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OCEANOGRAPHIC OBSERVATIONS IN THE
GEORGIA BIGHT: DATA REPORT FOR
R. V. EASTWARD CRUISES E-13-73
(4-11 SEPTEMBER) AND E-19-73
(8-9 DECEMBER 1973)

by
Larry P. Atkinson

Georgia Marine Science Center
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Skidaway Island, Georgia

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ABSTRACT

Data from Cruise E-13-73 (4-11 September 1973) and Cruise E-19-73 (8-9 December 1973) of the R.V. EASTWARD in the Georgia Bight are presented. Included are the NODC station printouts with the following data: depth, temperature, salinity, oxygen, phosphate, nitrate, silicate, dissolved organic carbon, weather, ships' position, station time and depth. Biological data include: chlorophyll, carbon-14 primary productivity, particulate carbon and nitrogen, principal zooplankton species and main benthic macroinvertebrates. Sediment size analysis and mercury analysis are also included.

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Benthos	Dr. John Kraeuter
Dissolved Organic Carbon	Dr. Wayne Gardner
Particulate Organic Carbon	
& Particulate Nitrogen	Dr. Ev Haines
Zooplankton Respiration	Dr. John Hall

Cruise participants are as follows:

E-13-73

Larry Atkinson	Dan Perlmutter
Wayne Gardner	Helen Beaty
Lowell Sick	Gary Baptist
John Hall	Frank Taylor
Evelyn Haines	Elizabeth Waiters
John Kraeuter	Bill Gunter
Bill Dunstan	Roy Smithberg

E-19-73

Larry Atkinson	Helen Beaty
Wayne Gardner	Frank Taylor
Lowell Sick	Bill Gunter
John Hall	Ron Wallace
John Kraeuter	Bruce Drennen
Greg McIntire	Bruce Haines
Evelyn Haines	

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The National Oceanographic Data Center provided data processing, listings and magnetic tape outputs.

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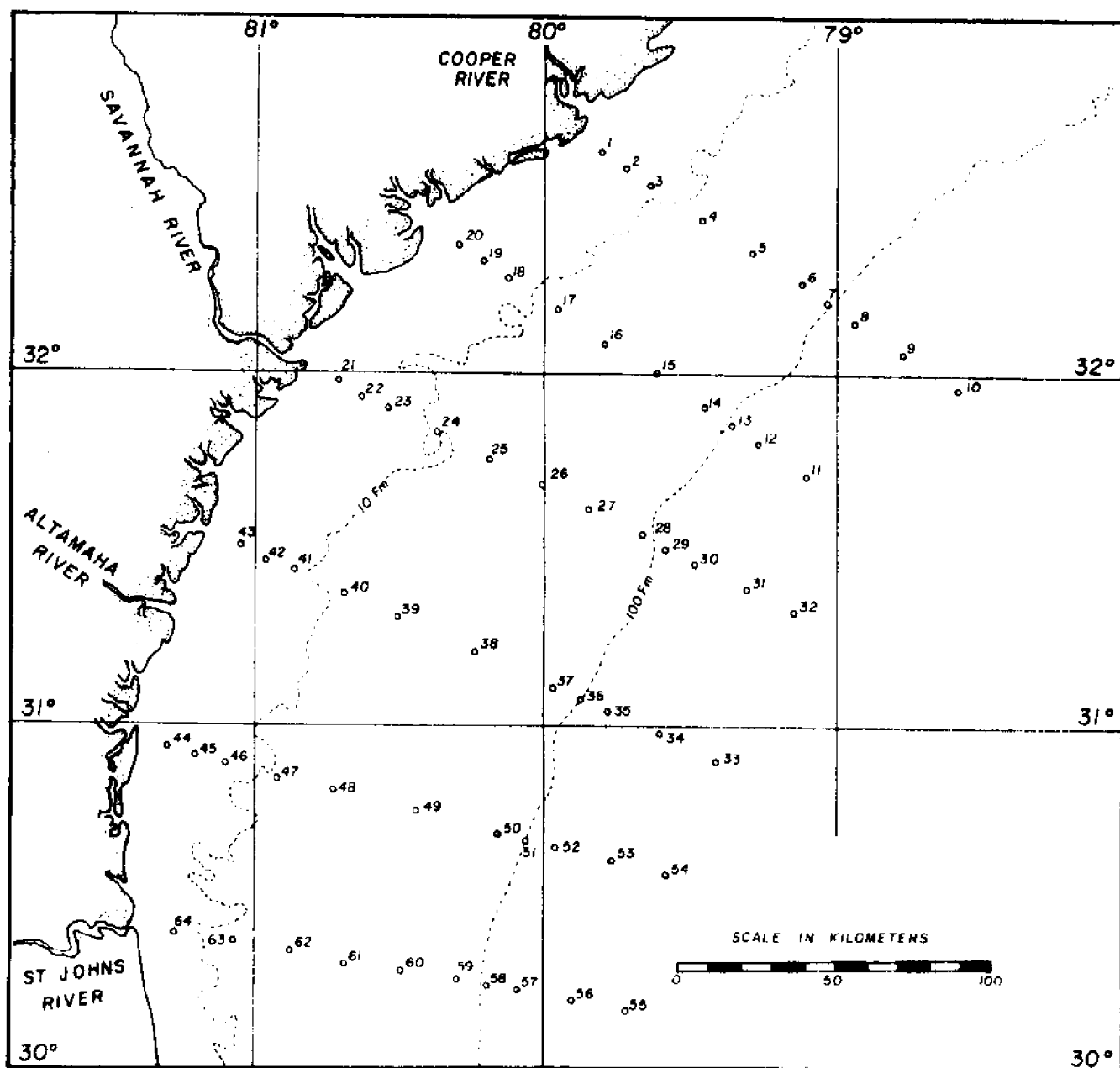
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INTRODUCTION

As part of a study of the biology, chemistry, physics and geology of the Georgia Bight and its waters, a survey of the area was made in September and December 1973, on board the R. V. EASTWARD (Cruises E-13-73 and E-19-73). The stations are shown in Figure 1. All data available from Cruises E-13-73 and E-19-73 are shown in Appendices A and B, respectively.



DISPOSITION OF DATA

The hydrographic data (salinity, temperature, nitrate, phosphate, silicate and oxygen) are on file with the National Oceanographic Data Center in Washington, D. C. and at the Skidaway Institute of Oceanography. The biological, geological and chemical data are available from Skidaway Institute of Oceanography.

METHODS

Hydrographic casts were made with teflon-lined Nansen bottles fitted with reversing thermometers. Sampling depths were determined using normal wire out, wire angle and thermometric depth techniques. A bathythermograph cast was made prior to each station to determine bottle spacing. Drift bottles were released at selected stations. They were made from green wine bottles weighted with sand and corked. They each contained a Day-Glo card requesting return of the card. Samples for chlorophyll, carbon-¹⁴ primary productivity, particulate organic carbon and particulate nitrogen were obtained by a separate cast using Niskin bottles. Reported weather observations were taken from the bridge log and represent the deck officer's observations. The other analytical methods were as follows:

Table 1. Analytical Methods

<u>Analysis</u>	<u>Methods</u>
Salinity	Portable High Precision Laboratory Salinometer
Oxygen	Standard Winkler Titration (Strickland and Parsons 1965)
Phosphate	Reduced phosphomolybdate (<i>ibid</i>)
Silica	Reduced silicomolybdate (<i>ibid</i>)
Nitrate	Hydrazine reduction (<i>ibid</i> , 1960)
Dissolved Organic Carbon	Persulfate oxidation/IR analysis (Menzel & Vaccaro, 1964)
Particulate Organic Carbon	High temperature combustion (<i>ibid</i>)
Particulate Nitrogen	Micro-Dumas/Coleman analyzer
Chlorophyll	<i>in vitro</i> fluorimetric (Yentsch & Menzel, 1963)
Primary Productivity	Carbon- ¹⁴ assimilation (Steeman Nielson, 1952)

Methods for the benthic samples are as follows:

Sediments: Sediment samples were taken with a box dredge, and a small subsample was removed, placed in a plastic bag and returned to the laboratory for grain size analysis. All sieve fractions were dried and kept separate after the standard analysis. These fractions were then acidified and reweighed to remove carbonates. Grain size of the samples with large amounts of silts and clays was determined by pipette analysis.

The organic sample was placed in a plastic container and immediately frozen. These samples remained frozen until they were cut into cubes in the laboratory. Four cubes were selected from each sample, dried at 60°C, weighed, ashed at 500°C, weighed and ash-free dry weight was determined.

Benthos: Benthic invertebrates were sampled with a small biological trawl (4mm mesh) on E-13-73 and a modified anchor dredge fitted with a 2m tail encased in stainless 4mm wire on E-19-73. All trawls were for two minutes, and samples were preserved in ethanol. When large amounts of sediment were brought up, the sample was divided into one-third or one-fourth size subsamples and an appropriate amount saved. The remaining subsamples were sorted for larger organisms such as clams, starfish, sand dollars and crabs. These specimens were counted, placed in the sample and their numbers were recorded. All sorting was done in the laboratory. Supplemental data and specimens were obtained from otter trawls.

Mercury: Water samples for mercury analysis were collected from the upper two meters by pumping with a peristaltic pump using polypropylene tubing attached to a 10 meter non-metallic boom. This allowed samples to be collected uncontaminated by the ship. Samples collected in PVC Niskin bottles using the ship's hydro winches were found to be contaminated giving spurious high values. Water samples were collected in Pyrex BOD bottles and acidified with concentrated sulfuric acid to a pH of less than 1.

Prior to analysis samples were further oxidized with nitric acid, potassium permanganate and potassium disulfate. This was followed by reduction of the mercury in the sample to its zero valance state with stannous sulfate. The mercury vapor was then aerated using a peristaltic pump into the mercury analyzer system (Laboratory Data Control). Sample absorption was compared to standards prepared in a similar way. Based on replicate seawater analyses, the analytical precision for mercury is $\pm 10\%$ at a concentration of 35 ng/l.

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APPENDICES

APPENDIX A

Cruise E-13-73 Data

RUNOFF AND WEATHER

The observed weather at each station is listed with the hydrographic data. Prior to the cruise the southeast coast was under the influence of a large stationary high centered over the Carolinas. Winds were generally northerly and light. During the cruise the high weakened and moved south-easterly. Winds remained northerly and light.

River flows from the principal rivers (Altamaha, Savannah and Cooper) are summarized in the following table:

Table 1. Runoff data for principal rivers. Average daily flow rates (m^3/day) are shown.

<u>Date</u>		<u>Altamaha/Savannah/Cooper</u> m^3/sec			<u>Total</u> km^3/day
August	22	246	279	281	.069
	23	232	270	281	.067
	24	228	268	345	.073
	25	229	271	337	.072
	26	217	272	532	.088
	27	196	268	203	.057
	28	179	259	357	.069
	29	167	252	385	.069
	30	162	246	365	.067
	31	156	245	379	.067
Sept.	1	159	251	379	.068
	2	167	253	419	.072
	3	166	248	365	.067
	4	161	239	334	.063
	5	164	233	279	.058
	6	159	227	314	.060
	7	145	228	422	.067
	8	134	234	300	.058
	9	130	236	408	.067
	10	130	238	348	.062
	11	128	238	212	.050

total 1.39 km^3

HYDROGRAPHIC DATA

The following data are directly from the NODC listing. The headings indicate the following:

1. NODC: NODC identification code
2. SH: ship (EZ=EASTWARD)
3. LAT: Latitude of station
4. LONG: Longitude of station
5. MSQ: Marsden Square
6. ID: Drift indicator (29=no drift)
7. MO: month (GMT)
8. DY: day (GMT)
9. HR: hour (GMT) to tenths (xx.x)
10. YEAR: year (GMT)
11. CRNO: cruise number
12. STANO: station number
13. DEPTH BOT: depth to bottom (meters) (xxxx)
14. DNP: maximum depth of samples in hundreds of meters
15. WAVE DIR: wave direction tens of degrees
16. WAVE HT: wave height in sea state units
17. WAVE P: wave period, not reported
18. WAVE S: sea amount, not reported
19. WC: weather code (WMO Code 4501)
20. CLOUD TY: cloud type (WMO Code 0500)
21. CLOUD AMT: cloud amount (WMO Code 2700)
22. NODC STANO: NODC station number
23. CASTMSG: cast messenger time (GMT) in tenths (xx.x)
24. CTYPE: OBS=observed data, STD=interpolated standard depth
25. DEPTH: depth in meters (xxxx). "T" indicates thermometric depth data
26. TEMP: temperature in °C to hundredths (xx.xx)
27. SAL: salinity in parts per thousand (xx.xx)
28. SIGMAT: sigma-t (density) to hundredths (xx.xx)
29. SPVOLAN: specific volume anomaly $\times 10^7$
30. SYNDPH: $\Sigma \Delta D$, dynamic meters $\times 10^3$
31. SVF: sound velocity
32. OXY: oxygen (ml/L) (x.xx)
33. PO4: phosphate ($\mu\text{g-at/L}$) (x.xx)
34. TOTP: total phosphate (not reported)
35. NO2: nitrite (not given)
36. NO3: nitrate ($\mu\text{g-at/L}$) (xx.x)
37. SI04: silicate ($\mu\text{g-at/L}$) (xx.x)
38. DOC: dissolved organic carbon (mgC/L) (x.xx)

Refer to NODC manual M-2 ("Processing physical and chemical data from oceanographic stations") for further information and explanation of the codes.

[illegible]

CASTMSG	CTYPE	DEPTH	TEMP	SAL	STGMAT	SPVOLAN	DYNDPH	SVF	OXY	PC4	TOTP	NO2	NO3	SI04	DOC
312229 EZ	32377N	070474W	116 29 00 05	115 1973	013 001	0011	1	14	1		X1	8	5		3001

[illegible]

NCDC STATION DATA

V09C
 CC ID SM LAT LON MSG ID MO DY HE YEAR CRVD STAND ORIGINATOR DEPTH BOT DWP AVE ORS CLDUN V09C
 STANO

WATER WIND AIR TEMP MO
 CLR TP DR F/S BAR DRY WET V ORS

CASTMSG CTYPE DEPTH TEMP SAL SIGMA SPWCLAN DYNDBH SWF CXY P04 T0TP V02 NC3 <104 DOC

312229 EZ 32350N 079423W 116 29 09 05 125 1973 012 2 0012 1 14 1 X1 8 6 0092

14 502 150 257 01

125 ST0 0000 2714 3498 2268 0051815 0020 15397 501 000 128
 085 0000 2714 3498 2268 15307 501 012

WDC STATION DATA

WDC
CC ID SH LAT LCN MSG ID MO DY HR YEAR CRNG STANO ORIGINATOR DEPTH BCT DND WAVE OBS WC TY AMT WDC STANO

WATER WIND AIR TEMP NO
CLR TP DR F/S BAR DRY WET V OBS

CASTMSG CTYPE DEPTH TEMP SAL SIGMAT SPVCLAN DYNDPH SVF OXY P04 T3TP V02 N03 S104 DOC

312229 E2 32325N 079375W 116 29 09 05 138 1973 012 3 0020 1 14 1 X1 8 5 0003

14 F02 169 272 02

138 STD 0000 2732 3504 2267 0051934 0000 15402 530 003 020 132
OBS 0000 2732 3504 2267 0051720 0052 15402 530 003 021 108
138 STD 0010 2726 3505 2269 0051720 0052 15402 496 003 021 108
OBS 0010 2726 3505 2269 0051720 0052 15402 496 003 021 108

NODC STATION DATA

NODC CC ID	SH	LAT	LCN	MSQ	10	MO	DY	HR	YEAR	CRVJ	STAND	ORIGINATOR	DEPTH	BOU	DNP	WAVE	OBS	WC	TY	AMT	NODC STAND
---------------	----	-----	-----	-----	----	----	----	----	------	------	-------	------------	-------	-----	-----	------	-----	----	----	-----	---------------

WATER	WIND	AIR	TEMP	NO
CLR	TP	DR	F/S	PAR
DRY	WET	V	OBS	

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNOPH	SVF	OXY	P04	T0T0	V02	N03	SIC4	DOC
--------	-------	-------	------	-----	--------	---------	--------	-----	-----	-----	------	-----	-----	------	-----

312229 FZ	32272N	079278W	116	29	09	05	154	1973	013	4	0021	1	16	1	0004
-----------	--------	---------	-----	----	----	----	-----	------	-----	---	------	---	----	---	------

16	F02	176	278	02
----	-----	-----	-----	----

154	STD	0000	2792	3525	2263	0052281	0000	15417	510	003	000	000	176
	ONS	0000	2792	3525	2263			15417	510				
	STD	0010	2608	3540	2333	0045623	0049	15379	484				
	STD	0020	2424	3555	2401	0039218	0091	15340	458				
154	ONS	0020	2424	3555	2401			15340	458	010	000	001	142

NOCC STATION DATA

[illegible]

WATER	WIND	AIR TEMP	ND
CLR TP DR F/S	BAP	DRY WFT V	CBS

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	QXY	PO4	TOTP	NO2	NO3	SI04	DOC
312229 EZ	32217N	079178W	116 29 09 05	175	1973 013	5	0031	1	16	1	X1	8	3		3005

16	502	173	283	04
----	-----	-----	-----	----

STG	0000	2864	3553	2260	0052545	0000	15435	516	000	122
175	STG	0000	2864	3553	2260	0052545	0000	15435	000	122
	JBS	0000	2864	3553	2260			15435	000	
	STG	0010	2849	3552	2265	0052177	0052	15434	000	160
175	JBS	0010	2849	3552	2265			15434	000	160
	STG	0020	2830	3561	2278	0050970	0104	15432	002	170
175	JBS	0020	2830	3561	2278			15432	002	170
	STG	0030	2203	3591	2492	0030549	0145	15291	000	226
175	JBS	0030	2203	3591	2492			15291	000	226

NODC STATION DATA

NODC CC ID		SH	LAT	LON	MSG ID	MO	DY	HR	YEAR	CRND	STAND	ORIGINATOR	DEPTH	BOT	DNP	WAVE DRS		WC	TY	AMT	NODC STAND
																	DP	HT	P S		
							</														

NODC STATION DATA

NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND		NODC STAND			
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NOOC STATION DATA

[illegible]

WDDC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	ORIGINATOR		DEPTH	ROT	DND	WAVE OBS		WC	TY	AMT	NODC STAN
										CANT	STAND				DR	HT				
312229 EZ		31385N	079108W	116	19	09	06	176	1973	013	12	0280	1	99	0	X1	8	6	0012	
				06	99	FC0	166	289	09											
176				2808	0000	3514	2249	0053576	0000	15419	514	002	000	007	194					
				2808	0000	3514	2249	0048867	0051	15419	514	000	002	009	208					
176				2750	0010	3555	2299			15413	500	010	000	009	154					
176				2750	0010	3555	2299			15413	500	010	000	009	154					
				2733	0019	3566	2313			15412	514	004								
				2716	0020	3568	2320	0046922	0099	15408	516									
				2559	0030	3587	2384	0040871	0143	15377	531									
176				2320	0048	3612	2474			15325	537	001	000	011	240					
				2300	0050	3612	2481	0031719	0216	15321	531									
				2083	0075	3616	2544	0025751	0287	15269	462									
176				1956	0096	3620	2581			15239	416	032	053	032	204					
				1955	0100	3621	2582	0022233	0347	15240	404									
				1920	0125	3628	2596	0020951	0401	15235	352									
176				1857	0144	3633	2616			15221	342	054	100	039	158					
				1812	0150	3629	2624	0018370	0451	15208	363									
176				1560	0192	3602	2664			15137	429	084	133	049	114					
				1542	0200	3601	2667	0014436	0533	15132	404									
176				1400	0240	3582	2684			15091	325	099	164	076	138					
				1350	0250	3574	2688			15076	317									
176				1240	0269	3557	2697	0012474	0600	15040	316	121	173	107	170					

[illegible]

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	DXY	P04	T0T0	N02	N03	S104	DOC
312229 EZ	31511V	079216W	116 19 09 06	197 1973 013 13	0105	1	99 0	X1	8 4						0013

99 F00 152

[illegible]

[illegible]

WATER	WIND	AIR TEMP	NO
CLR TP	DR F/S	DRY WET V	CBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	OXY	PO4	TCTP	NO2	NO3	SIG4	DOC
312229 EZ	31545N	079280W	116	19	09	06	218	1973	013	14					
								0065	1	14	1	X1	8	2	0014

14 F02 156 278 07

218	STD	0000	2809	3531	2262	0052381	0000	15421	005	000	007	190
	08S	0000	2809	3531	2262			15421				
	STD	0010	2749	3545	2292	0049551	0051	15411				
219	08S	0010	2749	3545	2292			15411	002	000	008	164
	STD	0020	2442	3620	2444	0035047	0093	15351				
218	08S	0020	2442	3620	2444			15351	006	000	009	122
	STD	0030	2291	3622	2490	0030706	0126	15316				
218	08S	0030	2291	3622	2490			15316	005	000	009	144
218	08S	0040	2206	3630	2521			15297	005	000	012	168
	STD	0050	2169	3629	2530	0026977	0184	15289				
218	08S	10050	2169	3629	2530			15289	004	001	012	
218	08S	10060	2123	3629	2543			15279	010	005	011	154

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ ID	MO	DAY	HR	YEAR	CRNG STANO	ORIGINATOR	DEPTH	WAVE DBS	DR HT DBS	WC	TY	AMT	NODC STANO
				WATER		WIND		AIR TEMP		NO							
				CLR		TP DB F/S		BAR		DRY		WET		V DBS			
CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SAPVOLAN	DYNOPH	SVF	NOY	PO4	TOTP	NO2	NO3	SIO4	DOC		
312229 EZ	32000N	079380W	116 29 09 07 000	1973	013	15	0042	1	99	0	X1	8	5	0015			
99 F00 150 05																	
000	STD	0000	2820	3521	2251	0053448	0000	15423	418	005	000	003	164				
	DBS	0000	2820	3521	2251			15423	418								
000	STD	0010	2783	3546	2282	0050535	0052	15419	500	010	000	074	144				
	DBS	0010	2783	3546	2282			15419	500								
000	STD	0020	2685	3591	2347	0044300	0099	15404	516	007	000	009	164				
	DBS	0020	2685					15404	516								
000	STD	0030	2362	3616	2465	0033114	0138	15323	524	010	000	074	168				
	DBS	0030	2362	3616	2465			15323	524								
000	STD	0040	2323	3620	2480			15326	514	010	000	074	204				
	DBS	0040	2323	3620	2480			15326	514								

NODC STATION DATA

NODC CC ID	SH	LAT	LCN	MSQ	ID	MO	DY	HR	YEAR	CRNG	STAND	ORIGINATOR	DEPTH	ROT	DNP	WAVE	DBS	DP	HT	P	S	WCLTY	AMT	NODC STAND	
				WATER		WIND		AIR TEMP		NO															
				CLR	TP	DR	E/S	BAR	DRY	WET	V	CRS													
				TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	DOC	TOTP	N02	N03	SIN4	DOC									
312229	EZ	32055N	070475W	116	20	09	07	017	1073	013	10	0027	1	14	0	X1	8	2							0016
						14 F02		169	267																
017	STD	0000	0000	2814	3563	2284	0050238	0000	15426	494	003													174	
	OBS	0000	0000	2814	3563	2284	0050238	0000	15426	484	003													174	
	STD	0010	0010	2795	3563	2291	0049588	0050	15423	497	002													190	
	OBS	0010	0010	2795	3563	2291	0049588	0050	15423	497	002													164	
017	OBS	0017	0017	2560	3558	2362	0040820	0095	15372	483	007													164	
	STD	0020	0020	2497	3562	2384	0040820	0095	15358	484	028													174	
017	OBS	0027	0027	2436	3584	2419	0040820	0095	15347	501	028													174	

NODC STATION DATA

NODC CC ID	SH	LAT	LCN	MSG ID	MO	DAY	HR	YEAR	ORIGINATOR CRNG	STANO	DEPTH BCT	DNP	WAVE OBS DR HT	P S	WC	TY	AMT	NODC STAND
				WATER CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS						
				TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	OXY	PO4	TJTP	NO2	NO3	SI04	DOC		
312229	EZ	32110N	079576W	116	29	09	07	1973	013	17	0020	1	14	1	X1	8	2	0017
				14 F02				169	267	03								
020	STD	0000	0000	2773	3553	2290	0049682	0000	15416	496	007	000	012	194				
020	OBS	0000	0000	2773	3553	2290	0049682	0000	15416	496	007	000	012	194				
020	STD	0010	0010	2744	3557	2303	0049530	0049	15412	501	001	000	004					
020	OBS	0010	0010	2744	3557	2303	0049530	0049	15412	501	001	000	004					
020	STD	0019	0019	2649	3564	2328			15303	508	012	000	015					
020	OBS	0019	0019	2649	3564	2328			15303	508	012	000	015					

NODC STATION DATA

NODC
CC ID SH LAT LON MSQ ID MO DY HR YEAR CRNG STAND ORIGINATOR DEPTH BOT DND WAVE OBS MC TY AMT NODC
STAND

WATER WIND AIR TEMP NO
CLR TP DR F/S BAR DRY WET V OBS

CASTMSG CTYPE DEPTH TEMP SAL SIGMAT SPVOLAN DYNDPH SVF OXY PD4 TOTP V02 N03 SIG4 DOC

312229 EZ 32160N 080072W 117 20 09 07 050 1973 013 18 0020 1 16 2 X1 8 2 0018

16 F03 166 267 03

050	STD	0000	2775	3499	2249	0053621	0000	15410	494	000	005
	OBS	0000	2775	3499	2249			15410	494		
050	STD	0010	2765	3511	2261	0052486	0053	15411	488	000	022
	OBS	0010	2765	3511	2261			15411	488		
050	STD	0020	2761	3514	2265	0052190	0105	15412	476	000	024
	OBS	0020	2761	3514	2265			15412	476		

NODC	YR	LEN	MSO	TO	MO	DAY	HR	YEAR	ORIGINATOR	DEPTH	WAVE CRS	CLOUD	NODC	
									CRNG	STAND	DR HT	P S	WCFY	AMT
NODC	YR	LEN	MSO	TO	MO	DAY	HR	YEAR	CRNG	STAND	DR HT	P S	WCFY	AMT

WATER	WIND	AIR TEMP	NO
CLR TP DR F/S	BAP	DRY WET V	CBS

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	OXY	P04	TCTP	V02	N03	S104	DOC
312229 FZ	32127N	080122W	117 20 09 07	064	1973 013	19	0016	1	16	2	X1	8	2		0019

16 F03	159	267	03
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STD	0000	2787	3485	2235	0054999	0000	15412	501	001	005	118
JBS	0000	2787	3485	2235			15412	501			
STD	0010	2784	3484	2235	0055022	0055	15412	499	000	000	172
JBS	0010	2784	3484	2235			15412	499	000	000	142
JBS	0015	2780	3482	2235			15412	495	000	000	

NODC STATION DATA

NODC
CC ID SH LAT LEN MSQ ID MO DY HR YEAR CRNG STANO ORIGINATOR DEPTH RPT DNP HAVE OBS WC TY AMT CLOUD NODC
STAND

WATER WIND AIR TEMP NO
CLR TP DR F/S BAR DRY WET V OBS

CASTMSG CTYPE DEPTH TEMP SAL SIGMAT SPVGLAN DYNDPH SVF QXY PO4 TCTP NO2 NO3 SIO4 DOC

312229 EZ 32212N 080164W 117 20 09 07 074 1973 013 20 0012 1 16 1 X1 8 2 0020

16 F03 152 267 02

074	STD	0000	2814	3323	2104	0067497	0000	15400	483	014	000	031	192
	OBS	0000	2814	3323	2104			15400	483				
074	STD	0010	2795	3466	2218	0056655	0062	15413	477	018	000	020	152
	OBS	0010	2795	3466	2218			15413	477				

NOBC STATISTN DATA

[illegible]

WATER	WIND	AIR TEMP	NO
CLR	TP DR F/S	DRY WET V	QBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	COVCLAN	DYNDPH	SVF	CRY	P04	T0TP	N02	N03	SI04	DOC
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0021	X1	99	0	21	080445W	117	10	39	07	121	1973	013	0010	1	99	0	X1	8	3	0021
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13 04 F01 163 278 02

	STD	0000	2796	3247	2053	0072403	0000	15388	514			
121	0BS	0000	2796	3247	2053			15388	514	925	000	051 178
	STD	0010	2796	3439	2197	0058627	0056	15410	467			
121	0BS	0010	2796	3439	2197			15410	467	324	000	040 101

WDC STATION DATA

[illegible]

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ ID	MO	DAY	HR	YEAR	CRNG	STAND	ORIGINATOR	DEPTH	ROT	DND	WAVE OBS	DR	HT	D	S	WC	TY	AMT	NODC STAND						
				WATER		WIND		AIR TEMP		NO		CLR		TP		DR		F/S		PAR		DRY		WET		V		OBS	
CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVGLAN	DYNDPH	SVF	OXY	PQ4	TCTP	NO2	NO3	SIO4	DOC														
312229 EZ	31535N	080341W	117	10	09	07	148	1973	013	23	0009	1	99	0	X1	8	3							0023					
				04		F01	169	283	02																				
148	STD	0000	2800	3477	2224	0055984	0000	15414	484	018													000	035	168				
148	OBS	0000	2800	3477	2224			15414	484	018													000	036	226				
148	OBS	0009	2778	3478	2232			15410	486	024													000	036	226				

NOCC STATION DATA

NOCC ID SH LAT LON MSQ ID MO DY HR YEAR CRNG STANO ORIGINATOR DEPTH BOT DNP WAVE DRS CLJUD WC TY AMT NOCC STAND

WATER WIND AIR TEMP NO
CLR TP DR F/S BAR DRY WET V DRS

CASMSG CTYPE DEPTH TEMP SAL SIGMAT SPVDLAN DYNDPH SVF RXY D04 T0TD M02 M03 SIO4 D0C

312229 EZ 31491N 080235W 117 10 09 07 173 1973 013 24 0018 1 99 0 X1 8 4 0024

11 99 F00 173 239 03

173	STD	0000	2779	3515	2260	0052600	0000	15413	496									
	DRS	0000	2779	3515	2260			15413	436	021	000	019	164					
173	STD	0010	2752	3530	2280	0050726	0052	15410	486									
	DRS	0010	2752	3530	2280			15410	486	011	000	018	158					
173	STD	0018	2713	3558	2313			15406	474	012	000	020	204					
	DRS	0018	2713	3558	2313													

NODC STATION DATA

NODC CC IN		SH	LAT	LON	MSG ID	MO	DY	HR	YEAR	CRNG	STAND	ORIGINATOR	DEPTH	WAVE OBS	WC	TY	AMT	NODC STAND
																</		

NODC STATION DATA

NODC CC ID	SH	LAT	LCN	MSG ID	MO	DY	HR	YEAR	CRND	STAND	ORIGINATOR		DEPTH	BCT	DNP	WAVE OBS		WC	TY	AMT	NODC STAND																				
											TP	DR	F/S			BAR	DPY					WET	V	OBS																	
		CASTMSG		CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	QXY	PD4	TJTP	NO2	NO3	SIO4	DOC																							
312229	EZ	31405N	080030W	117	10	09	07	210	1973	013	26	0032	1	14	1	X1	8	4				0026																			
				14	F01	152	317	04																																	
210				STD	0000	2848	3563	2273	0051314	0000	15433	503				000	007	122																							
				OBS	0000	2848	3563	2273			15433	503	003																												
210				STD	0010	2762	3561	2300	0048804	0050	15416	510				000	005	138																							
				OBS	0010	2762	3561	2300			15416	510	019																												
210				STD	0020	2494	3602	2415	0037847	0093	15362	540				012	006	108																							
				OBS	0020	2494	3602	2415			15362	540	008																												
210				STD	0030	2326	3622	2481	0031633	0128	15325	536				000	010	134																							
				OBS	0032	2304	3624	2488			15320	531	007																												

NODC STATION DATA

NODC CC ID	SH	LAT	LCN	MSG ID	MO	DAY	HR	YEAR	CRND	STAND	DEPTH	ROT	DWP	WAVE	DBS	WC	TY	AMT	NODC STAND	
				WATER	WIND				AIR TEMP				NO							
				CLF	TP	DR	F/S	BAR	DRY	WET	V	DBS								
312229	EZ	31337N	079470W	116	19	09	08	001	1973	013	27	0050	1	99	0	X1	8	2	0027	
CASTMSG CTYPE DEPTH TEMP SAL SIGMAT SPVOLAN DYNDPH SVF OXY PO4 TOTP ND2 NO3 SIG4 DOC																				

14 501 156 311 06

001	STN	0000	2912	3488	2195	0058741	0000	15439	463	002	000	011	168
	DBS	0000	2912	3488	2195			15439	463				
	STD	0010	2874	3546	2252	0053408	0055	15439	485				
001	DBS	0010	2874	3546	2252			15439	485	004	001	014	118
	STD	0020	2830	3592	2301	0049746	0107	15436	520				
001	DBS	0020	2830	3592	2301			15436	520	030	009	012	112
	STD	0030	2785	3605	2325	0046447	0155	15429	498				
001	DBS	0030	2785	3605	2325			15429	498	002	000	002	134
001	DBS	0040	2350	3622	2473			15333	520	005	000	012	100
	STD	0050	2291	3630	2496	0030204	0231	15321	510				
001	DBS	0050	2291	3630	2496			15321	510	000	000	019	129

NODC STATION DATA

NODC
CC ID SH LAT LON MSQ ID MO DY HR YEAR CRNG STANC ORIGINATOR DEPTH BCT DNP WAVE OBS CLCUG NODC
STANC

WATER WIND AIR TEMP NO
CLR TP DR F/S BAR DRY WET V OBS

CASTMSG CTYPE DEPTH TEMP SAL SIGMAT SPVCLAN DVNDPH SVF CXY P04 TTT9 V02 N03 S174 DOC

312229 EZ 31284N 079338W 116 19 09 08 032 1973 013 29 0250 1 99 0 X1 8 2 0029

14 F01 166 306 01

032 STD 0000 2852 3542 2256 0052946 0070 15432 485 000 007 168
JBS 0000 2852 3542 2256 15432 485 001

NOONC STATISTICS DATA

[illegible]

NODC STATION DATA

C ID	SH	LAT	LON	MSG ID	MO	DAY	HR	YEAR	CRNG	STANG	DEPTH	ORIGINATOR	DEPTH	WAVE	DR	HT	P	WC	TY	AMT	NO3	NO2	NO3	SIO4	DOC	NO3C	STANG
				WATER		WIND		AIR TEMP		NO																	
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS															
				TEMP	SAL	SIGMAT	SPVGLAN	DYNOPH	SVF	QVY	P04	TJTP	NO2	NO3	SIO4	DOC											
12220	EZ	31170N	079070W	116	19	09	08	124	1973	013	32	0535	1	99	0												0032
				36		F01	176	267	10																		
124				STD	0000			2872	3616	2305	0048270	0000	15444	524													
				OBS	0000			2872	3616	2305			15444	524	005											010	134
124				STD	0010			2868	3620	2309	0047903	0048	15445	568													
				OBS	0010			2868	3620	2309			15445	568	010											012	106
124				STD	0020			2870	3615	2305	0048365	0096	15447	531													
				OBS	0020			2870	3615	2305			15447	531	011											009	114
124				STD	0030			2853	3611	2308	0048134	0144	15444	536													
				STD	0050			2804	3610	2323	0046769	0239	15437	540													
124				OBS	0050			2804	3610	2323			15437	540	011											014	128
124				STD	0075			2706	3625	2366	0042757	0351	15422	526													
				STD	0100			2589	3640	2414	0038235	0453	15401	509													
124				OBS	0100			2589	3640	2414			15401	509	013											008	122
124				STD	0125			2446	3660	2474	0032677	0541	15374	490													
				OBS	0149			2304	3670	2523			15345	469	021											016	122
124				STD	0150			2297	3670	2525	0027898	0617	15343														
				OBS	0197			2008	3660	2598			15275		036											024	106
124				STD	0200			2000	3660	2600	0020925	0739	15273														
				STD	0250			1852	3651	2631	0018080	0836	15239														
124				OBS	0294			1698	3634	2656			15199		037											018	160
124				STD	0300			1672	3630	2659	0015526	0920	15192														
				OBS	0388			1292	3570	2697			15078		109											092	148
124				STD	0400			1241	3562	2701	0011601	1056	15062														
				OBS	0488			0866	3512	2729			14936		170											161	148

NODC STATION DATA

NODC
 CCCC ID SH LAT LON MSQ ID MO DY HR YEAR CRNO STANC ORIGINATOR DEPTH SGT DNP WAVE HRS MC FY AMT NODC
 STAND

WATER WIND AIR TEMP NJ
 CLR TP DR F/S BAR DRY WET V OBS

CASTMSG CTYPE DEPTH TEMP SAL SIGMAT SPVOLAN DYNDPH SVF QXY P04 T0TP NO2 NO3 S104 DOC

312229 EZ 30534N 079260W 116 09 09 08 174 1973 013 33 0750 1 99 0 X1 8 4 0933

29 F01 186 311 10

174	STD	0000	2892	3608	2292	0049482	0000	15447	007	000	010	154
	OBS	0000	2892	3608	2292			15447				
174	STD	0010	2862	3608	2302	0048568	0049	15443	005	000	009	154
	OBS	0010	2862	3608	2302			15443				
174	STD	0020	2864	3610	2303	0048538	0098	15445	005	000	013	144
	OBS	0020	2864	3610	2303			15445				
	STD	0030	2858	3610	2305	0048425	0146	15445				
	STD	0050	2812	3609	2320	0047088	0242	15439	007	000	009	187
174	OBS	0050	2812	3609	2320			15439				
	STD	0075	2657	3634	2388	0040654	0351	15412				
	STD	0100	2491	3652	2454	0034486	0445	15380	012	011	010	154
174	OBS	T0100	2491	3652	2454			15380				
	STD	0125	2285	3665	2525	0027816	0523	15335				
	STD	0150	2123	3670	2574	0023188	0597	15299	023	045	016	124
174	OBS	T0150	2123	3670	2574			15299				
	STD	0200	1928	3655	2615	0019460	0693	15253	043	058	023	102
174	OBS	T0200	1928	3655	2615			15253				
	STD	0250	1826	3644	2633	0017908	0787	15231				
	STD	0300	1717	3630	2649	0016537	0873	15205	410	088	030	138
174	OBS	T0300	1717	3630	2649			15205				
	STD	0400	1481	3591	2673	0014409	1028	15145	051	147	056	138
174	OBS	T0400	1481	3591	2673			15145				
	STD	0500	1198	3548	2698	0012100	1160	15062	081	184	105	124
174	OBS	T0500	1198	3548	2698			15062				

NOON STATION DATA

NDDC CC ID	SH	LAT	LCN	MSQ ID	MO	DY	HR	YEAR	CRND	STAND	ORIGINATOR	DEPTH BOT	DNP	WAVE ORS. DR HT P S	MC	CLOUD TY AMT	NDDC STAND	
											AIR TEMP	NO						
											CLR TP DR F/S BAR DRY WET V O9S							
											TEMP	SAL SIGMAT SAVCLAN DYNDPH SVF	OXY PO4 TOTP NO2 NO3	SIO4 DOC				
312228 E7	31042N	070470W		116	19	09	08	239	1973	013	35	0243	1	99	0	X1	8 2	0025

21 99 F00 166 289

239	STD	0000	2910	3529	2227	0055738	0000	15443	515			000	012	148
	CBS	0000	2910	3529	2227			15443	515	006				
239	STD	0010	2866	3571	2273	0051356	0054	15440	504			007	010	128
239	CBS	0010	2866	3571	2273			15440	504	009		000	014	138
	CBS	T0019	2854	3571	2277			15438	529	003				
	STD	0020	2850	3573	2280	0050706	0105	15438	529					
	STD	0030	2800	3595	2313	0047659	0154	15431	531					
239	CBS	T0047	2694	3622	2368			15414	534	007		000	008	132
	STD	0050	2665	3623	2378	0041513	0243	15408	530					
	STD	0075	2428	3633	2459	0033915	0337	15359	496					
239	CBS	T0094	2260	3641	2514			15321	471	019		030	021	082
	STD	0100	2213	3628	2518	0028388	0415	15309	463					
	STD	0125	2015	3585	2539	0026423	0484	15256	432					
239	CBS	T0141	1886	3565	2557			15220	412	045		070	041	118
	STD	0150	1800	3561	2575	0023013	0545	15197	400					
239	CBS	T0188	1498	3540	2630			15109	358	113		191	099	118
	STD	0200	1423	3533	2641	0016841	0645	15086	347			141	077	106
239	CBS	T0226	1296	3517	2655			15046	328	097				

NODC STATION DATA

NODC CC ID		SH	LAT	LON	MSQ ID	MO	DY	HR	YEAR	CRNG	STANG	DEPTH	BOY	DNP	WAVE OBS			CLOUD			NODC STAND
																DP	HT	P S	WC	TY	AMT

NODC CC ID	SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	CRNJ	STAND	DEPTH BOT	WAVE OBS DR HT P S	CLOUD WC TY AMT	NODC STAND
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CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVGLAN	DYNDPH	SVF	OXY	PO4	TOTP	NO2	NO3	SIO4	DOC
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3122229 EZ	31068N	079590W	116 19 09 09	046 1973 013 37	0041 1	20 1	X1 8 2	0037
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	STD	0000	2828	3450	2195	0058805	0000	15417	498
046	ORS	0000	2828	3450	2195			15417	498
	STD	0010	2821	3491	2228	0055679	0057	15421	509
046	ORS	0010	2821	3491	2228			15421	509
	STD	0020	2536	3589	2392	0040012	0105	15370	518
046	ORS	0020	2536	3589	2392			15370	518
	STD	0030	2349	3588	2448	0034721	0142	15327	515
046	ORS	0040	2259	3588	2474			15306	501

NODC STATION DATA

NODC CC ID	SH	LAT	LCN	MSQ ID	MO	DY	HR	YEAR	CRNG	STANG	ORIGINATOR	DEPTH	BOY	DNP	WAVE	OBS	WC	TY	AMT	NODC STANG		
				WATER		WIND		AIR TEMP		NO												
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS										
				TEMP	SAL	SIGMAT	S'VDLAN	DYNDPH	SVF	OXY	PO4	TJTP	NO2	N03	SIO4	DOC						
312229	E2	31130N	080156W	117	10	09	09	075	1973	013	38	0039	1	20	2	X1	8	5		0038		
				20		F04	173	261	05													
075	STD	0000	0000	2770	3578	2310	0047787	0000	15418	511	005	003	005	178								
	OBS	0000	0000	2770	3578	2310	0047787	0000	15418	511	005	003	005	178								
075	STD	0010	0010	2760	3581	2316	0047309	0048	15418	513	007	000	003	128								
	OBS	0010	0010	2760	3581	2316	0047309	0048	15418	513	007	000	003	128								
075	STD	0020	0020	2510	3596	2406	0038747	0091	15365	505	011	003	012	138								
	OBS	0020	0020	2510	3596	2406	0038747	0091	15365	505	011	003	012	138								
075	STD	0030	0030	2403	3606	2445	0034986	0127	15342	503	012	000	020	158								
	OBS	0030	0030	2403	3606	2445	0034986	0127	15342	503	012	000	020	158								
075	STD	0039	0039	2262	3614	2493			15310	507	019	004	019	124								
	OBS	0039	0039	2262	3614	2493			15310	507	019	004	019	124								

NODC STATION DATA

NODC CC ID	SH	LAT	LCN	MSQ	ID	MO	DY	HR	YEAR	CRNC	STANO	ORIGINATOR	DEPTH	BOT	DNP	WAVE	OBS	DR	HT	S	WC	TY	AMT	NODC STANO
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WATER	WIND	AIR	TEMP	NO				
CLR	TP	DR	F/S	BAR	DRY	WEY	V	OBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	TOTD	V02	N03	SIO4	DOC
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312229	EZ	31185N	080304W	117	10	09	09	105	1973	013	39	0030	1	27	2	X1	8	2						0039
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27	F03	163	267	04
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105	STD	0000	2760	3562	2301	0048625	0000	15414	515	009	001	008	184
	OBS	0000	2760	3562	2301			15414	515				
105	STD	0010	2745	3564	2308	0048065	0048	15413	515	021	003	010	144
	OBS	0010	2745	3564	2308			15413	515				
105	STD	0020	2460	3591	2417	0937655	0091	15352	499	009	001	018	158
	OBS	0020	2460	3591	2417			15352	499				
105	STD	0025	2429	3598	2432			15347	516	008	002	012	106
	OBS	0025	2429	3598	2432			15347	516				

**NODC
STAND**

CLOUD
TY AMT

Y OBS
DN

02 NC3

XI 82

03

482
482
447
447
475
475

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ ID	MO	DY	HR	YEAR	CRNJ	STAND	ORIGINATOR	DEPTH	BOT	DNP	WAVE	OBS	DR	HT	P	S	WC	TY	AMT	CLD	ND3	ND2	TGTP	ND3	SIO4	DOC
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WATER	WIND	AIR	TEMP	NO
CLR	TP	DR	F/S	BAR
DRY	WET	V	ORS	

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNOPH	SVF	OXY	PO4	TGTP	ND2	ND3	SIO4	DOC
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312229	EZ	31263N	080523W	117	10	09	09	142	1973	013	41	0017	1	32	2	X1	8	2													0041
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32	F03	183	272	Q2
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142	STD	0000	2817	3392	2155	0062624	0000	15408	523																							
	OBS	0000	2817	3392	2155			15408	523	027																						
142	STD	0010	2783	3479	2231	0055359	0059	15412	487																							
	OBS	0017	2760	3540	2285			15414	462	027																						

NOOC STAT ION DATA

NODC CC ID	SH	LAT	LON	MSG ID	MO	DY	HR	YEAR	CRNO	STANO	ORIGINATOR	DEPTH	BOT	DNP	WAVE OBS DR HT P S	WC TY AMT	CLOUD	NODC STANO
											AIR TEMP	NO						
											WIND							
											CLR TP DR F/S BAR	DRY WET V	OBS					
											SAL	SIGMAT	SPVCLAN DYNDPH	SVF	OXY PO4	TOTP NO2 NO3		
											TEMP							
											CTYPE	DEPTH						
											CASTMSG							
312229 EZ	31295N	081028W		117 11 09 09 169 1973 013 43								0007 1			99 0	X1 8 3		0043

99 F00	173	333	01
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169	STD	0000	2920	3176	1959	0081431	0000	15407	500	000	066	210
	OBS	0000	2920	3176	1959			15407	500	059		

[illegible]

WATER	WIND	AIP	TEMP	NO
CLR	TP	DR	F/S	BAR
		DRY	WET	V
				OBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	TJTP	N02	N03	S104	DOC
212229 EZ	30555N	081183W	117 01	09 09	214 1973	013 44	0009	1	18 1		X1	5 6			0044

18 F02	146	278	02
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214	STD	0000	2902	3395	2129	0065101	0000	15427	498	002	030	234
214	7BS	0000	2902	3395	2129			15427	498	002	030	234
214	0BS	0009	2811	3475	2219			15417	398	002	055	174

NODC STATION DATA

NODC CC ID	SH	LAT	LDN	MSO 1D	MO	DY	HR	YEAR	CRNO	STAND	ORIGINATOR	DEPTH	BCY	DNP	WAVE	DR	HT	P	S	WC	TY	AMT	CLOUD	NODC STAND				
				WATER	WIND	AIR TEMP		NO																				
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS																
				TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PD4	TJTP	V02	N03	S104	DOC												
312229	EZ	30544N	081135W	117	01	09	09	229	1973	013	45	0012	1	18	2	X1	5	7							0045			
18 F02 146 272 02																												
229	STD	0000	2900	3392	2128	0065256	0000	15426	519	022	002	072	254															
	JRS	0000	2900	3392	2128	0054821	0060	15421	491	022	000	006	164															
229	STD	0010	2813	3499	2237	0054821	0060	15421	491	022	000	006	164															
	JRS	0012	2796	3521	2259	0054821	0060	15419	473	022	000	006	164															

NODC STATION DATA

NODC
CC ID SH LAT LON MSQ 10 MO DY HR YEAR CRND STANO ORIGINATOR DEPTH BOT ONP WAVE OBS HC TY AMT CLOUD NODC
STAND

WATER WIND AIR TEMP NO
CLR TP DR F/S BAR DRY WET V OBS

CASTMSG CTYPE DEPTH TEMP SAL SIGMAT SPVOLAN DYNDPH SVF OXY PO4 TOTP NO2 NO3 SIO4 DOC

312229 EZ 30534N 081070W 117 01 09 10 000 1973 013 46 0014 1 18 1 X1 5 7 0046

18 F02 146 272 02

000	STD	0000	2906	3448	2167	0061427	0000	15433	510	032	000	004	180
	OBS	0000	2906	3448	2167			15433	510	032			
000	STD	0010	2826	3519	2248	0053791	0058	15425	482	037	000	004	154
	OBS	0014	2794	3548	2280			15422	471	037			

NODC STATION DATA

CC ID	SH	LAT	LCN	MSQ ID	MO	DAY	HR	YEAR	CRNO	STANO	ORIGINATOR	DEPTH	BCT	DNP	WAVE OBS	DR	HT	P	S	WC	TY	AMT	NODC	STAND	
				WATER	WIND	AIR TEMP		NO																	
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS													
				TEMP	SAL	SIGMAT	SPVOLAN	DYNOPH	SVF	OXY	PO4	TJTP	NO2	NO3	SIO4	DOC									
312229	EZ	30512N	080552W	117	00	09	10	020	1973	013	47	0018	1	18	1	X1	8	3					0047		
08 18 F02 152 272 03																									
020	STD	0000	2847	3576	2283	0050348	0000	15434	493	026	164														
	OBS	0000	2847	3576	2283			15434	493																
020	STD	0010	2788	3588	2312	0047674	0049	15425	510	018	138														
	OBS	0010	2788	3588	2312			15425	510																
020	OBS	0018	2788	3585	2309			15426	505	023	154														

NODC STATION DATA

NODC CC ID		SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	CRNG	STAND	ORIGINATOR	DEPTH	BOT	DNP	WAVE OBS		CLOUD		VDDC STAND			
																		DR	HT	P	S	WC	TY	AMT

NODC CC ID	SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	CRNG	ORIGINATOR	DEPTH BOT	DNP	DR	HT	P	S	WAVE OBS	CLOUD TY AMT	NODC STANG
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	WATER	WIND	AIR TEMP	NO
	CLR	TP DR F/S	DRY WET V	ORS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	OXY	PC4	TDT0	V02	N03	SI04	DOC
---------	-------	-------	------	-----	--------	---------	--------	-----	-----	-----	------	-----	-----	------	-----

112220 E7	30459N	080282W	117 00 09 10 053	1973 013	49	0038	1	22	2	X2	8	8	0049
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22 F03	146	283	04
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053	STD	0000	2890	3523	2229	0055528	0000	15438	487	001	014	204
	JBS	0000	2890	3523	2229			15438	487	001		
053	STD	0010	2809	3535	2265	0052140	0054	15423	504	006	011	154
053	JBS	0010	2809	3535	2265			15423	504			
	STD	0020	2699	3609	2356	0043454	0102	15409	505	015	017	128
053	JBS	0020	2699	3609	2356			15409	505			
	STD	0030	2552	3615	2407	0038689	0143	15378	501	011	018	168
053	JBS	0036	2447	3618	2441			15355	496			

[illegible]

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PO4	TOTP	NO2	NO3	SIO4	DOC
212229 EZ	30426N	080110W	117 00	09 10	088 1973	013 50	0043	1	29 2		X1	8 5			0050

	STD	2784	3481	2233	0055200	0000	15410	490					
088	OBS	2784	3481	2233			15410	490	005	000	009	150	
	STD	2581	3543	2344	0044603	0050	15374	511					
088	OBS	2581	3543	2344			15374	511	003	000	016	174	
	STD	2220	3610	2502	0029603	0087	15295	459					
088	OBS	2220	3610	2502			15295	469	025	036	026	174	
	STD	1972	3613	2572	0022977	0113	15232	430					
088	OBS	1972	3613	2572			15232	430	036	045	037	132	
088	OBS	1836	3612	2606			15196	404	040	080	050	092	

[illegible]

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	TCTP	ND2	ND3	ND4	DOC
---------	-------	-------	------	-----	--------	---------	--------	-----	-----	-----	------	-----	-----	-----	-----

32	F04	125	278	06
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59

[illegible]

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	JXY	PD4	TOTD	V02	N03	S104	D06
---------	-------	-------	------	-----	--------	---------	--------	-----	-----	-----	------	-----	-----	------	-----

32	F04	125	278	08

127	STD	0000	2806	3515	2251	0053439	0000	15419	483	000	011	168
	CBS	0000	2806	3515	2251			15419	483			
127	STD	0010	2805	3530	2262	0052377	0053	15422	490	000	007	168
127	CBS	0010	2805	3530	2262			15422	490	000		158
	CBS	0019	2752	3585	2321			15418	492	060		
	STD	0020	2724	3586	2331	0045875	0102	15412	491			
	STD	0030	2463	3595	2419	0037477	0144	15355	483			
127	CBS	0048	2082	3607	2538			15264	459	046	042	142
	STD	0050	2062	3607	2543	0025765	0207	15259	452			
	STD	0075	1824	3609	2606	0019830	0264	15197	383			
127	CBS	0097	1631	3610	2654			15144	341	138	056	104
	STD	0100	1606	3607	2657	0015066	0308	15136	339			
	STD	0125	1408	3579	2680	0012938	0343	15075	322			
127	CBS	0146	1260	3559	2695			15026	312	204	121	096
	STD	0150	1233	3555	2697	0011350	0373	15017	311			
127	CBS	0196	0970	3520	2718			14928	307	238	157	064
	STD	0200	0951	3518	2719	0009273	0424	14921	308	255	193	184
127	CBS	0241	0797	3503	2732			14868	322			

NODC STATION DATA

[illegible]

29 F03	098	272	10
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210	STD	0000	2872	3608	2299	0048844	0000	15443	456	000	008	148
	OBS	0000	2872	3608	2299			15443	466	005		
	STD	0010	2875	3612	2301	0048695	0049	15446	480	017	023	102
	OBS	0010	2875	3612	2301			15446	480			
	STD	0020	2884	3614	2299	0048884	0099	15450	476	002	015	
	OBS	0020	2884	3614	2299			15450	476	001		
	STD	0030	2875	3613	2302	0048681	0146	15449	476			
	STD	0050	2856	3612	2307	0048265	0243	15448	477			
	OBS	0050	2856	3612	2307			15448	477	000	014	
	STD	0075	2707	3626	2366	0042739	0357	15422	455			
	STD	0100	2541	3640	2429	0036814	0456	15390	431			
	OBS	0100	2541	3640	2429			15390	431	005	016	
	STD	0125	2331	3661	2508	0029408	0539	15346	397			
	STD	0150	2155	3670	2565	0024035	0606	15307	375			
	OBS	0150	2155	3670	2565			15307	375	029	022	090
	STD	0200	1901	3654	2621	0018866	0713	15245	363	060	023	064
	OBS	0200	1901	3654	2621			15245	363			
	STD	0250	1705	3625	2648	0016457	0802	15193	363			
	STD	0300	1543	3601	2667	0014718	0880	15149	363			
	OBS	0300	1543	3601	2667			15149	363	078	048	072
	STD	0400	1320	3568	2690	0012754	1017	15089	332			
	OBS	0400	1320	3568	2690			15089	332	180	090	072
	STD	0500	1103	3534	2705	0011356	1137	15027	301			
	OBS	0500	1103	3534	2705			15027	301	256	130	076

NODC STATION DATA

[illegible]

SURFACE DRIFTER DATA

Four drift bottles were released at each of the following stations:
1, 3, 5, 16, 18, 20, 21, 23, 25, 39, 41, 43, 44, 46, 48.

To date the return represents 52% of the bottles released. The general drift was toward the southwest at speeds from 1 to 11 miles per day.

Table 2. Chlorophyll α and C¹⁴ uptake with respect to depth.

<u>Station</u>	<u>Depth</u> <u>(m)</u>	<u>Chlorophyll α</u> <u>(mg/m³)</u>	<u>C¹⁴ uptake</u> <u>(mgC/m³/day)</u>
2	0	.245	18.7
	2.5	.322	12.9
	5.0	.189	49.8
	8.0	.216	3.6
4	0	.109	3.5
	5.5	.121	5.5
	10.5	.131	0.1
	17.5	.649	84.7
8	0	.071	3.9
	8	.051	1.5
	16.5	.073	1.8
	27.0	.461	7.0
	54.0	.255	0.9
10	0	.057	0.3
	8	.061	5.3
	16.5	.081	1.4
	27	.100	4.4
	54	.239	3.2
11	0	.071	3.4
	10.5	.063	21.8
	21	.047	2.9
	35	.050	0.9
	70.5	.121	2.0
15	0	.075	1.7
	5.5	.079	2.1
	10.5	.068	6.6
	17.5	.075	5.0
17	0	.102	1.7
	5.5	.076	6.9
	10.5	.088	11.2
	17.5	.116	17.3
19	0	.391	45.9
	2.5	.391	41.6
	5	.553	220.9
	8	.503	122.9

*The chlorophyll and carbon-¹⁴ productivity data are only considered accurate to 2 significant figures, at best, even though more are reported.

Table 2. (continued)

<u>Station</u>	<u>Depth</u> <u>(m)</u>	<u>Chlorophyll <i>a</i></u> <u>(mg/m³)</u>	<u>C¹⁴ uptake</u> <u>(mgC/m³/day)</u>
22	0	.166	31.3
	4.5	.186	136.7
	9	.183	313.0
24	0	.107	30.1
	4.5	.186	21.6
	9	.299	149.1
	15		100.9
27	0	.064	7.4
	6	.052	19.3
	12	.041	10.0
	20.5	.054	7.6
30	0	.018	1.5
	8	.025	9.4
	16.5	.093	5.2
	27	.120	4.3
35	0	.053	2.0
	8.5	.042	7.1
	17	.037	0.6
	28.5	.051	0.6
	57	.097	3.9
38	0	.068	3.5
	6	.081	1.7
	12	.024	3.7
	20.5	.026	60.0
40	0	.143	7.4
	3	.098	21.9
	6.5	.167	18.3
	11	.352	43.5
42	0	.436	70.3
	2	.442	42.3
	4	.458	30.6
	7	.588	118.8
45	0	.419	39.8
	3	.422	37.9
	6.5	.408	20.5
	11	.607	52.9
47	0	.303	27.4
	3	.357	42.5
	6.5	.339	27.7
	11.0	.334	45.8

Table 2. (continued)

<u>Station</u>	<u>Depth</u> <u>(m)</u>	<u>Chlorophyll <i>a</i></u> <u>(mg/m³)</u>	<u>C¹⁴ uptake</u> <u>(mgC/m³/day)</u>
49	0	.032	1.7
	6	.032	0.6
	12	.031	3.6
	20.5	.035	3.9
52	0	.080	2.6
	5	.083	2.6
	9.5	.096	4.3
	16.0	.138	9.0
	32.5	.050	23.1

Table 3. Surface chlorophyll α , depth integrated chlorophyll α and C^{14} values.

Station	Surface Chlorophyll mg/m^3	Depth Integrated Chlorophyll α mg/m^2	Depth Integrated C^{14} $\text{mgC/m}^2/\text{day}$
1	.352		
2	.290	1.9	206
3	.266		
4	.120	3.9	333
5	.105		
6	.099		
7	.073		
8	.093	13.6	189
9	.160		
10	.057	6.6	184
11	.031	4.9	339
12	.117		
13	.054		
14	.069		
15	.049	1.3	72
16	.058		
17	.102	1.6	167
18	.357		
19	.391	3.8	997
20	.211		
21	.435		
22	.166	1.6	1460
23	.232		
24	.107	2.7	1280
25	.146		
26	.069		
27	.064	1.0	239
28	.113		
29	.040		
30	.018	1.8	155
31	.026		
32	.122		
33	.087		
34	.280		
35	.053	3.4	138
36	.070		
37	.051		
38	.068	1.0	287
39	.099		
40	.143	2.1	259
41	.135		
42	.436	3.3	410
43	1.316 & 2.048		
44	.927		
45	.419	5.0	388
46	.472		
47	.303	3.7	394

Table 3. (continued)

Station	Surface Chlorophyll	Depth Integrated Chlorophyll <i>a</i>	Depth Integrated C ¹⁴
	<u>mg/m³</u>	<u>mg/m²</u>	<u>mgC/m²/day</u>
48	.117	0.6	50
49	.032		
50	.058		
51	.080	3.1	330
52	.080		
53	.040		
54	.030		
55	.044		
56	.035		

Table 4. Particulate Organic Carbon (POC) and Nitrogen (PN)

<u>Station</u>	<u>Depth</u> (m)	<u>POC</u> ($\mu\text{gC/L}$)	<u>PN</u> ($\mu\text{gN/L}$)	<u>C:N</u> (atomic)
1	0	178	21	10:1
3	0	84	13	7:1
5	0	41	14	3:1
8	0	70	10	8.5:1
8	27	100	4	28:1
11	0	50	-	-
13	0	76	13	7:1
16	0	74	-	-
18	0	192	-	-
19	0	185	17	13:1
21	0	234	40	7:1
22	4.5	63	13	6:1
23	0	135	23	7:1
24	0	486	76	8:1
27	0	55	-	-
36	0	131	30	5:1
39	0	130	-	-
41	0	108	9	14:1
43	0	240	34	8:1
44	0	379	36	12:1
45	0	150	-	-
45	6.5	174	-	-
46	0	232	28	9:1
48	0	259	22	16:1
51	0	74	13	7:1
52	0	47	-	-
52	32.5	97	16	7:1

ZOOPLANKTON

Sampling method: Plankton samples were collected with a half meter No. 20 mesh net towed obliquely through the entire water column. Although an impeller flow meter was mounted on the net, these measurements are only qualitative.

Data: The following data are the five dominant genera at each station in order of abundance. The average Cephalothorax length is also given.

Table 5. Generic Composition (five dominant genera at each station listed in order of abundance) and respective size ranges (Cephalothorax length in mm).

<u>Station</u>	<u>Genus</u>	<u>Size (mm)</u>
1	<i>Calanus</i> sp.	.62
	<i>Temora turbinata</i>	.65
	<i>Corycella carinata</i>	.50
	<i>Labidocera nerii</i>	.52
	Ave:	.57
21	<i>Calanus</i> sp.	.61
	<i>Temora turbinata</i>	.69
	<i>Corycaeus</i> sp.	.35
	<i>Centropages</i> sp.	1.10
	<i>Oithona</i> sp.	.77
	Ave:	.70
44	<i>Calanus</i> sp.	.64
	<i>Eucalanus</i> sp.	.83
	<i>Centropages</i> sp.	.90
	<i>Oithona</i> sp.	.64
	<i>Corycella</i> sp.	.40
	Ave:	.68
7	<i>Calanus</i> sp.	.63
	<i>Oncaea</i> sp.	.59
	<i>Corycella carinata</i>	.67
	<i>Temora turbinata</i>	.64
	<i>Centropages typicus</i>	1.11
	Ave:	.73
27	<i>Calanus</i> sp.	.73
	<i>Temora turbinata</i>	.70
	<i>Calocalanus pavo</i>	.50
	<i>Oithona</i> sp.	.60
	Ave:	.63
30	<i>Calanus</i> sp.	.77
	<i>Corycella</i> sp.	.50
	<i>Temora turbinata</i>	.70
	<i>Oithona</i> sp.	.60
	<i>Calocalanus pavo</i>	.50
	Ave:	.61

Table 5. (continued)

<u>Station</u>	<u>Genus</u>	<u>Size (mm)</u>
50	<i>Calanus</i> sp.	.80
	<i>Oithona</i> sp.	.69
	<i>Oncaea</i> sp.	.59
	<i>Corycella</i> sp.	.65
	<i>Centropages typicus</i>	<u>1.10</u>
	Ave:	.77
53	<i>Corycella carinata</i>	.80
	<i>Calocalanus pavo</i>	.63
	<i>Calanus</i> sp.	1.20
	<i>Sapphirina</i> sp.	<u>1.10</u>
	Ave:	.93

Table 6. Mean grain size, sorting, skewness and kurtosis (Folk and Ward values) for sediments from E-13-73. All values in phi (ϕ) where applicable.

<u>Station #</u>	<u>M_z</u>	<u>I</u>	<u>S_k</u>	<u>K_g</u>
1	0.91	1.03	0.12	0.90
7	0.98	1.54	-0.27	0.82
9	hard bottom			
10	hard bottom			
13	2.95	0.92	0.23	1.29
14	1.09	0.71	-0.03	0.94
17	0.92	0.90	0.02	0.88
18	0.82	0.97	-0.60	0.61
21	2.26	0.82	-0.41	2.45
23	1.11	0.83	-0.11	1.07
29	3.42	1.24	-0.05	0.92
36	1.27	0.51	-0.12	1.05
38	0.54	1.03	-0.08	0.96
41	2.43	0.44	-0.15	1.49
42	1.88	0.68	-0.35	1.08
44	1.38	1.59	-0.55	0.81
46	1.85	0.49	-0.18	1.05
50	0.81	0.67	-0.03	1.21

Table 7. Mean grain size, sorting, skewness and kurtosis (Folk and Ward values) for sediments from E-13-73 with carbonate removed. All values are in phi (ϕ) when applicable.

<u>Station #</u>	<u>M_Z</u>	<u>I</u>	<u>SK_I</u>	<u>K_g</u>
1	1.07	0.98	0.17	0.84
7	1.84	0.98	-0.41	1.31
9	hard bottom			
10	hard bottom			
13	1.72	0.40	-0.12	1.07
14	1.12	0.62	0.00	0.96
17	1.00	0.85	-0.02	0.88
18	0.99	1.11	-0.17	0.70
21	2.41	0.46	-0.12	1.41
23	1.16	0.74	-0.15	0.99
29	2.76	0.52	-0.33	1.04
36	1.27	0.50	-0.10	1.03
38	0.51	1.02	-0.09	0.87
41	2.43	0.38	-0.11	1.36
42	1.89	0.62	-0.29	1.09
44	2.23	0.72	-0.22	1.38
46	1.83	0.45	-0.22	1.12
50	0.95	0.76	0.18	0.98
52	1.70	0.57	0.02	1.07

Table 8. Numbers of species tentatively identified by major phyla and stations for E-13-73.

<u>Station #</u>	<u>Mollusca</u>	<u>Arthropoda (Crustacea)</u>	<u>Echinodermata*</u>
1	2	5	1
7	5	6	
9	no sample		
10	no sample		
13	20	15	
14	2	5	
17	10	7	1
18	15	18	1
21	8	9	1
23	13	6	3
29	4	5	
36		19	1
38	10	17	
41			2
42	13	12	
44		15	4
46	10	7	
50			
52		6	

*Includes only Asteroidea and Echinoidea several species of Holothuroidea and Ophiuroidea are present, but have not yet been identified.

Table 9. Dissolved mercury data.

Station #	Mercury Concentrations (ng/l)
	September 1973
2	27
4	33
6	62
7	18
8	26
10	8
11	36
13	29
15	8
17	5
19	26
22	26
24	34
26	31
28	42
30	13
32	31
34	34
36	26
38	21
40	26
42	57
45	24
47	9
49	10
51	5
53	9
56	5
58	14
60	9
Average	23
Minimum	5
Maximum	62

APPENDIX B
Cruise E-19-73 Data

WEATHER AND RUNOFF

On 5 and 6 December a cold front passed through the area. On 7 and 8 December a low formed offshore and moved northeast along the front. On 9 and 12 December the area was influenced by a weak high moving east from Texas to Florida. On 13, 14, and 15 December a large low moved across the north central U. S. and an associated cold front moved through the study area on 14 December. On 15 December an intense low formed in Alabama and traversed the area 15, 16, and 17 December.

River flows from the three principal rivers (Altamaha, Savannah and Cooper) are summarized in the following table:

Table 1. River flow data for principal rivers. Average daily flow rates (m^3/day) are shown.

Date	Altamaha	Savannah (km^3/day)	Cooper	Total (km^3/day)
8 November	.0091	.0194	.0277	.0562
9	.0087	.0183	.0259	.0529
10	.0087	.0196	.0320	.0603
11	.0089	.0196	.0165	.0450
12	.0092	.0208	.0186	.0486
13	.0094	.0208	.0121	.0423
14	.0093	.0196	.0096	.0512
15	.0093	.0198	.0223	.0514
16	.0094	.0204	.0207	.0505
17	.0097	.0208	.0197	.0502
18	.0099	.0208	.0216	.0523
19	.0099	.0208	.0187	.0494
20	.0099	.0208	.0211	.0518
21	.0098	.203	.0177	.0478
22	.0096	.0200	.0138	.0434
23	.0093	.0201	.0158	.0452
24	.0093	.0208	.0142	.0443
25	.0098	.0210	.0067	.0375
26	.0099	.0196	.0211	.0506
27	.0095	.0203	.0229	.0527
28	.0094	.0208	.0238	.0540
29	.0097	.0203	.0273	.0573
30	.0100	.0196	.0290	.0586
1 December	.0106	.0208	.0217	.0531
2	.0114	.0208	.0264	.0586
3	.0122	.0208	.0308	.0638
4	.0128	.0209	.0290	.0627
5	.0130	.0208	.0397	.0735
6	.0126	.0203	.0375	.0704
7	.0118	.0196	.0279	.0593
8	.0118	.0209	.0338	.0665
9	.0127	.0220	.0219	.0566
10	.0136	.0245	.0407	.0788
11	.0145	.0257	.0547	.0949
12	.0152	.0270	.0481	.0903
13	.0154	.0279	.0433	.0866
14	.0153	.0304	.0409	.0866
15	.0157	.0321	.0383	.0861
16	.0164	.0338	.0360	.0862
17	.0167	.0350	.0514	.1031
18	.0172	.0360	.0606	.1138
19	.0176	.0355	.0547	.1078

HYDROGRAPHIC DATA

The following data are directly from the NODC listing. The headings indicate the following:

1. NODC: NODC identification code
2. SH: ship (EZ=EASTWARD)
3. LAT: Latitude of station
4. LON: Longitude of station
5. MSQ: Marsden Square
6. ID: Drift indicator (29=no drift)
7. MO: month (GMT)
8. DY: day (GMT)
9. HR: hour (GMT) to tenths (xx.x)
10. YEAR: year (GMT)
11. CRNO: cruise number
12. STANO: station number
13. DEPTH BOT: depth to bottom (meters) (xxxx)
14. DNP: maximum depth of samples in hundreds of meters
15. WAVE DIR: wave direction tens of degrees
16. WAVE HT: wave height in sea state units
17. WAVE P: wave period, not reported
18. WAVE S: sea amount, not reported
19. WC: weather code (WMO Code 4501)
20. CLOUD TY: cloud type (WMO Code 0500)
21. CLOUD AMT: cloud amount (WMO Code 2700)
22. NODC STANO: NODC station number
23. CASTMSG: cast messenger time (GMT) in tenths (xx.x)
24. CTYPE: OBS=observed data, STD=interpolated standard depth
25. DEPTH: depth in meters (xxxx). "T" indicates thermometric depth data
26. TEMP: temperature in °C to hundredths (xx.xx)
27. SAL: salinity in parts per thousand (xx.xx)
28. SIGMAT: sigma-t (density) to hundredths (xx.xx)
29. SPVOLAN: specific volume anomaly $\times 10^7$
30. DYNDPH: $\Sigma\Delta D$, dynamic meters $\times 10^3$
31. SVF: sound velocity
32. OXY: oxygen (ml/L) (x.xx)
33. PO4: phosphate ($\mu\text{g-at/L}$) (x.xx)
34. TOTP: total phosphate (not reported)
35. NO2: nitrite (not given)
36. NO3: nitrate ($\mu\text{g-at/L}$) (xx.x)
37. SI04: silicate ($\mu\text{g-at/L}$) (xx.x)
38. DOC: dissolved organic carbon (mgC/L (x.xx)

Refer to NODC manual M-2 ("Processing physical and chemical data from oceanographic stations") for further information and explanation of the codes.

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSO	ID	MO	DY	HR	YEAR	CRNO	STANO	ORIGINATOR	DEPTH	BOT	DNP	WAVE OBS	DR	HT	P	S	WC	TY	AMT	NODC STANO		
				WATER	WIND	AIR TEMP																				
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS														
				TEMP	SAL	SIGMAT	SPVDLAN	OYNDPH	SVF	OXY	PO4	TOTP	N32	N03	S104	DOC										
312302	EZ	32373N	079475W	116	29	12	10	221	1973	019	001	0011	3	25	3	X1	8	2							0001	
				25 F05 159 133 128 02																						
221	STD	0000	0000	1582	3478	2564	0023603	0000	15097	594																
	OBS	0000	0000	1582	3478	2564			15097	594	004															
221	STD	0010	0010	1603	3500	2576	0022482	0023	15108	612																
	OBS	0010	0010	1603	3500	2576			15108	612	002															

NODC STATION DATA

DDC	C ID	SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	CRNO	STAND	DEPTH	BOT	DNP	DR	HT	P	S	WC	TY	AMT	NODC	STAND
12302	FZ	3235	LN	079425	W	116	29	12	10	236	1973	019	002	0014	3	25	3	X1	8	2			0002	

25 F05 163 100 100 02

CASTMSG	C TYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PD4	TOTP	NO2	NO3	SI04	DOC	
236	STD	0000	1662	3552	2602	0019996	0000	15130	589					000	025	088
	NBS	0000	1662	35516	2602			15130	589	002						
	STD	0010	1665	3553	2602	0019965	0020	15133								
236	NBS	0014	1666	3554	2603			15134								

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	DXV	PO4	TOTP	NO2	NO3	SI04	DOC
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312302 FZ	32325N	079384W	116 29 12 11 013	1973 019 003	0016	3	25	3	X1	8 2	0003
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25	F05	163	100	100	03
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	STD	0000	1703	3570	2607	0019543	0000	15145	449	000	000	009	072
013	STD	0000	1703	3570	2607	0019543	0000	15145	449	000			
	OBS	0000	1703	35705	2607			15145					
	STD	0010	1706	3569	2605	0019748	0020	15147					
013	OBS	0010	1706	3569	2605			15147					
	OBS	0010	1706	3569	2605			15148					
013	OBS	0014	1706	3569	2605			15148					

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ	10	MO	DY	HR	YEAR	CRNO	STAND	ORIGINATOR	DEPTH	BOT	DNP	WAVE	OBS	CLOUD	NODC STAND

WATER	WIND	AIR	TEMP	NO
CLR	TP	DR	F/S	BAR

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PO4	TOTP	NO2	NO3	SIO4	DOC
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312302	FL	32270N	079280W	116	29	12	11	030	1973	019	004	0020	3	27	3	X0	0	0004
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27 F05 179 100 100 03

030	STD	0000	1972	3617	2574	0022605	0000	15227	477	000	000	005	076
	OBS	0000	1972	36166	2574			15227	477				
	STD	0010	1975	3617	2574	0022687	0023	15230					
	OBS	0010	1975	3617	2574			15230					
	STD	0020	1977	3617	2573	0022778	0045	15232					
	OBS	0020	1977	3617	2573			15232					

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	CRNO	STANO	ORIGINATOR	DEPTH	BOT	DNP	WAVE	OBS	DR	HT	P	S	WC	TY	AMT	CLOUD	NODC STANC
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WATER		WIND		AIR TEMP		NO	
CLR	TP	DR	F/S	BAR	DRY	WET	V

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	QXY	P04	TOTP	N02	N03	S104	DOC
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312302	EZ	32220N	079178W	116	29	12	11	053	1973	019	005	0025	3	32	3	X0	0	0005								
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32	F08	190	100	100	02
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053	STD	0000	2072	3618	2549	0025044	0000	15255	557						
	OBS	0000	2072	36180	2549			15255	557	000					
	STD	0010	2072	3618	2549	0025082	0025	15256							
	STD	0020	2072	3618	2549	0025119	0050	15258							
053	OBS	0025	2072	3618	2549			15259							

2000

	WATER	WIND	AIR TEMP	NO
	CLR	TP DR F/S	BAR DRY WET V	OBS
1				
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100				

25 F04 166 144 139 05

	STD	0000	2188	3619	2518	0027983	0000	15285	544		000	009	096
074	ORS	0000	2188	36194	2518			15285	544				
	STD	0010	2197	3600	2500	0029664	0029	15287					
074	ORS	0010	2197	3600	2500			15287					
	STD	0020	2197	3598	2499	0029848	0059	15288					
074	ORS	0020	2197	3598	2499			15288					
	STD	0030	2199	3600	2500	0029795	0088	15291					
074	ORS	0030	2199	3600	2500			15291					
074	ORS	0040	2201	3601	2500			15293					

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ ID	MO	DY	HR	YEAR	CRND	STANO	ORIGINATOR	DEPTH	BOT	DNP	WAVE OBS DR HT P S	CLOUD WC TY AMT	NODC STANO		
				WATER	WIND	AIR TEMP													
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS							
				TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PO4	TOTP	N02	N03	SI04	DOC			
312302	EZ	32143N	079043W	116	29	12	11	084	1973	019	007	0082	3	29	5	X2	8	6	0007
29 F07 186 089 089 08																			
084				2235	3623	2507	0028963	0000	15297	532	000	000	000	000	000	036	060		
				2235	36233	2507			15297	532									
084				2243	3622	2504	0029320	0029	15301										
				2243	3622	2504			15301										
084				2242	3622	2504	0029332	0058	15302										
				2242	3622	2504			15302										
084				2240	3623	2506	0029243	0088	15304										
				2240	3623	2506			15304										
084				2235	3626	2509			15304										
				2216	3625	2514	0028521	0146	15301										
084				2216	3625	2514			15301										
084				2168	3611	2517			15289										
				2092	3622	2546	0025570	0213	15273										
084				2066	3634	2562			15268										

word

WATER	WIND	AIR TEMP	NO
CLR	TP	DRY	WET
	F/S	BAR	V
			OBS

29 F06 224 061 061 02

STD	0000	1338	3364	2528	0027003	0000	15004	632
190	0BS	0000	1338	33636	2528		15004	034
190	0BS	0007	1453	3521	2625		15063	000 047

NJDC STATION DATA

NJDC CC ID	SH	LAT	LON	MSQ ID	MO	DY	HR	YEAR	CRNO	STAND	DEPTH	BOT	DNP	DR	HT	P	S	WAVE OBS	CLOUD	NJDC STAND

WATER	WIND	AIR TEMP	NO
CLR	TP	DR	F/S
		BAR	DRY
		WET	V
		OBS	

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PO4	TOTP	NO2	NO3	SI04	DOC				
312302	EZ	32185N	080120W	117	20	12	11	208	1973	019	019	0009	3	29	1	XI	0	3	0009

29 F06 220 067 061 02

STD	085	085	085	0000	0000	0009	0000	0016581	0000	15110	15110	15111	579	579	579	002	000	003	088
208				1585	3575	2638	0016581	0000	15110	15110	15111	579	579	579	002	000	003	088	
208				1585	35752	2638			15110	15110	15111	579	579	579	002	000	003	088	
208				1585	3575	2638			15110	15110	15111	579	579	579	002	000	003	088	

NODC	DATE	TIME	MSQ	IO	MO	DAY	HR	YEAR	ORIGINATOR	DEPTH	WAVE OBS	CLOUD	NODC
CC	YY	MM	SS	YY	MM	DD	HH	YY	CRND STANO	BOI	DR HT P S	WC TY AMT	STANO
1	00	01	00	00	01	01	00	00					

[illegible]

312302 EZ	32165N	080073W	117	20	12	11	215	1973	019	018	0016	3	29	3	X1	8	2	0010
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29 F05 220 083 078 02

[illegible]

[illegible]

312302 EZ 32106N 079575W 116 29 12 11 230 1973 019 017 0021 3 29 3 29 3 X1 8 2 0011

29 F05 220 074 067 02

230	STD	0000	1813	3619	2617	0018574	0000	15183	553			
	ORS	0000	1813	36189	2617			15183	553	000	004	096
	STD	0010	1813	3619	2617	0018608	0C19	15185				
	STD	0020	1813	3619	2617	0018634	0C37	15186				
230	ORS	0020	1813	3619	2617			15186				

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ ID	MO	DAY	HR	YEAR	CRNO	STANO	ORIGINATOR	DEPTH	BOT	DNP	WAVE OBS DR HT P S	CLOUD WC TY AMT	NODC STANO
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WATER	WIND	AIR TEMP	NO
CLR TP DR F/S	BAR	DRY	WET V
OBS			

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	T0TP	NO2	NO3	SIO4	DOC
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312302	EZ	32053N	079475W	116	29	12	12	014	1973	019	016	0027	3	29	3	X1	8	3	0012
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29 F05 230 078 067 02

014	STD	0000	2085	3617	2544	0025443	0000	15258	543	000	000	008	076
	OBS	0000	2085	36171	2544			15258	543				
	STD	0010	2087	3614	2542	0025762	0026	15260					
014	STD	0020	2089	3611	2539	0026C71	0052	15262					
	OBS	0027	2091	3609	2537			15263					

NODC STATION DATA

[illegible]

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	QXY	P04	T0TP	NO2	NO3	SI04	IDC				
312302	EZ	31598N	079380W	116	19	12	12	028	1973	019	015	0042	3	29	3	X1	8	3	0013

29 F04 237 078 067 05

[illegible]

NODC STATION DATA

CC ID	SH	LAT	LON	MSO ID	MO	DY	HR	YEAR	CRNO	STAND	ORIGINATOR	DEPTH	BOT	DNP	DR	HT	P	S	MC	TY	AMT	CLOUD	WAVE OBS	NODC STAND	
				WATER	WIND		AIR TEMP		NO																
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS													
				TEMP	SAL	SIGMAT	SPVOLAN	DYNOPH	SVF	DX	PO4	IOYP	NO2	NO3	SIO4	DOC									
312302	EZ	31545N	079282W	116	19	12	12	044	1973	019	014	0064	3	29	4	X1	8	3							0014
				29 F04 237 078 067 07																					
044				STD	0000	2206	3610	2505	0029154	0000	15289	507													
				OBS	0000	2206	36099	2505	0029265	0029	15291	507	000												
044				STD	0010	2209	3610	2505	0029331	0059	15293														
				OBS	0010	2209	3610	2505	0029224	0088	15295														
044				STD	0020	2210	3610	2504			15296														
				OBS	0020	2210	3610	2504			15298														
044				STD	0030	2210	3612	2506			15295														
				OBS	0030	2210	3612	2506			15298														
044				STD	0040	2209	3612	2506			15295														
				OBS	0040	2209	3612	2506			15298														
044				STD	0050	2208	3614	2508	0029101	0146	15295														
				OBS	0050	2208	3614	2508			15298														
044				STD	0060	2186	3621	2519			15295														
				OBS	0060	2186	3621	2519			15298														

NODC CC ID	SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	CRND	STANO	ORIGINATOR		DEPTH	BOT	DNP	WAVE		OBS	WC	TY	AMT	NODC STAND
												CLR	TP				DR	F/S					
312302	FZ	31514N	079232W	116	19	12	12	064	1973	019	013	0094	3	32	3	X1	8	2	0015				
				32	F04	234	089	089	10														
064				STD	0000	2190	3615	2514	0028346	0000	15285	474	000	004	010	060							
				OBS	0000	2190	36152	2514			15285	474											
064				STD	0010	2192	3616	2514	0028412	0028	15287	470											
				OBS	0010	2192	3616	2514			15287	470											
064				STD	0020	2194	3616	2513	0028478	0057	15289	469	012	000	019	084							
				OBS	0020	2194	36159	2513			15289	469											
064				STD	0030	2195	3616	2513	0028516	0085	15291	473											
				OBS	0030	2195	3616	2513			15291	473											
064				OBS	0040																		
				STD	0050	2196	3617	2514	0028584	0142	15295	478	010	002	018	112							
064				OBS	0050	2196	36168	2514			15295	478											
064				OBS	0060	2196																	
064				OBS	0070	2196																	
				STD	0075	2197	3617	2513	0028707	0214	15299	476											
064				OBS	0080	2198																	
064				OBS	0094	1929	36167	2586			15231	468	000	003	009	046							

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ	1D	MO	DY	HR	YEAR	ORIGINATOR CRNO STANO	DEPTH BOT DNP	WAVE OBS DR HT P S	CLOUD WC TY AMT	NODC STANO	
				WATER	WIND		AIR TEMP		NO						
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS			
CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PO4	TOTP	NU2	NU3	SIO4	DOC
312302 FZ	31488N	079184W	116	19	12	12	078	1973	019	012	0208	3	32	3	0016
32 F04 237 100 094 06															
078	STD	0000	2230	3602	2493	0030334	0000	15294	484	009			000	018	
	OBS	0000	2230	36025	2493			15294	484						
078	STD	0010	2232	3602	2492	0030454	0030	15296	491						
	STD	0020	2234	3602	2492	0030547	0061	15298	495						
	OBS	0020	2234	36021	2492			15298	495	010			000	018	
	STD	0030	2235	3602	2491	0030595	0091	15300	495						
078	OBS	T0049	2236	36024	2491			15303	496						
	STD	0050	2229	3603	2494	0030445	0153	15302	493						
078	STD	0075	2058	3620	2554	0024806	0222	15263	420						
	OBS	T0098	1898	36255	2600			15224	377	034			086	039	
078	STD	0100	1879	3625	2604	0020097	0278	15219	377						
	STD	0125	1676	3614	2666	0016207	0323	15163	371	077			132	065	
	OBS	T0147	1553	36052	2668			15127	363						
078	STD	0150	1540	3604	2670	0013973	0361	15124	362				161	074	
	OBS	T0196	1464	35903	2676			15106	336	081					

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	CRNO	STANO	ORIGINATOR	DEPTH	WAVE OBS DR HT P S	CLOUD WC TY AMT	NODC STAND				
				CLR	TP	DR	F/S	BAK	DRY	WET	V	OBS								
				WATER	WIND		AIR TEMP	NO												
				TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PO4	TOTP	NO2	NO3	SI04	DOC				
312302 FZ	31444N	079044W		116	19	12	12	117	1973	019	011	0540	3	32	3 X1	8 3	0017			
				36 F04 234 083 076 09																
117			STD	0000	2292	3612	2483	0031333	0000	15311	555	011		000	028	114				
			OBS	0000	2292	36120	2483			15311	555									
			STD	0010	2290	3612	2483	0031317	0031	15312	559									
			STD	0020	2285	3612	2484	0031248	0063	15312	561									
117			OBS	0020	2285	36116	2484			15312	561	008		000	017	060				
			STD	0030	2275	3611	2486	0031078	0094	15311	556									
117			OBS	T0049	2260	36101	2490			15310	550	009		007	016	100				
			STD	0050	2260	3610	2490	0030783	0156	15310	550									
			STD	0075	2248	3610	2494	0030534	0232	15311	554									
117			OBS	T0099	2236	36105	2497			15313	557					084				
			STD	0100	2219	3610	2502	0029856	0308	15308	552									
			STD	0125	1831	3603	2600	0020592	0371	15207	443									
117			OBS	T0148	1556	35967	2661			15128	382	059		160	066	126				
			STD	0150	1539	3594	2663	0014668	0415	15122	381									
117			OBS	T0195	1275	35560	2689			15038	362	109		195	104	070				
			STD	0200	1178	3544	2699	0011271	0480	15005	364									
			STD	0250	0927	3513	2719	0009356	0531	14920	369									
117			OBS	T0269	0861	35047	2724			14897	371	135		236	188	116				
			STD	0300	0827	3500	2725	0008830	0577	14889	361									
117			OBS	T0354	0767	34952	2731			14874	350	173		270	212	072				
			STD	0400	0714	3495	2738	0007733	0660	14861	351									
117			OBS	T0438	0669	34947	2744			14849	351	173		215	221	080				

NOOC STATION DATA

NODC	ORIGINATOR	DEPTH	WAVE D3S	CLOUD	NODC
CC ID SH LAT LON	MSO ID MO DY HR YEAR CRNO STANO	BOT DNP DR HT P S MC TY AMT			STANC

WATER	WIND	AIR TEMP	NO
CLR	TP	DRY	WET
	DR	BAR	V
	F/S		OBS

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	QXY	PQ4	TOTP	ND2	ND3	SI04	DOC			
EZ	31190N	079110W	116	19	12	12	189	1973	019	032	0500	3	36	3	X1	8	2	0018

36 F03	213	133	133	10
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189	STD	0900	2610	3608	2384	0040767	0000	15386	007	000	019	108
189	0BS	0900	2610	36078	2384			15386				
	STD	0010	2612	3608	2383	0040845	0041	15388				
	STD	0020	2613	3608	2383	0040914	0082	15390				
189	0BS	0020	2613	36082	2383			15390	013	000	018	198
	STD	0030	2612	3608	2383	0040946	0123	15391				
189	0BS	T0049	2611	36078	2383			15394	003	000	015	100
	STD	0050	2611	3608	2384	0040974	0205	15394				
189	0BS	T0074	2609	36175	2391			15399				
	STD	0075	2605	3620	2394	0040077	0306	15398	017	012	020	096
189	0BS	T0099	2482	36563	2460			15378				
	STD	0100	2473	3656	2462	0033658	0398	15376				
	STD	0125	2267	3659	2526	0027722	0475	15330				
189	0BS	T0148	2096	36623	2576			15290	014	030	011	080
	STD	0150	2081	3662	2579	0022683	0538	15287				
189	0BS	T0185	1857	36506	2630			15230		050		080
	STD	0200	1815	3644	2635	0017542	0638	15219				
	STD	0250	1675	3621	2652	0016067	0722	15183				
189	0BS	T0269	1621	36126	2658			15169	063	123	047	072
	STD	0300	1562	3605	2666	0014853	0800	15155				
189	0BS	T0354	1377	35784	2686			15102	070	167	070	088
	STD	0400	1138	3543	2706	0011104	0929	15024				
189	0BS	T0438	0885	35050	2720			14934	125	272	179	092

100

NODC STATION DATA

CC ID	SH	LAT	LOA	MSG ID	MO	DY	HR	YEAR	CRNO	STANT	DEPTH	BOI	DNP	WAVE	OBS	DR	HT	P	S	WC	TY	AMT	NODC	STANC
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WATER		WIND		AIR TEMP		NO	
CLR	TP	DR	F/S	BAR	DRY	WET	V

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PD4	TOTP	VD2	ND3	SIO4	DOC
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312302	FZ	31255N	079197W	116	19	12	12	223	1973	019	031	0454	3	36	3	X1	8	3						0019	
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36 F03 207 128 128 09

223	STD	0000	2614	3605	2380	0041086	0000	15386	492																
223	OBS	0000	2614	36050	2380			15386	492	005			000	017	064										
223	OBS	0009	2613	36051	2381			15388	500	007			000	018	092										
223	STD	0010	2613	3605	2381	0041100	0041	15388	499																
223	OBS	0019	2613	36046	2380			15389	492	006			000	020	090										
223	STD	0020	2613	3605	2380	0041168	0082	15389	493																
223	STD	0030	2613	3605	2380	0041210	0123	15391	499																
223	OBS	T0041	2613	36045	2380			15393	502	004			000	017	094										
223	STD	0050	2613	3621	2393	0040171	0205	15396	498																
223	STD	0075	2614	3650	2415	0038125	0303	15404	486				000	016	212										
223	OBS	T0087	2614	36555	2418			15406	480	005															
223	STD	0100	2463	3646	2458	0034065	0393	15372	449																
223	STD	0125	2208	3628	2518	0028401	0471	15312	402																
223	OBS	T0133	2136	36211	2533			15294	391	032			047	027	208										
223	STD	0150	2056	3607	2544	0025997	0539	15273	390																
223	STD	0200	1800	3559	2574	0023289	0662	15205	386																
223	OBS	T0226	1656	35311	2587			15163	384	064			098	046	064										
223	STD	0250	1477					359	359																
223	STD	0300	1170					323	323																
223	OBS	T0320	1072					314	314	141			222	138	104										
223	STD	0400	0823					315	315																
223	OBS	T0417	0800					315	315	176			283	205	108										

NIDC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ ID	MO	DY	HR	YEAR	ORIGINATOR			DEPTH	WAVE D3S	CLOUD	NODC STAND									
									WATER	WIND	AIR TEMP													
				CLR	TP	DR	F/S	BAR	DRY	WET	V	NO												
CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	TOTP	V02	N03	S104	DOC									
312302 FZ	31290N	079312W		116	19	12	13	025	1973	019	030	0340	3	04	2	X1	8	2	0020					
																			04	F02	196	133	128	10
025	STD	0000	2579	3604	2390	0040149	0000	15378	505															
	08S	0000	2579	36036	2390	0040162	0040	15378	505	007				000	018	100								
025	STD	0010	2578	3603	2390			15380	496															
	08S	0019	2577	36034	2391			15381	490	009				000	018	108								
	STD	0020	2576	3603	2391	0040149	0080	15381	489															
	STD	0030	2561	3604	2396	0039717	0120	15379	481															
025	08S	T0048	2520	36054	2410			15373	480	007				000	018	136								
	STD	0050	2514	3606	2412	0038269	0198	15371	484															
025	08S	T0071	2440	36086	2436			15358	505	007				000	047	104								
	STD	0075	2430	3609	2440	0035721	0291	15356	497															
025	08S	T0095	2344	36100	2466			15339	473	009				003	019	126								
	STD	0100	2300	3612	2480	0031978	0375	15329	479															
	STD	0125	2076	3619	2549	0025519	0447	15276	509															
025	08S	T0143	1912	36250	2596			15235	530	048														
	STD	0150	1847	3621	2610	0019769	0504	15218	508															
025	08S	T0190	1471	35870	2672			15106	397	095				160	085	096								
	STD	0200	1341	3569	2686	0012556	0585	15064	367															
025	08S	T0238	1006	35227	2714			14948	295										080					
	STD	0250	0994	3521	2714	0009849	0641	14945	296															
025	08S	T0284	0938	35142	2719			14929	297	175				257	206	056								
	STD	0300	0900	3510	2722	0009227	0688	14918	300															
025	08S	T0332	0804	35006	2729			14885	310	167				222	177	104			102					

NJDC STATION DATA

NODC CC ID		SH	LAT	LON	MSO	ID	MO	DY	HR	YEAR	CPND	STANJ	DEPTH	BOY	DNP	WAVE OBS		CLOUD	NODC STAND			
																	DR	HT	P	MC	TY	AMT
																		</				

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ ID	MO	DY	HR	YEAR	CRNO	STANO	ORIGINATOR	DEPTH	WAVE OBS DR HT P S	CLOUD MC TY AMT	NODC STANO	
				WATER	WIND	AIR TEMP		NO								
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS				
CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	S	VOLAN	SYNDPH	SVF	OXY	PO4	TOTP	NO2	NO3	SIO4 DOC	
312302 EZ	31318N	079412W	116	19	12	13	058	1973	019	028	0082	3	18	3	X1 8 2	0022
				18	F04	166	167	167	04							
058	STD	0000	2322	3610	2472	0032332	0000	15318	500	000	000	018	056			
	OBS	0000	2322	36097	2472	0032453	0032	15318	500							
	STD	0010	2325	3610	2471	0032453	0032	15320	500							
	STD	0020	2329	3610	2470	0032574	0065	15323	500							
058	OBS	0020	2329	36101	2470	0032574	0065	15323	500	006	006	018	092			
	STD	0030	2273	3605	2482	0031459	0097	15310	459							
	STD	0050	2185	3596	2501	0029762	0158	15290	402	017	017	021	050			
058	OBS	0050	2185	35964	2501	0029762	0158	15290	402							
	STD	0075	2119	3590	2515	0028545	0231	15276	383	042	042	039	064			
058	OBS	0080	2112	35899	2516	0028545	0231	15275	379							

[illegible]

WATER	WIND	AIR TEMP	NO
CLR	TP OR F/S	BAR	DRY WET V
			CBS

CASIMSC	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDRH	SVF	OXY	P04	T01P	V02	N03	S104	DOC
312302 EZ	31363N	079530W	116 19 12 13	081	1973 019 027		0039	3	10	3	X2	8 8			0023

22 F03 173 167 167 03

STN	0000	1936	3566	2545	0025371	0000	15211	525
081	0000	1936	35662	2545			15211	525
081	0010	1936	3566	2545	0025406	0025	15213	526
081	0020	1937	3566	2545	0025451	0051	15215	528
081	0020	1937	35664	2545			15215	528
081	0030	1935	3566	2546	0025441	0076	15216	531
081	0039	1932	35662	2546			15217	534

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSG ID	MO	DY	HR	YEAR	CRNG	STAND	CRIGINATOR	DEPTH	WAVE OBS	DR	HT	P	S	WC	TY	AMT	NODC STAND	
				WATER	WIND	AIR TEMP																
				CLP	TP	DR	F/S	BAR	DRY	WET	V	OBS										
				TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	T0TP	V02	N03	S104	DOC						
312302	E7	31404N	080027W	117	10	12	13	107	1973	019	026	0037	3	22	2	X1	8	2			0024	
				22 F03 149 172 167 03																		
107				1846	3580	2579	0022170	0000	15188	544	007			000	009	092						
				1846	35802	2579			15188	544												
				1850	3581	2579	0022223	0022	15191	542												
				1850	3582	2579	0122185	0044	15192	540	007											
107				1850	35823	2579			15192	540												
				1846	3590	2586	0021577	0066	15194	537	007											
107				1841	35978	2594			15194	535												

2000

	WATER	WIND	AIR TEMP	NO
	CLR	TP DR F/S	BAR DRY WET V	OBS

312302 FZ	31446N	080128W	117	10	12	13	122	1973	019	025	0027	3	22	3	X1	9	3	0025
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22 F04 146 172 167 03

	SVD	0000	1812	3620	2618	0018474	0000	15183	543			
122	OAS	0000	1812	36200	2618			15183	543	000	008	072
	SVD	0010	1816	3620	2617	0018581	0019	15186	549			
122	OBS	0010	1816	36203	2617			15186	549	000	008	064
	SVD	0020	1815	3620	2617	0018598	0037	15187	545			
122	OAS	0025	1815	36203	2617			15188	540	000	008	076

NODC STATION DATA

NODC	CC ID	S4	LAT	LONG	MSO ID	MO	DY	HR	YEAR	CRND	STAND	DEPTH	BOT	DNP	DR	HT	P	S	WC	TY	AMT	NODC	STAND	
312302	FZ		31490N	090225W		117	10	12	13	140	1973	019	024		0019	3	22		3	X1	8	5		0026

22 F04 139 178 172 01

STD	0000	1696	3580	2616	0018673	0000	15144	550	008	000	010	104
DBS	0000	1696	35803	2616			15144	550	008			

[illegible]

WATER	WIND	AIR TEMP	NO
CLR	TP	DRY	WET
	F/S	BAR	V
			OBS

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	TOTP	N02	N03	S104	DOC
312302 FZ	31535N	080340W	117 10	12 13 164	1973 019 023		0016	3	22		3	X1	8	5	0027

22 F05 125 178 183 01

STD	0000	1586	3496	2577	0022352	0000	15100	561
164	0000	1586	34963	2577			15100	561 020
08S	0000	1586	34963	2577			15100	561 000 008 088

NOTES

312302

173	STD	0000	1508
	CRS	0000	1508

580		
580	014	000 926 104

NODC STATION DATA

NODC CC ID	SH	LAT	LCN	MSG ID	MO	DY	HR	YEAR	CRNO	STANO	ORIGINATOR	DEPTH	BOT	DNP	WAVE OBS	DR	HT	P	S	WC	TY	AMT	NODC STANO
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WATER		WIND		AIR TEMP		NO	
CLR	TP	DR	F/S	BAR	DRY	WET	V

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	Y0TP	N02	N03	SI04	DOC
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312302 FZ	31567N	080415W	117	10	12	13	185	1973	019	021	0014	3	22	4	X1	8	6						0029
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22	F05	183	183	01
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185	STD	0000	1484	3372	2504	0029299	0000	15053	589		
	ORS	0000	1484	33719	2504			15053	589		
									016		
									000	019	140

[illegible]

WATER		WIND		AIR TEMP		NO	
CLR	TP	DR	F/S	BAR	DRY	WET	OBS

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PD4	TOTP	NO2	NO3	SI04	DOC
312302 FZ	31295N	081029W	117 11 12 14	009 1973 019 043			0009	3	20		3	X1	8	6	0030

20 F05 061 172 167 01

	STG	0000	1470	3358	2496	0030016	0000	15047	587		
009	JBS	0000	1470	33581	2496			15047	587	023	000 020 126

NODC STATION DATA

NODC CC ID	SH	LAT	LCN	MSQ ID	MO	DY	HR	YEAR	CRNO	STAND	ORIGINATOR	DEPTH	BOY	DNP	WAVE OBS	DR	HT	P	S	WC	TY	AMT	CLOUD	NODC STAND
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WATER	WIND	AIR TEMP	NO
CLR	TP	DR	F/S
BAR	DRY	WET	V
OBS			

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	TOTP	NO2	NO3	SI04	DOC
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312302 F2	31117N	081058W	117	11	12	14	048	1973	019	436	0012	3	20	3	X1	9	6							0031
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20	F04	058	172	167	01
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048	STD	0000	1626	3452	2534	0026459	0000	15107	569						
	OBS	0000	1626	34520	2534			15107	569	019					
											000	000	000	146	

AND

NODC
STAND

WAVE 03S CLOUD
DR HT P S WC TY AMT

DEPTH	BOT	DNP
10	10	10
20	20	20
30	30	30
40	40	40
50	50	50
60	60	60
70	70	70
80	80	80
90	90	90
100	100	100
110	110	110
120	120	120
130	130	130
140	140	140
150	150	150
160	160	160
170	170	170
180	180	180
190	190	190
200	200	200
210	210	210
220	220	220
230	230	230
240	240	240
250	250	250
260	260	260
270	270	270
280	280	280
290	290	290
300	300	300
310	310	310
320	320	320
330	330	330
340	340	340
350	350	350
360	360	360
370	370	370
380	380	380
390	390	390
400	400	400
410	410	410
420	420	420
430	430	430
440	440	440
450	450	450
460	460	460
470	470	470
480	480	480
490	490	490
500	500	500
510	510	510
520	520	520
530	530	530
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790	790	790
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810	810	810
820	820	820
830	830	830
840	840	840
850	850	850
860	860	860
870	870	870
880	880	880
890	890	890
900	900	900
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950	950	950
960	960	960
970	970	970
980	980	980
990	990	990
1000	1000	1000

ORIGINATOR
CPNO: STAND

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WATER	WIND	AIR TEMP	NO
CLR	TP DR F/S	DRY WET V	OBS

[illegible]

312302 EZ	30550N	081110W	117 01 12 14 076	1973 019 045	0009 3 20	3 X1 8 5	0032

20 F04 075 172 172 01

STP	0000	1626	3444	2527	0027067	0000	15106
OBS	0000	1626	34437	2527			15106
076						000	068
							130

NOON STATION DATA

NODC	LAT	LONG	MSQ ID NO	DY HR	YEAR CRND STAN)	DEPTH BOT DNP	WAVE OBS DR HT P S	CLOUD WC TY AMT	NODC STAND
CC IP SH	SH LAT	ON LONG	MSQ ID NO DY HR YEAR CRND STAN)			DEPTH BOT DNP	WAVE OBS DR HT P S	CLOUD WC TY AMT	NODC STAND

WATER	WIND	AIR TEMP	NO
CLR TP DR F/S	BAR	DRY WET V	OBS

CAST#SG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	OXY	PD4	TOTP	NO2	NO3	SI04	DOC				
212302	E7	20387N	081137W	117	01	12	14	104	1973	019	458	0016	3	20	3	X1	8	5	0033

20 F04 085 172 167 01

[illegible]

NODC STATION DATA

NODC CC ID	SH	LAT	LOC	MSO ID	MO	DAY	HR	YEAR	ORIGINATOR CRNO	STAND	DEPTH BOT	DNP	WAVE OBS DR HT P S	CLOUD WC TY AMT	NODC STAN	
				WATER	WIND			AIR TEMP			NO					
				CLR	TP	PR	F/S	HAB	DRY	WET	V	CBS				
CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNOPH	SVF	OXY	PU4	TOTP	V02	N03	S104	DOC	
312302 17	30238N	081154W	117	01	12	14	125	1973	019	C64	0016	3	20	3	X1 8 3	0034
22 F03 119 172 167 01																
125	STO	0000	1803	3533	2553	0024609	0000	15170	550							
	ORIS	0000	1803	35326	2553			15170	550	01R			000	039	147	

[illegible][illegible]

WATER	WIND	AIR TEMP	NO
CLR	TP	DRY	WET
	F/S	BAR	V
			OBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	TOTP	V02	N03	SI04	DOC
12302 EZ	30214N	081036W	117 01	12 14	147 1973	019 063	0025	3	20	3	X1	8 3			0035

29 F03 129 172 167 01

	STD	0000	2028	3631	2571	0022941	0000	15244	522		
147	JBS	0000	2028	36315	2571			15244	522	000	009 160

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ ID	MO	DY	HR	YEAR	CRNO	STAND	ORIGINATOR	DEPTH	BOY	DNP	WAVE OBS DR HT P S	WC	TY	AMT	CLOUD	NODC STAND	
				WATER	WIND					AIR TEMP	NO										
				CLP	TP	DR	F/S	BAR	DRY	WET	V	OBS									
CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNOPH	SVF	OXY	P04	TOTP	VD2	NO3	SID4	DOC						
312302	FZ	30203N	080522W	117	00	12	14	162	1973	019	062	0026	3	20	3	X1	8	3		0036	

29 F03 125 172 167 02

162	STD	0000	2135	3620	2533	0026559	0000	15271	590											
	OBS	0000	2135	36197	2533			15271	590	002					000	009	126			
	STD	0010	2135	3621	2533	0026552	0027	15273	568											
	STD	0020	2136	3621	2534	0026544	0053	15275	545											
162	OBS	0026	2136	36218	2534			15276	532	004					000	001	120			

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSO	ID	MO	DY	HR	YEAR	CRNG	STAND	ORIGINATOR	DEPTH	BOT	DNP	WAVE	OBS	DR	HT	P	S	MC	TY	AMT	NODC STAND
CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	QXY	P04	T0TP	N02	N03	S104	DOC										
312302 EZ	30181N	080410W	117	00	12	14	176	1973	019	061	0035	3	20	3	X1	8	2								0037
29 F03 115 189 189 02																									
176	STD	0000	2168	3618	2522	0027539	0000	15280	520																108
	OBS	0000	2168	36182	2522			15280	520	005															
	STD	0010	2170	3618	2522	0027631	0028	15282	519																
	STD	0020	2171	3618	2521	0027715	0055	15284	519																
	STD	0030	2173	3618	2521	0027808	0083	15286	518																
176	OBS	0035	2174	36180	2521			15287	518	010															100

NDDC STATION DATA

NDDC		SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	ORIGINATOR		DEPTH		WAVE OBS		CLOUD		NDDC		
CC	ID										CRNO	STANO	DR	HT	P	S	WC	TY		AMT	
											WATER	WIND	AIR TEMP	NO							
											CLR	TP	CR	F/S	9AP	DRY	WET	V		OBS	
CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	T0TP	V02	N03	S104	DOC						
312302 FZ	30165N	080300W	117 00 12 14 191	1973	019	060	0036	3	20	3	X1	8	2	0038	0038						
																29 F03 112 211 200 02					
191	STD	0000	2376	3610	2456	0033840	0000	15331	497	004						000	017	096			
	OBS	0000	2376	36097	2456			15331	497												
	STD	0010	2377	3609	2456	0033907	0034	15333	501												
	STD	0020	2377	3609	2456	0033983	0068	15334	506												
	STD	0030	2378	3609	2455	0034059	0102	15336	510												
191	OBS	0035	2378	36089	2455			15337	512	013						000	014	076			

NODC STATION DATA

NODC	CC ID	SH	LAT	LON	MSQ	ID	MO	DAY	HR	YEAR	ORIGINATOR	DEPTH	WAVE OBS	CLOUD	NODC					
												BOT	DR	HT	P	S	WC	TY	AMT	STAND

WATER	WIND	AIR TEMP	NO
CLR	TP DR F/S	BAR	DRY WET V
			CBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PO4	TOTP	NO2	NO3	SI04	DOC
212302 FZ	30150N	080187W	117 00	12 14 212	1973 019	C59	0043	3	20	3	X0	0			0039

29 F03 112 199 189 02

	STD	0000	2401	3608	2448	0034666	0000	15337	480
212	OBS	0000	2401	36080	2448			15337	480
	STD	0010	2366	3609	2459	0033625	0034	15330	473
	STD	0020	2331	3610	2470	0032601	0067	15323	466
	STD	0030	2296	3612	2481	0031577	0099	15316	459
212	OBS	0041	2257	36130	2493			15309	451
									022
							000	052	092
							024	040	092

300A

WATER	WIND	AIR TEMP	NO
CLR	TP	DRY	WET
	F/S	BAR	V
			QBS

312302 FZ	30145N	080130W	117 00	12 14 224	1973 019 058	0110	3	20	3	X0	0	0040
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29 F03 119 189 189 06

224	DRS	0000	2454	3606	2431	0036284	0000	15349	505	003	000	016	116
	STD	0000	2454	36065	2431			15349	505				
	STD	0010	2445	3606	2433	0036061	0036	15349	501				
	STD	0020	2435	3606	2436	0035819	0072	15348	497				
224	DRS	0020	2435	36065	2436			15348	497	005	000	027	080
	STD	0030	2424	3607	2440	0035486	0108	15347	488				
224	DRS	0040	2413	36080	2444			15346	487	005	000	018	088
	STD	0050	2403	3609	2448	0034866	0178	15346	507				
	STD	0075	2377	3610	2457	0034110	0264	15344	556				
224	DRS	10078	2374	36107	2458			15343	562	011	003	031	088
224	DRS	10098	2071	36182	2549			15270	487	038	055	046	126
	STD	0100	2041	3619	2558	0024553	0338	15263	468				
224	DRS	10107	1938	36218	2587			15236	385	047	076	080	092

WJDC STATION DATA

WJDC
CC TO SH LAT LON MSQ ID MO DY HR YEAR CRNO STAND ORIGINATOR DEPTH BOT DNP WAVE OBS CLJUD NODC
STAND

WATER WIND AIR TEMP NO
CLR TP DR F/S BAR DRY WET V. OBS

CASMSG CTYPE DEPTH TEMP SAL SIGMAT SPVOLAN DYNDPH SVF OXY PD4 TOTP V32 N03 SID4 DOC

312302 FZ 301414 080081W 117 00 12 15 009 1973 019 057 0039903 0000 15374 002 000 009 064

00 F00 122 194 189 08

009	STD	0000	2561	3599	2393	0039903	0000	15374	002	000	009	064
	OBS	0000	2561	35995	2393			15374				
009	STD	0010	2563	3600	2392	0039990	0040	15376	007	078	108	
	OBS	0018	2564	36000	2392			15377	474			
	STD	0020	2558	3600	2394	0039849	0080	15376	457			
	STD	0030	2528	3601	2404	0038961	0119	15371	391			
009	OBS	0046	2489	36025	2417			15365	358	000	016	050
	STD	0050	2486	3603	2418	0037650	0196	15365	389			
009	OBS	0071	2450	36071	2432			15360	487	004	047	076
	STD	0075	2448	3608	2434	0036295	0288	15360	487			
009	OBS	0094	2372	36117	2459			15346	474	007	021	046
	STD	0100	2281	3611	2485	0031504	0373	15324	457			
	STD	0125	1918	3607	2581	0022452	0441	15232	395	000		
009	OBS	0141	1702	36039	2632			15172	363	049	108	043 030
	STD	0150	1568	3589	2652	0015695	0488	15131	347			
009	OBS	0188	1139	35395	2703			14989	301	122	222	118 036
	STD	0200	1106	3535	2705	0010640	0554	14979	301			
	STD	0250	0970	3516	2715	0009810	0605	14936	302			
009	OBS	0263	0934	35110	2717			14924	302	160	269	169 054

ACDC STAT ION DATA

MSO ID	MO	DY	HR	YEAR	CRNO	STAND	ORIGINATOR	DEPTH	WAVE	OBS	CLOUD	NODC							
CLR	TP	DR	F/S	BAR	DRY	WFT	V	OBS	DR	HT	P	S							
WATER	WIND	AIR	TEMP	NO	NO	NO	NO	NO	NO	NO	NO	NO							
TEMP	SAL	SIGMAT	S	VOLAN	DYNDPH	SVF	OXY	PO4	TOTP	VO2	NO3	SIO4							
DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO							
312302	EZ	30130N	079542W	116	09	12	15	033	1973	019	056	0544	3	27	2	X0	0	0042	0042
033	STD	0000	2616	3608	2382	0040913	0000	15387	381	004	000	017	046						
	OBS	0000	2616	36083	2382			15387	381										
	STD	0010	2618	3608	2382	0041009	0041	15389	398										
	STD	0020	2619	3608	2381	0041087	0082	15391	415										
	STD	0030	2619	3608	2381	0041164	0123	15393	431										
033	OBS	0047	2620	36078	2380			15396	460	002	000	017	056						
	STD	0050	2620	3608	2381	0041265	0206	15396	427										
033	OBS	0070	2619	36084	2381			15399	323	000	000	013	050						
	STD	0075	2616	3609	2383	0041150	0309	15400	367										
033	OBS	0093	2607	36190	2393			15402	458	004	000	016	046						
	STD	0100	2588	3628	2406	0039061	0409	15399	438										
033	OBS	0117	2528	36464	2438			15390	409	009	012	012	040						
	STD	0125	2492	3653	2454	0034570	0501	15384	410										
033	OBS	0140	2416	36623	2484			15370	412	019	016	016	034						
	STD	0150	2348	3666	2507	0029582	0581	15355	400										
033	OBS	0187	2096	36685	2581			15297	363	009	051	022	076						
	STD	0200	1998	3655	2597	0021222	0708	15272	363										
	STD	0250	1647	3609	2649	0016290	0802	15174	354										
033	OBS	0285	1424	35824	2679			15106	340	097	160	075	108						
	STD	0300	1332	3574	2691	0012325	0873	15078	328										
033	OBS	0336	1132	35516	2714			15013	308	100	215	110	108						
	STD	0400	0845	3510	2730	0008563	0978	14913	306										
033	OBS	0421	0770	34957	2730			14886											

NODC STATION DATA

NODC		SH	LAT	LON	MSG ID MO DY HR YEAR CPNO STANO				ORIGINATOR				DEPTH		BOT		ONP		WAVE OBS		CLOUD		NODC	
CC ID					MSO	ID	MO	DY	HR	YEAR	CPNO	STANO	BOY	ONP	DR	HT	P	S	WC	TY	AMT	STAND		
					WATER				WIND		AIR TEMP		NO											
					CLP	TP	DR	F/S	BAR	Dry	WET	V	OBS											
					TEMP	SAL	SIGMAT	SPVOLAN	DYN	DPH	SVF	OVY	PO4	YOT	P	N02	N03	SID4	DOC					
312302 EZ		3010IN	079446W	116	09	12	15	058	1973	019	055	0823	3	32	3	X0	0	0043						
		29 F03 146 206 200 10																						
058	STD	0000	2561	3618	2407	0038557	0000	15376	478	007	000	016												
	OBS	0000	2561	36183	2407	0038557	0000	15376	478	007	000	016												
	STD	0010	2558	3618	2408	0038516	0039	15377	484															
	STD	0020	2556	3619	2409	0038466	0077	15378	490															
	STD	0030	2553	3619	2409	0038417	0115	15379	493															
058	OBS	T0048	2549	36196	2411	0038417	0115	15381	496	004	000	014												
	STD	0050	2546	3620	2412	0038235	0192	15381	495															
	STD	0075	2520	3621	2422	0037427	0287	15379	485															
	OBS	T0096	2504	36233	2428	0036873	0380	15379	481	006	000	049												
	STD	0100	2502	3623	2429	0036873	0380	15379	481	004	000	014												
058	OBS	T0121	2493	36263	2434	0036274	0471	15381	497	003	000	017												
	STD	0125	2489	3628	2436	0036274	0471	15381	497															
	OBS	T0145	2424	36346	2461	0032124	0557	15361	474	022	043	016												
	STD	0150	2381	3644	2481	0032124	0557	15361	474	024	044	021												
	OBS	T0169	2251	36726	2540			15335	382	024	044	021												
058	OBS	T0193	2162	3664	2569	0023876	0697	15307	373															
	STD	0200	2125	3664	2569	0023876	0697	15307	373															
	STD	0250	1883	3647	2620	0019128	0804	15247	380	049	070	038												
	OBS	T0288	1728	36316	2647	0019128	0804	15247	380															
	STD	0300	1693	3626	2651	0016292	0893	15198	379	095	159	076												
058	OBS	T0384	1448	35854	2676	0016292	0893	15198	379															
	STD	0400	1401	3578	2680	0013682	1042	15117	330															
	STD	0500	1112	3534	2704	0011535	1169	15030	304															
	OBS	T0527	1034	35225	2709	0011535	1169	15030	304															
	OBS	T0527	1034	35225	2709	0011535	1169	15030	304															

NOON STATION DATA

[illegible]

22 F02	146	200	194	10
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099	STS	0000	2573	3620	2404	0038803	0000	15379	473				
	OBS	0000	2573	36198	2404			15379	473	007	000	012	108
	STD	0010	2574	3621	2405	0038780	0039	15381	472				
	STD	0020	2575	3622	2405	0038776	0078	15383	471				
	STD	0030	2575	3623	2406	0038790	0116	15384	470				
099	OBS	T0048	2577	36233	2406			15388	469	006	000	011	064
	STD	0050	2576	3623	2406	0038863	0194	15388	469				
	STD	0075	2568	3622	2407	0038802	0291	15390	467				
099	OBS	T0097	2560	36208	2409			15392	466	006	000	014	056
	STD	0100	2556	3622	2411	0038558	0388	15391	473				
099	OBS	T0121	2492	36287	2436			15381	478	006	000	011	056
	STD	0125	2466	3638	2451	0034856	0480	15376	456				
099	OBS	T0145	2345	36707	2512			15354	389	019	028	016	108
	STD	0150	2316	3672	2521	0028282	0558	15348	391				
099	OBS	T0170	2211	36744	2553			15325	399	021	041	015	088
099	OBS	T0194	2105	36727	2581			15301		025	049	019	092
	STD	0200	2081	3672	2587	0022166	0685	15296					
	STD	0250	1879	3657	2629	0018297	0786	15247					
099	OBS	T0291	1706	36373	2657			15202		028	056	025	072
	STD	0300	1657	3629	2662	0015231	0870	15187					
099	OBS	T0387	1273	35642	2696			15071		107	148	090	080
	STD	0400	1230	3557	2699	0011791	1005	15058					
	STD	0500	1021	3524	2712	0010650	1117	14997					
099	OBS	T0532	1001	35215	2714			14994		158	216	151	116

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ ID	MO	DAY	HR	YEAR	CRND	STANO	ORIGINATOR	DEPTH	BOT	DNP	WAVE OBS DR HT P S	WC	TY	AMT	NODC STANO	
				WATER		WIND		AIR TEMP		NO										
				CLP	TP	DR	F/S	BAR	DRY	WET	V	OBS								
CASTMSG				CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PD4	TOTP	V02	N03	S104	DOC		
312302 FZ	30398N	079475W		116	09	12	15	131	1973	019	053	0486	3	27	2	X1	8	7	0045	
				00 F00		152		200		194		10								
131	STD	0000	0000	2605	3604	2383	0040858	0000	15384	471	007	000	015	084						
	OBS	0000	0000	2605	36045	2383	0040981	0041	15384	471	007	000	015	084						
131	STD	0010	0010	2608	3605	2382	0040877	0082	15387	465	012	000	016	080						
	OBS	0010	0010	2608	36046	2382	0041009	0123	15387	465	007	000	015	100						
131	STD	0020	0020	2602	3604	2383	0041146	0205	15391	473	007	000	017	136						
	OBS	0020	0020	2602	36041	2383	0041021	0308	15395	476	007	000	016	030						
131	STD	0030	0030	2602	3603	2382	0040487	0410	15397	474	007	000	016	030						
	OBS	0030	0030	2602	3603	2382	0035914	0505	15387	432	019	022	016	108						
131	STD	0049	0049	2601	36015	2382	0032066	0590	15370	398	040	053	030	174						
	OBS	0050	0050	2601	3602	2382	0032066	0590	15370	398	040	053	030	174						
131	STD	0075	0075	2597	3603	2384	0032066	0590	15370	398	040	053	030	174						
	OBS	0075	0075	2597	3603	2384	0035914	0505	15397	474	007	000	016	030						
131	STD	0098	0098	2594	36049	2386	0032066	0590	15370	398	040	053	030	174						
	OBS	0098	0098	2594	36049	2386	0032066	0590	15370	398	040	053	030	174						
131	STD	0100	0100	2588	3608	2391	0032066	0590	15370	398	040	053	030	174						
	OBS	0100	0100	2588	3608	2391	0035914	0505	15397	474	007	000	016	030						
131	STD	0125	0125	2509	3641	2440	0032066	0590	15370	398	040	053	030	174						
	OBS	0125	0125	2509	3641	2440	0032066	0590	15370	398	040	053	030	174						
131	STD	0148	0148	2436	36572	2474	0032066	0590	15370	398	040	053	030	174						
	OBS	0148	0148	2436	36572	2474	0032066	0590	15370	398	040	053	030	174						
131	STD	0150	0150	2413	3657	2481	0032066	0590	15370	398	040	053	030	174						
	OBS	0150	0150	2413	3657	2481	0032066	0590	15370	398	040	053	030	174						
131	STD	0184	0184	2053	36566	2583	0032066	0590	15370	398	040	053	030	174						
	OBS	0184	0184	2053	36566	2583	0032066	0590	15370	398	040	053	030	174						
131	STD	0200	0200	1923	3643	2607	0032066	0590	15370	398	040	053	030	174						
	OBS	0200	0200	1923	3643	2607	0032066	0590	15370	398	040	053	030	174						
131	STD	0250	0250	1547	3599	2664	0032066	0590	15370	398	040	053	030	174						
	OBS	0250	0250	1547	3599	2664	0032066	0590	15370	398	040	053	030	174						
131	STD	0257	0257	1498	3524	2671	0032066	0590	15370	398	040	053	030	174						
	OBS	0257	0257	1498	3524	2671	0032066	0590	15370	398	040	053	030	174						
131	STD	0300	0300	1206	3550	2699	0032066	0590	15370	398	040	053	030	174						
	OBS	0300	0300	1206	3550	2699	0032066	0590	15370	398	040	053	030	174						
131	STD	0322	0322	1089	35339	2708	0032066	0590	15370	398	040	053	030	174						
	OBS	0322	0322	1089	35339	2708	0032066	0590	15370	398	040	053	030	174						
131	STD	0400	0400	0855	3504	2724	0032066	0590	15370	398	040	053	030	174						
	OBS	0400	0400	0855	3504	2724	0032066	0590	15370	398	040	053	030	174						
131	STD	0403	0403	0852	35039	2724	0032066	0590	15370	398	040	053	030	174						
	OBS	0403	0403	0852	35039	2724	0032066	0590	15370	398	040	053	030	174						

NDDC STATION DATA

CC ID	SH	LAT	ION	MSO ID	MO	DAY	HR	YEAR	CRND	STAND	ORIGINATOR	DEPTH	BOT	DNP	DR	HT	P	S	MC	TY	AMT	CLOUD	NO3	NO2	NO3	NO4	DOC	STAND		
312302	EZ	30415N	080057W	117	00	12	15	183	1973	019	C51	0096	3	27	3	X2	8	8												

20 F04 125 194 194 04

183	STD	0000	2474	3605	2423	0036993	0000	15354	007	000	017	072
	OBS	0000	2474	36047	2423			15354				
	STD	0010	2471	3604	2423	0037006	0037	15355				
	STD	0020	2468	3604	2424	0036965	0074	15356				
183	OBS	0020	2468	36038	2424			15356	009	002	020	080
	STD	0030	2451	3605	2431	0036396	0111	15353				
	STD	0050	2398	3608	2449	0034775	0182	15344				
183	OBS	0050	2398	36081	2449			15344	013	000	019	100
	STD	0075	2298	3611	2480	0031890	0265	15324				
183	OBS	0095	2191	36121	2511			15301	036	041	034	060

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSG ID	MO	DAY	HR	YEAR	CRNG	STANG	ORIGINATOR	DEPTH	WAVE OBS	CLOUD	NODC STAND				
				WATER	WIND	AIR TEMP						NO							
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS							
				TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PQ4	TOTP	NO2	NO3	SIO4	DOC			
312302 F7	30425N	080110W		117	00	12	15	196	1973	019	050	0045	3	20	3	X2	8	8	0048
20 F04 125 194 194 02																			
196	STD	0000	0000	2370	3611	2459	0033603	0000	15330										
	OBS	0000	0000	2370	36106	2459			15330				009	000	024	076			
	STD	0010	0010	2356	3611	2463	0033216	0033	15328										
	STD	0020	0020	2341	3611	2468	0032829	0066	15326										
	STD	0030	0030	2327	3612	2472	0032450	0099	15324										
196	OBS	0042	0042	2310	36121	2477			15322				022	016	026	088			

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	CRNG	STANT	ORIGINATOR	DEPTH	BOT	DNP	WAVE	OBS	DR	HT	P	S	WC	TY	AMT	CLOUD	NODC STAND	
				WATER	WIND	AIR TEMP		NO																			
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS															
				CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNOPH	SVF	OXY	PO4	TOTP	NO2	NO3	SIO4	DOC								
312302	FZ	30410N	080280W	117	00	12	15	224	1973	019	049	0034	3	22	3	X1	8	6	0049								
				22	F04	122	222	217	01																		
224	STD	0000	0000	2140	3620	2532	0026631	0000	15273																		
	OBS	0000	0000	2140	36205	2532	15273	010	000	023	136																

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSO	ID	MO	DY	HR	YEAR	CRNG	STAND	DEPTH	BOT	DNP	WAVE	OBS	CLOUD	NODC STAND			
															DR	HT	P	S	MC	TY	AMT

WATER	WIND	AIR	TEMP	NO				
CLR	TP	DR	F/S	BAP	DRY	WET	V	OBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PO4	TOTP	NO2	NO3	SIO4	DOC
---------	-------	-------	------	-----	--------	---------	--------	-----	-----	-----	------	-----	-----	------	-----

20 F04 119 211 206 01

033	STD	0000	1996	3628	2577	0022361	0000	15235							
	OBS	0000	1996	36283	2577			15235		010			000	034	076

NODC STATION DATA

[illegible]

	WATER	WIND	AIR TEMP	NO
	CLR TP DR F/S	BAR	DRY WET V	OBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	PO4	TOTP	NO2	NO3	SI04	DOC
---------	-------	-------	------	-----	--------	---------	--------	-----	-----	-----	------	-----	-----	------	-----

312302 F7	30510N	080550W	117 00 12 16 015	1973 019 047	0020 3 29	2 X1 8 3	0051

29 F03 194 183 01

	STO	0000	1854	3561	2562	0023775	0000	15188		
015	ORS	0000	1854	35607	2562			15188	017	000 006 140

NODC STATION DATA

NODC CC ID	SH	IAT	ION	MSQ	IO	MO	DY	HR	YEAR	CRNO	STAND	ORIGINATOR	DEPTH	BOT	DNP	WAVE	OBS	DR	HT	P	S	MC	TY	AMT	CLOUD	NODC STAND
---------------	----	-----	-----	-----	----	----	----	----	------	------	-------	------------	-------	-----	-----	------	-----	----	----	---	---	----	----	-----	-------	---------------

WATER	WIND	AIR	TEMP	NO
CLR	TP	DR	F/S	BAR
			DRY	WET
			V	OBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGNAT	SPVOLAN	DYNDPH	SVF	OXY	P04	TDTP	N02	N03	S104	DOC											
312302 EZ	30538N	081067M	117	01	12	16	023	1973	019	046	0014	3	29	2	X1	8	3									0052

29 F03 119 194 183 01

STD	0000	1754	3479	2524	0027357	0000	15149
023	0000	1754	34791	2524			15149
							017
							000
							001
							146

[illegible]

CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVCLAN	DYNDPH	SVF	OXY	PD4	TOTP	NO2	NO3	SI04	DOC
312302 F7	31106N	081020W	117 11 12 16 055	1973 019 428	0015	3	22	2	X2	8	8	0053			

29	F01	112	161	161	01
----	-----	-----	-----	-----	----

	STD	0000	1670	3457	2527	0027C76	0000	15121				
055	NBS	0000	1670	34568	2527			15121	019	000	008	160

NOEC STATION DATA

[illegible]

34	F01	105	156	156	01
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	STD	0000	1590	3459	2548	0025135	0000	15097				
078	CBS	0000	1590	34594	2548			15097	019	000	000	150

NODC STATION DATA

CC ID	SH	LAT	ION	MSO ID	MO	DY	HR	YEAR	CRNO	STANO	ORIGINATOR	DEPTH	BOT	DNP	WAVE OBS	DR	HT	P	S	WC	TY	AMT	CLOUD	NODC	STANO		
				WATER	WIND					AIR TEMP	NO																
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS															
				TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	QXY	PD4	TOTP	NO2	NO3	SIO4	DOC											
012302	FZ	31257N	080525W	117	10	12	16	085	1973	019	041	0024	3	09	2	X6	8	8							0055		

34 F01 091 156 156 01

STD	0000	1681	3485	2546	0025280	0000	15128
OBS	0000	1681	34849	2546			15128
							018
							000
							006
							120

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSG ID	MO	DY	HR	YEAR	CRNO	STAND	ORIGINATOR	DEPTH	BOT	DNP	WAVE OBS	CLOUD	NODC STAND			
				WATER	WIND				AIR TEMP	NO										
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS								
				CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGNAT	SPVOLAN	DYNDPH	SVF	QXY	P04	TOTP	V02	N03	S104	DOC	
312302	EZ	31217N	080410W	117	10	12	16	104	1973	019	040	0019	3	27	2	X6	5	8	0056	

34 F02 091 150 144 01

104	STD	0000	1747	3409	2472	0032323	0000	15138
	OBS	0000	1747	34087	2472			15138
								018
								003 019 136

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSO ID	MO	DY	HR	YEAR	CRNO	STAND	DEPTH BOT	DNP	DR	HT	P	S	WC	TY	AMT	NODC STAND

WATER	WIND	AIR TEMP	NO
CLR	TP	DR	F/S
BAR	DRY	WET	V
			OBS

CASTMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNOPH	SVF	OXY	PO4	TOTP	NO2	NO3	SIO4	DOC
312302 EZ	31175N	080302M	117 10 12 16 119 1973 019 039	0025	3	27	3	X2	5	8					0057

32	F02	915	150	144	01

STD	0000	1914	3561	2547	0025226	0000	15205	007	000	008	146
119	085	0000	1914	35608	2547		15205				

NJDC STATION DATA

CC ID	SH	LAT	LON	MSQ	ID	MO	DY	HR	YEAR	CRNO	STAND	ORIGINATOR	DEPTH	BOT	DNP	WAVE	DR	HT	P	S	WC	TY	AMT	CLCUD	NODC	STAND	
				WATER	WIND			AIR	TEMP	NO					CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS				
				TEMP	SAL	SIGMAT	SPVOLAN	DYNDPH	SVF	OXY	P04	T0TP	N02	N03	S104	DOC											
312302	FZ	31122N	080150W	117	10	12	16	141	1973	019	038		0036	3	32	3	X6	5	8						0058		

32 F02 081 150 144 01

141	STD	0000	2193	3609	2508	0028873	0000	15285
	ORS	0000	2193	36090	2508			15285
								005
								000 011 092

NOJC STATION DATA

[illegible]

32	F02	064	150	144	03
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STD	0000	2394	3603	2446	0034803	0000	15335		
NBS	0000	2394	36033	2446			15335	004	
STD	0010	2402	3606	2446	0034870	0035	15338		000 018 072
STD	0020	2405	3608	2446	0034855	0070	15341		
NBS	0020	2405	36081	2446			15341	006	
STD	0030	2403	3608	2447	0034814	0105	15342		000 019 054
NBS	0046	2389	36089	2452			15342	005	000 019 072

NODC STATION DATA

NODC
CC ID SH LAT LON MSQ ID MO DY HR YEAR CRND STANO ORIGINATOR DEPTH BOT DNP WAVF OBS DR HT P S WC TY AMT CLOUD NODC STANC

WATER WIND AIR TEMP NO
CLR TP DR F/S BAR DRY WET V OBS

CASTMSG CTYPE DEPTH TEMP SAL SIGMAT SPVOLAN DYNDPH SVF OXY PO4 TOTP NO2 NO3 SID4 DOC

312302 F7 31050N 079522W 116 19 12 16 1973 019 036 0140 3 20 3 X2 5 8 0060

20 F02 010 150 144 06

189	STD	0000	2422	3603	2437	0035639	0000	15341											
	OBS	0000	2422	36028	2437			15341	004	000	017								
	STD	0010	2421	3603	2438	0035606	0036	15343											
	STD	0020	2420	3604	2439	0035573	0071	15344											
	STD	0030	2418	3604	2440	0035541	0107	15346											
	STD	0050	2416	3605	2441	0035475	0178	15348											
189	OBS	0050	2416	36054	2441			15348	005	000	017								
	STD	0075	2320	3609	2472	0032599	0263	15329											
189	OBS	0075	2320	36093	2472			15329	015	018	025								
	STD	0100	2204	3612	2508	0729329	0340	15305											
189	OBS	0100	2204	36121	2508			15305	027	039	034								
189	OBS	0115	1903	36143	2590			15227	045	087	046								
	STD	0125	1727	3628	2629	0017739	0399	15177											
189	OBS	0140	1500	35866	2666			15107	085	128	084								

NODC STATION DATA

NODC CC ID	SH	LAT	LON	MSO ID	MO	DAY	HR	YEAR	CRND	STAND	ORIGINATOR	DEPTH	WAVE OBS DR HT P S	CLOUD WC TY AMT	NODC STAND	
				WATER		WIND		AIR TEMP		NO						
				CLR	TP	DR	F/S	BAR	DRY	WET	V	OBS				
CASMSG	CTYPE	DEPTH	TEMP	SAL	SIGMAT	SPVOLAN	DYNOPH	SVF	OXY	PO4	TOTP	NO2	NO3	SI04	DOC	
312302 EZ	31028N	079476W	116	19	12	16	190	1973	019	035	0265	3	32	5	X2 5 8	0061
				32 F08 024 172 167 06												
190	STD	0000	2579	3609	2394	0039739	0000	15379								
	OBS	0000	2579	36092	2394			15379	004				000	028	072	
	STD	0010	2579	3609	2394	0039790	0040	15380								
	STD	0020	2579	3609	2394	0039831	0080	15382								
190	STD	0030	2578	3609	2394	0039881	0119	15384								
	STD	0050	2578	3608	2394	0039972	0199	15387								
	OBS	0050	2578	36085	2394			15387	004				000	033	090	
	STD	0075	2526	3618	2417	0037891	0297	15380								
190	STD	0100	2475	3624	2437	0036053	0389	15373								
	OBS	10100	2475	36238	2437			15373	000				005	008	156	
	STD	0125	2193	3625	2521	0028173	0469	15307								
	STD	0150	1933	3626	2592	0021459	0531	15242								
190	OBS	10150	1933	36265	2592			15242	036				081	037	056	
190	STD	0200	1481	3592	2674	0013766	0619	15112								
	OBS	10200	1481	35917	2674			15112	093				138	075	064	
	STD	0250	1212	3550	2697	0011610	0683	15026								
	OBS	10250	1212	35496	2697			15026	103				219	113	072	

SURFACE DRIFTER DATA

Four drift bottles were released at each of the following stations:
1, 3, 5, 20, 18, 16, 25, 23, 21, 43, 64, 62, 60, 41, and 39.

To date no drift bottles have been returned.

Table 2. Chlorophyll α and C¹⁴ uptake with respect to depth.

<u>Station</u>	<u>Depth</u> <u>(m)</u>	<u>Chlorophyll α</u> <u>(mg/m³)</u>	<u>C¹⁴ uptake</u> <u>mgC/m³/day</u>
1	0	.620	292.4
	7	.797	68.9
4	0	.339	3.24
	9	.339	11.93
	16	.353	17.61
11	0	.398	33.14
	16	.326	28.22
	25	.384	1.88
	37	.487	17.28
	54	.184	13.71
14	0	.398	55.36
	9	.425	22.14
	15	.475	19.20
	21	.443	7.06
	26	.378	2.58
17	0	.301	114.09
	9	.290	40.68
	16	.288	22.68
20	0	2.09	659.81
	2	2.016	893.91
21	0	1.09	39.51
	3	.826	240.89
	7	.974	156.44
24	0	.266	56.44
	8	.324	46.42
	13	.266	16.14
27	0	.723	34.54
	9	.796	38.09
	15	.761	53.90
	21	.761	30.62
	30	.693	9.38
30	0	.203	13.31
	17	.193	6.71
	29	.194	7.29
	41	.218	3.42
	59	.310	10.56

*The chlorophyll and carbon-¹⁴ productivity data are only considered accurate to 2 significant figures, at best, even though more are reported.

Table 2. (continued)

<u>Station</u>	<u>Depth</u> <u>(m)</u>	<u>Chlorophyll <i>a</i></u> <u>(mg/m³)</u>	<u>C¹⁴ uptake</u> <u>mgC/m³/day</u>
30	0	.247	38.22
	17	.213	22.97
	29	.236	29.62
	37	.237	12.38
	54	.214	31.66
37	0	.306	42.50
	10	.354	46.69
	17	.442	0
	24	.354	8.33
	35	.413	18.62
40	0	.944	157.78
	8	.826	80.13
	13	.915	12.84
43	0	1.68	209.94
	3	1.83	398.90
	7	2.01	352.19
47	0	.826	17.51
	8	.885	43.34
	13	1.121	36.79
50	0	.369	119.41
	10	.378	22.39
	17	.438	16.26
	24	.390	8.00
	35	.420	25.99
54	0	.151	127.83
	16	.129	35.01
	25	.109	7.12
	37	.119	24.63
	54	.100	26.9
55	0	.133	50.65
	16	.122	14.83
	25	.144	7.67
	37	.317	8.55
	54	.094	13.13
59	0	.519	29.80
	10	.401	52.48
	16	.472	43.05
	24	.460	15.17
	35	.401	7.22

Table 2. (continued)

<u>Station</u>	<u>Depth</u> <u>(m)</u>	<u>Chlorophyll α</u> <u>(mg/m³)</u>	<u>C¹⁴ uptake</u> <u>mgC/m³/day</u>
61	0	.476	150.48
	9	1.02	103.36
	16	.812	96.74
	27	.770	54.81
	32	1.062	9.69
64	0	2.27	380.65
	3	2.124	811.84
	7	1.888	320.14

Table 3. Surface chlorophyll α , depth integrated chlorophyll α and C^{14} values.

Station	Surface Chlorophyll <u>mg/m³</u>	Depth Integrated Chlorophyll α <u>mg/m²</u>	Depth Integrated C^{14} <u>mgC/m²/day</u>
1	.620	5.0	1264.5
2	.508		
3	.612		
4	.339	5.5	171.7
5	.451		
6	.448		
7	.314		
11	.398	19.9	1004.7
12	.333		
13	.277		
14	.398	11.2	575.6
15	.601		
16	.602		
17	.301	4.7	918.2
18	.265		
19	.324		
20	2.09	4.1	1553.7
21	1.09	6.5	1215.3
22	.702		
23	.277		
24	.266	3.8	567.8
25	.223		
26	.546		
27	.723	22.6	1036.4
28	.496		
29	.609		
30	.203	12.9	444.2
31	.238		
32	.247	12.3	1378.0
35	.101		
36	.295		
37	.306	13.1	786.7
38	.301		
39	.594		
40	.944	11.4	1184.1
41	.414		
42	.737		
43	1.68	12.9	2415.4
45	1.563		
46	1.534		
47	.826	11.9	443.7
48	.260		
49	.558		
50	.369	13.9	1116.1
51	.252		
52	.119		
53	.234		
54	.151	6.5	2120.8
55	.133	9.5	906.7

Table 3. (continued)

<u>Station</u>	<u>Surface Chlorophyll</u> <u>mg/m³</u>	<u>Depth Integrated Chlorophyll a</u> <u>mg/m²</u>	<u>Depth Integrated C¹⁴</u> <u>mgC/m²/day</u>
56	.101		
57	.104		
58	.306		
59	.519	15.7	1056.8
60	.590		
61	.476	26.4	2837.4
62	.806		
63	.549		
64	2.27	14.6	4052.7

Table 4. Particulate Organic Carbon (PCN) and Nitrogen (PN)

<u>Station</u>	<u>Depth</u> (m)	<u>POC</u> $\mu\text{gC/L}$	<u>PN</u> $\mu\text{gN/L}$	<u>C:N</u> (atomic)
1	0	218	30	9:1
1	0	-	24	11:1
2	0	146	27	6:1
14	0	88	9	12:1
16	0	134	19	8:1
18	0	128	22	6:1
20	0	424	50	10:1
20	0	484	-	11:1
21	0	214	20	12:1
24	0	103	9	14:1
28	0	91	14	8:1
31	0	54	8	8:1
36	0	111	-	-
40	0	93	-	-
42	0	182	23	9:1
43	0	562	37	17:1
42-46	0	259	27	11:1
43-44	0	202	-	-
46	0	286	29	11:1
48	0	97	-	-
49	0	128	-	-
51	0	106	-	-
56	0	49	-	-
60	0	38	18	2:1
62	0	150	19	9:1
63	0	287	35	10:1
64	0	93	-	-

ZOOPLANKTON

Sampling Method: Plankton samples were collected with a half meter No. 20 mesh net towed obliquely through the entire water column. Although an impeller flow meter was mounted on the net, these measurements are only qualitative.

Data: The following data are the five dominant genera at each station in order of abundance. The average cephalothorax length and concentration/m³ are also given.

Table 5. Generic composition (five dominant genera at each station listed in order of abundance), respective size ranges (cephalothorax length in mm) and concentrations.

Station	Genus	Size (mm)	Animal Concentration (copepods/m ³)
1	<i>Oncaea</i> sp.	.31	48.51
	<i>Corycella</i> sp.	.68	6.57
	<i>Oithona</i> sp.	.43	4.65
	<i>Centropages</i> sp.	1.30	.61
	<i>Temora</i> sp.	.78	.32
	<i>Labidocera aestiva</i>	1.50	.21
	<i>Eucalanus</i> sp.	1.89	.11
	Total Concentration:		60.98
21	<i>Eucalanus attenuatus</i>	1.81	.88
	<i>Centropages typicus</i>	1.42	.18
	<i>Labidocera aestiva</i>	1.52	.06
	<i>Candacia curta</i>	1.68	.02
	Total Concentration:		1.14
44	<i>Corycella</i> sp.	.42	4.21
	<i>Calanus</i> sp.	.74	3.20
	<i>Centropages</i> sp.	.91	1.21
	<i>Eucalanus</i> sp.	.81	.08
	<i>Oithona</i> sp.	.64	.07
	Total Concentration:		8.77
7	<i>Oithona</i> sp.	.66	6.15
	<i>Calanus</i> sp.	.75	3.91
	<i>Centropages typicus</i>	1.11	1.04
	<i>Temora turbinata</i>	.61	.51
	Total Concentration:		11.61
27	<i>Calanus</i> sp.	1.10	2.39
	<i>Corycaeus</i> sp.	.38	.81
	<i>Oithona</i> sp.	.66	.12
	<i>Temora turbinata</i>	.72	.08
	<i>Calocalanus pavo</i>	.49	.03
	Total Concentration:		3.43

Station	Genus	Size (mm)	Animal Concentration (copepods/m ³)
30	<i>Oithona</i> sp.	.58	.97
	<i>Corycaeus</i> sp.	.81	.51
	<i>Pleuromamma abdominalis</i>	1.49	.13
	<i>Oncaea</i> sp.	.41	.04
	<i>Corycaeus speciosus</i>	1.33	.02
	<i>Rhincalanus cornutus</i>	2.50	.02
	Total Concentration:		<u>1.69</u>
50	<i>Calanus</i> sp.	.96	1.89
	<i>Oncaea</i> sp.	.59	.76
	<i>Oithona</i> sp.	.71	.75
	<i>Centropages typicus</i>	1.11	.16
	<i>Corycella</i> sp.	.68	.14
	<i>Eucalanus</i> sp.	1.72	.13
	<i>Temora turbinata</i>	.74	.09
	<i>Calocalanus pavo</i>	.40	.03
	<i>Euchaeta</i> sp.	2.10	.02
	<i>Sapphirina</i> sp.	.85	.01
	Total Concentration:		<u>3.98</u>
53	<i>Oithona</i> sp.	.65	.50
	<i>Oncaea</i> sp.	.59	.42
	<i>Calanus</i> sp.	1.40	.09
	<i>Farranula gracilis</i>	.62	.09
	<i>Corycaeus</i> sp.	.62	.07
	<i>Paracalanus</i> sp.	.85	.07
	<i>Candacia</i> sp.	1.81	.05
	<i>Phaenna spinifera</i>	1.59	.05
	<i>Calocalanus pavo</i>	.57	.03
	<i>Pleuromamma abdominalis</i>	1.89	.03
	<i>Corycaeus speciosus</i>	1.00	.01
	<i>Pleuromamma piseki</i>	1.37	.01
	Total Concentration:		<u>1.42</u>
64	<i>Labidocera aestiva</i>	1.78	1.11
	<i>Corycaeus</i> sp.	.55	.81
	<i>Eucalanus attenuatus</i>	1.61	.48
	<i>Centropages furoatus</i>	1.27	.12
	<i>Temora turbinata</i>	1.33	.02
	Total Concentration		<u>2.54</u>

BENTHOS

Table 6. Mean grain size, sorting, skewness and kurtosis (Folk and Ward values) for sediments from E-19-73. All values in phi (ϕ) where applicable.

Station #	Mz	σ_I	Sk	Kg
2	1.16	1.17	-0.38	1.05
3	1.27	1.01	-0.72	1.05
5	1.41	0.73	-0.15	0.97
12	4.20	0.79	-0.16	1.55
20	0.64	1.19	-0.05	1.01
22	0.61	0.98	-0.04	1.20
24	1.06	0.69	-0.15	1.03
25	0.26	0.90	-0.18	1.10
27	1.09	0.64	-0.18	0.95
28	0.29	1.13	0.15	1.03
38	0.91	0.68	-0.03	0.87
39	1.77	0.72	-0.22	1.14
40	1.83	0.69	-0.38	1.05
43	1.97	0.72	-0.40	1.41
45	1.44	0.70	-0.11	0.99
47	1.76	0.58	-0.19	1.16
51	0.66	1.20	-0.38	0.90
58	1.95	0.57	-0.17	0.98
60	1.20	0.74	-0.14	1.03

Table 7. Organic material in Continental Shelf sediments E-19-73.

Station #	$\bar{x}$ (%)	$S\bar{x}$.05	$\bar{x} \pm S\bar{x}$.05
2	0.57	0.18	0.75 — 0.39
3	0.47	0.06	0.53 — 0.41
5	0.56	0.03	0.59 — 0.53
12	2.78	0.65	3.43 — 2.13
20	0.55	0.04	0.59 — 0.51
22	0.29	0.07	0.36 — 0.22
24	0.33	0.07	0.40 — 0.26
25	0.45	0.07	0.52 — 0.38
27	0.23	0.06	0.29 — 0.17
28	0.75	0.21	0.96 — 0.54
38	0.34	0.04	0.38 — 0.30
39	0.32	0.08	0.40 — 0.24
40	0.45	0.03	0.47 — 0.42
43	0.25	0.04	0.29 — 0.21
45	0.17	0.03	0.20 — 0.14
47	0.22	0.08	0.30 — 0.14
51	0.68	0.07	0.75 — 0.61
58	0.73	0.11	0.84 — 0.62
60	0.56	0.06	0.62 — 0.50

Table 8. Dissolved mercury data.

<u>Station #</u>	<u>Mercury Concentrations (ng/l)</u> <u>December 1973</u>
3	33
9	41
12	31
14	35
16	21
18	39
20	39
22	29
23	28
25	55
27	58
29	55
31	72
34	68
37	83
39	53
41	49
43	66
45	65
47	102
49	76
50	103
52	65
54	91
56	56
58	22
60	155
62	82
64	85
Average	60
Minimum	21
Maximum	155