6	0.297
99	13.52	33.173	6.02	0.29	3.		0.0	306.5	100	13.41	33.171	6.01	24.916	304.6	0.381
114	12.06	33.133	5.79	0.43	5.		2.6	282.3	125	11.30	33.145	5.63	25.300	268.1	0.453
139	10.60	33.210	5.38	0.65	9.		7.8	251.5	150	10.18	33.319	5.10	25.632	236.6	0.517
159	9.92	33.418	4.87	0.96	14.		13.2	225.1	200	9.30	33.769	4.18	26.128	189.5	0.625
189	9.47	33.676	4.29	1.23	19.		16.5	198.9	250	8.40	33.974	3.55	26.430	160.7	0.715
219	8.99	33.898	4.01	1.42	25.		20.6	175.1	300	7.47	34.045	2.46	26.622	142.5	0.793
249	8.42	33.972	3.57	1.63	31.		23.7	161.2	400	6.62	34.161	1.09	26.832	122.6	0.931
298	7.50	34.042	2.50	2.08	45.		30.1	143.1	500	6.03	34.253	0.54	26.980	108.5	1.052
353	6.94	34.099	1.63	2.39	56.		32.9	131.4	600	5.34	34.287	0.46	27.093	97.9	1.163
438	6.40	34.207	0.79	2.76	69.		37.0	116.5							
523	5.89	34.264	0.50	2.89	79.		38.5	106.0							
608	5.28	34.288	0.46	3.10	90.		39.8	97.1							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 107032

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 25.8N	116 11.0W	07/01/78	1711 GMT	360M	350	14KT	2	330 3 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	14.64	33.576	5.96					299.2	0	14.64	33.576	5.96	24.973	299.2	0.000
11	13.32	33.585	5.14					272.4	10	13.45	33.587	5.20	25.229	274.9	0.029
31	10.53	33.446	4.76					232.9	20	11.91	33.485	4.98	25.451	253.8	0.055
45	10.15	33.773	3.43					202.5	30	10.64	33.447	4.78	25.652	234.7	0.080
60	10.21	33.888	2.69					195.0	50	10.17	33.831	3.13	26.031	198.6	0.123
75	10.20	33.998	2.12					186.7	75	10.20	33.998	2.12	26.157	186.7	0.172
89	10.20	34.026	1.42					184.6	100	10.18	34.035	1.43	26.188	183.7	0.218
109	10.16	34.038	1.44					183.1	125	10.12	34.049	1.48	26.209	181.7	0.265
133	10.10	34.056	1.51					180.8	150	10.04	34.079	1.58	26.246	178.2	0.310
162	9.98	34.103	1.61					175.4	200	9.65	34.243	1.50	26.440	159.8	0.397
196	9.67	34.230	1.52					161.0	250	9.42	34.358	1.05	26.569	147.6	0.476
230	9.52	34.319	1.27					152.1	300	9.00	34.379	0.81	26.653	139.6	0.550
265	9.32	34.377	0.90					144.7							
305	8.93	34.380	0.79					138.5							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 107035

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 21.5N	116 22.5W	07/01/78	1415 GMT	1665M	320	22KT	2	320 5 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	18.04	33.362	5.68	0.24	3.		0.1	389.0
10	18.03	33.360	5.68	0.28	3.		0.1	388.9
30	13.94	33.258	6.48	0.35	4.		0.1	308.5
39	12.24	33.241	5.63	0.48	6.		1.7	277.6
54	11.37	33.337	5.00	0.82	10.		9.8	255.1
69	10.98	33.551	4.07	1.07	14.		15.3	232.6
93	10.27	33.776	3.42	1.34	21.		19.4	204.2
113	9.43	33.845	3.61	1.48	23.		21.3	185.8
132	9.18	33.931	3.46	1.48	25.		21.1	175.5
152	8.97	34.025	2.95	1.67	28.		24.3	165.4
181	8.65	34.091	2.46	1.80	34.		25.9	155.7
215	8.40	34.120	2.21	1.98	38.		28.2	149.9
244	8.27	34.181	1.71	2.13	42.		29.9	143.5
293	7.77	34.202	1.38	2.36	48.		32.1	134.9
350	7.27	34.241	0.95	2.56	56.		34.5	125.1
430	6.93	34.297	0.57	2.64	63.		34.5	116.5
513	6.38	34.331	0.35	2.86	70.		37.6	106.9
598	5.84	34.371	0.27	2.86	68.		38.3	97.4

Z	T	S	O2	SIGT	DT	DD
0	18.04	33.362	5.68	24.031	389.0	0.000
10	18.03	33.360	5.68	24.032	388.9	0.039
20	16.30	33.299	6.25	24.394	354.4	0.076
30	13.94	33.258	6.48	24.876	308.5	0.109
50	11.46	33.301	5.13	25.392	259.3	0.166
75	10.82	33.622	3.81	25.756	224.8	0.227
100	9.96	33.805	3.47	26.048	197.1	0.280
125	9.24	33.898	3.52	26.239	178.9	0.328
150	8.99	34.017	3.01	26.371	166.3	0.372
200	8.50	34.108	2.32	26.520	152.2	0.453
250	8.22	34.186	1.65	26.624	142.4	0.529
300	7.70	34.207	1.32	26.716	133.6	0.600
400	7.04	34.278	0.69	26.866	119.4	0.732
500	6.47	34.326	0.37	26.981	108.4	0.853
600	5.83	34.371	0.27	27.099	97.3	0.963

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 107040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
30 11.0N	116 42.0W	07/01/78	0811 GMT	1950M	320	22KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	17.57	33.432	5.85	0.25	3.		0.0	373.0
6	17.57	33.432	5.90	0.19	3.		0.0	373.0
20	16.10	33.452	7.14	0.31	4.		0.0	338.9
27	15.85	33.463	7.21	0.22	4.		0.1	332.7
37	14.58	33.419	6.39		4.		0.1	309.4
46	13.91	33.416	6.07	0.18	5.		0.1	296.3
62	11.51	33.440	4.80	0.80	11.		9.0	250.0
74	11.01	33.513	4.23	0.94	15.		12.9	236.0
85	10.42	33.582	4.02	1.17	18.		14.6	221.0
97	10.26	33.723	3.58	1.20	20.		14.8	208.0
113	10.07	33.885	3.14	1.57	23.		20.7	192.9
132	9.62	33.968	2.97	1.67	27.		22.7	179.6
148	9.40	34.001	2.85	1.72	29.		24.0	173.7
175	9.01	34.101	2.38	1.97	34.		25.2	160.4
204	8.86	34.213	1.73	2.22	41.		28.2	149.8
254	8.23	34.236	1.35	2.55	47.		30.1	138.8
310	7.67	34.250	1.06	2.61	54.		31.2	129.9
376	7.03	34.278	0.65	2.86	59.		35.0	119.2

Z	T	S	O2	SIGT	DT	DD
0	17.57	33.432	5.85	24.198	373.0	0.000
10	17.57	33.433	6.25	24.198	373.0	0.037
20	16.10	33.452	7.14	24.556	338.9	0.073
30	15.50	33.450	7.00	24.690	326.2	0.106
50	13.29	33.417	5.77	25.131	284.2	0.168
75	10.95	33.518	4.21	25.653	234.6	0.233
100	10.23	33.758	3.48	25.965	204.9	0.288
125	9.79	33.947	3.01	26.187	183.8	0.337
150	9.37	34.008	2.82	26.303	172.8	0.383
200	8.88	34.200	1.81	26.532	151.0	0.465
250	8.29	34.230	1.36	26.647	140.2	0.540
300	7.75	34.248	1.12	26.742	131.2	0.610
400	6.82	34.295	0.56	26.910	115.2	0.739

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 107050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 50.5N	117 22.0W	07/01/78	0059 GMT	2225M	320	25KT	1	320 4 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	17.61	33.29	5.72	0.20	6.		0.0	384.3
8	17.59	33.29	5.82	0.20	6.		0.1	383.8
26	17.47	33.274	5.81	0.19	5.		0.0	382.3
34	16.65	33.245	5.94	0.20	5.		0.0	366.0
47	14.03	33.210	6.24	0.25	6.		0.0	313.8
60	12.44	33.168	5.88	0.33	8.		2.0	286.6
81	11.14	33.252	5.22		13.		2.7	257.4
97	10.67	33.40	4.73		16.			238.6
114	9.96	33.55	4.16		21.		11.4	215.9
130	9.62	33.681	3.74		23.		14.4	200.9
155	9.33	33.88	3.36		27.		19.7	181.6
183	9.01	33.993	2.78	1.64	32.		26.0	168.4
207	8.64	34.060	2.46	1.89	37.		27.6	157.9
248	7.69	34.045	2.52	2.07	44.		30.3	145.4
293	7.11	34.087	1.79	2.25	53.		32.0	134.5
364	6.83	34.217	0.94	2.46	63.		34.2	121.2
444	6.51	34.303	0.47	2.78	71.		37.5	110.7
523	6.00	34.341	0.32	3.00	79.		40.3	101.6

Z	T	S	O2	SIGT	DT	DD
0	17.61	33.29	5.72	24.080	384.3	0.000
10	17.58	33.29	5.82	24.087	383.7	0.038
20	17.51	33.28	5.81	24.096	382.8	0.077
30	17.13	33.26	5.87	24.172	375.5	0.115
50	13.59	33.20	6.19	24.901	306.1	0.183
75	11.39	33.21	5.41	25.337	264.6	0.255
100	10.54	33.43	4.63	25.654	234.4	0.318
125	9.70	33.64	3.86	25.963	205.1	0.373
150	9.38	33.84	3.43	26.175	185.0	0.423
200	8.76	34.05	2.53	26.430	160.8	0.511
250	7.66	34.05	2.49	26.597	144.9	0.589
300	7.07	34.10	1.69	26.722	133.0	0.661
400	6.70	34.26	0.68	26.901	116.1	0.791
500	6.17	34.33	0.36	27.027	104.1	0.907

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 107060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 32.0N	118 01.5W	06/30/78	1855 GMT	3650M	320	18KT	1	320 4 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.88	33.219	5.65	0.26	3.	0.00	0.0	395.7	0	17.88	33.219	5.65	23.961	395.7	0.000
10	17.87	33.216	5.72	0.22	3.	0.00	0.0	395.7	10	17.87	33.216	5.72	23.961	395.7	0.040
30	17.40	33.229	5.79	0.22	3.	0.00	0.0	384.0	20	17.64	33.221	5.77	24.019	390.1	0.079
40	17.33	33.235	5.76	0.32	3.	0.00	0.0	381.9	30	17.40	33.229	5.79	24.084	384.0	0.118
55	16.24	33.143	5.93	0.21	3.	0.01	0.0	364.5	50	16.73	33.177	5.86	24.200	372.9	0.194
80	13.97	33.139	6.12	0.23	3.	0.01	0.0	317.8	75	13.51	33.144	6.10	24.876	308.4	0.279
94	12.25	33.186	5.74	0.34	6.	0.12	2.7	281.8	100	11.81	33.213	5.54	25.259	272.0	0.352
114	10.94	33.307	5.02	0.68	11.	0.05	10.5	250.0	125	10.59	33.423	4.64	25.643	235.5	0.416
134	10.39	33.523	4.36	0.94	15.	0.03	14.7	224.9	150	9.98	33.670	3.95	25.940	207.3	0.472
154	9.88	33.704	3.85	1.20	20.	0.00	19.4	203.3	200	9.17	34.000	2.81	26.329	170.3	0.569
183	9.38	33.941	3.03	1.52	28.	0.02	23.7	177.9	250	8.47	34.089	2.30	26.510	153.2	0.652
217	8.97	34.030	2.67	1.76	31.	0.01	26.1	165.0	300	7.95	34.154	1.76	26.638	141.0	0.727
247	8.50	34.084	2.34	1.90	37.	0.02	28.0	154.1	400	6.76	34.195	1.04	26.839	121.9	0.864
296	8.00	34.152	1.79	2.14	44.	0.01	30.9	141.8	500	6.10	34.279	0.51	26.991	107.5	0.986
349	7.32	34.162	1.44	2.32	52.	0.01	33.3	131.7	600	5.69	34.361	0.28	27.109	96.4	1.095
432	6.48	34.222	0.81	2.63	66.	0.00	37.4	116.3							
516	6.04	34.292	0.46	2.81	75.	0.00	39.1	105.7							
599	5.69	34.361	0.28	2.96	82.	0.01	40.3	96.4							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 107070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 11.0N	118 41.0W	06/30/78	1306 GMT	3225M	320	13KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	18.45	33.242	5.62	0.28	3.	0.00	0.0	407.3	0	18.45	33.242	5.62	23.839	407.3	0.000
9	18.44	33.239	5.66	0.28	3.	0.00	0.0	407.3	10	18.44	33.239	5.66	23.839	407.3	0.041
27	18.42	33.238	5.64	0.27	3.	0.00	0.0	406.9	20	18.43	33.238	5.65	23.841	407.1	0.082
56	16.25	33.122	5.95	0.29	3.	0.00	0.0	366.2	30	18.40	33.237	5.67	23.847	406.5	0.122
65	16.07	33.124	5.94	0.26	3.	0.00	0.0	362.2	50	17.05	33.158	5.90	24.112	381.3	0.201
79	14.76	33.283	5.97	0.33	3.	0.00	0.0	323.1	75	15.17	33.231	5.97	24.593	335.4	0.291
93	13.97	33.360	5.87	0.30	3.	0.00	0.0	301.6	100	13.57	33.379	5.77	25.045	292.4	0.370
107	13.11	33.384	5.65	0.33	4.	0.04	1.0	283.2	125	11.31	33.329	5.39	25.441	254.7	0.439
130	10.85	33.322	5.32	0.51	8.	0.00	3.2	247.4	150	10.29	33.444	5.03	25.710	229.2	0.501
148	10.34	33.421	5.08	0.70	10.	0.02	9.2	231.6	200	9.09	33.862	3.84	26.234	179.3	0.604
175	9.71	33.728	4.33	0.93	16.	0.12	14.1	198.8	250	8.29	34.001	3.07	26.467	157.3	0.691
203	9.02	33.872	3.79	1.36	23.	0.00	21.3	177.5	300	7.69	34.037	2.59	26.585	146.0	0.769
230	8.52	33.965	3.29	1.61	29.	0.00	25.1	163.2	400	6.46	34.115	1.41	26.816	124.1	0.909
276	8.04	34.023	2.85	1.87	35.	0.00	27.1	151.9	500	6.05	34.249	0.61	26.975	109.1	1.032
327	7.28	34.049	2.29	2.25	46.	0.01	31.7	139.6							
405	6.42	34.120	1.35	2.47	61.	0.00	33.9	123.2							
486	6.11	34.234	0.68	2.83	70.	0.01	37.9	110.9							
570	5.76	34.305	0.42	3.14	78.	0.00	39.5	101.4							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 107080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 51.5N	119 20.0W	06/30/78	0650 GMT	3642M	350	12KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.77	33.316	5.54	0.31	2.		0.0	409.5	0	18.77	33.316	5.54	23.815	409.5	0.000
11	18.77	33.314	5.60	0.34	2.		0.0	409.7	10	18.77	33.314	5.60	23.814	409.7	0.041
31	18.78	33.315	5.64	0.40	3.		0.1	409.9	20	18.77	33.314	5.62	23.814	409.7	0.082
61	17.02	33.250	5.88	0.50	3.		0.0	373.9	30	18.78	33.315	5.64	23.812	409.9	0.123
70	16.09	33.243	5.95	0.45	3.		0.0	353.9	50	17.98	33.278	5.77	23.980	393.8	0.204
85	15.23	33.309	5.94	0.36	3.		0.0	330.9	75	15.77	33.261	5.95	24.484	345.8	0.297
100	14.11	33.388	5.71	0.39	4.		0.0	302.3	100	14.11	33.388	5.71	24.941	302.3	0.378
115	12.93	33.455	5.04	0.47	7.		5.2	274.6	125	12.06	33.419	5.13	25.372	261.3	0.449
139	11.11	33.413	5.24	0.49	10.		7.0	245.0	150	11.00	33.587	4.65	25.697	230.4	0.512
159	10.91	33.722	4.08	0.90	17.		14.5	218.8	200	10.24	34.072	3.05	26.207	182.0	0.617
188	10.34	33.982	3.05					190.2	250	8.43	34.045	2.98	26.482	155.8	0.703
217	9.96	34.140	2.27U	1.78	32.		25.3	172.3	300	7.90	34.119	2.13	26.619	142.8	0.780
265	8.47	34.030	3.06	1.74	35.		25.8	157.6	400	6.37	34.129	1.28	26.840	121.9	0.918
293	8.04	34.123	2.19	2.07	47.		29.6	144.5	500	5.59	34.215	0.67	27.005	106.2	1.038
346	6.93	34.081	1.85	2.23	57.		32.1	132.6	600	5.25	34.320	0.40	27.130	94.4	1.145
427	6.19	34.164	1.00	2.59	71.		36.3	117.1							
508	5.54	34.220	0.65	2.79	82.		38.6	105.2							
590	5.27	34.305	0.42	3.06	90.		40.2	95.7							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 107090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 32.0N	119 59.0W	06/30/78	0110 GMT	4080M	350	10KT	2	340 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.04	33.330	5.56	0.27	2.		0.1	415.0	0	19.04	33.330	5.56	23.758	415.0	0.000
10	19.04	33.325	5.59	0.28	2.		0.0	415.4	10	19.04	33.325	5.59	23.754	415.4	0.042
31	18.91	33.316	5.62	0.28	2.		0.0	412.9	20	18.98	33.321	5.60	23.766	414.3	0.083
62	17.36	33.422	5.86	0.21	2.		0.0	369.0	30	18.92	33.317	5.62	23.779	413.0	0.125
72	16.48	33.334	5.92	0.19	2.		0.0	355.8	50	18.91	33.316	5.76	23.780	412.9	0.207
87	15.25	33.453	5.52	0.20	3.		0.0	320.8	75	16.25	33.354	5.84	24.447	349.3	0.303
102	13.53	33.389	5.76	0.24	4.		0.6	290.9	100	13.75	33.401	5.72	25.024	294.4	0.384
117	12.48	33.380	5.54	0.37	5.		3.7	271.7	125	12.06	33.395	5.37	25.353	263.1	0.455
142	11.41	33.486	4.89	0.70	10.		8.7	244.8	150	11.20	33.577	4.59	25.652	234.6	0.518
162	10.93	33.722	4.12	0.95	14.		14.3	219.2	200	9.61	33.966	3.26	26.231	179.6	0.623
191	10.03	33.964	3.17	1.47	25.		20.6	186.4	250	8.12	34.014	3.34	26.504	153.8	0.708
220	8.73	33.969	3.57	1.57	29.		23.2	166.0	300	7.49	34.070	2.27	26.639	140.9	0.784
250	8.12	34.014	3.34	1.81	36.		25.6	153.8	400	6.62	34.177	1.08	26.844	121.4	0.921
298	7.51	34.067	2.30	2.27	46.		30.4	141.3	500	5.88	34.256	0.60	27.002	106.4	1.041
355	7.03	34.136	1.49	2.39	55.		33.7	129.8	600	5.32	34.314	0.45	27.117	95.6	1.149
434	6.32	34.204	0.87	2.74	69.		36.6	115.7							
517	5.78	34.268	0.56	2.98	78.		39.4	104.4							
603	5.30	34.315	0.45	3.19	89.		40.9	95.3							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 110035

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 45.9N	116 00.0W	07/02/78	0238 GMT	1400M	330	20KT	1	330 4 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	14.52	33.449	6.47	0.27	5.		0.2	306.0	0	14.52	33.449	6.47	24.901	306.0	0.000
7	14.50	33.446	6.52	0.32	5.		0.1	305.9	10	14.47	33.445	6.50	24.909	305.3	0.031
24	14.32	33.441	6.38	0.38	6.		0.2	302.6	20	14.36	33.442	6.41	24.929	303.4	0.061
32	13.22	33.490	5.19	0.58	8.		4.1	277.5	30	13.51	33.476	5.50	25.131	284.2	0.091
45	12.22	33.559	4.41	0.92	11.		10.0	253.8	50	11.70	33.580	4.22	25.565	243.0	0.143
57	11.00	33.611	4.02	1.14	15.		14.1	228.6	75	10.23	33.710	3.60	25.927	208.5	0.200
78	10.20	33.730	3.54	1.38	20.		18.4	206.5	100	10.22	33.929	3.04	26.099	192.2	0.251
95	10.23	33.901	3.15	1.60	23.		20.0	194.3	125	9.94	34.032	2.70	26.228	179.9	0.298
112	10.20	33.989	2.83	1.65	26.		19.9	187.3	150	9.70	34.130	2.36	26.343	169.0	0.342
129	9.85	34.044	2.67	1.85	29.		22.9	177.6	200	9.58	34.278	1.56	26.479	156.1	0.425
155	9.69	34.148	2.28	1.86	34.		21.4	167.4	250	9.39	34.410	0.74	26.614	143.3	0.502
186	9.45	34.198	1.97	2.26	37.		26.8	159.9	300	8.31	34.317	0.93	26.712	134.0	0.574
212	9.70	34.348	1.19	2.47	40.		27.7	152.8	400	7.37	34.308	0.66	26.843	121.5	0.708
255	9.30	34.413	0.73	2.66	45.		29.6	141.7	500	6.44	34.300	0.47	26.964	110.1	0.831
304	8.23	34.306	0.95	2.62	52.		29.6	133.6							
380	7.61	34.320	0.69	2.53	57.		29.1	123.9							
457	6.73	34.282	0.59	2.76	66.		34.4	115.0							
536	6.32	34.335	0.34	3.03	73.		37.9	105.9							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 110040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 36.5N	116 19.5W	07/02/78	0629 GMT	2080M	340	19KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	16.26	33.369	6.09	0.27	3.		0.1	348.4	0	16.26	33.369	6.09	24.457	348.4	0.000
9	16.26	33.368	6.09	0.24	3.		0.0	348.5	10	16.26	33.369	6.09	24.456	348.5	0.035
28	15.12	33.385	6.14					323.0	20	16.26	33.369	6.12	24.456	348.5	0.070
38	13.56	33.451	5.51	0.34	6.		0.8	286.9	30	14.64	33.398	6.04	24.836	312.3	0.103
52	12.46	33.581	4.42	0.72	12.		8.9	256.6	50	12.57	33.565	4.56	25.387	259.9	0.160
66	11.60	33.642	3.94	0.93	15.		12.8	236.7	75	11.02	33.658	3.79	25.749	225.4	0.221
90	10.26	33.711	3.60	1.19	20.		17.7	208.9	100	10.09	33.813	3.35	26.031	198.6	0.275
108	10.03	33.893	3.15	1.38	23.		20.1	191.7	125	9.82	33.951	2.96	26.185	184.0	0.323
131	9.73	33.964	2.91	1.55	26.		22.0	181.7	150	9.30	34.064	2.59	26.357	167.7	0.368
148	9.35	34.057	2.62	1.63	31.		21.5	168.8	200	8.45	34.146	2.04	26.557	148.7	0.449
176	8.78	34.114	2.29	1.93	36.		26.9	155.9	250	8.02	34.227	1.32	26.685	136.5	0.522
207	8.37	34.155	1.95	2.01	42.		28.0	146.9	300	7.63	34.251	1.03	26.761	129.3	0.591
233	8.12	34.205	1.49	2.27	49.		30.3	139.6	400	6.81	34.283	0.61	26.902	115.9	0.719
278	7.85	34.247	1.14	2.43	54.		31.3	132.6	500	6.20	34.345	0.33	27.031	103.7	0.835
325	7.36	34.251	0.92	2.62	59.		33.7	125.6							
403	6.79	34.285	0.60	2.78	67.		35.7	115.6							
480	6.31	34.335	0.35	2.88	76.		36.6	105.8							
559	5.93	34.365	0.29	3.03	84.		39.2	98.9							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 110050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 16.5N	116 59.0W	07/02/78	1246 GMT	3460M	320	9KT	2	310 4 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.78	33.364	5.67	0.29	2.		0.0	382.8	0	17.78	33.364	5.67	24.096	382.8	0.000
8	17.78	33.364	5.71	0.28	2.		0.0	382.8	10	17.78	33.364	5.71	24.096	382.8	0.038
27	17.77	33.365	5.69	0.27	2.		0.0	382.5	20	17.77	33.365	5.70	24.099	382.5	0.077
53	15.12	33.246	6.21	0.26	2.		0.0	333.2	30	17.77	33.364	5.78	24.098	382.6	0.115
62	13.85	33.251	5.96	0.39	4.		1.8	307.2	50	15.82	33.267	6.15	24.477	346.4	0.188
75	12.10	33.267	5.39	0.66	8.		7.1	273.1	75	12.10	33.267	5.39	25.247	273.1	0.266
88	11.07	33.316	5.07	0.84	11.		9.5	251.5	100	10.82	33.382	4.80	25.570	242.4	0.331
101	10.81	33.388	4.78	1.01	13.		12.0	241.8	125	10.12	33.667	3.95	25.912	209.9	0.388
123	10.16	33.640	4.03	1.27	19.		16.2	212.5	150	9.75	33.957	2.95	26.201	182.5	0.438
140	9.88	33.854	3.32	1.54	23.		20.1	192.2	200	8.93	34.101	2.47	26.447	159.1	0.525
166	9.53	34.068	2.54	1.88	29.		23.6	170.8	250	8.39	34.197	1.76	26.606	144.1	0.603
191	9.03	34.082	2.59	1.99	32.		25.5	162.1	300	8.03	34.240	1.29	26.694	135.7	0.675
217	8.77	34.141	2.18	2.17	36.		27.5	153.8	400	7.24	34.307	0.65	26.861	119.8	0.809
259	8.29	34.208	1.66	2.42	43.		29.4	141.8	500	6.30	34.331	0.41	27.007	106.0	0.928
306	8.00	34.243	1.24	2.68	49.		31.8	135.0							
382	7.42	34.303	0.72	2.86	59.		33.2	122.6							
461	6.63	34.317	0.49	3.08	70.		36.6	111.1							
545	5.98	34.353	0.34	3.18	80.		38.2	100.4							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 110060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 56.5N	117 39.0W	07/02/78	1835 GMT	3640M	340	25KT	0	330 5 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.69	33.337	5.66	0.27	0.		0.0	382.7	0	17.69	33.337	5.66	24.097	382.7	0.000
10	17.68	33.339	5.73	0.26	0.		0.0	382.3	10	17.68	33.339	5.73	24.101	382.3	0.038
32	17.63	33.327	5.69	0.25	0.		0.0	382.1	20	17.66	33.334	5.71	24.102	382.2	0.077
59	15.37	33.152	6.05	0.27	1.		0.0	345.3	30	17.63	33.329	5.69	24.103	382.1	0.115
67	14.87	33.170	6.11	0.26	1.		0.0	333.6	50	17.63	33.327	5.92	24.104	382.1	0.191
84	13.46	33.233	5.87	0.41	3.		1.9	301.0	75	14.26	33.206	6.04	24.769	318.7	0.280
97	12.12	33.198	5.54	0.53	5.		4.6	278.6	100	11.84	33.219	5.41	25.259	272.1	0.354
110	11.03	33.320	4.96	0.86	10.		10.7	250.5	125	10.34	33.473	4.43	25.724	227.8	0.417
134	10.11	33.567	4.15	1.10	17.		15.3	217.1	150	9.80	33.750	3.68	26.031	198.6	0.471
150	9.80	33.750	3.68	1.38	22.		20.0	198.6	200	8.78	33.936	3.38	26.341	169.2	0.565
174	9.12	33.830	3.59	1.59	26.		21.2	182.1	250	7.93	34.031	2.79	26.544	149.9	0.646
202	8.76	33.944	3.36	1.75	29.		23.4	168.3	300	7.25	34.052	2.28	26.659	139.0	0.721
225	8.30	34.008	2.99	1.85	33.		24.8	156.8	400	6.54	34.193	0.94	26.867	119.3	0.855
265	7.74	34.033	2.69	2.11	39.		28.6	147.0	500	6.12	34.289	0.46	26.997	106.9	0.975
317	7.04	34.064	2.06	2.31	48.		31.8	135.3							
400	6.54	34.193	0.94	2.74	62.		36.4	119.3							
477	6.24	34.268	0.54	2.93	71.		37.9	109.9							
545	5.86	34.329	0.35	3.11	80.		39.7	100.8							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 110070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 36.5N	118 18.0W	07/03/78	0007 GMT	3490M	330	28KT	1	330 5 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	18.28	33.264	5.65	0.26	3.		0.1	401.7	0	18.28	33.264	5.65	23.898	401.7	0.000
8	18.28	33.262	5.67	0.23	3.		0.1	401.9	10	18.28	33.262	5.67	23.896	401.9	0.040
25	18.25	33.262	5.66	0.24	3.		0.0	401.2	20	18.26	33.262	5.62	23.901	401.4	0.080
33	18.08	33.252	5.65	0.22	3.		0.0	397.9	30	18.17	33.258	5.65	23.920	399.5	0.121
46	17.37	33.198	5.82	0.15	4.		0.0	385.5	50	17.31	33.236	5.85	24.111	381.4	0.199
58	17.12	33.317	5.88	0.12	2.		0.0	371.2	75	15.51	33.315	5.88	24.584	336.3	0.289
79	15.03	33.314	5.88	0.14	2.		0.0	326.3	100	13.32	33.336	5.69	25.063	290.7	0.368
95	13.48	33.344	5.74	0.20	3.		0.1	293.2	125	12.36	33.485	4.86	25.365	262.0	0.438
111	13.08	33.337	5.59A	0.25	4.		0.6	286.1	150	11.06	33.599	4.26	25.696	230.5	0.500
128	12.19	33.520	4.69	0.38	8.		3.4	256.2	200	9.97	33.929	3.10	26.141	188.2	0.607
152	10.97	33.603	4.24	1.04	14.		13.0	228.6	250	9.64	34.190	1.99	26.400	163.6	0.697
180	10.36	33.782	3.71		19.		15.8	205.3	300	9.39	34.318	1.24	26.542	150.1	0.778
204	9.91	33.957	2.98	1.36	25.		21.3	185.0	400	7.80	34.300	0.84	26.775	128.0	0.924
244	9.66	34.163	2.12	1.68	32.		24.5	165.8	500	6.57	34.290	0.52	26.940	112.4	1.051
288	9.55	34.318	1.35	2.05	38.		27.4	152.6							
358	8.41	34.320	0.97	2.29	47.		30.5	135.2							
431	7.39	34.285	0.76	2.43	58.		32.6	123.5							
507	6.49	34.292	0.49	2.75	69.		36.8	111.2							

A) ALTERNATE VALUE, 5.76 ML/L.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 110080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 16.5N	118 57.5W	07/03/78	0614 GMT	3925M	330	27KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.22	33.363	5.47	0.25	2.		0.0	417.0	0	19.22	33.363	5.47	23.738	417.0	0.000
9	19.23	33.362	5.56	0.24	2.		0.0	417.3	10	19.23	33.362	5.56	23.734	417.3	0.042
27	19.23	33.360	5.52	0.23	2.		0.0	417.4	20	19.23	33.361	5.53	23.734	417.3	0.084
53	17.53	33.357	5.85	0.18	3.		0.0	377.6	30	19.23	33.360	5.56	23.733	417.4	0.125
62	17.09	33.380	5.87	0.15	2.		0.0	366.0	50	19.23	33.358	5.81	23.731	417.6	0.209
75	16.08	33.359	5.88	0.16	3.		0.0	345.2	75	16.08	33.359	5.88	24.490	345.2	0.305
88	14.34	33.374	5.81	0.20	4.		0.0	307.9	100	13.74	33.383	5.62	25.012	295.5	0.386
101	13.71	33.383	5.60	0.28	4.		0.2	294.8	125	11.86	33.512	4.97	25.482	250.8	0.455
123	11.98	33.501	4.99	0.44	8.		4.9	253.8	150	10.78	33.692	4.37	25.818	218.9	0.514
141	11.07	33.610	4.75	0.69	11.		9.6	229.8	200	10.21	34.159	2.13	26.280	174.9	0.614
167	10.44	33.866	3.47	1.08	21.		14.6	200.4	250	9.34	34.203	1.89	26.461	157.8	0.700
193	10.28	34.131	2.19	1.74	28.		24.3	178.2	300	8.72	34.264	1.39	26.607	143.9	0.778
219	9.96	34.190	1.97	1.93	31.		25.1	168.6	400	7.75	34.326	0.66	26.802	125.4	0.919
284	9.06	34.206	1.85	2.16	37.		28.0	153.4	500	6.76	34.345	0.35	26.956	110.8	1.044
313	8.63	34.286	1.21	2.31	44.		28.4	141.0							
390	7.86	34.323	0.71	2.37	52.		28.9	127.1							
470	7.03	34.338	0.42	2.73	63.		34.2	114.7							
554	6.35	34.356	0.29	3.02	73.		38.2	104.7							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 110090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 56.5N	119 35.0W	07/03/78	1206 GMT	3738M	340	26KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.61	33.603	5.45	0.26	2.		0.0	409.1	0	19.61	33.603	5.45	23.820	409.1	0.000
9	19.62	33.600	5.49	0.27	2.		0.0	409.5	10	19.62	33.600	5.49	23.815	409.5	0.041
34	19.63	33.599	5.44	0.22	1.		0.0	409.9	20	19.63	33.600	5.46	23.813	409.8	0.082
63	17.84	33.305	5.81	0.19	1.		0.0	388.5	30	19.63	33.599	5.44	23.812	409.9	0.123
73	17.55	33.410	5.80	0.18	1.		0.0	374.2	50	19.63	33.598	5.68	23.811	409.9	0.205
92	14.81	33.279	5.93	0.23	4.		0.1	324.4	75	17.31	33.403	5.82	24.237	369.3	0.303
106	13.29	33.238	5.76	0.25	4.		0.1	297.3	100	13.86	33.244	5.86	24.881	308.0	0.388
121	12.67	33.361	5.34	0.45	7.		3.7	276.6	125	12.61	33.400	5.25	25.251	272.8	0.462
150	11.98	33.615	4.75	0.69	11.		9.1	245.4	150	11.98	33.615	4.75	25.539	245.4	0.527
169	10.47	33.738	4.45	0.86	16.		12.4	210.3	200	9.46	33.884	3.92	26.192	183.3	0.636
198	9.51	33.877	3.94	1.26	24.		17.7	184.6	250	8.40	33.993	3.32	26.445	159.4	0.724
232	8.74	33.963	3.57	1.56	30.		22.5	166.5	300	7.60	34.036	2.60	26.597	144.9	0.803
262	8.19	34.007	3.14	1.76	36.		25.7	155.3	400	6.63	34.170	1.11	26.838	122.0	0.941
311	7.45 A	34.042	2.44	2.07	47.		29.3	142.4	500	6.32	34.328	0.41	27.003	106.4	1.062
376	6.72	34.122	1.42	2.52	62.		34.9	126.8	600	5.72	34.372	0.31	27.114	95.9	1.171
475	6.46	34.308	0.44	2.77	74.		35.8	109.7							
563	5.93	34.357	0.33	2.96	84.		38.7	99.5							
638	5.51	34.384	0.30	3.07	91.		39.4	92.6							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 113035

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 11.5N	115 38.0W	07/05/78	0443 GMT	1300M	320	30KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.12	33.348	5.86	0.28	3.		0.0	369.0	0	17.12	33.348	5.86	24.241	369.0	0.000
10	17.13	33.348	5.88	0.28	3.		0.0	369.2	10	17.13	33.348	5.88	24.239	369.2	0.037
30	15.89	33.397	5.97	0.27	3.		0.0	338.4	20	17.12	33.356	5.92	24.245	368.5	0.074
40	14.70	33.365	5.79	0.32	4.		0.0	314.4	30	15.89	33.397	5.97	24.562	338.4	0.109
55	12.25	33.253	5.51	0.46	6.		3.3	276.9	50	13.05	33.282	5.65	25.074	289.6	0.172
69	10.95	33.450	4.57	0.76	12.		11.2	239.6	75	10.90	33.589	4.20	25.716	228.5	0.237
93	10.74	33.870	3.23	1.15	20.		17.8	205.1	100	10.66	33.946	2.88	26.037	198.1	0.291
112	10.54	34.046	2.39	1.50	26.		21.2	188.7	125	10.52	34.134	2.06	26.208	181.9	0.339
131	10.51	34.165	1.97	1.74	29.		23.2	179.5	150	10.35	34.218	1.84	26.303	172.8	0.384
149	10.35	34.214	1.85	1.75	32.		20.0U	173.2	200	10.35	34.419	0.95	26.459	158.0	0.469
177	10.29	34.328	1.40	2.06	36.		26.1	163.8	250	10.07	34.489	0.53	26.561	148.3	0.548
209	10.36	34.448	0.80	2.23	39.		25.9	156.1	300	9.35	34.467	0.47	26.665	138.4	0.623
237	10.18	34.478	0.61	2.44	41.		27.6	150.9	400	8.01	34.373	0.54	26.802	125.5	0.761
282	9.69	34.493	0.43	2.57	46.		28.1	141.9	500	6.92	34.329	0.47	26.923	114.0	0.888
331	8.75	34.416	0.57	2.72	51.		30.7	133.1							
408	7.94	34.370	0.54	2.77	58.		31.6	124.8							
487	7.04	34.328	0.48	2.85	66.		33.7	115.6							
567	6.40	34.363	0.39	3.00	73.		36.3	104.8							

A) ALTERNATE VALUE, 7.39 DEGREES.

RV ALEJANDRO DE HUMBOLDT CALCOFI CRUISE 7807 113040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
29 02.0N	115 56.9W	07/05/78	0126 GMT	1850M	330	23KT	1	330 5 7

E	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.91	33.371	5.86	0.21	2.		0.3	362.6	0	16.91	33.371	5.86	24.308	362.6	0.000
11	16.90	33.370	5.89	0.21	2.		0.0	362.4	10	16.90	33.370	5.89	24.309	362.4	0.036
31	16.57	33.379	5.91	0.19	3.		0.1	354.5	20	16.82	33.373	5.90	24.330	360.4	0.072
41	16.15	33.376	5.93	0.20	3.		0.2	345.5	30	16.60	33.379	5.91	24.386	355.1	0.108
56	14.86	33.444	5.90	0.40	3.		0.1	313.3	50	15.45	33.422	5.91	24.680	327.1	0.177
71	13.21	33.344	5.58	0.51	6.		2.8	288.0	75	12.84	33.357	5.38	25.174	280.1	0.253
96	11.34	33.558	4.19	0.89	14.		11.7	238.3	100	11.15	33.619	4.00	25.694	230.7	0.317
116	10.65	33.852	3.33	1.23	19.		17.3	204.9	125	10.54	33.935	3.05	26.049	196.9	0.371
136	10.42	34.002	2.80	1.50	25.		20.5	190.0	150	10.06	34.043	2.68	26.216	181.1	0.419
156	9.90	34.054	2.65	1.64	28.		22.3	177.7	200	9.36	34.176	2.10	26.436	160.2	0.507
186	9.60	34.148	2.26					166.0	250	9.39	34.401	0.82	26.607	143.9	0.585
221	9.11	34.234	1.75	2.02	39.		27.0	152.0	300	9.13	34.481	0.33	26.711	134.1	0.657
251	9.40	34.407	0.79	2.37	43.		28.0	143.7	400	8.06	34.449	0.23	26.853	120.6	0.791
300	9.13	34.481	0.33	2.63	51.		29.6	134.1	500	7.12	34.431	0.20	26.975	109.0	0.913
355	8.73	34.486	0.18	2.79	55.		31.2	127.6	600	6.16	34.387	0.27	27.070	100.1	1.026
440	7.46	34.418	0.30	2.81	66.			114.5							
525	7.00	34.435	0.16	2.93	73.			107.1							
610	6.02	34.377	0.29	2.91	83.			99.1							

RV ALEJANDRO DE HUMBOLDT CALCOFI CRUISE 7807 113050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 41.5N	116 36.5W	07/04/78	1837 GMT	3640M	340	24KT	1	320 4 7

E	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.74	33.292	5.57	0.48	3.		0.0	387.1	0	17.74	33.292	5.57	24.050	387.1	0.000
9	17.67	33.292	5.72	0.30	3.		0.0	385.5	10	17.65	33.292	5.72	24.072	385.1	0.039
27	17.42	33.293	5.72	0.21	3.		0.0	379.8	20	17.51	33.293	5.72	24.106	381.8	0.077
54	14.45	33.251	6.01	0.16	4.		0.0	319.1	30	17.34	33.290	5.75	24.145	378.2	0.115
63	13.85	33.210	6.06	0.16	5.		0.0	310.2	50	15.01	33.257	5.97	24.650	330.0	0.186
77	12.41	33.185	5.75	0.29	7.		2.8	284.8	75	12.62	33.183	5.82	25.082	288.9	0.264
91	11.33	33.282	5.10	0.55	11.		8.6	258.5	100	10.61	33.359	4.92	25.589	240.7	0.331
104	10.32	33.397	4.86	0.73	14.		12.2	233.1	125	9.59	33.661	4.30	25.997	201.9	0.386
127	9.56	33.685	4.24	1.00	20.		18.1	199.6	150	9.37	33.880	3.64	26.203	182.3	0.435
145	9.39	33.843	3.79	1.20	24.		20.6	185.3	200	8.64	34.030	3.11	26.437	160.1	0.522
173	9.21	33.999	3.08	1.50	30.		23.2	171.0	250	8.06	34.137	2.12	26.608	143.8	0.600
200	8.64	34.030	3.11	1.65	34.		25.4	160.1	300	7.76	34.205	1.37	26.707	134.5	0.672
227	8.04	34.046	2.79	1.75	40.		26.7	150.3	400	6.90	34.272	0.65	26.881	118.0	0.804
273	8.08	34.207	1.50	2.12	49.		31.1	138.8	500	6.25	34.324	0.38	27.009	105.8	0.923
324	7.42	34.203	1.25	2.35	54.		33.7	130.0							
402	6.89	34.274	0.63	2.52	64.		35.5	117.7							
481	6.37	34.314	0.42	2.78	72.		38.9	108.1							
561	5.86	34.357	0.31	2.92	82.		40.8	98.7							

RV ALEJANDRO DE HUMBOLDT CALCOFI CRUISE 7807 113060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 22.0N	117 15.9W	07/04/78	1212 1231 GMT	3600M	330	14KT		

E	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.00	33.295	5.62	0.44	3.		0.1	392.9	0	18.00	33.295	5.62	23.989	392.9	0.000
9	17.99	33.293	5.72	0.43	3.		0.1	392.8	10	17.99	33.293	5.72	23.990	392.8	0.039
27	17.97	33.292	5.67	0.43	3.		0.1	392.5	20	17.98	33.292	5.69	23.992	392.7	0.079
47A	15.99	33.193	5.97	0.43	3.		0.0	355.4	30	17.97	33.291	5.71	23.994	392.5	0.118
54A	15.23	33.218	6.08	0.34	3.		0.0	337.5	50	15.64	33.203	6.02	24.469	347.3	0.192
66A	14.60	33.204	6.10	0.39	3.		0.0	325.6	75	14.03	33.215	5.99	24.825	313.3	0.275
78A	13.83	33.220	5.95	0.45	4.		0.1	309.1	100	12.32	33.238	5.56	25.183	279.2	0.350
90A	13.13	33.234	5.83	0.50	5.		1.7	294.6	125	10.73	33.350	4.79	25.561	243.3	0.416
111A	11.44	33.262	5.20	0.72	9.		7.1	261.8	150	9.99	33.591	4.13	25.875	213.4	0.474
128A	10.61	33.373	4.71	0.74	13.		8.4	239.6	200	9.04	33.997	3.12	26.349	168.5	0.571
153A	9.93	33.621	4.07	1.33	18.		16.3	210.2	250	8.35	34.102	2.42	26.538	150.5	0.653
179A	9.29	33.801	3.90	1.33	23.		18.1	186.9	300	7.60	34.151	1.79	26.687	136.3	0.727
206A	8.98	34.047	2.88	1.74	34.		24.0	163.9	400	7.21	34.300	0.60	26.859	120.0	0.860
250A	8.35	34.102	2.42	1.98	40.		25.7	150.5	500	6.25	34.340	0.31	27.021	104.6	0.979
300A	7.60	34.151	1.79	2.34	47.		29.9	136.3							
378A	7.40	34.284	0.73	2.65	57.		34.5	123.7							
455A	6.66	34.323	0.42	2.77	68.		36.6	111.1							
531A	5.97	34.349	0.27	2.87	77.		40.3	100.6							

A) CAST II.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 113070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 02.0N	117 55.0W	07/04/78	0549 GMT	3400M	340	24KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.34	33.338	5.48	0.29	2.		0.0	421.7	0	19.34	33.338	5.48	23.688	421.7	0.000
8	19.29	33.336	5.56	0.30	2.		0.0	420.6	10	19.30	33.336	5.56	23.697	420.9	0.042
28	19.13	33.321	5.58	0.29	2.		0.0	417.8	20	19.21	33.328	5.57	23.714	419.2	0.084
38	17.31	33.232	5.85	0.28	2.		0.0	381.7	30	18.77	33.299	5.63	23.803	410.8	0.126
52	16.76	33.283	5.90	0.28	2.		0.0	365.7	50	16.78	33.271	5.89	24.261	367.0	0.204
66	15.74	33.340	5.91	0.28	2.		0.0	339.3	75	14.79	33.364	5.69	24.779	317.7	0.290
90	13.26	33.418	5.17	0.33	5.		0.3	283.6	100	12.63	33.464	4.86	25.298	268.3	0.364
109	12.24	33.513	4.58	0.57	8.		6.3	257.6	125	11.96	33.645	4.11	25.566	242.8	0.428
128	11.92	33.671	4.02	0.70	12.		8.8	240.2	150	11.17	33.824	3.42	25.850	215.8	0.486
146	11.32	33.803	3.49	0.88	17.		12.1	219.9	200	9.90	34.051	2.69	26.248	178.0	0.587
174	10.38	33.933	3.10	1.03	22.		13.4	194.4	250	9.34	34.188	2.00	26.449	159.0	0.673
206	9.83	34.075	2.60	1.53	28.		21.5	175.0	300	8.85	34.269	1.40	26.591	145.5	0.752
234	9.55	34.160	2.19	1.84	33.		24.7	164.3	400	7.96	34.378	0.53	26.812	124.5	0.893
280	8.97	34.230	1.66	1.91	39.		23.8	150.2	500	6.50	34.312	0.49	26.966	109.9	1.018
331	8.68	34.324	1.03	2.36	45.		30.1	138.9	600	5.80	34.350	0.27	27.086	98.5	1.129
411	7.82	34.379	0.49	2.31	57.		28.0	122.4							
498	6.52	34.311	0.50	2.52	70.		32.9	110.2							
581	5.90	34.347	0.28	2.62	81.		34.4	99.9							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 113080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 42.0N	118 33.4W	07/03/78	2346 GMT	3890M	350	25KT	1	320 5 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.28	33.349	5.51	0.27	3.		0.1	419.4	0	19.28	33.349	5.51	23.712	419.4	0.000
8	19.29	33.349	5.59	0.28	3.		0.1	419.7	10	19.29	33.350	5.58	23.710	419.6	0.042
31	19.21	33.350	5.54	0.27	3.		0.1	417.7	20	19.25	33.350	5.56	23.720	418.6	0.084
59	16.93	33.356	5.85	0.27	3.		0.0	364.1	30	19.21	33.350	5.54	23.730	417.7	0.126
68	16.02	33.299	5.94	0.30	3.		0.0	348.3	50	17.84	33.355	5.72	24.074	384.9	0.206
86	14.31	33.332	5.84	0.35	3.		0.1	310.4	75	15.39	33.310	5.90	24.606	334.2	0.297
100	12.45	33.272	5.50	0.49	6.		3.5	279.1	100	12.45	33.272	5.50	25.184	279.1	0.374
114	11.73	33.354	5.14	0.65	9.		7.1	260.2	125	11.35	33.472	4.71	25.544	244.9	0.440
141	10.96	33.702	3.88	1.03	17.		14.0	221.2	150	10.74	33.865	3.26	25.959	205.5	0.497
159	10.59	34.022	2.66	1.51	25.		21.3	191.4	200	10.80	34.349	1.31	26.325	170.7	0.593
186	10.83	34.281	1.61	1.78	32.		22.1	176.3	250	10.53	34.471	0.74	26.467	157.3	0.678
217	10.70	34.398	1.08	2.13	36.		26.7	165.4	300	10.11	34.499	0.54	26.563	148.1	0.757
244	10.58	34.463	0.79	2.35	39.		27.2	158.6	400	9.21	34.483	0.40	26.701	135.1	0.906
288	10.20	34.497	0.54	2.54	42.		28.8	149.8	500	7.82	34.429	0.29	26.874	118.6	1.041
346	9.74	34.495	0.54	2.59	45.		28.6	142.5							
432	8.83	34.471	0.31	2.56	54.		27.7	130.2							
509	7.68	34.424	0.29	2.83	63.		33.2	117.1							
574	6.86	34.399	0.24	3.03	73.		37.2	108.0							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 113090

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 22.0N	119 12.0W	07/03/78	1738 GMT	3925M	350	19KT	1	330 3 5

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.33	33.357	5.28	0.26	2.		0.1	420.1	0	19.33	33.357	5.28	23.705	420.1	0.000
9	19.33	33.356	5.51	0.27	2.		0.1	420.1	10	19.33	33.357	5.51	23.705	420.1	0.042
28	19.33	33.362	5.51	0.26	2.		0.1	419.7	20	19.33	33.360	5.51	23.707	419.8	0.084
57	17.27	33.251	5.82	0.31	2.		0.1	379.4	30	19.33	33.361	5.53	23.707	419.8	0.126
67	16.70	33.303	5.89	0.27	2.		0.1	362.9	50	18.22	33.282	5.73	23.924	399.2	0.208
81	15.29	33.316	5.91	0.27	2.		0.0	331.6	75	15.93	33.312	5.90	24.487	345.5	0.302
96	13.91	33.368	5.72	0.31	3.		0.0	299.8	100	13.55	33.387	5.56	25.055	291.5	0.382
110	12.73	33.434	5.11	0.57	6.		5.5	272.4	125	11.80	33.479	4.65	25.466	252.3	0.451
134	11.50	33.526	4.38	0.75	11.		12.2	243.4	150	11.67	33.740	3.65	25.693	230.7	0.512
153	11.71	33.780	3.53	1.18	15.		15.5	228.4	200	10.25	34.057	2.73	26.193	183.2	0.617
182	10.31	33.906	3.35	1.45	22.		18.9	195.3	250	9.40	34.180	2.09	26.432	160.5	0.706
211	10.22	34.124	2.35	1.81	28.		23.2	177.7	300	8.57	34.220	1.66	26.597	144.9	0.785
240	9.60	34.172	2.15	1.93	33.		24.8	164.2	400	7.67	34.355	0.54	26.838	122.1	0.924
288	8.74	34.205	1.81	2.19	41.		28.9	148.6	500	6.73	34.351	0.32	26.966	109.9	1.047
346	8.03	34.283	1.04	2.48	52.		31.9	132.5	600	5.92	34.378	0.27	27.093	97.8	1.159
424	7.52	34.376	0.39	2.69	61.		33.4	118.5							
507	6.65	34.347	0.31	2.94	70.		37.0	109.2							
589	6.00	34.374	0.27	3.08	77.		39.1	99.1							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 117030

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 48.0N	114 56.5W	07/10/78	0100 GMT	91M	290	4KT	1	290 2 4

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	16.65	33.514	5.91	0.23	8.		0.0	346.4	0	16.65	33.514	5.91	24.478	346.4	0.000
10	16.33	33.511	6.06	0.29	9.		0.0	339.6	10	16.33	33.511	6.06	24.549	339.6	0.034
19	15.85	33.506	6.01	0.33	9.		0.0	329.6	20	15.59	33.508	5.90	24.714	323.9	0.068
29	12.97	33.576	4.67	0.36	11.		0.0	266.5	30	12.80	33.584	4.57	25.357	262.7	0.097
48	11.18	33.711	3.18	1.17	20.		15.6	224.3	50	11.14	33.745	3.05	25.795	221.0	0.145
73	10.66	33.937	1.94	1.79	29.		22.7	198.8	75	10.63	33.940	1.88	26.037	198.1	0.198

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 117035

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 38.0N	115 16.0W	07/10/78	0435 GMT	196M	300	6KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.19	33.552	5.95		5.		0.1	355.7	0	17.19	33.552	5.95	24.380	355.7	0.000
10	17.00	33.546	6.02	0.35	5.		0.0	351.8	10	17.00	33.546	6.02	24.421	351.8	0.035
30	11.48	33.628	3.93	1.14	17.		14.2	235.6	20	14.24	33.592	4.91	25.070	290.0	0.068
40	11.28	33.730	3.42	1.28	19.		15.6	224.6	30	11.48	33.628	3.93	25.642	235.6	0.094
55	10.72	33.922	2.74	1.54	25.		18.9	200.9	50	10.90	33.864	2.93	25.930	208.2	0.138
70	10.58	33.958	2.70	1.62	26.		19.8	195.9	75	10.53	34.001	2.58	26.102	191.9	0.189
85	10.45	34.092	2.31	1.86	30.		22.9	183.9	100	10.46	34.158	2.02	26.237	179.1	0.236
105	10.46	34.167	1.95	1.92	31.		22.9	178.5	125	10.44	34.187	1.88	26.262	176.7	0.281
130	10.43	34.189	1.86	1.91	32.		22.5	176.4	150	10.38	34.222	1.77	26.300	173.1	0.325
155	10.36	34.232	1.74	2.04	32.		24.5	172.0							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 117040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 28.0N	115 35.5W	07/10/78	1031 GMT	1000M	340	11KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	14.70	33.465	6.31	0.32	5.		0.4	308.5	0	14.70	33.465	6.31	24.875	308.5	0.000
10	14.03	33.486	6.17	0.48	4.		1.2	293.5	10	14.03	33.486	6.17	25.033	293.5	0.030
29	12.67	33.458	5.12	0.80	10.		8.1	269.5	20	13.19	33.467	5.64	25.190	278.6	0.059
39	12.80	33.629	4.83	1.00	13.		10.5	259.4	30	12.68	33.475	5.09	25.295	268.6	0.086
53	11.65	33.611	4.18	1.16	16.		13.5	239.8	50	11.93	33.625	4.31	25.555	243.8	0.138
68	11.14	33.618	3.99	1.26	18.		15.2	230.5	75	10.95	33.662	3.76	25.764	224.0	0.196
92	10.64	33.803	3.15	1.50	23.		19.0	208.3	100	10.61	33.867	2.92	25.984	203.1	0.250
110	10.56	33.934	2.71	1.62	26.		20.6	197.3	125	10.23	33.979	2.73	26.137	188.6	0.300
129	10.15	33.990	2.73	1.77	27.		22.9	186.5	150	10.24	34.119	2.20	26.243	178.4	0.346
148	10.24	34.108	2.25	1.84	30.		23.6	179.2	200	10.26	34.280	1.53	26.365	166.9	0.435
176	10.28	34.242	1.69	2.04	33.		25.7	170.0	250	9.83	34.432	0.83	26.557	148.7	0.516
208	10.26	34.297	1.48	2.16	35.		26.6	165.6	300	9.59	34.485	0.44	26.639	140.9	0.591
236	9.90	34.391	1.02	2.25	39.		27.0	152.8	400	8.76	34.474	0.29	26.765	129.0	0.733
282	9.73	34.487	0.53	2.52	45.		28.7	143.0	500	7.25	34.404	0.30	26.936	112.8	0.862
332	9.29	34.480	0.36	2.57	47.		29.8	136.6							
411	8.66	34.471	0.29	2.49	53.		29.1	127.7							
491	7.38	34.408	0.30	2.84	64.		35.3	114.2							
574	6.26	34.381	0.27	2.74	77.		37.3	101.7							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 117050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 08.0N	116 15.0W	07/10/78	1652 GMT	4200M	310	10KT	2	330 1

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	19.39	33.478	5.47	0.37	2.		0.5	412.8	0	19.39	33.478	5.47	23.782	412.8	0.000
11	19.38	33.476	5.49	0.37	2.		0.4	412.7	10	19.38	33.477	5.49	23.783	412.7	0.041
31	18.87	33.514	5.59	0.35	2.		0.4	397.6	20	19.15	33.493	5.53	23.854	405.9	0.082
42	15.06	33.260	6.12	0.43	4.		0.5	330.9	30	18.90	33.513	5.58	23.933	398.3	0.123
57	13.26	33.219	6.02	0.53	5.		0.6	298.1	50	13.78	33.230	6.07	24.887	307.4	0.193
72	12.66	33.559	4.49	1.01	11.		9.1	261.9	75	12.45	33.596	4.38	25.434	255.4	0.264
97	10.84	33.725	3.61	1.45	20.		17.3	217.4	100	10.62	33.719	3.71	25.868	214.1	0.323
117	9.79	33.736	4.06	1.43	21.		17.1	199.5	125	10.03	33.873	3.41	26.089	193.2	0.375
137	10.48	34.087	2.35	1.93	28.		22.3	184.7	150	10.25	34.140	2.27	26.258	177.1	0.422
157	10.05	34.144	2.23	2.17	31.		24.7	173.5	200	9.55	34.270	1.61	26.478	156.2	0.507
187	9.73	34.258	1.72	2.35	35.		26.7	159.9	250	8.83	34.288	1.29	26.607	143.9	0.584
222	9.23	34.271	1.49	2.48	39.		29.0	151.1	300	8.03	34.289	0.95	26.732	132.1	0.656
251	8.82	34.288	1.28	2.60	42.		29.8	143.6	400	7.17	34.330	0.43	26.890	117.1	0.786
301	8.02	34.289	0.94	2.79	51.		32.8	131.9	500	6.33	34.360	0.27	27.026	104.2	0.903
355	7.56	34.316	0.64	2.91	58.		34.3	123.5	600	5.88	34.418	0.20	27.130	94.4	1.010
438	6.84	34.340	0.31	2.97	70.		35.2	112.1							
523	6.17	34.369	0.25	3.08	80.		38.3	101.5							
608	5.87	34.424	0.19	3.28	88.		40.7	93.8							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 117060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 48.0N	116 53.0W	07/10/78	2210 GMT	3680M	310	4KT	1	330 1 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.89	33.300	5.50	0.27	3.		0.0	413.6	0	18.89	33.300	5.50	23.773	413.6	0.000
11	18.49	33.297	5.53	0.26	2.		0.0	404.3	10	18.53	33.298	5.53	23.860	405.3	0.041
30	17.60	33.311	5.65	0.25	2.		0.0	382.5	20	18.02	33.303	5.59	23.991	392.8	0.081
40	17.53	33.315	5.68	0.23	2.		0.0	380.7	30	17.60	33.311	5.65	24.099	382.5	0.120
55	16.26	33.213	5.90	0.24	2.		0.0	359.8	50	16.82	33.251	5.82	24.238	369.3	0.195
69	14.17	33.174	5.98	0.29	4.		0.3	319.2	75	13.63	33.173	5.92	24.874	308.6	0.280
93	12.36	33.212	5.49	0.56	7.		5.0	281.9	100	11.72	33.260	5.19	25.313	266.9	0.353
112	10.73	33.367	4.74	0.69	13.		11.1	242.0	125	10.13	33.488	4.71	25.771	223.3	0.415
131	9.98	33.548	4.70	0.95	16.		13.5	216.4	150	9.95	33.786	3.95	26.034	198.3	0.468
150	9.95	33.786	3.95	1.28	19.		17.8	198.3	200	9.46	34.102	2.52	26.362	167.2	0.561
178	10.11	34.109	2.39	1.80	27.		22.7	177.0	250	8.56	34.194	1.82	26.576	146.8	0.642
211	9.09	34.094	2.59	1.92	31.		25.1	162.1	300	7.74	34.189	1.49	26.697	135.4	0.715
239	8.78	34.193	1.91	2.20	38.		27.6	150.1	400	6.95	34.305	0.58	26.900	116.2	0.846
285	7.88	34.170	1.68	2.41	47.		30.8	138.8	500	6.14	34.338	0.30	27.034	103.5	0.963
337	7.50	34.248	0.98	2.68	55.		33.5	127.7	600	5.53	34.388	0.27	27.150	92.5	1.068
418	6.79	34.315	0.52	2.97	68.		36.7	113.3							
500	6.14	34.338	0.30	3.13	77.		39.3	103.5							
585	5.62	34.383	0.27	3.24	87.		40.7	93.9							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 117070

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 27.5N	117 32.5W	07/11/78	0412 GMT	3830M	340	12KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.42	33.309	5.48	0.23	3.		0.1	425.7	0	19.42	33.309	5.48	23.646	425.7	0.000
10	19.20	33.304	5.52	0.24	3.		0.2	420.7	10	19.20	33.304	5.52	23.698	420.7	0.042
30	18.60	33.273	5.58	0.23	2.		0.0	408.6	20	18.92	33.289	5.55	23.757	415.1	0.084
40	18.25	33.266	5.61	0.20	3.		0.0	400.9	30	18.60	33.273	5.58	23.825	408.6	0.125
55	17.98	33.268	5.65	0.20	3.		0.0	394.4	50	18.07	33.267	5.64	23.951	396.6	0.206
70	16.29	33.186	5.92	0.15	2.		0.1	362.4	75	15.78	33.200	5.91	24.435	350.5	0.300
94	14.06	33.304	5.88	0.15	4.		0.1	307.5	100	13.58	33.319	5.73	24.996	297.0	0.382
114	12.61	33.377	5.22	0.39	7.		4.2	274.3	125	12.06	33.512	4.62	25.443	254.5	0.451
134	11.64	33.611	4.24	0.86	14.		12.7	239.6	150	10.65	33.615	4.42	25.781	222.4	0.512
153	10.49	33.616	4.46		15.		13.3	219.7	200	10.05	34.102	2.47	26.264	176.5	0.613
182	10.33	34.003	2.87	1.58	26.		21.1	188.4	250	9.00	34.177	2.00	26.495	154.6	0.698
216	9.71	34.135	2.31	1.84	32.		25.3	168.7	300	8.76	34.270	1.38	26.605	144.1	0.776
244	9.02	34.159	2.08	1.89	45.		24.7	156.2	400	7.35	34.297	0.68	26.838	122.0	0.915
292	8.87	34.265	1.46	2.20	43.		28.5	146.1	500	6.39	34.331	0.36	26.995	107.2	1.036
344	8.05	34.275	1.03	2.44	52.		31.5	133.4	600	5.80	34.390	0.26	27.118	95.5	1.145
425	7.08	34.308	0.56	2.65	64.		34.1	117.6							
507	6.34	34.333	0.35	2.93	76.		38.6	106.3							
590	5.84	34.383	0.27	2.97	87.		39.1	96.5							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 117080

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 07.9N	118 10.5W	07/11/78	0920 GMT	4350M	330	15KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	19.99	33.370	5.38	0.21	2.		0.0	435.4	0	19.99	33.370	5.38	23.545	435.4	0.000
11	19.97	33.368	5.45	0.16	2.		0.0	435.0	10	19.97	33.369	5.44	23.548	435.1	0.044
31	19.20	33.354	5.50	0.10	2.		0.0	417.1	20	19.68	33.364	5.47	23.619	428.3	0.087
41	16.81	33.238	5.92	0.05	2.		0.0	370.0	30	19.24	33.355	5.50	23.727	418.0	0.129
56	15.22	33.216	6.09	0.04	2.		0.0	337.4	50	15.68	33.216	6.02	24.470	347.1	0.206
71	14.17	33.231	6.08	0.00	2.		0.0	315.0	75	13.79	33.246	6.00	24.898	306.4	0.288
96	12.00	33.318	5.20	0.27	7.		4.9	267.6	100	11.83	33.379	4.94	25.384	260.1	0.359
116	11.35	33.628	4.04	0.65	12.		11.4	233.3	125	11.06	33.700	4.01	25.775	223.0	0.420
136	10.74	33.762	3.98	0.82	14.			213.0	150	10.48	33.843	3.65	25.988	202.8	0.474
156	10.40	33.880	3.45	0.62	17.			198.7	200	9.82	34.170	2.20	26.355	167.9	0.569
185	10.19	34.158	2.17	1.74	27.			174.7	250	8.59	34.146	2.21	26.535	150.8	0.651
220	9.25	34.172	2.24	1.59	31.			158.8	300	7.92	34.150	1.93	26.641	140.7	0.726
249	8.61	34.147	2.21	1.63	36.			151.0	400	7.35	34.325	0.51	26.859	120.1	0.862
299	7.92	34.148	1.95	1.86	44.			141.0	500	6.43	34.358	0.29	27.012	105.6	0.982
353	7.76	34.281	0.89	2.51	52.			128.9	600	5.73	34.390	0.25	27.127	94.6	1.089
436	6.98	34.336	0.41	2.73	62.			114.2							
521	6.26	34.363	0.28	2.75	73.			103.1							
606	5.69	34.392	0.25	3.00	81.			94.1							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 118039

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 18.5N	115 23.7W	07/10/78	0743 GMT	252M	340	4KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.41	33.441	5.91	0.24	3.		0.0	368.8	0	17.41	33.441	5.91	24.243	368.8	0.000
10	15.67	33.453	6.39	0.23	2.		0.0	329.6	10	15.67	33.453	6.39	24.654	329.6	0.035
30	12.87	33.373	5.47	0.59	7.		4.4	279.5	20	14.11	33.409	6.08	24.958	300.7	0.066
45	11.90	33.425	4.85	0.75	12.		7.8	257.9	30	12.87	33.373	5.47	25.180	279.5	0.096
55	11.50	33.488	4.52	0.83	13.		9.2	246.3	50	11.68	33.451	4.69	25.469	252.1	0.149
71	11.23	33.734	3.56	1.23	18.		15.5	223.4	75	11.09	33.766	3.46	25.820	218.7	0.208
86	10.72	33.835	3.22	1.39	22.		17.5	207.3	100	10.71	33.978	2.59	26.053	196.5	0.260
106	10.70	34.024	2.34	1.76	27.		21.2	193.0	125	10.50	34.070	2.31	26.160	186.4	0.309
131	10.44	34.078	2.30	1.76	29.		21.5	184.7	150	10.43	34.195	1.79	26.270	176.0	0.355
152	10.43	34.207	1.73	1.83	32.		20.1	175.0	200	10.15	34.351	1.20	26.439	159.9	0.441
182	10.32														
207	10.07	34.351	1.12	2.22	38.		24.1	158.5							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 119033

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 19.0N	114 53.0W	07/09/78	2106 GMT	102M	330	7KT	1	330 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	18.46	33.608	5.86	0.37	7.		0.0	381.0	0	18.46	33.608	5.86	24.115	381.0	0.000
10	17.58	33.603	5.87	0.46	10.		0.2	360.8	10	17.58	33.603	5.87	24.326	360.8	0.037
20	17.19	33.602	5.71	0.53	12.		0.9	352.0	20	17.19	33.602	5.71	24.418	352.0	0.073
29	15.61	33.577	5.48	0.66	14.		2.2	319.3	30	15.41	33.576	5.36	24.806	315.1	0.106
50	12.08	33.689	3.09	1.49	17.		16.6	241.7	50	12.08	33.689	3.09	25.577	241.7	0.162
75	10.56	33.774	3.26	1.63	21.		19.7	209.2	75	10.56	33.774	3.26	25.920	209.2	0.219

120025

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 22.5N	114 15.0W	07/09/78	1244 GMT	54M	320	7KT	2	320 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	17.89	33.657	5.65	0.34	7.		0.1	364.0
10	17.90	33.657	5.68	0.39	7.		0.1	364.3
20	16.90	33.598	5.92	0.43	8.		0.1	345.8
30	13.10	33.668	4.49	0.95	11.		8.2	262.2
50	11.31	33.680	3.17	1.65	20.		17.3	228.8

Z	T	S	O2	SIGT	DT	DD
0	17.89	33.657	5.65	24.293	364.0	0.000
10	17.90	33.657	5.68	24.290	364.3	0.036
20	16.90	33.598	5.92	24.484	345.8	0.072
30	13.10	33.668	4.49	25.363	262.2	0.102
50	11.31	33.680	3.17	25.713	228.8	0.152

120030

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 13.0N	114 34.0W	07/09/78	1522 GMT	91M	330	8KT	2	320 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	17.79	33.606	5.83	0.40	6.		0.1	365.5
10	17.79	33.605	5.85	0.43	6.		0.1	365.5
20	17.23	33.602	5.80		7.		0.1	353.0
30	16.77	33.595	5.46	0.48	7.		0.8	343.1
50	12.41	33.601	4.14	1.10	13.		11.8	254.2
75	10.78	33.702	3.44	1.49	18.		18.4	218.1

Z	T	S	O2	SIGT	DT	DD
0	17.79	33.606	5.83	24.278	365.5	0.000
10	17.79	33.605	5.85	24.277	365.5	0.037
20	17.23	33.602	5.80	24.409	353.0	0.073
30	16.77	33.595	5.46	24.512	343.1	0.107
50	12.41	33.601	4.14	25.446	254.2	0.167
75	10.78	33.702	3.44	25.826	218.1	0.227

120035

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
28 03.0N	114 54.0W	07/09/78	1827 GMT	77M	030	9KT	1	330 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	18.43	33.600	5.71	0.40	4.		0.0	380.8
10	18.24	33.598	5.83	0.43	4.		0.0	376.5
20	17.78	33.589	5.87	0.44	4.		0.0	366.4
30	17.62	33.597	5.65	0.48	4.		0.3	362.2
50	17.22	33.602	5.51	0.57	7.		0.8	352.7

Z	T	S	O2	SIGT	DT	DD
0	18.43	33.600	5.71	24.116	380.8	0.000
10	18.24	33.598	5.83	24.162	376.5	0.038
20	17.78	33.589	5.87	24.267	366.4	0.075
30	17.62	33.597	5.65	24.312	362.2	0.112
50	17.22	33.602	5.51	24.411	352.7	0.183

120045

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 43.0N	115 33.0W	07/12/78	1250 GMT	2190M	340	20KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	17.09	33.395	5.96	0.29	2.		0.1	364.9
10	17.06	33.407	5.98	0.27	2.		0.1	363.3
26	16.67	33.509	5.96	0.25	2.		0.1	347.2
34	16.00	33.610	5.54	0.26	7.		0.1	325.2
49	12.33	33.668	4.34	0.78	13.		10.8	247.8
58	11.39	33.612	4.40	0.82	12.		12.1	235.2
82	11.10	33.783	3.58	1.13	18.		16.4	217.6
88	10.96	33.900	3.12	1.41	23.		19.8	206.6
114	11.20	34.121	1.89	1.76	29.		22.5	194.4
130	11.54	34.271	1.22	2.02	33.		24.4	189.3
150	11.14	34.337	1.03	2.14	35.		25.0	177.5
180	10.92	34.386	1.20	2.21	35.		26.2	170.1
205	10.89	34.471	0.75	2.34	39.		26.6	163.3
239	10.46	34.522	0.55	2.45	39.		27.0	152.3
303	9.30	34.418	0.75	2.48	42.		29.0	141.3
373	8.32	34.386	0.53	2.59	51.		31.7	129.0
467	7.22	34.358	0.45	2.68	62.		35.0	115.8
545	6.42	34.367	0.27	2.83	71.		37.3	104.8

Z	T	S	O2	SIGT	DT	DD
0	17.09	33.395	5.96	24.284	364.9	0.000
10	17.06	33.407	5.98	24.300	363.3	0.036
20	16.82	33.428	5.97	24.373	356.4	0.072
30	16.41	33.563	5.78	24.570	337.6	0.107
50	11.84	33.640	4.37	25.585	241.0	0.165
75	11.12	33.690	3.97	25.754	224.9	0.224
100	11.07	34.002	2.46	26.007	200.9	0.278
125	11.46	34.228	1.40	26.112	191.0	0.327
150	11.14	34.337	1.03	26.254	177.5	0.374
200	10.90	34.454	0.85	26.388	164.7	0.462
250	10.27	34.511	0.57	26.544	149.9	0.543
300	9.36	34.425	0.74	26.631	141.7	0.619
400	7.98	34.375	0.50	26.807	125.0	0.759
500	6.87	34.358	0.39	26.953	111.1	0.884

120050

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 33.0N	115 52.5W	07/12/78	0900 GMT	4220M	320	15KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	19.11	33.428	5.50	0.25	3.		0.0	409.6
9	19.12	33.429	5.56	0.21	3.		0.0	409.7
27	17.76	33.413	5.85	0.30	3.		0.0	378.8
37	16.91	33.393	5.87	0.27	3.		0.0	361.0
50	15.94	33.408	5.88	0.23	4.		0.0	338.6
59	13.18	33.429	5.43	0.32	5.		1.6	281.2
87	11.81	33.600	4.24	0.79	12.		11.6	243.5
105	11.19	33.710	3.45	0.97	15.		14.3	224.5
123	10.81	33.866	3.29	1.21	19.		18.0	206.6
141	10.23	33.919	3.22	1.39	21.		20.4	193.0
168	10.52	34.223	1.91	1.87	29.		24.8	175.3
200	10.09	34.271	1.71	2.04	33.		26.8	164.7
227	9.78	34.347	1.28	2.21	37.		27.8	154.1
273	9.36	34.384	0.91	2.39	43.		29.7	144.8
325	8.88	34.430	0.49	2.56	48.		30.8	134.0
485	7.62	34.368	0.44	2.66	58.		32.2	120.5
488	6.71	34.379	0.28	2.90	70.		37.3	107.5
575	6.16	34.400	0.21	2.97	79.		39.3	99.1

Z	T	S	O2	SIGT	DT	DD
0	19.11	33.428	5.50	23.815	409.6	0.000
10	19.12	33.428	5.58	23.813	409.8	0.041
20	19.10	33.425	5.59	23.815	409.6	0.082
30	17.41	33.407	5.86	24.217	371.2	0.121
50	15.94	33.408	5.88	24.559	338.6	0.192
75	12.40	33.524	4.73	25.389	259.6	0.268
100	11.34	33.678	3.64	25.706	229.5	0.329
125	10.74	33.871	3.28	25.965	204.9	0.384
150	10.28	34.019	2.81	26.159	186.5	0.434
200	10.09	34.271	1.71	26.388	164.7	0.523
250	9.56	34.373	1.07	26.556	148.8	0.604
300	9.13	34.412	0.67	26.658	139.1	0.679
400	7.70	34.373	0.44	26.846	121.2	0.815
500	6.61	34.382	0.26	27.007	106.1	0.936

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 120060

LATITUDE 27 13.0N | LONGITUDE 116 30.5W | MO/DAY/YR 07/12/78 | MESSENGER TIME 0248 GMT | BOTTOM 3640M | WIND 320 | SPEED 15KT | WEATHER 1 | DOMINANT WAVES 330 2 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	19.39	33.387	5.46	0.22	3.		0.0	419.3
10	19.39	33.385	5.49	0.20	3.		0.0	419.5
29	18.33	33.315	5.63	0.21	3.		0.0	399.2
38	18.05	33.303	5.66	0.22	3.		0.0	393.5
57	14.83	33.205	6.12	0.24	4.		0.0	330.2
67	14.33	33.208	6.08		4.		0.0	319.9
95	11.89	33.306	5.31	0.59	8.		3.7	266.5
114	10.99	33.343	5.03	0.64	12.		9.2	248.2
133	9.87	33.517	4.56	0.89	18.		15.5	216.9
152	9.84	33.783	3.77	1.14	23.		18.7	196.8
181	9.35	33.962	3.27	1.51	30.		21.8	175.9
211	8.59	33.989	3.45	1.62	34.		23.7	162.4
239	8.27	34.071	2.58	1.87	42.		26.0	151.7
292	8.54	34.296	1.17	2.33	51.		30.1	138.9
339	8.14	34.341	0.72	2.26	57.		31.5	129.8
419	7.13	34.327	0.50	2.43	68.		33.9	116.9
499	6.48	34.357	0.32	2.79	73.		37.7	106.3
579	5.86	34.386	0.26	2.76	85.		38.0	96.5

Z	T	S	O2	SIGT	DT	DD
0	19.39	33.387	5.46	23.713	419.3	0.000
10	19.39	33.385	5.49	23.711	419.5	0.042
20	19.10	33.365	5.53	23.770	413.9	0.084
30	18.31	33.314	5.63	23.929	398.7	0.124
50	16.05	33.228	5.96	24.395	354.2	0.200
75	13.64	33.229	5.89	24.914	304.9	0.283
100	11.63	33.312	5.24	25.368	261.6	0.354
125	10.29	33.429	4.79	25.699	230.2	0.416
150	9.84	33.760	3.85	26.032	198.5	0.470
200	8.86	33.985	3.41	26.367	166.7	0.563
250	8.31	34.122	2.24	26.559	148.5	0.644
300	8.50	34.310	1.06	26.678	137.2	0.718
400	7.37	34.333	0.52	26.863	119.7	0.853
500	6.47	34.357	0.32	27.006	106.1	0.972
600	5.72	34.400	0.26	27.136	93.8	1.080

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 120070

LATITUDE 26 53.0N | LONGITUDE 117 10.0W | MO/DAY/YR 07/11/78 | MESSENGER TIME 2112 GMT | BOTTOM 4040M | WIND 350 | SPEED 10KT | WEATHER 1 | DOMINANT WAVES 330 2 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
0	20.37	33.529	5.34	0.25	2.		0.0	433.4
10	20.28	33.529	5.42	0.22	2.		0.0	431.1
29	20.16	33.572	5.43	0.22	2.		0.0	425.0
39	19.92	33.567	5.42	0.22	2.		0.0	419.3
54	19.10	33.504	5.62	0.18	2.		0.0	403.8
68	18.24	33.435	5.67	0.13	1.		0.0	388.3
92	16.15	33.728	5.69	0.19	2.		0.0	319.9
111	14.05	33.539	5.61	0.26	3.		0.0	290.0
131	12.41	33.519	5.27	0.46	6.		3.9	260.2
150	11.18	33.604	4.84	0.77	10.		9.6	232.1
179	9.89	33.773	4.24	1.32	18.		16.6	198.3
212	9.07	33.938	3.74	1.59	26.		21.7	173.4
241	8.73	34.043	2.89	1.91	33.		25.0	160.5
289	8.24	34.158	2.05	2.27	43.		29.1	144.8
342	7.86	34.261	1.10	2.60	51.		31.7	131.7
425	7.23	34.316	0.55	2.78	61.		32.6	119.0
509	6.45	34.335	0.42	3.05	70.		37.4	107.5
593	5.93	34.380	0.28		78.		39.6	97.8

Z	T	S	O2	SIGT	DT	DD
0	20.37	33.529	5.34	23.566	433.4	0.000
10	20.28	33.529	5.42	23.589	431.1	0.043
20	20.24	33.554	5.43	23.617	428.4	0.086
30	20.14	33.572	5.43	23.659	424.5	0.129
50	19.35	33.525	5.56	23.827	408.4	0.213
75	17.70	33.526	5.68	24.237	369.3	0.310
100	15.26	33.657	5.66	24.902	306.0	0.395
125	12.85	33.524	5.39	25.301	268.0	0.468
150	11.18	33.604	4.84	25.678	232.1	0.531
200	9.30	33.883	3.94	26.217	181.0	0.636
250	8.63	34.068	2.71	26.468	157.1	0.723
300	8.15	34.183	1.83	26.630	141.7	0.800
400	7.43	34.308	0.63	26.835	122.3	0.938
500	6.53	34.333	0.42	26.979	108.7	1.060
600	5.90	34.385	0.27	27.101	97.1	1.171

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 120080

LATITUDE 26 32.5N | LONGITUDE 117 49.0W | MO/DAY/YR 07/11/78 | MESSENGER TIME 1514 GMT | BOTTOM 3945M | WIND 340 | SPEED 11KT | WEATHER 1 | DOMINANT WAVES 330 1 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
1	19.84	33.333	5.41	0.35	2.		0.2	434.3
11	19.79	33.330	5.44	0.32	3.		0.1	433.3
31	19.10	33.323	5.52	0.31	3.		0.1	417.0
41	18.40	33.274	5.68	0.26	3.		0.1	403.8
56	17.47	33.360	5.82	0.21	2.		0.1	376.0
71	16.15	33.342	5.88	0.20	3.		0.1	348.0
96	12.74	33.210	5.69	0.40	5.		2.2	289.0
116	12.03	33.505	5.15	0.55	8.		6.0	254.4
136	10.81	33.597	4.83	0.75	12.		10.1	226.4
156	10.22	33.757	4.18	1.08	17.		15.9	204.8
186	9.85	33.988	3.18	1.59	27.		21.0	181.8
221	9.21	34.083	2.88	1.83	33.		24.3	164.7
251	8.83	34.137	2.44	2.03	40.		26.1	155.0
301	8.42	34.254	1.40	2.43	49.		29.8	140.2
356	7.84	34.302	0.83	2.68	55.		32.7	128.4
442	6.84	34.300	0.51	2.91	67.		35.8	115.1
527	6.21	34.346	0.31	3.07	76.		38.3	103.7
613	5.83	34.419	0.20	3.15	83.		39.2	93.7

Z	T	S	O2	SIGT	DT	DD
0	19.84	33.333	5.41	23.556	434.3	0.000
10	19.79	33.331	5.44	23.565	433.4	0.043
20	19.59	33.328	5.48	23.616	428.5	0.087
30	19.16	33.325	5.51	23.724	418.2	0.129
50	17.86	33.321	5.78	24.044	387.7	0.210
75	15.56	33.300	5.85	24.561	338.5	0.301
100	12.55	33.266	5.59	25.160	281.4	0.379
125	11.47	33.554	5.01	25.585	241.0	0.445
150	10.35	33.706	4.39	25.904	210.7	0.502
200	9.59	34.039	3.02	26.291	174.0	0.600
250	8.84	34.136	2.46	26.488	155.3	0.685
300	8.43	34.252	1.42	26.643	140.5	0.761
400	7.31	34.301	0.62	26.847	121.2	0.898
500	6.37	34.327	0.37	26.994	107.2	1.019
600	5.87	34.406	0.21	27.122	95.1	1.128

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 123042

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
27 14.0N	114 59.0W	07/13/78	0303 GMT	1522M	320	22KT	1	310 4 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.30	33.481	5.86	0.20	3.		0.0	363.3	0	17.30	33.481	5.86	24.300	363.3	0.000
10	17.29	33.479	5.88	0.24	3.		0.1	363.3	10	17.29	33.479	5.88	24.301	363.3	0.036
29	16.05	33.411	6.33	0.23	2.		0.0	340.8	20	17.29	33.479	6.22	24.301	363.3	0.073
38	14.06	33.404	5.80	0.25	5.		0.6	300.1	30	15.83	33.407	6.28	24.583	336.3	0.108
57	12.77	33.522	4.66	0.57	9.		7.6	266.7	50	13.07	33.458	5.14	25.205	277.2	0.169
67	11.68	33.706	3.65	0.92	16.		15.2	233.4	75	11.21	33.778	3.59	25.807	219.9	0.232
95	10.68	33.860	3.45	1.09	20.		18.1	204.8	100	10.55	33.887	3.38	26.010	200.6	0.285
115	10.32	33.983	3.02	1.29	24.		20.4	189.7	125	10.42	34.085	2.53	26.185	184.0	0.334
134	10.55	34.175	2.08	1.56	29.		23.5	179.4	150	10.52	34.270	1.67	26.313	171.8	0.379
154	10.51	34.292	1.59	1.78	32.		25.8	170.1	200	10.42	34.461	0.86	26.479	156.1	0.463
173	10.53	34.406	1.05	1.93	35.		26.9	162.0	250	9.80	34.467	0.56	26.590	145.6	0.541
212	10.31	34.462	0.77	2.11	38.		27.9	154.2	300	9.21	34.457	0.44	26.680	137.0	0.614
241	9.91	34.467	0.59	2.19	40.		28.3	147.3	400	7.77	34.406	0.31	26.863	119.7	0.749
299	9.22	34.457	0.44	2.32	47.		30.2	137.2	500	6.92	34.419	0.22	26.994	107.2	0.869
352	8.53	34.434	0.36	2.41	52.		31.3	128.5	600	6.20	34.436	0.18	27.103	96.9	0.980
425	7.41	34.397	0.29	2.52	62.		33.3	115.4							
517	6.84	34.426	0.21	2.68	71.		36.8	105.7							
592	6.26	34.434	0.18	2.82	79.		39.3	97.8							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 123050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
26 58.0N	115 31.0W	07/13/78	0800 GMT	3340M	340	15KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.46	33.553	5.41	0.27	2.		0.0	409.0	0	19.46	33.553	5.41	23.821	409.0	0.000
9	19.47	33.552	5.54	0.30	2.		0.0	409.3	10	19.39	33.554	5.55	23.840	407.2	0.041
26	18.07	33.586	5.72	0.32	3.		0.0	373.4	20	18.56	33.572	5.66	24.061	386.1	0.081
35	13.38	33.581	5.20	0.62	7.		4.2	273.9	30	15.96	33.583	5.52	24.689	326.3	0.116
48	12.24	33.619	4.28	0.90	11.		10.5	249.8	50	12.11	33.645	4.09	25.537	245.5	0.174
61	11.54	33.798	3.15	1.23	18.		16.6	224.1	75	11.01	33.866	3.07	25.912	209.9	0.231
83	10.80	33.891	3.02	1.43	20.		19.4	204.5	100	10.57	34.042	2.48	26.127	189.5	0.281
100	10.57	34.042	2.48	1.64	25.		22.2	189.5	125	10.47	34.179	1.96	26.251	177.7	0.328
117	10.60	34.154	2.04	1.85	28.		24.0	181.8	150	10.15	34.239	1.70	26.353	168.0	0.372
133	10.31	34.196	1.90	1.77	31.		20.4	173.9	200	9.44	34.270	1.52	26.497	154.4	0.454
159	10.07	34.256	1.61	2.12	34.		26.8	165.5	250	9.39	34.441	0.58	26.637	141.1	0.530
188	9.58	34.257	1.63	2.02	36.		24.1	157.6	300	8.73	34.443	0.34	26.746	130.8	0.601
213	9.33	34.294	1.34	2.25	39.		27.7	151.0	400	7.61	34.404	0.32	26.884	117.7	0.731
255	9.40	34.459	0.48	2.48	44.		28.8	139.8	500	6.86	34.426	0.19	27.007	106.0	0.850
301	8.71	34.442	0.34	2.70	50.		31.3	130.6							
375	7.79	34.392	0.37	2.82	58.		33.8	121.0							
452	7.28	34.432	0.22	2.91	64.		34.5	111.1							
533	6.52	34.423	0.17	3.10	73.		38.6	101.8							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 123060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
26 38.5N	116 09.0W	07/13/78	1306 GMT	3832M	340	12KT	1	330 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	19.04	33.326	5.47	0.26	3.		0.0	415.3	0	19.04	33.326	5.47	23.755	415.3	0.000
11	19.05	33.328	5.55	0.25	2.		0.0	415.4	10	19.05	33.328	5.55	23.754	415.4	0.042
30	18.20	33.310	5.64	0.23	2.		0.0	396.5	20	19.04	33.325	5.56	23.754	415.4	0.083
50	16.00	33.212	5.97	0.20	2.		0.1	354.3	30	18.20	33.310	5.64	23.952	396.5	0.124
69	15.26	33.266	6.01	0.18	2.		0.1	334.6	50	16.73	33.227	5.87	24.239	369.1	0.201
87	13.44	33.318	5.75	0.24	3.		0.6	294.3	75	14.66	33.294	5.96	24.753	320.2	0.287
98	12.53	33.288	5.53	0.33	6.		2.9	279.4	100	12.40	33.291	5.53	25.209	276.8	0.362
116	11.51	33.310	5.29	0.47	8.		6.6	259.5	125	11.23	33.425	5.08	25.530	246.3	0.428
136	10.97	33.592	4.77	0.54	11.		8.5	229.5	150	10.56	33.745	4.35	25.898	211.3	0.486
155	10.41	33.79	4.20	0.86	16.		14.9	205.5	200	9.30	34.020	3.22	26.324	170.8	0.584
183	9.69	33.965	3.48	1.32	25.		20.5	180.9	250	8.62	34.125	2.37	26.514	152.8	0.667
212	9.07	34.047	3.05	1.58	31.		24.2	165.3	300	8.29	34.239	1.48	26.654	139.5	0.742
240	8.76	34.11	2.53	1.79	35.		26.8	155.9	400	7.84	34.386	0.51	26.836	122.2	0.879
287	8.24	34.19	1.77	2.03	44.		29.9	142.4	500	6.69	34.389	0.31	27.001	106.6	1.001
344	8.48	34.390	0.62	2.41	49.		32.3	131.0	600	6.06	34.442	0.14	27.127	94.7	1.109
425	7.45	34.362	0.46	2.55	61.		35.8	118.6							
518	6.54	34.399	0.28	2.72	71.		39.7	103.9							
609	6.02	34.447	0.12	2.87	82.		41.3	93.9							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 127034

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
26 55.0N	114 06.5W	07/14/78	1020 GMT	82M	350	10KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	16.68	33.446	5.86	0.29	4.		0.0	352.0	0	16.68	33.446	5.86	24.419	352.0	0.000
11	15.95	33.436	5.94	0.30	5.		0.1	336.8	10	16.09	33.439	5.93	24.549	339.6	0.035
21	13.83	33.424	5.83	0.35	6.		1.3	294.1	20	14.06	33.425	5.84	24.980	298.6	0.067
30	12.46	33.500	5.05	0.50	10.		4.7	262.5	30	12.46	33.500	5.05	25.359	262.5	0.095
60	12.00	33.667	3.77	0.86	15.		12.8	241.9	50	12.00	33.667	3.77	25.575	241.9	0.145
74	11.75	33.993	1.50	1.60	32.		21.7	213.5	75	11.74	34.007	1.48	25.888	212.3	0.202

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 127040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
26 43.5N	114 29.0W	07/14/78	0632 GMT	3000M	340	9KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	18.69	33.524	5.83	0.27	3.		0.0	392.5	0	18.69	33.524	5.83	23.994	392.5	0.000
10	18.67	33.525	5.88	0.30	2.		0.0	392.0	10	18.67	33.525	5.88	23.999	392.0	0.039
29	14.85	33.397	5.92	0.31	4.		0.0	316.6	20	16.91	33.461	5.90	24.377	356.0	0.077
39	13.24	33.295	5.72	0.38	5.		0.0	292.2	30	14.66	33.384	5.91	24.820	313.8	0.110
54	12.37	33.409	5.03	0.59	9.		4.5	267.6	50	12.50	33.361	5.22	25.244	273.5	0.169
68	11.82	33.595	4.77	0.64	10.		8.7	244.0	75	11.57	33.657	4.59	25.648	235.0	0.233
93	10.94	33.757	4.21	0.89	14.		13.3	216.8	100	10.65	33.777	4.16	25.906	210.5	0.289
112	10.22	33.805	4.11	1.02	17.		16.1	201.3	125	10.06	33.862	3.98	26.074	194.6	0.341
132	9.98	33.888	3.91	1.12	20.		17.4	191.3	150	10.19	34.095	2.51	26.235	179.3	0.388
151	10.20	34.107	2.43	1.59	29.		23.3	178.6	200	10.00	34.323	1.40	26.443	159.5	0.475
181	10.18	34.286	1.61	1.89	35.		26.3	165.1	250	9.45	34.345	1.16	26.553	149.0	0.554
215	9.82	34.329	1.33	2.09	39.		27.8	156.1	300	8.97	34.380	0.81	26.658	139.1	0.629
245	9.49	34.340	1.20	2.20	41.		28.6	150.1	400	7.59	34.359	0.49	26.852	120.7	0.765
294	9.05	34.381	0.84	2.33	45.		29.8	140.2	500	6.82	34.400	0.26	26.992	107.4	0.886
348	8.27	34.360	0.66	2.48	52.		32.1	130.2	600	6.08	34.418	0.23	27.104	96.8	0.996
433	7.23	34.359	0.39	2.64	64.		36.0	115.8							
517	6.74	34.412	0.24	2.71	72.		38.0	105.5							
603	6.05	34.418	0.23	2.80	81.		39.6	96.4							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 127050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
26 23.0N	115 08.0W	07/14/78	0058 GMT	3900M	330	11KT	1	340 2 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	19.76	33.376	5.43	0.26	1.		0.0	429.2	0	19.76	33.376	5.43	23.609	429.2	0.000
11	19.62	33.382	5.52	0.26	2.		0.0	425.4	10	19.63	33.382	5.51	23.647	425.6	0.043
31	17.51	33.375	5.97	0.22	1.		0.0	375.8	20	19.62	33.382	5.53	23.650	425.4	0.085
41	15.80	33.209	6.05	0.25	2.		0.0	350.2	30	17.74	33.378	5.93	24.115	381.0	0.126
60	14.54	33.281	5.98	0.22	3.		0.0	318.8	50	15.25	33.242	6.02	24.585	336.1	0.198
71	12.30	33.169	5.85	0.30	4.		1.9	284.0	75	12.19	33.273	5.75	25.235	274.3	0.274
100	11.49	33.648	4.77	0.54	9.		8.5	234.3	100	11.49	33.648	4.77	25.656	234.3	0.338
120	11.20	33.783	3.70	0.94	15.		15.4	219.3	125	10.99	33.793	3.75	25.858	215.0	0.395
140	10.39	33.840	3.89	1.06	18.		17.0	201.5	150	10.24	33.941	3.38	26.106	191.5	0.447
159	10.17	34.040	2.83	1.45	25.		22.5	183.1	200	9.86	34.276	1.68	26.431	160.6	0.537
189	9.85	34.209	2.00	1.82	34.		26.6	165.4	250	9.69	34.450	0.65	26.595	145.1	0.616
220	9.87	34.375	1.16	2.10	40.		28.8	153.5	300	9.10	34.472	0.35	26.709	134.3	0.688
250	9.69	34.450	0.65	2.41	42.		29.5	145.1	400	7.99	34.450	0.25	26.865	119.5	0.821
300	9.10	34.472	0.35	2.57	48.		31.2	134.3	500	6.85	34.424	0.20	27.007	106.0	0.942
359	8.58	34.478	0.25	2.66	53.		32.5	126.0	600	6.10	34.426	0.19	27.109	96.4	1.051
439	7.41	34.423	0.25	2.76	63.		36.5	113.5							
527	6.65	34.428	0.18	2.93	72.		39.4	103.1							
608	6.04	34.425	0.19	2.99	81.		41.5	95.7							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 127060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
26 03.5N	115 46.5W	07/13/78	1849 GMT	4000M	350	9KT	1	340 1 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	19.88	33.446	5.42	0.23	2.		0.0	427.1	0	19.88	33.446	5.42	23.631	427.1	0.000
10	19.87	33.487	5.43	0.20	2.		0.0	423.9	10	19.87	33.487	5.43	23.665	423.9	0.043
30	19.57	33.641	5.60	0.21	1.		0.1	405.3	20	19.72	33.517	5.50	23.726	418.1	0.085
39	18.56	33.595	5.69	0.27	2.		0.1	384.3	30	19.57	33.641	5.60	23.860	405.3	0.126
54	17.80	33.555	5.76		2.		0.1	369.4	50	17.98	33.569	5.75	24.203	372.5	0.204
69	16.41 A	33.447	5.83	0.33	2.		0.2	346.0	75	15.67	33.418	5.80	24.626	332.3	0.293
93	13.63	33.399	5.62		4.		0.1	292.1	100	13.18	33.412	5.53	25.149	282.4	0.370
113	12.54	33.463	5.31		6.		4.0	266.7	125	11.97	33.562	5.08	25.498	249.2	0.437
132	11.64 B	33.626	4.89	0.67	9.		8.0	238.5	150	10.61	33.770	4.08	25.909	210.3	0.495
152	10.50	33.784	3.99	1.08	17.		15.8	207.4	200	9.88	34.079	2.84	26.273	175.6	0.594
181	9.83	33.927	3.64	1.29	25.		17.8	186.0	250	9.46	34.282	1.62	26.503	153.8	0.678
215	9.96	34.189	2.20	1.83	31.		25.2	168.7	300	8.93	34.374	0.83	26.660	138.9	0.754
244	9.53	34.266	1.74	1.99	38.		26.5	156.2	400	8.18	34.426	0.37	26.817	124.1	0.892
293	9.00	34.370	0.88	2.41	46.		30.2	140.3	500	7.18	34.443	0.18	26.976	108.9	1.016
346	8.50	34.384	0.67	2.60	50.		30.8	131.8	600	6.22	34.444	0.14	27.107	96.5	1.127
430	7.99	34.446	0.23	2.75	58.		32.5	119.8							
514	7.01	34.443	0.17	2.95	67.		37.2	106.7							
598	6.24	34.444	0.14	3.14	80.		40.6	96.8							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 130030

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
26 29.0N	113 29.0W	07/14/78	1910 GMT	73M	270	6KT	1	270 1 7

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	20.20	33.842	5.56	0.23	6.		0.1	406.4	0	20.20	33.842	5.56	23.848	406.4	0.000
10	19.44	33.852	5.68	0.26	6.		0.2	386.8	10	19.44	33.852	5.68	24.053	386.8	0.040
20	13.74	33.829	4.19	0.72	13.		9.4	262.7	20	13.74	33.829	4.19	25.357	262.7	0.072
30	13.03	34.034	1.20	1.49	24.		22.6	234.0	30	13.03	34.034	1.20	25.659	234.0	0.097
50	12.52	34.119	0.34	1.97	32.		25.5	218.2	50	12.52	34.119	0.34	25.825	218.2	0.143

A) MEAN OF 16.35 AND 16.47 DEGREES.
B) ALTERNATE VALUE, 11.59 DEGREES.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 130040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
26 09.0N	114 07.0W	07/15/78	0114 GMT	2225M	280	12KT	1	280 1 3

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	18.37	33.463	5.72	0.26	3.		0.1	389.4	0	18.37	33.463	5.72	24.027	389.4	0.000
11	17.64	33.446	5.87	0.32	3.		0.0	373.6	10	17.75	33.450	5.85	24.168	375.9	0.038
31	13.86	33.394	6.48	0.35	4.		0.0	296.9	20	16.04	33.423	6.29	24.548	339.7	0.074
41	12.52	33.312	5.76	0.43	6.		0.4	277.5	30	14.07	33.397	6.48	24.956	300.9	0.106
59	12.28	33.734	3.25	0.99	17.		15.6	242.1	50	12.40	33.532	4.50	25.395	259.1	0.162
70	11.82	33.841	2.52	1.39	24.		19.6	225.9	75	11.77	33.942	2.27	25.832	217.6	0.222
98	11.53	34.308	1.38	1.78	31.		24.8	186.4	100	11.53	34.325	1.29	26.173	185.2	0.273
118	11.54	34.421	0.74	2.07	36.		26.2	178.2	125	11.36	34.420	0.87	26.278	175.2	0.319
137	11.08	34.416	1.12	2.11	34.		26.3	170.6	150	11.15	34.466	0.83	26.352	168.1	0.363
156	11.22	34.492	0.66	2.30	37.		26.7	167.4	200	10.91	34.491	0.71	26.415	162.1	0.447
185	11.13		0.72	2.27	37.		26.8		250	10.49	34.524	0.51	26.515	152.6	0.528
215	10.68	34.490	0.70	2.34	39.		27.6	158.3	300	9.96	34.522	0.36	26.606	144.1	0.606
244	10.53	34.519	0.54	2.42	40.		27.9	153.7	400	8.58	34.456	0.32	26.779	127.6	0.748
292	10.08	34.531	0.36	2.46	44.		28.5	145.4	500	7.25	34.423	0.26	26.951	111.3	0.876
349	9.19	34.465	0.42	2.53	49.		29.8	136.1	600	6.37	34.419	0.19	27.068	100.3	0.990
427	8.28	34.457	0.26	2.63	56.		32.2	123.2							
515	7.05	34.417	0.26	2.76	68.		35.8	109.1							
597	6.38	34.419	0.19	2.87	77.		37.8	100.4							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 130050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
25 49.0N	114 45.0W	07/15/78	0639 GMT	3415M	310	12KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	20.99	33.452	5.32	0.27U	1.		0.1	454.7	0	20.99	33.452	5.32	23.342	454.7	0.000
10	20.89	33.452	5.40	0.27U	1.		0.0	452.2	10	20.89	33.452	5.40	23.369	452.2	0.045
30	19.47	33.466	5.63	0.27U	1.		0.0	415.6	20	20.28	33.461	5.52	23.537	436.1	0.090
40	18.77	33.452	5.68	0.27U	1.		0.0	399.7	30	19.47	33.466	5.63	23.752	415.6	0.132
55	17.41	33.445	5.87	0.27	1.		0.1	368.5	50	17.89	33.443	5.81	24.129	379.6	0.212
70	15.97	33.496	5.83	0.27	1.		0.1	332.9	75	15.38	33.479	5.76	24.738	321.6	0.300
95	13.17	33.429	5.35	0.67	4.		2.8	281.0	100	12.74	33.438	5.27	25.256	272.3	0.375
115	11.83	33.525	4.88	0.72	8.		3.0	249.3	125	11.78	33.683	4.27	25.628	236.9	0.440
135	11.74	33.823	3.65	1.04	13.		15.0	225.8	150	11.26	33.931	3.21	25.918	209.4	0.496
155	11.07	33.955	3.13	1.16	19.		15.5	204.4	200	10.21	34.189	2.38	26.304	172.7	0.594
185	10.35	34.095	2.84	1.46	25.		17.2	182.0	250	9.36	34.299	1.50	26.533	151.0	0.677
219	10.04	34.285	1.79	1.60	32.		23.5	162.9	300	8.92	34.373	0.83	26.660	138.9	0.752
249	9.37	34.298	1.51	1.93	37.		27.3	151.3	400	8.06	34.443	0.29	26.848	121.0	0.888
298	8.93	34.369	0.85	2.16	45.		29.4	139.3	500	6.90	34.422	0.21	26.998	106.9	1.010
352	8.64	34.451	0.33	2.38	50.		30.9	128.9	600	6.26	34.453	0.13	27.109	96.4	1.119
436	7.57	34.422	0.26	2.58	61.		34.4	115.8							
520	6.73	34.425	0.19	2.69	71.		36.3	104.4							
605	6.24	34.455	0.13		80.		39.0	96.0							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 130060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
25 29.0N	115 24.0W	07/15/78	1215 GMT	3830M	290	11KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	21.57	33.428	5.24	0.24	2.		0.1	471.5	0	21.57	33.428	5.24	23.166	471.5	0.000
10	21.56	33.428	5.29	0.23	2.		0.1	471.3	10	21.56	33.428	5.29	23.169	471.3	0.047
30	20.02	33.409	5.49	0.20	2.		0.1	433.3	20	21.01	33.420	5.37	23.312	457.6	0.094
40	18.70	33.549	5.77	0.15	2.		0.1	391.0	30	20.02	33.409	5.49	23.567	433.3	0.138
59	17.21	33.465	5.83	0.14	1.		0.1	362.5	50	17.89	33.533	5.80	24.198	373.1	0.219
70	15.92	33.439	5.87	0.14	2.		0.1	336.0	75	15.37	33.440	5.79	24.710	324.2	0.307
99	13.27	33.455	5.39	0.29	5.		2.3	281.0	100	13.21	33.466	5.33	25.184	279.1	0.383
139	12.27	33.698	4.23	0.54	9.		8.8	244.5	125	11.94	33.754	3.99	25.655	234.4	0.448
138	11.33	33.857	3.59	0.87	15.		15.2	216.1	150	11.12	33.931	3.29	25.943	207.0	0.504
158	11.04	33.974	3.11	1.14	19.		18.8	202.5	200	10.31	34.223	2.05	26.312	171.9	0.600
188	10.42	34.150	2.42	1.51	27.		22.8	179.1	250	9.82	34.356	1.21	26.501	154.0	0.684
219	10.19	34.317A	1.53	1.83	33.		26.6	163.0	300	9.10	34.365	0.97	26.626	142.2	0.761
249	9.83	34.355	1.22	2.00	37.		27.3	154.3	400	8.00	34.391	0.42	26.817	124.0	0.901
298	9.12	34.364	0.98	2.19	42.		29.3	142.6	500	6.90	34.385	0.28	26.970	109.6	1.025
356	8.51	34.383	0.59	2.35	49.		30.7	132.0	600	6.09	34.409	0.22	27.096	97.5	1.136
436	7.58	34.394	0.34	2.43	59.		32.0	118.0							
524	6.67	34.383	0.27	2.89	70.		36.7	106.7							
603	6.07	34.411	0.22	2.99	77.		39.2	97.2							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 133025

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
26 04.5N	112 48.0W	07/16/78	1515 GMT	73M	140	2KT	1	140 1 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	21.79	33.856	5.38	0.47	5.		0.1	446.4	0	21.79	33.856	5.38	23.430	446.4	0.000
10	21.33	33.845	5.56	0.43	5.		0.1	435.1	10	21.33	33.845	5.56	23.548	435.1	0.044
20	16.12	33.636	6.23	0.43	7.		0.0	325.9	20	16.12	33.636	6.23	24.693	325.9	0.082
30	12.83	33.652	4.38	0.82	11.		9.5	258.2	30	12.83	33.652	4.38	25.404	258.2	0.111
50	12.22	33.926	2.78	1.23	17.		16.6	226.8	50	12.22	33.926	2.78	25.734	226.8	0.160
70	11.94	34.124	1.57	1.72	28.		22.7	207.2							

A) AN ERROR OF 0.01 (0.392 PPT) IN THE CONDUCTIVITY RATIO HAS BEEN ASSUMED FOR THIS VALUE.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 133030

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
25 54.5N	113 07.5W	07/16/78	1152 GMT	179M	160	5KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	21.04	33.587	5.32	0.23	3.		0.0	446.2	0	21.04	33.587	5.32	23.431	446.2	0.000
9	19.76	33.545	5.59	0.24	2.		0.0	417.0	10	19.52	33.525	5.63	23.784	412.5	0.043
29	15.35	33.342	6.08	0.28	2.		0.0	330.9	20	17.22	33.381	5.95	24.242	368.9	0.082
39	14.64	33.516	5.81	0.34	4.		0.0	303.6	30	15.27	33.361	6.06	24.672	327.9	0.117
54	12.76	33.454	5.11	0.48	6.		3.6	271.5	50	13.24	33.472	5.34	25.182	279.3	0.178
70	12.21	33.715	3.86	0.86	13.		12.5	242.2	75	12.21	33.782	3.57	25.625	237.2	0.243
86	12.20	33.903	3.06	1.12	16.		16.1	228.2	100	11.87	34.045	2.56	25.892	211.9	0.300
105	11.75	34.091	2.39	1.46	22.		20.3	206.3	125	11.74	34.267	1.35	26.088	193.2	0.351
130	11.74	34.295	1.12	1.74	31.		24.5	191.1	150	11.63	34.365	0.98	26.185	184.0	0.399
156	11.58	34.370	0.94	1.97	32.		25.3	182.7							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 133040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
25 34.5N	113 45.5W	07/16/78	0603 GMT	2790M	270	8KT	1	

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	20.42	33.543	5.50	0.28	3.		0.0	433.6	0	20.42	33.543	5.50	23.563	433.6	0.000
10	19.24	33.493	5.64	0.29	2.		0.0	408.0	10	19.24	33.493	5.64	23.831	408.0	0.042
30	16.43	33.436	6.07	0.33	2.		0.0	347.2	20	17.84	33.455	5.89	24.149	377.7	0.081
40	15.19 A	33.431	5.97	0.33	2.		0.0	321.1	30	16.43	33.436	6.07	24.469	347.2	0.118
55	13.03	33.432	5.34	0.40	5.		2.3	278.2	50	13.71	33.429	5.57	25.054	291.5	0.182
70	11.86	33.436	4.89	0.57	9.		7.6	256.4	75	11.57	33.483	4.70	25.513	247.9	0.250
95	10.82	33.746	3.87	0.93	16.		16.0	215.6	100	10.77	33.820	3.66	25.918	209.4	0.307
115	10.64	33.998	3.01	1.23	22.		19.8	194.0	125	10.67	34.115	2.48	26.166	185.8	0.357
134	10.68	34.201	2.05	1.62	28.		23.7	179.6	150	10.47	34.270	1.75	26.321	171.1	0.403
154	10.41	34.280	1.70	1.68	31.		22.4	169.3	200	10.23	34.433	0.91	26.490	155.0	0.486
184	10.34	34.402	1.07	2.08	36.		27.6	159.1	250	9.85	34.506	0.40	26.612	143.5	0.563
219	10.07	34.457	0.76	2.19	38.		26.8	150.7	300	9.25	34.504	0.28	26.710	134.1	0.635
248	9.87	34.506	0.41	2.35	42.		28.3	143.8	400	8.18	34.494	0.14	26.870	119.0	0.769
298	9.27	34.504	0.28	2.48	48.		29.2	134.5	500	7.22	34.477	0.13	26.998	106.9	0.889
352	8.64	34.495	0.20	2.60	52.		30.6	125.6	600	6.19	34.457	0.18	27.121	95.2	0.998
436	7.85	34.494	0.11	2.75	60.		32.8	114.3							
519	7.02	34.470	0.14	2.78	69.		34.3	104.8							
602	6.17	34.457	0.18	2.94	79.		37.8	94.9							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 133050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
25 14.5N	114 24.0W	07/16/78	0020 0055 GMT	3415M	180	1KT	2	180 1 6

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	21.87	33.463	5.36	0.31	2.		0.0	476.9	0	21.87	33.463	5.36	23.110	476.9	0.000
11	20.45	33.454	5.48	0.31	2.		0.0	440.8	10	20.56	33.455	5.47	23.459	443.5	0.046
31	19.43	33.444	5.67	0.29	2.		0.0	416.2	20	19.84	33.453	5.59	23.647	425.6	0.090
41	18.95	33.428	5.67	0.25	2.		0.0	405.7	30	19.46	33.446	5.67	23.738	416.9	0.132
56	17.50	33.412	5.90	0.23	2.		0.0	372.9	50	18.15	33.423	5.80	24.050	387.2	0.212
71	15.74	33.314	5.99	0.22	2.		0.0	341.2	75	15.21	33.320	5.90	24.654	329.6	0.302
95	12.87	33.449	5.23	0.41	5.		4.1	273.9	100	12.53	33.479	5.08	25.328	265.4	0.377
119	11.69	33.623	4.39	0.69	10.		10.9	239.6	125	11.50	33.702	4.07	25.696	230.5	0.440
139	11.12	33.887	3.36	1.04	16.		17.6	210.3	150	10.83	33.993	2.99	26.044	197.4	0.494
159	10.59	34.060	2.78	1.34	22.		21.7	188.5	200	9.76	34.221	2.27	26.405	163.1	0.586
189	9.79	34.159	2.58	1.53	27.		24.2	168.2	250	9.83	34.445	0.77	26.568	147.7	0.666
220	9.70	34.305	1.61	1.88	34.		27.4	155.9	300	9.27	34.471	0.45	26.681	136.9	0.740
250	9.83	34.445	0.77	2.16	38.		28.2	147.7	400	7.65	34.396	0.39	26.872	118.8	0.875
300	9.27	34.471	0.45	2.37	44.		30.0	136.9	500	6.76	34.434	0.19	27.028	104.1	0.993
354B	8.32	34.402	0.47	2.51	51.		32.1	127.8	600	6.13	34.471	0.18	27.140	93.4	1.100
440B	7.17	34.393	0.30	2.68	63.		35.5	112.5							
526B	6.63	34.455	0.16	2.92	71.		37.8	100.8							
611B	6.05	34.472	0.18	3.08	79.		39.5	92.4							

A) MEAN OF 15.16 AND 15.23 DEGREES.
B) CAST II.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 133060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
24 54.5N	115 02.0W	07/15/78	1808 GMT	3925M	310	6KT	1	310 1 3

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	22.07	33.515	5.26	0.30	2.		0.2	478.4	0	22.07	33.515	5.26	23.094	478.4	0.000
11	21.93	33.515	5.34	0.31	2.		0.1	474.7	10	21.94	33.515	5.33	23.130	475.0	0.048
31	20.20	33.814	5.64	0.26	2.		0.1	408.4	20	21.24	33.630	5.50	23.408	448.4	0.094
41	19.88	33.855	5.54	0.22	2.		0.1	397.5	30	20.30	33.795	5.63	23.785	412.4	0.137
56	19.15	33.744	5.65	0.22	2.		0.0	387.6	50	19.46	33.795	5.59	24.005	391.5	0.218
71	18.39	33.724	5.69	0.21	2.		0.1	370.9	75	17.97	33.693	5.70	24.299	363.4	0.313
96	15.36	33.528	5.75	0.23	2.		0.1	317.6	100	14.84	33.502	5.66	24.873	308.8	0.397
116	13.05	33.477	5.15	0.42	5.		4.3	275.2	125	12.49	33.562	4.78	25.401	258.5	0.469
136	12.06	33.688	4.33	0.66	10.		9.9	241.4	150	11.76	33.793	3.87	25.718	228.4	0.531
156	11.67	33.833	3.68	0.95	14.		14.4	223.8	200	10.61	34.174	2.32	26.222	180.5	0.635
186	10.91	34.090	2.67	1.47	23.		21.3	191.7	250	9.98	34.361	1.31	26.477	156.3	0.721
221	10.26	34.270	1.88	1.82	29.		25.8	167.6	300	9.39	34.427	0.72	26.626	142.1	0.799
251	9.97	34.363	1.29	2.06	34.		27.7	156.0	400	7.94	34.392	0.42	26.827	123.1	0.938
301	9.38	34.427	0.71	2.30	41.		28.9	141.9	500	7.03	34.426	0.24	26.983	108.2	1.061
356	8.54	34.402	0.54	2.48	48.		31.6	131.0	600	6.33	34.451	0.13	27.098	97.4	1.172
442	7.46	34.395	0.32	2.68	60.		34.9	116.3							
527	6.87	34.441	0.21	2.88	69.		36.8	105.0							
612	6.24	34.452	0.12	3.02	79.		38.3	96.2							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 137023

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
25 34.0N	112 19.0W	07/16/78	2243 GMT	73M	260	7KT	1	290 1 3

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	23.27	33.629	5.62	0.25	0.		0.0	502.7	0	23.27	33.629	5.62	22.840	502.7	0.000
10	21.52	33.590	5.96	0.40	1.		0.0	458.5	10	21.52	33.590	5.96	23.303	458.5	0.048
20	15.16	33.279	6.30	0.51	2.		0.0	331.6	20	15.16	33.279	6.30	24.633	331.6	0.088
30	13.77	33.535	5.44	0.73	4.		2.8	284.8	30	13.77	33.535	5.44	25.124	284.8	0.119
50	12.87	33.831	3.50	1.22	12.		13.4	245.8	50	12.87	33.831	3.50	25.534	245.8	0.172

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 137030

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
25 20.0N	112 46.0W	07/17/78	0205 GMT	305M	270	5KT	1	200 2 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.84	33.491	5.34	0.33	2.		0.1	500.9	0	22.84	33.491	5.34	22.859	500.9	0.000
10	20.59	33.483	5.65	0.40	2.		0.1	442.3	10	20.59	33.483	5.65	23.473	442.3	0.047
29	16.42	33.276	6.20	0.43	2.		0.0	358.7	20	18.34	33.365	6.00	23.958	395.9	0.089
44	13.98 A	33.289	5.96	0.51	3.		0.5	307.0	30	16.22	33.276	6.18	24.395	354.3	0.127
54	13.32	33.517	5.09	0.65	6.		4.2	277.4	50	13.53	33.420	5.47	25.083	288.7	0.191
69	12.41	33.754	3.78	0.97	12.		12.7	243.0	75	12.36	33.811	3.53	25.617	238.0	0.257
85	12.29	33.865	3.24	1.19	15.		15.9	232.6	100	11.96	34.032	2.64	25.865	214.4	0.315
105	11.85	34.092	2.42	1.51	22.		20.6	207.9	125	11.80	34.316	1.30	26.117	190.5	0.366
131	11.78	34.364	1.04	1.89	31.		25.6	186.7	150	11.56	34.416	1.03	26.238	179.0	0.413
150	11.56	34.416	1.03	2.04	32.		26.2	179.0	200	11.40	34.562	0.47	26.380	165.4	0.501
185	11.61	34.538	0.60	2.23	36.		27.0	170.9	250	10.90	34.584	0.19	26.489	155.1	0.584
216	11.15	34.576	0.36	2.36	40.		26.6	160.0							
255	10.88	34.586	0.17	2.49	43.		26.1	154.6							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 137040

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
25 00.0N	113 23.5W	07/17/78	0842 GMT	3450M	290	3KT		

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	24.15	33.680	5.06	0.24	2.		0.2	523.6	0	24.15	33.680	5.06	22.622	523.6	0.000
10	21.33	33.507	5.48	0.24	2.		0.2	459.5	10	21.33	33.507	5.48	23.292	459.5	0.049
30	16.88	33.351	6.06	0.37	1.		0.1	363.4	20	18.84	33.399	5.83	23.860	405.3	0.092
39	15.73	33.349	6.12	0.36	2.		0.1	338.5	30	16.88	33.351	6.06	24.300	363.4	0.131
54	13.43	33.318	5.99	0.36	2.		0.1	294.1	50	13.99	33.325	6.02	24.917	304.5	0.198
69	12.65	33.543	4.88	0.53	6.		6.6	262.9	75	12.34	33.604	4.52	25.461	252.8	0.268
94	11.67	33.793	3.49	0.86	14.		15.7	226.8	100	11.68	33.890	3.11	25.807	219.9	0.328
114	11.72	34.092	2.32	1.08	20.		20.0	205.6	125	11.55	34.194	1.97	26.068	195.1	0.380
134	11.34	34.249	1.79	1.46	25.		22.9	187.4	150	10.91	34.297	1.62	26.264	176.5	0.427
154	10.81	34.304	1.59	1.69	29.		25.0	174.2	200	10.33	34.411	1.01	26.456	158.3	0.513
185	10.48	34.384	1.17	1.82	34.		26.3	162.8	250	9.56	34.421	0.77	26.594	145.2	0.591
220	10.09	34.431	0.86	2.08	37.		28.5	152.9	300	8.98	34.440	0.47	26.703	134.8	0.664
250	9.56	34.421	0.77	2.20	40.		28.5	145.2	400	7.98	34.456	0.21	26.870	119.0	0.797
300	8.98	34.440	0.47	2.39	46.		30.8	134.8	500	7.09	34.472	0.15	27.012	105.5	0.917
365	8.43	34.452	0.31	2.50	52.		31.4	125.7	600	6.23	34.464	0.17	27.121	95.2	1.026
440	7.60	34.459	0.16	2.55	61.		32.3	113.4							
524	6.89	34.476	0.15	2.79	71.		37.4	102.6							
606	6.18	34.462	0.17	2.91	77.		39.3	94.7							

A) MEAN OF 13.95 AND 14.01 DEGREES.

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 137050

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
24 40.0N	114 02.0W	07/17/78	1413 GMT	3925M	330	6KT	4	180 6 10

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	21.81	33.496	5.36	0.27	2.		0.1	472.9	0	21.81	33.496	5.36	23.152	472.9	0.000
10	20.54	33.496	5.56	0.31	2.		0.1	440.0	10	20.54	33.496	5.56	23.496	440.0	0.046
29	18.22	33.431	5.97	0.27	2.		0.1	388.2	20	19.28	33.460	5.80	23.796	411.4	0.088
39	17.20	33.440	6.01	0.24	2.		0.0	364.1	30	18.10	33.432	5.97	24.069	385.4	0.128
54	16.59	33.442	5.97	0.31	2.		0.0	350.3	50	16.78	33.441	5.98	24.392	354.6	0.202
68	14.43	33.366	5.89	0.35	3.		0.0	310.3	75	13.55	33.380	5.63	25.050	291.9	0.284
93	11.87	33.511	4.70	0.72	10.		9.2	251.1	100	11.46	33.587	4.35	25.615	238.2	0.350
112	10.99	33.733	3.77	1.07	16.		16.0	219.4	125	10.76	33.901	3.30	25.984	203.1	0.406
131	10.73	33.978	3.07	1.35	21.		19.6	196.9	150	10.86	34.205	1.93	26.202	182.4	0.455
150	10.86	34.205	1.93	1.72	28.		23.7	182.4	200	10.47	34.437	1.05	26.452	158.6	0.542
179	10.21	34.250	1.87	1.91	32.		25.6	168.2	250	9.93	34.514	0.37	26.605	144.2	0.621
212	10.62	34.537	0.57	2.31	38.		28.0	153.8	300	9.38	34.518	0.25	26.700	135.2	0.693
241	10.05	34.514	0.41	2.36	40.		28.3	146.1	400	8.12	34.487	0.19	26.873	118.7	0.827
288	9.51	34.519	0.27	2.50	44.		29.6	137.1	500	7.00	34.476	0.13	27.028	104.0	0.946
341	8.91	34.515	0.21	2.60	51.		30.5	128.2	600	6.21	34.469	0.20	27.128	94.6	1.053
423	7.82	34.476	0.19	2.74	60.		33.7	115.2							
507	6.93	34.477	0.13	2.77	69.		35.8	103.1							
593	6.24	34.471	0.19	2.84	77.		37.0	94.8							

RV ALEJANDRO DE HUMBOLDT — CALCOFI CRUISE 7807 — 137060

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES
24 20.0N	114 39.5W	07/17/78	1908 GMT	3925M	060	9KT	1	180 5 8

Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1	21.91	33.380	5.28	0.26	1.		0.1	483.9	0	21.91	33.380	5.28	23.036	483.9	0.000
11	21.26	33.366	5.36	0.28	1.		0.1	467.9	10	21.33	33.368	5.35	23.186	469.6	0.048
31	19.92	33.860	5.60	0.31	3.		0.1	398.1	20	20.60	33.570	5.49	23.536	436.2	0.093
41	19.55	33.874	5.57	0.28	3.		0.1	388.0	30	19.97	33.839	5.59	23.905	401.0	0.135
56	18.60	33.814	5.67	0.28	3.		0.1	369.3	50	19.11	33.859	5.62	24.142	378.4	0.213
71	15.89	33.547	5.77	0.27	5.		0.1	327.4	75	15.41	33.547	5.70	24.782	317.4	0.301
96	13.60	33.643	5.03	0.41	7.		3.9	273.6	100	13.24	33.631	4.88	25.305	267.6	0.374
116	12.10	33.628	4.20	0.65	13.		11.5	246.6	125	11.95	33.763	3.74	25.659	234.0	0.438
137	11.75	33.934	3.05					217.8	150	11.79	34.153	2.19	25.991	202.4	0.493
157	11.81	34.255	1.75	1.19	26.		21.4	195.2	200	11.82	34.575	0.53	26.313	171.9	0.589
187	11.87	34.513	0.79	1.67	33.		27.0	177.3	250	11.24	34.624	0.24	26.459	158.0	0.674
222	11.63	34.626	0.27					164.7	300	10.44	34.584	0.28	26.570	147.5	0.754
252	11.21	34.624	0.24	2.02	38.		27.4	157.5	400	8.78	34.513	0.20	26.792	126.4	0.898
302	10.41	34.581	0.28	2.13	42.		27.8	147.1	500	7.51	34.477	0.18	26.956	110.8	1.024
356	9.48	34.552	0.21	2.30	47.		28.7	134.2	600	6.51	34.465	0.16	27.086	98.6	1.137
441	8.20	34.482	0.19	2.41	55.		32.4	120.1							
525	7.25	34.478	0.16	2.53	67.		34.3	107.2							
616	6.36	34.460	0.16	2.71	75.		38.3	97.1							

		Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
60.050	07/15/78 1140GMT 37 57.5N 122 53.1W BOTTOM 45M WIND 310 14KT WEATHER 4 DOMINANT WAVES	10	9.58	33.871	2.83	2.72	36.		23.2	186.2
60.052 [5]	07/15/78 1308GMT 37 52.5N 123 03.5W BOTTOM 90M WIND 310 16KT WEATHER 2 DOMINANT WAVES 350 3 4	10	11.02	33.716	6.56	1.14	9.		9.4	221.2
60.065	07/15/78 2206GMT 37 27.0N 123 58.5W BOTTOM 3723M WIND 310 18KT WEATHER 1 DOMINANT WAVES 340 4 5	10	14.10	33.025	6.56	0.35	1.		0.8	328.7
63.050	07/15/78 0711GMT 37 23.3N 122 27.8W BOTTOM 30M WIND 350 7KT WEATHER DOMINANT WAVES	10	9.98	33.758	3.93	1.65	22.		17.8	200.9
63.065	07/14/78 1753GMT 36 53.0N 123 33.0W BOTTOM 3540M WIND 340 14KT WEATHER 2 DOMINANT WAVES 330 4 7	10	13.79	32.980	6.47	0.34	1.		0.8	325.9
66.049	07/12/78 1516GMT 36 53.0N 122 01.7W BOTTOM 52M WIND 290 5KT WEATHER 2 DOMINANT WAVES 290 2 10	10	10.97	33.637	5.20	1.08	11.		10.8	226.1
67.065	07/13/78 0528GMT 36 18.0N 123 09.0W BOTTOM 3163M WIND 330 17KT WEATHER DOMINANT WAVES	10	13.34	32.956	6.50	0.52	1.		1.2	319.0
70.051	07/12/78 0937GMT 36 11.3N 121 43.9W BOTTOM 119M WIND 110 4KT WEATHER DOMINANT WAVES	10	10.56	33.547	5.35	1.19	16.		14.4	225.9
70.065	07/11/78 2209GMT 35 43.0N 122 45.0W BOTTOM 1479M WIND 320 11KT WEATHER 2 DOMINANT WAVES 310 4 10	10	13.61	33.256	6.18	0.51	3.		3.9	302.2
73.050	07/09/78 2102GMT 35 37.0N 121 17.0W BOTTOM 95M WIND 300 12KT WEATHER 2 DOMINANT WAVES 300 6 6	10	12.18	33.437	6.49	0.73	2.		12.5	262.1
73.065	07/10/78 0804GMT 35 08.0N 122 19.0W BOTTOM 3918M WIND 320 25KT WEATHER DOMINANT WAVES	10	16.40	33.036	5.75	0.18	4.		0.0	375.7
77.048	07/09/78 1608GMT 35 08.3N 120 43.7W BOTTOM 28M WIND 130 5KT WEATHER 4 DOMINANT WAVES	10	10.28	33.888	4.65	1.39	21.		17.8	196.1
77.065	07/08/78 2350GMT 34 34.0N 121 55.0W BOTTOM 3730M WIND 330 16KT WEATHER 2 DOMINANT WAVES 330 12 6	10	16.27	33.008	5.78	0.27	3.		0.1	375.3
80.051	07/06/78 2020GMT 34 26.0N 120 32.5W BOTTOM 103M WIND 300 25KT WEATHER 0 DOMINANT WAVES 310 6 6	10	11.23	33.800	4.53	1.30	17.		15.6	218.6
83.040 [6]	07/06/78 0930GMT 34 12.5N 119 24.2W BOTTOM 37M WIND 200 6KT WEATHER DOMINANT WAVES	10	12.87	33.645	6.38	0.65	7.		3.5	259.5
87.032 [5]	07/02/78 0549GMT 33 53.5N 118 26.5W BOTTOM 22M WIND 270 15KT WEATHER DOMINANT WAVES	10	12.93	33.60	6.29	0.50	8.		1.6	263.9
87.032 [7]	07/02/78 0651GMT 33 54.5N 118 28.0W BOTTOM 28M WIND 280 12KT WEATHER DOMINANT WAVES	10	14.55	33.58	6.97	0.20	5.		0.1	297.1
87.033	07/02/78 0745GMT 33 53.9N 118 29.0W BOTTOM 50M WIND 270 11KT WEATHER DOMINANT WAVES	10	14.80	33.59	6.88	0.29	6.		0.1	301.4
87.034	07/02/78 0909GMT 33 52.0N 118 33.2W BOTTOM 73M WIND 280 11KT WEATHER DOMINANT WAVES	10	14.85	33.56	6.63	0.27	4.		0.8	304.7
87.035	07/02/78 1047GMT 33 50.0N 118 37.5W BOTTOM 556M WIND 310 11KT WEATHER DOMINANT WAVES	10	15.33	33.56	6.48	0.23	4.		0.6	314.6
87.055	07/03/78 0530GMT 33 10.0N 120 00.0W BOTTOM 1202M WIND 310 27KT WEATHER DOMINANT WAVES	10	13.98	33.648	6.48	0.49	1.		2.2	280.7
90.027 [6]	07/02/78 0020GMT 33 29.3N 117 45.5W BOTTOM 47M WIND 290 7KT WEATHER 1 DOMINANT WAVES 270 2 4	10	13.27	33.55	6.00					274.1
90.028	07/01/78 2239GMT 33 28.5N 117 46.7W BOTTOM 436M WIND 240 2KT WEATHER 1 DOMINANT WAVES 270 2 4	10	12.96	33.55	6.65	0.58	11.		0.9	268.2
90.029	07/01/78 2047GMT 33 27.0N 117 49.5W BOTTOM 560M WIND 140 3KT WEATHER 1 DOMINANT WAVES 210 2 4	10	15.51	33.502	6.40	0.32	6.		0.2	322.6
90.030	07/01/78 1710GMT 33 25.0N 117 53.5W BOTTOM 621M WIND 180 4KT WEATHER 2 DOMINANT WAVES 49	10	16.85	33.498	6.62	0.37	2.		0.1	352.0

RV DAVID STARR JORDAN

CALCOFI CRUISE 7807 10 METER DATA

			Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
90.031	07/01/78 1505GMT 33 23.0N 117 57.7W BOTTOM 297M WIND 040 5KT WEATHER 1 7 DOMINANT WAVES 49		10	17.74	33.444	6.08	0.34	2.		0.1	376.1
93.026	06/21/78 0448GMT 32 57.2N 117 17.4W BOTTOM 45M WIND 340 6KT WEATHER 0 9 DOMINANT WAVES 0		10	13.43	33.395	6.80	0.70	9.	0.01	0.0	288.5
93.026	06/21/78 0632GMT 32 56.8N 117 18.5W BOTTOM 78M WIND 290 3KT WEATHER 0 DOMINANT WAVES 0		10	13.57	33.465	6.71	0.69	6.	0.01	0.0	286.1
93.028	06/21/78 0844GMT 32 54.7N 117 21.8W BOTTOM 648M WIND 280 6KT WEATHER 0 DOMINANT WAVES 0		10	15.47	33.462	6.82	0.65	6.	0.01	0.0	324.7
93.035	06/21/78 1940GMT 32 40.5N 117 51.5W BOTTOM 611M WIND 320 14KT WEATHER 0 DOMINANT WAVES 320 6 5		10	18.34	33.396	5.66	0.35	2.	0.02	0.1	393.5
93.045	06/22/78 1147GMT 32 20.0N 118 32.0W BOTTOM 1572M WIND 310 24KT WEATHER DOMINANT WAVES		10	17.04	33.346	5.96	0.69	4.	0.01	0.1	367.3
93.055	06/22/78 2102GMT 32 00.0N 119 13.5W BOTTOM 929M WIND 320 21KT WEATHER 1 DOMINANT WAVES 310 7 7		10	15.25	33.168	6.09	0.24	1.	0.01	0.0	341.6

RV ALEJANDRO DE HUMBOLDT

CALCOFI CRUISE 7807 10 METER DATA

			Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
97.029	05/22/78 2333GMT 32 17.5N 117 04.7W BOTTOM 40M WIND 320 10KT WEATHER 1 DOMINANT WAVES 320 3 5		10	12.56	33.430	6.14	0.59	12.	0.10	5.3	269.5
97.032	06/23/78 0242GMT 32 12.0N 117 15.2W BOTTOM 1380M WIND 330 8KT WEATHER 1 DOMINANT WAVES 330 3 5		10	13.87	33.387	6.52	0.75	4.	0.07	2.0	297.6
97.045	06/23/78 1341GMT 31 46.0N 118 08.5W BOTTOM 1249M WIND 320 23KT WEATHER 1 DOMINANT WAVES 330 9 10		10	16.99	33.374	5.83	0.43	0.	0.00	0.2	364.2
97.055	06/23/78 2054GMT 31 25.5N 118 49.5W BOTTOM 595M WIND 310 17KT WEATHER 1 DOMINANT WAVES 300 6 5		10	15.39	33.133	6.06	0.36	3.	0.03	0.2	347.1
100.029	05/27/78 2142GMT 31 42.2N 116 43.4W BOTTOM 90M WIND 280 5KT WEATHER 0 DOMINANT WAVES 280 2 6		10	11.55	33.463	5.02	0.77	14.	0.46	10.5	249.0
100.045	06/27/78 0501GMT 31 10.5N 117 46.5W BOTTOM 1856M WIND 310 18KT WEATHER DOMINANT WAVES		10	17.35	33.417	5.81	0.53	3.	0.03	0.1	369.1
103.029	06/28/78 0257GMT 31 07.0N 116 21.0W BOTTOM 20M WIND 310 12KT WEATHER 1 DOMINANT WAVES 310 2 6		10	14.04	33.617	6.26	0.69	15.	0.22	6.5	284.1
103.045	06/28/78 1542GMT 30 36.0N 117 24.0W BOTTOM 2100M WIND 330 13KT WEATHER 1 DOMINANT WAVES 310 2 6		10	17.88	33.395	5.62	0.48	6.	0.07	0.1	382.9
107.031	07/01/78 1924GMT 30 27.8N 116 07.0W BOTTOM 40M WIND 340 16KT WEATHER 2 DOMINANT WAVES 320 2 6		10	14.30	33.595	5.98	0.53	8.		5.1	290.9
107.045	07/01/78 0432GMT 30 01.5N 117 02.0W BOTTOM 1856M WIND 330 24KT WEATHER DOMINANT WAVES 4		10	17.38	33.435	5.82	0.34	4.		0.1	368.5
110.032	07/02/78 0021GMT 29 51.1N 115 49.7W BOTTOM 50M WIND 320 12KT WEATHER 0 DOMINANT WAVES 320 3 5		10	11.61	33.631	3.98	1.12	14.		14.8	237.6
110.045	07/02/78 0920GMT 29 26.5N 116 39.5W BOTTOM 2378M WIND 350 18KT WEATHER DOMINANT WAVES		10	17.99	33.461	5.74	0.33	3.		0.2	380.6
113.029	07/05/78 0907GMT 29 24.5N 115 13.5W BOTTOM 25M WIND 300 12KT WEATHER DOMINANT WAVES		10	14.70	33.606	5.18	0.68	10.		1.7	298.2
113.030	07/05/78 0738GMT 29 22.0N 115 18.0W BOTTOM 70M WIND 310 25KT WEATHER DOMINANT WAVES		10	13.58	33.635	4.52	0.73	12.		6.6	273.8
113.045	07/04/78 2205GMT 28 52.0N 116 18.0W BOTTOM 2227M WIND 330 23KT WEATHER 1 DOMINANT WAVES 330 4 6		10	17.22	33.369	5.81	0.29	3.		0.5	369.7
117.025	07/09/78 0527GMT 28 58.0N 114 37.0W BOTTOM 54M WIND 310 7KT WEATHER DOMINANT WAVES		10	16.86	33.605	5.93	0.39	7.		0.4	344.4

		Z	T	S	O2	PO4	SIO3	NO2	NO3	DT
117.026	07/09/78 0642GMT 28 56.0N 114 41.5W BOTTOM 68M WIND 300 5KT WEATHER DOMINANT WAVES	10	16.98	33.608	5.89	0.46	6.		0.2	346.9
117.045	07/10/78 1351GMT 28 18.0N 115 56.0W BOTTOM 3600M WIND 340 4KT WEATHER 2 DOMINANT WAVES 330 3 7	10	19.51	33.426	5.39	0.50	3.		0.7	419.5
120.024	07/09/78 1135GMT 28 25.9N 114 10.7W BOTTOM 30M WIND 310 12KT WEATHER DOMINANT WAVES	10	18.42		5.71	0.43	6.		0.1	
120.040	07/12/78 1723GMT 27 56.5N 115 14.0W BOTTOM 38M WIND 300 10KT WEATHER 1 DOMINANT WAVES 270 3 5	10	16.60	33.611	5.27	0.15	6.			338.2
123.036	07/12/78 2324GMT 27 26.2N 114 36.0W BOTTOM 57M WIND 300 11KT WEATHER 0 DOMINANT WAVES 270 2 6	10	13.35	33.421	5.63	0.43	6.		3.9	285.1
123.037	07/13/78 0019GMT 27 24.0N 114 40.0W BOTTOM 67M WIND 310 18KT WEATHER 1 DOMINANT WAVES 300 2 5	10	13.72	33.440	5.58	0.41	7.		5.8	290.8
123.045	07/13/78 0515GMT 27 08.0N 115 11.5W BOTTOM 4232M WIND 320 17KT WEATHER DOMINANT WAVES	10	18.74	33.520	5.66	0.31	3.		0.1	394.0
127.033	07/14/78 1129GMT 26 57.5N 114 02.2W BOTTOM 62M WIND 340 6KT WEATHER DOMINANT WAVES	10	15.04	33.809	4.59	0.97	18.		10.2	290.4
127.045	07/14/78 0402GMT 26 33.0N 114 48.5W BOTTOM 3433M WIND 330 14KT WEATHER 1 DOMINANT WAVES	10	19.07	33.435A	5.60	0.29	3.		0.2	408.1
130.028	07/14/78 1726GMT 26 33.0N 113 21.0W BOTTOM 53M WIND 090 1KT WEATHER 1 DOMINANT WAVES 280 1 7	10	17.51	33.800	5.89	0.34	7.		0.3	344.9
130.035	07/14/78 2211GMT 26 19.0N 113 48.0W BOTTOM 600M WIND 270 15KT WEATHER 1 DOMINANT WAVES 270 1 3	10	17.98	33.522	5.85	0.30	4.		0.1	376.0
133.023	07/16/78 1633GMT 26 08.5N 112 40.2W BOTTOM 66M WIND 210 2KT WEATHER 1 DOMINANT WAVES 210 1 7	10	21.31	33.787	5.59	0.49	3.		0.3	438.8
133.035	07/16/78 0856GMT 25 44.5N 113 26.5W BOTTOM 672M WIND 180 6KT WEATHER 1 DOMINANT WAVES	10	21.76	33.515	5.24	0.28	1.		0.1	470.2
137.022	07/16/78 2113GMT 25 36.1N 112 14.8W BOTTOM 55M WIND 290 8KT WEATHER 1 DOMINANT WAVES 290 1 3	10	16.41	33.680	6.44	0.47	2.		0.1	329.0
137.035	07/17/78 0526GMT 25 10.0N 113 04.5W BOTTOM 1114M WIND 290 5KT WEATHER DOMINANT WAVES	10	20.87	33.405	5.50	0.30	2.		0.6	455.0

A) ALTERNATE VALUE, 33.417 PPT.

	DEPTH	CHL A	PHAEO
STATION 60055	1	0.63	0.74
07/15/78	10	0.49	0.83
1523 GMT	29	1.38	1.76
	39	0.89	1.10
37 47.0N	53	0.33	0.36
123 15.0W	67	0.16	0.46
	81	0.12	0.45
	100	0.13	0.36
	119	0.11	0.43
STATION 60060	1	1.22	0.26
07/15/78	11	0.85	0.56
1903 GMT	29	2.67	0.89
	39	0.99	0.43
37 37.0N	48	0.24	0.27
123 37.0W	62	0.07	0.27
	76	0.03	0.13
	95	0.03	0.15
	118	0.01	0.04
	137	0.01	0.09
	166	0.01	0.12
	193	0.01	0.15
STATION 60070	2	2.67	0.18
07/16/78	10	0.69	0.49
0157 GMT	29	0.59	0.61
	38	0.82	0.62
37 17.0N	48	0.43	0.48
124 21.0W	61	0.16	0.28
	75	0.07	0.20
	95	0.03	0.26
	117	0.05	0.25
	137	0.06	0.16
	165	0.04	0.22
	192	0.02	0.20
STATION 60080	1	0.09	0.02
07/16/78	10	0.08	0.03
0822 GMT	29	0.08	0.03
	39	0.11	0.06
36 56.5N	48	0.12	0.06
125 04.0W	62	0.19	0.09
	95	0.28	0.20
	119	0.16	0.10
	136	0.05	0.05
	164	0.01	0.03
	192	0.03	0.02
STATION 60090	1	0.09	0.02
07/16/78	11	0.08	0.02
1422 GMT	29	0.07	0.02
	39	0.08	0.02
36 37.0N	48	0.14	0.00
125 47.0W	61	0.11	0.03
	75	0.18	0.06
	94	0.13	0.08
	117	0.16	0.08
	136	0.05	0.05
	164	0.01	0.02
	191	0.01	0.02
STATION 63052	1	1.68	0.87
07/15/78	11	1.58	1.15
0607 GMT	20	0.39	0.95
	30	0.26	0.56
37 19.0N	49	0.13	0.83
122 36.0W			
STATION 63055	1	1.05	0.64
07/15/78	10	1.08	0.61
0240 GMT	30	0.79	0.47
	43	0.66	0.41
37 13.0N	52	0.44	0.24
122 50.0W	66	0.13	0.20
	80	0.07	0.28
	99	0.05	0.17
	123	0.05	0.16
	141	0.11	0.09
	174	0.11	0.11
	203	0.01	0.09
STATION 63060	1	0.95	0.82
07/14/78	10	0.95	0.68
2153 GMT	30	0.66	0.49
	39	0.23	0.26
37 03.4N	48	0.10	0.16
123 10.5W	62	0.05	0.15
	76	0.09	0.16
	94	0.05	0.18
	117	0.04	0.18
	135	0.04	0.13
	161	0.03	0.13
	190	0.02	0.11
STATION 63070	1	0.36	0.06
07/14/78	10	0.53	0.07
1440 GMT	29	0.58	0.17
	52	0.33	0.07
36 42.5N	62	1.02	0.32
123 55.0W	71	1.61	0.38
	85	1.68	0.55
	99	0.13	0.09
	122	0.08	0.07
	141	0.03	0.02
	164	0.03	0.01
	193	0.01	0.02
STATION 63080	2	0.32	0.00
07/14/78	12	0.11	0.05
0837 GMT	30	0.17	0.04
	40	0.28	0.07
36 23.0N	48	0.69	0.20
124 38.5W	63	0.51	0.15
	77	0.27	0.14
	95	0.26	0.16
	118	0.10	0.09
	137	0.03	0.16
	164	0.02	0.06
	191	0.01	0.05
STATION 63090	1	0.13	0.08
07/14/78	11	0.08	0.08
0238 GMT	29	0.21	0.05
	53	0.32	0.08
36 03.0N	62	0.50	0.12
125 20.0W	70	0.47	0.17
	84	0.47	0.28
	98	0.27	0.40
	121	0.09	0.19
	140	0.02	0.04
	163	0.01	0.04
	191	0.01	0.02
STATION 67050	1	5.34	2.97
07/12/78	10	4.55	3.40
1712 GMT	29	0.36	0.38
	43	0.24	0.31
36 48.0N	57	0.19	0.35
122 05.0W	71	0.13	0.24
	85	0.08	0.28
	104	0.08	0.20
	127	0.04	0.17
	154	0.02	0.15
	186	0.00	0.17
	217	0.02	0.13
STATION 67055	1	0.79	1.20
07/12/78	10	0.66	1.04
2125 GMT	29	0.23	0.26
	39	0.18	0.15
36 39.0N	48	0.18	0.16
122 26.0W	62	0.02	0.10
	76	0.02	0.13
	95	0.07	0.21
	118	0.07	0.21
	136	0.04	0.20
	164	0.10	0.38
	193	0.05	0.17
STATION 67060	1	0.82	0.26
07/13/78	11	0.82	0.70
0148 GMT	29	0.63	0.28
	39	0.46	0.41
36 28.0N	48	0.39	0.47
122 47.0W	62	0.08	0.11
	76	0.07	0.25
	95	0.13	0.29
	118	0.07	0.32
	137	0.03	0.16
	165	0.01	0.04
	194	0.01	0.04
STATION 67070	1	0.59	0.35
07/13/78	10	2.04	0.17
0857 GMT	29	1.02	0.16
	52	0.72	0.26
36 08.0N	61	0.64	0.13
123 29.5W	70	0.28	0.18
	84	0.14	0.13
	98	0.05	0.08
	121	0.01	0.07
	139	0.01	0.06
	162	0.01	0.10
	190	0.01	0.11
STATION 67080	2	0.27	0.04
07/13/78	12	0.17	0.05
1455 GMT	29	0.20	0.06
	39	0.18	0.09
35 48.0N	48	0.28	0.28
124 12.0W	62	0.45	0.19
	77	0.19	0.14
	94	0.08	0.09
	118	0.05	0.27
	136	0.01	0.10
	164	0.01	0.05
	192	0.00	0.04
STATION 67090	1	0.10	0.41
07/13/78	11	0.22	0.06
2037 GMT	30	0.29	0.02
	39	0.26	0.07
35 28.0N	49	0.64	0.21
124 55.0W	63	0.43	0.31
	77	0.29	0.23
	96	0.39	0.03
	119	0.05	0.13
	138	0.07	0.18
	165	0.01	0.08
	193	0.01	0.10
STATION 70053	2	0.44	0.28
07/12/78	11	0.41	0.24
0735 GMT	30	0.52	0.37
	40	0.56	0.43
36 06.5N	54	0.23	0.45
121 54.0W	68	0.09	0.17
	92	0.04	0.07
	110	0.01	0.10
	129	0.01	0.06
	147	0.01	0.08
	175	0.01	0.08
	207	0.01	0.06
STATION 70060	1	0.49	0.15
07/12/78	10	0.49	0.11
0156 GMT	29	0.79	0.57
	39	0.85	0.63
35 53.0N	48	0.59	0.30
122 22.5W	62	0.39	0.24
	75	0.11	0.13
	95	0.07	0.22
	117	0.09	0.16
	135	0.07	0.21
	163	0.06	0.18
	190	0.06	0.19
STATION 70070	2	1.31	0.30
07/11/78	12	0.99	0.39
1932 GMT	30	0.44	0.35
	40	0.24	0.30
35 33.0N	49	0.22	0.27
123 06.0W	63	0.15	0.41
	77	0.09	0.17
	96	0.04	0.29
	120	0.01	0.13
	138	0.01	0.06
	166	0.02	0.15
	194	0.01	0.16
STATION 70080	1	0.07	0.03
07/11/78	10	0.08	0.02
1329 GMT	29	0.07	0.03
	38	0.08	0.04
35 13.5N	47	0.34	-0.01
123 47.5W	61	0.32	0.19
	74	0.29	0.25
	93	0.13	0.10
	116	0.07	0.11
	135	0.04	0.08
	163	0.01	0.05
	191	0.01	0.02

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CHLOROPHYLL-A AND PHAEOPHYTIN

CALCOFI CRUISE 7807

	DEPTH	CHL A	PHAEO
STATION 70090	0	0.09	0.05
07/11/78	10	0.09	0.02
0645 GMT	29	0.09	0.02
	53	0.08	0.02
34 53.0N	62	0.09	0.02
124 30.0W	71	0.19	0.07
	85	0.32	0.17
	99	0.46	0.19
	122	0.08	0.08
	141	0.02	0.06
	163	0.00	0.07
	191	0.00	0.07
STATION 73070	1	0.07	0.08
07/10/78	10	0.09	0.06
1135 GMT	38	0.10	0.05
	62	0.11	0.05
34 58.0N	80	0.26	0.08
122 40.0W	94	0.30	0.19
	108	0.29	0.15
	126	0.19	0.09
	145	0.10	0.08
	168	0.04	0.03
	192	0.01	0.03
	214	0.00	0.03
STATION 77051	1	1.81	0.32
07/09/78	11	1.87	0.51
1331 GMT	29	2.28	0.34
	44	3.36	1.09
35 02.0N	52	3.76	1.29
120 56.5W	66	2.57	0.69
	81	3.07	1.38
	98	3.17	1.34
	121	1.35	1.12
	139	0.22	0.34
	171	0.18	0.28
	200	0.29	0.50
STATION 77070	1	0.17	0.06
07/08/78	10	0.13	0.03
2037 GMT	29	0.13	0.03
	38	0.14	0.03
34 24.2N	47	0.16	0.03
122 16.0W	61	0.32	0.08
	75	0.29	0.08
	93	0.23	0.08
	116	0.06	0.07
	134	0.07	0.10
	162	0.06	0.16
	190	0.04	0.13
STATION 80052	1	1.22	0.32
07/06/78	10	1.64	0.29
2152 GMT	28	1.51	0.26
	41	0.79	0.24
34 24.0N	50	0.92	0.22
120 36.7W	63	0.89	0.38
	77	0.59	0.28
	95	0.36	0.35
	117	0.30	0.53
	135	0.39	0.32
	167	0.20	0.39
	194	0.30	0.53
STATION 80070	2	2.77	0.73
07/07/78	11	3.66	0.49
1222 GMT	30	1.33	0.91
	39	0.92	0.42
33 48.5N	49	0.85	0.56
121 51.0W	63	0.19	0.18
	77	0.10	0.33
	95	0.05	0.18
	118	0.02	0.12
	137	0.05	0.12
	165	0.03	0.14
	194	0.03	0.13
STATION 82047	2	0.62	0.16
07/06/78	11	1.77	0.32
1602 GMT	30	2.37	1.66
	39	1.12	1.21
34 16.5N	49	0.72	0.81
119 59.0W	64	0.66	0.53
	78	0.53	0.50
	96	0.33	0.30
	119	0.45	0.42
	138	0.59	0.39
	166	0.23	0.28
	194	0.12	0.27

	DEPTH	CHL A	PHAEO
STATION 73053	0	0.29	0.08
07/09/78	9	0.58	0.17
2333 GMT	28	0.52	0.31
	37	0.66	0.39
35 31.5N	47	0.66	0.39
121 28.5W	61	0.21	0.15
	75	0.12	0.10
	93	0.07	0.18
	117	0.17	0.19
	135	0.11	0.15
	163	0.09	0.16
	191	0.13	0.13
STATION 73080	1	0.13	0.04
07/10/78	10	0.15	0.03
1749 GMT	29	0.17	0.03
	57	0.27	0.14
34 38.0N	67	0.30	0.12
123 22.0W	81	0.36	0.16
	95	0.22	0.16
	109	0.15	0.09
	132	0.10	0.09
	151	0.06	0.06
	179	0.01	0.03
	207	0.00	0.02
STATION 77055	0	7.32	1.58
07/09/78	9	7.32	0.75
1005 GMT	28	2.47	1.03
	38	0.43	0.22
34 54.5N	47	0.41	0.24
121 13.0W	61	0.35	0.25
	75	0.29	0.21
	94	0.27	0.26
	117	0.18	0.26
	136	0.06	0.17
	164	0.16	0.47
	192	0.10	0.23
STATION 77080	1	2.28	0.40
07/08/78	11	2.18	0.38
1420 GMT	29	1.68	0.40
	39	0.69	0.32
34 04.0N	48	0.39	0.35
122 57.0W	63	0.27	0.25
	76	0.17	0.15
	95	0.24	0.19
	118	0.05	0.10
	137	0.09	0.14
	165	0.12	0.18
	193	0.06	0.12
STATION 80055	1	3.17	0.45
07/07/78	11	5.16	0.65
0122 GMT	29	8.91	1.66
	39	3.76	4.79
34 19.0N	48	5.44	1.27
120 48.0W	62	0.59	0.65
	76	0.30	0.40
	95	0.16	0.18
	118	0.12	0.20
	137	0.09	0.14
	165	0.11	0.13
	193	0.09	0.15
STATION 80080	1	1.18	0.19
07/07/78	11	1.18	0.33
1816 GMT	29	0.33	0.29
	39	0.15	0.23
33 28.7N	48	0.51	0.05
122 32.0W	62	0.27	0.22
	77	0.10	0.12
	95	0.05	0.05
	119	0.05	0.12
	137	0.07	0.14
	165	0.07	0.07
	193	0.04	0.12
STATION 83042	1	1.28	0.55
07/06/78	11	0.79	0.71
1122 GMT	30	1.64	0.31
	44	5.24	0.69
34 10.0N	53	2.77	1.68
119 29.5W	66	0.99	0.69
	78	0.92	0.68
	95	0.99	0.67
	116	0.24	0.20
	134	0.12	0.26
	162	0.29	0.25
	185	0.16	0.20

	DEPTH	CHL A	PHAEO
STATION 73060	2	0.20	0.02
07/10/78	11	0.20	0.03
0442 GMT	30	0.21	0.02
	53	0.28	0.04
35 16.7N	63	0.32	0.07
122 01.0W	72	0.67	-0.06
	86	0.32	0.14
	100	0.21	0.08
	123	0.07	0.06
	142	0.01	0.05
	165	0.03	0.03
	193	0.01	0.02
STATION 73090	2	0.10	0.03
07/10/78	11	0.10	0.00
2329 GMT	30	0.13	0.01
	53	0.12	0.02
34 18.5N	62	0.12	0.01
124 04.0W	71	0.23	0.01
	85	0.34	0.03
	99	0.27	0.05
	122	0.20	0.06
	140	0.10	0.08
	164	0.05	0.07
	191	0.01	0.06
STATION 77060	3	0.40	0.12
07/09/78	12	0.76	0.11
0424 GMT	31	0.89	0.05
	40	0.85	0.25
34 44.0N	50	0.79	0.24
121 34.0W	63	0.29	0.15
	77	0.25	0.20
	95	0.32	0.33
	119	0.27	0.33
	136	0.07	0.09
	163	0.23	0.30
	191	0.05	0.16
STATION 77090	1	0.10	0.03
07/08/78	10	0.11	0.01
0755 GMT	29	0.10	0.02
	57	0.16	0.03
33 43.0N	67	0.12	0.05
123 39.0W	81	0.22	0.05
	95	0.29	0.06
	109	0.25	0.13
	132	0.11	0.06
	151	0.05	0.05
	179	0.01	0.03
	207	0.01	0.02
STATION 80060	1	2.57	1.23
07/07/78	10	2.67	0.99
0551 GMT	29	0.76	0.51
	39	0.53	0.28
34 09.0N	47	0.53	0.24
121 09.0W	61	0.33	0.31
	75	0.27	0.36
	93	0.23	0.36
	117	0.19	0.29
	136	0.12	0.38
	164	0.05	0.11
	192	0.17	0.23
STATION 80090	0	0.16	0.03
07/08/78	10	0.15	0.05
0027 GMT	23	0.12	0.05
	37	0.14	0.04
33 09.0N	47	0.33	0.06
123 13.0W	61	0.33	0.15
	74	0.35	0.15
	93	0.26	0.19
	116	0.09	0.04
	135	0.11	-0.02
	163	0.01	0.07
	189	0.01	0.05
STATION 83051	1	4.95	1.76
07/05/78	11	4.95	1.03
1248 GMT	29	0.59	0.36
	39	0.49	0.33
33 52.0N	53	0.33	0.22
120 08.5W	68	0.27	0.56
	81	0.24	0.14
	99	0.27	0.14
	122	0.30	0.22
	146	0.45	0.56

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CHLOROPHYLL-A AND PHAEOPHYTIN

CALCOFI CRUISE 7807

	DEPTH	CHL A	PHAEO
STATION 83055	2	10.09	2.61
07/05/78	11	12.67	2.77
0933 GMT	21	11.08	3.88
	40	5.15	1.74
33 44.0N	49	2.77	1.33
120 24.5W	58	0.72	0.52
	72	0.35	0.37
	87	0.46	0.34
	129	0.24	0.27
	147	0.17	0.19
	175	0.21	0.17
	203	0.05	0.10
STATION 83060	2	3.66	0.55
07/05/78	11	3.36	0.85
0456 GMT	30	2.87	0.81
	39	1.84	0.39
33 33.7N	49	0.19	0.17
120 44.8W	63	0.38	0.40
	77	0.53	0.33
	95	0.11	0.19
	119	0.05	0.12
	137	0.09	0.12
	165	0.05	0.07
	193	0.03	0.06
STATION 83070	1	0.13	0.01
07/04/78	10	0.12	0.03
2315 GMT	28	0.12	0.03
	38	0.32	0.07
33 14.5N	51	0.47	0.13
121 26.0W	65	0.62	0.19
	88	0.27	0.08
	107	0.09	0.08
	126	0.03	0.09
	144	0.02	0.09
	173	0.01	0.09
	205	0.00	0.01
STATION 83080	3	0.15	0.02
07/04/78	12	0.14	0.04
1703 GMT	30	0.15	0.02
	54	0.16	0.04
32 54.0N	63	0.33	0.06
122 08.0W	72	0.44	0.15
	86	0.34	0.19
	100	0.21	0.17
	124	0.12	0.09
	143	0.05	0.04
	166	0.01	0.04
	194	0.00	0.04
STATION 83090	2	0.17	0.04
07/04/78	11	0.13	0.05
1110 GMT	30	0.18	0.04
	40	0.27	0.09
32 34.5N	54	0.41	0.14
122 50.0W	68	0.49	0.13
	91	0.21	0.11
	110	0.14	0.09
	128	0.06	0.10
	147	0.04	0.09
	175	0.00	0.06
	208	0.01	0.04
STATION 87036	1	1.33	0.63
07/02/78	10	1.58	0.91
1323 GMT	29	1.05	0.80
	39	0.59	0.43
33 49.0N	48	0.46	0.41
118 40.0W	62	0.17	0.16
	76	0.05	0.08
	95	0.05	0.08
	118	0.04	0.13
	136	0.02	0.05
	164	0.06	0.10
	192	0.08	0.10
STATION 87040	2	0.36	0.04
07/02/78	12	1.08	0.33
1740 GMT	31	2.08	0.24
	40	0.72	0.36
33 40.0N	50	0.33	0.15
118 58.0W	64	0.17	0.17
	76	0.09	0.09
	97	0.11	-0.02
	120	0.01	0.06
	139	0.01	0.07
	167	0.01	0.05
	195	0.01	0.05
STATION 87045	1	1.98	0.34
07/02/78	11	1.88	0.38
2211 GMT	29	2.18	0.67
	39	0.59	0.22
33 30.0N	48	0.19	0.17
119 19.0W	62	0.07	0.09
	76	0.05	0.11
	94	0.06	0.14
	118	0.14	0.19
	136	0.03	0.06
	164	0.05	0.06
	192	0.05	0.07
STATION 87050	2	2.77	0.67
07/03/78	12	2.57	0.63
0142 GMT	20	2.37	1.66
	30	2.97	0.36
33 20.0N	49	2.37	1.66
119 39.5W			
STATION 87060	1	0.76	0.13
07/03/78	10	0.92	0.14
0950 GMT	33	1.25	0.27
	42	0.43	0.40
33 00.0N	56	0.29	0.19
120 21.5W	69	0.15	0.14
	92	0.05	0.06
	111	0.06	0.09
	129	0.05	0.11
	157	0.01	0.13
	184	0.03	0.12
	221	0.03	0.08
STATION 87070	2	0.15	0.03
07/03/78	11	0.15	0.03
1638 GMT	30	0.15	0.04
	58	0.35	0.18
32 39.5N	67	0.45	0.25
121 02.0W	81	0.41	0.28
	95	0.27	0.17
	109	0.12	0.08
	132	0.07	0.08
	151	0.01	0.05
	179	0.01	0.02
	207	0.01	0.02
STATION 87080	1	0.22	0.02
07/03/78	10	0.18	0.05
2221 GMT	28	0.18	0.04
	51	0.29	0.04
32 19.5N	60	0.40	0.10
121 43.0W	69	0.30	0.08
	82	0.28	0.15
	96	0.17	0.14
	118	0.06	0.07
	137	0.04	0.08
	159	0.05	0.09
	187	0.02	0.04
STATION 87090	2	0.10	0.02
07/04/78	11	0.09	0.02
0417 GMT	29	0.11	0.01
	38	0.08	0.01
31 59.0N	52	0.14	0.02
122 24.0W	66	0.27	0.08
	89	0.35	0.28
	108	0.11	0.10
	126	0.08	0.03
	145	0.01	0.03
	173	0.01	0.04
	206	0.01	0.01
STATION 90033	0	0.11	0.04
07/01/78	10	0.10	0.05
1220 GMT	29	0.55	0.28
	38	0.63	0.46
33 18.5N	47	0.34	0.39
118 07.0W	61	0.18	0.23
	76	0.07	0.14
	94	0.03	0.07
	117	0.00	0.14
	135	0.01	0.06
	164	0.02	0.07
	190	0.01	0.03
STATION 90037	1	0.21	0.08
07/01/78	11	0.24	0.06
0829 GMT	29	0.85	0.39
	38	0.85	0.39
33 11.0N	48	0.72	0.52
118 22.5W	62	0.43	0.28
	76	0.26	0.14
	94	0.05	0.11
	117	0.01	0.13
	136	0.01	0.06
	164	0.01	0.07
	192	0.01	0.06
STATION 90045	1	0.33	0.13
07/01/78	11	0.36	0.06
0228 GMT	27	4.06	0.57
	36	7.52	1.50
32 54.5N	45	1.35	0.41
118 55.5W	58	0.27	0.29
	71	0.21	0.15
	89	0.11	0.11
	110	0.03	0.07
	127	0.01	0.08
	152	0.05	-0.00
	177	0.05	-0.01
STATION 90053	1	3.46	0.63
06/30/78	10	4.35	0.93
2037 GMT	28	1.02	0.55
	37	1.88	0.79
32 34.8N	46	1.08	0.78
119 29.5W	60	2.77	1.03
	74	0.79	0.98
	92	0.15	0.24
	114	0.15	0.26
	133	0.06	0.14
	160	0.03	0.10
	187	0.00	0.01
STATION 90060	1	0.89	0.11
06/30/78	10	0.72	0.12
1511 GMT	29	1.12	0.33
	38	1.31	0.29
32 25.0N	48	1.28	0.68
119 57.5W	62	0.79	0.66
	76	0.95	0.73
	94	0.38	0.34
	117	0.22	0.36
	135	0.24	0.28
	163	0.22	0.24
	190	0.18	0.28
STATION 90070	1	0.16	0.03
06/30/78	11	0.30	0.03
0807 GMT	29	1.54	0.15
	39	1.52	0.31
32 04.5N	48	2.97	0.77
120 38.5W	62	1.68	0.75
	76	2.47	0.73
	94	1.58	0.85
	118	0.85	0.60
	136	0.69	0.53
	164	0.11	0.13
	192	0.03	0.07
STATION 90080	1	0.07	0.04
06/30/78	10	0.09	0.02
0137 GMT	29	0.13	0.03
	38	0.18	0.03
31 44.5N	47	0.19	0.04
121 19.5W	61	0.39	0.11
	74	0.33	0.12
	93	0.26	0.17
	115	0.17	0.07
	133	0.11	0.08
	160	0.02	0.02
	187	0.00	0.02
STATION 90090	1	0.05	0.02
06/29/78	11	0.08	0.01
1856 GMT	29	0.09	0.00
	39	0.07	0.02
31 23.2N	48	0.09	0.02
122 01.2W	62	0.09	0.02
	76	0.12	0.05
	94	0.22	0.12
	118	0.21	0.19
	137	0.14	0.06
	164	0.03	0.03

	DEPTH	CHL A	PHAEO
STATION 90100	1	0.10	0.01
06/29/78	11	0.09	0.02
1320 GMT	29	0.08	0.01
	39	0.09	0.02
31 05.0N	48	0.09	0.03
122 39.0W	62	0.12	0.04
	76	0.17	0.05
	95	0.27	0.15
	118	0.22	0.17
	137	0.13	0.11
	165	0.04	0.02
	193	0.00	0.03
STATION 90110	1	0.09	0.02
06/29/78	11	0.06	0.01
0732 GMT	29	0.07	0.03
	53	0.10	0.05
30 44.3N	62	0.16	0.07
123 17.2W	72	0.16	0.08
	86	0.21	0.24
	100	0.22	0.30
	123	0.13	0.08
	142	0.05	0.05
	164	0.01	0.02
	192	0.00	0.04
STATION 90120	1	0.10	0.01
06/29/78	11	0.09	0.01
0145 GMT	29	0.10	0.02
	39	0.11	0.01
30 25.1N	48	0.12	0.02
123 59.9W	62	0.16	0.03
	76	0.22	0.07
	95	0.30	0.11
	117	0.26	0.05
	136	0.11	0.13
	164	0.01	0.06
	192	0.01	0.02
STATION 90130	1	0.08	0.01
06/28/78	11	0.08	0.02
1916 GMT	29	0.10	0.02
	39	0.12	0.04
30 04.3N	48	0.13	0.05
124 38.7W	62	0.18	0.07
	75	0.22	0.10
	95	0.28	0.16
	118	0.21	0.14
	137	0.08	0.13
	165	0.03	0.05
	194	0.03	0.01
STATION 90140	1	0.07	0.02
06/28/78	10	0.07	0.01
1325 GMT	29	0.06	0.03
	52	0.08	0.03
29 45.1N	62	0.09	0.03
125 19.6W	71	0.01	0.15
	85	0.13	0.07
	99	0.11	0.10
	122	0.19	0.12
	140	0.11	0.11
	163	0.06	0.05
	192	0.01	0.02
STATION 90150	1	0.05	0.05
06/28/78	11	0.06	0.02
0747 GMT	29	0.03	0.01
	53	0.07	0.03
29 25.1N	62	0.04	0.02
125 59.2W	71	0.09	0.04
	85	0.13	0.07
	100	0.15	0.13
	123	0.22	0.14
	142	0.09	0.09
	165	0.04	0.05
	193	0.01	0.03
STATION 90160	1	0.06	0.02
06/28/78	10	0.08	0.00
0158 GMT	29	0.07	0.01
	38	0.07	0.02
29 05.1N	48	0.08	0.01
126 38.7W	62	0.09	0.02
	76	0.09	0.05
	94	0.19	0.08
	117	0.18	0.15
	136	0.13	0.13
	164	0.07	0.05
	192	0.01	0.01
STATION 90170	1	0.07	0.02
06/27/78	11	0.08	0.01
1955 GMT	38	0.09	0.02
	62	0.10	0.04
28 45.8N	80	0.14	0.04
127 18.0W	94	0.14	0.07
	108	0.21	0.15
	127	0.19	0.22
	146	0.11	0.12
	169	0.07	0.08
	192	0.05	0.04
	215	0.01	0.02
STATION 90180	1	0.07	0.05
06/27/78	11	0.11	0.01
1411 GMT	39	0.09	0.03
	62	0.11	0.04
28 25.1N	81	0.16	0.05
127 57.5W	95	0.14	0.05
	109	0.17	0.08
	127	0.18	0.11
	146	0.15	0.13
	169	0.08	0.08
	193	0.05	0.06
	216	0.01	0.03
STATION 90190	2	0.09	0.02
06/27/78	11	0.07	0.04
0634 GMT	30	0.08	0.04
	54	0.11	0.04
28 00.5N	63	0.12	0.04
128 39.8W	72	0.09	0.04
	86	0.15	0.07
	100	0.15	0.13
	124	0.15	0.14
	143	0.14	0.16
	166	0.07	0.07
	194	0.02	0.04
STATION 90200	1	0.09	0.03
06/27/78	10	0.11	0.02
0124 GMT	38	0.12	0.03
	61	0.11	0.04
27 45.1N	79	0.11	0.11
129 15.5W	93	0.21	0.06
	106	0.35	-0.07
	124	0.16	0.13
	143	0.14	0.10
	165	0.07	0.08
	188	0.04	0.03
	212	0.01	0.02
STATION 93029	0	0.17	0.06
06/21/78	10	0.13	0.08
1144 GMT	28	0.47	0.40
	37	0.34	0.22
32 52.7N	47	0.16	0.13
117 26.6W	62	0.12	0.09
	75	0.02	0.06
	93	0.01	0.08
	119	0.01	0.05
	136	0.01	0.07
	164	0.01	0.06
STATION 93030	10	0.19	0.07
06/21/78	29	0.82	0.63
1455 GMT	39	0.43	0.30
	48	0.26	0.21
32 50.5N	62	0.07	0.10
117 31.0W	74	0.09	0.26
	93	0.03	0.08
	117	0.02	0.08
	134	0.01	0.06
	162	0.01	0.06
STATION 93040	2	0.16	0.03
06/22/78	11	0.18	0.04
0657 GMT	31	1.22	0.41
	40	0.63	0.29
32 30.0N	50	0.17	0.14
118 11.5W	64	0.11	0.14
	79	0.09	0.07
	97	0.01	0.06
	122	0.06	0.05
	139	0.01	0.05
	166	0.01	0.04
	195	0.01	0.04
STATION 93050	2	0.60	0.12
06/22/78	12	0.63	0.19
1626 GMT	30	2.57	1.23
	40	1.28	0.86
32 10.0N	54	0.23	0.29
118 52.5W	68	0.29	0.40
	90	0.07	0.21
	109	0.13	0.29
	128	0.02	0.12
	146	0.10	0.19
	175	0.01	0.06
	207	0.01	0.05
STATION 93060	1	0.13	0.04
06/23/78	9	0.13	0.02
0148 GMT	26	0.15	0.04
	35	0.23	0.04
31 50.0N	48	0.27	0.07
119 34.0W	61	0.30	0.10
	82	0.38	0.27
	100	0.18	0.15
	117	0.07	0.08
	135	0.02	0.01
	161	0.00	0.03
	192	0.00	0.02
STATION 93070	1	0.08	0.03
06/23/78	11	0.09	0.00
0839 GMT	29	0.09	0.02
	39	0.10	0.01
31 30.0N	48	0.13	0.02
120 14.0W	62	0.17	0.05
	76	0.38	0.05
	95	0.40	0.31
	118	0.22	0.19
	136	0.10	0.11
	164	0.05	0.05
	192	0.01	0.01
STATION 93080	1	0.08	0.01
06/23/78	10	0.08	0.01
1523 GMT	29	0.09	0.01
	38	0.06	0.01
31 10.0N	46	0.12	0.03
120 54.5W	62	0.10	0.04
	75	0.14	0.06
	94	0.23	0.07
	117	0.15	0.07
	136	0.05	0.09
	163	0.01	0.04
	191	0.01	0.04
STATION 93090	1	0.08	0.02
06/23/78	10	0.09	0.00
2205 GMT	29	0.09	0.02
	57	0.13	0.04
30 50.0N	66	0.10	0.03
121 34.5W	80	0.15	0.05
	95	0.07	0.10
	108	0.27	0.19
	132	0.13	0.15
	151	0.12	0.05
	168	0.05	0.08
	179	0.01	0.02
STATION 93100	2	0.06	0.02
06/24/78	11	0.08	0.01
0413 GMT	30	0.07	0.02
	39	0.09	0.03
30 30.0N	48	0.09	0.02
122 14.0W	63	0.11	0.08
	76	0.14	0.09
	95	0.19	0.16
	118	0.18	0.25
	138	0.09	0.13
	165	0.03	0.03
	194	0.00	0.02
STATION 93110	1	0.07	0.02
06/24/78	11	0.06	0.02
1042 GMT	29	0.07	0.02
	57	0.08	0.04
30 09.5N	66	0.08	0.02
122 55.0W	80	0.09	0.05
	94	0.13	0.07
	108	0.23	0.15
	132	0.15	0.12
	150	0.07	0.07
	178	0.01	0.03
	206	0.00	0.02

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	DEPTH	CHL A	PHAEO
STATION 93120	2	0.09	0.02
06/24/78	11	0.09	0.02
1722 GMT	30	0.09	0.04
	39	0.10	0.03
29 49.0N	53	0.11	0.06
123 35.0W	66	0.14	0.06
	90	0.28	0.23
	109	0.12	0.14
	127	0.11	0.13
	146	0.07	0.10
	173	0.01	0.03
	206	0.00	0.00
STATION 93130	1	0.09	0.02
06/24/78	10	0.08	0.01
2302 GMT	29	0.09	0.03
	39	0.09	0.03
29 29.0N	53	0.09	0.01
124 14.0W	67	0.11	0.03
	90	0.16	0.03
	109	0.23	0.11
	128	0.23	0.12
	146	0.18	0.11
	174	0.06	0.04
	207	0.01	0.02
STATION 93140	1	0.11	0.04
06/25/78	11	0.10	0.02
0524 GMT	44	0.14	0.04
	71	0.14	0.04
29 10.6N	90	0.18	0.05
124 56.3W	103	0.21	0.07
	118	0.23	0.17
	135	0.26	0.21
	154	0.14	0.11
	181	0.04	0.04
	205	0.03	0.02
	229	0.01	0.01
STATION 93150	1	0.12	0.04
06/25/78	11	0.09	0.02
1232 GMT	39	0.13	0.03
	62	0.10	0.03
28 50.4N	80	0.17	0.04
125 33.6W	94	0.19	0.06
	108	0.22	0.14
	126	0.24	0.21
	144	0.21	0.17
	166	0.08	0.08
	189	0.01	0.03
	211	0.01	0.02
STATION 93160	2	0.09	0.02
06/25/78	11	0.07	0.02
1845 GMT	29	0.08	0.02
	52	0.09	0.03
28 30.4N	61	0.09	0.01
126 12.8W	70	0.09	0.01
	84	0.09	0.04
	99	0.15	0.08
	121	0.22	0.20
	140	0.13	0.12
	164	0.05	0.07
	192	0.01	0.02
STATION 93170	2	0.09	0.01
06/26/78	11	0.09	0.01
0051 GMT	30	0.09	0.01
	39	0.10	0.01
28 10.4N	53	0.09	0.02
126 52.0W	67	0.13	0.02
	90	0.20	0.08
	109	0.28	0.17
	127	0.17	0.15
	145	0.11	0.11
	172	0.08	0.05
	205	0.01	0.02
STATION 93180	1	0.09	0.02
06/26/78	11	0.09	0.03
0748 GMT	39	0.10	0.01
	62	0.12	0.04
27 51.0N	81	0.11	0.04
127 31.0W	95	0.16	0.06
	109	0.18	0.06
	128	0.22	0.15
	146	0.16	0.09
	170	0.07	0.07
	193	0.03	0.05
	216	0.02	0.00
STATION 93190	3	0.09	0.03
06/26/78	12	0.09	0.01
1319 GMT	30	0.09	0.01
	53	0.08	0.02
27 30.4N	62	0.08	0.02
128 09.9W	71	0.10	0.02
	85	0.12	0.05
	98	0.17	0.07
	121	0.13	0.20
	139	0.16	0.17
	162	0.06	0.08
	189	0.01	0.03
STATION 93200	2	0.08	0.03
06/26/78	12	0.10	0.01
1908 GMT	30	0.09	0.02
	54	0.11	0.02
27 10.4N	63	0.12	0.02
128 48.7W	72	0.13	0.04
	86	0.14	0.04
	100	0.18	0.06
	123	0.27	0.13
	143	0.20	0.04
	165	0.14	0.05
	193	0.03	0.03

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	DEPTH	CHL A	PHAEO
STATION 95031	1	0.01	0.35
06/21/78	10	0.26	0.08
2056 GMT	20	1.03	0.43
	29	1.34	0.83
32 30.1N	39	0.70	0.24
117 24.2W	49	0.51	0.21
	58	0.30	0.19
	68	0.24	0.25
	77	0.08	0.15
	87	0.03	0.08
	96	0.01	0.07
	106	0.03	0.22
STATION 97030	0	3.97	0.07
06/23/78	10	3.52	1.01
0045 GMT	20	2.31	0.74
	30	0.56	0.38
32 16.0N			
117 07.0W			
STATION 97035	1	0.20	0.08
06/23/78	11	0.19	0.09
0543 GMT	31	1.12	0.82
	41	1.42	1.01
32 05.5N	56	0.34	0.35
117 27.5W	71	0.13	0.11
	96	0.04	0.08
	116	0.02	0.09
	136	0.03	0.08
	156	0.02	0.09
	186	0.01	0.10
	221	0.02	0.10
STATION 97040	0	0.18	0.08
06/23/78	9	0.27	0.09
0947 GMT	29	1.27	0.58
	33	0.77	0.46
31 56.0N	53	0.29	0.17
117 48.0W	67	0.17	0.19
	91	0.05	0.09
	111	0.03	0.08
	131	0.04	0.10
	150	0.02	0.12
	180	0.04	0.08
	214	0.02	0.07
STATION 97050	1	0.23	0.17
06/23/78	11	0.36	0.09
1720 GMT	31	1.09	0.57
	41	0.51	0.35
31 36.0N	55	0.31	0.24
118 30.5W	70	0.28	0.36
	95	0.07	0.10
	115	0.04	0.08
	135	0.04	0.08
	155	0.02	0.10
	188	0.03	0.07
	219	0.02	0.07
STATION 97060	2	0.14	0.04
06/24/78	12	0.16	0.04
0038 GMT	32	0.18	0.07
	61	0.31	0.28
31 15.5N	70	0.74	0.20
119 10.0W	84	0.28	0.30
	99	0.16	0.18
	113	0.12	0.16
	136	0.07	0.16
	155	0.04	0.10
	182	0.02	0.10
	209	0.01	0.07
STATION 97070	1	0.08	0.04
06/24/78	10	0.08	0.05
0833 GMT	29	0.09	0.06
	56	0.22	0.07
30 55.0N	65	0.64	0.60
119 50.5W	79	0.55	0.57
	92	0.38	0.38
	106	0.18	0.24
	128	0.07	0.10
	146	0.03	0.06
	172	0.01	0.02
	198	0.01	0.02
STATION 97080	2	0.09	0.04
06/24/78	12	0.08	0.03
1501 GMT	31	0.10	0.02
	60	0.15	0.05
30 35.0N	70	0.22	0.08
120 31.0W	74	0.22	0.11
	87	0.24	0.19
	100	0.38	0.40
	122	0.17	0.24
	140	0.11	0.07
	166	0.04	0.04
	193	0.02	0.01
STATION 97090	2	0.10	0.02
06/24/78	11	0.10	0.02
2128 GMT	36	0.19	0.04
	64	0.13	0.06
30 15.5N	73	0.15	0.07
121 10.5W	92	0.24	0.13
	107	0.37	0.36
	121	0.22	0.33
	151	0.09	0.10
	170	0.04	0.04
	199	0.01	0.02
	233	0.01	0.01

	DEPTH	CHL A	PHAEO
STATION 97100	1	0.09	0.01
06/25/78	11	0.07	0.01
0352 GMT	35	0.07	0.01
	65	0.10	0.03
29 55.0N	75	0.11	0.04
121 50.0W	94	0.13	0.07
	109	0.18	0.12
	124	0.24	0.27
	154	0.13	0.15
	173	0.06	0.09
	203	0.04	0.02
	237	0.01	0.01
STATION 100030	0	12.80	5.52
06/27/78	10	1.59	0.60
2001 GMT	25	1.41	0.68
	35	0.64	0.48
31 40.5N	45	0.25	0.35
116 46.5W	60	0.18	0.49
	75	0.13	0.24
	100	0.12	0.17
STATION 100035	0	0.20	0.10
06/27/78	10	0.27	0.13
1413 GMT	29	0.84	0.89
	39	0.61	1.04
31 30.5N	54	0.27	0.43
117 07.0W	69	0.23	0.38
	94	0.05	0.11
	114	0.02	0.09
	133	0.03	0.09
	153	0.02	0.12
	183	0.01	0.05
	218	0.02	0.02
STATION 100040	0	0.17	0.05
06/27/78	10	0.17	0.05
0947 GMT	30	0.31	0.16
	60	0.32	0.42
31 21.0N	70	0.29	0.33
117 27.0W	85	0.12	0.20
	100	0.06	0.11
	115	0.02	0.08
	140	0.02	0.06
	160	0.02	0.04
	188	0.01	0.05
	216	0.01	0.06
STATION 100050	0	0.37	0.09
06/27/78	11	0.28	0.08
0052 GMT	31	1.03	0.29
	41	1.05	0.47
31 00.5N	56	0.41	0.24
118 07.0W	71	0.53	0.29
	96	0.13	0.15
	116	0.11	0.19
	136	0.04	0.07
	156	0.02	0.07
	185	0.04	0.04
	217	0.02	0.04
STATION 100060	1	0.10	0.01
06/26/78	10	0.12	0.00
1854 GMT	33	0.10	0.02
	55	0.15	0.01
30 40.5N	54	0.19	0.04
118 47.5W	65	0.25	0.10
	92	0.37	0.38
	112	0.13	0.15
	131	0.06	0.07
	151	0.04	0.02
	180	0.00	0.03
	214	0.00	0.03
STATION 100070	2	0.11	0.02
06/26/78	11	0.10	0.03
1145 GMT	30	0.13	0.01
	60	0.13	0.05
30 20.5N	70	0.20	0.06
119 27.5W	84	0.39	0.30
	99	0.33	0.38
	113	0.16	0.19
	137	0.06	0.13
	157	0.04	0.10
	185	0.03	0.00
STATION 100080	2	0.09	0.03
06/26/78	12	0.09	0.01
0137 GMT	38	0.10	0.02
	68	0.22	0.09
30 01.0N	78	0.31	0.18
120 06.9W	98	0.38	0.44
	113	0.28	0.31
	129	0.13	0.17
	159	0.04	0.03
	179	0.02	0.01
	209	0.01	0.01
	243	0.01	0.02
STATION 100090	1	0.10	0.03
06/25/78	8	0.10	0.02
1843 GMT	28	0.09	0.03
	56	0.12	0.03
29 40.5N	66	0.13	0.04
120 47.0W	87	0.16	0.07
	94	0.25	0.18
	106	0.36	0.28
	132	0.15	0.20
	150	0.07	0.11
	178	0.03	0.03
	206	0.00	0.01
STATION 100100	0	0.08	0.01
06/25/78	9	0.08	0.03
0956 GMT	28	0.10	0.01
	56	0.11	0.01
29 20.0N	65	0.10	0.04
121 26.4W	79	0.12	0.05
	92	0.17	0.08
	106	0.20	0.14
	128	0.33	0.32
	145	0.18	0.22
	171	0.07	0.13
	197	0.01	0.06
STATION 103030	0	25.47	8.74
06/28/78	10	11.03	10.21
0406 GMT	20	0.84	0.73
	30	0.67	0.50
31 06.0N	49	0.96	1.27
116 24.5W			
STATION 103035	0	0.77	0.49
06/28/78	7	1.17	0.52
0719 GMT	23	0.53	0.74
	31	0.54	0.99
30 56.0N	55	0.46	0.54
116 45.0W	74	0.13	0.25
	90	0.07	0.11
	105	0.04	0.11
	123	0.09	0.14
	143	0.02	0.08
	170	0.02	0.08
STATION 103040	0	0.16	0.05
06/28/78	9	0.16	0.06
1133 GMT	28	1.27	0.60
	38	0.89	0.44
30 46.0N	52	0.22	0.22
117 04.4W	66	0.18	0.18
	90	0.04	0.08
	114	0.01	0.04
	129	0.04	0.09
	148	0.01	0.03
	177	0.01	0.04
	211	0.01	0.03
STATION 103050	1	0.28	0.03
06/28/78	11	0.37	0.04
2022 GMT	31	0.36	0.17
	41	0.80	0.45
30 26.0N	55	1.18	0.43
117 44.5W	70	0.79	0.55
	95	0.15	0.23
	114	0.09	0.11
	134	0.04	0.06
	153	0.05	0.06
	182	0.03	0.04
	216	0.03	0.04
STATION 103060	0	0.09	0.03
06/29/78	10	0.10	0.04
0158 GMT	30	0.17	0.05
	40	0.23	0.08
30 06.0N	55	0.55	0.29
118 25.0W	73	0.35	0.46
	94	0.20	0.26
	114	0.09	0.19
	134	0.04	0.09
	153	0.01	0.05
	183	0.01	0.05
	217	0.00	0.04
STATION 103070	0	0.08	0.04
06/29/78	10	0.09	0.02
0829 GMT	30	0.10	0.04
	59	0.13	0.05
29 46.4N	69	0.21	0.07
119 04.8W	84	0.28	0.27
	99	0.32	0.31
	113	0.18	0.25
	138	0.06	0.10
	157	0.03	0.04
	186	0.01	0.02
	216	0.01	0.02
STATION 103080	1	0.06	0.04
06/29/78	11	0.08	0.04
1400 GMT	31	0.08	0.04
	61	0.15	0.05
29 26.5N	71	0.16	0.05
119 43.0W	86	0.18	0.09
	100	0.24	0.21
	119	0.19	0.32
	140	0.12	0.21
	160	0.04	0.07
	189	0.01	0.03
	219	0.00	0.03
STATION 103090	0	0.10	0.02
06/29/78	10	0.11	0.03
1949 GMT	30	0.10	0.04
	60	0.16	0.06
29 06.0N	70	0.19	0.06
120 23.5W	85	0.28	0.16
	99	0.27	0.24
	114	0.24	0.35
	139	0.11	0.20
	189	0.02	0.04
	219	0.00	0.01
STATION 107032	1	1.11	0.86
07/01/78	11	1.80	1.72
1711 GMT	31	0.08	0.15
	45	0.06	0.10
30 25.8N	60	0.04	0.12
116 11.0W	75	0.02	0.15
	89	0.03	0.14
	109	0.01	0.18
	133	0.02	0.14
	162	0.08	0.21
	196	0.08	0.12
	230	0.01	0.06
STATION 107035	0	0.14	0.03
07/01/78	10	0.13	0.06
1415 GMT	30	0.33	0.16
	39	0.45	0.38
30 21.5N	54	0.32	0.39
116 22.5W	93	0.05	0.13
	113	0.02	0.06
	132	0.01	0.09
	152	0.01	0.07
	181	0.00	0.07
	215	0.01	0.04
STATION 107040	0	0.18	0.07
07/01/78	6	0.22	0.10
0811 GMT	20	0.48	0.39
	27	0.64	0.30
30 11.0N	37	0.24	0.11
116 42.0W	46	0.48	0.38
	62	0.38	0.23
	74	0.29	0.17
	85	0.15	0.19
	97	0.04	0.13
	113	0.03	0.11
	132	0.01	0.07

	DEPTH	CHL A	PHAEO
STATION 107050	0	0.13	0.05
07/01/78	8	0.13	0.04
0059 GMT	26	0.13	0.05
	34	0.20	0.11
29 50.5N	47	0.42	0.33
117 22.0W	60	0.44	0.64
	81	0.18	0.39
	97	0.09	0.15
	114	0.03	0.09
	130	0.03	0.05
	155	0.01	0.04
	183	0.00	0.05
STATION 107060	0	0.09	0.02
06/30/78	10	0.09	0.02
1855 GMT	30	0.13	0.04
	40	0.13	0.04
29 32.0N	55	0.15	0.06
118 01.5W	70	0.28	0.19
	94	0.35	0.53
	114	0.18	0.25
	134	0.06	0.11
	154	0.02	0.06
	183	0.00	0.04
	217	0.00	0.04
STATION 107070	0	0.06	0.06
06/30/78	9	0.08	0.04
1306 GMT	27	0.08	0.03
	56	0.11	0.07
29 11.0N	65	0.13	0.04
118 41.0W	79	0.16	0.11
	93	0.28	0.26
	107	0.24	0.41
	130	0.10	0.15
	148	0.05	0.10
	175	0.01	0.04
	203	0.00	0.02
STATION 107080	1	0.11	0.06
06/30/78	11	0.13	0.04
0650 GMT	31	0.13	0.06
	61	0.18	0.08
28 51.5N	70	0.24	0.13
119 20.0W	85	0.34	0.20
	100	0.33	0.51
	115	0.19	0.54
	139	0.10	0.21
	159	0.04	0.09
	188	0.00	0.04
	217	0.00	0.04
STATION 107090	0	0.09	0.02
06/30/78	10	0.10	0.04
0110 GMT	31	0.12	0.03
	62	0.15	0.03
28 32.0N	72	0.14	0.05
119 59.0W	87	0.20	0.11
	102	0.37	0.38
	117	0.26	0.24
	142	0.12	0.14
	162	0.03	0.07
	191	0.00	0.04
	220	0.00	0.02
STATION 110035	0	2.69	0.71
07/02/78	7	2.16	0.25
0238 GMT	24	2.87	0.88
	32	0.36	0.42
29 45.9N	45	0.29	0.38
116 00.0W	57	0.13	0.31
	78	0.04	0.09
	95	0.05	0.05
	112	0.02	0.06
	129	0.01	0.06
	155	0.02	0.06
	186	0.03	0.04
STATION 110040	0	0.24	0.14
07/02/78	9	0.28	0.16
0629 GMT	28	0.96	0.07
	38	0.42	0.32
29 36.5N	52	0.22	0.27
116 19.5W	66	0.13	0.25
	90	0.04	0.19
	108	0.03	0.09
	131	0.03	0.09
	148	0.01	0.10
	176	0.01	0.06
	207	0.00	0.04
STATION 110050	0	0.10	0.02
07/02/78	8	0.06	0.07
1246 GMT	27	0.08	0.04
	53	0.21	0.13
29 16.5N	62	0.24	0.11
116 59.0W	75	0.28	0.38
	88	0.19	0.27
	101	0.18	0.35
	123	0.07	0.16
	140	0.03	0.08
	166	0.02	0.06
	191	0.01	0.04
STATION 110060	0	0.24	0.03
07/02/78	10	0.21	0.04
1835 GMT	32	0.19	0.05
	59	0.27	0.20
28 56.5N	67	0.42	0.29
117 39.0W	84	0.25	0.41
	97	0.16	0.30
	110	0.10	0.17
	134	0.04	0.07
	150	0.03	0.03
	174	0.02	0.02
	202	0.01	0.02
STATION 110070	0	0.12	0.03
07/03/78	8	0.09	0.05
0007 GMT	25	0.08	0.01
	33	0.14	0.01
28 36.5N	46	0.17	0.05
118 18.0W	58	0.18	0.06
	79	0.46	0.12
	95	0.38	0.30
	111	0.25	0.37
	128	0.10	0.22
	152	0.03	0.14
	180	0.02	0.05
STATION 110080	0	0.08	0.03
07/03/78	9	0.07	0.04
0614 GMT	27	0.07	0.03
	53	0.10	0.05
28 16.5N	62	0.17	0.06
118 57.5W	75	0.25	0.06
	88	0.39	0.36
	101	0.34	0.55
	123	0.11	0.19
	141	0.04	0.10
	167	0.01	0.04
	193	0.01	0.03
STATION 110090	0	0.09	0.04
07/03/78	9	0.08	0.06
1206 GMT	34	0.10	0.03
	63	0.11	0.05
27 56.5N	73	0.15	0.04
119 35.0W	92	0.22	0.22
	106	0.33	0.33
	121	0.21	0.25
	150	0.06	0.10
	169	0.04	0.03
	198	0.01	0.03
	232	0.01	0.01
STATION 113035	0	0.32	0.61
07/05/78	10	0.42	0.18
0443 GMT	30	0.42	0.15
	40	0.96	0.54
29 11.5N	55	0.84	0.92
115 38.0W	69	0.20	0.29
	93	0.07	0.16
	112	0.07	0.24
	131	0.04	0.17
	149	0.03	0.20
	177	0.04	0.12
	209	0.04	0.13
STATION 113040	1	0.33	0.08
07/05/78	11	0.33	0.11
0126 GMT	31	0.48	0.31
	41	0.67	0.29
29 02.0N	56	2.46	1.63
115 56.9W	71	1.20	1.07
	96	0.16	0.15
	116	0.04	0.06
	136	0.02	0.05
	156	0.02	0.03
	186	0.01	0.03
	221	0.00	0.07
STATION 113050	0	0.10	0.04
07/04/78	9	0.12	0.03
1837 GMT	27	0.14	0.04
	54	0.18	0.12
28 41.5N	63	0.27	0.17
116 36.5W	77	0.48	0.57
	91	0.22	0.25
	104	0.09	0.15
	127	0.02	0.03
	145	0.00	0.03
	173	0.00	0.04
	200	0.00	0.02
STATION 113060	1	0.10	0.02
07/04/78	9	0.09	0.03
1212 GMT	27	0.08	0.03
	47	0.17	0.08
28 22.0N	54	0.24	0.19
117 15.9W	66	0.38	0.35
	78	0.48	0.52
	90	0.38	0.49
	111	0.16	0.20
	128	0.06	0.16
	153	0.04	0.05
	179	0.02	0.02
STATION 113070	0	0.08	0.02
07/04/78	8	0.07	0.01
0549 GMT	28	0.08	0.02
	38	0.08	0.03
28 02.0N	52	0.11	0.05
117 55.8W	66	0.18	0.08
	90	0.30	0.43
	109	0.18	0.27
	128	0.09	0.16
	146	0.03	0.06
	174	0.01	0.04
	206	0.00	0.03
STATION 113080	0	0.08	0.02
07/03/78	8	0.08	0.02
2346 GMT	31	0.10	-0.00
	59	0.13	0.05
27 42.0N	68	0.17	0.09
118 33.4W	86	0.32	0.27
	100	0.28	0.31
	114	0.16	0.27
	141	0.07	0.15
	159	0.02	0.05
	186	0.01	0.06
	217	0.01	0.05
STATION 113090	0	0.07	0.03
07/03/78	9	0.08	0.02
1738 GMT	28	0.07	0.03
	57	0.10	0.04
27 22.0N	67	0.15	0.05
119 12.0W	81	0.21	0.12
	96	0.28	0.51
	110	0.28	0.35
	134	0.07	0.13
	153	0.05	0.08
	182	0.01	0.03
	211	0.00	0.03
STATION 117030	0	0.74	0.16
07/10/78	10	0.96	0.19
0100 GMT	19	1.33	0.37
	29	0.77	0.65
28 48.0N	48	0.17	0.38
114 56.5W	73	0.04	0.24
STATION 117035	0	0.51	0.26
07/10/78	10	0.42	0.36
0435 GMT	30	0.35	0.61
	40	0.19	0.62
28 38.0N	55	0.11	0.35
115 16.0W	70	0.10	0.46
	85	0.04	0.19
	105	0.04	0.18
	130	0.05	0.27
	155	0.03	0.18

	DEPTH	CHL A	PHAEO
STATION 117040	0	3.09	1.20
07/10/78	10	5.97	1.71
1031 GMT	29	1.04	1.52
	39	0.89	0.98
28 28.0N	53	0.86	1.24
115 35.5W	68	0.52	0.42
	92	0.15	0.33
	110	0.13	0.37
	129	0.06	0.23
	148	0.05	0.23
	176	0.04	0.15
	208	0.02	0.17
STATION 117050	1	0.10	0.05
07/10/78	11	0.12	0.07
1652 GMT	31	0.19	0.05
	42	0.20	0.04
28 08.0N	57	0.37	0.07
116 15.0W	72	0.20	0.18
	97	0.06	0.13
	117	0.02	0.04
	137	0.02	0.06
	157	0.02	0.05
	187	0.01	0.04
	222	0.01	0.05
STATION 117060	1	0.13	0.01
07/10/78	11	0.10	0.03
2210 GMT	30	0.11	0.05
	40	0.15	0.03
27 48.0N	55	0.27	0.13
116 53.0W	69	0.43	0.33
	93	0.13	0.21
	112	0.10	0.19
	131	0.03	0.07
	150	0.02	0.02
	178	0.01	0.02
	211	0.00	0.02
STATION 117070	0	0.07	0.03
07/11/78	10	0.08	0.02
0412 GMT	30	0.08	0.05
	40	0.08	0.04
27 27.5N	55	0.15	0.03
117 32.5W	70	0.19	0.08
	94	0.30	0.26
	114	0.19	0.25
	134	0.06	0.15
	153	0.03	0.07
	182	0.00	0.02
	216	0.01	0.02
STATION 117080	1	0.07	0.01
07/11/78	11	0.07	0.01
0920 GMT	31	0.07	0.04
	41	0.07	0.04
27 07.9N	56	0.15	0.05
118 10.5W	71	0.19	0.09
	96	0.29	0.22
	116	0.11	0.11
	136	0.05	0.07
	156	0.02	0.04
	185	0.01	0.02
	220	0.01	0.03
STATION 118039	0	0.26	0.07
07/10/78	10	0.45	0.11
0743 GMT	30	1.73	0.68
	45	1.02	0.58
28 18.5N	55	0.61	0.53
115 23.7W	71	0.20	0.23
	86	0.20	0.29
	106	0.09	0.27
	131	0.02	0.12
	152	0.02	0.12
	207	0.00	0.00
STATION 119033	0	0.72	0.26
07/09/78	10	1.24	0.49
2106 GMT	20	1.58	0.47
	29	1.39	0.51
28 19.0N	50	0.34	0.30
114 53.0W	75	0.06	0.11
STATION 120025	0	0.33	0.13
07/09/78	10	0.33	0.15
1244 GMT	20	0.45	0.30
	30	0.51	0.37
28 22.5N	50	0.11	0.35
114 15.0W			
STATION 120030	0	0.90	0.21
07/09/78	10	0.77	0.30
1522 GMT	20	0.93	0.72
	30	0.54	0.31
28 13.0N	50	0.27	0.44
114 34.0W	75	0.09	0.19
STATION 120035	0	0.36	0.10
07/09/78	10	0.32	0.15
1827 GMT	20	0.77	0.42
	30	0.80	0.42
28 03.0N	50	0.41	0.44
114 54.0W			
STATION 120045	1	0.42	0.22
07/12/78	10	0.58	0.31
1250 GMT	26	1.96	0.90
	34	1.30	0.59
27 43.0N	49	0.70	0.97
115 33.0W	58	0.11	0.38
	82	0.09	0.14
	88	0.08	0.11
	114	0.06	0.13
	130	0.04	0.17
	150	0.04	0.14
	180	0.03	0.10
STATION 120050	0	0.12	0.06
07/12/78	9	0.12	0.05
0900 GMT	27	0.17	0.07
	37	0.18	0.09
27 33.0N	50	0.24	0.18
115 52.5W	59	0.63	0.59
	87	0.34	0.39
	105	0.35	0.29
	123	0.09	0.10
	141	0.04	0.06
	168	0.03	0.08
	200	0.03	0.08
STATION 120060	0	0.09	0.03
07/12/78	10	0.08	0.05
0248 GMT	29	0.12	0.04
	38	0.16	0.03
27 13.0N	57	0.36	0.18
116 30.5W	67	0.56	0.39
	95	0.15	0.27
	114	0.10	0.15
	133	0.04	0.10
	152	0.02	0.04
	181	0.01	0.02
	211	0.01	0.01
STATION 120070	0	0.07	0.02
07/11/78	10	0.07	0.02
2112 GMT	29	0.07	0.03
	39	0.08	0.03
26 53.0N	54	0.08	0.03
117 10.0W	68	0.11	0.04
	92	0.15	0.08
	111	0.30	0.43
	131	0.19	0.27
	150	0.08	0.14
	179	0.01	0.03
	212	0.02	0.01
STATION 120080	1	0.07	0.02
07/11/78	11	0.07	0.01
1514 GMT	31	0.07	0.01
	41	0.08	0.04
26 32.5N	56	0.09	0.06
117 49.0W	71	0.16	0.06
	96	0.22	0.35
	116	0.07	0.26
	136	0.02	0.14
	156	0.01	0.05
	186	0.00	0.03
	221	0.00	0.01
STATION 123042	0	0.25	0.11
07/13/78	10	0.24	0.11
0303 GMT	29	0.37	0.17
	38	0.51	0.47
27 14.0N	57	0.45	0.49
114 59.0W	67	0.20	0.27
	95	0.03	0.10
	115	0.02	0.07
	134	0.02	0.05
	154	0.01	0.06
	173	0.01	0.04
	212	0.00	0.04
STATION 123050	0	0.22	0.06
07/13/78	9	0.21	0.08
0800 GMT	26	0.31	0.10
	35	1.81	0.77
26 58.0N	48	1.60	0.80
115 31.0W	61	0.28	0.36
	83	0.08	0.08
	100	0.02	0.05
	117	0.01	0.04
	133	0.02	0.04
	159	0.01	0.06
	188	0.03	0.07
STATION 123060	1	0.10	0.02
07/13/78	11	0.08	0.05
1306 GMT	30	0.12	0.03
	60	0.25	0.11
26 38.5N	69	0.20	0.18
116 09.0W	87	0.29	0.30
	98	0.20	0.32
	116	0.11	0.42
	136	0.10	0.16
	155	0.02	0.04
	183	0.01	0.02
	212	0.00	0.02
STATION 127034	1	0.40	0.20
07/14/78	11	0.51	0.36
1020 GMT	21	1.14	0.41
	30	1.77	0.73
26 55.0N	50	0.77	0.89
114 06.5W	74	0.22	0.44
STATION 127040	0	0.26	0.11
07/14/78	10	0.23	0.23
0632 GMT	29	1.00	0.60
	39	0.57	0.87
26 43.5N	54	0.77	0.35
114 29.0W	68	0.20	0.33
	93	0.04	0.31
	112	0.04	0.09
	132	0.04	0.18
	151	0.06	0.17
	181	0.04	0.08
	215	0.01	0.05
STATION 127050	1	0.07	0.00
07/14/78	11	0.07	0.01
0058 GMT	31	0.21	0.02
	41	0.20	0.08
26 23.0N	60	0.20	0.14
115 08.0W	71	0.35	0.27
	100	0.10	0.15
	120	0.03	0.14
	140	0.03	0.04
	159	0.01	0.03
	189	0.01	0.02
	220	0.01	0.02

	DEPTH	CHL A	PHAEO
STATION 127060	0	0.07	0.01
07/13/78	10	0.07	0.01
1849 GMT	30	0.07	0.04
	39	0.08	0.03
26 03.5N	54	0.07	0.04
115 46.5W	69	0.09	0.06
	93	0.38	0.44
	113	0.21	0.38
	132	0.09	0.17
	152	0.02	0.03
	181	0.02	0.02
	215	0.00	0.03
STATION 130030	0	0.44	0.10
07/14/78	10	0.48	0.24
1910 GMT	20	3.09	0.55
	30	0.80	0.98
26 29.0N	50	0.45	0.35
113 29.0W			
STATION 130040	1	0.10	0.07
07/15/78	11	0.12	0.08
0114 GMT	31	1.47	0.20
	41	0.89	0.76
26 09.0N	59	0.80	0.53
114 07.0W	70	0.28	0.28
	98	0.01	0.11
	118	-0.01	0.20
	137	0.01	0.06
	156	0.02	0.10
	215	0.01	0.06
STATION 130050	0	0.06	0.07
07/15/78	10	0.12	0.07
0639 GMT	30	0.14	0.05
	40	0.16	0.02
25 49.0N	55	0.11	0.04
114 45.0W	70	0.16	0.07
	95	0.41	0.53
	115	0.17	0.27
	135	0.04	0.15
	155	0.03	0.02
	185	0.01	0.02
	219	0.00	0.02
STATION 130060	0	0.06	0.01
07/15/78	10	0.06	0.01
1215 GMT	30	0.07	0.01
	40	0.08	0.02
25 29.0N	59	0.10	0.06
115 24.0W	70	0.11	0.09
	99	0.19	0.76
	119	0.09	0.26
	138	0.03	0.06
	158	0.01	0.04
	188	0.01	0.02
	219	0.01	0.01
STATION 133025	0	0.24	0.12
07/16/78	10	0.30	0.15
1515 GMT	20	0.39	0.29
	30	0.73	0.80
26 04.5N	50	0.41	0.58
112 48.0W	70	0.11	0.87
STATION 133030	0	0.21	0.04
07/16/78	9	0.19	0.00
1152 GMT	29	0.35	0.10
	39	0.64	0.41
25 54.5N	54	0.54	0.50
113 07.5W	70	0.24	0.26
	86	0.12	0.19
	105	0.04	0.10
	130	0.02	0.28
	156	0.03	0.52
STATION 133040	0	0.14	0.07
07/16/78	10	0.10	0.05
0603 GMT	30	0.30	0.01
	40	0.50	0.15
25 34.5N	55	0.35	0.47
113 45.5W	70	0.09	0.17
	95	0.02	0.09
	115	-0.00	0.07
	134	0.01	0.05
	154	0.01	0.05
	184	0.00	0.04
	219	0.00	0.04
STATION 133050	1	0.08	0.00
07/16/78	11	0.08	0.00
0020 GMT	31	0.08	0.02
	41	0.09	0.04
25 14.5N	56	0.15	0.05
114 24.0W	71	0.18	0.06
	95	0.25	0.74
	119	0.11	0.25
	139	0.05	0.05
	159	0.02	0.01
	189	0.01	0.01
	220	0.01	0.01
STATION 133060	1	0.10	-0.00
07/15/78	11	0.08	0.01
1808 GMT	31	0.10	-0.00
	41	0.11	-0.01
24 54.5N	56	0.12	0.00
115 02.0W	71	0.14	0.02
	96	0.24	0.22
	116	0.23	0.48
	136	0.08	0.20
	156	0.06	0.11
	186	0.01	0.04
	221	0.01	0.01
STATION 137023	0	0.32	0.14
07/16/78	10	0.44	0.17
2243 GMT	20	0.30	0.08
	30	1.15	0.72
25 34.0N	50	0.67	0.47
112 19.0W			
STATION 137030	0	0.16	0.12
07/17/78	10	0.21	0.06
0205 GMT	29	0.37	0.09
	44	0.32	0.37
25 20.0N	54	0.25	0.29
112 46.0W	69	0.18	0.22
	85	0.13	0.19
	105	0.04	0.12
	131	0.01	0.18
	150	0.01	0.12
	185	0.00	0.11
	216	0.01	0.13
STATION 137040	0	0.08	0.01
07/17/78	10	0.10	0.03
0842 GMT	30	0.15	0.04
	39	0.21	0.08
25 00.0N	54	0.46	0.24
113 23.5W	69	0.25	0.46
	94	0.11	0.12
	114	0.04	0.15
	134	0.02	0.04
	154	0.01	0.04
	185	0.00	0.03
	220	0.00	0.03
STATION 137050	0	0.15	0.03
07/17/78	10	0.09	0.07
1413 GMT	29	0.18	0.05
	39	0.20	0.08
24 40.0N	54	0.34	0.15
114 02.0W	68	0.29	0.17
	93	0.14	0.30
	112	0.03	0.15
	131	0.01	0.07
	150	0.01	0.05
	179	0.00	0.03
	212	0.01	0.03
STATION 137060	1	0.08	0.02
07/17/78	11	0.08	0.02
1908 GMT	31	0.09	0.01
	41	0.10	0.02
24 20.0N	56	0.15	0.05
114 39.5W	71	0.23	0.12
	96	0.38	0.36
	116	0.13	0.18
	137	0.05	0.09
	157	0.02	0.03
	187	0.01	0.02
	222	0.02	0.03

Secchi Disk Observations

CalCOFI Cruise 7807

Stat #	Mo	Dy	Local Time (+8:PST)	Depth (m)	Weather	Clouds Type/Amt
60.055	7	15	0705	16	2	7 8
60.060	7	15	1043	11	1	6 7
60.065	7	15	1400	10	1	6 7
60.070	7	15	1730	8	1	6 1
63.060	7	14	1330	12	2	4 8
63.065	7	14	1000	12	2	4 8
67.050	7	12	0855	9	2	6 8
67.055	7	12	1305	9	2	4 8
67.060	7	12	1720	12	2	6 8
67.090	7	13	1205	17	1	6 7
70.060	7	11	1730	14	2	6 8
70.065	7	11	1400	15	2	6 8
70.070	7	11	1110	15	1	4 7
73.050	7	9	1255	9	2	7 8
73.053	7	9	1513	15	2	7 8
73.080	7	10	0928	22	2	6 8
73.090	7	10	1500	17	1	3 6
77.048	7	9	0800	3	4	7 8
77.065	7	8	1545	24	2	6 8
77.070	7	8	1215	24	2	6 8
80.051	7	6	1215	15	0	- 0
80.052	7	6	1340	13	1	0 2
80.055	7	6	1645	14	2	7 8
80.080	7	7	1000	12	2	6 8
80.090	7	7	1600	24	2	6 8
82.047	7	6	0730	20	1	6 4
83.070	7	4	1450	15	2	4 8
83.080	7	4	0920	13	2	6 8
87.040	7	2	0910	15	0	- 0
87.045	7	2	1340	13	0	- 0
87.070	7	3	0815	20	2	6 8
87.080	7	3	1400	14	1	6 5
90.027[6]	7	1	1615	7	1	- -
90.028	7	1	1430	6	1	7 1
90.029	7	1	1240	5	1	7 1
90.030	7	1	0935	8	2	6 8
90.031	7	1	0730	14	1	6 6
90.053	6	30	1215	8	1	0 1
90.080	6	29	1715	23	2	6 8

Stat #	Mo	Dy	Local Time (+8:PST)	Depth (m)	Weather	Clouds Type/Amt
90.090	6	29	1030	29	2	6 8
90.120	6	28	1720	21	1	6 7
90.130	6	28	1055	29	2	4 8
90.160	6	27	1730	30	1	6 4
90.170	6	27	1131	25	1	6 4
90.200	6	26	1700	18	2	6 8
93.035	6	21	1135	15	0	- 0
93.055	6	22	1254	11	1	1 4
93.060	6	22	1715	12	1	3 1
93.090	6	23	1335	20	1	4 7
93.120	6	24	0815	18	1	6 6
93.130	6	24	1440	16	1	2 1
93.160	6	25	1020	21	1	8 3
93.170	6	25	1630	20	1	8 5
93.200	6	26	1040	18	2	6 8
97.029	6	22	1535	7	1	1 1
97.030	6	22	1654	5	1	1 1
97.050	6	23	0941	11	1	1 7
97.055	6	23	1258	14	1	1 6
97.060	6	23	1607	21	1	1 6
97.080	6	24	0815	21	1	1 1
97.090	6	24	1253	18	1	3 2
100.029	6	27	1345	13	0	- 0
100.030	6	27	1148	12	0	- 0
100.035	6	27	0900	14	1	7 7
100.050	6	26	1608	10	2	7 8
100.060	6	26	1015	17	1	7 7
100.080	6	25	1656	12	0	- 0
100.090	6	25	1018	21	0	- 0
103.045	6	28	0752	21	-	- -
103.050	6	28	1154	20	1	1 6
103.060	6	28	1728	24	2	6 8
103.080	6	29	0720	23	2	6 8
103.090	6	29	1120	25	2	7 8
107.031	7	1	1128	10	2	6 8
107.032	7	1	0925	11	2	6 8
107.050	6	30	1630	16	1	6 6
107.060	6	30	1035	18	1	6 6
107.090	6	29	1645	23	2	7 8
110.032[4]	7	1	1625	7	0	- 0
110.060	7	2	1000	15	0	- 0
110.070	7	2	1630	16	1	7 3
113.040	7	4	1700	12	1	7 4
113.045	7	4	1358	14	1	8 3
113.050	7	4	1010	18	1	7 5
113.080	7	3	1520	15	1	6 4

Stat #	Mo	Dy	Local Time (+8:PST)	Depth (m)	Weather	Clouds Type/Amt
113.090	7	3	0910	21	1	6 7
117.030	7	9	1645	13	1	0 1
117.050	7	10	0815	21	2	7 8
117.060	7	10	1330	28	1	7 7
119.033	7	9	1250	15	1	7 5
120.030	7	9	0725	13	2	7 8
120.035	7	9	1025	15	2	7 8
120.040	7	12	0928	11	1	8 4
120.070	7	11	1241	26	1	7 7
120.080	7	11	0735	36	1	7 6
123.036	7	12	1518	15	0	- 0
123.037	7	12	1812	17	1	0 1
127.050	7	13	1630	27	1	7 1
127.060	7	13	1025	30	1	7 1
130.028	7	14	0930	13	1	3 1
130.030	7	14	1100	14	1	3 2
130.035	7	14	1404	13	1	1 2
130.040	7	14	1647	20	1	1 2
133.023	7	16	0835	17	1	3 5
133.025	7	16	0703	21	1	3 3
133.050	7	15	1545	29	2	7 8
133.060	7	15	0945	33	1	4 7
137.022	7	16	1318	14	1	0 2
137.023	7	16	1433	13	1	0 2
137.030	7	16	1746	29	1	0 2
137.060	7	17	1044	31	1	7 4

TRITIUM DATA
CALCOFI CRUISE 7801

depth (meters)	TU ± σTU	depth (meters)	TU ± σTU	depth (meters)	TU ± σTU
Station 97040		**Station 97050**		**Station 97060**	
10	8.52 ± 0.22	10	8.46 ± 0.20	10	8.70 ± 0.24
80	8.05 ± 0.19	80	8.19 ± 0.22	80	8.02 ± 0.22
125	7.21 ± 0.17	125	7.64 ± 0.21	125	7.84 ± 0.21
175	5.30 ± 0.13	175	6.35 ± 0.18	175	6.23 ± 0.17
225	4.98 ± 0.12	225	4.72 ± 0.14	225	5.21 ± 0.15
500	0.22 ± 0.03	500	0.34 ± 0.04	500	0.19 ± 0.03

CALCOFI CRUISE 7803

Station 97040		**Station 97050**		**Station 97060**	
10	8.47 ± 0.23	10	8.13 ± 0.23	80	8.29 ± 0.25
125	7.08 ± 0.20	80	8.33 ± 0.24	125	7.72 ± 0.22
175	5.35 ± 0.15	125	7.16 ± 0.21	175	6.79 ± 0.20
225	3.40 ± 0.11	175	5.74 ± 0.17	225	5.86 ± 0.17
500	0.20 ± 0.03	225	4.94 ± 0.15	500	0.14 ± 0.03
Station 97070		**Station 97080**		**Station 97090**	
10	8.71 ± 0.25	10	8.51 ± 0.26	10	8.28 ± 0.26
125	6.70 ± 0.20	80	3.60 ± 0.27	80	10.2 ± 0.3
225	5.28 ± 0.13	125	8.22 ± 0.26	125	7.84 ± 0.25
500	0.17 ± 0.03	175	7.24 ± 0.23	175	6.73 ± 0.25
		225	5.81 ± 0.19	225	5.93 ± 0.19
		500	0.09 ± 0.04	500	0.16 ± 0.04
Station 93040		**Station 93030**		**Station 90031**	
0	8.55 ± 0.23	0	9.00 ± 0.25	0	8.19 ± 0.22

CALCOFI CRUISE 7803

depth (meters)	TU ± σTU	depth (meters)	TU ± σTU	depth (meters)	TU ± σTU
Station 90037		**Station 83043**		**Station 83051**	
0	8.45 ± 0.23	10	8.7 ± 0.4	10	8.5 ± 0.3
		50	7.6 ± 0.4	50	7.60 ± 0.27
		80	8.3 ± 0.3	80	7.42 ± 0.26
		100	8.4 ± 0.4	100	7.65 ± 0.27
		120	7.73 ± 0.26	125	6.97 ± 0.25
				150	6.94 ± 0.25
Station 83060		**Station 83070**		**Station 83080**	
10	8.54 ± 0.28	10	8.4 ± 0.3	10	8.1 ± 0.4
100	7.28 ± 0.24	70	9.1 ± 0.4	70	8.0 ± 0.3
125	7.7 ± 0.4	100	8.20 ± 0.26	100	9.0 ± 0.4
175	6.21 ± 0.14	125	6.71 ± 0.16	125	8.8 ± 0.4
500	0.22 ± 0.03	175	6.11 ± 0.20	175	5.19 ± 0.16
		500	0.19 ± 0.02	500	0.22 ± 0.03
Station 83090		**Station 77051**		**Station 77060**	
10	8.2 ± 0.4	10	8.1 ± 0.3	10	9.7 ± 0.4
70	8.1 ± 0.4	60	7.4 ± 0.3	70	7.2 ± 0.4
100	7.7 ± 0.4	100	6.8 ± 0.3	125	6.6 ± 0.3
125	8.1 ± 0.4	125	5.65 ± 0.26	150	5.57 ± 0.15
175	7.49 ± 0.17	175	4.99 ± 0.15	200	4.69 ± 0.13
500	0.19 ± 0.03	200	3.74 ± 0.12	500	0.44 ± 0.06

CALCOFI CRUISE 7803

depth (meters)	TU ± σTU	depth (meters)	TU ± σTU	depth (meters)	TU ± σTU
Station 77080		**Station 77090**		**Station 63052**	
10	9.1 ± 0.3	10	8.9 ± 0.3	10	8.6 ± 0.5
70	8.1 ± 0.3	70	8.5 ± 0.3	50	8.2 ± 0.5
125	8.0 ± 0.4	100	7.5 ± 0.3	100	8.1 ± 0.3
150	6.80 ± 0.19	125	6.60 ± 0.21	125	7.4 ± 0.3
200	6.49 ± 0.19	200	4.71 ± 0.11	175	5.11 ± 0.14
		500	0.16 ± 0.04	200	4.15 ± 0.13
Station 63060		**Station 63070**			
10	8.3 ± 0.3	10	9.4 ± 0.3		
80	8.7 ± 0.5	80	7.5 ± 0.4		
125	7.5 ± 0.4	125	8.0 ± 0.4		
175	5.4 ± 0.15	175	5.58 ± 0.17		
200	5.04 ± 0.13	500	0.33 ± 0.03		
500	0.20 ± 0.06				

CALCOFI CRUISE 7804

Station 93040		**Station 93050**		**Station 93060**	
10	9.4 ± 0.4	10	9.7 ± 0.4	10	8.93 ± 0.28
80	7.6 ± 0.3	80	9.1 ± 0.4	80	7.96 ± 0.22
125	7.5 ± 0.3	175	4.97 ± 0.13	125	7.04 ± 0.20
175	4.75 ± 0.29	225	3.99 ± 0.13	175	6.42 ± 0.18
225	2.93 ± 0.08	500	0.12 ± 0.04	225	4.94 ± 0.14
				500	0.14 ± 0.03

CALCOFI CRUISE 7804

depth (meters)	TU ± σTU	depth (meters)	TU ± σTU	depth (meters)	TU ± σTU
Station 93070		**Station 93080**		**Station 93090**	
10	9.1 ± 0.3	10	9.0 ± 0.3	10	9.2 ± 0.4
80	8.5 ± 0.3	80	8.4 ± 0.3	80	9.0 ± 0.4
125	8.4 ± 0.3	125	8.12 ± 0.22	125	7.67 ± 0.26
175	7.5 ± 0.3	175	7.00 ± 0.20	175	6.4 ± 0.3
225	4.88 ± 0.15	225	6.20 ± 0.18	225	4.51 ± 0.15
500	0.22 ± 0.06	500	0.17 ± 0.06	500	0.24 ± 0.06
Station 93140		**Station 93200**		**Station 83070**	
10	9.2 ± 0.4	10	9.2 ± 0.4	10	9.00 ± 0.22
80	8.7 ± 0.4	80	9.8 ± 0.4	80	6.75 ± 0.18
125	9.06 ± 0.29	125	8.31 ± 0.17	125	7.82 ± 0.20
175	8.4 ± 0.4	175	7.87 ± 0.21	175	5.60 ± 0.16
225	6.39 ± 0.20	225	7.34 ± 0.20	225	5.19 ± 0.16
500	0.24 ± 0.03	500	0.27 ± 0.03	500	0.32 ± 0.08
Station 83060		**Station 83051**		**Station 83042**	
10	7.9 ± 0.3	10	8.04 ± 0.21	10	9.36 ± 0.22
80	7.19 ± 0.29	50	7.30 ± 0.19	50	8.41 ± 0.20
125	6.85 ± 0.18	70	7.45 ± 0.19	80	6.98 ± 0.18
175	5.00 ± 0.14	100	6.87 ± 0.16	100	7.47 ± 0.19
200	4.03 ± 0.13	135	6.04 ± 0.15	120	5.42 ± 0.18
500	0.21 ± 0.03			130	5.64 ± 0.16

CALCOFI CRUISE 7804

depth (meters)	TU ± σTU	depth (meters)	TU ± σTU	depth (meters)	TU ± σTU
Station 77070		**Station 77060**		**Station 77050**	
10	8.35 ± 0.19	10	8.3 ± 0.3	10	7.8 ± 0.3
70	8.11 ± 0.26	70	7.4 ± 0.3	60	7.5 ± 0.3
125	7.34 ± 0.23	125	6.51 ± 0.22	100	6.38 ± 0.22
150	6.86 ± 0.18	150	5.99 ± 0.19	125	6.15 ± 0.21
200	5.07 ± 0.14	200	4.69 ± 0.15	175	4.71 ± 0.16
500	0.26 ± 0.14	500	0.48 ± 0.06	200	4.25 ± 0.15
Station 63060		**Station 63055**			
10	8.0 ± 0.4	10	8.3 ± 0.3		
80	6.51 ± 0.18	50	7.1 ± 0.3		
125	5.65 ± 0.15	100	6.16 ± 0.21		
175	4.87 ± 0.16	125	5.67 ± 0.18		
200	4.17 ± 0.14	175	5.6 ± 0.4		
500	0.33 ± 0.04	200	4.20 ± 0.14		

CALCOFI CRUISE 7808

Station 93030		**Station 93040**		**Station 93050**	
0	7.5 ± 0.4	0	8.0 ± 0.4	10	8.7 ± 0.3
		10	7.5 ± 0.4	85	6.35 ± 0.29
		80	6.5 ± 0.4	130	5.3 ± 0.3
		125	4.9 ± 0.4	235	1.87 ± 0.09
		225	3.08 ± 0.10	340	0.42 ± 0.06
		325	0.90 ± 0.06	525	0.31 ± 0.06
		500	0.31 ± 0.06		

CALCOFI CRUISE 7808

depth (meters)	TU ± σTU	depth (meters)	TU ± σTU	depth (meters)	TU ± σTU
Station 93060		**Station 93070**		**Station 93080**	
10	7.3 ± 0.3	10	8.5 ± 0.4	10	8.0 ± 0.4
80	7.1 ± 0.3	80	7.3 ± 0.3	80	7.4 ± 0.4
125	5.4 ± 0.3	125	6.2 ± 0.4	125	6.9 ± 0.4
175	4.03 ± 0.14	175	5.2 ± 0.3	175	5.60 ± 0.19
225	2.24 ± 0.11	225	4.10 ± 0.13	225	4.40 ± 0.15
325	0.89 ± 0.08	325	1.13 ± 0.07	325	1.11 ± 0.08
500	0.08 ± 0.05	500	0.26 ± 0.06	500	0.46 ± 0.07
Station 93090		**Station 93140**		**Station 93180**	
10	8.9 ± 0.4	10	8.4 ± 0.4	10	8.62 ± 0.22
80	7.9 ± 0.4	80	8.7 ± 0.4	80	7.79 ± 0.20
125	7.8 ± 0.3	125	6.80 ± 0.20	125	7.8 ± 0.3
175	6.71 ± 0.24	225	5.98 ± 0.19	175	7.50 ± 0.19
225	6.40 ± 0.18	325	4.52 ± 0.14	225	7.01 ± 0.18
325	2.60 ± 0.09	500	0.29 ± 0.06	325	5.23 ± 0.18
500	1.14 ± 0.06			500	0.44 ± 0.07
Station 90037		**Station 90030**		**Station 83090**	
0	8.1 ± 0.4	0	8.1 ± 0.4	10	8.5 ± 0.4
				70	8.2 ± 0.4
				100	7.03 ± 0.21
				125	6.74 ± 0.20
				175	7.0 ± 0.4
				300	5.08 ± 0.15
				500	0.63 ± 0.05

CALCOFI CRUISE 7808

depth (meters)	TU ± σTU	depth (meters)	TU ± σTU	depth (meters)	TU ± σTU
Station 83080		**Station 83070**		**Station 83060**	
10	7.3 ± 0.4	10	8.3 ± 0.4	10	7.59 ± 0.18
70	6.4 ± 0.4	75	7.6 ± 0.3	70	7.46 ± 0.19
100	6.2 ± 0.4	105	5.91 ± 0.28	100	6.38 ± 0.18
125	6.2 ± 0.3	130	5.07 ± 0.29	125	6.01 ± 0.17
175	4.98 ± 0.22	185	4.13 ± 0.12	175	3.84 ± 0.12
300	2.63 ± 0.10	315	1.65 ± 0.06	300	1.07 ± 0.06
500	0.21 ± 0.05	525	0.07 ± 0.06	500	0.15 ± 0.07
Station 83051		**Station 83042**		**Station 77090**	
10	7.7 ± 0.3	10	6.8 ± 0.4	10	8.0 ± 0.3
50	7.5 ± 0.4	50	6.8 ± 0.4	70	8.2 ± 0.3
80	7.3 ± 0.4	80	5.84 ± 0.28	125	7.6 ± 0.4
100	6.3 ± 0.3	100	6.21 ± 0.21	150	6.5 ± 0.3
130	6.2 ± 0.3	130	6.0 ± 0.3	200	4.63 ± 0.15
				325	2.10 ± 0.09
				500	0.31 ± 0.06
Station 77080		**Station 77070**		**Station 77060**	
10	7.0 ± 0.4	10	7.18 ± 0.18	10	7.3 ± 0.4
70	7.7 ± 0.5	70	6.90 ± 0.20	70	6.7 ± 0.4
125	4.6 ± 0.3	125	5.05 ± 0.14	125	4.9 ± 0.3
150	4.1 ± 0.3	150	4.06 ± 0.13	150	4.49 ± 0.13
200	3.05 ± 0.13	200	3.25 ± 0.11	200	3.07 ± 0.11
325	1.42 ± 0.08	325	1.46 ± 0.08	325	0.79 ± 0.07
500	0.29 ± 0.06	500	0.33 ± 0.21	500	0.16 ± 0.07

CALCOFI CRUISE 7808

depth (meters)	TU ± σTU	depth (meters)	TU ± σTU	depth (meters)	TU ± σTU
Station 77051		**Station 63070**		**Station 63060**	
10	6.5 ± 0.4	10	8.1 ± 0.3	10	7.4 ± 0.3
60	5.9 ± 0.3	80	7.1 ± 0.4	80	5.33 ± 0.25
100	4.77 ± 0.15	125	5.7 ± 0.4	125	4.84 ± 0.29
125	5.18 ± 0.16	200	5.44 ± 0.16	200	3.97 ± 0.13
175	4.9 ± 0.4	325	1.10 ± 0.07	325	2.57 ± 0.09
200	4.0 ± 0.14	500	0.21 ± 0.06	500	0.31 ± 0.05
Station 63055		**Station 60070**			
10	7.6 ± 0.4	10	8.0 ± 0.4		
50	6.4 ± 0.4	80	7.9 ± 0.4		
100	6.4 ± 0.5	125	6.9 ± 0.3		
125	6.3 ± 0.4	200	5.26 ± 0.16		
175	5.7 ± 0.4	325	2.73 ± 0.11		
200	4.33 ± 0.15	500	0.42 ± 0.07		

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