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MESA

MARINE ECOSYSTEMS ANALYSIS PROGRAM

REPORT No. 74-2

New York Bight Project, Water Column Sampling Cruises #1-5 of the NOAA Ship FERREL, August-November 1973

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noaa

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

Environmental
Research Laboratories

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Marine Ecosystems Analysis Program
Boulder, Colorado
July 1974

UNITED STATES
DEPARTMENT OF COMMERCE
Frederick B. Dent, Secretary

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
Robert M. White, Administrator

Environmental Research
Laboratories
Wilmot N. Hess, Director

NOAA ship Ferrel

CONTENTS

ABSTRACT	Page 1
1. INTRODUCTION	1
2. INSTRUMENTATION	5
3. DATA COLLECTION	6
4. DATA PROCESSING	7
5. ACKNOWLEDGMENTS	12
6. REFERENCES	12
7. SERIAL DATA	15

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During the period August - November 1973, a series of five oceanographic cruises were made by the NOAA ship Ferrel in the New York Bight. These cruises are the first in a series of monthly cruises scheduled to last through 1975. Emphasis was given to collecting physical, chemical, and geological data. The objective of the cruises was to supply data to base analysis of the water movements on the highly impacted ecosystem. This report presents the corrected data from these five cruises and describes the parameters measured, the measurements methods, and corrections applied to the data.

Key Words: MESA, New York Bight, Physical Oceanographic Data,
Nutrient Data

1. INTRODUCTION

During 1973, the National Oceanic and Atmospheric Administration (NOAA) began a large-scale investigation of the marine ecosystem of New York Bight. This project is the first regional project of the Marine Ecosystem Analysis (MESA) program and includes a data collection phase in each of the major oceanographic disciplines of biology, geology, chemistry, and physics. The prime purpose in this field phase is to provide baseline data on existing conditions and mechanisms from which changes in the environment can be analyzed and guidelines for future assessment of man-produced activity in the marine environment can be developed.

The objective of the physical oceanography program is to obtain direct and indirect measurements of water movements that will provide an estimate of potential transport and energy dissipation within the Bight apex, the relatively small area within 60 km of New York Harbor. The direct measurement program, based on 10 current meter stations, was designed to provide data on the time and space scale of water motion in the apex and to test the circulation hypothesis proposed by Charnell et al. (1972).

To supplement these data, a series of cruises were planned that would provide data on density and quality of water in the apex. The cruises were designed to coincide with the transits of the Earth Resources Technology Satellite (ERTS). These remotely sensed data were to help in an evaluation of the potential for satellite monitoring of water quality changes in near-surface waters (cf. Charnell and Maul, 1973, and Charnell et al. 1974).

From August to November 1973, NOAA conducted the first five of these cruises. These water-sediment chemistry (WSC) cruises consisted of 25 stations (see fig. 1 for locations) that were occupied on an approximately monthly basis by the NOAA ship Ferrel. Cruise dates are given in table 1. The sampling program was designed by the oceanographic staff at the Atlantic Oceanographic and Meteorological Laboratories (AOML) of NOAA. Those staff members who participated in the field work are also listed in table 1.

Only the physical and chemical data obtained from water column measurements on these five cruises are presented in this report.

Figure 1. Locations of stations in the New York Bight area.

Table 1.

Water-Sediment Chemistry Cruises by the NOAA Ship Ferrel

Cruise	Date	AOML personnel
1	August 27-29, 1973	R. Starr P. Hatcher
2	September 16-20, 1973	P. Hatcher D. Drake
3	October 1-4, 1973	D. Drake
4	November 5-9, 1973	G. Berberian
5	November 26-29, 1973	G. Berberian P. Hatcher D. Drake

2. INSTRUMENTATION

The primary instrument used aboard the Ferrel for water column sampling was the Inter Ocean Model 513-10 CSTD, with added sensors for measuring turbidity, dissolved oxygen, pH, and Redox (Eh). This was mated with a deep-well pump at the end of 300 m of hose so that water samples could be drawn from any desired depth. The system is equipped with a digital display to monitor sensor functions during a cast. Data from the sensors were logged, one set per second, on a magnetic-tape-recording system. The ship was also equipped to collect water samples with sample bottles and has a wet laboratory for processing water samples. Ship's position was determined by horizontal sextant angles, by radar, and by Raydist.

The manufacturers specifications on the sensors are as follows:

- (a) Depth, 0 to 300 m, ± 1 m,
- (b) Temperature, -5° to 45°C , $\pm 0.02^{\circ}\text{C}$,
- (c) Conductivity, 0 to 65 m mhos, ± 0.05 m mhos,
- (d) Salinity, 0 to $40^{\circ}/\infty$, $\pm 0.05^{\circ}/\infty$,
- (e) Turbidity, 0 to 100 percent, ± 3 -percent transmission,
- (f) Dissolved oxygen, 0 to 20 ppm, ± 0.2 ppm,
- (g) pH, 2 to 12 pH, ± 0.1 pH, and
- (h) Redox (Eh), -2 to +2 V, ± 5 mV.

Time constants for most of the sensors are relatively short, varying between 10 and 400 ms. Exceptions are oxygen, which has a time constant of 10 s., and salinity, which has a time constant of

1.4 s., caused by the use of slow-response thermistors.

The sensor package was calibrated by the National Oceanographic Instrumentation Center (NOIC) in August 1973. Periodic calibration checks were made by the NOIC between cruises.

3. DATA COLLECTION

The normal plan of daily operations was to occupy five to nine stations, depending upon weather, depth of water, and travel distance. At each station, the sensor/sampling device was lowered to just below the water surface, and readings were logged from the digital readout for each sensor. For cruises WSC-1 and WSC-2, a bucket was used for collecting the surface water samples. For cruises WSC-3 through WSC-5, these samples were obtained by pump. The underwater unit was then lowered to the bottom at a rate of about 8 m/min, slow enough to permit the sensors to respond to gradients existing at the time. Another set of readings was taken at the bottom and the pump turned on for water samples. The sensor/sampling unit was then raised to the surface, stopping to take readings and water samples at 10-m intervals. On cruise WSC-5, in addition to the pumped water samples, Nansen casts with reversing thermometers were made at selected stations.

These temperature data were sufficient to check the accuracy of the temperature sensor and to compute a correction. In addition, the water samples were analyzed for dissolved oxygen so as to evaluate specifically the reliability of oxygen values obtained from pumped

samples. At each sample depth, a water sample was drawn for nutrient analysis into an aged 125-ml plastic bottle with polyseal cap and was then immediately frozen. At the end of each cruise, the samples were transported in freezer chests, packed with dry ice, to a freezer at the AOML.

4. DATA PROCESSING

After each cruise, the raw data tapes were returned to AOML for processing. In general, only the down-cast data were used. When all or part of the down-cast was missing, data from the complete up-cast were substituted.

Noise pulses were apparent in the original data, caused in part by power fluctuations and intermittent instrument noise associated with a faulty digitizer. This noise was removed by separate filters developed for each parameter.

To the extent possible, all sensor-measured parameters were checked for accuracy. Depth was compared to the meter-wheel reading at the winch and appeared to be accurate within 1 m.

Salinity could be determined by two methods. Salinity values, as computed by the instrument, were recorded directly. Salinity could also be computed from the measured temperature and the conductivity value. After each cruise, salinity values were determined from the water samples using a Plessey 6220 salinometer. The two separately measured salinity profiles were plotted and compared with the salinity values from the water samples. The sensor-recorded salinity

values were inconsistent and, therefore, are not reported herein. This poor result for directly recorded salinity value is caused by the high time constant of the salinity sensor. On the other hand, the salinity values computed from the temperature and conductivity gave acceptable results because the temperature thermistor has a time constant comparable to that for the conductivity sensor.

Computed salinity values compare well with the salinity values from the water samples. The small correction required was constant for each cruise, but drifted slightly from cruise to cruise. For cruise WSC-1, the correction factor was $-0.12^{\circ}/\text{oo}$, for cruise WSC-2 was $-0.07^{\circ}/\text{oo}$, and for cruise WSC-5 was $+0.02^{\circ}/\text{oo}$. The final recorded salinity values are considered accurate to within $\pm 0.05^{\circ}/\text{oo}$.

During cruises WSC-1 through WSC-4, no direct temperature check could be made; however, as the computed salinity (using the temperature sensor) gave very satisfactory results, temperature apparently is accurate to at least $\pm 0.05^{\circ}\text{C}$. During cruise WSC-5, reversing thermometers were attached to the Nansen bottles. The mean difference between the reversing thermometer observation and the correction factor was applied to all temperature observations for cruise WSC-5.

Eh values were recorded during all cruises. However, no values were tabulated. The Eh sensor is electronically connected to the Ph sensor and appears to have malfunctioned until cruise WSC-5. No Eh meter was available to check the water samples on that cruise.

During cruises WSC-1 and WSC-2, the oxygen sensor malfunctioned. It

was not until cruise WSC-5 that the equipment for titration of water by the Winkler method had been assembled. During cruise WSC-5, water samples were drawn at each station and oxygen was determined. In addition, 16 oxygen values were determined from water samples taken by Nansen cast.

Differences between the oxygen values determined from the Nansen cast and the pumped water were determined. The greatest difference was 0.06 ppm, and the mean difference was 0.00 ppm. These differences indicated that the oxygen values from the pumped water samples were sufficiently accurate to be used to correct the sensor reading.

Differences between pumped water samples and sensor oxygen values were determined and plotted. This plot indicated that the sensor drifted during the day. No drift related to depth dependence could be identified. During a single cast, the differences may be very small or considerable. Nine casts were discarded because no accurate correction factor could be determined. For the rest of the casts, individual cast correction factors were determined and applied. Error analysis indicate values are accurate to within ± 0.2 ppm.

Recorded pH values were compared with the water sample values for cruises WSC-1 and WSC-2. Recorded values were in error because of a suspected sensor malfunction. No correction could be determined. By cruise WSC-5, the pH probe had been replaced, and a new pH meter was used to check the water samples. It was noted that the pH sensor had a slight variation with depth and also a day-to-day variation.

Linear regression equations were computed and corrections were applied. Values for pH represented herein are accurate to within $\pm$ 0.1 units.

The turbidity probe on the profiling system is a 10-cm path-length transmissometer. Even for the coastal area where the water is highly turbid, values from the probe fell in the operating range from 70 to 90 percent. While this is not the range of most sensitive operation (Segar et al. 1974), the profiles provide useful data on the relative turbidity in the water column. The system was originally calibrated using clean-filtered seawater for the upper transmittance level. Periodic calibration checks showed the system to drift no more than 1 percent in the operating range. Consequently, accuracy of the measured data is considered to be within specifications of $\pm$ 3 percent.

Although it was not discovered until after cruise WSC-4, electronic problems had developed in the magnetic-tape-recording system before cruise WSC-3. Attempts to salvage these data were made, but were unsuccessful. Therefore, the only values tabulated were from the oceanographic logs. The data were logged from the analog readouts and the results of water sample analyses.

Water samples were analyzed for dissolved nitrates ($\text{NO}_3\text{-N}$), nitrites ($\text{NO}_2\text{-N}$), orthophosphates ($\text{PO}_4\text{-P}$), and silicates ($\text{SiO}_3\text{-Si}$) with a four-channel Technicon Autoanalyzer, generally within a period of 6 wk after their collection.

The analytical procedures used in the analyses for nitrate and nitrite are described by Armstrong et al. (1967). The orthophosphate procedure is described by Grasshoff (1965), and the silicate procedure is described by Strickland and Parsons (1968). The water used for standardization, blank determinations, and wash between samples is filtered Gulf Stream water obtained from the surface of the Straits of Florida.

The detection limits and accuracies of analysis for the four nutrients are as follows:

NO₃-N 0.1 to 40 µgat/L. Coefficient of variation--95-percent confidence level at 15 µgat NO₃-N/L--0.17 percent;

NO₂-N 0.1 to 20 µgat/L. Coefficient of variation--95-percent confidence level at 3.2 µgat NO₂-N/L--1.2 percent;

PO₄-P 0.05 to 20 µgat/L. Coefficient of variation--95-percent confidence level at 0.64 µgat PO₄-P/L--1.6 percent; and

SiO₃-Si 0.1 to 50 µgat/L. Coefficient of variation--95-percent confidence level at 33 µgat SiO₃-Si/L--2.3 percent.

For profiling data taken on cruises WSC-1, WSC-2, and WSC-5, there were generally two to five observations per meter recorded. To compute values at 1-m intervals, several interpolation methods were tried. The more sophisticated techniques--such as Lagrangian interpolation formulas--tended to introduce overshoots, especially at the beginning and end of regions of large gradients. Because of the frequency of recorded data, a linear interpolation was considered the most acceptable. The form used was the normal one with a modification: if a reading occurred at an interpolation depth, the accepted value would be the mean of the reading itself and the value determined from the linear interpolation performed as if the reading were absent. Values of sigma-t were interpolated rather

than calculated from the interpolated temperature and salinity.

The interpolated data and corresponding profiles of temperature, salinity, sigma-t, and turbidity are given in section 7, Serial Data. The codes used in the table headers are from the National Oceanographic Data Center Manual Series (1964). Profiles were made from the smoothed raw data, with identifying symbols located at 5-m intervals.

5. ACKNOWLEDGMENTS

The authors express their thanks to the officers and crew of the NOAA ship Ferrel, under Comdr. Kenneth Burke, for the long and diligent hours they devoted to collecting these data. Thanks also go to Frances Nastav and Maxine Weiselberg who assisted in data processing, Kathleen Philips who prepared the data layout and typed the manuscript, and to Alan Herman who wrote several of the data processing routines. The effort was sponsored by NOAA and funded in part by NOAA Environmental Research Laboratories and the MESA program.

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7. SERIAL DATA

REF CRS/STA	1/ 1	LAT 40 29.6N	LONG 73 56.9W	CMT 22.1 08/28/73	BARO 11.2					
SONIC DPTH 14	AIR DRY/WFT 28.9/--	WIND DIR/SPD 32/13	SEA DIR/HT 32/0							
SWELL DIR/HT --/--	WTHR 05	CLOUD TYP/CFR --/--	VIS 6	SFCCHT DPTH --						
ID	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	21.55	29.36	20.09	87.9			.56	1.91	2.14	1.24
2.	21.51	28.98	19.77	86.5						
3.	21.37	29.46	20.21	87.8						
4.	20.93	29.75	20.55	88.7						
5.	20.98	29.71	20.51	88.6						
6.	20.68	29.73	20.55	88.3						
7.	20.73	29.78	20.62	88.2						
8.	20.55	29.87	20.74	87.5						
9.	20.41	29.95	20.84	87.3						
10.	20.37	29.99	20.88	86.6						
11.	20.14	30.12	21.03	86.5			.46	1.38	2.48	.96
12.	20.11	30.12	21.05	86.3						

CRUISE 1 STATION NUMBER 1 AUGUST 28, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FE CRS/STA 1/ 2 LAT 40 31.0N; LONG 73 53.0W GMT 13.2 08/28/73 RAPO 14.5
 SONIC DPTH 13 AIR DRY/WFT 25.0/-- WIND DIR/SPD 27/04 SFA DIR/HT 27/0
 SWELL DIR/HT --/-- WTHR 05 CLOUD TYP/CVR -- VIS 5 SECCH DPTH --

U	TEMP	SAL	SIGT	TURR	PH	C2	N02	N03	SI03	P04
1.	21.91	29.66	20.22	86.9			.46	.92	.00	.69
2.	21.94	29.60	20.17	85.8						
3.	21.71	29.78	20.36	86.8						
4.	21.22	29.98	20.65	89.9						
5.	21.42	30.48	20.97	88.5						
6.	21.48	30.65	21.08	93.3						
7.	20.99	30.73	21.28	92.5						
8.	20.73	30.71	21.33	92.1						
9.	20.69	30.74	21.37	92.2						
10.	20.67	30.75	21.37	92.4						
11.	20.67	30.74	21.37	91.9			.22	.18	1.13	.42
12.	20.65	30.74	21.37	91.1						

CRUISE 1 STATION NUMBER 2 AUGUST 28, 1973

FF CRS/STA 1/ 3 LAT 40 31.2N; LONG 73 47.3W CMT 14.1 08/28/73 BARO 14.2
 SONIC DPTH 20 AIR DRY/WFT 25.7/-- WIND DIR/SPD 27/08 SFA DIR/HT 27/1
 SWELL DIR/HT 18/0 WTHR 05 CLOUD TYP/CVR -- VIS 5 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	22.49	29.45	19.90	63.5			.15	2.99	.00	1.86
2.	22.47	29.45	19.91	83.9						
3.	22.46	29.47	19.92	84.5						
4.	22.45	29.46	19.92	84.4						
5.	22.44	29.44	19.91	84.3						
6.	22.33	29.60	20.06	85.8						
7.	21.92	30.06	20.52	90.1						
8.	21.30	30.54	21.05	94.1						
9.	21.31	30.54	21.05	94.4						
10.	21.31	30.56	21.06	94.7						
11.	21.27	30.59	21.10	94.7						
12.	21.24	30.58	21.10	94.8						
13.	21.17	30.60	21.13	95.1						
14.	21.09	30.60	21.15	95.0						
15.	20.83	30.67	21.27	94.7						
16.	20.62	30.68	21.34	94.6						
17.	20.02	30.84	21.61	93.5						
18.	18.86	30.95	21.98	92.6			.29	.66	9.51	1.02
19.	18.22	30.93	22.13	90.6						

CRUISE 1 STATION NUMBER 3 AUGUST 28, 1973

FE CRS/STA	1/ 4	LAT 40 31.911	LONG 73 40.000	GMT 15.3 08/28/73	BARO 14.2					
SONIC DPTH	17	AIR DRY/WFT 26.4/---	WIND DIR/SPD 27/05	SFA DIR/HT 27/0						
SWELL DIR/HT	18/0	WTHR 05	CLOUD TYP/CVR -/-	VIS 5	SECCHI DPTH --					
D	TEMP	SAL	SIGT	TURB	PH	C2	N02	N03	SIO3	P04
1.	22.56	29.78	20.13	86.5			.13	.87	.00	.42
2.	22.62	29.76	20.10	89.1						
3.	22.62	29.75	20.09	88.7						
4.	22.46	29.79	20.17	88.2						
5.	22.37	29.82	20.22	89.1						
6.	21.88	30.09	20.55	88.1						
7.	21.69	30.49	20.90	88.1						
8.	21.77	30.62	20.99	90.3						
9.	21.58	30.66	21.07	91.1						
10.	21.48	30.68	21.10	91.0						
11.	21.17	30.68	21.19	90.6						
12.	20.85	30.73	21.32	91.8						
13.	20.31	30.76	21.48	90.7						
14.	19.99	30.79	21.58	89.0						
15.	19.93	30.80	21.60	91.2						
16.	19.91	30.76	21.58	88.8			.16	.41	4.13	.67
17.	19.90	30.79	21.60	90.2						

CRUISE 1 STATION NUMBER 4 AUGUST 28, 1973

FF CRS/SIA 1/ 5 LAT 40 41.0N: LONG 73 00.0W CMT 16.5 08/28/73 HARO 10.0
 SONIC DPTH 15 AIR WRY/WFT 27.8/--- WIND DIR/SPD 27/09 SFA DIR/HT 00/0
 SWELL DIR/HT 18/0 WTHR 05 CLOUD TYP/CVR -/- VIS 5 SECCH DPTH --

	TEMP	SAL	SIGT	TURB	PH	N02	N03	S103	P04
1.	22.30	30.32	20.62	85.8		.25	.73	4.91	.90
2.	22.16	30.30	20.63	85.7					
3.	22.02	30.31	20.68	85.7					
4.	21.85	30.33	20.74	85.6					
5.	21.70	30.32	20.77	86.7					
6.	21.33	30.45	20.98	87.4					
7.	20.76	30.55	21.18	90.6					
8.	20.62	30.57	21.25	91.7					
9.	20.54	30.57	21.28	91.4					
10.	20.49	30.55	21.27	91.1					
11.	20.41	30.59	21.32	90.4					
12.	20.27	30.59	21.36	89.4		.21	.63	6.98	.81
13.	20.22	30.63	21.40	88.5					

CRUISE 1 STATION NUMBER 5 AUGUST 28, 1973

FE CRS/STA	1/ 6	LAT 40 25.8N	LONG 74 57.0W	GMT 13.7	08/27/73	BARO 19.5				
SONIC DPTH 11	AIR DRY/WFT 26.4/---	WIND DIR/SPD 25/10	SFA DIR/HT ---/-							
SWELL DIR/HT 17/0	WTHR 05	CLOUD TYP/CVR -/-	VIS 5	SECCHI DPTH --						
D	TEMP	SAL	SIGT	TURR	PH	O2	N02	N03	SI03	P04
1.	22.57	27.91	18.72	78.8			1.31	2.27	.35	1.23
2.	22.60	27.78	18.56	76.3						
3.	22.67	27.87	18.67	76.4						
4.	22.48	27.95	18.78	78.9						
5.	22.36	28.03	18.87	80.1						
6.	22.26	28.35	19.14	82.6						
7.	22.23	28.81	19.49	84.1						
8.	22.19	29.03	19.67	85.3						
9.	22.05	29.28	19.90	85.6			.51	1.84	.00	.86
10.	21.71	29.76	20.35	85.7						
11.	21.40	30.19	20.76	85.7						

CRUISE 1 STATION NUMBER 6 AUGUST 27, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FE CRS/STA 1/ 7 LAT 40 27.0N; LONG 73 58.0W GMT 22.2 09/27/73 BARO 16.2
 SONIC DPTH 22 AIR DRY/WFT 28.9/--- WIND DIR/SPD 23/11 SEA DIR/HT 18/0
 SWELL DIR/HT 18/0 WTHR 05 CLOUD TYP/CVR -/- VIS 5 SECCHT DPTH --

N	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
2.	22.72	27.55	18.39	84.4			.99	5.03	4.30	1.39
3.	22.19	28.72	19.43	85.9						
4.	22.05	29.39	19.98	88.6						
5.	22.09	29.90	20.35	88.0						
6.	22.10	30.08	20.49	88.4						
7.	22.10	30.17	20.56	89.2						
8.	22.11	30.35	20.69	91.5						
9.	22.15	30.56	20.84	90.7			.15	.00	.00	.17
10.	22.09	30.60	20.88	93.7						
11.	21.61	30.61	21.02	93.5						
12.	21.04	30.73	21.26	93.0						
13.	20.68	30.77	21.39	93.3						
14.	20.29	30.69	21.43	93.2						
15.	19.26	30.74	21.73	92.4						
16.	18.07	30.93	22.17	89.7						
17.	16.36	31.16	22.74	85.6						
18.	13.92	31.44	23.48	87.8						
19.	13.03	31.47	23.68	88.8						
20.	12.71	31.57	23.82	83.3						
21.	12.61	31.67	23.93	79.6			.51	1.53	19.57	1.36
22.	12.47	31.68	23.95	78.5						
23.	12.46	31.67	23.94	74.9						

CRUISE 1 STATION NUMBER 7 AUGUST 27, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FT CRS/SIA 1/8 LAT 40 27.0N; LONG 73 47.9W GMT 20.3 08/28/73 RARO 11.3
 SONIC DPTH 29 AIR DRY/WET 29.2/--- WIND DIR/SPD 28/10 SEA DIR/HT 00/0
 SWELL DIR/HT 18/1 WTHR 05 CLOUD TYP/CVR -/- VIS 5 SFCCHI DPTH ---

D	TFMP	SAL	SIGT	TUFR	PH	02	N02	N03	SI03	P04
1.	23.41	28.81	19.16	76.7			.47	.10	.00	.88
2.	23.15	29.00	19.38	77.2						
3.	22.93	29.14	19.54	80.1						
4.	23.04	29.11	19.49	80.2						
5.	22.99	29.11	19.51	80.0						
6.	22.76	29.27	19.69	81.1						
7.	22.24	29.79	20.23	87.5						
8.	21.79	30.17	20.64	90.6						
9.	21.41	30.43	20.93	94.2						
10.	21.31	30.50	21.01	93.7			.09	.00	.00	.18
11.	21.06	30.57	21.14	94.7						
12.	21.20	30.63	21.15	94.1						
13.	21.14	30.65	21.17	93.6						
14.	21.14	30.65	21.18	93.7						
15.	21.04	30.67	21.22	93.8						
16.	20.71	30.72	21.34	93.8						
17.	20.57	30.75	21.40	93.4						
18.	20.27	30.60	21.37	93.0						
19.	18.85	30.69	21.79	90.9						
20.	17.48	30.83	22.48	89.9			.17	.39	4.86	.67
21.	13.89	31.13	23.25	91.0						
22.	12.76	31.16	23.49	89.8						
23.	11.10	31.49	24.05	88.3						
24.	10.14	31.74	24.41	88.1						
25.	9.66	31.91	24.62	88.1						
26.	9.52	31.96	24.68	87.1						
27.	9.34	31.93	24.68	86.2						
28.	9.13	32.02	24.79	85.0						

CRUISE 1 STATION NUMBER 8 AUGUST 28, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FE CRS/STA	1/ 9	LAT 40 28.1N	LONG 73 39.9W	GMT 19.0 08/28/73	RARO 14.8					
SONIC DPTH 24	AIR DRY/WFT 28.3/---	WIND DIR/SPD 27/04	SFA DIR/HT 00/0							
SWELL DIR/HT 18/1	WTHR 05	CLOUD TYP/CVR -/-	VIS 5	SECCH DPTH --						
D	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	23.43	29.28	19.51	86.2			.11	.21	.00	.32
2.	22.93	29.48	19.80	86.4						
3.	22.21	29.95	20.36	87.4						
4.	21.48	30.13	20.59	89.8						
5.	21.60	30.20	20.66	90.2						
6.	21.58	30.32	20.81	90.4						
7.	21.52	30.39	20.88	91.5						
8.	21.29	30.51	21.03	92.2						
9.	21.27	30.51	21.04	92.3			.00	.00	.00	.23
10.	21.28	30.55	21.06	92.3						
11.	21.30	30.59	21.09	92.2						
12.	21.35	30.65	21.12	92.7						
13.	21.37	30.72	21.16	93.1						
14.	21.33	30.76	21.21	93.1						
15.	21.13	30.74	21.25	92.9						
16.	20.82	30.66	21.27	92.7						
17.	20.24	30.72	21.48	92.0						
18.	18.72	30.88	21.97	90.5						
19.	18.11	30.97	22.19	88.3						
20.	17.97	30.99	22.24	87.7						
21.	16.73	30.95	22.50	86.8			.39	.91	11.14	1.51
22.	15.78	31.08	22.80	84.8						

CRUISE 1 STATION NUMBER 9 AUGUST 28, 1973

D	TEMP	SAL	SIGT	TURR	PH	02	N02	N03	SI03	P04
1.	22.50	29.95	20.28	92.4						
2.	23.16	29.57	19.81	92.0			.00	.00	.00	.24
3.	22.82	29.65	19.96	90.6						
4.	21.63	30.33	20.80	93.3						
5.	21.64	30.30	20.78	93.7						
6.	21.52	30.35	20.85	94.3						
7.	21.41	30.38	20.90	94.1						
8.	21.44	30.51	20.99	93.3						
9.	21.34	30.59	21.07	93.6						
10.	21.47	30.81	21.21	94.3			.20	.57	6.57	.73
11.	21.36	30.69	21.14	93.8						
12.	21.68	30.97	21.27	94.3						
13.	21.90	31.15	21.35	93.9						
14.	21.79	31.13	21.36	93.7						
15.	21.19	31.05	21.46	95.0						
16.	20.32	30.82	21.52	94.1						
17.	19.73	30.76	21.63	93.1						
18.	19.00	30.71	21.77	89.3						
19.	17.86	31.06	22.31	89.5			.17	.57	6.14	.68
20.	17.77	31.11	22.38	90.1						

CRUISE 1 STATION NUMBER 10 AUGUST 28, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/STA 1/11 LAT 40 21.7N: LONG 73 56.9W GMT 15.1 08/27/73 HARO 19.5
 SONIC DPTH 14 AIR DRY/WET 28.2/--- WIND DIR/SPD 25/10 SFA DIR/HT ---/
 SWELL DIR/HT 18/0 WTHR 05 CLOUD TYP/CVR -/- VIS 5 SFCCHT DPTH --

D	TEMP	SAL	SIGT	TURR	PH	OZ	N02	N03	SI03	P04
2.	22.73	27.72	19.53	76.9			1.08	2.14	.00	1.04
3.	22.55	27.75	18.60	77.3						
4.	22.58	28.70	19.31	80.1						
5.	22.48	29.15	19.68	80.1						
6.	22.10	29.78	20.26	83.8						
7.	21.60	30.32	20.80	87.8						
8.	21.43	30.54	21.02	90.6						
9.	21.35	30.49	21.00	91.8						
10.	20.99	30.74	21.29	90.8						
11.	20.91	30.61	21.35	89.8						
12.	20.90	30.80	21.35	89.4						
13.	20.89	30.82	21.37	88.2			.18	.46	2.61	.60
14.	20.69	30.80	21.36	88.4						

CRUISE 1 STATION NUMBER 11 AUGUST 27, 1973

FE CRS/STA 1/12 LAT 40 22.9N; LONG 73 52.1W GMT 21.2 08/27/73 RAR0 16.9										
SONIC DPTH 23 AIR DRY/WET 29.4/--- WIND DIR/SPEED 27/02 SFA DIR/HT ---/-										
SWELL DIR/HT 00/0 WTHR 05 CLOUD TYP/CVR -/- VIS 5 SFCCHI DPTH --										
D	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
2.	23.45	29.31	19.64	85.1						
3.	23.17	29.25	19.56	83.5						
4.	22.80	29.77	20.06	87.9						
5.	22.49	30.19	20.46	91.4						
6.	22.23	30.51	20.77	92.6						
7.	22.10	30.66	20.93	94.0						
8.	22.09	30.70	20.95	94.3						
9.	22.11	30.76	20.99	94.9						
10.	22.09	30.81	21.04	94.6			.41	.00	.00	.64
11.	22.07	30.82	21.06	94.7						
12.	22.07	30.87	21.09	94.4						
13.	22.07	30.89	21.11	94.9						
14.	21.73	30.82	21.14	95.2						
15.	21.42	30.82	21.24	94.6						
16.	20.46	30.75	21.47	94.9						
17.	19.46	30.87	21.78	94.9						
18.	18.73	30.61	21.77	95.3						
19.	17.31	30.68	22.16	95.2						
20.	17.09	30.89	22.36	94.6						
21.	16.98	30.94	22.59	94.2						
22.	12.43	31.31	23.66	88.6						
23.	11.18	31.68	24.18	81.8			.57	1.53	20.55	1.49

CRUISE 1 STATION NUMBER 12 AUGUST 27, 1973

FF CRS/STA	1/13	LAT 40 23.0N	LONG 73 47.0W	GMT 13.4 08/29/73	RARO 18.8				
SUNIC DPTH	39	DIR/HT 18/0	AIR 25.0/-	WIND DIR/SPD 32/04	SFA DIR/HT 00/0				
SWELL DIR/HT	18/0	CLOUD TYP/CVR -/-	WIND TYP/CVR -/-	VIS 5	SECCHI DPTH --				
D	TEMP	SAL	SIGT	TURB	PH	N02	N03	SI03	P04
1.	22.57	30.33	20.55	90.5					
2.	22.48	30.22	20.35	93.4					
3.	22.47	30.21	20.37	92.8					
4.	22.70	30.22	20.43	92.7					
5.	22.12	30.36	20.70	93.1					
6.	21.93	30.42	20.79	91.4					
7.	21.55	30.40	20.88	88.5					
8.	21.39	30.45	20.96	88.5					
9.	21.22	30.47	21.02	88.5					
10.	21.10	30.53	21.10	89.9		.00	.00	.00	.14
11.	21.11	30.59	21.17	89.0					
12.	20.96	30.57	21.30	89.8					
13.	20.58	30.61	21.40	91.0					
14.	20.33	30.67	21.40	91.0					
15.	19.75	30.61	21.67	92.0					
16.	19.08	30.61	21.67	92.0					
17.	18.17	31.05	22.23	91.0					
18.	18.17	31.11	22.28	92.0					
19.	16.62	31.18	22.70	92.0					
20.	16.33	31.10	22.70	92.0		.10	.15	.89	.58
21.	16.14	31.04	22.62	91.5					
22.	15.70	31.03	22.79	91.5					
23.	14.57	31.24	23.19	90.6					
24.	11.43	31.90	24.45	90.6		.48	1.89	18.85	.92
25.	11.07	31.85	24.55	89.7					
26.	8.62	32.10	24.55	89.6					
27.	7.87	32.33	24.55	89.6					
28.	7.76	32.33	24.55	89.6					
29.	7.65	32.33	24.55	88.0					
30.	7.65	32.33	24.55	88.0					
31.	7.61	32.31	24.55	88.6					
32.	7.61	32.30	24.55	88.4					
33.	7.60	32.27	24.55	88.5					
34.	7.60	32.29	24.55	88.4					
35.	7.59	32.25	24.55	88.4					
36.	7.59	32.25	24.55	88.4					

CRUISE 1 STATION NUMBER 13 AUGUST 29, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FE CRS/STA 1/14 LAT 40 24.2N; LONG 73 38.9W GMT 22.7 08/29/73 BARO 17.0
 SONIC DPTH 24 AIR DRY/WFT 26.7/--- WIND DIR/SPD 23/13 SFA IIR/HT 23/0
 SWELL DIR/HT 18/0 WTHR 05 CLOUD TYP/CVR -/- VIS 6 SFCCHI DPTH --

O	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	24.26	29.77	19.64	95.8			.07	.09	.00	.26
2.	24.27	29.74	19.62	96.4						
3.	24.24	29.75	19.63	96.0						
4.	24.09	29.76	19.68	96.3						
5.	22.40	30.13	20.45	96.4						
6.	21.82	30.39	20.80	96.2						
7.	21.62	30.46	20.91	96.0						
8.	21.48	30.51	20.98	95.6						
9.	21.45	30.61	21.06	95.5			.00	.00	.00	.31
10.	21.48	30.73	21.15	95.4						
11.	21.62	30.86	21.21	95.5						
12.	21.76	30.95	21.24	95.4						
13.	21.94	31.12	21.31	95.4						
14.	22.03	31.21	21.36	95.3						
15.	21.81	31.12	21.35	95.0						
16.	21.19	30.98	21.41	95.2						
17.	20.33	30.75	21.46	94.7						
18.	19.77	30.90	21.73	94.4						
19.	19.27	30.97	21.90	93.9						
20.	18.68	30.80	21.94	92.8						
21.	16.44	30.95	22.52	90.1						
22.	16.25	31.03	22.66	89.1						
23.	16.16	31.01	22.67	88.2			.34	.64	11.06	1.18
24.	16.15	31.07	22.72	86.8						

CRUISE 1 STATION NUMBER 14 AUGUST 29, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/SIA 1/15 LAT 40 25.0N; LONG 73 30.3W GMT 21.4 08/29/73 RAR0 17.6
 SONIC DPTH 25 AIR DRY/WFT 29.4/-/- WIND DIR/SPD 18/11 SFA DIR/HT 00/0
 SWELL DIR/HT 18/0 WTHR 05 CLOUD TYP/CVR -/- VIS 6 SFCCHT DPTH --

1	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	25.17	29.75	19.36	96.5			.16	.00	.00	1.92
2.	24.83	29.81	19.50	96.6						
3.	23.48	29.95	20.00	96.6						
4.	23.45	29.97	20.02	96.5						
5.	23.32	30.06	20.13	96.5						
6.	22.79	30.29	20.45	96.3						
7.	22.42	30.50	20.71	96.1						
8.	21.96	30.88	21.13	95.7						
9.	21.73	30.97	21.26	95.8						
10.	21.68	30.99	21.29	95.3						
11.	21.70	31.04	21.32	95.5						
12.	21.71	31.04	21.32	95.2						
13.	21.69	31.04	21.32	95.4						
14.	21.65	31.03	21.33	95.3						
15.	21.59	31.02	21.33	95.1						
16.	21.34	31.04	21.42	94.9						
17.	20.98	30.97	21.46	94.7						
18.	20.39	31.05	21.68	93.7						
19.	19.78	31.13	21.89	92.8						
20.	19.26	30.99	21.92	92.2			.00	.00	.00	.26
21.	18.25	31.13	22.28	92.4						
22.	16.07	31.33	22.91	91.8						
23.	15.26	31.60	23.32	91.0						
24.	15.14	31.58	23.33	90.3			.14	.25	3.32	.49

CRUISE 1 STATION NUMBER 15 AUGUST 29, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

CRUISE 1 STATION NUMBER 16 AUGUST 27, 1973

FF CRS/STA 1/17 LAT 40 19.0N; LONG 73 52.3W GMT 19.9 08/27/73 RARO 17.0
 SONIC DPTH 24 AIR DRY/WET 26.1/--.- WIND DIR/SPD 18/15 SFA DIR/HT 18/0
 SWELL DIR/HT 18/1 WTHR 05 CLOUD TYP/CVR 7/8 VIS 5 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURR	PH	O2	N02	N03	SI03	P04
2.	22.64	30.11	20.36	87.6						
3.	22.64	30.11	20.36	87.7			.11	.51	.00	.38
4.	22.54	30.07	20.36	87.9						
5.	22.10	30.19	20.57	89.3						
6.	21.80	30.42	20.82	89.2						
7.	21.46	30.55	21.00	89.2						
8.	21.36	30.61	21.09	92.4						
9.	21.35	30.70	21.16	92.9			.00	.00	.00	.00
10.	21.43	30.75	21.17	93.7						
11.	21.46	30.78	21.19	94.2						
12.	21.47	30.80	21.20	94.2						
13.	21.49	30.84	21.22	93.9						
14.	20.97	30.53	21.13	93.7						
15.	20.05	30.48	21.33	94.2						
16.	19.53	30.56	21.64	94.0						
17.	18.03	30.55	21.85	93.6						
18.	17.70	30.42	21.86	92.8						
19.	17.00	30.62	22.18	92.2			.22	.89	5.01	.83
20.	15.89	30.54	22.37	92.2						
21.	14.01	31.27	23.33	90.0						
22.	13.27	31.43	23.60	89.7						
23.	11.96	31.54	23.94	88.9			.85	2.16	24.07	1.63
24.	10.13	31.97	24.59	85.9						

CRUISE 1 STATION NUMBER 17 AUGUST 27, 1973

	FF CRS/STA	1/1R	LAT 40 17.0N	LONG 73 46.0W	GMT 14.6	08/29/73	RAR0 19.5			
	SONIC DPTH 31	AIR DRY/WFT 27.8	WIND DIR/SFC 27/02	SEA DIR/HT 00/0						
	SWELL DIR/HT 18/1	WTHR 05	CLOUD TYP/CVR --	VIS 5	SECCHI DPTH --					
	TEMP	SAL	SIGT	TURR	PH	02	N02	N03	SI03	P04
1.	23.07	30.46	20.50	87.1						
2.	23.11	30.58	20.43	87.8						
3.	22.97	30.42	20.50	88.8						
4.	22.90	30.46	20.55	89.2						
5.	22.84	30.45	20.56	88.9						
6.	22.41	30.79	20.83	91.0						
7.	22.79	31.11	21.07	92.2						
8.	22.73	31.14	21.11	92.5						
9.	22.64	31.20	21.18	92.7						
10.	22.52	31.26	21.26	92.6			.00	.00	.00	.01
11.	22.31	31.29	21.34	93.2						
12.	22.27	31.27	21.34	93.0						
13.	22.10	31.31	21.41	92.7						
14.	21.45	31.22	21.49	92.5						
15.	20.12	31.16	21.97	92.6						
16.	17.92	31.13	22.30	91.2						
17.	17.51	31.17	22.48	92.5						
18.	17.09	31.13	22.55	92.2						
19.	16.66	31.29	22.77	91.6						
20.	16.41	31.33	22.86	91.3			.00	.00	.00	.39
21.	16.14	31.27	22.88	90.9						
22.	15.82	31.25	22.93	90.6						
23.	15.27	31.31	23.10	90.7						
24.	15.00	31.34	23.18	90.1						
25.	14.80	31.52	23.36	89.5						
26.	13.80	31.62	23.64	90.5						
27.	11.67	31.75	24.17	91.2						
28.	9.33	32.07	24.79	90.5						
29.	8.77	32.21	24.99	89.9			.48	2.11	19.85	1.02
30.	8.52	32.25	25.06	89.3						

CRUISE 1 STATION NUMBER 18 AUGUST 29, 1973

FE CRS/SIA 1/19		LAT 40 19.8N; LONG 73 37.9W		GMT 17.1	08/29/73	RARO 19.4				
SONIC DPTH 24		AIR DRY/WFT 31.7/---		WIND DIR/SPD --/-	SFA DIR/HT 00/0					
SWELL DIR/HT 18/1		WTHR 05		CLOUD TYP/CVR -/-	VIS 5	SECCHI DPTH --				
N	TEMP	SAL	SIGT	TURR	PH	O2	N02	N03	SI03	P04
1.	24.04	30.05	19.92	94.3			.08	.00	.00	.13
2.	23.03	30.13	20.09	94.5						
3.	23.52	30.19	20.17	94.5						
4.	23.27	30.25	20.29	94.4						
5.	22.74	30.44	20.58	94.3						
6.	22.50	30.52	20.70	94.1						
7.	22.46	30.63	20.80	94.0						
8.	22.44	30.70	20.86	93.8						
9.	22.40	30.74	20.90	93.7			.00	.00	.00	.00
10.	22.33	30.79	20.95	93.6						
11.	22.17	30.79	21.00	93.7						
12.	21.99	30.98	21.20	93.6						
13.	22.06	31.27	21.39	93.6						
14.	22.07	31.32	21.43	93.6						
15.	21.85	31.28	21.46	93.7						
16.	21.33	31.33	21.72	93.6						
17.	18.27	31.35	22.42	93.4						
18.	16.71	31.50	22.92	92.6						
19.	15.73	31.57	23.23	91.9						
20.	14.90	31.56	23.37	89.9						
21.	14.27	31.78	23.67	88.7						
22.	14.21	31.73	23.65	88.2						
23.	13.64	31.85	23.85	87.7			.11	.27	3.42	.47
24.	13.61	31.86	23.87	87.9						

CRUISE 1 STATION NUMBER 19 AUGUST 29, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/STW	1/20	LAT 40 20.9N	LONG 73 28.9W	GMT 20.3 08/29/73	BARO 18.0					
SONIC DPTH 29	AIR DRY/WFT 32.2/-/-	WIND DIR/SPD 18/02	SFA DIR/HT 00/0							
SWELL DIR/HT 18/0	WTHR 05	CLOUD TYP/CVR -/-	VIS 5	SECCHI DPTH --						
ID	TEMP	SAL	SIGT	TURR	PH	02	NO2	NO3	SI03	P04
1.	24.49	30.31	19.96	95.3						
2.	24.29	30.17	19.94	95.8						
3.	23.64	30.21	20.15	95.6						
4.	23.28	30.26	20.29	95.5						
5.	23.13	30.28	20.35	95.4						
6.	22.86	30.31	20.45	95.5						
7.	22.59	30.59	20.74	95.3						
8.	22.63	31.11	21.11	95.5						
9.	22.72	31.26	21.20	95.7						
10.	22.67	31.40	21.33	95.7			.00	.00	.00	.09
11.	22.23	31.44	21.47	95.7						
12.	21.35	31.21	21.54	95.5						
13.	20.43	31.08	21.69	95.2						
14.	19.72	31.07	21.86	95.4						
15.	18.91	31.21	22.17	95.1						
16.	18.15	31.16	22.32	94.8						
17.	17.12	30.95	22.42	94.1						
18.	16.51	31.18	22.72	94.3						
19.	16.21	31.39	22.95	93.8						
20.	15.93	31.37	23.00	93.1			.00	.00	.00	.18
21.	15.76	31.32	23.00	92.7						
22.	15.23	31.38	23.16	92.2						
23.	15.10	31.42	23.22	91.3						
24.	15.06	31.43	23.24	90.4						
25.	15.03	31.45	23.26	89.2						
26.	15.00	31.46	23.26	89.2						
27.	14.89	31.48	23.31	89.0						
28.	14.41	31.56	23.47	88.0			.38	.20	2.02	.36

CRUISE 1 STATION NUMBER 20 AUGUST 29, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

D	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	22.89	30.07	20.26	85.0			.00	.16	.00	.33
2.	23.02	30.01	20.18	88.4						
3.	23.02	30.00	20.17	88.4						
4.	22.89	30.09	20.33	88.0						
5.	22.55	30.05	20.34	88.7						
6.	22.18	30.15	20.52	88.2						
7.	22.04	30.20	20.59	87.9						
8.	22.01	30.19	20.60	87.0						
9.	21.87	30.24	20.67	87.4			.18	.00	.00	.24
10.	21.50	30.39	20.88	88.6						
11.	21.42	30.49	20.98	90.0						
12.	21.36	30.54	21.03	90.9						
13.	21.22	30.54	21.07	90.8						
14.	20.85	30.60	21.21	91.0						
15.	20.05	30.62	21.44	91.2						
16.	18.00	30.87	22.14	90.4						
17.	17.10	30.84	22.33	88.8						
18.	16.92	30.85	22.38	87.9						
19.	16.77	30.89	22.44	86.8			.41	2.43	9.87	.26
20.	16.20	31.00	22.65	84.7						

CRUISE 1 STATION NUMBER 21 AUGUST 27, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/STA 1/22 LAT 40 14.2N; LONG 73 57.0W GMT 18.4 08/27/73 BARO 17.8
 SONIC DPTH 26 AIR DRY/WFT 28.1/--- WIND DIR/SPD 18/15 SFA DIR/HT 18/1
 SWELL DIR/HT 18/1 WTHR 05 CLOUD TYP/CVR 0/7 VIS 5 SECCHI DPTH ---

N	TEMP	SAL	SIGT	TURB	PH	02	NO2	NO3	SI03	P04
1.	22.74	29.89	20.17	89.4			.11	.00	.00	.30
2.	22.68	29.89	20.18	91.6						
3.	22.67	29.89	20.19	90.1						
4.	22.59	29.90	20.21	91.1						
5.	22.48	29.88	20.23	90.9						
6.	22.27	30.01	20.39	90.5						
7.	22.30	30.37	20.65	92.0						
8.	22.23	30.74	20.95	93.0						
9.	22.10	30.90	21.10	93.8						
10.	22.05	30.89	21.11	94.7			.00	.00	.00	.17
11.	21.96	30.91	21.15	94.6						
12.	21.71	30.87	21.19	95.1						
13.	21.17	30.63	21.15	94.2						
14.	20.09	30.62	21.39	94.3						
15.	19.80	30.75	21.60	94.2						
16.	19.15	30.73	21.74	94.9						
17.	18.29	30.66	21.89	93.7						
18.	17.74	30.66	22.04	93.1						
19.	17.46	30.64	22.09	92.7						
20.	16.92	30.64	22.22	90.9			.19	.68	3.18	.68
21.	15.11	30.75	22.63	90.8						
22.	13.91	31.37	23.42	89.6						
23.	13.45	31.50	23.62	89.1						
24.	12.19	31.36	23.75	89.6						
25.	10.78	31.86	24.39	89.0						
26.	10.37	31.86	24.46	87.4						

CRUISE 1 STATION NUMBER 22 AUGUST 27, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

U	TEMP	SAL	SIGT	TURR	PH	02	N02	N03	SI03	P04
1.	24.11	30.35	20.12	94.3			.00	.00	.00	.12
2.	24.04	30.40	20.18	94.5						
3.	23.75	30.40	20.26	94.6						
4.	23.61	30.42	20.32	94.7						
5.	23.27	30.61	20.56	94.2						
6.	23.03	30.92	20.86	94.3						
7.	22.68	31.10	21.10	94.2						
8.	22.30	31.27	21.33	94.0						
9.	21.96	31.32	21.46	94.1						
10.	21.46	31.27	21.56	93.4			.00	.00	.00	.45
11.	21.31	31.27	21.60	93.5						
12.	19.43	31.00	21.88	93.1						
13.	16.00	31.00	22.24	88.6						
14.	17.58	31.10	22.42	87.4						
15.	17.46	31.14	22.48	89.5						
16.	17.27	31.17	22.54	90.2						
17.	16.96	31.10	22.56	90.1						
18.	15.92	31.11	22.80	89.9						
19.	15.44	31.14	22.93	91.5						
20.	15.23	31.29	23.09	91.7			.00	.00	.00	.58
21.	15.10	31.30	23.12	90.7						
22.	14.63	31.22	23.16	89.2						
23.	14.72	31.44	23.31	67.7						
24.	14.52	31.45	23.36	89.1						
25.	14.16	31.47	23.45	89.7						
26.	13.66	31.50	23.58	90.2						
27.	12.85	31.62	23.83	90.9						
28.	11.64	31.70	24.13	91.3						
29.	9.56	31.88	24.62	91.4						
30.	8.96	32.04	24.83	90.6						
31.	8.28	32.11	24.99	89.4						
32.	7.67	32.31	25.23	89.0			.40	3.40	20.72	1.02
33.	7.03	32.33	25.25	88.5						

CRUISE 1 STATION NUMBER 23 AUGUST 29, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/STA 1/24 LAT 40 15.9N; LONG 73 36.9W GMT 18.0 03/29/73 RARO 19.0
 SONIC DPTH 26 AIR DRY/WFT 31.1/-- WIND NIK/SPD 18/05 SEA DIR/HT 00/0
 SWELL DIR/HT 18/0 WTHR 05 CLOUD TYP/CVR -- VIS 5 SFCCHT DPTH --

	TEMP	SAL	SIGT	TURR	PH	CP	N02	N03	SI03	P04
1.	24.46	30.26	19.80	94.7						
2.	23.65	30.36	20.26	96.3			.07	.00	.00	.22
3.	23.33	30.39	20.37	96.3						
4.	23.17	30.48	20.49	96.3						
5.	23.13	30.50	20.52	95.6						
6.	22.97	30.57	20.62	95.9						
7.	22.64	30.85	20.92	95.4						
8.	22.57	30.91	20.98	96.0						
9.	22.54	31.01	21.06	95.8						
10.	22.57	31.16	21.17	95.7			.00	.00	.00	.07
11.	22.64	31.29	21.25	95.7						
12.	22.67	31.35	21.28	95.6						
13.	22.64	31.39	21.33	95.7						
14.	22.54	31.43	21.39	95.7						
15.	21.23	31.40	21.72	94.9						
16.	19.48	31.70	22.40	95.4						
17.	17.65	31.60	22.85	94.9						
18.	15.93	31.70	23.25	94.5						
19.	15.37	31.87	23.51	94.1						
20.	14.83	31.90	23.64	93.5						
21.	13.41	31.86	23.90	91.9						
22.	12.50	31.92	24.13	89.5						
23.	12.25	31.95	24.20	89.9						
24.	12.20	31.98	24.23	90.3			.27	1.24	7.76	.68
25.	12.20	31.98	24.23	90.1						

CRUISE 1 STATION NUMBER 24 AUGUST 29, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/ST4 1/25 LAT 40 17.11N; LONG 73 28.1W GMT 19.3 08/29/73 RAR0 18.8
 SONIC DPTH 32 AIR DRY/WFT 31.1/--- WIND DIR/SPD 18/07 SFA DIR/HT 00/0
 SWELL DIR/HT 18/0 WTHR 05 CLOUD TYP/CVR -/- VIS 5 SECCHT DPTH --

D	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	24.34	30.53	20.19	95.6						
2.	23.94	30.47	20.26	95.8						
3.	23.33	30.57	20.51	95.7						
4.	23.27	30.58	20.54	95.6						
5.	23.21	30.62	20.58	95.4						
6.	23.10	30.73	20.70	95.9						
7.	22.87	30.95	20.93	95.8						
8.	22.91	31.22	21.12	95.9						
9.	22.93	31.35	21.22	95.7						
10.	22.91	31.44	21.29	95.7			.00	.00	.00	.13
11.	22.87	31.49	21.33	95.8						
12.	22.37	31.39	21.40	95.7						
13.	22.23	31.37	21.42	95.7						
14.	22.04	31.35	21.46	95.6						
15.	21.61	31.50	21.69	95.6						
16.	18.01	31.44	22.57	95.1						
17.	15.08	31.49	23.28	93.3						
18.	14.43	31.60	23.50	91.3						
19.	14.21	31.64	23.57	89.5						
20.	13.97	31.68	23.65	88.1						
21.	13.78	31.61	23.64	88.2						
22.	13.36	31.84	23.92	89.6						
23.	12.72	31.91	24.10	89.7						
24.	12.30	32.00	24.23	90.9						
25.	12.17	32.03	24.27	91.4						
26.	11.55	32.13	24.47	92.1						
27.	11.46	32.10	24.46	91.9						
28.	11.41	32.16	24.52	91.6						
29.	11.41	32.15	24.50	91.8						
30.	11.40	32.11	24.48	91.8						
31.	11.40	32.14	24.51	91.6			.19	.61	6.38	.45
32.	11.39	32.18	24.53	91.7						

CRUISE 1 STATION NUMBER 25 AUGUST 29, 1973

FE CRS/STA 2/ 1 LAT 40 29.5N; LONG 73 56.6W GMT 13.2 09/19/73 RARO 18.0
 SONIC DPTH 13 AIR DRY/WFT 15.0/--- WIND DIR/SPD 05/07 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 00 CLOUD TYP/CVR -/- VIS 8 SFCCHI DPTH 2

D	TEMP	SAL	SIGT	TURR	PH	02	N02	N03	SI03	P04
1.	19.37	27.83	19.49	78.7			2.12	7.73	11.20	3.90
2.	19.37	27.76	19.44	78.9						
3.	19.38	27.81	19.47	79.3						
4.	19.38	27.92	19.56	79.6						
5.	19.37	28.00	19.63	80.2						
6.	19.35	28.28	19.84	80.9						
7.	19.32	28.62	20.10	81.9						
8.	19.29	28.76	20.22	82.0						
9.	19.25	29.10	20.49	82.0						
10.	19.17	29.38	20.72	78.8			1.15	3.98	5.31	2.28

CRUISE 2 STATION NUMBER 1 SEPT. 19, 1973

FE CRS/STA 2/ 2 LAT 40 30.9N; LONG 73 51.9W GMT 17.5 09/16/73 RAR0 15.0
 SONIC DPTH 14 AIR DRY/WFT 23.3/--- WIND DIR/SPD 23/02 SFA DIR/HT 00/0
 SWELL DIR/HT 24/0 WTHR 05 CLOUD TYP/CVR 8/1 VIS 6 SECCHI DPTH 08

0	TFMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
2.	20.62	30.64	21.31	92.0			.13	.33	.00	.48
3.	20.60	30.63	21.30	91.9						
4.	20.47	30.62	21.33	91.7						
5.	20.40	30.61	21.34	91.9						
6.	20.27	30.63	21.39	91.7						
7.	20.21	30.62	21.39	91.4						
8.	20.17	30.62	21.41	91.5						
9.	20.13	30.61	21.41	91.2						
10.	20.11	30.63	21.43	91.2						
11.	20.09	30.62	21.43	90.1			.12	.31	.00	.53
12.	20.09	30.62	21.43	90.2						

CRUISE 2 STATION NUMBER 2 SEPT. 16, 1973

	FE CRS/STA	2/ 3	LAT	40	30.9N	LONG	73	47.9W	GMT	16.5	09/16/73	BARO	16.0
	SONIC DPTH	18	AIR	DRY/WET	22.8/	--	WIND	DIR/SPD	21/06	SFA	DIR/HT	21/0	
	SWELL	DIR/HT	13/0	WTHR	05	CLOUD	TYP/CVR	0/0	VIS	6	SFCCHI	DPTH	12
		TEMP	SAL	SIGT	TURB	PH	CP	N02	N03	SI03	P04		
2.	20.72	30.66	21.30	93.1				.05	.19	.00	.36		
3.	20.68	30.66	21.31	92.7									
4.	20.62	30.66	21.32	92.8									
5.	20.53	30.66	21.35	93.0									
6.	20.51	30.66	21.35	92.8									
7.	20.51	30.66	21.35	92.9									
8.	20.49	30.66	21.36	92.8									
9.	20.49	30.67	21.36	92.9									
10.	20.48	30.67	21.36	92.7				.04	.23	.00	.42		
11.	20.47	30.67	21.37	93.0									
12.	20.48	30.69	21.38	92.8									
13.	20.58	30.76	21.41	93.0									
14.	20.58	30.76	21.41	93.2									
15.	20.13	30.76	21.53	92.7									
16.	18.65	30.86	21.98	86.0									
17.	18.55	30.89	22.02	60.2				.42	1.09	6.92	1.25		
18.	18.50	30.90	22.04	78.4									

CRUISE 2 STATION NUMBER 3 SEPT. 16, 1973

FF CRS/STA 2/ 4 LAT 40 31.5N; LONG 73 40.1W GMT 21.3 09/17/73 HARGO 23.0
 SONIC DPTH 17 AIR DRY/WFT 19.4/-- WIND DIR/SPD 09/07 SEA DIR/HT 09/0
 SWELL DIR/HT 09/0 WTHR 00 CLOUD TYP/CVR -- VIS 8 SECCHI DPTH 5

	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
2.	19.94	30.52	21.39	88.9			.25	.76	.00	.74
3.	19.93	30.49	21.37	87.3						
4.	19.91	30.51	21.39	90.0						
5.	19.92	30.50	21.38	89.9						
6.	19.92	30.50	21.38	90.1						
7.	19.92	30.52	21.39	90.4						
8.	19.91	30.50	21.39	90.3						
9.	19.89	30.51	21.39	90.4						
10.	19.85	30.49	21.39	90.2						
11.	19.53	30.44	21.43	89.9						
12.	18.98	30.50	21.62	87.4						
13.	16.65	30.70	21.85	87.7						
14.	18.47	30.82	21.99	87.9			.26	.84	3.24	1.09
15.	18.45	30.83	22.00	87.7						

CRUISE 2 STATION NUMBER 4 SEPT. 17, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FC CRS/SIA 2/ 5 LAT 40 32.6N; LONG 73 31.9W GMT 20.0 09/17/73 H2RO 23.0
 SONIC DPTH 16 AIR DRY/WFT 23.6/--- WIND DIR/SPD 09/10 SFA DIR/HT 09/0
 SWELL DIR/HT 09/0 WTHR 01 CLOUD TYP/CVR -/- VIS - SECCHI DPTH 7

	TEMP	SAL	SIGT	TURR	PH	02	N02	N03	SI03	P04
1.	19.41	30.75	21.70	82.7			.11	.00	.00	.67
2.	19.61	30.65	21.57	90.5						
3.	19.57	30.65	21.58	90.6						
4.	19.57	30.65	21.58	90.6						
5.	19.57	30.65	21.58	90.8						
6.	19.57	30.66	21.59	90.9						
7.	19.59	30.66	21.58	90.9						
8.	19.57	30.68	21.61	90.7						
9.	19.47	30.71	21.66	90.7						
10.	19.33	30.72	21.70	90.8						
11.	19.28	30.74	21.72	90.7						
12.	19.03	30.75	21.79	90.5						
13.	18.69	30.84	21.95	88.8						
14.	18.52	30.89	22.03	85.7			.30	.63	6.00	1.39
15.	18.27	30.97	22.15	78.1						

CRUISE 2 STATION NUMBER 5 SEPT. 17, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FE CRS/STA 2/ 6 LAT 40 25.8N; LONG 73 57.3W GMT 14.3 09/19/73 H4R0 19.0
 SONIC DPTH 10 AIR DRY/WFT 14.4/--.- WIND DIR/SPD 36/08 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 00 CLOUD TYP/CVR -/- VIS 8 SFCCHI DPTH 7

0	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	19.32	28.24	19.82	79.8			1.87	7.71	8.15	3.40
2.	19.30	28.25	19.83	81.3						
3.	19.29	28.26	19.84	81.2						
4.	19.30	28.26	19.84	81.3						
5.	19.30	28.26	19.84	81.0						
6.	19.31	28.24	19.82	81.2						
7.	19.25	28.34	19.91	81.3						
8.	19.23	28.50	20.04	82.2			1.41	6.03	5.91	2.69
9.	19.26	28.85	20.30	79.1						

CRUISE 2 STATION NUMBER 6 SEPT. 19, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/STA	2/ 7	LAT 40 26.8N	LONG 73 53.1W	GMT 19.1 09/19/73	RAPO 18.0					
SONIC DPTH	22	AIR DRY/WFT 25.0/--	WIND DIR/SPD 18/03	SFA DIR/HT 00/0						
SWELL DIR/HT	00/0	WTHR 00	CLOUD TYP/CVR --	VIS 8	SECCHI DPTH 9					
ID	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SIO3	P04
1.	20.37	30.69	21.41	79.2			.21	.75	.00	.62
2.	20.51	30.64	21.34	91.0						
3.	20.43	30.67	21.38	91.4						
4.	20.43	30.67	21.38	90.8						
5.	20.34	30.68	21.40	91.2						
6.	20.28	30.68	21.43	91.3						
7.	20.24	30.68	21.43	91.3						
8.	20.21	30.68	21.45	90.7						
9.	20.22	30.69	21.45	91.0			.13	.26	.00	.43
10.	20.22	30.69	21.45	91.1						
11.	20.21	30.69	21.45	91.4						
12.	20.19	30.69	21.46	91.2						
13.	20.18	30.68	21.45	91.1						
14.	20.04	30.63	21.45	90.7						
15.	19.32	30.54	21.56	89.3						
16.	18.64	30.73	21.87	86.8						
17.	18.20	30.75	22.00	86.1						
18.	17.22	31.00	22.42	85.7						
19.	16.71	31.25	22.73	84.9						
20.	16.67	31.28	22.76	83.7			.75	2.16	11.62	1.75
21.	16.69	31.26	22.74	82.4						

CRUISE 2 STATION NUMBER 7 SEPT. 19, 1973

FF CRS/STA	2/ 8	LAT 40 28.3N	LONG 73 47.9W	GMT 14.5 09/16/73	RAAO 16.0					
SONIC DPTH	28	AIR DRY/WFT 18.9/---	WIND DIR/SPD 21/07	SFA DIR/HT 25/1						
SWELL DIR/HT	15/1	WTHR 00	CLOUD TYP/CVR -/-	VIS 6	SECCHI DPTH 15					
ID	TEMP	SAL	SIGT	TURR	PH	O2	N02	N03	SI03	P04
1.	20.60	30.67	21.28	94.5			.07	.21	.00	.28
2.	20.65	30.69	21.28	94.5			.02	.28	.00	.25
3.	20.79	30.68	21.29	94.6						
4.	20.77	30.68	21.30	94.4						
5.	20.80	30.68	21.29	94.4						
6.	20.75	30.68	21.30	94.0						
7.	20.77	30.67	21.29	94.5						
8.	20.94	30.63	21.22	94.4						
9.	21.08	30.63	21.17	94.6						
10.	20.73	30.69	21.31	94.4			.08	.25	.00	.29
11.	20.75	30.70	21.32	94.5						
12.	20.75	30.70	21.32	94.6						
13.	20.76	30.72	21.33	94.3						
14.	20.75	30.73	21.34	94.5						
15.	20.75	30.74	21.35	94.5						
16.	20.76	30.74	21.34	94.7						
17.	20.74	30.75	21.36	94.7						
18.	20.74	30.74	21.35	94.6						
19.	20.73	30.75	21.36	94.6						
20.	20.71	30.74	21.36	94.7			.08	.16	.00	.46
21.	20.30	30.76	21.48	94.6						
22.	19.01	30.84	21.87	94.4						
23.	14.81	31.54	23.37	87.7						
24.	14.45	31.66	23.54	82.9						
25.	14.41	31.67	23.56	61.6						
26.	14.56	31.62	23.48	78.4						
27.	14.51	31.63	23.50	75.1			.57	.85	10.44	1.44
28.	14.47	31.64	23.52	69.5						
29.	14.56	31.62	23.52	77.8						
30.	14.63	31.67	23.52	74.2						

CRUISE 2 STATION NUMBER 8 SEPT. 16, 1973

CRUISE 2 STATION NUMBER 9 SEPT. 17, 1973

FE CRS/STA 2/10		LAT 40 28.6N: LONG 73 32.1W		GMT 18.9 09/17/73		RARO 23.5				
SONIC DPTH 21		AIR DRY/WFT 23.3/-/-		WIND 71K/SPD 09/10		SFA DIR/HT 09/0				
SWELL DIR/HT 06/0		WTHR 01		CLOUD TYP/CVR -/-		VIS 8 SECCHI DPTH 7				
ID	TEMP	SAL	SIGT	TURB	PH	C2	N02	N03	SI03	P04
1.	19.22	31.02	21.95	86.9						
2.	19.25	31.02	21.95	89.8						
3.	19.25	31.02	21.94	90.3						
4.	19.25	31.02	21.95	89.9						
5.	19.25	31.02	21.95	90.8						
6.	19.25	31.02	21.95	90.7						
7.	19.25	31.02	21.95	90.9						
8.	19.23	31.02	21.95	90.5						
9.	19.22	31.02	21.95	90.8						
10.	19.25	31.01	21.94	91.1			.00	.00	.00	.59
11.	19.09	30.95	21.93	90.8						
12.	19.09	30.96	21.94	91.0						
13.	19.05	30.95	21.94	90.7						
14.	18.94	30.94	21.96	91.3						
15.	18.94	30.95	21.97	91.4						
16.	18.92	30.96	21.98	91.0						
17.	18.75	30.96	22.02	91.3						
18.	17.33	31.25	22.59	91.3						
19.	17.05	31.33	22.72	88.4						
20.	16.95	31.35	22.75	87.8						
21.	16.51	31.45	22.93	85.5						
22.	16.66	31.41	22.86	85.2			.55	1.27	12.63	1.44
23.	16.77	31.38	22.82	85.1						

CRUISE 2 STATION NUMBER 10 SEPT. 17, 1973

FF CRS/STA 2/11 LAT 40 21.9N; LONG 73 57.1W GMT 15.3 09/19/73 RARO 19.5
 SONIC DPTH 14 AIR DRY/WFT 17.2/-- WIND DIR/SPD 36/07 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 00 CLOUD TYP/CVR -- VIS 8 SECCHI DPTH 4

U	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	19.33	29.31	20.63	85.7			1.05	5.54	3.80	2.15
2.	19.33	29.31	20.63	86.2						
3.	19.32	29.31	20.63	86.0						
4.	19.32	29.30	20.62	86.1						
5.	19.29	29.33	20.65	86.1						
6.	19.26	29.38	20.70	86.3						
7.	19.26	29.40	20.71	86.6						
8.	19.27	29.41	20.72	86.8						
9.	19.27	29.42	20.72	86.7						
10.	19.27	29.42	20.73	86.7						
11.	19.29	29.42	20.72	86.4						
12.	19.30	29.42	20.72	86.3						
13.	19.25	29.41	20.72	85.3			1.02	4.87	3.61	2.05
14.	19.20	29.60	20.88	90.5						

CRUISE 2 STATION NUMBER 11 SEPT. 19, 1973

88

CRUISE 2 STATION NUMBER 12 SEPT. 19, 1973

SIGMA T

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TURBIDITY

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SALINITY

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TEMPERATURE

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FF	CRS/STA	2/13	LAT	40	22.9N	LONG	73	46.9W	GMT	14.6	09/18/73	RAR0	12.0
SONIC	DPH	37	AIR	DRY/WFT	21.1	WIND	DIR/SPD	23/15	SFA	DIR/HT	23/0		
SWELL	DIR/HT	18/2	WTHR	02	CLOUD	TYP/CVR	-/-	VIS	5	SECCH	DPH	15	
D	TEMP	SAL	SIGT	TURR	PH	N02	N03	SI03	P04				
1.	20.48	30.88	21.53	93.1									
2.	20.49	30.87	21.52	92.8									
3.	20.49	30.87	21.52	93.2									
4.	20.49	30.87	21.52	93.3									
5.	20.49	30.87	21.52	93.4									
6.	20.49	30.87	21.52	93.1									
7.	20.49	30.87	21.52	93.4									
8.	20.49	30.87	21.52	93.3									
9.	20.49	30.88	21.52	93.3									
10.	20.49	30.88	21.52	93.4									
11.	20.49	30.88	21.52	93.4									
12.	20.49	30.88	21.52	93.3									
13.	20.49	30.88	21.52	93.4									
14.	20.48	30.88	21.52	93.2									
15.	20.48	30.88	21.52	93.5									
16.	20.48	30.89	21.52	93.0									
17.	20.48	30.88	21.52	93.4									
18.	20.48	30.87	21.52	93.4									
19.	20.48	30.88	21.52	93.5									
20.	20.48	30.88	21.52	93.4									
21.	20.48	30.87	21.52	93.4									
22.	20.47	30.87	21.52	93.4									
23.	20.34	30.85	21.52	93.5									
24.	19.68	30.82	21.52	93.4									
25.	17.98	30.85	21.52	92.5									
26.	14.70	31.68	21.52	90.4									
27.	13.12	31.82	21.52	89.0									
28.	13.97	31.87	21.52	89.6									
29.	13.94	31.89	21.52	88.4									
30.	13.93	31.91	21.52	88.4									
31.	13.93	31.93	21.52	88.4									
32.	13.45	31.94	21.52	88.4									
33.	12.79	32.02	21.52	87.9									
34.	12.53	32.02	21.52	87.9									
35.	12.17	32.02	21.52	87.1									
36.	11.36	32.02	21.52	85.5									

CRUISE 2 STATION NUMBER 13 SEPT. 18, 1973

FF CRS/STA 2/14 LAT 40 24.2N: LONG 73 39.1W GMT 16.2 09/17/73 RAR0 24.5
 SONIC DPTH 24 AIR DRY/WFT 17.8/--- WIND DIR/SPD 06/10 SFA DIR/HT 06/0
 SWELL DIR/HT 06/0 WTHR 00 CLOUD TYP/CVR -/- VIS 8 SECCHT DPTH 6

D	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SIO3	P04
2.	19.50	30.58	21.55	89.9			.19	.43	.00	.78
3.	19.55	30.62	21.57	90.5						
4.	19.51	30.58	21.55	90.5						
5.	19.51	30.59	21.55	89.8						
6.	19.51	30.58	21.55	89.9						
7.	19.51	30.58	21.55	90.4						
8.	19.51	30.59	21.55	90.0						
9.	19.51	30.59	21.55	90.8						
10.	19.51	30.59	21.55	90.5			.17	.50	.00	.76
11.	19.51	30.59	21.55	90.7						
12.	19.51	30.58	21.55	90.4						
13.	19.49	30.59	21.56	90.8						
14.	19.47	30.59	21.56	90.6						
15.	19.46	30.59	21.56	90.9						
16.	19.44	30.58	21.57	90.6						
17.	17.82	30.86	22.17	90.8						
18.	15.39	31.61	23.30	90.7						
19.	15.23	31.66	23.38	89.2						
20.	15.19	31.66	23.38	87.6						
21.	15.15	31.65	23.38	87.3						
22.	15.04	31.66	23.41	86.7						
23.	15.02	31.66	23.42	85.2			.75	1.79	13.15	1.38
24.	14.98	31.67	23.43	84.5						

CRUISE 2 STATION NUMBER 14 SEPT. 17, 1973

FF CRS/STA	2/15	LAT 40 24.6N	LONG 73 30.4W	GMT 17.6 09/17/73	BARO 24.0				
SONIC DPTH 24	AIR DRY/WET 19.4/-	WIND DIR/SPD 06/10	SFA DIR/HT 06/0	SECCHI DPTH 10					
SWELL DIR/HT 06/0	WTHR 01	CLCUD TYP/CVR -/-	VIS 8						
	TEMP	SAL	SIGT	TURB	PH	N02	N03	SI03	P04
1.									
2.	19.33	30.91	21.84	91.6					
3.	19.37	30.90	21.82	90.9		.06	.10	.00	
4.	19.33	30.90	21.84	91.3					
5.	19.34	30.90	21.83	91.9					
6.	19.32	30.90	21.84	91.9					
7.	19.29	30.90	21.85	91.7					
8.	19.29	30.90	21.85	91.7					
9.	19.29	30.90	21.85	91.8					
10.	19.28	30.90	21.85	91.8		.05	.14	.00	.44
11.	19.24	30.91	21.86	91.7					
12.	19.23	30.91	21.87	91.5					
13.	19.23	30.90	21.86	91.6					
14.	19.21	30.90	21.86	91.6					
15.	19.18	30.90	21.87	91.5					
16.	19.13	30.91	21.89	91.5					
17.	18.82	30.98	22.02	91.7					
18.	17.29	31.28	22.62	91.8					
19.	16.00	31.56	23.13	89.1					
20.	15.85	31.59	23.18	88.9					
21.	15.75	31.61	23.22	88.4					
22.	15.72	31.59	23.21	87.4					
23.	15.71	31.57	23.20	86.5		.71	1.94	15.67	1.57
24.	15.69	31.61	23.23	86.4					

CRUISE 2 STATION NUMBER 15 SEPT. 17, 1973

FF CRS/STA 2/16 LAT 40 17.9N: LONG 73 56.0W CMT 16.1 09/19/73 HARO 19.0
 SONIC DPTH 20 AIR DRY/WET 17.2/-- WIND DIR/SPD 35/03 SFA DIR/HT 00/0
 SWELL DIR/HT 35/0 WTHR -- CLOUD TYP/CVR -- VIS 7 SFCCHI DPTH 5

	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
2.	19.40	30.11	21.11	85.9						
3.	19.77	30.11	21.12	88.2			.57	2.18	1.40	1.31
4.	19.72	30.14	21.16	88.2						
5.	19.70	30.19	21.20	88.4						
6.	19.73	30.32	21.29	88.2						
7.	19.76	30.35	21.31	89.4						
8.	19.74	30.38	21.34	89.7						
9.	19.77	30.41	21.35	89.5						
10.	19.77	30.41	21.35	89.6			.30	1.21	.00	.82
11.	19.75	30.41	21.36	89.3						
12.	19.75	30.41	21.35	89.4						
13.	19.76	30.42	21.36	89.3						
14.	19.76	30.41	21.36	88.7						
15.	19.76	30.41	21.36	89.4						
16.	19.76	30.41	21.36	89.5						
17.	19.75	30.42	21.36	89.3						
18.	19.75	30.41	21.36	89.2						
19.	19.75	30.42	21.36	89.1			.38	1.56	1.20	1.01
20.	19.67	30.60	21.52	82.3						

CRUISE 2 STATION NUMBER 16 SEPT. 19, 1973

FF CRS/STA 2/17 LAT 40 14.9N; LONG 73 52.0W GMT 17.0 09/19/73 HARO 19.0
 SONIC DPTH 20 AIR DRY/WET 20.0/-- WIND DIR/SPP 35/05 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 00 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH 10

0	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	20.13	30.94	21.66	73.9			.07	.25	.00	.43
2.	20.09	30.90	21.64	91.7						
3.	20.11	30.90	21.63	91.7						
4.	20.07	30.90	21.65	91.8						
5.	20.08	30.90	21.64	91.9						
6.	20.09	30.89	21.63	91.5						
7.	20.06	30.90	21.65	91.9						
8.	20.06	30.89	21.64	91.8						
9.	20.05	30.90	21.65	91.8						
10.	20.05	30.90	21.65	91.8			.04	.18	.00	.34
11.	20.02	30.89	21.65	91.7						
12.	20.00	30.90	21.66	92.1						
13.	19.99	30.90	21.66	91.7						
14.	19.99	30.90	21.67	92.0						
15.	19.99	30.90	21.67	92.0						
16.	19.99	30.90	21.67	91.9						
17.	19.97	30.89	21.67	92.0						
18.	19.96	30.90	21.67	91.9						
19.	19.95	30.90	21.68	92.2						
20.	19.88	30.89	21.69	92.0						
21.	19.69	30.74	21.62	91.8						
22.	18.89	30.72	21.80	90.8						
23.	18.15	30.76	22.05	88.7						
24.	16.38	30.96	22.58	87.0			.79	2.81	19.07	1.73
25.	15.40	31.26	22.94	84.9						

CRUISE 2 STATION NUMBER 17 SEPT. 19, 1973

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TURBIDITY

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SALINITY

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TEMPERATURE

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FF CRS/SIA 2/18 LAT 40 18.9N; LONG 73 45.9W GMT 16.2 09/18/73 RARO 11.0
 SONIC DPTH 31 AIR DRY/WFT 17.8/--- WIND DIR/SPD 32/23 SFA DIR/HT 32/0
 SWELL DIR/HT 18/1 WTHR 00 CLOUD TYP/CVR -/- VIS 6 SECCHI DPTH 6

D	TFWP	SAL	SIGT	TURB	PH	Q2	N02	N03	SI03	P04
2.	20.66	30.82	21.43	90.3			.06	.13	.00	.36
3.	20.66	30.82	21.43	91.3						
4.	20.66	30.82	21.43	91.6						
5.	20.66	30.82	21.43	91.5						
6.	20.66	30.82	21.43	91.6						
7.	20.66	30.82	21.43	91.4						
8.	20.66	30.83	21.44	91.7						
9.	20.66	30.83	21.44	91.5						
10.	20.66	30.83	21.44	91.6						
11.	20.66	30.83	21.44	91.6						
12.	20.66	30.83	21.44	91.7						
13.	20.66	30.83	21.44	91.7						
14.	20.66	30.85	21.45	91.5			.00	.11	.00	.27
15.	20.66	30.83	21.44	91.6						
16.	20.66	30.84	21.45	91.9						
17.	20.65	30.84	21.45	91.9						
18.	20.64	30.85	21.46	91.9						
19.	20.63	30.85	21.46	92.2						
20.	20.62	30.85	21.47	92.4						
21.	20.61	30.86	21.47	92.6						
22.	20.59	30.85	21.48	92.4						
23.	20.51	30.85	21.49	92.6						
24.	20.22	30.70	21.46	92.6			.50	1.08	6.45	.78
25.	18.14	31.05	22.29	92.9						
26.	14.69	31.83	23.63	90.5						
27.	13.94	31.60	23.75	89.4						
28.	13.71	31.90	23.88	87.6						
29.	13.64	31.90	23.88	85.4			.70	2.29	14.51	.98
30.	13.55	31.92	23.92	84.4						
31.	13.56	31.88	23.89	85.2						

CRUISE 2 STATION NUMBER 18 SEPT. 18, 1973

FE CRS/STA	2/19	LAT 40 19.9N	LONG 73 37.9W	GMT 14.3 09/20/73	RAR0 17.6				
SONIC DPTH	26	AIR DRY/WFT 17.5/---	WIND DIR/SPD 26/11	SFA DIR/HT 24/0					
SWELL DIR/HT	00/0	WTHR 01	CLOUD TYP/CVR 7/1	VIS 7	SECCHI DPTH 6				
N	TEMP	SAL	SIGT	TURB	PH	N02	N03	SI03	P04
1.	19.38	30.63	21.62	82.9					
2.	19.41	30.62	21.60	87.1					
3.	19.44	30.60	21.58	88.8		.19	.27	.00	.61
4.	19.53	30.65	21.59	89.3					
5.	19.57	30.71	21.63	90.5					
6.	19.41	30.63	21.61	90.0					
7.	19.37	30.65	21.64	89.8					
8.	19.34	30.67	21.65	89.5					
9.	19.31	30.69	21.68	89.0					
10.	19.29	30.73	21.71	88.7		.17	.13	.00	.50
11.	19.26	30.79	21.77	88.0					
12.	19.21	30.92	21.88	85.7					
13.	19.08	31.11	22.06	89.1					
14.	18.89	31.24	22.20	91.5					
15.	18.87	31.25	22.22	91.6					
16.	18.87	31.25	22.22	91.7					
17.	18.85	31.26	22.23	91.6					
18.	18.84	31.25	22.23	91.8					
19.	18.77	31.26	22.25	91.6					
20.	18.44	31.30	22.36	91.3		.45	.86	5.58	.80
21.	18.08	31.33	22.47	91.4					
22.	17.44	31.44	22.71	89.7					
23.	15.86	31.57	23.17	90.0					
24.	15.51	31.64	23.30	88.0					
25.	15.49	31.64	23.30	87.3		.86	1.97	13.86	1.30
26.	15.44	31.72	23.35	89.0					

CRUISE 2 STATION NUMBER 19 SEPT. 20, 1973

FF CRS/STA	2/20	LAT 40 20.8N	LONG 73 28.7W	GMT 17.7 09/20/73	HARO 16.0					
SONIC DPH 30	AIR DRY/WFT 22.2/-	WIND DIR/SPD 20/13	SFA DIR/HT 20/0							
SWELL DIR/HT --/-	WTHR 01	CLOUD TYP/CVR 8/5	VIS 7	SFCCHI DPTH 9						
ID	TEMP	SAL	SIGT	TURB	PH	Q2	N02	N03	SI03	P04
2.	18.87	31.25	22.21	91.0						
3.	18.88	31.24	22.21	91.2						
4.	18.87	31.25	22.21	91.0				.11	.00	.40
5.	18.87	31.25	22.21	90.6						
6.	18.87	31.25	22.21	90.9						
7.	18.87	31.25	22.22	91.2						
8.	18.84	31.25	22.22	91.3						
9.	18.84	31.25	22.23	91.2						
10.	18.82	31.25	22.22	91.2			.00	.08	.00	.38
11.	18.81	31.25	22.23	91.3						
12.	18.79	31.26	22.24	91.4						
13.	18.79	31.26	22.25	91.5						
14.	18.78	31.28	22.26	91.6						
15.	18.79	31.30	22.27	91.8						
16.	18.76	31.47	22.41	91.6						
17.	18.56	31.43	22.43	90.7						
18.	17.95	31.46	22.60	91.4						
19.	17.87	31.42	22.59	91.3						
20.	17.66	31.47	22.68	91.0			.54	1.18	5.09	.73
21.	17.54	31.48	22.72	90.1						
22.	17.46	31.49	22.74	90.7						
23.	17.26	31.51	22.80	90.4						
24.	17.01	31.55	22.89	90.7						
25.	16.46	31.64	22.97	90.9						
26.	16.87	31.57	22.94	91.3						
27.	16.21	31.55	23.08	90.6						
28.	15.45	31.69	23.26	90.4			1.11	2.93	11.19	.92

CRUISE 2 STATION NUMBER 20 SEPT. 20, 1973

FE CRS/STA 2/21 LAT 40 13.0N; LONG 73 56.4W GMT 20.4 09/18/73 BARO ---
 SONIC DPTH 19 AIR DRY/WET 21.7/--- WIND DIR/SPD 32/07 SEA DIR/HT 32/0
 SWELL DIR/HT 15/0 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SFCCHI DPTH 4

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	19.87	29.67	20.76	63.7			.81	3.12	1.33	1.41
2.	19.88	29.67	20.76	65.3						
3.	19.84	29.69	20.79	86.1						
4.	19.93	30.34	21.26	66.0						
5.	20.04	30.68	21.49	88.6						
6.	20.04	30.77	21.55	88.3						
7.	20.09	30.85	21.60	89.5						
8.	20.09	30.85	21.60	89.7						
9.	20.07	30.86	21.62	89.9						
10.	20.08	30.85	21.61	89.6						
11.	20.06	30.87	21.62	89.9						
12.	20.06	30.87	21.62	89.9						
13.	20.05	30.87	21.63	90.1						
14.	20.06	30.87	21.63	90.1						
15.	20.04	30.87	21.63	89.5						
16.	20.00	30.82	21.61	90.0						
17.	19.58	30.83	21.72	88.8						
18.	19.07	30.81	21.83	88.4			.34	1.50	7.06	1.09
19.	18.90	30.84	21.90	86.4						

CRUISE 2 STATION NUMBER 21 SEPT. 18, 1973

FF CRS/STA 2/22 LAT 40 14.0N; LONG 73 51.4W GMT 19.3 09/18/73 RARO 09.2
 SONIC DPTH 26 AIR DRY/WFT 21.1/--- WIND DIR/SPD 32/10 SFA DIR/HT 00/0
 SWELL DIR/HT 15/0 WTHR 00 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH 8

D	TEMP	SAL	SIGT	TURR	PH	02	N02	N03	SIO3	P04
2.	20.43	30.94	21.58	91.0			.00	.16	.00	.26
3.	20.38	30.94	21.59	92.0						
4.	20.36	30.95	21.61	91.9						
5.	20.36	30.94	21.60	92.0						
6.	20.36	30.94	21.60	92.1						
7.	20.36	30.94	21.60	92.0						
8.	20.35	30.94	21.60	92.2						
9.	20.35	30.94	21.61	91.1			.00	.11	.00	.30
10.	20.35	30.94	21.60	92.2						
11.	20.35	30.94	21.60	92.1						
12.	20.35	30.94	21.61	92.1						
13.	20.35	30.94	21.60	92.3						
14.	20.34	30.94	21.61	92.3						
15.	20.33	30.94	21.61	92.5						
16.	20.30	30.94	21.62	92.4						
17.	20.28	30.95	21.63	92.4						
18.	20.25	30.95	21.64	92.4						
19.	20.22	30.96	21.66	92.4						
20.	20.14	30.98	21.69	92.5						
21.	19.96	31.00	21.75	92.6						
22.	18.07	30.97	22.16	91.7						
23.	16.70	30.99	22.53	90.3						
24.	15.74	31.30	22.99	88.0						
25.	15.35	31.43	23.17	86.8			.61	2.02	12.41	1.22
26.	14.72	31.30	23.20	92.6						

CRUISE 2 STATION NUMBER 22 SEPT. 18, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/STA	2/23	LAT 40 14.9N	LONG 73 45.9W	GMT 17.8	09/18/73	RAPO 10.0				
SONIC DPTH	49	AIR DRY/WET	19.4/-	WIND DIR/SPD	32/10	SFA DIR/HT				
SWELL DIR/HT	15/1	WTHR 00	CLOUD TYP/CVR	-/-	VIS 8	SECCHI DPTH 8				
N	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	20.73	30.76	21.37	68.9						
2.	20.75	30.76	21.36	69.7						
3.	20.76	30.77	21.34	72.5			.06	.18	.00	.29
4.	20.75	30.80	21.37	66.5						
5.	20.75	30.81	21.39	92.8						
6.	20.75	30.81	21.40	92.9						
7.	20.75	30.81	21.40	92.9						
8.	20.75	30.81	21.40	93.0						
9.	20.75	30.81	21.40	93.0						
10.	20.75	30.81	21.40	93.0						
11.	20.75	30.81	21.40	93.0						
12.	20.75	30.81	21.40	93.0						
13.	20.75	30.81	21.40	93.0						
14.	20.75	30.81	21.40	93.0			.04	.12	.00	.34
15.	20.74	30.81	21.40	93.1						
16.	20.75	30.81	21.40	93.1						
17.	20.75	30.81	21.41	93.1						
18.	20.73	30.81	21.41	93.2						
19.	20.73	30.81	21.41	93.2						
20.	20.72	30.81	21.41	93.2						
21.	20.71	30.80	21.41	93.2						
22.	20.67	30.79	21.51	93.2						
23.	19.85	30.65	22.15	93.2						
24.	17.50	31.38	22.35	93.2						
25.	16.72	31.64	22.35	93.2						
26.	15.72	31.71	22.35	93.2						
27.	15.31	31.84	22.35	93.2						
28.	15.06	31.87	22.35	93.2						
29.	14.99	31.95	22.35	93.2			.57	1.34	10.03	.85
30.	14.56	31.98	22.35	93.2						
31.	14.52	32.00	22.35	93.2						
32.	14.44	32.00	22.35	93.2						
33.	14.44	32.01	22.35	93.2						
34.	14.41	32.01	22.35	93.2						
35.	14.35	32.04	22.35	93.2						
36.	14.35	32.06	22.35	93.2						
37.	14.35	32.06	22.35	93.2						
38.	14.35	32.06	22.35	93.2						
39.	14.35	32.06	22.35	93.2						
40.	14.35	32.06	22.35	93.2						
41.	14.35	32.06	22.35	93.2						
42.	14.35	32.06	22.35	93.2						
43.	14.35	32.06	22.35	93.2						
44.	14.35	32.06	22.35	93.2						
45.	14.35	32.06	22.35	93.2						
46.	14.35	32.06	22.35	93.2						
47.	14.35	32.06	22.35	93.2						
48.	14.35	32.06	22.35	93.2			.68	2.45	21.74	1.18

CRUISE 2 STATION NUMBER 23 SEPT. 18, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/SLA 2/24 LAT 40 15.9N; LONG 73 36.9W GMT 15.3 09/20/73 HARO 17.3
 SONIC DPTH 20 AIR DRY/WFT 19.4/-- WIND DIR/SPD 23/14 SFA DIR/HT 23/0
 SWELL DIR/HT 00/0 WTHK -- CLOUD TYP/CVR 8/7 VIS 7 SECCHI DPTH 4

D	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	19.26	31.00	21.93	90.2						
2.	19.20	31.06	21.99	87.9			.05	.09	.00	.35
3.	18.88	31.32	22.27	91.4						
4.	18.87	31.35	22.29	91.6						
5.	18.87	31.37	22.31	91.6						
6.	18.89	31.39	22.32	91.7						
7.	18.89	31.41	22.33	91.7						
8.	18.90	31.42	22.34	91.7						
9.	18.90	31.43	22.34	91.7						
10.	18.90	31.43	22.34	91.7						
11.	18.91	31.43	22.35	91.7						
12.	18.92	31.44	22.35	91.6						
13.	18.92	31.45	22.36	91.8						
14.	18.92	31.45	22.36	91.8						
15.	18.92	31.46	22.36	91.6		.93	.00	.00	.00	.29
16.	18.92	31.44	22.35	91.7						
17.	18.93	31.45	22.36	92.1						
18.	18.97	31.49	22.37	92.1						
19.	19.11	31.65	22.46	91.9						
20.	19.14	31.68	22.48	91.7						
21.	19.11	31.76	22.54	91.3						
22.	18.58	31.76	22.63	90.8						
23.	16.05	31.77	23.30	90.2						
24.	15.07	31.74	23.47	89.7						
25.	15.02	31.75	23.49	89.7		.03	3.21	15.51	1.05	

CRUISE 2 STATION NUMBER 24 SEPT. 20, 1973

FF CRS/STA 2/25 LAT 40 17.0N; LONG 73 27.9W GMT 16.4 09/20/73 RAR0 17.0
 SONIC DPTH 33 AIR DRY/WFT 20.0/-- WIND DIR/SPD 23/- SEA DIR/HT 23/0
 SWELL DIR/HT 23/0 WTHR 01 CLOUD TYP/CVR -/2 VIS 7 SECCHI DPTH 9

1)	TEMP	SAL	SIGT	TURR	PH	O2	NO2	NO3	SI03	P04
1.	18.46	31.29	22.25	78.2						
2.	18.48	31.31	22.26	90.0			.01	.07	.00	7.34
3.	18.99	31.37	22.29	91.5						
4.	18.90	31.35	22.28	91.7						
5.	18.87	31.32	22.27	91.6						
6.	18.88	31.32	22.26	91.6						
7.	18.88	31.32	22.26	91.7						
8.	18.86	31.32	22.27	91.4						
9.	18.86	31.32	22.27	91.6						
10.	18.86	31.32	22.27	91.7			.01	.10	.40	.22
11.	18.86	31.33	22.28	91.7						
12.	18.86	31.33	22.28	91.7						
13.	18.85	31.34	22.29	91.7						
14.	18.84	31.34	22.29	91.8						
15.	18.84	31.35	22.30	91.9						
16.	18.84	31.37	22.31	92.0						
17.	18.80	31.43	22.37	91.6						
18.	18.57	31.61	22.56	91.2						
19.	18.09	31.68	22.73	91.0						
20.	16.66	31.61	23.01	89.2			.62	1.25	5.32	.79
21.	16.25	31.90	23.33	90.4						
22.	14.83	31.80	23.56	90.6						
23.	14.67	31.84	23.63	90.7						
24.	14.46	31.83	23.67	90.6						
25.	14.42	31.85	23.69	90.4						
26.	14.18	31.84	23.74	90.2						
27.	14.10	31.86	23.76	90.2						
28.	14.05	31.87	23.78	89.9						
29.	14.00	31.87	23.79	90.2						
30.	13.96	31.88	23.81	90.1						
31.	13.94	31.89	23.82	90.2			1.17	2.80	15.51	.87
32.	13.86	31.88	23.83	90.1						
33.	13.84	31.91	23.85	89.9						

CRUISE 2 STATION NUMBER 25 SEPT. 20, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/STA 3/ 1 LAT 40 29.8N; LONG 73 56.8W GMT 21.4 10/01/73 RAO 29.5
 SONIC DPTH 16 AIR DRY/WET 20.6/--.- WIND DIR/SPD 12/12 SFA DIR/HT 12/0
 SWELL DIR/HT 15/0 WTHR 01 CLOUD TYP/CVR --/- VIS 8 SECCHI DPTH --
 1. TEMP SAL SIGT TURR PH 02 NO2 NO3 SIO3 PO4
 1. 19.26 26.66 18.63 82.8 3.71 12.71 17.11 4.38
 14. 18.58 29.32 20.82 83.3 2.01 7.09 10.95 2.66

FE CRS/STA 3/ 2 LAT 40 30.9N; LONG 73 51.9W GMT 13.5 10/04/73 RAO 17.5
 SONIC DPTH 12 AIR DRY/WET 20.0/--.- WIND DIR/SPD 27/03 SFA DIR/HT 00/0
 SWELL DIR/HT 15/0 WTHR 01 CLOUD TYP/CVR --/- VIS 1 SECCHI DPTH --
 1. TEMP SAL SIGT TURR PH 02 NO2 NO3 SIO3 PO4
 1. 19.15 30.29 21.41 92.5 .10 .17 .00 .82
 11. 18.59 30.93 22.09 83.3 .42 1.22 2.47 1.09

FF CRS/STA 3/ 3 LAT 40 30.9N; LONG 73 48.1W GMT 13.6 10/03/73 HARO ---
 SONIC DPTH 17 AIR DRY/WET 20.0/--- WIND DIR/SPD 18/02 SFA DIR/HT 00/0
 SWELL DIR/HT 12/2 WTHR 01 CLOUD TYP/CVR -/- VIS 1 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	18.91	30.82	21.88	85.9			.03	.13	.00	.38
15.	18.50	31.12	22.20	90.4			.06	.27	.00	.49

FE CRS/STA 3/ 4 LAT 40 31.8N; LONG 73 40.0W GMT 14.6 10/03/73 HARO 16.6
 SONIC DPTH 17 AIR DRY/WET 20.7/--- WIND DIR/SPD 20/03 SFA DIR/HT 00/0
 SWELL DIR/HT 12/2 WTHR -- CLOUD TYP/CVR -/- VIS 2 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	18.97	30.56	21.66	80.5			.12	.25	.00	.68
15.	18.41	30.96	22.10	87.8			.31	.91	3.97	.74

FE CRS/STA 3/ 5 LAT 40 32.8N; LONG 73 31.8W GMT 15.6 10/03/73 RAR0 16.1
 SONIC DPTH 14 AIR DRY/WFT 20.7/--- WIND DIR/SPD 20/ 3 SFA DIR/HT 00/0
 SWELL DIR/HT 14/2 WTHR 05 CLOUD TYP/CVR -/- VIS 6 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	C2	NO2	NO3	SI03	P04
1.	18.96	30.83	21.87	81.4			.00	.00	.00	.47
12.	18.40	30.94	22.09	80.3			.26	1.10	4.33	.93

FF CRS/STA 3/ 6 LAT 40 26.0N; LONG 73 57.0W GMT 20.6 10/01/73 RAR0 29.5
 SONIC DPTH 10 AIR DRY/WFT 24.4/--- WIND DIR/SPD 12/11 SFA DIR/HT 15/0
 SWELL DIR/HT 15/1 WTHR -- CLOUD TYP/CVR 4/2 VIS 8 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	C2	NO2	NO3	SI03	P04
1.	19.24	28.40	19.96	84.4			2.42	7.19	9.32	2.69
9.	18.88	28.83	20.37	85.2			2.08	11.45	7.90	2.34

FF CRS/STA 3/ 7 LAT 40 26.8N: LONG 73 53.1W GMT 15.0 10/04/73 HARO 17.0
 SONIC DPTH 22 AIR DRY/WET 24.4/--- WIND DIR/SPD 25/03 SFA DIR/HT 00/0
 SWELL DIR/HT 15/0 WTHR 05 CLOUD TYP/CVR -/- VIS 5 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	19.56	27.24	19.00	82.2			2.34	11.76	9.37	2.49
10.	18.77	30.30	21.51	86.4			.69	2.78	.41	.85
20.	16.74	31.43	22.86	86.2			.70	2.29	9.26	.96

FF CRS/STA 3/ 8 LAT 40 28.4N: LONG 73 47.8W GMT 14.2 10/04/73 HARO 17.5
 SONIC DPTH 26 AIR DRY/WET 20.0/--- WIND DIR/SPD 27/05 SFA DIR/HT 00/0
 SWELL DIR/HT 15/0 WTHR 05 CLOUD TYP/CVR -/- VIS 5 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	19.18	29.81	21.04	76.8			1.02	4.25	.00	.84
10.	18.74	30.94	22.01	90.4			.20	.58	.00	.61
25.	14.92	31.70	23.47	86.5			1.10	4.06	21.23	1.46

FF CRS/SIA 3/0 LAT 40 27.9N; LONG 73 40.0W GMT 17.5 10/03/73 RAR0 15.6
 SONIC DPTH 24 AIR DRY/WET 22.2/--.-- WIND DIR/SPD 23/02 SFA DIR/HT 00/0
 SWELL DIR/HT 12/1 WTHR 01 CLOUD TYP/CVR 8/3 VIS 6 SFCCHT DPTH --

D	TEMP	SAL	SIGT	TURR	PH	O2	NO2	NO3	SI03	P04
1.	19.57	30.66	21.59	84.4			.14	.43	.00	.62
10.	18.87	30.78	21.85	87.6			.06	.37	.00	.59
22.	17.15	31.05	22.47	87.2			.72	2.58	9.63	1.15

FF CRS/SIA 3/10 LAT 40 28.8N; LONG 73 31.9W GMT 16.3 10/03/73 RAR0 16.0
 SONIC DPTH 22 AIR DRY/WET 21.1/--.-- WIND DIR/SPD 20/03 SFA DIR/HT 00/0
 SWELL DIR/HT 13/3 WTHR 05 CLOUD TYP/CVR -- VIS 6 SECCHT DPTH --

D	TEMP	SAL	SIGT	TURR	PH	O2	NO2	NO3	SI03	P04
1.	18.99	30.38	21.52	85.8			.60	2.44	.00	.98
10.	18.54	30.84	21.98	87.7			.54	1.87	2.90	1.11
20.	17.61	31.36	22.60	80.3			.77	1.67	9.27	1.47

FF CRS/STA 3/11 LAT 40 22.0N; LONG 73 57.1W GMT 19.9 10/01/73 HARP 30.0
 SONIC DPTH 13 AIR DRY/WFT 22.2/--- WIND DIR/SPD 15/10 SFA DIR/HT 15/0
 SWELL DIR/HT 15/0 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	18.86	28.94	20.46	85.2			2.05	8.69	10.01	2.53
11.	18.74	30.30	21.52	90.7			.78	3.57	3.14	1.37

FF CRS/STA 3/12 LAT 40 22.9N; LONG 73 52.1W GMT 13.2 10/01/73 HARP 29.0
 SONIC DPTH 23 AIR DRY/WFT 15.6/--- WIND DIR/SPD 03/06 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 00 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.		30.86					.19	.87	.00	.69
10.	18.57	31.04	22.13	88.6			.09	.28	.00	.28
20.	17.03	31.60	22.92	91.0			.89	2.13	9.13	.93

FF CRS/STA 3/13 LAT 40 23.00N; LONG 73 47.00W GMT 18.8 10/03/73 RAR0 14.9
 SONIC DPTH 37 AIR DRY/WET 25.0/--- WIND DIR/SPD 17/03 SFA DIR/HT 00/0
 SWELL DIR/HT 14/2 WTHR 01 CLOUD TYP/CVR 8/4 VIS 6 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	02	NO2	NO3	SI03	P04
1.	19.91	30.70	21.53	85.5			.27	1.08	.00	.65
10.	18.87	30.96	21.99	67.4			.00	.00	.00	.25
20.	18.53	31.49	22.48	89.3			.00	.00	.00	.21
35.	12.86	32.06	24.16	83.1			1.17	6.46	23.11	1.49

FF CRS/STA 3/14 LAT 40 24.00N; LONG 73 39.00W GMT 20.3 10/02/73 RAR0 23.9
 SONIC DPTH 22 AIR DRY/WET 21.1/--- WIND DIR/SPD 12/10 SFA DIR/HT 12/0
 SWELL DIR/HT 15/1 WTHR 01 CLOUD TYP/CVR -- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	02	NO2	NO3	SI03	P04
1.	18.90	30.59	21.70	84.5			.44	1.82	.00	.83
10.	18.70	30.54	21.71	86.7			.43	1.75	.00	.75
20.	18.01	31.49	22.60	90.0			.22	.44	1.16	.48

FF CRS/STA 3/15 LAT 40 24.0N; LONG 73 30.0W GMT 19.1 10/02/73 RAR0 24.4
 SONIC DPTH 24 AIR DRY/WFT 22.2/--.- WIND DIR/SPD 12/12 SFA DIR/HT 12/0
 SWELL DIR/HT 15/1 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	02	N02	NC3	SI03	P04
1.	18.65	31.03	22.10	91.6			.00	.14	1.04	.53
10.	18.55	31.05	22.14	87.3			.01	.01	.96	.71
22.	18.04	31.43	22.55	88.3			.33	1.34	5.80	.81

FF CRS/STA 3/16 LAT 40 18.0N; LONG 73 56.0W GMT 19.1 10/01/73 RAR0 30.0
 SONIC DPTH 19 AIR DRY/WFT 21.1/--.- WIND DIR/SPD 15/10 SFA DIR/HT 15/0
 SWELL DIR/HT 15/0 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	19.15	29.43	20.76	87.8			1.41	6.67	4.87	2.12
10.	18.93	30.17	21.38	92.5			.76	3.28	2.20	1.40
17.	17.68	31.29	22.53	89.6			.71	2.38	9.38	1.36

FE CRS/STA 3/17 LAT 40 18.9N; LONG 73 52.2W GMT 14.5 10/01/73 RARO 29.5
 SONIC DPTH 24 AIR DRY/WET 18.3/--.- WIND DIR/SPD 03/10 SFA DIR/HT 03/0
 SWELL DIR/HT 00/0 WTHR 00 CLOUD TYP/CVR -/- VIS 8 SFCCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	19.06	30.13	21.31	88.8			.49	2.13	.69	.68
10.	19.01	30.79	21.83	91.0			.48	1.91	.22	1.00
22.	13.02	31.94	23.92	88.8			1.14	5.18	20.35	1.48

FE CRS/STA 3/18 LAT 40 18.9N; LONG 73 46.1W GMT 13.8 10/02/73 RARO 27.2
 SONIC DPTH 31 AIR DRY/WET 19.4/--.- WIND DIR/SPD 15/10 SFA DIR/HT 15/0
 SWELL DIR/HT 15/1 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	18.76	30.01	21.90	69.5			.20	.52	.00	.54
10.	18.48	31.35	22.38	90.4			.00	.20	.00	.47
20.	18.48	31.70	22.65	90.7			.00	.03	.00	.41
29.	14.84	31.82	23.58	89.8			.73	3.74	12.36	1.10

FE CRS/STA 3/19 LAT 40 19.9N; LONG 73 38.0W GMT 15.1 10/02/73 HRO 27.2
 SONIC DPTH 24 AIR DRY/WFT 20.6/--- WIND DIR/SPD 15/10 SFA DIR/HT 15/0
 SWELL DIR/HT 15/1 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURR	PH	02	NO2	NO3	SI03	P04
1.	18.65	30.88	21.98	90.0			.07	.11	.00	.47
10.	18.60	31.00	22.09	89.1			.04	.04	.84	.59
22.	17.91	31.74	22.82	92.7			.39	.82	4.98	.84

FE CRS/STA 3/20 LAT 40 20.9N; LONG 73 29.0W GMT 18.2 10/02/73 HRO 25.0
 SONIC DPTH 29 AIR DRY/WFT 22.2/--- WIND DIR/SPD 15/11 SFA DIR/HT 15/0
 SWELL DIR/HT 15/1 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURR	PH	02	NO2	NO3	SI03	P04
1.	18.48	31.57	22.55	93.0			.00	.05	.00	.37
10.	18.35	31.51	22.54	93.0			.00	.00	.00	.38
20.	18.24	31.60	22.63	94.5			.00	.08	.00	.40
28.	17.46	31.89	22.95	94.4			.26	1.42	5.33	.72

FE CRS/STA 3/21 LAT 40 12.9N; LONG 73 56.1W GMT 18.2 10/01/73 RAR0 30.0
 SONIC DPTH 20 AIR DRY/WET 20.0/--- WIND DIR/SPD 15/10 SFA DIR/HT 15/0
 SWELL DIR/HT 00/0 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	C2	N02	N03	SI03	P04
1.	19.32	30.49	21.52	66.3			.41	1.66	.00	.95
10.	19.18	30.44	21.52	68.6			.39	1.68	.18	.82
18.	18.74	30.64	21.93	92.0			.39	1.77	6.55	1.23

FF CRS/STA 3/22 LAT 40 14.0N; LONG 73 51.1W GMT 17.3 10/01/73 RAR0 30.0
 SONIC DPTH 25 AIR DRY/WET 19.4/--- WIND DIR/SPD 15/13 SFA DIR/HT 15/0
 SWELL DIR/HT 00/0 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	C2	N02	N03	SI03	P04
1.	19.37	30.81	21.75	90.4			.03	.10	.00	.52
10.	19.27	30.84	21.80	91.5			.00	.26	.00	.22
24.	17.06	31.86	23.11	94.4			.86	5.06	18.29	1.34

FF CRS/STA 3/23 LAT 40 14.9N; LONG 73 46.2W GMT 15.8 10/01/73 RAR0 30.0
 SONIC DPTH 55 AIR DRY/WFT 18.3/--- WIND DIR/SPD 12/12 SFA DIR/HT 12/0
 SWELL DIR/HT 00/0 WTHR 00 CLOUD TYP/CVR -/- VIS 8 SFCCHT DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	18.57	31.26	22.29	91.5			.03	.13	.00	.46
10.	18.52	31.27	22.31	94.0			.02	.08	.00	.47
20.	18.52	31.46	22.46	94.4			.00	.00	.00	.46
30.	13.00	31.86	23.82	93.6			.92	5.26	19.24	1.44
40.	11.02	32.39	24.76	93.0			.73	7.37	14.53	.92
52.	10.04	32.59	25.08	88.1			.34	9.24	15.97	1.00

FF CRS/STA 3/24 LAT 40 15.9N; LONG 73 36.9W GMT 16.1 10/02/73 RAR0 26.5
 SONIC DPTH 27 AIR DRY/WFT 21.1/--- WIND DIR/SPD 15/09 SFA DIR/HT 15/0
 SWELL DIR/HT 15/2 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SFCCHT DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	18.74	31.26	22.25	91.7			.00	.00	.00	.44
10.	18.64	31.28	22.29	92.0			.00	.00	.00	.48
25.	17.95	31.88	22.92	94.2			.30	1.53	6.30	.76

FF CRS/STA	3/25	LAT 40 17.1N	LONG 73 27.9W	GMT 17.3	10/02/73	RAR0 26.0				
SUNIC DPTH 33	ATR DRY/WFT 21.1/---	WIND DIR/SFC 15/13	SFA DIR/HT 15/0	VIS 8	SFCCHI DPTH --					
SWELL DIR/HT 15/2	WTHR 01	CLOUD TYP/CVR --	PH	NO2	NO3	SI03				
0	TEMP	SAL	SIGT	TURR	PH	O2	NO2	NO3	SI03	P04
1.	18.29	31.54	22.58	93.9			.00	.11	.00	.36
10.	18.17	31.57	22.63	94.2			.00	.00	.00	.34
31.	15.05	32.10	23.75	90.9			.47	4.87	11.38	.88

FE CRS/STA 4/ 1 LAT 40 29.8N; LONG 73 56.9W GMT 08.0 11/05/73 BARO 18.0
 SONIC DPTH 10 AIR DRY/WET 07.2/--.-- WIND DIR/SPD 33/20 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 02 CLOUD TYP/CVR 7/E VIS 7 SECCH DPTH --

D	TEMP	SAL	SIGT	TUPR	PH	NO2	NO3	SI03	P04
1.	11.98	27.15	20.54	86.1	6.0	3.06	13.35	13.74	2.76
10.	12.92	31.71	23.88	82.9	6.8	.60	6.94	9.15	1.19

FE CRS/STA 4/ 2 LAT 40 31.0N; LONG 73 53.5W GMT 14.5 11/06/73 BARO 16.0
 SONIC DPTH 13 AIR DRY/WET 04.4/--.-- WIND DIR/SPD 30/25 SFA DIR/HT 33/1
 SWELL DIR/HT 33/1 WTHR 01 CLOUD TYP/CVR -- VIS 8 SECCH DPTH --

D	TEMP	SAL	SIGT	TUPR	PH	NO2	NO3	SI03	P04
1.	12.10	31.78	24.09	84.7	8.1	.71	8.15	10.31	1.29
11.	12.16	32.01	24.26	85.4	7.9	.57	7.43	10.32	1.13

FF CRS/SIA 4/ 3 LAT 40 31.5N; LONG 73 48.4W GMT 15.0 11/06/73 RARO 16.0
 SONIC DPTH 17 AIR DRY/WFT 04.4/--- WIND DIR/SPD 30/25 SFA DIR/HT 33/1
 SWELL DIR/HT 33/1 WTHR 01 CLOUD TYP/CVR -/- VIS R SECCHI DPTH --
 D TEMP SAL SIGT TURB PH 02 NO2 NO3 SI03 P04
 1. 12.43 31.53 23.84 82.3 7.7 .44 4.59 4.04 .70
 10. 12.52 32.15 24.34 85.6 7.6 .31 4.52 5.31 .62
 17. 12.12 32.75 24.84 80.2 7.6 .27 7.82 12.03 .92

FF CRS/SIA 4/ 4 LAT 40 32.4N; LONG 73 40.5W GMT 16.2 11/06/73 RARO 15.0
 SONIC DPTH 16 AIR DRY/WFT 05.0/--- WIND DIR/SPD 30/25 SFA DIR/HT 29/2
 SWELL DIR/HT 29/2 WTHR 01 CLOUD TYP/CVR -/- VIS R SECCHI DPTH --
 D TEMP SAL SIGT TURB PH 02 NO2 NO3 SI03 P04
 1. 11.84 32.46 24.67 84.7 7.3 .21 5.09 7.05 .54
 13. 11.88 32.42 24.63 85.4 7.5 .19 5.04 7.01 .55

FF CRS/STA 4/ 5 LAT 40 33.3N: LONG 73 32.5W GMT 17.3 11/06/73 RARO 14.5
 SONIC DPTH 15 AIR DRY/WFT 05.0/--- WIND DIR/SPD --- SFA DIR/HT 30/2
 SWELL DIR/HT 30/2 WTHR 02 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	02	NO2	NO3	SI03	P04
1.	12.18	31.88	24.15	73.4	7.2		.41	6.33	8.16	1.09
13.	12.20	31.93	24.19	82.0	7.5		.37	6.33	8.07	1.03

FE CRS/STA 4/ 6 LAT 40 26.0N: LONG 73 56.8W GMT 14.9 11/05/73 RARO 18.0
 SONIC DPTH 12 AIR DRY/WFT 07.6/--- WIND DIR/SPD 33/10 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 02 CLOUD TYP/CVR -/- VIS 7 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	02	NO2	NO3	SI03	P04
1.	11.90	28.75	21.79	81.9	7.0		2.58	15.65	10.27	1.91
10.	13.53	31.50	23.60	82.8	7.2		.60	4.43	3.99	1.14

FF CRS/STA 4/ 7 LAT 40 26.7N; LONG 73 53.1W GMT 14.4 11/09/73 BARO 13.0
 SONIC DPTH 21 AIR DRY/WFT 06.7/--.- WIND DIR/SPD 34/13 SEA DIR/HT 34/0
 SWELL DIR/HT 00/0 WTHR 02 CLOUD TYP/CVR --/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	12.31	31.00	23.45	75.5	7.4		.41	2.77	1.19	.92
10.	12.51	31.12	23.50	67.2	7.3		.32	2.24	.92	.82
20.	12.20	32.98	25.00	64.5	7.4		.29	8.34	12.99	.94

FF CRS/STA 4/ 8 LAT 40 28.3N; LONG 73 47.9W GMT 15.3 11/09/73 BARO 13.0
 SONIC DPTH 26 AIR DRY/WFT 06.7/--.- WIND DIR/SPD 34/13 SEA DIR/HT 34/0
 SWELL DIR/HT 00/0 WTHR 02 CLOUD TYP/CVR --/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	12.27	31.01	23.46	66.1	7.3		.45	3.10	1.46	.84
10.	12.56	31.15	23.52	67.9	7.5		.34	2.27	.65	.67
25.	12.40	33.18	25.11	67.6	7.3		.23	8.11	11.51	.81

FF CRS/STA 4/9 LAT 40 27.9N; LONG 73 40.0W GMT 16.3 11/09/73 RARO 12.0
 SONIC DPTH 23 AIR DRY/WFT 06.7/-- WIND DIR/SPD 34/15 SEA DIR/HT 34/0
 SWELL DIR/HT 00/0 WTHR 02 CLOUD TYP/CVR -/- VIS 8 SFCCHT DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	12.56	31.52	23.80	80.4	7.3		.23	2.03	1.11	.54
10.	13.03	31.71	23.86	91.2	7.5		.26	2.27	1.63	.62
21.	13.06	32.20	24.23	91.1	7.4		.20	2.53	3.12	.58

FF CRS/STA 4/10 LAT 40 28.9N; LONG 73 32.1W GMT 18.4 11/06/73 RARO 14.3
 SONIC DPTH 22 AIR DRY/WFT 06.1/-- WIND DIR/SPD 30/25 SEA DIR/HT 27/3
 SWELL DIR/HT 27/3 WTHR 02 CLOUD TYP/CVR -/- VIS 8 SFCCHT DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	11.63	32.15	24.43	85.6	7.3		.26	6.14	8.38	.90
10.	11.83	32.16	24.43	86.1	7.6		.19	3.85	4.84	.53
20.	11.85	32.19	24.45	85.7	7.4		.28	6.79	9.44	1.02

FF CRS/STA 4/11 LAT 40 22.1N; LONG 73 57.1W GMT 15.6 11/05/73 HRO 17.0
 SONIC DPTH 13 AIR DRY/WFT 06.7/--- WIND DIR/SPD 21/08 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 02 CLOUD TYP/CVR -/- VIS 7 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	12.01	29.36	22.24	82.8	7.3		1.86	11.86	8.18	1.81
12.	13.00	31.32	23.41	81.0	7.4		.46	3.08	1.36	1.06

FF CRS/STA 4/12 LAT 40 23.0N; LONG 73 52.0W GMT 22.0 11/05/73 HRO 13.0
 SONIC DPTH 24 AIR DRY/WFT 08.3/--- WIND DIR/SPD 23/11 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	13.84	31.52	23.55	85.9	7.4		.17	1.90	.34	.55
10.	13.85	31.52	23.55	87.3	7.5		.38	2.30	.00	.64
25.	12.01	32.78	24.88	85.0	7.4		.20	7.54	13.29	.86

FF CRS/STA 4/13 LAT 40 23.1N; LONG 73 47.0W GMT 15.1 11/07/73 RARO 21.0
 SONIC DPTH 37 AIR DRY/WFT 06.1/-- WIND DIR/SPD 30/20 SFA DIR/HT 30/2
 SWELL DIR/HT 30/2 WTHR 01 CLOUD TYP/CVR -- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	13.29	32.06	24.06	90.3	7.0		.19	1.57	1.46	.71
10.	13.29	32.09	24.10	90.1	7.2		.19	1.62	1.46	.63
20.	13.31	32.12	24.12	90.0	7.3		.18	1.63	1.64	.57
35.	11.58	33.10	25.21	84.5	7.2		.18	9.03	14.22	.96

FF CRS/STA 4/14 LAT 40 23.9N; LONG 73 38.9W GMT 22.2 11/07/73 RARO 20.5
 SONIC DPTH 23 AIR DRY/WFT 07.6/-- WIND DIR/SPD 30/15 SEA DIR/HT 30/1
 SWELL DIR/HT 30/1 WTHR 02 CLOUD TYP/CVR -- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	12.80	31.60	23.97	89.4	7.4		.35	2.59	1.55	.82
10.	13.06	32.05	24.12	89.3	7.4		.36	2.63	1.32	.74
21.	13.35	32.25	24.21	91.2	7.5		.18	1.63	1.99	.60

FF CRS/STA 4/15 LAT 40 25.2N; LONG 73 30.4W GMT 19.3 11/06/73 RAO 14.3
 SONIC DPTH 24 AIR DRY/WET 06.1/-- WIND DIR/SPD 30/25 SEA DIR/HT 30/3
 SWELL DIR/HT 30/3 WTHR 02 CLOUD TYP/CVR -- VIS 8 SECCHI DPTH --

	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	11.75	32.13	24.43	81.0	7.6		.36	6.63	9.49	.79
10.	11.74	32.17	24.46	86.0	7.7		.35	7.02	9.49	.86
18.	11.74	32.12	24.42	86.0	7.2		.12	5.43	8.45	.68

FF CRS/STA 4/16 LAT 40 17.0N; LONG 73 55.8W GMT 16.5 11/05/73 RAO 16.0
 SONIC DPTH 20 AIR DRY/WET 06.7/-- WIND DIR/SPD 23/08 SEA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 02 CLOUD TYP/CVR -- VIS 7 SECCHI DPTH --

	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	13.95	31.30	23.36	80.0	7.3		.44	2.85	.85	.86
10.	13.97	31.29	23.35	87.7	7.6		.42	2.79	.77	.19
18.	14.24	31.58	23.52	87.5	7.5		.29	2.00	.69	.19

FE CRS/STA 4/17 LAT 40 19.0N; LONG 73 52.2W GMT 21.1 11/05/73 RARO 13.0
 SONIC DPTH 25 AIR DRY/WFT 08.3/--- WIND DIR/SPD 23/11 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SFCCHT DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	13.85	31.49	23.53	88.8	7.5		.35	1.66	.00	.00
10.	13.90	31.60	23.60	89.2	7.4		.31	1.82	.00	.00
20.	12.25	32.70	24.77	82.9	7.3		.12	5.95	11.53	1.53

FF CRS/STA 4/18 LAT 40 19.0N; LONG 73 46.3W GMT 16.5 11/07/73 RARO 20.5
 SONIC DPTH 30 AIR DRY/WFT 08.3/--- WIND DIR/SPD 30/--- SFA DIR/HT 30/1
 SWELL DIR/HT 30/1 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHT DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	13.39	32.23	24.19	89.8	7.5		.16	1.36	1.08	.20
10.	13.40	32.20	24.16	90.3	7.6		.00	.00	1.16	.21
20.	13.40	32.22	24.18	90.2	7.7		.16	1.83	10.37	.31
28.	13.55	32.30	24.25	90.3	7.8		.16	1.83	2.10	.32

FF CRS/STA 4/19 LAT 40 19.9N; LONG 73 38.0W GMT 17.6 11/07/73 RARO 19.8
 SONIC DPTH 25 AIR DRY/WFT 07.8/--- WIND DIR/SPD 30/15 SFA DIR/HT 30/2
 SWELL DIR/HT 30/1 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	13.42	32.30	24.24	88.0	7.5		.16	1.46	1.64	.48
10.	13.39	32.28	24.23	88.1	7.4		.16	1.55	1.90	.52
24.	13.42	32.28	24.22	88.5	7.8		.15	1.54	1.73	.49

FF CRS/STA 4/20 LAT 40 20.9N; LONG 73 29.0W GMT 20.7 11/07/73 RARO 19.4
 SONIC DPTH 29 AIR DRY/WFT 09.4/--- WIND DIR/SPD 30/15 SFA DIR/HT 30/1
 SWELL DIR/HT 30/1 WTHR 02 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	13.00	31.96	24.06	82.4	7.4		.16	1.46	.94	.56
10.	12.46	31.90	24.02	91.3	7.7		.18	1.73	.94	.59
20.	13.02	31.97	24.06	91.0	7.7		.15	1.47	1.03	.59
28.	13.10	32.08	24.13	91.2	7.6		.14	1.42	1.73	.60

FE CRS/STA 4/21 LAT 40 12.8N; LONG 73 55.9W GMT 17.5 11/05/73 BARO 15.5
 SONIC DPTH 22 AIR DRY/WFT 06.7/-- WIND DIR/SPD 23/11 SEA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 02 CLOUD TYP/CVR -/- VIS 7 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	S103	P04
1.	14.03	31.38	23.41	88.1	7.4		.28	2.03	1.03	.71
10.	14.03	31.40	23.42	88.5	7.4		.00	.96	.95	.47
21.	14.21	31.52	23.48	88.1	7.3		.22	1.59	.77	.65

FE CRS/STA 4/22 LAT 40 13.9N; LONG 73 50.9W GMT 18.4 11/05/73 BARO 14.5
 SONIC DPTH 25 AIR DRY/WFT 07.8/-- WIND DIR/SPD 23/13 SEA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 02 CLOUD TYP/CVR -/- VIS 7 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	S103	P04
1.	14.16	31.87	23.76	89.3	7.3		.16	1.18	.86	.52
10.	14.18	31.84	23.73	90.5			.14	1.16	.86	.49
23.	14.19	31.88	23.76	90.4	7.5		.03	.08	1.21	.42

FF CRS/STA 4/23 LAT 40 14.9N: LONG 73 46.1W GMT 19.3 11/05/73 RARO 13.0
 SONIC DPTH 52 AIR DRY/WET 08.3/--- WIND DIR/SPD 23/05 SFA DIR/HT 00/0
 SWELL DIR/HT 00/0 WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	Q2	N02	N03	SI03	P04
1.	14.38	32.23	23.99	88.4	7.5		.00	.19	.69	.36
10.	14.39	32.19	23.95	90.7	7.8		.15	.43	1.00	.44
20.	14.43	32.22	23.97	91.0	7.7		.16	.32	1.03	.50
30.	12.85	32.60	24.58	90.3	7.6		.33	3.30	9.30	.61
40.	11.60	32.93	25.07	86.5	7.2		.00	5.14	12.95	.57
51.	11.58			84.4						

FF CRS/STA 4/24 LAT 40 15.8N: LONG 73 36.8W GMT 18.5 11/07/73 RARO 20.0
 SONIC DPTH 27 AIR DRY/WET 08.3/--- WIND DIR/SPD 30/20 SFA DIR/HT 30/2
 SWELL DIR/HT 30/1 WTHR 02 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH --

D	TEMP	SAL	SIGT	TURB	PH	Q2	N02	N03	SI03	P04
1.	13.15	32.31	24.30	75.8	7.3		.11	.00	2.66	.34
10.	13.15	32.30	24.29	92.6	7.6		.00	.00	2.61	.36
25.	13.14	32.29	24.29	90.6	7.4		.19	1.63	2.61	.52

FE CRS/ST4	4/25	LAT 40 17.0N	LONG 73 28.0W	GAT 19.7	11/07/73	HARO 19.8
SONIC DPTH 33	AIR DRY/WFT 09.4/---	WIND DIR/SPR 30/20	SFA DIR/HT 30/1			
SWELL DIR/HT 30/1	WTHR 01	CLOUD TYP/CVR -/-	VIS 8	SFCCHI DPTH --		

D	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	13.05	32.02	24.10	87.5	7.6		.30	.36	1.17	.34
10.	13.08	32.00	24.07	90.0	7.6		.18	.00	1.26	.36
20.	13.16	32.09	24.13	90.9	7.6		.00	.00	1.53	.41
30.	13.17	32.12	24.15	88.8	7.5		.00	.00	1.57	.39

FE CRS/STA 5/ 1 LAT 40 29.9N; LONG 73 57.0W GMT 12.2 11/26/73 HAKO 23.0
 SONIC DPTH 16 AIR DRY/WFT 7.2/--- WIND DIR/SPD 36/13 SEA DIR/HT 00/0
 SWELL DIR/HT 09/0 WTHR 02 CLOUD TYP/CVR -/- VIS 7 SECCH DPTH ---

1	TEMP	SAL	SIGT	TURB	PH	0.2	N02	N03	SI03	P04
1.	11.01	32.27	24.68	75.6			.36	3.08	.73	.92
2.	10.96	32.26	24.67	75.5						
3.	10.97	32.27	24.68	76.9						
4.	11.01	32.27	24.67	77.0						
5.	10.98	32.27	24.67	76.7						
6.	11.01	32.26	24.67	76.4						
7.	11.02	32.27	24.67	75.6						
8.	11.00	32.28	24.68	76.1						
9.	11.01	32.23	24.64	75.6			.35	2.94	.44	.85
10.	11.02	32.27	24.67	75.5						
11.	11.06	32.28	24.67	75.0						
12.	11.04	32.28	24.68	73.8						
13.	11.01	32.28	24.68	70.9						

CRUISE 5 STATION NUMBER 1 NOV. 26, 1973

FE CRS/STA 5/2 LAT 40 29.7N; LONG 73 51.7W CMT 15.3 11/27/73 RARO 19.0
 SONIC DPTH 13 AIR DRY/WFT 11.7/--- WIND DIRK/SPD 15/17 SFA DIR/HT 18/0
 SWELL DIR/HT 15/2 WTHR 02 CLOUD TYP/CVR -/- VIS 5 SECCHT DPTH 03

D	TEMP	SAL	SIGT	TURB	PH	C2	N02	N03	SI03	P04
1.	10.67	32.22	24.70	72.9	8.1		.24	2.90	.00	.66
2.	10.67	32.20	24.68	71.9	8.1					
3.	10.66	32.24	24.71	73.9	8.1					
4.	10.64	32.22	24.70	79.3	8.0					
5.	10.67	32.24	24.71	81.9	8.0					
6.	10.66	32.24	24.71	81.8	8.0					
7.	10.66	32.24	24.71	82.2	8.0					
8.	10.64	32.25	24.72	81.8	8.0					
9.	10.66	32.23	24.70	80.8	7.9					
10.	10.65	32.24	24.71	79.5	7.9		.26	2.91	.00	.69
11.	10.66	32.23	24.70	79.0	7.9					

CRUISE 5 STATION NUMBER 2 NOV. 27, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FE CRS/SIA 5/ 3 LAT 40 31.1N; LONG 73 47.2W GMT 16.0 11/27/73 HARO 18.9
 SONIC DPTH 18 AIR DRY/WFT 12.2/--- WIND DIR/SPD 15/15 SFA DIR/HT 1P/0
 SWELL DIR/HT 15/2 WTHR 04 CLOUD TYP/CVR -/- VIS 4 SECCHI DPTH 04

D	TEMP	SAL	SIGT	TURB	PH	Q2	N02	N03	SI03	P04
1.	11.19	32.52	24.83	82.1	8.2	6.33				
2.	11.18	32.51	24.83	82.0	8.1	6.31		1.54	.00	.54
3.	11.19	32.52	24.83	81.7	8.1	6.33				
4.	11.18	32.52	24.84	80.6	8.1	6.33				
5.	11.16	32.53	24.84	81.0	8.1	6.37				
6.	11.18	32.52	24.83	81.3	8.1	6.31				
7.	11.18	32.53	24.84	82.3	8.0	6.34				
8.	11.18	32.53	24.84	82.4	8.0	6.29				
9.	11.17	32.52	24.83	83.1	8.0	6.33				
10.	11.18	32.53	24.84	83.3	8.0	6.36				
11.	11.17	32.52	24.84	82.9	7.9	6.36				
12.	11.18	32.53	24.84	82.6	7.9	6.37				
13.	11.18	32.53	24.84	83.4	7.9	6.37				
14.	11.17	32.54	24.85	83.0	7.9	6.37				
15.	11.18	32.53	24.84	82.7	7.9	6.37	.10	1.55	.00	.54
16.	11.16	32.53	24.85	83.0	7.9	6.33				
17.	11.17	32.55	24.86	82.9	7.8	6.34				

CRUISE 5 STATION NUMBER 3 NOV. 27, 1973

FF CRS/STA	5/ 4	LAT 40 32.0N	LONG 73 39.6W	GMT 16.9	11/27/73	BARO 18.0			
SONIC DPTH 17	AIR DRY/WFT 12.2/---	WIND DIR/SPD 15/10	SFA DIR/HT 18/0	VIS 4	SECCHI DPTH 05				
SWELL DIR/HT 15/2	WTHR 04	CLOUD TYP/CVR -/-	PH	NO2	NO3	SI03	P04		
D	TEMP	SAL	SIGT	TURB	PH	NO2	NO3	SI03	P04
1.	11.18	32.44	24.78	84.2	8.1	6.33	1.90	.00	.51
2.	11.18	32.45	24.78	84.5	8.1	6.32			
3.	11.17	32.46	24.79	85.1	8.1	6.34			
4.	11.15	32.46	24.79	85.1	8.0	6.30			
5.	11.17	32.45	24.78	85.2	8.0	6.35			
6.	11.17	32.45	24.78	85.3	8.0	6.32			
7.	11.17	32.46	24.79	85.5	8.0	6.36			
8.	11.16	32.46	24.79	85.5	8.0	6.34			
9.	11.17	32.45	24.78	85.7	8.0	6.37	1.90	.00	.52
10.	11.17	32.46	24.79	85.5	7.9	6.37			
11.	11.17	32.46	24.79	85.5	7.9	6.39			
12.	11.17	32.46	24.79	85.7	7.9	6.43			
13.	11.17	32.46	24.79	85.3	7.9	6.42			
14.	11.17	32.46	24.79	85.6	7.9	6.43			
15.	11.17	32.46	24.79	85.3	7.9	6.46	1.90	.00	.53

CRUISE 5 STATION NUMBER 4 NOV. 27, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/STA 5/ 5 LAT 40 33.0N; LONG 73 32.0W CMT 18.0 11/27/73 R4RO 17.0
 SONIC DPTH 18 AIR DRY/WET 12.2/--.- WIND DIR/SPD --/-- SFA DIR/HT 00/0
 SWELL DIR/HT 12/1 WTHR 04 CLOUD TYP/CVR --/- VIS 3 SFCCHI DPTH 04

L	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	10.66	32.19	24.67	80.1	8.1	6.74	.02	.84	.00	.43
2.	10.65	32.19	24.67	80.5	8.1	6.74				
3.	10.65	32.19	24.67	81.2	8.1	6.77				
4.	10.65	32.19	24.67	80.5	8.1	6.82				
5.	10.65	32.19	24.67	81.6	8.1	6.86				
6.	10.65	32.19	24.67	81.4	8.0	6.87				
7.	10.64	32.20	24.68	81.3	8.0	6.86				
8.	10.64	32.20	24.68	81.2	8.0	6.89				
9.	10.64	32.20	24.68	81.2	8.0	6.84	.02	.82	.00	.44
10.	10.65	32.20	24.68	80.5	8.0	6.84				
11.	10.63	32.20	24.68	81.4	7.9	6.82				
12.	10.65	32.20	24.68	81.5	7.9	6.79				
13.	10.63	32.21	24.69	81.0	7.9	6.74				
14.	10.65	32.20	24.68	81.2	7.9	6.74	.11	.85	.00	.63
15.	10.65	32.19	24.67	80.6	7.9	6.69				

CRUISE 5 STATION NUMBER 5 NOV. 27, 1973

FE CRS/STA 5/ 6 LAT 40 26.0N; LONG 73 57.0W GMT 13.4 11/26/73 RARO 23.8
 SONIC DPTH 12 AIR DRY/WET 7.2/-/- WIND DIR/SPO 03/10 SFA DIR/HT 00/0
 SWELL DIR/HT 00/1 WTHR 02 CLOUD TYP/CVR -/- VIS 7 SFCCHT DPTH 04

N	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	10.64	30.36	23.26	82.4			1.76	14.08	8.75	1.80
2.	10.64	30.36	23.25	83.2						
3.	10.66	30.39	23.28	83.8						
4.	10.68	30.47	23.34	83.9						
5.	10.71	30.53	23.37	84.7						
6.	10.75	30.65	23.46	84.6						
7.	10.85	30.93	23.66	84.0						
8.	10.95	31.23	23.88	82.0						
9.	11.02	31.58	24.13	76.6			1.15	9.60	6.31	1.43

CRUISE 5 STATION NUMBER 6 NOV. 26, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

154

CRUISE 5 STATION NUMBER 7 NOV. 28, 1973

FE	CHS/STA	5/ 8	LAT	40	28.0N	LONG	73	47.8W	GMT	20.8	11/27/73	RAR0	15.0
SONIC	DPH	27	AIR	DRY/WFT	11.1/---	WIND	DIR/SPD	03/06	SFA	DIR/HT	00/0		
SWELL	DIR/HT	15/1	WTHR	04	CLOUD	TYP/CVR	-/-	VIS	4	SECCH	DPH	04	
U	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04			
1.	11.18	32.57	24.87	83.8	8.1	6.46	.12	2.49	.00	.62			
2.	11.18	32.57	24.87	83.8	8.1	6.43							
3.	11.18	32.58	24.88	83.8	8.1	6.45							
4.	11.18	32.58	24.88	83.9	8.1	6.45							
5.	11.18	32.58	24.88	83.9	8.1	6.44							
6.	11.18	32.57	24.87	83.8	8.1	6.43							
7.	11.17	32.58	24.89	83.8	8.0	6.45							
8.	11.17	32.58	24.88	83.8	8.0	6.43							
9.	11.17	32.58	24.88	83.9	8.0	6.42	.10	2.18	.00	.58			
10.	11.17	32.58	24.88	83.7	8.0	6.40							
11.	11.17	32.58	24.88	83.7	8.0	6.40							
12.	11.17	32.58	24.88	83.8	8.0	6.41							
13.	11.17	32.58	24.88	83.7	8.0	6.41							
14.	11.17	32.58	24.88	83.8	7.9	6.40							
15.	11.17	32.58	24.88	83.7	7.9	6.40							
16.	11.17	32.58	24.89	83.8	7.9	6.40							
17.	11.17	32.58	24.88	83.7	7.9	6.40							
18.	11.17	32.59	24.89	83.8	7.9	6.40							
19.	11.17	32.59	24.89	83.5	7.9	6.38	.17	2.70	.00	.69			
20.	11.17	32.59	24.89	83.5	7.9	6.37							
21.	11.17	32.60	24.90	83.5	7.9	6.35							
22.	11.17	32.60	24.90	82.8	7.8	6.35							
23.	11.17	32.60	24.90	82.4	7.8	6.35							
24.	11.17	32.60	24.90	82.5	7.8	6.32							
25.	11.18	32.60	24.89	82.7	7.8	6.31							
26.	11.18	32.60	24.90	80.8	7.8	6.30	.16	2.76	.16	.64			

CRUISE 5 STATION NUMBER 8 NOV. 27, 1973

FF CRS/STA 5/ 9 LAT 40 27.8N; LONG 73 39.6W GMT 19.9 11/27/73 BARO 15.0
 SONIC DPTH 24 AIR DRY/WFT 12.2/-- -- WIND DIR/SPD 15/05 SEA DIR/HT 00/0
 SWELL DIR/HT 15/1 WTHR 04 CLOUD TYP/CVR -- VIS 4 SECCH DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	11.27	32.41	24.73	67.7	8.1	6.63	.13	.60	.00	.57
2.	11.26	32.40	24.73	86.8	8.1	6.64				
3.	11.27	32.41	24.73	67.8	8.1	6.62				
4.	11.26	32.42	24.74	88.0	8.1	6.61				
5.	11.27	32.41	24.73	87.9	8.1	6.61				
6.	11.27	32.41	24.73	88.1	8.0	6.62				
7.	11.27	32.40	24.73	88.1	8.0	6.61				
8.	11.27	32.41	24.74	67.9	8.0	6.61				
9.	11.26	32.41	24.73	68.1	8.0	6.62	.12	.55	.00	.51
10.	11.26	32.42	24.74	87.9	8.0	6.61				
11.	11.25	32.42	24.74	88.2	8.0	6.58				
12.	11.25	32.42	24.74	87.9	7.9	6.58				
13.	11.24	32.42	24.75	88.4	7.9	6.57				
14.	11.24	32.43	24.76	88.4	7.9	6.55				
15.	11.27	32.52	24.82	88.5	7.9	6.55				
16.	11.36	32.74	24.98	88.6	7.8	6.47				
17.	11.42	32.92	25.10	88.4	7.8	6.23				
18.	11.41	32.94	25.12	88.2	7.6	6.05				
19.	11.44	32.94	25.12	88.1	7.8	5.96				
20.	11.44	32.97	25.14	88.1	7.8	5.87				
21.	11.45	32.99	25.15	87.8	7.7	5.78	.21	4.78	2.66	.73
22.	11.45	32.99	25.15	86.4	7.7	5.71				

CRUISE 5 STATION NUMBER 9 NOV. 27, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FE CRS/STA	5/10	LAT 40 29.3N	LONG 73 32.0W	GMT 18.8 11/27/73	RDR0 16.2					
SONIC DPTH 21	AIR DRY/WFT 12.2/---	WIND DIR/SPD 15/05	SFA DIP/HT 00/0							
SWELL DIR/HT 15/2	WTHR 04	CLOUD TYP/CVR -/-	VIS 4	SECCH DPTH 05						
ID	TEMP	SAL	SIGT	TURR	PH	O2	NO2	NO3	SI03	P04
2.	11.12	32.44	24.79	86.0	8.1	6.57	.15	1.66	.00	.62
3.	11.17	32.40	24.74	86.0	8.1	6.58				
4.	11.16	32.40	24.75	86.2	8.1	6.58				
5.	11.17	32.39	24.74	86.1	8.1	6.58				
6.	11.16	32.40	24.75	85.7	8.0	6.57				
7.	11.16	32.40	24.75	86.1	8.0	6.57				
8.	11.17	32.40	24.74	86.2	8.0	6.54				
9.	11.16	32.38	24.73	85.8	8.0	6.56	.14	1.63	.00	.59
10.	11.16	32.40	24.75	86.3	8.0	6.52				
11.	11.16	32.41	24.75	86.1	8.0	6.56				
12.	11.16	32.41	24.75	86.1	8.0	6.56				
13.	11.16	32.41	24.75	86.0	7.9	6.56				
14.	11.16	32.41	24.75	86.1	7.9	6.55				
15.	11.16	32.42	24.76	86.0	7.9	6.54				
16.	11.16	32.42	24.76	85.9	7.9	6.58				
17.	11.16	32.42	24.76	86.0	7.9	6.50				
18.	11.20	32.47	24.79	85.8	7.9	6.52				
19.	11.32	32.62	24.89	85.9	7.8	6.41	.11	1.20	.00	.41
20.	11.35	32.67	24.92	82.0	7.8	6.33				

CRUISE 5 STATION NUMBER 10 NOV. 27, 1973

FF CRS/STA 5/11 LAT 40 22.0N; LONG 73 57.1W GMT 14.2 11/26/73 BARO 23.4
 SONIC DPTH 13 AIR DRY/WFT 8.3/--.- WIND DIR/SPD 03/14 SEA DIR/HT 00/0
 SWELL DIR/HT 09/1 WTHR 02 CLOUD TYP/CVR -/- VIS 7 SECCHI DPTH --

1	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	10.62	30.44	23.32	82.0		5.97	1.70	13.87	7.62	1.79
2.	10.61	30.50	23.37	84.3		5.93				
3.	10.63	30.48	23.35	85.0		5.96				
4.	10.61	30.50	23.37	85.0		5.91				
5.	10.62	30.50	23.36	85.0		5.93				
6.	10.63	30.51	23.37	85.1		5.92				
7.	10.64	30.51	23.37	85.0		5.90				
8.	10.66	30.56	23.41	84.5		5.91				
9.	10.68	30.73	23.54	81.4		5.89				
10.	10.71	30.70	23.51	82.3		5.88				
11.	10.65	30.80	23.59	79.4		5.84	1.34	10.48	5.51	1.59

CRUISE 5 STATION NUMBER 11 NOV. 26, 1973

FE CRS/STA	5/12	LAT 40 23.1N	LONG 73 52.0W	GMT 15.2	11/28/73	RARO 01.5			
SONIC DPTH 24	AIR DRY/WFT 13.9/---	WIND DIR/SPD 18/25	SFA DIR/HT 18/2	VIS 6	SFCCHT DPTH 05				
SWELL DIR/HT 15/3	WTHR 02	CLOUD TYP/CVR -/-	PH	02	NO3	SI03	P04		
D	TEMP	SAL	SIGT	TURK	PH	02	NO3	SI03	P04
2.	10.48	31.25	23.90	83.4	7.9		7.24	1.29	1.17
3.	10.47	31.26	23.91	84.9	7.9				
4.	10.47	31.37	24.00	85.0	7.9				
5.	10.46	31.70	24.26	85.1	7.9				
6.	10.49	32.08	24.55	85.7	7.9				
7.	10.43	32.17	24.60	86.0	7.9				
8.	10.47	32.25	24.67	86.1	7.9				
9.	10.99	32.43	24.80	86.7	7.9	.30	2.99	.00	.76
10.	11.02	32.47	24.82	86.6	7.9				
11.	11.03	32.50	24.84	86.8	7.9				
12.	11.06	32.52	24.85	87.0	7.9				
13.	11.09	32.56	24.89	86.7	7.9				
14.	11.13	32.58	24.89	86.2	7.9				
15.	11.14	32.59	24.90	85.8	7.9				
16.	11.16	32.60	24.90	84.6	7.9				
17.	11.16	32.60	24.90	84.6	7.9				
18.	11.16	32.60	24.90	84.2	7.9				
19.	11.16	32.60	24.90	82.8	7.9				
20.	11.16	32.60	24.90	82.3	7.9				
21.	11.16	32.60	24.90	81.1	7.9				
22.	11.16	32.60	24.90	80.9	7.9	.21	3.05	.31	.71

CRUISE 5 STATION NUMBER 12 NOV. 28, 1973

FF CRS/STA	5/13	LAT 40 23.1N	LONG 73 47.0W	GMT 15.6	11/29/73	SFA DIR/HT	PARO 08.0	
SONIC DPTH	39	AIR DRY/WET	WIND TYP/CVR	WIND DIR/SPD	25/18	SECCHI DPTH	25/2	
SWELL DIR/HT	25/0	WTHR 01	CLOUD	02	N02	N03	SI03	
			PH				P04	
1.	11.03	31.92	85.1	8.0	.54	3.86	.15	.81
2.	11.03	31.91	85.4	8.0				
3.	11.03	31.91	85.4	8.0				
4.	11.04	31.92	85.5	8.0				
5.	11.04	31.93	85.5	8.0				
6.	11.04	31.93	85.5	8.0				
7.	11.04	31.93	85.5	8.0				
8.	11.05	31.92	85.4	8.0				
9.	11.06	31.93	85.5	8.0	.51	3.53	.23	.74
10.	11.08	31.96	85.4	8.0				
11.	11.09	31.97	85.5	8.0				
12.	11.09	31.99	85.5	8.0				
13.	11.12	32.00	85.5	8.0				
14.	11.18	32.02	85.5	8.0				
15.	11.18	32.13	85.5	8.0				
16.	11.21	32.17	85.5	8.0				
17.	11.24	32.19	85.5	8.0	.32	1.89	.00	.47
18.	11.26	32.22	86.0	8.0				
19.	11.25	32.24	86.2	8.0				
20.	11.27	32.24	86.6	8.0				
21.	11.37	32.45	86.6	8.0				
22.	11.42	32.50	86.8	8.0				
23.	11.42	32.52	86.8	8.0				
24.	11.42	32.52	86.8	8.0				
25.	11.42	32.52	86.8	8.0				
26.	11.42	32.52	86.8	8.0				
27.	11.42	32.52	86.8	8.0	.24	4.60	3.92	.77
28.	11.42	32.52	86.8	8.0				
29.	11.42	32.52	86.8	8.0				
30.	11.42	32.52	86.8	8.0				
31.	11.42	32.52	86.8	8.0				
32.	11.42	32.52	86.8	8.0				
33.	11.42	32.52	86.8	8.0				
34.	11.42	32.52	86.8	8.0				
35.	11.42	32.52	86.8	8.0				
36.	11.42	32.52	86.8	8.0				
37.	11.42	32.52	86.8	8.0	.26	5.57	5.20	.87
38.	11.42	32.52	86.8	8.0				
39.	11.42	32.52	86.8	8.0				

CRUISE 5 STATION NUMBER 13 NOV. 29, 1973

FF CRS/STA	5/14	LAT 40 24.4N	LONG 73 38.5W	GMT 20.3	11/28/73	BARO 97.1				
SONIC DPTH 23	AIR DRY/WFT 13.3	WIND DIR/SPD 21/25	SFA DIR/HT 21/2							
SWELL DIR/HT 15/6	WTHR 02	CLOUD TYP/CVR --	VIS 6	SECCH DPTH --						
0	TEMP	SAL	SIGT	TURB	PH	02	N02	N03	SI03	P04
1.	11.27	32.33	24.67	80.1	8.0					
2.	11.27	32.30	24.65	81.7	8.0		.26	2.19	.00	.61
3.	11.27	32.32	24.67	86.5	8.0					
4.	11.27	32.33	24.67	86.8	8.0					
5.	11.27	32.33	24.67	87.0	8.0					
6.	11.27	32.32	24.66	87.0	8.0					
7.	11.27	32.32	24.67	86.8	8.0					
8.	11.27	32.32	24.67	87.2	8.0		.24	2.23	.00	.61
9.	11.27	32.32	24.67	87.4	8.0					
10.	11.26	32.33	24.67	87.4	7.9					
11.	11.27	32.32	24.67	87.4	7.9					
12.	11.26	32.33	24.67	87.3	7.9					
13.	11.27	32.33	24.67	87.3	7.9					
14.	11.27	32.33	24.67	87.1	7.9					
15.	11.26	32.33	24.67	87.2	7.9					
16.	11.26	32.33	24.68	87.3	7.9					
17.	11.25	32.35	24.69	87.5	7.9					
18.	11.23	32.36	24.70	87.3	7.9					
19.	11.24	32.37	24.71	87.3	7.9					
20.	11.24	32.40	24.73	87.6	7.9					
21.	11.39	32.80	25.01	86.9	7.8		.23	2.27	.00	.67

CRUISE 5 STATION NUMBER 14 NOV. 28, 1973

FE CRS/STA 5/15 LAT 40 25.2N; LONG 73 29.8W GMT 20.3 11/29/73 RARO 11.0										
SONIC DPTH 26 AIR DRY/WFT 9.4/--- WIND DIR/SPD 21/23 SEA DIR/HT 21/2										
SWELL DIR/HT ---/- WTHR 01 CLOUD TYP/CVR -/- VIS 8 SECCHI DPTH ---										
D	TEMP	SAL	SIGT	TURB	PH	γ2	N02	N03	SI03	P04
4.	11.25	32.50	24.81	86.4	8.0		.28	3.07	.71	.87
5.	11.25	32.50	24.81	86.4	8.0					
6.	11.26	32.47	24.78	85.0	8.0					
7.	11.25	32.47	24.79	85.0	8.0					
8.	11.26	32.47	24.78	85.4	8.0					
9.	11.27	32.47	24.78	85.6	8.0		.29	3.06	.71	.71
10.	11.27	32.49	24.80	85.9	8.0					
11.	11.27	32.49	24.79	85.7	7.9					
12.	11.27	32.49	24.79	86.2	7.9					
13.	11.27	32.49	24.80	86.3	7.9					
14.	11.27	32.49	24.80	86.1	7.9					
15.	11.27	32.49	24.79	86.4	7.9					
16.	11.27	32.49	24.79	86.4	7.9					
17.	11.27	32.48	24.79	86.5	7.9					
18.	11.27	32.48	24.79	86.3	7.9					
19.	11.27	32.48	24.79	86.5	7.9		.26	2.53	.33	.58
20.	11.27	32.49	24.80	86.4	7.9					
21.	11.27	32.51	24.81	86.2	7.9					
22.	11.28	32.50	24.80	86.1	7.9					
23.	11.28	32.51	24.81	85.9	7.9					
24.	11.28	32.51	24.81	85.8	7.9					
25.	11.28	32.52	24.81	85.9	7.9		.29	3.15	1.01	.75

CRUISE 5 STATION NUMBER 15 NOV. 29, 1973

0	TEMP	SAL	SIGT	TUPR	PH	Q2	N02	N03	SIG3	P04
1.	10.84	31.38	24.01	83.2		6.10	1.08	8.01	4.69	1.19
2.	10.83	31.39	24.02	83.2		6.10				
3.	10.85	31.39	24.02	83.5		6.03				
4.	10.84	31.36	24.00	84.0		5.96				
5.	10.83	31.38	24.01	83.9		5.97				
6.	10.85	31.41	24.03	83.8		5.92				
7.	10.93	31.49	24.08	84.1		5.94				
8.	11.03	31.68	24.21	84.4		5.97				
9.	11.06	31.76	24.26	84.6		6.02				
10.	11.11	31.88	24.35	84.7		6.06	1.00	7.11	4.23	1.21
11.	11.14	31.91	24.37	84.8		6.04				
12.	11.14	31.94	24.40	84.0		6.04				
13.	11.14	31.95	24.40	83.1		6.01				
14.	11.15	31.95	24.40	82.7		6.01				
15.	11.15	31.96	24.41	81.7		5.99				
16.	11.16	31.98	24.42	80.9		5.98	.81	6.06	3.87	1.14
17.	11.17	32.01	24.44			5.91				
18.	11.25	31.97	24.40			5.91				

CRUISE 5 STATION NUMBER 16 NOV. 26, 1973

FE CRS/STA 5/17 LAT 40 19.0N; LONG 73 52.1W GMT 20.9 11/26/73 H4RO ---
 SONIC DPTH 26 AIR DRY/WFT 8.3/--- WIND DIR/SPD 07/10 SFA DIR/HT 07/0
 SWELL DIR/HT 07/1 WTHR 02 CLOUD TYP/CVR -/- VIS 6 SFCCHI DPTH --

D	TEMP	SAL	SIGT	TURR	PH	02	N02	N03	SI03	P04
1.	11.40	32.46	24.75	86.1			.35	1.15	.00	.52
2.	11.39	32.46	24.75	86.4						
3.	11.40	32.47	24.76	86.5						
4.	11.36	32.51	24.79	86.8						
5.	11.40	32.47	24.76	86.7						
6.	11.39	32.49	24.77	86.6						
7.	11.41	32.46	24.75	86.7						
8.	11.41	32.48	24.76	86.9						
9.	11.40	32.47	24.76	86.5			.36	1.09	.00	.43
10.	11.42	32.48	24.76	87.1						
11.	11.44	32.52	24.79	87.4						
12.	11.47	32.50	24.77	87.6						
13.	11.46	32.52	24.78	87.1						
14.	11.51	32.51	24.77	86.8						
15.	11.52	32.55	24.80	87.9						
16.	11.52	32.55	24.80	88.0						
17.	11.52	32.57	24.81	88.0						
18.	11.53	32.57	24.81	87.8						
19.	11.53	32.63	24.85	87.7			.41	1.69	.29	.42
20.	11.52	32.65	24.87	87.6						
21.	11.55	32.77	24.96	85.5						
22.	11.56	32.81	24.99	83.4						
23.	11.54	32.82	25.01	81.6			.51	4.25	3.55	.68
24.	11.52	32.86	25.03	81.9						
25.	11.54	32.84	25.02	81.0						

CRUISE 5 STATION NUMBER 17 NOV. 26, 1973

FF CRS/SIA 5/18 LAT 40 19.0N; LONG 73 46.0W GMT 17.0 11/28/73 HARO 99.H
 SONIC DPTH 34 AIR DRY/WFT 14.4/--- WIND DIR/SPD 16/30 SFA DIR/HT 16/2
 SWELL DIR/HT 15/3 WTHR 02 CLOUD TYP/CVR -- VIS 6 SECCH DPTH --

D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	11.34	32.40	24.71	85.3	8.1	6.41	.32	1.24	.00	.31
2.	11.34	32.40	24.72	85.8	8.1	6.43				
3.	11.32	32.40	24.72	86.0	8.1	6.47				
4.	11.33	32.40	24.72	86.1	8.1	6.50				
5.	11.34	32.40	24.71	86.1	8.1	6.47				
6.	11.34	32.40	24.71	86.1	8.1	6.43				
7.	11.35	32.40	24.71	86.0	8.1	6.43				
8.	11.35	32.40	24.71	86.0	8.1	6.40				
9.	11.34	32.41	24.72	86.0	8.1	6.32	.32	1.47	.00	.39
10.	11.34	32.40	24.71	86.1	8.1	6.30				
11.	11.33	32.41	24.73	86.0	8.1	6.27				
12.	11.32	32.41	24.72	86.2	8.1	6.26				
13.	11.33	32.40	24.72	86.1	8.1	6.26				
14.	11.33	32.40	24.71	86.2	8.0	6.25				
15.	11.32	32.41	24.73	86.2	8.0	6.24				
16.	11.32	32.41	24.72	85.8	8.0	6.22				
17.	11.34	32.39	24.71	86.3	8.0	6.23				
18.	11.32	32.40	24.72	86.2	8.0	6.24				
19.	11.32	32.41	24.72	86.2	8.0	6.23	.34	1.64	.00	.42
20.	11.32	32.41	24.72	86.2	8.0	6.19				
21.	11.31	32.41	24.73	86.0	8.0	6.19				
22.	11.31	32.41	24.73	86.2	8.0	6.19				
23.	11.31	32.41	24.73	86.0	8.0	6.18				
24.	11.31	32.41	24.73	86.2	8.0	6.16				
25.	11.31	32.41	24.73	85.9	8.0	6.16				
26.	11.30	32.42	24.74	85.9	8.0	6.16				
27.	11.30	32.42	24.74	85.9	8.0	6.15				
28.	11.30	32.42	24.74	85.7	8.0	6.13				
29.	11.30	32.42	24.74	85.5	8.0	6.10				
30.	11.30	32.42	24.74	85.7	8.0	6.08	.28	1.29	.00	.33
31.	11.30	32.42	24.74	85.7	8.0	6.07				

CRUISE 5 STATION NUMBER 18 NOV. 28, 1973

FE CRS/STA 5/19 LAT 40 19.9N; LONG 73 37.4W GMT 19.6 11/28/73 RARO 97.8										
SONIC DPTH 27 AIR DRY/WET 13.9/--- WIND DIR/SPD 21/25 SEA DIR/HT 21/2										
SWELL DIR/HT 15/3 WTHR 22 CLOUD TYP/CVR -/- VIS 6 SECCH DPTH --										
D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
2.	11.45	32.48	24.76	87.5	8.0					
3.	11.44	32.48	24.75	87.6	8.0		.16	2.44	.00	.18
4.	11.44	32.49	24.76	87.7	8.0					
5.	11.44	32.49	24.76	87.7	8.0					
6.	11.44	32.49	24.76	87.7	8.0					
7.	11.44	32.49	24.76	87.8	8.0					
8.	11.44	32.49	24.76	87.7	8.0		.29	2.72	.63	.55
9.	11.44	32.49	24.76	87.7	8.0					
10.	11.45	32.49	24.76	87.8	8.0					
11.	11.45	32.50	24.77	87.9	8.0					
12.	11.45	32.50	24.77	87.8	8.0					
13.	11.44	32.50	24.77	87.8	8.0					
14.	11.44	32.50	24.78	87.8	8.0					
15.	11.45	32.50	24.77	87.8	8.0					
16.	11.45	32.50	24.77	87.9	8.0					
17.	11.45	32.52	24.78	87.8	8.0					
18.	11.45	32.51	24.78	88.0	7.9		.23	2.24	.08	.40
19.	11.46	32.51	24.78	88.2	7.9					
20.	11.47	32.53	24.79	88.0	7.9					
21.	11.48	32.56	24.81	88.1	7.9					
22.	11.49	32.58	24.82	88.0	7.9					
23.	11.48	32.59	24.84	87.8	7.9		.17	1.97	.00	.33

CRUISE 5 STATION NUMBER 19 NOV. 28, 1973

FF CRS/STA	5/26	LAT 40 20.9N	LONG 73 29.5W	GMT 19.6 11/29/73	RARO 10.0					
SONIC DPTH 28	AIR DRY/WFT 10.6/---	WIND DIR/SPD 27/25	SEA DIR/HT 27/3	SFCCHT DPTH --						
SWELL DIR/HT --/-	WTHR 01	CLOUD TYP/CVR --/-	VIS -							
D	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	11.37	32.55	24.82	86.7	8.2	6.02	.26	2.84	.99	.74
2.	11.38	32.56	24.83	87.8	8.2	5.99				
3.	11.38	32.57	24.84	88.0	8.2	6.06				
4.	11.38	32.56	24.83	87.9	8.2	6.01				
5.	11.39	32.56	24.83	88.0	8.2	6.03				
6.	11.38	32.56	24.83	87.9	8.2	5.99				
7.	11.38	32.55	24.82	87.9	8.2	5.94				
8.	11.37	32.56	24.83	88.3	8.2	6.00				
9.	11.38	32.55	24.82	88.1	8.2	6.02	.26	3.11	.99	.72
10.	11.38	32.57	24.84	88.1	8.2	6.02				
11.	11.39	32.57	24.84	88.1	8.2	6.00				
12.	11.39	32.57	24.84	88.3	8.2	6.02				
13.	11.39	32.57	24.84	88.2	8.2	6.00				
14.	11.38	32.57	24.84	88.4	8.2	6.02				
15.	11.38	32.57	24.84	88.5	8.2	5.98				
16.	11.39	32.58	24.84	88.3	8.1	5.96				
17.	11.39	32.58	24.84	88.2	8.1	6.00				
18.	11.38	32.56	24.83	88.2	8.1	6.05	.28	3.00	.91	.75
19.	11.38	32.57	24.84	88.2	8.1	6.05				
20.	11.38	32.57	24.84	88.2	8.1	6.01				
21.	11.38	32.56	24.83	88.5	8.1	6.01				
22.	11.38	32.57	24.84	88.3	8.1	6.07				
23.	11.39	32.57	24.84	88.1	8.1	6.02				
24.	11.38	32.57	24.84	88.3	8.1	6.01				
25.	11.38	32.58	24.84	88.0	8.1	6.01	.28	2.87	1.04	.72
26.	11.38	32.57	24.84	88.0	8.1	6.03				

CRUISE 5 STATION NUMBER 20 NOV. 29, 1973

	FE CRS/SIA 5/21	LAT 40 12.9N; LONG 73 55.9W	GMT 16.8 11/26/73	RARO 23.0						
	SONIC DPTH 20	AIR DRY/WET 8.9/---	WIND DIR/SPD 09/14	SFA DIR/HT ---/-						
	SWELL DIR/HT 09/2	WTHR 02	CLOUD TYP/CVR -/-	VIS 7						
				SECCHI DPTH 04						
D	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	11.08	31.84	24.33	84.7		6.59	.55	3.65	1.12	.91
2.	11.07	31.88	24.36	85.5		6.38				
3.	11.07	31.88	24.36	85.8		6.36				
4.	11.07	31.86	24.34	85.6		6.37				
5.	11.08	31.87	24.35	85.8		6.34				
6.	11.07	31.89	24.36	85.9		6.33				
7.	11.07	31.88	24.36	85.7		6.33				
8.	11.06	31.90	24.37	86.1		6.34	.28	1.65	.00	.51
9.	11.07	31.87	24.35	85.9		6.33				
10.	11.16	31.96	24.41	87.0		6.32				
11.	11.50	32.44	24.72	88.8		6.17				
12.	11.54	32.49	24.75	88.8		6.02				
13.	11.55	32.50	24.75	88.8		5.92				
14.	11.55	32.51	24.76	89.3		5.89				
15.	11.59	32.63	24.84	89.2		5.83				
16.	11.60	32.79	24.97	87.1		5.68	.46	4.95	4.66	1.01
17.	11.61	32.83	25.00	86.0		5.46				
18.	11.64	32.84	25.00	85.4		5.10				
19.	11.65	32.83	24.99	85.4		5.05				

CRUISE 5 STATION NUMBER 21 NOV. 26, 1973

FF CRS/STA 5/22		LAT 40 14.0N; LONG 73 51.0W		GMT 19.7 11/26/73		RARO 23.0				
SONIC DPTH 28		AIR DRY/WFT 8.6/---		WIND DIR/SPD 07/08		SEA DIR/HT 07/0				
SWELL DIR/HT 07/2		WTHR 02		CLOUD TYP/CVR -/-		VIS 6 SECCHT DPTH 05				
D	TEMP	SAL	SIGT	TURB	Ph	O2	N02	N03	SI03	P04
1.	11.23	32.20	24.58	85.8		6.41	.20	1.05	.00	.50
2.	11.20	32.19	24.58	86.2		6.46				
3.	11.22	32.20	24.58	86.7		6.47				
4.	11.23	32.18	24.57	86.7		6.43				
5.	11.23	32.20	24.58	86.7		6.40				
6.	11.21	32.20	24.58	86.6		6.32				
7.	11.23	32.21	24.59	86.8		6.30				
8.	11.26	32.24	24.60	86.8		6.29				
9.	11.26	32.29	24.65	86.9		6.26	.20	.96	.00	.46
10.	11.41	32.39	24.69	87.0		6.23				
11.	11.47	32.45	24.72	87.3		6.15				
12.	11.48	32.48	24.75	87.4		6.13				
13.	11.48	32.52	24.78	87.2		6.07				
14.	11.50	32.52	24.78	87.3		6.05				
15.	11.50	32.54	24.79	87.6		6.02				
16.	11.49	32.55	24.80	87.1		5.96				
17.	11.51	32.58	24.82	88.1		5.93				
18.	11.55	32.69	24.90	87.5		5.81	.35	2.88	2.37	.54
19.	11.62	32.79	24.96	88.0		5.66				
20.	11.64	32.87	25.02	88.0		5.48				
21.	11.65	32.86	25.01	88.0		5.50				
22.	11.66	32.93	25.07	87.9		5.42				
23.	11.67	32.93	25.07	87.7		5.37	.38	4.14	3.98	.76
24.	11.70	32.96	25.08	87.8		5.34				

CRUISE 5 STATION NUMBER 22 NOV. 26, 1973

SIGMA T

△ 18 19 20 21 22 23 24 25 26 27

TURBIDITY

× 55 60 65 70 75 80 85 90 95 100

SALINITY

* 26 27 28 29 30 31 32 33 34 35

TEMPERATURE

◇ 2 5 8 11 14 17 20 23 26 29

FF CRS/SIA	5/23	LAT 40 14.9N	LONG 73 44.6W	GMT 18.0	11/28/73	RARO 98.8				
SONIC DPTH 34	AIR DRY/WFT 14.4/---	WIND DIR/SPD 21/30	SFA DIR/HT 21/2	VIS 6	SFCCHI DPTH --					
SWELL DIR/HT 17/3	WTHR 02	CLOUD TYP/CVR --	PH	Q2	N02	N03	SI03	P04		
N	TEMP	SAL	SIGT	TURB	PH	Q2	N02	N03	SI03	P04
3.	11.37	32.40	24.71	86.2	8.0	6.46	.26	1.51	.00	.55
4.	11.36	32.41	24.72	85.7	8.0	6.47				
5.	11.36	32.41	24.72	87.2	8.0	6.42				
6.	11.37	32.41	24.72	87.2	8.0	6.42				
7.	11.37	32.41	24.71	87.2	8.0	6.39				
8.	11.37	32.40	24.71	87.3	8.0	6.38				
9.	11.37	32.40	24.71	87.3	8.0	6.39	.23	1.46	.00	.53
10.	11.37	32.40	24.71	87.4	8.0	6.40				
11.	11.37	32.41	24.72	87.5	8.0	6.38				
12.	11.37	32.41	24.72	87.5	8.0	6.36				
13.	11.36	32.41	24.72	87.6	8.0	6.36				
14.	11.36	32.43	24.73	87.6	8.0	6.33				
15.	11.37	32.41	24.72	87.7	8.0	6.33				
16.	11.37	32.42	24.72	87.6	8.0	6.32	.25	1.38	.04	.52
17.	11.40	32.45	24.74	87.8	8.0	6.31				
18.	11.41	32.45	24.74	87.8	8.0	6.30				
19.	11.40	32.46	24.75	87.7	8.0	6.28				
20.	11.43	32.47	24.76	87.9	8.0	6.25				
21.	11.45	32.53	24.80	88.0	8.0	6.23				
22.	11.46	32.52	24.78	88.1	8.0	6.19				
23.	11.48	32.55	24.80	88.3	8.0	6.18				
24.	11.49	32.55	24.81	88.2	8.0	6.20				
25.	11.49	32.56	24.81	88.3	8.0	6.20	.31	1.29	.08	.50
26.	11.49	32.57	24.82	88.4	7.9	6.21				
27.	11.49	32.57	24.82	88.4	7.9	6.22				
28.	11.49	32.58	24.82	88.3	7.9	6.21				
29.	11.50	32.57	24.82	88.1	7.9	6.21				
30.	11.50	32.57	24.82	88.0	7.9	6.20				
31.	11.50	32.58	24.82	87.9	7.9	6.20				
32.	11.50	32.57	24.82	87.9	7.9	6.20				
33.	11.50	32.57	24.82	87.0	7.9	6.22	.34	1.29	.08	.51
34.	11.49	32.58	24.83	84.2	7.9	6.27				

CRUISE 5 STATION NUMBER 23 NOV. 28, 1973

FF CRS/STA 5/24 LAT 40 15.8N; LONG 73 36.9W GMT 17.1 11/29/73 HARGO 08.2
 SONIC DPTH 27 AIR DRY/WFT 10.0/--- WIND DIR/SPD 25/18 SFA DIR/HT 27/0
 SWELL DIR/HT 27/1 WTHR 01 (CLOUD) TYP/CVR -/6 VIS 8 SFCCHI DPTH --

ID	TEMP	SAL	SIGT	TURB	PH	O2	N02	N03	SI03	P04
1.	11.39	32.50	24.78	87.5	8.1	6.29	.33	1.27	.00	.67
2.	11.40	32.49	24.77	87.8	8.1	6.28				
3.	11.40	32.49	24.77	88.0	8.1	6.29				
4.	11.40	32.50	24.78	87.7	8.1	6.32				
5.	11.40	32.49	24.78	88.0	8.0	6.36				
6.	11.40	32.50	24.78	88.0	8.0	6.37				
7.	11.40	32.50	24.78	88.2	8.0	6.40				
8.	11.40	32.50	24.78	88.1	8.0	6.43	.32	1.26	.00	.60
9.	11.40	32.50	24.78	88.0	8.0	6.40				
10.	11.40	32.49	24.78	88.2	8.0	6.36				
11.	11.40	32.50	24.76	87.9	8.0	6.34				
12.	11.40	32.51	24.79	88.1	8.0	6.32				
13.	11.40	32.51	24.78	88.3	8.0	6.29				
14.	11.40	32.51	24.79	88.2	8.0	6.27				
15.	11.40	32.51	24.79	87.9	8.0	6.24				
16.	11.41	32.50	24.78	88.2	8.0	6.23				
17.	11.41	32.50	24.78	88.2	8.0	6.23				
18.	11.41	32.51	24.79	88.1	8.0	6.22	.32	1.26	.00	.57
19.	11.41	32.51	24.76	88.1	8.0	6.20				
20.	11.41	32.51	24.79	88.0	8.0	6.22				
21.	11.41	32.51	24.79	88.0	8.0	6.23				
22.	11.41	32.51	24.79	88.1	8.0	6.21				
23.	11.41	32.51	24.79	88.0	8.0	6.21				
24.	11.41	32.51	24.79	88.0	8.0	6.19				
25.	11.40	32.52	24.79	87.6	8.0	6.20	.30	1.28	.00	.55

CRUISE 5 STATION NUMBER 24 NOV. 29, 1973

FF CRS/SIA 5/25 LAT 40 17.1N: LONG 73 27.7W GMT 18.3 11/29/73 HARO 08.0
 SONIC DPTH 31 AIR DRY/WET 10.6/-- WIND DIR/SPD 27/25 SFA DIR/HT 27/3
 SWELL DIR/HT --/-- WTHR 01 CLOUD TYP/CVR 8/7 VIS 8 SECCHI DPTH --

N	TEMP	SAL	SIGT	TURB	PH	O2	NO2	NO3	SI03	P04
1.	11.34	32.49	24.78	85.6	7.9	6.14	.30	2.65	.54	.66
2.	11.33	32.48	24.77	84.8	7.9	6.12				
3.	11.33	32.48	24.77	86.1	7.9	6.14				
4.	11.33	32.48	24.77	86.6	7.9	6.13				
5.	11.34	32.47	24.77	86.7	7.9	6.14				
6.	11.34	32.48	24.77	86.7	7.9	6.17				
7.	11.34	32.48	24.77	86.7	7.9	6.16				
8.	11.34	32.48	24.77	86.5	7.9	6.14				
9.	11.34	32.48	24.77	86.3	7.9	6.14	.28	2.54	.37	.64
10.	11.34	32.48	24.77	86.5	7.9	6.15				
11.	11.34	32.48	24.77	86.6	7.9	6.10				
12.	11.34	32.48	24.77	86.3	7.9	6.14				
13.	11.34	32.48	24.77	86.6	7.9	6.14				
14.	11.34	32.49	24.78	86.7	7.9	6.12				
15.	11.34	32.48	24.78	86.5	7.9	6.12				
16.	11.34	32.48	24.78	86.7	7.9	6.12				
17.	11.34	32.49	24.78	86.5	7.9	6.13				
18.	11.34	32.49	24.78	86.6	7.9	6.12				
19.	11.34	32.48	24.78	86.5	7.9	6.13	.28	2.52	.50	.66
20.	11.34	32.49	24.78	86.4	7.9	6.11				
21.	11.34	32.48	24.77	86.6	7.9	6.13				
22.	11.34	32.49	24.78	86.3	7.9	6.15				
23.	11.34	32.49	24.78	86.2	7.9	6.18				
24.	11.33	32.49	24.79	86.3	7.9	6.13				
25.	11.34	32.49	24.78	86.5	7.9	6.15				
26.	11.34	32.49	24.78	86.4	7.9	6.14				
27.	11.34	32.49	24.79	86.6	7.9	5.94				
28.	11.35	32.48	24.77	86.6	7.9	6.11				
29.	11.35	32.48	24.77	86.6	7.9	6.12	.27	2.35	.50	.74
30.	11.34	32.50	24.79	86.3	7.9	6.11				

CRUISE 5 STATION NUMBER 25 NOV. 29, 1973

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