

# UNITED STATES COAST GUARD OCEANOGRAPHIC REPORT No. 40 CG 373-40

Woods Pole Oceanographic Institution ATLAS - GAZETTEER COLLECTION

OCEANOGRAPHIC INVESTIGATIONS IN THE NORTHERN BERING SEA AND BERING STRAIT

June-July 1968



# UNITED STATES COAST GUARD OCEANOGRAPHIC



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## OCEANOGRAPHIC INVESTIGATIONS IN THE NORTHERN BERING SEA AND BERING STRAIT

June-July 1968

By David M. Husby



WASHINGTON, D.C. 🕉



### ABSTRACT

Oceanographic data collected on 79 stations in the northern Bering Sea and Bering Strait during 8–19 July 1968 are presented and interpreted. The data include observations of temperature, salinity, dissolved oxygen, and current velocity made at 5-meter intervals from sea surface to the bottom. Contoured sections of the data are also presented.

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## Oceanographic Investigations in the Northern Bering Sea and Bering Strait

June–July 1968

David M. Husby 1

#### INTRODUCTION

Results of past investigations in the Bering Sea and Bering Strait (Aagaard, 1964; Coachman and Aagaard, 1966; Coachman and Rankin, 1968; Husby, 1969) have shown four problem areas: (1) turbulent mixing and transfer processes, (2) time-dependence of the velocity field, (3) the role of atmospheric circulation in driving or modifying oceanic circulation, and (4) general physical oceanography of the northern Bering Sea. A cooperative cruise with the U.S. Coast Guard Oceanographic Unit and University of Washington was conducted on the USCGC STATEN ISLAND (WAGB-278) during June-July 1968 to investigate the general physical oceanography of the northern Bering Sea and Bering Strait, current flow through the Bering Strait, and transport of suspended sediments by currents.

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#### DATA COLLECTION AND PROCESSING

#### **Cruise Chronology**

- 1968 Departed Kodiak, Alaska en route to north-25 June ern Bering Sea.
- 1 July Moored current meter arrays and temperature-pressure recorders at 64°00'N, 171° 55'W and 65°37.9'N, 168°30'W.
- 4 July Moored temperature-pressure recorder at 65°00'N, 170°20'W. Vessel anchored nearby for period of 26 hours while hourly current meter lowerings and two-hourly Nansen casts made for time-series study.
- 6 July Vessel anchored at 63°20'N, 168°29'W for 30 hours for time-series observations.
- 9 July Completed third time-series study at 64° 00'N, 172°00'W with total of 31 hours spent on this station. Arrived at first oceanographic station at 2100 hours (GMT).
- 16 July Completed station number 55, but then operations halted due to fog and reports of heavy concentrations of Soviet vessels in the western channel of the Bering Strait.
- 17 July Survey resumed at 1000 hours on station 56.

19 July Completed station 76 at 0400 hours. Reoecupied stations 56-58, to verify the strong (180 cm/sec) eurrent and marked temperature inversions. Initiated search for current meter array originally moored at 65°37.9'N, 168°30'W.

- 20 July Continued search for eurrent meter array with no success. Abandoned search and proceeded to Norton Sound to begin a study of suspended sediments.
- 21 July Completed suspended sediment study and en route Nome, Alaska.
- 22 July Disembarked scientific party at Nome with the exception of Mr. P. Joppa who remained aboard to assist in search for anchored instrument packages. Instruments anchored at 65°37.9'N, 168°20'W never located; one of orange surface floats was observed in fisherman's boat. Temperature-pressure recorder anchored at 65°00'N, 170°20'W was retrieved.
- 23 July Instruments anchored at 64°00'N, 171°55'W were located but lost during retrieval.

#### **Anchored Instrument Packages**

To determine the tidal wave pattern in the northern Bering Sea and to continuously monitor the flow through the Bering Strait, three instrument arrays were anchored (fig. 1). The basic configuration of the arrays is shown in figure 2. At the 64°00'N, 171°55'W location, the instrument array was placed at a depth of approximately 28 meters in water depth of 48 meters. The second instrument array, anchored at 65°37.9'N, 168°30.2'W in 55 meters of water. was suspended at a depth of approximately 25 meters. The third, consisting of only a temperature-pressure recorder, was placed near the bottom in 40 meters of water at 65°00'N, 170°20'W. Unfortunately, neither of the current meters was retrieved and no useable data were obtained from the one temperature-pressure recorder which was retrieved.

#### **Direct Measurements of Current on Station**

At each of the 79 oceanographic stations, the ship was anchored and allowed to swing on the anchor until it achieved a fairly stable heading. A current meter was then lowered and raised through the water column stopping at 5-meter intervals to record current velocity for about 15 minutes. The deflection of the cable from the vertical was measured at each current reading along with the length of cable paid out to determine actual depth of the meter. The current meter used was the "Magnesyn" current meter, designed and built at the Department of Oceanography, University of Washington. It combined a Hydro Products Model 460 current speed sensor and Model 451 current speed readout module with a Marine Remote Compass system for measuring magnetic direction. The current velocity data are retained by the Department of Oceanography, University of Washington, for later transfer to the National Oceanographic Data Center, Washington, D.C. (NODC).

#### **Time-Series Current Measurements**

At three locations (fig. 1), the ship was anehored and hourly current meter lowerings were made over periods of 26, 30, and 31 hours to measure the time-dependent variation of the velocity field. Nansen bottle casts were made approximately every two hours to measure temperature, salinity, and dissolved oxygen content at 5-meter intervals. The current and physical oceanographic data from these three stations are retained by the Department of Oceanography, University of Washington, for later transfer to NODC.

#### **Oceanographic Stations**

At each of the 79 oceanographic stations, a Nansen bottle cast was accomplished by personnel from the U.S. Coast Guard Oceanographie Unit. Observations of temperature, salinity, and dissolved oxygen were made at 5-meter intervals from the surface to near the bottom. Water temperatures were measured by a pair of deep-sea reversing thermometers in each Nansen bottle. The salinities were determined using an inductive salinometer. Conductivity values obtained were converted to salinity by use of the International Oceanographic Tables published jointly by UNESCO and the National Institute of Oceanography of Great Britain (UNESCO, 1966). Methods of collecting and processing the temperature and salinity data essentially followed those outlined in H.O. Pub. 607 (U.S. Naval Oceanographic Office, 1968). Upon retrieval of each cast, water samples were drawn immediately for the determination of dissolved oxygen content. The method used was a modified Winkler determination involving the titration of a 50 ml aliquot of the treated sample with a 0.01 normal sodium thiosulfate solution using starch as the end point indicator. The temperature, salinity, and dissolved oxygen data were forwarded to NODC and are listed as Ref. No. 31-1270.

#### Suspended Sediment Study

To determine the transport of material of fluviatile origin through Norton Sound and the northern Bering Sea, Mr. Stephen Smyth (Univ. of Washington) conducted an investigation during the occupation of the 79 oceanographic stations. A Hydro Products Model 412T Towable One Meter Transmissometer was lowered into the water at 53 stations until contact was made with the bottom. Water depth and transmissivity were recorded on a strip chart recorder in the oceanographic laboratory. When the transmissometer recordings indicated unusual optical characteristics, water samples were obtained from the Nansen casts for later analysis of suspended sediment concentration. A total of 62 transmissometer lowerings were accomplished and 142 water samples were collected.

During the Norton Sound operations on 21 July, four stations were occupied. At each station a Nansen bottle cast was made to obtain water samples at 5 meter intervals from the

#### Water Masses

Hydrographic conditions in the northern Bering Sea and Bering Strait in July 1968 closely paralleled the summer regime observed in previous surveys, showing a relatively warm  $(>5^{\circ}C)$ , low salinity (<32.5%) water mass in the upper 10 meters and a layer of gradients between 10 and 15 meters overlying a colder  $(<3^{\circ}C)$ , more saline (>32.5%) water mass (figs. 3-14). Large zonal gradients of temperature and salinity were observed at the surface in the eastern portion of the survey area (figs. 15 and 16). The warm  $(>7.0^{\circ}C)$ , low salinity (<31.0‰) water mass which extended along the Alaskan coast in the surface layer corresponded closely with the Alaskan Coastal Water (8-10°C, 20-30‰) first defined by Saur, et al. (1954). The low salinity of this water mass is attributed to dilution by the effluents of the Yukon and Kuskokwim rivers. The isolated parcel of warm, low salinity water found at the surface northwest of St. Lawrence Island (figs. 15 and 16) may be the result of the advection of some river runoff through the Strait of Anadyr, possibly from the Anadyr River to the southwest.

The distribution of properties at 20 meters revealed two distinct deeper water masses (figs. 17 and 18). One, in the western half of the survey area, was characterized by a temperature range of 1.0 to  $3.0^{\circ}$ C and a salinity greater than 33.0‰. This mass was definitely the Modified Shelf Water (1.0 to  $4.0^{\circ}$ C, 32.0 to 33.0%) described by Saur, et al. (1954) which usually has been found over the bottom in the northern Bering Sea in the late summer. The second water mass was found close to the northern coast of St. Lawrence Island and was characterized by temperatures less than  $1.0^{\circ}$ C and salinities between 32.7 and 32.8‰ (figs. 17 and 18). This water mass is the Deep Shelf Water, surface to near the bottom, current speed and direction were measured at 5-meter intervals to near the bottom, a gravity core sample was obtained, a Van Veen grab sample was obtained, and a transmissometer lowering was accomplished. These data and samples are retained by the Department of Oceanography, University of Washington.

#### RESULTS

described by Saur, et al. (1954) and Barnes and Thompson (1938) which attains its low temperatures from ice formation in the winter. The source of this water mass has been hypothesized to be the Gulf of Anadyr. The northeastward flow of water in the Strait of Anadyr observed in July 1968 would tend to confirm this hypothesis. Goodman, et al. (1942) reported an eddy of this water mass in the summers of 1937 and 1938 between St. Lawrence Island and St. Matthew Island with a temperature in the bottom water of -1.6 °C. They suggested this water was a remnant of winter conditions when ice formation was occurring.

#### Currents

The current meter data were analyzed in an unpublished research paper (Grider, 1969) at the University of Washington. The direct measusements of currents on station were resolved into north and east components, which were averaged over two depth layers. The upper layer contained the average of all measured currents between the surface and the 10 meter depth; the lower layer averaged all measurements from 15 meters and deeper. The choice of those layers was based on the fact that the pycnocline in the northern Bering Sea is normally located between 10 and 15 meters in the summer.

Results of observations at the three timeseries current stations revealed semi-diurnal fluctuations in the current records which were of a tidal nature with a 12.4 hour period. This tidal species was then subtracted from the current records obtained at stations 1 to 28 which had obvious semi-diurnal oscillations. The current records for stations 29 through 76 were not corrected because there were no obvious periodic fluctuations and the time difference between the occupation of these stations and the first time-series current station was too large. Transport calculations were then made for the lines of stations and the most interesting result of those calculations was the net southward transport of 0.1 Sv (Sverdrup= 106m3/sec) through section G-G'. This section was occupied during a period of average wind speed of 18 knots from the north. A southerly transport had been observed in this area only once before, in July 1967, aboard the CGC NORTHWIND. The net transport through section D-D' and C-C', 1.6 Sv to the north, showed good correlation with the net transport through section H-H', 1.7 Sv to the north. The current regime in the Bering Strait showed the usual summer conditions of greatest flow in the eastern half of the Strait. The highest speed, 180 cm/sec (3.6 knots), was measured in the lower layer at station 56 (figs. 19 and 20).

There was good correlation between the net

transport through the four southernmost sections computed from the current meter data and the average wind components normal to each section. However, Grider stated that the wind probably does not have a casual effect on the change in net transport, but is more symptomatic of atmospheric pressure zones which exert pressure differentials on the sea surface over a large distance.

#### **Dissolved Oxygen Distribution**

Measurements of dissolved oxygen concentrations revealed that the surface layer in the entire survey area was supersaturated or nearly supersaturated with oxygen at the temperatures which were observed. The Modified Shelf Water and Deep Shelf Water masses were about 90% saturated, indicating recent contact with the surface and low oxygen utilization.

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Figure 1. Location of anchored sensing systems and oceanographic stations occupied by USCGC STATEN ISLAND, 1-21 July 1968. •=oceanographic stations, A=anchored instrument package, +=time-series current station, =Norton Sound station.





Figure 3. Distribution of temperature (°C) along section H–H', from USCGC STATEN ISLAND 8–11 July 1968. Contour interval 1.0°C except for —0.5°C contour.



Figure 4. Distribution of temperature (°C) along section G-G', from USCGC STATEN ISLAND 11-12 July 1968. Contour interval 1.0°C.



Figure 5. Distribution of temperature (°C) along section F-F', from USCGC STATEN ISLAND data of 13-14 July 1968. Contour interval 1.0°C.



Figure 6. Distribution of temperature (°C) along section E-E', from USCGC STATEN ISLAND data of 15-16 July 1968. Contour interval 1.0°C.





Figure 7. Distribution of temperature (°C) along section D-D', from USCGC STATEN ISLAND data of 17-18 July 1968. Contour interval 1.0°C.



Figure 8. Distribution of temperature (°C) along section C-C', from USCGC STATEN ISLAND data of 18-19 July 1968. Contour interval 1.0°C.



Figure 9. Distribution of salinity (%) along section H-II', from USCGC STATEN ISLAND data of 8-11 July 1968. Contour interval 0.5%, except for 24.0-32.0% contours.





Figure 10. Distribution of salinity (%) along section G-G', from USCGC STATEN ISLAND data of 11-12 July 1968. Contour interval 0.5%.



Figure 11. Distribution of salinity (‰) along section F–F', from USCGC STATEN ISLAND data of 13–14 July 1968. Contour interval 0.5‰.



Figure 12. Distribution of salinity (‰) along section E-E', from USCGC STATEN ISLAND data of 15-16 July 1968. Contour interval 0.5‰.



Figure 13. Distribution of salinity (‰) along section D–D', from USCGC STATEN ISLAND data of 17–18 July 1968. Contour interval 0.5‰.



Figure 14. Distribution of salinity (‰) along section C-C', from USCGC STATEN ISLAND data of 18-19 July 1968. Contour interval 0.5‰.



Figure 15. Horizontal distribution of sea surface temperature (°C) from USCGC STATEN ISLAND data of 8–19 July 1968.



Figure 16. Horizontal distribution of surface salinity (%) from USCGC STATEN ISLAND data of 8-19 July 1968.



Figure 17. Horizontal distribution of temperature (°C) at depth of 20 meters from USCGC STATEN ISLAND data of 8-19 July 1968.



Figure 18. Horizontal distribution of salinity (%) at depth of 20 meters from USCGC STATEN ISLAND data of 8-19 July 1968.



Figure 19. Current velocity at a depth of 5 meters at stations occupied by USCGC STATEN ISLAND, 8-19 July 1968.



Figure 20. Current velocity at a depth of 20 meters at stations occupied by USCGC STATEN ISLAND, 8-19 July 1968.



Figure 21. Distribution of dissolved oxygen (ml/l) along section H-H', from USCGC STATEN ISLAND data of 8-11 July 1968. Contour interval 0.5 ml/l.



Figure 22. Distribution of dissolved oxygen (ml/l) along section G-G', from USCCC STATEN ISLAND data of 11-12 July 1968. Contour interval 0.5 ml/l.



Figure 23. Distribution of dissolved oxygen (ml/1) along section F-F', from USCGC STATEN ISLAND data of 13-14 July 1968. Contour interval 0.5 ml/l.



Figure 24. Distribution of dissolved oxygen (ml/l) along section E-E', from USCCC STATEN ISLAND data of 15-16 July 1968. Contour interval 0.5 ml/l.





Figure 25. Distribution of dissolved oxygen (ml/l) along section D-D', from USCGC STATEN ISLAND data of 17-18 July 1968. Contour interval 0.5 ml/l.



Figure 26. Distribution of dissolved oxygen (ml/l) along section C-C', from USCGC STATEN ISLAND data of 18-19 July 1968. Contour interval 0.5 ml/l.



## APPENDIX A

### **OCEANOGRAPHIC DATA**

A complete description of the codes utilized in the tabulation of oceanographic station data can be found in National Oceanographic Data Center publication M-2, Processing Physical and Chemical Data from Oceanographic Stations. (Rev. August 1964, supplement issued May 1966.)

To facilitate use of the oceanographic station data listing, entry headings which are not self-explanatory are described below.

Depth to Bottom	Corrected or uncorrected sounding in meters.
Max. Depth of Samples	Depth of deepest sample to nearest multiple of one hundred meters.
Wave observations:	
DIR	Rounded to nearest multiple of ten degrees.
HGT	In increments of $\frac{1}{2}$ m. Sum of 5 meters plus increments of $\frac{1}{2}$ m if 50 is added to direction.
PER	If numerals 2 through 9 are entered, period in seconds is twice the numeric entry or $2 \times$ (numeric entry) + 1. For other entries see WMO Code 3155.
SEA	Sea state according to WMO Code 3700.
Weather Code	If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.
Cloud Code	
Type	Cloud type according to WMO Code 0500.
Amount	Cloud amount in eights. Entry of the numeral 9 indicates cloud amount could not be estimated.
Water	
Color Code Trans	Color according to Forel-Ule scale. Transparency in whole meters as determined by Secchi disc.
Wind	
Dir	Rounded to nearest multiple of ten degrees.
Speed or Force.	If preceded by letter S, wind speed in knots; if preceded by letter F, wind force according to Beaufort scale.
Barometer	Barometric pressure given in tens, units and tenths of millibars.
Air Temp. °C	Air temperature to tenths of a degree centigrade.
Vis. Code	Visibility according to WMO Code 4300.
No obs. depths	Number of observed levels associated with the station.
Messenger time	Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.
Card type	OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.

Depth (m)	Depth to nearest meter. A postscript T indicates depth was obtained thermometrically; $\Sigma$ indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
T°C	Temperature to hundredths of a degree Centigrade.
S ‰	Salinity in parts-per-thousand.
SIGMA-T	Entered to hundredths.
Specific-volume	Multiply entry by $10^{-7}$ to obtain specific-volume anomaly in cubic centimeters per gram.
Anomaly — $\times$ 107	
∑∆Dyn. M × 10 <sup>3</sup>	Multiply entry by $10^{-3}$ to obtain anomaly of dynamic height in dynamic meters referenced to the sea surface.
Sound Velocity	Sound velocity according to Wilson's formula entered to tenths of a meter per second.
O <sub>2</sub> ml/l	Dissolved oxygen in milliliters per liter entered to hundredths.
PO <sub>4</sub> -P µg-at/1	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total-P µg-at/l	Total phosphorus in microgram-atoms per liter entered to hundredths.
NO <sub>2</sub> -N µg-at/1	Nitrite-nitrogen in microgram-atoms per liter entered to hundredths.
NO <sub>3</sub> -N µg-at/l	Nitrate-nitrogen in microgram-atoms per liter entered to tenths.
SiO <sub>4</sub> -Si µg-at/l	Silicate-silicon in microgram-atoms per liter entered to whole units.
pH	Entered to hundredths.

# Table 1.—Observed and interpolated oceanographic data from stations taken by USCGC STATEN ISLAND, 8–19 July 1968, prepared from NODC Listing No. 31–1270.

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		228		089	D 0000	0811	32372	2522	ç	027586	5 0000	)	1479	9 1	108							
		228		OBS	5 0005	0810	32374	2522					1480	0 1	706							
				SI	rD 0010	0803	3237	2523	C	027483	3 0026	3	1479	8 7	708							
		228		08:	5 0010	0803	32373	2523					1479	8 7	708							
		220		51	D 0020	0152	3299	2642	C	016188	3 0049	>	1457	7 6	570							
		228		OBS	0020	0152	32988	2642					1453	7 6	70							
		228		085	0025	0148	32992	2642	0	016147	7 0066		1453	6676	60							
		228		OBS	6 0030	0149	32991	2642		010141	, 0000	•	1453	7 6	67							
		228		OBS	0035	0147	32991	2642					1453	7 6	67							
		228		085	0040	0147	32993	2643					1453	8 6	64							
		220		51	D 0050	0149	3299	2642	0	016149	9 009E	3	1455	1 6	65							
		2 2 B		OBS	0050	0149	32991	2642					1454	1 6	65							
	erver 1																					
CTRY	ID.	SHIP	LATITU	Dł	LONGITUDE	SQUARE	STATION TIM	E YEAR			ATOR'S	DE		EPTH	OUSE	WAVE RVATIONS	WEA- THER	CLOUD		4	ATION	
CODE	NO.		•	1/10	* '1/10 <sup>C</sup> Z	10° 1°	MO DAY HR.	1/10	_	ND, N	UMBER	BOT	110M 5'A	MPL'S	O III.	HGT PER 51	A CODE	TYPE AM	1	N	UMBER	
31	1270	s1	6357	BN I	172136W	234 32	07/10/00	0 196	8 6	SZ 003	3	00	64	00	29	1 2	×1	32			0003	
						COLOR	TRANS DUD	SPEED ME	RD-	DRY	WET COT	NO	ID. 185- 08	SPEC 14								
						CODE	unt DIR.	FORCE (m	ibs)	3013	BULE	DU	PTHS									
							31 5	514 0	55	090	090 8	1	1									_
		MESSENGE TIME 0	CAST	CAF	DEPTH ONI	5 1	s •/	SIGMA-1	59	CINC VOLUA	T DYN. A	A.	SOUND	0	2 ml/1	PO <sub>4</sub> -P	TOTAL-P	NO2-N	NO3-N	\$104-51	pМ	s C
		HR 1/10									x 103	-	veroch	"		yg • 61/1	yg = af/1	1/10 - DV	µg = ot/1	µg • 61/1		C
	1		[ ]						1		1	1				1 1	1		I			11
		0.0.0		S	rD 0000	0822	3205	2495	C	030107	7 0000	)	1479	9 7	705							
		008		085	5 0005	0820	32063	2496					1480	ó i	707							
				SI	rD 0010	0352	3268	2602	C	020022	2 0025	5	1461	9 7	736							
		008		08:	0010	0352	32684	2602					1461	9 6	73							
		008		S	ID 0020	0134	3300	2644	C	015990	0043	3	1452	9 6	63							
		008		08	s 0020	0134	32999	2644					1452	9 6	663							
		008		OBS	5 0025 TO 0030	0130	32998	2644	0	015970	9 0059	,	1452	9 6	67							
		008		08	5 0030	0131	32998	2644					1452	9 6	67							
		008		OB:	\$ 0035	0130	32998	2644					1453	0 6	67							
		008		083	5 0040	0133	33002	2643					1453	2 6	564							
		000		S	TD 0050	0126	3300	2645	C	015911	0091		1453	1 6	60							
		008		OB:	5 0050	0126	33003	2645					1453	1 6	60						2	25

REFERENCE CITY IO. COOL NO. 311270	SHIP CODE	6354	0E 1/18 N	LONGITI	UOE 1/19 6 W	Deul T BNDCTB	×/ 25 SQU/ 10* 2 3 4	DEN ARE 1' 32 WAT COLOR CODE	STATE E0 07 1 E8 T6ANS	ON T SMTI AT T OR	11ME HE,1/10 0.2.0 WINO SPEED OB FOIC	TEAR 1968 BAR METI E (mbi		ODGINA ST. NL OO 4 LIE TEM DRY ULB	IDR'S ATION IMBER P. °C WET BULR	VIS. CODE	DEPTH TO BOTTOM 0053 NO. 085. 02PTHS		S DR 2 B CIAL (ATIONS	WAVE SERVATION INGERSE	INS SIA	WEA- THER COOL X 1	CLOUC COOLI TIM AN	17	3	NOBC ITATION NUMBER	
							[			30	514	05	5 0	94	083	8	10				.						T,
	HR 1/1	ND.	C A I		)EPTH &	mŀ	T	2	S	•/	\$2G	M A-1	ANOM	AUT-ETBI	Ö	1 10 <sup>3</sup>	. VELO	DEITY	03 ml/l	PO4-	•/1	FE - 01/7	NO3-N F8 - 61/1	ND3-N 98 - 80/1	99 = 61/ 51 O 4 = 5	t ] ₽H	00
									210	0	26	0.0	00.3	0.051	1	000	14	749	768								T
			5	TO	0000	)	06	594	319	8	25	08	002	8421	0	000	1.4	747	768								
	02	4	OB:	5	0000		00	594	217	02	20	22					14	776	706								
	02	4	OB:	5	0005	2	08	532	320	00	20	22	00.2	0206	0	0.26	14	400	007								
			5	TO I	0010	)	0.	511	320	1 2	20	00	002	0200	0	025	1.4	400	007								
	02	4	OB:	5	0010		0.	110	277	10	20	21					1.4	525	075								
	0.2	4	OB:	5	0015	2	01	100	220	10	20	64	0.01	5036	0	043	14	518	660								
	0.0		- 5	10	0020	) \	01	109	270	96	20	44	001	2950	0	045	1.4	518	660								
	02	4	08:	5	0020		01	104	267	00	20	4.6					14	517	652								
	02	4	003	5	0025	, \	01	103	220	0.77	20	46	0.01	5802	0	050	1.4	517	648								
	0.7		000		0030	, ,	01	103	220	00	20	40	001	2002	0	0,0,0	14	517	040								
	0.2	4	OB:	5	0030		01	103	329	99	20	40					14	518	646								
	02	4	08:	5	0035	2	01	100	329	91	20	40					14	510	646								
	02	4	08:	5	0040		01	104	220	70	20	46					1.4	520	649								
	02	4	08.	2	0043	,	0	104	563	73	20						14	2.0	047								

<b>REAF</b>	ENCE	SHOP	LATITUDE			-	5	:50	DEN	5TA	TION	TIME		L	ONGIN	OTAN	1*5		DEPTH	MAX. DEPTH		A N		-		WEA-	CLO	00			NOOC	
000	ID. NÖ.	000	LATITU *	1/10	LONGITU	1/10	ă 1	0° 1	1.	MD I	DAY !	HR.1/10	TEAR	CRUI	32	STA 11 NUM	ON BER		NOTTON	OF S'MPL"	5 0	IR. H	GT N	10 31	-	COOL	179	ANT			NUMBER	
31	1270	51	6351	N	17159	W	2	34	31 WAT	TRAN IER	10 5 08.	040 WINO	8001 848 9 840 9 8 8	BS 0- ER 1	2 00 AIR 18 DRY BULB	5 MP. 1		115.	040 NO. OBS. DEPTHS	00 SPE OBSERV	CIAL	13   1 IN S	1 2			Хl	3	3			0005	
											35	515	05	0	095	0	36 8	3	08						*							
		MISSING TIME	CAST NO.	C A T Y	RD 0	PTH (m	1	T	τ		s •/	sic	MA-T	SPEC:	IFIC VOLI	UMT 1187	ΣΔ 01N.	о 0 <sup>3</sup>	SOL	UÃO CITY	01	m1/1	PO. FS *	α=₽ α1/1	101	7AL-P 1+41/1	NO3- 29 - 1	-N и/I	NO3-N 99 - et/l	5) O 4 -5 1/9 + 6t	n 1 pH	100
										-							-			İ												T
				S	το σ	0000		06	83	3 2	14	25	21	00	2767	0	000	0	14	746	70	)5										
		03	9	QB.	5 0	000		06	83	32	135	25	21						14	746	70	)5										
		03	9	08	5 0	005		05	27	32	383	25	60						140	687	79	97										
				5	το (	010		01	23	32	48	26	03	00	1990	8 (	002	24	14	515	94	• 0										
		03	9	OB	s (	010		01	23	32	475	26	03						14	515	94	+0										
		03	9	08	5 (	015		00	28	32	550	26	14						144	474	90	)9										
				5	το σ	020		00	18	32	82	26	36	00	1671	. 7	004	2	144	474	71	13										
		03	9	OB	5 0	020		00	18	32	820	26	36						14	474	71	13										
		03	9	OB	s (	025		00	18	32	832	26	37						144	475	70	) 8 (										
				5	το σ	030		00	17	32	83	26	37	00	1662	26	005	59	144	476	7(	)5										
		03	9	OB	s (	030		00	17	32	790	26	340								70	)5										
		03	9	08	5 0	035		00	18	32	830	26	37						14	477	70	)6										

EFERENCE CTRY ID. C	SHIP COOE	LATITUDE	LONGITUDE	SOUARE	STATIO (G)	N TIME AT)	YEAR	O RIG CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAS. OEPTH OF	015	WAVE ERVAD	ONS	WEA- THER COOL	CLOI	UD DES	NODC STATION NUMBER
311270	51	6348 N	17152 W				1968 Meter I Umbs1		0.6 VEMP. TC BULB	NO. OLI DEPTHS	00 SPECI O ISERVA	29 IAL TIONS	1 2	1	×1	3	4	0006

COOL	(III)	DIR,	POTCI	(mbs)	9019	BULB	000	DEPTHS	OBSELVATION
		1							

				1991	200 103	2 1092 10	02 0								
MISSINGE CAST	C ARD TYPE	DEPTH (m)	T °C	5 */	SIG MA-T	TRECIFIC VOLUME	∑ △ O DYN. M. X 10 <sup>3</sup>	SOUND VELOCITY	Og mi/l	PO <sub>4</sub> =P µ8+a1/1	101AL=P 48 - 41/2	NO2=N #8 = 80	NO3=N #8 + al/l	5) D 45i 48 - 41/1	BH C
					1										
	510	0000	0667	3242	2546	0025333	0000	14744	754	1			e		
053	085	0000	0667	32421	2546			14744	754						
053	085	0005	0669	32421	2545			14745	749						
	STD	0010	0596	3243	2555	0024406	0025	14717	794						
053	0B5	0010	0596	32433	2555			14717	794						
053	085	0015	-0002	32718	2629			14463	785						
	510	0020	-0022	3273	2631	0017213	0046	14455	735						
053	OBS	0020	-0022	32732	2631			14455	735						
053	085	0025	-0026	32740	2632			14454	721						
	510	0030	-0025	3274	2632	0017136	0063	14455	724						
053	085	0030	-0025	32740	2632			14455	724						

REFI	ID. NO.	SHIP CODE	LATITU	ICE 1/10		10" 1"	STATION IGA	N TIME AT) 1 [HR_1/10	TEAR	CRUISE NO.	STAT	DR*S FION ABER	OEPTH TO BOTTOM	MAL DEPTH OF S'MPL	085 5 Dit.	WAVE SERVATION	S THER SEA COOL	CLOUD CODES	7	S	NODC TATION UMBER	
31	1270	SI	6253	1N	169183w	2 3 3 2 9 w/	07 10 ATER t TBANS C	197 WING R. OF	D MET	852 0- 2 1 1 1 1	007 IR TEMP, JLB B	VET COD	0039 NO. 085. 02PTHS	00 SPE OBSERV	CIAL ATIONS	o x l	X4	x 9	1		0007	
		MESSENG TIME HR 1/10	CAST	CAR		J T	s •/	9 <u>51</u>	5 06 5ma-1	5 0 SMCIFIC ANDM	VOLUME	58 1 \$ 0 0 0 1 x 10 <sup>3</sup>			02 m1/1	PO4=P y8+41/	F07AL=P 210+91	NO2=N 98 - et/l	NO3-N NO3-N	51 O <sub>4</sub> = 51 29 = 01/1	pН	500
		19 <sup>°</sup> 19 <sup>°</sup> 19 <sup>°</sup> 19 <sup>°</sup>		ST OBS OBS ST OBS OBS ST OBS OBS	D 0000 0005 D 0010 0015 D 0020 0020 0025	0275 0275 0254 0035 0035 -0018 -0037 -0037 -0045	3264 3263 3263 3268 3267 3269 3270 3269 3269	9 20 3 20 5 20 3 20 8 20 8 20	505 506 524 528 529 529	001 001 001	9714 7908 7413	0000 0019 0036	14 14 14 14 14 14 14 14	583 583 575 478 455 447 447 444	1038 1038 1028 814 814 757 754 754 754 720							
		19	7	ST OBS OBS	0 0030 0030 0035	-0050 -0050 -0050	3270 3270 3270	20	530 530 530	001	7335	0054	144	443 443 444	715 715 716							
REFE CTBY CODE	IO. NO.	SHIP CODE	LATITU	DE 1/10	LONGITUDE	M/ 250EN SOUARE	STATION (GA	1 TIME 11 [HR,1/10	YEAR	CRUISE NO.	RIGINATO STAT	NICH ABER	DEPTH TO BOTTOM	MAX. DEPTH OF S"MPL"	OIS S OIR	WAVE ERVATION	S WEATHER CODE		T	S	NOOC TATION UMBER	
31	1270	SI	6249	N	16858 w	233 28	07 10	217	1968	BS2	008	T 1	0039	00	00	0 x	X4	X 9			0008	

												no.									
				COLOR	TRANS. SH1	OR,	SPEED OL FORCE	M ETE	R DRY BULB	W BU	ET CODE	OBS. GEPTHS	OBSER	VATIONS							
						20	S12	07	5 077	0	57 1	07									
HETTINE OF NO.	T CARD TTPE	DEPTH (m)	T	r	. 5	•/	SIGM	A - T	SPECIFIC VOL	UME 167	₹ △ 0 DYN, M, x 10 <sup>3</sup>	SOL	UHD DCITY	02 ml/t	PO4-P 28 - 81/2	107AL=P #8+ 81/1	NÔ2=N µg = o!/3	NO3-N vg - a1/i	\$1 O4-\$1 99 - 01/1	pH	200
																					Π
	STD	0000	0	138	326	6	261	6	001860	6	0000	14	523	882	'			•			1
221	085	0000	0	138	326	58	261	6				14	523	882							
221	OBS	0005	0	143	326	58	261	6				14	526	888							
	STD	0010	0	033	326	7	262	3	001797	5	0018	14	477	826							
221	OBS	0010	0	033	326	65	262	3				14	477	826							
221	OBS	0015	-0	003	326	69	262	5				14	462	777							
	STD	0020	-0	009	326	7	262	5	001778	0	0036	14	460	758							
221	OBS	0020	-00	009	326	65	262	5				14	460	758							
221	OBS	0025	-00	019	326	72	262	6				14	456	747							
	STO	0030	-00	035	326	8	262	7	001757	7	0054	14	449	735							
221	085	0030	-00	035	326	77	262	7				14	449	735							

REFERE	NCE			1		· · · · · · ·	SOEN	STAT				T	ORIGIN	IATO	15	01		MAX,	T	WAVE	- wra	Teloun	1			
CTRY	10.	SHIP	LATITU	DE	LONGITUDE	501	JARE	1	GMTJ		YEAR	CRU	ISE	STATI	DN	1	10	OEPTH	085	SERVATIONS	THER	CODES		51	ATION	
000	NO.	0001	•	1/10	1/10	2 10*	1.	MOIO	HYAC	R.1/10		N	0. 1	NUM	BER	BOT	TOM	S'MPL'S	DIR	HGT PER SE	A CODE	TTPE AM	1	N	D AN BER	
311	270	ST	6245	N	16841 W	233	28	07 3	10/2	236 1	968	B	52 00	9		00	44	00	18	1 2	X1	31			0009	
~			02.0				WA	TER	V	VINO	BAR	2	AIR TE	MP. 1	5	IN	0.			(						
							COLO	TRANS	OIR	SPEED	METE	R	DRY	w	T COD	0	BS.	OBSERV	ATIONS							
							COOL	(m)		PORCE	(mb e		BULS	10	LB	100										
								1	17	S08	07	6	061	05	5 7	0	9									
		MESSENGI	CAST	CAR			 	s	•/	SIGM	A – T	SPEC	INC YOLU	ME		2	sou	ND	0.1 ml/l	PO4=P	TOTAL	NO2-N	NO3-N	5104-SI	. 14	1
		HR 1/10	T HO.	TYP:			-					AN	OM AL7-31	187	x to <sup>3</sup>		VELO	CITY		$\lambda B + 42/1$	µg = e1/1	µg = at/1.	yg = at∕t	yg = at∕l	10	c
				ST	ວ່ວວວວ	0	205	326	54	261	0	00	01917	7	0000	) <sup>'</sup>	145	53	901							
		239	9	OBS	0000	0	205	326	41	261	0						145	53	901							
		239	9	OBS	0005	0	196	326	540	261	1 1						145	49	896							
				ST	0 0010	0	180	326	4	261	2	00	01900	7	0019	9	145	43	926							
		239	9	OBS	0010	0	180	326	641	261	2						145	43	926							
		239	9	OBS	0015	0	017	326	547	262	2						144	71	816							
				ST	0 0020	0	003	326	55	262	3	00	01796	2	0038	3	144	65	823							
		239	9	OBS	0020	0	003	326	648	262	3						144	65	823							
		239	9	OBS	0025	-0	001	326	48	262	3						144	64	814							
				ST	0 0030	0	000	326	55	262	3	00	01793	0	0056	5	144	65	811							
		239	9	085	0030	C	000	326	550	262	3						144	65	811							
		230	9	OBS	0035	-0	002	320	>54	262	4						144	65	806							
		23	9	OBS	0040	- 0	003	326	554	262	4						144	66	801							

REFERENCE	SHIP	LATITU	08	LONGTUDE		E LI	·A, 21 SQU	DEN	574	TION (GMT	TIME	7	'E A R	C BLUES	ONGIN	ATDR	S N	T	DEPTH TD	MAL	e Di		VE A TION	5	WEA- THER	CLOUD		s	ATION
C006 HD.	CODE	•	1/10	•	1/10	101	10*	1.	MD	OAT	HR.1/	10		NO.	Ň	UMI	ER	1	DITOM	STMPL	S OR	MG	P28 ]	SEA	CODE	17 PE A 14	1	H	UMBER
31127	olsil	6240	N	168	21 W		233	28	07	11	019		968	BS2	010	2		0	037	00	18	1	2		Х4	X 9	1		0010
								A W	rea .		WIND	)	BARC		A IE TEA	AP. 10	<u> </u>		NO.	5.81	CIAL	1							
								COLOR	18,4 H 8=2	L DI	- 1P	910 De Dece	AN ET E Gmba	1 I	DRY ULB	WE BUL		0	DIS. DEPTHS	DESER	ATIONS								
										17	s	7(	08	3 0	75	07	z 0		07			1							
	MESSENGI FLME HR 1/10	CAST NO.	CAR	D ł	DEPTN	(m.)	T	٣		· ·/		SIG M /	A-T	INCO	C VOLU	41 17	₹ △ DYN. ± 10	Д.	SOL		Dyml	1	104=P 8 * 81/1	10	01ALP 9 = #1/1	ND3-H F8 = 81/1	ND3=N 28 - aV1	51 O g 5- 2 g - 01/1	рH
																								1					
	1		sr	D	000	С	00	524	32	45	2	255	4 <sup>'</sup>	002	4566	s È	000	0	141	727	704	1			,		•		
	018	3	OBS	5	000	0	0	524	32	454	2	255	4						141	727	704								
	018	3	085		000	5	0.	424	32	503	2	258	0						146	546	865								
			ST	0	001	C	0	153	32	60	- 2	261	0	001	9172	2	002	2	14	531	942								
	018	3	085		0010	0	0	153	34	596	2	2610	0						14	531	942								
	018	3	OBS		001	5	00	9.9	32	618	2	261	6						14	507	917								
			ST	D	002	С	00	085	32	63	- 2	261	7	001	8524	4	004	1	14	502	880								
	018	3	OBS	j.	0020	С	00	85	32	628	2	261	7						149	502	880								
	018	3	OBS		002	5	00	082	32	626	2	261	7						14	501	878								
			ST	0	003	С	00	081																					
	016	4	OBS		0030	0	00	180																					

DIFFERENCE	SHIP	LATITU	Dł	LONGITUDE	Delf MOC 19	SQUARE	N .		GMT	HR,1/10	YEAR	CRUISE ND.	ORGIN/	ATION UMBER		DEPTH 10 IOTIO	MADEPT DEPT S'MPI	L H OB	WA SEEV/	VE ATIONS	WE THI CO	A - IR DI	CLOUD CODES		51 51 H	IODC ATION UMBER	
311270	SI	6234	N	16804 W		233 2	8	07	11	037	1968	BS2	01			0029	00	) 19	1	2	X	4	X 9			0011	
							WAT	1R	1	WIND	_ BAR	»- L	AIR TEA	01.10	VIS	NO.	50	ECIAL									
						00	DE	TRANS.	DR	1 POICE	MET (m)	ER   11   1	DRY	WET	coo	DEPTH	OBSER	VATIONS									
									00	S00	08	7 0	72	071	0	06											
	MESSENGI TIME MR 1/10	CAST	CAR	D DEPTH	(m I	1 10		5	•/	SIGA	1 A A - 1	SPECIFIC	C VOLU	48 ₹ 17 D	∆ D тн. м х 10 <sup>3</sup>	. SC	UND LOCITY	02 ml/	Р 21	04-P 8 * #1/1	101AL- 25 - 81	7	HD3-H 98 - 01/1	ND3-N 29 - 01/1	51 O e 51 29 - 61/1	вH	100
																											T
	·		ST	0 000	0	067	0	322	2.8	25	34	002	6454	0	000	14	743	725									
	04	2	085	000	0	067	0	322	276	25	34					14	743	725									
	04	2	OBS	000	5	060	9	322	277	25	42					14	719	734									
			ST	D 001	0	024	5	321	39	25	87	002	138.	7 0	024	14	568	800									
	04	2	085	001	0	024	5	32:	388	25	87					14	568	800									
	04	2	OBS	001	5	022	7	323	392	25	89					14	561	802									
			ST	0 002	0	022	6	323	39	25	89	002	1234	• 0	045	14	562	799									
	04	2	OBS	002	0	022	6	323	390	25	89					14	562	799									
	04	2	OBS	002	5	022	4	32:	393	25	89					14	1562										

REFER	ENCE	SHIP	1.477711	01	IDNGITI	101	E 77	25DEN	STA	TION	TIME	ATA		ORIGI	NATD	rs -	1	DEPTH	MAT	1 015			EA-	CLOUD			NODC	
C 001	HQ.	CODE	•	1/10		1/10	10	1.1.	MO	DAY	HR,1/10			NO,	NUM	DH IER	80	NOTION	DF S'MPL	S DIR.	HGT PI 1	IA CI	DE	TTPL A WT			NUMBER	
31	1270	SI	6232	N	16742	2 W	23	3 27	07	11	070	196	8	BS2 01	12		0	029	00	23	0 2		(4	X 9			0012	
								WA	TER		WIND		ARO	AIRT	EMP. '	C	. Г	NO.		10141								
								COLOR	TRAN (m)	L DIR	01 01 0101	0 M	1973 mbal	E DRY BULB	W RU		i o	DES. DEPTHS	OBSERV	VATIONS								
										00	500	) 0	93	083	0	3 1		06										
		ALEERING TIME H.R. 1/1(	HO.	CARD	D	EPTH (m		r °C	1	•/	sic	; M A - 1		SPECIPIC VOL	U A I 110 <sup>9</sup>	₹ ∆ I DYN. 1 10	D м.	SOL VELC	UND DCITY	0 2 ml/1	PO4=P 22 + 81/1	101A #8 *	L=P	ND3-N 28 - 81/1	NO3=N 29 = 81/1	51 Og = 1 28 - 10	n g BR	200
													Ţ					1										T
				ST	D	0000		8070	32	31	25	531		002670	7 (	0000	С	14	758	713								
		06	7	OBS	(	0000		0708	32	306	25	531						147	758	713								
		06	7	OBS	(	0005		0628	32	349	25	545						147	728	715								
				ST	0 (	0100		0350	32	4 I –	25	08		002206	55	002	4	146	514	786								
		06	7	085	(	0100		)350	32	411	25	08						146	614	786								
		06	7	OBS	(	015		0190	32	499	26	00						145	546	822								
				ST	0 0	020	1	2189	32	50	26	00		002014	0	004	5	14	547	826								
		06	7	085	(	020		0189	32	500	26	00						145	547	826								
		0.6	7	085	0	025		0187	32	494	26	00						145	547	824								

REP	IQ.	CE SHIP LATITUDE LONGITU				Self t	W/ 21 SQU	DEN	STA	TION	TIME 3	YEA		O C#UISE	NGIN /	TATION		DEPTI TO	H c	MAL DEPTH OF	01	WA' SERVA	TION	s	WEA- THER	CLOUI	2	s	NDDC	
CODE	HD.		•	1/10	<u>'</u> ''	/10	10'	1.1.	MDI	DAY	HR.1/1	5		NO.	N	UMBER		10110	M 5	S"MPL"S	0#.	HGI	P18 1	LA	COUL	TTPI AF	0	N	UMBER	
31	1270	SI	6226	N	16726	w	233	27	07	11	090	196	8	852	013	3		003		00	00	0	x		Х4	X 9			0013	
								WA1	ER		WINO		ARO-	A	UR TEA	19. 70	-	NO.		STECK	A 1									
								COLOR	TRAN 1 tm)	DIR	57E	CE C	ETER	0	JLB	WET BULB	COD	DEPTH	15 0	BSERVA	TIONS									
										00	SO	0 1	00	08	33	072	0	06												
		MESSENGI TIME HR 1/10	CAST NO.	CAR SYP	0 E DEP	(H (m)	r	°C	s	•/	\$1	GMA-1		SPECIFIC	VOLUJ	AL O	∆ 0 тн. м х 10 <sup>3</sup>	4 SI	DUH		02 m1/1	Pi Pi	D <sub>4</sub> ⇔P ⊢ α1/1	10 /1	TAL-P	NO2+N P8 - 61/1	NO3-N 28 + 01/3	51 Od -51 199 - 61/1	₽Н	
									1		_																			1
		1		ST	0 0	00	0	719	32	02	2	508		0028	3954	• ° 0	000	1	475	59		1		1		1		1		ľ
		08.	7	085	; 00	000	0	719	32	024	- Z	508						1.	475	59										
		08	7	085	5 00	05	0	652	32	026	2	516						14	473	33										
				ST	D 00	10	0	139	32	32	2	589		0021	1206	5 0	025	1	452	20										
		08	7	085	; 00	10	0	139	32	317	2	589						1.	452	20										
		081	7	085	00	15	0	125	32	321	2	590						14	451	15										
				ST	D 00	20	0	124	32	32	2	590		0021	1077	0 7	046	1	451	15										
		08	7	085	00	20	0	124	32	322	2	590						1.	451	15										
		08	7	085	00	25	0	122	32	325	2	591						1	451	15										

STD

0137 3236

0137 32359 2592

2592

14523

REFI	RENCE	<b>E-1110</b>				. # W/	RSDEH	STA	TION T	ME			ORIGIN	ATOR'S		QEPTH	MAL		WAV	E	WEA-	CLOUO	[		NODC	
TET	ID.	CODE	LATITU	DE	LONGITUDE	Bốl 20	UARE		IG MTI	1	YEAR	CRUI	SE	TATID	4	10	OF	015	ERVAT	IONS	THEA	CODES			STATION	
ODE	ND.			1/10	° 1/10	P 10*	1.	MO	DAY H	R.1/10		NC	).	NUMBE	R	10110	S'MPL'S	Cu.	HGTP	ER SE	A COOL	TTPE AM	1		NUMBER	
31	1270	SI	6222	N :	16707 W	23:	3 27	07	11 1	.05	1968	85	2 01	4		0034	00	00	o x		X4	X 9	1	- 1	0014	
							w.	ATER	¥	IND		0. L	AIR TE	MP. °C		NO.	5.857									
							CDLO	R TEAN	S. OIR.	SPEEO OB PORCE	MET (mbi	ER 1)	DRY BULB	WET	COD	OBS. DEPTHS	OBSERV	ATIONS								
									00	S00	09	5	069	064	+ 0	07										
		MESSENGI TIME HR 1/10	CAST HO.	C ARD TYPE	DEPTH 0	11	r °c		s •/	SIGA	MA-T	SPECI	MALT-1	IM E D <sup>P</sup>	₹ △ D 01H. M X 10 <sup>3</sup>	SDI VELO	DAL TTI DC	0 2 ml/l	PO PR -	4P 01/1	TOTAL-P #8 - 61/1	NO2-N vg - et/l	NQ3-N yg = ot/1	51 O4- 99 - 01	Si pH	S C C
				ST	0000		829	30	71	23	89	00	4023	9 (	0000	14	785	692								
		110	)	085	0000	(	829	30	707	23	89					14	785	692								
		110	)	085	0005	(	814	30	831	24	01					14	781	690								
				ST	0010	(	)519	31	.62	25	00	00	2966	9 (	035	14	675	686								
		110	)	085	0010	(	519	31	618	25	00					14	675	686								
		110	)	OBS	0015	(	142	32	345	25	91					14	523	776								
				ST	0020	(	139	32	36	25	92	00	2090	9 (	060	14	523	785								
		110	)	OBS	0020	(	139	32	356	25	92					14	523	785								

REFEI	ENCE	SHIP				- E   M	RSDEN	STA	TION	IIME			DRIGIN	ATDR'S		DEPTH	MAX		WAVE	WEA-	CLOUD		N	ODC	
CTRY	ID. NO,	1000	+	1/10	1/10	10	1 1.	MD	DAT	HR.1/10	TEAR	CRU	ISE S	STATION HUMBER		BOTTON	S'MPL	S CIL	HGT PERT SE	CODE	TTPE AM	-	ST NU	ATION JMBER	
31	1270	SI	6218	N	16651 W	23	3 26	07	11	127	1968	BS	2 01	5		0032	00	36	0 2	X4	x 9	1	(	015	
-							WJ	ATER		WIN D		a. L	AIR TE	MP. C		NO.		C144							
							COLD	R TRAN	S. DIR.	SPEED OR FORCE	M ET (mb	ER s)	DRY BULB	WET BULB	coo	DEPTHS	DESER	A TION S							
									33	S05	09	1	083	080	5	06									
		MESSENG TIME HR 1/10	CAST	CAR	D DEPTH G	1	3° 1		s •4.	SIGA	T-AN	SPEC	IFIC VOLU	JM€ ₹ 10? D	△ D YH, M X 10 <sup>2</sup>	SO VEL	UND DCITY	O3 wi/i	PO a=P µq + 61/1	{D1AL=P µg = 01/1	NO2-N µg - at/l	NO3-N 29 - 01/1	\$1 O4-\$i vq = o1/1	рМ	S C C
																									TI.
		•		st	D 0000		1122	23	70	18	01	00	9670	2 0	000	14	806	649							·
		129	9	085	0000		1122	23	703	180	01					14	806	649							
		12	9	085	0005		0434	30	094	23	88					14	618	689							
				ST	D 0010		0410	31	40	24	94	00	3027	1 0	063	14	626	783							
		12	9	085	0010		0410	31	395	24	94					14	626	783							
		12	9	085	0015		0179											784							
				ST	D 0020		0178	31	40	25	13	00	2846	0 0	093	14	527	784							
		12	7	085	0020		0178	31	395	25	13					14	527	784							
		12	9	085	0025		0173	31	392	25	13					14	525	788							

	ERENGE				4/2	OEN	ST.	TION	TIME			DRIGINATORS	OTPTH	MAX,		WAV	1	WEA	CLC	DUO	NOOC
C117	10.	COOL	LATITUOE	LONGITUOE	sou		110	IGMI	1	TËAR	CRUISE NO.	STATION NUMBER	BOTTOM	OF S'MPL'S	0.0	THGT I	TR SEA	COOL	178	TANT	NUMBER
			1/10	1/14	10		~0	UAT	HR. 1719								1				 
131	1270	SI	63185N	16838 #	233	38	07	11	221	1968	852	016	0016	00		ιı	1 1	X4	I X	19	0016
		0.	00200.			WA	TER		WIND	BAR		AIR TEMP. "C	NO.	SPEC	TAL						
						COLO	TRAN	1 01	L OR	AA ETE		DRY WET	CODE OBS. DEPTHS	OSSERVA	TONS						

			10000	1	, oree ]	-	_				l								
				32	\$20	085	067	06	1 1		03								
MESSENGE CAST	CARO TYPE	OEPTH Imi	±7 1	5 %.	SIGMA	1-1 S	MCHC VOLU	M E B <sup>P</sup>	₹ △ 07N, 3 1	о м.	SOUND VELOCITY	07 ml/l	PO4=P FR = +1/1	101AL=P #8 = 91/5	NÖ3-H 28 - 61/1	NO3-N #\$ - et/1	\$104=\$i 28 - 81/1	ęн	100
																			Π
223	STD 085	0000	0467 0467	3223 32225	255	4 I 4	002456	1	000	0	14659 14659	763 763							
223	OBS STD	0005	0437 0372	32288 3235	256	3	002269	1	002	4	14649	770							
223	OBS	0010	0372	32354	257	3					14623	773							

					_									-				_				
REFE	ENCE	SMIR			- 5	14, 25	OEN	514	TIOH	TIME			DRIGINATOR'S	OEPTH	OEPTH	010	WAVE	ы	WEA-	CLOUD	1	NOOC
Ctev	10,	COOL	LATTUOL	LONGITUDE	NO NO	5007			GMI	r MB 1/10	TEAR	CRUISE NO.	STATION	ROTTON	OF	0.001	HCT PH	17.4	COOL	THE AM	-	NUMBER
1			1/10	1210		Ig	1	MU	UAS	HR, 17 19					1							
31	1270	51	6324 N	16820 W		233	38	07	12	000	1968	BSZ	017	0034	00	32	1 1		X4	x 9	1	0017
~ 1	1210					[	WA	TER		WIND	3480		AR TEMP. C	NO.	9101							
							COLON	TRAN	S. 018	L OR	METE			DE OBS. DEPTHS	OFSERVA	TIONS						

			1000	1	L	FOICE	- Dunna	1 0000													
					32	\$12	08	5 055	04	7	6	07									
HE 1/10	CARD	DEPTH (m)	1 7	5	•/	SIGM	A - T	SPICIFIC VOLU ANOMALT-21	4E 17	¥ Ο Υ Η Χ	2 D 10 <sup>3</sup>	SOL		03 ml/1	PO4-P 22 + 01/1	101AL=P #8 - a1/1	NO3-N h8 - et/l	NO3-N	51 O4-51 #8 + 01/1	P.H	500
														1	1						
	STD	0000	0394	325	57	258	8	002125	7	00	00	140	633	1032							
002	085	0000	0394	32	570	258	8					14	633	1032							
002	OBS	0005	0389	32	572	258	9					14	632	1033							
0.05	STD	0010	0138	320	63	261	4	001882	7	00	20	14	524	862							
0.0.2	OBS	0010	0138	320	629	261	4					14	524	862							
002	OBS	0015	0009	320	696	262	7					14	468	767							
002	STO	0020	-0022	32	7)	262	9	001735	9	00	38	14	454	751							
002	086	0020	-0022	3.2	713	262	o l					14	454	751							
002	005	0020	-0022	22	721	262	ó					14	453	749							
002	065	0025	-0026	32	121	203				~ ~				74.6							
	STD	0030	-0026	32	11	262	9	001/34	D	00	22	14	424	F44							
002	OBS	0030	-0026	32	712	262	9					14	454	744							

a: ct	10.	SHIP	LATITUCE	LONGITUOE	M/ RSOEN SOU ARE	STATION TIME	YEAR	ORIGINATOR'S CRUISE STATION	OEPTH TO	MAX. OEPTH OF	WAVE DESERVATIONS	WEA- THER	CLOUD		NODC
co	DE NO.	0000	1/10	1/10	10" 1"	MO   DAY HR 1/10		NO. NUMBER	ROHOW	S'MPL'S ON	R. HGT FER STA	0001	TIP ANT		In Draw etc.
Γ.	11270	SI	63293N	16802 W	233 38	07 12 020	1968	B52 018	0034	00 3	5 2 2 1 2 1	X4	48	1	0018

WATER WIND BARD-COLOR TRANS DIR SHOT METER DET WET COT OTHER SHOT METER DIR SHOT METER DET WET COT OTHER DIR SHOT METER DIR S

					210 101	1000 0	UV II I	<u>vo _</u>								-
HE 1/10	CARD TYPE	OEPTH (m)	3° T	s */	SIGMA-T	SPECIFIC VOLUME ANOMALY-LEIRF	\$ △ 0 OYN, M, X 10 <sup>3</sup>	SOUND VELOCITY	0 2 ml/l	PO4=P y2 + 01/1	101AL=P +8+ e1/1	NO3N vg = 01/1	NO3-N 99 - 01/1	104-51 1104-51 1110-51	ęН	100
										ĺ.						
1 '	STO	0000	0382	3258	2591	0021048	0000	14628	919	*						, i
022	OBS	0000	0382	32583	2591			14628	919							
022	ORS	0005	0382	32593	2591			14629	916							
022	STD	0010	0117	3262	2615	0018746	0020	14515	890							
022	OBS	0010	0117	32623	2615			14515	890							
022	OBS	0015	0028	32669	2624			14476	858							
V L L	STO	0020	0005	3265	2623	0017933	0038	14466	851							
022	OBS	0020	0005	32653	2623			14466	851							
022	OBS	0025	0001	32678	2626			14465	849							

REFE C1RY CODE	IO. NO.	SHIP	LA TITU OF	LONGITUDE	SOUARE	STATIO (G	N TIME MTJ T [HR.1/10	YEAR	CRUISE NO.	STATION NUMBER	OEPTH TO BOTTOM	MAL OEPTH OF S'MPL'S DIL	WAVE SERVATIONS	WEA- TNER CODE	CLOUO CODES	NOOC STATION NUMBER
31	1270	S1	6334 N	16747 W	233 37	07 1	2 050	1968	lesz	019	10033	00 33	22	X2	7 8	0019
					COLO	TRANS		BARC     METE     Imbe	R	ORY WET CO	NO. OEDEPTHS	SPECIAL DESERVATIONS				

				1 1	FORCE	1	1.	1											
				32	\$15	065	067	0	56 7	06									
TIME OF NO.	C ARO TYPE	OEPTH (m)	ວີ 1	s */	SIGM	A-T	SPECIFIC VOLU	JME 187	₹ △ 0 0 YN, M x 10 <sup>3</sup>	. SO VEL	OCITI	0.2 m1/i	$PO_4 = P$ $\mu R = at/1$	FOTAL=F yg=at/S	NÖ2=N 99 - 81/l	NO3=N 98 - 61/1	SLO <sub>4</sub> =Sr yg + el/l	рН	500
	1																		
	STD	0000	0411	3248	258	0	002208	7	0000	14	639	815							
052	085	0000	0411	32481	258	0				14	639	815							
052	OBS	0005	0411	32498	258	1				14	640								
	STD	0010	0408	3250	258	1	002193	7	0022	14	640	827							
052	OBS	0010	0408	32498	258	1				14	640	827							
052	OBS	0015	0353	32513	258	8				14	618	828							
	STD	0020	0172	3262	261	1	001910	7	0043	14	541	847							
052	OBS	0020	0172	32621	261	1				14	541	847							
052	OBS	0025	0116	32651	261	7				14	517	834							

REFERENC	E	Chile				*A + 25	OEN	STA	TION	TIME			DRIGINATOR'S	OEPTH	MAX, OEPTH		w	VE		WEA-	CLO	ouo	NOOC
CTRY IC	). 0.	CODE	LATITUOE	LONGITUDE	081	5007	1.	M0	10 M	11 HR 1/10	YEAR	CRUISE NO.	STATION NUMBER	BOTTOM	OF S'MPL'S	04	THG	1 228	A 32	CODE	1491	TANT	NUMBER
3112	70	SI	6340 N	167275W		233	37	07	12	072	1968	BS2	020	0029	00	33	2	2		X 2	7	8	0020
7112	10.	<b>.</b>	0,000	1012104			WA COLO3	TER		WIN O	BARC	-	AIR TEMP. C	NO. 085.	SPEC								

				CODE	(m)	OIR	OR FORCE	(mba	i NULI	\$1	ila	0001	DEPTHS	OB2ER.	VA NORS							
						33	S23	060	0 069	0	55	5	06									
MESSENGE CAST	CARO TYPE	OEPTH (m)	т	°c	s	•/	SIGM	A-T	SPECIFIC VOLU	1. M. E 19.7	X Z OYM X	10 <sup>3</sup>	SOL	UND DOITY	Og mi/l	PO4=P yg = 01/l	101AL=P µg+st/1	NO2=N µg = at/1	NO3-N 29 - a1/1	51 0 4 = 51 31g = 61/1	рH	
																						Τ
	ST0	0000	' о	493	325	0	257	3	002274	5	00	00	140	674	792							
072	OBS	0000	0	493	325	02	257	3					140	674	792							
072	OBS	0005	0	482	325	09	257	5					144	670	799							
	STD	0010	0	475	325	1	257	5	002253	7	00	23	14	668	797							
072	OBS	0010	0	475	325	606	257	5					14	668	797							
072	OBS	0015	0	226	325	67	260	3				•	14	563	836							
	STD	0020	0	180	325	8	260	7	001947	9	00	44	14	544	839							
072	085	0020	0	180																		
072	OBS	0025	0	175	325	90	260	8					14	543	842							

REFE	RENCE	Chille				= Ĕ	97.25	DEN	STA	TION	TIME			ORIGIN	ATOR'S		OEPT	н	MAX, DEETH		WAVI		WEA	- CLC	DUO			NOOC	
Ctev	10.	COOL	LATTU	OE	LONGITUOE	NDON	500.	A R E		GMI	1	YEAR	1	CRUISE	STATION	-	TO BOTTO	м.	OF	0	SERVA I	10145			012		S N	UMBER	
	NO.			1/10	1/10	-	10*	1*	MO	YAD	HR,1/10			NU. 1	40 M 981				S-WARE'S	Out.	HGT P	R 58	A	TYPE	ANT				
31	1270	ST	6345	7 N	167105₩		233	37	07	12	090	196	8	BS2 02	1		003	3	00	34	15 4	.	X2	7	8			0021	
21	1210	51	0545		1011004		ا ^ ۲	WA	TER	1	WINO			AIR TE	MP. C		NO.												
								COLOR	t tean	<sup>\$</sup> . OIR	SPEEC OR PORC	O M	ETER	ORY BULB	WET	C00	E OBS.	is C	DBSERV	ATION S									
										34	S25	0	45	061	056	5	06									100			
		MESSENG SIME	CAST NO.	CA TY	RD DEPTH	(m 1	r	ີ		s •⁄	SIG	GMA-T		SPECIFIC VOLU	IME 0	₹ △ 0 × 0 × 10 <sup>3</sup>	· VI	LOC	NO CITY	0 2 ml/	1 10	4—P 01/1	TOTAL- 29 - 01/	P NO2-	-N 01/1	NO <sub>3</sub> —N µg - at/E	SI © 4→Si ¥9 - 01/3	pН	500
									+				+								1								
		1		' S'	ססס ' סז	0	06	591	31	79	24	93	1	003033	4 'C	0000	' <b>1</b>	47	45	722	+								
		09	0	OB	s 000	0	06	591	31	792	24	93					1	47	45	722									
		0.9	o O	OB	5 000	5	06	535	31	935	25	511					1	473	25	748									
				S	TD 001	0	0:	214	32	60	26	06		001957	7 0	025	1	45	58	849									
		0.9	a	OB	5 001	D	0	214	32	597	26	06					1.	45!	58	849									
		0.9	0	OB:	s 001	5	0;	202	32	615	26	800					1.	45!	53	842									
			-	S	TD 002	0	0	201	32	262	26	09		001934	2 0	044	1	45	54	840									
		09	0	OB:	s 002	0	0	201	32	616	26	609					1	45	54	840									
		0.9	Ő.	0B	5 002	5	0	198	32	618	26	609					1	45	53	835									

EEF CTRV CODE	ID. NO.	SHIP			50U	ARE	:T.	IGMT	TIME	TEAR	CRUISE NO.	STATION NUMBER	DEPTN TD EDTTOM	MAL OEPTH DF S'MPL'S	OB GR.	WA SERV.	VE A TIO	N S SEA	WEA- THER CODE	CLC CC	DUD	NOOC STATION NUMBE	1
31	1270	S1	63512N	166520W	233.	36	07	12	107	1968	BS2	022	0032	00	01	4	4		X4	x	9	002	2

#### WATE WHD SARO-COLOR TAME DIR OF COLOR WHD CARTER OF WIT COOL OF SPECIAL CODE WT DIR OF COLOR WHT COOL OF THE DIRECT OF COOL OF THE

					01	S25 04	0 064 0	58 0	06								
HESSENGE TIME OF HE 1/10	CAST ND.	CARD	OEPTH (m)	r °c	s =4	SIG M A -T	SPECIFIC VOLUME	≨ Δ D DYN, M, z 10 <sup>3</sup>	SOUND	O2 mi/I	PO4-P #2+81/1	101AL-P #8 * 41/1	NO3-N #8 - eVi	NO3-N x8 - et/1	SI D 4Si 199 + 01/1	рH	100
																	Π
		STD	0000	0815	3114	2425	0036842	0000	14785	690							
109		085	0000	0815	31137	2425			14785	690							
109		085	0005	0540	31904	2520			14686	771							
		STD	0010	0175	3251	2602	0019999	0028	14539	822							
109		085	0010	0175	32506	2602			14539	822							
109		OBS	0015	0156	32525	2605			14532	819							
		STD	0020	0154	3253	2605	0019688	0048	14532	819							
109		OBS	0020	0154	32529	2605			14532	819							
109		085	0025	0151	32531	2605			14531	819							

REFI	ERENCE	C LALA				41.25	OEN	STA	TION	TIME			DRIGINATOR'S	DEPTH	MAX,		WA	VE		WEA-	CLC	DUD	NODC	٦
CODE	10. NO.	COOF	LATITUOE 1/10	LONGITUDE	PLOC N	10*	1°1°	MO	IGM1	1 HR.1/10	YEAR	CRUISE NO.	STATION NUMSER	TO SOTTOM	OF	DR	NGT	PER	SEA	THER	CD	OES	STATION	
31	1270	51	6356 N	1663554		233	36	0.7	12	126	1968	BS2	023	0031	00	34	2	2		X4	x	0	0023	3

 
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 SIG MA-T
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 NO\_R-N
 SIG MA-T

HR 1/10				1	1		x 10 <sup>3</sup>			2.2.0 + 0.171	10 - 01/1	1 1 1 4 4 4 1 / 1	29 + 02/1	10 = 0121	
									-						ĺ
	STD	0000	0746	3146	2460	0033514	0000	14762	702	,					
129	OBS	0000	0746	31460	2460			14762	702						
129	OBS	0005	0223	32380	2588			14558	840						
	STD	0010	0083	3254	2610	0019207	0026	14498	857						
129	OBS	0010	0083	32537	2610			14498	857						
129	085	0015	0077	32543	2611			14496	855						
	STD	0020	0073	3254	2611	0019106	0046	14495	849						
129	OBS	0020	0073	32543	2611			14495	849						
129	085	0025	0073	32542	2611			14496	844						

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RI CT	LFER 47	ID.	SNIP	LATITUGE	LONGITUCE	0011	500 SDU	DEN	514	IGM	TIME D	YEAR	CRUISE	STATION	OEPTH TO	MAX, DEPTH OF	WAVE DESERVATIONS	WEA- THEE	CLOUB	NODC
CO		NO.		1/10	* '1/10	- 6	10*	30	MD	DAY	HR.1/10		NO.	NUMBER	BOTTOM	S'MPL'S	Q18. HG1 P14 SEA	CODE	TTPL AMT	NUMBER
1	31	270	S1	6402 N	16618 W		233	46	07	12	147.	1968	BS2	024	0027	00	35 2 2	X4	X 9	0024

WATER WIND BARO AN TUMP. C VIL NO. SPICIAL COLOR TANK, DR. STOC MITTER DRY WIT COOL OFFICE CODE TANK, DR. STOC MITTER DRY WIT COOL OFFICE 012 JUL DIFFERENCE OFFICE

				26	222 J 42	2 1 0 1 2 1 0	01101								
MESSINGE CAST TIME OF NO. HE 1/10	C ARD TYPE	OEPTH (m)	5.1	s */	SIG M A -T	SPECIFIC VOLUME	₹ Д D Сүн. м. 10 <sup>3</sup>	SOUND VELDCITY	0 2 ml/l	PO4=P #8 * #1/1	FOTAL-F PR+ at/l	NO2N µ9 - et/l	NO3-N #2 = 01/1	SIDa=Si ag = at/l	8H 0
	STD	. 0000	0772	3178	2481	0031483	0000	14776	692	'					
150	085	0000	0772	31778	2481			14776	692						
150	OBS	0005	0679	31830	2498			14741	713						
	STD	0010	0190	3221	2577	0022316	0027	14542	826						
150	OBS	0010	0190	32214	2577			14542	826						
150	085	0015	0183	32233	2579			14540	826						
	STD	0020	0182	3222	2579	0022188	0049	14540	833						
150	OBS	0020	0182	32224	2579			14540	833						

BEFERENCE	SHIP		50	A. RSDEN	STATION TIME	YEAR	ORIGINATOR'S	DEPTH	DEPTH DE	WAVE SERVATIONS	WEA- CLOUT	NODC
CIET ID.	CODE	LATITUDE 1/10	1/10 B	10* 1 1*	MO   DAY HE1/10	16.48	NO, NUMBER	NOTTON	OF S"MPL"S OR	HGT PEP SEA	CODE TIPE AA	 NUMBER
31127	0 SI	64078N	16600 W 2	233 46 WA COLOI	07 12 170 TER WIND	1968 BARG MITE	AIR TEMP. "C VIL DAT WET COD	0023 NO. 085. DEPTHS	00 30 SPECIAL OBSERVATIONS	2 2 1	X1 6 7	0025

CODE IN FORCE CONTRACT	
31 520 000 097 087	7 04
INGE CAST CARD DEPTH (m) T °C S °A. SIGMA-T INCINC VOLUME TO MANALT-1187	EΔ D SOUND 02 mi/1 P0a=P TOTAL=P NO3=N NO3=N SIC4=5 VLDCITY μ = +1/1 μ
STD 0000 0934 3075 2376 0041445 0	000 14825 667
170 OBS 0000 0934 30746 2376	14825 667
170 OBS 0005 0702 31677 2483	14749
STD 0010 0202 3201 2560 0023985 0	1033 14544 840
170 OBS 0010 0202 32005 2560	14544 840
170 OBS 0015 0200 32008 2560	14544 840

RE	ERENCE	C 1410				47.25	DEN	ST/	ATION	TIME			ONGIN	NATORS	DEPTH	MAX. DEPTH	~	WA	VE.	ALC:	WEA-	CLOU	0	NODC
CTR	ID.	CODE	LATITUDE	LONGITUDE	N Del	5007	A R E		IGM		YEAR	CRUIS	3	STATION	ID110M	OF	0	254.4	A 110	193	CODE	CODE	13	NUMBER
COC	NO.		1/10	*1/10	-	10*	1.	MD	YAO	HR.1/10		CRUISE STATION NO, NUMBER			2.Whr.2	0.91	HG	1 1 1 2	3 E A		TTPE A	MA T	 	
3	11270	SI	64134N	165411W		233	45	07	12	190	1968	BS	z oz	6	0023	00	32	2	2		X4	X	9	0026
-						· - [	WA	TER		WIN 0	BAR	o. L	AIR TE	MP. °C	NO.	5957	141	1						
						[	COLO	TRAN	1 01	L SHE	MET	ER	DRY	WET C	DOE DEPTHS	OBSERV	TION							

CODE	Sec.1	0.0	FOICE	(mbs)	BULB	BULB		DEPIRS	
		27	572	997	076	072	3	04	

				126	366 17	1 1010 10	12 12									-
MESSENGE CAST	CARO TYPE	QEPTH (m)	2' 1	s */	SIGM A +T	SMCIFIC VOLUME	₹ △ 0 DYN. M. X 10 <sup>3</sup>	SOUND VELOCITY	02 ml/l	PO4~P #8 * #1/2	EO TA L.—P #8 + 41/1	NO3-N µg + et/l	NO3—N NB = 61/I	\$104 <b>-5</b> 99-e1/8	₽Н	S C C
190 190 190	STD OBS OBS STD OBS	0000 0000 0005 0010 0010	0898 0898 0613 0395 0395	2923 29228 30355 3148 31476	2264 2264 2390 2502 2502	0052222	0000	14792 14792 14696 14621 14621	670 670 733 790 790							
190	OBS	0015	0394	31497	2503			14621	793							

																								· · · · · · · · · · · · · · · · · · ·			7
REI	FERENCE	SHIP				-	4/1	SDEN	STA	TION T	IME	~~~~		ORIG	NATO	R*5		DEPTH	DEPTH			WEA-	CLOUG		1.	NOOC	
CTR	10.	CODE	LATIN	DE	LON	GITUDE		MAE		10 00 13		TEAR	c	LUISE	STAT	ION		IOTTOM	OF			CODE	0000			LUMER	
lcoo	NO.		•	1/10		1/10	10°	1.	MO	DAY	12.1/10			NO.	NUN	BER			S'MPL*S	Dut	HGT PER S	EA	TYPE AM	1			
3	11270	SI	6419	N	165	5227W	233	45	07	12	210	1968		BSZ 0	27		0	0024	00	31	22	X1	81			0027	
-								W/	TER	1	NIND		0.	AIR T	EMP.	2		NO.									
						COLOR TEAMS CDDE TEAMS DIR 31				S. DIR,	5PE20 08 FORC	P MEI	TER.	DRY	W BL	ET JLD	008 008	OBS. DEPTHS	OUSERV	ATIONS							
							COLOR TEANS DIR.		\$10	99	5	104	0	94	7	04											
		MESSENG	CAST	CA	RD			31         S10           **         \$***		MA-T	5	REPRC VO	UMI	₹ /	20	sou	UND	Do ml/l	P04-P	TOTA L-P	NO2-N	NO3-N	5104-5	BH	S.C.		
		HR 1/10	ND.	ŤY	PE									ANOWALT-		X	10 <sup>3</sup>	VELO			μg + at/1	µg + et/l	µg = ot/1	µ <b>0</b> = ot/1	.µg - ¢l∕		c
		1	1										Ł			ł						1					
				S	TD	0000	1	074	2 9	30	22	41	- (	00543	1	00	00	14	858	656							
		21	1	08	S	0000	1	074	2 9	299	22	41						14	858	656							
		21	1	ÖB	ŝ	0005	1	070	29	292	22	42						14	858	658							
			•	Š	τD	0010	5 1070 29292 0 1056 2930	22	44		00540	9	00	54	14	853	693										
		21	1	OB	S	0010	1	056	2.9	298	22	44						14	853	693							
		21	1	OB	s	0015	ō	634	_											660							

Γ	REFER	ENCE	CALLE				11.25	DEN	517	NTION	TIME			ORIGINATORS	DEPTH	MAR		w.	VE		WEA-	CLC	DUC	NODC
00	787	10. NO.	CODE	LATITUDE 1/10	LONGITUDE	DIN N DC	SQU/	11	MD	IGM	1)  HR 1/10	YEAR CRUISE STATION TO NO. NUMBER BOTTON		DF	01	JHG	A TIO	N S SEA	CODE	CO TTPI	DES AM1	STATION NUMBER		
ŀ	311	270	SI	64235N	165073W		233	45	0.7	12	226	1968	BS2	028	0027	00	13	0	2		X1	7	2	0028
						710 23 10° 1° MD 04Y HE1/10 3W 233 45 07 12 226 WATER WIND COLORIER WIND					· -	AIR TEMP. C VIS	NO.	SPEC	LAL									

				CODE	(81)	DIR.	08 FORCE	(mba	i BULB	80		٦ ا	EPTHS	OUSER	AN HON?							
						13	S10	999	5		6		04									
NQ.	CARD TYPE	OEPTH (m)	т	¢	s	•/	SIGMA	t.−T	SPECIFIC VOLU ANOMALT-B	10 <sup>7</sup>	₹ Δ 0YN, x 10	о м.	SOL VELC	NO CITY	02 ml/1	PO <sub>4</sub> =P #8+81/1	Nto - Br	NO2~N #9 - e1/1	NO3-N 98 - 61/8	51 O a - 51 1/19 - 61/1	₽Н	100
																						T
	STD	0000	1.	214	288	9	218	5	005972	4	000	0	149	903	647							
	OBS	0000	1	214	288	86	218	5					149	903	647							
	OBS	0005	0	900	293	65	227	4					14	795	681							
	STD	0010	0	794	295	7	230	5	004829	5	005	4	14	758	688							
	OBS	0010	0	794	295	66	230	5					14	758	688							
	OBS	0015	0	725	296	93	232	4					14	733	688							
	NQ.	ASI CAND NO. TYPE STD OBS OBS STD OBS OBS	XASI         CAND TYPE         DEPTH         Inst           STD         0000         085         0000           OBS         0005         STD         0010           OBS         0010         085         0015           OBS         0015         0015         015	XASI NO.         CAND TYPE         OEPTH (m)         T           STD         0000         1           OBS         0000         1           OBS         0005         0           STD         0010         0           OBS         0015         0	хазі Сляд авртн (m3) т т NO. Туте авртн (m3) т т STD 0000 1214 OBS 0000 1214 OBS 0005 0900 STD 0010 0794 OBS 0015 0725	Соде Тип Соде Тип Т С 5 5 5 5 5 5 5 5 5 5 5 5 5	Соор         Смар         Ов.           13         13           КАЗ         Слар         Обрание         13           STD         ОООО         1214         2889           OBS         0000         1214         2889           OBS         0000         1214         28886           OBS         0005         0900         29365           STD         0010         0794         29576           OBS         0010         0794         29566           OBS         0015         0725         29693	CARD NO.         CARD TYPE         CEPTH (m)         T ℃         S *4.         SIGMU           STD         0000         1214         28889         218           OBS         0000         1214         28886         218           OBS         0005         0900         29365         227           STD         0010         0794         2957         230           OBS         0015         0725         29693         232	CODE         Junit         Dill         Totel         Junit           13         S10         99'           133         S10         99'           Image: STD         0EPTH         T         T         S'-C.         SIGMA-T           STD         0000         1214         2889         2185           OBS         0000         1214         28886         2185           OBS         0005         0900         29365         2274           STD         0010         0794         2957         2305           OBS         0015         0725         29666         2305           OBS         0015         0725         29693         2324	CODE         Juit         Dile.         oract         Juiti         JUIT           13         510         995         13         510         995           IASI         CAND         OEPTH (m)         T °C         5 °C         SIGMA-T         IMOUALT-I           NO.         TYPE         OEPTH (m)         T °C         5 °C         SIGMA-T         IMOUALT-I           STD         0000         1214         28889         2185         005972           OBS         0005         0900         29365         2274         004829           OBS         0010         0794         2957         2305         004829           OBS         0015         0725         29693         2324	CODE         Junit         Dile.         Other         Other <th< td=""><td>CAND NO.         CAND TYPE         CENTH Int         T         T         C         S * 4.         SIGMA-T         InfCIRC YOULWIT MIGMAL(T=18)<sup>7</sup>         S ± Δ X 10           STD         0000         1214         2889         2185         0059724         000           OBS         0000         1214         28886         2185         0059724         000           OBS         0000         1214         28886         2185         0048295         005           OBS         0010         0794         29576         2305         0048295         005           OBS         0010         0794         29566         2305         005         005         005           OBS         0010         0794         29566         2305         0048295         005           OBS         0015         0725         29693         2324         2324         2324</td><td>COOP         Image         DBL         Total         DBL         Total         <thtotal< th=""> <thtotal< th=""> <thtotal<< td=""><td><math display="block">\begin{array}{c c c c c c c c c c c c c c c c c c c </math></td><td>COOP         Image: Disc         Dis         Dis         <thdisc< th=""></thdisc<></td><td>COOP         Training         Dill         Training         Dill         Training         Dill         Training         Dill         Training         Dill         Training         Dill         Dill         Training         Dill         Dill         Training         Dill         Dil         <thdil< th=""> <thdill< th=""></thdill<></thdil<></td><td>STD         OCOD         1214         2889         2185         OCOS9724         OCOD         14903         647           NO.         TYDE         0         0         1214         2889         2185         0059724         0000         14903         647           NO.         TYDE         0000         1214         2889         2185         0059724         0000         14903         647           OBS         0000         1214         28886         2185         0059724         0000         14903         647           OBS         0000         1214         28886         2185         14903         647           OBS         0000         1214         28866         2185         14903         647           OBS         0000         1214         28886         2185         14795         681           STD         0010         0794         2957         2305         0048295         0054         14758         688           0BS         0010         0794         29566         2305         14758         688         686           0BS         0015         0725         29693         2324         14733         688         <td< td=""><td>STD         OCOU         1214         2889         2185         OCOUST (NA)         Store         Altic at the store         store</td><td>COOLE         Image of the state of t</td><td>Cool         Image         Orac         Image         Image</td><td>CODE Non         Dile         OCCOP         Non         Dile         POLE         POLE</td><td>STD         OCOCI         Image         Office         Image         <thimage< th="">         Image         <thimage< th=""> <thimage< th=""> <thimage< th=""></thimage<></thimage<></thimage<></thimage<></td></td<></td></thtotal<<></thtotal<></thtotal<></td></th<>	CAND NO.         CAND TYPE         CENTH Int         T         T         C         S * 4.         SIGMA-T         InfCIRC YOULWIT MIGMAL(T=18) <sup>7</sup> S ± Δ X 10           STD         0000         1214         2889         2185         0059724         000           OBS         0000         1214         28886         2185         0059724         000           OBS         0000         1214         28886         2185         0048295         005           OBS         0010         0794         29576         2305         0048295         005           OBS         0010         0794         29566         2305         005         005         005           OBS         0010         0794         29566         2305         0048295         005           OBS         0015         0725         29693         2324         2324         2324	COOP         Image         DBL         Total         DBL         Total         Total <thtotal< th=""> <thtotal< th=""> <thtotal<< td=""><td><math display="block">\begin{array}{c c c c c c c c c c c c c c c c c c c </math></td><td>COOP         Image: Disc         Dis         Dis         <thdisc< th=""></thdisc<></td><td>COOP         Training         Dill         Training         Dill         Training         Dill         Training         Dill         Training         Dill         Training         Dill         Dill         Training         Dill         Dill         Training         Dill         Dil         <thdil< th=""> <thdill< th=""></thdill<></thdil<></td><td>STD         OCOD         1214         2889         2185         OCOS9724         OCOD         14903         647           NO.         TYDE         0         0         1214         2889         2185         0059724         0000         14903         647           NO.         TYDE         0000         1214         2889         2185         0059724         0000         14903         647           OBS         0000         1214         28886         2185         0059724         0000         14903         647           OBS         0000         1214         28886         2185         14903         647           OBS         0000         1214         28866         2185         14903         647           OBS         0000         1214         28886         2185         14795         681           STD         0010         0794         2957         2305         0048295         0054         14758         688           0BS         0010         0794         29566         2305         14758         688         686           0BS         0015         0725         29693         2324         14733         688         <td< td=""><td>STD         OCOU         1214         2889         2185         OCOUST (NA)         Store         Altic at the store         store</td><td>COOLE         Image of the state of t</td><td>Cool         Image         Orac         Image         Image</td><td>CODE Non         Dile         OCCOP         Non         Dile         POLE         POLE</td><td>STD         OCOCI         Image         Office         Image         <thimage< th="">         Image         <thimage< th=""> <thimage< th=""> <thimage< th=""></thimage<></thimage<></thimage<></thimage<></td></td<></td></thtotal<<></thtotal<></thtotal<>	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	COOP         Image: Disc         Dis         Dis <thdisc< th=""></thdisc<>	COOP         Training         Dill         Training         Dill         Training         Dill         Training         Dill         Training         Dill         Training         Dill         Dill         Training         Dill         Dill         Training         Dill         Dil <thdil< th=""> <thdill< th=""></thdill<></thdil<>	STD         OCOD         1214         2889         2185         OCOS9724         OCOD         14903         647           NO.         TYDE         0         0         1214         2889         2185         0059724         0000         14903         647           NO.         TYDE         0000         1214         2889         2185         0059724         0000         14903         647           OBS         0000         1214         28886         2185         0059724         0000         14903         647           OBS         0000         1214         28886         2185         14903         647           OBS         0000         1214         28866         2185         14903         647           OBS         0000         1214         28886         2185         14795         681           STD         0010         0794         2957         2305         0048295         0054         14758         688           0BS         0010         0794         29566         2305         14758         688         686           0BS         0015         0725         29693         2324         14733         688 <td< td=""><td>STD         OCOU         1214         2889         2185         OCOUST (NA)         Store         Altic at the store         store</td><td>COOLE         Image of the state of t</td><td>Cool         Image         Orac         Image         Image</td><td>CODE Non         Dile         OCCOP         Non         Dile         POLE         POLE</td><td>STD         OCOCI         Image         Office         Image         <thimage< th="">         Image         <thimage< th=""> <thimage< th=""> <thimage< th=""></thimage<></thimage<></thimage<></thimage<></td></td<>	STD         OCOU         1214         2889         2185         OCOUST (NA)         Store         Altic at the store         store	COOLE         Image of the state of t	Cool         Image         Orac         Image         Image	CODE Non         Dile         OCCOP         Non         Dile         POLE         POLE	STD         OCOCI         Image         Office         Image         Image <thimage< th="">         Image         <thimage< th=""> <thimage< th=""> <thimage< th=""></thimage<></thimage<></thimage<></thimage<>

EFFERENCE SHIP LATITUDE LONGITUDE	Ling sou	APE	TATION IGM	TIME 1) (H#, 5/10	YEAR	CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAL DEPTH OF S'MPL'S D	WAVE OBSERVATIONS R. HGT PLE SEA	WEA- THEE COOE	CLOUD COOLS	NODC STATION HUMBER
311270 SI 64368N 166335	233	46 ( WAT	7 13	183 WING	1968	852		0022 NO.	00 3 SPECIAL	2 1 1	Χ4	99	0029

			0	COOE	Pm 1	O DC	POICE	(mba	1 9UU	1	UL9		DEPTHS	00000								
						13	S11	010	084	0	84 ]		04									
TIME OF CAST	CARD 17PE	OLETH IMI	F	r	2	•/,.	SIGMA	N = T	SHERIC VI	0LUME ==210 <sup>P</sup>	₹ △ 01h. 3 1	о м.	SOU VELO	NO CITY	02 m1/1	PO4=P 28 * 61/1	TOTA LurP JPE = 01/1	NQ2=N 28 = 81/	NOJ-N Vý st	- 14-50 - 11-01-1	рH	200
													1									
	STD	0000	08	25	294	9	229	5	00492	48	000	0	147	167	703							
183	OBS	0000	08	25	294	92	229	5					147	167	703							
183	085	0005	08	07	295	02	229	8					147	761	703							
	STD	0010	05	17	302	9	2390	6	00396	13	004	4	146	556	728							
183	085	0010	05	17	302	93	239	6					146	556	728							
183	085	0015	04	46	306	73	243	3					146	532	741							

821	FERENCE	YCE SNIP LATTINGE LONGITUGE						RSOEN	ST.	ATION	TIME			ORIGIN	ATORS		OEPTR		AX.		WAV	E	w	{A+	CLOUD			100c	
C181	1 IO.	COOF	LATITU	0E	LONGIT	1/10 E	SO SO	1*	MO	IGM1	э н.в.1/10	YEAR	C	RUISE S	TATIO	l R	01 0110	M 5'M	DF PL*S	00.	LRVA	HONS		DE	TYPE A M		N N	UARBER	
3	11270	SI	6433	N	1665	2 W	233	46	07	13	200	1968	8 8	352 03	0		0024	9 0	0			1	X	4	X 9	1		0030	
							144.	W.	ATER		WIND		£0+	AIR TE	MP. C		NO.	T .											
								COLO	R TRAP	s ou	SPEE OP FORC	0 ME	TER	ORY BULB	WET PULI	COD	OBS. OEPTH	S OBS	ERVA1	non s									
										13	510	0 01	12	086	082	2 0	05												
		MESSENG TLME NR 1/1	NO.	C A T T	RO T	DEPTH G	it 👘	3 1		s •4.	\$10	G₩A-1	1	MCHIC YOLU	M.E 0.7	₹ △ 0 DIN. M X 10 <sup>3</sup>	. \$1 VE	LOCITY	, 0	); ml/1	PO FB	4-17 - 11/1	1 A 1 D 1	-+	NO <sub>2</sub> —N #9 - al/1	NO3-N 99 - 81/1	51 O 4 = 5+ 1/3 = 101/3	₽N	100
				-		0000		020	1	10.5	71	126	T	004531		000		4780		579									T
		20	4	08	<pre></pre>	0000	č	057	30	049	23	336		004221			- ī4	4780	) 6	579									
		20	4	08	5	0005	č	188	3	2174	29	574					14	4539	3 6	914									
		2.0		S	TD	0010	Ċ	202	3	233	2 5	686	0	002149	5 (	033	14	4549	۶ (	819									
		20	4	08	S	0010	(	202	3.	2333	25	586					14	4549	9 1	819									
		20	4	OB:	S	0015	(	199	32	2339	2 2 2	587					14	4548	3 8	822									
				S	тD	0020	(	197	32	234	25	87	(	002137	8 (	055	14	4548	3 8	819									
		20	204 08S 0020 0197 3234 25	587					14	4548	3 8	819																	

00	187 001	NCE 10. NO.	SNIF CODE	LA 111 U OE		SOUARE	N	472   0M	TION T	IME (8,3/10	YEAR	CPUISE NO.	STATION NUMBER	OEPTH TO BOTTOM	MAX OEPTH OF S'MPL'S	WAVE OBSERVATIONS DR. HGT PER SEA	WEA- TNER CODE	CLOUO CODES	NODC STATION NUMBER
1	311;	270	SI	64287N	16712 W	233 4	7 0	70	13	220	1968	852	031	0032	00	_ 1	X4	x 9	0031

 WATER
 WIND
 SARD AIR TEMP T
 VIL
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					300 01	· · · · · · ·	/ IV L	V V 1								-
HR 1/10	CARO TYPE	DEPTH Smi	517	\$ 14.	SIGMA=T	SPECIFIC VOLUME	\$ △ D DTN, M. x 10 <sup>3</sup>	SOUND VELOCITY	0.2 ml/l	PO4=P ×8 + et/1	101AL=P ====1/1	NO2-N #8 = et/1	NO3-N v8-eV1	\$1.0 a=5: ug=et/1	ЪH	500
										1				) (		11
	STO	0000	0919	3158	2444	0035003	0000	14830	652							
222	085	0000	0919	31583	2444			14830	652							
222	085	0005	0745	32218	2519			14773	688							
	STD	0010	0435	3244	2574	0022664	0029	14650	759							
222	085	0010	0435	32436	2574			14650	759							
222	OBS	0015	0178	32584	2608			14542	834							
	STD	0020	0174	3259	2609	0019332	0050	14541	828							
222	085	0020	0174	32593	2609			14541	828							
222	ORS	0025	0177	32592	2608			14544	883							

REFI CTRV CODE	ID. NO.	SHIP	LATITUOE	LONGITUOE	DQUET IN DOCTO	47 as SOU	DEN ARE	A1:	IGMT	HAL 1/10	YEAR	CRUISI NO.	ORIGIN A	ATOP'S TATION UMBER		DEPTH TO BOTTOM	MAX. DEPTH OE S'MPL'S	OB:	ERVA ERVA	VE TIONS	WEA THER CODI	CL GC	0U . DDE'	_	N S* Pris	ATION ATION
31	1270	SI	64255N	16731 W		233	47 WA COLOR CODE	07 TER TRAN	13 5. DIR	239 WIND SPLIT	1968 #ARC METE E Umbs		O32	2 KP. *C WE7 BULB	VIS	NO. OBS. OEPTHS	SPEC OBSERV	27 CIAL ATIONS	1	2	X4	X	9		c	032
									21	509	01	1 0	89	084	1	06										
		MESSENG	CAST CA		(m)	1	*		/		44.4-3	SPECIPI	C VOLUA	48 X	0 ∆	sou	ам	0.0	PI	04-P	TOTAL-P	NO	-N	NO1-N S	104-51	

HR 1/10	TTPL				-	ANDMALT-119	x 10 <sup>3</sup>	VELOCITY		24 × 41/3	29 × 07/1	n8 = 41\1	µg + 61/I ·	- y y = 41/1	 l
														_	Î
	STO	0000	0673	3228	2533	0026499	0000	14744	714						
240	OBS	0000	0673	32275	2533			14744	714						
240	OBS	0005	0657	32294	2537			14739	722						
	STD	0010	0351	3244	2582	0021840	0024	14615	781						
240	OBS	0010	0351	32442	2582			14615	781						
240	OBS	0015	0178	32640	2612			14543	853						
	STD	0020	0178	3263	2612	0019063	0045	14544	841						
240	OBS	0020	0178	32632	2612			14544	841						
240	OBS	0025	0180	32634	2612			14546	841						

REP	ERENCE	SHIP				1.5	147 25	DEN	STA	TION	TIME			0	RIGINAT	DR"S		DEPTH	MAX		WAVE		WEA-	CLOUD		1	100c	
CTRI	EFFELINCE SHIP CTET IO. CODE NO. 311270 SI 64 MISSENGE CA TIME ON NO.		LATITU	OE	LONGITUDE	DBU	500			LG MT		YEAR	CI	NUISE	STA	TION		TO BOTIOM	OF	. OB2	ERVA D	ONS	CODE	COGES		S1 N	DATION	
				17.10	1/10	-	10.	++	MOI	DAT	HIL.1710		-		140	ALD C.K.			S.W.PP	3 DW	HGT PI	STA		TTPI AM	1			1
3	11270	SI	6421	5N	167495W		233	47	07	14	020	1968	3   e	352	033		0	0037	00	25	1 2		X4	X 9	1		0033	
							[	WA	TER		WIND		PO-	A	IR TEAAP	°C		NO.										
								COLOR	TRAM!	OR	SPEED NO FORC		TER	D	RY I	N ET UL₽	CODE	OBS. DEPTHS	OBSER	ATIONS								
		_								02	504	01	0	07	15 (	72	0	07										
	MESSENGE CA		CAST	CAR	D DEPTH	(m )	T	r	5	•/	sig	MA-T	S P J	ECIFIC	VDLUME	X O X	∆ D N, M. 10 <sup>3</sup>	SOL VELO	D N D VII D C	03 m1/1	PO4	P	tota ( ۵۴/۱ یو - ۱/۱۵	NO3-N 29 - 01/1	NO <sub>3</sub> —N µg = 61/1	SI O.4~~Si ug + ai/l	PH	
			1								]		Γ															T
	022			ST	0 000	0	06	545	32	33	25	41	C	025	775	00	000	14	734	739								
			2	OBS	0000	0	06	545	32	326	25	41						14	734	739								
		02	2	OBS	000	5	05	559	32	308	25	50						14	699	752								
	022		-	ST	0 0010	0	0.	504	32	32	25	57	С	024	259	00	25	140	678	770								
		0.2	,	ORS	0010	0	0.	04	32	317	25	57						14/	678	770								
		020	-	000	0010	~	¥ -		20	- 4 1	20																	

		-								
022	OBS	0015	0325	32504	2590			14605	803	
	STD	0020	0129	3260	2612	0019000	0047	14521	806	
022	OBS	0020	0129	32599	2612			14521	806	
022	OBS	0025	0111	32633	2616			14515	804	
	STD	0030	0091	3263	2617	0018518	0065	14506	803	
022	OBS	0030	0091	32633	2617			14506	803	

REFER	ENCE	SHIP				= 5	MZ R	SOEN	STAT	ION T	IAA E			ORIGIN	ATOR"		08	EPTH	MAX.		WAVE		W E	A-	CLOUO			NODC	
CODE	10. NO.	COOF	+ LATITU	1/10	LONGITUDE	ND ON	10.	AXE	MO 1 0	H TAC	R.1/10	YEAR	CRU	0.	TATIO	N R	BOT	TO MOTI	OF	OIL	SERVA T	IONS II SE		9 7E -	CODES		2 4	UMBER	
311	270	SI	6417	9N	168100		233	48	07	4	040 1	968	83	52 03	4		00	40	00	01	1 2		XI		3 6			0034	
								COLOR CODE	TRANS.	OIR,	VINO SPEEO DR FORCE	BAR MET (mbi	D- ER	AIR TE ORY BULB	WP. C		E DEI	IO. IBS. PTHS	SPE( OBSERV	CIAL ATIONS									
										33	S10	02	0	078	07	2 7	0	8			1								
		MESSENGE TIME HR 3/10	CAST NO.	CAR	О Е ОЕРТН	lm I	T	٣	s	•/	SIGM	A-T	SPEC	OMALT-I	0 AA E	₹ △ 0 DIN. A X 10 <sup>3</sup>	4	SOU VELC	IND CITY	02 ml/	PO.	1-P 01/1	101AL- #8 * e1/	. p /1	NO3-N 29 - 01/1	NO3-N 28 + et/1	\$1 O 4 + \$1 µg = 01/1	p₩	500
							1		1								-					-		1				1	T
				51	D 000	0	0	694	322	28	253	1	00	2 <b>6</b> 70	1 (	0000		147	752	712									
		04	3	085	5 000	0	0	694	322	283	253	1						147	152	712									
		04	3	083	6 000	5	0	691	322	289	253	2			_			147	752	712									
		04	,	- 51	001	0	0	631	343	27	204	5	00	12230	9 (	1026	•	141	133	734									
		04.	2	089	5 001 5 001	5	0	021 520	326	63	259	1						14:	22	768									
				SI	0 002	Ó	Ő.	424	328	30	260	3	00	1984	6 (	049	)	146	552	733									
		04	3	OBS	5 00z	0	0	424	32	197	260	3						146	552	733									
		04	3	OBS	6 00z	5	0	411	32	191	260	4						146	548	732									
				51	D 003	0	0	364	321	17	260	7	00	1953	0 (	068		146	28	726									
		043	3	OBS	6 003	0	0	364	327	65	260	7						146	28	726									
		04:	3	OBS	5 003	15	0.	232	326	575	261	1						145	571	736									

ALTERNOT	1											011/211/14/1	0.011			MAT								
cim 10	- SHIP	LATITUO	DE 4	ONGITUOI	Sol sol	JARE		IGMI	1	TEAR	CRUIES	1	100 H		TO	OLPTI	OIS	EEV/	VI A DOHS	THE	t. CLOU	5		SODC ATION
CODE NO.	1000	•	1/10	* '1/10 <sup>O</sup>	ă 10'	11	M0 1	DAT !	HP.1/10		NO.	NU	MEER		BOTTOM	SMPL	S OR	HGE	P58 51	A COD	E TYFE TA	1.1	N	UMBER
	1			(0.200)	222		0.7	14	010		000	0.25			00/0	0.0		,	2		7 1			0025
31127	1 21 1	64144	6N   1	68289WI	1233	481	<u>u/1</u>	4.	0601	1968	1052	1 U 3 2	97	1	0042	1_00	34	11	21	1.44			1	00351
						00101			SPLED	- BAR	o. ⊢	DRY		VIL.	ORS.	SP	ICIAL							
						CODE	501	* OR	10101	Unbi	1	ULB	UL.	000	DEPTHS	Dayte	VATIONS							
								26	500	0.2	3 0	67 0	161	7	0.8									
		<u> </u>				I	<u> </u>	150	1307	102	5 10	07 1	1	11	100						1			
	MESSENGI	CAST	CARO	DEPTH Im	,   1	D" 1		•/	SIGA	A-T	SPECIFIC	VDLUM	N N	A D	SOL	DNC	0 x m1/1	P	04-1	TOTAL-	P NO2-P	NO3-H	SID4-SI	
	HE 1/10	1 40.	IAbf								ANON	ALTALIST		t 10 <sup>3</sup>	AFFC	DCITY		11	r = #1/1	1 2 - 01/	1 00-01/	NE + 07/1	_ e μ ≈ ø1/L	
						_												1			1			
	1		6 T D	0000	· 0	574		96	251	a a	002	0305	່ ດ	000	14	717	7.6.1	1		1		1	1	
	061		085	0000	0	574	32	945	25	28	002	0.000		000	14	713	741							
	061	2	005	0005	0	572	32	052	250	90					14	713	746							
	00.	· .	SYD	0010	ő	572	32	95	250	20	002	0248	0	020	14	714	748							
	06		0.95	0010	0	672	32	951	250	, o	002				14	714	748							
	061	2	085	0015	ŏ	569	32	952	261	, , , ,					14	714	748							
	00.	53 085 510 53 085		0010	ő	522	22	00	260		001	0325	0	040	14	6.96	750							
	0.6.1			0020	0	522	22	001	260	0	001	1222	Ŭ.		1.4	6 9 6	760							
	00:			0020	ő	262	22	0/1	200	27 11					1.40	(20	750							
	06	2	085	0025	0	270	22	744	20.	2.2	001	8077	0	0.6.0	140	622	712							
			510	0030	0	010	32	71	20,	22	001	0011	0	039	140	622	712							
	06	1	085	0030	0	370	32	965	26.	22					140	633	112							
	063	5	085	0035	0	370	- 32	913	26,	23					140	034	120							

REFEREN	CE	CHIP					19.2	SDEN	STA	10N 1	TIME		1	ONGIN	ATORS		OEPTH	MAI	<u>i</u>	WA	VE	WEA	- CLOUC		T	NDDC	
CODE >	ID. ID.	COOF	LA TITU +	DE 1/10	LONGITUDE	10	10*	1 1 1	MDI	IG M TI	HR.1/10	YEAR	CRUIS NO.	E S	TATIO	N Br	TO	A OF	N 08	SERV	A TIONS	THE COD		5	5	UMBER	
3112	270	51	6410	N	168545	W	233	48	07 TER	14	083 . WIND	1968	BS:		6 1 P. °C	VIS.	0038 NO.	00	) 35	1	2	× 2	7 8	1	1	00361	
								COLOR	Sean S	DIR	0P FORCE	in bi	1	BULB	BULI	1 000	DEPTHS	OBSER	VATIONS								
	,								1	35	512	03	5 0	69	063	3 6	07										
		MESSENG TIME NR 1710	ND.	C A TY	ED DEPT	N (m)	t	°C	s	•/	SIGA	T=A N	SPECIF	ALT-EN	ME -	₹ △ D 07N. M 1 10 <sup>3</sup>	· SO	UNO DCITY	O 2 m1/		PO4=P g = 81/F	1014 L= #9 * #1/	NQ3-H PB+ et/c	HO2-H #6 - 61/3	51 O 4=5i #8 = #1/1	ън	
																											T
				5	TD 00	00	0	677	32	66	256	63	002	3686	5 (	0000	14	751									
		08	5	OB:	5 00	00	0	677	32	658	256	53					14	751									
		08	5	08	5 00	05	0	562	32	672	251	78	0.01	04.44			14	705									
		0.01	<b>E</b>	0.00	C 00	10	0	222	32	/1 712	200	72	001	904:		1022	14	611									
		08	5	28	5 00	15	ő	294	32	716	261	10					14	591									
		00.	-	S	TD 00	20	ŏ	282	32	74	261	12	001	9043	3 (	0041	14	591									
		08	5	OB:	5 00.	20	0	282	32	736	261	12					14	591									
		08	5	OB:	5 00	25	0	280	32	732	261	12					14	591									
				5	TD 00	30	0	282	32	73	261	12	001	907	7 (	060	14	592									
		089	5	OB	5 00	30	0	282	32	732	261	12					14	592									

													_												
BEFERENCE	SHIP				14. 25	DEN	STA	TION	TIME			0	NGINA	TON'S		DEPTH	MA	TH	WAVE	WEA	. CLOUD		Ι,	1000	
C787 10.	C001	LATITU	DE   LO	NGITUDE 139	5007	AKE		IG MI		Y	EAR	CRUISE	12	ATION		01	0		SERVATIONS	THE COD	CODIS		51	ATION	
LOUI NO.			1/10	1/10	10°	1*	MOI	DAY	HR,1/1	0		NQ.	NI	D VY BES		101104	S'MP	L'S DIE	HGT PED S	14 000	1196 A-0-1			0 10 10 10	
311270	51	6406	5N 16	914 W	233	40	07	14	100	119	968	ASO	037			0038	10	0 34		1   x2	7 8			0037	
311210	. 91 .	0400	JI4 - 10	A PARA	ار در ۱	WA	TER	1-	WIND				IR TEM	P. 10	<u> </u>			¥						00211	
						COLON	TRAN		3.0	10	METE		AY I	WET	VIL	OIS.	0.55	PECIAL							
						CDDE	501	~   Uik	10	ici i	(mba	1 10	1.0	BULE	1	DEPTHS	0								
					ľ		1	24	51	1	044	0 0	16	053	6	0.6									
				1			4	154		<u> </u>					10		1	· · · · · · · · · · · · · · · · · · ·	L.,	1	1 1				T
	MISSING	CASE	CARD	DEPTH (m)	1 1	3	5	. •/	5	GMA	-1	SPECIFIC	VOLUN	1 S	A D N. M	50	UND	0.2 ml/	PO <sub>4</sub> =P	TOTAL-P	NO3-N	NO3-H	51 O 4-5-	n M	1
	HE 1/10		1405									ANOMA	(LA-RIA	1	103	.   ver	DCITY		PB * 81/1	#8 + 81/1	#B = 01/1	±₿ + 01/1	$v \oplus = \oplus 1/2$		ľ
																					1				T
	Na 1/10		C T D	0000		24	22	1.0		66/		00.2/	620	100	000	1.0	722	600	1	1	1 1				1
		_	510	0000	00	000	32	4 a	4	234	•	0024	1229	00	000	14	126	680							
	10	2	085	0000	0.6	536	32	478	2	554	•					14	132	680							
	10;	2	OBS	0005	06	534	32	482	2 2	555	5					14	732	758							
	102		SID	0010	06	523	32	48	2	556	5	0024	363	00	24	14	728	768							
			OBS	0010	06	523	32	481	. 2	556	5					14	728	768							
			OBS	0015	02	88	32	671	2	606	5					14	592	774							
		-	STD	0020	0.2	282	32	67	2	60	7	0019	9527	00	)46	14	590	758							
	1.0	2	0.85	0020	0.2	202	32	672	2	60.	7	001		0.		14	590	758							
	10.	2	005	0020	0.0	202	20	172								1.4	500	750							
	10.	2	085	0025	0.4	280	34	012	. 2	00	1					14	240	150							

REFERENCE	SHIP	LATTU	0E		SOUARE		IME YEAR	OBGINATI CRUISE STA NO. NUI	DR'S TION HIER	DEPTH TO BOTTOM	MAX. DEPTH C	WAVE BSERVATIONS	WEA- THER CODE	CLOUD		ST N	HODC ATION UMBER	
31127	0 51	6402	N	16928 W	233 49 WA COLO <sup>9</sup> CODE	07141 TER V TRANS DIR	VIND SAR SPELO MET DB UND	BS2 038 0- AIR TEMP. ER DRY BULB B		0040 NO. 015. DEPTHS	00 34 SPECIAL OBSERVATION	s 2 2	X4	X 9			0038	
					· · · · · · · · · · · · · · · · · · ·	34	S14 04	0 057 0	56 6	09		1	1					Τ.
	MESSENG TIME	LCAST NO.	CAR 17P	E DEPTH (m)	3° T	s */	SIGMA-T	SPECIFIC VOLUME	DYN. A X 10 <sup>3</sup>	A. VELO	CITY 02 m	VI PO4=P VE - 41/1	TDTAL=P ug = at/1	NO2-N 98 - 91/1	NO3-N P8 = ot/1	51 Oa-5- 98 - 61/1	рН	00
									1									T
			S1	0000 D	0672	3249	2550	0024879	0000	) 147	146							
	11	9	OBS	0000	0672	32490	2550			147	746							
	11	9	083	6 0005	0592	32580	2568			147	716							
			S1	rD 0010	0334	3276	2609	0019313	0022	2 146	512							
	11	9	085	5 0010	0334	32757	2609			146	12							
	11	9	085	0015	0295	32758	2612			145	96							
			\$1	D 0020	0272	3276	2614	0018797	0041	145	100							
	11	9	083	0020	0272	32758	2614			145	087							
	11	9	085	0025	0271	32759	2015	0018833	0040	140	007							
		_	51	D 0030	0271	3215	2014	0010823	0060	140	000							
	11	9	085	0030	0271	32754	2614			142	000							
	11	9	085	0035	02271	22751	2614			145	/07							
	11	9	083	5 0040	05590	72791	20000											

					_									_										
REFERENCI	SHIP				M/ RSD	DEN	STAT	ION TI	ME ,		ORIC	INATO	R'S	0	EPTH	MAX. DEPTH	015		WEA-	CLOUD			NODC	
COOL HO	1002	* *	1/10	· 1/10	10°	1.	MOID	H TAC	R.1/10		CAUISE NO.	STAT HUM	BER	10	MOR	OF S"MPL"S	OIR.	HGT PER 51	CODE	JTPE A M	7	i	UMBER	
31127	0 ST	6406	5N 16	95654	233	49	07 1	4 ]	44 1	968	B52 0	39		00	38	00	34	2 2	X2	78			0039	
71751	0, 01,	0400	514 1 20	///////////////////////////////////////		WAT	ER	W	/IN D		AIR	TEMP.	2	1	NO.					_				
					00	COLOR	TRANS.	DR.	SPEED OR FORCE	METE	R ORY	W BL	ET COI	DE	DBS. EPTHS	SPEC DESERVA	TIONS							
								31	510	04	9 064	0	58 7	0	)6									
	MESSENG TIME	CAST NO.	CARD	DEPTH (m)		ĉ	5	•/,.	SIGM	4. <b>-</b> 1	SPECIFIC VO	-X187	₹ △ ( 0YN. x 10	2. V.	SOUN	OP CITY	02 m1/1	PO <sub>4</sub> =P µg + a1/1	101AL-P 28 - 61/1	NÖ2-N 99 o al/l	NÔg-N yg - ei/l	SI Oa-Si 28 - 01/	рН	500
							†							-										T
	1	1	STD	0000	07	62	324	•1	253	2	00266	66	0000	່ເ	147	81	652	1	4		2		·	1
	14	4	085	0000	07	62	324	+06	253	2					147	81	652							
	14	4	085	0005	02	71	327	718	261	1					145	83	721							
	_		STD	0010	01	74	328	32	262	7	00175	77	002	2	145	43	712							
	144 144			0010	01	74	328	324	262	7					145	43	712							
				0015	01	72	328	96Q	263	00							707							
			STD	0020	01	69	328	34	262	9	00174	16	0041	)	145	43	709							
	14	4	085	0020	01	69	328	341	262	9					145	43	709							
	14	4	OBS	0025	01	69	328	337	262	9					145	43	701							

																				· · · · · · · · · · · · · · · · · · ·			
REFES	ENCE	CMUR			- E	A RSOEN	ST	TION	TIME		0.00	GIHATO	es.	DEPT	H MA	Х. Гы	WAVE	WEA	CLOUD		1	NODC	
CTET	10. NÓ.	CODE	LATITUI +	DE L 1/10	ONGITUDE	10" 1"	MO	IGMT	) HR,3/10	YEAR	CRUISE NO,	STAT	ON BER	10 80110	M S'MP	U'S DUL	NGT PER S	THER CODE	CODES	7	S' N	UMBER	
31	1270	SI	6409	6N 1	7024 W	234 40	07	14	160 1	968	BS2 0	40		003	4 0	0 02	12	X5	6 8			0040	
						WA	TER	-	WIN D	- BAR	0- A IR	TEMP.		NO	.   s	PECIAL							
						COLO	R TEAP	IS DIR	. OI FORCE	AA ET	ER DRY 1 DULE		ET COD	DEPT	NS OBSE	EVATION S							
							-	35	510	05	5 064	0	50 7	06			1						
		MESSENGE TIME	CAST NO.	CARD TYPE	DEPTH (m)	ש' ד		s •4.	SIG A	7—AA	SPECIFIC VO	-1107	₹ △ E DYN. 4 X 10 <sup>3</sup>	2. V	OUND ELOCITY	02 m1/	PO4-P yg+at/s	1014L-P 20-01/1	HÖ2−N µg - et/l	HO3-N 29 - 01/l	51 O 4-51 29 - 81/1	рН	500
			1				+																T
				STO	0000	0880	32	212	249	92	00304	55	0000	) ' 1	4822	1	ŀ						Ľ.,
		163	ļ.	OBS	0000	0880	3.	2118	249	92				1	4822								
		163		OBS	0005	0881	32	2118	249	72				1	4824								
				STD	0010	0252	32	285	262	23	00179	79	0024	• 1	4578								
		163	3	OBS	0010	0252	32	2845	262	23				1	4578								
		163	L	OBS	0015	0185	32	2902	263	33				1	4550								
				STD	0020	0182	32	290	263	33	00170	33	0042	2 1	4549								
		163	3	OBS	0020	0182	3.	2903	263	33				1	4549								
		162		OBS	0025	0192	3	2003	267	12				1	4550								

CTET ID.	SHIP CODE	LATITU	01		50 SO	SDEN JARE	AT2	IGMT	TIANE	TEAR	CBUIS	ONGIN	ATOR	S N IR	OEP TO BOTT		MAL DEPTH DP	085	WAVE ERVATO	NS I SIA	WEA- THER COOL	CLDUD	1		N ( STA N U	DDC TION MBER	
311270	ST	6412	4N 1	17050 W	234	40	07	14	180	1968	85	2 04	1		003	4	0.0	35	1 2		X 2	6 8	1		0	041	
						C0108	TRANT	0.0	SPEED OR FORCE	AR MET Smb	0~	ORY BULD	WEI BULI	COO	DEPT	5. MS 0	SPEC BSERVA	TIONS									
								01	511	06	4 (	070	06	6 7	06	,											
	MESSENG TIME NR 1/10	CAST ND,	CARD TYPE	OTAL N	1	3' 1	5	•/	SIG A	î → A N	SPECI	IC VOLU	њЕ 8 <sup>2</sup>	₹ △ 0 01N, A 10 <sup>3</sup>		SOUN	0 m	0 2 m1/i	PO4- 10-1	17 I	ГОТА (Р уд = 81/1	NÖ3-N #9 = et/i	NO3-N P8-01/I	SI Dia PE 1	-54 p1/1	₽H	-00
											1									1							T
			STO	0000	C	960	32	09	247	77	00	3188	7	0000	1	485	52	655									
	18	4	085	0000	C	960	32	086	24	77					1	485	52	655									
	18	4	085	0005	C	958	32	097	247	78					1	485	52	656									
			STD	0010	0	121	32	81	263	30	00	1732	4 1	0025	1	451	19	705									
	18	4	085	0010	C	121	32	813	263	30					1	451	19	705									
	18	4	085	0015	0	116	32	817	263	30					1	451	18	701									
			STD	0020	0	114	32	82	263	30	00	1726	7 (	0042	1	451	18	701									
	18	<b>6</b>	085	0020	0	114	32	815	26:	30					1	451	18	701									
	18	4	085	0025	0	114	32	817	263	31					1	451	19	701									

REFERENCE CTAT IO. CODE NO.	SHIP	LATITU	IOE 1/10	LONG	11 171	Deary	5QU	SDEN ARE	STA <sup>1</sup>	IGAT	1ME	YEAR	CRUIS ND,		ATOR'S	N i	DEPTH TO BOTTOP	A DF	H DB	WAVE SERVATH	2NS	WEA- THEE CODE	CLOUD CODES		ST N	NODC TATION UMBER	
311270	SI	6416	7N	171	1750		234	41	07	14	205	1968	852	04	2		0046	00	02	22		×1	45			0042	
								WAI	TER	1	NIND	BAR		AIR SEN	A.P. C	1	NO.	1		}```							
								COLOR	TRA NS	QIR.	SHED DR FORCE	AA ET (mbi	ER III	DRY FULB	WET BULI	COD	OBS.	OBSER	VATIONS	Ì							
										02	S11	07	0 0	71	06	1 7	09										
	MESSENGE TIME HE 1/10	CAST NO.	CAL	RD PE	DEPTH	(m.)	Т	τ	2	•/	SIG A	T-A	SPECIFI	C VOLUA	W2	₹ △ D 07N. M X 10 <sup>3</sup>	SC VEL	UNO DCITY	0 g m1/	1 PD4-	-P 1	ЮТА ( ~ Р 98 ~ 97/1	NÖ3=N #8 = et/1	NO3=N ¥9 = 01/1	51 O 4=51 PB = 01/1	ън	
							<u> </u>																				T
				TO .	000	0	0	956	31	45	242	28	003	6538	3 (	0000	14	842									
	208		085	5	000	0	0	956	31	451	242	2.8					14	842									
	208		085	5	000	5	0	951	31	464	243	30					14	841									
			S1	то	001	0	0	140	32	86	263	32	001	7076	5 (	027	14	528									
	208		085	5	001	0	0	140	32	861	263	32					14	528									
	208		083	S	001	5	0	126	32	851	263	33					14	523									
			S1	TD	002	0	0	122	32	85	263	33	001	7041	1 (	)044	14	522									
	208		083	S	002	0	0	122	32	851	263	33					14	522									
	208	l i	085	5	002	5	0	122	32	856	263	33					14	523									
			S1	τD	003	0	0	124	32	86	263	33	001	6985	5 (	061	14	524									
	208		085	S	003	0	0	124	32	860	263	33					14	524									
	208		083	S	003	5	0	124	32	856	263	33					14	525									
	208		085	S	004	0	0	125	32	857	263	33					14	527									

REF	ID.	SHIP	LATITUDE	LONGITUOE	4/ SO	SOEN	57.	LG A1	TIME	TEAR	CRUISE	STATION	OEPTH TO	MAX, OEPTH OF	08	W A SERV	VE A TIO	INS	WEA- THER	CL	000	NDDC
000	NO.		1/10	1/10	· 10*	1*	MD	DAY	HR,1/10	1	HO,	NUMBER	NOTION	S"AA PL"S	CIR.	НĢ	1 128	Séa	CODE	TTP	AMT	NUMBER
3	1270	SI	64192N	171350w	234	41	07	14	220	1968	852	043	0054	00	01	1	2		X1	3	3	0043
						W	A TER		WINO SNE		·	AIR TEMP. C	NO. 085.	SPEC	IAL							

				CODE	(m)	D BC	PORCE	(mba	1	BULB	81,	ili I		DEPTHS	1 01514	YA IIDA 3							
						01	S08	07	5 0	99	0	78	8	10									
MESSENGE CAST TIME OF NO. HR 1/10	CARO	DEPTH IM1	T	J	s	•/	SIGM	A-T	SPECIFI	C VOLU	JME 18 <sup>2</sup>	STI R	∆ 0 4	SO VEL	UND QCITY	0 2 ml/l	PO <sub>4</sub> =P µg = st/l	101AL=P #8 = 01/1	NO2←N ≠9 - 01/1	HO3-N V2 - 01/1	SEO4—Si yg+at/I	şН	500
									ļ														
	STP	0000	10	23	315	1	242	1	003	3717	0	00	00	14	868	654							
223	085	0000	10	23	315	06	242	1						14	868	654							
223	085	0005	1(	016	315	80	242	3						14	866	656							
	STD	0010	0;	271	329	2	262	7	001	757	4	00	27	14	587	668							
223	085	0010	0;	271	329	18	262	7						14	587	668							
223	085	0015	0;	200	330	01	263	9						14	558	656							
	STD	0020	0	91	330	0	264	0	001	639	0	00	44	14	555	646							
223	085	0020	0	91	329	96	264	0						14	555	646							
223	085	0025	0	82	329	84	263	9						14	551	645							
	STD	0030	0	81	329	9	264	0	001	636	1	00	61	14	552	643							
223	085	00 10	01	81	329	91	264	0						14	552	643							
223	085	0035	01	80	329	86	264	õ						14	552	641							
223	085	0040	0	AI	329	92	264	0						14	553	641							
223	085	0045	0	78	329	86	264	õ						14	553	643							

												-					-	7					the second se		
REFERENCE	SNIP		DE	LONGITUDE	2 La	47 RS	ARE	STAT	ION T	IME	YFAR		ORIGIN	ATOR	'S	OEPTN	DEPTH	OISI	WAVE ERVATIONS	WEA	- CLDUD		1	NODC	
DDE NO.	CODE	•	1/10	* 1/10	25	10*	1-1-	MOII	DAY IN	HR,1/10		NO,	E 5	UM	IER -	BOTTON	A S'MPL"	S DH.	NGT PER S	CDD	E TYPE A M	T	N	UMBER	
311270	ST	6510	N	171085W		234	51	07	15 0	030 1	1968	BSZ	04	4		0045	00			1 X 1	71	1		0044	
277514		0510		1.1005.		[	WA	TER		WIND	LAR	. L	A IR TEP	WP. 7		ND.	0								
							COLOR	TRANS.	OR.	SPIID OB FDACE	AA ETI Umba		ORY	WE BUI	1 000	DEPTNS	OBSERV	ATIONS							
						ľ			16	505	07	5 0	55	05	0 8	08									
	MESSING	CAST	CAI	ID OEPTH I	m)	т	ĉ	s	•/	SIGA	AA-T	SPECIF	C VOLU	₩£ 87	₹ △ 0 01N. N x 10 <sup>3</sup>	SC VEI	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 2 ml/l	PO4=P #8 = 81/1	-1 AT 01	NO2-N 93 - et/1	NO3-N 93-81/1	51 D 4~51 20 + 01/1	μН	100
								1-								-					1				T
	'		' s1	rD 0000	ֹ נ	04	+82	33:	14	262	24	001	785	8 '	0000	14	678	659	·	*					ľ
	03	5	OBS	s 0000	)	04	482	333	137	262	24					14	678	659							
	03	5	083	5 0005	5	04	449	33	135	262	28					14	665	661							
			ST	TD 0010	)	03	356	331	14	263	37	001	664	0	0017	14	626	656							
	03	5	085	5 0010	2	03	356	33	137	263	37					14	626	656							
	03	5	083	5 0015	5	03	301	33	144	264	+3					14	604	661							
			ST	TD 0020	)	0;	295	331	15	264	44	001	601	9	0034	14	602	640							
	03	5	083	5 0020	)	02	295											640							
	03	5	083	5 0025	5	02	277											621							
			S1	TD 0030	)	02	277	331	15	264	+5	001	587	6	0050	14	596	621							
	03	5	085	5 0030	)	02	277											621							
	03	5	083	5 0035	5	02	278	33	151	264	+5					14	597	619							

								_																-	 
REFE	IENCE	CMIR			11.	W/ 25	DEN	STA	TION	TIME			ONGIN	ATOR'S		OEPTH	MAL.		W	VE		WEA-	CLL	DUD	NODC
CTEV	10.	CODE	LATITUOE	LONGITUDE	R C	500.	ARE		IG M I	'	TEAR	CRUISI	E S	TATION	ł	TO	DF	0	258.4	~ 10	114.2	THER		UDE2	STATION
CODe	NO.	0000	* 1/10	1/10	- 5	10°	1"	MOI	DAY	NR.1/10		NO.	1	NUMBER		IOTIOM	S'MPL'S	D IR,	NG	T FER	SEA	1000	114	AAT	 NUMBER
31	1270	S1	6512 N	170405W		234	50	07	15	050	1968	BSZ	04	5		0046	00				1	X1	2	4	0045
						[	WA	TER		WIN Q	BARC		AIR TE	M.P. °C		NO.	595/	-141	1						
							COLDR	TRANS Un)	DIR	SPLEC	AMETE	R 3	DRY	W ET BULB	CODI	OBS. DEPTHS	OBSERV	A TION S							
								1				_							1						

					00	S00	080	072	061 8	08								
MESSENGE TIME O HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	ס" ז	5 %.	SIGMA	-T	SPECIFIC VOLUN	€ \$ △ D DYN, M, 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO4=2 yg = 81/1	fotAt—P yg = st/l	NO2-N µg - 01/1	NO3-N vg - at/l	\$1 Oa++5i یو - al/l	pН	100
		STD	0000	0465	3307	2621	1	0018156	0000	14670								
052		OBS	0000	0465	33074	2621	1			14670								
052		OBS	0005	0396	33092	2630	)			14642								
		STD	0010	0319	3312	2639	9	0016420	0017	14610								
052		OBS	0010	0319	33123	2639	9			14610								
052		OBS	0015	0295	33109	2640	0			14601								
		STD	0020	0292	3311	2641	1	0016274	0034	14600								
052		085	0020	0292	33113	2641	1			14600								
052		085	0025	0289	33116	2642	2			14600								
		STD	0030	0290	3312	2642	2	0016232	0050	14601								
052		085	0030	0290	33117	2642	2			14601								
052		OBS	0035	0289	33119	2642	2			14602								

REFERI	IO.	SNIP	LATITU	DE	LONGITUDE	DCT	47 R SOU	SDEN ARE	STA	TION (GM1	TIME	YE	AR	CRUIST	ORIGIN	ATDR'	N	DEPT		MAX, DEPTH OF	DI	WAV SERVA	TION	(S	WEA-	CLOU	D		S	TATION	
CODE	NO.		•	1/10	1/1	0 _ ₹	10*	1.	MD	OAY	HR,1/1	5		ND.	I P	10 M BI	R	10111	J.M.	S'MPL"	S OR	HGT	PER	SEA	0002	177E A	MT			UMBER	
311	270	SI	6509	N	17011 W	1	234	50	07	15	070	19	68	BS2	04	6		004	6	00	02	1	2		×1	7	3			0046	
								W A	TER		WIND		BARO		AIR TEP	ир. °С		ND.	.	595	C1A1	}									
								COLOI	t TRAN	r Di	SPE DI FOR		METE (mba	R	DRY	W EY BUL	COD	DEPTI	HS	OBSERV	ATIONS										
										00	50	0	085	5 Q	67	05	8 6	08													
		MESSENGE TIME O	CAST NO.	CAR	DEPTH	(m 1	т	٣		s •/	51	GMA	-T	SPECIPI	C VOLU	AA 2 0 7	₹ △ 0 DYN, M x 10 <sup>3</sup>	. v	SON ELD	NO	02 ml/	L PC	)4-1 - a1/	1 1	0 T A L - P 10 - 41/1	NO3-H Vg - el/	I N	103-N 8 = 81/1	51 O 4—5- yg = at/1	рN	500
									-	-												-					1-				T
		•		S1	rD 000	0(	0	463	- 33	02	2	617		001	857	9	0000	1	46	68	723										
		072		083	s 000	0(	0	463	- 33	015	2	617						1	46	68	723										
		072		083	5 000	)5	0	462	33	010	) 2	616						1	46	69	730										
				51	TD 001	0	0	437	33	02	2	619		001	831	8	0018	1	46	59	723										
		072		083	5 001	0	0	437	33	016	> 2	619						1	46	59	723										
		072		083	5 001	15	0	280	33	032	2	636						1	45	593	655										
				SI	TD 002	20	0	278	33	04	2	636		001	674	9	0036	1	45	93	650										
		072		083	5 002	0	0	278	33	035	2	636						1	45	593	650										
		072		0B3	s 00;	25	0	276	33	052	2	638						1	45	93	639										
				S	003	30	0	279	33	06	2	638		001	658	0	0053	1	45	96	642										
		072		OB:	s 003	0 0	0	279	33	059	2	638						1	45	96	642										
		072		OB:	s 003	35	0	279	33	063	3 2	638						1	45	96	638										

CTET ID.	SHIP	LATTU	DE	LONGITUDE	SQUARE	STATION T	TEAB	CAUSE	STA	DA'S TION	DEPTH	N DEPTI	015	WAVE LEVATIONS	WEA- THER	CLOUD		5	TATION	
CODE NO.	CODE	•	1/10	1/10	Z 10" 1"	MO DAY	18,1/30	HD.	NUA	MILI	01108	M SMPL	5 04	HGE P10 5	CDDE	TTPE AM		H	UMBER	
31127	olsil	6506	5N	16941 W	233 59	07 15	095 1968	852	047		005	5 00	1		1 X4	X 9			0047	
					COLD	TRANS OF	SPILO MET		DRY V		NO.	SP								
					CODE	8#1 UIK	FOICE INT	14] B	ULS	010	DEPTH	15								
		·				00	500 09	05 0	53 0	50 0	10	<u> </u>								
	MESSENGE TUMB	CAST	CARD	DEPTH (m)	1 2	5 ./	SIGMA-1	SPECIFIC	VOLUME	TA D	50	OUND	0;=1/1	PO4=P	IOTAL=P	N03-N	ND3-N	SI O a-Si	BH	1
	HR 1/18									£ 10 <sup>3</sup>		COCITY		28 - 61/1	#8 * e1/1	#2 = 01/1	h# = er/J	P3 = 01/1	-	-
	1			0000	0614	1201	2(1)	1	0120	0000				1	1 1				1	
	097		085	0000	0514	33013	2611	001	7127	0000	14	4689								
	097		OBS	0005	0511	33009	2611				14	4689								
	0.0.7		ST	D 0010	0511	3302	2611	001	9084	0019	14	4690								
	097		085	0015	0468	33023	2617				14	4673								
			ST	0020	0296	3298	2630	001	7314	0037	14	4601								
	097		085	0020	0298	32982	2630				14	4601								
	071		STI	D 0030	0265	3299	2633	001	7020	0054	14	4588								
	097		OBS	0030	0265	32986	2633				14	4588								
	097		085	0040	0250	32989	2634				14	4588								
	097		085	0045	0262	33000	2635				14	4590								
REFERENCE	I.			_	= W/RSDEN	STATION T	1ME	1	ORGINATO	DIES	DEPT	MAX	-	WAVE	WFA-	CLDUD	1		HODE	
CTIT ID.	CDDE	LATITU +	DE	LONGITUDE	SOUARE	IGMTI	YEAR	CRUISE	STA .	TION	1D DTTO	DEPTI	011	SERVATIONS	CODE	CODES		S	TATION	
			1/19	1/10	10. 1.	MO DAT	121/10	0.00	0.0	- BEH	0.06	S.W.PL	S DIL	HGT PLE S		TTPL AM		-	0040	
1311270	NETI	6504	NI	1691I WI	1233 159 WA		VIND	1852	A IR TEMP.	2	0052	21 00			0   X4	X 19	1	1	0048	
					COLDI	TRANS DR.	SPIED MET		DRY V	VIL COD	OBS.	SPI OLSER	ECIAL VATIDHS							
					CODE	UN1 000	10102 000				10									
						1 100	1200 109	1 10	50 10		110			1					1	
	TIME	LCAST	CARD	DEPTH (=)	2.1	s •/	SIGMA-1	SPECIFIC ANOM	ALT-E187		- 50 VE	OUND	D 2 m1/1	PO4=P	10 TAL-P	NO3-N #8 - et/1	ND3-N	51 Od-Si 100-51	рн	100
	HR 1/10				-			-		A 10-	+									f
	1	1	STI	0000	0465	3298	2614	001	8855	0000	14	4669		ļ		1			1	'
	121		OBS	0000	0465	32981	2614				14	4669								
	121		085	0005	0466	32977	2613	0.01	0207	0010	14	4670								
	121		085	0010	0421	32986	2619	001	0201	0019	14	4652								
	121		OBS	0015	0333	32995	2628				14	4616								
			STI	0020	0264	3299	2634	001	6978	0036	14	4586								
	121		085	0025	0235	32983	2635				14	4575								
			ST	0030	0224	3298	2636	001	6766	0053	14	4570								
	121		085	0030	0224	32978	2636				14	4570								
	121		085	0040	0224	32976	2636				14	4572								
	121		OBS	0045	0222	32979	2636				14	4572								
REFERENCE	SHIP			-	M/ RSDEN	STATION T	IME		DRIGINAT	D#*S	DEPTH	H MAX		WAVE	WEA-	CLOUD	1		NODC	
CODE NO.	CODE	·	1/10	1/10	10" 1"	MDIDAY	TEAH	CRUISE NO.	STA1 NUA	TION	ID TTD	M S'MPL	5 08	KGT PEP 3	CDDE	CODES		2 A	TATION UMBER	
311270	1 ST	6503	1.N	168617W	233 58	07 15	146 1968	852	049		0.05	2 00	1		0 X4	X O	1		0049	
21751		0.000	T14	10041141	WA	128	VIND	10-	AIR TEMP.	3	ND.	L			01 74				00471	
					COLDR	IRANS DIR.	DI LORCE UND	ER (	DRY V ULE E	VET COD	DEPTH	DASER	VATIONS							
						00	500 09	5 0	60 0	53 0	10									
	MESSENGE	CAST	CARD		1			SPICIPIC	VOLUME	I S A D	50	DUND		PO P	Inter-	NDawN	ND	505		T
	HR 3/10	ND.	TYPE	DEPTH UNI			SIGMAT	ANOM	ALT-1187	E 10 <sup>3</sup>	. VE	LOCITY	03 ml/l	#8 = #1/1	# E = 01/1	PB = 01/1	## + 01/1	28 - 81/1	j pH	C
										1									1	T
			STI	0000	0588	3299	2601	002	0099	0000	14	4719	737							
	146		085	0000	0588	32994	2601				14	4719	737							
	1-0		STI	0010	0586	3300	2601	002	0073	0020	14	4720	733							
	146		085	0010	0586	32996	2601				14	4720	733							
	146		OBS	0015	0284	33027	2623	001	6979	0039	14	4649	694							
	146		OBS	0020	0284	33011	2634				14	4595	694							
	146		OBS	0025	0271	33019	2635			0.0.5	14	4591	655							
	164		ST(	0030	0280	3305	2637	001	0657	0055	14	4596	636							
	146		OBS	0035	0285	33070	2638				14	4599	628							
	146		OBS	0040	0286	33075	2639				14	4600	628							
	311		0.0.0	0015	0.2.0.1	22010	7/70				1 4	0.0.0	678							

REFEREN	ICE S	SHIP ODE	LATITU	DE L(	DNGITUDE	Delify	47 2 SQU 10*	SDEN ARE		TIME TJ	TEAR	CRUIT	ORIGIN E S	A TOR'S		DEPTH 10 101101	MAI DEPTI OF S'MPL	H OIS	WAVE ERVATIONS	WEA- THER CD DE	CLOUD CODES	<del>,</del>	S	NDOC TATION UMBER	
3112	70 5	SI	6458	4N 1	58115W	1	233	48	07 15	170	196	8 85	05	0		0046	200			1 X4	X 9			0050	
								COLOR	TEANS OF	WIND IR. SP	EEO ME	RO-	ORY ORY	WET	CODI	NO. OBS. DEPTM	SP OBSER	ECIAL VATIONS							
								CODE		0 50	0 10		)42	042	0	09									
	ME	ESSENGE TIME o R 1/10	CAST NO.	C ARD TYPE	DEPTH	lm )	T	r	s •4.		IGMA-1	SPECI	IC VOLU	41	₹ △ D 37H, AA X 10 <sup>3</sup>	SC VE		03 mV1	PO a=P ya= et/l	107AL=P	NO3-N NO3-N	NQ3=N 28 - st/l	51 O 451 1/9 - 01/1	pH	500
				STD	0000	0	0	672	3249	2	550	00	2490	2 0	0000	14	+746	719		ļ					
		172		OBS	000	0	0	672	3248	7 2	550					14	746	719							
		172		STO	0010	0	0	666	3254	4 Z	555	00	2444	4 C	025	14	746	769							
		172		085	0010	0	0	666	3254	0 2	555					14	746	769							
		172		STD	001	> 0	0	545 450	3292	8 2	610	00	921	6 0	047	14	+705	679							
		172		OBS	0020	0	0	450	3291	5 2	610					14	665	679							
		172		085	002	5	0.	438	3292	0 2	612	00	905	4 C	0.66	14	+661 -661	679							
		172		085	0030	0	0	436	3291	9 2	612					14	661	676							
		172		085	0035	5	0.	436	3293	12 82	613					14	662	665							
				000	004	·	Ť		2-72							-									
																	•								
REFEREN	CES	5HIP	LATITU	DE	DNGITUDE	BIFT DC18	W/R SOU	SOEN	STATION	TIME	YEAR		ORIGIN	A TOR'S		DEPTP	MA)	L OB	W A VE	W EA THER	- CLOUD CODES			NODC	
REFEREN CTRT COCE F	CE D. CC	SHIP ODE	LATITU	DE L(	DNGITUDE	DRIFT	50U 10*	SOEN IARE		TIME 1)	YEAR	CRUI	ORIGIH E S	A TOR'S	d R	DEPTP TO ROTTO	MA) DEPT OF S'MPL	L OBS	WAVE ERVATIONS HGT PER S	WEA THER CODI	CLOUD CODES		2	NDDC TATION VUMBER	
REFEREN COL	CE 5 0. CC	S I	LATTU	DE LO 1/10 7N 14	57535W	Delet	v / a SOU 10*	SOEN ARE	STATION IGM MO DAY 07 15	11ME 11 HR.1/	TEAR			ATOR'S		DEPTI TO BOTTO	4 (MA) DEPT M S*MPL 7 OC	L 085	WAVE ERVATIONS HG <sup>C</sup> PER S	en code 2 X 4	CLOUD CODES TYPE AM		3	NDDC TATION UMBEP	
REFEREN CTEV COOL 3112	ct s 0. cc 10. cc	SHIP ODE	6458	DE LO 1/10 7N 14	57535W	DRIFT	×/2 SOU 10*	SOEN ARE 1° 47 WA COLOR CODE	STATION IGM MO DAY 07 15 TER 12ANS IMI D	190 WINE R, 90	10 196 8A 860 9 84 860 9 80 80 80 80 80 80 80 80 80 80 80 80 80	CRUII NO B B S RO-		ATOR'S TATIOP UMBE	vis.	DEPTH TO ROTTO 004 NO. 085. 0EPTH	1 MAD DEPT OF S'MPL 7 OC SP S DISER	ECIAL		WEA THER CODI 2 X4	CLOUD CODES TYPE AM	<u>.</u>	3	NDDC ITATION UMBEP	
REFEREN CIEF COUL 3112	CE 5 0. CC 10. CC	SHIP ODE	ιΑπυ 6458	DE LO 1/10 7N 1	DNGITUDE 11/10 57535W	DRIFT	10° 233	SOEN ARE 1° 47 WA COLOR CODE	STATION IGM MO DAY 07 15 TER TEANS D	190 WINE R, 5P R, 5P R, 5P	1961 1961 84 1961 1961 1961 1961 1961 1961 1961 196	CRUII NO B BS RO- TER ball 05	ORIGIH E S 2 05 AIR TEP BULB 066	ATOR'S TATIOP UMBE UMP. 10 WET BULD	vis. cool	DEPTH TO FOTTD 004 ND. 085, 0EPTH 08	1 DEPT OF S'MPL 7 OC SP S DIRSER	ECIAL	WAVE ERVATIONS HGT PERS	2 X4	CLOUD CODES TYPE A M		5	NDDC TATION UMBEP	
REFEREN CTEV COOL 3112	CE 5 0. CC 70 5	SI SI SI Time o R 1/10	6458	DE 1/10 7N 11 CARO 17PE	DNGITUDE 11/10 5 7 5 3 5 W	Date No.	10° 233	SOEN ARE 1° 47 WA COLOR CODE	STATION IGM MO DAY 07 15 TER TRANS D 001 0 0	TIME 1) HR, 1/ WINE R, 5/ FC 0 SC	TEAR 10 196 196 196 196 196 196 196 196	CRUII NO B BS RO- ITER Ibit 0 5	ORIGIH E S AIR TEF DRY BULB D66 IC VOLU MALT-21	ATOR'S TATIOP UMBE UMP. 10 WET BULB 055 ME B <sup>2</sup>	чі£ сооі 1 € х 1д <sup>3</sup>		4 MAJ DEPT M OF S'MPL 7 OC SP S DBSER DUND LOCITY	C AL OBS	W A V E           E E V A TIONS           H G T P(R S           PO q= P           μ Q = P / μ	WEA THER IA CODI 2 X 4 TOTAL-P μg = ot/l	CLOUD CODES TTRE AM X 9 NO2-N µg + ot/1	NO <sub>3</sub> -N µg - ci/l	51 D4-5 yg - 01/	NDDC ITATION UMBEP 0051	S CCC
REFERENCIES	CE 5 0. CC 70 S	SHIP ODE SI SSENGE TIME R 1/10	CAST NO.	0E L0 1/10 7N 10 CAR0 17PE	DNGITUDE 11/10 57535W	Date T	233 t	SOEN ARE 1° 47 WA COLOR CODE	STATION IGM MO DAY TER TER TER TER S */, *	HR.17 HR.17 190 WINE R. 59 6 0 S0	75 AR 10 1961 460 860 860 10 10 10 10 10 10 10 10 10 1	CRUSI NO B B S RO- TER ball SPECI ANC	ORIGIH E 5 2 05 AIR TE/ DRY BULB D66	ATOR'S TATIOP NUMBE 1 WP. 'C WET BULB 055 87	к к соол 1 х 10 <sup>3</sup>	DEPTH TO BOTTO 004 NO. 085, 0EPTH 08 08	4 MAA DEPT M STMPL 7 OC SP S DBSER DUND LOCITY	C A OBS	W A V E           ERVA TIONS           HGT PIE           POq=P           μq = =1/1	W [A THER CODI 2 X 4	CLOUD CODES TTRE AM X 9 NO2-N µg = ot/1	NO3-N yg - 01/1	SI 04-5 yg - 01/	NDDC TATION UMBEP 0051	SCO
REFERENCIENT	CE 5 0. CC 70 5	SHIP ODE SI SI ISSENGE R 1/10	CAST NO.	0E L0 1/10 7N 10 CARD 17PE STD	DNGITUDE 1/10 57535W		233 t	SOEN ARE 1° 47 WA COLOR CODE	STATION IGM MO DAY 07 15 TER TEANS D 00 5 */, 3219 3219	TIME 13 HR.17 190 WINE R. 50 FC 10 10 10 10 10 10 10 10 10 10	TEAR 196 196 196 196 196 196 196 196	CRUII NO 8 BS RO- TER ball 0 5 1 SPECI ANC	ORIGIH E S 2 05 AIR TEF BULB DBR BULB D66	ATOR'S TATIOP UMBE WET BULB 055 ME B <sup>27</sup>	vis cool 2 1 € △ D DYN, M x 10 <sup>3</sup>	DEPTH TO BOTTO ND. OBS. DEPTH OB SI VE	4 MA) OFT M S'MPL 7 OC SP S OBSER DUND LOCITY	C AL C C AL VATIONS O 2 mL/1	WAVE EEVATIONS HGT P(E 5 PO4-P y9 - =1/(	TOTAL-P ug = 01/1	CLOUD CODES TYPE A.M X 9 NO2-N µg - oVI	NO <sub>3</sub> -N µg + ot/1	51 D4-5 µg - от/	NDDC ITATION GUMBEP 0051	500
REFEREN	CE 5 D. CC 70 S	5HIP ODE 5 I 155ENGR R 1/10 196	CAST NO.	0E 1/10 1/10 7N 10 17FE STD 0BS 0BS	Divigitude 1/10 57535W DEPTH 0000 0000		233 t 0 0 0	SOEN ARE 1' 47 WA COLOR CODE *C 7210 735	STATION IGM MO DAY 07 15 TER TLANS D 0 0 3219 3219 3219 3218	TIME T) HR,1// HR,1// HR,1// FC O SC - 1 1 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	TEAR 196 196 196 196 196 196 10 10 10 10 10 10 10 10 10 10	CRUST NO B BS RO- TER ball O 5	ORIGIH E 205 AIR TE/ BULB DBT BULB D66	ATOR'S TATIOP WMBE 1 WF, 'C WET BULB 055 ME B <sup>7</sup>	4 к соор ул. м х 10 <sup>3</sup>	DEPTH TO ROTIO 004 085. 0EPTH 08 08	4 040 040 040 040 040 040 040 040	C A 085 (S 012 C (A L V A TIONS 0 2 mi/l	WAVE           EEVATIONS           HGT PEE           POq=P           μφ = e1/1	2 X 4		NO3-N µg - ai/i	51 04-5 yg - 01/	NDDC ITATION UM859 0051	SOCO
SEFEREN CTAY COOR 3112	CE 5 0. CC 70 S	SHIP ODE SI SI TIME 8 1/10 196 196	CAS1	CARD TYN 10 CARD TYPE STO OBS OBS STD	DNGITUDE 1/10 57535W DEPTH 0000 0000 0001	LIND 00500	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SOEN ARE 1° 47 WA COLOR CODE ° 7210 735 557	STATION IGM MO DAY 07 15 TER TLANS D 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	TEAR 1961 1961 1961 1961 1961 1971 1971 1972 1972 1975	CRUII NO 8 BS RO- TER ball SPECI ANC	ORIGIH E 205 AIR TE/ DRY BULB D66 IC VOLU MALY-21	A1085 TATIOP UMB2 1 WF, TC 055 ME 87	4 R COOI 1 Σ Δ D Σ/H. M X 10 <sup>3</sup>	DEPTH TO 80TTD 004 085. 06PTH 08 08 VE	4 MAI 0EPT 0F 5'MPI 7 OC 5P 0BSER 0DUND LOCITY 4768 702	L 083 (S 01R ECIAL VATIONS 0 2 ml/l	WAVE ERVATIONS HGT PTR 3 PD ε=P μg = e1/1	Z X4	CLOUD CODES TTR AM X 9 NO7-N µg - oVI	NO3-N 20- 01/1	51 D4-5 µg - 01/	NDDC ITATION GUMBEP 0051	SOC
REFEREN CTAY COOL 3112	CE 5 (D. CC 70 5	SHIP ODE SI SI SI SI SI SI SI SI SI SI SI SI SI	CAST	CARD 177N 10 7N 10 177E STD OBS OBS STD OBS OBS STD OBS	0000 0001 0011 0011	UT 0 0 5 0 0 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SOEN AALE 47 47 47 47 47 47 7210 7210 735 557 7557 417	STATION IGM MO DAY 07 15 TER TER 3219 3219 3219 3218 3253 3252 3274	TIME T) HR.1/2 WIND R. 5 FC 0 SC 0 SC 0 SC 0 SC 0 SC 0 SC 0 SC 0 S	1961 1965 1966 1967 1967 1967 1967 1967 1967 1967	CRUTH NO 8 BS 8 BS 15R 905 905 905 900 900	ORIGIN E S 2 05 AIR TE/ DBY SULB SULB SULB SULB SULB SULB 2 05 C VOLU 2 326	A10R'S TATIOP NUMBE 1 WF. TC BULB 055 ME 5	4 8 2 2 2 2 2 2 2 2 2 2 2 2 2	DEPTH TO ROTTO 004 085. 06PTH 08	4 MA) 0 EPT 0 F 5' MPI 7 0 C 5 P 5 DISSER 0 DIND LOCITY 4768 4768 4768 4768	ECIAL VATIONS	WAVE ERVATIONS HG 7 FE 3 PO ε-P με - e1/1	totaL-P yg er/f	CLOUD CODES TITE AM X 9 NG2-N µg = ot/1	NO <sub>1</sub> -N µg - 01/1	51 04-5 yg - 01/	NDDC ITATION SUMBEP 0051	SOC
REFEREN Clar COOL +	CE 5 G. CC 770 S	ISSENCE SI TAME • 196 196 196	CAST NO.	CARD 177N 11 CARD 177E STD OBS OBS STD OBS STD OBS STD	0000 0001 0011 0021		v/2 sou 10* 2 3 3 t 0 0 0 0 0 0 0	SOEN ARE 1' 47 WA COLOR CODE CODE 7210 735 557 557 417 396	STATION IGM MO DAY 07 15 ITR 12ANS D 0 0 0 3219 3219 3219 3219 3219 3219 3218 3253 32552 3274 3273	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	126 126 126 126 126 126 126 126	CRUII NO B B S RR0- TER D5 SPECI ANC 00 00	ORIGIN E 2 2 2 5 5 5 5 5 5 5 5 5 5 5 5 5	A10RS TATIOP UMAE WET BULD BU BU 5	4 8 2 2 3 1 2 4 8 2 2 0 0 1 2 4 2 0 0 0 1 2 1 2 2 1 2 1 2 1 2 1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	DEPTH TOTO 004 085. 0671H 088 087 087 087 087 087 087 087 087 087	4 MAA OET 5 OF 5 OF 0 OET 5 OF 5 OF 0 OET 0	C AL OIS CIR CIAL VATIONS	WAVE           EEVATIONS           ING PIE           POq=P           μg = n/l	WEA           THER           2         X 4           TOTAL-P           ug = e1/1	CLOUD CODES TITE AM X 9 NO2-N µg = ot/1	NO <sub>2</sub> -N yg - 01/1	51 Ο 4 - 5 μg - οι/	NDDC ITATION UMBEP 0051	SOC
REFEREN Clark COOR ,	СЕ 5 0. 770 5	SHIP ODI 5 I 196 196 196 196 196	CASI NO.	CARD 177N 1 7N 1 7N 1 7N 1 7N 1 7N 1 7N 1 7N	0000 0000 0001 0011 0012 0022 0022	Lind (m) 005005005	V/2 Source 2 3 3 T T 0 0 0 0 0 0 0 0 0 0 0 0 0	SOEN ARE 1' 47 47 COLOR CODE CODE 7210 735 557 557 417 396 156	STATION IGM MO DAY 07 15 TER TEM S	11 HR.1/ HR.1/ 11 10 11 10 11 10 11 20 0 50 0 br>0 0 0 0	7248 196 196 196 196 196 196 196 196	CRUIT NO B BS RR0- TER D05 SPECI ANCO 00 00	ORIGIH E 5 2 05 A IR TE/ BULB 066 IC VOLUB 2 3 26 2 3 26 2 0 0 8	ATOR'S TATION 100 MB2 1 1 0 0 5 5 5	4 8 2 2 3 1 5 1 1 5 1 1 5 1 5 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1	DEPT) 10004 ND. 085. 06FHH 08 08 VE	4 MA1 0 cm 0 cm	C AL C AL C AL C AL C AL C 2 mi/l	WAVE           EEVATIONS           ING PIE           POq=P           μg = n/l	WEA           THER           CODI           2         X 4           TOTAL-P           #g = 01/1	- СLOUD СОDES 11776 Ам Х 9 NO2-N µg = ot/1	NO3-N µp - ei/i	5104-5 yg - 01/	NDDC TATION NUMBEP 0051	SCC

REFE	IENCE	SHIP	LATITU	DE	LONG	TUDE	RIFT DC18	97 at \$00	DEN	\$1/	TION	TIME		YEAR	CRUIS	ORIGIN	ATORS		DE	PTH TD	MAX. DEPTH	081	W A SERV/	VE		WEA- THER	CLOU	5	5	NODC
C001	ND.	CODE	•	1/10	•	1/10	° 3	10*	1°	MO	DAY	HR.1/	10		NO		NUMBE	R	801	MOT	S'MPL'S	5 011:	HGT	9EQ 5	1A	CODE	TYPE A	UT .	Þ	UMBER
31	1270	S1	6458	8N	1674	+3 W		233	47	07	15	20	51	968	BS	2 05	2	_	00	39	00	I,			2	X 4	X			0052
								:	COLOR	TEAN	s Du		110 01 010	A ETE	)=   R I	DRY BULR	WET	VI%	DEP	10. 185. PTHS	S PEI O B SER V	CIAL A TION S								
										1	00	5	00	104		053	050		0	7										
		MESSENG TIME HR 1/10	CAST ND.	C AR TYP	O E	DEPTH	im 1	r	°C		s •4.	Ť	SIGM	A-1	SPECI	IC VOLU	IM E	₹ △ D OYN, N X 10 <sup>3</sup>		SOU VELO	IND ICITY	03 ml/1	P V1	04-P 1 = e1/l	10 99	TAL-P	NO7-1 #9 = 01/	NQ3-N 29 - ot/	\$1.0 4=54 19 = 101/1	pН
				51	D	0000	0	0	927	30	99		239	7	00	3952	8 (	0000		148	326	640								
		20	7	085		0000	2	0	927	30	990		239	7						148	326	640								
		20	/	085	. D	0001	2	0	(1) 688	32	204		252	2	0.0	2667	6 (	033		141	752	701								
		20	7	085	5	0010	5	0	688	32	278		253	2		2001		, - , , ,		147	752	701								
		20	7	085	i	001	5	0	436	32	539		258	12						146	53	862								
				ST	D	0020	5	0	113	32	67		261	9	00	1834	9 (	056		145	515	828								
		20	7	085	5	0020	)	0	113	32	672	: :	261	9						145	515	828								
		20	7	085	5	002	5	0	109	32	667	1	261	9						145	514	830								
				ST	D	0030	C	0	109	32	68		262	0	00	1830	2 (	074		145	15	830								
		20	7	OBS	5	0030	)	0	109	32	675	1	262	0						145	15	830								

 0396
 3273
 2601

 0156
 32653
 2615

 0147
 3266
 2616

 0147
 32656
 2616

 0147
 32653
 2615

0BS 0BS

R C1 C0	EFERE	NCE ID. NO.	SHIP COOE		LONGITUDE	PHOC TE	4/25 SQU	DEN ABE	ST.	GMT	TIME 1 HR.1/10	YEAR	CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAL OEPTH DF S'MPL'S	OBS DHL	WAVE LEVATIC	ONS SEA	WEA- THER CDDE	CLD CD	UD OES	NOOC STATION NUMBER
F.	311	270	ST	64595N	16734 W		233	47.	07	15	215	1968	B52	053	0035	00			1	X4	X	9	0053

#### 233 14/10/11/21/21/21/21/2018 10/21/21/2018 10/21/2018 10/11/2018 WATER WIND 6A80-01 All TEAMS VIL NO. SPECIAL COLOR TLAMS OIL 01 All TEAMS OIL OIL SPECIAL COLOR TLAMS Intel SPECIAL BULS BULS DEFENS DESERVATIONS

					00	SO0 11	8 056 0	55 1	06								
MISSINGE TIME 0 HR 1/10	CAST ND.	CARD	DEPTH (m)	ט" ד	s *4.	SIGMA-T	SPICIFIC VOLUME	₹ △ 0 01N. M. 1 10 <sup>3</sup>	SOUNO VELOCITY	0; ml/3	PO4=P 23 = 61/1	101A L=P #8 = 41/1	NO3-N 28 - 81/1	N03-N 98 - 81/1	\$1 O4=\$1 98 + 01/1	рH	202
1		STO	0000	0923	3013	2330	0045894	0000	14813								
218		OBS	0000	0923	30126	2330			14813								
218		OBS	0005	0688	32358	2538			14752								
		STO	0010	0490	3249	2572	0022842	0034	14674								
218		OBS	0010	0490	32486	2572			14674								
218		085	0015	0222	32619	2607			14562								
		STO	0020	0218	3262	2607	0019463	0056	14561								
218		OBS	0020	0218	32616	2607			14561								
218		085	0025	0216	32622	2608			14561								

1117 C117 C001	IENCE ID. ND.	SHIP		LONGITUOE	10°	DEN ARE	AT2	IDN TIN IGMTI	1/10 YE	EAR	OI CRUISE NO.	RIGINATOR'S STATION NUMBER	_	DEPTH TO BDTTOM	MAX. OEPTH QF S"MPL"S	DR	WAVE ERVAT	IONS #_ 3EA	WEA- THE COOE	CLO	DUD DES	NDDC STATION NUMBER
31	1270	SI	65005N	16725 W	233	S7 WA	0.7 TER TEANS	15 2 WI	31 19 NO 1410 01	BARD- AAETER [mbail		054 R TEMP. °C RY WET LB BULB	VIS	0024 NO. DBS. DEPTHS	00 SPEC OBSERVA	LAL		1	X4	7	8	0054

				00	S00 11	7 064 0	60 7	04								
HESSENGE CAST	CARD TYPE	QEPTH [m]	7 °C	s •/	SIGMA-T	SPICIFIC VOLUME	Σ Δ D ΟΥΝ, Μ. # 10 <sup>3</sup>	SOUNO	02 ml/l	PO4=P 93 * 61/1	TOTAL=P #8 + #1/1	NO3=N sg = et/i	$NO_3 = N$ $\mu_B = at/1$	51 O <sub>4</sub> —51 98 + 81/1	₽H	SCC
231	STO OBS	0000	0922 0922	2952 29519	2283 2283	0050397	0000	14805 14805	656 656							
231	OBS STD DBS	0005 0010 0010	0551 0264 0264	32233 3236 32361	2545 2583 2583	0021736	0036	14695 14576 14576	740 796 796 801							

REP CTET COD	ERENCE 10, NO,	SHIP	LATITU	1/10	LON		Deul 1 ex DC 1e	M7 25 SQU-	OEN ARE	STA	GAT	TIME I HE 1/10	YEAR	c	C RUISE NO.	SRIGIN S N	ATOR'S TATION		017108	A MA DEPT OF A DEPT	H I	W DBSERV	A VE VA TI	ONS RÍSEA	WEA THE COD		CLOUO CDDES	7	S N	NDDC TATION	
3	+ 11270	51	6501	N	167	15 1	4	233	57 WA1	07	16		196	B F	BS2	05 UR TEA	5 AP. °C	VTS.	0020 NO.	2 01	ECIAL		T	1	x z	1	7 8			0055	
									COLOR	TRAN!	- OIR	08 F010	2 (m	10		73	10L1	7	DEPTH	S OBSE		42									
		HISSING TIME HIL 1/10	CAST NO.	CA 11	RD PE	DEPTH	i (m.)	τ	r	2	-/	SIG	MA-1	51	PECIFIC ANOM	VOLUI ALT	ME D	103	- SC VE		0,7	=1/1	PO4 23 *	F 01/1	TOTAL= #8 - 01/1	P H	103-N 9 - 01/	ND3-N #8 - 81/1	5) D 4 = 5; #8 + 81/3	р. рН	1 C C
		00 00 00	7 7 7	S 08 08 S 08	T 0 S S T 0 S		00 00 05 10	01	885 885 749 393 393	29 29 30 31 31	94 937 809 68 681	23 23 24 25	21 21 08 18	0	004	675 ( 795 (	6 0 8 0	000 037		4796 4796 4756 4623 4623											

REFE CTHY CODE	IO. NO.	SHIP	LATITUOE		SOUA	DEN VRE	AT2	TION T	11ME	YEAR	CRUIS-	STATION NUMBER	DEPTH TO BOTTOM	MAL OEPTH OF S'MPL'S	OB1	WAVE ERVATIO	I SEA	WEA- THER CODE	CLOUD CODES	ī	NOOC STATION NUMBER
31	1270	51	65351N	168105W	233	58 WA	07	17 L OIR		1968 6ARC METE	BSZ	056	0039 NO. 085. 05PTHS	00 SPEC	18 A TION S		3	X2	7 8		0056

			100	01	1		A D & C E	Uner				1 1		1								
						18	520	12	5 08	0	078	6	07									
MESSENGE CAST	CARD TYPE	OEPTN (m)	ט"ז		5 *	/	SIGM	A T	SPECIFIC I	/OLUM 7-616?	₹ OY X	∆ ¤. N. ∞. 10 <sup>3</sup>	SO VEL	UN O OCITY	03 ml/l	PO4~P #2 + 01/1	TOTAL=P up+at/1	NO3N µ9 - et/l	NO3-H 95-et/1	\$1 O <sub>4</sub> —\$1 99 + 01/1	pН	sec
	STD	0000	081	1	303	1	236	1	0042	948	00	000	14	773								
104	OBS	0000	081	1	303	11	236	1					14	773								
104	OBS	0005	084	4	309	68	240	7					14	795								
104	OBS	0009	084	4	311	62	242	2					14	798								
	STD	0010	084	2	312	1	242	6	0036	689	00	40	14	798								
104	085	0013			313	24																
104	085	0017	083	0	314	27	244	5					14	797								
	STO	0020	079	8	315	0	245	6	0033	932	00	)75	14	786								
104	085	0022	075	2	315	64	246	7					14	770								
104	OBS	0026	060	3	317	32	249	9					14	713								

REFERENCE	SHIP CODE	LATITUO	DE 1/10	LONGITUOE	DAUFT IN DC TR	147 25 SQU	DEN ARE	STA	ION I IGMTI	TIME   HR,1/10	YEAR	CRUISE NO.	STA NU	DR'S TION ABER	OEP1 TO BOTTO	'H DI DM S'A	AAX. EPTH OF MPL'S	OBSE	WAVE RVATION	IS J	WEA-	CLOL COO		P ST N	ATION
31127	0 51	65351		168184W		233	58 WAT COLOR CODE	0 7 TRANS	018.	SPEII OR FORC	1968 BARO METE Unbe	BS2	057 AR TEMP. ORY		004 NO 085 0871	B OB	SPEC SERVA			2	X 4	7	3		0057
	MESSING TIME HR 1/1	CAST OF NO.	CARO	ОЕРТН	(m 1	1	٣	s	•/	SIG	MA-T	SPECIFIC	C VOLUME	∑ ∆ C OYN, A x 10 <sup>3</sup>		LOCIT	n l	02 ml/l	PO4=0 yp=01	1014 - 44	4.L=P + 01/1	NOg~ µg - at	к NO3=N И уд - et/I	\$1 O4-51 29 - 01/1	∎N

l				1	1		1					1	1	1	1
	STD	0000	0880	3152	2445	0034917	0000	14815	717						
116	085	0000	0880	31518	2445			14815	717						
116	OBS	0005	0877	31516	2445			14814	738						
	STD	0010	0876	3154	2447	0034733	0035	14815	735						
116	OBS	0010	0876	31537	2447			14815	735						
116	085	0014	0808	31522	2456			14789	754						
116	085	0019	0701	32260	25280				680						
	STD	0020	0697	3155	2473	0032263	0068	14747	679						
116	OBS	0023	0663	31560	2478			14734	675						
116	OBS	0028	0528	32146	2541			14688	719						
	STD	0030	0496	3227	2554	0024545	0097	14677	742						
116	OBS	0033	0446	32402	2570			14658	772						
114	ORS	0038	0357	32514	2588			14623	809						

REFE	RENCE				. =	44/85	DEN	STA	TION	TIME			DRIGINATOR'S	OEPTH	MAX.		WA	VE		WEA-	CLO	ouc	NOOC
CTEY	10.	COOL	LATITUOE	LONGITUDE		sour	ARE		(GMT	1	TEAR	CRUISE	STATION	01 BOTTOM	OF	01	SERV	A TIQI	NS	CODE	CC	OES	STATION NUMBER
			1/10	1/10	-	10"	1.	MO	140	HR_1/10		140.	IN UMBER		2 WILL'S	D UL	HGI	PLU	SEA		TYPE	AMT	 
31	1270	ST	6535 N	16826 W		233	58	07	17	130	1968	BS2	058	0048	_00	19	1	2		X2	7	8	0058
						[	WA	TER		WIND	BAR		AIR TEMP. C	NO.	5.860	14.1	1						
							COLOR	IRAN	S. OIR	SPEEL OR	METE	a 🗌	DRY WET COD	OIS.	OBSERV	TIONS							

COOE	tm J	0.0	POICE	lmbal	10L1	BULB		OFFINS		
		20	S15	125	078	072	7	09		

					and a second sec											_
HE 1/10	AST CARO	OEPTH (m)	2" T	\$ */	SIGMA-T	SPECIFIC VOLUME ANOMALT~E187	₹∆0 01N. M. x 10 <sup>3</sup>	SOUND VELOCITY	02 ml/1	PO 4P yy - at/1	10.1А.L—Р уқ + өз/1	NO2-N 29 + 61/1	NO3+N yg + e1/1	51 O 4 - 51 99 + et/1	pН	500
		1														
	STD	0000	0692	3235	2536	0026206	0000	14753								
130	QBS	0000	0692	32346	2536			14753								
130	085	0005	0690	32354	2537			14753								
	STO	0010	0691	3236	2537	0026116	0026	14754								
130	085	0010	0691	32358	2537			14754								
130	OBS	0015	0387	32647	2595			14634								
	STO	0020	0267	3264	2605	0019688	0049	14583								
130	085	0020	0267	32635	2605			14583								
130	OBS	0024	0255	32639	2606			14578								
130	OBS	0029	0251	32646	2607			14578								
	STD	0030	0250	3265	2607	0019477	0069	14577								
130	085	0034	0248	32645	2607			14577								
130	OBS	0039	0248	32644	2607			14578								

C	IEFERENCE	SHIP	LATITUDE	LONGITUDE	02 SO	SOEN U ARE	51	IG M1	TIME	YEAR	CRUISE	STATION	DEPTH	MAL, DEPTH OF	08	W.A SERV	ATIO	HS	WEA-	CLC CC		NODC
100	ND.		1/10	1/11	10*	1*	MO	DAY	HE1/10		NO.	NUMBER	BOITOM	S"MPL'S	D#L	HG	PLE	18A	1000	TYPE	ANT	NUMBER
Γ	311270	SI	6535 N	168338W	23	58	07	17	140	1968	BS2	059	0058	00	21	2	3		X2	7	8	0059
						W COLO	ATER R 1841		WIND 1/11	6ARC		AS TEMP. C	NO. OIS	SPEC								

			CDD	E Last	DIR	10401	[mbal	F BULE	1 81	iii	000	DEPTHS	ORZER	VATIONS							
					23	S22		078	0	71	7	09									
NR 1/10	ST CARD O. TYPE	DEPTH IMI	3° T	2	•4.	SIG M	A – T	SHCIPIC VOLU	144P 18 <sup>2</sup>	N DYI	∆ D N. M. 10 <sup>3</sup>	SD VEL	UND OCITY	D2 mVl	PO4=P #8 * 81/5	TOTAL=P PE = PI/I	NO2=N #2 - 01/1	NO3-N 23 - 81/1	SI D 4=5i µg + et/1	рH	
			1									1			ļ						
	STO	0000	0664	325	58	255	9	002410	0	00	00	14	744	742							
143	085	0000	0664	325	581	255	9					14	744	742							
143	OBS	0005	0663	329	584	255	9					14	745	748							
	STO	0010	0646	327	72	257	1	002289	0	00	23	14	741	767							
143	OBS	0010	0646	327	715	257	1					14	741	767							
143	OBS	0015	0289	327	751	261	2					14	593	765							
	STD	0020	0243	321	74	261	5	001870	1	00	44	14	574	795							
143	OBS	0020	0243	327	741	261	5					14	574	795							
143	OBS	0025	0238																		
	STD	0030	0234	321	73	261	6	001868	9	00	63	14	572	797							
143	OBS	0030	0234	327	734	261	6					14	572	797							
143	OBS	0034	0226	321	715	261	5					14	568	800							
143	OBS	0039	0226	32	733	261	6					14	569	802							

1EFE	ENCE	Chille			-==	147.25	DEN	57.	ATION	TIME			DEGINATORS	DEPTH	MAX		WA	VE		WEA-	CLC	OUD	NODC
CODE	ID. NO.	CODE	LATITUOE	LONGITUOE	Ded M	\$QU.	A R E	MO	IG M1	1	YEAR	CAUISI NO.	STATION NUMBER	TD BOTTOM	OF S"MPL"S	01	THG	A TIO	N S	CDDE	00	DES	NUMBER
31	1270	ST	6535 N	168410w		233	58	07	17	154	1968	BSZ	060	0054	00	18	2	2		X 2	7	8	0060
		•.						TER		WIND	BAR		AIR TEMP. C VIS	NO.	SPEC	LAL							

				COLOR	2 HABT	DR	OE PORCE	(mba	IR DRY	W BU	LI CO	DEC	ENTHS	OBSER	VATIONS							
						18	520	12	5 078	0	72 7		10_									
MESSINGE CAST	CARD TYPE	DEPTH (m)	r	r	2	•/, ,	SIGM	A-1	SHCIFIC VOLU ANOMALT-ST	ме 67	₹ △ 07N, x 10	0 M. 3	SOU	IND CITY	0 2 ml/l	PO 4=P #8 * #1/1	101AL-P #8 + 01/1	NÖ3=N #2 = 81/1	NOy=N PE-st/l	SEO 4Si P} + #t/1	pН	100
	ST0	0000	0	625	329	96	259	3	002081	3	000	0	14	734		1						
158	OBS	0000	0	625	329	957	259	3					14	734								
158	OBS	0005	0	622	329	959	259	4					147	733								
	STD	0010	0	620	329	96	259	4	002075	8	002	1	14	733								
158	OBS	0010	0	620	329	958	259	4					14	733								
158	085	0015	0	287	321	781	261	5					14	593								
	STD	0020	0	266	32	76	261	5	001871	2	004	1	145	584								
158	085	0020	0	266	321	763	261	5					149	584								
158	OBS	0025	0	266	321	756	261	5					145	585								
	STD	0030	0	265	327	76	261	5	001876	0	005	9	149	585								
158	OBS	0030	0	265	327	756	261	5					149	585								
158	OBS	0035	0	262	327	764	261	6					14	585								
158	OBS	0040	0	259	327	765	261	6					149	585								
158	OBS	0045	0	262	321	759	261	5					145	587								

EFERENCE ID. ID. NO.	SHIP			SOUARE	STATION TIME	YEAR	ORIGINATOR'S CRUISE STATION NO, NUMBER	DEPTH DEP TO O BDTIOM S'MI	AL WAVE TH OESERVATIONS P	WEA- THER CODE	CLOUD COOLS	NOOC STATION NUMBER
311270	SI	65372N	16857 W	233 58	07 17 172	1968	BS2 061	0051 0	0 17 2 2	X4	X 9	0061

 WATER
 WIND
 SACO
 AIR TEMP. C
 VIC
 NO.
 SPECIAL

 COLOR
 TATAK
 DIR.
 STED
 OV
 WET
 COLOR
 DIR.
 OS.
 SPECIAL

 COLOR
 TATAK
 DIR.
 STED
 OV
 WET
 COLOR
 DIR.
 OSE
 OSE
 OSE
 OSEEVA TIONS
 DIR.
 OSEEVA TIONS
 DIR.
 DIR

						514 112	5 010 0	12 6	07								
MESSENGE TIME 0 HE 3/10	CAST NO.	CARD	OEPTH Imi	2' T	\$ */ <sub>* *</sub>	SIGMA-1	SPECIFIC VOLUME AND MALT-1187	₹ Δ D ΟΥΝ. Μ. χ 10 <sup>3</sup>	SOUND VELOCITY	0 2 ml/l	PO4=P 28 * +1/1	101A L=P #8 = #1/1	NO2+-N #8 - 01/1	NO3~N 48+81/1	5) O.4=5i #9 + 01/1	gН	1 C C
				1							1						
		STO	0000	0536	3302	2609	0019294	0000	14699	802	·						
174		085	0000	0536	33023	2609			14699	802							
174		OBS	0005	0536	33019	2609			14699	813							
		STD	0010	0535	3302	2609	0019338	0019	14700	913							
174		085	0010	0535	33017	2609			14700	813							
174		OBS	0015	0512	33021	2612			14691	782							
		STD	0020	0318	3304	2633	0017067	0038	14610	718							
174		OBS	0020	0318	33037	2633			14610	718							
174		OBS	0025	0280	33064	2638			14595	664							
		STO	0030	0280	3306	2638	0016566	0054	14596	655							
174		OBS	0030	0280	33062	2638			14596	655							
174		OBS	0035	0277	33070	2639			14596	655							
174		OBS	0040	0266	33072	2640			14592	594							

REF E	ID. ND.	SHIP		/10 LO	NGITUDE	10" 1"	TATION TI IGMTI MO OAY H	ME YEAR	ORIGINATO CRUISE STAT ND. NUN	IR'S IDN SBER	DEPTN TO BOTTOM	MAL OEPTN OF S'MPL'S	DUSEI OR.H	VAVE RVATIONS	WEA- THER CODE	CLOUD COQES	r	1	NOOC STATION NUMBER	
31	1270	SI	652771	4   16	9055W	233 59	07 17 1 FER W	97 1968 INO BARO SHED METI OR IND	BS2 062 AIR TEMP. ER DRY W BULB BI	TC VIS	0053 NO. 085. DEPTHS	00 SPECIAL DESERVAT	AL TIONS		3   X4	X 9			0062	
							17	S22 12	5 069 0	67 4	10		_							
		MESSENGI TUME MR 1/10	CAST	C ARO TYPE	DEPTN Im1	7.2	s •/.	SIGMA-T	INCIPIC VOLUME	₹ △ D DYN, M 2 10 <sup>3</sup>	SOL VELC		)2 ml/l	PO4=P #8 = at/1	101AL-P PB = 01/1	NO2-N #8 = 61/1	NO3-N 28 - 01/1	\$104-\$ 20-01/	и рн	100
		201		STO	0000	0504	3298	2609	0019284	0000	140	585 685							ļ	1
		200		BS STD	0005	0503	32968	2609	0019253	0019	140	685								
		200		DBS DBS STD	0010	0503 0411 0249	32982 32988 3298	2610 2620 2634	0016937	0037	140	586 580								
		200 200	) (	)BS )BS  ST0	0020 0025 0030	0249 0246 0244	32980 32998 3299	2634 2636 2635	0016857	0054	149	580 580 579								
		200 200 200		)85 )85 )85	0030 0035 0040	0244 0241 0240	32986 32992 32971	2635 2636 2634			149 149 149	579 579 579								
		200	) (	BS	0045	0241	32999	2636			14	581								
						,		,			····-	1								
CTRY	IO. NO.	SHIP	LATITUDE	10	NGITUDE 17/10	10° 1°	STATION TI IGMT	ME YEAR	CRUISE STAT	NON NON	DEPTN TO BOTTOM	DEPTN OF S'MPL'S	OBSE OIL P	NAVE RVATIONS	THER CODE	CLOUD CODES	7		NODC STATION NUMBER	
31	1270	SI	65291	N   16	9172W	233 59			BS2 063	J. 11	0046 NO.	00			3   X4	X 9		1	0063	
						COLDR	TRANS DIL	DR CE CMBI	ER DEY V 13 BULD BU	LE COD	DEPTHS	OBSERVA	TONS							

					18	S22 12	20 072 0	68 0	09								
MESSENGE TIME O HR 1/10	CAST NO	C ARD TYPE	DEPTH (m)	שיז	s */	SIGMA-T	SPECIFIC VOLUME ANOMALT-E18 <sup>9</sup>	₹ △ D OYN. M. x 10 <sup>3</sup>	SOUND VELOCITY	02 mV1	PO4=P 22 - +1/1	FOTAL=P PB = 01/T	NO3-N 18 - 01/1	NO3-N µg - ot/1	\$1 O <sub>4</sub> —\$1 99 - 01/1	рн	500
																	Γ
	· ·	STD	0000	0540	3300	2607	0019503	0000	14700	782	'						
213		OBS	0000	0540	33001	2607			14700	782							
213		OBS	0005	0539	32997	2607			14700	793							
		STD	0010	0539	3300	2607	0019532	0020	14701	795							
213		OBS	0010	0539	32997	2607			14701	795							
213		OBS	0015	0539	32997	2607			14702	806							
		STD	0020	0342	3301	2628	0017464	0038	14620	740							
213		OBS	0020	0342	33012	2628			14620	740							
213		OBS	0025	0275	33004	2634			14592	683							
		STO	0030	0258	3300	2635	0016844	0055	14586	678							
213		085	0030	0258	33002	2635			14586	678							
213		OBS	0035	0254	32999	2635			14585	673							
213		085	0040	0255	33001	2635			14586	669							

REF E	ID.	SHIP	LATITU	DE		NDCIA SOL	SOEN	CTAT	ION T GMT	IME YE	AR			ION	DEPTH TO IDTTON	MAX DEPTH OF	OIS	WAVE ERVATION	WEA THER	CLDUD CODES		ST N		
31	1270	SI	6531	8N	169285W	233	59	07 1	7	227 19	68	BS2 C	64	1926	0050	00	S DIR	H GT PER	3 X4	7 9	1		0064	
							COLOR	TER TRANS. Un 1	DIR.	SPEED OR FORCE	BARO METE Imbe	R DRY BULI		LET COD	ND. OBS. DEPTHS	SPE OBSERV	CIAL ATIONS							
									16	S20	120	069	0	65 5	09									
		MESSENGE TUME HR 1/10	CAST ND.	CAT	D DEPTH IM		o* 10	s	•/	SIGMA	-T	SH CIFIC V ANOMALI	-810 P	₹ △ D OYN. <i>N</i> x 10 <sup>3</sup>	SO VEL	0 H U 1 T I O O	02 ml/l	PO4-P #9 = 01/1	TOTAL=P 28 + 01/1	NO2-N 29 - 01/1	NO3=N 98 - 61/l	\$1.04-\$1 29 + 01/1	рM	SUC
			<u> </u>			-					-					-	-			1				T
				S	0000 01	Ċ	519	330	00	2609		00192	88	0000	14	691								
		229	>	OB	5 0000	0	519	329	99	2609					14	691								
		229	9	OB:	5 0005	0	517	329	97	2609					14	691								
				S	10 0010	0	517	330	10	2609		00194	. 76	0019	14	692								
		229	9	OB:	5 0010		517	329	199	2609					14	692								
		225	1	00	5 0010		270	330	000	2612		00169	50	0037	14	689								
		220	<u>,</u>	08	5 0020	0	270	330		2634		0010	00	005,	14	589								
		220	2	OB	5 0025	č	265	329	88	2633					14	588								
			·	S	0030	c	264	329	8	2633		00170	27	0054	14	588								
		229	2	OB:	5 0030	C	264	329	84	2633					14	588								
		229	9	OB	5 0035	C	261	329	88	2634					14	588								
		229	>	OB:	5 0040	C	259	329	989	2634					14	588								

REFERENCE	SHIP	LATITU	90	LONGITUOL	DC TE	47.25 \$QU	DEN ARE	STA	TION IG M	TIME TI		YEAR	CIU	ONG	NATO	ICS ON		DEPTH TO	MAX. DEPTH	· c	W		TION	s	WEA- THER	Cu				NDDC	
CODE NO.	000	•	1/10	* '1/18	° #	10*	1.	MO	DAY	HR.1/	10		NO		NUM	BER		BOTIDM	S'MPL"	s on	HC	G1 1	1= 1	JEA	COOL	1199	A 441	ri -		NUMBER	
311270	ST	65352	2N	169375W		233	59	07	18	00		968	BS	2 00	55			0060	00	20	2		2		X6	7	8			0065	
						[	WAT	E II		WINI	)	LAR	. L	AIR T	EMP.	7		NO.		C14.1											
							C0108 C008	TRAN (m)	L DI	L F	11D 08 08C1	MET .	ER	ORY BULB	W BU	ET LD	cobi	OIS. DEPTHS	DESERV	ATION	s										
									18	3 51	15	12	0	086	0	75	7	10			1										
	MESSENG TIMP HE 1/10	CAST NO.	C AI TYI	D OEPTH I	im 1	ſ	r	3	•/		SIG M	A-T	SPECE	MALT-	UMP 112 <sup>7</sup>	₹ DYP I	∆ D N. M 10 <sup>3</sup>	- SOI	UND SCITY	D2 #	N	P0 28	- a1/1	10	01AL-P g = ut/1	NO2 28 -	-N el/1	NO3-N #E = 81/1	51 D.4- 22 - 01	5i pH	204
																								Τ							T
			51	0000 Q1	)	0 5	533	33	07	1	261	3	00	1892	23	00	00	14	598 <sup>°</sup>	772	2										
	00	9	085	5 0000	)	05	533	33	068	3 2	261	3						14	698	772	2										
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			S1	D 0030	)	02	289	33	07	4	263	8	00	1657	79	00	53	140	500	660	>										
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	00	9	085	0045	>	02	291	33	076		263	8						140	603	662	2										

				and the second distance in the second distanc		the statements														
CTET ID.	CODE	LATITUOE	LONGITUDE	SOU AR	EN IE	STATION IGM	TIME 13	YEAR	CIUISE	STA	DRS NON	DEP1 TO BDTTC	H DIPTI	085	WAVE SEEVATIONS	WEA- THER CODE	CLOUD		N ST. NI	DDC ATION JMBER
21127	0.51	6520 N	16944 W	223 6	500	17 18	018	1968	BS2	0.6.6		0.05	1 00	1 1 8	2 2	XA	7 9	<u> </u>		066
. DITEL	0. 51	, 0, 5, 5, 5, 14	10)44 WI		WAT	ER	WIND	BAR	0- 4	UR TEMP	σ.	NO.			10 10 1	1	1 1 0	'	1.0	0001
				c	DDI	TRANS DI	L 01	D MET	ER C	ULB	WET CO	OIS DEPTI	O BSER	VATIONS						
						1	52	3 11	5 0	71 (	68 6	09								
HESSENGE CA		T CASE C	TPE DEPTH IMI	7 1	7	s •4.	\$10	GMA-T	SPECIFIC	VOLUMI	₹ △ DYN, x 10	9. I	LOCITY	0 2 ml/l	PO4=P #8 = #t/l	101AL-P #8 - st/1	NÖ2=N 29 - 81/1	NO3=N #8 = 91/1	\$1.04=\$2 17.16 = 81	рĦ
			TD 0000	043	78	3309	2/	21	001	8184	000		4676							

0016144 0051

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021

PEFERENCE CTET IO, CODE NO,	SHIP		LONGITUDE	100 H 10*	SDEN ARE	ATC MO I	TION IGMT	TIME 1 HR_1/10	YEAR	CRUISE NO.	STATION NUMEER	DEPTH TO BOTTOM	MAL DEPTH OF S'MPL'S	01	WA SERV.	A TIO	N 5 58 A	WEA- THER CDDE	CLC CO	DUD DES	NDDC STATION NUMBER
311270	SI	65436N	16948 W	233	59	07	18	031	1968	852	067	0052	00	16	2	2		X 5	7	8	0067

						_	_		2 3ARI	0. h			- v	a	40. j	5.0	FC1AL							
					COLOR	TRANS. 841	DIR	SPEED OF FORCE	MET!	ER C	0118 0118	WET BULS	co	õe o	095. EPTHS	OBSER	VATIONS							
							18	524	11	0 0	73	066	5 3	(	09									
MESSENGE TIME OF HR 1/10	CAST ND,	CARO TYPE	OEPTH (m)	T	T	s	•/	SIGM	A-ĩ	SPECIFIC	ALT-I	ме 57	₹ △ 01N. x 10	D M.	SOL VELO	UNO DCITY	02 ml/l	PO4=P xy = 01/1	101AL=P +Q = a1/I	NO2N 99 + at/1	NO3-N 99 - 81/1	51 O 4-51 26 + 81/1	рN	100
								}																Γ
		STD	0000	0	513	330	8	261	6	001	8653	3 (	000	0 '	146	590	834							
034		OBS	0000	0	513	330	75	261	6						146	590	834							
034		085	0005	0	512	330	81	261	6						140	590	836							
		STD	0010	0	512	330	8	261	7	001	8599	9 (	001	9	140	591	833							
034		OBS	0010	0	512	330	82	261	7						140	591	833							
034		OBS	0015	0	472	330	90	262	2						140	576	809							
		SID	0020	0	295	331	4	264	3	0010	6095	5 (	003	6	146	502	597							
034		OBS	0020	0	295	331	40	264	3						140	502	597							
034		OBS	0025	0	295	331	42	264	3						148	503	650							
		STD	0030	0	294	331	4	264	3	0010	6076	5 (	005	2	140	503	652							
034		085	0030	0	294	331	42	264	3						140	503	652							
034		085	0035	0.	292	331	40	264	3						146	503	654							
034		OBS	0040	0	293	331	39	264	3						146	504	655							

REF	ERENCE	Shire			101 250	DEN	STA	TIDN	TIME			DRGINATOR'S	OEPTH	MAL OFETH		WA	VE	,	WEA-	CLC	oup	NODC	
C117 C001	ID. NO.	CODE	LATITUDE 1/10	LONGITUDE	10.	1*	MD	OAT	HR.1/10	YEAR	CRUISE NO.	STATION NUMBER	BOTTOM	OF S'MPL'S	DIR.	SEEV HG1	A 110 P	45 SEA	CODE	CD	DES A WT	NUMBER	
31	1270	SI	66235N	166205W	233	66	07	18	145	1968	B <sub>S2</sub>	068	0017	00	23	2	3		X 2	6	8	006	8
					ŀ	WA COLOR	TER	\$ 0.0	WIND SPEE	BARC		AR TEMP, TO VIS	NO. OIS.	SPEC	AL DONS								

			C	000	Ball 1	Dar	FOICE	(mbs)	BULB	8018	100	OEPTHS	SUBSER	VATIONS							
						00	S00	148	103	089	9 8	03									
MESSENGE CAST	CARO TYPE	DEPTH (m)	1 °C	2	2	•/	SIGMA	L=T 5	PECIFIC VOLU	MB 1	₹ △ D 07N. M z 10 <sup>3</sup>	SO VEL	UND OCITY	D2 ml/l	PO_4=P 22 + 41/1	101AL=P 28 - 41/1	NÖ3=N 28 + 80/1	NÖ3-N 98 + eV1	51 Q451 22 + 81/5	pН	200
												-									
	STD	0000	068	39	306	4	240	3 (	003892	6 (	0000	14	729	731							
146	085	0000	068	39	306	40	240	3				14	729	731							
146	085	0005	068	39	306	47	240	3				14	730	740							
	STD	0010	064	8	307	7	241	8 (	003747	1 (	038	14	716	740							
146	085	0010	064	8	307	70	241	8				14	716	740							

REF	RENCE	Ship			- E 14.	ASOEN	STA	TION 1	TIME			ORIGIN	ATOR'S	DEPT	н }	MAL		WA	VE		WEA-	CLO	000	NODC
C787 C008	ID. NÖ.	CODE	LATTUDE 1/10	LONGITUDE	N 10	• 1°	MOJ	IGMTI DAT	HR,1/10	YEAR	CRUIS NÖ,	E	STATION NUMBER	01 01108	IM S	OF S'MPL'S	DI DIL	ISERVA HGT	PER	NS SEA	CDDE	CO TTPE	DES	STATION NUMBER
31	1270	51	6630 N	16641 W	23	3 66	07	18	162	1968	BSZ	06	9	002	3	00	15	1	2		X6	5	8	0069
						COLOR CODE	TER TRANS	L DIR,	SPEE	BAR( AAETE (mbs	D= R I)	AIR TE DRI BULB	WET BULB	VIS. DIS CODE DIS	is c	SPEC DBSERVA	IAL TION S							

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SLO4~SI 1 x8 = ot/1 PH C
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APPENENCE	<i>c</i>	1													1								
REFERENC	SHIP	LATITU		ONGITUDE		SDEN	STATIO	N TIME NTI	YEAR		DRIGINA	TOR'S		DEPTH	OEPTH	015	WAVE	WEA	CLOUD			NOOC	
CODE NO	CODE	· ·	1/10	* 1/10	© <u>Z</u> 10*	11.	MDIDA	Y (HR.171	0	NO.		J M BER		IOTTO/	A STANPL	5 012	HGTPER	CODE	TYPE	1	i	UMBER	
21107		( ( ) )		1739		1 - 7	07.11	1.70	12040	0.00	0.70												
. 21121	0.21	0000	- 01 I I	OTIZ W	1200	WA WA	TER	WIND	11999	TRPS	AIR TEM	P. °C	T 1	1032	1 00	1 10	1 12 1	1 7 0	1 5 (8	1	1	00701	
						COLOR	TRANS	111 114	ED MET	ER (	DRY	WET		OBS.	SPE DBSERV	CIAL /ATIONS							
						CODE	um i	101	CE (mb	4) 3	ULB	BULL		DEPTH									
							1	6 51	2 14	0 0	96	086	6	06									
	MISSEN	CAST	CARD	DEPTH (		*				SPECIFIC	. VOLUM	ιž	Δ 0	SC	UND		PO4-P	10141-7	NO2-N	NOTEN	\$104-5		T
	HR 1/1	OT ND.	TYPE			0	1 .	31	Gm A = 1	ANOM	ALT-IIP	X	K 10 <sup>3</sup>	· VEI	OCITY	02 m1/1	yg = 01/1	29 - et/l	40 - 01/3	vg - et/l	yg = et/	PH	0
												-					<u> </u>					1	+
			STD	0000	, ' o	736	3046	2	382	004	0894	00	000	14	745	703	1	1	1	1		1	1
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	17	9	085	0005	0	735	3045	2 2	382					14	746	702							
			STD	0010	0	736	3050	2	386	004	0546	00	041	14	747	702							
	17	9	085	0010	0	736	3050	3 2	386					14	747	702							
	11	9	085	0015		738	3052	5 2	395 407	002	8506	0.0	100	14	751	702							
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BEFFER																							
REPERENC	E SHIP			ONCITUDE	10	SOEN	STATIO	N TIME			ORIGINA	TDR'S		DEPTH	DEPTH	005		WEA	CLOUC	T		NODC	
CIEV ID.	E SHIP	LATITU	Df 1	ONGITUDE	SOL SOL	SOEN JARE		N TIME NTI Y HR 1/1	YEAR	CRUISE ND.	DRIGIHA ST NU	TDR'S		DEPTH TD BOTTO	MAX DEPTH OF S'MPL		WAVE ERVATIONS	WEA THEP CDDE	CLOUC			NODC STATION NUMBER	
CODE NO	E SHIP CODE	LATTU	DE L	ONGITUDE	SOL	SOEN JARE		N TIME	YEAR	CRUISE NO.	DRIGIHA ST NU	TDR'S ATION JABER		DEPTH TD BOTTO	MAX DEPTH OF S'MPL	OBS	WAVE ERVATIONS	WEA THEP CDDE				NODC STATION NUMBER	
CODE NO	E SHIP CODE	6634	DE L 1/10 1N 1	ONGITUDE 11/10	10° 233	SOEN JARE 1° 67 WA		N TIME HTI Y HT.1/1 190 WIND	1968	CRUISE NO.	ORIGINA ST NU 071	TDR'S ATION JABER		0029	MAX DEPTH OF S'MIPL	OBSI IS DIR	WAVE ERVATIONS	EA CDDE		1		NODC STATION NUMBER	
CTITY ID.	E SHIP CODE	6634	DE 1 1/10 1N 1	ONGITUDE 1/10 67360W	233	SOEN JARE 1° 67 WA COLDR	STATIO 161 MO DA 07 1 8 TER TER	N TIME MTI Y HR,1/1 190 WIND SHE	TEAR 1968 BAS		ORIGIHA ST NU 071 NIP TEM DRY	TDR'S ATION JABER P. °C WET	VIL	0029 ND. 015.	MAX DEPTH OF S'MIRL 000		WAVE ERVATIONS	2 X2		7		NODC STATION NUMBER	
CTIT ID.	E SHIP CODE	6634	DE L 1/10 1N 1	0NGITUDE 1710	233	SOEN JARE 1° 67 WA COLDR COOE	UTATIO IGI MO DA 07 18 TER TEANS ( 01	N TIME WTI Y HR.1/1 WIND WIND DIR, D FOI	YEAR 1968 BAB MET (m)		ORIGIHA ST NU 071 NI 071 NI DRY ULB	TDR'S ATION JABER P. °C WET BULB	VIL	0029 ND. 085. DEPTH	MAX DEPTH OF S'MPL' DO SPE DUSER'	CIAL	WAVE ERVATIONS	2 X2		1		NODC STATION SUMBER	
CODE NO	E SHIP CODE 70 SI	6634	DE 1 1/10 IN 1	ONGITUDE 11/10	233	SOEN JARE 1° 67 WA COLDR COOE		N TIME MTI Y HR.1/1 190 WIND WIND SHR. 0 FOI .4 S1	YEAR 1968 BAS MET CE CE 5 1 3		ORIGINA ST NU 071 NIF TEM DRY ULB 89	TDR'S ATION JMBER P. °C WET BULB 083	vis. coor	0029 ND. 055	MAX DEPTH OF S'MRL 000 SPE 5 DIISER	CIAL		EA CODE	CLOUC COOF 11/1 A.A. 6 8	1		NODC STATION SUMBER	
STILL	E SHIP CODE	6634	DE 1 1/10 1N 1 CARD	ONGITUDE 11/10 67360W	233	SOEN JARE 1° 67 WA COLDR COOE	STATIO           IGI           MO         DA           0.7         1.8           TER         TEANS.           01         1           S.*/         S.*/	WIND WIND WIND WIND CHR. 0 FOIR .4 S1	1968 BAR MET CE (m) 5 13	CRUISE NO. BS2 Da ER ER S7 O	ORIGINA ST NU 071 NIP TEM DRY ULB 89	TDR'S ATION JMBER P. °C WET BULB 083	VIS. COOR 7 0	0029 ND. 005 05	MAX DEPTH OF S'MPL DISER			w (А. Тне сооб 2 X2	CLOUC COOR 11/PI A.A. 6 8	ND3-N	51 04-5	NODC STATION UMBER 0071	T
31127	E SHIP CODE 70 S I	6634	DE L 1/10 IN 1 CARD TYPE	ONGITUDE 1/10 67360W	100 SOL 100 233	SOEN JARE 1° 67 WA COLDR COOE	STATIO           IGI           MO         DA           0.7         1.8           TER         TEANS.           m1         1           S         */	N TIME ATI Y HR.1/1 190 WIND SIR SH POIR 4 S1	YEAR 1968 BAJ Ce Umb 5 13 GMA-T	CRUISE ND. B S 2 ID* *1 B SPECIFIC ANOM	071 071 071 071 072 071 071 071 072 072 072 072 072 072 072 072 072 072	TDR'S ATION JMBER WET BULB 083 E	VIS. COOR 7 7 2 D 7 8 10 <sup>3</sup>	00229 ND. 055 05 VEI		CIAL VATIONS	PO4-P	w €А. ТНЕР ЕА СОДЕ 2 X2	Ссоис соот түн ал 6 В NO <sub>2</sub> -N у9 - eV/	τ τ ΝD <sub>3</sub> -Ν μg - et/l	SI D 4 = 5 y 1 = et/	NODC STATION UMBER 0071	
31127	E SHIP CODE 70 S I MESSENC TIME HR 1/1	6634	DE L 1/10 IN 1 CARD TYPE	ONGITUDE 1/10 67360W	233	SOEN JARE 1° 67 WA COLDR COOF	UTATIO IG MO DA 07 1 E TER TER TEANS. ( m1 1 1 S */	N TIME MTI Y HR.1/1 190 WIND WIND DIR. SME POI .4 S1	YEAR 1968 1968 848 60 460 460 460 460 460 460 460	CRUISE ND. BS2 ID- IER IIII B 7 0 SPECIFIC ANOM	071 071 071 072 072 073 073 071 071 071 071 071 071 071 071 071 071	TDR'S ATION JMBER P. °C WEI BULB 083 E S DY	V15. COOR 7 7 N. M 10 <sup>3</sup>	0029 ND. 055 05 VEI	MAX DEPTH OF S'MPL' DISER' DISER'	CIAL VATIONS	WAVE ERVATION: NGT 728 5	2 X 2	CLOUC COOR TYPE AN 6 8	ND 3-Ν μg - et/l	51 D 4 = 5 y = a1/	NODC STATION NUMBER 0071	
31127	E SHIP	6634	DE L 1/10 IN 1 CARD TYPE STO	0NGITUDE 1710 67360W	1 50L 1 50L 1 2 3 3 m <sup>2</sup> 1 m <sup>2</sup> 1	SOEN JARE 1° 67 WA COLDR COOF	3205	N TIME WTI Y HR.1/1 WIND WIND DIR. 50 FOI 4 S1	YEAR 1968 1968 40 40 40 40 40 40 40 40 40 40	CRUISE ND. B 5 2 ID- ER FR SPECIFIC ANOM	071 071 071 072 073 075 077 000 000 000 000 000 000 000 000		VIL COOR 7 7 7 10 <sup>3</sup>	0029 ND. 015 05 05 05	MAX DEPTH OF S'MPL' DO SPI DISERV	CIAL VATIONS		2 X 2	CLOUC COOR TYPE AA 6 8	ND 3-N ND 3-N Ng - at/l	51 D4=5 y8 = 01/	NODC STATION SUMBER 0071	
4000 NC	E SHIP CODE 70 S I MESSEN MR 1/1 19	6634	DE L 1/10 1N 1 CARD TYPE STO OBS	0NGITUDE 1710 67360W DEPTH 0 0000	m <sup>2</sup> 1 m <sup>2</sup> 1 0 0 0 0 0 0	SOEN JARE 1° 67 WA COLDR COOE COOE	2005 3205 3205	N TIME WTI Y HR.1/1 WIND DIR. 50 FOI 4 S1 S1 S2 S0 2 0 2 0 2	YEAR 1968 1968 1968 1968 00 1968 00 00 00 00 00 00 00 00 00 0	CRUISE NO. BS2 DD- ER B 7 0 SPECIFIC ANOM	071 071 071 077 089 7769		VIL COOE 7 7 2 D 7 2 D 7 2 D 7 2 D 7 2 D 7 000	0029 ND. 015 05 05 05 144	MAX DEPTI OF S'MPL' S'MPL' DOS SPI SDUSER' DUSER' DUSER' OUND COCITY	CIAL A TIONS	WAVE ERVA TIOMS NCT PER 1 PO 4-P μg = στ/1	φ EA           TH EB           CDDE           2         X 2           IOTA L=P           μB = el/l	Ссои Соон Түн ал 6 8 N03-н рө-өгл	ND <sub>3</sub> =N μg = et/l	51 D 4 = 2	NODC STATION SUMBER 0071	
42748.NC CIP ID COOR NO 31127	E SHIP CODE 70 S I MESSENI NR 1/1 19 19	CATTU 6634	DE L 1/10 1N 1 CARD TYPE STO OBS OBS	ONGITUDE 1/10 67360W DEPTH 0 0000 0005	m <sup>2</sup> 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SOEN JARE 1° 67 WA COLDR COOL COOL COOL COOL COOL COOL COOL COO	CALL STATES     CONTRACT     CONTRACT STATES     CONTRACT     CONTR	N TIME T HR.1//1 190 WIND WIND UR. 51 FOI 4 S1 5 5 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 0 2 0 0 2 0 0 2 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	YEAR 1968 1968 1968 1968 400 513 513 520 520 520 520 520	CRUISE ND. BS2 D+ +1 B 37 0 SPECIFIC ANOM	07100000000000000000000000000000000000	TOR'S ATION JMBER P. °C WET BULB 083 E 20 D	vis_ coor 7 7 2 0000 0000	DEPTH TO IIOTTO/ 0029 ND. 085. DEPTH! 05 SC VEI 14 14	MAX DEPTH OF S'MPL' S'MPL' S'MPL' S'MPL' DESERV DESERV OCITY	CIAL A TIONS	WAVE ERVATIONS NGT 728 5 PO4-P μg = et/l		CLOUC COOE TYPI AX 6 8	ΝD <sub>3</sub> =N μ <sub>2</sub> = ν μ <sub>2</sub> = et/l	51 D 4 - 5 y = - 01/	NODC STATION SUMBER 0071	
31127	E SHIP CODE 70 S I меззене на 1/1 19 19	CATTU 6634	DE L 1/10 1N 1 CARD TYPE STO OBS OBS STD	ONGITUDE 1/10 67360W 0000 0000 0000 0000	m <sup>2</sup> 1 0 000 0 000 0 000 0 000	50EN JARE 1° 67 WA COLDR CODE CODE 639 639 639 628 628	3205 3205 3205	N         TIME           Y         HR.1//1           190         WIND           WIND         SM           64         S1           64         S1           65         2           60         2           64         2	YEAR           196.8           843           60           60           60           60           61           62           63           64           65           64           65           65           65           65           65           65           65           65           65           65           65           65           75	CRUISE ND. B52 De eR eR specific ANOM	7769		VIS. COOR 77 7 0000 0000	00229 ND. 005 05 144 144	MAX DEPTH OFFT S'MPL' S	CIAL VA DONS	WA VE           ERVA TIONS           NGT F28           PO4-P           μg = et/l	тн тн та соос 2 Х2 Тота ц=г µв - «гл	ССОИ СООР ТТЙ АЛ 6 8	ND <sub>3</sub> =N µg - «t/l	51 D 4 - 5 y = - 01/	NODC STATION SUMBER 0071	
31127	E SHIP CODE 70 SI меззене ня 1/1 19 19	LATTU 6634 CAST CAST CAST S NO. 0 1 3 3 3	CARD 1/10 IN 1 CARD 1YPE STO OBS OBS STD OBS	00000000000000000000000000000000000000	m <sup>2</sup> 1 0 00 0 br>0 00 0 br>0 00 0 00	50EN JARE 1* 67 WA COLDR CODE CODE 639 639 639 628 626 626	3205 3205 3205 3205 3205	N TIME MTI Y HR.1/1 4 190 WIND DIR. 0 FOI 4 51 50 200 2 34 2 200 2 200 2 200 2 200 2 200 2 200 2	YEAR           196.8           843           60           60           61           62           63           64           65           65           65           65           65           65           65           65           65           75	CRUISE ND. B S 2 ER 1 87 0 SPECIFIC ANOM 002	7769		VISL COOE 77 7 7000000000000000000000000000000	00229 ND. 005 05 144 144 144	MAX DEPTH OF S'MPL' DISERS DISERS DISERS 728 728 724 724 724 725	CIAL VATIONS	WAVE ERVATIONS NGT F18 3 PO 4=9 μg = 41/1	тн тн та сооб 2 Х 2 тотац-г µр - «1/л	ССОИ СООР ТТЙ АЛ 6 8	ND3=N 23=N 23=V	SI D 4=5 y = et/	NODC STATION NUMBER 0071	
31127	е SHIP CODE 70 SI меззене ня 1/1 19 19	CATTU 6634 6634 CAST CAST 0 1 3 3 3 3 3	CARD 1/10 IN 1 CARD 1YPE STO OBS OBS STD OBS OBS STD	0 NGITUDE 1//10 67360 W 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000	m <sup>2</sup> 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50EN JARE 1° 67 WA COLDR CODE 639 639 628 626 626 626 626	ITATIO           MO         DA           07         12           ItR         1           ItR         1           10         1           3205         3205           3205         3205           3205         3205           3205         3205           3205         3205           3205         3205           3205         3205	N TIME MTI Y HR.1/1 4 190 WIND OIR. 0 FOI 4 51 4 51 50 20 2 20 2 20 2 2 2 2 2 2 2 2 2 2 2 2	YEAR           1968           1968           513           520           520           520           524           525           525           520	CRUISE ND. B S 2 ER 1 8 7 002 002	7769		VIL. COOR 77 7 10 <sup>3</sup> 0000 028	00229 NO. 0025 05 05 05 144 14 14 14	MAX DEPTH OF S'MPL' DISERV DIS	CIAL A DIR CIAL A TIONS		WEA. THEP           2         X2           10TAL-P         μp - nt/7	ССОИС СООР ТҮЙ (АА 6 8 NO2-N ур - eU/i	ND3=N yg - 4//	SI D 4=5 y = al/	NODC TATION NUMBER 0071	
3 11 2 7	е SHIP CODE 70 SI меззене ня 1/1 19 19 19	CATTU 6634 CAST CAST 0 NO. 3 3 3 3 3	CARD 1/10 IN 1 CARD TYPE STO OBS OBS STD OBS OBS STD OBS STD OBS	000GITUDE 1/10 67360W 000G 000G 000G 000G 001G 001G 001G 00	m <sup>2</sup> 1 m <sup>2</sup> 2 3 3 m <sup>2</sup> 10 <sup>+</sup> 2 3 3 m <sup>2</sup> 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50EN JARE 1° 67 WA COLDR CODE 639 639 628 626 626 626 626 626 623	3205 3205 3205 3205 3205 3205 3205 3205	N. TIME MTI Y HR. 1//1 Y HR. 1//1 Y HR. 1//1 Y HR. 1//1 SHO SHO SHO SHO SHO SHO SHO SHO SHO SHO	YEAR           1968           1968           513           6           6           7           6           7 <t< td=""><td>CRUISE ND. B 5 2 DD- ER 10 57 002 002 002</td><td>0710 071 071 071 071 071 077 089 7769 7326 6792</td><td></td><td>vis. coor 7 7 10 2000 28 0000 0000</td><td>0029 NO. 055. 055. 055. 055. 144 14 14 14</td><td>MAX DEPTH OF S'MPL' S'MPL' DISSER DISSER 728 728 728 728 724 724 724 726 726</td><td></td><td>PO4-P           μ0-er//</td><td>WEA           THEP           2           2           FOTAL-P           μp - nl/l</td><td>ССОИ СООГ ТҮЙ АА 6 8 NO2-N уд - eU/i</td><td>ND3-N yg-et/l</td><td>SI D4=5 y8 = al/</td><td>NODC ITATION SUMBER 0071</td><td></td></t<>	CRUISE ND. B 5 2 DD- ER 10 57 002 002 002	0710 071 071 071 071 071 077 089 7769 7326 6792		vis. coor 7 7 10 2000 28 0000 0000	0029 NO. 055. 055. 055. 055. 144 14 14 14	MAX DEPTH OF S'MPL' S'MPL' DISSER DISSER 728 728 728 728 724 724 724 726 726		PO4-P           μ0-er//	WEA           THEP           2           2           FOTAL-P           μp - nl/l	ССОИ СООГ ТҮЙ АА 6 8 NO2-N уд - eU/i	ND3-N yg-et/l	SI D4=5 y8 = al/	NODC ITATION SUMBER 0071	

00	ABPERENCE	SHIP		LONGITUOE	M 250EN SQUARE	STATION TIME	YEAR	CRUISE NO,	STATION NUMBER	OLPIN TO BOTTOM	MAK OEPTH OF S"MPL"S	O85	WAVE RVATI	DNS	WEA- THER COOE	CLOU COOL	D 5 41	NOOC STATION NUMBER
ŀ	311270	51	66357N	167541W	233 67	07 18 205	1968	BS2	072	0026	00		1	2	X 2	6 8		0072

#### WATER WIND BARO- AIR TEMP. C VIL NO. SPECIAL COLOR TANKL DIR OF METER DET WET COOL CODE mi DIR OF LIBBIT BULB BULB COOL OFFINS OBSERVATIONS

					14	S16 13	2 086 0	80 7	04								
MESSENGE RME of HR 1/18	CAST NO.	CARD 11PE	GEPTN (m)	5° 1	5 */	SIG M A - T	SPECIFIC VOLUME	₹ △ 0 Отн. м. 10 <sup>3</sup>	SOUNO VELOCITY	02 mU/I	PO4=P +8 = 41/1	total=P rg = st/l	NO2=N #8 = et/1	NO3=N #9 - et/5	51 O.4-54 #8 - 01/3	₽N	S C C
																	11
· ·		STO	0000	0642	3210	2523	0027438	0000	14729	721							
206		OBS	0000	0642	32099	2523			14729	721							
206		OBS	0005	0638	32121	2526			14729	728							
		STD	0010	0627	3221	2534	0026409	0027	14726	735							
206		OBS	0010	0627	32214	2534			14726	735							
206		OBS	0015	0608	32281	2542			14721	741							

TEFERE	NCE				# 4	ISDEN	ITAI	TION TIME	1		ORIGINATOR'S	OEPTH	MAR,	WAVE	WEA-	CLOUD	NOOC
CTET	10. NO.	COOL	LA 111UOE 1/10	LONGITUDE	0 S	0°   1°	MOI	GM11	YEAR	CRUISE NO.	STATION NUMBER	tO BOTTOM	OF S"MPL"S	DIL HGT PER SEA	CODE	COOES	NUMBER
311	270	SI	6636 N	16821 W	23	3 3 6.8 W/	0.7	1.8.220 WINO			073 AIR TEMP. "C VIS	0034 NO, 085.	SPEC ORSERVA	16 0 2	X4	7 8	0073

			0000			10101	0.01				- 1											
					14	\$16	12	8 0	94	08	8	6	06									
MESSENGE CAST	CARO	OEPTH (m)	2° T	2	•/	SIG M	A – T	SPECIFIC	ALT-11	u E	₹ / OYN X	10 <sup>3</sup>	SOI VEL	0 M U TTI DC	03 mL/1	PO <sub>A</sub> =P 28 * 81/1	TOTAL-P PB = 81/I	NO3-N v8 + 01/1	NQ3=N #9 - eV1	51 O e —Sr 49 = e1/1	рN	100
	1	-																				Π
	STD	0000	0509	325	8	257	7	002	232	7	00	00	14	682								
222	OBS	0000	0509	325	08	257	7						14	682								
222	OBS	0005	0508	325	80	257	7						14	682								
	STD	0010	0504	325	9	257	8	002	223	8	00	22	14	681								
222	OBS	0010	0504	325	86	257	8						14	681								
222	OBS	0015	0506	325	97	257	9						14	683								
	STD	0020	0508	326	1	258	0	002	210	9	00	44	14	685								
222	OBS	0020	0508	326	10	258	0						14	685								
222	OBS	0025	0502	326	16	258	1						14	683								

REFE	RENCE	SHIP	LATITU	OE	LONGITUOL	i i	sou	ARE	517	IG M1	TIME	,	(EAR		ONGIN	IOT AF	rs DN	_	DEPTH TO	M AT OEPT	L. H	OISE	WAVE RVAT	ON5	Y	NEA-	CLOUD	Ĩ	51	ATION	
000	NO.	C008	•	1/10	1/10	-	10*	110	MO	740	HR.17	10		NO		NUM	LER	1	NOTTON	SMPI	rs D	IL [	HGT PI	12 9	- c	005	TTPE A M	7	N	UMBER	
	1270	e .	( ( 25	C. AL	16860		2.2.2	10	0.7	1.0	220	1.	04.0	D C	2 07	4		1	2051	00	, ,	8	2 2			¥ 2	6 8			0074	
. 91	1270	SLI	6635	5 1 1	10848 #1		233	168   WA	U /	18	12 3 5 WING		908	103	AIR 12	-44 	c T		1031	1_00		4	c   c	L		~ 6	1 0 10			001-1	
								COLOR	TRAN		57	10	METE	)-  - R	ORY	T w		VIL	ORS.	57	ECIAL VATIO	N.S.									
								CODE	(m)	-  00	1 10	RCE	(mba	5	RULE	EU.	ŭ		DEPTHS	0.00											
										17	51	8	12	5	075	00	57	7	09												
		MESSINGE	CAST	CAR			Ι.		1					59101	ne vou	141	\$ (	A 0	50	UND		k.	PO,	-P	1014	L-P	NO2-N	NO3-N	5104-5		1
		TLMB 0 HR 1/10	NO.	1178	OTAL O			C		5 - 16 +		IG M J	A=1	ANC	44 A L T - 3	10.9	UTH X	103	VEU	OCITY	021	m 17 1	18.	#1/I	11.1	a1/1	µg + et/1	µ∎ + at/l	µ8 = 01/1	pri	č
							-																								Π
				ST	0000	)	0	357	32	80	2	61	0	00	1916	3	00	00	14	621	77	8									
		240		OBS	0000	)	0	357	32	803	3 2	61	0						14	621	77	8									
		240		OBS	0005	j .	0	354	- 32	801	1. 2	61	1						14	620	78	1									
				ST	D 0010	)	0	356	32	61	- 2	61	1	00	1912	9	00	19	14	622	78	6									
		240		OBS	0010	)	0	356	32	807	7 2	61	1						14	622	78	6									
		240		OBS	0015	>	0	359	- 32	808	3 2	61	1						14	624	77	5									
				ST	D 0020	)	0	359	32	81	- i	61	1	00	1913	9	00	38	14	625	77	6									
		240		OBS	0020	)	0	359	32	810	2	61	1						14	625	77	6									
		240		OBS	0025		0	363	32	814	1 2	61	1						14	628	77	1									
				ST	D 0030	)	0	364	32	82	é	61	1	00	1913	8	00	57	14	629	77	0									
		240		OBS	0030	)	0	364	34	817	1 2	61	1						14	629	77	0									
		240		OBS	0035	>	0	362	32	821		61	1						14	629	76	8									
		240		OBS	0040	)	0	364	32	823	3 2	61	1						14	631	76	5									

REF	RENCE	CHUP			A RSDEN	STA	ION TIME			ORIGINATOR'S	OEPTH	MAL, DEPTH	0.81	WAV	E	WEA-	CLOU	D	NDDC
C117	ID. NO.	CODE	1/10	LONGITUDE 17	10" 1"	MOI	DAT HE 1/10	TEAR	CRUISE NO.	STATION NUMBER	NOTION	OF S'MPL'S	0.	NG1 7	11 144	C 001	TYPE A	MT.	NUMBER
31	1270	SI	66325N	16911 W	233 69	07	19 018	1968	BSZ	075	0055	00	_18	2	2	X4	7	6	0075
					COLO	R TRANS	DIR SHI	O AAETI	0~ 2R 1)	DRY WEI CD	DI DEPTHS	SPEC	IAL TIDNS						

				18	523	113	1 071	068	3 6	10_									
MESSENGE CAST TIME OF NO. HR 1/10	CARD TYPE	DEPTH (m)	211	5 *4.	SIGMA	-1	SMCIRC VOLU	M8	₹ Δ D DYN. Μ. ¥ 10 <sup>3</sup>	SO VEL	DCITY	02 m1/1	PO4-P 29 + 01/1	1014L-P #8+01/1	NØ2-N #8 + 60/1	NO3-N 28+05/1	51 O4=5i #8 - 6t/1	₽H	1000
				1	1								1	ł	ł	1	1		I
	STD	0000	0506	3304	2614	4	001883	3 (	0000	14	687								
018	OBS	0000	0506	33041	2614	4				14	687								
018	085	0005	0495	33051	2616	6				14	683								
	STO	0010	0486	3306	2618	8	001848	7 (	019	14	680								
018	OBS	0010	0486	33060	2618	8				14	680								
018	085	0015	0480	33061	2618	8				14	678								
	ST0	0020	0476	3306	2619	9	001840	7 (	037	14	678								
018	OBS	0020	0476	33058	2619	9				14	678								
018	085	0025	0396	33060	2627	7				14	645								
	STD	0030	0377	3306	2629	9	001742	5 (	055	14	638								
018	085	0030	0377	33060	2629	9				14	638								
018	085	0035	0373	33060	2629	9				14	637								
018	OBS	0040	0374	33060	2629	9				14	638								
018	OBS	0045	0375	33064	2630	0				14	639								

20 m	EFER	ID.	SHIP		LONGITUDE	DUFT	10°	DEN ARE	51/	IGM	TIME TE	YEAR	CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAL OEPTH DF S'MPL'S	0	W) BSERV	A VE A TIO	NS SEA	WEA- THER CODE	CLC	DES	NODC STATION NUMBER
t	-+- 311	1270	SI	66275N	169335W		233,	69	07	19	038	1968	B <sub>S2</sub>	076	0058	00	16	22	2		X 2	7	8	0076

rol s	I   6627	5N 16	9335W	233 69 0		38 1968	BS2 076		058 00	16	2   2	[ X 2	7 8	1	÷ (	0761	
				COLDR	TRANS DIR.	SPEED METE OR UNDE	D- ER DRY W 1) BULB BU	LE CODE	OBS. DEPTHS OBSER	ECIAL VATIONS							
					16	S25 12	0 073 0	67 6	10								
MES T	INGE CAST	CARD	DEPTH (m)	ס" ד	5 %.	SIGMA-T	SMCIFIC VDLUME	\$ △ D DYN. M. X 10 <sup>3</sup>	SOUND VELOCITY	02 ml/l	PO4-P yg = 01/1	TOTAL-P 28 + 81/2	NÖ3-N vg + el/i	NO3-N yg + et/b	\$1 D.4 -51 µg - 01/1	₽.H	S C C
								}									11
•		STD	0000	0552	3289	2597	0020461	0000	14703	841							
	040	OBS	0000	0552	32891	2597			14703	841							
	040	OBS	0005	0549	32896	2598			14703	841							
		STD	0010	0415	3298	2619	0018381	0019	14649	728							
	040	085	0010	0415	32979	2619			14649	728							
	040	OBS	0015	0352	33068	2632			14625	694							
		STD	0020	0351	3307	2632	0017099	0037	14625	697							
	040	085	0020	0351	33071	2632			14625	697							
	040	OBS	0025	0352	33069	2632			14626	689							
		STD	0030	0352	3307	2632	0017152	0054	14627	694							
	040	OBS	0030	0352	33066	2632			14627	694							
	040	OBS	0035	0348	33069	2632			14626	687							
	040	OBS	0039	0350	33076	2633			14628	694							
	040	OBS	0044	0350	33069	2632			14629	689							

	EFER TRY	ID.	SHIP	LATITUDE	LONGITUDE	4DC 14	**, 25 SQUA	DEN	114	IGMI	TIME D	YEAR	CRUISE	DRIGINATOR'S CRUISE STATION		EPTH DEPTH TO DF		AX. WAVE PTH OBSERVATIONS		N 5	WEA- THER	CLOU	D [5	NDDC
C	311	270	SI	1/10	16809 W	5	233	٦°	M0	19	HR.1/10	1968	BS2	NUMBER 077	0038	5"MPL"S	0#. 16	HG1	2	SEA	X Z	1771 A	3	 0077
	- 1 -							WA COLOI	TER TRAN	5 01	WIND SPEE	- BARO	D-	AIR TEMP. C VIS	NO. OBS.	SPEC								

		CDDE	(m) UIIC,	FOICE (m)	Sal BULB	6UL9	DEPTHS								
			16	SZ1 14	0 073	070 7	07								
CARD TYPE	DEPTH (m)	ש ז	5 %.	SIGMA-T	SPECIFIC VOLUM	€ \$ △ ₽ DYN. M. X 10 <sup>3</sup>	SDUND VELOCITY	02 m1/1	PO4=P µ8+01/3	TDTAL=P #B = st/l	NO2-N 92 - 61/1	NO3-N 20-61/1	51 G4=\$1 99 - 01/1	şН	S C C
				1											
STD	0000	0723	3016	2361	0042907	0000	14736		'						
OBS	0000	0723	30164	2361			14736								
OBS	0004	0722	30162	2361			14737								
OBS	0009	0722	30163	2361			14737								
STD	0010	0722	3016	2361	0042920	0043	14738								
085	0013	0722	30160	2361			14738								
OBS	0017	0719	30168	2362			14738								
STD	0020	0720	3017	2362	0042863	0086	14738								
OBS	0022	0720	30166	2362			14739								
085	0026	0718	30178	2363			14739								
	CARD TYPE OBS OBS OBS STD OBS STD OBS STD OBS OBS	CARD TYPE DEPTH (m1 STD 0000 OBS 0004 OBS 0004 OBS 0013 OBS 0017 STD 0020 OBS 0022 OBS 0022 OBS 0022	CARD TYPE         DEPTH (m)         T T           STD         0000         0723           OBS         0000         0723           OBS         0004         0722           OBS         0010         0722           OBS         0010         0722           OBS         0010         0722           OBS         0017         0719           STD         0020         0720           OBS         0022         0720           OBS         0022         0720	CDODE         Imi         Off.           CARD         DEPTH Imi         T TC         5 */.           TYPE         DEPTH Imi         T TC         5 */.           STD         0000         0723         3016           OBS         0000         0723         30162           OBS         0004         0722         30163           STD         0010         0722         30160           OBS         0013         0722         30160           OBS         0017         0719         30168           STD         0020         0720         3017           OBS         0020         0720         30160           OBS         0020         0720         3017           OBS         0022         0720         30160           OBS         0022         0720         30160	CDDE         Imin         Dic.         POREL         Imin           16         S21         14           179E         DEPTH Imin         1 °C         S '/.         SIGMA-1           STD         0000         0723         3016         2361           0BS         0000         0722         30162         2361           0BS         0009         0722         30162         2361           0BS         0010         0722         30162         2361           0BS         0013         0722         30162         2361           0BS         0010         0722         30162         2361           0BS         0013         0722         30162         2361           0BS         0013         0722         30162         2361           0BS         0017         0719         30168         2362           STD         0020         0720         3017         2362           STD         0020         0720         30166         2362           STD         0020         0720         30166         2362           STD         0020         0720         3017         2362	CARD TYPE         DEFTH (m1)         T         C         S'/L         SIGMA-T         SUCC (mbat)         BULE           16         521         140         073         140         073           CARD TYPE         DEFTH (m1)         T         5 '/L         SIGMA-T         SUCC VOLUM MNOMALT-B197           STD         0000         0723         3016         2361         0042907           OBS         0000         0722         30162         2361         0042907           OBS         0009         0722         30163         2361         0042920           OBS         0010         0722         30163         2361         0042920           OBS         0010         0722         30166         2361         0042920           OBS         0010         0722         30168         2362         0042820           OBS         0017         0719         30168         2362         0042863           OBS         0020         0720         3017         2362         0042863           OBS         0022         0720         30166         2362         0042863           OBS         0022         0720         30178         2363	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

REFERENCE		TITUDI	LON	GITUDE	SOUARE		ME YEAR	CRUISE ND.	DEGINATO STAT	DR*S TION ABER	DEPTH TO BOTTOS	MAL DEPTH OF S'MPL	ORS	WAVE ERVATIONS	WEA- THER COOL	CLOUD	F 	S <sup>1</sup> N	IODC ATION UMBER	
		26.1	10	220 1/	222 60 1	07 19 1	28 196	8 852	078		0046	0.0	18	2 2	x2	7 8			0078	
1 311270	1 21 1 02	135 1	N I 100	217 WI I	WAT		IND B	10-	A 18 TEANP.	°C	ND.	571	CIAL							
					COLDR	TRANS DIR	SPLID AA	ETËR   1640   1	ORY V	VET CO	OEPTH	OLSERY	VATIONS							
						18	523 1	43 0	71 0	66 6	09									
	MISSINGL		C 480					191010	C VOLUME	1 A	0 50	UND		PO4-P	TOTAL-P	NO2-N	NO3-N	SIDa-Si		1
	TIME OF N	6.	TYPE	OEPTN IMI		\$ */	SIGMA-T	ANOA	ALT-EIR?	X 10	M. VE	00117	03 m01	µg + #1/1	## + #1/1	$\mu_R + 61/1$	PB = 01/1	ν8 ~ e1/1	PH.	č
										1				1						I
	,		STD	0000	0599	3207	2526	002	7172	000	0 14	712								
	131		085	0000	0599	32067	2526				14	711								
	131		085	0009	0597	32110	2530				14	713								
			STO	0010	0598	3211	2530	002	6820	002	7 14	713								
	131		OBS	0013	0599	32120	2530				14	714								
	131		OBS	0018	0607	32130	2531	002	6797	005	4 14	721								
	131	-	OBS	0020	0616	32150	2531	002		000	14	723								
	131		OBS	0027	0615	32155	2531				14	724								
			STD	0030	0612	3216	2532	002	6681	008	1 14	723								
	131	4	OBS	0032	0611	32158	2532				14	723								
	101	,	065	0030	0011	26122	2002				•									
REFERENCE CTET ID. CODE NO.	SHIP CODE	A TITUDE	/10	GITUOL 100	*A- 25DEN SOUARE 10* 1*	STATION TI	IME 7,1/10	CRUISINO.		DR'S TION WBER		MAX DEPT DF S'MPL	N OB	WAVE SERVATION	S THER SEA CODI	CLOUD CODES	<u>t</u>	S	NDOC TATION UMBER	
REFERENCE CTAT IO. CODE NO. 311270	SHIP CODE SI 65	111UOE 1 535	/10 N 16	KGITUOL * 11/10 826 W	*A: 25DEN SOUARE 10* 1* 2 3 3 58	STATION TI IGMTI MD DAY H 07 19 J	IME R.1/10	CRUIS NO.	ORIGINATI	DR'S TION WBER	0051	MAX DEPT DF S'MPL		WAVE SERVATION MGT PER 2 5	S TNER CODI	CLOUD CODES TTTE 4-4 7 8	E	S	NDDC 7 ATION 1 UMBER 0079	
REFERENCE CODE NO. 311270	SHIP CODE	11TUDE 1 535	10 N 16	KGITUOL 1/10 826 W	10° 1° 2 3 3 5 8 WA	STATION TI IGMT3 MD DAY H 07 19 J IER V TRANS DR	IME R.1/10 4.2 196 VIND SPEED M	B B S Z	ORIGINATI E STA NUI OT 9 AIR TEMP	TION MBER		MAX DEPTI DF S'MPL	I OB IS DIR 16 ECIAL VATIONS	WAVE SERVATION HIGT PEE 2 5	S THER SEA COOL X 4	7 8	F	S	NDDC 7ATION UMBER 0079	
REFERENCE CTHY IO. CODE NO. 311270	SHIP CODE . SI 65	11000	/10 N 16	KGITUOE * 1/10 826 W	A 25DEN SOUARE 10° 1° 2 33 58 WAI COLOR CDDE	STATION TI IGMT) MD DAY H 07 19 1 IER V TRANS DIR (m) DIR	IME R.1/10 4.2 196 VINO SP(10 FORCE 0 C 2.0 2	B B S 2 ARO- ETEB mbs)	ORIGINATI E STA NUI OT 9 AIR TEMP. ORT BULB	TION MBER	0051 0051 0051 0051 015. 015. 015.	MAX DEPT OF S'MPL OC SP OBSER	IS DR.	WAVE SERVATION HIGT PER 2 5	S TNER SEA CODI	CLOUD COOES 7 8		2	NDDC TATION UMBER 0079	
EFFERENCE CTW ID. COOR NO. 311270	SHIP CODE	111000	/10 N 16	igituot * '1/10 826 ₩	10° 1° SOUARE 10° 1° 233 58 WA COLOR CODE	STATION TI IGMTI MD 047 M 07 19 J IER V TRANS DIR. 17	IME R.1/10 4.2 196 VINO 8 57(10 M FORCE 520 1	B BS2 ARO- ETES 145 C	ORIGINATI STA NUI OT 9 AIR TEMP. ORT BULB II	TION WER VULB			N OB S DIR 16 ECIAL VATIONS	WAVE SERVATION MGT PER 2 5	S WEA THER CDOI	CLOUD CUDES 1171 4 4 7 8		5 h	NDDC 7ATION UMBER 0079	T
ALFERENCE CTW IO. COOM NO. 311270	SHIP CODE . SI 65		CARD TYPE	GITUOL 50 1/10 826 W 02PTH (m)	10° 1° 50UARE 10° 1° 233 58 WAI COLOR CDDE	STATION TI           IGMTI           MD         DAY           MO         7           IGMTI           R         V           TER         V           TER         V           TANS         DIR           17         5           5         %.	IME R.1/10 4.4.2 196 VINO 8 SPED M FORCE 0 S20 1 SIGMA-1	R CRUIS NO. 8 BS2 ARO- ETER NBs3 4 5 C 3PfCiF AND/	ORIGINATI E STA NUI O 7 9 AIR TEMP. ORT I BULB I O 64 (C IC VOLUME WALY-ESP	DR'S TION WEER TO VI WEE COULS DO 1 6 DYN. X 10	0051 0051 0051 0051 005.	MAX DEPT M S'MPL OO SP S OBSER	08 15 Dil 16 16 16 16 102 mil	WAYE SERVATION MGT PER 2 5 PO 4~P ×8 - 01/1	S WEA THER SLA CODI X 4	CLOUD COOES 1171 400 7 8 NO2-N 29 - 61/	NO3=N 28 - et/l	51 O 4-5 11 O 4-5	NDDC TATION UMBER 0079	11
EFFEENCE CTET IO. COOR NO. 311270	SNIP CODE . SI 65 MISSENGE C TIME . NR 1/10		LOP /10 N 16 CARO TYPE	GITUDE 826 W	*4. 25DEN SOUARE 10* 1* 2 3 3 58 WA COLOR COLOR COLOR COLOR	STATION TI IGMTI MD 04Y H 07 19 J FER V TRANS DIR 17 S */.	IME R.1/10 42 196 VIND 8 SPRD 8 S	R CRUIS NO. 8 BS2 ARO- ETER nbs) 45 C	ORIGINATI STA NUI 2079 AIR TEMP. ORT BULB IC VOLUME WALY-ZIR?	C TION WBER VI VI VI VI VI VI VI VI VI VI	00050 00050 5. NO. 0050 0050 0050 0050 0050 0050 0050 00	MAX DEPT DF SMPL DC SMPL DC SP S DC SP S DC SP S DC SP S DC SP S DC SP S DC SP S DC SP S S DC SP S S S S S S S S S S S S S S S S S S	02 m1/	WAVE SERVATION HGT PER 2 5 PO4=P rg = 01/1	S WEA TNEE SIA CODI X 4	CLOUD COOLS TTTL 4 W 7 8 NO2-N y9 + 81/	NO3-N 26 - at/1	5 5 5104-5 98-01/1	NDDC 7 ATION UWBER 00 79	1000
REFERENCE COM NO. 311270	SNIP CODE SI 65 MISSENGE TIME NR 1/10		CARO TYPE	GITUOL 1/10 826 W 0227TH (m)		274 TION TI (GMT) MD 047 H 07 19 2 TER V TEANS OIR 017 17 5 *4. 3268	IME         YEA           R.1/10         8           (42)         196           ISME         8           FORCE         0           SIGMA-1         3           2587         2	R CRUIS NO. 8 BS2 ARO- 2758 1910 1910 1910 1910 1910 1910 1910 191	ORIGINATI STA NU: 079 AIR TEMP. 064 C IC VOLUME WALV-EIR? 21352	DR'S TION MBER VI ULB DOG 1 6 DYN. x 10 0000	0 (P1) TO BDTTO 0 05 ( S. 085. 015 (P1) 0 0 5 ( S. 085. 01 (P1) 0 1 ( 0 1 (	A MAX DEPT S'MPL S'MPL DOUND LDCITY	S DIR S DIR CIAL VATIONS	VAVE SERVATION HGT PER 2 5	S WEA TNEE SIA CODI X 4	CLOUD CUOES 1171 400 7 8 NO2-N 29 - 01/	NO3=N y8 - a1/1	5104-5. µR = 01/1	NDDC 7ATION UWBER 0079	100
REFERENCE COM NO. 311270	SHIP CODE SI 65 MISSING IMI 6 , NR 1/10 145		CARD TYPE STD OBS	CITUOL 32 1/10 826 W 02FTH In) 0000 0000		274 TION TT IGM11 MD D47 H 07 19 1 FER V TANKS DIR. 17 5 *%. 3268 32679	IME         YEA           R.1/10         42         1.96           VINO         8         5710           STORE         1         5367           SIGMA-1         2.587         2.587	R CRUIS NO. 8 BS2 ARO- ETER Nbs) 4 S C 191C/F ANO/ 002	ORIGINATI STA NUI O79 AIR TEMP. ORT 064 C C VOLUME WALV-218?	ОРИ'S TION MBER	0 1 4 0 1 4 0 1 4 0 1 4 0 1 4 0 1 4 0 1 4	MAX DEPT S'MPL S'MPL DOUSER SOUSER COUND LOCITY	02 m1/	WAVE SERVATION WCOT PER 2 5	5 51A CDDI X.4 TOTA L-1 ~= +01/	CLOUD CODES TTEL 400 7 8 7 8	NO3=N yg - at/1	5 5 10 4 - 5 10 4 - 6/1	NDDC TATION UWBER 0079	100
EFFERNCE CTT IO. COS NO. 311270	SNIP CODE SI 65 ************************************		CARD TYPE STD OBS OBS	CITUDE 3		STATION TI IGM1           MD DAY [% 07 19 ]           IFIA           VT           TAMS: (m)           DIR           3268           32670           32670	IME         YEA           R.1/10         42         1.96           42         1.96         M           FORCE         0         5           SIGMA-1         SIGMA-1         2587           2587         2587         2588           2588         2588         2588	R CRUIS NO. 8 BS 2 8 BS	ORIGINATI STA NU 079 AIR TEMP. 08118 1064 21352 21352	000 TION WET CO 000 200 000 000 000 000 000 00	0 (P1) TO BDTTO 0 056 S 00 DEPTH 10 0 M. S 0 M. VE 0 10 10 10	MAX DEPT OF S'MPL DF S'MPL DC SP S OBSER DUND LDCITY 4674 4674	I OB IS DIL ECIAL VATIONS	WAVE SEEVATION WCOT PEE 2 5	5 WEA 51A CODI X 4 707A 1 - 6 ~= + 01/	CLOUD CODES TTTL 400 7 8 NO2-N y9 + 61/	NO3=N 25 - at/1	5104-5 104-5	NDDC 7ATION (UMBER 0079	100
REFERENCE CTT IO. COOS NO. 311270	SHIP CODE SI 65 NIIIIICE 1001 C NIIIIICE 1001 C NIIIIICE 1001 C NIIIIICE 1001 C NIIIIICE 1001 C NIIIIICE 1001 C NIIIIICE 1001 C NIIIIICE 1001 C NIIIIICE 1001 C NIIIICE 1001 C NIIII 1001 C NIIIICE 1001 C NIIICE 1001 C NIIICE 1000 C NII		CARD TIPE STD OBS STD OBS	CITUDE · 1/10 B26 W 02FTH W) 0000 0005 0010	10° - 350EN 50UARE 10° - 1° 2 3 3 58 WA 2 3 58 COLOR	STATION II           GM1           MD         DAY IN           07         19           III         V           TAME         DIR           17         17           3268         32679           3266         32667           3266         32660	IME         YEA           R.1/10         9           142         196           900         8           900         8           900         8           900         8           900         8           900         8           900         9           900         8           900         9	R CRUIS NO. 8 BS 2 8 RO- 8 RO-	ORIGINATI STA NU 2079 AIR TEMP. ORT 064 C 1064 C 1352 21226	000 000 000 000 000 000 000 000	0 [P1] TO BDTTO 0054 0055 00056 0055 00056 000500000000	MAX DEPT DEPT S'MPL DF S'MPL DC SP S OBSER S OBSER COS		WAVE SERVATION HIGT PER 2 5 PO4=P rg = #1/	5 WEA TNEE SIA CODI X.4	CLOUD COOIS 1114 400 7 8 7 8	NO3=N 25 - at/1	51 O a = 5 µR = 01/1	NDDC 7ATION (UMBER 0079	100
REFERENCE CTET IO. COOS NO. 311270	SHIP COOL SI 65 NHSHRGE C HARTING C HARTING HARTIN HARTING HARTING HARTINO HARTINO HARTINO HARTINO HAR	AST NO,	CARD N 16	сатиот • 1/16 826 W 0227TH (м) 0000 0005 0010 0015	301 к           10°           10°           10°           10°           10°           10°           10°           10°           10°           10°           10°           11°           1233           10°           11°           1233           11°	TATION TI IGMT           MO 04Y H IGMT           MO 04Y H IGMT           ITA           S268           32667           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266	IME         YEA           R.1/10         YEA           SIGMA-1         SGMA-1           SIGMA-1         SIGMA-1           2587         2588           2589         2589           2599         2590	R CRUIS NO. 8 BS2 ARO- ETER 1900 2 002	ORIGINATI 514 514 079 AIR TEMP 064 064 064 01352 21352 21226	000 100 100 100 100 100 100 100	0 1 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A AX DEPT DF SMAPL DC DO SP SOUSER DUND LDCITY 4674 4674 4674 4664 4664 4664	N 08 'S DR 0 16 ECIAL VATIONS 0 2 ml/	WAVE SERVATION HIGT PER 2 5 PO4=P rg = #1/	5 WEA TNEE CDD X 4 TOTAL	CLOUD COOIS 1111 400 7 8 7 8	NO3=N 28 - at/1	51 O a - 5 y2 - 01/1	NDDC TATION UMBER 0079	100
REFERENCE CTH IO. COOR NO. 311270	SHIP COOL SI 65 SI 65 HR 1/10 145 145 145	A TITUDE 1 535	CARD N 16 STD OBS OBS STD OBS STD OBS STD	стиот • 1/10 826 W 0000 0000 0000 0005 0010 0015 0020	1.301N           SOUARE           10*           10*           10*           12           233           3           0487           0487           0487           0470           0460           0460           0460           0430           0431	3268         32667           3266         32660           3266         32660           3266         32660           3266         32660           3266         32660           32663         3263	Ime         YEA           R.1/10         YEA           Image: State S	R CRUIS NO. 8 BS2 ARO- ETER 1990 4 5 C 002 002	ORIGINATI STA 1079 AIR TEMP 064 064 064 0064 0064 0064 0064 0064 0064 0064 0064 0079 0064 0079 0079 0079 0079 0079 0079 0079 0079 0079 0079 0079 0079 0079 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0064 0079 0079 0064 0079 0079 0064 0079 0064 0079 0079 0079 0064 0079 0079 0079 0079 0079 0079 0079 0079 0067 0079 0079 0064 0079 0	000 000 000 000 000 000 000 000	0 1 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MAX DEPT OF SMAPL OC SP SOUSER OUND LDCITY 6674 6674 6674 6664 6664 6664 6664	02 m1/	WAVE SERVATION 1007 PER 2 5 PO4=P 2 - 11/1	5 WEA TNEE CDD X 4	CLOUD COOLS 1171 4w 7 8 NO2=N 29 • 01/	NO3=N 2\$- at/1	51 O a - 5 22 - 01/1	NDDC TATION UM#EP 0079	100
REFERENCE CTT IO. COOR NO. 311270	SHIP COOL SI 65 SI 65 MH314961 C 1045 145 145 145 145	A TITUDE 1 3 3 5 1 A 57 40.	CARD N 16 STD OBS OBS STD OBS STD OBS STD OBS	CEPTH (m) 0000 0000 0000 0000 0000 0010 0010 0015 0020 0020		3268         3266           3266         3266           3266         3266           3266         3266           3266         3266           3266         3266           3266         3266           3266         3266           3266         3266           3266         3266           3266         3266	Imt         YEA           R.1/10         42         196           VNO         8         970           FORCE         0         9           FORCE         0         9           SIGMA-1         5887         25887           2588         2589         2589           2590         2591         2591	R CRUIS NO. 8 B S 2 ARO- 4 5 C 199C/F 002 002	ORIGINATI 1079 AIR TEMP. 064 C 1352 21352 21226 21070	0000 0002 0004	0050 10050 10050 10050 000	A AX DEPT DF SMPL SM	02 m1/	WAVE SERVATION HIGT PER 2 5 PO 4=P rg = eV/	S WEA S TNEE SIA CODI X 4	CLOUD COOES 1174 Aw 7 8 NO2=N 29 • et/	NO <sub>3</sub> =N yg - at/1	51 O a = 5 µg = ot/1	NDDC TATION UMBER 0079	100
REFERENCE CON IO. CON NO. 311270	SHIP COOL SI 65 MISSING C IMI 07 HR 1/10 145 145 145 145 145 145	A 57	CARD N 16 STD OBS STD OBS STD OBS OBS OBS OBS OBS	CITUOL 1/10 826 W 0000 0000 0005 0010 0010 0010 0020 0020 0025		STATION II           STATION II           IGMI           MD DAY H           07 19 J           ITA           07 19 J           ITA           17           S */.           3268           32679           32660           32660           32660           32660           32660           32660           32628           32628           32628           32629	Imit         YEA           R.1/10         42         196           VNO         8         5970           FORCE         0         5           FORCE         0         5           SIGMA-1         3         3           SIGMA-1         2587         2588           2589         2589         2589           2591         2591         2591           2591         2591         3	CRUIS     NO.     B BS2     ARO     SPECIFIC     SPE	ORIGINATI 1079 AIR TEMP. 064 C 1052 1352 12226 21226 21070	Constant of the second s	0 (P1) 10 (0) 10 (0)	4654 46645	I OB IS DIR I G ECIAL VATIONS 0 2 ml/		S WEA S THEE SLA CODI X 4	CLOUD COOLS TITL 400 7 8 NO2-N NO2-N	NO3=N #8 - al/I	51 O a = 5. µ2 = 01/1	NDDC 7ATION UMBER 0079	
EFFERNCE CTT IO. COS NO. 311270	SII 65 SI 65 NIIIIII 65 NIIIII 65 NIIIII 65 NIIII 65 NIIII 65 NIIII 65 NIIII 65 NIIII 65 NIIII 65 NIIII 65 NIIII 65 NIIII 65 NIII 65	A 57	CARD N 16 STD OBS OBS STD OBS STD OBS OBS STD OBS OBS	CITUOL 1/10 826 W 0000 0000 0005 0010 0015 0020 0025 0030		STATION II           IGM1           MD DAY NO           07 19 J           ITR           VT MARK           01 02           17           3268           32679           32660           32660           32660           32660           32640           32628           32629           32629           32629           32629           32629	Imt         YEA           R.1/10         I           WNO         I           STORE         U           STORE         U           SIGMA-1         SIGMA-1	R CRUIS NO. 8 BS2 ARD- 145 C 145 C 145 C 002 002 002	ORIGINATI STA NU 079 0810 E 8018 E 064 C 1352 21226 21070 21043	DATS TICM MISER TTCM MILER DOI: 001160 0000 0002 0004 0006	0 (P1) 0 (P1)	4 0000 000		WAVE SERVATION WGT PER 2 5 PO 4-P ra - eV/	S THE SLA CODI X 4	CLOUD COOLS TITL 4 00 7 8 NO3-N y9 - 61/	NO3=N 28 - at/1	5104-5 19 - 41/	NDDC TATION GUMBER 0079	100
REFERENCE CIT IO. COS NO. 311270	SHIP CODI SI 65 SI 65 Iutimo c на 1/10 Iuti на 1/10 Iuti	A 51	CARD TYPE STD OBS OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS OBS	CITUDE (1/10)	10° 10 10° 1° 233 30 WA 233 30 WA 233 30 WA COLOR CO	STATION II           STATION II           IGMI           MD DAY MO           07 19 J           ITA           07           19 J           ITA           17           3268           32679           32660           32660           32660           32663           32629           32620           32620           32621           326263           326619           32662           326163	Imt         YEA           R.1/10         YEA           WHO         8           Imt         196           FORCE         0           S20         1           S1GMA-1         568           2587         2587           2589         2589           2591         2591           2591         2591           2591         2591           2591         2591	CRUIS     C	ORIGINATI STA NU 079 0179 018 019 019 019 019 019 019 019 019	DR'S TION MBER C VIII CON XIII CON XIII CON XIII CON XIII CON XIII CON XIII CON CON CON CON CON CON CON CON CON CON	0 (PTTT TO DOTO	Image: 1         Image: 2		WAVE EEEVATION WGT PEB 2 5 PO 4=P 2 = 1/1	5 51A CODI X 4 TOTA 5-1 -2 = -0/0	CLOUD COOLS 1111 400 7 8 99 - 61/	NO3=N 28 - at/1	5 h	NDDC TATION GUMBER 0079	
REFERENCE CTT IO. COOS NO. 311270	SHIP COOL SI 65 SI 65 NHIHEGE C INNE W NR 1/10 145 145 145 145 145 145 145 145 145	A 51 40.	CARD TYPE STD OBS OBS STD OBS STD OBS OBS STD OBS OBS OBS OBS OBS OBS	CITUOL (1110)	Y. SDIN           SOUARE           10"           11"           233           WA           COLOR           COL	3268           3268           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3266           3261           3261	Ime         YEA           R.1/10         YEA           Ime         Yea           Ime <td>R         CPUIS           NO.         NO.           NO.         NO.           NO.         NO.           IFE.         IFE.           002         002           002         002</td> <td>ORIGINATI STA NU: 079 064 064 064 064 064 064 064 021070 21043</td> <td>DR'S TTON MBER C VIII CO 61 6 5 DVA. x 10 000 0002 0004 0006</td> <td>0 (#1) 10 0 (5) 10 0 (5) 10 0 (5) 10 0 (5) 0 (5)</td> <td>4 0000 0 00000 0 0000 0 000</td> <td></td> <td>WAVE SERVATION WG PEE 2 5 PO_a=P ×a = =1/1</td> <td>S TNER SILA CODI X4</td> <td>CLOUD CLOUDS TITL 400 7 8 7 8</td> <td>NO3=N 28 - aV/</td> <td>5 h</td> <td>NDDC TATION GUMBER 0079</td> <td></td>	R         CPUIS           NO.         NO.           NO.         NO.           NO.         NO.           IFE.         IFE.           002         002           002         002	ORIGINATI STA NU: 079 064 064 064 064 064 064 064 021070 21043	DR'S TTON MBER C VIII CO 61 6 5 DVA. x 10 000 0002 0004 0006	0 (#1) 10 0 (5) 10 0 (5) 10 0 (5) 10 0 (5) 0 (5)	4 0000 0 00000 0 0000 0 000		WAVE SERVATION WG PEE 2 5 PO_a=P ×a = =1/1	S TNER SILA CODI X4	CLOUD CLOUDS TITL 400 7 8 7 8	NO3=N 28 - aV/	5 h	NDDC TATION GUMBER 0079	



Woods Holo Accorption psitution ATLAS - GAZITTEER COLLECTION





