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MAY 1991

REPORT OF ECOSYSTEM STUDIES CONDUCTED DURING THE 1990 EASTERN TROPICAL PACIFIC DOLPHIN SURVEY ON THE RESEARCH VESSEL *DAVID STARR JORDAN*

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center

NOAA Technical Memorandum NMFS

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Valerie A. Philbrick[1]
Paul C. Fiedler[1]
Stephen B. Reilly[1]
Robert L. Pitman[1]
Lisa T. Ballance[1]
Gregg G. Thomas[2]
David W. Behringer[2]

[1]Southwest Fisheries Science Center
National Marine Fisheries Service, NOAA
P.O. Box 271
La Jolla, California 92038

[2]Atlantic Oceanographic and Meteorological Laboratory
Environmental Research Laboratories, NOAA
4301 Rickenbacker Causeway
Miami, Florida 33149

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U.S. DEPARTMENT OF COMMERCE
Robert A. Mosbacher, Secretary
National Oceanic and Atmospheric Administration
John A. Knauss, Under Secretary for Oceans and Atmosphere
National Marine Fisheries Service
William W. Fox, Jr., Assistant Administrator for Fisheries

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INTRODUCTION

The National Marine Fisheries Service (NMFS) has the responsibility of assessing the status of dolphin stocks affected by the tuna purse-seine fishery in the eastern tropical Pacific (ETP). In 1990, the Southwest Fisheries Science Center (SWFSC) conducted the fifth survey of a six-year program to monitor population trends in ETP dolphin stocks (Hill *et al.* 1991). Two NOAA vessels were used, the *David Starr Jordan* (hereafter referred to as the *Jordan*) and the *McArthur*. The vessels operated concurrently in the ETP from July 28 through December 6, 1990. Approximately the same area and time period are surveyed during each year of the program. As part of this monitoring program, the SWFSC is also studying the physical and biological environment inhabited by the dolphins. This ecosystem approach will facilitate the interpretation of dolphin population trends detected by these surveys, and will provide information necessary for understanding the biological basis of ETP dolphin distribution and abundance.

The physical oceanographic research of the program is being carried out jointly with NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML), as part of their contribution to the long-term Eastern Pacific Ocean Climate Study (EPOCS) and Tropical Ocean Global Atmosphere (TOGA) programs.

This report describes the types of data collected and sampling techniques used, and summarizes data collected (including disposition of the data) for the environmental studies conducted aboard the *Jordan*. Results from the *McArthur* are available in a separate data report (Philbrick *et al.* 1991).

OBJECTIVES

The primary objective of the dolphin habitat monitoring portion of the program is to provide information about the effects of large-scale environmental variation on the estimates of trends in dolphin abundance. These environmental effects are monitored by examining the relationships between dolphin distribution and oceanographic patterns and processes. These phenomena are sampled concurrently with the dolphin sighting survey by measuring regional and local changes in chlorophyll, nutrients, oxygen, temperature, salinity, and the occurrence of seabirds and other animals. These parameters can fluctuate both seasonally and as a result of large scale ocean-atmosphere interactions such as the El Niño Southern Oscillation (ENSO) phenomena. Studying oceanographic patterns and variability in the ETP concurrently with the fauna may reveal regional or local associations.

The studies of surface and subsurface physical properties which are conducted jointly with AOML also contribute to the objectives of the EPOCS and TOGA programs, which include developing the ability to forecast ENSO occurrences.

STUDY AREA AND ITINERARY

The *Jordan* departed San Diego, California on 28 July 1990 and returned on 6 December 1990. The cruise was conducted in four legs of approximately 30 days each, with scheduled port calls in Puerto Quetzal, Guatemala; Puerto Caldera, Costa Rica; and Manzanillo, Mexico. Unscheduled stops in Cabo San Lucas, Mexico and Puerto Quetzal, Guatemala were made due to equipment and ship problems. The cruise tracks for both vessels were chosen to maximize coverage of the known ranges of the two target species, the spotted dolphin (*Stenella attenuata*) and the spinner dolphin (*Stenella longirostris*) in the ETP (Perrin *et al.* 1983).

The itinerary for the *Jordan* was as follows:

Leg 1

Departure	28 July	San Diego, California
Arrival/Departure	03 August	Cabo San Lucas, Mexico
Arrival	26 August	Puerto Quetzal, Guatemala

Leg 2

Departure	31 August	Puerto Quetzal, Guatemala
Arrival/Departure	27 September	Isla Montuosa, Panama
Arrival	29 September	Puerto Caldera, Costa Rica

Leg 3

Departure	04 October	Puerto Caldera, Costa Rica
Arrival	24 October	Puerto Quetzal, Guatemala
Departure	28 October	Puerto Quetzal, Guatemala
Arrival	02 November	Manzanillo, Mexico

Leg 4

Departure	08 November	Manzanillo, Mexico
Arrival/Departure	11 November	Clipperton Island, France
Arrival/Departure	30 November	San Benedicto Island, Mexico
Arrival	06 December	San Diego, California

MATERIALS AND METHODS

Oceanography

While the ship was underway, temperature and salinity of surface water were measured and recorded continuously in digital form. Sea water was sampled continuously from a bow intake 3

meters below the surface. Temperature and salinity were measured with an ODEC (Model TSG-102) Thermosalinograph[1]. These data were recorded on a data acquisition system consisting of an AI08 A/D board (Industrial Computer Source) connected to an IBM PC compatible microcomputer (Holland 1989).

Conductivity, temperature and depth (CTD) device casts were made two times per night using a Neil-Brown CTD. Each CTD cast lasted approximately 60 minutes. The CTD was lowered to 1000 meters and sensors connected to shipboard computers measured conductivity (salinity), temperature, pressure (depth) and dissolved oxygen. Water samples were collected on all CTD casts for salinity and oxygen calibration and phytoplankton pigment analysis. Water samples were collected on morning CTD casts for nutrient analysis and ^{14}C-uptake incubations.

Acid-washed 1.7-liter General Oceanics Niskin bottles were retrofitted with silicon rubber o-rings in the valves and endcaps. Silicon rubber tubing was used as the closing mechanism. The ten rosette mounted bottles collected water from eight standard depths (0, 20, 40, 60, 80, 100, 125, and 150 m) plus two additional standard light depths for primary productivity casts as described below. Ten 275 ml samples (0-150 m) were collected for chlorophyll analysis at each morning station and eight at each evening station. Extracted chlorophyll and phaeophytin were measured with a Turner Designs Model 10-005R fluorometer. At morning primary productivity stations, ten 20 ml samples (0-150 m) were collected and immediately frozen for nutrient analysis following the cruise. Three 150 ml salinity samples and three 250 ml oxygen samples were also collected from each cast and analyzed for the purpose of CTD calibration.

Water samples for determination of dissolved inorganic carbon uptake were collected from depths to which 100, 50, 30, 15, 5, 1 and 0.1% of the incident light penetrated. Light depths were estimated from expected euphotic zone depths calculated from pigment profiles observed on previous MOPS cruises (1986-1989) according to Morel (1988). Samples were drawn into screw cap "Vitro" glass 150 ml bottles (Wheaton Corporation) rinsed twice with sample water. 10 μCi of $NaH^{14}CO_3$ were added to each sample bottle. The sample bottles were incubated in nickel screens (Perforated Products) in an on-deck seawater-cooled Plexiglass incubator for 24 hours with natural sunlight as the light source. The screens act as neutral density filters, reducing the light intensity to the same level as that occurring at the depth from which the sample was collected. Two extra samples at the 100% and 0.1% light levels were inoculated with radioactive tracer and filtered immediately with no incubation to determine abiotic particulate ^{14}C incorporation (Chavez and Barber 1987). For determination of particulate carbon fixation, the water was filtered onto Whatman GF/F filters at <10 psi of vacuum, acidified with 0.5 N HCl and counted in 10 ml of CytoScint ES on a liquid scintillation counter following the end of the cruise. The total inorganic carbon activity was determined (at the 100% and 30% light levels) by adding 1.0 ml of incubated sample water to a scintillation vial containing 20 ml of CytoScint ES cocktail. An average of these values was used as the total amount of added activity in the calculation of carbon uptake for each sample.

Expendable bathythermograph (XBT) drops were made daily at 0000, 0800, 1200 and 1600 hours (local time). A Shipboard Environmental data Acquisition System (SEAS) was utilized. XBT data were transmitted to shore via the GOES (Geostationary Operational Environmental Satellite)

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[1] Reference to trade names does not imply endorsement by NMFS.

every four hours. Position, date and time for each drop were recorded on NOAA XBT logs and disks.

An acoustic data acquisition system (ADA) was operated during the first few weeks of the first leg of the cruise on the *Jordan*. Acoustic backscatter was recorded using a 38 Khz and a 200 Khz depth sounder. Backscatter was digitized and integrated in 10-meter intervals between the surface and a depth of 500 meters. Thirty pings were averaged every fifteen minutes to reduce data volume.

Six satellite-tracked drift buoys were deployed at predetermined locations. These buoys transmit signals which are received by NOAA satellites and transferred to the ARGOS service facility in Toulouse, France. The deployments, arranged by Don Hansen of AOML, were for EPOCS and TOGA investigations of surface currents.

Biological Observations

Seabird censuses were conducted using standard 300 m strip-transect methodology and hand-held binoculars. Weather permitting, bird observers stood shifts on the flying bridge throughout the daylight hours when the ship was underway. Species identification, numbers and behaviors of birds were recorded, as well as associations with marine mammals, fish or flotsam. Flock compositions and occasionally, individual identifications were verified using mounted 25X binoculars.

A separate census using strip-transect methods and 25X binoculars was conducted to quantify distribution and abundance of seabird flocks. The species composition and number of individuals for all seabird flocks within 2.2 miles of the ship were recorded.

Manta tows were conducted each night immediately following the CTD station, using a 505 μm-mesh manta net with a mouth opening of 15 cm x 86 cm. A General Oceanics flowmeter was suspended in the center of the net mouth. The net was towed from the starboard hydrographic wire for fifteen minutes. Samples were preserved in formalin, labeled and stored.

Surface organisms were sampled during evening CTD stations to collect information on the occurrence, relative abundance and distribution of flying fishes in the ETP. Two 500-watt lamps were suspended over the side of the ship to attract animals, and a long-handled dipnet was used to collect them. Other information collected during these stations included species observed, relative abundance and pertinent environmental data (e.g., sea surface temperature and salinity, sea state and moon phase).

Counts of flying fish that were flushed by the ship were recorded from the flying bridge during all daylight hours when the vessel was underway. All fish flushed within 100 m of the ship from the bow to 90° to the beam of one side of the ship were counted. Group sizes of flushed fish and identification to one of 7 taxonomic categories were routinely recorded. Taxonomic categories for classification were: "unidentified", cypselurid spp., *Cypselurus* species A and B, *Cypselurus* species C, *Hirundichthyes* spp., *Exocoetus* spp. and "other".

As part of a long-term study of the distribution and ecology of sea turtles in the ETP, all sightings of marine turtles made incidental to the marine bird and mammal surveys were recorded. Identification, approximate size, and associations with birds, fish, flotsam and other turtles were also

recorded. Under normal field conditions, specific identification of sea turtles other than leatherbacks is difficult. Therefore, in order to obtain a sample of identified individuals, the ship was diverted briefly to pass closely by individuals that were close to the trackline to photograph or for experienced observers to identify. Live turtles were captured opportunistically for the purpose of freeing them from entanglement. A large net with a breakaway netting was constructed during the cruise to scoop up turtles rafting at the surface that passed close by the bow. This allowed us to capture turtles for tagging and obtaining blood samples then to release them unharmed. Dead turtles were salvaged to obtain life history data, stomach contents and reproductive tracts. The handling of live turtles and the salvage of dead turtles in international waters are covered by Endangered Species Permit No. 691, Modification No. 1. Importation of endangered species parts is covered by CITES permit US742057.

Fish stomach contents were collected opportunistically and analyzed for a food habits study. Fish were caught by rod and reel or trolling. The fish were identified, sexed and measured. Associations with flotsam, other fish, bird flocks or mammals were recorded. Stomach contents were identified and measured. Unidentifiable stomach contents were preserved in alcohol for later identification. Seabirds were collected opportunistically for gut content analysis.

RESULTS

Hill *et al.* (1991) reported on the dolphin assessment methods and data collected from the 1990 *Jordan* cruise.

The cruise track for the *Jordan* is plotted in Figure 1. Table 1 lists the total numbers of environmental and biological samples, by category, collected on the *Jordan.*

Oceanography

Digital records of continuous surface data from the thermosalinograph are now being analyzed at the SWFSC. Plots of continuous environmental data from the 1986-1989 surveys have been published in a separate report[2].

Figure 2 shows the locations of the 164 CTD casts. Of these, two were hydrocasts (no CTD data because of computer malfunctions) and three were CTD casts only. Uncorrected CTD temperature and salinity data are included in Appendix A.

XBT data were sent by the SEAS to the National Ocean Service, NOAA[3]. Digital XBT data were edited by AOML. Figure 3 shows XBT deployment locations.

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[2] Fiedler, P.C., S.B. Reilly, S.N. Sexton, R.S. Holt, and D.P. DeMaster. 1990. Atlas of eastern tropical Pacific oceanographic variability and cetacean sightings, 1986-1989. NOAA-TM-NMFS-SWFSC-144, 142 pp.

[3] Persons wishing to receive copies of these data should write to: National Ocean Service, Universal Bldg. South, Rm. 618, 1825 Connecticut Ave., NW, Washington D.C., 20235.

Oxygen bottle data were analyzed on board using a Winkler-titration system prepared by the Ocean Chemistry Division at AOML. Reagents were systematically checked for contamination.

Discrete chlorophyll samples were analyzed at sea and data were processed at the SWFSC in La Jolla. Results are presented in Appendix A. Surface chlorophyll concentrations from both the *Jordan* and the *McArthur* are mapped in Figure 4.

Selected frozen nutrient samples were shipped to Monterey Bay Aquarium Research Institute to be analyzed. Nutrient and chlorophyll data will be submitted to NOAA/National Oceanographic Data Center.

Primary productivity samples were analyzed after the cruise at Scripps Institution of Oceanography. The data were processed at the SWFSC in La Jolla. A manuscript describing the results has been submitted for a special issue of *Limnology and Oceanography* (Fiedler *et al.* 1991).

No acoustic backscatter data were obtained due to a system malfunction.

Table 2 lists the locations and dates of the six drifting buoy deployments. Figure 5 shows the tracks of these buoys.

Biological Observations

A total of 767.3 hours during 97 days was spent on effort for the seabird distribution and abundance survey. During this time, 5748 individuals of 46 species were recorded (Tables 3 and 4).

Abundance of seabirds varied according to the area surveyed, a fact evidenced by the differences in abundance by leg (Tables 3 and 4). In general, the most abundant family of seabirds was Procellariidae (petrels and shearwaters), primarily represented by Juan Fernandez Petrels and Wedge-tailed Shearwaters. The next most abundant families were Oceanitidae (storm-petrels), represented by Leach's and Galapagos Storm-Petrels and Phalaropodidae (Phalaropes), represented by Red and Northern Phalaropes. Three species of booby were also abundant: Masked, Red-footed and Brown.

Manta tow samples have been sorted and are now being identified at SWFSC.[4]

Figure 6 shows the location of 110 dipnet stations occupied during the cruise. Table 5 summarizes data and specimens collected for each of the stations. A total of 1193 flying fish of 13-14 species were collected, along with 582 *Oxyporhamphus micropterus*, and 1340 miscellaneous fish including 1031 myctophids. Most of the specimens, including all of the flying fish, will be processed and housed at the Museum of Natural History, Los Angeles.

A total of 743 hours during 94 days was spent on effort for the flying fish census. During this time 59,689 flying fish were recorded flushed by the ship. Future analyses will include examination of abundance and distribution of each taxonomic group.

[4] Questions concerning these samples may be addressed to Dr. Geoff Moser at the SWFSC.

The locations of 251 individual sea turtle sightings are plotted in Figure 7. Sightings included 65 olive ridleys (*Lepidochelys olivacea*), 22 loggerheads (*Caretta caretta*), 8 greens (*Chelonia mydas*), and 3 leatherbacks (*Dermochelys coriacea*). Loggerhead sightings were all off Baja California; greens were identified only around Wenman and Culpepper islands in the Galapagos,and olive ridleys were distributed throughout the warmer waters of the eastern tropical Pacific.

Seventeen live and two dead olive ridleys were captured using the scoop net. All live turtles were measured, tagged and released unharmed. Blood samples were obtained from 11 live individuals and will be used for DNA analyses to determine which breeding populations these individuals may have come from. Humeri were collected from the 2 dead specimens to be used for aging. A satellite radio tag was attached to an adult male (curved carapace length 70.5 cm) olive ridley on 26 November; it was released in the area of capture at 17° 08'N, 110° 59'W. Position fixes were obtained for nearly 4 months, after which the transmissions ceased.

A total of 79 fish were examined for stomach content analysis, including 27 mahi mahi (*Coryphaena hippurus*), 25 yellowfin tuna (*Thunnus albacares*), 14 bigeye tuna (*Thunnus obesus*) and 13 of other species. A total of 19 birds were collected for gut content analysis.

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Table 1. Summary of environmental and biological data collected, *David Starr Jordan*, 28 July - 6 December, 1990[1]

Leg	XBT	CTD	Chl *a*	Nutrients	Primary Productivity	Manta Tows	Flying Fish Collected	Fish Stomach Samples	Bird Stomach Samples	Turtle Sightings	Turtle Captures	Bird Sightings	Bird Effort
I	84	37	427	157	111	18	133	8	8	47	0	1014	192.2 hours 23 tot.days
II	109	49	597	208	145	25	400	42	12	90	9	1058	199.7 hours 26 tot.days
III	87	32	419	148	99	19	362	26	0	78	7	1162	173.5 hours 24 tot.days
IV	104	46	546	220	154	23	298	3	0	36	3	1016	201.9 hours 24 tot.days
Total	384	164	1989	733	509	85	1193	79	20	251	19[2]	4250	767.3 hours 97 tot.days 7.9 average hours/day

1. Continuous sea surface temperature and salinity recorded during all four legs.
2. Includes two dead turtles.

Table 2. Deployment locations of six drift buoys, *Jordan*, 28 July - 6 December 1990.

DATE	LATITUDE	LONGITUDE
13 September	01°39.9' N	109°59.9' W
14 September	00°01.3' S	110°00.6' W
15 September	02°10.1' S	108°39.9' W
16 September	00°59.8' S	106°30.3' W
17 September	00°00.0'	104°59.9' W
9 October	06°00.1' N	085°21.8' W

Table 3. Number of seabirds recorded from the *David Starr Jordan*, 28 July - 6 December, 1990, listed by family.

Leg Number:	I	II	III	IV	TOTAL
ALBATROSSES (Diomedeidae)	0	0	0	0	0
PETRELS AND SHEARWATERS (Procellariidae)					
PTERODROMA PETRELS	839	835	380	133	2187
OTHER PETRELS (Bulweria, Procellaria, Fulmarus, Daption)	2	2	0	0	4
SHEARWATERS (Puffinus)	311	481	87	87	966
STORM-PETRELS (Oceanitidae)	268	184	345	686	1483
TROPICBIRDS (Phaethontidae)	7	11	10	12	40
PELICANS (Pelecanidae)	0	0	0	0	0
BOOBIES (Sulidae)	116	192	298	275	881
CORMORANTS (Phalacrocoracidae)	0	0	0	0	0
FRIGATEBIRDS (Fregatidae)	5	34	9	2	50
PHALAROPES (Phalaropodidae)	33	122	1129	110	1394
JAEGERS (Stercorariidae)	1	11	46	7	65
GULLS, TERNS AND NODDIES (Laridae)					
GULLS (Larus)	0	6	47	0	53
TERNS (Sterna, Chlidonias, Gygis)	25	42	122	4	193
NODDIES (Anous)	0	0	1	0	1
ALCIDS (Alcidae)	0	0	0	0	0

Table 4. Identity and numbers of seabirds recorded from the *David Starr Jordan*, 28 July - 6 December, 1990.

Common Name	Scientific Name	Leg Number: I	II	III	IV	TOTAL
Juan Fernandez Petrel	Pterodroma externa	717	748	369	121	1955
Leach's Storm-Petrel (White-Rumped)	Oceanodroma leucorhoa	64	32	70	358	524
Wedge-tailed Shearwater (Dark Morph)	Puffinus pacificus	237	257	7	18	519
Wedge-tailed Shearwater (Light Morph)	Puffinus pacificus	64	215	53	49	381
Red-footed Booby	Sula sula	23	135	94	12	264
Galapagos Storm-Petrel	Oceanodroma tethys	89	57	55	55	256
Red Phalarope	Phalaropus fulcarius	30	59	100	60	249
Northern Phalarope	Phalaropus lobatus	2	13	193	7	215
Masked Booby (Orange Billed Morph)	Sula dactylatra	12	22	130	7	171
Brown Booby	Sula leucogaster	13	12	9	116	150
Masked Booby (Unidentified Morph)	Sula dactylatra	9	11	62	67	149
Masked Booby (Yellow Billed Morph)	Sula dactylatra	59	12	3	73	147
White-winged Petrel	Pterodroma leucoptera	30	56	0	0	86
Cook's Petrel	Pterodroma cookii	60	0	1	1	62
Sooty Tern	Sterna fuscata	24	18	11	4	57
Arctic Tern	Sterna paradisaea	0	7	45	0	52
Tahiti Petrel	Pterodroma rostrata	21	9	7	9	46
Sabine's Gull	Larus sabini	0	3	33	0	36
Unidentified Frigatebird	Fregata sp.	1	25	8	1	35
Pomarine Jaeger	Stercorarius pomarinus	1	0	30	2	33
White Tern	Gygis alba	0	2	30	0	32
Leach's Storm-Petrel (Dark-Rumped)	Oceanodroma leucorhoa	0	0	8	23	31
Red-billed Tropicbird	Phaethon aethereus	3	11	10	7	31
Passerine		2	10	11	2	25
Black Tern	Chilidonias niger	0	1	21	0	22
Kermadec Petrel	Pterodroma neglecta	7	11	1	1	20
Audubon's Shearwater	Puffinus lherminieri	1	2	13	0	16
Harcourt's Storm-Petrel	Oceanodroma castro	0	3	9	3	15
Great Frigatebird	Fregata minor	4	9	1	1	15
White-faced Storm-Petrel	Pelagodroma marina	12	2	0	0	14
Pink-footed Shearwater	Puffinus creatopus	1	3	8	1	13
Black Storm-Petrel	Oceanodroma melania	0	6	7	0	13
Parasitic Jaeger	Stercorarius parasiticus	0	5	5	2	12
Dark-rumped Petrel	Pterodroma phaeopygia	1	10	1	0	12
Franklin's Gull	Larus pipixcan	0	0	10	0	10
Townsend's/Newell's Shearwater	Puffinus auricularis	1	0	2	7	10
Sooty Shearwater	Puffinus griseus	0	0	0	10	10
Red-tailed Tropicbird	Phaethon rubricauda	4	0	0	5	9
Christmas Island Shearwater	Puffinus nativitatus	5	2	2	0	9
Shore Bird		0	5	0	0	5
Markham's Storm-Petrel	Oceanodroma markhami	2	3	0	0	5
Common Tern	Sterna hirundo	0	0	5	0	5
Bridled Tern	Sterna anaethetus	0	5	0	0	5
Swallow-tailed Gull	Larus furcatus	0	3	1	0	4
Least Tern	Sterna antillarum	0	2	2	0	4
Skua	Catharacta sp.	1	0	1	1	3
Bulwer's Petrel	Bulweria bulweri	2	1	0	0	3
Black-winged Petrel	Pterodroma nigripennis	1	0	0	1	2
White-throated Storm-Petrel	Nesofregetta albigularis	1	1	0	0	2
Brown Noddy	Anous stolidus	0	0	1	0	1
White-bellied Storm-Petrel	Fregatta grallaria	0	1	0	0	1
Herald Petrel	Pterodroma heraldica	1	0	0	0	1
Parkinson's Petrel	Procellaria parkinsoni	0	1	0	0	1
TOTAL		1505	1790	1429	1024	5748

Table 5. Results of night-light dip-net sampling, JORDAN, 28 July - 6 December, 1990.

Station Number[1]	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea State[2]	Moon Phase[3]	Sky Cond.[4]	SST (C)	SSS (%)	Fish Species[5]	Relative Abundance (Fish)[6]	Number Collected (Fish)	Squid Type[7]	Relative Abundance (Squid)[6]	Number Collected (Squid)
	90-07-31		26 34 N	114 05 W	0.0					30		1			
1	90-08-01	1.0	23 10 N	110 27 W	2.0	3	1			10	1	2	1	2	
1	90-08-01	1.0	23 10 N	110 27 W	2.0	3	1			30	1	2	2	4	

1 - Records without Station numbers reflect opportunistic, or non-standard specimen collections.

2 - Beaufort Scale

3 - 1 = quarter moon; 2 = half moon; 3 = 3/quarter moon; 4 = full moon; 5 = no moon; 6 = new moon.

4 - 1 = clear; 2 = partly cloudy; 3 = overcast; 4 = rain; 5 = other or unknown.

5 - 005 = Unidentified flying fish
010 = Oxyporhamphus micropterus
015 = Fodiator spp.
020 = Exocetus spp.
030 = Unidentified 4-wing flying fish
060 = Elassichthys
080 = Hemiramphidae (halfbeaks)
090 = Belonidae (needlefish)
100 = Myctophidae (lanternfish)
125 = Vinciguerria spp.
200 = Scombridae (tunas)
300 = Gempylidae (snake mackerel)
400 = Coryphaenidae (dolphinfish)
500 = Other
700 = Octopoda (pelagic octopus)
900 = Sea Snake

6 - 1 = "a couple" (1-3)
2 = "a few" (4-8); uncommon
3 = "several" (9-15); fairly common
4 = "common" (16-50)
5 = "abundant" (51-150)
6 = "superabundant" (150+)
7 = 1000's
8 = "present"
9 = "possibly present"

7 - 1 = Large (mantle length > 8 inches)
2 = Medium (3 inches ≤ mantle length ≤ 8 inches)
3 = Small (mantle length < 3 inches)

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
1	90-08-01	1.0	23 10 N	110 27 W	2.0	3	1			500	1	1			
	90-08-03		22 29 N	111 22 W	0.0					20		1			
2	90-08-03	1.0	21 44 N	114 31 W	4.0	4	2	26.2	34.39	20	2	1			
										30	3	3			
										100	3	8			
										300	1				
3	90-08-04	1.0	20 31 N	117 42 W	3.0	4	2	26.6	34.61	30	1	1	2	1	
										100	2	4			
										300	1				
										400	1				
	90-08-05		20 03 N	117 58 W	0.0					30		1			
4	90-08-05	1.0	18 21 N	120 29 W	4.0	4	2	27.2	34.63	20	1	1	2	4	
										30	1	1			
										100	2	5			
	90-08-06		17 55 N	121 18 W	0.0					20		1			
										30		3			
5	90-08-06	1.0	16 39 N	123 40 W	5.0	4	2	27.5	34.65	100	3	6	2	2	
										500	1				
6	90-08-07	1.0	13 48 N	125 52 W	5.0	4	3	28.1	34.58	10	1	1	2	3	
										20	1	1			
										30	1				
										100	3	2			
										400	3				
7	90-08-09	1.0	7 44 N	123 54 W	1.0	5	3	28.2	33.92	10	3	9	2	6	
										20	1	1			
										30	2	4			
										100	5	12			
										500	1	2			
										500	1	1			
8	90-08-10	1.0	5 04 N	121 57 W	4.0	5	3	26.2	34.68	10	2	1	1	3	
										20	3	6	2	4	
										30	2	1	3	1	
										100	4	10			
										300	1	1			
	90-08-11		5 01 N	121 51 W	0.0					30		1			
	90-08-11		4 20 N	121 09 W	0.0					20		2			
9	90-08-11	1.0	2 39 N	119 50 W	4.0	5	3	25.5	34.53	10	4	12	1	3	
										20	3	6	2	2	
										30	1	1			
										100	4	6			
										400	1	1			
10	90-08-12	1.0	0 55 N	117 32 W	4.0	5	1	24.8	34.54	10	3	2	1	3	
										20	3	4	2	3	
										30	2	2			
										100	3				
	90-08-13		0 58 N	116 26 W	0.0					20		1			
11	90-08-13	1.0	0 53 N	114 14 W	3.0	5	3	24.0	34.82	10	1	1	1	6	

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
11	90-08-13	1.0	0 53 N	114 14 W	3.0	5	3	24.0	34.82	30	1		2	2	
										100	6	50			
										400	1				
12	90-08-14	1.0	1 04 N	111 24 W	4.0	5	1	25.0	34.32	10	1	1	1	3	
										100	3	2	2	1	
13	90-08-15	1.0	0 56 N	108 52 W	4.0	5	2	25.6	34.23	10	2	3	1	2	
										100	4	5			
										400	1	1			
	90-08-16		0 56 N	108 27 W	0.0					20		1			
	90-08-16		0 56 N	108 27 W	0.0					30		1			
14	90-08-16	1.0	1 06 N	106 20 W	3.0	5	2	23.6	34.46	20	2	5	1	4	
										100	4	20			
										500	1				
	90-08-17		1 51 N	106 15 W	0.0					20		3			
										30		1			
15	90-08-17	1.0	4 29 N	105 46 W	4.0	5	3	27.3	33.64	10	4	7	1	5	
										20	3	6	2	2	
										30	3	5			
										100	5	10			
										300	1	1			
										400	1	2			
	90-08-18		5 10 N	105 44 W	0.0					30		1			
	90-08-19		8 24 N	107 42 W	0.0					30		1			
16	90-08-19	1.0	10 19 N	109 11 W	3.0	5	3	28.6	33.35	30	6	18			
										80	2				
										90	2				
17	90-08-20	1.0	13 04 N	107 52 W	4.0	5	3	29.1	33.20	20	2	3	2	3	
										30	2	1			
										100	2				
										400	1	1			
										500	1				
18	90-08-21	1.0	13 42 N	105 03 W	1.0	5	2	28.9	33.83	10	6	24	1	2	
										20	4	9	2	4	
										30	4	6			
										100	1				
										400	2	3			
19	90-08-22	1.0	12 46 N	102 04 W	4.0	5	3	29.1	33.37	10	5	14	1	2	
										20	4	7	2	3	
										30	3	4	3	1	
										100	2	1			
										400	1				
20	90-08-23	1.0	12 17 N	99 03 W	2.0	1	3	29.4	33.42	10	5	11	1	2	
										20	2	3	2	3	
										30	4	9	3	3	
										200	8	5			
										300	1				
										400	2	5			

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
20	90-08-23	1.0	12 17 N	99 03 W	2.0	1	3	29.4	33.42	500	2	4			
										500	1	1			
	90-08-24		12 10 N	98 30 W	0.0					30		2			
21	90-08-24	1.0	12 07 N	96 00 W	2.0	1	2	29.1	33.49	10	4	6	2	4	
										30	3	3	3	2	
										100	2	1			
										500	2	3			
22	90-08-26	1.0	13 21 N	92 04 W	1.0	5	3	29.5	33.06	10	4	7	2	3	
										20	1	1	3	5	
										30	3	3			
										80	3	3			
										100	2	2			
										400	3	3			
										500	1	1			
										500	4	2			
23	90-08-31	1.0	13 12 N	91 10 W	2.0	3	2	29.5	33.10	10	1	1	1	1	
										30	4	15	2	4	
										80	1	1			
										500	3	6			
										500	1	1			
24	90-09-01	1.0	10 05 N	92 59 W	1.0	3	2	29.1	33.22	10	2	2	2	4	
										20	2	4			
										30	2	1			
										200	2	4			
										400	1	1			
										500	1	1			
	90-09-02		10 06 N	92 57 W	0.0					10		2			
										20		3			
										30		1			
25	90-09-02	1.0	10 30 N	96 23 W	1.0	4	1	29.8	33.64	10	4	5	2	4	
										20	2	2	3	3	
										30	1				
										500	1	1			
26	90-09-03	1.0	11 28 N	99 32 W	3.0	4	2	29.8	33.35	20	1		1	2	
										30	2	2	2	3	
										90	1	1			
										500	1	1			
										500	1	1			
										500	1	1			
										500	1	1			
27	90-09-04	1.0	10 26 N	102 34 W	3.0	4	2	29.1	32.99	10	5	17	1	2	
										20	4	9	2	5	
										30	3	1	3	2	
										100	2				
28	90-09-05	1.0	8 24 N	104 52 W	4.0	5	3	28.0	32.66	10	2	3	1	2	
										20	2	3	2	4	
										100	4	16			

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
28	90-09-05	1.0	8 24 N	104 52 W	4.0	5	3	28.0	32.66	300	1				
										400	1				
29	90-09-06	1.0	6 36 N	107 15 W	4.0	5	3	27.9	33.31	20	5	31	1	6	
										30	1	1	2	4	
										100	4	13			
										400	1				
										500	1	1			
30	90-09-07	1.0	5 00 N	110 01 W	3.0			27.4	33.64	10	4	9	2	2	
										20	5	17			
										30	4	7			
										100	4	11			
										300	1	1			
										400	8				
31	90-09-08	1.0	4 58 N	113 27 W	4.0	5	2	27.7	33.69	10	4	10	1	2	
										20	3	7	2	3	
										30	3	2			
										100	5	35			
										400	1	1			
										500	1				
	90-09-09		5 00 N	114 43 W	0.0					20		4			
32	90-09-09	1.0	4 55 N	116 29 W	4.0	5	2	27.8	33.98	10	2	3	1	4	
										20	4	16	2	3	
										30	2	4			
										100	5	16			
										400	2	2			
										700	1	1			
33	90-09-10	1.0	4 24 N	115 26 W	3.0	5	2	27.5	34.17	10	3	5	1	4	
										20	4	14	2	4	
										30	3	6			
										100	6	30			
										300	1	1			
										400	1	1			
										500	1	1			
										60	1	1			
34	90-09-11	1.0	4 08 N	114 20 W	4.0	5	2	27.5	34.17	10	2	1	1	1	
										20	3	2	2	4	
										30	2	2			
										100	6	14			
										300	1	1			
										400	6	2			
35	90-09-11	1.0	3 53 N	112 56 W	3.0	5	2	27.4	33.91	10	3	6	1	4	
										20	4	15	2	4	
										30	3	4	3	3	
										100	6	32			
										300	1	1			
										400	1	1			
										500	5				

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
36	90-09-12	1.0	3 34 N	111 48 W	2.0	2	2	25.7	34.12	10	1	1	1	2	
										20	4	6	2	4	
										30	4	7			
										100	4	10			
37	90-09-12	1.0	3 00 N	110 00 W	4.0	5	3	25.4	34.12	10	4	7	1	3	
										20	4	13	2	3	
										30	1	1			
										100	5	22			
										300	1	1			
										400	1				
38	90-09-14	1.0	0 01 S	110 00 W	4.0	5	3	22.9	34.81	10	1		1	6	
										60	1	1	2	1	
										100	5	26			
39	90-09-15	1.0	3 00 S	110 00 W	5.0	5	3	24.0	34.87	10	3	5	1	5	
										20	5	16	2	3	
										30	3	5			
										100	5	10			
40	90-09-15	1.0	1 56 S	108 06 W	4.0	5	3	22.8	34.67	10	1	1	1	6	
										20	1	1	2	3	
										100	4	11	3	1	
										500	1	1			
41	90-09-16	1.0	0 23 S	105 28 W	3.0	5	3	22.6	34.60	20	1	1	1	5	
										100	6	40	2	4	
42	90-09-17	1.0	1 08 N	103 06 W	4.0	5	2	25.6	33.67	10	1		1	4	
										20	1	3	2	2	
										30	2	5			
										100	5	25			
										300	1				
	90-09-18		1 25 N	102 26 W	0.0					30		1			
43	90-09-18	1.0	2 28 N	100 39 W	4.0	5	3	26.6	33.77	10	3	4	1	4	
										20	1	2	2	3	
										30	1				
										100	4	12			
										400	1	2			
44	90-09-19	1.0	4 32 N	98 03 W	3.0	5	3	27.0	33.66	10	1	1	1	3	
										20	3	9	2	4	
										30	3	5			
										100	5	25			
										300	1	1			
	90-09-20		5 07 N	97 30 W	0.0					30		1			
45	90-09-20	1.0	4 26 N	95 36 W	4.0	5	3	27.3	33.24	10	3	9	1	4	
										20	2	2	2	3	
										30	3	4			
										100	5	25			
										300	1				
										400	2	1			
										500	1	1			

Table 5. continued.

Station Number[1]	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea State[2]	Moon Phase[3]	Sky Cond.[4]	SST (C)	SSS (%)	Fish Species[5]	Relative Abundance (Fish)[6]	Number Collected (Fish)	Squid Type[7]	Relative Abundance (Squid)[6]	Number Collected (Squid)
45	90-09-20	1.0	4 26 N	95 36 W	4.0	5	3	27.3	33.24	500	1	1			
46	90-09-21	1.0	3 30 N	94 35 W	4.0	5	3	27.0	33.59	10	4	5	1	2	
										20	4	11	2	4	
										30	3	5	3	1	
										60	1	1			
										100	4	7			
										300	1				
										400	2	1			
47	90-09-21	1.0	2 13 N	93 01 W	4.0	5	3	26.7	33.45	10	4	6	1	4	
										20	5	22	2	4	
										30	3	5			
										100	6	28			
										400	1	1			
										500	1	1			
	90-09-22		1 40 N	92 01 W	0.0			25.4	33.57	10		7			
										30		3			
										80		2			
										125		1			
										200		1			
										500		2			
										500		2			
										500		1			
48	90-09-22	1.0	1 19 N	91 09 W	2.0	1	2	24.0	33.91	10	1	2	1	3	
										15	1	1	2	4	
										30	1				
										100	5	42			
										400	1	1			
49	90-09-23	1.0	1 23 N	87 47 W	4.0	5	3	24.9	33.89	10	3	6	1	5	
										20	3	9	2	4	
										100	6	40	3	1	
50	90-09-24	1.0	1 42 N	84 48 W	3.0	2	2	25.7	33.57	10	4	10	1	5	
										20	4	9	2	4	
										30	5	27			
										80	1				
										100	5	17			
51	90-09-25	1.0	3 04 N	84 46 W	4.0	5	3	26.3	33.28	10	3	4	1	3	
										20	2	4	2	3	
										30	3	2	3	1	
										100	4	7			
52	90-09-26	1.0	5 27 N	83 13 W	3.0	5	3	27.3	30.97	10	5	12	1	2	
										20	5	18	2	3	
										30	3	6	3	2	
										100	4	4			
										400	3	5			
										500	3	3			
										500	1	1			
53	90-09-26	1.0	5 35 N	81 07 W	3.0	5	4	27.6	30.46	10	3	5	1	6	1

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
53	90-09-26	1.0	5 35 N	81 07 W	3.0	5	4	27.6	30.46	20	3	8	2	4	
										30	1	2	3	2	
										100	5	16			
										400	1	1			
										500	1	1			
										500	1	1			
										500	1	1			
54	90-09-27	1.0	6 50 N	81 43 W	2.0	5	3	28.6	30.33	10	4	6	1	2	
										20	1		2	3	
										30	3	6	3	2	
										80	3	3			
										90	1				
										100	9				
										200	4	14			
										400	3	2			
										500	3	8			
										500	1				
										900	1				
55	90-09-27	1.0	7 20 N	82 25 W	3.0	5	3	27.9	30.22	10	4	5	1	3	
										20	1	1	2	4	
										30	3	7	3	2	
										80	1				
										90	2	4			
										200	2	6			
										500	2	1			
										900	1				
56	90-09-28	1.0	9 18 N	84 27 W	2.0	5	3	28.9	29.94	15	3	8	3	3	
										30	3	6			
										80	2	3			
										400	1				
										500	3	1			
										500	3	5			
										500	1	1			
										500	1	1			
57	90-10-04	1.0	9 08 N	84 40 W	1.0	5	3	29.0	30.88	10	3	6	1	2	
										30	1	2	2	4	
										90	1		3	2	
										90	1				
										200	4	12			
										400	1	2			
										500	2	2			
										500	4	10			
58	90-10-05	1.0	6 22 N	83 56 W	4.0	5	4	27.8	30.31	10	4	9	1	2	
										20	2	3	2	3	
										30	3	6			
										90	1				
										100	4	7			

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
58	90-10-05	1.0	6 22 N	83 56 W	4.0	5	4	27.8	30.31	200	1	2			
										400	1	2			
										500	1	1			
										500	5	20			
										500	2	3			
										500	1	1			
										500	1	1			
59	90-10-06	1.0	4 01 N	81 34 W	4.0	5	3	27.0	32.89	10	2	2	1	1	
										20	1	1	2	3	
										80	1				
										400	1	1			
										500	2	4			
										500	1	1			
										500	1	3			
60	90-10-07	1.0	3 02 N	82 20 W	3.0	5	3	26.7	33.10	10	5	12	1	6	
										20	4	14	2	4	
										30	3	5			
										100	6	24			
										300	1				
										400	1				
61	90-10-08	1.0	4 41 N	84 37 W	4.0	5	3	26.9	32.73	10	4	6	1	6	2
										30	3	5	2	3	
										100	6	20	3	1	
										300	1				
										400	1	1			
62	90-10-09	1.0	7 41 N	86 06 W	5.0	5	3	26.9	33.16	10	3	3	1	6	
										30	3	5	2	5	6
										100	5	7	3	1	
										500	1	1			
63	90-10-10	1.0	8 58 N	87 58 W	2.0	5	3	27.3	33.53	10	6	16	1	6	
										20	5	21	2	4	5
										30	4	7	3	1	1
										100	5	9			
										200	1	1			
64	90-10-11	1.0	7 10 N	89 47 W	3.0	5	3	26.4	33.52	10	6	10	1	6	
										20	6	25	2	5	
										30	6	28	3	1	
										100	4	1			
										400	1				
										500	4				
65	90-10-12	1.0	4 54 N	91 09 W	2.0	5	3	27.2	32.75	10	6	21	1	4	
										20	4	7	2	3	
										30	3	5			
										60	2	3			
										100	6	27			
										300	1	1			
										400	3				

Table 5. continued.

Station Number[1]	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea State[2]	Moon Phase[3]	Sky Cond.[4]	SST (C)	SSS (%)	Fish Species[5]	Relative Abundance (Fish)[6]	Number Collected (Fish)	Squid Type[7]	Relative Abundance (Squid)[6]	Number Collected (Squid)
66	90-10-13	1.0	5 15 N	93 46 W	3.0	5	3	27.4	33.01	10	4	3	1	5	
										20	3	6	2	4	2
										30	1	1			
										100	5	37			
										300	1	1			
	90-10-13		5 28 N	93 30 W	0.0					20	1				
										30	4				
67	90-10-14	1.0	7 32 N	91 20 W	2.0	5	3	26.4	33.43	10	5	11	1	4	1
										20	4	14	2	4	3
										30	4	12			
										100	6	11			
										200	3				
										500	1	1			
68	90-10-15	1.0	10 02 N	88 59 W	1.0	5	3	28.2	33.29	10	6	14	1	5	
										20	1	1	2	4	2
										30	6	22	3	3	3
										100	1	1			
										200	1	2			
										500	1	1			
										500	2	1			
69	90-10-16	.8	11 00 N	88 02 W	1.0	1	3	27.9	31.66	10	5	12	1	2	
										20	3	2	2	3	
										30	3	2	3	2	
										80	1	1			
										90	1				
										100	2	1			
70	90-10-16	.7	11 32 N	89 29 W	1.0	5	3	29.7	31.87	10	8	5	1	8	
										30	8	6	2	8	
										200	8	7	3	8	
										500	1	1			
										500	1	1			
71	90-10-17	1.0	10 15 N	92 16 W	2.0	5	2	27.6	33.13	10	5	8	1	4	
										20	5	12	2	5	
										30	1	1	3	3	
										100	2	2			
										400	2				
72	90-10-18	.3	9 38 N	93 38 W	1.0	5	2	26.8	34.00	10	5	8	2	4	
										30	3	7	3	3	
73	90-10-18	1.0	8 48 N	94 58 W	4.0	5	3	28.1	32.37	10	6	9	1	5	
										20	6	20	2	4	
										30	4	15			
										100	3	2			
										300	1				
										400	2				
										500	1	1			
	90-10-19		8 36 N	95 26 W	0.0					30		2			
74	90-10-19	1.0	7 39 N	97 28 W	4.0	5	3	27.2	33.09	10	6	13	1	3	

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
74	90-10-19	1.0	7 39 N	97 28 W	4.0	5	3	27.2	33.09	20	5	13	2	4	
										30	5	19			
										100	3	3			
										300	1				
	90-10-20		7 27 N	97 56 W	0.0					30		2			
75	90-10-20	1.0	6 57 N	100 01 W	4.0	5	3	27.3	33.17	10	8	1	1	3	
										20	8	12	2	3	
										30	8	5	3	1	
										100	8	10			
										300	1	1			
										400	1	1			
76	90-10-21	1.0	9 15 N	97 39 W	4.0	5	3	28.2	32.82	10	3	7	1	3	
										20	6	17	2	4	
										30	5	13	3	2	
										100	2	2			
										200	4				
										400	1				
	90-10-22		9 33 N	97 17 W	0.0					30		6			
77	90-10-22	1.0	10 47 N	95 30 W	4.0	5	3	27.8	33.60	10	5	13	2	6	
										30	4	8			
78	90-10-30	1.4	15 56 N	99 38 W	3.0	4	2	30.0	33.17	10	4	14	1	1	
										30	1	1	2	3	
										100	2	3			
										400	1	1			
										500	2	4			
										500	1	2			
										500	1	1			
										500	1	1			
										500	1	1			
										500	4				
79	90-10-31	1.0	16 25 N	102 52 W	1.0	4	1	30.5	33.34	10	1	1	1	1	
										30	1	1	2	6	
										80	1		3	2	
										90	4				
										100	1	1			
										500	1	1			
	90-11-01		16 18 N	104 24 W	0.0	5	1	29.3	33.30	10	2		3	3	
										20	2	1			
										30	1				
80	90-11-01	1.0	18 23 N	104 16 W	3.0	4	1	29.1	33.55	10	4	11	2	5	
										20	2	2	3	2	
										30	3	8			
										400	1	1			
										500	2	2			
81	90-11-01	1.0	18 33 N	104 16 W	2.0	4	1	29.2	33.57	10	4	10	1	1	
										20	1	2	2	4	
										90	1		3	1	

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
81	90-11-01	1.0	18 33 N	104 16 W	2.0	4	1	29.2	33.57	500	1	1			
82	90-11-08	1.0	16 43 N	105 48 W	3.0	5	2	28.5	33.19	10	2	5	1	3	
										20	4	12	2	4	
										30	2	3	3	2	
										100	1	1			
										200	1	2			
										400	1				
										500	1	1			
										500	1	1			
83	90-11-09	1.0	13 49 N	106 05 W	3.0	5	1	28.8	33.18	10	4	9	1	3	
										20	4	9	2	4	
										30	3	6			
										100	2	3			
										400	2				
										500	1				
	90-11-10		13 12 N	106 18 W	0.0					30		2			
84	90-11-10	1.0	11 03 N	107 19 W	3.0	5	3	28.4	33.20	10	6	15	1	3	
										20	2	2	2	4	
										30	4	13	3	2	
										200	4	1			
	90-11-10		11 04 N	107 19 W	0.0					20		1			
85	90-11-11	.8	10 34 N	108 27 W	3.0	1	2	28.2	33.09	20	1	1	2	2	
										200	1	1	3	2	
										500	4				
	90-11-11		10 34 N	108 28 W	0.0					20		1			
86	90-11-12	1.0	8 18 N	112 33 W	3.0	5	2	28.1	33.34	10	1	2	1	2	
										20	2	4	2	2	
										30	1				
										100	2	3			
										300	1	1			
87	90-11-13	1.0	5 15 N	113 15 W	4.0	5	3	26.8	34.32	10	2	5	1	2	
										20	3	10	2	3	
										30	3	8			
										100	4	17			
										300	1	2			
88	90-11-14	1.0	1 55 N	113 28 W	4.0	5	3	24.0	34.45	10	1		1	2	
										20	3	8	2	4	
										30	3	5			
										100	6	40			
										300	1				
										400	1				
	90-11-15		1 26 N	113 32 W	0.0					30		2			
89	90-11-15	1.0	0 26 N	115 53 W	4.0	5	3	23.6	34.76	10	1	1	1	4	
										20	1	1	2	5	
										30	2				
										100	6	35			
										300	1				

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
90	90-11-16	1.0	2 28 N	117 02 W	4.0	5	1	25.6	34.49	10	2	3	1	3	
										20	3	8	2	4	
										30	2	2			
										100	5	13			
										300	1				
	90-11-17		3 00 N	116 59 W	0.0					30		8			
91	90-11-17	.8	3 46 N	116 56 W	5.0	5	2			10	1		1	2	
										20	2	4	2	3	
										30	2	1			
										125	3	3			
92	90-11-17	1.0	5 53 N	116 35 W	4.0	5	2			20	3	8	1	2	
										30	1	1	2	3	
										100	4	11			
	90-11-18		7 03 N	116 28 W	0.0					30		8			
93	90-11-18	1.0	9 16 N	116 16 W	3.0	5	2			20	1	1	1	2	
										100	4	6	2	3	
										500	4				
	90-11-19		9 27 N	115 45 W	0.0					20		1			
94	90-11-19	1.0	10 38 N	113 21 W	5.0	5	3			10	2		1	1	
										20	2	3	2	2	
										30	2	2			
										100	9				
										300	1	1			
										500	3	2			
95	90-11-20	1.0	11 34 N	110 54 W	4.0	1	2			10	2	1	1	3	
										20	2	4	2	4	
										30	2	4			
										100	4	4			
										400	2				
	90-11-21	1.0	11 44 N	111 32 W	0.0					30		5			
96	90-11-21	1.0	12 44 N	114 33 W	1.0	1	1			10	3	5	1	2	
										20	3	6	2	4	
										30	2	4			
										100	4	5			
										200	4				
										300	1	1			
										400	2	3			
	90-11-22		12 57 N	115 08 W	0.0					30		5			
97	90-11-22	1.0	13 47 N	113 53 W	4.0	1	2			10	1	1	1	2	
										20	3	5	2	3	
										30	3	3			
										100	3				
										300	1				
										400	2	3			
98	90-11-23	1.0	14 44 N	112 40 W	3.0	2	2			10	3	8	1	2	
										20	2	6	2	3	
										30	2				

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
98	90-11-23	1.0	14 44 N	112 40 W	3.0	2	2			100	2				
										200	3				
										400	2	3			
	90-11-24		14 54 N	113 17 W	0.0					20		2			
										30		8			
99	90-11-24	1.0	15 50 N	116 09 W	3.0	2	2			10	2	4	1	2	
										20	3	9	2	3	
										30	1	1			
										100	3	4			
	90-11-25		15 55 N	116 22 W	0.0					30		1			
100	90-11-25	1.0	16 37 N	113 20 W	3.0	2	2			10	4	11	1	3	
										20	4	20	2	4	
										30	3	7	3	1	
										90	1	1			
										100	4	4			
										200	1	1			
										500	1				
101	90-11-26	.5	16 58 N	111 46 W	2.0	5	2			10	3	4	3	2	
										20	1	1			
										30	1	1			
	90-11-27		17 32 N	111 46 W	0.0					30		1			
102	90-11-27	1.0	18 01 N	113 42 W	4.0	3	2			10	3	3	2	4	
										20	2	4	3	2	
										30	4	9			
										100	1				
										400	3				
103	90-11-28	1.0	18 13 N	114 24 W	4.0	5	3			20	1		1	1	
										30	1		2	1	
										300	1	1	3	1	
104	90-11-28	1.0	18 34 N	113 37 W	4.0	3	2			10	1	1	1	1	
										20	2	3	2	4	
										30	3	8			
										100	2				
										200	4				
	90-11-29		18 54 N	112 20 W	0.0					30		1			
105	90-11-29	1.0	19 26 N	111 06 W	4.0		2			10	2	5	2	3	
										20	2	3	3	1	
										30	2	3	1	1	
										100	3				
										400	1	1			
	90-11-29		19 18 N	110 49 W	0.0					30		2			
106	90-11-30	1.0	19 09 N	109 54 W	3.0	4	2			10	4	11	2	5	
										30	2	3	3	1	
										90	1	1			
107	90-12-01	1.0	21 17 N	111 08 W	4.0	4	1			10	8	1	2	3	
										20	8	2			
										30	8	2			

Table 5. continued.

Station[1] Number	Date Y/M/D	Hours of Effort	Location Latitude	Location Longitude	Sea[2] State	Moon[3] Phase	Sky[4] Cond.	SST (C)	SSS (%)	Fish[5] Species	Relative[6] Abundance (Fish)	Number Collected (Fish)	Squid[7] Type	Relative[6] Abundance (Squid)	Number Collected (Squid)
107	90-12-01	1.0	21 17 N	111 08 W	4.0	4	1			90	1	1			
										100	1	1			
										300	1				
	90-12-02		21 52 N	111 34 W	0.0					30		1			
108	90-12-02	1.0	23 52 N	113 25 W	3.0	4	1			10	1	1	1	4	
										20	1	1	2	2	1
										30	1	1			
										100	4	16			
										500	2	8			
										500	1	1			
										500	4				
109	90-12-03	1.0	26 25 N	113 48 W	2.0	4	1			500	6		1	1	
										500	3				
										500	3	3			
110	90-12-04	1.0	28 01 N	117 03 W	2.0	5	1			30	1	1	1	2	
										100	5	22	2	3	3
										500	1				

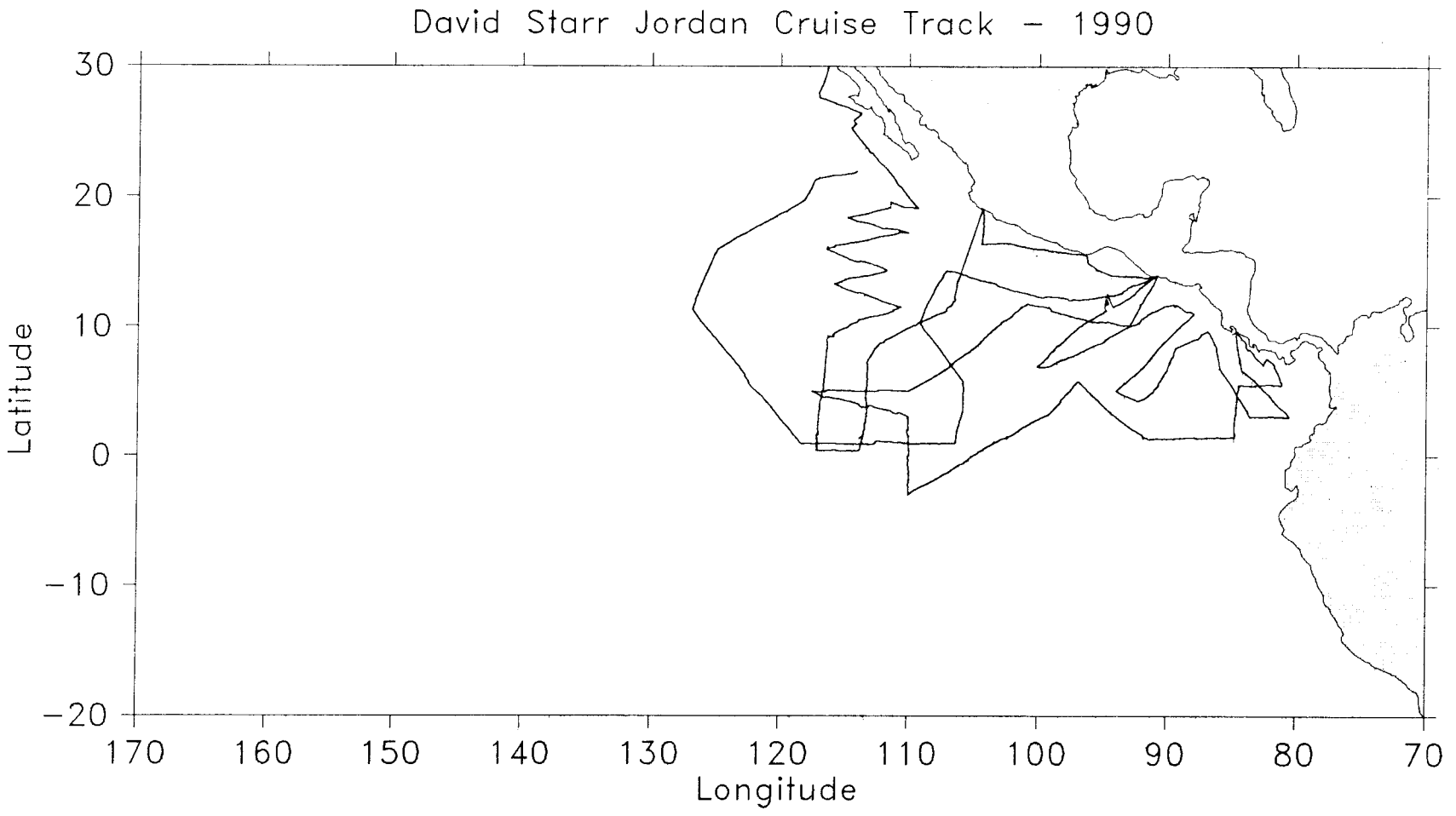
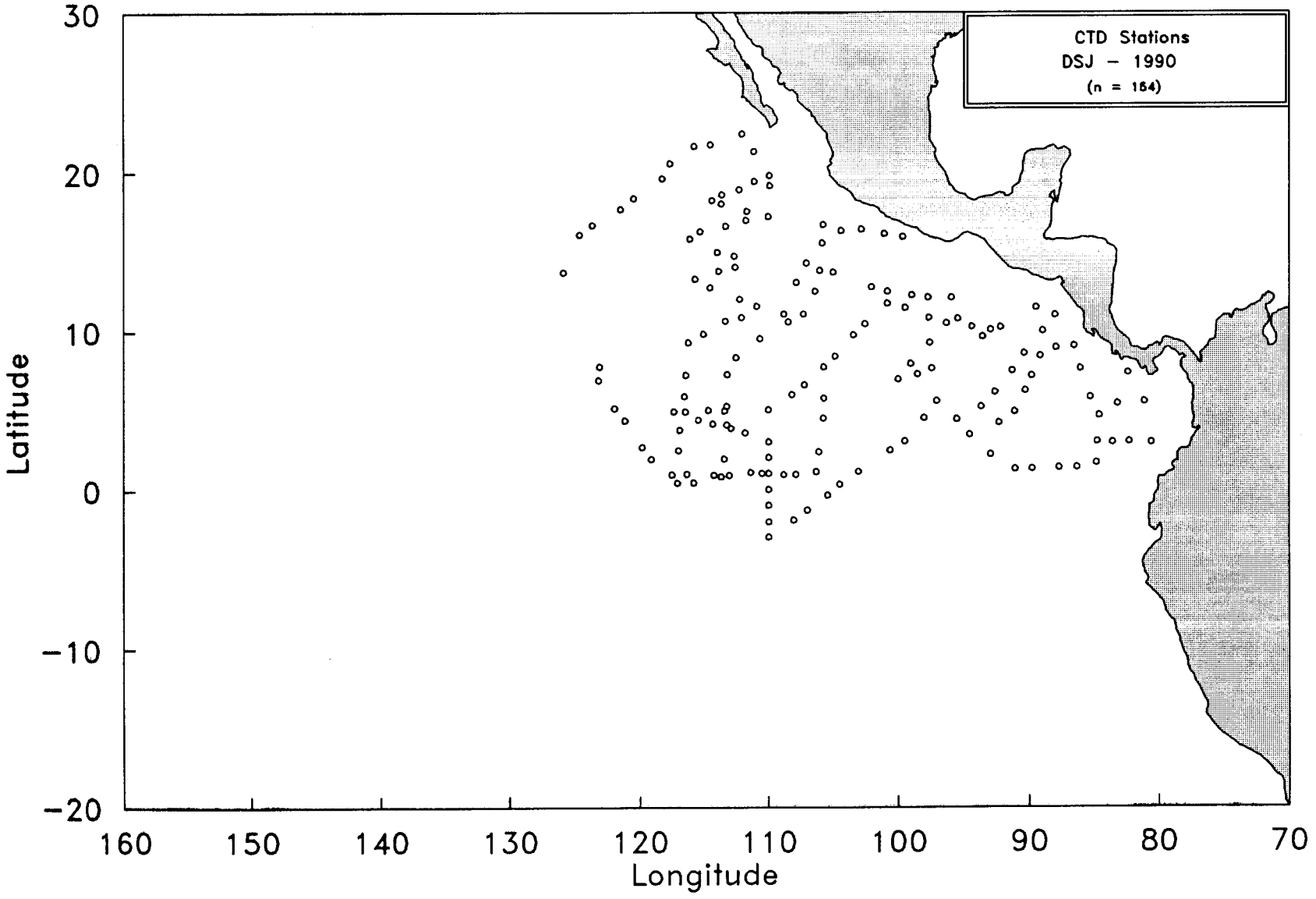


Figure 1. Cruise track, *Jordan*, 28 July - 6 December, 1990


CTD Stations
DSJ – 1990
(n = 154)
30
20
10
0
−10
−20
Latitude
160
150
140
130
120
110
100
90
80
70
Longitude

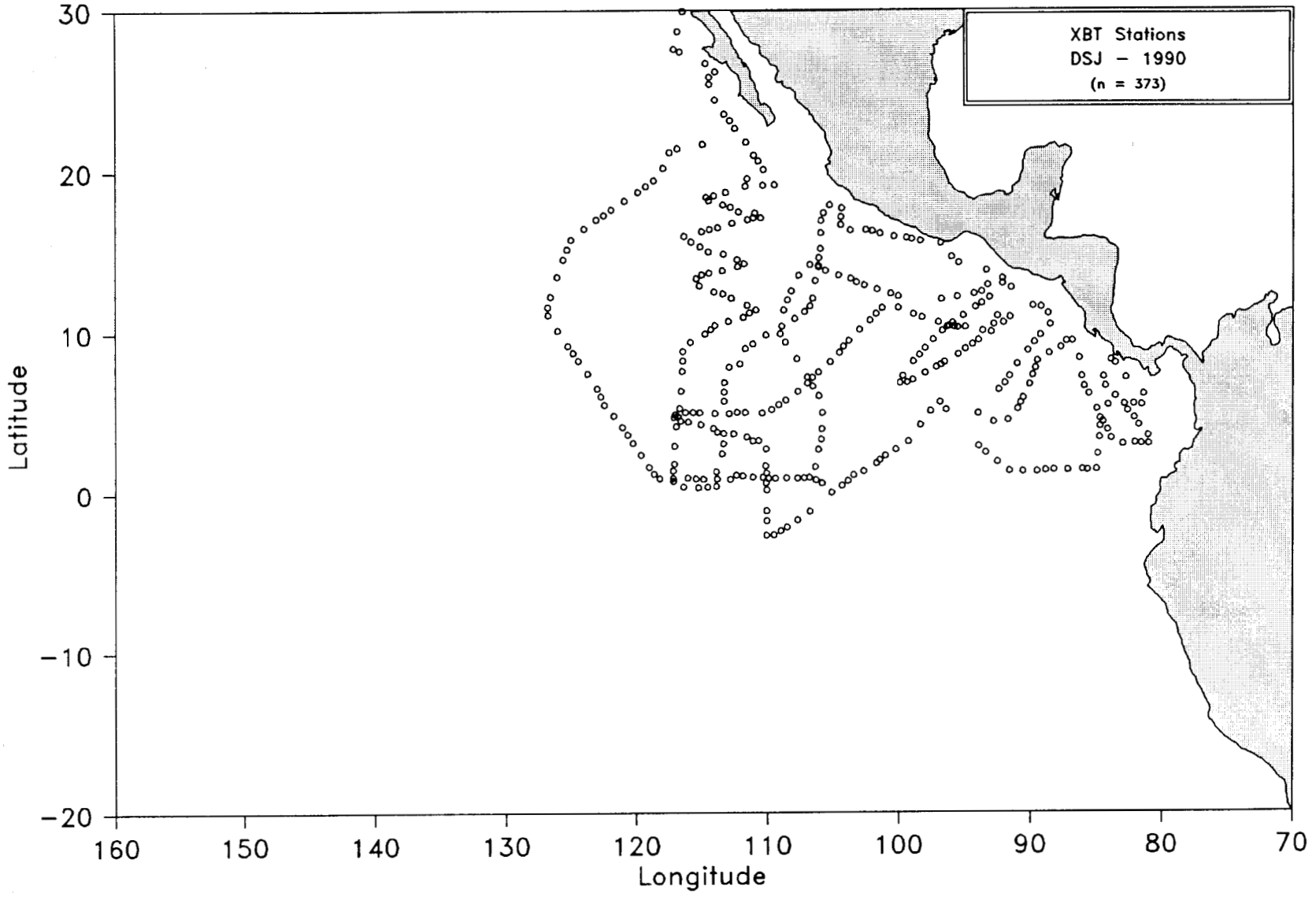


Figure 3. XBT deployments, *Jordan*, 28 July - 6 December, 1990

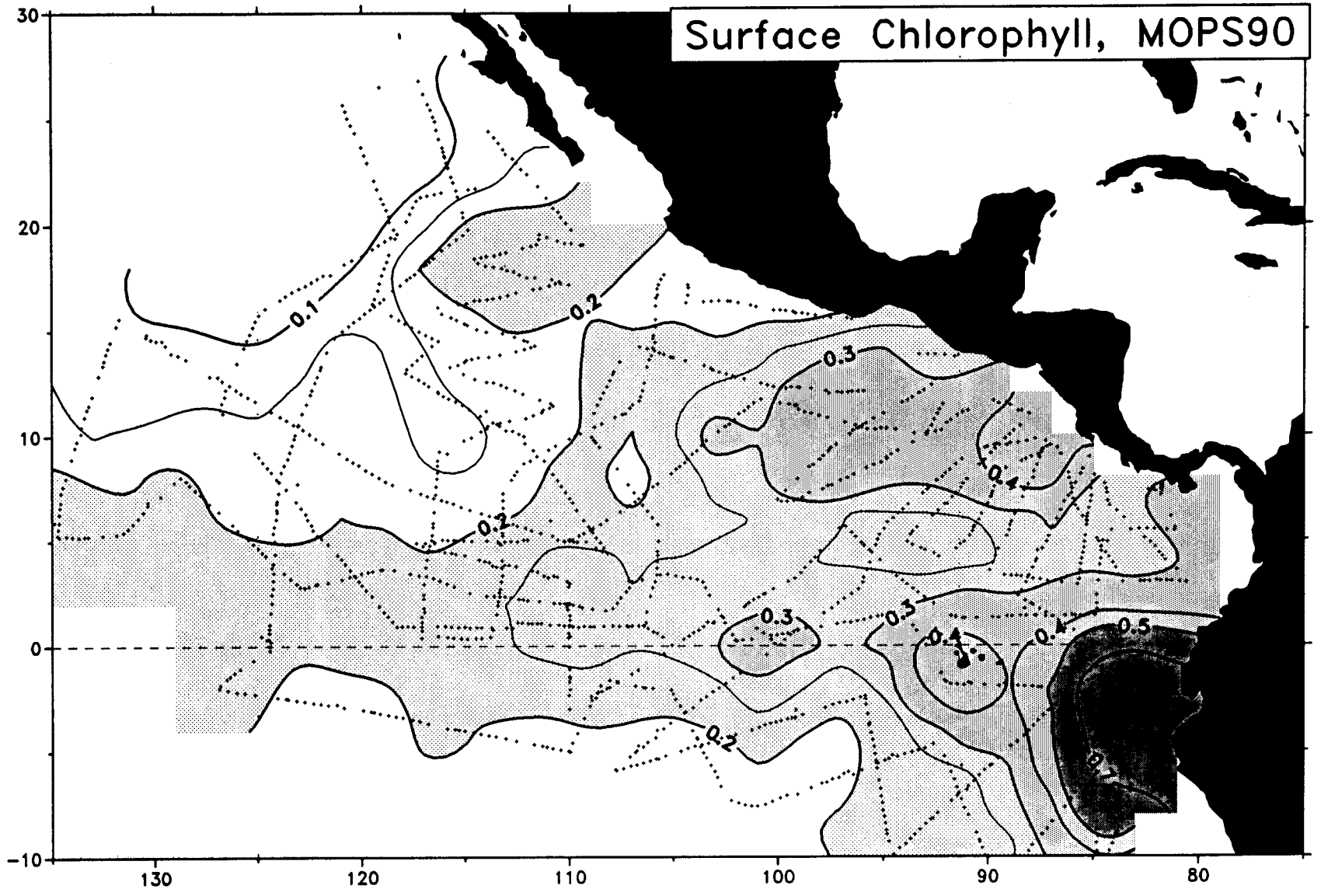


Figure 4. Surface chlorophyll (mg · m^{-3}), *Jordan* and *McArthur*, 28 July - 6 December, 1990

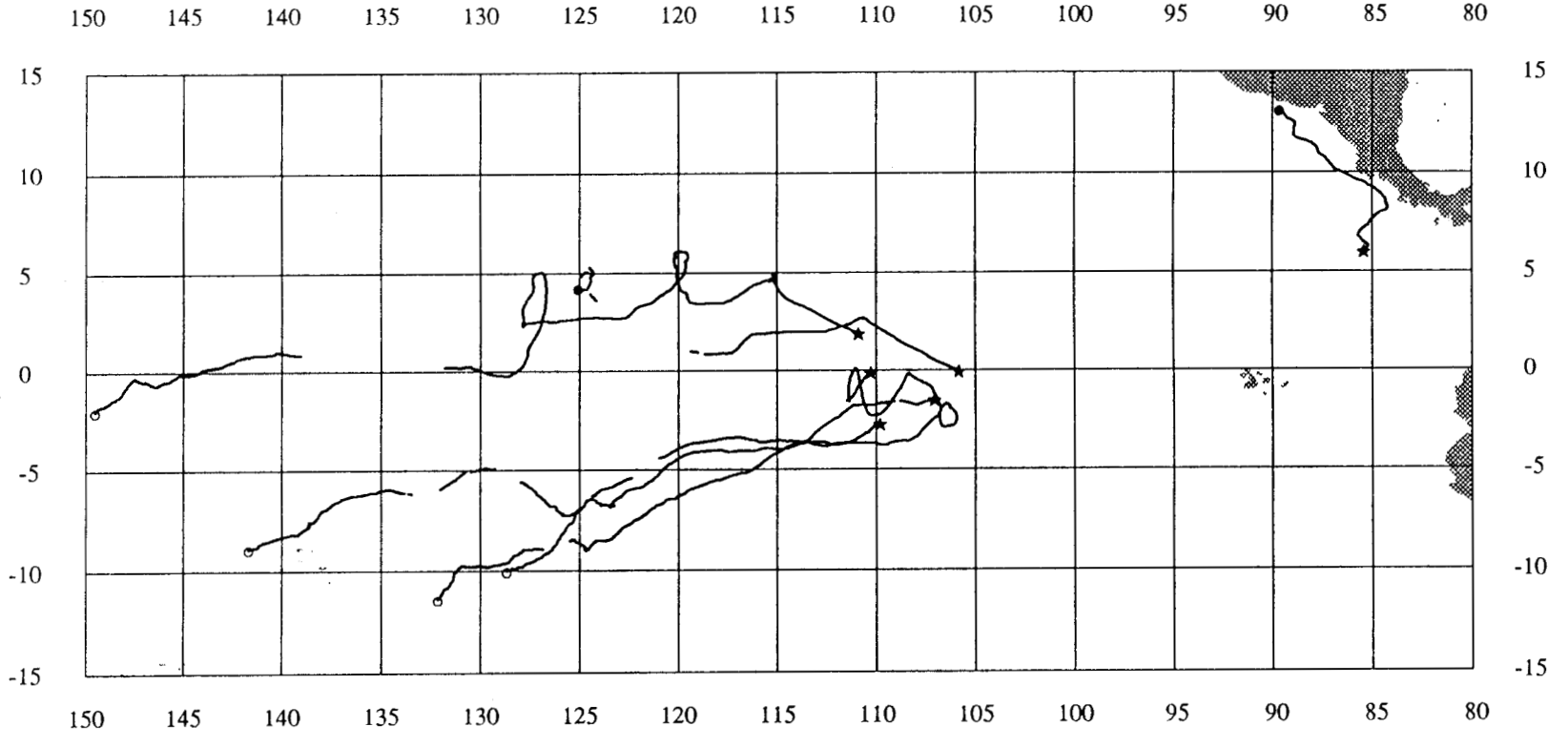
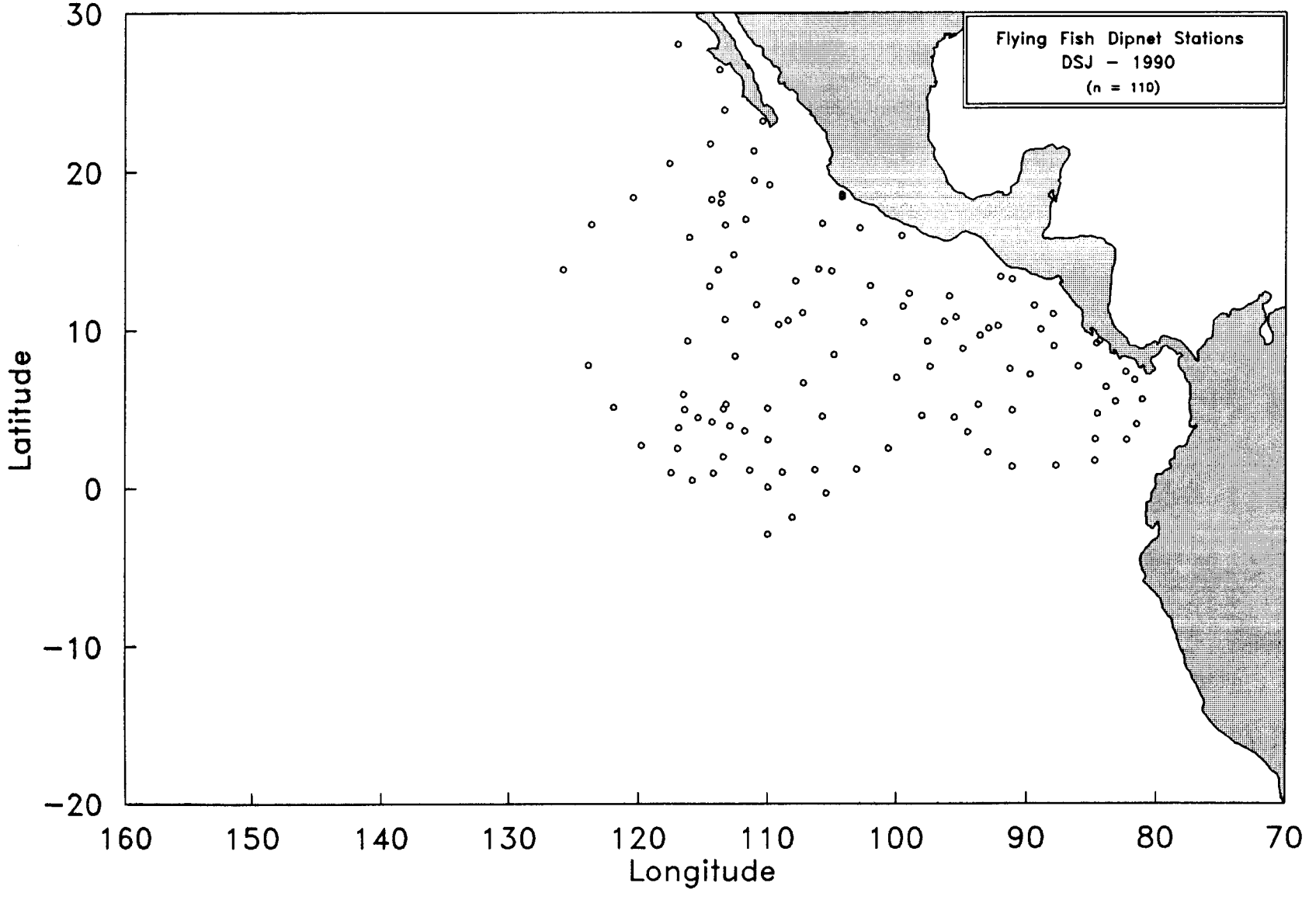


Figure 5. Tracks of six drifting buoys, *Jordan*, 28 July - 6 December, 1990

★ Location of buoy deployment
• Location of last signal from buoy


Flying Fish Dipnet Stations
DSJ - 1990
(n = 110)
30
20
10
0
-10
-20
Latitude
160
150
140
130
120
110
100
90
80
70
Longitude

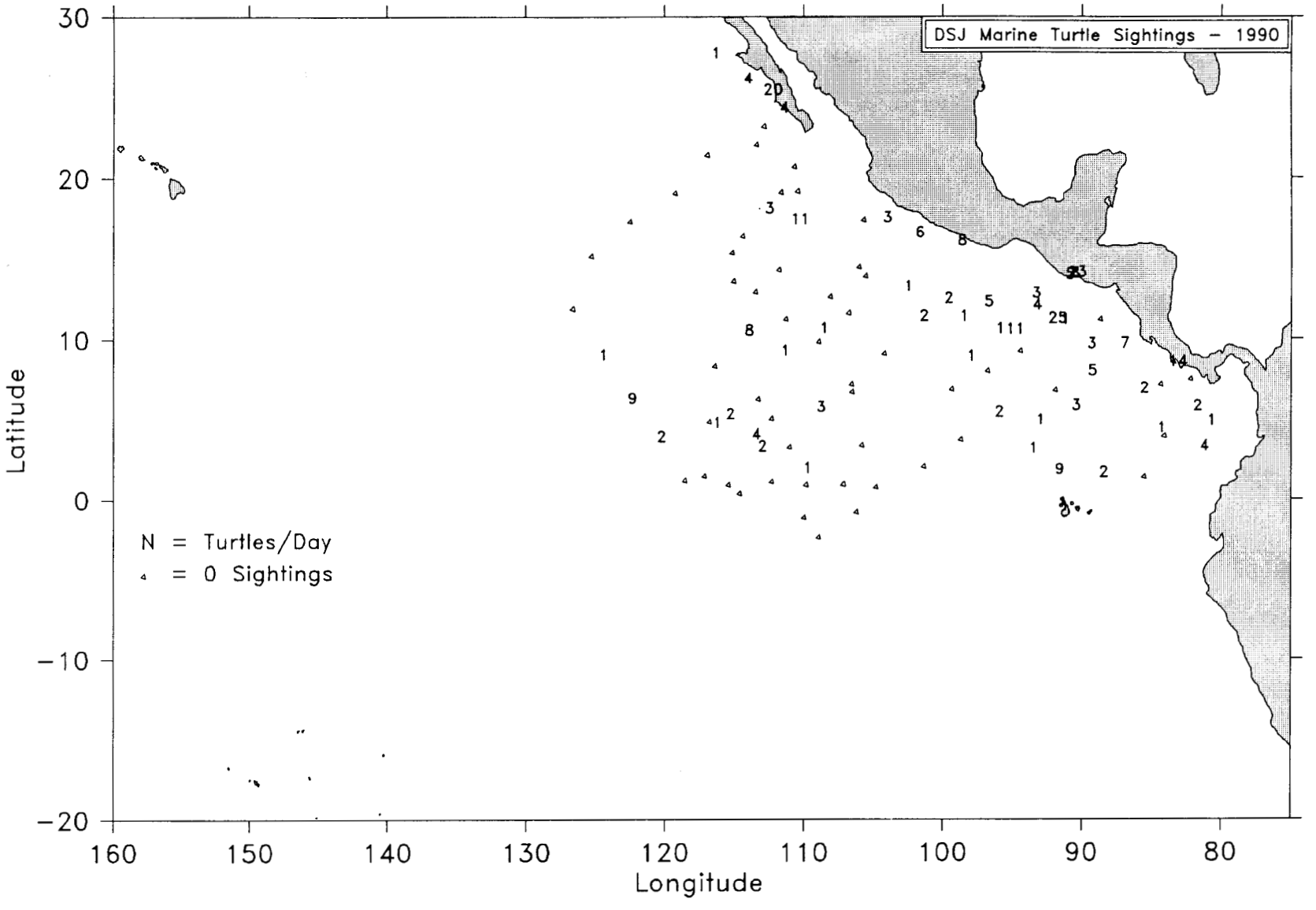


Figure 7. Locations of turtle sightings, *Jordan*, 28 July - 6 December, 1990

APPENDIX A

Station No.	1-001	Date - GMT	04 AUG 90
Station Name	D901-001	Time - GMT	0328
Latitude	21.43.8 N	Date - LOC	03 AUG 90
Longitude	114.31.5 W	Time - LOC	2112

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.90	34.39	0.06	0.02	--	4.46
20	25.20	34.37	0.05	0.02	--	4.43
40	24.04	34.35	0.06	0.03	--	4.52
60	22.82	34.29	0.15	0.08	--	4.65
80	18.08	34.03	0.34	0.42	--	4.87
100	15.90	34.08	0.21	0.46	--	4.06
125	14.27	34.38	0.06	0.23	--	2.50
150	12.81	34.36	0.01	0.06	--	1.88

Station No.	1-002	Date - GMT	04 AUG 90
Station Name	D901-002	Time - GMT	1203
Latitude	21.37.9 N	Date - LOC	04 AUG 90
Longitude	115.48.4 W	Time - LOC	0503

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.21	34.40	--	--	--	4.24
20	23.84	34.28	--	--	--	4.46
40	22.85	34.21	--	--	--	4.48
60	20.48	34.11	--	--	--	4.71
80	18.99	34.02	--	--	--	4.94
100	16.89	33.95	--	--	--	4.85
125	13.89	33.94	--	--	--	4.00
150	12.71	34.19	--	--	--	2.78

Station No.	1-003	Date - GMT	05 AUG 90
Station Name	D901-003	Time - GMT	0412
Latitude	20.32.2 N	Date - LOC	04 AUG 90
Longitude	117.41.5 W	Time - LOC	2112

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.38	34.69	0.04	0.02	--	3.86
20	25.84	34.64	0.05	0.02	--	4.40
40	22.54	34.52	0.05	0.02	--	4.79
60	19.98	34.22	0.10	0.05	--	4.97
80	18.77	34.12	0.13	0.06	--	5.00
100	17.64	34.02	0.28	0.31	--	4.95
125	14.43	33.96	0.13	0.35	--	4.21
150	12.71	34.10	0.05	0.13	--	2.82

Station No.	1-004	Date - GMT	05 AUG 90
Station Name	D901-004	Time - GMT	1149
Latitude	19.36.0 N	Date - LOC	05 AUG 90
Longitude	118.16.9 W	Time - LOC	0449

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.21	34.69	0.06	0.02	1.82	3.94
11	27.17	34.76	0.06	0.02	1.97	4.13
20	26.64	34.69	0.05	0.02	1.05	4.24
31	26.53	34.69	0.05	0.02	1.68	4.24
40	26.30	34.67	0.10	0.04	1.18	4.34
60	22.68	34.50	0.13	0.08	--	4.64
80	20.73	34.41	0.23	0.13	0.05	4.71
100	19.11	34.15	0.24	0.16	--	4.85
125	17.56	34.05	0.18	0.30	0.27	4.80
150	14.23	33.93	0.10	0.25	--	4.32

Station No.	1-005	Date - GMT	06 AUG 90
Station Name	D901-005	Time - GMT	0412
Latitude	18.21.1 N	Date - LOC	05 AUG 90
Longitude	120.28.8 W	Time - LOC	2112

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.97	34.70	0.06	0.02	--	4.45
20	26.69	34.62	0.06	0.02	--	4.39
40	24.97	34.45	0.07	0.02	--	4.59
60	24.46	34.50	0.11	0.05	--	4.64
80	22.99	34.51	0.19	0.12	--	4.75
100	19.49	34.21	0.22	0.29	--	5.09
125	15.66	34.17	0.16	0.31	--	3.77
150	14.27	34.21	0.06	0.13	--	2.65

Station No.	1-006	Date - GMT	06 AUG 90
Station Name	D901-006	Time - GMT	1230
Latitude	17.40.0 N	Date - LOC	06 AUG 90
Longitude	121.30.0 W	Time - LOC	0530

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.81	34.60	0.05	0.02	1.47	4.01
11	26.79	34.57	0.05	0.02	3.22	4.32
20	26.80	34.57	0.05	0.02	3.36	4.29
31	26.79	34.57	0.05	0.02	3.05	4.22
40	25.97	34.51	0.06	0.02	0.89	4.48
60	20.85	34.33	0.13	0.05	--	4.97
80	17.74	34.08	0.32	0.46	0.69	4.64
100	15.67	34.06	0.25	0.43	--	4.39
125	13.18	34.06	0.11	0.29	0.13	3.61
150	11.81	34.34	0.03	0.04	--	2.12

Station No.	1-007	Date - GMT	07 AUG 90
Station Name	D901-007	Time - GMT	0423
Latitude	16.39.3 N	Date - LOC	06 AUG 90
Longitude	123.39.7 W	Time - LOC	2123

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.52	34.69	0.05	0.01	--	4.30
20	25.20	34.69	0.05	0.01	--	4.24
40	23.82	34.55	0.06	0.02	--	4.61
60	22.92	34.57	--	--	--	4.80
80	21.29	34.61	0.12	0.04	--	4.69
100	20.10	34.55	0.16	0.07	--	4.83
125	16.55	34.28	0.26	0.39	--	4.47
150	14.66	34.16	0.20	0.53	--	3.87

Station No.	1-008	Date - GMT	07 AUG 90
Station Name	D901-008	Time - GMT	1219
Latitude	16. 3.6 N	Date - LOC	07 AUG 90
Longitude	124.38.2 W	Time - LOC	0519

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.71	34.70	0.05	0.02	0.95	4.21
11	26.72	34.71	0.05	0.02	2.05	4.32
20	26.72	34.71	0.05	0.02	0.94	4.37
29	26.72	34.71	0.06	0.02	2.22	4.34
40	25.13	34.53	0.07	0.02	1.00	4.51
60	23.78	34.44	0.11	0.03	0.24	4.79
80	21.89	34.58	0.14	0.07	--	4.74
100	20.98	34.62	0.19	0.14	0.19	4.82
125	19.12	34.47	0.25	0.37	--	4.73
150	14.93	34.37	0.11	0.23	--	2.35

Station No.	1-009	Date - GMT	08 AUG 90
Station Name	D901-009	Time - GMT	0348
Latitude	13.41.7 N	Date - LOC	07 AUG 90
Longitude	125.51.6 W	Time - LOC	2048

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.76	34.63	--	--	--	4.23
20	27.77	34.63	--	--	--	4.18
40	27.77	34.63	--	--	--	4.28
60	25.19	34.55	--	--	--	4.58
80	18.41	34.32	--	--	--	3.35
100	14.73	34.38	--	--	--	1.23
125	13.25	34.58	--	--	--	0.92
150	12.75	34.75	--	--	--	0.43

Station No.	1-010	Date - GMT	10 AUG 90
Station Name	D901-010	Time - GMT	0420
Latitude	07.45.0 N	Date - LOC	09 AUG 90
Longitude	123. 6.1 W	Time - LOC	2120

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.88	33.94	0.12	0.06	--	3.95
20	27.73	33.96	0.14	0.07	--	4.03
40	27.71	33.96	0.16	0.08	--	4.01
60	27.72	33.97	0.23	0.11	--	4.02
80	27.25	34.66	0.33	0.35	--	3.90
100	20.09	34.68	0.28	0.33	--	3.12
125	14.04	34.79	0.09	0.22	--	0.91
150	13.28	34.80	0.02	0.11	--	0.67

Station No.	1-011	Date - GMT	10 AUG 90
Station Name	D901-011	Time - GMT	1215
Latitude	06.53.5 N	Date - LOC	10 AUG 90
Longitude	123.10.7 W	Time - LOC	0515

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.66	34.03	0.16	0.08	1.72	3.91
10	27.66	34.08	0.15	0.08	2.29	3.96
20	27.67	34.08	0.16	0.08	0.51	3.86
27	27.66	34.08	0.16	0.08	2.33	3.88
40	27.65	34.08	0.17	0.08	0.79	3.97
60	27.61	34.10	0.22	0.13	0.37	3.98
80	27.31	34.36	0.25	0.14	--	4.01
100	25.48	34.75	0.28	0.30	0.20	3.70
125	17.42	34.66	0.13	0.24	--	2.64
150	13.88	34.65	0.04	0.11	--	1.47

Station No.	1-012	Date - GMT	11 AUG 90
Station Name	D901-012	Time - GMT	0356
Latitude	05. 7.3 N	Date - LOC	10 AUG 90
Longitude	121.56.6 W	Time - LOC	2056

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.95	34.70	0.26	0.13	--	3.97
20	25.93	34.73	0.27	0.12	--	4.09
40	24.96	34.69	0.42	0.27	--	4.00
60	24.13	34.68	0.34	0.30	--	3.78
80	23.11	34.69	0.20	0.22	--	3.69
100	20.94	34.75	0.10	0.18	--	3.25
125	16.07	34.63	0.08	0.16	--	2.37
150	13.72	34.67	0.03	0.10	--	1.70

Station No.	1-013	Date - GMT	11 AUG 90
Station Name	D901-013	Time - GMT	1227
Latitude	04.20.4 N	Date - LOC	11 AUG 90
Longitude	121. 9.7 W	Time - LOC	0527

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.99	34.71	0.18	0.11	2.64	4.14
10	26.00	34.71	0.17	0.11	7.18	4.07
20	26.01	34.71	0.17	0.11	6.22	4.04
27	26.00	34.71	0.20	0.12	4.65	4.13
40	25.84	34.69	0.19	0.11	2.33	4.17
60	25.35	34.67	0.22	0.16	0.49	4.21
80	24.92	34.68	0.24	0.20	--	4.12
100	18.74	34.77	0.18	0.25	0.44	3.21
125	15.55	34.86	0.10	0.25	--	2.33
150	13.96	34.90	0.06	0.18	--	1.60

Station No.	1-014	Date - GMT	12 AUG 90
Station Name	D901-014	Time - GMT	0347
Latitude	02.39.8 N	Date - LOC	11 AUG 90
Longitude	119.49.2 W	Time - LOC	2047

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.28	34.56	0.27	0.14	--	3.99
20	25.26	34.56	0.27	0.11	--	4.29
40	25.19	34.55	0.30	0.16	--	4.35
60	25.18	34.56	0.31	0.18	--	4.30
80	25.14	34.63	0.26	0.16	--	4.32
100	21.44	34.67	0.17	0.21	--	3.89
125	14.05	34.90	0.06	0.14	--	1.75
150	13.39	34.92	0.03	0.07	--	1.41

Station No.	1-015	Date - GMT	12 AUG 90
Station Name	D901-015	Time - GMT	1215
Latitude	01.53.8 N	Date - LOC	12 AUG 90
Longitude	119. 8.6 W	Time - LOC	0515

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.83	34.49	0.32	0.20	4.64	3.95
9	25.82	34.51	0.29	0.16	10.17	3.95
16	25.83	34.52	0.31	0.17	12.71	4.07
20	25.83	34.53	0.31	0.18	11.04	4.08
40	25.80	34.53	0.31	0.18	4.60	4.09
60	25.62	34.52	0.32	0.20	0.65	4.09
80	23.13	34.85	0.23	0.17	0.15	3.90
100	16.51	34.76	0.12	0.13	--	2.55
125	13.72	34.93	0.07	0.14	--	1.46
150	13.35	34.92	0.01	0.04	--	1.36

Station No.	1-016	Date - GMT	13 AUG 90
Station Name	D901-016	Time - GMT	0330
Latitude	00.55.3 N	Date - LOC	12 AUG 90
Longitude	117.32.1 W	Time - LOC	2030

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	24.66	34.54	0.20	0.08	--	3.95
20	24.61	34.58	0.21	0.08	--	3.93
40	23.98	34.76	0.19	0.07	--	3.90
60	23.83	34.86	0.22	0.12	--	3.81
80	19.23	34.69	0.27	0.29	--	3.57
100	15.52	34.86	0.07	0.12	--	2.33
125	13.88	34.84	0.02	0.04	--	2.12
150	13.48	34.87	0.01	0.04	--	1.95

Station No.	1-017	Date - GMT	13 AUG 90
Station Name	D901-017	Time - GMT	1219
Latitude	00.57.5 N	Date - LOC	13 AUG 90
Longitude	116.22.1 W	Time - LOC	0519

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.81	34.91	0.23	0.12	4.45	3.83
9	23.81	34.91	0.20	0.12	7.41	3.86
16	23.82	34.91	0.19	0.11	6.86	3.76
20	23.83	34.91	0.24	0.14	5.60	3.73
40	23.81	34.91	0.20	0.12	2.14	3.76
60	23.78	34.91	0.22	0.14	0.54	3.73
80	20.00	34.49	0.30	0.27	0.40	3.42
100	14.28	34.83	0.09	0.13	--	2.05
125	13.77	34.89	0.03	0.05	--	1.78
150	13.36	34.91	0.01	0.04	--	1.39

Station No.	1-018	Date - GMT	14 AUG 90
Station Name	D901-018	Time - GMT	0317
Latitude	00.53.3 N	Date - LOC	13 AUG 90
Longitude	114.14.7 W	Time - LOC	2017

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.77	34.86	0.22	0.08	--	3.77
20	23.69	34.87	0.21	0.11	--	3.63
40	23.61	34.87	0.25	0.12	--	3.58
60	23.58	34.87	0.30	0.15	--	3.64
80	19.12	34.80	0.28	0.22	--	2.79
100	18.60	34.82	0.25	0.27	--	2.20
125	14.39	34.91	0.11	0.21	--	1.34
150	13.55	34.92	0.03	0.05	--	1.36

Station No.	1-019	Date - GMT	14 AUG 90
Station Name	D901-019	Time - GMT	1217
Latitude	00.52.9 N	Date - LOC	14 AUG 90
Longitude	113. 3.0 W	Time - LOC	0517

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.51	34.99	0.22	0.11	2.52	3.39
9	23.40	34.93	0.21	0.13	6.30	3.29
16	23.39	34.93	0.21	0.16	5.55	3.28
20	23.37	34.93	0.22	0.11	5.21	3.32
40	23.30	34.91	0.24	0.13	1.52	3.30
60	22.85	34.89	0.25	0.23	0.66	3.23
80	21.11	34.77	0.20	0.20	0.21	2.76
100	15.71	34.88	0.15	0.26	--	1.66
125	15.10	34.91	0.12	0.20	--	1.47
150	14.14	34.93	0.08	0.17	--	1.43

Station No.	1-020	Date - GMT	15 AUG 90
Station Name	D901-020	Time - GMT	0328
Latitude	01. 3.6 N	Date - LOC	14 AUG 90
Longitude	111.23.3 W	Time - LOC	2028

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	24.74	34.38	0.32	0.12	--	3.27
20	24.64	34.43	0.32	0.12	--	3.21
40	23.59	34.70	0.29	0.21	--	3.23
60	22.54	34.87	0.28	0.23	--	3.08
80	22.36	34.86	0.21	0.21	--	3.00
100	16.66	34.85	0.12	0.22	--	2.15
125	14.22	34.93	0.07	0.18	--	1.50
150	13.87	34.93	0.05	0.13	--	1.44

Station No.	1-021	Date - GMT	15 AUG 90
Station Name	D901-021	Time - GMT	1219
Latitude	01. 0.4 N	Date - LOC	15 AUG 90
Longitude	110.30.7 W	Time - LOC	0519

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.28	34.28	0.23	0.10	3.23	2.79
9	25.29	34.30	0.22	0.10	6.97	2.82
16	25.29	34.31	0.22	0.08	7.33	2.84
20	25.29	34.31	0.22	0.18	4.55	2.92
40	23.83	34.45	0.28	0.22	1.88	2.80
60	22.97	34.55	0.27	0.30	0.44	2.61
80	21.47	34.83	0.17	0.16	0.12	2.62
100	16.25	34.86	0.11	0.20	--	1.86
125	14.42	34.93	0.07	0.19	--	1.38
150	13.69	34.93	0.03	0.10	--	1.25

Station No.	1-022	Date - GMT	16 AUG 90
Station Name	D901-022	Time - GMT	0315
Latitude	00.56.0 N	Date - LOC	15 AUG 90
Longitude	108.50.6 W	Time - LOC	2015

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.44	34.30	0.28	0.11	--	2.85
20	25.38	34.33	0.27	0.10	--	2.85
40	22.81	34.58	0.37	0.30	--	2.70
60	15.83	34.91	0.24	0.33	--	2.07
80	14.97	34.91	0.13	0.23	--	1.63
100	14.28	34.92	0.06	0.14	--	1.45
125	13.34	34.89	0.02	0.07	--	1.40
150	12.74	34.88	0.01	0.04	--	1.50

Station No.	1-023	Date - GMT	16 AUG 90
Station Name	D901-023	Time - GMT	1217
Latitude	00.56.7 N	Date - LOC	16 AUG 90
Longitude	107.54.3 W	Time - LOC	0517

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	24.27	34.31	0.22	0.13	3.45	3.24
9	24.26	34.33	0.22	0.12	3.35	3.10
16	24.26	34.33	0.22	0.12	6.89	3.17
20	24.09	34.37	0.24	0.14	6.11	3.18
40	22.52	34.71	0.26	0.12	3.48	3.16
60	16.10	34.81	0.28	0.39	0.87	1.84
80	14.66	34.91	0.19	0.23	0.04	1.26
100	14.20	34.90	0.07	0.12	--	1.21
125	13.82	34.90	0.04	0.09	--	1.22
150	12.89	34.88	0.02	0.05	--	1.49

Station No.	1-024	Date - GMT	17 AUG 90
Station Name	D901-024	Time - GMT	0358
Latitude	01. 6.7 N	Date - LOC	16 AUG 90
Longitude	106.20.4 W	Time - LOC	2058

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.52	34.54	0.25	0.12	--	3.46
20	22.27	34.77	0.28	0.11	--	3.23
40	21.25	34.83	0.44	0.22	--	4.00
60	21.03	34.84	0.50	0.26	--	2.90
80	18.56	34.84	0.31	0.41	--	2.05
100	15.30	34.87	0.10	0.18	--	1.42
125	13.79	34.91	0.03	0.08	--	1.20
150	13.62	34.91	0.02	0.07	--	1.26

Station No.	1-025	Date - GMT	17 AUG 90
Station Name	D901-025	Time - GMT	1212
Latitude	02.21.5 N	Date - LOC	17 AUG 90
Longitude	106. 7.7 W	Time - LOC	0512

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.22	34.31	0.29	0.14	4.03	3.28
9	25.22	34.31	0.28	0.13	3.59	3.09
16	25.23	34.31	0.30	0.14	7.08	3.11
20	25.23	34.31	0.27	0.13	3.44	3.16
40	25.09	34.34	0.30	0.15	3.43	3.19
60	20.93	34.74	0.31	0.34	0.66	2.52
80	17.52	34.91	0.24	0.48	0.24	2.14
100	14.67	34.95	--	--	--	1.36
125	14.12	34.94	--	--	--	1.39
150	13.90	34.93	--	--	--	1.43

Station No.	1-026	Date - GMT	18 AUG 90
Station Name	D901-026	Time - GMT	0314
Latitude	04.29.6 N	Date - LOC	17 AUG 90
Longitude	105.46.8 W	Time - LOC	2014

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.02	33.76	0.23	0.11	--	2.47
20	27.01	33.78	0.23	0.09	--	2.46
40	26.98	33.83	0.42	0.26	--	2.50
60	25.73	34.31	0.34	0.30	--	2.44
80	17.18	34.60	0.59	1.03	--	1.49
100	13.62	34.67	0.07	0.14	--	1.23
125	12.64	34.78	0.03	0.07	--	1.32
150	12.44	34.83	0.01	0.05	--	1.18

Station No.	1-027	Date - GMT	18 AUG 90
Station Name	D901-027	Time - GMT	1217
Latitude	05.45.7 N	Date - LOC	18 AUG 90
Longitude	105.45.9 W	Time - LOC	0517

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.97	33.66	0.18	0.12	2.68	2.57
9	26.97	33.66	0.19	0.09	10.60	2.57
16	26.97	33.68	0.19	0.09	7.31	2.56
20	26.97	33.68	0.21	0.11	2.72	2.57
40	26.73	33.95	0.32	0.21	2.44	2.62
60	24.55	34.16	0.32	0.41	0.72	2.49
80	19.89	34.21	0.24	0.39	0.11	2.02
100	13.58	34.76	0.08	0.16	--	1.40
125	12.15	34.75	0.05	0.08	--	0.89
150	11.93	34.74	0.01	0.05	--	0.89

Station No.	1-028	Date - GMT	20 AUG 90
Station Name	D901-028	Time - GMT	1214
Latitude	11. 3.8 N	Date - LOC	20 AUG 90
Longitude	108.49.7 W	Time - LOC	0514

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.37	33.27	0.29	0.17	1.41	4.10
9	28.37	33.28	0.28	0.18	4.82	4.09
16	28.38	33.28	0.27	0.18	4.27	4.16
20	28.38	33.28	0.29	0.19	2.27	3.91
40	23.62	34.28	0.51	0.82	1.42	3.30
60	19.34	34.51	0.17	0.26	0.33	1.05
80	14.63	34.72	0.02	0.23	0.19	0.35
100	13.84	34.76	0.00	0.24	--	0.32
125	12.74	34.77	0.01	0.15	--	0.32
150	12.07	34.78	0.00	0.13	--	0.36

Station No.	1-029	Date - GMT	21 AUG 90
Station Name	D901-029	Time - GMT	0250
Latitude	13. 3.0 N	Date - LOC	20 AUG 90
Longitude	107.52.3 W	Time - LOC	1950

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.73	33.34	0.19	0.09	--	3.37
20	28.78	33.40	0.18	0.09	--	3.42
40	28.62	33.72	0.34	0.19	--	3.46
60	23.68	33.95	0.60	1.03	--	2.89
80	18.23	34.55	0.08	0.25	--	1.10
100	15.35	34.71	0.01	0.54	--	0.66
125	13.63	34.75	0.01	0.45	--	0.64
150	12.72	34.78	0.00	0.32	--	0.62

Station No.	1-030	Date - GMT	21 AUG 90
Station Name	D901-030	Time - GMT	1148
Latitude	14.16.4 N	Date - LOC	21 AUG 90
Longitude	107. 5.8 W	Time - LOC	0448

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.63	33.66	--	--	--	3.45
9	28.64	33.66	--	--	--	3.39
16	28.65	33.66	--	--	--	3.40
20	28.64	33.66	--	--	--	3.40
40	25.30	34.31	--	--	--	3.73
60	20.76	34.37	--	--	--	3.44
80	16.72	34.51	--	--	--	1.49
100	14.43	34.72	--	--	--	0.73
125	13.48	34.77	--	--	--	0.69
150	12.85	34.78	--	--	--	0.67

Station No.	1-031	Date - GMT	22 AUG 90
Station Name	D901-031	Time - GMT	0251
Latitude	13.42.5 N	Date - LOC	21 AUG 90
Longitude	105. 2.0 W	Time - LOC	1951

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.63	33.95	0.26	0.11	--	3.07
20	28.07	33.93	0.42	0.21	--	3.16
40	22.64	34.28	0.51	0.31	--	2.52
60	17.36	34.53	0.23	0.27	--	1.14
80	15.08	34.68	0.02	0.32	--	0.73
100	13.76	34.77	0.01	1.25	--	0.69
125	12.92	34.78	0.02	0.49	--	0.68
150	12.39	34.79	0.00	0.33	--	0.68

Station No.	1-032	Date - GMT	22 AUG 90
Station Name	D901-032	Time - GMT	1225
Latitude	13.42.7 N	Date - LOC	22 AUG 90
Longitude	105. 2.6 W	Time - LOC	0525

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.49	33.62	0.18	0.09	3.62	3.59
8	28.47	33.62	0.17	0.10	2.04	3.61
14	28.45	33.63	0.16	0.10	5.33	3.73
20	28.43	33.63	0.17	0.10	2.82	3.73
40	24.60	33.99	0.59	0.64	4.30	3.65
60	18.25	34.51	0.22	0.44	0.47	1.14
80	14.34	34.79	0.03	0.22	0.07	0.47
100	13.50	34.82	0.00	1.30	--	0.45
125	12.86	34.82	0.01	0.60	--	0.45
150	12.47	34.80	0.00	0.35	--	0.45

Station No.	1-033	Date - GMT	23 AUG 90
Station Name	D901-033	Time - GMT	0258
Latitude	12.46.5 N	Date - LOC	22 AUG 90
Longitude	102. 3.8 W	Time - LOC	1958

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.73	33.44	0.29	0.14	--	2.64
20	28.71	33.48	0.31	0.15	--	2.63
40	23.63	34.18	0.55	1.07	--	2.49
60	16.37	34.72	0.03	0.76	--	1.32
80	14.14	34.79	0.01	0.41	--	0.84
100	13.52	34.82	0.01	0.72	--	0.74
125	12.90	34.82	0.00	0.42	--	0.71
150	12.49	34.80	0.00	0.27	--	0.70

Station No.	1-034	Date - GMT	23 AUG 90
Station Name	D901-034	Time - GMT	1215
Latitude	12.29.9 N	Date - LOC	23 AUG 90
Longitude	100.50.3 W	Time - LOC	0515

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.54	33.84	0.25	0.13	6.78	2.36
8	28.37	33.45	0.25	0.14	10.20	2.94
13	28.38	33.45	0.25	0.11	7.02	2.98
20	28.40	33.47	0.26	0.13	7.10	3.01
40	26.46	33.74	0.46	0.47	4.80	2.98
60	17.94	34.56	0.28	0.53	0.55	0.95
80	15.51	34.72	0.02	0.55	0.18	0.58
100	13.49	34.80	0.00	0.63	--	0.56
125	12.84	34.81	0.00	0.44	--	0.55
150	12.41	34.80	0.00	0.23	--	0.55

Station No.	1-035	Date - GMT	24 AUG 90
Station Name	D901-035	Time - GMT	0218
Latitude	12.15.8 N	Date - LOC	23 AUG 90
Longitude	099. 0.3 W	Time - LOC	1918

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	29.24	33.60	0.48	0.20	--	2.66
20	29.04	33.55	0.58	0.30	--	2.71
40	29.25	33.71	0.25	0.24	--	2.62
60	27.82	34.00	0.25	0.37	--	2.63
80	21.38	34.42	0.06	0.20	--	1.78
100	14.84	34.73	0.16	0.14	--	0.62
125	13.38	34.81	0.00	0.29	--	0.59
150	12.83	34.81	0.00	0.10	--	0.61

Station No.	1-036	Date - GMT	24 AUG 90
Station Name	D901-036	Time - GMT	1211
Latitude	12. 7.3 N	Date - LOC	24 AUG 90
Longitude	097.46.1 W	Time - LOC	0511

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	29.43	33.54	0.53	0.25	3.00	3.01
12	29.42	33.75	0.48	0.24	--	3.10
20	29.44	33.77	0.50	0.25	4.82	2.96
29	29.44	33.77	0.51	0.24	4.52	3.03
40	29.45	33.79	0.43	0.26	3.95	2.96
60	26.10	34.21	0.42	0.37	0.43	2.89
80	15.77	34.71	0.09	0.27	0.15	0.58
100	14.35	34.82	0.03	0.69	--	0.45
125	13.67	34.85	0.01	0.07	--	0.53
150	13.34	34.85	0.00	0.06	--	0.53

Station No.	1-037	Date - GMT	25 AUG 90
Station Name	D901-037	Time - GMT	0207
Latitude	12. 6.7 N	Date - LOC	24 AUG 90
Longitude	095.58.7 W	Time - LOC	2007

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.90	33.58	0.32	0.16	--	3.07
20	28.38	33.81	0.86	0.46	--	3.23
40	14.55	34.78	0.52	0.67	--	0.43
60	13.33	34.82	0.05	0.24	--	0.41
80	12.98	34.83	0.00	0.27	--	0.40
100	12.49	34.80	0.00	0.42	--	0.42
125	9.83	34.67	0.00	0.16	--	0.52
150	7.53	34.58	0.00	0.09	--	0.65

Station No.	2-038	Date - GMT	2 SEP 90
Station Name	D902-038	Time - GMT	0143
Latitude	10. 5.2 N	Date - LOC	1 SEP 90
Longitude	092.58.6 W	Time - LOC	1943

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.80	33.27	0.22	0.07	--	--
20	17.96	34.73	--	--	--	--
40	14.91	34.84	0.21	0.37	--	--
60	13.88	34.85	0.05	0.21	--	--
80	13.39	34.86	0.05	0.15	--	--
100	12.96	34.83	0.03	0.12	--	--
125	12.66	34.83	0.00	0.05	--	--
150	12.37	34.81	0.00	0.05	--	--

Station No.	2-039	Date - GMT	2 SEP 90
Station Name	D902-039	Time - GMT	1101
Latitude	10.17.1 N	Date - LOC	2 SEP 90
Longitude	094.26.1 W	Time - LOC	0501

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.12	33.80	0.17	0.19	12.53	--
10	27.86	33.86	0.20	0.14	18.83	--
20	25.15	34.08	0.57	0.41	36.93	--
26	16.38	34.73	0.91	1.21	16.07	--
40	14.14	34.83	0.10	0.57	0.77	--
60	13.45	34.81	--	--	--	--
80	13.06	34.82	0.01	0.10	0.18	--
100	12.64	34.77	0.09	0.20	--	--
125	12.18	34.76	0.04	0.21	--	--
150	12.08	34.79	0.00	0.05	--	--

Station No.	2-040	Date - GMT	3 SEP 90
Station Name	D902-040	Time - GMT	0133
Latitude	10.30.1 N	Date - LOC	2 SEP 90
Longitude	096.21.9 W	Time - LOC	1933

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	29.83	33.73	0.17	0.05	--	--
20	25.98	34.13	0.84	0.48	--	--
40	16.44	34.82	0.28	0.68	--	--
60	14.72	34.89	0.16	0.24	--	--
80	13.97	34.86	0.12	0.24	--	--
100	13.52	34.87	0.06	0.23	--	--
125	13.21	34.85	0.08	0.20	--	--
150	12.76	34.83	0.13	0.18	--	--

Station No.	2-041	Date - GMT	3 SEP 90
Station Name	D902-041	Time - GMT	1046
Latitude	10.50.5 N	Date - LOC	3 SEP 90
Longitude	097.41.8 W	Time - LOC	0446

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	29.31	33.39	0.13	0.05	6.39	--
12	29.36	33.45	0.12	0.05	10.68	--
20	29.23	33.44	0.14	0.06	7.27	--
29	28.37	33.67	0.27	0.21	9.07	--
40	23.79	34.39	0.90	0.97	0.93	--
60	15.66	34.80	0.05	0.38	0.45	--
80	14.17	34.85	--	--	--	--
100	13.47	34.87	0.01	0.08	--	--
125	--	--	0.00	0.06	--	--
125	13.03	34.85	--	--	--	--
150	12.70	34.84	0.00	0.05	--	0.66

Station No.	2-042	Date - GMT	4 SEP 90
Station Name	D902-042	Time - GMT	0222
Latitude	11.28.4 N	Date - LOC	3 SEP 90
Longitude	099.30.3 W	Time - LOC	2022

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	29.46	33.48	0.22	0.08	--	--
20	29.05	33.71	0.39	0.20	--	--
40	25.12	34.28	0.49	0.56	--	--
60	18.10	34.67	0.03	0.07	--	--
80	14.89	34.78	0.02	0.37	--	--
100	13.59	34.82	0.04	0.45	--	--
125	12.92	34.82	0.02	0.12	--	--
150	12.42	34.80	0.00	0.07	--	--

Station No.	2-043	Date - GMT	4 SEP 90
Station Name	D902-043	Time - GMT	1042
Latitude	11.43.8 N	Date - LOC	4 SEP 90
Longitude	100.50.7 W	Time - LOC	0442

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	29.50	33.53	0.19	0.05	2.06	--
8	29.50	33.54	0.19	0.06	18.05	--
13	29.52	33.55	0.19	0.06	5.74	--
20	29.53	33.59	0.20	0.06	4.08	--
40	27.01	34.35	0.49	0.51	3.38	--
60	19.76	34.73	0.39	0.78	0.57	--
80	15.04	34.85	0.10	0.68	0.29	--
100	13.95	34.85	0.04	0.25	--	--
125	13.24	34.83	0.05	0.13	--	--
150	12.73	34.82	0.01	0.10	--	0.52

Station No.	2-044	Date - GMT	5 SEP 90
Station Name	D902-044	Time - GMT	0219
Latitude	10.26.3 N	Date - LOC	4 SEP 90
Longitude	102.32.9 W	Time - LOC	2019

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.70	33.16	0.34	0.10	--	--
20	22.07	34.41	0.38	0.30	--	--
40	15.90	34.83	0.20	0.30	--	--
60	14.11	34.85	0.12	0.30	--	--
80	13.59	34.89	0.04	0.40	--	--
100	13.27	34.87	0.02	0.09	--	--
125	12.94	34.86	0.00	0.06	--	--
150	12.57	34.83	0.00	0.07	--	--

Station No.	2-045	Date - GMT	5 SEP 90
Station Name	D902-045	Time - GMT	1054
Latitude	09.45.1 N	Date - LOC	5 SEP 90
Longitude	103.27.6 W	Time - LOC	0454

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.79	33.10	0.24	0.11	7.69	--
8	28.73	33.18	0.26	0.11	10.20	--
14	26.75	33.77	0.39	0.24	20.66	--
20	22.43	34.28	0.37	0.28	8.20	--
40	15.58	34.82	0.19	0.45	0.56	--
60	13.92	34.82	0.11	0.24	0.15	--
80	13.11	34.83	0.07	0.25	0.15	--
100	12.82	34.83	0.05	0.15	--	--
125	12.41	34.81	0.09	0.11	--	--
150	12.10	34.79	0.00	0.07	--	0.59

Station No.	2-046	Date - GMT	6 SEP 90
Station Name	D902-046	Time - GMT	0218
Latitude	08.23.6 N	Date - LOC	5 SEP 90
Longitude	104.53.5 W	Time - LOC	2018

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.61	32.78	0.24	0.11	--	--
20	27.89	33.12	0.30	0.13	--	--
40	23.68	34.43	0.41	0.50	--	--
60	16.04	34.72	0.14	0.25	--	--
80	13.80	34.82	0.09	0.25	--	--
100	13.09	34.84	0.03	0.16	--	--
125	12.59	34.82	0.01	0.05	--	--
150	12.24	34.80	0.03	0.09	--	--

Station No.	2-047	Date - GMT	6 SEP 90
Station Name	D902-047	Time - GMT	1149
Latitude	07.43.4 N	Date - LOC	6 SEP 90
Longitude	105.46.2 W	Time - LOC	0449

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.39	33.03	0.16	0.09	0.68	--
9	27.39	33.03	0.15	0.09	1.82	--
16	27.39	33.03	0.15	0.08	2.70	--
20	27.39	33.03	0.15	0.11	2.76	--
40	27.47	33.42	0.25	0.15	2.21	--
60	24.41	34.23	0.35	0.43	0.70	--
80	15.84	34.76	0.12	0.34	0.39	--
100	13.62	34.87	0.11	0.21	--	--
125	12.42	34.76	0.03	0.10	--	--
150	12.04	34.78	0.01	0.05	--	1.13

Station No.	2-048	Date - GMT	7 SEP 90
Station Name	D902-048	Time - GMT	0251
Latitude	06.35.5 N	Date - LOC	6 SEP 90
Longitude	107.14.4 W	Time - LOC	1951

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.48	33.48	0.10	0.05	--	--
20	27.49	33.48	0.10	0.04	--	--
40	27.49	33.50	0.11	0.06	--	--
60	27.31	33.73	0.32	0.18	--	--
80	23.18	34.33	0.33	0.61	--	--
100	15.80	34.73	0.12	0.36	--	--
125	13.05	34.83	0.06	0.16	--	--
150	12.29	34.80	0.02	0.07	--	--

Station No.	2-049	Date - GMT	7 SEP 90
Station Name	D902-049	Time - GMT	1151
Latitude	05.59.0 N	Date - LOC	7 SEP 90
Longitude	108.12.5 W	Time - LOC	0451

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.15	33.87	0.20	0.10	1.31	--
9	27.15	33.87	0.20	0.10	3.27	--
16	27.14	33.87	0.20	0.10	3.30	--
20	27.14	33.86	0.20	0.10	3.38	--
40	27.13	33.87	0.21	0.11	1.55	--
60	26.32	34.21	0.28	0.21	0.33	--
80	25.13	34.42	0.31	0.30	0.15	--
100	21.26	34.63	0.25	0.40	--	--
125	14.33	34.76	0.18	0.19	--	--
150	13.23	34.82	0.05	0.19	--	0.86

Station No.	2-050	Date - GMT	8 SEP 90
Station Name	D902-050	Time - GMT	0351
Latitude	05. 1.2 N	Date - LOC	7 SEP 90
Longitude	110. 0.7 W	Time - LOC	1051

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.04	33.80	0.23	0.10	--	--
20	27.04	33.79	0.23	0.09	--	--
40	27.04	33.80	0.23	0.10	--	--
60	26.69	34.22	0.29	0.19	--	--
80	25.30	34.47	0.32	0.29	--	--
100	19.52	34.45	0.23	0.47	--	--
125	14.70	34.76	0.08	0.22	--	--
150	12.99	34.84	0.03	0.11	--	--

Station No.	2-051	Date - GMT	09 SEP 90
Station Name	D902-051	Time - GMT	0254
Latitude	04.57.2 N	Date - LOC	08 SEP 90
Longitude	113.25.2 W	Time - LOC	1954

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.35	33.85	0.15	0.08	--	--
20	27.36	33.85	0.15	0.07	--	--
40	27.41	33.92	0.20	0.10	--	--
60	27.40	34.16	0.28	0.13	--	--
80	22.75	34.53	0.33	0.56	--	--
100	14.81	34.75	0.12	0.28	--	--
125	12.65	34.77	0.03	0.10	--	--
150	11.48	34.69	0.00	0.05	--	--

Station No.	2-052	Date - GMT	09 SEP 90
Station Name	D902-052	Time - GMT	1149
Latitude	05. 0.0 N	Date - LOC	09 SEP 90
Longitude	114.41.6 W	Time - LOC	0449

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.38	34.02	0.12	0.06	0.61	--
9	27.39	34.02	0.11	0.06	1.20	--
16	27.40	34.06	0.12	0.06	1.03	--
20	27.40	34.21	0.15	0.08	1.12	--
40	27.20	34.38	0.22	0.12	0.81	--
60	27.01	34.42	0.30	0.20	0.32	--
80	25.74	34.51	0.29	0.31	0.17	--
100	17.84	34.55	0.16	0.33	--	--
125	13.73	34.67	0.05	0.16	--	--
150	11.93	34.72	0.01	0.05	--	--

Station No.	2-053	Date - GMT	10 SEP 90
Station Name	D902-053	Time - GMT	0247
Latitude	04.54.0 N	Date - LOC	09 SEP 90
Longitude	116.29.8 W	Time - LOC	1947

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.48	34.15	0.10	0.05	--	--
20	27.39	34.26	0.14	0.06	--	--
40	26.80	34.41	0.29	0.17	--	--
60	24.88	34.68	0.34	0.43	--	--
80	22.11	34.74	0.26	0.40	--	--
100	18.84	34.65	0.11	0.23	--	--
125	13.81	34.82	0.03	0.19	--	--
150	12.66	34.82	0.01	0.07	--	--

Station No.	2-054	Date - GMT	10 SEP 90
Station Name	D902-054	Time - GMT	1150
Latitude	04.54.6 N	Date - LOC	10 SEP 90
Longitude	117.23.2 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.44	34.19	0.13	0.08	0.74	--
10	27.44	34.19	0.12	0.06	1.05	--
20	27.45	34.19	0.13	0.07	0.35	--
27	27.45	34.19	0.13	0.06	1.21	--
40	27.43	34.21	0.15	0.08	0.70	--
60	27.10	34.46	0.31	0.24	0.27	--
80	24.64	34.95	0.28	0.37	0.17	--
100	21.52	34.71	0.21	0.34	--	--
125	14.56	34.72	0.09	0.16	--	--
150	12.70	34.80	0.02	0.08	--	0.71

Station No.	2-055	Date - GMT	11 SEP 90
Station Name	D902-055	Time - GMT	0244
Latitude	04.22.7 N	Date - LOC	10 SEP 90
Longitude	115.28.0 W	Time - LOC	1944

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.14	34.39	0.21	0.09	--	--
20	27.15	34.33	0.33	0.17	--	--
40	27.01	34.39	0.40	0.25	--	--
60	26.19	34.53	0.32	0.32	--	--
80	25.44	34.62	0.31	0.32	--	--
100	22.93	34.63	0.19	0.38	--	--
125	13.65	34.67	0.04	0.15	--	--
150	12.04	34.77	0.01	0.05	--	--

Station No.	2-056	Date - GMT	11 SEP 90
Station Name	D902-056	Time - GMT	1150
Latitude	04. 7.7 N	Date - LOC	11 SEP 90
Longitude	114.20.6 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.15	34.31	0.25	0.13	1.54	--
9	27.15	34.31	0.24	0.13	2.89	--
16	27.15	34.31	0.26	0.14	2.80	--
20	27.15	34.31	0.27	0.12	3.21	--
40	27.15	34.31	0.28	0.17	1.50	--
60	27.14	34.32	0.29	0.22	0.42	--
80	26.87	34.35	0.25	0.46	0.12	--
100	19.60	34.67	0.04	0.13	--	--
125	13.88	34.78	0.19	0.13	--	--
150	12.27	34.75	0.01	0.05	--	--

Station No.	2-057	Date - GMT	12 SEP 90
Station Name	D902-057	Time - GMT	0247
Latitude	03.51.8 N	Date - LOC	11 SEP 90
Longitude	112.55.5 W	Time - LOC	1947

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.05	34.07	0.27	0.11	--	5.54
20	27.03	34.07	0.39	0.25	--	--
40	26.54	34.26	0.33	0.19	--	--
60	26.00	34.44	0.40	0.53	--	--
80	21.26	34.30	0.14	0.31	--	--
100	16.49	34.69	0.04	0.10	--	--
125	13.27	34.65	0.01	0.04	--	--
150	11.65	34.66	0.00	0.02	--	--

Station No.	2-058	Date - GMT	12 SEP 90
Station Name	D902-058	Time - GMT	1150
Latitude	03.34.0 N	Date - LOC	12 SEP 90
Longitude	111.49.0 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.41	34.29	0.27	0.13	1.86	--
9	25.40	34.26	0.27	0.13	4.95	--
16	25.38	34.27	0.27	0.13	3.29	--
20	25.37	34.27	0.30	0.15	3.49	--
40	25.20	34.28	0.29	0.18	2.18	--
60	23.79	34.39	0.31	0.28	0.55	--
80	22.67	34.69	0.27	0.41	0.22	--
100	17.22	34.89	0.07	0.21	--	--
125	14.11	34.91	0.03	0.07	--	--
150	13.44	34.93	0.00	0.02	--	1.45

Station No.	2-059	Date - GMT	13 SEP 90
Station Name	D902-059	Time - GMT	0421
Latitude	02.59.2 N	Date - LOC	12 SEP 90
Longitude	110. 0.3 W	Time - LOC	2121

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.06	34.26	0.19	0.10	--	2.00
20	25.06	34.26	0.19	0.10	--	--
40	24.97	34.25	0.24	0.13	--	--
60	23.04	34.59	0.30	0.31	--	--
80	16.74	34.89	0.18	0.43	--	--
100	14.69	34.97	0.09	0.24	--	--
125	14.20	34.95	0.07	0.17	--	--
150	13.82	34.95	0.05	0.16	--	--

Station No.	2-060	Date - GMT	13 SEP 90
Station Name	D902-060	Time - GMT	1258
Latitude	02. 1.0 N	Date - LOC	13 SEP 90
Longitude	110. 0.0 W	Time - LOC	0558

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	24.26	34.27	0.36	0.18	2.07	--
9	24.26	34.27	0.35	0.18	6.10	--
16	24.26	34.27	0.35	0.18	7.01	--
20	24.27	34.27	0.35	0.18	6.08	--
40	23.36	34.41	0.36	0.22	3.34	--
60	21.00	34.62	0.28	0.42	0.58	--
80	15.39	34.89	0.17	0.33	0.13	--
100	14.33	34.95	0.09	0.20	--	--
125	13.99	34.94	0.06	0.15	--	--
150	13.41	34.92	0.03	0.10	--	--

Station No.	2-061	Date - GMT	14 SEP 90
Station Name	D902-061	Time - GMT	0050
Latitude	01. 0.0 N	Date - LOC	13 SEP 90
Longitude	110. 0.1 W	Time - LOC	1750

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.28	34.67	0.28	0.11	--	5.21
20	23.07	34.68	0.27	0.12	--	--
40	22.65	34.83	0.31	0.18	--	--
60	20.89	34.91	0.40	0.38	--	--
80	16.37	34.91	0.25	0.33	--	--
100	14.41	34.93	0.11	0.17	--	--
125	13.68	34.92	0.03	0.06	--	--
150	13.26	34.92	0.01	0.06	--	--

Station No.	2-062	Date - GMT	14 SEP 90
Station Name	D902-062	Time - GMT	0821
Latitude	00. 0.9 S	Date - LOC	14 SEP 90
Longitude	110. 0.3 W	Time - LOC	0121

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	22.61	34.98	0.25	0.15	--	--
20	22.46	34.98	0.27	0.19	--	--
40	21.56	34.90	0.38	0.36	--	--
60	18.71	34.86	0.29	0.47	--	--
80	17.09	35.15	0.13	0.13	--	--
100	15.08	34.96	0.05	0.05	--	--
125	13.74	34.94	0.01	0.04	--	--
150	13.16	34.92	0.03	0.05	--	--

Station No.	2-063	Date - GMT	14 SEP 90
Station Name	D902-063	Time - GMT	1739
Latitude	01. 0.6 S	Date - LOC	14 SEP 90
Longitude	109.59.8 W	Time - LOC	1039

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.13	35.00	0.26	0.12	2.67	--
9	23.08	35.00	0.25	0.12	6.44	--
16	23.03	35.00	0.29	0.13	4.93	--
20	23.02	35.00	0.28	0.14	3.10	--
40	22.89	35.03	0.32	0.19	1.72	--
60	22.32	35.12	0.38	0.29	0.26	--
80	17.84	35.39	0.30	0.37	0.25	--
100	14.63	35.10	0.11	0.14	--	--
125	13.68	34.99	0.05	0.06	--	--
150	12.88	34.92	0.01	0.03	--	--

Station No.	2-064	Date - GMT	15 SEP 90
Station Name	D902-064	Time - GMT	0118
Latitude	02. 3.6 S	Date - LOC	14 SEP 90
Longitude	109.58.6 W	Time - LOC	1818

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.53	34.97	0.19	0.09	--	5.13
20	23.49	34.98	0.18	0.09	--	--
40	23.36	35.00	0.23	0.13	--	--
60	18.17	34.98	0.31	0.35	--	--
80	13.89	34.96	0.22	0.34	--	--
100	13.07	34.92	0.09	0.18	--	--
125	12.94	34.91	0.02	0.06	--	--
150	12.79	34.90	0.03	0.12	--	--

Station No.	2-065	Date - GMT	15 SEP 90
Station Name	D902-065	Time - GMT	0919
Latitude	03. 0.6 S	Date - LOC	15 SEP 90
Longitude	110. 0.3 W	Time - LOC	0219

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.75	35.07	0.22	0.12	--	1.05
20	23.75	35.08	0.22	0.12	--	--
40	23.75	35.07	0.22	0.11	--	--
60	23.61	35.07	0.28	0.20	--	--
80	14.07	34.95	0.23	0.45	--	--
100	13.40	34.94	0.15	0.34	--	--
125	13.05	34.92	0.04	0.10	--	--
150	12.94	34.92	0.02	0.06	--	--

Station No.	2-066	Date - GMT	16 SEP 90
Station Name	D902-066	Time - GMT	0218
Latitude	01.56.5 S	Date - LOC	15 SEP 90
Longitude	108. 4.7 W	Time - LOC	1918

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	22.44	34.92	0.22	0.13	--	5.06
20	22.43	34.93	0.25	0.13	--	--
40	22.33	34.94	0.26	0.17	--	--
60	21.90	34.96	0.33	0.30	--	--
80	14.62	34.99	0.20	0.24	--	--
100	13.36	34.95	0.09	0.17	--	--
125	13.00	34.92	0.04	0.09	--	--
150	12.79	34.90	0.02	0.05	--	--

Station No.	2-067	Date - GMT	16 SEP 90
Station Name	D902-067	Time - GMT	1146
Latitude	01.19.7 S	Date - LOC	16 SEP 90
Longitude	107. 0.5 W	Time - LOC	0446

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	21.77	34.99	0.26	0.18	7.16	--
9	21.75	34.99	0.29	0.17	12.33	--
16	21.73	34.99	0.24	0.15	13.32	--
20	21.69	35.00	0.24	0.17	13.24	--
40	21.25	35.02	0.27	0.24	6.70	--
60	19.56	35.40	0.32	0.33	1.11	--
80	16.12	35.27	0.19	0.26	0.07	--
100	14.42	35.07	0.10	0.14	--	--
125	13.71	35.04	0.07	0.10	--	--
150	13.01	34.94	0.01	0.04	--	1.77

Station No.	2-068	Date - GMT	17 SEP 90
Station Name	D902-068	Time - GMT	0144
Latitude	00.22.7 S	Date - LOC	16 SEP 90
Longitude	105.27.5 W	Time - LOC	1844

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	22.25	34.82	0.27	0.10	--	5.04
20	22.02	34.81	0.30	0.15	--	--
40	21.86	34.82	0.37	0.19	--	--
60	20.08	34.86	0.38	0.26	--	--
80	16.38	35.15	0.13	0.12	--	--
100	15.09	35.02	0.06	0.06	--	--
125	13.84	34.96	0.02	0.04	--	--
150	13.39	34.93	0.02	0.04	--	--

Station No.	2-069	Date - GMT	17 SEP 90
Station Name	D902-069	Time - GMT	1150
Latitude	00.18.7 N	Date - LOC	17 SEP 90
Longitude	104.30.9 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	22.97	34.51	0.32	0.17	8.35	--
8	22.97	34.51	0.30	0.16	16.44	--
14	22.91	34.53	0.31	0.17	16.73	--
20	22.78	34.57	0.32	0.20	17.43	--
40	21.72	34.79	0.35	0.26	8.84	--
60	16.91	34.87	0.30	0.40	1.39	--
80	14.68	34.87	0.09	0.18	0.19	--
100	14.35	34.89	0.06	0.10	--	--
125	13.68	34.90	0.05	0.06	--	--
150	13.25	34.91	0.01	0.04	--	--

Station No.	2-070	Date - GMT	18 SEP 90
Station Name	D902-070	Time - GMT	0142
Latitude	01. 7.3 N	Date - LOC	17 SEP 90
Longitude	103. 4.1 W	Time - LOC	1842

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.28	33.88	0.21	0.08	--	5.07
20	25.28	33.88	0.21	0.08	--	--
40	25.22	33.90	0.25	0.09	--	--
60	19.14	34.87	0.41	0.43	--	--
80	15.68	34.93	0.19	0.29	--	--
100	14.83	34.96	0.10	0.21	--	--
125	13.89	34.94	0.04	0.10	--	--
150	13.46	34.92	0.02	0.04	--	--

Station No.	2-071	Date - GMT	19 SEP 90
Station Name	D902-071	Time - GMT	0139
Latitude	02.28.4 N	Date - LOC	18 SEP 90
Longitude	100.37.8 W	Time - LOC	1839

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.21	34.00	0.19	0.07	--	--
20	26.20	34.01	0.20	0.08	--	--
40	23.86	34.13	0.31	0.20	--	--
60	20.88	34.56	0.29	0.32	--	--
80	17.70	34.93	0.23	0.41	--	--
100	15.53	34.94	0.16	0.33	--	--
125	13.72	34.93	0.06	0.16	--	--
150	13.40	34.93	0.00	0.04	--	--

Station No.	2-072	Date - GMT	19 SEP 90
Station Name	D902-072	Time - GMT	1146
Latitude	03. 2.3 N	Date - LOC	19 SEP 90
Longitude	099.31.3 W	Time - LOC	0446

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.11	34.03	0.21	0.10	1.40	--
8	26.11	34.03	0.20	0.10	2.53	--
14	26.12	34.03	0.20	0.09	3.90	--
20	26.12	34.03	0.21	0.10	2.55	--
40	25.91	34.07	0.22	0.11	1.57	--
60	22.27	34.38	0.25	0.20	0.64	--
80	17.73	34.89	0.23	0.36	0.18	--
100	15.00	34.93	0.14	0.27	--	--
125	13.66	34.88	0.14	0.15	--	--
150	13.39	34.89	0.02	0.07	--	--

Station No.	2-073	Date - GMT	20 SEP 90
Station Name	D902-073	Time - GMT	0121
Latitude	04.30.3 N	Date - LOC	19 SEP 90
Longitude	098. 3.1 W	Time - LOC	1821

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.66	33.89	0.20	0.07	--	5.45
20	26.66	33.89	0.24	0.09	--	--
40	26.61	33.90	0.23	0.09	--	--
60	23.47	34.60	0.35	0.31	--	--
80	18.75	35.19	0.24	0.42	--	--
100	14.01	34.90	0.10	0.20	--	--
125	13.42	34.92	0.02	0.05	--	--
150	13.07	34.91	0.00	0.04	--	--

Station No.	2-074	Date - GMT	20 SEP 90
Station Name	D902-074	Time - GMT	1046
Latitude	05.35.5 N	Date - LOC	20 SEP 90
Longitude	097. 6.9 W	Time - LOC	0446

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.43	33.24	0.17	0.10	4.27	--
8	27.43	33.24	0.18	0.10	3.24	--
14	27.43	33.24	0.18	0.09	2.70	--
20	27.43	33.24	0.18	0.09	2.69	--
40	27.47	33.38	0.21	0.12	1.04	--
60	22.27	34.68	0.32	0.47	0.39	--
80	16.64	34.77	0.23	0.45	0.25	--
100	13.97	34.87	0.08	0.25	--	--
125	13.05	34.82	0.07	0.13	--	--
150	12.14	34.79	0.00	0.04	--	1.31

Station No.	2-075	Date - GMT	21 SEP 90
Station Name	D902-075	Time - GMT	0113
Latitude	04.26.3 N	Date - LOC	20 SEP 90
Longitude	095.35.0 W	Time - LOC	1913

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.91	33.48	0.17	0.06	--	5.36
20	26.92	33.49	0.17	0.06	--	--
40	26.82	33.50	0.19	0.07	--	--
60	24.59	34.19	0.32	0.21	--	--
80	16.98	34.45	0.12	0.29	--	1.44
100	13.43	34.92	0.04	0.09	--	--
125	13.35	34.92	0.01	0.04	--	--
150	12.86	34.89	0.00	0.03	--	--

Station No.	2-076	Date - GMT	21 SEP 90
Station Name	D902-076	Time - GMT	1045
Latitude	03.29.1 N	Date - LOC	21 SEP 90
Longitude	094.35.4 W	Time - LOC	0445

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.65	33.77	0.24	0.12	2.67	--
8	26.66	33.77	0.23	0.12	2.98	--
14	26.65	33.77	0.23	0.11	3.15	--
20	26.65	33.77	0.23	0.13	3.58	--
40	26.65	33.84	0.25	0.12	1.19	--
60	20.79	34.46	0.34	0.27	0.57	--
80	14.03	34.77	0.25	0.35	0.25	--
100	13.70	34.92	0.10	0.23	--	--
125	13.39	34.92	0.08	0.11	--	--
150	13.03	34.90	0.01	0.04	--	1.44

Station No.	2-077	Date - GMT	22 SEP 90
Station Name	D902-077	Time - GMT	0105
Latitude	02.13.4 N	Date - LOC	21 SEP 90
Longitude	092.58.8 W	Time - LOC	1905

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.35	33.57	0.30	0.11	--	5.45
20	26.34	33.57	0.29	0.11	--	--
40	23.17	34.22	0.39	0.33	--	--
60	17.16	34.91	0.42	0.55	--	--
80	16.56	34.97	0.22	0.43	--	3.22
100	14.63	34.84	0.08	0.25	--	--
125	13.54	34.91	0.02	0.08	--	--
150	13.47	34.92	0.01	0.07	--	--

Station No.	2-078	Date - GMT	23 SEP 90
Station Name	D902-078	Time - GMT	0100
Latitude	01.18.0 N	Date - LOC	22 SEP 90
Longitude	091. 6.6 W	Time - LOC	1900

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.74	34.03	0.46	0.13	--	--
20	23.74	34.04	0.45	0.12	--	--
40	23.48	34.07	0.46	0.15	--	--
60	23.26	34.09	0.53	0.20	--	--
80	16.49	34.95	0.39	0.36	--	--
100	16.05	34.96	0.32	0.37	--	--
125	15.31	34.95	0.16	0.29	--	--
150	14.32	34.94	0.07	0.17	--	--

Station No.	2-079	Date - GMT	23 SEP 90
Station Name	D902-079	Time - GMT	1046
Latitude	01.19.4 N	Date - LOC	23 SEP 90
Longitude	089.46.7 W	Time - LOC	0446

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.96	34.02	0.35	0.16	3.00	--
8	23.95	34.02	0.36	0.15	6.28	--
13	23.96	34.02	0.39	0.15	6.37	--
20	23.96	34.02	0.34	0.15	9.61	--
40	23.92	34.04	0.36	0.15	3.90	--
60	17.90	34.90	0.42	0.27	0.74	--
80	15.65	34.99	0.30	0.30	0.35	--
100	15.36	34.98	0.13	0.21	--	--
125	15.17	35.00	0.12	0.18	--	--
150	14.73	34.98	0.06	0.13	--	--

Station No.	2-080	Date - GMT	24 SEP 90
Station Name	D902-080	Time - GMT	0047
Latitude	01.24.3 N	Date - LOC	23 SEP 90
Longitude	087.43.5 W	Time - LOC	1847

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	24.59	34.02	0.39	0.14	--	5.52
20	24.60	34.02	0.37	0.14	--	--
40	24.26	34.07	0.45	0.18	--	--
60	17.33	34.95	0.40	0.41	--	--
80	16.18	34.93	0.29	0.31	--	--
100	15.42	34.99	0.16	0.26	--	2.43
125	14.97	34.99	0.03	0.08	--	--
150	14.40	34.97	0.01	0.05	--	--

Station No.	2-081	Date - GMT	24 SEP 90
Station Name	D902-081	Time - GMT	1054
Latitude	01.24.8 N	Date - LOC	24 SEP 90
Longitude	086.20.1 W	Time - LOC	0454

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	24.69	34.00	0.21	0.10	4.43	--
8	24.68	34.00	0.21	0.10	6.11	--
13	24.69	34.00	0.21	0.09	5.85	--
20	24.69	34.00	0.20	0.09	4.74	--
40	21.52	34.86	0.20	0.12	1.95	--
60	16.81	34.97	0.22	0.35	0.50	--
80	15.72	34.98	0.11	0.29	0.16	--
100	15.01	34.97	0.05	0.10	--	--
125	14.71	34.96	0.04	0.07	--	--
150	14.61	34.96	0.01	0.04	--	1.86

Station No.	2-082	Date - GMT	25 SEP 90
Station Name	D902-082	Time - GMT	0035
Latitude	01.42.2 N	Date - LOC	24 SEP 90
Longitude	084.49.0 W	Time - LOC	1835

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.40	33.71	0.34	0.13	--	5.50
20	25.40	33.71	0.32	0.14	--	--
40	25.30	33.71	0.41	0.16	--	--
60	16.91	35.01	0.32	0.43	--	--
80	15.95	34.95	0.05	0.10	--	1.92
100	15.08	34.98	0.16	0.34	--	--
125	14.76	34.99	0.03	0.07	--	--
150	14.25	34.96	0.03	0.05	--	--

Station No.	2-083	Date - GMT	25 SEP 90
Station Name	D902-083	Time - GMT	1006
Latitude	03. 3.2 N	Date - LOC	25 SEP 90
Longitude	084.46.1 W	Time - LOC	0506

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.00	33.42	0.24	0.09	3.77	--
8	25.99	33.42	0.23	0.09	3.41	--
13	26.01	33.42	0.21	0.09	3.01	--
20	26.01	33.42	0.31	0.16	4.84	--
40	24.96	33.83	0.36	0.53	2.25	--
60	17.80	34.90	0.28	0.36	0.42	--
80	16.40	34.95	0.13	0.21	0.17	--
100	15.48	34.96	0.10	0.17	--	--
125	14.81	34.93	0.09	0.15	--	--
150	14.13	34.94	0.00	0.02	--	1.51

Station No.	2-084	Date - GMT	26 SEP 90
Station Name	D902-084	Time - GMT	0949
Latitude	05.26.6 N	Date - LOC	26 SEP 90
Longitude	083.13.0 W	Time - LOC	0449

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.02	31.39	0.22	0.05	4.11	5.55
8	27.10	31.46	0.21	0.09	4.22	--
13	27.11	31.50	0.21	0.10	3.15	--
20	27.04	32.60	0.34	0.15	9.85	--
40	24.96	33.50	0.65	0.39	3.86	--
60	17.31	34.79	0.31	0.46	2.33	--
80	15.11	33.88	0.10	0.15	0.22	--
100	14.67	34.90	0.06	0.12	--	--
125	14.03	34.93	--	--	--	--
150	13.78	34.93	0.00	0.04	--	1.21

Station No.	2-085	Date - GMT	27 SEP 90
Station Name	D902-085	Time - GMT	0003
Latitude	05.34.5 N	Date - LOC	26 SEP 90
Longitude	081. 8.9 W	Time - LOC	1903

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.28	30.63	0.29	0.14	--	5.70
20	27.22	31.68	0.44	0.21	--	--
40	19.44	34.54	0.55	0.68	--	--
60	17.45	34.93	0.39	0.40	--	--
80	16.16	34.92	0.21	0.24	--	--
100	15.09	34.92	0.13	0.17	--	--
125	14.64	34.93	0.03	0.09	--	--
150	14.10	34.93	0.01	0.04	--	--

Station No.	2-086	Date - GMT	28 SEP 90
Station Name	D902-086	Time - GMT	0016
Latitude	07.23.1 N	Date - LOC	27 SEP 90
Longitude	082.24.4 W	Time - LOC	1916

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.55	30.34	0.29	0.10	--	5.30
20	27.36	32.85	0.50	0.29	--	--
40	25.59	33.59	0.48	0.57	--	--
60	18.32	34.66	0.17	0.24	--	--
80	15.30	34.86	0.06	0.12	--	--
100	14.49	34.91	0.02	0.07	--	--
125	14.05	34.92	0.01	0.04	--	--
150	13.64	34.91	0.02	0.05	--	--

Station No.	3-087	Date - GMT	07 OCT 90
Station Name	D903-087	Time - GMT	1045
Latitude	02.59.0 N	Date - LOC	07 OCT 90
Longitude	080.35.2 W	Time - LOC	0445

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.53	33.21	0.32	0.17	0.74	5.04
8	26.53	33.21	0.30	0.17	3.32	--
13	26.54	33.21	0.29	0.17	4.59	--
20	26.54	33.21	0.30	0.17	5.29	--
40	26.46	33.23	0.30	0.18	4.72	--
60	15.97	34.95	0.22	0.40	0.53	--
80	15.20	34.96	0.12	0.27	0.28	--
100	14.91	34.94	0.11	0.21	--	--
125	14.38	34.93	0.02	0.07	--	--
150	14.24	34.95	0.01	0.06	--	1.54

Station No.	3-088	Date - GMT	08 OCT 90
Station Name	D903-088	Time - GMT	0034
Latitude	03. 2.1 N	Date - LOC	07 OCT 90
Longitude	082.19.9 W	Time - LOC	1834

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.41	33.21	0.19	0.07	--	4.97
20	26.42	33.22	0.20	0.07	--	--
40	26.24	33.34	0.28	0.11	--	--
60	16.45	34.94	0.36	0.66	--	--
80	15.54	34.94	0.16	0.26	--	--
100	14.80	34.95	0.08	0.11	--	--
125	14.42	34.93	0.02	0.06	--	--
150	13.93	34.93	0.00	0.03	--	--

Station No.	3-089	Date - GMT	08 OCT 90
Station Name	D903-089	Time - GMT	1043
Latitude	02.59.9 N	Date - LOC	08 OCT 90
Longitude	083.35.5 W	Time - LOC	0443

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.22	33.13	0.20	0.09	2.79	4.99
8	26.22	33.12	0.20	0.09	4.83	--
13	26.23	33.13	0.20	0.09	4.82	--
20	26.23	33.12	0.20	0.10	6.81	--
40	23.79	33.95	0.30	0.18	4.62	--
60	17.14	34.96	0.29	0.60	0.89	--
80	15.62	34.86	0.07	0.14	0.11	--
100	15.06	34.94	0.05	0.09	--	--
125	14.48	34.95	0.01	0.05	--	--
150	14.23	34.94	0.01	0.03	--	1.15

Station No.	3-090	Date - GMT	09 OCT 90
Station Name	D903-090	Time - GMT	0029
Latitude	04.41.3 N	Date - LOC	08 OCT 90
Longitude	084.37.2 W	Time - LOC	1829

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.58	32.84	0.32	0.13	--	4.83
20	26.60	32.84	0.31	0.12	--	--
40	25.98	33.13	0.62	0.60	--	--
60	16.78	34.92	0.32	0.63	--	--
80	15.28	34.91	0.20	0.43	--	--
100	14.61	34.96	0.04	0.07	--	--
125	14.35	34.96	0.01	0.04	--	--
150	13.99	34.94	0.00	0.05	--	--

Station No.	3-091	Date - GMT	09 OCT 90
Station Name	D903-091	Time - GMT	1042
Latitude	05.50.8 N	Date - LOC	09 OCT 90
Longitude	085.18.1 W	Time - LOC	0442

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.65	32.63	0.20	0.10	0.57	4.88
8	26.65	32.63	0.21	0.11	4.77	--
13	26.65	32.63	0.22	0.11	6.98	--
20	--	--	--	--	--	--
20	26.61	32.83	--	--	--	--
40	18.99	34.76	0.54	0.82	1.50	--
60	16.09	34.86	0.19	0.24	0.38	--
80	15.49	34.90	0.10	0.13	0.09	--
100	14.93	34.92	0.04	0.07	--	--
125	14.47	34.92	0.01	0.06	--	--
150	13.95	34.93	0.01	0.04	--	0.65

Station No.	3-092	Date - GMT	10 OCT 90
Station Name	D903-092	Time - GMT	0033
Latitude	07.39.6 N	Date - LOC	09 OCT 90
Longitude	086. 5.0 W	Time - LOC	1833

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.57	33.26	0.30	0.13	--	--
20	24.91	33.13	0.42	0.28	--	--
40	18.96	34.65	0.29	0.63	--	--
60	15.40	34.90	0.21	0.45	--	--
80	14.74	34.92	0.11	0.24	--	--
100	14.42	34.95	0.06	0.14	--	--
125	14.10	34.93	0.01	0.04	--	--
150	13.80	34.93	0.00	0.03	--	--

Station No.	3-093	Date - GMT	10 OCT 90
Station Name	D903-093	Time - GMT	1045
Latitude	09. 4.6 N	Date - LOC	10 OCT 90
Longitude	086.33.4 W	Time - LOC	0445

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.07	32.40	0.24	0.13	3.45	4.78
12	27.03	32.41	0.31	0.23	9.44	--
20	22.44	34.38	0.44	0.50	6.45	--
29	17.40	34.72	0.58	0.80	4.83	--
40	16.45	34.81	0.37	0.63	1.06	--
60	15.15	34.86	0.20	0.51	0.29	--
80	14.42	34.88	0.08	0.15	--	--
100	13.96	34.89	0.03	0.06	--	--
125	13.37	34.88	0.00	0.04	--	--
150	13.13	34.87	0.00	0.04	--	0.29

Station No.	3-094	Date - GMT	11 OCT 90
Station Name	D903-094	Time - GMT	0041
Latitude	08.58.0 N	Date - LOC	10 OCT 90
Longitude	087.57.8 W	Time - LOC	1841

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.26	33.73	0.31	0.15	--	4.51
20	18.76	34.50	0.35	0.33	--	--
40	15.65	34.80	0.34	0.66	--	--
60	14.45	34.84	0.18	0.33	--	--
80	13.71	34.91	0.10	0.17	--	--
100	13.51	34.91	0.03	0.05	--	--
125	13.33	34.89	0.00	0.05	--	--
150	12.85	34.84	0.00	0.04	--	--

Station No.	3-095	Date - GMT	11 OCT 90
Station Name	D903-095	Time - GMT	1050
Latitude	08.26.3 N	Date - LOC	11 OCT 90
Longitude	089. 9.9 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.39	33.82	0.45	0.21	14.99	5.02
12	26.38	33.82	0.49	0.25	27.51	--
20	20.77	34.46	0.48	0.58	8.83	--
29	17.92	34.65	0.35	0.58	3.40	--
40	16.00	34.66	0.27	0.35	0.72	--
60	14.70	34.84	0.10	0.18	0.21	--
80	13.89	34.92	0.01	0.04	--	--
100	--	--	--	--	--	--
100	13.49	34.90	--	--	--	--
125	13.19	34.88	0.00	0.03	--	--
150	12.72	34.85	0.00	0.03	--	0.45

Station No.	3-096	Date - GMT	12 OCT 90
Station Name	D903-096	Time - GMT	0048
Latitude	07.11.2 N	Date - LOC	11 OCT 90
Longitude	089.49.4 W	Time - LOC	1848

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.14	33.64	0.25	0.12	--	5.22
20	25.90	33.71	0.34	0.19	--	--
40	19.55	34.57	0.38	0.42	--	--
60	16.49	34.55	0.31	0.48	--	--
80	14.54	34.83	0.13	0.31	--	--
100	13.55	34.85	0.06	0.20	--	--
125	12.57	34.78	0.03	0.10	--	--
150	12.22	34.77	0.02	0.03	--	--

Station No.	3-097	Date - GMT	12 OCT 90
Station Name	D903-097	Time - GMT	1046
Latitude	06.15.3 N	Date - LOC	12 OCT 90
Longitude	090.19.4 W	Time - LOC	0446

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.78	32.75	0.23	0.11	2.75	5.34
8	26.78	32.75	0.23	0.11	6.69	--
13	26.78	32.75	0.24	0.10	3.99	--
20	26.78	32.75	0.23	0.11	4.99	--
40	24.41	34.37	0.38	0.41	3.00	--
60	18.91	34.64	0.43	0.65	1.02	--
80	16.81	34.79	0.28	0.55	0.12	--
100	14.38	34.75	0.08	0.23	--	--
125	13.59	34.89	0.05	0.13	--	--
150	13.24	34.91	0.02	0.08	--	--

Station No.	3-098	Date - GMT	13 OCT 90
Station Name	D903-098	Time - GMT	0059
Latitude	04.55.6 N	Date - LOC	12 OCT 90
Longitude	091. 9.2 W	Time - LOC	1859

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.88	32.86	0.11	0.05	--	5.04
20	26.84	32.87	0.12	0.05	--	--
40	26.81	32.94	0.15	0.09	--	--
60	18.90	34.73	0.38	0.47	--	--
80	16.00	34.77	0.24	0.50	--	--
100	14.57	34.86	0.12	0.26	--	--
125	13.66	34.90	0.04	0.11	--	--
150	13.28	34.89	0.04	0.09	--	--

Station No.	3-099	Date - GMT	13 OCT 90
Station Name	D903-099	Time - GMT	1047
Latitude	04.13.9 N	Date - LOC	13 OCT 90
Longitude	092.21.1 W	Time - LOC	0447

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.60	33.08	0.12	0.05	2.29	5.00
8	26.60	33.09	0.13	0.07	2.87	--
14	26.61	33.09	0.14	0.06	2.97	--
20	26.61	33.09	0.14	0.06	3.37	--
40	26.57	33.12	0.16	0.08	1.41	--
60	20.00	34.51	0.35	0.46	0.98	--
80	13.51	34.85	0.05	0.08	0.30	--
100	13.40	34.92	0.10	0.22	--	--
125	13.21	34.91	0.02	0.05	--	--
150	13.07	34.90	0.00	0.04	--	1.16

Station No.	3-100	Date - GMT	14 OCT 90
Station Name	D903-100	Time - GMT	0101
Latitude	05.15.1 N	Date - LOC	13 OCT 90
Longitude	093.43.1 W	Time - LOC	1901

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.04	33.13	0.13	0.05	--	5.05
20	27.02	33.14	0.14	0.06	--	--
40	26.97	33.16	0.18	0.09	--	--
60	23.00	34.42	0.32	0.24	--	--
80	16.59	34.77	0.28	0.52	--	--
100	13.94	34.92	0.11	0.30	--	--
125	13.46	34.92	0.02	0.05	--	--
150	13.28	34.91	0.01	0.04	--	--

Station No.	3-101	Date - GMT	14 OCT 90
Station Name	D903-101	Time - GMT	1052
Latitude	06. 9.6 N	Date - LOC	14 OCT 90
Longitude	092.39.7 W	Time - LOC	0452

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.97	32.93	0.23	0.12	3.18	5.15
8	26.96	32.92	0.23	0.11	6.68	--
13	26.96	32.92	0.23	0.11	4.87	--
20	26.96	32.92	0.24	0.11	4.55	--
40	26.90	32.96	0.24	0.11	2.54	--
60	18.82	34.30	0.28	0.54	0.58	--
80	14.22	34.69	0.14	0.38	0.11	--
100	13.25	34.82	0.08	0.18	--	--
125	12.46	34.78	0.03	0.07	--	--
150	12.24	34.79	0.01	0.03	--	1.07

Station No.	3-102	Date - GMT	15 OCT 90
Station Name	D903-102	Time - GMT	0104
Latitude	07.30.4 N	Date - LOC	14 OCT 90
Longitude	091.19.0 W	Time - LOC	1904

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.15	33.58	0.27	0.11	--	4.98
20	20.48	34.35	0.37	0.21	--	--
40	14.13	34.87	0.11	0.27	--	--
60	13.40	34.86	0.05	0.24	--	--
80	13.13	34.86	0.04	0.24	--	--
100	12.87	34.84	0.03	0.19	--	--
125	12.51	34.82	0.01	0.07	--	--
150	12.29	34.82	0.01	0.06	--	--

Station No.	3-103	Date - GMT	15 OCT 90
Station Name	D903-103	Time - GMT	1048
Latitude	08.36.4 N	Date - LOC	15 OCT 90
Longitude	090.25.3 W	Time - LOC	0448

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.32	33.02	0.18	0.10	2.51	5.01
12	27.16	33.30	0.19	0.11	8.82	--
20	26.82	33.56	0.48	0.51	7.01	--
29	18.54	34.69	0.50	0.71	2.38	--
40	15.58	34.77	0.46	1.17	0.77	--
60	13.91	34.77	0.19	0.48	0.62	--
80	13.28	34.86	0.03	0.06	--	--
100	13.00	34.86	0.01	0.05	--	--
125	12.60	34.85	0.00	0.03	--	--
150	12.25	34.81	0.00	0.03	--	0.37

Station No.	3-104	Date - GMT	16 OCT 90
Station Name	D903-104	Time - GMT	0048
Latitude	10. 1.4 N	Date - LOC	15 OCT 90
Longitude	088.59.0 W	Time - LOC	1848

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.96	33.49	0.22	0.07	--	--
20	21.73	34.43	0.36	0.39	--	--
40	17.55	34.69	0.47	0.84	--	--
60	15.18	34.74	0.20	0.32	--	--
80	14.18	34.83	0.03	0.08	--	--
100	13.69	34.87	0.01	0.07	--	--
125	13.03	34.84	0.00	0.05	--	--
150	12.74	34.83	0.01	0.04	--	--

Station No.	3-105	Date - GMT	16 OCT 90
Station Name	D903-105	Time - GMT	1049
Latitude	11. 0.9 N	Date - LOC	16 OCT 90
Longitude	088. 2.3 W	Time - LOC	0449

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.55	31.79	0.19	0.09	2.17	5.26
12	27.55	31.85	0.20	0.09	4.93	--
20	26.23	33.37	0.41	0.22	4.11	--
29	21.89	34.43	0.48	0.42	2.34	--
40	18.84	34.71	0.40	0.79	0.77	--
60	16.64	34.78	0.23	0.48	0.20	--
80	15.11	34.75	0.08	0.23	--	--
100	14.37	34.79	0.05	0.19	--	--
125	13.36	34.85	0.02	0.10	--	--
150	12.80	34.82	0.01	0.06	--	--

Station No.	3-106	Date - GMT	17 OCT 90
Station Name	D903-106	Time - GMT	0301
Latitude	11.29.9 N	Date - LOC	16 OCT 90
Longitude	089.30.2 W	Time - LOC	2101

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	29.35	31.87	0.16	0.06	--	4.96
20	29.50	32.86	0.19	0.08	--	--
40	23.48	34.35	0.74	1.02	--	--
60	19.08	34.70	0.23	0.59	--	--
80	16.68	34.71	0.09	0.25	--	--
100	14.47	34.85	0.02	0.10	--	--
125	13.62	34.86	0.01	0.09	--	--
150	13.18	34.85	0.01	0.04	--	--

Station No.	3-107	Date - GMT	18 OCT 90
Station Name	D903-107	Time - GMT	0047
Latitude	10.14.8 N	Date - LOC	17 OCT 90
Longitude	092.13.7 W	Time - LOC	1847

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.25	33.30	0.21	0.07	--	4.97
20	21.39	34.51	0.36	0.22	--	--
40	17.79	34.72	0.47	1.01	--	--
60	15.53	34.82	0.14	0.32	--	--
80	14.43	34.85	0.03	0.12	--	--
100	13.58	34.87	0.03	0.09	--	--
125	13.21	34.85	0.02	0.07	--	--
150	12.83	34.84	0.02	0.04	--	--

Station No.	3-108	Date - GMT	18 OCT 90
Station Name	D903-108	Time - GMT	1054
Latitude	09.39.6 N	Date - LOC	18 OCT 90
Longitude	093.36.5 W	Time - LOC	0454

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.35	33.32	0.42	0.20	7.85	4.76
12	20.59	34.41	0.42	0.37	5.88	--
20	17.09	34.61	0.51	0.53	3.23	--
29	14.31	34.86	0.19	0.50	0.87	--
40	13.85	34.87	0.10	0.27	0.22	--
60	13.40	34.85	0.05	0.19	0.19	--
80	13.19	34.86	0.02	0.10	--	--
100	12.99	34.85	0.00	0.08	--	--
125	12.71	34.83	0.00	0.08	--	--
150	12.43	34.82	0.00	0.07	--	1.11

Station No.	3-109	Date - GMT	20 OCT 90
Station Name	D903-109	Time - GMT	0125
Latitude	07.39.1 N	Date - LOC	19 OCT 90
Longitude	097.29.0 W	Time - LOC	1925

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.76	33.27	0.29	0.10	--	4.87
20	26.77	33.27	0.31	0.13	--	--
40	22.23	34.12	0.45	0.29	--	--
60	15.70	34.73	0.23	0.38	--	--
80	13.51	34.86	0.16	0.42	--	--
100	12.97	34.84	0.08	0.18	--	--
125	12.59	34.82	0.04	0.05	--	--
150	12.03	34.80	0.07	0.03	--	--

Station No.	3-110	Date - GMT	20 OCT 90
Station Name	D903-110	Time - GMT	1044
Latitude	07.16.3 N	Date - LOC	20 OCT 90
Longitude	098.33.0 W	Time - LOC	0444

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.80	33.36	0.24	0.10	13.34	5.01
8	26.81	33.36	0.25	0.10	19.38	--
14	26.80	33.36	0.32	0.11	19.88	--
20	26.81	33.36	0.22	0.11	15.11	--
40	26.74	33.35	0.23	0.10	4.40	--
60	18.35	34.61	0.21	0.33	0.54	--
80	14.25	34.88	0.11	0.42	0.40	--
100	13.62	34.89	0.08	0.21	--	--
125	13.38	34.88	0.04	0.06	--	--
150	12.71	34.84	0.01	0.05	--	0.24

Station No.	3-111	Date - GMT	21 OCT 90
Station Name	D903-111	Time - GMT	0129
Latitude	06.57.1 N	Date - LOC	20 OCT 90
Longitude	100. 0.9 W	Time - LOC	1929

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.01	33.30	0.25	0.07	--	4.86
20	27.00	33.30	0.23	0.08	--	--
40	26.94	33.28	0.25	0.09	--	--
60	16.61	34.58	0.36	0.52	--	--
80	14.05	34.82	0.13	0.38	--	--
100	13.51	34.89	0.07	0.27	--	--
125	13.14	34.85	0.03	0.06	--	--
150	12.56	34.83	0.03	0.04	--	--

Station No.	3-112	Date - GMT	21 OCT 90
Station Name	D903-112	Time - GMT	1044
Latitude	07.55.5 N	Date - LOC	21 OCT 90
Longitude	099. 5.1 W	Time - LOC	0444

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.91	33.25	0.42	0.18	15.77	5.02
8	26.91	33.25	0.39	0.14	30.74	--
14	26.91	33.25	0.41	0.14	26.46	--
20	26.91	33.25	0.39	0.13	19.77	--
40	19.95	34.44	0.40	0.44	2.58	--
60	14.68	34.82	0.16	0.56	0.75	--
80	13.58	34.80	0.10	0.35	0.24	--
100	13.03	34.82	0.04	0.16	--	--
125	12.71	34.83	0.01	0.05	--	--
150	12.31	34.81	0.00	0.03	--	1.46

Station No.	3-113	Date - GMT	22 OCT 90
Station Name	D903-113	Time - GMT	0118
Latitude	09.16.3 N	Date - LOC	21 OCT 90
Longitude	097.37.9 W	Time - LOC	1918

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.86	32.97	0.48	0.16	--	5.00
20	27.82	32.97	0.47	0.20	--	--
40	14.93	34.77	0.20	0.34	--	--
60	13.88	34.80	0.07	0.36	--	--
80	13.24	34.84	0.05	0.17	--	--
100	12.93	34.82	0.03	0.08	--	--
125	12.48	34.81	0.00	0.06	--	--
150	12.23	34.79	0.02	0.04	--	--

Station No.	3-114	Date - GMT	23 OCT 90
Station Name	D903-114	Time - GMT	0103
Latitude	10.46.9 N	Date - LOC	22 OCT 90
Longitude	095.29.9 W	Time - LOC	1903

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.63	33.72	0.38	0.16	--	4.96
20	14.82	34.79	0.14	0.48	--	--
40	13.77	34.86	0.05	0.19	--	--
60	13.28	34.82	0.03	0.11	--	--
80	13.04	34.85	0.01	0.08	--	--
100	12.62	34.76	0.00	0.07	--	--
125	12.32	34.81	0.00	0.07	--	--
150	12.09	34.79	0.01	0.05	--	--

Station No.	3-115	Date - GMT	31 OCT 90
Station Name	D903-115	Time - GMT	0142
Latitude	15.55.9 N	Date - LOC	30 OCT 90
Longitude	099.40.2 W	Time - LOC	1842

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	29.79	33.37	0.14	0.06	--	--
20	29.54	33.31	--	--	--	--
40	28.40	33.58	--	--	--	--
60	23.39	34.36	--	--	--	--
80	17.91	34.51	--	--	--	--
100	15.21	34.75	--	--	--	--
125	13.71	34.80	--	--	--	--
150	12.98	34.81	--	--	--	--

Station No.	3-116	Date - GMT	31 OCT 90
Station Name	D903-116	Time - GMT	1201
Latitude	16. 7.2 N	Date - LOC	31 OCT 90
Longitude	101. 4.8 W	Time - LOC	0501

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.75	33.33	0.18	0.10	1.14	5.02
8	28.73	33.33	0.36	0.24	2.16	--
13	28.73	33.33	0.36	0.24	2.49	--
20	28.73	33.33	0.37	0.24	2.63	--
40	28.66	33.32	0.38	0.24	2.80	--
60	28.56	33.48	0.45	0.51	1.41	--
80	21.10	34.45	0.14	0.37	0.20	--
100	16.36	34.62	0.04	0.21	--	--
125	14.27	34.80	0.01	0.79	--	--
150	13.11	34.82	0.01	0.41	--	1.45

Station No.	3-117	Date - GMT	01 NOV 90
Station Name	D903-117	Time - GMT	0133
Latitude	16.24.5 N	Date - LOC	31 OCT 90
Longitude	102.50.8 W	Time - LOC	1833

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	30.05	33.82	0.13	0.04	--	5.26
20	29.39	33.49	0.17	0.08	--	--
40	29.66	33.75	0.30	0.17	--	--
60	22.14	34.31	0.47	0.74	--	--
80	17.50	34.51	0.11	0.26	--	--
100	15.33	34.75	0.04	1.08	--	--
125	13.70	34.81	0.01	0.50	--	--
150	13.02	34.80	0.00	0.24	--	--

Station No.	3-118	Date - GMT	01 NOV 90
Station Name	D903-118	Time - GMT	1149
Latitude	16.18.6 N	Date - LOC	01 NOV 90
Longitude	104.25.1 W	Time - LOC	0449

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.97	33.51	0.18	0.08	2.63	5.04
8	29.00	33.43	0.18	0.09	3.99	--
14	28.92	33.43	0.17	0.09	4.85	--
20	28.91	33.43	0.17	0.09	3.28	--
40	28.83	33.44	0.22	0.13	2.86	--
60	25.15	34.19	0.40	0.38	1.21	--
80	20.20	34.34	0.18	0.38	1.15	--
100	17.18	34.42	0.08	0.18	--	--
125	13.86	34.69	0.00	0.22	--	--
150	13.13	34.79	0.00	0.69	--	--

Station No.	4-119	Date - GMT	09 NOV 90
Station Name	D904-119	Time - GMT	0140
Latitude	16.42.1 N	Date - LOC	08 NOV 90
Longitude	105.47.8 W	Time - LOC	1840

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.65	33.23	0.19	0.07	--	5.36
20	27.23	33.18	0.43	0.28	--	--
40	26.00	33.49	0.51	0.41	--	--
60	19.86	34.43	0.21	0.35	--	--
80	16.09	34.74	0.06	0.25	--	--
100	14.44	34.84	0.02	0.34	--	--
125	13.10	34.82	0.00	0.67	--	--
150	12.78	34.82	0.00	0.39	--	--

Station No.	4-120	Date - GMT	09 NOV 90
Station Name	D904-120	Time - GMT	1158
Latitude	15.32.0 N	Date - LOC	09 NOV 90
Longitude	105.52.5 W	Time - LOC	0458

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	29.02	33.50	0.10	0.04	0.82	5.36
8	29.03	33.49	0.12	0.04	2.45	--
14	29.03	33.49	0.12	0.04	1.73	--
20	29.03	33.49	0.12	0.05	2.63	--
40	29.02	33.49	0.14	0.06	1.75	--
60	28.55	33.78	0.39	0.50	0.72	--
80	21.95	34.22	0.24	0.45	0.56	--
100	15.85	34.67	0.07	0.34	--	--
125	13.76	34.75	0.01	0.41	--	--
150	13.00	34.81	0.01	0.11	--	0.50

Station No.	4-121	Date - GMT	10 NOV 90
Station Name	D904-121	Time - GMT	0141
Latitude	13.48.3 N	Date - LOC	09 NOV 90
Longitude	106. 4.3 W	Time - LOC	1841

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	--	--	0.15	0.05	--	5.35
20	--	--	0.33	0.16	--	--
40	--	--	0.30	0.21	--	--
60	--	--	0.22	0.28	--	--
80	--	--	0.09	0.36	--	--
100	--	--	0.23	0.55	--	--
125	--	--	0.04	1.00	--	--
150	--	--	0.03	0.29	--	--

Station No.	4-122	Date - GMT	10 NOV 90
Station Name	D904-122	Time - GMT	1150
Latitude	12.29.5 N	Date - LOC	10 NOV 90
Longitude	106.25.5 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.61	33.14	0.19	0.08	2.72	5.14
8	27.62	33.14	0.03	0.42	10.25	--
14	27.62	33.14	0.19	0.10	7.67	--
20	27.47	33.24	0.18	0.10	9.13	--
40	20.81	34.38	0.26	0.17	3.50	--
60	16.39	34.65	0.17	0.18	0.30	--
80	13.98	34.77	0.05	0.39	0.14	--
100	13.31	34.79	0.01	0.33	--	--
125	12.97	34.81	0.01	0.22	--	--
150	12.52	34.79	0.00	0.19	--	0.79

Station No.	4-123	Date - GMT	11 NOV 90
Station Name	D904-123	Time - GMT	0151
Latitude	11. 3.2 N	Date - LOC	10 NOV 90
Longitude	107.19.2 W	Time - LOC	1851

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.18	33.23	0.15	0.06	--	5.43
20	27.55	33.23	0.26	0.13	--	--
40	19.82	34.41	0.25	0.42	--	--
60	15.02	34.72	0.09	0.72	--	--
80	14.03	34.86	0.01	0.35	--	--
100	13.42	34.85	0.02	0.19	--	--
125	13.00	34.83	0.03	0.10	--	--
150	12.74	34.83	0.01	0.07	--	--

Station No.	4-124	Date - GMT	11 NOV 90
Station Name	D904-124	Time - GMT	1153
Latitude	10.33.8 N	Date - LOC	11 NOV 90
Longitude	108.28.6 W	Time - LOC	0453

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.93	33.18	0.13	0.04	0.70	5.75
9	27.93	33.18	0.13	0.05	1.98	--
16	27.69	33.32	0.13	0.06	3.27	--
20	27.59	33.36	0.13	0.05	3.02	--
40	25.22	33.86	0.24	0.15	2.67	--
60	17.36	34.56	0.13	0.37	1.47	--
80	14.42	34.76	0.04	0.26	0.44	--
100	13.55	34.78	0.00	0.45	--	--
125	12.96	34.82	0.02	0.16	--	--
150	12.57	34.81	0.01	0.08	--	--

Station No.	4-125	Date - GMT	12 NOV 90
Station Name	D904-125	Time - GMT	1155
Latitude	09.31.1 N	Date - LOC	12 NOV 90
Longitude	110.41.0 W	Time - LOC	0455

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.77	33.36	0.14	0.05	0.78	5.69
9	27.79	33.37	0.16	0.07	2.38	--
16	27.88	33.51	0.20	0.09	2.35	--
20	27.84	33.51	0.19	0.10	2.23	--
40	27.06	33.99	0.40	0.21	2.42	--
60	16.82	34.79	0.28	0.71	0.78	--
80	13.90	34.74	0.07	0.29	0.17	--
100	13.32	34.79	0.05	0.20	--	--
125	12.56	34.79	0.01	0.09	--	--
150	12.05	34.78	0.00	0.06	--	--

Station No.	4-126	Date - GMT	13 NOV 90
Station Name	D904-126	Time - GMT	0217
Latitude	08.18.9 N	Date - LOC	12 NOV 90
Longitude	112.32.3 W	Time - LOC	1917

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.89	33.44	0.10	0.03	--	5.80
20	27.56	33.45	0.11	0.04	--	--
40	27.55	33.51	0.15	0.07	--	--
60	27.90	34.23	0.34	0.24	--	--
80	20.03	34.63	0.27	0.50	--	--
100	15.97	34.66	0.15	0.60	--	--
125	13.12	34.80	0.05	0.22	--	--
150	12.55	34.80	0.01	0.23	--	--

Station No.	4-127	Date - GMT	13 NOV 90
Station Name	D904-127	Time - GMT	1201
Latitude	07.15.4 N	Date - LOC	13 NOV 90
Longitude	113.13.2 W	Time - LOC	0501

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.27	33.78	0.12	0.04	1.02	5.27
9	27.28	33.79	--	--	1.59	--
16	27.30	33.82	0.13	0.05	1.33	--
20	27.30	33.82	0.13	0.05	1.16	--
40	27.29	33.82	0.14	0.05	0.91	--
60	27.33	33.92	0.29	0.16	0.40	--
80	24.12	34.55	0.32	0.46	0.23	--
100	16.27	34.61	0.14	0.44	--	--
125	13.74	34.76	0.05	0.21	--	--
150	12.87	34.81	0.03	0.08	--	--

Station No.	4-128	Date - GMT	14 NOV 90
Station Name	D904-128	Time - GMT	0239
Latitude	05.15.0 N	Date - LOC	13 NOV 90
Longitude	113.14.9 W	Time - LOC	1939

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.49	34.36	0.20	0.08	--	5.41
20	26.50	34.36	0.24	0.09	--	--
40	26.49	34.36	0.24	0.10	--	--
60	26.47	34.36	0.26	0.12	--	--
80	26.38	34.37	0.25	0.14	--	--
100	24.59	34.51	0.21	0.35	--	--
125	15.60	34.32	0.09	0.23	--	--
150	12.56	34.78	0.01	0.05	--	--

Station No.	4-129	Date - GMT	14 NOV 90
Station Name	D904-129	Time - GMT	1153
Latitude	04. 4.1 N	Date - LOC	14 NOV 90
Longitude	113.15.8 W	Time - LOC	0453

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.01	34.44	0.23	0.10	2.23	5.69
9	25.97	34.44	0.22	0.10	2.81	--
16	25.98	34.44	0.22	0.12	3.61	--
20	25.98	34.44	0.23	0.10	3.27	--
40	25.98	34.44	0.23	0.09	2.14	--
60	25.09	34.45	0.23	0.19	0.41	--
80	24.17	34.43	0.21	0.14	0.18	--
100	19.94	34.64	0.24	0.46	--	--
125	13.62	34.62	0.08	0.14	--	--
150	12.75	34.85	0.02	0.06	--	--

Station No.	4-130	Date - GMT	15 NOV 90
Station Name	D904-130	Time - GMT	0241
Latitude	01.55.1 N	Date - LOC	14 NOV 90
Longitude	113.27.5 W	Time - LOC	1941

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.83	34.48	0.19	0.08	--	5.07
20	23.80	34.49	0.19	0.09	--	--
40	23.47	34.52	0.23	0.11	--	--
60	22.80	34.69	0.30	0.25	--	--
80	17.71	34.75	0.26	0.57	--	--
100	14.58	34.96	0.12	0.38	--	--
125	14.07	34.95	0.06	0.14	--	--
150	13.54	34.93	0.01	0.04	--	--

Station No.	4-131	Date - GMT	15 NOV 90
Station Name	D904-131	Time - GMT	1152
Latitude	00.47.8 N	Date - LOC	15 NOV 90
Longitude	113.41.7 W	Time - LOC	0452

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.28	34.70	0.21	0.12	3.02	5.41
9	23.28	34.70	0.20	0.11	6.16	--
16	23.28	34.70	0.20	0.11	4.74	--
20	23.29	34.70	0.21	0.11	4.43	--
40	23.20	34.69	0.22	0.14	1.62	--
60	22.74	34.69	0.25	0.29	0.42	--
80	18.62	34.76	0.26	0.50	0.16	--
100	15.32	34.91	0.12	0.28	--	--
125	14.19	34.93	0.04	0.11	--	--
150	13.45	34.92	0.01	0.04	--	--

Station No.	4-132	Date - GMT	16 NOV 90
Station Name	D904-132	Time - GMT	0253
Latitude	00.25.4 N	Date - LOC	15 NOV 90
Longitude	115.51.0 W	Time - LOC	1953

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.35	34.81	0.26	0.10	--	5.48
20	23.35	34.82	0.28	0.11	--	--
40	23.14	34.81	0.33	0.16	--	--
60	22.56	34.85	0.28	0.19	--	--
80	19.56	34.78	0.19	0.30	--	--
100	14.89	34.81	0.09	0.17	--	--
125	14.29	34.85	0.12	0.10	--	--
150	13.89	34.91	0.02	0.05	--	--

Station No.	4-133	Date - GMT	16 NOV 90
Station Name	D904-133	Time - GMT	1153
Latitude	00.23.9 N	Date - LOC	16 NOV 90
Longitude	117. 7.0 W	Time - LOC	0453

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	23.33	34.85	0.24	0.13	2.67	--
9	23.33	34.85	0.23	0.13	5.58	--
16	23.34	34.85	0.24	0.13	4.19	--
20	23.33	34.85	0.23	0.14	4.13	--
40	23.32	34.85	0.23	0.13	2.12	--
60	23.01	34.85	0.22	0.16	0.32	--
80	16.84	34.82	0.16	0.24	0.13	--
100	14.49	34.81	0.04	0.06	--	--
125	13.66	34.89	0.01	0.03	--	--
150	13.57	34.96	0.00	0.03	--	3.25

Station No.	4-134	Date - GMT	17 NOV 90
Station Name	D904-134	Time - GMT	0250
Latitude	02.27.3 N	Date - LOC	16 NOV 90
Longitude	117. 1.4 W	Time - LOC	1950

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	25.27	34.50	0.20	0.09	--	5.21
20	25.29	34.50	0.21	0.09	--	--
40	25.29	34.49	0.23	0.12	--	--
60	25.25	34.50	0.24	0.22	--	--
80	19.84	34.58	0.20	0.27	--	--
100	15.62	34.91	0.11	0.25	--	--
125	13.87	34.93	0.07	0.16	--	--
150	13.33	34.91	0.01	0.03	--	--

Station No.	4-135	Date - GMT	17 NOV 90
Station Name	D904-135	Time - GMT	1153
Latitude	03.44.7 N	Date - LOC	17 NOV 90
Longitude	116.56.0 W	Time - LOC	0453

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.10	34.52	0.25	0.16	1.98	--
9	26.11	34.51	0.27	0.18	3.18	--
16	26.11	34.51	0.27	0.16	3.14	--
20	26.11	34.51	0.26	0.17	2.95	--
40	26.10	34.51	0.25	0.17	0.87	--
60	26.05	34.50	0.26	0.18	0.22	--
80	25.95	34.57	0.29	0.22	0.47	--
100	20.70	34.74	0.23	0.42	--	--
125	15.94	34.57	0.05	0.13	--	--
150	12.99	34.75	0.02	0.06	--	--

Station No.	4-136	Date - GMT	18 NOV 90
Station Name	D904-136	Time - GMT	0236
Latitude	05.52.0 N	Date - LOC	17 NOV 90
Longitude	116.34.2 W	Time - LOC	1936

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.28	34.21	0.14	0.05	--	6.52
20	27.29	34.21	0.15	0.06	--	--
40	27.28	34.21	0.16	0.06	--	--
60	27.26	34.22	0.19	0.08	--	--
80	26.20	34.63	0.27	0.17	--	--
100	22.22	34.25	0.27	0.43	--	--
125	13.79	34.75	0.12	0.25	--	--
150	12.66	34.81	0.02	0.07	--	--

Station No.	4-137	Date - GMT	18 NOV 90
Station Name	D904-137	Time - GMT	1155
Latitude	07.12.4 N	Date - LOC	18 NOV 90
Longitude	116.27.6 W	Time - LOC	0455

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.42	34.29	0.16	0.07	0.66	--
10	27.43	34.07	0.19	0.10	1.91	--
20	27.44	34.18	0.21	0.10	2.09	--
27	27.34	34.21	0.22	0.13	1.88	--
40	26.89	34.53	0.25	0.16	1.18	--
60	26.04	34.59	0.22	0.17	0.25	--
80	24.33	34.78	0.20	0.36	--	--
100	19.12	34.61	0.16	0.34	0.28	--
125	14.45	34.69	0.05	0.20	--	--
150	13.08	34.80	0.03	0.10	--	1.94

Station No.	4-138	Date - GMT	19 NOV 90
Station Name	D904-138	Time - GMT	0240
Latitude	09.15.4 N	Date - LOC	18 NOV 90
Longitude	116.16.0 W	Time - LOC	1940

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.90	33.45	0.14	0.06	--	5.53
20	27.78	33.50	0.22	0.09	--	--
40	27.93	33.65	0.27	0.27	--	--
60	24.86	34.36	0.20	0.29	--	--
80	15.55	34.66	0.12	0.37	--	--
100	14.57	34.63	0.03	0.19	--	--
125	12.88	34.76	0.02	0.05	--	--
150	11.99	34.75	0.00	0.04	--	--

Station No.	4-139	Date - GMT	19 NOV 90
Station Name	D904-139	Time - GMT	1149
Latitude	09.47.8 N	Date - LOC	19 NOV 90
Longitude	115. 4.9 W	Time - LOC	0449

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.83	33.09	0.10	0.04	0.80	--
9	27.87	33.22	0.11	0.04	1.01	--
16	27.87	33.22	0.10	0.05	0.75	--
20	27.86	33.25	0.15	0.08	0.97	--
40	27.95	33.72	0.27	0.30	0.72	--
60	17.57	34.48	0.08	0.46	0.23	--
80	14.18	34.72	0.06	0.37	0.23	--
100	13.09	34.79	0.02	0.06	--	--
125	12.50	34.79	0.00	0.06	--	--
150	11.87	34.76	0.00	0.02	--	1.31

Station No.	4-140	Date - GMT	20 NOV 90
Station Name	D904-140	Time - GMT	0214
Latitude	10.37.0 N	Date - LOC	19 NOV 90
Longitude	113.21.6 W	Time - LOC	1914

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.79	33.49	0.14	0.05	--	5.60
20	27.80	33.47	0.23	0.13	--	--
40	20.03	34.46	0.23	0.40	--	--
60	15.52	34.67	0.15	1.29	--	--
80	13.67	34.76	0.01	0.63	--	--
100	12.97	34.78	0.03	0.36	--	--
125	12.51	34.75	0.07	0.10	--	--
150	12.18	34.78	0.01	0.07	--	--

Station No.	4-141	Date - GMT	20 NOV 90
Station Name	D904-141	Time - GMT	1151
Latitude	10.50.7 N	Date - LOC	20 NOV 90
Longitude	112. 6.9 W	Time - LOC	0451

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.66	33.53	0.17	0.07	1.93	--
9	27.66	33.53	0.17	0.07	1.90	--
16	27.66	33.53	0.17	0.08	2.32	--
20	27.65	33.53	0.19	0.09	2.80	--
40	20.91	34.40	0.21	0.34	0.92	--
60	15.21	34.71	0.11	0.87	0.29	--
80	13.80	34.87	0.06	0.51	0.18	--
100	12.98	34.80	0.02	0.12	--	--
125	12.22	34.77	0.00	0.06	--	--
150	11.80	34.76	0.00	0.06	--	0.52

Station No.	4-142	Date - GMT	21 NOV 90
Station Name	D904-142	Time - GMT	0223
Latitude	11.33.0 N	Date - LOC	20 NOV 90
Longitude	110.55.8 W	Time - LOC	1923

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.88	33.54	0.14	0.05	--	4.75
20	27.75	33.53	0.36	0.15	--	--
40	23.25	34.47	0.22	0.55	--	--
60	16.39	34.66	0.07	0.56	--	--
80	14.60	34.65	0.04	0.52	--	--
100	13.71	34.76	0.02	0.42	--	--
125	12.81	34.76	0.06	0.18	--	--
150	12.15	34.76	0.02	0.15	--	--

Station No.	4-143	Date - GMT	21 NOV 90
Station Name	D904-143	Time - GMT	1153
Latitude	12. 0.2 N	Date - LOC	21 NOV 90
Longitude	112.15.3 W	Time - LOC	0453

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.75	33.28	0.21	0.10	1.02	--
10	27.76	33.27	0.22	0.10	3.59	--
20	27.76	33.28	0.32	0.21	6.73	--
27	27.76	33.32	0.30	0.29	4.75	--
40	21.28	34.42	0.24	0.30	1.48	--
60	17.14	34.58	0.14	0.44	0.38	--
80	14.01	34.63	0.11	0.47	--	--
100	13.14	34.68	0.02	0.26	0.22	--
125	12.72	34.72	0.03	0.14	--	--
150	12.29	34.76	0.00	0.15	--	0.21

Station No.	4-144	Date - GMT	22 NOV 90
Station Name	D904-144	Time - GMT	0223
Latitude	12.43.5 N	Date - LOC	21 NOV 90
Longitude	114.33.0 W	Time - LOC	1923

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.55	33.70	0.18	0.06	--	4.92
20	27.42	33.70	0.19	0.10	--	--
40	22.10	34.29	0.25	0.21	--	--
60	16.03	34.59	0.16	0.79	--	--
80	13.81	34.73	0.02	0.47	--	--
100	13.13	34.75	0.00	0.46	--	--
125	12.55	34.77	0.01	0.14	--	--
150	12.11	34.76	0.00	0.10	--	--

Station No.	4-145	Date - GMT	22 NOV 90
Station Name	D904-145	Time - GMT	1150
Latitude	13.16.5 N	Date - LOC	22 NOV 90
Longitude	115.44.0 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.71	33.75	0.19	0.06	3.06	--
10	27.66	33.73	0.17	0.08	4.10	--
20	27.57	33.72	0.20	0.10	3.97	--
27	27.56	33.72	0.21	0.09	3.70	--
40	26.16	33.42	0.24	0.20	2.11	--
60	17.61	34.51	0.20	0.54	0.38	--
80	14.93	34.65	0.08	0.45	--	--
100	13.59	34.72	0.01	0.54	0.51	--
125	12.59	34.77	0.01	0.78	--	--
150	12.18	34.77	0.03	0.52	--	0.18

Station No.	4-146	Date - GMT	23 NOV 90
Station Name	D904-146	Time - GMT	0209
Latitude	13.45.6 N	Date - LOC	22 NOV 90
Longitude	113.53.2 W	Time - LOC	1909

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.64	33.57	0.17	0.06	--	5.19
20	27.56	33.63	0.27	0.12	--	--
40	26.21	33.72	0.40	0.37	--	--
60	18.98	34.47	0.28	0.41	--	--
80	15.60	34.61	0.02	0.48	--	--
100	14.13	34.72	0.00	0.86	--	--
125	13.20	34.79	0.03	0.89	--	--
150	12.73	34.80	0.00	0.51	--	--

Station No.	4-147	Date - GMT	23 NOV 90
Station Name	D904-147	Time - GMT	1153
Latitude	14. 1.4 N	Date - LOC	23 NOV 90
Longitude	112.35.3 W	Time - LOC	0453

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.58	33.59	0.19	0.09	1.95	--
10	27.59	33.59	0.18	0.07	2.92	--
20	27.59	33.59	0.16	0.07	3.44	--
27	27.54	33.65	0.16	0.07	3.98	--
40	26.29	34.13	0.22	0.11	1.69	--
60	20.61	34.48	0.33	0.40	0.45	--
80	16.19	34.62	0.20	0.84	--	--
100	14.64	34.71	0.00	0.53	0.56	--
125	13.44	34.79	0.01	0.78	--	--
150	12.64	34.77	0.01	0.16	--	0.28

Station No.	4-148	Date - GMT	24 NOV 90
Station Name	D904-148	Time - GMT	0209
Latitude	14.43.2 N	Date - LOC	23 NOV 90
Longitude	112.39.9 W	Time - LOC	1909

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.56	33.86	0.12	0.04	--	4.94
20	27.37	33.92	--	--	--	--
40	26.78	33.89	0.23	0.11	--	--
60	20.56	34.27	0.38	0.44	--	--
80	16.91	34.55	0.17	0.60	--	--
100	13.74	34.56	0.05	0.30	--	--
125	12.76	34.71	0.02	0.08	--	--
150	12.37	34.75	0.01	0.17	--	--

Station No.	4-149	Date - GMT	24 NOV 90
Station Name	D904-149	Time - GMT	1152
Latitude	14.57.3 N	Date - LOC	24 NOV 90
Longitude	113.59.8 W	Time - LOC	0452

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.18	33.95	0.14	0.06	1.72	--
10	27.15	33.94	0.14	0.06	3.47	--
20	26.98	34.05	0.15	0.07	2.21	--
27	26.57	34.19	0.14	0.07	2.52	--
40	26.38	34.21	0.15	0.16	0.85	--
60	21.59	34.21	0.32	0.23	0.25	--
80	17.45	34.17	0.32	0.37	--	--
100	15.15	34.43	0.14	0.26	0.11	--
125	13.30	34.68	0.03	0.10	--	--
150	12.64	34.71	0.01	0.16	--	0.19

Station No.	4-150	Date - GMT	25 NOV 90
Station Name	D904-150	Time - GMT	0214
Latitude	15.48.9 N	Date - LOC	24 NOV 90
Longitude	116. 9.0 W	Time - LOC	1914

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.30	33.52	0.16	0.05	--	4.94
20	26.11	34.28	0.12	0.05	--	--
40	25.20	34.38	0.27	0.13	--	--
60	18.47	34.16	0.29	0.40	--	--
80	14.56	34.28	0.10	0.29	--	--
100	13.71	34.62	0.01	0.17	--	--
125	12.90	34.71	0.06	0.35	--	--
150	12.45	34.74	0.00	0.24	--	--

Station No.	4-151	Date - GMT	25 NOV 90
Station Name	D904-151	Time - GMT	1250
Latitude	16.16.0 N	Date - LOC	25 NOV 90
Longitude	115.20.4 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.25	33.89	0.18	0.09	0.93	--
11	27.25	33.88	0.19	0.08	1.12	--
20	27.21	33.88	0.19	0.09	1.07	--
29	27.20	33.88	0.19	0.10	1.19	--
40	27.21	33.89	0.22	0.12	0.49	--
60	25.42	34.15	0.39	0.38	0.33	--
80	18.80	34.22	0.32	0.39	--	--
100	14.99	34.22	0.10	0.26	0.18	--
125	13.59	34.59	0.02	0.10	--	--
150	12.74	34.69	0.02	0.31	--	0.23

Station No.	4-152	Date - GMT	26 NOV 90
Station Name	D904-152	Time - GMT	0221
Latitude	16.36.1 N	Date - LOC	25 NOV 90
Longitude	113.20.8 W	Time - LOC	1821

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.97	33.92	0.25	0.09	--	--
20	26.45	33.94	0.49	0.25	--	--
40	19.96	34.19	0.45	0.61	--	--
60	15.19	34.55	0.04	0.17	--	--
80	13.62	34.61	0.02	0.21	--	--
100	12.91	34.67	0.01	0.05	--	--
125	12.35	34.71	0.04	0.05	--	--
150	11.93	34.73	0.00	0.12	--	--

Station No.	4-153	Date - GMT	26 NOV 90
Station Name	D904-153	Time - GMT	1253
Latitude	16.58.1 N	Date - LOC	26 NOV 90
Longitude	111.46.4 W	Time - LOC	0453

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.14	34.07	0.16	0.06	0.78	--
10	27.14	34.07	0.16	0.06	1.86	--
20	26.92	34.20	0.17	0.07	1.46	--
27	26.22	34.24	0.20	0.08	1.77	--
40	23.74	34.16	0.28	0.14	1.31	--
60	17.95	34.34	0.42	0.41	0.19	--
80	14.95	34.19	0.18	0.26	--	--
100	13.34	34.37	0.08	0.19	0.23	--
125	12.82	34.58	0.03	0.13	--	--
150	12.58	34.69	0.00	0.15	--	0.16

Station No.	4-154	Date - GMT	27 NOV 90
Station Name	D904-154	Time - GMT	0219
Latitude	17.11.9 N	Date - LOC	26 NOV 90
Longitude	110. 2.5 W	Time - LOC	1819

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	--	--	0.18	0.05	--	5.08
20	--	--	0.29	0.09	--	--
40	--	--	0.43	0.19	--	--
60	--	--	0.46	0.45	--	--
80	--	--	0.13	0.23	--	--
100	--	--	0.16	1.73	--	--
125	--	--	0.08	0.89	--	--
150	--	--	0.02	0.76	--	--

Station No.	4-155	Date - GMT	27 NOV 90
Station Name	D904-155	Time - GMT	1248
Latitude	17.31.6 N	Date - LOC	27 NOV 90
Longitude	111.42.0 W	Time - LOC	0448

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.26	34.13	0.14	0.05	0.57	--
10	27.26	34.12	0.13	0.05	1.03	--
20	25.89	34.14	0.28	0.13	3.96	--
27	25.30	34.17	0.21	0.11	2.49	--
40	23.72	34.20	0.51	0.32	1.63	--
60	17.45	34.35	0.39	0.54	0.28	--
80	14.48	34.31	0.15	0.24	--	--
100	13.33	34.42	0.05	0.14	0.10	--
125	12.72	34.69	0.01	0.07	--	--
150	12.38	34.72	0.00	0.16	--	0.24

Station No.	4-156	Date - GMT	28 NOV 90
Station Name	D904-156	Time - GMT	0224
Latitude	18. 0.9 N	Date - LOC	27 NOV 90
Longitude	113.40.6 W	Time - LOC	1824

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.59	33.86	0.26	0.09	--	5.33
20	26.56	33.92	0.37	0.18	--	--
40	20.86	33.97	0.45	0.64	--	--
60	15.58	34.10	0.19	0.33	--	--
80	14.50	34.48	0.05	0.19	--	--
100	13.43	34.62	0.02	0.09	--	--
125	12.76	34.75	0.05	0.39	--	--
150	12.31	34.75	0.00	0.29	--	--

Station No.	4-157	Date - GMT	28 NOV 90
Station Name	D904-157	Time - GMT	0824
Latitude	18.13.4 N	Date - LOC	28 NOV 90
Longitude	114.24.0 W	Time - LOC	0024

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.68	34.04	0.31	0.17	--	--
20	26.73	34.08	0.36	0.19	--	--
40	26.74	34.17	0.34	0.41	--	--
60	19.95	34.02	0.21	0.34	--	--
80	17.18	34.03	0.18	0.27	--	--
100	14.44	34.21	0.04	0.14	--	--
125	13.67	34.69	0.06	0.53	--	--
150	12.79	34.74	0.00	0.57	--	0.39

Station No.	4-158	Date - GMT	29 NOV 90
Station Name	D904-158	Time - GMT	0222
Latitude	18.34.8 N	Date - LOC	28 NOV 90
Longitude	113.38.3 W	Time - LOC	1822

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	26.55	33.87	0.29	0.11	--	5.05
20	26.57	33.90	0.33	0.15	--	--
40	20.58	34.25	0.28	0.40	--	--
60	17.03	34.00	0.14	0.25	--	--
80	14.18	34.04	0.07	0.21	--	--
100	13.38	34.36	0.02	0.11	--	--
125	12.59	34.53	0.05	0.06	--	--
150	12.18	34.61	0.00	0.03	--	--

Station No.	4-159	Date - GMT	29 NOV 90
Station Name	D904-159	Time - GMT	1253
Latitude	18.54.0 N	Date - LOC	29 NOV 90
Longitude	112.17.4 W	Time - LOC	0453

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.31	33.90	0.20	0.08	0.53	--
10	27.32	33.90	0.25	0.08	2.21	--
20	27.31	33.90	0.20	0.07	2.43	--
27	27.32	33.90	0.20	0.08	2.13	--
40	22.71	34.06	0.45	0.56	2.20	--
60	18.12	34.24	0.27	0.30	0.28	--
80	14.62	34.22	0.12	0.19	--	--
100	13.87	34.43	0.06	0.12	0.65	--
125	13.10	34.60	0.02	0.06	--	--
150	12.54	34.68	0.01	0.05	--	0.47

Station No.	4-160	Date - GMT	30 NOV 90
Station Name	D904-160	Time - GMT	0222
Latitude	19.25.5 N	Date - LOC	29 NOV 90
Longitude	111. 7.2 W	Time - LOC	1822

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.26	33.84	0.17	0.06	--	5.20
20	27.08	33.87	0.24	0.09	--	--
40	24.38	34.10	0.51	0.56	--	--
60	18.27	34.34	0.26	0.35	--	--
80	15.63	34.43	0.08	0.19	--	--
100	14.00	34.51	0.01	0.07	--	--
125	13.18	34.59	0.04	0.05	--	--
150	12.66	34.68	0.00	0.04	--	--

Station No.	4-161	Date - GMT	01 DEC 90
Station Name	D904-161	Time - GMT	0221
Latitude	19. 8.5 N	Date - LOC	30 NOV 90
Longitude	109.55.2 W	Time - LOC	1821

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.93	33.37	0.24	0.10	--	5.97
20	27.94	33.37	0.30	0.12	--	--
40	28.49	34.22	0.39	0.24	--	--
60	25.32	34.27	0.30	0.44	--	--
80	18.83	34.31	0.13	0.29	--	--
100	15.99	34.53	0.05	0.20	--	--
125	14.07	34.66	0.04	0.08	--	--
150	13.12	34.64	0.01	0.06	--	--

Station No.	4-162	Date - GMT	01 DEC 90
Station Name	D904-162	Time - GMT	1250
Latitude	19.46.9 N	Date - LOC	01 DEC 90
Longitude	109.56.7 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	28.02	34.15	0.19	0.10	0.25	--
9	28.02	34.14	0.18	0.09	1.12	--
16	28.03	34.13	0.19	0.09	0.91	--
20	28.04	34.14	0.19	0.10	1.06	--
40	28.04	34.13	0.19	0.09	0.53	--
60	28.04	34.14	0.19	0.08	0.11	--
80	22.19	34.23	0.27	0.46	0.11	--
100	18.59	34.39	0.08	0.19	--	--
125	15.24	34.58	0.02	0.14	--	--
150	13.85	34.64	0.00	0.06	--	0.71

Station No.	4-163	Date - GMT	02 DEC 90
Station Name	D904-163	Time - GMT	0233
Latitude	21.17.5 N	Date - LOC	01 DEC 90
Longitude	111. 8.0 W	Time - LOC	1833

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	27.44	34.07	0.15	0.06	--	5.97
20	27.45	34.05	0.47	0.30	--	--
40	27.09	33.99	0.44	0.42	--	--
60	25.99	34.19	0.15	0.27	--	--
80	21.91	34.15	0.07	0.15	--	--
100	18.10	34.00	0.02	0.10	--	--
125	14.75	34.28	0.05	0.07	--	--
150	13.92	34.34	0.00	0.04	--	--

Station No.	4-164	Date - GMT	02 DEC 90
Station Name	D904-164	Time - GMT	1250
Latitude	22.23.8 N	Date - LOC	02 DEC 90
Longitude	112. 3.7 W	Time - LOC	0450

Depth (m)	Temp (deg C)	Salinity (psu)	Chloro (mg/m3)	Phaeo (mg/m3)	Productivity (mgC/m3/day)	Oxygen (ml/L)
0	24.49	34.31	0.14	0.03	0.50	--
9	24.51	34.30	0.14	0.03	1.19	--
16	24.33	34.22	0.13	0.04	1.39	--
20	24.32	34.17	0.13	0.04	1.55	--
40	23.09	34.07	0.16	0.06	0.77	--
60	17.72	33.55	0.28	0.13	0.18	--
80	17.24	33.92	0.43	0.31	0.12	--
100	15.76	33.94	0.16	0.25	--	--
125	14.40	34.05	0.09	0.19	--	--
150	12.60	34.28	0.02	0.06	--	2.14

APPENDIX B

SCIENTIFIC PERSONNEL

		Leg
Cruise Leaders		
Andrew Dizon, SWFSC		1
James Gilpatrick, SWFSC		2
Scott Hill, NOAA Corps, SWFSC		3
Edward Cassano, NOAA Corps, SWFSC		4
Bird Observers		
Lisa Ballance, SWFSC		1-3
Robert Pitman, SWFSC		1-4
Jan Friedrichsen, contracted		4
Marine Mammal Identification Experts		
Richard LeDuc, SWFSC		1-2
Scott Benson, SWFSC		1-2
James Cotton, SWFSC		3-4
Gary Friedrichsen, SWFSC		3-4
Marine Mammal Observers		
Carrie LeDuc, SWFSC		1-2
Joseph Raffetto, SWFSC		1-2
Jim Carretta, SWFSC		1-2
Darlene Everhart, SWFSC		1-2
Bill Irwin, SWFSC		3-4
Richard Rowlett, SWFSC		3-4
Brian Smith, SWFSC		3-4
Wes Armstrong, SWFSC		3-4
Oceanographers		
Valerie Philbrick, SWFSC		1-4
Gregg Thomas, AOML		1-4
Other Scientific Crew Members		
Robert Holland, SWFSC		2
Horacio De Anda, Mexico	(until Aug. 03)	1
Pablo Loreto, Mexico		4
Photogrammetrists		
Mark Lowry, SWFSC		1
Andrew Dizon, SWFSC		1
James Gilpatrick, SWFSC		2
Morgan Lynn, SWFSC		2-4
Robin Westlake, SWFSC		3-4
Helicopter Support		
Miles Croom, NOAA Corps, OAO		1,3
Dave Gardiner, NOAA Corps, OAO		2,4
Ron Helgeson, OAO		1-4
Robert Pape, NOAA Corps, OAO		4

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