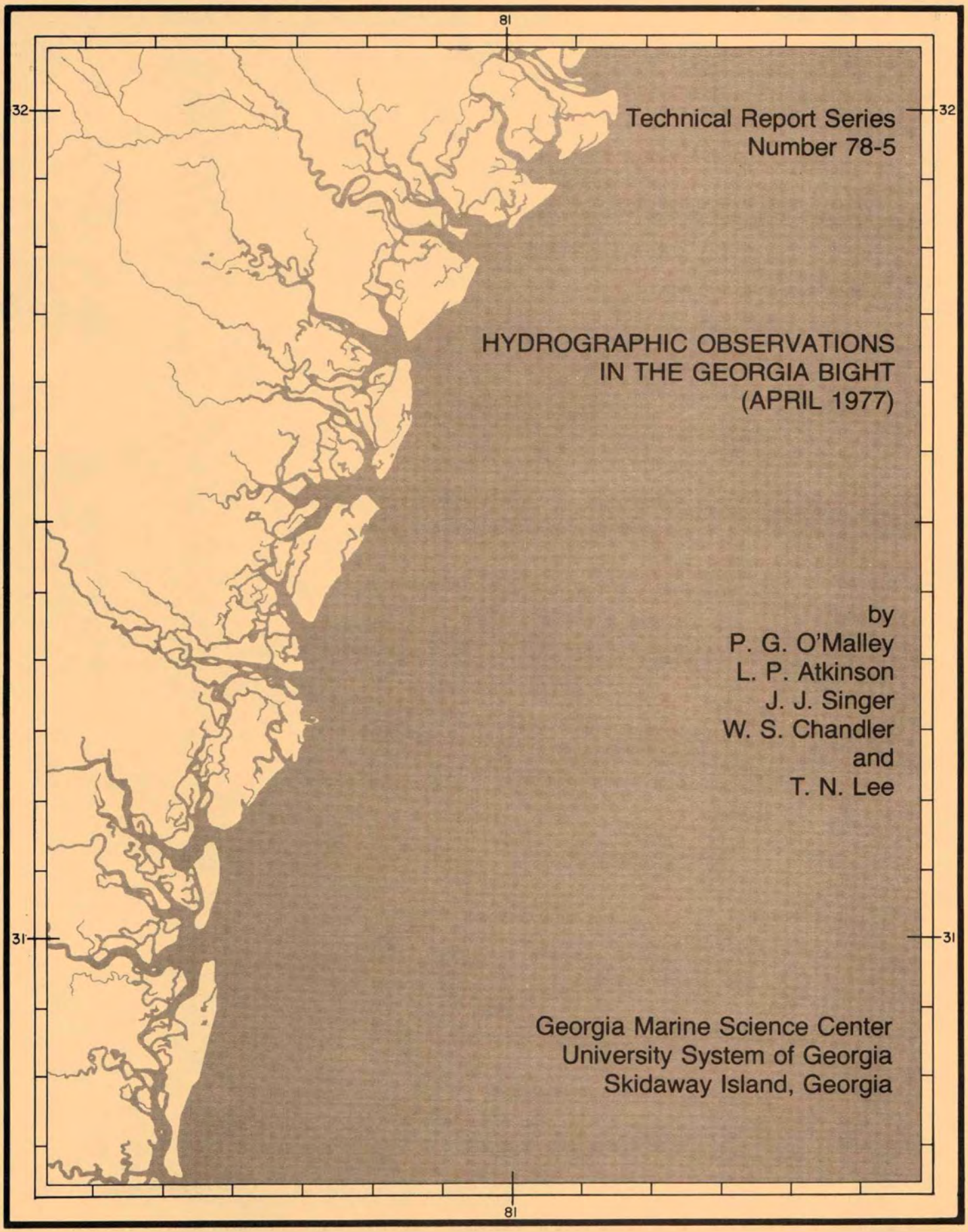

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by
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Skidaway Island, Georgia

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ABSTRACT

During two cruises in the Georgia Bight in April 1977, nine hydrographic and three XBT transects were conducted. Temperature, salinity, dissolved oxygen, and nutrient (NO_3, PO_4, and SiO_2) data were collected.

Generally, the continental shelf water was well mixed vertically and characterized by low nutrient concentrations and oxygen saturation. However, bottom and interlayering intrusions of Gulf Stream water onto the shelf were observed. Satellite thermal images revealed a Gulf Stream spin-off eddy which was subsequently mapped and intensively sampled. Strong upwelling of dense, cold, nutrient-rich, and oxygen depleted water was associated with the eddy event. It is likely that the regular occurrence of spin-off eddies provides a mechanism for significant nutrient enrichment of the continental shelf.

INTRODUCTION

This report contains chemical and physical data obtained during Georgia Bight cruises AD-4-77 and BF-29-77 aboard the S/S ADVANCE II and the R/V BLUE FIN from 8 to 20 April 1977. The investigation was part of a larger multi-institutional DOE program to describe and explain the physical, chemical, and biological processes of the South Atlantic Bight, the continental shelf region from Cape Hatteras to Cape Canaveral. The study reported here was concentrated in the Georgia Bight from Savannah, Georgia, south to Ormond Beach, Florida (Fig. 1).

Our object was to collect temperature and chemical data to correlate with other data from box arrays of current/temperature/pressure recording instruments (deployed by the University of Miami) concurrently operative in the study area (Fig. 1). Additionally, our temperature and conductivity data are used to calibrate the moored instruments. No attempt is made here to correlate the hydrographic/chemical observations with the current meter data. The latter will appear in a separate report edited by Dr. T. Lee of the University of Miami.

The processed hydrographic data set is available from the National Oceanographic Data Center (NODC).

METHODS

Nine onshore-offshore hydrographic transects and two XBT transects were conducted during the ADVANCE II cruise (Fig. 2). The first four transects were selected to provide chemical and physical data during recovery, servicing, and deployment of the current/temperature/pressure instruments of the box array off Savannah and St. Simons, Georgia. Later, we proceeded south to locate what appeared, in satellite thermal images, to be a Gulf Stream spin-off eddy (Lee, 1975).

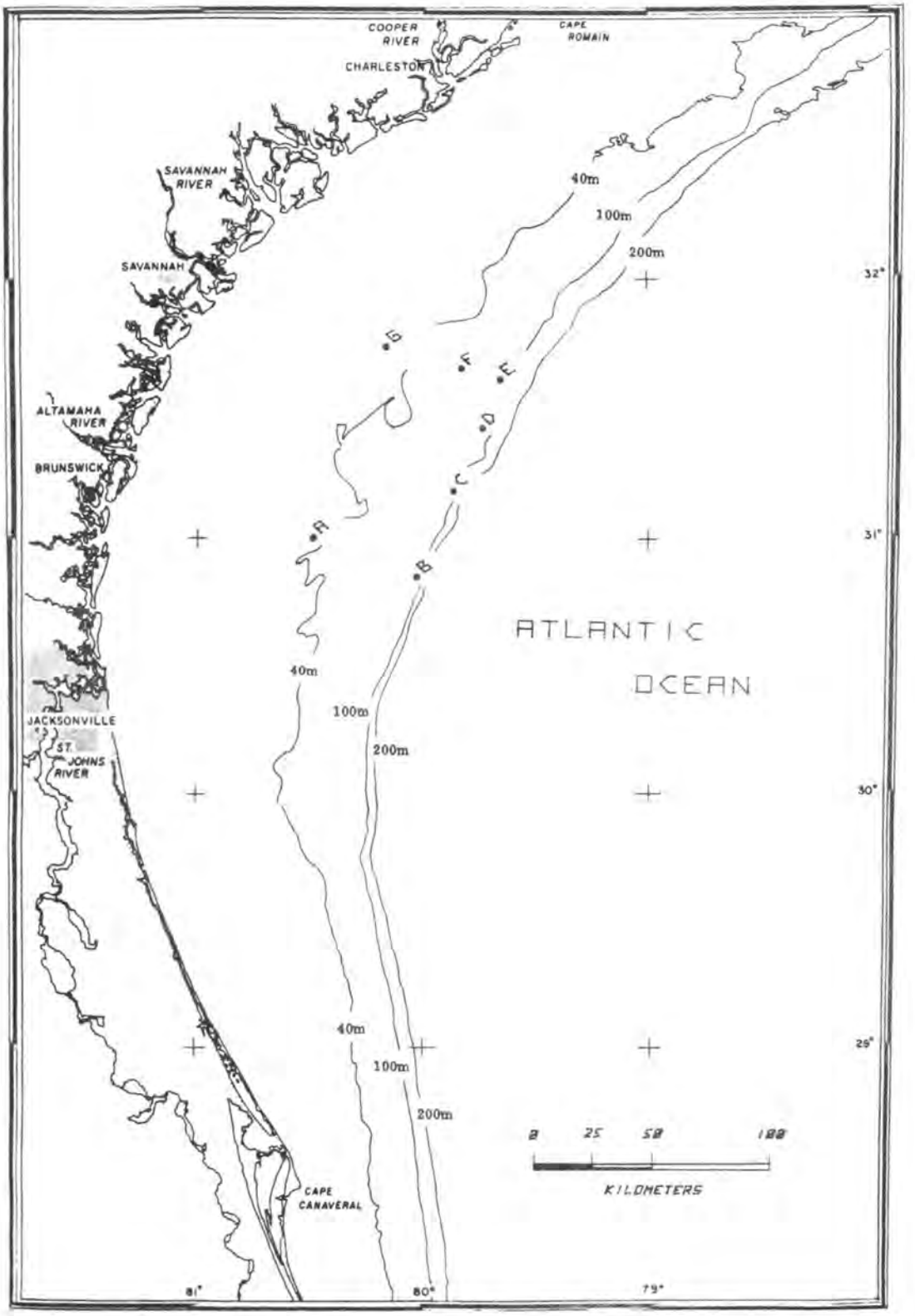

Figure 1. The Georgia Bight. Current/Temperature/Pressure moorings are designated A through G.

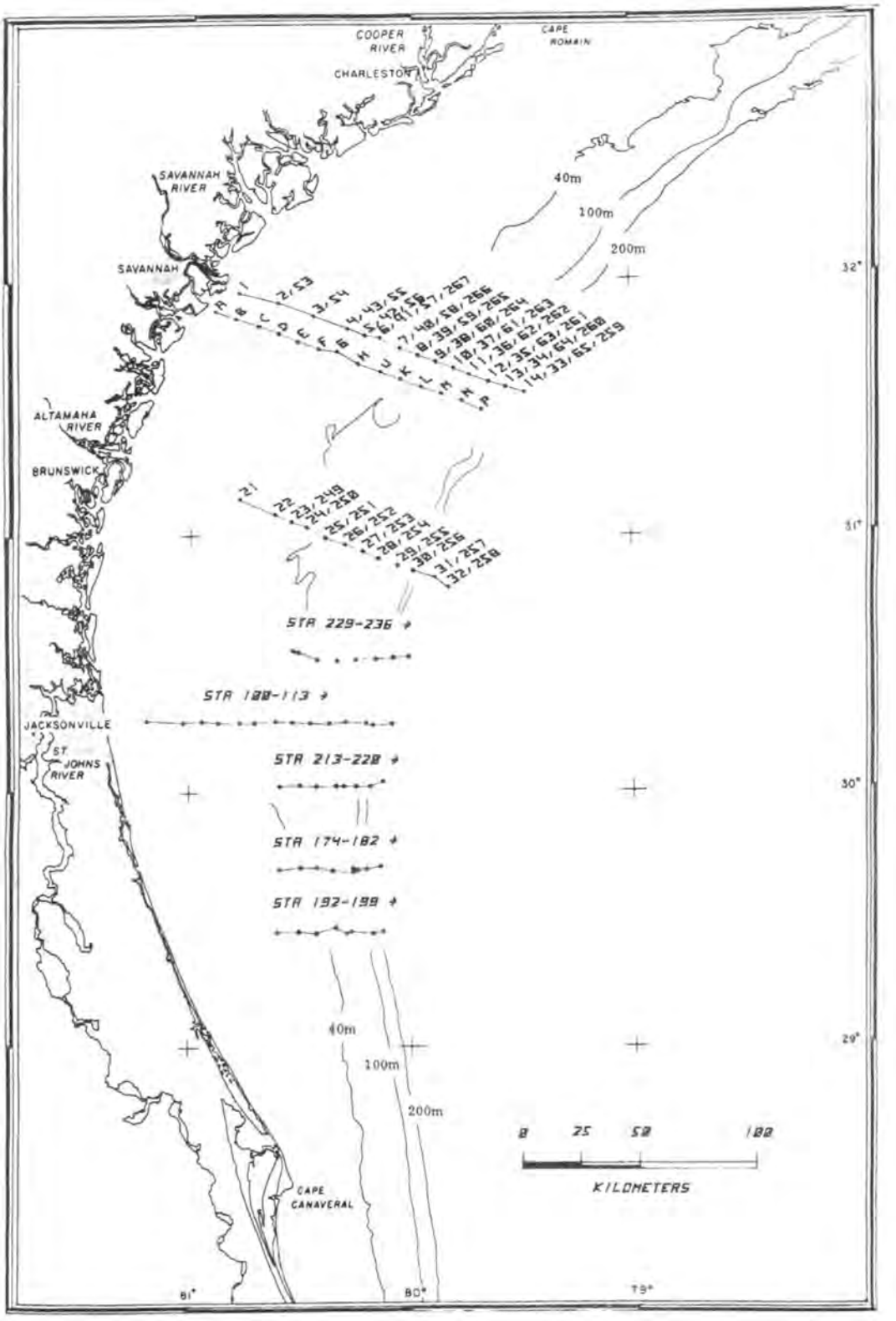

Figure 2. The study area showing station locations for cruises AD-4-77 (numbered stations) and BF-29-77 (lettered stations).

Four hydrographic sections and one XBT transect were made adjacent to and through this event. The final two sections were made off St. Simons and Savannah to provide additional data in the area of the array. Throughout the ADVANCE II cruise, surface temperature/salinity distribution was mapped by means of a thermosalinograph. The BLUE FIN cruise on 19-20 April consisted of one onshore/offshore XBT section off Savannah (Fig. 2).

A typical hydrographic section consisted of alternate CTD (conductivity/temperature/depth) Rosette casts and XBT (expendable bathythermograph) firings at approximately 10 kilometer intervals. On occasion, specifically during investigation of the eddy event, sampling intensity was increased. Two sections, Jacksonville (North), 15 April 1977, and St. Simons, 16 April 1977, consisted exclusively of XBT stations at approximately 10 kilometer intervals. The average time required to complete a hydrographic section, excluding the first Savannah section which took 15 hours, was approximately 6 hours. The average time of an XBT section was 2 hours.

At CTD stations, a General Oceanics Model 1015 Mark 5 Rosette multi-bottle array was mated to the Plessey 9400 CTD sensor unit and equipped with 1.7 liter Niskin bottles for water sampling. Niskin sampling depths were determined from the temperature structure obtained from the CTD. Samples were taken near the surface, just above or below the thermocline, at the bottom, and occasionally at other depths. Samples were analyzed for salinity, nitrate, phosphate, silicate, and dissolved oxygen contents.

Chemical and Physical Procedures

Salinity samples were analyzed conductometrically using a Plessey Model 6230N portable laboratory salinometer. Values obtained were used

to calibrate the Plessey Model 9400 CTD system. A separate section of this report details the CTD calibration procedure. Temperature was determined with deep sea reversing thermometers, XBT's, and the CTD system.

Dissolved oxygen analyses were performed onboard the research vessel within 24 hours of collection using a modified Winkler procedure (Strickland and Parsons, 1965).

Nutrient samples were immediately frozen in polyethylene bottles and stored in the dark until thawed and analyzed ashore. Colorimetric determinations of nutrient concentrations were made utilizing a Bausch and Lomb Spectronic 88 spectrophotometer with a sample sipper. Silicate was determined by the method of Mullin and Riley (1955) as modified by Strickland and Parsons (1965), phosphate by the method of Murphy and Riley (1962), and nitrate by the cadmium column reduction technique as modified by Gardner et al. (1976)

XBT Data Acquisition and Processing

A Sippican Model LM3A handheld launcher equipped with type T10 probes (200 m), coupled to a Sippican Model MK2A-1 recorder, was used for XBT casts. The temperature/depth plots were digitized on a Hewlett-Packard Model 9864A digitizer interfaced to a Hewlett-Packard Model 9825A calculator. The digitized data was placed in NODC format and merged on magnetic tape with processed CTD data. Depths at which temperature was a whole or half degree are reported as are depths at which a significant mixed layer began or ended.

CTD Data Acquisition

The CTD unit consisted of a Plessey Model 9400 CTD sensor system with a Model 8400 digital data logger and Kennedy Model 1600 incremental

magnetic tape recorder for data acquisition and storage. A redundant XYY' plot was made of all casts using a Hewlett-Packard Model 7046 X-Y recorder which was calibrated with a precision 10VDC source.

With the exception of two stations (53S and 54S), digitized data was collected as the CTD sensor unit was lowered at 15m/min on single conductor cable. All three parameters (C, T, and D) were sampled once each 229 milliseconds or every 6 cm at the 15m/min lowering rate. For primary calibration of temperature and salinity, a Niskin bottle equipped with paired protected deep sea reversing thermometers was tripped after a four minute equilibration period at the maximum sample depth. Other water samples were collected during ascent at depths selected after examination of the downcast temperature structure. The average time for stations less than 100 meters in depth was 16 minutes; for those greater than 100 meters, average time was 44 minutes, with a maximum of 60 minutes at station 65.

The acquisition of CTD data during the downcast and water samples during the upcast creates some problems:

1) CTD data is of higher quality during the down than up cast since the sensors are located at the bottom of the sub-surface unit to maximize response during the downward motion. During upward motion, the CTD sensors lie in the wake of the Rosette.

2) Water samples are taken during the upcast since surface water samples taken during the downcast may be diluted by deeper waters.

3) Although horizontal advection may alter the coherence of downcast CTD data versus upcast water sample data, the minor advective motions during the time of a station cause negligible mismatch of nutrient data

since horizontal gradients in nutrients are typically quite low.

Upcast CTD data is reported for stations 53S and 54S since those collected on the downcast were not recorded on magnetic tape.

CTD Data Processing

CTD plots were logged and stored with their respective station sheets. All data recorded on magnetic tape were extracted and processed according to the flow scheme (Scarlet, 1975) shown in Table 1. Computation and data manipulation were performed on a CDC Cyber 70 computer.

MAGREAD converts binary coded data to frequencies and CTDUNIT converts frequencies to engineering units. LAGFILT treats the data for the temperature lag of the temperature sensor and coarse filters the data for noise. Next, SIGSALP calculates uncorrected sigma-t and salinity values. At this stage, salinity and temperature offset corrections are made from the primary calibration data. Flow is then resumed by repeating SIGSALP with the added correction factors. DLATCH deletes lines with decreasing or repeated depths caused by ship roll and CTDAVE presents the data in average one meter increments. NODCFO converts the data to NODC format and NODMER merges additional data (i.e., nutrients, weather, latitude, longitude, etc.) for submission to NODC. CEMLIST calculates specific volume anomalies, oxygen saturation and apparent oxygen utilization (from the International Oceanographic Tables, 1973), the distance between successive stations, reads all other data and formats the data for presentation in a technical report. The final product is stored on magnetic tape in our computer system and all data (i.e., CTD, XBT, chemical, etc.) are available through NODC.

At the stations and to the depths listed in Table 2, a Hewlett-Packard Model 9825A calculator was used to record data on cassette tape because of a

Table 1. CTD/Data Flow. Shipboard acquisition to NODC submission.

Data Source/Disposition	Program	Data File
Tape from Data Logger	MAGREAD (Converts binary coded data to decimal)	
		BIRANG
	CTDUNIT (Converts decimal units to engineering units)	
		LAG
	LAGFILT (Course filter and temperature lag)	
		CAL
Primary calibration from bottle casts	SIGSALP (Calculates sigma-t and salinity)	
		LATCH
	DLATCH (Removes decreasing and repeated depths)	
		CTDATA
	CTDAVE (One meter average data)	
		AVE
	NODCFO (Converts to NODC format)	
		NODC + HEAD
	NODMER (Merges NODC data with Headers and chemical data)	
Submission to NODC		NODCFNL
	CEMLIST (Calculates specific volume anomally, oxygen utilization, etc.)	
		TECHNICAL REPORT

Table 2. Stations at which Hewlett-Packard 9825A was used as the primary data acquisition system.

Stations Number	Depth Range (m)
65S	3-21
113S	4-29
182S	3-18
199S	3-36
220S	4-16
259S	3-84
261S	3-37

malfunction in the primary collection system. At the time, software for the HP system was being developed. These data were treated essentially in the same manner as described above. The correction for temperature sensor lag is not applied, however, since most of the data are from mixed layers where the lag effect is considered minimal.

The Hewlett-Packard system yielded a discrete data point at approximately 0.5 meter depth increments. This relatively infrequent sampling, compared to the primary acquisition system, resulted in considerable scatter ($\pm$ 0.09 °/oo) in the salinity generated from the three parameters collected. Therefore, binomial smoothing was performed on salinity data after interpolation for values at whole meter increments.[1]

CTD Calibration

The data derived from the CTD sensor system are critical to the correct interpretation of the oceanographic processes. To insure data of the highest possible quality, an extensive calibration was performed.

The CTD system was calibrated only against bottle casts in mixed layers to insure that the sensors and the bottles were sampling the same water. However, since a mixed layer was not always observed, comparisons could not be made at every station. Consequently, the resulting mean offset, -0.010 °/oo (Figure 3), for the mixed layer salinity data was originally used for the entire data set. On later cruises, it became apparent that the head of the conductivity sensor was effected by increased pressure at depth. To further refine the data,

---

[1]The expression used, as adapted from Broenkow et al. (1977), is:

$$S_F = (S_{D-2m} + 4S_{D-1m} + 6S_D + 4S_{D+1m} + S_{D+2m})/16$$

where S_F is the salinity reported at depth D and S_D is the unsmoothed salinity at depth D.

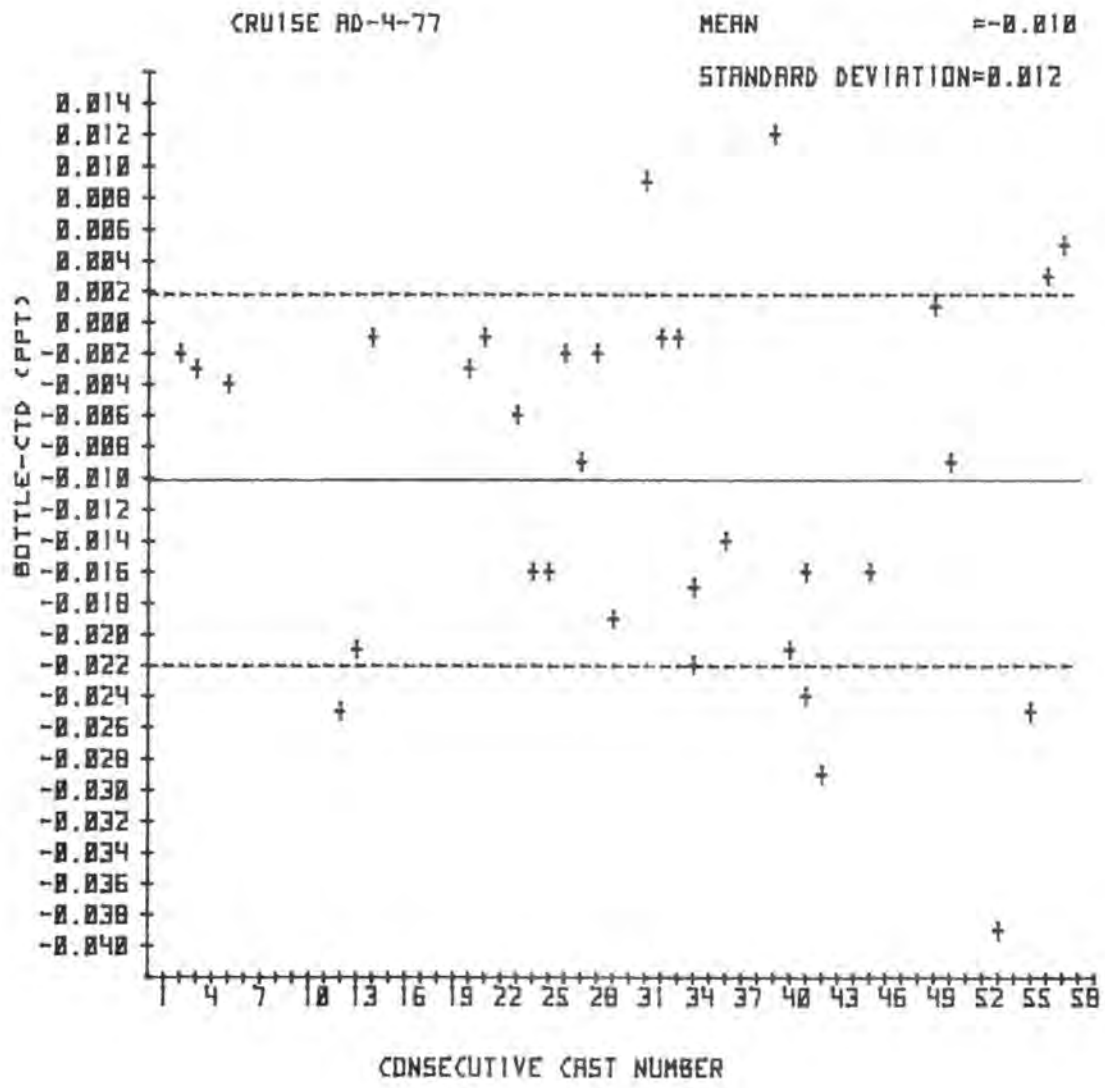

Figure 3. Salinity offset for cruise AD-4-77 (——— mean offset; ------ standard deviation).

a regression analysis was performed (Figure 4) and an expression ($S + S_0 + 0.007 - 4.97 \times 10^{-4}D$, where S is corrected salinity, S_0 is calculated salinity without calibration offset, and D is depth of sample) was obtained. This expression was applied to generate corrected salinities at all CTD stations at which the maximum sampling depth was greater than 50 meters. At other CTD stations, the original offset was preserved. The calibration data used to generate both the original offset and the subsequent expression for the depth effect are listed in Table 3. Station numbers are discontinuous since thermosalinograph stations were established at intervals between hydrographic sections.

A depth offset of -1.714 meters was applied to the entire data set as the depth sensor consistently recorded a depth of 1.714 meters at the surface. No temperature offset was necessary since the CTD temperature sensor agreed with the protected reversing thermometers within the range of accuracy (± 0.02°C).

CTD Error Analysis

The Plessey Model 9400 CTD system has the following rated accuracy, resolution, and time constants (Table 4).

Table 4. Specifications for Plessey Model 9400 CTD system.

	Conductivity	Temperature	Depth
Accuracy	± 0.03 mmho/cm	± 0.02°C	± 1.5 m
Resolution	0.0001 mmho/cm	0.0001°C	0.0012 m
Time Constant	0.1 sec	0.35 sec	0.1 sec

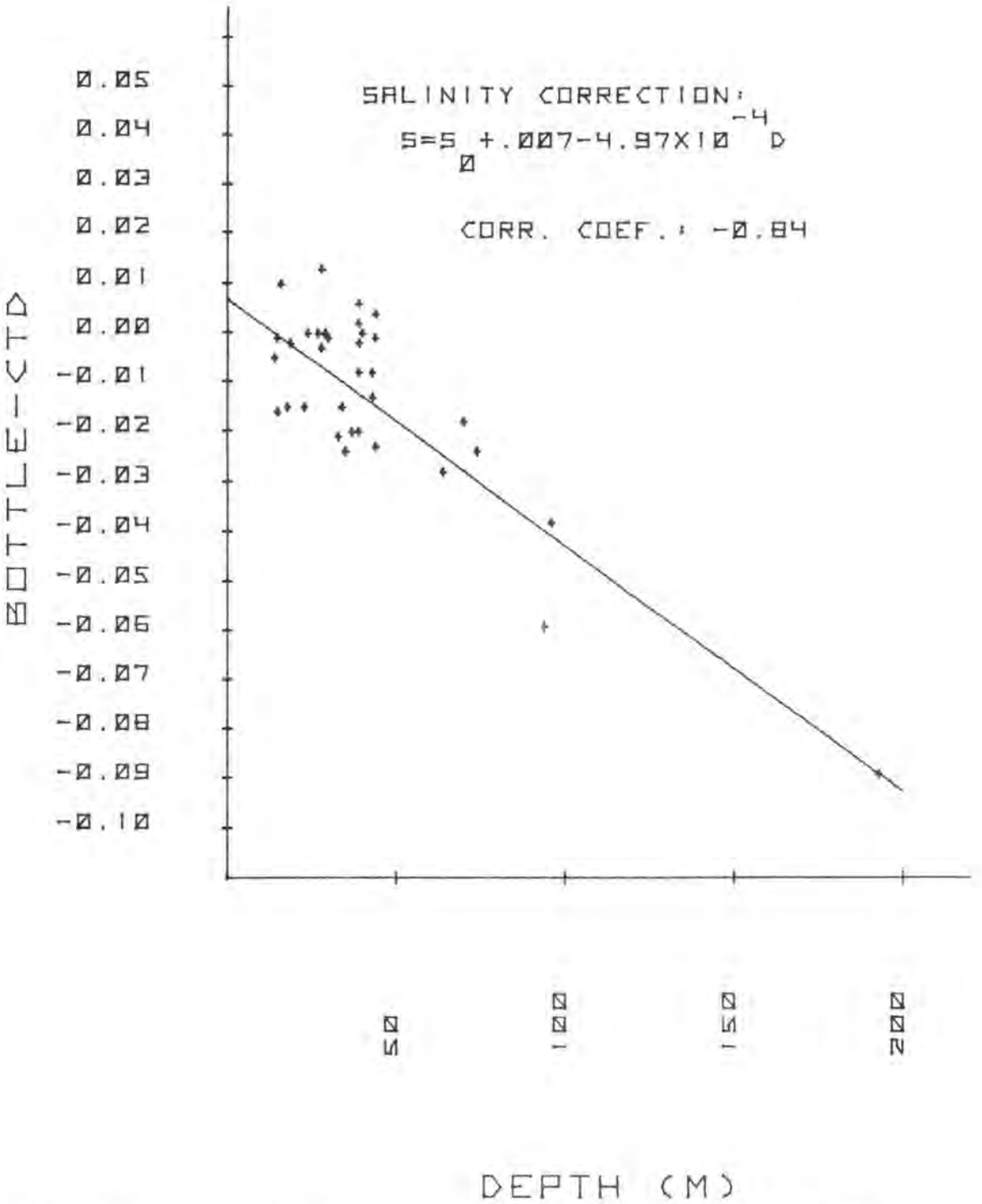

Figure 4. Regression analysis of salinity offset versus depth of sensor, cruise AD-4-77.

Table 3. Cruise AD-4-77 Salinity Calibration Data.

Consecutive Cast No.	Station No.	Depth (m)	Bottle °/oo	CTD °/oo	Difference Bottle-CTD(°/oo)
2	2S	14	32.897	32.899	-0.002
3	3S	18	34.005	34.008	-0.003
5	6S	27	35.154	35.158	-0.004
9	14S	192	35.930	36.020	-0.090
12	24S	34	35.297	35.322	-0.025
13	26S	38	36.006	36.027	-0.021
14	28S	39	36.251	36.252	-0.001
20	39S	38	35.549	35.552	-0.003
21	41S	28	34.973	34.974	-0.001
23	53S	13	32.902	32.908	-0.006
24	54S	17	33.955	33.971	-0.016
25	55S	22	34.679	34.695	-0.016
26	57S	29	35.042	35.044	-0.002
27	59S	38	35.509	35.518	-0.009
28	61S	43	35.528	35.530	-0.002
29	63S	69	35.807	35.826	-0.019
31	100S	15	35.263	35.254	+0.009
32	101S	23	35.623	35.624	-0.001
33	103S	26	35.724	35.725	-0.001
34	105S	32	35.927	35.949	-0.022
	105S	14	35.934	35.951	-0.017
36	109S	42	36.196	36.210	-0.014
37	111S	93	35.937	36.000	-0.063
39	174S	27	35.784	35.772	+0.012
40	176S	36	36.081	36.102	-0.021
41	177S	43	36.019	36.043	-0.024
	177S	33	36.022	36.038	-0.016
42	178S	63	35.587	35.616	-0.029
45	192S	22	35.958	35.974	-0.016
48	213S	38	36.151	36.150	+0.001
50	215S	42	36.140	36.149	-0.009
53	220S	95	35.439	35.478	-0.039
55	261S	73	35.980	36.005	-0.025
56	263S	43	36.100	36.097	+0.003
57	265S	38	35.736	35.731	+0.005

From the above parameters, and using the equation of Bennett (1976), the *in situ* conductivity, C(S,t,p), was reduced to salinity.

1) The conductivity ratio is expressed as:

$R(S,t,p) = C(S,t,p)/C(35^{o}/oo, 15^{o}C, 0)$

where C(S,t,p) is the *in situ* conductivity

and $C(35^{o}/oo, 15^{o}C, 0) = 42.906$ mmho/cm.

2) A correction is made for the effect of pressure

$R(S,t) = R(S,t,p)/(1 + F)$

$$\text{where } F = \frac{1.60836 \times 10^{-5}\, p - 5.4845 \times 10^{-10}\, p^2 + 6.166 \times 10^{-15}\, p^3}{1 + 3.0786 \times 10^{-2}\, t + 3.169 \times 10^{-4}\, t^2}$$

F is the fractional increase in conductivity at pressure p dbar and temperature $t^{o}C$.

3) A correction is made for the effect of temperature

$R(S) = R(S,t)/r_t$

where $r_t = 0.676518 + 0.200402 \times 10^{-1} t$

$+ 0.122700 \times 10^{-3}\, t^2 - 0.218091 \times 10^{-5}\, t^3$

$+ 0.663405 \times 10^{-7}\, t^4 - 0.95646 \times 10^{-9}\, t^5$

4) The corrected conductivity ratio is converted to salinity

$S = -0.08996 + 28.8567R + 12.18882R^2$

$- 10.61869R^3 + 5.98624R^4 - 1.32311R^5$

$+ R(R-1)\{0.442 \times 10^{-1} t - 0.46 \times 10^{-3} t^2$

$- 4 \times 10^{-3}\, Rt + (1.25 \times 10^{-4} - 2.9 \times 10^{-6}\, t)p\}$

Bennett estimates the overall accuracy of this equation as 0.0042 $^{o}/oo$ r.m.s. Additional sources of error (summarized in Table 5) are attributed to the reported accuracy of the conductivity, temperature, and depth sensors. These values were obtained by varying observed extremes in C, T, and D data by the rated sensor accuracies.

Table 5. Sources of salinity error due to the reported accuracy of the sensors and the salinity equation.

Parameter	Maximum Error
Conductivity	± 0.032
Temperature	± 0.020
Depth	± 0.001
Equation	± 0.004
Total	± 0.057

The standard deviation of all mixed layer samples taken for salinity calibration purposes implies an accuracy, after offset, of ± 0.012 $^{o}/_{oo}$. We believe this value is, except in strong thermoclines ($\Delta T > 1^{o}C/m$), a more realistic measure of the quality of the data set, particularly in mixed layers, than the composite maximum error of the sensor package reported above.

METEOROLOGICAL CONDITIONS

Wind data from Jacksonville, Florida, are presented in Figure 5. These data are derived from the monthly summary for April 1977 (U.S. Department of Commerce, April 1977) and are plotted in GMT at three hour intervals.

Winds in the first part of the month were generally southwesterly. April 6-9 was characterized by winds gradually changing from southwesterly to easterly. The easterly wind continued from April 10-18 when it changed to southeasterly and remained as such until April 21. Winds were strongest on April 4-5, averaging 6.2 m/sec.

The average daily air temperature of the study period ranged from 14.4^{o}C to 21.1^{o}C. There was no precipitation during the study.

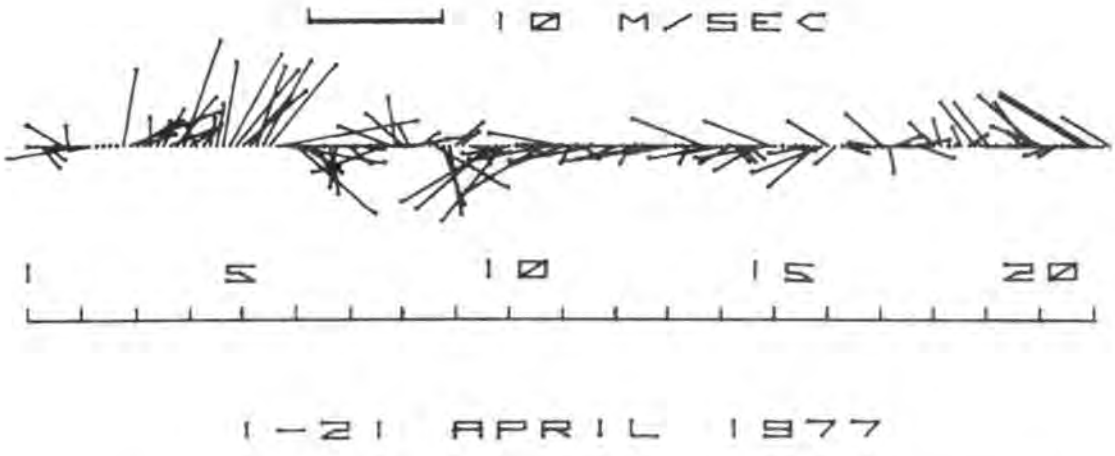

Figure 5. Wind data, Jacksonville, Florida, 1-20 April, 1977 at three hour intervals (U.S. Dept. of Comm. April, 1977).

Meteorological data were also collected by the ship's personnel at each station. These additional data are presented with the data sheets.

The Jacksonville, Florida, weather station is located at International Airport, which is approximately 27 kilometers inshore. Consequently, the meteorological data presented in Figure 5 may not be indicative of the actual conditions at a particular hydrographic station.

RESULTS AND DISCUSSION

In the following figures, vertical temperature plots are derived from CTD and XBT data, salinity plots from CTD data, sigma-t from temperature and salinity and nutrients (NO_3, PO_4, and SiO_2), and dissolved oxygen from water samples collected at selected depths indicated by dots on the respective plots. Horizontal surface temperature plots are derived from continuous thermosalinograph mapping conducted during the ADVANCE II cruise.

On all vertical plots, except those for cruise BF-29-77, the "S" or "X" following the station number indicates a CTD or XBT station, respectively. The plots are arranged chronologically by section.

The Vertical Distribution of Physical and Chemical Properties

Savannah Section, 8-9 April 1977. (Figures 6-7) The temperature, salinity, and density structures seen in Figure 6 are indicative of typical continental shelf conditions expected in the Georgia Bight in April. Nearshore is cold, low salinity, low density water resulting from high spring runoff. Further offshore is warmer, more saline and denser continental shelf water. At the shelf break, the sharp horizontal thermal gradient indicates the thermal wall of the Gulf Stream with its characteristically higher salinity surface water ($\geq$ 35.00 $^{o}/_{oo}$). The 20.0^{o}C isotherm and 36.00 $^{o}/_{oo}$ isohaline at 35 meters showed an interlayering intrusion of the Gulf Stream onto the continental shelf as described by

Atkinson (1977), i.e., the shelf water was stratified with low salinity water lying on top of more saline, denser water, and intermediate density Gulf Stream water intruded between the two.

Phosphate and silicate plots of the same section (Figure 7) show elevated concentrations in both the nearshore runoff water and the deep, cold Gulf Stream water. These nutrients were fairly depleted in the shelf water. Nitrate was essentially depleted from shore out to the shelf break. As with the other nutrients, the Gulf Stream water below the euphotic zone had higher concentrations of nitrate.

St. Simons Section, 10 April 1977. (Figures 8-9) The St. Simons transect, 10 April 1977, (Figures 8-9) revealed well mixed water from nearshore almost to the shelf break. The temperature and density plots showed a possible Gulf Stream perturbation around station 28S, as temperature increased and then decreased and density correspondingly decreased and then increased from onshore to offshore. Additionally, isotherms which sloped down to the west (see 10.0° - 21.0°C isotherms, Figure 8) indicate an eddy event (Lee, 1975). Current meter data, now being processed at the University of Miami, should elucidate the nature of the event.

Savannah Sections, 11 and 12 April 1977. (Figures 10-13) A bottom intrusion of dense Gulf Stream water onto the shelf was observed during the Savannah sections of 11 and 12 April, 1977 (Figures 10-13). Note particularly the relatively high nutrient concentrations at depth at station 39S (Figure 11) and station 59S (Figure 12). Also, the presence of cool, nitrate-rich water at the shelf break (Figure 11) demonstrated the availability of this water as a potential source of nutrients to the continental shelf.

Jacksonville Section, 13-14 April 1977. (Figures 14-15) A bottom intrusion was observed during the Jacksonville section, 13-14 April 1977. Figure 14 shows that the 19.0°C isotherm was on the continental shelf. Associated with this cool water were high nutrient concentrations (Figure 15).

St. Augustine (South) Section, 14 April 1977. (Figures 16-17) The vertical plots (Figures 16-17) of the St. Augustine (South) section, 14 April 1977, reveal the presence of a Gulf Stream spin-off eddy. Taking temperature as an example, proceeding from onshore to offshore, an increase, then decrease, and finally an increase occurred. The first significant increasing horizontal temperature gradient resulted from the water being of Gulf Stream origin. This water spun off from the main body of the Stream and was transported as a cyclonic counter-current. Lee (1975) described a similar process in the Florida Current.

Strong upwelling was observed at stations 177S through 180S and, as can be seen in Figure 17, nutrients are advected upwards with the deep Gulf Stream water. The ratio between nitrate and phosphate at station 178S at a sample depth of 39 meters is 15.7:1, which suggests that the water is of deep origin. The low oxygen concentrations observed support this contention.

Ormond Beach Section, 15 April 1977. (Figures 18-19) During the Ormond Beach section, 15 April 1977, some upwelling was observed. The 17.0°C to 22.0°C isotherms (Figure 18) best demonstrated this feature as they curved downwards to the west. Comparison of the nutrient and oxygen plots (Figure 19) with those of the St. Augustine (South) section (Figure 17), however, confirms that the observed upwelling was not as strong as during the eddy event since nutrient concentrations were

significantly lower and dissolved oxygen concentrations higher at the shelf break.

St. Augustine (North) Section, 15 April 1977. (Figures 20-21) Another hydrographic section, St. Augustine (North), 15 April 1977, was run through the eddy event. The results are presented graphically in Figures 20 and 21. Again, a strong upwelling of cold, nutrient-rich, low oxygen water was apparent. Note that this water extended well onto the shelf: the 1.0 μ mole/l nitrate isopleth extended almost to station 213S (Figure 21). Thus, assuming that the fate of a spin-off eddy is eventual dissipation in the shelf water, an eddy event can increase the supply of available nutrients on the shelf.

Jacksonville (North) Section, 15 April 1977. (Figure 24a) An XBT transect was conducted to the north of the eddy center (Jacksonville (North) 15 April 1977). Figure 24a shows the characteristic increase, decrease and increase in surface water temperature found during an eddy event. Upwelling of cold water at stations 233X and 234X was observed. No nutrient or oxygen data was collected.

St. Simons Section, 16 April 1977. (Figure 24b) The St. Simons XBT section, 16 April 1977, (Figure 24b) through the northern portion of the eddy also showed upwelling at the shelf break but this upwelling was not as strong as during the preceding section since the corresponding isotherms were not as shallow.

Savannah Section, 16 April 1977. (Figures 22-23) The results of the last hydrographic section occupied (Savannah, 16 April 1977) are shown graphically in Figures 22 and 23. The plots do not indicate an eddy; however, there was a bottom intrusion since high salinity water (> 36.10°/oo) was observed on the continental shelf at station 263S (Figure 22). Associated with this water was high nutrient and low oxygen concentrations (Figure 23).

Savannah Section, 19 April 1977. (Figure 24c) Changes which can occur over a short period of time are demonstrated by comparing Figure 24c, which presents the results of XBT Cruise BF-29, 19 April 1977, with Figure 22 (Savannah section, 16 April 1977). In three days, the upper 10 meters stratified, possibly as a result of surface heating in response to insolation, and a cold water core (< 17.0°C at the center) moved into the mid-shelf region. Since Gulf Stream spin-off eddies are advected northward (Lee, 1975), it is likely that this is the same water mass observed upwelling in response to the eddy mechanism but which later completely separated from the parent Gulf Stream. This is again evidence that spin-off eddies are a significant source of nutrients to the continental shelf.

The Horizontal Distribution of Temperature

The results of continuous mapping of surface temperature during the ADVANCE II cruise are presented graphically in Figures 25 (12-14 April 1977) and 26 (14-16 April 1977). Note in Figure 25 the cold water surface core (< 21°C) of the eddy at a latitude of 29°40'N. To the west was a warmer tongue (> 22°C) spun off from the Gulf Stream. Figure 26 reveals that the cold water core and the entire eddy increased in size. Also, the core center advected northward while water warmer than 23°C in the tongue extended more to the south. Additionally, water warmer than 24°C was evident in portions of the tongue. Clearly, these two figures, in combination with Figures 16 and 20 (St. Augustine (South) and (North)), provide a unique documentation of an eddy event.

T-S Relationship

The relation of temperature to salinity observed during cruise AD-4-77 is presented graphically in Figure 27. The nearshore and shelf waters are at the left and center of the plot, respectively. The generally vertical band at the right hand side of the plot is characteristic of the Gulf Stream T-S relationship. Within this band are found the T-S relationships of the waters at the shelf break during the eddy event, identifying their origin.

SUMMARY

During cruises AD-4-77 and BF-29-77 in April 1977, the following observations were made:

1. Water on the continental shelf was generally well mixed vertically. On the outer shelf, exceptions occurred when Gulf Stream water was deposited on the shelf in the form of an intrusion or as a spin-off eddy.

2. An interlayering intrusion of Gulf Stream water into the continental shelf water was seen at the shelf break off Savannah on April 8-9, 1977.

3. Bottom intrusions of cool, nutrient-rich water onto the shelf occurred during the Savannah transects of 11 and 12 April, the Jacksonville transect of 13-14 April, and the Savannah transect of 16 April, 1977.

4. A Gulf Stream spin-off eddy centered off St. Augustine and at the shelf break had associated with it cool, nutrient-rich, low oxygen water which was advected upward from its origin off the continental shelf. Within a week, this water was on the mid-shelf, isolated from the parent Gulf Stream. Therefore, a spin-off eddy can be identified as a mechanism for nutrient enrichment of the continental shelf waters.

FIGURES: 6 - 27

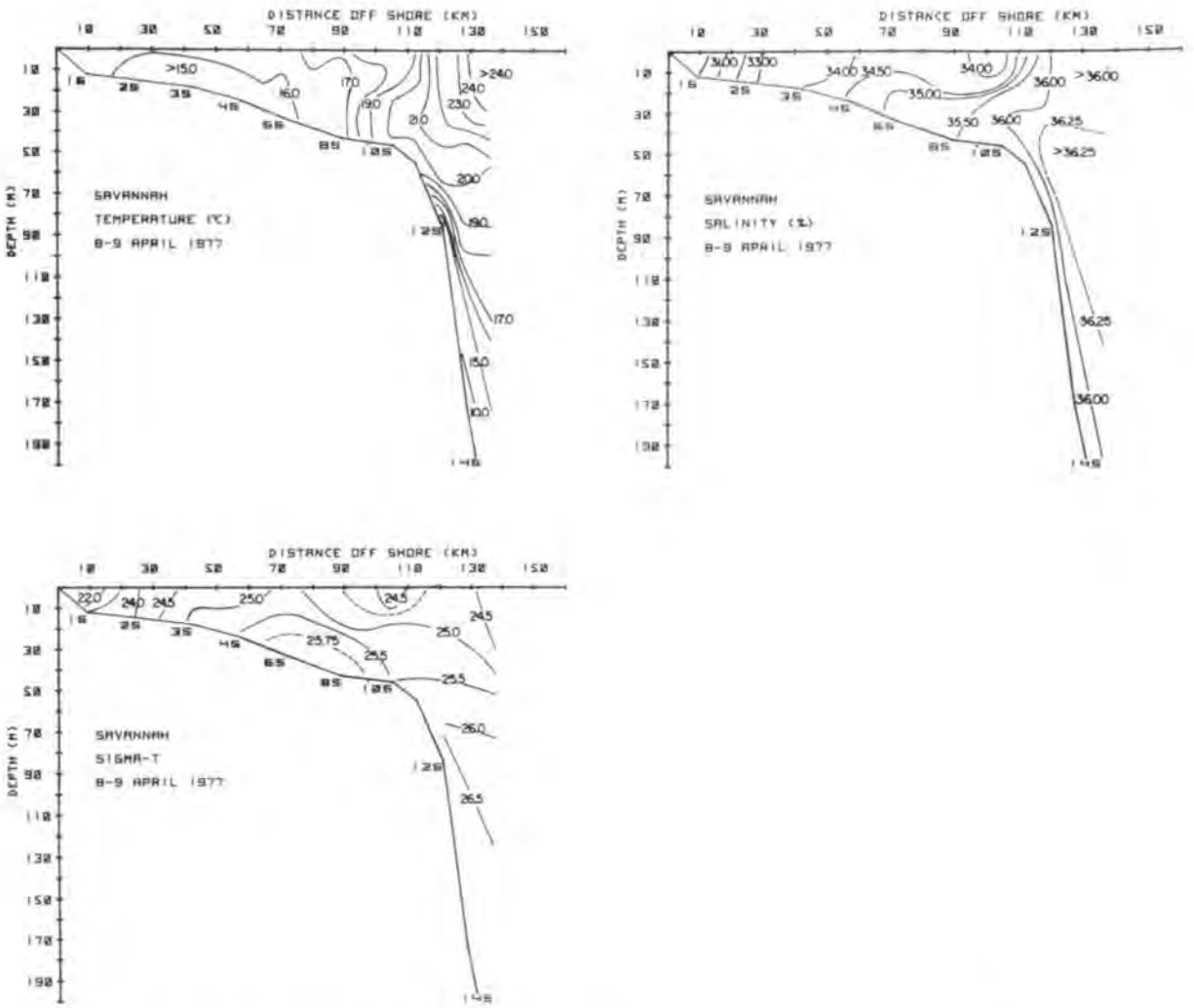

Figure 6. Vertical distribution of temperature, salinity, and sigma-t, Savannah section, 8-9 April 1977.

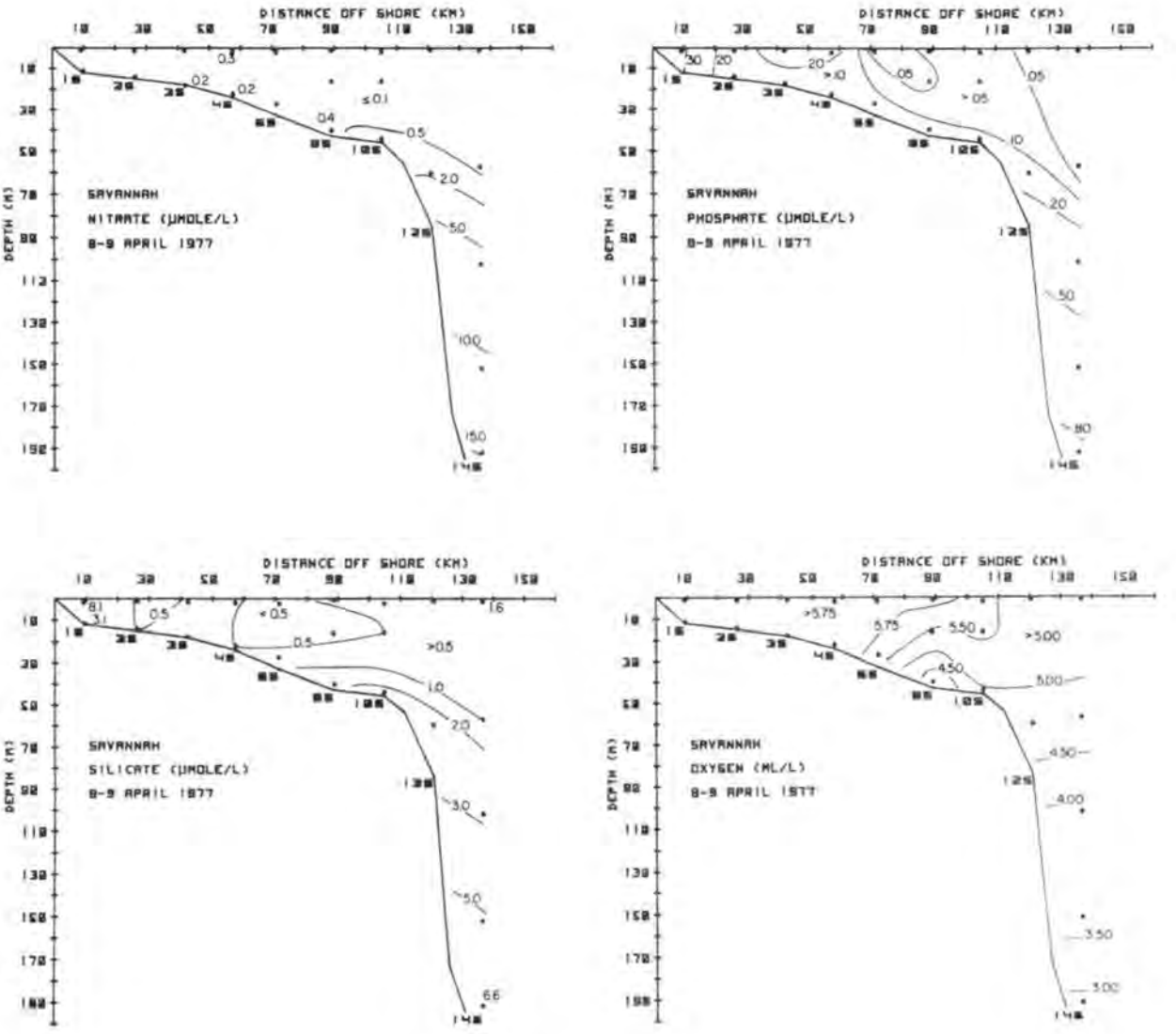

Figure 7. Vertical distribution of nutrients and oxygen, Savannah section, 8-9 April 1977.

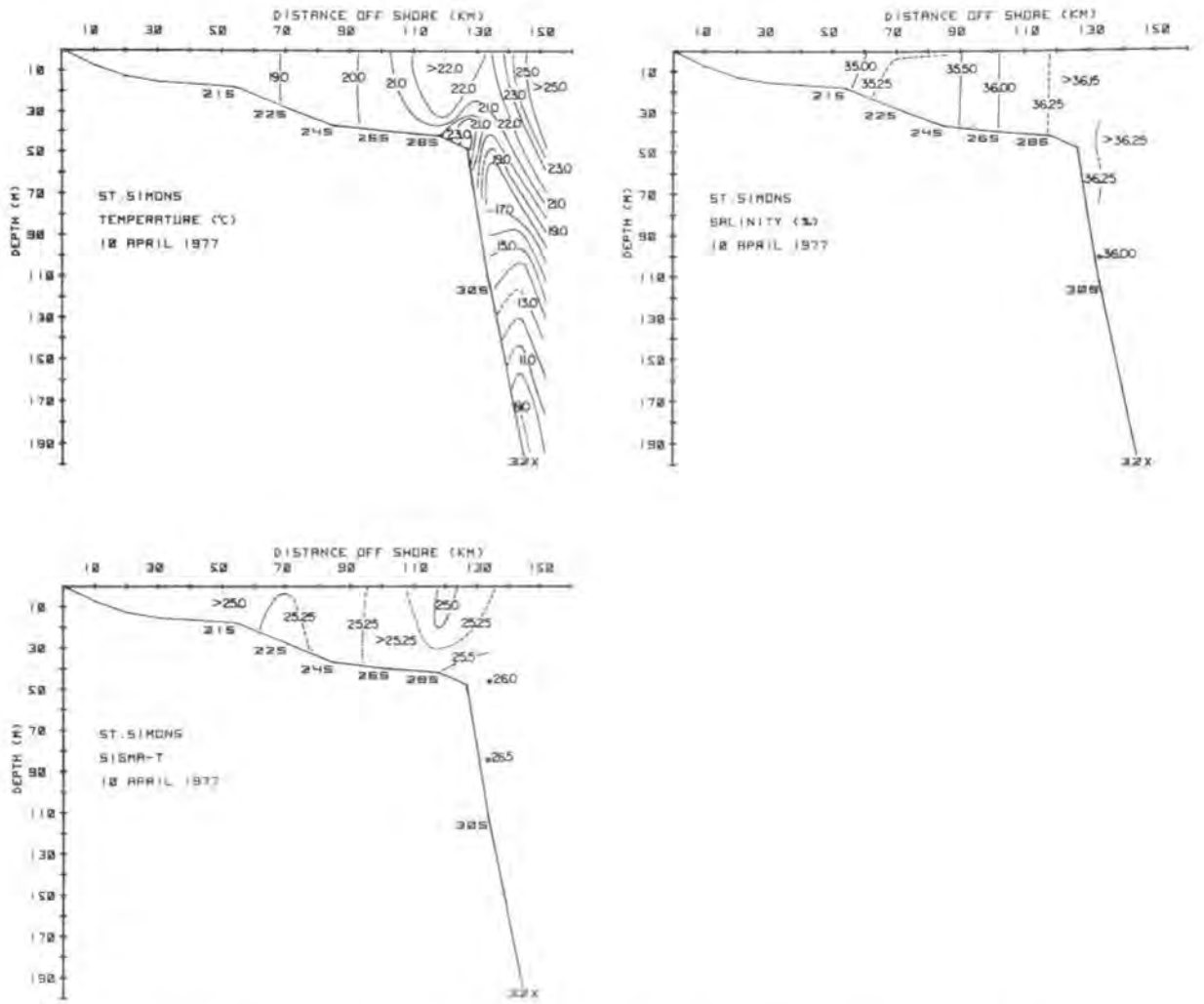

Figure 8. Vertical distribution of temperature, salinity, and sigma-t, St.Simons section, 10 April 1977.

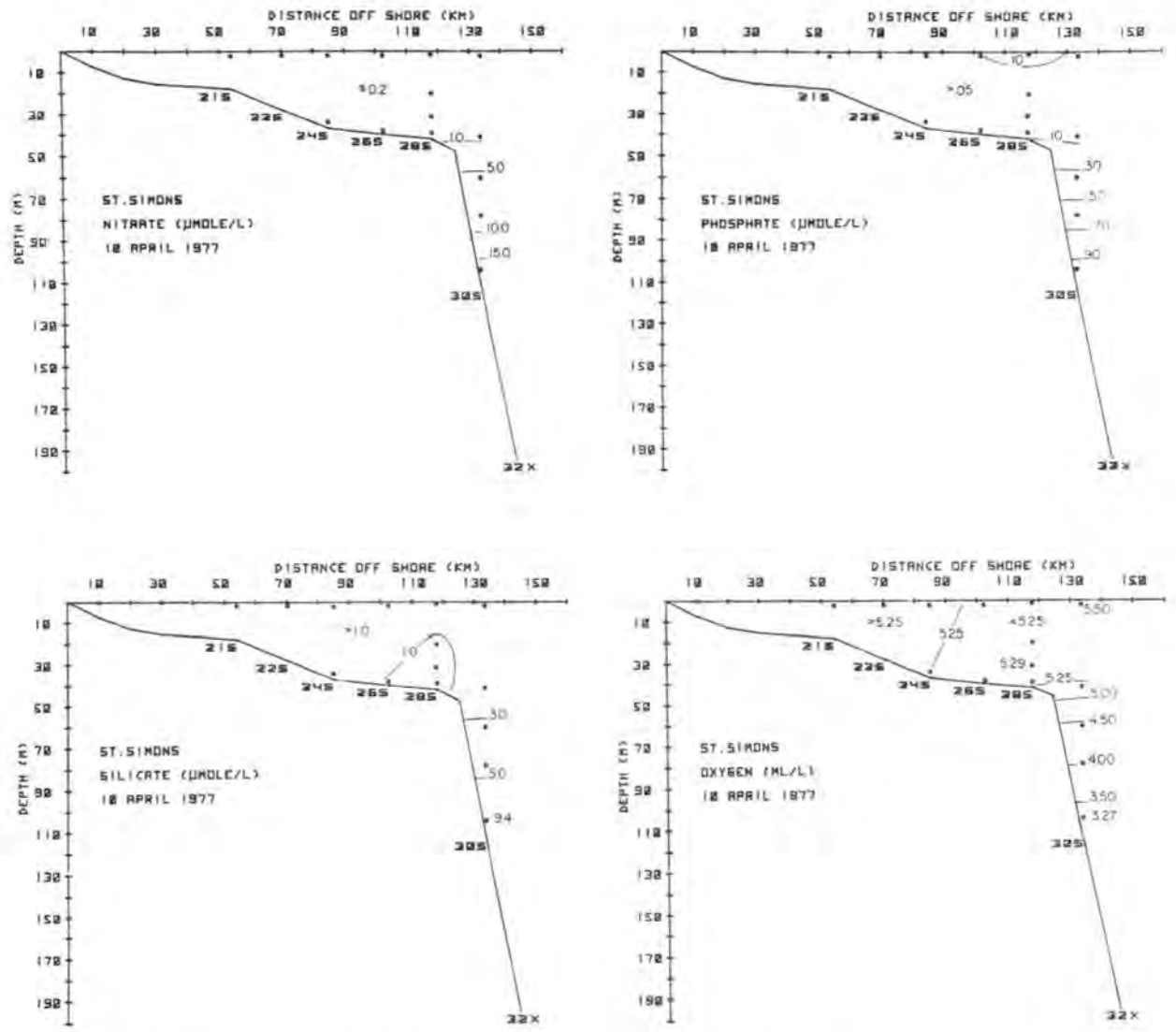

Figure 9. Vertical distribution of nutrients and oxygen, St. Simons section, 10 April 1977.

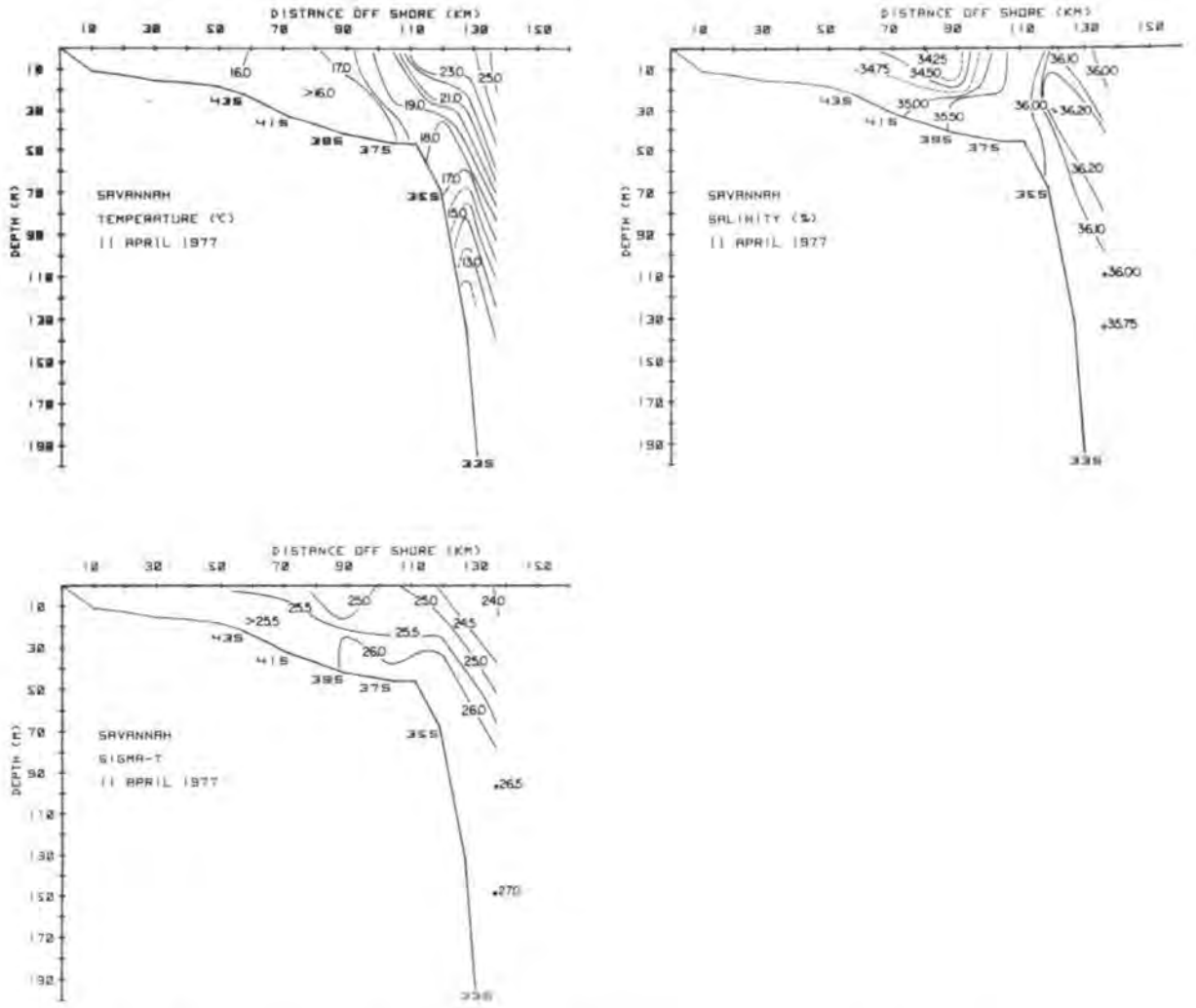

Figure 10. Vertical distribution of temperature, salinity, and sigma-t, Savannah section, 11 April 1977.

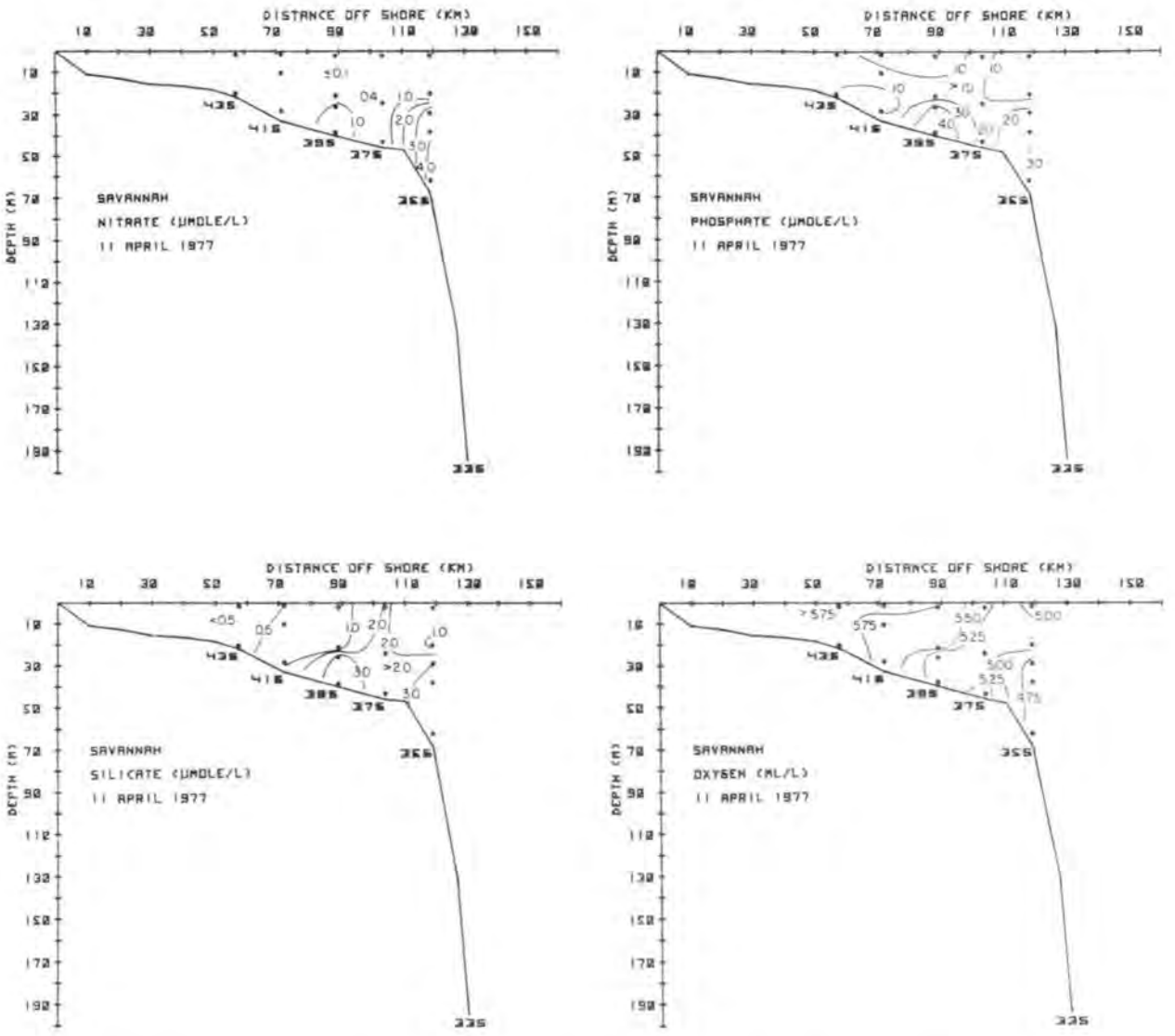

Figure 11. Vertical distribution of nutrients and oxygen, Savannah section, 11 April 1977.

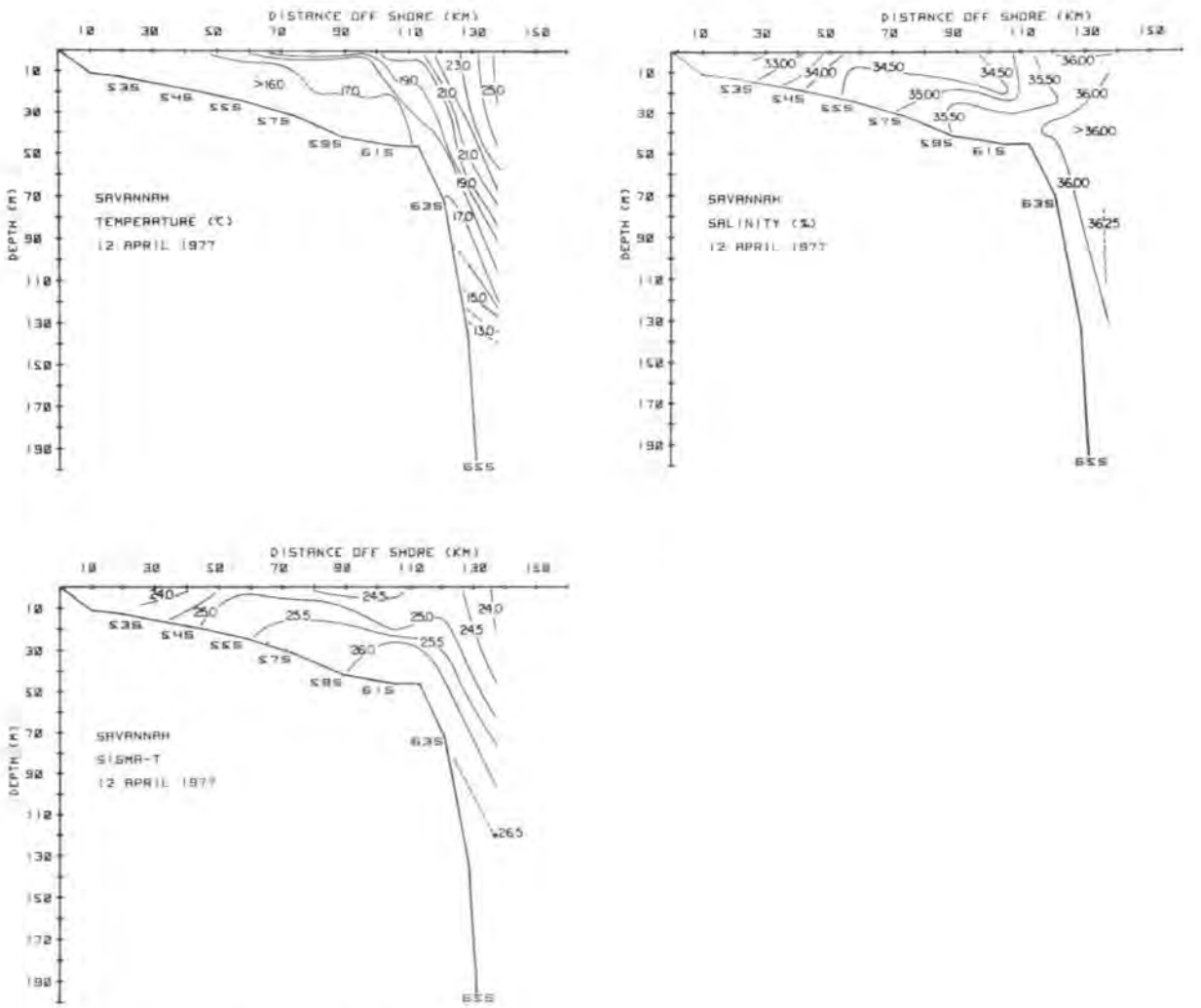

Figure 12. Vertical distribution of temperature, salinity, and sigma-t, Savannah section, 12 April 1977.

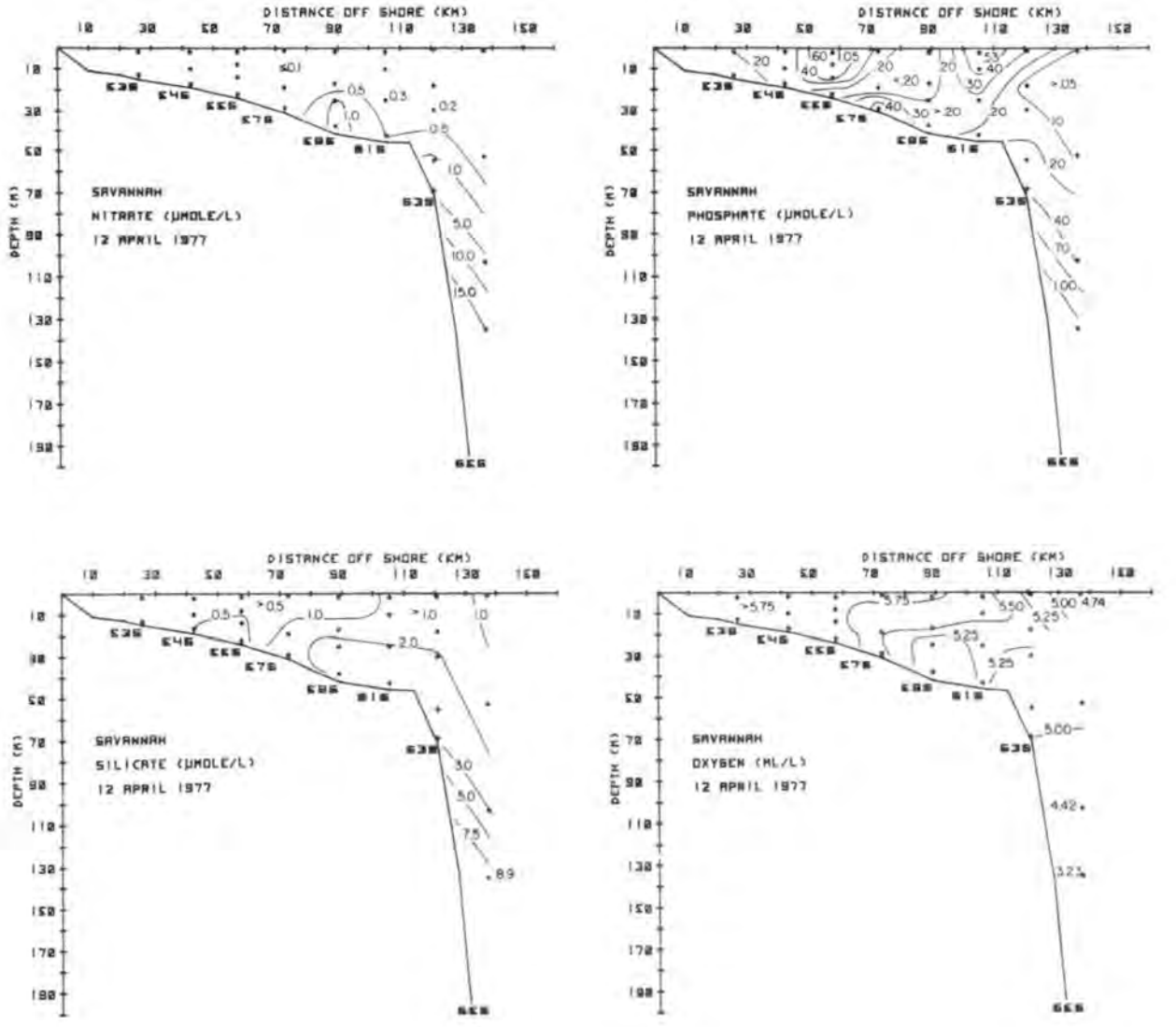

Figure 13. Vertical distribution of nutrients and oxygen, Savannah section, 12 April 1977.

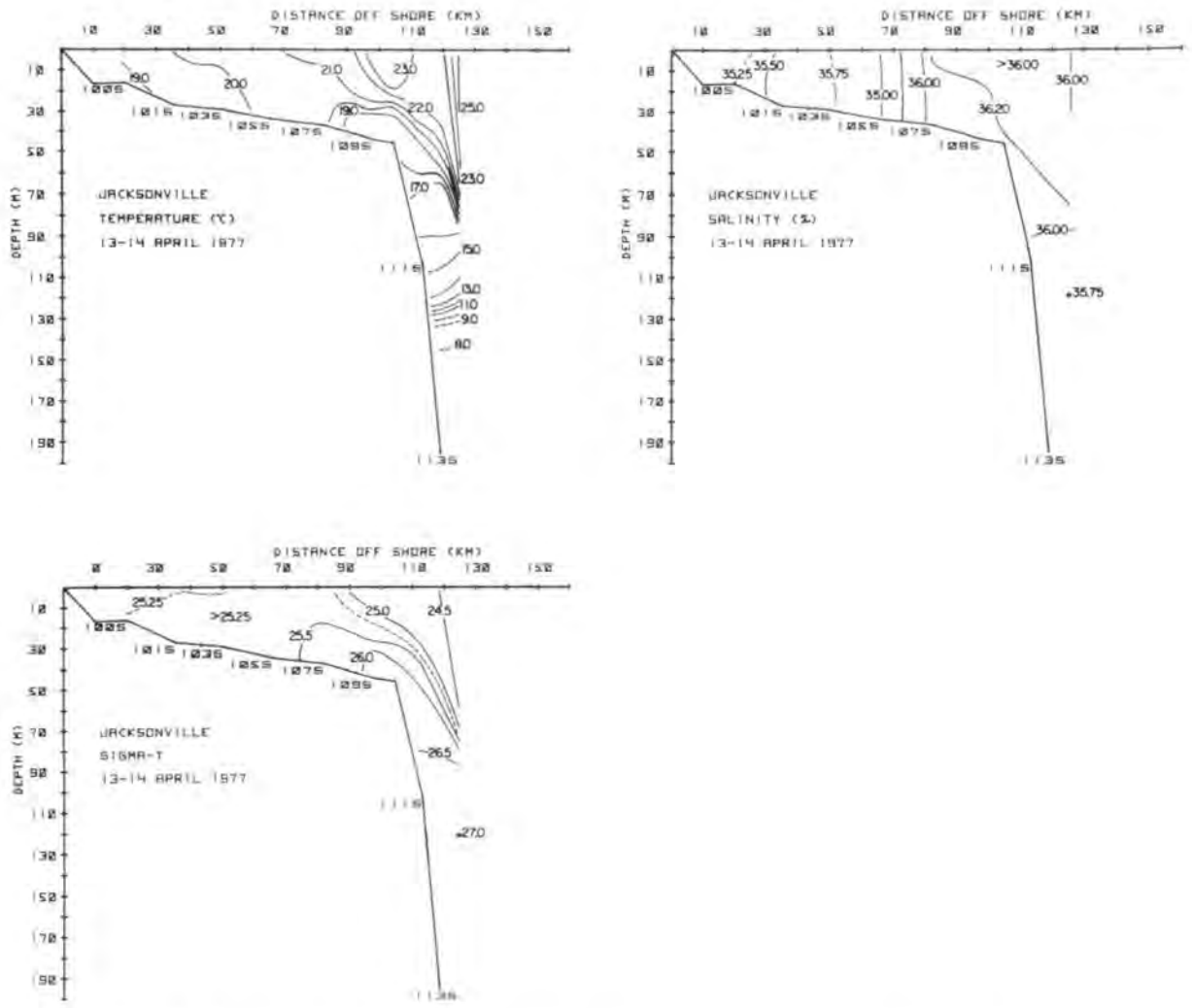

Figure 14. Vertical distribution of temperature, salinity, and sigma-t, Jacksonville section, 13-14 April 1977.

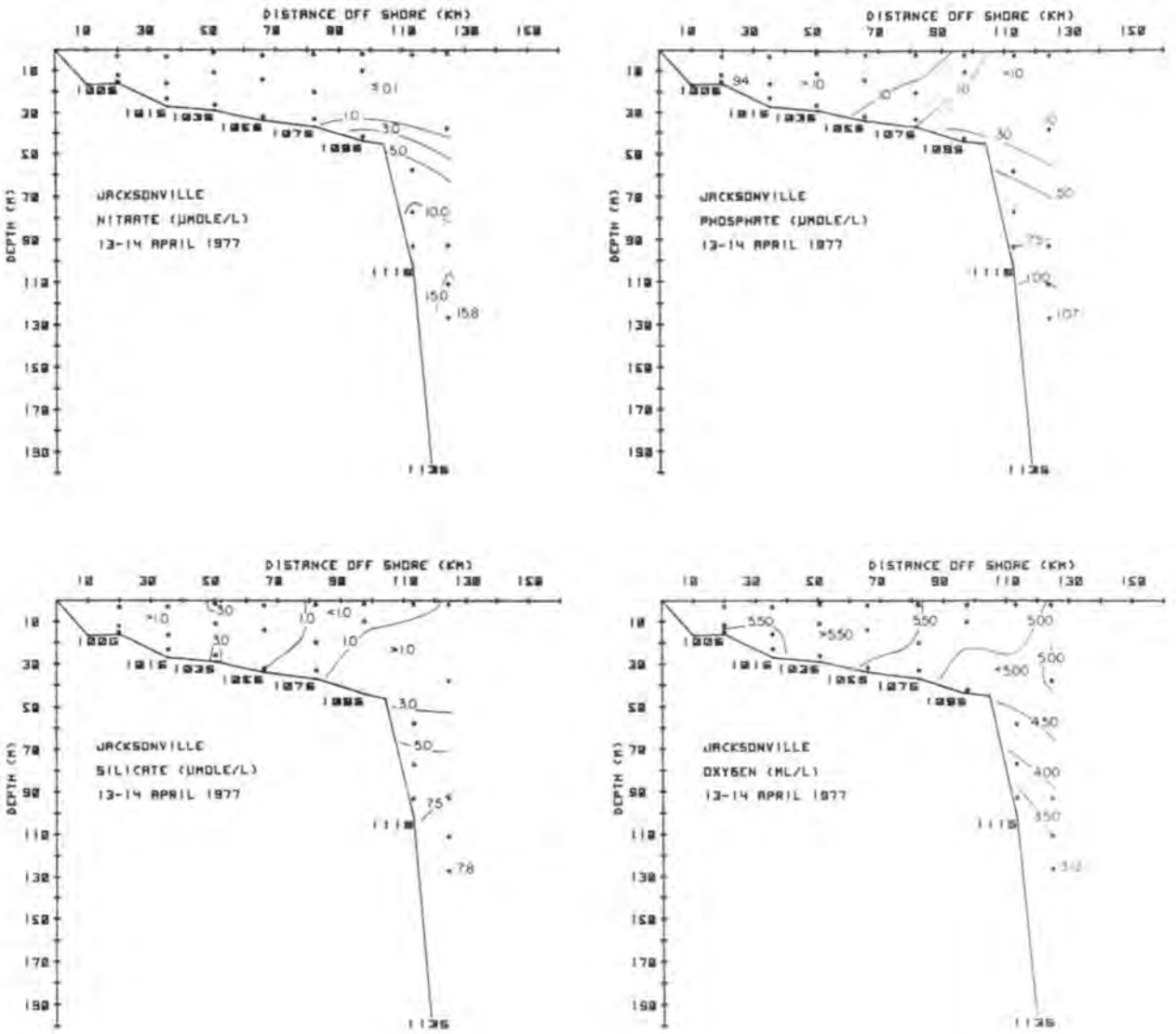

Figure 15. Vertical distribution of nutrients and oxygen, Jacksonville section, 13-14 April 1977.

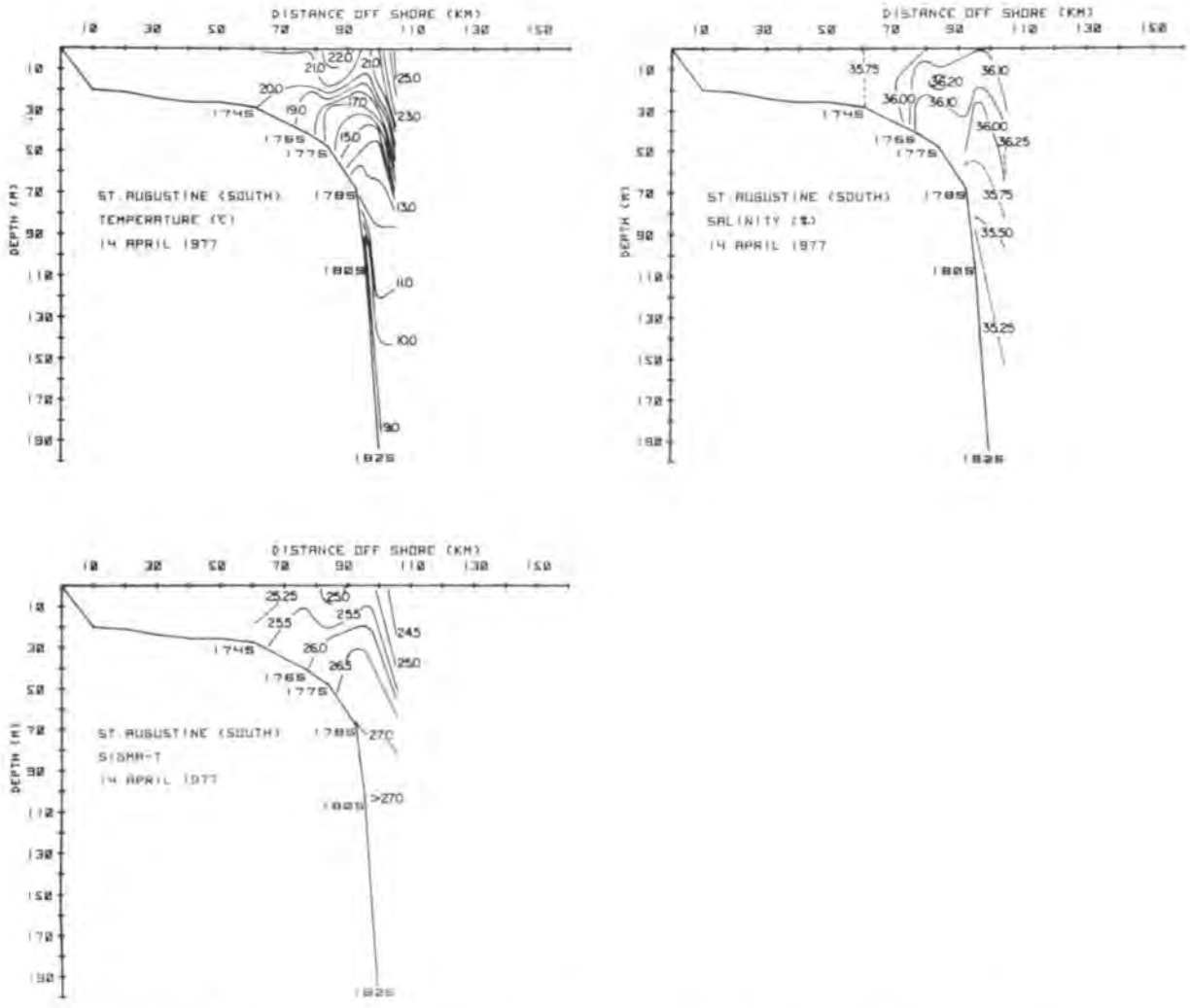

Figure 16. Vertical distribution of temperature, salinity, and sigma-t, St.Augustine (South) section, 14 April 1977.

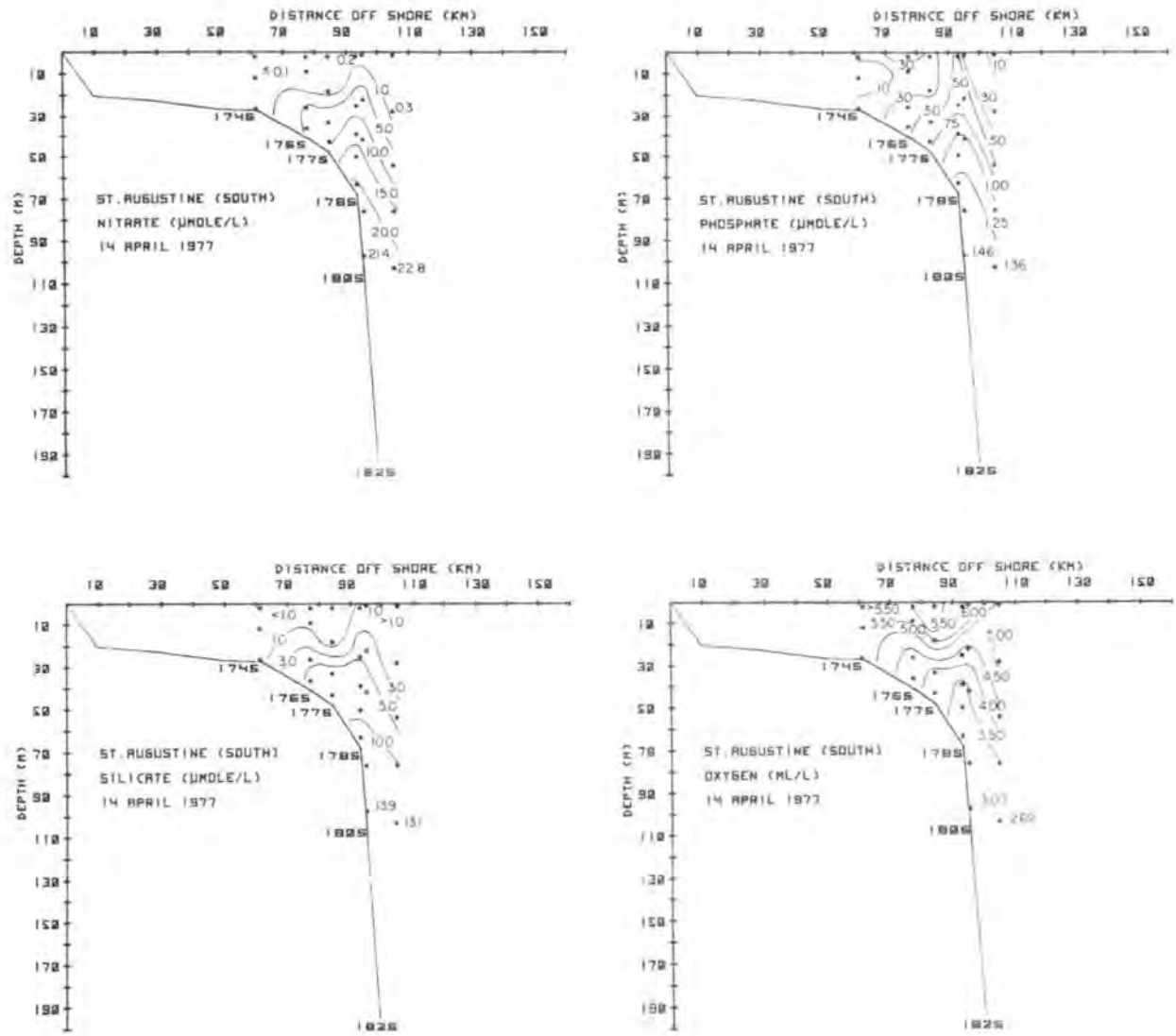

Figure 17. Vertical distribution of nutrients and oxygen, St. Augustine (South) section, 14 April 1977.

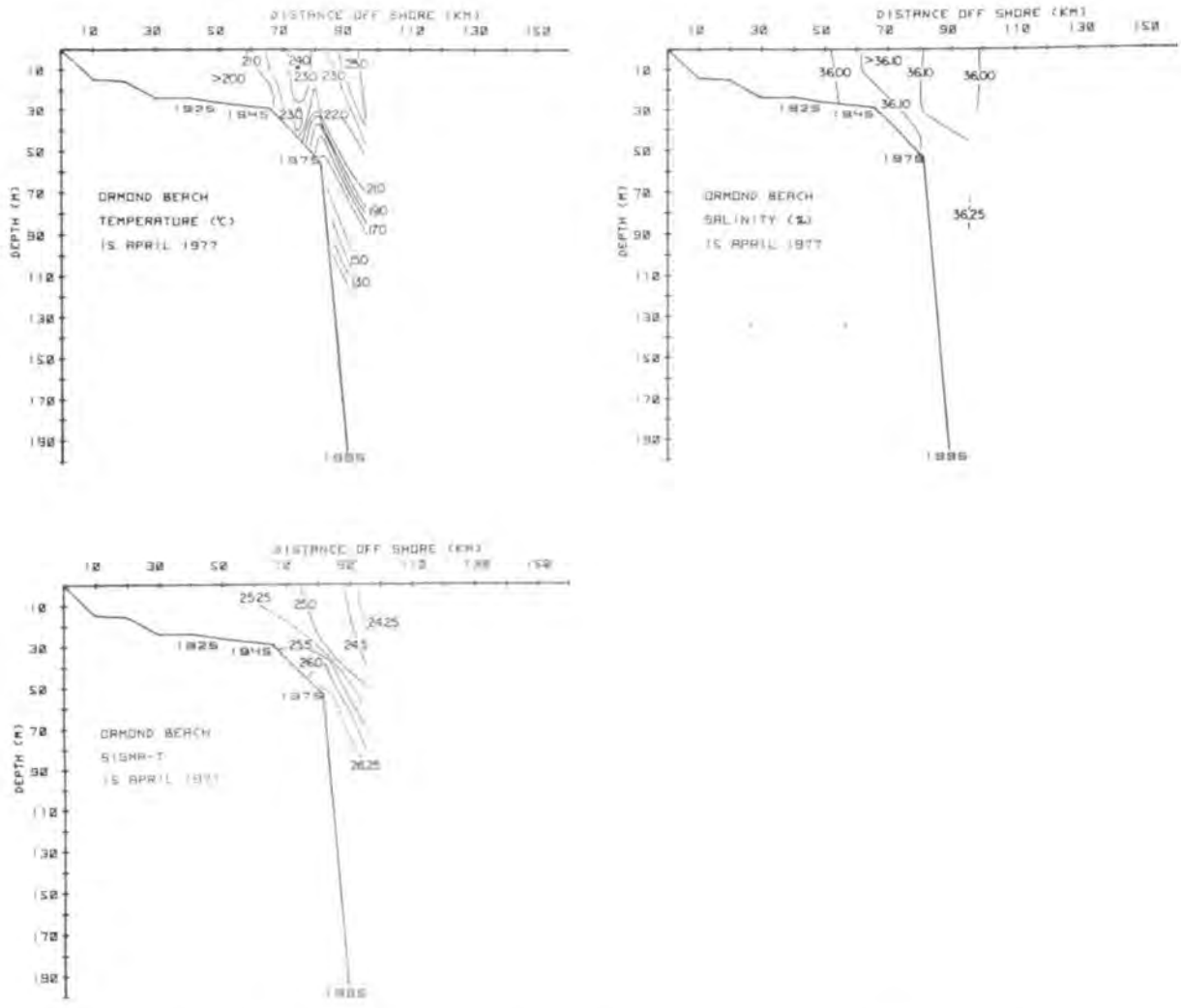

Figure 18. Vertical distribution of temperature, salinity, and sigma-t, Ormond Beach section, 15 April 1977.

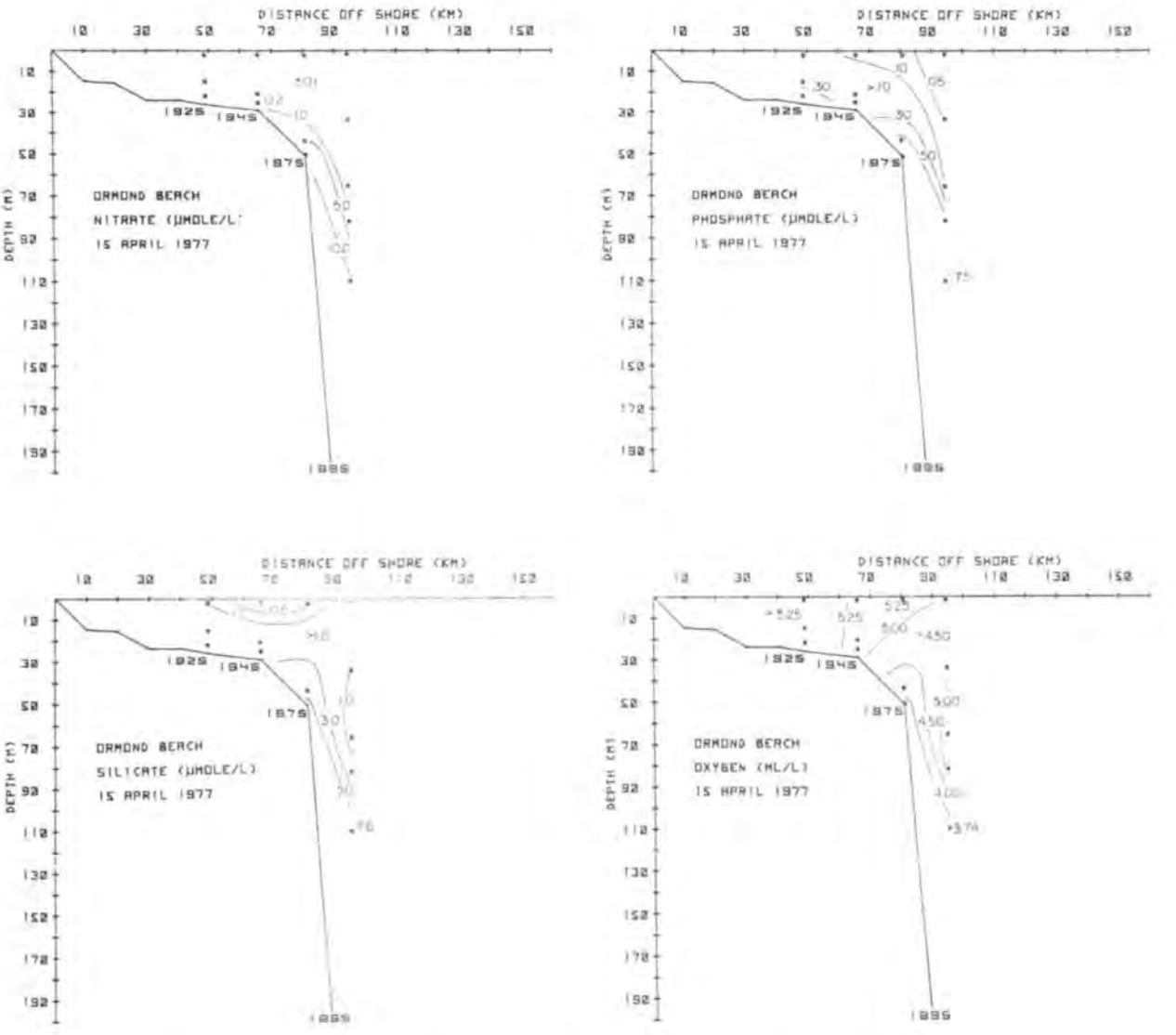

Figure 19. Vertical distribution of nutrients and oxygen, Ormond Beach section, 15 April 1977.

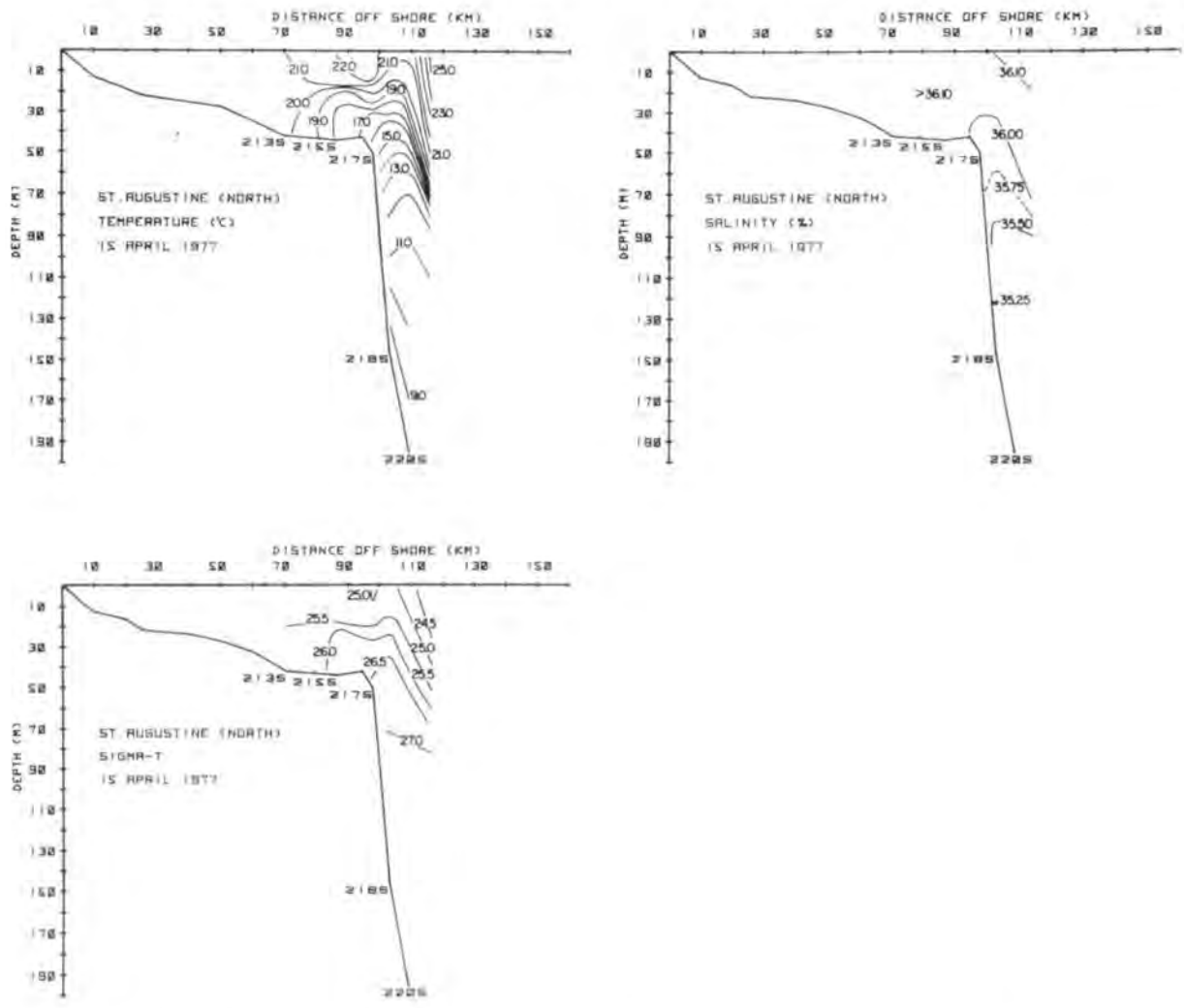

Figure 20. Vertical distribution of temperature, salinity, and sigma-t, St.Augustine (North) section, 15 April 1977.

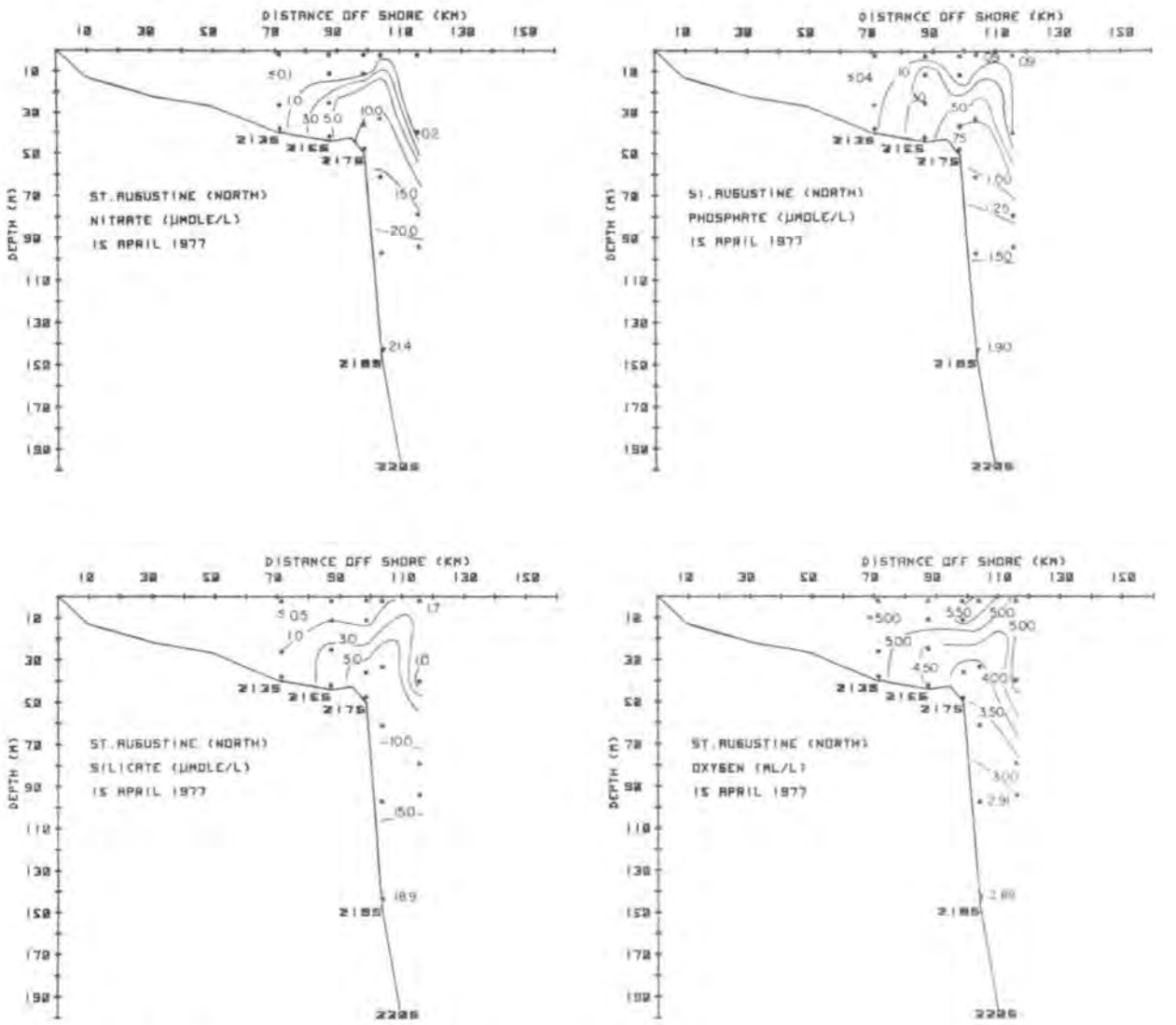

Figure 21. Vertical distribution of nutrients and oxygen, St. Augustine (North) section, 15 April 1977.

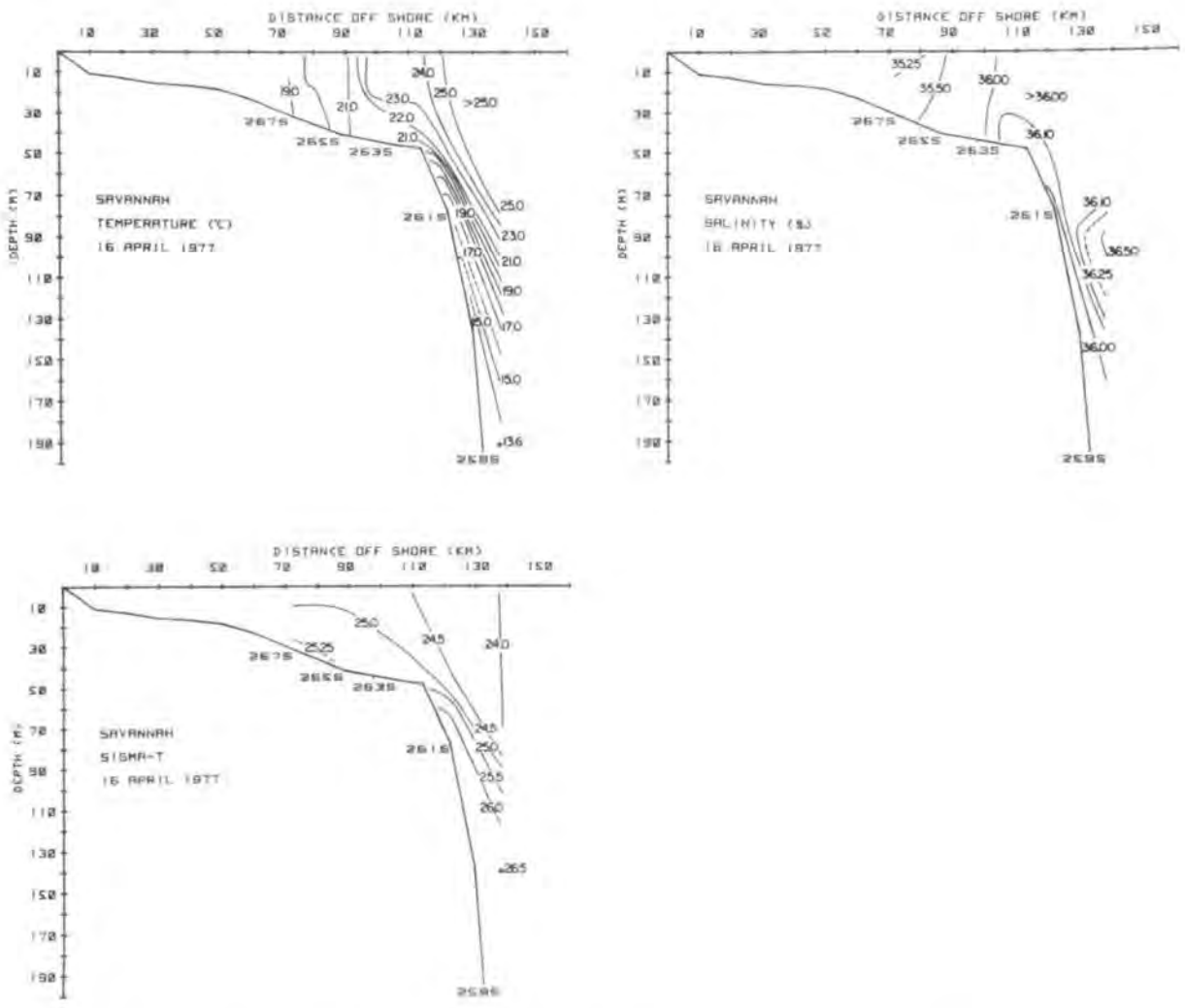

Figure 22. Vertical distribution of temperature, salinity, and sigma-t, Savannah section, 16 April 1977.

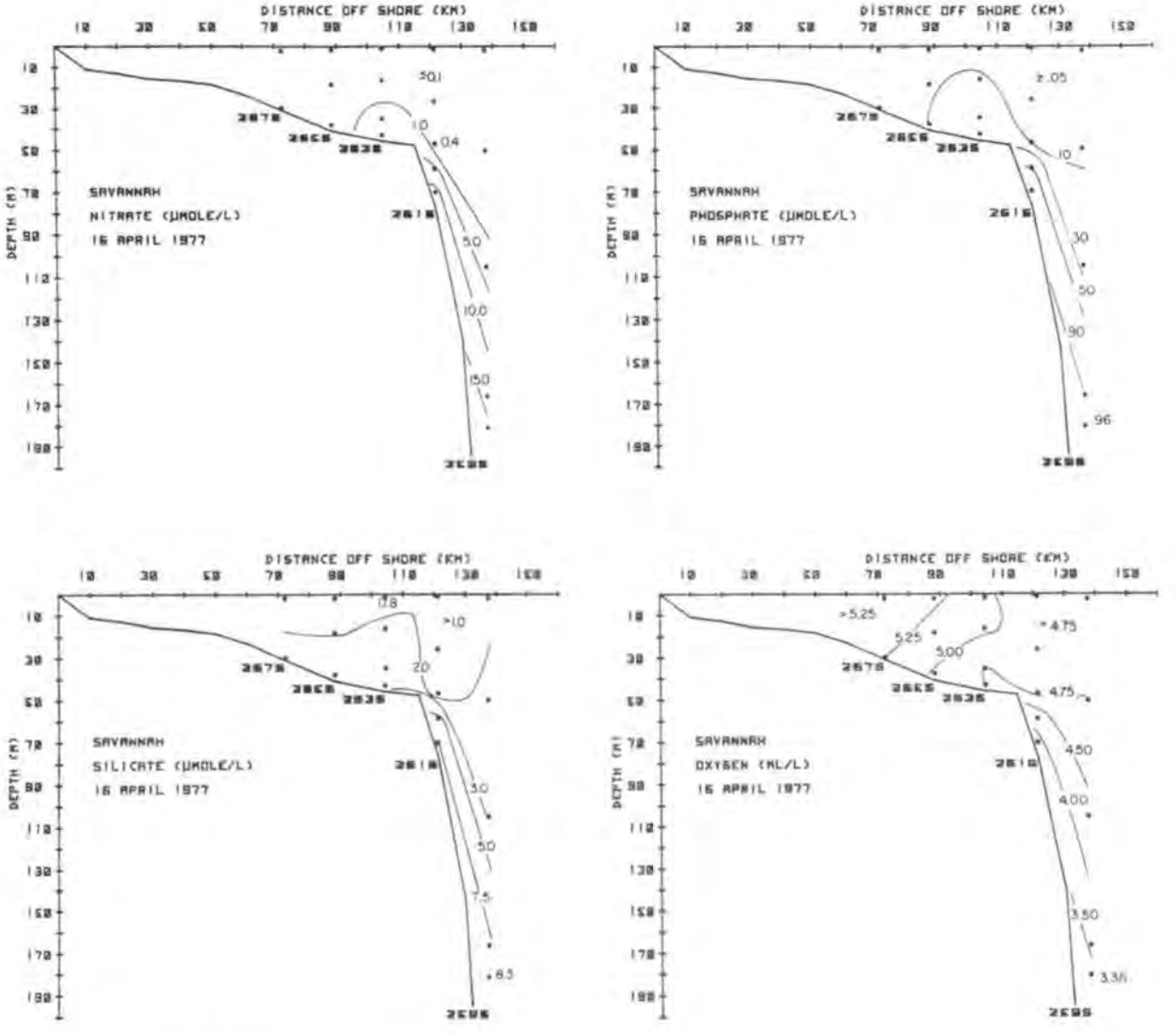

Figure 23. Vertical distribution of nutrients and oxygen, Savannah section, 16 April 1977.

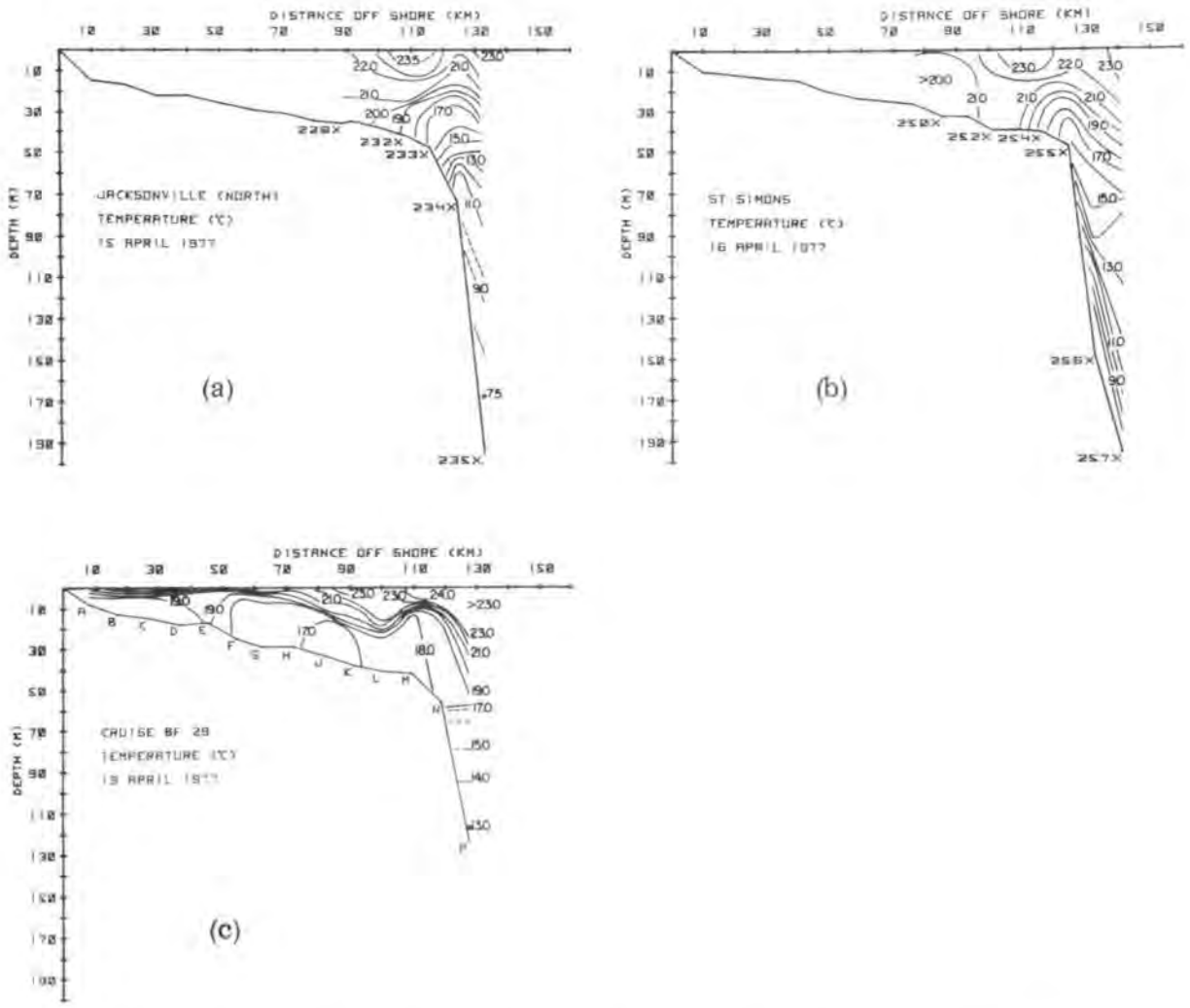

Figure 24. Vertical distribution of temperature, (a) Jacksonville (North) section, 15 April 1977, (b) St.Simons section, 16 April 1977, and (c) cruise BF-29-77 (Savannah), 19 April 1977.

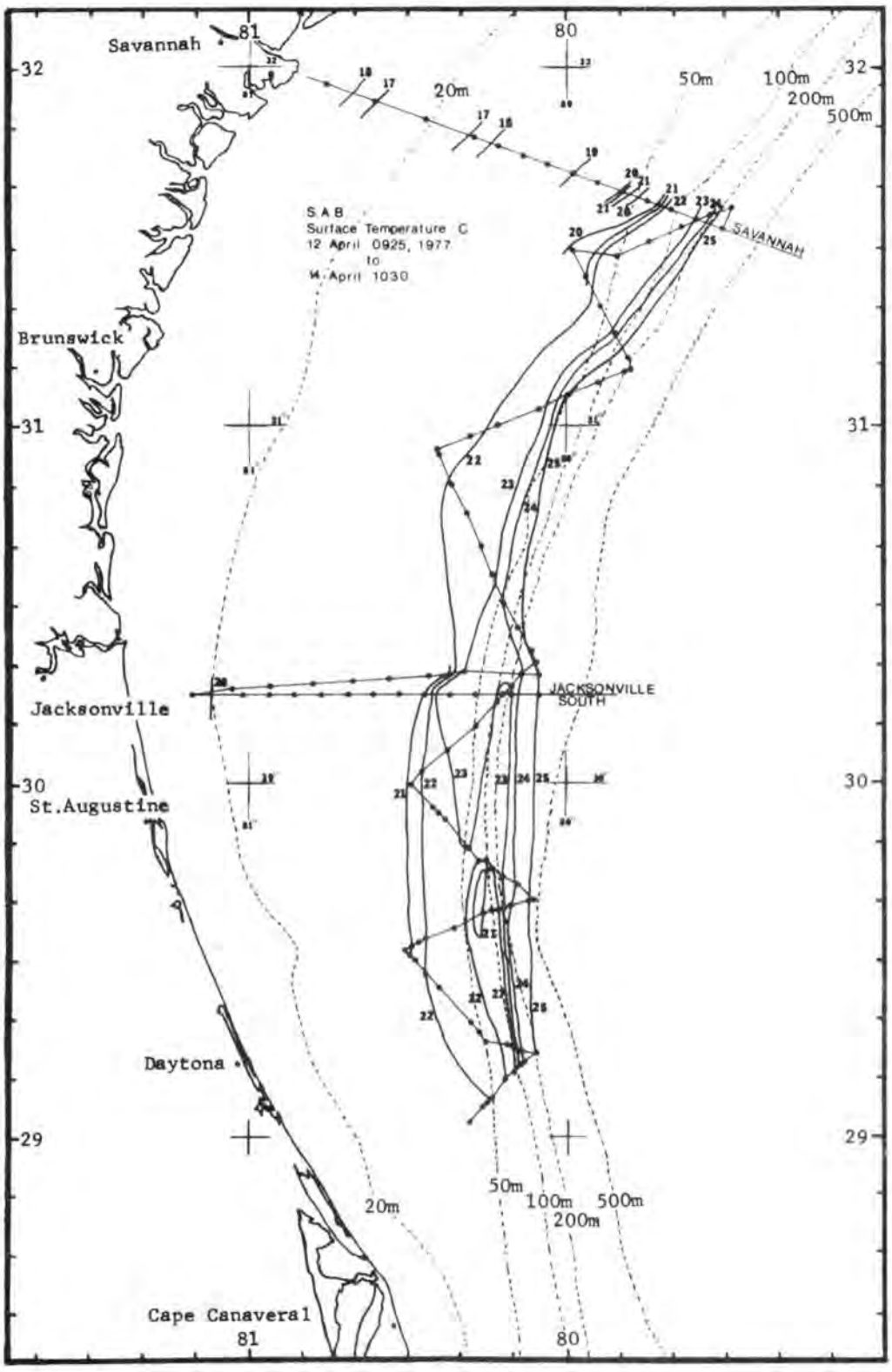

Figure 25. Horizontal surface temperature distribution, 12-14 April 1977.

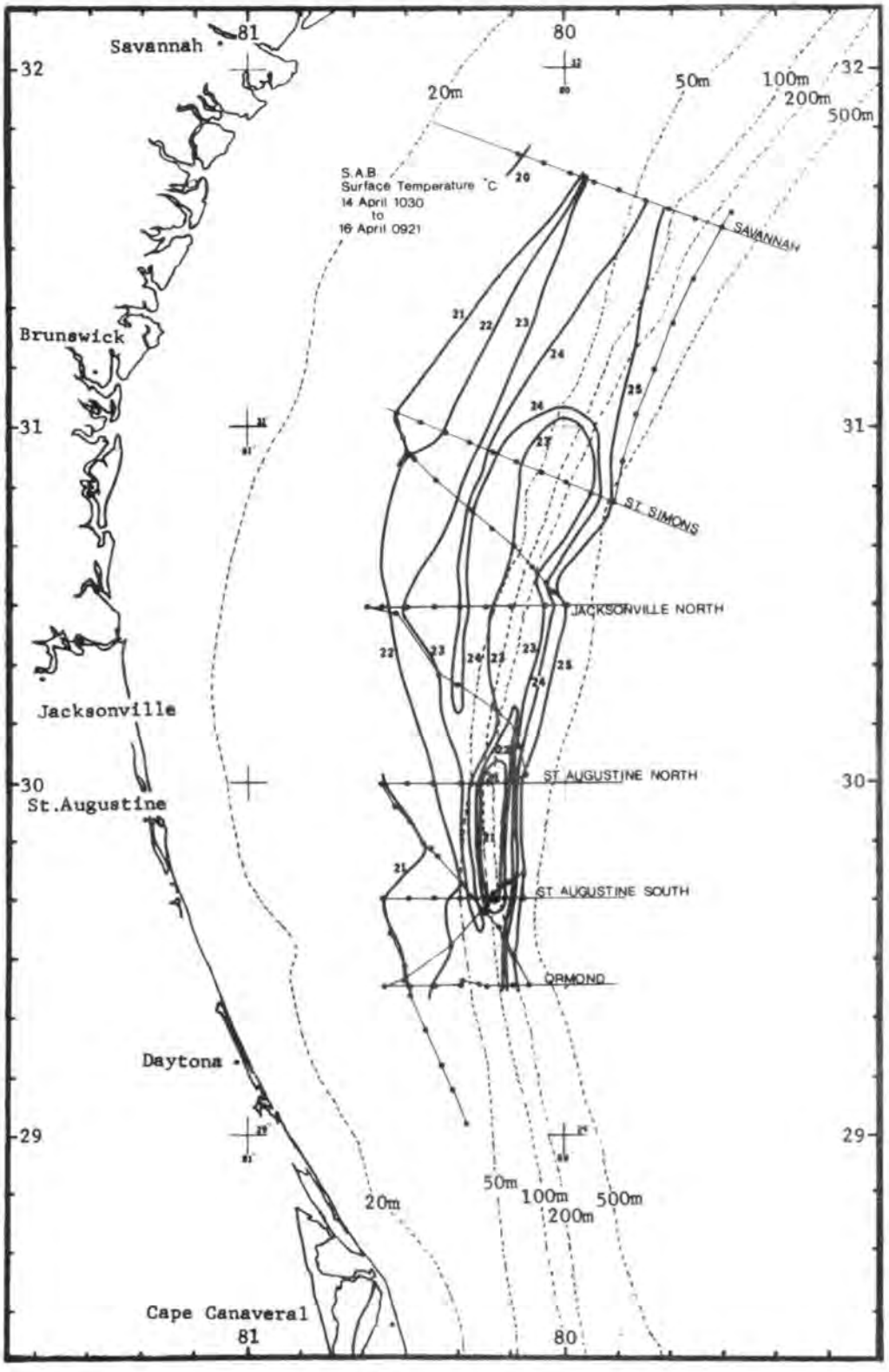

Figure 26. Horizontal surface temperature distribution, 14-16 April 1977.

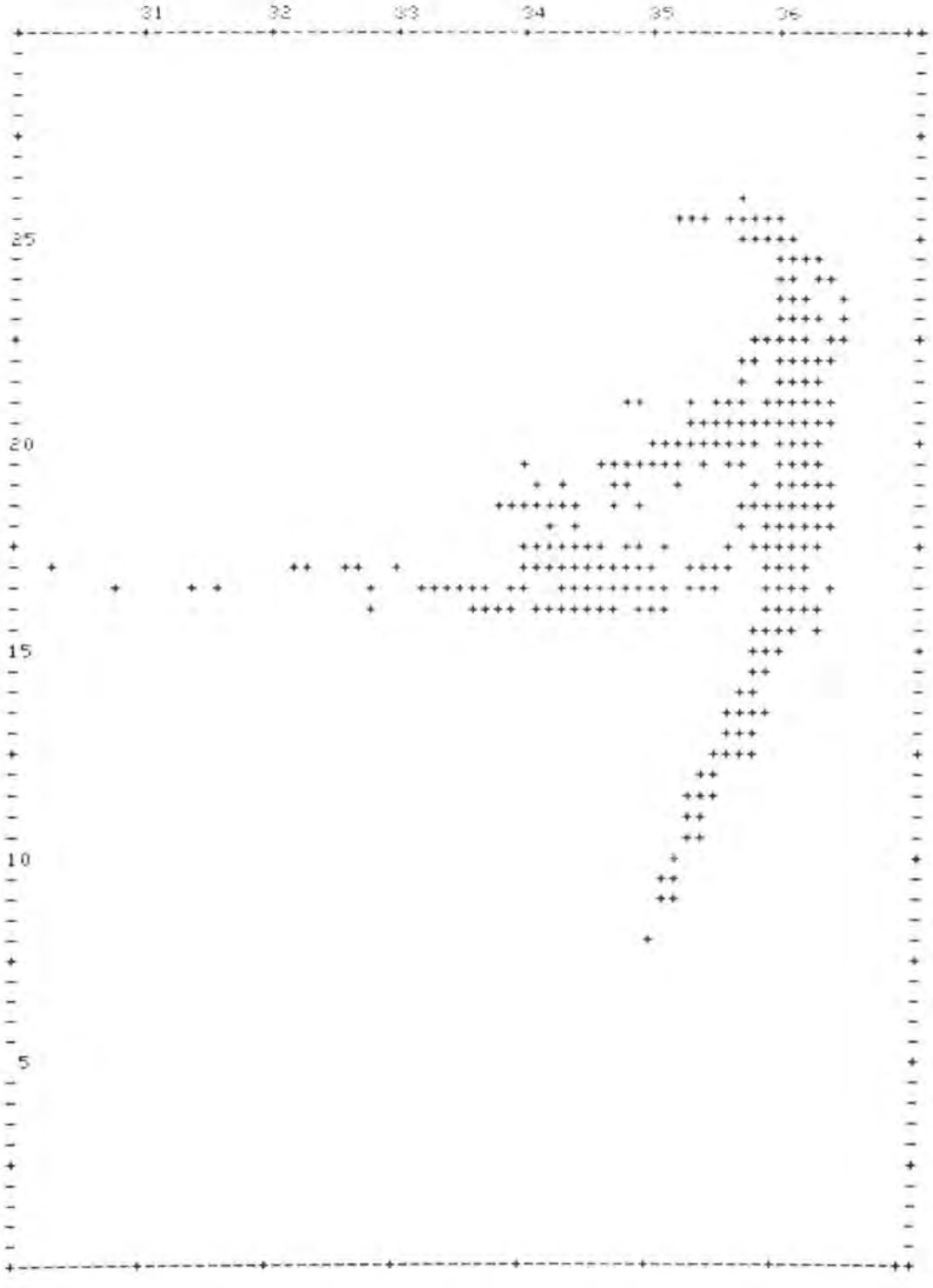

Figure 27. Temperature-Salinity plot, cruise AD-4-77, April 1977.

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Appendix I.

Hydrographic Data

HYDROGRAPHIC DATA

The following printouts are from our CEMLIST programming of the data set. An explanation of the listing follows.

Header Data:

Times are GMT (EST + 5 hours)
Latitude and Longitude are from Loran A or Loran C

Weather Data:

These data are from the ship's log.

Wind speed (knots)
Wind direction (degrees)
Air temperature (degrees C)
Weather code (WMO code 4501)
Barometric pressure (millibars)
Sea state (WMO code 3700)
Wave direction (not given)
Cloud type (not given)
Cloud amount (not given)
Visibility code (not given)

Observations:

Z = Depth in meters
T = Temperature in ^{o}C
S = Salinity in $^{o}/oo$
D = Sigma-t
SVA = Specific volume anomaly x 10^5
O_2 = Dissolved oxygen in milliliters/liter
O_2' = Oxygen saturation value (from International Oceanographic Tables, Vol. 2 (1973)
AOU = Apparent oxygen utilization $(O_2' - O_2)$

PO_4 = Phosphate concentration in µmole/liter
NO_3 = Nitrate concentration in µmole/liter
Si = Silicate concentration in µmole/liter

STATION SUMMARY FOR ADVANCE II CRUISE

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
4	1	31 56.7N	80 46.3W	77	4	8	14.8	12	1
4	2	31 54.2N	80 36.0W	77	4	8	15.8	15	2
4	3	31 51.0N	80 26.5W	77	4	8	17.0	19	3
4	4	31 48.0N	80 17.5W	77	4	8	21.4	24	4
4	5	31 46.5N	80 13.0W	77	4	8	22.1	29	5
4	6	31 46.0N	80 9.0W	77	4	8	22.4	33	6
4	7	31 43.6N	80 3.6W	77	4	8	23.6	38	7
4	8	31 42.0N	79 58.9W	77	4	9	.1	43	8
4	9	31 40.5N	79 54.0W	77	4	9	.9	46	9
4	10	31 39.0N	79 49.3W	77	4	9	1.4	46	10
4	11	31 37.5N	79 45.0W	77	4	9	2.3	55	11
4	12	31 36.0N	79 40.0W	77	4	9	2.9	84	12
4	13	31 34.7N	79 35.5W	77	4	9	4.0	172	13
4	14	31 33.4N	79 30.5W	77	4	9	4.4	338	14
4	21	31 7.7N	80 45.8W	77	4	10	1.4	19	21
4	22	31 4.0N	80 36.5W	77	4	10	2.7	28	22
4	23	31 2.3N	80 32.0W	77	4	10	3.4	31	23
4	24	31 1.0N	80 28.0W	77	4	10	3.9	37	24
4	25	30 58.5N	80 23.0W	77	4	10	4.8	37	25
4	26	30 57.0N	80 18.0W	77	4	10	5.3	40	26
4	27	30 55.4N	80 13.2W	77	4	10	6.0	41	27
4	28	30 53.7N	80 9.1W	77	4	10	6.5	42	28
4	29	30 52.2N	80 3.9W	77	4	10	7.2	48	29
4	30	30 50.9N	79 59.8W	77	4	10	7.8	113	30
4	31	30 49.3N	79 53.8W	77	4	10	8.8	261	31
4	32	30 47.0N	79 50.5W	77	4	10	9.4	351	32
4	33	31 33.4N	79 30.8W	77	4	11	3.1	329	33
4	34	31 35.0N	79 36.0W	77	4	11	5.0	124	34
4	35	31 36.6N	79 40.8W	77	4	11	5.7	68	35
4	36	31 38.2N	79 45.4W	77	4	11	6.5	46	36
4	37	31 39.0N	79 49.9W	77	4	11	7.0	46	37
4	38	31 40.3N	79 54.4W	77	4	11	7.6	44	38
4	39	31 42.0N	79 58.7W	77	4	11	8.2	40	39
4	40	31 43.4N	80 4.1W	77	4	11	9.1	37	40
4	41	31 45.0N	80 9.0W	77	4	11	9.6	33	41
4	42	31 46.1N	80 13.5W	77	4	11	10.2	27	42
4	43	31 47.7N	80 17.5W	77	4	11	10.6	22	43
4	53	31 54.0N	80 36.2W	77	4	12	15.4	15	53
4	54	31 51.0N	80 26.3W	77	4	12	16.5	19	54
4	55	31 47.4N	80 17.5W	77	4	12	17.6	24	55
4	56	31 46.0N	80 13.0W	77	4	12	18.3	26	56
4	57	31 45.0N	80 8.4W	77	4	12	18.8	31	57
4	58	31 43.5N	80 3.2W	77	4	12	19.6	37	58
4	59	31 41.8N	79 58.8W	77	4	12	20.0	42	59
4	60	31 40.4N	79 53.2W	77	4	12	20.8	44	60

ADVANCE II CRUISE [CONTINUED]

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
4	61	31 39.2N	79 48.9W	77	4	12	21.2	46	61
4	62	31 37.5N	79 44.6W	77	4	12	22.0	47	62
4	63	31 36.1N	79 39.8W	77	4	12	22.4	71	63
4	64	31 34.9N	79 35.1W	77	4	12	23.4	132	64
4	65	31 33.4N	79 30.0W	77	4	12	23.8	238	65
4	100	30 15.3N	81 10.4W	77	4	13	17.7	16	100
4	101	30 14.9N	81 .8W	77	4	13	18.9	27	101
4	102	30 15.2N	80 55.8W	77	4	13	19.5	29	102
4	103	30 14.9N	80 51.4W	77	4	13	19.9	29	103
4	104	30 15.0N	80 45.8W	77	4	13	20.7	29	104
4	105	30 15.0N	80 41.8W	77	4	13	21.1	34	105
4	106	30 15.3N	80 36.2W	77	4	13	22.0	35	106
4	107	30 15.0N	80 31.6W	77	4	13	22.4	37	107
4	108	30 15.0N	80 27.0W	77	4	13	23.1	40	108
4	109	30 15.0N	80 22.0W	77	4	13	23.5	44	109
4	110	30 15.4N	80 17.6W	77	4	14	.1	46	110
4	111	30 15.1N	80 12.2W	77	4	14	.6	102	111
4	112	30 14.7N	80 10.3W	77	4	14	1.7	185	112
4	113	30 15.1N	80 5.2W	77	4	14	2.1	329	113
4	174	29 40.0N	80 35.0W	77	4	14	19.1	28	174
4	175	29 40.5N	80 29.3W	77	4	14	19.9	33	175
4	176	29 40.5N	80 25.0W	77	4	14	20.4	41	176
4	177	29 39.8N	80 20.8W	77	4	14	21.2	48	177
4	178	29 39.8N	80 15.3W	77	4	14	22.0	68	178
4	179	29 40.2N	80 15.4W	77	4	14	22.6	68	179
4	180	29 40.1N	80 14.1W	77	4	14	23.0	104	180
4	181	29 40.2N	80 11.8W	77	4	14	23.7	200	181
4	182	29 41.0N	80 8.2W	77	4	15	.1	388	182
4	192	29 25.2N	80 35.5W	77	4	15	4.1	26	192
4	193	29 25.3N	80 29.7W	77	4	15	5.0	33	193
4	194	29 25.0N	80 25.0W	77	4	15	5.4	29	194
4	195	29 26.4N	80 19.9W	77	4	15	6.3	43	195
4	196	29 25.2N	80 16.9W	77	4	15	6.6	48	196
4	197	29 25.5N	80 15.7W	77	4	15	6.9	55	197
4	198	29 25.2N	80 9.9W	77	4	15	7.8	125	198
4	199	29 25.6N	80 7.3W	77	4	15	8.1	370	199
4	213	30 0.0N	80 35.0W	77	4	15	12.1	41	213
4	214	30 .1N	80 29.5W	77	4	15	12.9	42	214
4	215	30 0.0N	80 25.1W	77	4	15	13.3	44	215
4	216	30 0.0N	80 20.0W	77	4	15	14.0	42	216
4	217	30 0.0N	80 18.0W	77	4	15	14.2	50	217
4	218	30 0.0N	80 14.8W	77	4	15	14.9	146	218
4	219	30 0.0N	80 11.0W	77	4	15	16.2	270	219
4	220	30 1.2N	80 7.5W	77	4	15	16.6	370	220
4	229	30 31.6N	80 31.7W	77	4	15	20.8	36	229
4	230	30 31.2N	80 30.0W	77	4	15	21.0	35	230

ADVANCE II CRUISE [CONTINUED]

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
4	231	30 29.5N	80 25.2W	77	4	15	21.3	38	231
4	232	30 29.4N	80 20.0W	77	4	15	21.7	42	232
4	233	30 29.7N	80 15.0W	77	4	15	22.1	48	233
4	234	30 30.0N	80 9.7W	77	4	15	22.4	73	234
4	235	30 30.2N	80 5.0W	77	4	15	22.8	240	235
4	236	30 30.5N	80 1.1W	77	4	15	23.0	283	236
4	249	31 2.5N	80 32.0W	77	4	16	2.7	26	249
4	250	31 .8N	80 27.0W	77	4	16	3.1	33	250
4	251	30 59.0N	80 22.5W	77	4	16	3.4	33	251
4	252	30 57.2N	80 18.0W	77	4	16	3.7	40	252
4	253	30 55.5N	80 13.3W	77	4	16	4.1	40	253
4	254	30 53.8N	80 8.9W	77	4	16	4.4	41	254
4	255	30 52.2N	80 4.0W	77	4	16	4.7	48	255
4	256	30 50.5N	79 59.4W	77	4	16	5.1	148	256
4	257	30 48.5N	79 54.7W	77	4	16	5.4	236	257
4	258	30 49.1N	79 50.0W	77	4	16	5.7	370	258
4	259	31 33.0N	79 29.6W	77	4	16	8.7	200	259
4	260	31 34.6N	79 34.6W	77	4	16	10.3	132	260
4	261	31 35.9N	79 39.3W	77	4	16	10.8	77	261
4	262	31 38.2N	79 44.0W	77	4	16	11.7	48	262
4	263	31 39.1N	79 49.2W	77	4	16	12.1	46	263
4	264	31 41.4N	79 53.0W	77	4	16	12.8	43	264
4	265	31 42.2N	79 58.8W	77	4	16	13.3	41	265
4	266	31 43.8N	80 3.8W	77	4	16	14.0	38	266
4	267	31 45.5N	80 8.2W	77	4	16	14.4	31	267

ADVANCE II CRUISE 4 STA 1 8/ IV/77 14.8 GMT CONSEC STA 1

LAT 31 56.7N LONG 80 46.3W DEPTH = 12M DIST LAST STA = 0.0KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 270	WAVE DIRECTION	=
AIR TEMP	= 26.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1019.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	16.84	29.45	21.32	648	5.99	5.67	-.32	0.32	.	08.1
3.0	16.82	29.47	21.34	646	.	.	.	.	.	.
4.0	16.79	29.48	21.35	645	.	.	.	.	.	.
5.0	16.76	29.51	21.38	642	.	.	.	.	.	.
6.0	16.77	29.52	21.39	641	.	.	.	.	.	.
7.0	16.77	29.56	21.42	638	.	.	.	.	.	.
8.0	16.70	29.81	21.63	619	.	.	.	.	.	.
9.0	16.52	30.33	22.06	577	.	.	.	.	.	.
10.0	16.38	30.84	22.49	536	.	.	.	.	.	.
11.0	16.18	31.43	22.98	489	.	.	.	.	.	.
12.0	16.11	31.68	23.19	469	5.74	5.67	-.07	0.31	.	03.1

ADVANCE II CRUISE 4 STA 2 8/ IV/77 15.8 GMT CONSEC STA 2

LAT 31 54.2N LONG 80 36.0W DEPTH = 15M DIST LAST STA = 16.9KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 230	WAVE DIRECTION	=
AIR TEMP	= 21.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1019.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
2.0	16.02	32.82	24.08	384	5.85	5.64	-.21	0.14	00.1	00.1
3.0	15.88	32.89	24.17	376	.	.	.	.	.	.
4.0	15.88	32.83	24.12	380	.	.	.	.	.	.
5.0	15.87	32.84	24.13	379	.	.	.	.	.	.
6.0	15.87	32.84	24.13	379	.	.	.	.	.	.
7.0	15.86	32.84	24.13	379	.	.	.	.	.	.
8.0	15.86	32.85	24.14	378	.	.	.	.	.	.
9.0	15.86	32.85	24.14	378	.	.	.	.	.	.
10.0	15.86	32.86	24.15	378	.	.	.	.	.	.
11.0	15.86	32.86	24.15	378	.	.	.	.	.	.
12.0	15.86	32.86	24.15	378	.	.	.	.	.	.
13.0	15.86	32.86	24.15	378	.	.	.	.	.	.
14.0	15.86	32.87	24.16	377	5.85	5.66	-.19	0.13	00.1	00.5
15.0	15.86	32.87	24.16	377	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 3 8/ IV/77 17.0 GMT CONSEC STA 3

LAT 31 51.0N LONG 80 26.5W DEPTH = 19M DIST LAST STA = 16.1KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 230	WAVE DIRECTION	=
AIR TEMP	= 18.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1019.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	16.04	33.64	24.71	324	5.85	5.61	-.24	0.28	00.1	00.6
4.0	16.00	33.66	24.73	322	.	.	.	.	.	.
5.0	15.91	33.66	24.75	320	.	.	.	.	.	.
6.0	15.88	33.65	24.75	320	.	.	.	.	.	.
7.0	15.81	33.65	24.76	319	.	.	.	.	.	.
8.0	15.70	33.68	24.81	314	.	.	.	.	.	.
9.0	15.67	33.73	24.86	310	.	.	.	.	.	.
10.0	15.64	33.77	24.90	306	.	.	.	.	.	.
11.0	15.62	33.88	24.98	298	.	.	.	.	.	.
12.0	15.60	33.95	25.04	293	.	.	.	.	.	.
13.0	15.59	33.96	25.05	292	.	.	.	.	.	.
14.0	15.58	33.98	25.07	290	.	.	.	.	.	.
15.0	15.58	33.98	25.07	290	.	.	.	.	.	.
16.0	15.58	33.99	25.08	289	.	.	.	.	.	.
17.0	15.58	33.99	25.08	289	.	.	.	.	.	.
18.0	15.58	33.99	25.08	289	5.79	5.65	-.14	0.14	00.2	00.8
19.0	15.58	33.99	25.08	289	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 4 8/ IV/77 21.4 GMT CONSEC STA 4

LAT 31 48.0N LONG 80 17.5W DEPTH = 24M DIST LAST STA = 15.2KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 210	WAVE DIRECTION	=
AIR TEMP	= 20.6C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	16.41	33.97	24.87	308	5.91	5.56	-.35	0.23	00.3	00.6
3.0	16.41	33.96	24.87	309	.	.	.	.	.	.
4.0	16.40	33.97	24.88	308	.	.	.	.	.	.
5.0	16.39	33.97	24.88	308	.	.	.	.	.	.
6.0	16.38	33.97	24.88	308	.	.	.	.	.	.
7.0	16.34	33.98	24.90	306	.	.	.	.	.	.
8.0	16.26	34.02	24.95	302	.	.	.	.	.	.
9.0	16.11	34.07	25.02	295	.	.	.	.	.	.
10.0	15.93	34.17	25.14	283	.	.	.	.	.	.
11.0	15.89	34.19	25.16	281	.	.	.	.	.	.
12.0	15.77	34.28	25.26	272	.	.	.	.	.	.
13.0	15.69	34.35	25.33	265	.	.	.	.	.	.
14.0	15.67	34.40	25.37	261	.	.	.	.	.	.
15.0	15.64	34.42	25.39	259	.	.	.	.	.	.
16.0	15.63	34.45	25.42	257	.	.	.	.	.	.
17.0	15.63	34.47	25.43	255	.	.	.	.	.	.
18.0	15.62	34.51	25.47	252	.	.	.	.	.	.
19.0	15.62	34.52	25.48	252	.	.	.	.	.	.
20.0	15.62	34.54	25.49	250	.	.	.	.	.	.
21.0	15.62	34.55	25.50	249	.	.	.	.	.	.
22.0	15.62	34.55	25.50	249	5.91	5.63	-.28	0.11	00.2	00.5
23.0	15.62	34.56	25.51	249	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 5 8/ IV/77 22.1 GMT CONSEC STA 5

LAT 31 46.5N LONG 80 13.0W DEPTH = 29M DIST LAST STA = 7.6KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 210	WAVE DIRECTION	=
AIR TEMP	= 20.6C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	16.70	.	.	.	.	.	.	.	.	.
7.0	16.50	.	.	.	.	.	.	.	.	.
16.0	16.00	.	.	.	.	.	.	.	.	.
18.0	16.00	.	.	.	.	.	.	.	.	.
19.0	15.80	.	.	.	.	.	.	.	.	.
29.0	15.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 6 8/ IV/77 22.4 GMT CONSEC STA 6

LAT 31 46.0N LONG 80 9.0W DEPTH = 33M DIST LAST STA = 6.4KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 210	WAVE DIRECTION	=
AIR TEMP	= 21.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
2.0	16.51	34.27	25.08	289	5.94	5.54	-.40	0.02	00.1	00.0
3.0	16.40	34.34	25.16	281	.	.	.	.	.	.
4.0	16.33	34.36	25.19	278	.	.	.	.	.	.
5.0	16.26	34.39	25.23	274	.	.	.	.	.	.
6.0	16.32	34.36	25.19	278	.	.	.	.	.	.
7.0	16.26	34.40	25.24	274	.	.	.	.	.	.
8.0	16.30	34.36	25.20	278	.	.	.	.	.	.
9.0	16.20	34.50	25.33	265	.	.	.	.	.	.
10.0	16.12	34.60	25.42	256	.	.	.	.	.	.
11.0	16.09	34.63	25.45	253	.	.	.	.	.	.
12.0	16.00	34.65	25.49	250	.	.	.	.	.	.
13.0	15.93	34.66	25.51	248	.	.	.	.	.	.
14.0	15.88	34.65	25.52	247	.	.	.	.	.	.
15.0	15.81	34.65	25.53	246	.	.	.	.	.	.
16.0	15.80	34.71	25.58	241	.	.	.	.	.	.
17.0	15.70	34.93	25.77	223	.	.	.	.	.	.
18.0	15.69	35.02	25.84	217	.	.	.	.	.	.
19.0	15.69	35.09	25.90	211	.	.	.	.	.	.
20.0	15.69	35.11	25.91	210	.	.	.	.	.	.
21.0	15.70	35.11	25.91	210	.	.	.	.	.	.
22.0	15.70	35.13	25.93	209	.	.	.	.	.	.
23.0	15.70	35.14	25.93	208	.	.	.	.	.	.
24.0	15.70	35.14	25.93	208	.	.	.	.	.	.
25.0	15.70	35.15	25.94	207	.	.	.	.	.	.
26.0	15.72	35.14	25.93	209	.	.	.	.	.	.
27.0	15.72	35.15	25.94	208	5.67	5.60	-.07	0.12	00.1	00.6
28.0	15.72	35.15	25.94	208	.	.	.	.	.	.
29.0	15.72	35.15	25.94	208	.	.	.	.	.	.
30.0	15.72	35.16	25.94	207	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 7 8/ IV/77 23.6 GMT CONSEC STA 7

LAT 31 43.6N LONG 80 3.6W DEPTH = 38M DIST LAST STA = 9.6KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 190	WAVE DIRECTION	=
AIR TEMP	= 20.6C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	17.80	.	.	.	.	.	.	.	.	.
2.0	17.50	.	.	.	.	.	.	.	.	.
9.5	17.00	.	.	.	.	.	.	.	.	.
11.0	16.80	.	.	.	.	.	.	.	.	.
20.0	16.70	.	.	.	.	.	.	.	.	.
25.0	16.50	.	.	.	.	.	.	.	.	.
27.0	16.40	.	.	.	.	.	.	.	.	.
38.0	16.40	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 8 9/ IV/77 .1 GMT CONSEC STA 8

LAT 31 42.0N LONG 79 58.9W DEPTH = 43M DIST LAST STA = 8.0KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 180	WAVE DIRECTION	=
AIR TEMP	= 20.0C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	17.20	34.06	24.76	319	5.89	5.47	-.42	0.08	00.0	00.8
3.0	17.20	34.07	24.76	319	.	.	.	.	.	.
4.0	17.20	34.07	24.76	319	.	.	.	.	.	.
5.0	17.18	34.07	24.77	318	.	.	.	.	.	.
6.0	17.17	34.07	24.77	318	.	.	.	.	.	.
7.0	17.17	34.07	24.77	318	.	.	.	.	.	.
8.0	17.12	34.07	24.78	317	.	.	.	.	.	.
9.0	17.10	34.06	24.78	317	.	.	.	.	.	.
10.0	17.09	34.05	24.78	318	.	.	.	.	.	.
11.0	16.97	34.08	24.83	313	.	.	.	.	.	.
12.0	16.87	34.07	24.84	312	.	.	.	.	.	.
13.0	16.80	34.05	24.84	311	.	.	.	.	.	.
14.0	16.72	34.07	24.88	308	.	.	.	.	.	.
15.0	16.66	34.07	24.89	307	.	.	.	.	.	.
16.0	16.66	34.07	24.89	307	5.47	5.53	.06	0.04	00.0	00.2
17.0	16.66	34.07	24.89	307	.	.	.	.	.	.
18.0	16.64	34.08	24.90	306	.	.	.	.	.	.
19.0	16.64	34.10	24.92	304	.	.	.	.	.	.
20.0	16.70	34.21	24.99	298	.	.	.	.	.	.
21.0	16.62	34.42	25.17	281	.	.	.	.	.	.
22.0	16.50	34.68	25.40	259	.	.	.	.	.	.
23.0	16.41	34.94	25.62	238	.	.	.	.	.	.
24.0	16.34	35.10	25.76	225	.	.	.	.	.	.
25.0	16.36	35.33	25.93	209	.	.	.	.	.	.
26.0	16.39	35.37	25.95	207	.	.	.	.	.	.
27.0	16.41	35.40	25.97	205	.	.	.	.	.	.
28.0	16.46	35.40	25.96	206	.	.	.	.	.	.
29.0	16.49	35.42	25.97	205	.	.	.	.	.	.
30.0	16.50	35.43	25.97	205	.	.	.	.	.	.
31.0	16.52	35.43	25.97	205	.	.	.	.	.	.
32.0	16.52	35.44	25.97	205	.	.	.	.	.	.
33.0	16.52	35.44	25.97	205	.	.	.	.	.	.
34.0	16.54	35.44	25.97	205	.	.	.	.	.	.
35.0	16.56	35.45	25.97	205	.	.	.	.	.	.
36.0	16.54	35.45	25.98	204	.	.	.	.	.	.
37.0	16.53	35.45	25.98	204	.	.	.	.	.	.
38.0	16.52	35.45	25.98	204	.	.	.	.	.	.
39.0	16.52	35.45	25.98	204	.	.	.	.	.	.
40.0	16.52	35.46	25.99	203	4.22	5.50	1.28	0.11	00.4	01.7
41.0	16.50	35.46	25.99	203	.	.	.	.	.	.
42.0	16.50	35.46	25.99	203	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 9 9/ IV/77 .9 GMT CONSEC STA 9

LAT 31 40.5N LONG 79 54.0W DEPTH = 46M DIST LAST STA = 8.2KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 180	WAVE DIRECTION	=
AIR TEMP	= 19.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	18.70	.	.	.	.	.	.	.	.	.
2.5	18.50	.	.	.	.	.	.	.	.	.
6.0	18.00	.	.	.	.	.	.	.	.	.
15.0	17.50	.	.	.	.	.	.	.	.	.
17.0	17.30	.	.	.	.	.	.	.	.	.
18.0	17.50	.	.	.	.	.	.	.	.	.
19.5	18.00	.	.	.	.	.	.	.	.	.
21.0	18.50	.	.	.	.	.	.	.	.	.
23.0	18.80	.	.	.	.	.	.	.	.	.
46.0	18.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 10 9/ IV/77 1.4 GMT CONSEC STA 10

LAT 31 39.0N LONG 79 49.3W DEPTH = 46M DIST LAST STA = 7.9KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 180	WAVE DIRECTION	=
AIR TEMP	= 21.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
2.0	18.10	33.87	24.39	354	5.65	5.39	-.26	0.06	00.0	00.7
3.0	18.10	33.88	24.40	353	.	.	.	.	.	.
4.0	18.10	33.88	24.40	353	.	.	.	.	.	.
5.0	18.10	33.87	24.39	354	.	.	.	.	.	.
6.0	18.10	33.88	24.40	353	.	.	.	.	.	.
7.0	18.10	33.88	24.40	353	.	.	.	.	.	.
8.0	18.09	33.90	24.42	352	.	.	.	.	.	.
9.0	18.09	33.93	24.44	350	.	.	.	.	.	.
10.0	18.10	33.96	24.46	348	.	.	.	.	.	.
11.0	18.10	34.06	24.54	340	.	.	.	.	.	.
12.0	18.12	34.18	24.63	332	.	.	.	.	.	.
13.0	18.14	34.22	24.65	330	.	.	.	.	.	.
14.0	18.20	34.24	24.65	330	.	.	.	.	.	.
15.0	18.33	34.32	24.68	327	.	.	.	.	.	.
16.0	18.41	34.44	24.75	320	5.61	5.34	-.27	0.10	00.0	00.5
17.0	19.14	35.00	24.99	297	.	.	.	.	.	.
18.0	19.63	35.59	25.32	267	.	.	.	.	.	.
19.0	19.77	35.70	25.36	262	.	.	.	.	.	.
20.0	19.80	35.71	25.36	262	.	.	.	.	.	.
21.0	19.83	35.73	25.37	262	.	.	.	.	.	.
22.0	19.88	35.75	25.37	261	.	.	.	.	.	.
23.0	19.98	35.77	25.36	263	.	.	.	.	.	.
24.0	20.00	35.81	25.39	260	.	.	.	.	.	.
25.0	20.00	35.82	25.40	259	.	.	.	.	.	.
26.0	20.12	35.86	25.39	260	.	.	.	.	.	.
27.0	20.21	35.88	25.39	261	.	.	.	.	.	.
28.0	20.26	35.91	25.39	260	.	.	.	.	.	.
29.0	20.26	35.91	25.39	260	.	.	.	.	.	.
30.0	20.27	35.91	25.39	260	.	.	.	.	.	.
31.0	20.34	35.95	25.40	259	.	.	.	.	.	.
32.0	20.38	35.97	25.41	259	.	.	.	.	.	.
33.0	20.38	35.99	25.42	257	.	.	.	.	.	.
34.0	20.26	35.96	25.43	256	.	.	.	.	.	.
35.0	20.23	35.95	25.43	256	.	.	.	.	.	.
36.0	20.26	35.94	25.42	258	.	.	.	.	.	.
37.0	20.11	35.92	25.44	255	.	.	.	.	.	.
38.0	20.12	35.92	25.44	256	.	.	.	.	.	.
39.0	20.18	35.92	25.42	257	.	.	.	.	.	.
40.0	20.02	35.91	25.46	254	.	.	.	.	.	.

STA 10 9/ IV/77 1.4 GMT CONSEC STA 10 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
41.0	**20.06**	35.89	25.43	256	.	.	.	.	.	.
42.0	**20.04**	35.92	25.46	254	.	.	.	.	.	.
43.0	**19.97**	35.89	25.46	254	.	.	.	.	.	.
44.0	**19.96**	35.88	25.45	255	4.96	5.14	.18	0.13	00.8	02.4

ADVANCE II CRUISE 4 STA 11 9/ IV/77 2.3 GMT CONSEC STA 11

LAT 31 37.5N LONG 79 45.0W DEPTH = 55M DIST LAST STA = 7.3KM

WEATHER DATA

WIND SPEED = 12 KTS
WIND DIRECTION = 180
AIR TEMP = 21.1C
WEATHER CODE =
BAROMETRIC PRESSURE = 1016.6 MB

SEA STATE =
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	19.00	.	.	.	.	.	.	.	.	.
11.5	19.00	.	.	.	.	.	.	.	.	.
16.0	19.50	.	.	.	.	.	.	.	.	.
17.0	20.00	.	.	.	.	.	.	.	.	.
18.0	20.40	.	.	.	.	.	.	.	.	.
24.0	20.50	.	.	.	.	.	.	.	.	.
34.5	21.00	.	.	.	.	.	.	.	.	.
39.0	20.50	.	.	.	.	.	.	.	.	.
44.5	20.00	.	.	.	.	.	.	.	.	.
48.5	19.70	.	.	.	.	.	.	.	.	.
55.0	19.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 12 9/ IV/77 2.9 GMT CONSEC STA 12

LAT 31 36.0N LONG 79 40.0W DEPTH = 84M DIST LAST STA = 8.4KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 220	WAVE DIRECTION	=
AIR TEMP	= 21.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	ADU	PO4	NO3	SI
2.0	22.49	36.15	24.96	300	5.11	4.90	-.21	0.03	00.0	00.6
3.0	22.50	36.17	24.97	299	.	.	.	.	.	.
4.0	22.50	36.18	24.98	298	.	.	.	.	.	.
5.0	22.50	36.18	24.98	298	.	.	.	.	.	.
6.0	22.50	36.18	24.98	298	.	.	.	.	.	.
7.0	22.50	36.17	24.97	299	.	.	.	.	.	.
8.0	22.50	36.17	24.97	299	.	.	.	.	.	.
9.0	22.50	36.16	24.97	300	.	.	.	.	.	.
10.0	22.50	36.16	24.97	300	.	.	.	.	.	.
11.0	22.50	36.16	24.97	300	.	.	.	.	.	.
12.0	22.50	36.17	24.97	299	.	.	.	.	.	.
13.0	22.50	36.17	24.97	299	.	.	.	.	.	.
14.0	22.50	36.16	24.97	300	.	.	.	.	.	.
15.0	22.48	36.16	24.97	300	.	.	.	.	.	.
16.0	22.41	36.15	24.98	298	.	.	.	.	.	.
17.0	22.38	36.13	24.98	299	.	.	.	.	.	.
18.0	22.38	36.14	24.98	298	.	.	.	.	.	.
19.0	22.37	36.14	24.99	298	.	.	.	.	.	.
20.0	22.33	36.13	24.99	298	.	.	.	.	.	.
21.0	22.29	36.13	25.00	297	.	.	.	.	.	.
22.0	22.26	36.13	25.01	296	.	.	.	.	.	.
23.0	22.20	36.12	25.02	295	.	.	.	.	.	.
24.0	22.16	36.11	25.02	295	.	.	.	.	.	.
25.0	22.13	36.12	25.04	293	.	.	.	.	.	.
26.0	22.12	36.14	25.06	292	.	.	.	.	.	.
27.0	22.04	36.15	25.09	289	.	.	.	.	.	.
28.0	22.00	36.14	25.09	289	.	.	.	.	.	.
29.0	21.88	36.13	25.12	286	.	.	.	.	.	.
30.0	21.71	36.09	25.14	284	.	.	.	.	.	.
31.0	21.61	36.10	25.17	281	.	.	.	.	.	.
32.0	21.51	36.16	25.24	274	.	.	.	.	.	.
33.0	21.49	36.19	25.27	272	.	.	.	.	.	.
34.0	21.41	36.23	25.33	267	.	.	.	.	.	.
35.0	21.32	36.26	25.37	262	.	.	.	.	.	.
36.0	21.30	36.26	25.38	262	.	.	.	.	.	.
37.0	21.28	36.27	25.39	260	.	.	.	.	.	.
38.0	21.27	36.27	25.39	260	.	.	.	.	.	.
39.0	21.27	36.27	25.39	260	.	.	.	.	.	.
40.0	21.27	36.27	25.39	260	.	.	.	.	.	.

STA 12 9/ IV/77 2.9 GMT CONSEC STA 12 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
41.0	21.26	36.28	25.40	259	.	.	.	.	.	.
42.0	21.22	36.30	25.43	257	.	.	.	.	.	.
43.0	21.18	36.31	25.45	255	.	.	.	.	.	.
44.0	21.10	36.33	25.49	252	.	.	.	.	.	.
45.0	21.04	36.32	25.50	251	.	.	.	.	.	.
46.0	21.01	36.31	25.50	251	.	.	.	.	.	.
47.0	21.00	36.31	25.50	250	.	.	.	.	.	.
48.0	20.98	36.32	25.51	249	.	.	.	.	.	.
49.0	20.97	36.32	25.51	249	.	.	.	.	.	.
50.0	20.94	36.32	25.52	248	.	.	.	.	.	.
51.0	20.90	36.33	25.54	247	.	.	.	.	.	.
52.0	20.89	36.32	25.54	247	.	.	.	.	.	.
53.0	20.88	36.32	25.54	247	.	.	.	.	.	.
54.0	20.88	36.32	25.54	247	.	.	.	.	.	.
55.0	20.88	36.31	25.53	248	.	.	.	.	.	.
56.0	20.86	36.31	25.54	247	.	.	.	.	.	.
57.0	20.83	36.31	25.55	246	.	.	.	.	.	.
58.0	20.82	36.31	25.55	246	.	.	.	.	.	.
59.0	20.80	36.32	25.56	245	.	.	.	.	.	.
60.0	20.67	36.33	25.60	241	4.88	5.06	.18	0.15	01.9	02.2
61.0	20.52	36.30	25.62	239	.	.	.	.	.	.
62.0	20.41	36.28	25.64	238	.	.	.	.	.	.
63.0	20.27	36.28	25.67	234	.	.	.	.	.	.
64.0	20.13	36.26	25.70	232	.	.	.	.	.	.
65.0	19.96	36.29	25.76	226	.	.	.	.	.	.
66.0	19.51	36.36	25.94	210	.	.	.	.	.	.
67.0	18.68	36.25	26.07	197	.	.	.	.	.	.
68.0	18.28	36.14	26.08	196	.	.	.	.	.	.
69.0	18.09	36.12	26.12	193	.	.	.	.	.	.
70.0	17.82	36.12	26.18	186	.	.	.	.	.	.
71.0	17.40	36.16	26.32	174	.	.	.	.	.	.
72.0	17.13	36.10	26.34	172	.	.	.	.	.	.
73.0	16.90	36.10	26.39	166	.	.	.	.	.	.
74.0	16.46	36.22	26.59	148	.	.	.	.	.	.
75.0	15.48	36.28	26.86	122	.	.	.	.	.	.
76.0	15.01	35.90	26.67	140	.	.	.	.	.	.
77.0	15.01	35.88	26.66	141	.	.	.	.	.	.
78.0	15.00	35.87	26.65	142	.	.	.	.	.	.
79.0	14.99	35.87	26.65	141	.	.	.	.	.	.
80.0	14.99	35.87	26.65	141	.	.	.	.	.	.
81.0	14.92	35.87	26.67	140	.	.	.	.	.	.
82.0	14.93	35.86	26.66	141	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 13 9/ IV/77 4.0 GMT CONSEC STA 13

LAT 31 34.7N LONG 79 35.5W DEPTH =172M DIST LAST STA = 7.5KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 230	WAVE DIRECTION	=
AIR TEMP	= 23.9C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	23.90	.	.	.	.	.	.	.	.	.
15.5	23.90	.	.	.	.	.	.	.	.	.
28.0	23.70	.	.	.	.	.	.	.	.	.
29.0	23.50	.	.	.	.	.	.	.	.	.
32.0	23.00	.	.	.	.	.	.	.	.	.
35.5	22.50	.	.	.	.	.	.	.	.	.
39.0	22.00	.	.	.	.	.	.	.	.	.
42.0	21.50	.	.	.	.	.	.	.	.	.
45.5	21.00	.	.	.	.	.	.	.	.	.
49.5	20.50	.	.	.	.	.	.	.	.	.
66.5	20.00	.	.	.	.	.	.	.	.	.
75.0	19.50	.	.	.	.	.	.	.	.	.
85.5	19.00	.	.	.	.	.	.	.	.	.
89.0	18.50	.	.	.	.	.	.	.	.	.
98.0	18.00	.	.	.	.	.	.	.	.	.
102.0	17.50	.	.	.	.	.	.	.	.	.
106.5	17.00	.	.	.	.	.	.	.	.	.
108.5	16.50	.	.	.	.	.	.	.	.	.
112.0	16.00	.	.	.	.	.	.	.	.	.
115.5	15.50	.	.	.	.	.	.	.	.	.
117.5	15.00	.	.	.	.	.	.	.	.	.
118.5	14.50	.	.	.	.	.	.	.	.	.
118.5	14.00	.	.	.	.	.	.	.	.	.
119.0	13.50	.	.	.	.	.	.	.	.	.
120.0	13.00	.	.	.	.	.	.	.	.	.
131.5	13.00	.	.	.	.	.	.	.	.	.
133.5	12.50	.	.	.	.	.	.	.	.	.
136.0	12.00	.	.	.	.	.	.	.	.	.
143.5	11.50	.	.	.	.	.	.	.	.	.
145.0	11.00	.	.	.	.	.	.	.	.	.
152.0	10.50	.	.	.	.	.	.	.	.	.
155.0	10.00	.	.	.	.	.	.	.	.	.
157.0	9.50	.	.	.	.	.	.	.	.	.
160.5	9.00	.	.	.	.	.	.	.	.	.
172.0	8.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 14 9/ IV/77 4.4 GMT CONSEC STA 14

LAT 31 33.4N LONG 79 30.5W DEPTH =338M DIST LAST STA = 8.3KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 250	WAVE DIRECTION	=
AIR TEMP	= 24.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	24.68	36.06	24.25	368	5.28	4.72	-.56	0.03	00.0	01.6
3.0	24.68	36.08	24.26	367	.	.	.	.	.	.
4.0	24.68	36.07	24.26	367	.	.	.	.	.	.
5.0	24.70	36.07	24.25	368	.	.	.	.	.	.
6.0	24.70	36.07	24.25	368	.	.	.	.	.	.
7.0	24.70	36.06	24.24	369	.	.	.	.	.	.
8.0	24.68	36.07	24.26	367	.	.	.	.	.	.
9.0	24.70	36.06	24.24	369	.	.	.	.	.	.
10.0	24.70	36.06	24.24	369	.	.	.	.	.	.
11.0	24.68	36.07	24.26	368	.	.	.	.	.	.
12.0	24.68	36.07	24.26	368	.	.	.	.	.	.
13.0	24.68	36.07	24.26	368	.	.	.	.	.	.
14.0	24.68	36.07	24.26	368	.	.	.	.	.	.
15.0	24.70	36.05	24.23	370	.	.	.	.	.	.
16.0	24.70	36.05	24.23	370	.	.	.	.	.	.
17.0	24.70	36.06	24.24	369	.	.	.	.	.	.
18.0	24.68	36.06	24.25	369	.	.	.	.	.	.
19.0	24.68	36.06	24.25	369	.	.	.	.	.	.
20.0	24.68	36.06	24.25	369	.	.	.	.	.	.
21.0	24.68	36.06	24.25	369	.	.	.	.	.	.
22.0	24.64	36.07	24.27	367	.	.	.	.	.	.
23.0	24.62	36.07	24.27	366	.	.	.	.	.	.
24.0	24.54	36.09	24.31	363	.	.	.	.	.	.
25.0	24.52	36.08	24.31	363	.	.	.	.	.	.
26.0	24.41	36.10	24.36	358	.	.	.	.	.	.
27.0	24.33	36.12	24.40	355	.	.	.	.	.	.
28.0	24.20	36.13	24.45	350	.	.	.	.	.	.
29.0	24.09	36.15	24.49	346	.	.	.	.	.	.
30.0	23.94	36.16	24.55	341	.	.	.	.	.	.
31.0	23.74	36.18	24.62	334	.	.	.	.	.	.
32.0	23.70	36.16	24.62	334	.	.	.	.	.	.
33.0	23.66	36.16	24.63	333	.	.	.	.	.	.
34.0	23.54	36.19	24.69	327	.	.	.	.	.	.
35.0	23.36	36.19	24.74	322	.	.	.	.	.	.
36.0	23.18	36.21	24.81	316	.	.	.	.	.	.
37.0	22.97	36.23	24.88	309	.	.	.	.	.	.
38.0	22.87	36.22	24.90	307	.	.	.	.	.	.
39.0	22.77	36.24	24.95	303	.	.	.	.	.	.
40.0	22.60	36.24	25.00	298	.	.	.	.	.	.

STA 14 9/ IV/77 4.4 GMT CONSEC STA 14 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
41.0	22.40	36.26	25.07	291	.	.	.	.	.	.
42.0	22.14	36.29	25.17	282	.	.	.	.	.	.
43.0	22.02	36.29	25.20	279	.	.	.	.	.	.
44.0	21.94	36.27	25.21	278	.	.	.	.	.	.
45.0	21.88	36.27	25.22	277	.	.	.	.	.	.
46.0	21.86	36.26	25.22	277	.	.	.	.	.	.
47.0	21.73	36.30	25.29	270	.	.	.	.	.	.
48.0	21.46	36.29	25.36	264	.	.	.	.	.	.
49.0	21.30	36.32	25.42	258	.	.	.	.	.	.
50.0	21.20	36.31	25.44	256	.	.	.	.	.	.
51.0	21.12	36.31	25.47	254	.	.	.	.	.	.
52.0	21.00	36.32	25.51	250	.	.	.	.	.	.
53.0	20.92	36.31	25.52	249	.	.	.	.	.	.
54.0	20.61	36.39	25.67	235	.	.	.	.	.	.
55.0	20.23	36.34	25.73	229	.	.	.	.	.	.
56.0	20.10	36.32	25.75	227	.	.	.	.	.	.
57.0	20.00	36.32	25.78	224	4.85	5.12	.27	0.01	00.1	01.0
58.0	19.90	36.33	25.81	221	.	.	.	.	.	.
59.0	19.80	36.34	25.84	218	.	.	.	.	.	.
60.0	19.76	36.33	25.85	218	.	.	.	.	.	.
61.0	19.72	36.34	25.87	216	.	.	.	.	.	.
62.0	19.68	36.34	25.88	215	.	.	.	.	.	.
63.0	19.64	36.33	25.88	215	.	.	.	.	.	.
64.0	19.62	36.33	25.88	214	.	.	.	.	.	.
65.0	19.60	36.33	25.89	214	.	.	.	.	.	.
66.0	19.60	36.34	25.90	213	.	.	.	.	.	.
67.0	19.59	36.33	25.89	214	.	.	.	.	.	.
68.0	19.50	36.35	25.93	210	.	.	.	.	.	.
69.0	19.42	36.34	25.94	209	.	.	.	.	.	.
70.0	19.33	36.35	25.98	206	.	.	.	.	.	.
71.0	19.28	36.33	25.97	206	.	.	.	.	.	.
72.0	19.27	36.34	25.98	205	.	.	.	.	.	.
73.0	19.26	36.34	25.99	205	.	.	.	.	.	.
74.0	19.26	36.34	25.99	205	.	.	.	.	.	.
75.0	19.26	36.32	25.97	207	.	.	.	.	.	.
76.0	19.24	36.32	25.98	206	.	.	.	.	.	.
77.0	19.23	36.33	25.99	205	.	.	.	.	.	.
78.0	19.22	36.33	25.99	205	.	.	.	.	.	.
79.0	19.21	36.32	25.98	206	.	.	.	.	.	.
80.0	19.20	36.32	25.99	205	.	.	.	.	.	.

STA 14 9/ IV/77 4.4 GMT CONSEC STA 14 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
81.0	19.16	36.33	26.00	204	.	.	.	.	.	.
82.0	19.13	36.32	26.00	204	.	.	.	.	.	.
83.0	19.11	36.32	26.01	203	.	.	.	.	.	.
84.0	19.10	36.32	26.01	203	.	.	.	.	.	.
85.0	19.08	36.33	26.02	202	.	.	.	.	.	.
86.0	19.00	36.33	26.05	200	.	.	.	.	.	.
87.0	18.98	36.33	26.05	199	.	.	.	.	.	.
88.0	18.92	36.34	26.07	197	.	.	.	.	.	.
89.0	18.89	36.33	26.07	197	.	.	.	.	.	.
90.0	18.88	36.34	26.08	196	.	.	.	.	.	.
91.0	18.86	36.34	26.09	196	.	.	.	.	.	.
92.0	18.80	36.35	26.11	194	.	.	.	.	.	.
93.0	18.73	36.36	26.14	191	.	.	.	.	.	.
94.0	18.61	36.38	26.18	187	.	.	.	.	.	.
95.0	18.48	36.37	26.21	185	.	.	.	.	.	.
96.0	18.40	36.37	26.23	183	.	.	.	.	.	.
97.0	18.29	36.38	26.26	179	.	.	.	.	.	.
98.0	18.18	36.38	26.29	177	.	.	.	.	.	.
99.0	18.04	36.38	26.33	174	.	.	.	.	.	.
100.0	18.00	36.36	26.32	174	.	.	.	.	.	.
101.0	17.96	36.38	26.35	172	.	.	.	.	.	.
104.0	17.83	36.36	26.36	170	3.91	5.33	1.42	0.35	06.2	02.8
110.0	17.62	36.33	26.39	168	.	.	.	.	.	.
115.0	17.38	36.29	26.42	165	.	.	.	.	.	.
120.0	17.23	36.28	26.45	163	.	.	.	.	.	.
125.0	17.14	36.27	26.46	161	.	.	.	.	.	.
130.0	17.09	36.26	26.47	161	.	.	.	.	.	.
135.0	16.92	36.24	26.49	159	.	.	.	.	.	.
140.0	16.41	36.20	26.58	150	.	.	.	.	.	.
145.0	15.87	36.10	26.63	146	.	.	.	.	.	.
150.0	15.64	36.05	26.65	145	.	.	.	.	.	.
155.0	15.63	36.04	26.64	145	3.66	5.58	1.92	0.67	10.8	05.5
159.0	15.58	36.04	26.65	144	.	.	.	.	.	.
165.0	15.37	36.01	26.68	142	.	.	.	.	.	.
170.0	15.20	36.00	26.71	139	.	.	.	.	.	.
175.0	15.00	35.97	26.73	137	.	.	.	.	.	.
180.0	14.88	35.95	26.74	136	.	.	.	.	.	.
186.0	14.81	35.94	26.75	136	.	.	.	.	.	.
190.0	14.68	35.94	26.78	133	.	.	.	.	.	.
195.0	14.59	35.91	26.77	134	2.90	5.70	2.80	0.83	14.9	06.6

ADVANCE II CRUISE 4 STA 21 10/ IV/77 1.4 GMT CONSEC STA 21

LAT 31 7.7N LONG 80 45.8W DEPTH = 19M DIST LAST STA = 128.4KM

WEATHER DATA

WIND SPEED	= 18 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 17.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD MOUNT	=
BAROMETRIC PRESSURE	= 1022.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	18.24	34.91	25.15	282	5.53	5.34	-.19	0.07	00.0	01.0
3.0	18.23	34.93	25.17	280	.	.	.	.	.	.
4.0	18.24	34.92	25.16	281	.	.	.	.	.	.
5.0	18.24	34.93	25.17	280	.	.	.	.	.	.
6.0	18.24	34.92	25.16	281	.	.	.	.	.	.
7.0	18.23	34.93	25.17	280	.	.	.	.	.	.
8.0	18.24	34.92	25.16	281	.	.	.	.	.	.
9.0	18.26	34.92	25.16	282	.	.	.	.	.	.
10.0	18.26	34.92	25.16	282	.	.	.	.	.	.
11.0	18.26	34.92	25.16	282	.	.	.	.	.	.
12.0	18.26	34.92	25.16	282	.	.	.	.	.	.
13.0	18.24	34.92	25.16	281	.	.	.	.	.	.
14.0	18.26	34.92	25.16	282	.	.	.	.	.	.
15.0	18.26	34.92	25.16	282	.	.	.	.	.	.
16.0	18.26	34.92	25.16	282	.	.	.	.	.	.
17.0	18.26	34.92	25.16	282	.	.	.	.	.	.
18.0	18.26	34.92	25.16	282	.	.	.	.	.	.
19.0	18.26	34.92	25.16	282	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 22 10/ IV/77 2.7 GMT CONSEC STA 22

LAT 31 4.0N LONG 80 36.5W DEPTH = 28M DIST LAST STA = 16.3KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 19.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1023.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
4.0	19.09	35.13	25.11	286	5.49	5.25	-.24	0.08	00.1	01.6
5.0	19.10	35.47	25.36	262	.	.	.	.	.	.
6.0	19.10	35.47	25.36	262	.	.	.	.	.	.
7.0	19.10	35.48	25.37	261	.	.	.	.	.	.
8.0	19.10	35.47	25.36	262	.	.	.	.	.	.
9.0	19.10	35.47	25.36	262	.	.	.	.	.	.
10.0	19.10	35.47	25.36	262	.	.	.	.	.	.
11.0	19.10	35.47	25.36	262	.	.	.	.	.	.
12.0	19.10	35.47	25.36	262	.	.	.	.	.	.
13.0	19.10	35.47	25.36	262	.	.	.	.	.	.
14.0	19.10	35.47	25.36	262	.	.	.	.	.	.
15.0	19.10	35.47	25.36	262	.	.	.	.	.	.
16.0	19.10	35.47	25.36	262	.	.	.	.	.	.
17.0	19.10	35.47	25.36	262	.	.	.	.	.	.
18.0	19.10	35.47	25.36	262	.	.	.	.	.	.
19.0	19.10	35.47	25.36	262	.	.	.	.	.	.
20.0	19.10	35.47	25.36	262	.	.	.	.	.	.
21.0	19.10	35.47	25.36	262	.	.	.	.	.	.
22.0	19.10	35.47	25.36	262	.	.	.	.	.	.
23.0	19.10	35.47	25.36	262	.	.	.	.	.	.
24.0	19.10	35.47	25.36	262	.	.	.	.	.	.
25.0	19.10	35.47	25.36	262	.	.	.	.	.	.
26.0	19.10	35.47	25.36	263	.	.	.	.	.	.
27.0	19.10	35.47	25.36	263	.	.	.	.	.	.
28.0	19.10	35.47	25.36	263	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 23 10/ IV/77 3.4 GMT CONSEC STA 23

LAT 31 2.3N LONG 80 32.0W DEPTH = 31M DIST LAST STA = 7.8KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 19.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1023.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	19.40	.	.	.	.	.	.	.	.	.
7.5	19.30	.	.	.	.	.	.	.	.	.
31.0	19.30	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 24 10/ IV/77 3.9 GMT CONSEC STA 24

LAT 31 1.0N LONG 80 28.0W DEPTH = 37M DIST LAST STA = 6.8KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 19.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1023.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	19.54	35.24	25.07	289	5.29	5.20	-.09	0.08	00.1	01.6
3.0	19.54	35.31	25.13	284	.	.	.	.	.	.
4.0	19.54	35.29	25.11	286	.	.	.	.	.	.
5.0	19.54	35.32	25.14	283	.	.	.	.	.	.
6.0	19.54	35.31	25.13	284	.	.	.	.	.	.
7.0	19.54	35.31	25.13	284	.	.	.	.	.	.
8.0	19.54	35.31	25.13	284	.	.	.	.	.	.
9.0	19.54	35.31	25.13	284	.	.	.	.	.	.
10.0	19.54	35.31	25.13	284	.	.	.	.	.	.
11.0	19.54	35.31	25.13	284	.	.	.	.	.	.
12.0	19.54	35.31	25.13	284	.	.	.	.	.	.
13.0	19.54	35.31	25.13	284	.	.	.	.	.	.
14.0	19.54	35.31	25.13	285	.	.	.	.	.	.
15.0	19.54	35.32	25.14	284	.	.	.	.	.	.
16.0	19.54	35.31	25.13	285	.	.	.	.	.	.
17.0	19.54	35.31	25.13	285	.	.	.	.	.	.
18.0	19.54	35.31	25.13	285	.	.	.	.	.	.
19.0	19.54	35.31	25.13	285	.	.	.	.	.	.
20.0	19.54	35.31	25.13	285	.	.	.	.	.	.
21.0	19.54	35.31	25.13	285	.	.	.	.	.	.
22.0	19.54	35.31	25.13	285	.	.	.	.	.	.
23.0	19.54	35.32	25.14	284	.	.	.	.	.	.
24.0	19.54	35.31	25.13	285	.	.	.	.	.	.
25.0	19.54	35.31	25.13	285	.	.	.	.	.	.
26.0	19.54	35.32	25.14	284	.	.	.	.	.	.
27.0	19.54	35.32	25.14	284	.	.	.	.	.	.
28.0	19.54	35.32	25.14	284	.	.	.	.	.	.
29.0	19.54	35.32	25.14	284	.	.	.	.	.	.
30.0	19.54	35.31	25.13	285	.	.	.	.	.	.
31.0	19.54	35.32	25.14	284	.	.	.	.	.	.
32.0	19.54	35.31	25.13	285	.	.	.	.	.	.
33.0	19.54	35.32	25.14	284	.	.	.	.	.	.
34.0	19.54	35.32	25.14	284	5.25	5.20	-.05	0.06	00.0	02.0
35.0	19.54	35.31	25.13	285	.	.	.	.	.	.
36.0	19.54	35.32	25.14	285	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 25 10/ IV/77 4.8 GMT CONSEC STA 25

LAT 30 58.5N LONG 80 23.0W DEPTH = 37M DIST LAST STA = 9.2KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 18.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1023.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	20.10	.	.	.	.	.	.	.	.	.
25.0	20.10	.	.	.	.	.	.	.	.	.
37.0	20.10	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 26 10/ IV/77 5.3 GMT CONSEC STA 26

LAT 30 57.0N LONG 80 18.0W DEPTH = 40M DIST LAST STA = 8.4KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 18.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1023.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	20.62	36.03	25.39	259	5.22	5.07	-.15	0.10	00.1	01.9
3.0	20.62	36.02	25.38	260	.	.	.	.	.	.
4.0	20.62	36.02	25.38	260	.	.	.	.	.	.
5.0	20.62	36.02	25.38	260	.	.	.	.	.	.
6.0	20.62	36.03	25.39	259	.	.	.	.	.	.
7.0	20.62	36.02	25.38	260	.	.	.	.	.	.
8.0	20.62	36.02	25.38	260	.	.	.	.	.	.
9.0	20.62	36.02	25.38	260	.	.	.	.	.	.
10.0	20.62	36.02	25.38	260	.	.	.	.	.	.
11.0	20.62	36.02	25.38	260	.	.	.	.	.	.
12.0	20.62	36.02	25.38	260	.	.	.	.	.	.
13.0	20.62	36.02	25.38	260	.	.	.	.	.	.
14.0	20.62	36.02	25.38	260	.	.	.	.	.	.
15.0	20.62	36.02	25.38	260	.	.	.	.	.	.
16.0	20.62	36.02	25.38	260	.	.	.	.	.	.
17.0	20.62	36.02	25.38	260	.	.	.	.	.	.
18.0	20.62	36.02	25.38	261	.	.	.	.	.	.
19.0	20.62	36.02	25.38	261	.	.	.	.	.	.
20.0	20.62	36.02	25.38	261	.	.	.	.	.	.
21.0	20.62	36.02	25.38	261	.	.	.	.	.	.
22.0	20.62	36.02	25.38	261	.	.	.	.	.	.
23.0	20.62	36.02	25.38	261	.	.	.	.	.	.
24.0	20.62	36.03	25.39	260	.	.	.	.	.	.
25.0	20.62	36.02	25.38	261	.	.	.	.	.	.
26.0	20.62	36.02	25.38	261	.	.	.	.	.	.
27.0	20.62	36.02	25.38	261	.	.	.	.	.	.
28.0	20.62	36.02	25.38	261	.	.	.	.	.	.
29.0	20.62	36.03	25.39	260	.	.	.	.	.	.
30.0	20.62	36.02	25.38	261	.	.	.	.	.	.
31.0	20.62	36.02	25.38	261	.	.	.	.	.	.
32.0	20.62	36.02	25.38	261	.	.	.	.	.	.
33.0	20.62	36.02	25.38	261	.	.	.	.	.	.
34.0	20.62	36.02	25.38	261	.	.	.	.	.	.
35.0	20.62	36.02	25.38	261	.	.	.	.	.	.
36.0	20.62	36.02	25.38	261	.	.	.	.	.	.
37.0	20.62	36.02	25.38	261	.	.	.	.	.	.
38.0	20.62	36.02	25.38	261	5.21	5.07	-.14	0.08	00.0	00.9
39.0	20.62	36.02	25.38	261	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 27 10/ IV/77 6.0 GMT CONSEC STA 27

LAT 30 55.4N LONG 80 13.2W DEPTH = 41M DIST LAST STA = 8.2KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 18.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1023.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	22.10	.	.	.	.	.	.	.	.	.
13.0	22.10	.	.	.	.	.	.	.	.	.
14.5	22.00	.	.	.	.	.	.	.	.	.
21.5	21.50	.	.	.	.	.	.	.	.	.
32.5	21.00	.	.	.	.	.	.	.	.	.
41.0	20.90	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 28 10/ IV/77 6.5 GMT CONSEC STA 28

LAT 30 53.7N LONG 80 9.1W DEPTH = 42M DIST LAST STA = 7.2KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 19.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1022.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	22.82	36.24	24.93	303	5.12	4.87	-.25	0.12	00.0	01.1
3.0	22.82	36.25	24.94	302	.	.	.	.	.	.
4.0	22.82	36.27	24.96	300	.	.	.	.	.	.
5.0	22.83	36.26	24.95	301	.	.	.	.	.	.
6.0	22.82	36.27	24.96	301	.	.	.	.	.	.
7.0	22.80	36.26	24.95	301	.	.	.	.	.	.
8.0	22.83	36.25	24.94	302	.	.	.	.	.	.
9.0	22.82	36.26	24.95	301	.	.	.	.	.	.
10.0	22.82	36.26	24.95	301	.	.	.	.	.	.
11.0	22.80	36.27	24.96	300	.	.	.	.	.	.
12.0	22.80	36.26	24.95	301	.	.	.	.	.	.
13.0	22.80	36.26	24.95	301	.	.	.	.	.	.
14.0	22.80	36.26	24.95	301	.	.	.	.	.	.
15.0	22.80	36.27	24.96	300	.	.	.	.	.	.
16.0	22.79	36.28	24.97	299	.	.	.	.	.	.
17.0	22.80	36.27	24.96	300	.	.	.	.	.	.
18.0	22.78	36.27	24.97	300	.	.	.	.	.	.
19.0	22.77	36.27	24.97	300	.	.	.	.	.	.
20.0	22.74	36.28	24.99	298	5.13	4.88	-.25	0.05	00.1	00.8
21.0	22.71	36.28	25.00	297	.	.	.	.	.	.
22.0	22.56	36.26	25.02	295	.	.	.	.	.	.
23.0	22.34	36.27	25.09	288	.	.	.	.	.	.
24.0	22.13	36.26	25.15	283	.	.	.	.	.	.
25.0	21.62	36.24	25.27	271	.	.	.	.	.	.
26.0	21.26	36.27	25.40	259	.	.	.	.	.	.
27.0	21.03	36.24	25.44	256	.	.	.	.	.	.
28.0	20.99	36.26	25.46	253	.	.	.	.	.	.
29.0	20.99	36.24	25.45	255	.	.	.	.	.	.
30.0	20.97	36.25	25.46	253	.	.	.	.	.	.
31.0	20.97	36.24	25.45	254	5.29	5.04	-.25	0.08	00.1	00.9
32.0	20.97	36.24	25.45	254	.	.	.	.	.	.
33.0	20.97	36.24	25.45	254	.	.	.	.	.	.
34.0	20.96	36.24	25.46	254	.	.	.	.	.	.
35.0	20.96	36.24	25.46	254	.	.	.	.	.	.
36.0	20.96	36.25	25.46	253	.	.	.	.	.	.
37.0	20.94	36.25	25.47	253	.	.	.	.	.	.
38.0	20.92	36.25	25.48	252	.	.	.	.	.	.
39.0	20.92	36.25	25.48	252	5.26	5.04	-.22	0.07	00.2	00.5
40.0	20.92	36.25	25.48	252	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 29 10/ IV/77 7.2 GMT CONSEC STA 29

LAT 30 52.2N LONG 80 3.9W DEPTH = 48M DIST LAST STA = 8.7KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 20.0C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1022.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	22.40	.	.	.	.	.	.	.	.	.
20.5	22.40	.	.	.	.	.	.	.	.	.
21.5	22.00	.	.	.	.	.	.	.	.	.
24.0	21.50	.	.	.	.	.	.	.	.	.
25.5	21.00	.	.	.	.	.	.	.	.	.
28.0	20.50	.	.	.	.	.	.	.	.	.
29.0	20.10	.	.	.	.	.	.	.	.	.
30.0	20.50	.	.	.	.	.	.	.	.	.
31.0	21.00	.	.	.	.	.	.	.	.	.
31.5	21.50	.	.	.	.	.	.	.	.	.
32.5	22.00	.	.	.	.	.	.	.	.	.
35.0	22.50	.	.	.	.	.	.	.	.	.
39.0	23.00	.	.	.	.	.	.	.	.	.
43.5	23.50	.	.	.	.	.	.	.	.	.
48.0	23.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 30 10/ IV/77 7.8 GMT CONSEC STA 30

LAT 30 50.9N LONG 79 59.8W DEPTH =113M DIST LAST STA = 7.0KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 20.0C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1022.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
2.0	21.88	36.17	25.15	282	5.51	4.96	-.55	0.09	00.2	02.2
3.0	21.88	36.18	25.16	281	.	.	.	.	.	.
4.0	21.88	36.17	25.15	282	.	.	.	.	.	.
5.0	21.88	36.16	25.14	283	.	.	.	.	.	.
6.0	21.88	36.16	25.14	283	.	.	.	.	.	.
7.0	21.88	36.17	25.15	282	.	.	.	.	.	.
8.0	21.88	36.16	25.14	283	.	.	.	.	.	.
9.0	21.88	36.16	25.14	283	.	.	.	.	.	.
10.0	21.88	36.17	25.15	282	.	.	.	.	.	.
11.0	21.88	36.16	25.14	283	.	.	.	.	.	.
12.0	21.88	36.16	25.14	283	.	.	.	.	.	.
13.0	21.88	36.16	25.14	283	.	.	.	.	.	.
14.0	21.88	36.17	25.15	283	.	.	.	.	.	.
15.0	21.88	36.16	25.14	283	.	.	.	.	.	.
16.0	21.88	36.15	25.13	284	.	.	.	.	.	.
17.0	21.88	36.15	25.13	284	.	.	.	.	.	.
18.0	21.88	36.15	25.13	284	.	.	.	.	.	.
19.0	21.88	36.16	25.14	284	.	.	.	.	.	.
20.0	21.88	36.16	25.14	284	.	.	.	.	.	.
21.0	21.88	36.15	25.13	284	.	.	.	.	.	.
22.0	21.86	36.17	25.15	282	.	.	.	.	.	.
23.0	21.77	36.17	25.18	280	.	.	.	.	.	.
24.0	21.68	36.18	25.21	277	.	.	.	.	.	.
25.0	21.59	36.19	25.24	274	.	.	.	.	.	.
26.0	21.52	36.18	25.26	273	.	.	.	.	.	.
27.0	21.50	36.19	25.27	272	.	.	.	.	.	.
28.0	21.01	36.24	25.44	255	.	.	.	.	.	.
29.0	20.92	36.16	25.41	259	.	.	.	.	.	.
30.0	20.80	36.13	25.42	258	.	.	.	.	.	.
31.0	20.71	36.13	25.44	255	.	.	.	.	.	.
32.0	20.62	36.19	25.51	249	.	.	.	.	.	.
33.0	20.62	36.22	25.53	247	.	.	.	.	.	.
34.0	20.62	36.23	25.54	246	.	.	.	.	.	.
35.0	20.63	36.23	25.54	246	.	.	.	.	.	.
36.0	20.62	36.25	25.56	245	.	.	.	.	.	.
37.0	20.51	36.28	25.61	240	.	.	.	.	.	.
38.0	20.38	36.29	25.65	236	.	.	.	.	.	.
39.0	20.32	36.29	25.67	234	.	.	.	.	.	.
40.0	20.09	36.30	25.74	228	.	.	.	.	.	.

STA 30 10/ IV/77 7.8 GMT CONSEC STA 30 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
41.0	20.00	36.29	25.75	226	5.19	5.12	-.07	0.05	00.2	01.8
42.0	19.98	36.28	25.75	226	.	.	.	.	.	.
43.0	19.97	36.29	25.76	225	.	.	.	.	.	.
44.0	19.86	36.30	25.80	222	.	.	.	.	.	.
45.0	19.73	36.30	25.83	219	.	.	.	.	.	.
46.0	19.34	36.31	25.94	208	.	.	.	.	.	.
47.0	19.10	36.30	26.00	203	.	.	.	.	.	.
48.0	19.00	36.29	26.01	201	.	.	.	.	.	.
49.0	18.90	36.29	26.04	199	.	.	.	.	.	.
50.0	18.79	36.26	26.05	199	.	.	.	.	.	.
51.0	18.71	36.28	26.08	195	.	.	.	.	.	.
52.0	18.42	36.30	26.17	187	.	.	.	.	.	.
53.0	18.37	36.25	26.14	189	.	.	.	.	.	.
54.0	18.17	36.23	26.18	186	.	.	.	.	.	.
55.0	18.01	36.23	26.22	182	.	.	.	.	.	.
56.0	17.99	36.23	26.22	182	.	.	.	.	.	.
57.0	17.97	36.22	26.22	182	.	.	.	.	.	.
58.0	17.94	36.22	26.23	181	.	.	.	.	.	.
59.0	17.92	36.22	26.23	181	.	.	.	.	.	.
60.0	17.91	36.23	26.24	180	4.40	5.33	.93	0.36	06.5	03.1
61.0	17.91	36.23	26.24	180	.	.	.	.	.	.
62.0	17.87	36.23	26.25	179	.	.	.	.	.	.
63.0	17.76	36.23	26.28	177	.	.	.	.	.	.
64.0	17.77	36.22	26.27	178	.	.	.	.	.	.
65.0	17.77	36.22	26.27	178	.	.	.	.	.	.
66.0	17.77	36.22	26.27	178	.	.	.	.	.	.
67.0	17.77	36.21	26.26	178	.	.	.	.	.	.
68.0	17.77	36.22	26.27	178	.	.	.	.	.	.
69.0	17.74	36.23	26.29	176	.	.	.	.	.	.
70.0	17.72	36.22	26.28	177	.	.	.	.	.	.
71.0	17.72	36.22	26.28	177	.	.	.	.	.	.
72.0	17.73	36.21	26.27	178	.	.	.	.	.	.
73.0	17.71	36.22	26.29	176	.	.	.	.	.	.
74.0	17.53	36.21	26.32	173	.	.	.	.	.	.
75.0	17.50	36.19	26.31	174	.	.	.	.	.	.
76.0	17.38	36.22	26.37	169	.	.	.	.	.	.
77.0	17.04	36.20	26.43	163	.	.	.	.	.	.
78.0	17.02	36.15	26.40	166	4.03	5.42	1.39	0.55	06.6	03.7
79.0	16.88	36.15	26.43	163	.	.	.	.	.	.
80.0	16.77	36.14	26.45	161	.	.	.	.	.	.

STA 30 10/ IV/77 7.8 GMT CONSEC STA 30 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
81.0	16.77	36.14	26.45	161	.	.	.	.	.	.
82.0	16.80	36.13	26.44	162	.	.	.	.	.	.
83.0	16.78	36.14	26.45	161	.	.	.	.	.	.
84.0	16.77	36.14	26.45	161	.	.	.	.	.	.
85.0	16.72	36.16	26.48	158	.	.	.	.	.	.
86.0	16.73	36.14	26.46	160	.	.	.	.	.	.
87.0	16.53	36.15	26.52	155	.	.	.	.	.	.
88.0	16.47	36.15	26.53	154	.	.	.	.	.	.
89.0	16.26	36.17	26.60	147	.	.	.	.	.	.
90.0	15.98	36.11	26.61	146	.	.	.	.	.	.
91.0	15.89	36.06	26.60	147	.	.	.	.	.	.
92.0	15.86	36.06	26.60	147	.	.	.	.	.	.
93.0	15.76	36.07	26.63	144	.	.	.	.	.	.
94.0	15.58	36.04	26.65	142	.	.	.	.	.	.
95.0	15.49	36.03	26.66	141	.	.	.	.	.	.
96.0	15.42	36.02	26.67	140	.	.	.	.	.	.
97.0	15.26	36.01	26.70	138	.	.	.	.	.	.
98.0	15.22	35.99	26.69	138	.	.	.	.	.	.
99.0	15.08	36.01	26.74	134	.	.	.	.	.	.
100.0	14.98	35.94	26.71	137	.	.	.	.	.	.
101.0	14.93	35.97	26.74	134	.	.	.	.	.	.
104.0	14.26	35.87	26.81	127	3.27	5.74	2.47	0.97	17.3	09.4

ADVANCE II CRUISE 4 STA 31 10/ IV/77 8.8 GMT CONSEC STA 31

LAT 30 49.3N LONG 79 53.8W DEPTH =261M DIST LAST STA = 10.0KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 20.0C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1022.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	24.80	.	.	.	.	.	.	.	.	.
14.5	24.90	.	.	.	.	.	.	.	.	.
22.0	24.50	.	.	.	.	.	.	.	.	.
28.0	24.00	.	.	.	.	.	.	.	.	.
33.5	23.50	.	.	.	.	.	.	.	.	.
36.0	23.00	.	.	.	.	.	.	.	.	.
40.0	22.50	.	.	.	.	.	.	.	.	.
47.0	22.00	.	.	.	.	.	.	.	.	.
51.5	21.50	.	.	.	.	.	.	.	.	.
56.0	21.00	.	.	.	.	.	.	.	.	.
59.5	20.50	.	.	.	.	.	.	.	.	.
62.0	20.00	.	.	.	.	.	.	.	.	.
63.0	19.50	.	.	.	.	.	.	.	.	.
68.5	19.00	.	.	.	.	.	.	.	.	.
71.0	18.50	.	.	.	.	.	.	.	.	.
73.0	18.00	.	.	.	.	.	.	.	.	.
77.0	17.50	.	.	.	.	.	.	.	.	.
83.0	17.00	.	.	.	.	.	.	.	.	.
87.5	16.50	.	.	.	.	.	.	.	.	.
89.0	16.00	.	.	.	.	.	.	.	.	.
91.5	15.50	.	.	.	.	.	.	.	.	.
94.5	15.00	.	.	.	.	.	.	.	.	.
100.0	14.50	.	.	.	.	.	.	.	.	.
102.5	14.00	.	.	.	.	.	.	.	.	.
108.5	13.50	.	.	.	.	.	.	.	.	.
115.0	13.00	.	.	.	.	.	.	.	.	.
119.5	12.50	.	.	.	.	.	.	.	.	.
129.5	12.00	.	.	.	.	.	.	.	.	.
137.0	11.50	.	.	.	.	.	.	.	.	.
142.5	11.00	.	.	.	.	.	.	.	.	.
144.5	10.50	.	.	.	.	.	.	.	.	.
155.0	10.00	.	.	.	.	.	.	.	.	.
170.5	9.50	.	.	.	.	.	.	.	.	.
177.0	9.00	.	.	.	.	.	.	.	.	.
200.0	8.60	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 32 10/ IV/77 9.4 GMT CONSEC STA 32

LAT 30 47.0N LONG 79 50.5W DEPTH =351M DIST LAST STA = 6.8KM

WEATHER DATA

WIND SPEED	= 20 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 20.6C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1022.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	25.90	.	.	.	.	.	.	.	.	.
37.5	25.90	.	.	.	.	.	.	.	.	.
47.0	25.50	.	.	.	.	.	.	.	.	.
50.5	25.00	.	.	.	.	.	.	.	.	.
52.5	24.50	.	.	.	.	.	.	.	.	.
54.0	24.00	.	.	.	.	.	.	.	.	.
57.0	23.50	.	.	.	.	.	.	.	.	.
59.0	23.00	.	.	.	.	.	.	.	.	.
64.0	22.50	.	.	.	.	.	.	.	.	.
69.0	22.00	.	.	.	.	.	.	.	.	.
73.0	21.50	.	.	.	.	.	.	.	.	.
76.0	21.00	.	.	.	.	.	.	.	.	.
81.0	20.50	.	.	.	.	.	.	.	.	.
83.0	20.00	.	.	.	.	.	.	.	.	.
85.0	19.50	.	.	.	.	.	.	.	.	.
89.0	19.00	.	.	.	.	.	.	.	.	.
92.0	18.50	.	.	.	.	.	.	.	.	.
96.0	18.00	.	.	.	.	.	.	.	.	.
97.5	17.50	.	.	.	.	.	.	.	.	.
101.0	17.00	.	.	.	.	.	.	.	.	.
109.0	16.50	.	.	.	.	.	.	.	.	.
112.5	16.00	.	.	.	.	.	.	.	.	.
117.0	15.50	.	.	.	.	.	.	.	.	.
122.5	15.00	.	.	.	.	.	.	.	.	.
125.0	14.50	.	.	.	.	.	.	.	.	.
130.5	14.00	.	.	.	.	.	.	.	.	.
137.5	13.50	.	.	.	.	.	.	.	.	.
142.0	13.00	.	.	.	.	.	.	.	.	.
149.0	12.50	.	.	.	.	.	.	.	.	.
158.0	12.00	.	.	.	.	.	.	.	.	.
168.5	11.50	.	.	.	.	.	.	.	.	.
176.5	11.00	.	.	.	.	.	.	.	.	.
186.0	10.50	.	.	.	.	.	.	.	.	.
194.0	10.00	.	.	.	.	.	.	.	.	.
200.0	9.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 33 11/ IV/77 3.1 GMT CONSEC STA 33

LAT 31 33.4N LONG 79 30.8W DEPTH =329M DIST LAST STA = 91.5KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1024.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
3.0	25.32	35.97	23.98	393	.	.	.	.	.	.
4.0	25.32	35.97	23.98	393	.	.	.	.	.	.
5.0	25.32	35.97	23.98	393	.	.	.	.	.	.
6.0	25.32	35.97	23.98	393	.	.	.	.	.	.
7.0	25.32	35.97	23.98	393	.	.	.	.	.	.
8.0	25.32	35.97	23.98	393	.	.	.	.	.	.
9.0	25.32	35.97	23.98	393	.	.	.	.	.	.
10.0	25.32	35.97	23.98	393	.	.	.	.	.	.
11.0	25.30	35.97	23.99	393	.	.	.	.	.	.
12.0	25.30	35.97	23.99	393	.	.	.	.	.	.
13.0	25.29	35.98	24.00	392	.	.	.	.	.	.
14.0	25.27	35.97	24.00	392	.	.	.	.	.	.
15.0	25.20	35.98	24.03	389	.	.	.	.	.	.
16.0	25.12	35.98	24.05	387	.	.	.	.	.	.
17.0	25.10	35.99	24.07	386	.	.	.	.	.	.
18.0	25.04	35.98	24.08	385	.	.	.	.	.	.
19.0	25.00	35.99	24.10	383	.	.	.	.	.	.
20.0	24.90	36.00	24.14	379	.	.	.	.	.	.
21.0	24.83	36.01	24.16	377	.	.	.	.	.	.
22.0	24.77	36.02	24.19	374	.	.	.	.	.	.
23.0	24.76	36.02	24.19	374	.	.	.	.	.	.
24.0	24.72	36.02	24.21	373	.	.	.	.	.	.
25.0	24.71	36.02	24.21	373	.	.	.	.	.	.
26.0	24.70	36.02	24.21	372	.	.	.	.	.	.
27.0	24.68	36.02	24.22	372	.	.	.	.	.	.
28.0	24.62	36.03	24.24	369	.	.	.	.	.	.
29.0	24.60	36.03	24.25	369	.	.	.	.	.	.
30.0	24.58	36.04	24.26	368	.	.	.	.	.	.
31.0	24.52	36.04	24.28	366	.	.	.	.	.	.
32.0	24.49	36.05	24.30	364	.	.	.	.	.	.
33.0	24.41	36.05	24.32	362	.	.	.	.	.	.
34.0	24.38	36.06	24.34	361	.	.	.	.	.	.
35.0	24.28	36.05	24.36	358	.	.	.	.	.	.
36.0	24.21	36.07	24.40	355	.	.	.	.	.	.
37.0	24.09	36.07	24.43	352	.	.	.	.	.	.
38.0	23.83	36.12	24.55	341	.	.	.	.	.	.
39.0	23.67	36.14	24.61	335	.	.	.	.	.	.
40.0	23.53	36.14	24.65	331	.	.	.	.	.	.
41.0	23.41	36.14	24.69	328	.	.	.	.	.	.

STA 33 11/ IV/77 3.1 GMT CONSEC STA 33 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
42.0	23.34	36.14	24.71	326	.	.	.	.	.	.
43.0	23.30	36.15	24.73	324	.	.	.	.	.	.
44.0	23.22	36.16	24.76	321	.	.	.	.	.	.
45.0	23.14	36.16	24.78	319	.	.	.	.	.	.
46.0	23.00	36.18	24.84	314	.	.	.	.	.	.
47.0	22.92	36.19	24.87	311	.	.	.	.	.	.
48.0	22.82	36.20	24.90	307	.	.	.	.	.	.
49.0	22.74	36.20	24.93	305	.	.	.	.	.	.
50.0	22.64	36.19	24.95	303	.	.	.	.	.	.
51.0	22.60	36.20	24.97	301	.	.	.	.	.	.
52.0	22.48	36.22	25.02	297	.	.	.	.	.	.
53.0	22.40	36.21	25.03	295	.	.	.	.	.	.
54.0	22.38	36.21	25.04	295	.	.	.	.	.	.
55.0	22.26	36.20	25.06	292	.	.	.	.	.	.
56.0	22.14	36.20	25.10	289	.	.	.	.	.	.
57.0	22.10	36.21	25.12	287	.	.	.	.	.	.
58.0	21.80	36.22	25.21	279	.	.	.	.	.	.
59.0	21.77	36.21	25.21	278	.	.	.	.	.	.
60.0	21.63	36.22	25.26	274	.	.	.	.	.	.
61.0	21.56	36.22	25.28	272	.	.	.	.	.	.
62.0	21.44	36.22	25.31	269	.	.	.	.	.	.
63.0	21.29	36.21	25.34	266	.	.	.	.	.	.
64.0	21.01	36.23	25.44	257	.	.	.	.	.	.
65.0	20.90	36.20	25.44	257	.	.	.	.	.	.
66.0	20.86	36.21	25.46	255	.	.	.	.	.	.
67.0	20.63	36.24	25.55	247	.	.	.	.	.	.
68.0	20.36	36.22	25.60	241	.	.	.	.	.	.
69.0	20.29	36.21	25.62	240	.	.	.	.	.	.
70.0	20.09	36.23	25.68	234	.	.	.	.	.	.
71.0	19.84	36.22	25.74	228	.	.	.	.	.	.
72.0	19.59	36.23	25.82	221	.	.	.	.	.	.
73.0	19.46	36.20	25.83	220	.	.	.	.	.	.
74.0	19.37	36.20	25.85	218	.	.	.	.	.	.
75.0	19.24	36.18	25.87	216	.	.	.	.	.	.
76.0	19.09	36.17	25.90	213	.	.	.	.	.	.
77.0	18.90	36.17	25.95	209	.	.	.	.	.	.
78.0	18.60	36.16	26.02	202	.	.	.	.	.	.
79.0	18.50	36.16	26.04	200	.	.	.	.	.	.
80.0	18.33	36.18	26.10	194	.	.	.	.	.	.
81.0	18.24	36.14	26.09	195	.	.	.	.	.	.

STA 33 11/ IV/77 3.1 GMT CONSEC STA 33 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
82.0	18.12	36.17	26.15	190	.	.	.	.	.	.
83.0	18.03	36.17	26.17	188	.	.	.	.	.	.
84.0	17.92	36.17	26.20	185	.	.	.	.	.	.
85.0	17.88	36.16	26.20	185	.	.	.	.	.	.
86.0	17.80	36.16	26.22	183	.	.	.	.	.	.
87.0	17.76	36.16	26.23	182	.	.	.	.	.	.
88.0	17.70	36.16	26.24	181	.	.	.	.	.	.
89.0	17.56	36.16	26.28	178	.	.	.	.	.	.
90.0	17.30	36.14	26.32	173	.	.	.	.	.	.
91.0	17.14	36.15	26.37	169	.	.	.	.	.	.
92.0	17.09	36.12	26.36	170	.	.	.	.	.	.
93.0	17.01	36.11	26.37	169	.	.	.	.	.	.
94.0	16.89	36.11	26.40	166	.	.	.	.	.	.
95.0	16.72	36.09	26.43	164	.	.	.	.	.	.
96.0	16.62	36.09	26.45	162	.	.	.	.	.	.
97.0	16.48	36.08	26.47	159	.	.	.	.	.	.
98.0	16.41	36.07	26.48	158	.	.	.	.	.	.
99.0	16.34	36.07	26.50	157	.	.	.	.	.	.
100.0	16.21	36.06	26.52	155	.	.	.	.	.	.
101.0	16.12	36.04	26.53	154	.	.	.	.	.	.
105.0	15.64	36.00	26.61	147	.	.	.	.	.	.
110.0	15.14	35.96	26.69	139	.	.	.	.	.	.
115.0	14.86	35.90	26.71	138	.	.	.	.	.	.
120.0	14.60	35.88	26.75	134	.	.	.	.	.	.
125.0	14.00	35.81	26.82	127	.	.	.	.	.	.
130.0	13.61	35.74	26.85	124	.	.	.	.	.	.
135.0	13.20	35.68	26.89	121	.	.	.	.	.	.
140.0	12.94	35.64	26.91	119	.	.	.	.	.	.
145.0	12.80	35.62	26.92	117	.	.	.	.	.	.
150.0	12.38	35.67	27.05	106	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 34 11/ IV/77 5.0 GMT CONSEC STA 34

LAT 31 35.0N LONG 79 36.0W DEPTH =124M DIST LAST STA = 8.7KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1024.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	23.50	.	.	.	.	.	.	.	.	.
8.5	23.50	.	.	.	.	.	.	.	.	.
13.0	23.00	.	.	.	.	.	.	.	.	.
18.0	22.90	.	.	.	.	.	.	.	.	.
20.0	22.50	.	.	.	.	.	.	.	.	.
22.5	22.00	.	.	.	.	.	.	.	.	.
25.5	21.50	.	.	.	.	.	.	.	.	.
29.0	21.00	.	.	.	.	.	.	.	.	.
32.5	20.50	.	.	.	.	.	.	.	.	.
38.0	20.00	.	.	.	.	.	.	.	.	.
44.0	19.50	.	.	.	.	.	.	.	.	.
49.5	19.00	.	.	.	.	.	.	.	.	.
52.0	18.50	.	.	.	.	.	.	.	.	.
54.5	18.00	.	.	.	.	.	.	.	.	.
57.5	17.50	.	.	.	.	.	.	.	.	.
59.5	17.00	.	.	.	.	.	.	.	.	.
64.5	16.50	.	.	.	.	.	.	.	.	.
66.5	16.00	.	.	.	.	.	.	.	.	.
71.0	15.50	.	.	.	.	.	.	.	.	.
74.0	15.00	.	.	.	.	.	.	.	.	.
76.0	14.50	.	.	.	.	.	.	.	.	.
80.5	14.00	.	.	.	.	.	.	.	.	.
87.5	13.50	.	.	.	.	.	.	.	.	.
97.0	13.00	.	.	.	.	.	.	.	.	.
104.5	12.50	.	.	.	.	.	.	.	.	.
112.0	12.00	.	.	.	.	.	.	.	.	.
117.5	11.50	.	.	.	.	.	.	.	.	.
124.0	11.20	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 35 11/ IV/77 5.7 GMT CONSEC STA 35

LAT 31 36.6N LONG 79 40.8W DEPTH = 68M DIST LAST STA = 8.1KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 21.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	24.00	36.13	24.50	343	4.93	4.78	-.15	0.03	00.1	01.4
3.0	24.00	36.13	24.50	343	.	.	.	.	.	.
4.0	24.00	36.14	24.51	343	.	.	.	.	.	.
5.0	24.00	36.13	24.50	344	.	.	.	.	.	.
6.0	24.00	36.13	24.50	344	.	.	.	.	.	.
7.0	24.00	36.12	24.50	344	.	.	.	.	.	.
8.0	24.00	36.13	24.50	344	.	.	.	.	.	.
9.0	24.00	36.13	24.50	344	.	.	.	.	.	.
10.0	23.98	36.14	24.52	342	.	.	.	.	.	.
11.0	23.90	36.15	24.55	339	.	.	.	.	.	.
12.0	23.44	36.22	24.74	322	.	.	.	.	.	.
13.0	22.86	36.33	24.99	298	.	.	.	.	.	.
14.0	22.46	36.27	25.06	291	.	.	.	.	.	.
15.0	22.14	36.24	25.13	285	.	.	.	.	.	.
16.0	22.00	36.22	25.15	282	.	.	.	.	.	.
17.0	21.82	36.22	25.20	277	.	.	.	.	.	.
18.0	21.52	36.23	25.29	269	.	.	.	.	.	.
19.0	21.42	36.24	25.33	266	.	.	.	.	.	.
20.0	21.40	36.24	25.34	265	5.16	5.00	-.16	0.06	00.1	00.8
21.0	21.40	36.24	25.34	265	.	.	.	.	.	.
22.0	21.37	36.25	25.35	264	.	.	.	.	.	.
23.0	21.29	36.24	25.37	262	.	.	.	.	.	.
24.0	21.26	36.26	25.39	260	.	.	.	.	.	.
25.0	20.80	36.25	25.51	249	.	.	.	.	.	.
26.0	20.44	36.23	25.59	241	.	.	.	.	.	.
27.0	20.12	36.21	25.66	234	.	.	.	.	.	.
28.0	19.78	36.22	25.76	225	.	.	.	.	.	.
29.0	19.50	36.20	25.82	220	4.70	5.17	.47	0.25	03.8	03.0
30.0	19.16	36.22	25.92	210	.	.	.	.	.	.
31.0	18.90	36.17	25.95	207	.	.	.	.	.	.
32.0	18.70	36.15	25.98	204	.	.	.	.	.	.
33.0	18.61	36.16	26.02	201	.	.	.	.	.	.
34.0	18.48	36.14	26.03	199	.	.	.	.	.	.
35.0	18.00	36.11	26.13	190	.	.	.	.	.	.
36.0	17.70	36.03	26.14	189	.	.	.	.	.	.
37.0	17.68	36.03	26.15	188	.	.	.	.	.	.
38.0	17.64	36.04	26.17	187	4.61	5.36	.75	0.29	03.9	03.9
39.0	17.64	36.03	26.16	187	.	.	.	.	.	.
40.0	17.64	36.03	26.16	187	.	.	.	.	.	.

STA 35 11/ IV/77 5.7 GMT CONSEC STA 35 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
41.0	17.64	36.03	26.16	188	.	.	.	.	.	.
42.0	17.64	36.03	26.16	188	.	.	.	.	.	.
43.0	17.64	36.02	26.15	188	.	.	.	.	.	.
44.0	17.64	36.03	26.16	188	.	.	.	.	.	.
45.0	17.64	36.02	26.15	188	.	.	.	.	.	.
46.0	17.64	36.03	26.16	188	.	.	.	.	.	.
47.0	17.64	36.03	26.16	188	.	.	.	.	.	.
48.0	17.64	36.03	26.16	188	.	.	.	.	.	.
49.0	17.64	36.03	26.16	188	.	.	.	.	.	.
50.0	17.64	36.03	26.16	188	.	.	.	.	.	.
51.0	17.64	36.03	26.16	188	.	.	.	.	.	.
52.0	17.64	36.03	26.16	188	.	.	.	.	.	.
53.0	17.64	36.03	26.16	188	.	.	.	.	.	.
54.0	17.64	36.03	26.16	188	.	.	.	.	.	.
55.0	17.64	36.02	26.15	189	.	.	.	.	.	.
56.0	17.64	36.02	26.15	189	.	.	.	.	.	.
57.0	17.64	36.02	26.15	189	.	.	.	.	.	.
58.0	17.64	36.02	26.15	189	.	.	.	.	.	.
59.0	17.64	36.02	26.15	189	.	.	.	.	.	.
60.0	17.64	36.02	26.15	189	.	.	.	.	.	.
61.0	17.64	36.02	26.15	189	.	.	.	.	.	.
62.0	17.64	36.02	26.15	189	4.58	5.36	.78	0.32	04.3	03.8
63.0	17.64	36.02	26.15	189	.	.	.	.	.	.
64.0	17.64	36.02	26.15	189	.	.	.	.	.	.
65.0	17.64	36.03	26.16	188	.	.	.	.	.	.
66.0	17.66	36.03	26.15	189	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 36 11/ IV/77 6.5 GMT CONSEC STA 36

LAT 31 38.2N LONG 79 45.4W DEPTH = 46M DIST LAST STA = 7.8KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 21.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	23.50	.	.	.	.	.	.	.	.	.
7.0	23.00	.	.	.	.	.	.	.	.	.
8.5	22.50	.	.	.	.	.	.	.	.	.
10.0	22.00	.	.	.	.	.	.	.	.	.
11.0	21.50	.	.	.	.	.	.	.	.	.
11.5	21.00	.	.	.	.	.	.	.	.	.
13.0	20.50	.	.	.	.	.	.	.	.	.
16.5	20.00	.	.	.	.	.	.	.	.	.
22.0	19.70	.	.	.	.	.	.	.	.	.
26.0	19.90	.	.	.	.	.	.	.	.	.
29.0	19.50	.	.	.	.	.	.	.	.	.
30.5	19.00	.	.	.	.	.	.	.	.	.
39.0	18.50	.	.	.	.	.	.	.	.	.
40.5	18.30	.	.	.	.	.	.	.	.	.
46.0	18.30	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 37 11/ IV/77 7.0 GMT CONSEC STA 37

LAT 31 39.0N LONG 79 49.9W DEPTH = 46M DIST LAST STA = 7.3KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 20.6C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	19.60	35.40	25.18	279	5.33	5.19	-.14	0.12	00.1	02.1
3.0	19.60	35.40	25.18	279	.	.	.	.	.	.
4.0	19.60	35.39	25.17	280	.	.	.	.	.	.
5.0	19.60	35.39	25.17	280	.	.	.	.	.	.
6.0	19.61	35.39	25.17	280	.	.	.	.	.	.
7.0	19.61	35.39	25.17	280	.	.	.	.	.	.
8.0	19.60	35.39	25.17	280	.	.	.	.	.	.
9.0	19.60	35.39	25.17	280	.	.	.	.	.	.
10.0	19.60	35.39	25.17	280	.	.	.	.	.	.
11.0	19.60	35.38	25.17	281	.	.	.	.	.	.
12.0	19.60	35.39	25.17	280	.	.	.	.	.	.
13.0	19.60	35.38	25.17	281	.	.	.	.	.	.
14.0	19.60	35.38	25.17	281	.	.	.	.	.	.
15.0	19.60	35.38	25.17	281	.	.	.	.	.	.
16.0	19.60	35.38	25.17	281	.	.	.	.	.	.
17.0	19.60	35.39	25.17	280	.	.	.	.	.	.
18.0	19.60	35.39	25.17	280	.	.	.	.	.	.
19.0	19.60	35.39	25.17	280	.	.	.	.	.	.
20.0	19.51	35.39	25.20	278	.	.	.	.	.	.
21.0	19.50	35.40	25.21	277	.	.	.	.	.	.
22.0	19.54	35.52	25.29	270	.	.	.	.	.	.
23.0	19.62	35.62	25.34	264	.	.	.	.	.	.
24.0	19.64	35.67	25.38	261	5.08	5.18	.10	0.11	00.4	02.2
25.0	19.50	35.72	25.45	254	.	.	.	.	.	.
26.0	18.59	35.87	25.80	221	.	.	.	.	.	.
27.0	18.52	35.87	25.82	219	.	.	.	.	.	.
28.0	18.38	35.83	25.82	219	.	.	.	.	.	.
29.0	18.34	35.83	25.83	218	.	.	.	.	.	.
30.0	18.22	35.83	25.86	215	.	.	.	.	.	.
31.0	18.13	35.80	25.86	215	.	.	.	.	.	.
32.0	18.03	35.80	25.89	213	.	.	.	.	.	.
33.0	17.90	35.76	25.89	213	.	.	.	.	.	.
34.0	17.72	35.73	25.91	211	.	.	.	.	.	.
35.0	17.58	35.70	25.92	210	.	.	.	.	.	.
36.0	17.40	35.67	25.94	208	.	.	.	.	.	.
37.0	17.14	35.64	25.98	204	.	.	.	.	.	.
38.0	16.97	35.61	26.00	203	.	.	.	.	.	.
39.0	16.86	35.58	26.00	202	.	.	.	.	.	.
40.0	16.77	35.58	26.02	200	.	.	.	.	.	.

STA 37 11/ IV/77 7.0 GMT CONSEC STA 37 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
41.0	16.68	35.57	26.04	199	.	.	.	.	.	.
42.0	16.62	35.56	26.04	198	.	.	.	.	.	.
43.0	16.56	35.55	26.05	198	5.31	5.49	.18	0.16	00.1	02.2
44.0	16.54	35.55	26.05	197	.	.	.	.	.	.
45.0	16.53	35.55	26.06	197	.	.	.	.	.	.
46.0	16.53	35.56	26.06	196	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 38 11/ IV/77   7.6 GMT CONSEC STA 38

LAT 31 40.3N LONG 79 54.4W DEPTH = 44M DIST LAST STA =   7.5KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	18.70	.	.	.	.	.	.	.	.	.
19.0	18.70	.	.	.	.	.	.	.	.	.
19.5	18.50	.	.	.	.	.	.	.	.	.
20.0	18.00	.	.	.	.	.	.	.	.	.
20.5	17.50	.	.	.	.	.	.	.	.	.
21.0	17.00	.	.	.	.	.	.	.	.	.
21.5	16.50	.	.	.	.	.	.	.	.	.
23.0	16.20	.	.	.	.	.	.	.	.	.
44.0	16.30	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 39 11/ IV/77 8.2 GMT CONSEC STA 39

LAT 31 42.0N LONG 79 58.7W DEPTH = 40M DIST LAST STA = 7.5KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 18.9C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	17.44	34.13	24.75	320	5.75	5.45	-.30	0.06	00.0	00.6
3.0	17.41	34.15	24.78	318	.	.	.	.	.	.
4.0	17.40	34.15	24.78	317	.	.	.	.	.	.
5.0	17.40	34.14	24.77	318	.	.	.	.	.	.
6.0	17.40	34.14	24.77	318	.	.	.	.	.	.
7.0	17.39	34.14	24.77	318	.	.	.	.	.	.
8.0	17.38	34.13	24.77	319	.	.	.	.	.	.
9.0	17.23	34.11	24.79	317	.	.	.	.	.	.
10.0	17.17	34.10	24.79	316	.	.	.	.	.	.
11.0	17.09	34.09	24.81	315	.	.	.	.	.	.
12.0	16.94	34.11	24.86	310	.	.	.	.	.	.
13.0	16.86	34.16	24.91	305	.	.	.	.	.	.
14.0	16.87	34.20	24.94	302	.	.	.	.	.	.
15.0	16.87	34.22	24.96	301	.	.	.	.	.	.
16.0	16.89	34.25	24.98	299	.	.	.	.	.	.
17.0	16.90	34.28	25.00	297	.	.	.	.	.	.
18.0	16.97	34.36	25.04	293	.	.	.	.	.	.
19.0	17.02	34.53	25.16	282	.	.	.	.	.	.
20.0	17.04	34.61	25.22	276	.	.	.	.	.	.
21.0	17.02	34.67	25.27	271	5.65	5.47	-.18	0.14	00.0	00.8
22.0	16.88	35.06	25.60	240	.	.	.	.	.	.
23.0	16.79	35.32	25.82	219	.	.	.	.	.	.
24.0	16.70	35.53	26.00	202	.	.	.	.	.	.
25.0	16.70	35.53	26.00	202	.	.	.	.	.	.
26.0	16.70	35.53	26.00	202	5.07	5.48	.41	0.31	01.2	03.1
27.0	16.70	35.54	26.01	201	.	.	.	.	.	.
28.0	16.70	35.53	26.00	202	.	.	.	.	.	.
29.0	16.70	35.54	26.01	201	.	.	.	.	.	.
30.0	16.70	35.53	26.00	202	.	.	.	.	.	.
31.0	16.70	35.53	26.00	202	.	.	.	.	.	.
32.0	16.70	35.53	26.00	202	.	.	.	.	.	.
33.0	16.68	35.54	26.01	201	.	.	.	.	.	.
34.0	16.68	35.54	26.01	201	.	.	.	.	.	.
35.0	16.68	35.54	26.01	201	.	.	.	.	.	.
36.0	16.68	35.54	26.01	201	.	.	.	.	.	.
37.0	16.68	35.54	26.01	201	.	.	.	.	.	.
38.0	16.68	35.54	26.01	201	5.10	5.48	.38	0.42	01.5	03.9
39.0	16.68	35.54	26.01	201	.	.	.	.	.	.
40.0	16.68	35.55	26.02	200	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 40 11/ IV/77 9.1 GMT CONSEC STA 40

LAT 31 43.4N LONG 80 4.1W DEPTH = 37M DIST LAST STA = 8.9KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 18.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	16.80	.	.	.	.	.	.	.	.	.
10.0	16.70	.	.	.	.	.	.	.	.	.
18.0	16.80	.	.	.	.	.	.	.	.	.
20.5	16.70	.	.	.	.	.	.	.	.	.
37.0	16.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 41 11/ IV/77 9.6 GMT CONSEC STA 41

LAT 31 45.0N LONG 80 9.0W DEPTH = 33M DIST LAST STA = 8.3KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 17.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	16.52	34.38	25.16	281	5.85	5.54	-.31	0.06	00.1	00.5
3.0	16.58	34.40	25.16	281	.	.	.	.	.	.
4.0	16.58	34.40	25.16	281	.	.	.	.	.	.
5.0	16.68	34.53	25.24	274	.	.	.	.	.	.
6.0	16.80	34.73	25.36	262	.	.	.	.	.	.
7.0	16.78	34.82	25.44	255	.	.	.	.	.	.
8.0	16.64	34.89	25.52	247	.	.	.	.	.	.
9.0	16.61	34.92	25.55	244	.	.	.	.	.	.
10.0	16.60	34.94	25.57	242	5.66	5.51	-.15	0.12	00.1	00.6
11.0	16.60	34.94	25.57	242	.	.	.	.	.	.
12.0	16.60	34.94	25.57	242	.	.	.	.	.	.
13.0	16.59	34.95	25.58	241	.	.	.	.	.	.
14.0	16.58	34.95	25.58	241	.	.	.	.	.	.
15.0	16.58	34.95	25.58	241	.	.	.	.	.	.
16.0	16.56	34.96	25.60	240	.	.	.	.	.	.
17.0	16.56	34.96	25.60	240	.	.	.	.	.	.
18.0	16.56	34.96	25.60	240	.	.	.	.	.	.
19.0	16.56	34.95	25.59	241	.	.	.	.	.	.
20.0	16.56	34.96	25.60	240	.	.	.	.	.	.
21.0	16.56	34.96	25.60	240	.	.	.	.	.	.
22.0	16.56	34.96	25.60	240	.	.	.	.	.	.
23.0	16.56	34.96	25.60	240	.	.	.	.	.	.
24.0	16.54	34.98	25.62	238	.	.	.	.	.	.
25.0	16.54	34.97	25.61	239	.	.	.	.	.	.
26.0	16.54	34.97	25.61	239	.	.	.	.	.	.
27.0	16.54	34.97	25.61	239	.	.	.	.	.	.
28.0	16.54	34.97	25.61	239	5.70	5.51	-.19	0.07	00.0	00.7
29.0	16.54	34.97	25.61	239	.	.	.	.	.	.
30.0	16.56	34.96	25.60	240	.	.	.	.	.	.
31.0	16.58	34.95	25.58	242	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 42 11/ IV/77 10.2 GMT CONSEC STA 42

LAT 31 46.1N LONG 80 13.5W DEPTH = 27M DIST LAST STA = 7.4KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 17.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	16.70	.	.	.	.	.	.	.	.	.
27.0	16.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 43 11/ IV/77 10.6 GMT CONSEC STA 43

LAT 31 47.7N LONG 80 17.5W DEPTH = 22M DIST LAST STA = 7.0KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 17.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1026.8 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	15.92	34.69	25.54	245	5.80	5.59	-.21	0.16	00.1	00.2
3.0	15.93	34.69	25.54	245	.	.	.	.	.	.
4.0	15.93	34.70	25.54	245	.	.	.	.	.	.
5.0	15.93	34.71	25.55	244	.	.	.	.	.	.
6.0	15.94	34.72	25.56	243	.	.	.	.	.	.
7.0	15.96	34.72	25.55	244	.	.	.	.	.	.
8.0	15.99	34.73	25.55	244	.	.	.	.	.	.
9.0	16.00	34.74	25.56	243	.	.	.	.	.	.
10.0	16.03	34.76	25.57	243	.	.	.	.	.	.
11.0	16.06	34.77	25.57	243	.	.	.	.	.	.
12.0	16.10	34.79	25.57	242	.	.	.	.	.	.
13.0	16.11	34.81	25.59	241	.	.	.	.	.	.
14.0	16.11	34.81	25.59	241	.	.	.	.	.	.
15.0	16.12	34.81	25.58	241	.	.	.	.	.	.
16.0	16.11	34.81	25.59	241	.	.	.	.	.	.
17.0	16.12	34.82	25.59	240	.	.	.	.	.	.
18.0	16.13	34.83	25.60	240	.	.	.	.	.	.
19.0	16.14	34.84	25.60	239	.	.	.	.	.	.
20.0	16.14	34.83	25.59	240	5.88	5.56	-.32	0.09	00.1	00.4
21.0	16.14	34.83	25.59	240	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 53 12/ IV/77 15.4 GMT CONSEC STA 53

LAT 31 54.0N LONG 80 36.2W DEPTH = 15M DIST LAST STA = 31.7KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 20.0C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1028.1 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	16.99	32.27	23.44	445	5.84	5.56	-.28	0.20	00.1	00.6
3.0	16.94	32.30	23.47	442	.	.	.	.	.	.
4.0	16.84	32.39	23.56	433	.	.	.	.	.	.
5.0	16.67	32.61	23.77	413	.	.	.	.	.	.
6.0	16.61	32.71	23.86	405	.	.	.	.	.	.
7.0	16.54	32.80	23.95	397	.	.	.	.	.	.
8.0	16.50	32.87	24.01	391	.	.	.	.	.	.
9.0	16.50	32.88	24.02	390	.	.	.	.	.	.
10.0	16.50	32.89	24.03	389	.	.	.	.	.	.
11.0	16.50	32.89	24.03	389	.	.	.	.	.	.
12.0	16.50	32.89	24.03	389	.	.	.	.	.	.
13.0	16.50	32.89	24.03	389	5.89	5.59	-.30	0.09	00.1	00.5

ADVANCE II CRUISE 4 STA 54 12/ IV/77 16.5 GMT CONSEC STA 54

LAT 31 51.0N LONG 80 26.3W DEPTH = 19M DIST LAST STA = 16.5KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 21.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1027.8 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
2.0	16.79	33.03	24.07	385	5.90	5.55	-.35	0.21	00.1	00.8
3.0	16.76	33.02	24.07	385	.	.	.	.	.	.
4.0	16.70	33.01	24.07	385	.	.	.	.	.	.
5.0	16.50	33.21	24.27	366	.	.	.	.	.	.
6.0	16.49	33.24	24.30	363	.	.	.	.	.	.
7.0	16.41	33.27	24.34	360	.	.	.	.	.	.
8.0	16.37	33.29	24.36	357	.	.	.	.	.	.
9.0	16.29	33.34	24.42	352	.	.	.	.	.	.
10.0	16.26	33.41	24.48	346	5.87	5.60	-.27	0.31	00.0	00.6
11.0	16.27	33.54	24.58	337	.	.	.	.	.	.
12.0	16.20	33.78	24.78	318	.	.	.	.	.	.
13.0	16.11	33.93	24.91	305	.	.	.	.	.	.
14.0	16.11	33.95	24.93	304	.	.	.	.	.	.
15.0	16.10	33.96	24.94	303	.	.	.	.	.	.
16.0	16.10	33.96	24.94	303	.	.	.	.	.	.
17.0	16.10	33.96	24.94	303	5.77	5.60	-.17	0.26	00.1	00.5
18.0	16.10	33.96	24.94	303	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 55 12/ IV/77 17.6 GMT CONSEC STA 55

LAT 31 47.4N LONG 80 17.5W DEPTH = 24M DIST LAST STA = 15.4KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 21.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1026.8 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	17.29	34.44	25.03	294	5.86	5.45	-.41	1.05	00.0	00.7
4.0	16.97	34.30	25.00	297	.	.	.	.	.	.
5.0	17.00	34.34	25.02	295	.	.	.	.	.	.
6.0	16.78	34.24	24.99	297	.	.	.	.	.	.
7.0	16.60	34.55	25.27	270	.	.	.	.	.	.
8.0	16.11	34.42	25.29	269	5.89	5.58	-.31	0.64	00.0	00.6
9.0	16.11	34.45	25.31	267	.	.	.	.	.	.
10.0	16.12	34.48	25.33	265	.	.	.	.	.	.
11.0	16.12	34.53	25.37	261	.	.	.	.	.	.
12.0	16.18	34.58	25.39	259	.	.	.	.	.	.
13.0	16.20	34.61	25.41	257	.	.	.	.	.	.
14.0	16.24	34.68	25.46	253	5.87	5.56	-.31	0.67	00.1	00.4
15.0	16.24	34.67	25.45	254	.	.	.	.	.	.
16.0	16.24	34.68	25.46	253	.	.	.	.	.	.
17.0	16.24	34.68	25.46	253	.	.	.	.	.	.
18.0	16.24	34.68	25.46	253	.	.	.	.	.	.
19.0	16.24	34.68	25.46	253	.	.	.	.	.	.
20.0	16.24	34.69	25.46	253	.	.	.	.	.	.
21.0	16.24	34.69	25.46	253	.	.	.	.	.	.
22.0	16.24	34.68	25.46	253	5.98	5.56	-.42	0.13	00.0	00.2

ADVANCE II CRUISE 4 STA 56 12/ IV/77 18.3 GMT CONSEC STA 56

LAT 31 46.0N LONG 80 13.0W DEPTH = 26M DIST LAST STA = 7.5KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 040	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1026.8 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	19.00	.	.	.	.	.	.	.	.	.
2.0	18.50	.	.	.	.	.	.	.	.	.
2.5	18.00	.	.	.	.	.	.	.	.	.
3.0	17.50	.	.	.	.	.	.	.	.	.
6.0	17.00	.	.	.	.	.	.	.	.	.
7.0	16.70	.	.	.	.	.	.	.	.	.
26.0	16.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 57 12/ IV/77 18.8 GMT CONSEC STA 57

LAT 31 45.0N LONG 80 8.4W DEPTH = 31M DIST LAST STA = 7.5KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 040	WAVE DIRECTION	=
AIR TEMP	= 27.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1026.1 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	18.53	34.33	24.64	331	5.84	5.33	-.51	0.24	00.0	00.6
3.0	18.42	34.35	24.68	327	.	.	.	.	.	.
4.0	17.76	34.40	24.88	308	.	.	.	.	.	.
5.0	17.46	34.39	24.95	301	.	.	.	.	.	.
6.0	17.32	34.43	25.01	295	.	.	.	.	.	.
7.0	17.17	34.42	25.04	293	.	.	.	.	.	.
8.0	17.03	34.43	25.08	289	.	.	.	.	.	.
9.0	16.90	34.41	25.10	287	.	.	.	.	.	.
10.0	16.87	34.46	25.14	283	.	.	.	.	.	.
11.0	16.86	34.52	25.19	278	.	.	.	.	.	.
12.0	16.88	34.63	25.27	271	.	.	.	.	.	.
13.0	16.88	34.72	25.34	264	.	.	.	.	.	.
14.0	16.88	34.74	25.35	263	.	.	.	.	.	.
15.0	16.80	34.83	25.44	255	.	.	.	.	.	.
16.0	16.68	34.96	25.57	243	.	.	.	.	.	.
17.0	16.62	35.03	25.64	236	.	.	.	.	.	.
18.0	16.62	35.03	25.64	236	.	.	.	.	.	.
19.0	16.61	35.03	25.64	236	5.52	5.51	-.01	0.13	00.1	01.3
20.0	16.61	35.04	25.65	235	.	.	.	.	.	.
21.0	16.61	35.04	25.65	235	.	.	.	.	.	.
22.0	16.61	35.04	25.65	235	.	.	.	.	.	.
23.0	16.61	35.04	25.65	235	.	.	.	.	.	.
24.0	16.61	35.04	25.65	235	.	.	.	.	.	.
25.0	16.61	35.04	25.65	235	.	.	.	.	.	.
26.0	16.61	35.04	25.65	235	.	.	.	.	.	.
27.0	16.61	35.04	25.65	236	.	.	.	.	.	.
28.0	16.61	35.04	25.65	236	.	.	.	.	.	.
29.0	16.61	35.04	25.65	236	5.55	5.50	-.05	0.42	00.1	01.7
30.0	16.61	35.04	25.65	236	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 58 12/ IV/77 19.6 GMT CONSEC STA 58

LAT 31 43.5N LONG 80 3.2W DEPTH = 37M DIST LAST STA = 8.7KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 040	WAVE DIRECTION	=
AIR TEMP	= 27.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1026.1 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	19.30	.	.	.	.	.	.	.	.	.
2.0	18.50	.	.	.	.	.	.	.	.	.
5.0	18.00	.	.	.	.	.	.	.	.	.
8.0	17.90	.	.	.	.	.	.	.	.	.
9.0	17.50	.	.	.	.	.	.	.	.	.
12.5	17.00	.	.	.	.	.	.	.	.	.
20.5	17.00	.	.	.	.	.	.	.	.	.
22.0	16.70	.	.	.	.	.	.	.	.	.
37.0	16.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 59 12/ IV/77 20.0 GMT CONSEC STA 59

LAT 31 41.8N LONG 79 58.8W DEPTH = 42M DIST LAST STA = 7.6KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	=	WAVE DIRECTION	=
AIR TEMP	= 27.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
2.0	19.20	34.07	24.27	366	5.80	5.27	-.53	0.10	00.0	00.6
3.0	18.60	34.14	24.48	346	.	.	.	.	.	.
4.0	17.94	34.23	24.71	324	.	.	.	.	.	.
5.0	17.61	34.25	24.80	315	.	.	.	.	.	.
6.0	17.14	34.29	24.95	301	.	.	.	.	.	.
7.0	17.01	34.28	24.97	299	.	.	.	.	.	.
8.0	16.94	34.27	24.98	298	.	.	.	.	.	.
9.0	16.87	34.29	25.01	295	.	.	.	.	.	.
10.0	16.83	34.28	25.01	295	.	.	.	.	.	.
11.0	16.70	34.31	25.07	290	.	.	.	.	.	.
12.0	16.76	34.32	25.06	291	.	.	.	.	.	.
13.0	16.89	34.45	25.13	284	.	.	.	.	.	.
14.0	16.94	34.50	25.16	282	.	.	.	.	.	.
15.0	17.03	34.55	25.17	280	.	.	.	.	.	.
16.0	17.04	34.66	25.25	273	.	.	.	.	.	.
17.0	17.10	34.81	25.35	263	5.52	5.46	-.06	0.13	00.1	01.3
18.0	17.21	34.99	25.47	252	.	.	.	.	.	.
19.0	17.17	35.15	25.60	240	.	.	.	.	.	.
20.0	16.96	35.33	25.79	222	.	.	.	.	.	.
21.0	16.83	35.41	25.88	213	.	.	.	.	.	.
22.0	16.76	35.47	25.94	207	.	.	.	.	.	.
23.0	16.70	35.50	25.98	204	.	.	.	.	.	.
24.0	16.70	35.50	25.98	204	.	.	.	.	.	.
25.0	16.68	35.51	25.99	203	5.07	5.48	.41	0.20	01.0	02.5
26.0	16.68	35.50	25.98	204	.	.	.	.	.	.
27.0	16.68	35.51	25.99	203	.	.	.	.	.	.
28.0	16.68	35.51	25.99	203	.	.	.	.	.	.
29.0	16.68	35.51	25.99	203	.	.	.	.	.	.
30.0	16.68	35.51	25.99	203	.	.	.	.	.	.
31.0	16.68	35.51	25.99	203	.	.	.	.	.	.
32.0	16.68	35.51	25.99	203	.	.	.	.	.	.
33.0	16.68	35.51	25.99	203	.	.	.	.	.	.
34.0	16.68	35.51	25.99	203	.	.	.	.	.	.
35.0	16.68	35.50	25.98	204	.	.	.	.	.	.
36.0	16.68	35.51	25.99	203	.	.	.	.	.	.
37.0	16.68	35.51	25.99	203	.	.	.	.	.	.
38.0	16.68	35.51	25.99	203	5.07	5.48	.41	0.24	01.2	02.1
39.0	16.68	35.51	25.99	203	.	.	.	.	.	.
40.0	16.68	35.51	25.99	203	.	.	.	.	.	.
41.0	16.68	35.51	25.99	203	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 60 12/ IV/77 20.8 GMT CONSEC STA 60

LAT 31 40.4N LONG 79 53.2W DEPTH = 44M DIST LAST STA = 9.2KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	=
WIND DIRECTION	=	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	19.50	.	.	.	.	.	.	.	.	.
2.0	19.00	.	.	.	.	.	.	.	.	.
2.5	18.50	.	.	.	.	.	.	.	.	.
4.5	18.00	.	.	.	.	.	.	.	.	.
11.0	17.50	.	.	.	.	.	.	.	.	.
13.0	17.20	.	.	.	.	.	.	.	.	.
21.0	17.20	.	.	.	.	.	.	.	.	.
22.5	17.00	.	.	.	.	.	.	.	.	.
27.5	16.80	.	.	.	.	.	.	.	.	.
44.0	16.80	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 61 12/ IV/77 21.2 GMT CONSEC STA 61

LAT 31 39.2N LONG 79 48.9W DEPTH = 46M DIST LAST STA = 7.1KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 130	WAVE DIRECTION	=
AIR TEMP	= 26.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.1 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	21.00	34.91	24.44	350	5.60	5.07	-.53	0.53	00.0	01.1
4.0	21.00	34.90	24.43	351	.	.	.	.	.	.
5.0	20.94	34.81	24.38	356	.	.	.	.	.	.
6.0	19.23	34.71	24.75	320	.	.	.	.	.	.
7.0	19.09	34.68	24.76	319	.	.	.	.	.	.
8.0	19.30	34.78	24.79	317	.	.	.	.	.	.
9.0	19.50	34.86	24.80	316	.	.	.	.	.	.
10.0	19.41	34.89	24.84	312	5.58	5.22	-.36	0.44	00.0	01.1
11.0	19.38	34.87	24.83	312	.	.	.	.	.	.
12.0	19.40	34.90	24.85	311	.	.	.	.	.	.
13.0	19.38	34.89	24.85	311	.	.	.	.	.	.
14.0	19.33	34.88	24.85	311	.	.	.	.	.	.
15.0	19.04	34.85	24.91	306	.	.	.	.	.	.
16.0	18.90	34.83	24.93	304	.	.	.	.	.	.
17.0	18.73	34.80	24.95	302	.	.	.	.	.	.
18.0	18.48	34.74	24.96	300	.	.	.	.	.	.
19.0	18.47	34.72	24.95	301	.	.	.	.	.	.
20.0	18.41	34.72	24.97	300	.	.	.	.	.	.
21.0	18.09	34.70	25.03	294	.	.	.	.	.	.
22.0	16.60	34.47	25.21	277	.	.	.	.	.	.
23.0	16.59	34.58	25.30	268	.	.	.	.	.	.
24.0	16.39	35.13	25.77	224	.	.	.	.	.	.
25.0	16.18	35.47	26.08	195	5.32	5.54	.22	0.27	00.3	02.0
26.0	16.14	35.46	26.08	194	.	.	.	.	.	.
27.0	16.13	35.47	26.09	194	.	.	.	.	.	.
28.0	16.13	35.48	26.10	193	.	.	.	.	.	.
29.0	16.12	35.49	26.11	192	.	.	.	.	.	.
30.0	16.13	35.48	26.10	193	.	.	.	.	.	.
31.0	16.14	35.50	26.11	192	.	.	.	.	.	.
32.0	16.17	35.51	26.11	192	.	.	.	.	.	.
33.0	16.18	35.51	26.11	192	.	.	.	.	.	.
34.0	16.18	35.52	26.11	191	.	.	.	.	.	.
35.0	16.18	35.52	26.11	191	.	.	.	.	.	.
36.0	16.20	35.50	26.09	193	.	.	.	.	.	.
37.0	16.20	35.52	26.11	192	.	.	.	.	.	.
38.0	16.20	35.52	26.11	192	.	.	.	.	.	.
39.0	16.20	35.52	26.11	192	.	.	.	.	.	.
40.0	16.20	35.52	26.11	192	.	.	.	.	.	.
41.0	16.20	35.52	26.11	192	.	.	.	.	.	.

STA 61 12/ IV/77 21.2 GMT CONSEC STA 61 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
42.0	16.20	35.52	26.11	192	.	.	.	.	.	.
43.0	16.20	35.52	26.11	192	5.27	5.53	.26	0.18	00.5	02.3
44.0	16.20	35.52	26.11	192	.	.	.	.	.	.
45.0	16.20	35.52	26.11	192	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 62 12/ IV/77 22.0 GMT CONSEC STA 62

LAT 31 37.5N LONG 79 44.6W DEPTH = 47M DIST LAST STA = 7.5KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 130	WAVE DIRECTION	=
AIR TEMP	= 26.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1025.1 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	20.50	.	.	.	.	.	.	.	.	.
4.0	20.00	.	.	.	.	.	.	.	.	.
6.0	19.50	.	.	.	.	.	.	.	.	.
16.0	19.00	.	.	.	.	.	.	.	.	.
20.5	19.00	.	.	.	.	.	.	.	.	.
25.5	18.80	.	.	.	.	.	.	.	.	.
26.5	18.50	.	.	.	.	.	.	.	.	.
27.0	18.20	.	.	.	.	.	.	.	.	.
27.5	18.50	.	.	.	.	.	.	.	.	.
28.5	18.90	.	.	.	.	.	.	.	.	.
30.0	18.50	.	.	.	.	.	.	.	.	.
33.0	18.00	.	.	.	.	.	.	.	.	.
40.5	17.50	.	.	.	.	.	.	.	.	.
47.0	17.30	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 63 12/ IV/77 22.4 GMT CONSEC STA 63

LAT 31 36.1N LONG 79 39.8W DEPTH = 71M DIST LAST STA = 8.0KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 130	WAVE DIRECTION	=
AIR TEMP	= 26.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1024.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	22.51	36.01	24.85	311	5.21	4.90	-.31	0.30	00.0	01.4
3.0	22.51	36.02	24.86	310	.	.	.	.	.	.
4.0	22.51	36.02	24.86	310	.	.	.	.	.	.
5.0	22.48	36.01	24.86	310	.	.	.	.	.	.
6.0	22.47	36.02	24.87	309	.	.	.	.	.	.
7.0	22.46	35.98	24.84	312	.	.	.	.	.	.
8.0	22.32	35.97	24.87	309	.	.	.	.	.	.
9.0	22.21	35.94	24.88	308	.	.	.	.	.	.
10.0	22.14	35.93	24.89	307	.	.	.	.	.	.
11.0	22.04	35.90	24.90	306	.	.	.	.	.	.
12.0	21.98	35.90	24.92	305	.	.	.	.	.	.
13.0	21.87	35.88	24.93	303	.	.	.	.	.	.
14.0	21.70	35.80	24.92	305	.	.	.	.	.	.
15.0	21.11	35.77	25.06	291	.	.	.	.	.	.
16.0	20.89	35.64	25.02	295	.	.	.	.	.	.
17.0	20.60	35.62	25.08	289	.	.	.	.	.	.
18.0	20.54	35.60	25.08	289	5.40	5.09	-.31	0.05	00.0	01.2
19.0	20.51	35.58	25.08	290	.	.	.	.	.	.
20.0	20.48	35.58	25.08	289	.	.	.	.	.	.
21.0	20.32	35.56	25.11	286	.	.	.	.	.	.
22.0	20.20	35.53	25.12	285	.	.	.	.	.	.
23.0	20.00	35.53	25.17	280	.	.	.	.	.	.
24.0	19.87	35.49	25.18	280	.	.	.	.	.	.
25.0	19.76	35.45	25.18	280	.	.	.	.	.	.
26.0	19.76	35.45	25.18	280	.	.	.	.	.	.
27.0	19.73	35.47	25.20	278	.	.	.	.	.	.
28.0	19.67	35.50	25.24	274	.	.	.	.	.	.
29.0	19.62	35.55	25.29	270	.	.	.	.	.	.
30.0	19.64	35.58	25.31	268	5.19	5.18	-.01	0.13	00.2	02.1
31.0	19.42	35.69	25.45	255	.	.	.	.	.	.
32.0	19.47	35.74	25.47	252	.	.	.	.	.	.
33.0	19.87	35.88	25.48	252	.	.	.	.	.	.
34.0	20.18	36.21	25.64	236	.	.	.	.	.	.
35.0	20.03	36.26	25.72	229	.	.	.	.	.	.
36.0	19.72	36.23	25.78	223	.	.	.	.	.	.
37.0	19.58	36.20	25.80	222	.	.	.	.	.	.
38.0	19.51	36.18	25.80	222	.	.	.	.	.	.
39.0	19.41	36.20	25.84	218	.	.	.	.	.	.
40.0	19.20	36.19	25.89	213	.	.	.	.	.	.

STA 63 12/ IV/77 22.4 GMT CONSEC STA 63 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
41.0	18.90	36.10	25.90	212	.	.	.	.	.	.
42.0	18.73	36.05	25.90	212	.	.	.	.	.	.
43.0	18.62	36.03	25.91	211	.	.	.	.	.	.
44.0	18.59	36.01	25.91	212	.	.	.	.	.	.
45.0	18.32	36.05	26.00	202	.	.	.	.	.	.
46.0	18.04	35.91	25.97	206	.	.	.	.	.	.
47.0	17.87	35.91	26.01	202	.	.	.	.	.	.
48.0	17.64	35.91	26.07	196	.	.	.	.	.	.
49.0	17.52	35.89	26.08	195	.	.	.	.	.	.
50.0	17.48	35.85	26.06	197	.	.	.	.	.	.
51.0	17.37	35.85	26.09	195	.	.	.	.	.	.
52.0	17.24	35.81	26.09	195	.	.	.	.	.	.
53.0	17.21	35.82	26.10	193	.	.	.	.	.	.
54.0	17.21	35.81	26.09	194	.	.	.	.	.	.
55.0	17.20	35.80	26.09	195	5.06	5.42	.36	0.24	01.1	02.5
56.0	17.20	35.80	26.09	195	.	.	.	.	.	.
57.0	17.18	35.80	26.09	194	.	.	.	.	.	.
58.0	17.18	35.79	26.09	195	.	.	.	.	.	.
59.0	17.17	35.79	26.09	195	.	.	.	.	.	.
60.0	17.14	35.80	26.10	193	.	.	.	.	.	.
61.0	17.14	35.80	26.10	193	.	.	.	.	.	.
62.0	17.14	35.79	26.10	194	.	.	.	.	.	.
63.0	17.16	35.79	26.09	195	.	.	.	.	.	.
64.0	17.16	35.79	26.09	195	.	.	.	.	.	.
65.0	17.14	35.80	26.10	193	.	.	.	.	.	.
66.0	17.14	35.80	26.10	194	.	.	.	.	.	.
67.0	17.14	35.80	26.10	194	.	.	.	.	.	.
68.0	17.14	35.80	26.10	194	.	.	.	.	.	.
69.0	17.14	35.80	26.10	194	5.02	5.42	.40	0.27	01.6	02.7
70.0	17.14	35.80	26.10	194	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 64 12/ IV/77 23.4 GMT CONSEC STA 64

LAT 31 34.9N LONG 79 35.1W DEPTH =132M DIST LAST STA = 7.7KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 130	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1024.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
1.0	23.20	.	.	.	.	.	.	.	.	.
19.5	23.10	.	.	.	.	.	.	.	.	.
22.5	23.00	.	.	.	.	.	.	.	.	.
32.5	22.50	.	.	.	.	.	.	.	.	.
34.5	22.00	.	.	.	.	.	.	.	.	.
37.0	21.50	.	.	.	.	.	.	.	.	.
50.0	21.00	.	.	.	.	.	.	.	.	.
56.0	20.90	.	.	.	.	.	.	.	.	.
59.5	20.50	.	.	.	.	.	.	.	.	.
63.0	20.00	.	.	.	.	.	.	.	.	.
63.5	19.50	.	.	.	.	.	.	.	.	.
65.0	19.00	.	.	.	.	.	.	.	.	.
66.0	18.50	.	.	.	.	.	.	.	.	.
70.5	18.30	.	.	.	.	.	.	.	.	.
71.5	18.00	.	.	.	.	.	.	.	.	.
74.0	17.50	.	.	.	.	.	.	.	.	.
84.5	17.00	.	.	.	.	.	.	.	.	.
86.0	16.70	.	.	.	.	.	.	.	.	.
94.0	16.70	.	.	.	.	.	.	.	.	.
95.0	16.50	.	.	.	.	.	.	.	.	.
103.5	16.00	.	.	.	.	.	.	.	.	.
115.5	15.50	.	.	.	.	.	.	.	.	.
116.5	15.00	.	.	.	.	.	.	.	.	.
120.0	14.50	.	.	.	.	.	.	.	.	.
123.5	14.50	.	.	.	.	.	.	.	.	.
125.5	14.00	.	.	.	.	.	.	.	.	.
127.0	13.50	.	.	.	.	.	.	.	.	.
132.0	13.00	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 65 12/ IV/77 23.8 GMT CONSEC STA 65

LAT 31 33.4N LONG 79 30.0W DEPTH =238M DIST LAST STA = 8.5KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 130	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1024.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	ADU	PO4	NO3	SI
3.0	25.55	35.99	23.93	398	4.74	4.65	-.09	0.06	00.0	00.8
4.0	25.55	35.99	23.93	398	.	.	.	.	.	.
5.0	25.55	35.98	23.92	399	.	.	.	.	.	.
6.0	25.55	35.97	23.91	400	.	.	.	.	.	.
7.0	25.55	35.99	23.93	399	.	.	.	.	.	.
8.0	25.55	35.98	23.92	399	.	.	.	.	.	.
9.0	25.55	35.98	23.92	399	.	.	.	.	.	.
10.0	25.54	36.00	23.94	398	.	.	.	.	.	.
11.0	25.55	35.98	23.92	399	.	.	.	.	.	.
12.0	25.52	36.01	23.95	396	.	.	.	.	.	.
13.0	25.53	35.98	23.93	399	.	.	.	.	.	.
14.0	25.53	35.97	23.92	400	.	.	.	.	.	.
15.0	25.52	35.96	23.92	400	.	.	.	.	.	.
16.0	25.51	35.97	23.93	399	.	.	.	.	.	.
17.0	25.51	35.97	23.93	399	.	.	.	.	.	.
18.0	25.45	35.99	23.96	396	.	.	.	.	.	.
19.0	25.43	35.96	23.94	398	.	.	.	.	.	.
20.0	25.41	35.96	23.95	397	.	.	.	.	.	.
21.0	25.28	35.97	24.00	393	.	.	.	.	.	.
22.0	25.12	35.99	24.06	387	.	.	.	.	.	.
23.0	25.12	36.00	24.07	386	.	.	.	.	.	.
24.0	25.09	36.00	24.08	385	.	.	.	.	.	.
25.0	25.00	36.01	24.11	382	.	.	.	.	.	.
26.0	24.96	36.00	24.12	381	.	.	.	.	.	.
27.0	24.90	36.00	24.14	380	.	.	.	.	.	.
28.0	24.88	36.01	24.15	378	.	.	.	.	.	.
29.0	24.86	36.00	24.15	379	.	.	.	.	.	.
30.0	24.80	36.01	24.17	376	.	.	.	.	.	.
31.0	24.76	36.01	24.19	375	.	.	.	.	.	.
32.0	24.70	36.02	24.21	373	.	.	.	.	.	.
33.0	24.64	36.03	24.24	370	.	.	.	.	.	.
34.0	24.62	36.03	24.24	370	.	.	.	.	.	.
35.0	24.60	36.01	24.23	371	.	.	.	.	.	.
36.0	24.53	36.01	24.26	369	.	.	.	.	.	.
37.0	24.48	36.02	24.28	366	.	.	.	.	.	.
38.0	24.41	36.02	24.30	364	.	.	.	.	.	.
39.0	24.36	36.03	24.32	362	.	.	.	.	.	.
40.0	24.29	36.04	24.35	360	.	.	.	.	.	.
41.0	24.22	36.04	24.37	358	.	.	.	.	.	.

STA 65 12/ IV/77 23.8 GMT CONSEC STA 65 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
42.0	24.14	36.05	24.40	355	.	.	.	.	.	.
43.0	24.04	36.06	24.44	351	.	.	.	.	.	.
44.0	23.98	36.07	24.47	349	.	.	.	.	.	.
45.0	23.89	36.08	24.50	346	.	.	.	.	.	.
46.0	23.77	36.08	24.54	342	.	.	.	.	.	.
47.0	23.68	36.10	24.58	338	.	.	.	.	.	.
48.0	23.62	36.09	24.59	337	.	.	.	.	.	.
49.0	23.56	36.10	24.61	335	.	.	.	.	.	.
50.0	23.50	36.11	24.64	333	.	.	.	.	.	.
51.0	23.42	36.12	24.67	330	.	.	.	.	.	.
52.0	23.38	36.12	24.68	329	.	.	.	.	.	.
53.0	23.38	36.12	24.68	329	5.19	4.83	-.36	0.09	00.1	01.2
54.0	23.33	36.13	24.70	327	.	.	.	.	.	.
55.0	23.30	36.11	24.70	327	.	.	.	.	.	.
56.0	23.24	36.13	24.73	324	.	.	.	.	.	.
57.0	23.17	36.14	24.76	322	.	.	.	.	.	.
58.0	23.10	36.14	24.78	320	.	.	.	.	.	.
59.0	23.00	36.16	24.82	315	.	.	.	.	.	.
60.0	22.92	36.19	24.87	311	.	.	.	.	.	.
61.0	22.84	36.20	24.90	308	.	.	.	.	.	.
62.0	22.74	36.20	24.93	306	.	.	.	.	.	.
63.0	22.56	36.25	25.02	297	.	.	.	.	.	.
64.0	22.22	36.22	25.09	290	.	.	.	.	.	.
65.0	22.14	36.14	25.05	294	.	.	.	.	.	.
66.0	22.14	36.14	25.05	294	.	.	.	.	.	.
67.0	22.12	36.15	25.07	293	.	.	.	.	.	.
68.0	22.08	36.18	25.10	289	.	.	.	.	.	.
69.0	21.98	36.18	25.13	287	.	.	.	.	.	.
70.0	21.88	36.16	25.14	285	.	.	.	.	.	.
71.0	21.61	36.20	25.25	275	.	.	.	.	.	.
72.0	21.54	36.15	25.23	277	.	.	.	.	.	.
73.0	21.47	36.17	25.26	274	.	.	.	.	.	.
74.0	21.26	36.19	25.34	267	.	.	.	.	.	.
75.0	21.00	36.20	25.42	259	.	.	.	.	.	.
76.0	20.82	36.22	25.48	253	.	.	.	.	.	.
77.0	20.79	36.21	25.48	253	.	.	.	.	.	.
78.0	20.77	36.21	25.49	253	.	.	.	.	.	.
79.0	20.72	36.23	25.51	250	.	.	.	.	.	.
80.0	20.63	36.23	25.54	248	.	.	.	.	.	.
81.0	20.59	36.25	25.56	245	.	.	.	.	.	.

STA 65 12/ IV/77 23.8 GMT CONSEC STA 65 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
82.0	20.42	36.26	25.62	240	.	.	.	.	.	.
83.0	20.21	36.31	25.71	231	.	.	.	.	.	.
84.0	20.08	36.30	25.74	229	.	.	.	.	.	.
85.0	19.90	36.28	25.77	226	.	.	.	.	.	.
86.0	19.77	36.27	25.80	223	.	.	.	.	.	.
87.0	19.71	36.24	25.79	224	.	.	.	.	.	.
88.0	19.64	36.25	25.82	222	.	.	.	.	.	.
89.0	19.50	36.30	25.89	215	.	.	.	.	.	.
90.0	19.46	36.24	25.86	218	.	.	.	.	.	.
91.0	19.38	36.27	25.90	214	.	.	.	.	.	.
92.0	19.30	36.24	25.90	214	.	.	.	.	.	.
93.0	19.27	36.24	25.91	213	.	.	.	.	.	.
94.0	19.20	36.27	25.95	209	.	.	.	.	.	.
95.0	19.12	36.25	25.95	209	.	.	.	.	.	.
96.0	19.10	36.25	25.96	208	.	.	.	.	.	.
97.0	19.00	36.28	26.01	204	.	.	.	.	.	.
98.0	18.92	36.27	26.02	203	.	.	.	.	.	.
99.0	18.72	36.35	26.13	192	.	.	.	.	.	.
100.0	18.50	36.25	26.11	194	.	.	.	.	.	.
101.0	18.39	36.23	26.12	193	.	.	.	.	.	.
105.0	18.13	36.23	26.19	187	4.42	5.31	.89	0.39	05.9	03.0
110.0	17.83	36.22	26.26	181	.	.	.	.	.	.
115.0	17.59	36.18	26.28	178	.	.	.	.	.	.
120.0	17.26	36.19	26.37	170	.	.	.	.	.	.
124.0	16.00	36.18	26.66	142	.	.	.	.	.	.
130.0	14.56	35.94	26.80	129	.	.	.	.	.	.
135.0					3.23	.	.	1.07	15.7	08.9

ADVANCE II CRUISE 4 STA 100 13/ IV/77 17.7 GMT CONSEC STA 100

LAT 30 15.3N LONG 81 10.4W DEPTH = 16M DIST LAST STA = 215.5KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 25.6C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1022.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
4.0	19.27	35.10	25.04	293	5.68	5.23	-.45	0.20	00.0	01.6
5.0	19.40	35.07	24.98	298	.	.	.	.	.	.
6.0	19.37	35.09	25.00	296	.	.	.	.	.	.
7.0	19.41	35.05	24.96	300	.	.	.	.	.	.
8.0	19.09	35.19	25.15	282	.	.	.	.	.	.
9.0	18.71	35.23	25.28	270	.	.	.	.	.	.
10.0	18.61	35.23	25.31	267	.	.	.	.	.	.
11.0	18.59	35.24	25.32	266	.	.	.	.	.	.
12.0	18.58	35.24	25.32	266	5.53	5.29	-.24	0.18	00.0	01.8
13.0	18.58	35.24	25.32	266	.	.	.	.	.	.
14.0	18.56	35.25	25.33	265	.	.	.	.	.	.
15.0	18.56	35.24	25.33	266	5.49	5.30	-.19	0.94	00.1	01.8
16.0	18.56	35.24	25.33	266	.	.	.	.	.	.
17.0	18.56	35.24	25.33	266	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 101 13⁄ IV⁄77 18.9 GMT CONSEC STA 101

LAT 30 14.9N LONG 81 .8W DEPTH = 27M DIST LAST STA = 15.4KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 27.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1020.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2′	AOU	PO4	NO3	SI
3.0	19.98	35.62	25.25	273	5.53	5.15	−.38	0.21	00.0	02.4
4.0	19.98	35.63	25.26	272	.	.	.	.	.	.
5.0	19.98	35.62	25.25	273	.	.	.	.	.	.
6.0	19.97	35.62	25.25	273	.	.	.	.	.	.
7.0	19.87	35.63	25.29	269	.	.	.	.	.	.
8.0	19.80	35.62	25.30	268	.	.	.	.	.	.
9.0	19.77	35.62	25.30	268	.	.	.	.	.	.
10.0	19.70	35.61	25.31	267	.	.	.	.	.	.
11.0	19.56	35.64	25.37	261	.	.	.	.	.	.
12.0	19.50	35.63	25.38	260	.	.	.	.	.	.
13.0	19.48	35.62	25.38	261	.	.	.	.	.	.
14.0	19.46	35.61	25.38	261	.	.	.	.	.	.
15.0	19.46	35.61	25.38	261	.	.	.	.	.	.
16.0	19.44	35.62	25.39	260	5.49	5.20	−.29	0.14	00.0	01.5
17.0	19.44	35.62	25.39	260	.	.	.	.	.	.
18.0	19.44	35.62	25.39	260	.	.	.	.	.	.
19.0	19.44	35.61	25.38	260	.	.	.	.	.	.
20.0	19.44	35.61	25.38	261	.	.	.	.	.	.
21.0	19.42	35.62	25.40	259	.	.	.	.	.	.
22.0	19.42	35.61	25.39	260	.	.	.	.	.	.
23.0	19.42	35.62	25.40	259	5.45	5.20	−.25	0.20	00.0	01.6
24.0	19.42	35.61	25.39	260	.	.	.	.	.	.
25.0	19.42	35.62	25.40	259	.	.	.	.	.	.
26.0	19.42	35.62	25.40	260	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 102 13/ IV/77 19.5 GMT CONSEC STA 102

LAT 30 15.2N LONG 80 55.8W DEPTH = 29M DIST LAST STA = 8.0KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 26.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1020.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	20.50	.	.	.	.	.	.	.	.	.
7.5	20.00	.	.	.	.	.	.	.	.	.
8.0	19.80	.	.	.	.	.	.	.	.	.
11.0	19.70	.	.	.	.	.	.	.	.	.
11.5	20.20	.	.	.	.	.	.	.	.	.
13.0	19.80	.	.	.	.	.	.	.	.	.
29.0	19.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 103 13/ IV/77 19.9 GMT CONSEC STA 103

LAT 30 14.9N LONG 80 51.4W DEPTH = 29M DIST LAST STA = 7.1KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 26.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1019.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	20.34	35.74	25.24	273	5.57	5.11	-.46	0.10	00.0	03.1
3.0	20.27	35.75	25.27	271	.	.	.	.	.	.
4.0	20.28	35.73	25.25	272	.	.	.	.	.	.
5.0	20.32	35.74	25.25	273	.	.	.	.	.	.
6.0	20.21	35.77	25.30	268	.	.	.	.	.	.
7.0	20.10	35.74	25.31	267	.	.	.	.	.	.
8.0	19.96	35.74	25.35	264	.	.	.	.	.	.
9.0	19.82	35.73	25.37	261	.	.	.	.	.	.
10.0	19.76	35.73	25.39	259	.	.	.	.	.	.
11.0	19.76	35.72	25.38	260	5.53	5.16	-.37	0.17	00.0	02.9
12.0	19.76	35.72	25.38	260	.	.	.	.	.	.
13.0	19.74	35.73	25.40	259	.	.	.	.	.	.
14.0	19.76	35.72	25.38	260	.	.	.	.	.	.
15.0	19.73	35.72	25.39	260	.	.	.	.	.	.
16.0	19.73	35.72	25.39	260	.	.	.	.	.	.
17.0	19.73	35.72	25.39	260	.	.	.	.	.	.
18.0	19.73	35.72	25.39	260	.	.	.	.	.	.
19.0	19.72	35.72	25.39	259	.	.	.	.	.	.
20.0	19.72	35.72	25.39	260	.	.	.	.	.	.
21.0	19.72	35.71	25.39	260	.	.	.	.	.	.
22.0	19.71	35.72	25.40	259	.	.	.	.	.	.
23.0	19.71	35.72	25.40	259	.	.	.	.	.	.
24.0	19.71	35.72	25.40	259	.	.	.	.	.	.
25.0	19.70	35.72	25.40	259	.	.	.	.	.	.
26.0	19.71	35.72	25.40	259	5.61	5.17	-.44	0.14	00.0	03.1
27.0	19.70	35.72	25.40	259	.	.	.	.	.	.
28.0	19.70	35.72	25.40	259	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 104 13⁄ IV⁄77 20.7 GMT CONSEC STA 104

LAT 30 15.0N LONG 80 45.8W DEPTH = 29M DIST LAST STA = 9.0KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	=	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2⁄	AOU	PO4	NO3	SI
1.0	20.70	.	.	.	.	.	.	.	.	.
2.5	20.50	.	.	.	.	.	.	.	.	.
14.0	20.00	.	.	.	.	.	.	.	.	.
29.0	20.00	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 105 13/ IV/77 21.1 GMT CONSEC STA 105

LAT 30 15.0N LONG 80 41.8W DEPTH = 34M DIST LAST STA = 6.4KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 25.0C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
3.0	20.60	35.98	25.36	262	5.62	5.08	-.54	0.17	00.1	01.4
4.0	20.62	35.96	25.34	264	.	.	.	.	.	.
5.0	20.62	35.96	25.34	264	.	.	.	.	.	.
6.0	20.48	35.96	25.37	261	.	.	.	.	.	.
7.0	20.42	35.96	25.39	259	.	.	.	.	.	.
8.0	20.38	35.97	25.41	258	.	.	.	.	.	.
9.0	20.26	35.97	25.44	255	.	.	.	.	.	.
10.0	20.20	35.95	25.44	255	.	.	.	.	.	.
11.0	20.12	35.95	25.46	253	.	.	.	.	.	.
12.0	20.12	35.94	25.45	253	.	.	.	.	.	.
13.0	20.12	35.94	25.45	253	.	.	.	.	.	.
14.0	20.11	35.94	25.46	253	5.62	5.12	-.50	0.15	00.1	01.6
15.0	20.11	35.94	25.46	253	.	.	.	.	.	.
16.0	20.10	35.95	25.47	252	.	.	.	.	.	.
17.0	20.10	35.94	25.46	253	.	.	.	.	.	.
18.0	20.10	35.94	25.46	253	.	.	.	.	.	.
19.0	20.10	35.94	25.46	253	.	.	.	.	.	.
20.0	20.10	35.94	25.46	253	.	.	.	.	.	.
21.0	20.10	35.94	25.46	253	.	.	.	.	.	.
22.0	20.10	35.94	25.46	253	.	.	.	.	.	.
23.0	20.10	35.94	25.46	253	.	.	.	.	.	.
24.0	20.10	35.94	25.46	253	.	.	.	.	.	.
25.0	20.10	35.94	25.46	253	.	.	.	.	.	.
26.0	20.10	35.94	25.46	253	.	.	.	.	.	.
27.0	20.10	35.94	25.46	253	.	.	.	.	.	.
28.0	20.10	35.94	25.46	253	.	.	.	.	.	.
29.0	20.10	35.94	25.46	253	.	.	.	.	.	.
30.0	20.10	35.94	25.46	253	.	.	.	.	.	.
31.0	20.10	35.94	25.46	254	.	.	.	.	.	.
32.0	20.10	35.94	25.46	254	5.48	5.12	-.36	0.09	00.1	01.0
33.0	20.10	35.94	25.46	254	.	.	.	.	.	.
34.0	20.10	35.94	25.46	254	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 106 13⁄ IV⁄77 22.0 GMT CONSEC STA 106

LAT 30 15.3N LONG 80 36.2W DEPTH = 35M DIST LAST STA = 9.0KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 23.9C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2′	AOU	PO4	NO3	SI
1.0	21.50	.	.	.	.	.	.	.	.	.
6.0	21.00	.	.	.	.	.	.	.	.	.
14.0	20.60	.	.	.	.	.	.	.	.	.
35.0	20.60	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 107 13/ IV/77 22.4 GMT CONSEC STA 107

LAT 30 15.0N LONG 80 31.6W DEPTH = 37M DIST LAST STA = 7.4KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	21.03	36.20	25.41	258	5.52	5.03	-.49	0.19	00.1	00.9
4.0	21.04	36.10	25.33	265	.	.	.	.	.	.
5.0	21.03	36.20	25.41	258	.	.	.	.	.	.
6.0	21.03	36.20	25.41	258	.	.	.	.	.	.
7.0	21.01	36.20	25.41	257	.	.	.	.	.	.
8.0	21.00	36.19	25.41	258	.	.	.	.	.	.
9.0	21.00	36.19	25.41	258	.	.	.	.	.	.
10.0	20.96	36.20	25.43	256	.	.	.	.	.	.
11.0	20.89	36.19	25.44	255	.	.	.	.	.	.
12.0	20.77	36.19	25.47	252	.	.	.	.	.	.
13.0	20.70	36.18	25.48	251	.	.	.	.	.	.
14.0	20.70	36.18	25.48	251	.	.	.	.	.	.
15.0	20.67	36.18	25.49	250	.	.	.	.	.	.
16.0	20.64	36.18	25.50	249	.	.	.	.	.	.
17.0	20.62	36.17	25.50	250	.	.	.	.	.	.
18.0	20.61	36.17	25.50	249	.	.	.	.	.	.
19.0	20.60	36.16	25.49	250	.	.	.	.	.	.
20.0	20.58	36.16	25.50	249	5.48	5.07	-.41	0.07	00.1	00.8
21.0	20.54	36.16	25.51	248	.	.	.	.	.	.
22.0	20.53	36.16	25.51	248	.	.	.	.	.	.
23.0	20.51	36.16	25.52	248	.	.	.	.	.	.
24.0	20.50	36.15	25.51	248	.	.	.	.	.	.
25.0	20.47	36.15	25.52	248	.	.	.	.	.	.
26.0	20.44	36.14	25.52	248	.	.	.	.	.	.
27.0	20.44	36.14	25.52	248	.	.	.	.	.	.
28.0	20.42	36.14	25.53	247	.	.	.	.	.	.
29.0	20.42	36.14	25.53	247	.	.	.	.	.	.
30.0	20.41	36.15	25.54	246	.	.	.	.	.	.
31.0	20.40	36.14	25.53	247	.	.	.	.	.	.
32.0	20.40	36.14	25.53	247	.	.	.	.	.	.
33.0	20.40	36.14	25.53	247	5.28	5.09	-.19	0.07	00.1	00.6
34.0	20.38	36.13	25.53	247	.	.	.	.	.	.
35.0	20.38	36.14	25.54	246	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 108 13/ IV/77 23.1 GMT CONSEC STA 108

LAT 30 15.0N LONG 80 27.0W DEPTH = 40M DIST LAST STA = 7.4KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 080	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	21.40	.	.	.	.	.	.	.	.	.
2.0	21.20	.	.	.	.	.	.	.	.	.
7.0	21.20	.	.	.	.	.	.	.	.	.
17.5	21.00	.	.	.	.	.	.	.	.	.
22.0	20.90	.	.	.	.	.	.	.	.	.
24.0	20.50	.	.	.	.	.	.	.	.	.
25.5	20.00	.	.	.	.	.	.	.	.	.
26.5	19.50	.	.	.	.	.	.	.	.	.
31.0	19.00	.	.	.	.	.	.	.	.	.
40.0	19.00	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 109 13/ IV/77 23.5 GMT CONSEC STA 109

LAT 30 15.0N LONG 80 22.0W DEPTH = 44M DIST LAST STA = 8.0KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	23.61	36.08	24.58	336	5.18	4.81	-.37	0.06	00.0	00.9
3.0	23.61	36.09	24.59	335	.	.	.	.	.	.
4.0	23.61	36.09	24.59	335	.	.	.	.	.	.
5.0	23.59	36.09	24.60	335	.	.	.	.	.	.
6.0	23.52	36.07	24.60	334	.	.	.	.	.	.
7.0	23.50	36.09	24.62	332	.	.	.	.	.	.
8.0	23.03	36.08	24.75	320	.	.	.	.	.	.
9.0	22.61	36.16	24.93	303	.	.	.	.	.	.
10.0	22.49	36.15	24.96	300	5.30	4.90	-.40	0.03	00.0	00.7
11.0	22.41	36.16	24.99	297	.	.	.	.	.	.
12.0	22.36	36.16	25.01	296	.	.	.	.	.	.
13.0	22.34	36.15	25.00	296	.	.	.	.	.	.
14.0	22.27	36.16	25.03	294	.	.	.	.	.	.
15.0	22.20	36.17	25.06	291	.	.	.	.	.	.
16.0	22.06	36.18	25.11	287	.	.	.	.	.	.
17.0	21.90	36.18	25.15	283	.	.	.	.	.	.
18.0	21.86	36.19	25.17	281	.	.	.	.	.	.
19.0	21.74	36.19	25.20	278	.	.	.	.	.	.
20.0	21.61	36.20	25.25	273	.	.	.	.	.	.
21.0	21.50	36.21	25.28	270	.	.	.	.	.	.
22.0	21.38	36.21	25.32	267	.	.	.	.	.	.
23.0	21.24	36.22	25.36	262	.	.	.	.	.	.
24.0	21.12	36.20	25.38	261	.	.	.	.	.	.
25.0	21.08	36.21	25.40	259	.	.	.	.	.	.
26.0	20.97	36.23	25.45	255	.	.	.	.	.	.
27.0	20.84	36.22	25.47	252	.	.	.	.	.	.
28.0	20.50	36.32	25.64	236	.	.	.	.	.	.
29.0	19.96	36.28	25.76	225	.	.	.	.	.	.
30.0	19.08	36.33	26.02	200	.	.	.	.	.	.
31.0	18.79	36.22	26.02	201	.	.	.	.	.	.
32.0	18.39	36.26	26.15	188	.	.	.	.	.	.
33.0	18.30	36.22	26.14	189	.	.	.	.	.	.
34.0	18.29	36.23	26.15	188	.	.	.	.	.	.
35.0	18.28	36.22	26.14	189	.	.	.	.	.	.
36.0	18.28	36.20	26.13	190	.	.	.	.	.	.
37.0	18.27	36.20	26.13	190	.	.	.	.	.	.
38.0	18.26	36.21	26.14	189	.	.	.	.	.	.
39.0	18.26	36.20	26.13	190	.	.	.	.	.	.
40.0	18.26	36.21	26.14	189	.	.	.	.	.	.
41.0	18.26	36.20	26.13	190	.	.	.	.	.	.
42.0	18.26	36.20	26.13	190	4.59	5.30	.71	0.42	04.2	02.4

ADVANCE II CRUISE 4 STA 110 14/ IV/77 .1 GMT CONSEC STA 110

LAT 30 15.4N LONG 80 17.6W DEPTH = 46M DIST LAST STA = 7.1KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 22.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	23.70	.	.	.	.	.	.	.	.	.
16.0	23.70	.	.	.	.	.	.	.	.	.
17.0	23.50	.	.	.	.	.	.	.	.	.
19.0	23.00	.	.	.	.	.	.	.	.	.
21.0	22.50	.	.	.	.	.	.	.	.	.
22.5	22.00	.	.	.	.	.	.	.	.	.
23.0	21.50	.	.	.	.	.	.	.	.	.
25.5	21.00	.	.	.	.	.	.	.	.	.
26.0	20.50	.	.	.	.	.	.	.	.	.
27.5	20.00	.	.	.	.	.	.	.	.	.
29.0	19.50	.	.	.	.	.	.	.	.	.
32.0	19.00	.	.	.	.	.	.	.	.	.
35.0	18.70	.	.	.	.	.	.	.	.	.
46.0	18.60	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 111 14/ IV/77 .6 GMT CONSEC STA 111

LAT 30 15.1N LONG 80 12.2W DEPTH =102M DIST LAST STA = 8.7KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1018.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	22.78	36.08	24.82	313	5.52	4.88	-.64	.	00.1	00.3
4.0	22.78	36.09	24.83	312	.	.	.	.	.	.
5.0	22.78	36.09	24.83	312	.	.	.	.	.	.
6.0	22.78	36.09	24.83	312	.	.	.	.	.	.
7.0	22.79	36.08	24.82	313	.	.	.	.	.	.
8.0	22.78	36.09	24.83	312	.	.	.	.	.	.
9.0	22.78	36.08	24.82	313	.	.	.	.	.	.
10.0	22.78	36.08	24.82	313	.	.	.	.	.	.
11.0	22.78	36.09	24.83	313	.	.	.	.	.	.
12.0	22.78	36.09	24.83	313	.	.	.	.	.	.
13.0	22.78	36.08	24.82	313	.	.	.	.	.	.
14.0	22.78	36.08	24.82	313	.	.	.	.	.	.
15.0	22.77	36.08	24.83	313	.	.	.	.	.	.
16.0	22.77	36.08	24.83	313	.	.	.	.	.	.
17.0	22.78	36.08	24.82	314	.	.	.	.	.	.
18.0	22.78	36.07	24.82	314	.	.	.	.	.	.
19.0	22.78	36.08	24.82	314	.	.	.	.	.	.
20.0	22.78	36.08	24.82	314	.	.	.	.	.	.
21.0	22.78	36.08	24.82	314	.	.	.	.	.	.
22.0	22.78	36.08	24.82	314	.	.	.	.	.	.
23.0	22.78	36.08	24.82	314	.	.	.	.	.	.
24.0	22.78	36.07	24.82	315	.	.	.	.	.	.
25.0	22.76	36.08	24.83	313	.	.	.	.	.	.
26.0	22.73	36.08	24.84	313	.	.	.	.	.	.
27.0	22.53	36.10	24.91	306	.	.	.	.	.	.
28.0	22.16	36.20	25.09	288	.	.	.	.	.	.
29.0	21.99	36.13	25.09	289	.	.	.	.	.	.
30.0	21.94	36.14	25.11	287	.	.	.	.	.	.
31.0	21.84	36.14	25.14	284	.	.	.	.	.	.
32.0	21.77	36.13	25.15	283	.	.	.	.	.	.
33.0	21.66	36.13	25.18	280	.	.	.	.	.	.
34.0	21.56	36.14	25.22	277	.	.	.	.	.	.
35.0	21.26	36.13	25.29	270	.	.	.	.	.	.
36.0	21.16	36.14	25.33	267	.	.	.	.	.	.
37.0	20.89	36.15	25.41	259	.	.	.	.	.	.
38.0	20.63	36.16	25.49	251	.	.	.	.	.	.
39.0	20.40	36.13	25.52	248	.	.	.	.	.	.
40.0	20.30	36.08	25.51	249	.	.	.	.	.	.
41.0	20.10	36.06	25.55	245	.	.	.	.	.	.

STA 111 14/ IV/77 .6 GMT CONSEC STA 111 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
42.0	19.99	36.07	25.59	242	.	.	.	.	.	.
43.0	19.90	36.06	25.60	240	.	.	.	.	.	.
44.0	19.78	36.06	25.64	237	.	.	.	.	.	.
45.0	19.62	36.05	25.67	234	.	.	.	.	.	.
46.0	19.40	36.04	25.72	229	.	.	.	.	.	.
47.0	19.18	36.04	25.78	224	.	.	.	.	.	.
48.0	18.89	36.05	25.86	216	.	.	.	.	.	.
49.0	18.62	36.07	25.94	208	.	.	.	.	.	.
50.0	18.56	36.09	25.97	205	.	.	.	.	.	.
51.0	18.54	36.11	25.99	203	.	.	.	.	.	.
52.0	18.42	36.12	26.03	200	.	.	.	.	.	.
53.0	18.38	36.12	26.04	199	.	.	.	.	.	.
54.0	18.34	36.14	26.07	197	.	.	.	.	.	.
55.0	18.28	36.14	26.08	195	.	.	.	.	.	.
56.0	18.21	36.16	26.12	192	.	.	.	.	.	.
57.0	18.12	36.18	26.15	188	.	.	.	.	.	.
58.0	18.10	36.20	26.17	187	4.31	5.31	1.00	0.42	06.3	03.6
59.0	18.10	36.21	26.18	186	.	.	.	.	.	.
60.0	18.09	36.23	26.20	184	.	.	.	.	.	.
61.0	18.00	36.23	26.22	182	.	.	.	.	.	.
62.0	17.88	36.22	26.24	180	.	.	.	.	.	.
63.0	17.72	36.18	26.25	179	.	.	.	.	.	.
64.0	17.54	36.15	26.27	177	.	.	.	.	.	.
65.0	17.40	36.13	26.29	175	.	.	.	.	.	.
66.0	17.27	36.12	26.32	173	.	.	.	.	.	.
67.0	17.11	36.08	26.32	173	.	.	.	.	.	.
68.0	16.99	36.08	26.35	170	.	.	.	.	.	.
69.0	16.80	36.05	26.38	168	.	.	.	.	.	.
70.0	16.73	36.03	26.38	168	.	.	.	.	.	.
71.0	16.62	36.03	26.40	165	.	.	.	.	.	.
72.0	16.53	36.00	26.40	165	.	.	.	.	.	.
73.0	16.51	36.00	26.41	165	.	.	.	.	.	.
74.0	16.44	36.03	26.45	161	.	.	.	.	.	.
75.0	16.46	35.99	26.41	165	.	.	.	.	.	.
76.0	16.44	36.01	26.43	163	.	.	.	.	.	.
77.0	16.41	36.01	26.44	162	3.96	5.49	1.53	0.78	11.1	06.0
78.0	16.38	36.01	26.44	161	.	.	.	.	.	.
79.0	16.36	36.01	26.45	161	.	.	.	.	.	.
80.0	16.36	36.00	26.44	162	.	.	.	.	.	.
81.0	16.33	36.00	26.45	161	.	.	.	.	.	.

STA 111 14⁄ IV⁄77 .6 GMT CONSEC STA 111 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2⁄	AOU	PO4	NO3	SI
82.0	16.30	35.99	26.45	161	.	.	.	.	.	.
83.0	16.29	35.99	26.45	161	.	.	.	.	.	.
84.0	16.28	36.00	26.46	160	.	.	.	.	.	.
85.0	16.20	36.00	26.48	158	.	.	.	.	.	.
86.0	16.20	35.98	26.46	160	.	.	.	.	.	.
87.0	16.18	35.99	26.48	159	.	.	.	.	.	.
88.0	16.14	35.98	26.48	159	.	.	.	.	.	.
89.0	16.02	35.98	26.51	156	.	.	.	.	.	.
90.0	16.00	35.97	26.50	156	.	.	.	.	.	.
91.0	15.96	35.96	26.50	156	.	.	.	.	.	.
92.0	15.93	35.96	26.51	156	.	.	.	.	.	.
93.0	15.92	35.96	26.51	155	3.28	5.55	2.27	0.75	12.5	06.6
94.0	15.91	35.96	26.52	155	.	.	.	.	.	.
95.0	15.89	35.95	26.51	156	.	.	.	.	.	.
96.0	15.81	35.95	26.53	154	.	.	.	.	.	.
97.0	15.77	35.95	26.54	153	.	.	.	.	.	.
98.0	15.74	35.94	26.54	153	.	.	.	.	.	.
99.0	15.69	35.94	26.55	152	.	.	.	.	.	.
100.0	15.50	35.95	26.60	147	.	.	.	.	.	.
101.0	15.38	35.91	26.60	148	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 112 14/ IV/77 1.7 GMT CONSEC STA 112

LAT 30 14.7N LONG 80 10.3W DEPTH =185M DIST LAST STA = 3.1KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1018.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	22.80	.	.	.	.	.	.	.	.	.
30.0	22.50	.	.	.	.	.	.	.	.	.
33.5	22.50	.	.	.	.	.	.	.	.	.
37.0	22.00	.	.	.	.	.	.	.	.	.
41.0	21.50	.	.	.	.	.	.	.	.	.
45.0	21.00	.	.	.	.	.	.	.	.	.
48.5	20.50	.	.	.	.	.	.	.	.	.
53.5	20.00	.	.	.	.	.	.	.	.	.
55.5	19.50	.	.	.	.	.	.	.	.	.
58.0	19.00	.	.	.	.	.	.	.	.	.
59.5	18.50	.	.	.	.	.	.	.	.	.
61.0	18.00	.	.	.	.	.	.	.	.	.
65.0	17.50	.	.	.	.	.	.	.	.	.
75.0	17.00	.	.	.	.	.	.	.	.	.
75.5	16.70	.	.	.	.	.	.	.	.	.
87.5	16.50	.	.	.	.	.	.	.	.	.
92.0	16.00	.	.	.	.	.	.	.	.	.
95.0	15.50	.	.	.	.	.	.	.	.	.
106.0	15.00	.	.	.	.	.	.	.	.	.
116.0	14.50	.	.	.	.	.	.	.	.	.
118.5	14.00	.	.	.	.	.	.	.	.	.
120.5	13.50	.	.	.	.	.	.	.	.	.
121.5	13.00	.	.	.	.	.	.	.	.	.
123.0	12.50	.	.	.	.	.	.	.	.	.
124.5	12.00	.	.	.	.	.	.	.	.	.
126.0	11.50	.	.	.	.	.	.	.	.	.
127.5	11.00	.	.	.	.	.	.	.	.	.
128.0	10.50	.	.	.	.	.	.	.	.	.
130.0	10.00	.	.	.	.	.	.	.	.	.
130.5	9.50	.	.	.	.	.	.	.	.	.
133.0	9.00	.	.	.	.	.	.	.	.	.
137.0	8.50	.	.	.	.	.	.	.	.	.
145.5	8.00	.	.	.	.	.	.	.	.	.
154.5	7.70	.	.	.	.	.	.	.	.	.
185.0	7.60	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 113 14/ IV/77 2.1 GMT CONSEC STA 113

LAT 30 15.1N LONG 80 5.2W DEPTH =329M DIST LAST STA = 8.2KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 22.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1018.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
4.0	25.17	36.04	24.08	384	4.92	4.68	-.24	0.22	00.1	01.3
5.0	25.17	36.02	24.07	385	.	.	.	.	.	.
6.0	25.19	36.04	24.08	384	.	.	.	.	.	.
7.0	25.19	36.01	24.05	387	.	.	.	.	.	.
8.0	25.19	36.03	24.07	385	.	.	.	.	.	.
9.0	25.19	36.02	24.06	386	.	.	.	.	.	.
10.0	25.19	36.03	24.07	385	.	.	.	.	.	.
11.0	25.19	36.04	24.08	385	.	.	.	.	.	.
12.0	25.19	36.04	24.08	385	.	.	.	.	.	.
13.0	25.19	36.03	24.07	385	.	.	.	.	.	.
14.0	25.19	36.02	24.06	386	.	.	.	.	.	.
15.0	25.19	36.01	24.05	387	.	.	.	.	.	.
16.0	25.19	36.01	24.05	387	.	.	.	.	.	.
17.0	25.18	36.00	24.05	387	.	.	.	.	.	.
18.0	25.18	36.03	24.07	385	.	.	.	.	.	.
19.0	25.17	36.03	24.08	385	.	.	.	.	.	.
20.0	25.16	36.03	24.08	385	.	.	.	.	.	.
21.0	25.16	36.03	24.08	385	.	.	.	.	.	.
22.0	25.14	36.03	24.09	384	.	.	.	.	.	.
23.0	25.13	36.03	24.09	384	.	.	.	.	.	.
24.0	25.11	36.04	24.10	383	.	.	.	.	.	.
25.0	25.11	36.01	24.08	385	.	.	.	.	.	.
26.0	25.08	36.01	24.09	384	.	.	.	.	.	.
27.0	25.09	36.05	24.12	382	.	.	.	.	.	.
28.0	25.09	36.00	24.08	385	.	.	.	.	.	.
29.0	25.04	35.99	24.09	384	.	.	.	.	.	.
30.0	25.00	35.98	24.09	384	.	.	.	.	.	.
31.0	24.94	36.01	24.13	380	.	.	.	.	.	.
32.0	24.89	36.03	24.16	377	.	.	.	.	.	.
33.0	24.83	36.03	24.18	376	.	.	.	.	.	.
34.0	24.82	36.04	24.19	375	.	.	.	.	.	.
35.0	24.77	36.04	24.21	373	.	.	.	.	.	.
36.0	24.74	36.03	24.21	373	.	.	.	.	.	.
37.0	24.70	36.03	24.22	372	.	.	.	.	.	.
38.0	24.66	36.02	24.22	372	5.06	4.72	-.34	0.07	00.0	01.3
39.0	24.63	36.04	24.25	369	.	.	.	.	.	.
40.0	24.62	36.03	24.24	370	.	.	.	.	.	.
41.0	24.61	36.03	24.25	370	.	.	.	.	.	.
42.0	24.60	36.03	24.25	369	.	.	.	.	.	.

STA 113 14/ IV/77 2.1 GMT CONSEC STA 113 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
43.0	24.60	36.02	24.24	370	.	.	.	.	.	.
44.0	24.60	36.03	24.25	369	.	.	.	.	.	.
45.0	24.60	36.03	24.25	369	.	.	.	.	.	.
46.0	24.59	36.03	24.25	369	.	.	.	.	.	.
47.0	24.59	36.03	24.25	369	.	.	.	.	.	.
48.0	24.59	36.04	24.26	369	.	.	.	.	.	.
49.0	24.59	36.03	24.25	369	.	.	.	.	.	.
50.0	24.59	36.02	24.24	370	.	.	.	.	.	.
51.0	24.59	36.02	24.24	370	.	.	.	.	.	.
52.0	24.58	36.02	24.25	370	.	.	.	.	.	.
53.0	24.52	36.03	24.27	368	.	.	.	.	.	.
54.0	24.38	36.04	24.32	363	.	.	.	.	.	.
55.0	24.32	36.02	24.33	363	.	.	.	.	.	.
56.0	24.23	36.03	24.36	359	.	.	.	.	.	.
57.0	24.12	36.03	24.39	356	.	.	.	.	.	.
58.0	24.00	36.01	24.41	354	.	.	.	.	.	.
59.0	23.86	36.03	24.47	349	.	.	.	.	.	.
60.0	23.71	36.05	24.53	343	.	.	.	.	.	.
61.0	23.53	36.03	24.57	340	.	.	.	.	.	.
62.0	23.36	36.06	24.64	333	.	.	.	.	.	.
63.0	23.26	36.07	24.68	329	.	.	.	.	.	.
64.0	23.06	36.05	24.72	325	.	.	.	.	.	.
65.0	22.92	36.07	24.78	320	.	.	.	.	.	.
66.0	22.87	36.09	24.81	317	.	.	.	.	.	.
67.0	22.66	36.11	24.88	310	.	.	.	.	.	.
68.0	22.39	36.09	24.94	304	.	.	.	.	.	.
69.0	22.21	36.12	25.02	297	.	.	.	.	.	.
70.0	22.03	36.13	25.08	292	.	.	.	.	.	.
71.0	21.88	36.12	25.11	288	.	.	.	.	.	.
72.0	21.74	36.13	25.16	284	.	.	.	.	.	.
73.0	21.52	36.14	25.23	277	.	.	.	.	.	.
74.0	21.34	36.16	25.29	271	.	.	.	.	.	.
75.0	21.23	36.11	25.28	272	.	.	.	.	.	.
76.0	21.04	36.14	25.36	265	.	.	.	.	.	.
77.0	20.50	36.32	25.64	238	.	.	.	.	.	.
78.0	20.00	36.14	25.64	238	.	.	.	.	.	.
79.0	19.30	36.27	25.92	211	.	.	.	.	.	.
80.0	18.37	36.38	26.24	181	.	.	.	.	.	.
81.0	17.64	36.20	26.29	177	.	.	.	.	.	.
82.0	17.02	36.19	26.43	163	.	.	.	.	.	.

STA 113 14/ IV/77 2.1 GMT CONSEC STA 113 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
83.0	16.67	36.11	26.45	161	.	.	.	.	.	.
84.0	16.40	36.04	26.46	160	.	.	.	.	.	.
85.0	16.32	35.95	26.41	165	.	.	.	.	.	.
86.0	16.21	35.98	26.46	160	.	.	.	.	.	.
87.0	15.91	36.09	26.61	146	.	.	.	.	.	.
88.0	15.76	36.08	26.64	143	.	.	.	.	.	.
89.0	15.57	35.96	26.59	148	.	.	.	.	.	.
90.0	15.42	36.01	26.67	141	.	.	.	.	.	.
91.0	15.31	36.01	26.69	138	.	.	.	.	.	.
92.0	15.22	35.97	26.68	139	.	.	.	.	.	.
93.0	15.19	35.93	26.66	142	3.91	5.63	1.72	0.81	12.5	07.7
94.0	15.19	35.93	26.66	142	.	.	.	.	.	.
95.0	15.18	35.91	26.64	143	.	.	.	.	.	.
96.0	15.12	35.93	26.67	140	.	.	.	.	.	.
97.0	15.10	35.92	26.67	141	.	.	.	.	.	.
98.0	15.02	35.95	26.71	137	.	.	.	.	.	.
99.0	14.81	35.99	26.79	130	.	.	.	.	.	.
100.0	14.68	35.91	26.75	133	.	.	.	.	.	.
101.0	14.59	35.91	26.77	131	.	.	.	.	.	.
105.0	14.19	35.85	26.81	127	.	.	.	.	.	.
110.0	14.06	35.79	26.79	129	.	.	.	.	.	.
115.0	13.33	35.75	26.92	117	3.54	5.85	2.31	1.04	15.9	08.8
120.0	12.44	35.58	26.96	113	.	.	.	.	.	.
127.0					3.12	.	.	1.07	15.8	07.8

ADVANCE II CRUISE 4 STA 174 14⁄ IV⁄77 19.1 GMT CONSEC STA 174

LAT 29 40.0N LONG 80 35.0W DEPTH = 28M DIST LAST STA = 80.8KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 020	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1015.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2⁄	AOU	PO4	NO3	SI
2.0	20.90	35.74	25.09	287	5.50	5.06	-.44	0.11	00.1	00.5
3.0	20.90	35.74	25.09	287	.	.	.	.	.	.
4.0	20.79	35.72	25.11	286	.	.	.	.	.	.
5.0	20.83	35.71	25.09	288	.	.	.	.	.	.
6.0	20.53	35.76	25.21	277	.	.	.	.	.	.
7.0	20.28	35.74	25.26	272	.	.	.	.	.	.
8.0	20.26	35.75	25.27	270	.	.	.	.	.	.
9.0	20.22	35.76	25.29	269	.	.	.	.	.	.
10.0	20.14	35.75	25.30	268	.	.	.	.	.	.
11.0	20.13	35.76	25.32	267	.	.	.	.	.	.
12.0	20.12	35.76	25.32	266	5.50	5.13	-.37	0.05	00.0	00.2
13.0	20.11	35.76	25.32	266	.	.	.	.	.	.
14.0	20.10	35.75	25.32	267	.	.	.	.	.	.
15.0	20.09	35.76	25.33	266	.	.	.	.	.	.
16.0	20.06	35.77	25.34	264	.	.	.	.	.	.
17.0	20.08	35.76	25.33	266	.	.	.	.	.	.
18.0	20.06	35.77	25.34	264	.	.	.	.	.	.
19.0	20.04	35.76	25.34	265	.	.	.	.	.	.
20.0	20.04	35.76	25.34	265	.	.	.	.	.	.
21.0	20.04	35.77	25.35	264	.	.	.	.	.	.
22.0	20.04	35.77	25.35	264	.	.	.	.	.	.
23.0	20.04	35.76	25.34	265	.	.	.	.	.	.
24.0	20.04	35.76	25.34	265	.	.	.	.	.	.
25.0	20.04	35.76	25.34	265	.	.	.	.	.	.
26.0	20.04	35.76	25.34	265	.	.	.	.	.	.
27.0	20.04	35.76	25.34	265	5.35	5.14	-.21	0.14	00.1	00.8
28.0	20.04	35.76	25.34	265	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 175 14/ IV/77 19.9 GMT CONSEC STA 175

LAT 29 40.5N LONG 80 29.3W DEPTH = 33M DIST LAST STA = 9.2KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 040	WAVE DIRECTION	=
AIR TEMP	= 25.6C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	21.30	.	.	.	.	.	.	.	.	.
1.5	21.00	.	.	.	.	.	.	.	.	.
5.0	20.60	.	.	.	.	.	.	.	.	.
18.0	20.50	.	.	.	.	.	.	.	.	.
20.0	20.00	.	.	.	.	.	.	.	.	.
21.0	19.60	.	.	.	.	.	.	.	.	.
33.0	19.50	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 176 14/ IV/77 20.4 GMT CONSEC STA 176

LAT 29 40.5N LONG 80 25.0W DEPTH = 41M DIST LAST STA = 6.9KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 040	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1015.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	20.73	35.97	25.31	266	5.50	5.07	-.43	0.46	00.1	00.3
4.0	20.73	35.96	25.31	267	.	.	.	.	.	.
5.0	20.76	35.93	25.28	270	.	.	.	.	.	.
6.0	20.66	36.07	25.41	257	.	.	.	.	.	.
7.0	20.56	36.12	25.47	251	.	.	.	.	.	.
8.0	20.52	36.13	25.49	250	.	.	.	.	.	.
9.0	20.52	36.13	25.49	250	5.52	5.08	-.44	0.12	00.1	00.5
10.0	20.50	36.12	25.49	250	.	.	.	.	.	.
11.0	20.50	36.13	25.50	249	.	.	.	.	.	.
12.0	20.50	36.12	25.49	250	.	.	.	.	.	.
13.0	20.48	36.13	25.50	249	.	.	.	.	.	.
14.0	20.50	36.13	25.50	249	.	.	.	.	.	.
15.0	20.50	36.14	25.51	249	.	.	.	.	.	.
16.0	20.49	36.16	25.52	247	.	.	.	.	.	.
17.0	20.22	36.16	25.60	240	.	.	.	.	.	.
18.0	19.89	36.13	25.66	234	.	.	.	.	.	.
19.0	19.78	36.15	25.70	230	.	.	.	.	.	.
20.0	19.20	36.19	25.89	213	.	.	.	.	.	.
21.0	18.88	36.12	25.92	210	.	.	.	.	.	.
22.0	18.62	36.11	25.97	204	.	.	.	.	.	.
23.0	18.59	36.11	25.98	204	.	.	.	.	.	.
24.0	18.59	36.10	25.97	204	.	.	.	.	.	.
25.0	18.58	36.09	25.97	205	.	.	.	.	.	.
26.0	18.56	36.09	25.97	204	4.19	5.27	1.08	0.39	05.3	04.8
27.0	18.56	36.10	25.98	204	.	.	.	.	.	.
28.0	18.56	36.09	25.97	205	.	.	.	.	.	.
29.0	18.54	36.10	25.99	203	.	.	.	.	.	.
30.0	18.54	36.10	25.99	203	.	.	.	.	.	.
31.0	18.54	36.10	25.99	203	.	.	.	.	.	.
32.0	18.56	36.09	25.97	205	.	.	.	.	.	.
33.0	18.56	36.09	25.97	205	.	.	.	.	.	.
34.0	18.56	36.09	25.97	205	.	.	.	.	.	.
35.0	18.56	36.09	25.97	205	.	.	.	.	.	.
36.0	18.56	36.09	25.97	205	4.11	5.27	1.16	0.42	05.1	05.2
37.0	18.56	36.09	25.97	205	.	.	.	.	.	.
38.0	18.56	36.09	25.97	205	.	.	.	.	.	.
39.0	18.56	36.10	25.98	204	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 177 14/ IV/77 21.2 GMT CONSEC STA 177

LAT 29 39.8N LONG 80 20.8W DEPTH = 48M DIST LAST STA = 6.9KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 080	WAVE DIRECTION	=
AIR TEMP	= 24.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	22.66	36.06	24.84	311	5.18	4.89	-.29	0.22	00.1	00.0
4.0	22.70	36.07	24.84	312	.	.	.	.	.	.
5.0	22.67	36.07	24.85	311	.	.	.	.	.	.
6.0	22.64	36.07	24.86	310	.	.	.	.	.	.
7.0	22.58	36.08	24.88	308	.	.	.	.	.	.
8.0	22.46	36.09	24.92	304	.	.	.	.	.	.
9.0	22.37	36.09	24.95	301	.	.	.	.	.	.
10.0	22.08	36.14	25.07	290	.	.	.	.	.	.
11.0	21.91	36.11	25.09	288	.	.	.	.	.	.
12.0	21.78	36.11	25.13	284	.	.	.	.	.	.
13.0	21.70	36.14	25.18	280	.	.	.	.	.	.
14.0	21.41	36.23	25.33	266	.	.	.	.	.	.
15.0	21.28	36.21	25.35	264	.	.	.	.	.	.
16.0	21.20	36.21	25.37	262	.	.	.	.	.	.
17.0	21.14	36.20	25.38	261	.	.	.	.	.	.
18.0	21.04	36.19	25.40	259	5.55	5.03	-.52	0.16	00.1	00.0
19.0	20.98	36.18	25.41	258	.	.	.	.	.	.
20.0	20.87	36.20	25.45	254	.	.	.	.	.	.
21.0	20.58	36.17	25.51	249	.	.	.	.	.	.
22.0	20.18	36.18	25.62	238	.	.	.	.	.	.
23.0	19.96	36.16	25.66	234	.	.	.	.	.	.
24.0	19.67	36.16	25.74	227	.	.	.	.	.	.
25.0	19.10	36.15	25.88	213	.	.	.	.	.	.
26.0	18.32	36.14	26.07	195	.	.	.	.	.	.
27.0	17.77	36.09	26.17	186	.	.	.	.	.	.
28.0	16.98	36.09	26.36	167	.	.	.	.	.	.
29.0	16.90	36.04	26.34	169	.	.	.	.	.	.
30.0	16.90	36.04	26.34	169	.	.	.	.	.	.
31.0	16.90	36.04	26.34	169	.	.	.	.	.	.
32.0	16.90	36.03	26.34	170	.	.	.	.	.	.
33.0	16.90	36.03	26.34	170	3.92	5.44	1.52	0.61	09.1	05.5
34.0	16.90	36.04	26.34	170	.	.	.	.	.	.
35.0	16.90	36.04	26.34	170	.	.	.	.	.	.
36.0	16.90	36.04	26.34	170	.	.	.	.	.	.
37.0	16.90	36.04	26.34	170	.	.	.	.	.	.
38.0	16.90	36.04	26.34	170	.	.	.	.	.	.
39.0	16.90	36.04	26.34	170	.	.	.	.	.	.
40.0	16.90	36.03	26.34	170	.	.	.	.	.	.
41.0	16.90	36.04	26.34	170	.	.	.	.	.	.

STA 177 14/ IV/77 21.2 GMT CONSEC STA 177 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
42.0	16.90	36.03	26.34	171	.	.	.	.	.	.
43.0	16.90	36.03	26.34	171	3.89	5.44	1.55	0.68	09.4	05.6
44.0	16.90	36.03	26.34	171	.	.	.	.	.	.
45.0	16.90	36.03	26.34	171	.	.	.	.	.	.
46.0	16.90	36.04	26.34	170	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 178 14/ IV/77 22.0 GMT CONSEC STA 178

LAT 29 39.8N LONG 80 15.3W DEPTH = 68M DIST LAST STA = 8.9KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 080	WAVE DIRECTION	=
AIR TEMP	= 24.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	21.78	36.08	25.11	286	5.95	4.97	-.98	0.51	00.2	01.2
4.0	21.78	36.09	25.12	285	.	.	.	.	.	.
5.0	21.74	36.08	25.12	285	.	.	.	.	.	.
6.0	21.47	36.10	25.21	276	.	.	.	.	.	.
7.0	21.12	36.11	25.31	267	.	.	.	.	.	.
8.0	21.01	36.10	25.34	264	.	.	.	.	.	.
9.0	21.00	36.09	25.33	265	.	.	.	.	.	.
10.0	20.87	36.09	25.37	262	.	.	.	.	.	.
11.0	20.74	36.09	25.40	258	.	.	.	.	.	.
12.0	20.68	36.09	25.42	257	.	.	.	.	.	.
13.0	20.62	36.08	25.43	256	.	.	.	.	.	.
14.0	20.40	36.11	25.51	248	.	.	.	.	.	.
15.0	20.02	36.12	25.62	238	.	.	.	.	.	.
16.0	19.82	36.10	25.66	234	.	.	.	.	.	.
17.0	19.52	36.11	25.74	226	.	.	.	.	.	.
18.0	19.40	36.10	25.77	224	.	.	.	.	.	.
19.0	18.96	36.11	25.89	212	.	.	.	.	.	.
20.0	18.53	36.14	26.02	200	.	.	.	.	.	.
21.0	17.88	36.10	26.15	187	.	.	.	.	.	.
22.0	17.76	36.09	26.17	185	.	.	.	.	.	.
23.0	17.62	36.09	26.21	182	.	.	.	.	.	.
24.0	17.40	36.09	26.26	177	.	.	.	.	.	.
25.0	17.26	36.11	26.31	172	4.26	5.40	1.14	0.59	07.8	04.7
26.0	17.18	36.09	26.32	172	.	.	.	.	.	.
27.0	17.12	36.10	26.34	170	.	.	.	.	.	.
28.0	17.00	36.10	26.37	167	.	.	.	.	.	.
29.0	16.73	36.11	26.44	160	.	.	.	.	.	.
30.0	16.60	36.11	26.47	158	.	.	.	.	.	.
31.0	16.46	36.11	26.50	154	.	.	.	.	.	.
32.0	16.39	36.10	26.51	154	.	.	.	.	.	.
33.0	16.18	36.09	26.55	150	.	.	.	.	.	.
34.0	15.99	36.07	26.58	147	.	.	.	.	.	.
35.0	15.89	36.04	26.58	147	.	.	.	.	.	.
36.0	15.77	36.04	26.61	144	.	.	.	.	.	.
37.0	15.64	36.02	26.62	143	.	.	.	.	.	.
38.0	15.61	36.02	26.63	143	.	.	.	.	.	.
39.0	15.58	36.00	26.62	143	3.42	5.59	2.17	0.91	14.3	07.5
40.0	15.57	36.00	26.62	143	.	.	.	.	.	.
41.0	15.50	35.99	26.63	142	.	.	.	.	.	.

STA 178 14/ IV/77 22.0 GMT CONSEC STA 178 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
42.0	15.49	35.99	26.63	142	.	.	.	.	.	.
43.0	15.28	35.99	26.68	138	.	.	.	.	.	.
44.0	15.08	35.94	26.69	137	.	.	.	.	.	.
45.0	14.83	35.91	26.72	134	.	.	.	.	.	.
46.0	14.73	35.93	26.76	131	.	.	.	.	.	.
47.0	14.57	35.88	26.75	131	.	.	.	.	.	.
48.0	14.49	35.87	26.76	130	.	.	.	.	.	.
49.0	14.43	35.87	26.78	129	.	.	.	.	.	.
50.0	14.37	35.87	26.79	128	3.23	5.73	2.50	1.09	17.0	09.2
51.0	14.36	35.84	26.77	130	.	.	.	.	.	.
52.0	14.32	35.84	26.78	129	.	.	.	.	.	.
53.0	14.31	35.85	26.79	128	.	.	.	.	.	.
54.0	14.27	35.84	26.79	128	.	.	.	.	.	.
55.0	13.81	35.81	26.86	121	.	.	.	.	.	.
56.0	13.58	35.74	26.86	121	.	.	.	.	.	.
57.0	13.51	35.73	26.86	121	.	.	.	.	.	.
58.0	13.49	35.73	26.87	120	.	.	.	.	.	.
59.0	13.46	35.72	26.87	121	.	.	.	.	.	.
60.0	13.17	35.71	26.92	116	.	.	.	.	.	.
61.0	12.57	35.59	26.95	113	.	.	.	.	.	.
62.0	12.52	35.60	26.96	111	.	.	.	.	.	.
63.0	12.50	35.60	26.97	111	3.12	5.96	2.84	1.29	20.5	12.4
64.0	12.43	35.59	26.97	110	.	.	.	.	.	.
65.0	12.39	35.57	26.97	111	.	.	.	.	.	.
66.0	12.38	35.59	26.98	109	.	.	.	.	.	.
67.0	12.38	35.57	26.97	111	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 179 14/ IV/77 22.6 GMT CONSEC STA 179

LAT 29 40.2N LONG 80 15.4W DEPTH = 68M DIST LAST STA = .8KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 24.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	22.00	.	.	.	.	.	.	.	.	.
1.5	21.80	.	.	.	.	.	.	.	.	.
4.0	21.70	.	.	.	.	.	.	.	.	.
4.5	21.50	.	.	.	.	.	.	.	.	.
7.0	21.00	.	.	.	.	.	.	.	.	.
11.0	20.50	.	.	.	.	.	.	.	.	.
13.0	20.00	.	.	.	.	.	.	.	.	.
16.0	19.50	.	.	.	.	.	.	.	.	.
17.5	19.00	.	.	.	.	.	.	.	.	.
18.5	18.50	.	.	.	.	.	.	.	.	.
19.5	18.00	.	.	.	.	.	.	.	.	.
23.5	17.50	.	.	.	.	.	.	.	.	.
25.0	17.20	.	.	.	.	.	.	.	.	.
29.5	17.00	.	.	.	.	.	.	.	.	.
33.0	16.50	.	.	.	.	.	.	.	.	.
37.0	16.00	.	.	.	.	.	.	.	.	.
44.0	15.50	.	.	.	.	.	.	.	.	.
45.5	15.00	.	.	.	.	.	.	.	.	.
46.5	14.50	.	.	.	.	.	.	.	.	.
50.5	14.00	.	.	.	.	.	.	.	.	.
54.5	13.50	.	.	.	.	.	.	.	.	.
57.5	13.00	.	.	.	.	.	.	.	.	.
63.5	12.50	.	.	.	.	.	.	.	.	.
68.0	12.10	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 180 14/ IV/77 23.0 GMT CONSEC STA 180

LAT 29 40.1N LONG 80 14.1W DEPTH =104M DIST LAST STA = 2.1KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 24.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
2.0	20.54	36.10	25.46	252	6.33	5.08	-1.25	0.21	00.1	00.4
3.0	20.54	36.11	25.47	251	.	.	.	.	.	.
4.0	20.54	36.11	25.47	251	.	.	.	.	.	.
5.0	20.53	36.12	25.48	251	.	.	.	.	.	.
6.0	20.53	36.11	25.47	251	.	.	.	.	.	.
7.0	20.54	36.11	25.47	252	.	.	.	.	.	.
8.0	20.53	36.11	25.47	251	.	.	.	.	.	.
9.0	20.50	36.12	25.49	250	.	.	.	.	.	.
10.0	20.38	36.11	25.51	248	.	.	.	.	.	.
11.0	20.27	36.12	25.55	244	.	.	.	.	.	.
12.0	20.20	36.10	25.56	244	.	.	.	.	.	.
13.0	19.80	36.10	25.66	234	.	.	.	.	.	.
14.0	19.71	36.09	25.68	232	.	.	.	.	.	.
15.0	19.70	36.09	25.68	232	.	.	.	.	.	.
16.0	19.51	36.06	25.71	230	.	.	.	.	.	.
17.0	19.40	36.09	25.76	225	.	.	.	.	.	.
18.0	19.09	36.11	25.85	216	.	.	.	.	.	.
19.0	18.66	36.12	25.97	204	.	.	.	.	.	.
20.0	18.28	36.02	25.99	203	.	.	.	.	.	.
21.0	18.18	36.04	26.03	199	.	.	.	.	.	.
22.0	18.10	36.01	26.03	199	4.43	5.32	.89	0.57	07.2	04.0
23.0	17.94	36.01	26.07	195	.	.	.	.	.	.
24.0	17.79	36.01	26.11	192	.	.	.	.	.	.
25.0	17.53	36.01	26.17	186	.	.	.	.	.	.
26.0	17.38	36.01	26.21	182	.	.	.	.	.	.
27.0	17.20	35.99	26.23	180	.	.	.	.	.	.
28.0	17.04	35.98	26.26	177	.	.	.	.	.	.
29.0	16.51	35.95	26.37	167	.	.	.	.	.	.
30.0	16.37	35.97	26.42	163	.	.	.	.	.	.
31.0	16.22	35.95	26.44	161	.	.	.	.	.	.
32.0	16.08	35.97	26.48	156	.	.	.	.	.	.
33.0	15.93	35.93	26.49	156	.	.	.	.	.	.
34.0	15.48	35.96	26.61	144	.	.	.	.	.	.
35.0	15.26	35.89	26.61	144	.	.	.	.	.	.
36.0	15.06	35.88	26.65	141	.	.	.	.	.	.
37.0	15.00	35.89	26.67	139	.	.	.	.	.	.
38.0	14.93	35.89	26.68	137	.	.	.	.	.	.
39.0	14.88	35.89	26.69	136	.	.	.	.	.	.
40.0	14.81	35.90	26.72	134	.	.	.	.	.	.

STA 180 14/ IV/77 23.0 GMT CONSEC STA 180 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
41.0	14.80	35.90	26.72	134	.	.	.	.	.	.
42.0	14.78	35.90	26.72	134	3.53	5.68	2.15	1.05	13.5	07.0
43.0	14.74	35.91	26.74	132	.	.	.	.	.	.
44.0	14.67	35.90	26.75	131	.	.	.	.	.	.
45.0	14.51	35.90	26.78	128	.	.	.	.	.	.
46.0	14.41	35.87	26.78	128	.	.	.	.	.	.
47.0	14.23	35.84	26.80	127	.	.	.	.	.	.
48.0	14.12	35.82	26.80	126	.	.	.	.	.	.
49.0	14.11	35.82	26.81	126	.	.	.	.	.	.
50.0	14.00	35.80	26.81	125	.	.	.	.	.	.
51.0	13.90	35.80	26.84	123	.	.	.	.	.	.
52.0	13.78	35.78	26.85	122	.	.	.	.	.	.
53.0	13.70	35.79	26.87	120	.	.	.	.	.	.
54.0	13.61	35.74	26.85	122	.	.	.	.	.	.
55.0	13.54	35.74	26.86	121	.	.	.	.	.	.
56.0	13.48	35.74	26.88	119	.	.	.	.	.	.
57.0	13.43	35.73	26.88	119	.	.	.	.	.	.
58.0	13.40	35.71	26.87	120	.	.	.	.	.	.
59.0	13.38	35.72	26.88	119	.	.	.	.	.	.
60.0	13.31	35.71	26.89	118	.	.	.	.	.	.
61.0	13.26	35.71	26.90	117	.	.	.	.	.	.
62.0	13.22	35.70	26.90	117	.	.	.	.	.	.
63.0	13.10	35.69	26.92	116	.	.	.	.	.	.
64.0	13.06	35.67	26.91	117	.	.	.	.	.	.
65.0	13.00	35.69	26.94	114	.	.	.	.	.	.
66.0	12.93	35.65	26.92	116	.	.	.	.	.	.
67.0	12.83	35.64	26.93	114	.	.	.	.	.	.
68.0	12.77	35.65	26.95	113	.	.	.	.	.	.
69.0	12.76	35.63	26.94	114	.	.	.	.	.	.
70.0	12.70	35.62	26.94	113	.	.	.	.	.	.
71.0	12.67	35.62	26.95	113	.	.	.	.	.	.
72.0	12.59	35.62	26.97	111	.	.	.	.	.	.
73.0	12.56	35.62	26.97	111	.	.	.	.	.	.
74.0	12.46	35.64	27.01	108	.	.	.	.	.	.
75.0	12.36	35.58	26.98	110	.	.	.	.	.	.
76.0	12.26	35.57	26.99	109	3.08	5.99	2.91	1.46	21.6	13.6
77.0	12.07	35.54	27.01	108	.	.	.	.	.	.
78.0	11.96	35.55	27.03	105	.	.	.	.	.	.
79.0	11.86	35.50	27.01	107	.	.	.	.	.	.
80.0	11.81	35.51	27.03	105	.	.	.	.	.	.

STA 180 14/ IV/77 23.0 GMT CONSEC STA 180 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
81.0	11.69	35.50	27.05	104	.	.	.	.	.	.
82.0	11.59	35.45	27.03	106	.	.	.	.	.	.
83.0	11.36	35.46	27.08	101	.	.	.	.	.	.
84.0	11.17	35.44	27.10	99	.	.	.	.	.	.
85.0	11.09	35.41	27.09	100	.	.	.	.	.	.
86.0	10.83	35.42	27.14	95	.	.	.	.	.	.
87.0	10.67	35.34	27.11	98	.	.	.	.	.	.
88.0	10.33	35.38	27.20	89	.	.	.	.	.	.
89.0	9.64	35.20	27.18	91	.	.	.	.	.	.
90.0	9.38	35.24	27.26	84	.	.	.	.	.	.
91.0	9.20	35.16	27.22	87	.	.	.	.	.	.
92.0	9.00	35.17	27.26	83	.	.	.	.	.	.
93.0	8.94	35.12	27.24	86	.	.	.	.	.	.
94.0	8.92	35.11	27.23	86	.	.	.	.	.	.
95.0	8.90	35.10	27.23	87	.	.	.	.	.	.
96.0	8.88	35.10	27.23	86	.	.	.	.	.	.
97.0	8.88	35.10	27.23	86	3.06	6.47	3.41	1.46	21.4	13.9
98.0	8.88	35.08	27.21	88	.	.	.	.	.	.
99.0	8.88	35.09	27.22	87	.	.	.	.	.	.
100.0	8.88	35.10	27.23	86	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 181 14/ IV/77 23.7 GMT CONSEC STA 181

LAT 29 40.2N LONG 80 11.8W DEPTH =200M DIST LAST STA = 3.7KM

WEATHER DATA

WIND SPEED	= 12 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	21.90	.	.	.	.	.	.	.	.	.
8.5	21.90	.	.	.	.	.	.	.	.	.
14.5	21.50	.	.	.	.	.	.	.	.	.
17.5	21.00	.	.	.	.	.	.	.	.	.
20.0	20.50	.	.	.	.	.	.	.	.	.
24.0	20.00	.	.	.	.	.	.	.	.	.
24.5	19.50	.	.	.	.	.	.	.	.	.
25.5	19.00	.	.	.	.	.	.	.	.	.
27.0	18.50	.	.	.	.	.	.	.	.	.
29.0	18.00	.	.	.	.	.	.	.	.	.
31.5	17.50	.	.	.	.	.	.	.	.	.
33.0	17.00	.	.	.	.	.	.	.	.	.
34.5	16.50	.	.	.	.	.	.	.	.	.
35.5	16.00	.	.	.	.	.	.	.	.	.
37.0	15.50	.	.	.	.	.	.	.	.	.
39.0	15.00	.	.	.	.	.	.	.	.	.
42.0	14.50	.	.	.	.	.	.	.	.	.
45.0	14.00	.	.	.	.	.	.	.	.	.
54.5	13.50	.	.	.	.	.	.	.	.	.
62.5	13.00	.	.	.	.	.	.	.	.	.
77.5	12.50	.	.	.	.	.	.	.	.	.
85.0	12.00	.	.	.	.	.	.	.	.	.
96.5	11.50	.	.	.	.	.	.	.	.	.
101.5	11.50	.	.	.	.	.	.	.	.	.
103.0	11.30	.	.	.	.	.	.	.	.	.
113.0	11.50	.	.	.	.	.	.	.	.	.
120.5	11.00	.	.	.	.	.	.	.	.	.
125.5	10.50	.	.	.	.	.	.	.	.	.
139.5	10.00	.	.	.	.	.	.	.	.	.
142.0	9.50	.	.	.	.	.	.	.	.	.
144.0	9.30	.	.	.	.	.	.	.	.	.
189.5	9.00	.	.	.	.	.	.	.	.	.
200.0	8.80	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 182 15⁄ IV⁄77 .1 GMT CONSEC STA 182

LAT 29 41.0N LONG 80 8.2W DEPTH =388M DIST LAST STA = 6.0KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2⁄	AOU	PO4	NO3	SI
3.0	25.12	36.09	24.14	379	4.93	4.69	-.24	0.08	00.1	01.5
4.0	25.12	36.11	24.15	377	.	.	.	.	.	.
5.0	25.11	36.10	24.15	378	.	.	.	.	.	.
6.0	25.11	36.08	24.13	379	.	.	.	.	.	.
7.0	25.11	36.06	24.12	381	.	.	.	.	.	.
8.0	25.11	36.08	24.13	379	.	.	.	.	.	.
9.0	25.11	36.09	24.14	379	.	.	.	.	.	.
10.0	25.11	36.08	24.13	379	.	.	.	.	.	.
11.0	25.11	36.07	24.12	380	.	.	.	.	.	.
12.0	25.11	36.08	24.13	379	.	.	.	.	.	.
13.0	25.11	36.09	24.14	379	.	.	.	.	.	.
14.0	25.08	36.08	24.14	379	.	.	.	.	.	.
15.0	25.03	36.10	24.17	376	.	.	.	.	.	.
16.0	24.95	36.08	24.18	375	.	.	.	.	.	.
17.0	24.89	36.07	24.19	374	.	.	.	.	.	.
18.0	24.81	36.08	24.22	371	.	.	.	.	.	.
19.0	24.70	36.05	24.23	370	.	.	.	.	.	.
20.0	24.44	36.08	24.34	360	.	.	.	.	.	.
21.0	24.29	36.06	24.37	357	.	.	.	.	.	.
22.0	24.13	36.07	24.42	352	.	.	.	.	.	.
23.0	24.00	36.08	24.47	348	.	.	.	.	.	.
24.0	23.89	36.09	24.51	344	.	.	.	.	.	.
25.0	23.79	36.08	24.53	342	.	.	.	.	.	.
26.0	23.70	36.08	24.56	339	.	.	.	.	.	.
27.0	23.61	36.07	24.58	338	.	.	.	.	.	.
28.0	23.50	36.07	24.61	335	5.11	4.82	-.29	0.14	00.3	01.5
29.0	23.44	36.08	24.63	332	.	.	.	.	.	.
30.0	23.32	36.10	24.68	328	.	.	.	.	.	.
31.0	23.23	36.08	24.69	327	.	.	.	.	.	.
32.0	23.17	36.09	24.72	324	.	.	.	.	.	.
33.0	23.10	36.11	24.75	321	.	.	.	.	.	.
34.0	22.97	36.10	24.78	318	.	.	.	.	.	.
35.0	22.87	36.10	24.81	315	.	.	.	.	.	.
36.0	22.73	36.10	24.85	311	.	.	.	.	.	.
37.0	22.67	36.08	24.86	311	.	.	.	.	.	.
38.0	22.50	36.11	24.93	305	.	.	.	.	.	.
39.0	22.38	36.16	25.00	298	.	.	.	.	.	.
40.0	22.16	36.15	25.05	293	.	.	.	.	.	.
41.0	22.02	36.14	25.09	290	.	.	.	.	.	.

STA 182 15/ IV/77 .1 GMT CONSEC STA 182 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
42.0	21.82	36.15	25.15	284	.	.	.	.	.	.
43.0	21.72	36.15	25.18	281	.	.	.	.	.	.
44.0	21.62	36.16	25.21	278	.	.	.	.	.	.
45.0	21.40	36.21	25.31	268	.	.	.	.	.	.
46.0	21.27	36.17	25.32	268	.	.	.	.	.	.
47.0	21.14	36.18	25.36	264	.	.	.	.	.	.
48.0	20.92	36.26	25.48	252	.	.	.	.	.	.
49.0	20.51	36.21	25.56	245	.	.	.	.	.	.
50.0	20.24	36.25	25.66	235	.	.	.	.	.	.
51.0	19.98	36.23	25.71	230	.	.	.	.	.	.
52.0	19.89	36.16	25.68	233	.	.	.	.	.	.
53.0	19.71	36.20	25.76	226	.	.	.	.	.	.
54.0	19.39	36.18	25.83	219	4.44	5.19	.75	0.53	06.5	04.1
55.0	19.00	36.28	26.01	202	.	.	.	.	.	.
56.0	18.70	36.19	26.02	202	.	.	.	.	.	.
57.0	18.62	36.16	26.01	202	.	.	.	.	.	.
58.0	18.44	36.18	26.07	196	.	.	.	.	.	.
59.0	18.14	36.28	26.23	182	.	.	.	.	.	.
60.0	17.84	36.18	26.22	182	.	.	.	.	.	.
61.0	17.50	36.23	26.34	170	.	.	.	.	.	.
62.0	17.11	36.12	26.36	169	.	.	.	.	.	.
63.0	16.78	36.00	26.34	171	.	.	.	.	.	.
64.0	16.39	36.00	26.43	162	.	.	.	.	.	.
65.0	15.94	36.01	26.55	151	.	.	.	.	.	.
66.0	15.63	35.90	26.53	153	.	.	.	.	.	.
67.0	15.41	35.97	26.64	143	.	.	.	.	.	.
68.0	15.17	35.88	26.62	144	.	.	.	.	.	.
69.0	14.89	35.86	26.67	140	.	.	.	.	.	.
70.0	14.62	35.87	26.73	133	.	.	.	.	.	.
71.0	14.38	35.96	26.86	122	.	.	.	.	.	.
72.0	14.19	35.91	26.86	122	.	.	.	.	.	.
73.0	14.07	35.88	26.86	121	.	.	.	.	.	.
74.0	13.87	35.80	26.84	123	.	.	.	.	.	.
75.0	13.62	35.81	26.90	118	.	.	.	.	.	.
76.0	13.33	35.91	27.04	105	3.47	5.85	2.38	1.12	16.2	10.5
77.0	13.23	35.79	26.97	111	.	.	.	.	.	.
78.0	13.08	35.80	27.01	108	.	.	.	.	.	.
79.0	12.93	35.85	27.08	101	.	.	.	.	.	.
80.0	12.86	35.68	26.96	112	.	.	.	.	.	.
81.0	12.64	35.68	27.00	108	.	.	.	.	.	.

STA 182 15/ IV/77 .1 GMT CONSEC STA 182 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
82.0	12.43	35.70	27.06	103	.	.	.	.	.	.
83.0	12.10	35.84	27.23	86	.	.	.	.	.	.
84.0	12.07	35.55	27.01	107	.	.	.	.	.	.
85.0	12.02	35.51	26.99	109	.	.	.	.	.	.
86.0	12.00	35.51	27.00	109	.	.	.	.	.	.
87.0	11.99	35.52	27.01	108	.	.	.	.	.	.
88.0	11.93	35.53	27.02	106	.	.	.	.	.	.
89.0	11.90	35.57	27.06	103	.	.	.	.	.	.
90.0	11.88	35.50	27.01	107	.	.	.	.	.	.
91.0	11.81	35.51	27.03	105	.	.	.	.	.	.
92.0	11.70	35.50	27.05	104	.	.	.	.	.	.
93.0	11.70	35.49	27.04	105	.	.	.	.	.	.
94.0	11.69	35.47	27.02	106	.	.	.	.	.	.
95.0	11.62	35.45	27.02	107	.	.	.	.	.	.
96.0	11.51	35.51	27.09	100	.	.	.	.	.	.
97.0	11.48	35.46	27.06	103	.	.	.	.	.	.
98.0	11.43	35.42	27.03	105	.	.	.	.	.	.
99.0	11.39	35.41	27.03	105	.	.	.	.	.	.
100.0	11.39	35.41	27.03	105	.	.	.	.	.	.
101.0	11.38	35.43	27.05	104	.	.	.	.	.	.
104.0	11.23	35.41	27.06	103	2.69	6.13	3.44	1.36	22.8	13.1
110.0	11.10	35.37	27.06	103	.	.	.	.	.	.
115.0	11.02	35.36	27.06	103	.	.	.	.	.	.
120.0	10.74	35.32	27.08	101	.	.	.	.	.	.
125.0	10.57	35.31	27.11	99	.	.	.	.	.	.
130.0	10.41	35.27	27.10	99	.	.	.	.	.	.
135.0	10.32	35.28	27.13	97	.	.	.	.	.	.
140.0	10.12	35.26	27.15	95	.	.	.	.	.	.
145.0	9.88	35.23	27.16	94	.	.	.	.	.	.
150.0	9.59	35.21	27.20	91	.	.	.	.	.	.
155.0	9.50	35.17	27.18	92	.	.	.	.	.	.
161.0	9.14	35.16	27.23	87	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 192 15/ IV/77 4.1 GMT CONSEC STA 192

LAT 29 25.2N LONG 80 35.5W DEPTH = 26M DIST LAST STA = 52.9KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 080	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1015.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
3.0	20.60	35.97	25.35	263	5.53	5.08	-.45	0.14	00.1	00.9
4.0	20.60	35.97	25.35	263	.	.	.	.	.	.
5.0	20.60	35.98	25.36	262	.	.	.	.	.	.
6.0	20.60	35.98	25.36	262	.	.	.	.	.	.
7.0	20.59	35.98	25.36	262	.	.	.	.	.	.
8.0	20.54	35.98	25.37	261	.	.	.	.	.	.
9.0	20.50	35.97	25.38	261	.	.	.	.	.	.
10.0	20.42	35.97	25.40	259	.	.	.	.	.	.
11.0	20.38	35.96	25.40	258	.	.	.	.	.	.
12.0	20.26	35.97	25.44	255	.	.	.	.	.	.
13.0	20.22	35.97	25.45	254	.	.	.	.	.	.
14.0	20.22	35.96	25.44	255	.	.	.	.	.	.
15.0	20.22	35.96	25.44	255	5.40	5.11	-.29	0.19	00.1	01.8
16.0	20.21	35.96	25.45	254	.	.	.	.	.	.
17.0	20.21	35.97	25.45	254	.	.	.	.	.	.
18.0	20.21	35.97	25.45	254	.	.	.	.	.	.
19.0	20.21	35.97	25.45	254	.	.	.	.	.	.
20.0	20.21	35.97	25.45	254	.	.	.	.	.	.
21.0	20.21	35.97	25.45	254	.	.	.	.	.	.
22.0	20.21	35.96	25.45	255	5.40	5.11	-.29	0.44	00.1	02.1

ADVANCE II CRUISE 4 STA 193 15/ IV/77 5.0 GMT CONSEC STA 193

LAT 29 25.3N LONG 80 29.7W DEPTH = 33M DIST LAST STA = 9.4KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1015.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	21.30	.	.	.	.	.	.	.	.	.
1.5	21.00	.	.	.	.	.	.	.	.	.
13.0	20.50	.	.	.	.	.	.	.	.	.
14.5	20.20	.	.	.	.	.	.	.	.	.
33.0	20.20	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 194 15/ IV/77 5.4 GMT CONSEC STA 194

LAT 29 25.0N LONG 80 25.0W DEPTH = 29M DIST LAST STA = 7.6KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1015.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
2.0	22.03	36.14	25.08	288	5.20	4.94	-.26	0.09	00.0	00.1
3.0	22.02	36.15	25.09	287	.	.	.	.	.	.
4.0	22.02	36.15	25.09	287	.	.	.	.	.	.
5.0	22.02	36.15	25.09	287	.	.	.	.	.	.
6.0	22.02	36.15	25.09	287	.	.	.	.	.	.
7.0	22.02	36.15	25.09	288	.	.	.	.	.	.
8.0	22.01	36.15	25.10	287	.	.	.	.	.	.
9.0	22.00	36.15	25.10	287	.	.	.	.	.	.
10.0	22.00	36.15	25.10	287	.	.	.	.	.	.
11.0	22.00	36.15	25.10	287	.	.	.	.	.	.
12.0	21.90	36.17	25.14	283	.	.	.	.	.	.
13.0	21.88	36.15	25.13	284	.	.	.	.	.	.
14.0	21.79	36.15	25.16	282	.	.	.	.	.	.
15.0	21.72	36.16	25.19	279	.	.	.	.	.	.
16.0	21.68	36.15	25.19	279	.	.	.	.	.	.
17.0	21.50	36.17	25.25	273	.	.	.	.	.	.
18.0	20.92	36.13	25.38	260	.	.	.	.	.	.
19.0	20.76	36.09	25.40	259	.	.	.	.	.	.
20.0	20.73	36.09	25.41	258	.	.	.	.	.	.
21.0	20.72	36.09	25.41	258	5.19	5.06	-.13	0.18	00.1	01.8
22.0	20.72	36.09	25.41	258	.	.	.	.	.	.
23.0	20.72	36.09	25.41	258	.	.	.	.	.	.
24.0	20.72	36.09	25.41	258	.	.	.	.	.	.
25.0	20.72	36.09	25.41	258	5.18	5.06	-.12	0.16	00.2	02.4
26.0	20.72	36.09	25.41	258	.	.	.	.	.	.
27.0	20.72	36.09	25.41	258	.	.	.	.	.	.
28.0	20.72	36.09	25.41	258	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 195 15/ IV/77 6.3 GMT CONSEC STA 195

LAT 29 26.4N LONG 80 19.9W DEPTH = 43M DIST LAST STA = 8.6KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1015.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	23.50	.	.	.	.	.	.	.	.	.
8.5	24.00	.	.	.	.	.	.	.	.	.
16.0	23.70	.	.	.	.	.	.	.	.	.
18.0	23.50	.	.	.	.	.	.	.	.	.
26.0	23.00	.	.	.	.	.	.	.	.	.
29.0	22.60	.	.	.	.	.	.	.	.	.
31.0	23.00	.	.	.	.	.	.	.	.	.
32.0	23.50	.	.	.	.	.	.	.	.	.
32.5	24.00	.	.	.	.	.	.	.	.	.
33.0	24.50	.	.	.	.	.	.	.	.	.
33.5	24.60	.	.	.	.	.	.	.	.	.
35.5	24.50	.	.	.	.	.	.	.	.	.
37.0	24.00	.	.	.	.	.	.	.	.	.
38.0	23.50	.	.	.	.	.	.	.	.	.
40.5	23.00	.	.	.	.	.	.	.	.	.
42.0	22.50	.	.	.	.	.	.	.	.	.
42.5	22.00	.	.	.	.	.	.	.	.	.
43.0	19.90	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 196 15/ IV/77 6.6 GMT CONSEC STA 196

LAT 29 25.2N LONG 80 16.9W DEPTH = 48M DIST LAST STA = 5.3KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 21.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	22.60	.	.	.	.	.	.	.	.	.
16.5	22.60	.	.	.	.	.	.	.	.	.
16.5	22.50	.	.	.	.	.	.	.	.	.
18.5	22.00	.	.	.	.	.	.	.	.	.
19.5	21.50	.	.	.	.	.	.	.	.	.
26.0	21.00	.	.	.	.	.	.	.	.	.
30.0	20.50	.	.	.	.	.	.	.	.	.
31.0	20.00	.	.	.	.	.	.	.	.	.
34.0	19.50	.	.	.	.	.	.	.	.	.
35.0	19.00	.	.	.	.	.	.	.	.	.
41.0	18.50	.	.	.	.	.	.	.	.	.
44.0	18.00	.	.	.	.	.	.	.	.	.
48.0	17.50	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 197 15/ IV/77 6.9 GMT CONSEC STA 197

LAT 29 25.5N LONG 80 15.7W DEPTH = 55M DIST LAST STA = 2.0KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 21.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	22.38	36.10	24.95	301	5.30	4.91	-.39	0.06	00.1	00.4
3.0	22.38	36.11	24.96	300	.	.	.	.	.	.
4.0	22.38	36.11	24.96	300	.	.	.	.	.	.
5.0	22.38	36.11	24.96	300	.	.	.	.	.	.
6.0	22.38	36.11	24.96	300	.	.	.	.	.	.
7.0	22.38	36.11	24.96	300	.	.	.	.	.	.
8.0	22.38	36.11	24.96	300	.	.	.	.	.	.
9.0	22.38	36.11	24.96	300	.	.	.	.	.	.
10.0	22.38	36.11	24.96	300	.	.	.	.	.	.
11.0	22.38	36.11	24.96	300	.	.	.	.	.	.
12.0	22.38	36.11	24.96	300	.	.	.	.	.	.
13.0	22.38	36.11	24.96	300	.	.	.	.	.	.
14.0	22.38	36.11	24.96	300	.	.	.	.	.	.
15.0	22.38	36.10	24.95	301	.	.	.	.	.	.
16.0	22.38	36.10	24.95	301	.	.	.	.	.	.
17.0	22.38	36.10	24.95	301	.	.	.	.	.	.
18.0	22.38	36.10	24.95	301	.	.	.	.	.	.
19.0	22.39	36.09	24.94	302	.	.	.	.	.	.
20.0	22.38	36.11	24.96	301	.	.	.	.	.	.
21.0	22.38	36.10	24.95	301	.	.	.	.	.	.
22.0	22.38	36.10	24.95	301	.	.	.	.	.	.
23.0	22.38	36.10	24.95	301	.	.	.	.	.	.
24.0	22.38	36.11	24.96	301	.	.	.	.	.	.
25.0	22.38	36.10	24.95	302	.	.	.	.	.	.
26.0	22.38	36.10	24.95	302	.	.	.	.	.	.
27.0	22.38	36.10	24.95	302	.	.	.	.	.	.
28.0	22.38	36.11	24.96	301	.	.	.	.	.	.
29.0	22.38	36.11	24.96	301	.	.	.	.	.	.
30.0	22.36	36.11	24.97	300	.	.	.	.	.	.
31.0	22.00	36.22	25.15	283	.	.	.	.	.	.
32.0	21.44	36.17	25.27	272	.	.	.	.	.	.
33.0	21.13	36.18	25.36	263	.	.	.	.	.	.
34.0	20.88	36.17	25.43	257	.	.	.	.	.	.
35.0	20.30	36.17	25.58	242	.	.	.	.	.	.
36.0	20.08	36.13	25.61	239	.	.	.	.	.	.
37.0	19.51	36.13	25.76	225	.	.	.	.	.	.
38.0	19.20	36.16	25.86	215	.	.	.	.	.	.
39.0	18.30	36.16	26.09	194	.	.	.	.	.	.
40.0	18.12	36.12	26.11	192	.	.	.	.	.	.

STA 197 15/ IV/77 6.9 GMT CONSEC STA 197 [CONTINUED]

				OBSERVATIONS						
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
41.0	18.08	36.12	26.12	191	.	.	.	.	.	.
42.0	18.01	36.11	26.13	190	.	.	.	.	.	.
43.0	17.92	36.10	26.14	189	.	.	.	.	.	.
44.0	17.91	36.10	26.14	189	4.22	5.33	1.11	0.52	05.4	04.4
45.0	17.90	36.10	26.15	189	.	.	.	.	.	.
46.0	17.90	36.10	26.15	189	.	.	.	.	.	.
47.0	17.89	36.10	26.15	188	.	.	.	.	.	.
48.0	17.82	36.10	26.17	187	.	.	.	.	.	.
49.0	17.61	36.08	26.20	183	.	.	.	.	.	.
50.0	17.38	36.11	26.28	176	.	.	.	.	.	.
51.0	17.21	36.09	26.31	174	3.93	5.41	1.48	0.58	08.4	05.4
52.0	17.10	36.05	26.30	174	.	.	.	.	.	.
53.0	16.98	36.05	26.33	171	.	.	.	.	.	.
54.0	16.96	36.05	26.34	171	.	.	.	.	.	.
55.0	16.99	36.05	26.33	172	.	.	.	.	.	.

ADVANCE II CRUISE 4 / STA 198 15/ IV/77 7.8 GMT CONSEC STA 198

LAT 29 25.2N LONG 80 9.9W DEPTH =125M DIST LAST STA = 9.4KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 21.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1014.2 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	24.60	.	.	.	.	.	.	.	.	.
8.5	24.60	.	.	.	.	.	.	.	.	.
12.0	24.50	.	.	.	.	.	.	.	.	.
16.0	24.00	.	.	.	.	.	.	.	.	.
19.5	23.50	.	.	.	.	.	.	.	.	.
25.0	23.00	.	.	.	.	.	.	.	.	.
31.5	22.50	.	.	.	.	.	.	.	.	.
37.5	22.00	.	.	.	.	.	.	.	.	.
40.0	21.80	.	.	.	.	.	.	.	.	.
54.5	21.70	.	.	.	.	.	.	.	.	.
56.0	21.50	.	.	.	.	.	.	.	.	.
58.5	21.00	.	.	.	.	.	.	.	.	.
60.5	20.50	.	.	.	.	.	.	.	.	.
60.5	20.20	.	.	.	.	.	.	.	.	.
63.0	20.10	.	.	.	.	.	.	.	.	.
63.5	20.00	.	.	.	.	.	.	.	.	.
65.0	19.50	.	.	.	.	.	.	.	.	.
66.0	19.00	.	.	.	.	.	.	.	.	.
67.0	18.50	.	.	.	.	.	.	.	.	.
68.5	18.00	.	.	.	.	.	.	.	.	.
71.0	17.50	.	.	.	.	.	.	.	.	.
74.0	17.00	.	.	.	.	.	.	.	.	.
80.0	16.50	.	.	.	.	.	.	.	.	.
81.0	16.30	.	.	.	.	.	.	.	.	.
94.5	16.00	.	.	.	.	.	.	.	.	.
100.5	15.50	.	.	.	.	.	.	.	.	.
103.5	15.00	.	.	.	.	.	.	.	.	.
109.0	14.50	.	.	.	.	.	.	.	.	.
110.0	14.00	.	.	.	.	.	.	.	.	.
111.5	13.50	.	.	.	.	.	.	.	.	.
114.0	13.00	.	.	.	.	.	.	.	.	.
119.5	12.60	.	.	.	.	.	.	.	.	.
125.0	12.60	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 199 15/ IV/77 8.1 GMT CONSEC STA 199

LAT 29 25.6N LONG 80 7.3W DEPTH =370M DIST LAST STA = 4.3KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 090	WAVE DIRECTION	=
AIR TEMP	= 21.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1013.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	25.20	35.99	24.04	388	4.87	4.68	-.19	0.03	00.0	01.7
4.0	25.20	35.96	24.01	390	.	.	.	.	.	.
5.0	25.20	35.98	24.03	389	.	.	.	.	.	.
6.0	25.21	36.02	24.06	386	.	.	.	.	.	.
7.0	25.20	36.03	24.07	385	.	.	.	.	.	.
8.0	25.20	36.00	24.04	388	.	.	.	.	.	.
9.0	25.21	36.00	24.04	388	.	.	.	.	.	.
10.0	25.22	36.02	24.05	387	.	.	.	.	.	.
11.0	25.22	36.00	24.04	388	.	.	.	.	.	.
12.0	25.22	35.99	24.03	389	.	.	.	.	.	.
13.0	25.22	36.01	24.05	388	.	.	.	.	.	.
14.0	25.22	36.02	24.05	387	.	.	.	.	.	.
15.0	25.23	36.02	24.05	387	.	.	.	.	.	.
16.0	25.23	36.01	24.04	388	.	.	.	.	.	.
17.0	25.22	36.00	24.04	389	.	.	.	.	.	.
18.0	25.23	35.99	24.03	390	.	.	.	.	.	.
19.0	25.23	35.99	24.03	390	.	.	.	.	.	.
20.0	25.23	35.97	24.01	391	.	.	.	.	.	.
21.0	25.23	36.00	24.03	389	.	.	.	.	.	.
22.0	25.23	36.01	24.04	388	.	.	.	.	.	.
23.0	25.22	36.00	24.04	389	.	.	.	.	.	.
24.0	25.21	36.01	24.05	388	.	.	.	.	.	.
25.0	25.20	35.99	24.04	389	.	.	.	.	.	.
26.0	25.19	36.02	24.06	387	.	.	.	.	.	.
27.0	25.18	36.03	24.07	386	.	.	.	.	.	.
28.0	25.16	36.01	24.06	387	.	.	.	.	.	.
29.0	25.15	36.03	24.08	385	.	.	.	.	.	.
30.0	25.13	36.04	24.10	384	.	.	.	.	.	.
31.0	25.12	36.05	24.11	383	.	.	.	.	.	.
32.0	25.10	36.06	24.12	381	.	.	.	.	.	.
33.0	25.04	36.08	24.15	378	4.93	4.69	-.24	0.05	00.1	01.0
34.0	25.01	36.09	24.17	377	.	.	.	.	.	.
35.0	24.90	36.07	24.19	375	.	.	.	.	.	.
36.0	24.72	36.06	24.24	370	.	.	.	.	.	.
37.0	24.33	36.10	24.38	356	.	.	.	.	.	.
38.0	24.00	36.05	24.44	351	.	.	.	.	.	.
39.0	23.77	36.03	24.50	346	.	.	.	.	.	.
40.0	23.63	36.05	24.55	340	.	.	.	.	.	.
41.0	23.49	36.07	24.61	335	.	.	.	.	.	.

STA 199 15/ IV/77 8.1 GMT CONSEC STA 199 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
42.0	23.38	36.06	24.64	333	.	.	.	.	.	.
43.0	23.29	36.05	24.65	331	.	.	.	.	.	.
44.0	23.17	36.07	24.70	326	.	.	.	.	.	.
45.0	23.10	36.08	24.73	323	.	.	.	.	.	.
46.0	23.00	36.09	24.77	320	.	.	.	.	.	.
47.0	22.88	36.10	24.81	316	.	.	.	.	.	.
48.0	22.74	36.09	24.84	313	.	.	.	.	.	.
49.0	22.63	36.10	24.88	309	.	.	.	.	.	.
50.0	22.49	36.12	24.94	304	.	.	.	.	.	.
51.0	22.27	36.13	25.01	297	.	.	.	.	.	.
52.0	21.98	36.16	25.11	287	.	.	.	.	.	.
53.0	21.80	36.13	25.14	285	.	.	.	.	.	.
54.0	21.70	36.14	25.18	281	.	.	.	.	.	.
55.0	21.60	36.17	25.23	277	.	.	.	.	.	.
56.0	21.53	36.14	25.22	277	.	.	.	.	.	.
57.0	21.50	36.14	25.23	276	.	.	.	.	.	.
58.0	21.48	36.15	25.24	275	.	.	.	.	.	.
59.0	21.42	36.16	25.27	273	.	.	.	.	.	.
60.0	21.40	36.16	25.27	272	.	.	.	.	.	.
61.0	21.36	36.17	25.29	271	.	.	.	.	.	.
62.0	21.27	36.20	25.34	266	.	.	.	.	.	.
63.0	21.24	36.19	25.34	266	.	.	.	.	.	.
64.0	21.22	36.18	25.34	266	.	.	.	.	.	.
65.0	21.20	36.19	25.35	265	5.29	5.02	-.27	0.10	00.1	00.0
66.0	21.14	36.19	25.37	264	.	.	.	.	.	.
67.0	21.11	36.19	25.38	263	.	.	.	.	.	.
68.0	21.08	36.19	25.39	262	.	.	.	.	.	.
69.0	21.00	36.21	25.42	259	.	.	.	.	.	.
70.0	20.98	36.20	25.42	259	.	.	.	.	.	.
71.0	20.90	36.21	25.45	256	.	.	.	.	.	.
72.0	20.76	36.22	25.50	252	.	.	.	.	.	.
73.0	20.64	36.21	25.52	249	.	.	.	.	.	.
74.0	20.41	36.27	25.63	239	.	.	.	.	.	.
75.0	20.23	36.21	25.63	239	.	.	.	.	.	.
76.0	20.16	36.16	25.61	241	.	.	.	.	.	.
77.0	20.10	36.16	25.63	239	.	.	.	.	.	.
78.0	19.90	36.18	25.70	233	.	.	.	.	.	.
79.0	19.40	36.32	25.93	210	.	.	.	.	.	.
80.0	19.10	36.24	25.95	209	.	.	.	.	.	.
81.0	18.92	36.13	25.91	212	.	.	.	.	.	.

STA 199 15/ IV/77 8.1 GMT CONSEC STA 199 [CONTINUED]

				OBSERVATIONS						
Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
82.0	18.68	36.21	26.04	201	5.06	5.25	.19	0.59	02.2	01.9
83.0	18.50	36.20	26.07	197	.	.	.	.	.	.
84.0	18.20	36.16	26.12	193	.	.	.	.	.	.
85.0	17.88	36.22	26.24	181	.	.	.	.	.	.
86.0	17.68	36.10	26.20	185	.	.	.	.	.	.
87.0	17.53	36.13	26.26	179	.	.	.	.	.	.
88.0	17.50	36.08	26.23	182	.	.	.	.	.	.
110.0					3.74	.	.	0.75	11.6	07.6

ADVANCE II CRUISE 4 STA 213 15/ IV/77 12.1 GMT CONSEC STA 213

LAT 30 0.0N LONG 80 35.0W DEPTH = 41M DIST LAST STA = 77.8KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 23.9C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1015.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
2.0	20.94	36.21	25.44	254	5.44	5.04	-.40	0.06	00.1	00.3
3.0	20.92	36.23	25.46	253	.	.	.	.	.	.
4.0	20.92	36.23	25.46	253	.	.	.	.	.	.
5.0	20.92	36.23	25.46	253	.	.	.	.	.	.
6.0	20.92	36.22	25.45	253	.	.	.	.	.	.
7.0	20.92	36.22	25.45	253	.	.	.	.	.	.
8.0	20.92	36.22	25.45	253	.	.	.	.	.	.
9.0	20.92	36.22	25.45	253	.	.	.	.	.	.
10.0	20.92	36.22	25.45	254	.	.	.	.	.	.
11.0	20.92	36.22	25.45	254	.	.	.	.	.	.
12.0	20.90	36.23	25.47	252	.	.	.	.	.	.
13.0	20.90	36.22	25.46	253	.	.	.	.	.	.
14.0	20.89	36.22	25.46	253	.	.	.	.	.	.
15.0	20.86	36.22	25.47	252	.	.	.	.	.	.
16.0	20.80	36.21	25.48	251	.	.	.	.	.	.
17.0	20.79	36.21	25.48	251	.	.	.	.	.	.
18.0	20.76	36.20	25.48	251	.	.	.	.	.	.
19.0	20.71	36.20	25.49	250	.	.	.	.	.	.
20.0	20.64	36.20	25.51	248	.	.	.	.	.	.
21.0	20.62	36.19	25.51	248	.	.	.	.	.	.
22.0	20.58	36.19	25.52	247	.	.	.	.	.	.
23.0	20.38	36.19	25.58	242	.	.	.	.	.	.
24.0	20.29	36.16	25.58	242	.	.	.	.	.	.
25.0	20.26	36.15	25.58	242	.	.	.	.	.	.
26.0	20.26	36.15	25.58	242	5.09	5.10	.01	0.09	00.0	01.0
27.0	20.24	36.15	25.58	242	.	.	.	.	.	.
28.0	20.23	36.15	25.59	242	.	.	.	.	.	.
29.0	20.23	36.14	25.58	242	.	.	.	.	.	.
30.0	20.23	36.14	25.58	242	.	.	.	.	.	.
31.0	20.23	36.14	25.58	242	.	.	.	.	.	.
32.0	20.22	36.14	25.58	242	.	.	.	.	.	.
33.0	20.22	36.14	25.58	242	.	.	.	.	.	.
34.0	20.22	36.14	25.58	242	.	.	.	.	.	.
35.0	20.22	36.14	25.58	242	.	.	.	.	.	.
36.0	20.21	36.15	25.59	241	.	.	.	.	.	.
37.0	20.21	36.14	25.58	242	.	.	.	.	.	.
38.0	20.21	36.14	25.58	242	5.11	5.11	.00	0.09	00.1	01.2
39.0	20.21	36.14	25.58	242	.	.	.	.	.	.
40.0	20.20	36.15	25.59	241	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 214 15/ IV/77 12.9 GMT CONSEC STA 214

LAT 30 .1N LONG 80 29.5W DEPTH = 42M DIST LAST STA = 8.8KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 22.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1015.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	21.80	.	.	.	.	.	.	.	.	.
9.0	21.70	.	.	.	.	.	.	.	.	.
12.5	21.50	.	.	.	.	.	.	.	.	.
16.0	21.00	.	.	.	.	.	.	.	.	.
19.0	20.50	.	.	.	.	.	.	.	.	.
20.0	20.00	.	.	.	.	.	.	.	.	.
22.0	19.50	.	.	.	.	.	.	.	.	.
23.0	19.30	.	.	.	.	.	.	.	.	.
42.0	19.30	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 - STA 215 15/ IV/77 13.3 GMT CONSEC STA 215

LAT 30 0.0N LONG 80 25.1W DEPTH = 44M DIST LAST STA = 7.1KM

WEATHER DATA

WIND SPEED	= 6 KTS	SEA STATE	=
WIND DIRECTION	= 080	WAVE DIRECTION	=
AIR TEMP	= 23.9C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	21.89	36.17	25.15	282	5.26	4.95	-.31	0.04	00.0	00.0
4.0	21.90	36.18	25.15	282	.	.	.	.	.	.
5.0	21.90	36.18	25.15	282	.	.	.	.	.	.
6.0	21.90	36.18	25.15	282	.	.	.	.	.	.
7.0	21.80	36.19	25.19	279	.	.	.	.	.	.
8.0	21.70	36.18	25.21	277	.	.	.	.	.	.
9.0	21.62	36.19	25.24	274	.	.	.	.	.	.
10.0	21.62	36.18	25.23	275	.	.	.	.	.	.
11.0	21.60	36.18	25.23	274	5.35	4.98	-.37	0.39	00.1	01.0
12.0	21.58	36.19	25.25	273	.	.	.	.	.	.
13.0	21.56	36.18	25.25	273	.	.	.	.	.	.
14.0	21.46	36.19	25.28	270	.	.	.	.	.	.
15.0	21.30	36.21	25.34	264	.	.	.	.	.	.
16.0	21.23	36.21	25.36	263	.	.	.	.	.	.
17.0	21.10	36.23	25.41	258	.	.	.	.	.	.
18.0	20.09	36.25	25.70	230	.	.	.	.	.	.
19.0	19.46	36.15	25.79	222	.	.	.	.	.	.
20.0	18.83	36.13	25.94	208	.	.	.	.	.	.
21.0	18.61	36.12	25.98	203	.	.	.	.	.	.
22.0	18.16	36.13	26.11	192	.	.	.	.	.	.
23.0	18.00	36.14	26.15	187	.	.	.	.	.	.
24.0	18.00	36.14	26.15	187	.	.	.	.	.	.
25.0	18.00	36.14	26.15	187	4.44	5.32	.88	0.34	04.3	03.6
26.0	18.00	36.14	26.15	187	.	.	.	.	.	.
27.0	18.00	36.14	26.15	188	.	.	.	.	.	.
28.0	18.00	36.14	26.15	188	.	.	.	.	.	.
29.0	18.00	36.14	26.15	188	.	.	.	.	.	.
30.0	18.00	36.14	26.15	188	.	.	.	.	.	.
31.0	18.00	36.14	26.15	188	.	.	.	.	.	.
32.0	18.00	36.14	26.15	188	.	.	.	.	.	.
33.0	18.00	36.14	26.15	188	.	.	.	.	.	.
34.0	17.99	36.13	26.15	188	.	.	.	.	.	.
35.0	17.99	36.14	26.16	188	.	.	.	.	.	.
36.0	17.99	36.14	26.16	188	.	.	.	.	.	.
37.0	17.99	36.14	26.16	188	.	.	.	.	.	.
38.0	17.99	36.13	26.15	188	.	.	.	.	.	.
39.0	17.99	36.14	26.16	188	.	.	.	.	.	.
40.0	17.99	36.13	26.15	188	.	.	.	.	.	.
41.0	17.99	36.14	26.16	188	.	.	.	.	.	.

STA 215 15/ IV/77 13.3 GMT CONSEC STA 215 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
42.0	17.99	36.13	26.15	189	4.41	5.33	.92	0.38	04.1	03.8
43.0	17.98	36.14	26.16	188	.	.	.	.	.	.
44.0	17.98	36.14	26.16	188	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 216 15/ IV/77 14.0 GMT CONSEC STA 216

LAT 30 0.0N LONG 80 20.0W DEPTH = 42M DIST LAST STA = 8.2KM

WEATHER DATA

WIND SPEED = 6 KTS
WIND DIRECTION = 080
AIR TEMP = 23.9C
WEATHER CODE =
BAROMETRIC PRESSURE = 1016.3 MB

SEA STATE =
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	22.90	.	.	.	.	.	.	.	.	.
11.5	22.80	.	.	.	.	.	.	.	.	.
12.5	22.50	.	.	.	.	.	.	.	.	.
13.0	22.00	.	.	.	.	.	.	.	.	.
15.5	21.50	.	.	.	.	.	.	.	.	.
16.5	21.00	.	.	.	.	.	.	.	.	.
17.0	20.50	.	.	.	.	.	.	.	.	.
19.0	20.00	.	.	.	.	.	.	.	.	.
22.0	19.50	.	.	.	.	.	.	.	.	.
22.5	19.00	.	.	.	.	.	.	.	.	.
24.0	18.50	.	.	.	.	.	.	.	.	.
27.0	18.00	.	.	.	.	.	.	.	.	.
30.5	17.50	.	.	.	.	.	.	.	.	.
38.0	17.00	.	.	.	.	.	.	.	.	.
42.0	16.90	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 217 15/ IV/77 14.2 GMT CONSEC STA 217

LAT 30 0.0N LONG 80 18.0W DEPTH = 50M DIST LAST STA = 3.2KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 23.9C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	22.33	36.13	24.99	297	5.42	4.92	-.50	0.04	00.0	00.3
4.0	22.37	36.12	24.97	299	.	.	.	.	.	.
5.0	22.39	36.11	24.96	300	.	.	.	.	.	.
6.0	22.37	36.12	24.97	299	.	.	.	.	.	.
7.0	22.30	36.11	24.98	298	.	.	.	.	.	.
8.0	22.10	36.11	25.04	293	.	.	.	.	.	.
9.0	22.08	36.11	25.05	292	.	.	.	.	.	.
10.0	22.04	36.11	25.06	291	.	.	.	.	.	.
11.0	22.03	36.11	25.06	291	5.61	4.94	-.67	0.04	00.1	00.3
12.0	22.03	36.11	25.06	291	.	.	.	.	.	.
13.0	22.02	36.11	25.06	291	.	.	.	.	.	.
14.0	22.01	36.11	25.07	290	.	.	.	.	.	.
15.0	22.00	36.11	25.07	290	.	.	.	.	.	.
16.0	22.00	36.12	25.08	289	.	.	.	.	.	.
17.0	21.24	36.16	25.32	266	.	.	.	.	.	.
18.0	20.63	36.09	25.43	256	.	.	.	.	.	.
19.0	20.37	36.08	25.49	250	.	.	.	.	.	.
20.0	20.10	36.07	25.56	244	.	.	.	.	.	.
21.0	19.83	36.11	25.66	234	.	.	.	.	.	.
22.0	19.60	36.09	25.71	230	.	.	.	.	.	.
23.0	19.51	36.10	25.74	227	.	.	.	.	.	.
24.0	19.37	36.11	25.78	223	.	.	.	.	.	.
25.0	19.20	36.13	25.84	217	.	.	.	.	.	.
26.0	18.76	36.13	25.95	206	.	.	.	.	.	.
27.0	18.36	36.13	26.06	197	.	.	.	.	.	.
28.0	18.10	36.14	26.13	190	.	.	.	.	.	.
29.0	17.49	36.09	26.24	179	.	.	.	.	.	.
30.0	17.13	36.04	26.29	175	.	.	.	.	.	.
31.0	16.68	36.08	26.43	162	.	.	.	.	.	.
32.0	16.32	35.98	26.44	161	.	.	.	.	.	.
33.0	16.26	35.97	26.44	160	.	.	.	.	.	.
34.0	16.23	35.96	26.44	160	.	.	.	.	.	.
35.0	16.20	35.96	26.45	160	.	.	.	.	.	.
36.0	16.20	35.97	26.46	159	3.78	5.52	1.74	0.77	10.6	06.3
37.0	16.17	35.96	26.45	159	.	.	.	.	.	.
38.0	16.16	35.95	26.45	160	.	.	.	.	.	.
39.0	16.13	35.95	26.46	159	.	.	.	.	.	.
40.0	16.11	35.95	26.46	159	.	.	.	.	.	.
41.0	16.10	35.95	26.46	158	.	.	.	.	.	.

STA 217 15/ IV/77 14.2 GMT CONSEC STA 217 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
42.0	16.06	35.96	26.48	157	.	.	.	.	.	.
43.0	16.01	35.96	26.49	156	.	.	.	.	.	.
44.0	16.00	35.95	26.49	156	.	.	.	.	.	.
45.0	15.98	35.95	26.49	156	.	.	.	.	.	.
46.0	15.89	35.97	26.53	152	.	.	.	.	.	.
47.0	15.72	35.95	26.55	150	.	.	.	.	.	.
48.0	15.64	35.95	26.57	149	3.63	5.58	1.95	0.85	11.8	06.6
49.0	15.57	35.94	26.58	148	.	.	.	.	.	.
50.0	15.26	35.91	26.62	143	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 218 15/ IV/77 14.9 GMT CONSEC STA 218

LAT 30 0.0N LONG 80 14.8W DEPTH =146M DIST LAST STA = 5.1KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 23.9C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
2.0	21.26	36.11	25.28	270	5.88	5.01	-.87	0.09	00.1	00.5
3.0	21.22	36.13	25.30	268	.	.	.	.	.	.
4.0	21.17	36.11	25.30	268	.	.	.	.	.	.
5.0	21.09	36.11	25.32	266	.	.	.	.	.	.
6.0	21.00	36.12	25.35	263	.	.	.	.	.	.
7.0	21.00	36.11	25.35	263	.	.	.	.	.	.
8.0	21.00	36.11	25.35	263	.	.	.	.	.	.
9.0	20.98	36.11	25.35	263	.	.	.	.	.	.
10.0	20.97	36.12	25.36	262	.	.	.	.	.	.
11.0	20.97	36.11	25.35	263	.	.	.	.	.	.
12.0	20.91	36.11	25.37	261	.	.	.	.	.	.
13.0	20.76	36.12	25.42	257	.	.	.	.	.	.
14.0	20.39	36.11	25.51	248	.	.	.	.	.	.
15.0	19.94	36.12	25.64	236	.	.	.	.	.	.
16.0	19.79	36.08	25.65	235	.	.	.	.	.	.
17.0	19.61	36.08	25.70	231	.	.	.	.	.	.
18.0	19.58	36.07	25.70	231	.	.	.	.	.	.
19.0	19.24	36.08	25.79	221	.	.	.	.	.	.
20.0	19.13	36.06	25.81	220	.	.	.	.	.	.
21.0	18.79	36.07	25.90	211	.	.	.	.	.	.
22.0	18.72	36.05	25.90	211	.	.	.	.	.	.
23.0	18.62	36.06	25.94	208	.	.	.	.	.	.
24.0	18.38	36.04	25.98	204	.	.	.	.	.	.
25.0	18.08	36.04	26.06	197	.	.	.	.	.	.
26.0	17.90	36.03	26.09	193	.	.	.	.	.	.
27.0	17.71	36.04	26.15	188	.	.	.	.	.	.
28.0	17.48	36.02	26.19	184	.	.	.	.	.	.
29.0	17.28	36.02	26.24	179	.	.	.	.	.	.
30.0	17.11	36.01	26.27	176	.	.	.	.	.	.
31.0	16.96	36.01	26.31	173	.	.	.	.	.	.
32.0	16.68	36.02	26.38	166	.	.	.	.	.	.
33.0	16.59	36.00	26.39	165	3.89	5.48	1.59	0.73	11.2	07.0
34.0	16.29	35.98	26.44	160	.	.	.	.	.	.
35.0	16.00	35.99	26.52	153	.	.	.	.	.	.
36.0	15.99	35.97	26.50	154	.	.	.	.	.	.
37.0	15.98	35.98	26.51	153	.	.	.	.	.	.
38.0	15.93	35.98	26.53	152	.	.	.	.	.	.
39.0	15.88	35.98	26.54	151	.	.	.	.	.	.
40.0	15.61	35.98	26.60	145	.	.	.	.	.	.

STA 218 15/ IV/77 14.9 GMT CONSEC STA 218 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
41.0	15.50	35.97	26.62	144	.	.	.	.	.	.
42.0	15.31	35.98	26.67	139	.	.	.	.	.	.
43.0	15.17	35.94	26.67	139	.	.	.	.	.	.
44.0	15.00	35.92	26.69	137	.	.	.	.	.	.
45.0	14.98	35.90	26.68	138	.	.	.	.	.	.
46.0	14.89	35.93	26.72	134	.	.	.	.	.	.
47.0	14.52	35.86	26.75	131	.	.	.	.	.	.
48.0	14.41	35.85	26.77	130	.	.	.	.	.	.
49.0	14.31	35.85	26.79	128	.	.	.	.	.	.
50.0	14.22	35.83	26.79	128	.	.	.	.	.	.
51.0	14.14	35.83	26.81	126	.	.	.	.	.	.
52.0	14.02	35.82	26.83	124	.	.	.	.	.	.
53.0	14.00	35.80	26.81	125	.	.	.	.	.	.
54.0	13.90	35.80	26.84	123	.	.	.	.	.	.
55.0	13.72	35.77	26.85	122	.	.	.	.	.	.
56.0	13.63	35.75	26.85	122	.	.	.	.	.	.
57.0	13.39	35.75	26.90	117	.	.	.	.	.	.
58.0	13.08	35.67	26.91	117	.	.	.	.	.	.
59.0	13.06	35.65	26.89	118	.	.	.	.	.	.
60.0	13.01	35.65	26.90	117	.	.	.	.	.	.
61.0	13.00	35.65	26.91	117	3.11	5.90	2.79	1.09	15.5	08.6
62.0	13.00	35.65	26.91	117	.	.	.	.	.	.
63.0	13.00	35.65	26.91	117	.	.	.	.	.	.
64.0	13.00	35.65	26.91	117	.	.	.	.	.	.
65.0	12.99	35.65	26.91	117	.	.	.	.	.	.
66.0	12.98	35.64	26.90	117	.	.	.	.	.	.
67.0	12.76	35.62	26.93	115	.	.	.	.	.	.
68.0	12.64	35.62	26.96	112	.	.	.	.	.	.
69.0	12.57	35.60	26.95	112	.	.	.	.	.	.
70.0	12.43	35.58	26.97	111	.	.	.	.	.	.
71.0	12.28	35.58	27.00	108	.	.	.	.	.	.
72.0	12.23	35.55	26.98	110	.	.	.	.	.	.
73.0	12.20	35.54	26.98	110	.	.	.	.	.	.
74.0	12.19	35.54	26.98	110	.	.	.	.	.	.
75.0	12.18	35.53	26.98	110	.	.	.	.	.	.
76.0	12.13	35.52	26.98	110	.	.	.	.	.	.
77.0	12.13	35.52	26.98	110	.	.	.	.	.	.
78.0	12.12	35.53	26.99	109	.	.	.	.	.	.
79.0	12.10	35.52	26.98	110	.	.	.	.	.	.
80.0	12.04	35.52	27.00	109	.	.	.	.	.	.

STA 218 15/ IV/77 14.9 GMT CONSEC STA 218 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
81.0	11.88	35.51	27.02	106	.	.	.	.	.	.
82.0	11.80	35.49	27.02	107	.	.	.	.	.	.
83.0	11.76	35.46	27.00	108	.	.	.	.	.	.
84.0	11.74	35.46	27.01	108	.	.	.	.	.	.
85.0	11.64	35.45	27.02	107	.	.	.	.	.	.
86.0	11.57	35.46	27.04	105	.	.	.	.	.	.
87.0	11.44	35.42	27.03	105	.	.	.	.	.	.
88.0	11.39	35.41	27.03	105	.	.	.	.	.	.
89.0	11.32	35.41	27.05	104	.	.	.	.	.	.
90.0	11.26	35.39	27.04	104	.	.	.	.	.	.
91.0	11.17	35.38	27.05	104	.	.	.	.	.	.
92.0	11.07	35.37	27.06	103	.	.	.	.	.	.
93.0	11.06	35.36	27.06	103	.	.	.	.	.	.
94.0	11.04	35.36	27.06	103	.	.	.	.	.	.
95.0	11.01	35.35	27.06	103	.	.	.	.	.	.
96.0	11.01	35.35	27.06	103	.	.	.	.	.	.
97.0	11.01	35.35	27.06	103	2.91	6.16	3.25	1.47	21.8	14.0
98.0	11.00	35.36	27.07	102	.	.	.	.	.	.
99.0	11.00	35.35	27.06	103	.	.	.	.	.	.
100.0	11.00	35.36	27.07	102	.	.	.	.	.	.
101.0	11.00	35.37	27.08	102	.	.	.	.	.	.
104.0	10.74	35.35	27.11	99	.	.	.	.	.	.
111.0	10.26	35.29	27.15	95	.	.	.	.	.	.
115.0	9.90	35.22	27.15	94	.	.	.	.	.	.
120.0	9.70	35.21	27.18	92	.	.	.	.	.	.
125.0	9.57	35.19	27.19	91	.	.	.	.	.	.
130.0	9.37	35.15	27.19	91	.	.	.	.	.	.
135.0	8.60	35.09	27.27	84	.	.	.	.	.	.
140.0	7.84	34.97	27.29	81	.	.	.	.	.	.
143.0					3.08	.	.	1.90	21.4	18.9

ADVANCE II CRUISE 4 STA 219 15/ IV/77 16.2 GMT CONSEC STA 219

LAT 30 0.0N LONG 80 11.0W DEPTH =270M DIST LAST STA = 6.1KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 050	WAVE DIRECTION	=
AIR TEMP	= 23.9C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	21.50	.	.	.	.	.	.	.	.	.
5.0	21.00	.	.	.	.	.	.	.	.	.
22.0	20.50	.	.	.	.	.	.	.	.	.
23.5	20.00	.	.	.	.	.	.	.	.	.
24.5	19.50	.	.	.	.	.	.	.	.	.
27.5	19.00	.	.	.	.	.	.	.	.	.
30.0	18.50	.	.	.	.	.	.	.	.	.
33.5	18.00	.	.	.	.	.	.	.	.	.
36.0	17.50	.	.	.	.	.	.	.	.	.
38.5	17.00	.	.	.	.	.	.	.	.	.
41.0	16.50	.	.	.	.	.	.	.	.	.
42.5	16.00	.	.	.	.	.	.	.	.	.
44.0	15.50	.	.	.	.	.	.	.	.	.
48.0	15.00	.	.	.	.	.	.	.	.	.
50.0	14.50	.	.	.	.	.	.	.	.	.
53.0	14.00	.	.	.	.	.	.	.	.	.
55.5	13.50	.	.	.	.	.	.	.	.	.
59.5	13.00	.	.	.	.	.	.	.	.	.
63.5	12.50	.	.	.	.	.	.	.	.	.
70.0	12.00	.	.	.	.	.	.	.	.	.
83.5	11.50	.	.	.	.	.	.	.	.	.
94.0	11.00	.	.	.	.	.	.	.	.	.
106.5	10.50	.	.	.	.	.	.	.	.	.
130.0	10.00	.	.	.	.	.	.	.	.	.
144.5	10.00	.	.	.	.	.	.	.	.	.
155.0	9.50	.	.	.	.	.	.	.	.	.
169.0	9.00	.	.	.	.	.	.	.	.	.
176.5	8.50	.	.	.	.	.	.	.	.	.
195.0	8.20	.	.	.	.	.	.	.	.	.
200.0	7.90	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 220 15/ IV/77 16.6 GMT CONSEC STA 220

LAT 30 1.2N LONG 80 7.5W DEPTH =370M DIST LAST STA = 6.0KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 26.1C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
4.0	25.07	36.03	24.11	381	4.87	4.69	-.18	0.09	00.0	01.7
5.0	25.07	36.03	24.11	382	.	.	.	.	.	.
6.0	25.04	36.02	24.11	381	.	.	.	.	.	.
7.0	25.03	36.02	24.11	381	.	.	.	.	.	.
8.0	25.04	36.03	24.12	381	.	.	.	.	.	.
9.0	25.01	36.03	24.12	380	.	.	.	.	.	.
10.0	25.00	36.03	24.13	380	.	.	.	.	.	.
11.0	24.97	36.03	24.14	379	.	.	.	.	.	.
12.0	24.96	36.06	24.16	376	.	.	.	.	.	.
13.0	24.92	36.07	24.18	375	.	.	.	.	.	.
14.0	24.85	36.06	24.20	373	.	.	.	.	.	.
15.0	24.79	36.04	24.20	373	.	.	.	.	.	.
16.0	24.70	36.04	24.23	370	.	.	.	.	.	.
17.0	24.62	36.04	24.25	368	.	.	.	.	.	.
18.0	24.56	36.06	24.28	365	.	.	.	.	.	.
19.0	24.51	36.05	24.29	364	.	.	.	.	.	.
20.0	24.39	36.06	24.34	360	.	.	.	.	.	.
21.0	24.30	36.06	24.36	358	.	.	.	.	.	.
22.0	24.17	36.07	24.41	353	.	.	.	.	.	.
23.0	24.06	36.05	24.43	352	.	.	.	.	.	.
24.0	23.97	36.05	24.45	349	.	.	.	.	.	.
25.0	23.84	36.05	24.49	346	.	.	.	.	.	.
26.0	23.76	36.06	24.52	343	.	.	.	.	.	.
27.0	23.64	36.06	24.56	339	.	.	.	.	.	.
28.0	23.56	36.06	24.58	337	.	.	.	.	.	.
29.0	23.40	36.06	24.63	333	.	.	.	.	.	.
30.0	23.28	36.05	24.66	330	.	.	.	.	.	.
31.0	23.11	36.07	24.72	324	.	.	.	.	.	.
32.0	23.00	36.05	24.74	322	.	.	.	.	.	.
33.0	22.83	36.05	24.79	318	.	.	.	.	.	.
34.0	22.73	36.05	24.82	315	.	.	.	.	.	.
35.0	22.60	36.05	24.85	312	.	.	.	.	.	.
36.0	22.50	36.06	24.89	308	.	.	.	.	.	.
37.0	22.39	36.07	24.93	304	.	.	.	.	.	.
38.0	22.29	36.09	24.97	300	.	.	.	.	.	.
39.0	22.22	36.09	24.99	298	.	.	.	.	.	.
40.0	22.17	36.09	25.01	297	5.20	4.93	-.27	0.10	00.2	00.8
41.0	22.09	36.10	25.04	294	.	.	.	.	.	.
42.0	21.97	36.10	25.07	291	.	.	.	.	.	.

STA 220 15/ IV/77 16.6 GMT CONSEC STA 220 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
43.0	21.83	36.12	25.12	286	.	.	.	.	.	.
44.0	21.74	36.14	25.16	282	.	.	.	.	.	.
45.0	21.67	36.15	25.19	280	.	.	.	.	.	.
46.0	21.59	36.17	25.23	276	.	.	.	.	.	.
47.0	21.50	36.18	25.26	273	.	.	.	.	.	.
48.0	21.34	36.21	25.33	267	.	.	.	.	.	.
49.0	21.20	36.17	25.34	266	.	.	.	.	.	.
50.0	20.92	36.19	25.43	257	.	.	.	.	.	.
51.0	20.71	36.24	25.52	248	.	.	.	.	.	.
52.0	20.56	36.18	25.52	249	.	.	.	.	.	.
53.0	20.40	36.18	25.56	245	.	.	.	.	.	.
54.0	20.26	36.20	25.62	240	.	.	.	.	.	.
55.0	20.12	36.18	25.64	238	.	.	.	.	.	.
56.0	19.99	36.18	25.67	234	.	.	.	.	.	.
57.0	19.80	36.17	25.71	230	.	.	.	.	.	.
58.0	19.63	36.17	25.76	226	.	.	.	.	.	.
59.0	19.40	36.18	25.83	220	.	.	.	.	.	.
60.0	19.09	36.22	25.94	209	.	.	.	.	.	.
61.0	18.76	36.18	25.99	204	.	.	.	.	.	.
62.0	18.59	36.19	26.04	199	.	.	.	.	.	.
63.0	18.26	36.24	26.16	188	.	.	.	.	.	.
64.0	18.10	36.16	26.14	190	.	.	.	.	.	.
69.0	16.70	36.28	26.58	149	.	.	.	.	.	.
70.0	16.26	36.41	26.78	129	.	.	.	.	.	.
71.0	15.82	36.30	26.80	128	.	.	.	.	.	.
72.0	15.83	36.10	26.64	143	.	.	.	.	.	.
74.0	15.20	36.15	26.82	125	.	.	.	.	.	.
75.0	14.50	35.86	26.75	132	.	.	.	.	.	.
76.0	14.10	35.89	26.86	121	.	.	.	.	.	.
77.0	13.69	35.80	26.88	120	.	.	.	.	.	.
78.0	13.50	35.77	26.90	118	.	.	.	.	.	.
79.0	13.76	35.71	26.80	128	3.40	5.80	2.40	1.77	15.8	11.7
80.0	13.49	35.74	26.88	120	.	.	.	.	.	.
81.0	13.31	35.73	26.90	117	.	.	.	.	.	.
82.0	13.24	35.70	26.90	118	.	.	.	.	.	.
83.0	12.72	35.71	27.01	108	.	.	.	.	.	.
84.0	12.36	35.62	27.01	107	.	.	.	.	.	.
85.0	12.10	35.61	27.05	103	.	.	.	.	.	.
86.0	11.94	35.52	27.02	107	.	.	.	.	.	.
87.0	11.91	35.51	27.01	107	.	.	.	.	.	.

STA 220 15/ IV/77 16.6 GMT CONSEC STA 220 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
88.0	11.76	35.53	27.06	103	.	.	.	.	.	.
89.0	11.62	35.48	27.05	104	.	.	.	.	.	.
90.0	11.56	35.47	27.05	104	.	.	.	.	.	.
91.0	11.54	35.46	27.04	104	.	.	.	.	.	.
92.0	11.51	35.44	27.03	105	.	.	.	.	.	.
93.0	11.49	35.45	27.05	104	.	.	.	.	.	.
94.0	11.48	35.43	27.03	105	3.00	6.10	3.10	1.43	21.1	14.1
95.0	11.50	35.39	27.00	109	.	.	.	.	.	.
96.0	11.48	35.43	27.03	105	.	.	.	.	.	.
97.0	11.48	35.42	27.02	106	.	.	.	.	.	.
98.0	11.43	35.43	27.04	105	.	.	.	.	.	.
99.0	11.44	35.44	27.05	104	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 229 15/ IV/77 20.8 GMT CONSEC STA 229

LAT 30 31.6N LONG 80 31.7W DEPTH = 36M DIST LAST STA = 68.4KM

WEATHER DATA

WIND SPEED = 18 KTS
WIND DIRECTION = 060
AIR TEMP = 22.2C
WEATHER CODE =
BAROMETRIC PRESSURE = 1016.6 MB

SEA STATE =
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	21.70	.	.	.	.	.	.	.	.	.
2.0	21.50	.	.	.	.	.	.	.	.	.
4.0	21.00	.	.	.	.	.	.	.	.	.
5.0	20.90	.	.	.	.	.	.	.	.	.
7.0	21.00	.	.	.	.	.	.	.	.	.
11.0	21.10	.	.	.	.	.	.	.	.	.
14.0	20.90	.	.	.	.	.	.	.	.	.
36.0	20.90	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 230 15⁄ IV⁄77 21.0 GMT CONSEC STA 230

LAT 30 31.2N LONG 80 30.0W DEPTH = 35M DIST LAST STA = 2.8KM

WEATHER DATA

WIND SPEED	= 18 KTS	SEA STATE	=
WIND DIRECTION	= 060	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2′	AOU	PO4	NO3	SI
1.0	22.50	.	.	.	.	.	.	.	.	.
4.0	22.00	.	.	.	.	.	.	.	.	.
11.5	21.50	.	.	.	.	.	.	.	.	.
17.0	21.20	.	.	.	.	.	.	.	.	.
35.0	21.20	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 231 15⁄ IV⁄77 21.3 GMT CONSEC STA 231

LAT 30 29.5N LONG 80 25.2W DEPTH = 38M DIST LAST STA = 8.3KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 22.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2′	AOU	PO4	NO3	SI
1.0	22.50	.	.	.	.	.	.	.	.	.
4.0	22.00	.	.	.	.	.	.	.	.	.
16.0	21.80	.	.	.	.	.	.	.	.	.
17.5	21.50	.	.	.	.	.	.	.	.	.
18.5	21.00	.	.	.	.	.	.	.	.	.
20.0	20.50	.	.	.	.	.	.	.	.	.
25.0	20.00	.	.	.	.	.	.	.	.	.
38.0	19.90	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 232 15/ IV/77 21.7 GMT CONSEC STA 232

LAT 30 29.4N LONG 80 20.0W DEPTH = 42M DIST LAST STA = 8.3KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 22.8C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	24.00	.	.	.	.	.	.	.	.	.
7.5	23.50	.	.	.	.	.	.	.	.	.
12.0	23.00	.	.	.	.	.	.	.	.	.
14.5	22.50	.	.	.	.	.	.	.	.	.
18.0	22.00	.	.	.	.	.	.	.	.	.
22.5	21.50	.	.	.	.	.	.	.	.	.
25.5	21.00	.	.	.	.	.	.	.	.	.
26.0	20.50	.	.	.	.	.	.	.	.	.
27.0	20.00	.	.	.	.	.	.	.	.	.
27.5	19.50	.	.	.	.	.	.	.	.	.
28.0	19.00	.	.	.	.	.	.	.	.	.
30.0	18.90	.	.	.	.	.	.	.	.	.
42.0	18.90	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 233 15/ IV/77 22.1 GMT CONSEC STA 233

LAT 30 29.7N LONG 80 15.0W DEPTH = 48M DIST LAST STA = 8.0KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	23.50	.	.	.	.	.	.	.	.	.
2.0	23.40	.	.	.	.	.	.	.	.	.
10.5	23.20	.	.	.	.	.	.	.	.	.
11.5	23.00	.	.	.	.	.	.	.	.	.
13.0	22.50	.	.	.	.	.	.	.	.	.
13.0	22.00	.	.	.	.	.	.	.	.	.
16.5	21.50	.	.	.	.	.	.	.	.	.
18.0	21.00	.	.	.	.	.	.	.	.	.
18.5	20.50	.	.	.	.	.	.	.	.	.
19.5	20.00	.	.	.	.	.	.	.	.	.
21.5	19.50	.	.	.	.	.	.	.	.	.
23.5	19.00	.	.	.	.	.	.	.	.	.
25.0	18.50	.	.	.	.	.	.	.	.	.
27.0	18.00	.	.	.	.	.	.	.	.	.
30.0	17.50	.	.	.	.	.	.	.	.	.
32.0	17.00	.	.	.	.	.	.	.	.	.
33.5	16.70	.	.	.	.	.	.	.	.	.
48.0	16.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 234 15/ IV/77 22.4 GMT CONSEC STA 234

LAT 30 30.0N LONG 80 9.7W DEPTH = 73M DIST LAST STA = 8.5KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	22.50	.	.	.	.	.	.	.	.	.
3.0	22.00	.	.	.	.	.	.	.	.	.
8.0	21.50	.	.	.	.	.	.	.	.	.
10.0	21.00	.	.	.	.	.	.	.	.	.
12.5	20.50	.	.	.	.	.	.	.	.	.
16.5	20.00	.	.	.	.	.	.	.	.	.
18.5	19.50	.	.	.	.	.	.	.	.	.
19.5	19.00	.	.	.	.	.	.	.	.	.
21.0	18.50	.	.	.	.	.	.	.	.	.
22.0	18.00	.	.	.	.	.	.	.	.	.
25.0	17.50	.	.	.	.	.	.	.	.	.
27.0	17.00	.	.	.	.	.	.	.	.	.
28.0	16.70	.	.	.	.	.	.	.	.	.
34.0	16.60	.	.	.	.	.	.	.	.	.
34.5	16.50	.	.	.	.	.	.	.	.	.
37.5	16.00	.	.	.	.	.	.	.	.	.
41.0	15.50	.	.	.	.	.	.	.	.	.
46.0	15.00	.	.	.	.	.	.	.	.	.
49.0	14.50	.	.	.	.	.	.	.	.	.
51.0	14.00	.	.	.	.	.	.	.	.	.
52.5	13.50	.	.	.	.	.	.	.	.	.
53.5	13.00	.	.	.	.	.	.	.	.	.
54.5	12.00	.	.	.	.	.	.	.	.	.
55.5	11.50	.	.	.	.	.	.	.	.	.
59.0	11.00	.	.	.	.	.	.	.	.	.
64.5	10.50	.	.	.	.	.	.	.	.	.
73.0	10.30	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 235 15⁄ IV⁄77 22.8 GMT CONSEC STA 235

LAT 30 30.2N LONG 80 5.0W DEPTH =240M DIST LAST STA = 7.5KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 070	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2⁄	AOU	PO4	NO3	SI
1.0	23.20	.	.	.	.	.	.	.	.	.
4.0	23.00	.	.	.	.	.	.	.	.	.
7.5	22.50	.	.	.	.	.	.	.	.	.
13.5	22.00	.	.	.	.	.	.	.	.	.
17.5	21.50	.	.	.	.	.	.	.	.	.
19.5	21.00	.	.	.	.	.	.	.	.	.
21.0	20.50	.	.	.	.	.	.	.	.	.
24.0	20.00	.	.	.	.	.	.	.	.	.
25.5	19.50	.	.	.	.	.	.	.	.	.
27.0	19.00	.	.	.	.	.	.	.	.	.
31.5	18.50	.	.	.	.	.	.	.	.	.
34.5	18.00	.	.	.	.	.	.	.	.	.
36.0	17.50	.	.	.	.	.	.	.	.	.
38.0	17.00	.	.	.	.	.	.	.	.	.
40.5	16.50	.	.	.	.	.	.	.	.	.
41.5	16.00	.	.	.	.	.	.	.	.	.
42.5	15.50	.	.	.	.	.	.	.	.	.
44.5	15.00	.	.	.	.	.	.	.	.	.
47.0	14.50	.	.	.	.	.	.	.	.	.
49.0	14.00	.	.	.	.	.	.	.	.	.
53.5	13.50	.	.	.	.	.	.	.	.	.
58.0	13.00	.	.	.	.	.	.	.	.	.
63.5	12.50	.	.	.	.	.	.	.	.	.
67.5	12.00	.	.	.	.	.	.	.	.	.
78.0	11.50	.	.	.	.	.	.	.	.	.
85.5	11.00	.	.	.	.	.	.	.	.	.
95.0	10.50	.	.	.	.	.	.	.	.	.
110.5	10.00	.	.	.	.	.	.	.	.	.
115.5	9.50	.	.	.	.	.	.	.	.	.
122.0	9.00	.	.	.	.	.	.	.	.	.
136.0	8.50	.	.	.	.	.	.	.	.	.
147.0	8.00	.	.	.	.	.	.	.	.	.
168.5	7.50	.	.	.	.	.	.	.	.	.
200.0	7.20	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 236 15/ IV/77 23.0 GMT CONSEC STA 236

LAT 30 30.5N LONG 80 1.1W DEPTH =283M DIST LAST STA = 6.3KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	25.50	.	.	.	.	.	.	.	.	.
6.0	25.00	.	.	.	.	.	.	.	.	.
8.5	24.50	.	.	.	.	.	.	.	.	.
14.0	24.00	.	.	.	.	.	.	.	.	.
18.0	23.50	.	.	.	.	.	.	.	.	.
22.0	23.00	.	.	.	.	.	.	.	.	.
25.0	22.50	.	.	.	.	.	.	.	.	.
28.5	22.00	.	.	.	.	.	.	.	.	.
32.5	21.50	.	.	.	.	.	.	.	.	.
37.0	21.00	.	.	.	.	.	.	.	.	.
39.0	20.50	.	.	.	.	.	.	.	.	.
41.5	20.00	.	.	.	.	.	.	.	.	.
43.5	19.50	.	.	.	.	.	.	.	.	.
47.5	19.00	.	.	.	.	.	.	.	.	.
52.5	18.50	.	.	.	.	.	.	.	.	.
53.5	18.00	.	.	.	.	.	.	.	.	.
54.5	17.50	.	.	.	.	.	.	.	.	.
55.5	17.00	.	.	.	.	.	.	.	.	.
58.0	16.50	.	.	.	.	.	.	.	.	.
59.5	16.00	.	.	.	.	.	.	.	.	.
60.5	15.50	.	.	.	.	.	.	.	.	.
61.0	15.00	.	.	.	.	.	.	.	.	.
62.0	14.50	.	.	.	.	.	.	.	.	.
63.5	14.00	.	.	.	.	.	.	.	.	.
65.0	13.50	.	.	.	.	.	.	.	.	.
70.5	13.00	.	.	.	.	.	.	.	.	.
78.5	12.50	.	.	.	.	.	.	.	.	.
84.0	12.00	.	.	.	.	.	.	.	.	.
97.5	11.50	.	.	.	.	.	.	.	.	.
109.0	11.00	.	.	.	.	.	.	.	.	.
118.5	10.50	.	.	.	.	.	.	.	.	.
133.0	10.00	.	.	.	.	.	.	.	.	.
144.5	9.50	.	.	.	.	.	.	.	.	.
167.0	9.00	.	.	.	.	.	.	.	.	.
188.0	8.50	.	.	.	.	.	.	.	.	.
200.0	8.30	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 249 16/ IV/77 2.7 GMT CONSEC STA 249

LAT 31 2.5N LONG 80 32.0W DEPTH = 26M DIST LAST STA = 77.1KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 21.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	21.30	.	.	.	.	.	.	.	.	.
2.0	21.00	.	.	.	.	.	.	.	.	.
3.5	20.50	.	.	.	.	.	.	.	.	.
7.0	20.10	.	.	.	.	.	.	.	.	.
20.0	20.00	.	.	.	.	.	.	.	.	.
26.0	20.00	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 250 16/ IV/77 3.1 GMT CONSEC STA 250

LAT 31 .8N LONG 80 27.0W DEPTH = 33M DIST LAST STA = 8.5KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 21.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	21.20	.	.	.	.	.	.	.	.	.
1.5	21.00	.	.	.	.	.	.	.	.	.
8.5	20.50	.	.	.	.	.	.	.	.	.
17.0	20.10	.	.	.	.	.	.	.	.	.
33.0	20.10	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 251 16⁄ IV⁄77 3.4 GMT CONSEC STA 251

LAT 30 59.0N LONG 80 22.5W DEPTH = 33M DIST LAST STA = 7.9KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 21.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2⁄	AOU	PO4	NO3	SI
1.0	21.40	.	.	.	.	.	.	.	.	.
4.0	21.40	.	.	.	.	.	.	.	.	.
5.5	21.00	.	.	.	.	.	.	.	.	.
7.5	20.70	.	.	.	.	.	.	.	.	.
19.0	20.60	.	.	.	.	.	.	.	.	.
27.5	20.60	.	.	.	.	.	.	.	.	.
33.0	20.70	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 252 16⁄ IV⁄77 3.7 GMT CONSEC STA 252

LAT 30 57.2N LONG 80 18.0W DEPTH = 40M DIST LAST STA = 7.9KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 21.7C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2⁄	AOU	PO4	NO3	SI
1.0	22.80	.	.	.	.	.	.	.	.	.
3.0	22.50	.	.	.	.	.	.	.	.	.
11.0	22.00	.	.	.	.	.	.	.	.	.
17.5	21.50	.	.	.	.	.	.	.	.	.
19.0	21.40	.	.	.	.	.	.	.	.	.
40.0	21.40	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 253 16/ IV/77 4.1 GMT CONSEC STA 253

LAT 30 55.5N LONG 80 13.3W DEPTH = 40M DIST LAST STA = 8.1KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
1.0	23.90	.	.	.	.	.	.	.	.	.
5.0	23.90	.	.	.	.	.	.	.	.	.
8.0	23.50	.	.	.	.	.	.	.	.	.
10.5	23.00	.	.	.	.	.	.	.	.	.
11.5	22.50	.	.	.	.	.	.	.	.	.
14.5	22.00	.	.	.	.	.	.	.	.	.
15.5	21.50	.	.	.	.	.	.	.	.	.
17.5	21.20	.	.	.	.	.	.	.	.	.
40.0	21.20	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 254 16⁄ IV⁄77 4.4 GMT CONSEC STA 254

LAT 30 53.8N LONG 80 8.9W DEPTH = 41M DIST LAST STA = 7.7KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2′	AOU	PO4	NO3	SI
1.0	23.40	.	.	.	.	.	.	.	.	.
2.5	23.30	.	.	.	.	.	.	.	.	.
9.0	23.30	.	.	.	.	.	.	.	.	.
10.0	23.00	.	.	.	.	.	.	.	.	.
12.0	22.50	.	.	.	.	.	.	.	.	.
15.5	22.00	.	.	.	.	.	.	.	.	.
16.5	21.50	.	.	.	.	.	.	.	.	.
17.0	21.00	.	.	.	.	.	.	.	.	.
20.0	20.50	.	.	.	.	.	.	.	.	.
24.5	20.00	.	.	.	.	.	.	.	.	.
28.0	19.50	.	.	.	.	.	.	.	.	.
30.0	19.00	.	.	.	.	.	.	.	.	.
35.0	18.50	.	.	.	.	.	.	.	.	.
41.0	18.30	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 255 16/ IV/77 4.7 GMT CONSEC STA 255

LAT 30 52.2N LONG 80 4.0W DEPTH = 48M DIST LAST STA = 8.3KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
1.0	22.50	.	.	.	.	.	.	.	.	.
8.5	22.40	.	.	.	.	.	.	.	.	.
10.0	22.00	.	.	.	.	.	.	.	.	.
15.0	21.50	.	.	.	.	.	.	.	.	.
17.5	21.00	.	.	.	.	.	.	.	.	.
19.5	20.50	.	.	.	.	.	.	.	.	.
22.0	20.00	.	.	.	.	.	.	.	.	.
23.5	19.50	.	.	.	.	.	.	.	.	.
24.5	19.00	.	.	.	.	.	.	.	.	.
30.0	18.50	.	.	.	.	.	.	.	.	.
31.5	18.00	.	.	.	.	.	.	.	.	.
32.5	17.50	.	.	.	.	.	.	.	.	.
33.5	17.00	.	.	.	.	.	.	.	.	.
37.5	16.50	.	.	.	.	.	.	.	.	.
47.0	16.00	.	.	.	.	.	.	.	.	.
48.0	16.00	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 256 16/ IV/77 5.1 GMT CONSEC STA 256

LAT 30 50.5N LONG 79 59.4W DEPTH =148M DIST LAST STA = 8.0KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	22.70	.	.	.	.	.	.	.	.	.
5.0	22.60	.	.	.	.	.	.	.	.	.
7.5	22.50	.	.	.	.	.	.	.	.	.
16.0	22.00	.	.	.	.	.	.	.	.	.
21.0	21.50	.	.	.	.	.	.	.	.	.
25.5	21.00	.	.	.	.	.	.	.	.	.
28.5	20.50	.	.	.	.	.	.	.	.	.
33.5	20.00	.	.	.	.	.	.	.	.	.
36.0	19.50	.	.	.	.	.	.	.	.	.
37.5	19.00	.	.	.	.	.	.	.	.	.
42.5	18.50	.	.	.	.	.	.	.	.	.
47.0	18.00	.	.	.	.	.	.	.	.	.
49.5	17.50	.	.	.	.	.	.	.	.	.
52.5	17.00	.	.	.	.	.	.	.	.	.
58.0	16.50	.	.	.	.	.	.	.	.	.
60.5	16.00	.	.	.	.	.	.	.	.	.
65.0	15.50	.	.	.	.	.	.	.	.	.
77.5	15.00	.	.	.	.	.	.	.	.	.
84.5	14.50	.	.	.	.	.	.	.	.	.
92.5	14.00	.	.	.	.	.	.	.	.	.
97.0	13.50	.	.	.	.	.	.	.	.	.
99.5	13.00	.	.	.	.	.	.	.	.	.
101.0	12.50	.	.	.	.	.	.	.	.	.
103.0	12.00	.	.	.	.	.	.	.	.	.
105.0	11.50	.	.	.	.	.	.	.	.	.
106.5	11.00	.	.	.	.	.	.	.	.	.
109.0	10.50	.	.	.	.	.	.	.	.	.
111.0	10.20	.	.	.	.	.	.	.	.	.
112.0	10.00	.	.	.	.	.	.	.	.	.
113.0	9.50	.	.	.	.	.	.	.	.	.
115.0	9.00	.	.	.	.	.	.	.	.	.
118.5	8.50	.	.	.	.	.	.	.	.	.
126.0	8.00	.	.	.	.	.	.	.	.	.
134.5	7.90	.	.	.	.	.	.	.	.	.
148.0	7.90	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 257 16⁄ IV⁄77 5.4 GMT CONSEC STA 257

LAT 30 48.5N LONG 79 54.7W DEPTH =236M DIST LAST STA = 8.3KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2′	AOU	PO4	NO3	SI
1.0	23.20	.	.	.	.	.	.	.	.	.
10.5	23.20	.	.	.	.	.	.	.	.	.
22.5	22.50	.	.	.	.	.	.	.	.	.
28.0	22.00	.	.	.	.	.	.	.	.	.
34.0	21.50	.	.	.	.	.	.	.	.	.
38.0	21.00	.	.	.	.	.	.	.	.	.
39.5	20.50	.	.	.	.	.	.	.	.	.
42.0	20.00	.	.	.	.	.	.	.	.	.
44.5	19.50	.	.	.	.	.	.	.	.	.
48.5	19.00	.	.	.	.	.	.	.	.	.
50.5	18.50	.	.	.	.	.	.	.	.	.
55.0	18.00	.	.	.	.	.	.	.	.	.
59.0	17.50	.	.	.	.	.	.	.	.	.
60.5	17.00	.	.	.	.	.	.	.	.	.
63.5	16.50	.	.	.	.	.	.	.	.	.
71.0	16.00	.	.	.	.	.	.	.	.	.
72.5	15.50	.	.	.	.	.	.	.	.	.
74.0	15.00	.	.	.	.	.	.	.	.	.
78.0	14.50	.	.	.	.	.	.	.	.	.
81.5	14.00	.	.	.	.	.	.	.	.	.
82.5	13.80	.	.	.	.	.	.	.	.	.
99.0	13.60	.	.	.	.	.	.	.	.	.
99.5	13.50	.	.	.	.	.	.	.	.	.
115.0	13.00	.	.	.	.	.	.	.	.	.
120.5	12.50	.	.	.	.	.	.	.	.	.
121.5	12.30	.	.	.	.	.	.	.	.	.
131.5	12.20	.	.	.	.	.	.	.	.	.
139.5	12.00	.	.	.	.	.	.	.	.	.
149.5	11.50	.	.	.	.	.	.	.	.	.
156.5	11.00	.	.	.	.	.	.	.	.	.
162.0	10.50	.	.	.	.	.	.	.	.	.
168.0	10.00	.	.	.	.	.	.	.	.	.
171.0	9.50	.	.	.	.	.	.	.	.	.
176.5	9.00	.	.	.	.	.	.	.	.	.
181.5	8.50	.	.	.	.	.	.	.	.	.
184.5	8.00	.	.	.	.	.	.	.	.	.
189.5	7.50	.	.	.	.	.	.	.	.	.
200.0	7.20	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 258 16/ IV/77 5.7 GMT CONSEC STA 258

LAT 30 49.1N LONG 79 50.0W DEPTH =370M DIST LAST STA = 7.6KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	25.00	.	.	.	.	.	.	.	.	.
21.5	24.90	.	.	.	.	.	.	.	.	.
28.5	24.50	.	.	.	.	.	.	.	.	.
41.5	24.00	.	.	.	.	.	.	.	.	.
48.5	23.50	.	.	.	.	.	.	.	.	.
54.0	23.00	.	.	.	.	.	.	.	.	.
58.5	22.50	.	.	.	.	.	.	.	.	.
60.5	22.00	.	.	.	.	.	.	.	.	.
62.0	21.50	.	.	.	.	.	.	.	.	.
63.5	21.00	.	.	.	.	.	.	.	.	.
67.0	20.50	.	.	.	.	.	.	.	.	.
71.0	20.00	.	.	.	.	.	.	.	.	.
72.0	19.50	.	.	.	.	.	.	.	.	.
74.0	19.00	.	.	.	.	.	.	.	.	.
76.5	18.50	.	.	.	.	.	.	.	.	.
76.5	18.00	.	.	.	.	.	.	.	.	.
79.0	17.50	.	.	.	.	.	.	.	.	.
80.5	17.00	.	.	.	.	.	.	.	.	.
81.5	16.50	.	.	.	.	.	.	.	.	.
82.5	16.00	.	.	.	.	.	.	.	.	.
83.5	15.50	.	.	.	.	.	.	.	.	.
85.0	15.00	.	.	.	.	.	.	.	.	.
87.0	14.50	.	.	.	.	.	.	.	.	.
89.5	14.00	.	.	.	.	.	.	.	.	.
95.5	13.50	.	.	.	.	.	.	.	.	.
98.5	13.00	.	.	.	.	.	.	.	.	.
104.0	12.50	.	.	.	.	.	.	.	.	.
119.5	12.00	.	.	.	.	.	.	.	.	.
137.5	11.50	.	.	.	.	.	.	.	.	.
159.5	11.00	.	.	.	.	.	.	.	.	.
171.0	10.50	.	.	.	.	.	.	.	.	.
200.0	10.00	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 259 16/ IV/77 8.7 GMT CONSEC STA 259

LAT 31 33.0N LONG 79 29.6W DEPTH =200M DIST LAST STA = 87.6KM

WEATHER DATA

WIND SPEED	= 2 KTS	SEA STATE	=
WIND DIRECTION	= VARIABLE	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	25.46	36.03	23.99	393	.	.	.	0.06	00.1	01.8
4.0	25.46	36.04	23.99	392	.	.	.	.	.	.
5.0	25.46	36.01	23.97	394	.	.	.	.	.	.
6.0	25.46	36.03	23.99	393	.	.	.	.	.	.
7.0	25.46	36.02	23.98	394	.	.	.	.	.	.
8.0	25.46	36.03	23.99	393	.	.	.	.	.	.
9.0	25.45	36.01	23.97	394	.	.	.	.	.	.
10.0	25.45	36.02	23.98	394	.	.	.	.	.	.
11.0	25.45	36.04	24.00	392	.	.	.	.	.	.
12.0	25.45	36.03	23.99	393	.	.	.	.	.	.
13.0	25.46	36.04	23.99	393	.	.	.	.	.	.
14.0	25.46	36.04	23.99	393	.	.	.	.	.	.
15.0	25.46	36.03	23.99	393	.	.	.	.	.	.
16.0	25.47	36.05	24.00	392	.	.	.	.	.	.
17.0	25.47	36.06	24.01	392	.	.	.	.	.	.
18.0	25.47	36.05	24.00	392	.	.	.	.	.	.
19.0	25.47	36.03	23.98	394	.	.	.	.	.	.
20.0	25.47	36.03	23.98	394	.	.	.	.	.	.
21.0	25.47	36.02	23.98	395	.	.	.	.	.	.
22.0	25.47	36.00	23.96	396	.	.	.	.	.	.
23.0	25.47	35.99	23.95	397	.	.	.	.	.	.
24.0	25.47	35.99	23.95	397	.	.	.	.	.	.
25.0	25.47	36.00	23.96	396	.	.	.	.	.	.
26.0	25.47	36.01	23.97	396	.	.	.	.	.	.
27.0	25.47	36.00	23.96	396	.	.	.	.	.	.
28.0	25.47	36.00	23.96	396	.	.	.	.	.	.
29.0	25.47	36.01	23.97	396	.	.	.	.	.	.
30.0	25.47	36.02	23.98	395	.	.	.	.	.	.
31.0	25.48	36.01	23.97	396	.	.	.	.	.	.
32.0	25.48	36.03	23.98	395	.	.	.	.	.	.
33.0	25.48	36.02	23.97	395	.	.	.	.	.	.
34.0	25.48	36.05	24.00	393	.	.	.	.	.	.
35.0	25.48	36.04	23.99	394	.	.	.	.	.	.
36.0	25.48	36.04	23.99	394	.	.	.	.	.	.
37.0	25.48	36.00	23.96	397	.	.	.	.	.	.
38.0	25.48	35.99	23.95	398	.	.	.	.	.	.
39.0	25.48	36.02	23.97	396	.	.	.	.	.	.
40.0	25.48	36.00	23.96	397	.	.	.	.	.	.
41.0	25.47	36.01	23.97	396	.	.	.	.	.	.

STA 259 16/ IV/77 8.7 GMT CONSEC STA 259 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
42.0	25.47	36.01	23.97	396	.	.	.	.	.	.
43.0	25.47	36.00	23.96	397	.	.	.	.	.	.
44.0	25.47	36.02	23.98	396	.	.	.	.	.	.
45.0	25.46	36.01	23.97	396	.	.	.	.	.	.
46.0	25.46	36.03	23.99	395	.	.	.	.	.	.
47.0	25.46	36.04	23.99	394	.	.	.	.	.	.
48.0	25.46	36.02	23.98	395	.	.	.	.	.	.
49.0	25.46	36.00	23.96	397	.	.	.	.	.	.
50.0	25.46	36.02	23.98	396	4.71	4.66	-.05	0.07	00.1	02.2
51.0	25.46	36.02	23.98	396	.	.	.	.	.	.
52.0	25.46	36.02	23.98	396	.	.	.	.	.	.
53.0	25.46	36.03	23.99	395	.	.	.	.	.	.
54.0	25.46	36.03	23.99	395	.	.	.	.	.	.
55.0	25.46	36.02	23.98	396	.	.	.	.	.	.
56.0	25.46	36.02	23.98	396	.	.	.	.	.	.
57.0	25.46	36.03	23.99	395	.	.	.	.	.	.
58.0	25.45	36.04	24.00	394	.	.	.	.	.	.
59.0	25.46	36.03	23.99	395	.	.	.	.	.	.
60.0	25.46	36.03	23.99	395	.	.	.	.	.	.
61.0	25.46	36.04	23.99	395	.	.	.	.	.	.
62.0	25.46	36.05	24.00	394	.	.	.	.	.	.
63.0	25.47	36.01	23.97	397	.	.	.	.	.	.
64.0	25.47	36.02	23.98	396	.	.	.	.	.	.
65.0	25.47	36.00	23.96	398	.	.	.	.	.	.
66.0	25.47	35.99	23.95	399	.	.	.	.	.	.
67.0	25.46	36.03	23.99	395	.	.	.	.	.	.
68.0	25.46	36.01	23.97	397	.	.	.	.	.	.
69.0	25.45	36.04	24.00	395	.	.	.	.	.	.
70.0	25.45	36.03	23.99	395	.	.	.	.	.	.
71.0	25.44	36.00	23.97	397	.	.	.	.	.	.
72.0	25.43	36.00	23.97	397	.	.	.	.	.	.
73.0	25.43	36.04	24.00	394	.	.	.	.	.	.
74.0	25.42	36.02	23.99	395	.	.	.	.	.	.
75.0	25.39	36.01	23.99	395	.	.	.	.	.	.
76.0	25.27	36.10	24.10	385	.	.	.	.	.	.
77.0	25.10	36.16	24.20	376	.	.	.	.	.	.
78.0	24.94	36.20	24.27	368	.	.	.	.	.	.
79.0	24.81	36.20	24.31	365	.	.	.	.	.	.
80.0	24.68	36.22	24.37	360	.	.	.	.	.	.
81.0	24.58	36.24	24.41	355	.	.	.	.	.	.

STA 259 16/ IV/77 8.7 GMT CONSEC STA 259 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
82.0	24.53	36.27	24.45	352	.	.	.	.	.	.
83.0	24.43	36.27	24.48	349	.	.	.	.	.	.
84.0	24.21	36.32	24.59	339	.	.	.	.	.	.
85.0	24.01	36.33	24.65	333	.	.	.	.	.	.
86.0	23.94	36.32	24.67	331	.	.	.	.	.	.
87.0	23.84	36.36	24.73	326	.	.	.	.	.	.
88.0	23.59	36.43	24.85	314	.	.	.	.	.	.
89.0	23.47	36.50	24.94	305	.	.	.	.	.	.
90.0	23.40	36.53	24.98	301	.	.	.	.	.	.
91.0	23.02	36.53	25.10	291	.	.	.	.	.	.
92.0	22.90	36.54	25.14	287	.	.	.	.	.	.
93.0	22.80	36.53	25.16	285	.	.	.	.	.	.
94.0	22.74	36.51	25.16	284	.	.	.	.	.	.
95.0	22.60	36.48	25.18	283	.	.	.	.	.	.
96.0	22.46	36.46	25.20	281	.	.	.	.	.	.
97.0	22.32	36.45	25.24	277	.	.	.	.	.	.
98.0	22.11	36.43	25.28	273	.	.	.	.	.	.
99.0	21.97	36.44	25.33	269	.	.	.	.	.	.
100.0	21.83	36.45	25.38	264	.	.	.	.	.	.
101.0	21.63	36.42	25.41	261	.	.	.	.	.	.
105.0	20.89	36.41	25.60	243	4.43	5.04	.61	0.25	03.2	02.8
110.0	20.21	36.38	25.77	227	.	.	.	.	.	.
115.0	19.41	36.29	25.91	214	.	.	.	.	.	.
120.0	18.56	36.18	26.04	201	.	.	.	.	.	.
125.0	18.00	36.14	26.15	191	.	.	.	.	.	.
130.0	17.53	36.07	26.22	185	.	.	.	.	.	.
135.0	17.00	36.04	26.32	175	.	.	.	.	.	.
140.0	16.42	36.04	26.46	162	.	.	.	.	.	.
145.0	16.12	36.03	26.52	156	.	.	.	.	.	.
150.0	15.80	36.02	26.59	150	.	.	.	.	.	.
155.0	15.59	35.99	26.61	148	.	.	.	.	.	.
160.0	15.20	35.95	26.67	143	.	.	.	.	.	.
165.0	14.73	35.87	26.71	139	.	.	.	.	.	.
170.0	14.51	35.84	26.74	136	3.54	5.71	2.17	0.91	14.2	07.8
175.0	14.23	35.81	26.77	133	.	.	.	.	.	.
180.0	13.99	35.76	26.79	132	.	.	.	.	.	.
185.0	13.72	35.72	26.81	129	3.36	5.81	2.45	0.96	15.8	08.5
190.0	13.57	35.70	26.83	128	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 260 16⁄ IV⁄77 10.3 GMT CONSEC STA 260

LAT 31 34.6N LONG 79 34.6W DEPTH =132M DIST LAST STA = 8.4KM

WEATHER DATA

WIND SPEED	= 15 KTS	SEA STATE	=
WIND DIRECTION	= 320	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2⁄	AOU	PO4	NO3	SI
1.0	25.40	.	.	.	.	.	.	.	.	.
21.5	25.40	.	.	.	.	.	.	.	.	.
52.0	25.20	.	.	.	.	.	.	.	.	.
55.0	25.00	.	.	.	.	.	.	.	.	.
58.5	24.50	.	.	.	.	.	.	.	.	.
61.0	24.00	.	.	.	.	.	.	.	.	.
67.0	23.50	.	.	.	.	.	.	.	.	.
70.0	23.00	.	.	.	.	.	.	.	.	.
72.0	22.50	.	.	.	.	.	.	.	.	.
74.5	22.00	.	.	.	.	.	.	.	.	.
77.5	21.50	.	.	.	.	.	.	.	.	.
79.5	21.00	.	.	.	.	.	.	.	.	.
81.0	20.50	.	.	.	.	.	.	.	.	.
82.0	20.00	.	.	.	.	.	.	.	.	.
84.0	19.50	.	.	.	.	.	.	.	.	.
86.5	19.00	.	.	.	.	.	.	.	.	.
90.5	18.50	.	.	.	.	.	.	.	.	.
92.0	18.00	.	.	.	.	.	.	.	.	.
94.0	17.50	.	.	.	.	.	.	.	.	.
98.0	17.00	.	.	.	.	.	.	.	.	.
106.5	16.50	.	.	.	.	.	.	.	.	.
110.0	16.00	.	.	.	.	.	.	.	.	.
114.0	15.50	.	.	.	.	.	.	.	.	.
117.0	15.00	.	.	.	.	.	.	.	.	.
120.0	14.50	.	.	.	.	.	.	.	.	.
123.5	14.00	.	.	.	.	.	.	.	.	.
132.0	13.80	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 261 16/ IV/77 10.8 GMT CONSEC STA 261

LAT 31 35.9N LONG 79 39.3W DEPTH = 77M DIST LAST STA = 7.8KM

WEATHER DATA

WIND SPEED	= 10 KTS	SEA STATE	=
WIND DIRECTION	= 320	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
3.0	25.05	36.10	24.17	376	4.76	4.69	-.07	0.05	00.1	01.5
4.0	25.05	36.08	24.15	377	.	.	.	.	.	.
5.0	25.05	36.09	24.16	377	.	.	.	.	.	.
6.0	25.05	36.07	24.14	378	.	.	.	.	.	.
7.0	25.05	36.10	24.17	376	.	.	.	.	.	.
8.0	25.05	36.09	24.16	377	.	.	.	.	.	.
9.0	25.05	36.07	24.14	378	.	.	.	.	.	.
10.0	25.05	36.06	24.14	379	.	.	.	.	.	.
11.0	25.05	36.09	24.16	377	.	.	.	.	.	.
12.0	25.05	36.09	24.16	377	.	.	.	.	.	.
13.0	25.05	36.07	24.14	378	.	.	.	.	.	.
14.0	25.04	36.09	24.16	377	.	.	.	.	.	.
15.0	25.05	36.05	24.13	380	.	.	.	.	.	.
16.0	25.05	36.05	24.13	380	.	.	.	.	.	.
17.0	25.04	36.06	24.14	379	.	.	.	.	.	.
18.0	25.03	36.05	24.13	379	.	.	.	.	.	.
19.0	24.96	36.04	24.15	378	.	.	.	.	.	.
20.0	24.94	36.04	24.15	378	.	.	.	.	.	.
21.0	24.94	36.06	24.17	376	.	.	.	.	.	.
22.0	24.94	36.07	24.18	376	.	.	.	.	.	.
23.0	24.93	36.08	24.19	375	.	.	.	.	.	.
24.0	24.92	36.08	24.19	374	.	.	.	.	.	.
25.0	24.91	36.06	24.18	375	.	.	.	.	.	.
26.0	24.90	36.06	24.18	375	4.84	4.70	-.14	0.04	00.1	01.6
27.0	24.85	36.06	24.20	374	.	.	.	.	.	.
28.0	24.82	36.07	24.21	372	.	.	.	.	.	.
29.0	24.79	36.07	24.22	371	.	.	.	.	.	.
30.0	24.77	36.08	24.24	370	.	.	.	.	.	.
31.0	24.75	36.08	24.24	370	.	.	.	.	.	.
32.0	24.72	36.08	24.25	369	.	.	.	.	.	.
33.0	24.70	36.07	24.25	369	.	.	.	.	.	.
34.0	24.69	36.07	24.25	369	.	.	.	.	.	.
35.0	24.66	36.06	24.25	369	.	.	.	.	.	.
36.0	24.60	36.06	24.27	367	.	.	.	.	.	.
37.0	24.48	36.04	24.29	365	.	.	.	.	.	.
38.0	24.32	36.05	24.35	360	.	.	.	.	.	.
39.0	24.28	36.05	24.36	359	.	.	.	.	.	.
40.0	24.22	36.05	24.38	357	.	.	.	.	.	.
41.0	24.04	36.07	24.45	350	.	.	.	.	.	.

STA 261 16/ IV/77 10.8 GMT CONSEC STA 261 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
42.0	23.91	36.08	24.49	346	.	.	.	.	.	.
43.0	23.88	36.07	24.50	346	.	.	.	.	.	.
44.0	23.72	36.07	24.54	341	.	.	.	.	.	.
45.0	23.60	36.08	24.59	337	.	.	.	.	.	.
46.0	23.46	36.08	24.63	334	.	.	.	.	.	.
47.0	23.34	36.08	24.66	330	4.84	4.83	-.01	0.09	00.4	01.7
48.0	23.33	36.07	24.66	331	.	.	.	.	.	.
49.0	23.22	36.07	24.69	328	.	.	.	.	.	.
50.0	23.10	36.08	24.73	324	.	.	.	.	.	.
51.0	22.88	36.06	24.78	319	.	.	.	.	.	.
52.0	22.62	36.05	24.85	313	.	.	.	.	.	.
53.0	22.27	36.05	24.95	303	.	.	.	.	.	.
54.0	21.89	36.09	25.08	290	.	.	.	.	.	.
55.0	21.30	36.06	25.23	277	.	.	.	.	.	.
56.0	20.88	36.10	25.37	263	.	.	.	.	.	.
57.0	20.51	36.11	25.48	253	.	.	.	.	.	.
58.0	20.22	36.07	25.53	248	.	.	.	.	.	.
59.0	19.86	36.08	25.63	238	4.23	5.14	.91	0.51	07.1	05.7
60.0	19.48	36.08	25.73	229	.	.	.	.	.	.
61.0	19.21	36.02	25.75	227	.	.	.	.	.	.
62.0	18.72	36.06	25.91	212	.	.	.	.	.	.
63.0	18.46	36.02	25.95	208	.	.	.	.	.	.
64.0	18.33	36.05	26.00	203	.	.	.	.	.	.
65.0	18.21	36.06	26.04	200	.	.	.	.	.	.
66.0	17.99	36.06	26.09	194	.	.	.	.	.	.
67.0	17.59	36.07	26.20	184	.	.	.	.	.	.
68.0	17.30	36.08	26.28	177	.	.	.	.	.	.
69.0	17.00	36.08	26.35	170	.	.	.	.	.	.
70.0	16.68	36.09	26.44	162	3.76	5.46	1.70	0.70	10.8	07.5
71.0	16.50	36.04	26.44	162	.	.	.	.	.	.
72.0	16.39	36.01	26.44	161	.	.	.	.	.	.
73.0	16.38	35.97	26.41	164	.	.	.	.	.	.
74.0	16.37	35.97	26.42	164	.	.	.	.	.	.
75.0	16.38	35.96	26.41	165	.	.	.	.	.	.
76.0	16.38	35.96	26.41	165	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 262 16/ IV/77 11.7 GMT CONSEC STA 262

LAT 31 38.2N LONG 79 44.0W DEPTH = 47M DIST LAST STA = 8.6KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 320	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
1.0	23.90	.	.	.	.	.	.	.	.	.
17.0	23.50	.	.	.	.	.	.	.	.	.
25.5	23.00	.	.	.	.	.	.	.	.	.
34.5	22.50	.	.	.	.	.	.	.	.	.
40.0	22.00	.	.	.	.	.	.	.	.	.
42.0	21.50	.	.	.	.	.	.	.	.	.
43.0	21.00	.	.	.	.	.	.	.	.	.
44.5	20.50	.	.	.	.	.	.	.	.	.
47.0	19.90	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 263 16⁄ IV⁄77 12.1 GMT CONSEC STA 263

LAT 31 39.1N LONG 79 49.2W DEPTH = 46M DIST LAST STA = 8.4KM

WEATHER DATA

WIND SPEED	= 5 KTS	SEA STATE	=
WIND DIRECTION	= 320	WAVE DIRECTION	=
AIR TEMP	= 22.2C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2′	AOU	PO4	NO3	SI
2.0	23.49	36.06	24.60	334	5.05	4.82	-.23	0.07	00.1	00.8
3.0	23.49	36.08	24.62	333	.	.	.	.	.	.
4.0	23.49	36.08	24.62	333	.	.	.	.	.	.
5.0	23.49	36.07	24.61	333	.	.	.	.	.	.
6.0	23.49	36.07	24.61	334	.	.	.	.	.	.
7.0	23.49	36.07	24.61	334	.	.	.	.	.	.
8.0	23.49	36.07	24.61	334	.	.	.	.	.	.
9.0	23.49	36.07	24.61	334	.	.	.	.	.	.
10.0	23.49	36.07	24.61	334	.	.	.	.	.	.
11.0	23.49	36.07	24.61	334	.	.	.	.	.	.
12.0	23.49	36.08	24.62	333	.	.	.	.	.	.
13.0	23.49	36.08	24.62	333	.	.	.	.	.	.
14.0	23.49	36.08	24.62	333	.	.	.	.	.	.
15.0	23.48	36.08	24.62	333	.	.	.	.	.	.
16.0	23.48	36.08	24.62	333	5.05	4.82	-.23	0.11	00.1	02.6
17.0	23.47	36.09	24.63	332	.	.	.	.	.	.
18.0	23.46	36.08	24.63	332	.	.	.	.	.	.
19.0	23.41	36.08	24.64	331	.	.	.	.	.	.
20.0	23.40	36.08	24.64	331	.	.	.	.	.	.
21.0	23.37	36.08	24.65	330	.	.	.	.	.	.
22.0	23.30	36.08	24.67	328	.	.	.	.	.	.
23.0	23.28	36.08	24.68	328	.	.	.	.	.	.
24.0	23.21	36.08	24.70	326	.	.	.	.	.	.
25.0	22.84	36.11	24.83	313	.	.	.	.	.	.
26.0	22.62	36.08	24.87	310	.	.	.	.	.	.
27.0	22.50	36.09	24.91	306	.	.	.	.	.	.
28.0	22.40	36.08	24.93	304	.	.	.	.	.	.
29.0	22.23	36.09	24.99	298	.	.	.	.	.	.
30.0	22.00	36.08	25.05	293	.	.	.	.	.	.
31.0	21.80	36.09	25.11	287	.	.	.	.	.	.
32.0	21.68	36.09	25.14	284	.	.	.	.	.	.
33.0	21.61	36.10	25.17	281	.	.	.	.	.	.
34.0	21.53	36.09	25.19	280	.	.	.	.	.	.
35.0	21.50	36.10	25.20	278	4.75	4.99	.24	0.18	02.1	02.1
36.0	21.49	36.09	25.20	279	.	.	.	.	.	.
37.0	21.48	36.09	25.20	279	.	.	.	.	.	.
38.0	21.47	36.09	25.20	278	.	.	.	.	.	.
39.0	21.47	36.09	25.20	278	.	.	.	.	.	.
40.0	21.44	36.09	25.21	278	.	.	.	.	.	.

STA 263 16/ IV/77 12.1 GMT CONSEC STA 263 [CONTINUED]

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
41.0	21.44	36.10	25.22	277	.	.	.	.	.	.
42.0	21.44	36.09	25.21	278	.	.	.	.	.	.
43.0	21.44	36.09	25.21	278	4.75	5.00	.25	0.22	02.3	02.8
44.0	21.44	36.09	25.21	278	.	.	.	.	.	.
45.0	21.42	36.10	25.22	277	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 264 16/ IV/77 12.8 GMT CONSEC STA 264

LAT 31 41.4N LONG 79 53.0W DEPTH = 43M DIST LAST STA = 7.4KM

WEATHER DATA

WIND SPEED = 8 KTS
WIND DIRECTION = 320
AIR TEMP = . C
WEATHER CODE =
BAROMETRIC PRESSURE = 1017.6 MB
SEA STATE =
WAVE DIRECTION =
CLOUD TYPE =
CLOUD AMOUNT =
VISIBILITY CODE =

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	23.20	.	.	.	.	.	.	.	.	.
22.0	23.00	.	.	.	.	.	.	.	.	.
25.0	22.50	.	.	.	.	.	.	.	.	.
26.5	22.00	.	.	.	.	.	.	.	.	.
27.0	21.70	.	.	.	.	.	.	.	.	.
37.5	21.50	.	.	.	.	.	.	.	.	.
43.0	21.40	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 265 16/ IV/77 13.3 GMT CONSEC STA 265

LAT 31 42.2N LONG 79 58.8W DEPTH = 41M DIST LAST STA = 9.3KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 320	WAVE DIRECTION	=
AIR TEMP	= 24.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
3.0	20.39	35.44	25.00	296	5.30	5.11	-.19	0.06	00.1	01.9
4.0	20.53	35.39	24.93	303	.	.	.	.	.	.
5.0	20.58	35.38	24.91	305	.	.	.	.	.	.
6.0	20.59	35.38	24.90	306	.	.	.	.	.	.
7.0	20.47	35.41	24.96	300	.	.	.	.	.	.
8.0	20.46	35.40	24.95	301	.	.	.	.	.	.
9.0	20.49	35.38	24.93	303	.	.	.	.	.	.
10.0	20.39	35.41	24.98	298	.	.	.	.	.	.
11.0	20.10	35.40	25.05	292	.	.	.	.	.	.
12.0	20.04	35.52	25.16	282	.	.	.	.	.	.
13.0	20.11	35.58	25.18	279	.	.	.	.	.	.
14.0	20.21	35.65	25.21	277	.	.	.	.	.	.
15.0	20.26	35.67	25.21	277	.	.	.	.	.	.
16.0	20.29	35.70	25.23	275	.	.	.	.	.	.
17.0	20.29	35.71	25.23	274	.	.	.	.	.	.
18.0	20.29	35.71	25.23	275	5.06	5.11	.05	0.08	00.1	01.9
19.0	20.28	35.71	25.24	274	.	.	.	.	.	.
20.0	20.28	35.71	25.24	274	.	.	.	.	.	.
21.0	20.28	35.71	25.24	274	.	.	.	.	.	.
22.0	20.28	35.71	25.24	274	.	.	.	.	.	.
23.0	20.28	35.70	25.23	275	.	.	.	.	.	.
24.0	20.28	35.71	25.24	274	.	.	.	.	.	.
25.0	20.28	35.71	25.24	275	.	.	.	.	.	.
26.0	20.28	35.71	25.24	275	.	.	.	.	.	.
27.0	20.28	35.71	25.24	275	.	.	.	.	.	.
28.0	20.28	35.71	25.24	275	.	.	.	.	.	.
29.0	20.29	35.71	25.23	275	.	.	.	.	.	.
30.0	20.29	35.71	25.23	275	.	.	.	.	.	.
31.0	20.29	35.71	25.23	275	.	.	.	.	.	.
32.0	20.29	35.71	25.23	275	.	.	.	.	.	.
33.0	20.29	35.71	25.23	275	.	.	.	.	.	.
34.0	20.29	35.71	25.23	275	.	.	.	.	.	.
35.0	20.29	35.71	25.23	275	.	.	.	.	.	.
36.0	20.29	35.71	25.23	275	.	.	.	.	.	.
37.0	20.29	35.71	25.23	275	.	.	.	.	.	.
38.0	20.29	35.72	25.24	275	4.98	5.11	.13	0.10	00.1	02.9
39.0	20.29	35.72	25.24	275	.	.	.	.	.	.
40.0	20.29	35.72	25.24	275	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 266 16/ IV/77 14.0 GMT CONSEC STA 266

LAT 31 43.8N LONG 80 3.8W DEPTH = 38M DIST LAST STA = 8.4KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 320	WAVE DIRECTION	=
AIR TEMP	= 24.4C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1017.6 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
1.0	20.70	.	.	.	.	.	.	.	.	.
13.5	20.60	.	.	.	.	.	.	.	.	.
14.0	20.50	.	.	.	.	.	.	.	.	.
16.0	20.00	.	.	.	.	.	.	.	.	.
31.0	19.50	.	.	.	.	.	.	.	.	.
38.0	19.50	.	.	.	.	.	.	.	.	.

ADVANCE II CRUISE 4 STA 267 16/ IV/77 14.4 GMT CONSEC STA 267

LAT 31 45.5N LONG 80 8.2W DEPTH = 31M DIST LAST STA = 7.6KM

WEATHER DATA

WIND SPEED	= 8 KTS	SEA STATE	=
WIND DIRECTION	= 320	WAVE DIRECTION	=
AIR TEMP	= 23.3C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1016.9 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
2.0	19.79	35.03	24.85	311	5.40	5.18	-.22	0.05	00.0	01.1
3.0	19.80	35.03	24.85	311	.	.	.	.	.	.
4.0	19.82	35.02	24.83	312	.	.	.	.	.	.
5.0	19.82	35.02	24.83	312	.	.	.	.	.	.
6.0	19.80	35.02	24.84	312	.	.	.	.	.	.
7.0	19.76	35.02	24.85	311	.	.	.	.	.	.
8.0	19.73	35.03	24.86	309	.	.	.	.	.	.
9.0	19.68	35.06	24.90	306	.	.	.	.	.	.
10.0	19.51	35.14	25.01	296	.	.	.	.	.	.
11.0	19.26	35.22	25.13	284	.	.	.	.	.	.
12.0	19.09	35.28	25.22	276	.	.	.	.	.	.
13.0	19.01	35.29	25.25	273	.	.	.	.	.	.
14.0	18.99	35.28	25.25	273	.	.	.	.	.	.
15.0	18.90	35.27	25.26	272	.	.	.	.	.	.
16.0	18.86	35.28	25.28	270	.	.	.	.	.	.
17.0	18.87	35.28	25.28	270	.	.	.	.	.	.
18.0	18.87	35.28	25.28	270	.	.	.	.	.	.
19.0	18.87	35.28	25.28	270	.	.	.	.	.	.
20.0	18.87	35.28	25.28	270	.	.	.	.	.	.
21.0	18.87	35.29	25.28	270	.	.	.	.	.	.
22.0	18.87	35.29	25.28	270	.	.	.	.	.	.
23.0	18.88	35.29	25.28	270	.	.	.	.	.	.
24.0	18.88	35.30	25.29	269	.	.	.	.	.	.
25.0	18.88	35.30	25.29	269	.	.	.	.	.	.
26.0	18.88	35.30	25.29	269	.	.	.	.	.	.
27.0	18.88	35.29	25.28	270	.	.	.	.	.	.
28.0	18.88	35.30	25.29	270	.	.	.	.	.	.
29.0	18.88	35.30	25.29	270	.	.	.	.	.	.
30.0	18.89	35.30	25.29	270	5.27	5.26	-.01	0.07	00.1	02.7
31.0	18.90	35.29	25.28	271	.	.	.	.	.	.

STATION SUMMARY FOR BLUE FIN CRUISE 29

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
29	A	31 51.9N	80 52.5W	77	4	19	15.3	8	1
29	B	31 50.2N	80 47.1W	77	4	19	17.5	13	2
29	C	31 48.5N	80 41.0W	77	4	19	18.0	15	3
29	D	31 46.8N	80 35.6W	77	4	19	19.2	18	4
29	E	31 45.0N	80 30.5W	77	4	19	19.7	17	5
29	F	31 43.3N	80 25.0W	77	4	19	20.8	25	6
29	G	31 42.8N	80 20.1W	77	4	19	21.3	29	7
29	H	31 40.0N	80 14.6W	77	4	19	22.7	29	8
29	J	31 38.2N	80 8.7W	77	4	19	23.3	33	9
29	K	31 36.4N	80 3.3W	77	4	20	.6	38	10
29	L	31 34.6N	79 57.9W	77	4	20	1.3	41	11
29	M	31 33.0N	79 52.5W	77	4	20	2.4	42	12
29	N	31 31.3N	79 46.9W	77	4	20	2.6	56	13
29	P	31 29.3N	79 41.8W	77	4	20	4.0	124	14

BLUE FIN CRUISE 29 STA A 19/ IV/77 15.3 GMT CONSEC STA 1

LAT 31 51.9N LONG 80 52.5W DEPTH = 8M DIST LAST STA = 0.0KM

WEATHER DATA

WIND SPEED	= 0 KTS	SEA STATE	= 2
WIND DIRECTION	=	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 2	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1022.0 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
0.5	20.90	28.56	.	.	.	.	.	.	.	.
2.0	20.50	.	.	.	.	.	.	.	.	.
3.0	20.00	.	.	.	.	.	.	.	.	.
4.0	19.00	.	.	.	.	.	.	.	.	.
4.5	18.50	.	.	.	.	.	.	.	.	.
8.0	18.20	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA B 19/ IV/77 17.5 GMT CONSEC STA 2

LAT 31 50.2N LONG 80 47.1W DEPTH = 13M DIST LAST STA = 9.1KM

WEATHER DATA

WIND SPEED	= KTS	SEA STATE	= 2
WIND DIRECTION	=	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 2	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	=	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
0.5	22.60	29.06	.	.	.	.	.	.	.	.
1.0	22.50	.	.	.	.	.	.	.	.	.
1.5	22.00	.	.	.	.	.	.	.	.	.
2.0	21.50	.	.	.	.	.	.	.	.	.
2.5	21.00	.	.	.	.	.	.	.	.	.
3.0	20.50	.	.	.	.	.	.	.	.	.
3.5	20.00	.	.	.	.	.	.	.	.	.
4.0	19.50	.	.	.	.	.	.	.	.	.
4.5	19.00	.	.	.	.	.	.	.	.	.
6.0	18.50	.	.	.	.	.	.	.	.	.
13.0	18.40	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA C 19/ IV/77 18.0 GMT CONSEC STA 3

LAT 31 48.5N LONG 80 41.0W DEPTH = 15M DIST LAST STA = 10.1KM

WEATHER DATA

WIND SPEED	= 9 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 2	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1022.4 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	ADU	PO4	NO3	SI
0.5	22.80	29.10	.	.	.	.	.	.	.	.
1.0	22.50	.	.	.	.	.	.	.	.	.
1.5	22.00	.	.	.	.	.	.	.	.	.
2.0	21.50	.	.	.	.	.	.	.	.	.
2.5	21.00	.	.	.	.	.	.	.	.	.
3.0	20.50	.	.	.	.	.	.	.	.	.
3.5	20.00	.	.	.	.	.	.	.	.	.
4.0	19.50	.	.	.	.	.	.	.	.	.
4.5	19.00	.	.	.	.	.	.	.	.	.
5.0	18.50	.	.	.	.	.	.	.	.	.
15.0	18.10	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA D 19/ IV/77 19.2 GMT CONSEC STA 4

LAT 31 46.8N LONG 80 35.6W DEPTH = 18M DIST LAST STA = 9.1KM

WEATHER DATA

WIND SPEED	= 9 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	=	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	=	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	ADU	PO4	NO3	SI
0.5	23.10	28.86	.	.	.	.	.	.	.	.
1.0	23.00	.	.	.	.	.	.	.	.	.
1.5	22.00	.	.	.	.	.	.	.	.	.
2.0	21.00	.	.	.	.	.	.	.	.	.
3.0	20.00	.	.	.	.	.	.	.	.	.
4.0	19.50	.	.	.	.	.	.	.	.	.
5.0	19.00	.	.	.	.	.	.	.	.	.
5.5	18.50	.	.	.	.	.	.	.	.	.
18.0	18.10	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA E 19/ IV/77 19.7 GMT CONSEC STA 5

LAT 31 45.0N LONG 80 30.5W DEPTH = 17M DIST LAST STA = 8.7KM

WEATHER DATA

WIND SPEED	= 9 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1021.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.5	22.30	.	.	.	.	.	.	.	.	.
1.0	22.00	.	.	.	.	.	.	.	.	.
2.0	19.50	.	.	.	.	.	.	.	.	.
4.0	19.10	.	.	.	.	.	.	.	.	.
8.0	19.50	.	.	.	.	.	.	.	.	.
17.0	19.20	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA F 19/ IV/77 20.8 GMT CONSEC STA 6

LAT 31 43.3N LONG 80 25.0W DEPTH = 25M DIST LAST STA = 9.2KM

WEATHER DATA

WIND SPEED	= 9 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	=	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.5	21.60	34.16	.	.	.	.	.	.	.	.
1.0	21.00	.	.	.	.	.	.	.	.	.
1.5	20.00	.	.	.	.	.	.	.	.	.
2.0	19.00	.	.	.	.	.	.	.	.	.
3.0	18.50	.	.	.	.	.	.	.	.	.
6.0	18.00	.	.	.	.	.	.	.	.	.
25.0	17.80	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA G 19/ IV/77 21.3 GMT CONSEC STA 7

LAT 31 42.8N LONG 80 20.1W DEPTH = 29M DIST LAST STA = 7.8KM

WEATHER DATA

WIND SPEED	= 7 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1020.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
0.5	22.20	34.02	.	.	.	.	.	.	.	.
1.0	22.00	.	.	.	.	.	.	.	.	.
1.5	21.00	.	.	.	.	.	.	.	.	.
2.0	20.50	.	.	.	.	.	.	.	.	.
3.0	20.00	.	.	.	.	.	.	.	.	.
3.5	19.50	.	.	.	.	.	.	.	.	.
4.0	19.00	.	.	.	.	.	.	.	.	.
4.5	18.50	.	.	.	.	.	.	.	.	.
7.0	18.00	.	.	.	.	.	.	.	.	.
29.0	17.90	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA H 19/ IV/77 22.7 GMT CONSEC STA 8

LAT 31 40.0N LONG 80 14.6W DEPTH = 29M DIST LAST STA = 10.1KM

WEATHER DATA

WIND SPEED	= 7 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1020.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
0.5	21.70	34.22	.	.	.	.	.	.	.	.
2.0	20.50	.	.	.	.	.	.	.	.	.
4.0	20.00	.	.	.	.	.	.	.	.	.
5.0	19.50	.	.	.	.	.	.	.	.	.
5.5	19.00	.	.	.	.	.	.	.	.	.
6.0	18.50	.	.	.	.	.	.	.	.	.
7.0	18.00	.	.	.	.	.	.	.	.	.
7.5	17.50	.	.	.	.	.	.	.	.	.
29.0	17.10	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA J 19/ IV/77 23.3 GMT CONSEC STA 9

LAT 31 38.2N LONG 80 8.7W DEPTH = 33M DIST LAST STA = 9.9KM

WEATHER DATA

WIND SPEED	= 7 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1020.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2/	AOU	PO4	NO3	SI
0.5	22.60	34.79	.	.	.	.	.	.	.	.
2.0	22.00	.	.	.	.	.	.	.	.	.
6.0	21.50	.	.	.	.	.	.	.	.	.
7.5	21.00	.	.	.	.	.	.	.	.	.
12.0	20.50	.	.	.	.	.	.	.	.	.
12.5	19.00	.	.	.	.	.	.	.	.	.
13.0	18.00	.	.	.	.	.	.	.	.	.
13.5	17.50	.	.	.	.	.	.	.	.	.
15.0	17.00	.	.	.	.	.	.	.	.	.
33.0	16.80	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA K 20/ IV/77 .6 GMT CONSEC STA 10

LAT 31 36.4N LONG 80 3.3W DEPTH = 38M DIST LAST STA = 9.2KM

WEATHER DATA

WIND SPEED	= 7 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1020.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.5	23.50	35.03	.	.	.	.	.	.	.	.
3.0	23.00	.	.	.	.	.	.	.	.	.
3.5	22.50	.	.	.	.	.	.	.	.	.
5.0	22.00	.	.	.	.	.	.	.	.	.
7.0	21.50	.	.	.	.	.	.	.	.	.
9.0	21.00	.	.	.	.	.	.	.	.	.
12.0	20.50	.	.	.	.	.	.	.	.	.
15.0	20.00	.	.	.	.	.	.	.	.	.
17.0	19.50	.	.	.	.	.	.	.	.	.
18.0	19.00	.	.	.	.	.	.	.	.	.
19.0	18.50	.	.	.	.	.	.	.	.	.
20.0	18.00	.	.	.	.	.	.	.	.	.
21.0	17.50	.	.	.	.	.	.	.	.	.
23.0	17.00	.	.	.	.	.	.	.	.	.
38.0	16.80	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA L 20/ IV/77 1.3 GMT CONSEC STA 11

LAT 31 34.6N LONG 79 57.9W DEPTH = 41M DIST LAST STA = 9.2KM

WEATHER DATA

WIND SPEED	= 7 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1020.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.5	22.80	35.81	.	.	.	.	.	.	.	.
7.5	22.50	.	.	.	.	.	.	.	.	.
11.0	22.50	.	.	.	.	.	.	.	.	.
15.0	22.70	.	.	.	.	.	.	.	.	.
16.0	22.50	.	.	.	.	.	.	.	.	.
17.0	22.00	.	.	.	.	.	.	.	.	.
18.0	21.50	.	.	.	.	.	.	.	.	.
20.0	21.00	.	.	.	.	.	.	.	.	.
20.5	20.50	.	.	.	.	.	.	.	.	.
21.0	20.00	.	.	.	.	.	.	.	.	.
21.5	19.50	.	.	.	.	.	.	.	.	.
22.0	19.00	.	.	.	.	.	.	.	.	.
23.0	18.50	.	.	.	.	.	.	.	.	.
24.0	18.00	.	.	.	.	.	.	.	.	.
41.0	17.70	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA M 20/ IV/77 2.4 GMT CONSEC STA 12

LAT 31 33.0N LONG 79 52.5W DEPTH = 42M DIST LAST STA = 9.0KM

WEATHER DATA

WIND SPEED	= 7 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1020.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	ADU	PO4	NO3	SI
0.5	24.40	36.14	.	.	.	.	.	.	.	.
7.0	24.00	.	.	.	.	.	.	.	.	.
7.5	23.50	.	.	.	.	.	.	.	.	.
8.0	23.00	.	.	.	.	.	.	.	.	.
8.5	22.50	.	.	.	.	.	.	.	.	.
9.0	22.00	.	.	.	.	.	.	.	.	.
9.5	21.50	.	.	.	.	.	.	.	.	.
10.0	20.00	.	.	.	.	.	.	.	.	.
11.0	19.50	.	.	.	.	.	.	.	.	.
11.5	19.00	.	.	.	.	.	.	.	.	.
12.0	18.50	.	.	.	.	.	.	.	.	.
13.0	18.00	.	.	.	.	.	.	.	.	.
42.0	17.70	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA N 20/ IV/77 2.6 GMT CONSEC STA 13

LAT 31 31.3N LONG 79 46.9W DEPTH = 56M DIST LAST STA = 9.4KM

WEATHER DATA

WIND SPEED	= 7 KTS	SEA STATE	= 2
WIND DIRECTION	= 160	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1020.7 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.5	24.30	36.16	.	.	.	.	.	.	.	.
6.0	24.00	.	.	.	.	.	.	.	.	.
8.0	23.50	.	.	.	.	.	.	.	.	.
9.0	23.00	.	.	.	.	.	.	.	.	.
11.0	22.50	.	.	.	.	.	.	.	.	.
11.5	22.00	.	.	.	.	.	.	.	.	.
12.0	21.50	.	.	.	.	.	.	.	.	.
13.0	21.00	.	.	.	.	.	.	.	.	.
13.5	20.50	.	.	.	.	.	.	.	.	.
14.0	20.00	.	.	.	.	.	.	.	.	.
14.5	19.50	.	.	.	.	.	.	.	.	.
17.0	19.00	.	.	.	.	.	.	.	.	.
52.0	18.50	.	.	.	.	.	.	.	.	.
56.0	18.20	.	.	.	.	.	.	.	.	.

BLUE FIN CRUISE 29 STA P 20/ IV/77 4.0 GMT CONSEC STA 14

LAT 31 29.3N LONG 79 41.8W DEPTH =124M DIST LAST STA = 8.9KM

WEATHER DATA

WIND SPEED	= 11 KTS	SEA STATE	= 2
WIND DIRECTION	= 140	WAVE DIRECTION	=
AIR TEMP	= . C	CLOUD TYPE	=
WEATHER CODE	= 4	CLOUD AMOUNT	=
BAROMETRIC PRESSURE	= 1021.3 MB	VISIBILITY CODE	=

OBSERVATIONS

Z	T	S	D	SVA	O2	O2'	AOU	PO4	NO3	SI
0.5	23.60	36.12	.	.	.	.	.	.	.	.
15.0	23.50	.	.	.	.	.	.	.	.	.
24.0	23.00	.	.	.	.	.	.	.	.	.
27.0	22.50	.	.	.	.	.	.	.	.	.
28.0	22.00	.	.	.	.	.	.	.	.	.
32.0	21.50	.	.	.	.	.	.	.	.	.
33.0	21.00	.	.	.	.	.	.	.	.	.
37.0	20.50	.	.	.	.	.	.	.	.	.
42.0	20.00	.	.	.	.	.	.	.	.	.
44.0	19.50	.	.	.	.	.	.	.	.	.
52.0	19.00	.	.	.	.	.	.	.	.	.
55.0	18.50	.	.	.	.	.	.	.	.	.
56.0	18.00	.	.	.	.	.	.	.	.	.
58.0	17.50	.	.	.	.	.	.	.	.	.
60.0	17.00	.	.	.	.	.	.	.	.	.
62.0	16.50	.	.	.	.	.	.	.	.	.
65.0	16.00	.	.	.	.	.	.	.	.	.
68.0	15.50	.	.	.	.	.	.	.	.	.
79.0	15.00	.	.	.	.	.	.	.	.	.
88.0	14.50	.	.	.	.	.	.	.	.	.
95.0	14.00	.	.	.	.	.	.	.	.	.
100.0	13.50	.	.	.	.	.	.	.	.	.
118.0	13.00	.	.	.	.	.	.	.	.	.
124.0	12.60	.	.	.	.	.	.	.	.	.