84N017C181

DATA DOCUMENTATION FORM

TT1907

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
TO ANTIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address. $\neg C \lor = \theta S_1$

OPIGINATOR IDENTIFICATION

	A. UKIU	INATOR	IDENTIFICATI	ION		
THIS SECTION MUST BE COMP	LETED BY DONOR !	OR ALL	ATA TRANSMIT	TALS		
1. NAME AND ADDRESS OF IN UNIVERSITY OF		ATORY, OF	R ACTIVITY WIT	H WHICH SUBM	ITTED DATA AF	RE ASSOCIATED
INSTITUTE OF N	ARINE SCIENCE					ł
DATA MANAGEMEN	NT					
O'NEAL BUILDIN	NG, ROOM 111					
FAIRBANKS, ALA	ASKA 99701					
C. EXPEDITION, PROJECT, O	R PROGRAM DURING	WHICH		IBER(S) USED I	BY ORIGINATOR	TO IDENTIFY
		I	TT13	3/ LEG 1		
PROBES						
PLATFORM NAME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO		6. PLATFORM A NATIONALIT		1	TES
			PLATFORM	OPERATOR	FROM: MODAY,YR	TO: MO/DAY/YR
THOMPSON	SHIP		USA	USA ·	4/11/78	4/29/78
8. ARE DATA PROPRIETARY	,				UARES IN WHIC	
X NO YES		CONT	AINED IN YOUR	SUBMISSION W	ERE COLLECT	ED.
IF YES, WHEN CAN TH		L.		GENERAL AF	REA	
9. ARE DATA DECLARED NA PROGRAM (DNP)?	TIONAL	100° 120° 1	Her 180° 180° 180° 140	* 128* 188* 89* 89*	47 27 F 27	40° ty- 00° 100°
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not,	en cetaloz	100° 120°			7 40° 20° 0° 20°	583 578 46" 58" 58"
NOAA FORM 24-13	\mathcal{O}				USC	MM-DC 44289-P72



NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
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	SEE ATTACHMENT	rs		
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DAA FORM 24-13 (9-72)		· · · · · · · · · · · · · · · · · · ·		USCOMM-DC 44288-P

L. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL GIVE METHOD OF IDENTIFYING EACH RECORD TYPE	L OF YOUR FILE
See attached "CTD Record format D	escription"
2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION	
See attached "CTD Record Format De	escription"
	LANGUAGE r (907) 474-7836 (907) 474-7092 itute of Marine Science, Fairbanks, AK. 99701
5. RECORDING MODE BCD BINARY X ASCII EBCDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X 56
6. NUMBER OF TRACKS (CHANNELS) SEVEN X NINE 7. PARITY X ODD EVEN	Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES (TD/FLUOROMETER DATA TT131 LEG 1 4/11/78 - 4/29/78 COACHMAN (PTL-24)
8. DENSITY 200 BPI 1600 BPI	STATIONS: 1002-1613, 1015-1157. 1 FILE 1352 BLOCKS
₹ 556 BPI	12. PHYSICAL BLOCK LENGTH IN BYTES 5-150 bytes/block
	8 bits byte

RECORD FORMAT DESCRIPTION

14. FIELD NAME	15. POSITION FROM - 1 MEASURED	İ	GTH	17. ATTRIBUTES	18. USE AND MEANING
	(e.g., bits, bytes)	NUMBER	UNITS		
				•	
See attac	hed "CTD	Record	Forma	Description"	
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USCOMM-DC 44289-P72

NOAA FORM 24-13

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("\(\subseteq \subseteq \subseteq \subseteq \subseteq \subseteq \text{order} \) the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE DATE OF LAST		INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED				INSTRU- MENT IS	
INSTRUMENT TYPE DATE OF LAST CALIBRATION	YOUR ORGANIZATION . (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√.)	BEFORE OR AFTER USE (\(\frac{1}{2} \))	BEFORE AND AFTER USE	ONLY AFTER REPAIR (√)	ONLY WHEN NEW (V)	NOT CAĊI~ BRATED	
PLESSEY STD MODEL 9040	2/18		NRCC	l year					
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		L	L	L	1	L	<u> </u>	USCOM	M-DC 44289-P



University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	I/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	1/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	1/5	
Latitude:		
Degrees	I/2	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'N' or *S'
Longitude:		•
Degrees	1/3	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE/BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	I/5	Number of 'scans' of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	I/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	I/2	0-23 (GMT)
Minutes	I/2	0-59 (GMT)
Depth Interval Indicator	1/1	Always '1' for equally spaced depths
Depth interval	1/3	Depth interval to tenths (should always be 010)
Barometric Pressure	I/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	1/2	Tens of degrees (eg. 145°=15)
Wind speed	1/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	1/1	WMO Code 3700
Visibility Code	1/1	WMO Code 4300
Cloud Type Code	I/1 .	WMO Code 0500
Cloud Amount Code	1/1	WMO Code 2700
nstrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	1/5	To whole meters
Maximum Depth of Cast	1/4	To whole meters
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)
Wave Height	1/3	To tenths

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2	To nearest second
Blank	X/27	

DATA_RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
File Type	A/3	Always '022'
File Identification	A/6	
Record Type	I/1	Always '3'
Station Number	I/5	
Depth	I/5	To tenths (but not used) (Scan Data)
Temperature	I/5	To thousandths (Scan Data)
Salinity	I/5	To thousandths (Scan Data)
Sigma-t	I/4	To hundredths (Scan Data)
4th Channel	I/6	To thousandths (Scan Data)
Scan Condition Code	1/1	Code describing how data arrived at. (Scan Data) (See attached)
Scan Data	4*26	Repitition of above
Sequence Number	1/5	Ascending numeric, 1st Data Record =1, 2nd Data Record = 2, etc.



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

HUMBER

84NOX181

DATA DOCUMENTATION FORM

8400210

NOAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE NAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEANOGRAPHIC DATA CENTER RECORDS SECTION ROCKVILLE, MARYLAND 20852

FORM APPROVED Q.M.B. No. 41-R2651

USCOMM-DC 44289-P72

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMP	LETED BY DONOR F	FOR ALL	DATA TRANSMIT	TALS		
DATA MANAGEMEN O'NEAL BUILDIN FAIRBANKS, ALA 2. EXPEDITION, PROJECT, O	ALASKA MARINE SCIENCE NT NG, ROOM 111 ASKA 99701		3. CRUISE NUM	IBER(S) USED E	ITTED DATA AF	
PROBES			ア :	IS SHIPMENT		
4. PLATFORM NAME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO		6. PLATFORM A NATIONALIT		7. DA	TES
			PLATFORM	OPERATOR	FROM: MO,DAY,YR	TO: MO/DAY/YR
THOMPSON	SHIP		USA	USA	5/1/18	5/21/18
8. ARE DATA PROPRIETARY X NO YES IF YES, WHEN CAN TH FOR GENERAL USE?	EY BE RELEASED YEARMONTH		SE DARKEN ALI		ERE COLLECT	
9. ARE DATA DECLARED NA PROGRAM (DNP)? (1.E., SHOULD THEY BE IN DATA CENTERS HOLDING: TIONAL EXCHANGE?) NO X YES PART 10. PERSON TO WHOM INQUIRI DATA SHOULD BE ADDRES PHONE NUMBER (AND ADDITIONAL IN ITEM-1) DATA MANAGER (907) 474-7836 (9	CLUDED IN WORLD FOR INTERNA- (SPECIFY BELOW) ES CONCERNING ESCONCERNING SED WITH TELE- PRESS IF OTHER	278 278 278 278 278 278 278 278 278 278	188° 188° 188° 188° 188° 188° 188° 188	227 222 222 222 223 233 233 233 233 233	100 100	214 279 240 220 212 207 215 207 216 207 217 217 217 217 217 217 217 217 217 21



NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
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	SEE ATTACHMEN	?S · · · · · · · · · · · · · · · · ·		
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C. DATA TORMA

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMIT GIVE METHOD OF IDENTIFYING EACH RECORD TYPE	E .
See attached "CTD Record format	Description"
2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION	
See attached "CTD Record Format	Description!
See accached CID Record Format	Description .
3. ATTRIBUTES AS EXPRESSED IN PL-1	ALGOL COBOL
. X FORTRAN	LANGUAGE
A DECRONCIBLE COMPUTER SPECIALIST.	
	ger (907) 474-7836 (907) 474-7092
ADDRESS <u>University</u> of Alaska, In	stitute of Marine Science, Fairbanks, AK. 99701
COMPLETE THIS SECTION IF DATA ARE ON MAGE	
5. RECORDING MODE BCD BINARY	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH
X ASCII EBCDIC	<u>X</u> 56
	10. END OF FILE MARK
6. NUMBER OF TRACKS (CHANNELS) SEVEN	X Octal 23
X NINE	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS
	OF DATA TYPE, VOLUME NUMBER) PROBES CTD/FLUOROMETER DATA
7. PARITY	CRUISE: TT131 LEG 2 (PTL-6)
X ODD EVEN	STATIONS: 2001-2004, 2010-2022,
8. DENSITY	2024-2052, 2057-2072. NO. OF FILES = 1 464 RECORDS
200 BPI 1600 BPI	
556 BPI	12. PHYSICAL BLOCK LENGTH IN BYTES
_X 800 8PI	5-150 bytes/block 13. LENGTH OF BYTES IN BITS
	8 bits byte
NOAA FORM 24-13	USCOMM*DC 44289-P72

RECORD FORMAT DESCRIPTION

4. FIELD NAME		FF	15. POSITION FROM - 1 MEASURED			17. ATTRIBUTES	18. USE AND MEANING		
		(o.g., b	its, bytes)	NUMBER	UNITS				
									
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D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("/") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

04-5-05-1-05-	INSTRUMENT WAS		INSTRU- MENT IS					
INSTRUMENT TYPE DATE OF LAST CALIBRATION	YOUR ORGANIZATION . (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (\(\(\(\) \))	ONLY AFTER REPAIR (√)	ONLY WHEN NEW	NOT CALI- BRATED (√)
2/18		NRCC	l year					
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		DATE OF LAST CALIBRATION YOUR ORGANIZATION . (V)	CALIBRATION YOUR ORGANIZATION (GIVE NAME) . (√.)	DATE OF LAST CALIBRATION YOUR ORGANIZATION (GIVE NAME) (V)	DATE OF LAST CALIBRATION YOUR ORGANIZATION (GIVE NAME) INSTRUMEN ONSTRUMEN INSTRUMEN BEFORE OR AT FIXED OR AFTER USE (\(\forall\)) (\(\forall\)	DATE OF LAST CALIBRATION YOUR ORGANIZATION (GIVE NAME) OTHER ORGANIZATION (GIVE NAME) OTHER ORGANIZATION (GIVE NAME) (V) (V) (V) (V)	DATE OF LAST CALIBRATION YOUR ORGANIZATION (GIVE NAME) INSTRUMENT IS CALIBRATED INSTRUMENT IS CALIBRATED BEFORE ORGAN AFTER AFTER USE REPAIR (\(\) (\(\) (\(\) (\(\))	DATE OF LAST CALIBRATION YOUR ORGANIZATION (GIVE NAME) OTHER ORGANIZATION (GIVE NAME) INSTRUMENT IS CALIBRATED INSTRUMENT IS CALIBRATED ORGANIZATED BEFORE AND AFTER USE REPAIR NEW (\(\frac{1}{\frac{1}{2}}\) (\(\frac{1}{2}\) (\(\frac{1}{2



University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	1/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	I/5	
Latitude:		
Degrees	I/2	
Minutes	1/2	
Hundreths of	·	
Minutes	I/2	
Hemisphere	A/1	'N' or 'S'
Longitude:		
Degrees	I/3	
Minutes	1/2	
Hundreths of		
Minutes	I/2	
Hemisphere	A/1	'E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE/BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	I/5	Number of 'scans'of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	1/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	1/2	0-23 (GMT)
Minutes	1/2	0-59 (GMT)
Depth Interval Indicator	1/1	Always '1' for equally spaced depths
Depth interval	1/3	Depth interval to tenths (should always be 010)
Barometr1c Pressure	1/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	1/2	Tens of degrees (eg. 145°=15)
Wind speed	1/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	1/1	WMO Code 3700
Visibility Code	1/1	WMO Code 4300
Cloud Type Code	I/1	WMO Code 0500
Cloud Amount Code	I/1	WMO Code 2700
instrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	1/5	To whole meters
Maximum Depth of Cast	1/4	To whole meters
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)
Wave Height	1/3	To tenths

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	1/1	Always '3'	
Station Number	1/5		
Depth	I/5	To tenths (but not used)	(Scan Data)
Temperature	1/5	To thousandths	(Scan Data)
Salinity	I/5	To thousandths	(Scan Data)
Sigma-t	1/4	To hundredths	(Scan Data)
4th Channel	I/6	To thousandths	(Scan Data)
Scan Condition Code	1/1	Code describing how data (See attached)	arrived at. (Scan Data)
Scan Data	4*26	Repitition of above	
Sequence Number	I/5	Ascending numeric, 1st D 2nd Data Record = 2, etc	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

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Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

84NODC181

DATA DOCUMENTATION FORM

NUMBER

NOAA FORM 24-13 (4-72)

U.S. DEPARTMENT OF COMMERCE NAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEANOGRAPHIC DATA CENTER NATIONAL RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED Q.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMP	LETED BY DONOR	ORALL	TATA TRANSMIT	TALS		
1. NAME AND ADDRESS OF IN	· ·	ATORY, OF	R ACTIVITY WIT	H WHICH SUBM	ITTED DATA AF	RE ASSOCIATED
UNIVERSITY OF	ALASKA MARINE SCIENCE					
DATA MANAGEMEN						
O'NEAL BUILDIN	_					
FAIRBANKS, ALA	•					
····			T2 2222			
2. EXPEDITION, PROJECT, O DATA WERE COLLECTED	R PROGRAM DURING	WHICH		IBER(S) USED E IS SHIPMENT	Y ORIGINATOR	TO IDENTIFY
PROBES			7	T131 LE	G3	
4. PLATFORM NAME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO		6. PLATFORM A	ND OPERATOR	7. DA	TES
			PLATFORM	OPERATOR	FROM: MO,DAY,YR	TO: MO/DAY/YR
THOMPSON	SHIP		USA	USA	5/25/18	
8. ARE DATA PROPRIETARY X NO YES IF YES, WHEN CAN TH			L SE DARKEN ALI AINED IN YOUR		ERE COLLECTI	
FOR GENERAL USET						
PROGRAM (DNP)?	TORAL	100° 120° 1	48° 188° 188° 188° 148	- 130° 100° 00° 00°	40° 20° 0° 20°	
(I.E., SHOULD THEY BE IN DATA CENTERS HOLDINGS TIONAL EXCHANGE?)		278 22 242 206 170 44* 134	237 252 257 252 257 252 251 255 160 127 128 973 258	227 227 222 227 191 119 11M	grane or	212 207 213 207 214 207 215 207 216 207 207 207 207 207 207 207 207 207 207
10. PERSON TO WHOM INQUIRE	ES CONCERNING		057 052	047 049	037072	037
DATA SHOULD BE ADDRES PHONE NUMBER (AND ADD THAN IN ITEM-1)		20 30	320 315 1 356 3 351 1 327 1 327 1 327 1 327 1 327	346 341 382 377	330559 33457 (/ 372403	63 342 63 342 69 64
DATA MANAGER		464	944 8 60 500 ms	64 44	444679	511 906
(907) 474-7836 (90	07) 474-7092	311	536 531	526 521	514951	549 542 560 578
NOAA FORM 24-13		100 120	140 100 100 100 140	- Har 1997 667 187	- a F a F	MM-DC 44289-P72



NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
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·	SEE ATTACHMEN	rs		
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C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

	CONTAINED IN THE TRANSMITTA ENTIFYING EACH RECORD TYPE	e of four fice
See attad	ched "CTD Record format D	escription"
2. GIVE BRIEF DESCRIF	PTION OF FILE ORGANIZATION	
See attad	ched "CTD Record Format D	escription"
	PRESSED IN PL-1	ALGOL COBOL
	PHONE NUMBER Data Manage	r (907) 474-7836 (907) 474-7092 itute of Marine Science, Fairbanks, AK. 99701
	SECTION IF DATA ARE ON MAGNE	
5. RECORDING MODE	BCD BINARY X ASCII BECDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 10. END OF FILE MARK OCTAL 17
6. NUMBER OF TRACKS	5	∭ Octal 23
(CHANNELS)	X NINE	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES CTO/FLUOROMETER DATA
7. PARITY	X ODD EVEN	CRUISE: TT 131 LEG3 (PTL-9) 5/25/78-6/12/78 DR. IVERSON STATIONS: 3001-3018, 3020-3124
8. DENSITY	200 BPI 1600 BPI	NO. OF FILES = 1 828 RECORPS
,	X 800 BPI	5-150 bytes/block
		8 bits byte
NOAA FORM 24-13	 	USCOMM•DC 44289•P72

RECORD FORMAT DESCRIPTION

RECORD NAME_ 17. ATTRIBUTES | 18. USE AND MEANING 15. POSITION 16. LENGTH 14. FIELD NAME FROM - 1 MEASURED IN_ NUMBER UNITS (e.g., bite, bytee) See attached "CTD Record Format Description"

USCOMM-DC 44289-P72

NOAA FORM 24-18

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("\(\subseteq \cdot \)") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE DATE OF LAST (MFR., MODEL NO.) CALIBRATION	INSTRUMENT WAS	CALIBRATED BY		INSTRU- MENT IS				
	YOUR ORGANIZATION . (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (\(\(\(\) \))	ONLY AFTER REPAIR (√.)	ONLY WHEN NEW	NOT CALI- BRATED (√)
2/18		NRCC	l year	•		·		
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	CALIBRATION 2/18	DATE OF LAST CALIBRATION YOUR ORGANIZATION (V)	CALIBRATION ORGANIZATION (IV) OTHER ORGANIZATION (GIVE NAME) NRCC	DATE OF LAST CALIBRATION ORGANIZATION (V) POUR ORGANIZATION (GIVE NAME) OTHER ORGANIZATION (GIVE NAME) AT FIXED INTERVALS (V) NRCC 1 year	DATE OF LAST CALIBRATION YOUR ORGANIZATION (IV) NRCC INSTRUMENT BEFORE OR AFTER USE (IV) NRCC 1 year	DATE OF LAST CALIBRATION YOUR ORGANIZATION (V) NRCC DATE OF LAST OCHER ORGANIZATION (GIVE NAME) NRCC AT FIXED OR AFTER USE OR AND AFTER USE (V) (V) AT FIXED OR AND AFTER USE (V) (V) AT FIXED OR AND AFTER USE (V) (V) (V)	DATE OF LAST CALIBRATION TOUR ORGANIZATION (V) NRCC DATE OF LAST CALIBRATED OTHER ORGANIZATION (GIVE NAME) NRCC DATE OF LAST CALIBRATED BEFORE AND AFTER USE (V) (V) (V) (V) (V) (V) (V)	DATE OF LAST CALIBRATED TOTHER ORGANIZATION (GIVE NAME) OTHER ORGANIZATION (GIVE NAME) OTHE



University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	1/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	I/ 5	
Latitude:		
Degrees	1/2	
Minutes	I/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'N' or 'S'
Longitude:		
Degrees	I/3	·
Minutes	1/2	
Hundreths of		
Minutes	I/2	
Hemisphere	A/1	"E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE/BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	1/5	Number of 'scans'of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	1/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	1/2	0-23 (GMT)
Minutes	I/2	0-59 (GMT)
Depth Interval Indicator	1/1	Always '1' for equally spaced depths
Depth interval	1/3	Depth interval to tenths (should always be 010)
Barometr i c Pressure	1/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	1/2	Tens of degrees (eg. 145°=15)
Wind speed	1/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	1/1	WMO Code 3700
Visibility Code	I/1	WMO Code 4300
Cloud Type Code	I/1	WMO Code 0500
Cloud Amount Code	1/1	WMO Code 2700
nstrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	I/5	To whole meters
Maximum Depth of Cast	1/4	To whole meters
Wave Direction	I/2	Tens of degrees (eg. 355° 4' = 36)
Wave Height	1/3	To tenths

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA /NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		·
Record Type	1/1	Always '3'	
Station Number	1/5		
Depth	I/5	To tenths (but not used)	(Scan Data)
Temperature	1/5	To thousandths	(Scan Data)
Salinity	I/5	To thousandths	(Scan Data)
Sigma-t	1/4	To hundredths	(Scan Data)
4th Channel	I/6	To thousandths	(Scan Data)
Scan Condition Code	I /1	Code describing how data (See attached)	arrived at. (Scan Data)
Scan Data	4*26	Repitition of above	
Sequence Number	1/5	Ascending numeric, 1st Da 2nd Data Record = 2, etc.	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

84NODC 181

DATA DOCUMENTATION FORM

8400210 TT1910

NUMBER

NOAA FORM 24-13 (4-72) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEANOGRAPHIC DATA CENTER RECORDS SECTION ROCKVILLE, MARYLAND 20852 FORM APPROVED O.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF IN UNIVERSITY OF	•	ATORY, OF	R ACTIVITY WIT	H WHICH SUBMI	TTED DATA AF	RE ASSOCIATED
INSTITUTE OF MARINE SCIENCE						
DATA MANAGEMENT						
O'NEAL BUILDIN	-					
FAIRBANKS, ALA	-					
2. EXPEDITION, PROJECT, O		WHICH	3. CRUISE NUM	BER(S) USED E	Y ORIGINATOR	TO IDENTIFY
DATA WERE COLLECTED			DATA IN TH	IS SHIPMENT		
			T/	T131 LEG	4	
PROBES						ŀ
	V					
4. PLATFORM NAME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO		6. PLATFORM A		7. DA	TES
			PLATFORM	OPERATOR	FROM: MO,DAY,YR	TO: MO/DAY/YR
THOMPSON					,	,
,,,,,,,	SHIP		USA	USA	6/17/78	6/21/78
			,			' '
8. ARE DATA PROPRIETARY	7		E DARKEN ALI			
X NO YES		CONT	AINED IN YOUR	SUBMISSION WI	ERE COLLECT	ED.
IF YES, WHEN CAN TH FOR GENERAL USE?				GENERAL AR	EA	Ì
9. ARE DATA DECLARED NA						
PROGRAM (DNP)? (I.E., SHOULD THEY BE IN	CLUDED IN WORLD	774		Tobal Tobal	\$ 5×20	THE REPORT OF THE PARTY OF THE
DATA CENTERS HOLDINGS						THE PARTY
TIONAL EXCHANGE?)		2/2		277 273 27	Consol	7 20
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B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
	SEE ATTACHMENT	TS .		
			!	
			!	
				-
				USCOMM-DC 4428

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE GIVE METHOD OF IDENTIFYING EACH REC	TRANSMITTAL OF YOUR FILE CORD TYPE
See attached "CTD Record	format Description"
2. GIVE BRIEF DESCRIPTION OF FILE ORGAN	NIZATION
See attached "CTD Record	Format Description"
3. ATTRIBUTES AS EXPRESSED IN PL-	1 ALGOL COBOL
4. RESPONSIBLE COMPUTER SPECIALIST: NAME AND PHONE NUMBER Da	ta Manager (907) 474-7836 (907) 474-7092 aska, Institute of Marine Science, Fairbanks, AK. 99701
5. RECORDING MODE BCD BIN	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 10. END OF FILE MARK OCTAL 17
6. NUMBER OF TRACKS SEVEN (CHANNELS) X NINE	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES CTO/FLUOROMETER DATA
7. PARITY	CRUISE: TT131 LEG 4 (PTL-10) 6/17/78 - 6/21/78 DR. McROY 57ATIONS: 4001,4003-4008,4010-4013, 4015-4018,4020-4058. NO. OF FILES=1 343 RECORDS.
X 800 BPI	12. PHYSICAL BLOCK LENGTH IN BYTES 5-150 bytes/block 13. LENGTH OF BYTES IN BITS 8 bits byte

RECORD FORMAT DESCRIPTION

14. FIELD NAME	15. POSITION FROM - 1	16. LEN	GTH	17. ATTRIBUTES	18. USE AND MEANING
	MEASURED				
	(o.g., bits, bytee)	NUMBER	UNITS		
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See attac	hed "CTD	Record	Forma	Description"	
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USCOMM-DC 44289-P72

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking (" /") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE DATE OF LAST (MFR., MODEL NO.) CALIBRATION	INSTRUMENT WAS	CALIBRATED BY	CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS	
	YOUR ORGANIZATION . (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (\forall)	ONLY AFTER REPAIR (√)	ONLY WHEN HEW	NOT CALI- BRATED	
PLESSEY STD MODEL 9040	2/18		NRCC	l year					
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	<u> </u>	<u> L</u> _	<u> </u>	<u> </u>	<u></u>	L	<u> </u>	119604	4-DC 44289-P7



University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	1/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always 12'
Station Number	I/5	
Latitude:		
Degrees	1/2	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'N' or 'S'
Longitude:		
Degrees	1/3	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE/BYTES	USE AND MEANING	
Cruise identification	A/10		
Number of Scans	1/5	Number of 'scans' of station data. (Five scans per Data Record - same as number of depths.)	
Year	1/2	Last two digits of year (GMT)	
Month	I/2	1-12 (GMT)	
DAY	1/2	1-31 (GMT)	
Hour	1/2	0-23 (GMT)	
Minutes	I/2	0-59 (GMT)	
Depth Interval Indicator	I/l	Always 'l' for equally spaced depths	
Depth interval	1/3	Depth interval to tenths (should always be 010)	
Barometric Pressure	I/5	To tenths	
Wet bulb temperature	1/4	To tenths	
Dry bulb temperature	1/4	To tenths	
Wind Direction	1/2	Tens of degrees (eg. 145°=15)	
Wind speed	I/2	Whole knots	
Weather Code	1/1	WMO Code 4501	
Sea State Code	I/l	WMO Code 3700	
Visibility Code	1/1	WMO Code 4300	
Cloud Type Code	1/1	WMO Code 0500	
Cloud Amount Code	1/1	WMO Code 2700	
Instrument Information	A/20	Type and Serial Number	
Station Name	A/6		
Depth to Bottom	I/5	To whole meters	
Maximum Depth of Cast	1/4	To whole meters	
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)	
Wave Height	I/3 ·	To tenths	

PROBES

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	I/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	1/1	Always '3'	
Station Number	I/5		
Depth	I/5	To tenths (but not used)	(Scan Data)
Temperature	1/5	To thousandths	(Scan Data)
Salinity	1/5	To thousandths	(Scan Data)
Sigma-t	1/4	To hundredths	(Scan Data)
4th Channel	I/6	To thousandths	(Scan Data)
Scan Condition Code	1/1	Code describing how data arrived at. (Scan Data) (See attached)	
Scan Data	4*26	Repitition of above	
Sequence Number	I/5	Ascending numeric, 1st Data Record =1, 2nd Data Record = 2, etc.	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

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Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge $et\ al.$ (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

NUMBER

191

DATA DOCUMENTATION FORM

8400210

NOAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED Q.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

THIS SECTION MOST BE COMP	CETED BY DONOR	01. ALL 0		1763		
1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED						
UNIVERSITY OF ALASKA INSTITUTE OF MARINE SCIENCE						
=						
DATA MANAGEMEN	_					
O'NEAL BUILDIN						
FAIRBANKS, ALA	ASKA 99701					
2. EXPEDITION, PROJECT, O DATA WERE COLLECTED	R PROGRAM DURING	WHICH		BER(S) USED E	Y ORIGINATOR	TO IDENTIFY
				121 150	_	
PROBES			///	131 LEGS	•	
PROBES						
4. PLATFORM NAME(S)	5. PLATFORM TYPE		6. PLATFORM A		7. DA	TES
	(E.G., SHIP, BUO	r, <i>E (</i> C.)	PLATFORM		FROM: MO,DAY,YR	TO: MO/DAY/YR
			PLATFORM	OPERATOR	FROM: / /	TO: / /
THOMPSON	SHIP		USA	USA	7/3/78	7/6/78
8. ARE DATA PROPRIETARY	<u> </u>	11. PLFAS	E DARKEN ALI	MARSDEN SOL	LAPES IN WHIC	H ANY DATA
X NO YES	•		AINED IN YOUR			
<u> </u>						
FOR GENERAL USE?				GENERAL AR	EA	
9. ARE DATA DECLARED NA					1	
PROGRAM (DNP)?		1997 1287 1 [TGL]	48° 198° 188° 188° 148	135' 155' 65' 65'	46° 28° 8° 28°	4r 6r 67 167
(I.E., SHOULD THEY BE IN DATA CENTERS HOLDINGS		278	742	2015	3 2320	284 (1) 279
TIONAL EXCHANGE?)		242	237 232	27 20 22	C Const	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
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	(SPECIFI BELOW)	170	165 160	155 550	I I I I I I I I I I I I I I I I I I I	3762
		4. PH 4.2	129 124	119 114		7 140 135
•		20.	093 088 057 052	007		700 200 200
10. PERSON TO WHOM INQUIRE	ES CONCERNING		021 DIA	011	10) 34	0327
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THAN IN ITEM-1)	KESS II OTHER	39.	362 367	342 371	372 407	20"
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DATA FIMINGER					} 	
(907) 474-7836 (9	07) 474-7002	ser 505	 	970	400519	511 506
(301) 414-1030 (3	01) 414-1034	M	534 531	224	514551	
		188° 128°			49° 29° 9° 29°	60° 60° 100°
NOAA FORM 24-13				··	11500	DMM-DC 44289-P72



AME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
	SEE ATTACHMEN	rs		
				-
			į	

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

	LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE GIVE METHOD OF IDENTIFYING EACH RECORD TYPE						
See attac	See attached "CTD Record format Description"						
2. GIVE BRIEF DESCRIF	PTION OF FILE ORGANIZATION						
See attad	ched "CTD Record Format I	Description"					
3. ATTRIBUTES AS EXP	PRESSED IN PL-1	ALGOL GOBOL LANGUAGE					
ADDRESS <u>I</u>	PHONE NUMBER Data Manage	er (907) 474-7836 (907) 474-7092 Eitute of Marine Science, Fairbanks, AK. 99701					
5. RECORDING MODE	BCD BINARY X ASCII BECDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 10. END OF FILE MARK OCTAL 17					
6. NUMBER OF TRACKS (CHANNELS)	S SEVEN NINE	IX Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES CTD/FLUOROMETER DATA					
7. PARITY 8. DENSITY	X ODD EVEN	CRUISE: TT131 LEG 5 PI = ENGLISH 7/3/78 - 7/6/78 STATIONS: 5001, 4052, 5003, 5004, 5006, 5008, 5011, 5012. 1 FILE 49 BLOCKS NO ERROR					
	556 BPI	12. PHYSICAL BLOCK LENGTH IN BYTES 5-150 bytes/block 13. LENGTH OF BYTES IN BITS 8 bits byte					
NOAA FORM 24-13		USCOMMOC 44320-033					

RECORD FORMAT DESCRIPTION

14. FIELD NAME	15. POSITION FROM - 1 MEASURED	}	GTH	17. ATTRIBUTES	18. USE AND MEANING
	IN	NUMBER	UNITS		
·					
See attad	hed "CTD	Record	Forma	Description"	
			'		
,					
		i			
	:				
					I
			ĺ		

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking (" ") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE DATE OF LAST		INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED				INSTRU- MENT IS	
(MFR., MODEL NO.)	CALIBRATION	YOUR ORGANIZATION	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS	BEFORE OR AFTER USE (√)	BEFORE AND After Use (\(\(\(\) \))	ONLY AFTER REPAIR (√)	(√) MHEN ONLY	NOT CALI- BRATED
PLESSEY STD MODEL 9040	2/18		NRCC	l year			,		
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1									
	1								
	 								
						·····			
							,		4-DC 44269-P

University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always 'l'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	I/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	I/5	
Latitude:		
Degrees	1/2	
Minutes	I/2	
Hundreths of		
Minutes	I/2	
Hemisphere	A/1	'N' or 'S'
Longitude:	·	
Degrees	1/3	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	1/5	Number of 'scans' of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	1/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	I/2	0-23 (GMT)
Minutes	I/2	0-59 (GMT)
Depth Interval Indicator	I/1	Always '1' for equally spaced depths
Depth interval	1/3	Depth interval to tenths (should always be 010)
Barometr1c Pressure	1/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	1/2	Tens of degrees (eg. 145°=15)
Wind speed	1/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	1/1	WMO Code 3700
Visibility Code	I/1	WMO Code 4300
Cloud Type Code	1/1	WMO Code 0500
Cloud Amount Code	1/1	WMO Code 2700
Instrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	1/5	To whole meters
Maximum Depth of Cast	1/4	To whole meters
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)
Wave Height	1/3	To tenths

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	I/1	Always '3'	
Station Number	1/5		
Depth	I/5	To tenths (but not used)	(Scan Data)
Temperature	I/5	To thousandths	(Scan Data)
Salinity	I/5	To thousandths	(Scan Data)
Sigma-t	1/4	To hundredths	(Scan Data)
4th Channel	I/6	To thousandths	(Scan Data)
Scan Condition Code	1/1	Code describing how data (See attached)	arrived at. (Scan Data)
Scan Data	4*26	Repitition of above	
Sequence Number	1/5	Ascending numeric, 1st Da 2nd Data Record = 2, etc.	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

84 NODCI81

DATA DOCUMENTATION FORM

8400219

HUMBER

T1917_

NOAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED Q.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED						
UNIVERSITY OF ALASKA						
INSTITUTE OF 1						
DATA MANAGEMEI	NT					
O'NEAL BUILDI						
FAIRBANKS, AL						
			Ta			
2. EXPEDITION, PROJECT, O	R PROGRAM DURING	WHICH		IBER(S) USED I IS SHIPMENT	SY ORIGINATOR	TO IDENTIFY
			! ,		•	
			///	38 LEG 1		
PROBES						
4. PLATFORM NAME(S)	5. PLATFORM TYPE		6. PLATFORM		7. DA	TES
	(E.G., SHIP, BUO	Y, ETC.)	NATIONALIT		<u> </u>	l va sa de
			PLATFORM	OPERATOR	FROM: MO,DAY,YR	TO: MO,DAY,YR
THOMPSON	1					
•	SHIP		USA	USA	4/14/19	4/26/79
			•		' ' ' '	
8. ARE DATA PROPRIETARY	7	11. PLEAS	SE DARKEN ALI	MARSDEN SO	UARES IN WHIC	H ANY DATA
					ERE COLLECT	
X NO YES						
IE VEE WUEN CAN TU				CENEDAL AS		:
FOR GENERAL USE?		ĺ		GENERAL AF	CEA	
9. ARE DATA DECLARED NA						
PROGRAM (DNP)?		189" 129"	148° 188° 188° 186° 146	r 129* 100* 00* 00*	40° 20° 0° 20°	46° 90° 90° 190°
(I.E., SHOULD THEY BE IN DATA CENTERS HOLDING:		278	7400	Charles 1	\$ 57200	294 () 279
TIONAL EXCHANGE?)	S F OK THE ERINA-	242	27 202	27 20 72	21723	7440 SV 1540
		206	1 30			212 207
NO X YES PAR	T (SPECIFY BELOW)	170	12 160	7 159 250		
		40.	129 124	119		171 1351
		m A	073 088	93 5 67		1
		* al	057 052	047		100
10. PERSON TO WHOM INQUIRED DATA SHOULD BE ADDRES			021 016	011 7 Da	901036	0327 027 631 326
PHONE NUMBER (AND ADE		20. 361	V\356	346 1	336371/	3671 362
THAN IN ITEM-1)	•	397	1962 1 1967 1 19	382 37 418 . gr		1403 398 439 634
DATA MANAGER		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	64 154	 	439 454 457: 470	
IEMMOLK				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1-1-1-1-1-1-1	
(907) 474-7836 (9	07) /7/-7002	es 505	300 475	1 10 70 10	9	5111 506
(907) 474-7836 (9	0/) 4/4-/092	<mark>│ </mark> ┡╬╌┾┿	534 534	326	1 5166551	99 - P
		577	572 500	J942 55	552 567	583 578
		186" 126"	140" 180" 180" 160" 140	r 120° 100° 84° 60°	40. 50. 0. 50.	49. 69. 69. 198.
NOAA FORM 24-12		L				



NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING • AND AVERAGING
	SEE ATTACHMENT	rs		
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1			1	
1			!	
1				
1				
OAA FORM 24-13 (9-72)				USCOMM-DC 4428

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR SISC SUBMISSIONS.

LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE GIVE METHOD OF IDENTIFYING EACH RECORD TYPE							
See attad	ched "CTD Record format I	Description"					
2. GIVE BRIEF DESCRIF	. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION						
See attad	ched "CTD Record Format I	Description"					
	X FORTRAN LUTER SPECIALIST:	LANGUAGE LANGUAGE er (907) 474-7836 (907) 474-7092 citute of Marine Science, Fairbanks, AK. 99701					
COMBLETE THIS	CECTION IS DATA ARE ON MACHE	TIC TARE					
5. RECORDING MODE	BCD BINARY X ASCII BEBCDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 10. END OF FILE MARK OCTAL 17					
6. NUMBER OF TRACKS (CHANNELS)	SEVEN X NINE	IX Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES CTD/FLUOROMETER DATA CRUISE: TT138 LEG! PI = COONEY					
7. PARITY 8. DENSITY	X ODD EVEN	1/14-4/26/79 STATIONS: 1001-1115 I FILE 1066 BLOCKS NO ERROR					
	200 BPI 1600 BPI 12. PHYSICAL BLOCK LENGTH IN BYTES 5-150 bytes/block 13. LENGTH OF BYTES IN BITS 8 bits byte						
NOAA FORM 24-13		USCOMM-DC 44289-P72					

RECORD FORMAT DESCRIPTION

RECORD NAME					
14. FIELD NAME	FROM - 1	1	GTH	17. ATTRIBUTES	18. USE AND MEANING
	l IN	NUMBER	UNITS		
See atta	thed "CTD	Record	Forma	Description"	
			•		
•					
		-			
	·	:			
NOAA FORM 24-18		_			USCOMM-DC 44289-P72

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("\(\sigma\)") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

		INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS
INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	YOUR ORGANIZATION . (√.)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (\(\(\(\) \))	ONLY AFTER REPAIR (√)	ONLY WHEN NEW	NOT CALI- BRATED
PLESSEY STD MODEL 9040	2/18	· · · · · · · · · · · · · · · · · · ·	NRCC	1 year	V	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			.,,
	·								
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University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	1/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	I/1	Always '2'
Station Number	1/5	
Latitude:		
Degrees	I/2	
Minutes	1/2	
Hundreths of		
Minutes	I/2	
Hemisphere	A/1	'N' or 'S'
Longitude:	,	·
Degrees	I/3	
Minutes	1/2	
Hundreths of		
Minutes	I/2	
Hemisphere	A/1	'E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	1/5	Number of 'scans' of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	1/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	1/2	0-23 (GMT)
Minutes	1/2	0-59 (GMT)
Depth Interval Indicator	1/1	Always '1' for equally spaced depths
Depth interval	1/3	Depth interval to tenths (should always be 010)
Barometric Pressure	I/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	1/2	Tens of degrees (eg. 145°=15)
Wind speed	1/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	I/l	WMO Code 3700
Visibility Code	1/1	WMO Code 4300
Cloud Type Code	1/1	WMO Code 0500
Cloud Amount Code	1/1	WMO Code 2700
nstrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	1/5	To whole meters
Maximum Depth of Cast	1/4	To whole meters
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)
Wave Height	1/3	To tenths

PROBES

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	I/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	I/1	Always '3'	
Station Number	1/5		
Depth	1/5	To tenths (but not used)	(Scan Data)
Temperature	1/5	To thousandths	(Scan Data)
Saliníty	I/5	To thousandths	(Scan Data)
Sigma-t	1/4	To hundredths	(Scan Data)
4th Channel	1/6	To thousandths	(Scan Data)
Scan Condition Code	1/1	Code describing how data (See attached)	arrived at. (Scan Data)
Scan Data	4*26	Repitition of above	
Sequence Number	1/5	Ascending numeric, 1st Da 2nd Data Record = 2, etc	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

<u>Note</u>

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

MMAER

8400210

DATA DOCUMENTATION FORM

TI1913

NOAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCK VILLE, MARY LAND 20852

FORM APPROVED Q.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

UNIVERSITY OF ALASKA

INSTITUTE OF	MARINE SCIENCE					į
DATA MANAGEME						
O'NEAL BUILDI						
FAIRBANKS, AL	ASKA 99701					
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED			BER(S) USED E IS SHIPMENT	Y ORIGINATOR	TO IDENTIFY	
PROBES			アアハ	38 LEG 2	2	
4. PLATFORM NAME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO		6. PLATFORM A NATIONALIT			TES
			PLATFORM	OPERATOR	FROM: MODAY,YR	TO: MO/DAY/YR
THOMPSON	SHIP		USA	USA	5/3/79 5/3/8	5/17/79
8. ARE DATA PROPRIETARY	77				UARES IN WHIC	
X NO YES		CONT	AINED IN YOUR	SUBMISSION W	ERE COLLECT	ED.
IF YES, WHEN CAN TH	EY BE RELEASED			GENERAL AR	REA	
FOR GENERAL USE!	YEARMONTH				_	
9. ARE DATA DECLARED NA		1000 1700	140* 160* 160* 166* 146	* 150° 160° 60° 60°	AP 30 8 70	
9. ARE DATA DECLARED NA PROGRAM (DNP)? (I.E., SHOULD THEY BE IN DATA CENTERS HOLDING TIONAL EXCHANGE?)	TIONAL	242 206 170	201 202 166 166 166 166 166 166 166 166 166 16	227		254 (1 725) 279 245 (207) 265 212 (207)
9. ARE DATA DECLARED NA PROGRAM (DNP)? (I.E., SHOULD THEY BE IN DATA CENTERS HOLDING TIONAL EXCHANGE?) NO XYES PAR	TIONAL ICLUDED IN WORLD S FOR INTERNA- T (SPECIFY BELOW)	242	237 232 201 201 200 166 160 129 124 1093 1088 1097 1088	119 114 123 0m	18 100 10 10 10 10 10 10 10 10 10 10 10 10	243 243 243 243 243 243 243 243 243 243
9. ARE DATA DECLARED NA PROGRAM (DNP)? (I.E., SHOULD THEY BE IN DATA CENTERS HOLDING TIONAL EXCHANGE?) NO XYES PAR	TIONAL ICLUDED IN WORLD S FOR INTERNA- T (SPECIFY BELOW) IES CONCERNING SSED WITH TELE-	262 206 170 44* 134 170 134 170 190 190 190 190 190 190 190 19	237 232 201 - 166 1165 1160 124 1093 1068	119 110	217 553 (p) 187 214 (p) 175 (p	243 243 243 243 243 243 243 243 243 243
9. ARE DATA DECLARED NA PROGRAM (DNP)? (I.E., SHOULD THEY BE IN DATA CENTERS HOLDING TIONAL EXCHANGE?) NO X YES PAR 10. PERSON TO WHOM INQUIR DATA SHOULD BE ADDRE PHONE NUMBER (AND AD)	TIONAL ICLUDED IN WORLD S FOR INTERNA- T (SPECIFY BELOW) IES CONCERNING SSED WITH TELE-	262 206 170 134 28° 002 28° 100 100 100 100 100 100 100 10	237 232 201 166 160 129 124 1093 1088 1057 1052 1021 115 105 105 105	119 110 110 110 110 110 110 110 110 110	217 253 18 218 10 10 10 10 10 10 10 10 10 10 10 10 10 1	243 245 247 277 277 277 277 277 277 277 277 277
9. ARE DATA DECLARED NA PROGRAM (DNP)? (I.E., SHOULD THEY BE IN DATA CENTERS HOLDING TIONAL EXCHANGE?) NO XYES PAR 10. PERSON TO WHOM INQUIR DATA SHOULD BE ADDRE PHONE NUMBER (AND ADITHAN IN ITEM-1)	TIONAL ICLUDED IN WORLD S FOR INTERNA- T (SPECIFY BELOW) IES CONCERNING SSED WITH TELE- DRESS IF OTHER	265 206 170 134 134 134 28* 008 28* 008 28* 180 180 180 180 180 180 180 180 180 180	237 232 232 232 232 232 232 232 232 232	119 110 110 110 110 110 110 110 110 110	217 253 187 214 188 100 197 102 197 102 197 102 197 102 197 102 197 102 197 102 197 102 197 102 198 103 198	243 243 243 243 243 243 243 243 243 243



NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
	SEE ATTACHMEN	cs I		
	1			
	1			
	1			
	1			
	1.			
AA FORM 24-13 (9-72)		<u></u>		USCOMM-DC 442

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

	S CONTAINED IN THE TRANSMITT ENTIFYING EACH RECORD TYPE	THE OF TOOK FILE				
See atta	ched "CTD Record format	Description"				
2. GIVE BRIEF DESCRI	PTION OF FILE ORGANIZATION	· · · · · · · · · · · · · · · · · · ·				
	<u>. </u>					
See atta	ched "CTD Record Format	Description"				
3. ATTRIBUTES AS EXI	PRESSED IN PL-1	ALGOL COBOL LANGUAGE				
	PHONE NUMBER Data Manag	er (907) 474-7836 (907) 474-7092 titute of Marine Science,Fairbanks,AK.99701				
COMPLETE THIS	SECTION IF DATA ARE ON MAGNE	ETIC TAPE				
5. RECORDING MODE	BCD BINARY X ASCII EBCDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56				
		OCTAL 17				
6. NUMBER OF TRACK (CHANNELS)	S SEVEN	X Octal 23				
	XININE	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)				
	<u> </u>	PROBES CTD/FLUOROMETER DATA				
7. PARITY	XODD	CRUISE: TT138 LEG 2 (PTL-19)				
	EVEN	5/03/79 - 5/17/79 DR. GOERING STATIONS: 2001-2043, 2044-2090.				
8. DENSITY	200 BPI1600 BPI	NO. OF FILES = 1				
	556 BPI	12. PHYSICAL BLOCK LENGTH IN BYTES				
	_X 800 BPI	5-150 bytes/block 13. LENGTH OF BYTES IN BITS				
	<u> </u>	8 bits byte				
NOAA FORM 24-13		USCOMM-0C 44289-P7				

RECORD FORMAT DESCRIPTION

14. FIELD NAME	15. POSITION FROM - 1 MEASURED		GTH	17. ATTRIBUTES	18. USE AND MEANING
	IN	NUMBER	UNITS		,
See attac	thed "CTD	Record	Forma	: Description"	
	i				
					•

NOAA FORM 24-13

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("\sum'") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE DATE OF LAST		INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS
(MFR., MODEL NO.) CALIBRATION	YOUR ORGANIZATION . (√.)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE ()	ONLY AFTER REPAIR (√)	(\rangle) MHEN ONLY	NOT CALI- BRATED (√1	
PLESSEY STD MODEL 9040	2/18		NRCC	l year					
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				·					
			 						
	<u> </u>	1	L	l	l	L	L	USCOM	4-DC 44289-P7

University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	I/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	1/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	I/5	
Latitude:		
Degrees	I/2	
Minutes	I/2	
Hundreths of	-•	
Minutes	I/2	
Hemisphere	A/1	'N' or 'S'
Longitude:	•	•
Degrees	1/3	
Minutes	1/2	
Hundreths of	•	
Minutes	I/2	
Hemisphere	A/1	'E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	1/5	Number of 'scans' of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	1/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	1/2	0-23 (GMT)
Minutes	1/2	0-59 (GMT)
Depth Interval Indicator	I/1	Always '1' for equally spaced depths
Depth interval	I/3	Depth interval to tenths (should always be 010)
Barometr i c Pressure	1/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	1/2	Tens of degrees (eg. 145°=15)
Wind speed	1/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	1/1	WMO Code 3700
Visibility Code	I/1	WMO Code 4300
Cloud Type Code	I/1 .	WMO Code 0500
Cloud Amount Code	1/1	WMO Code 2700
nstrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	I/5	To whole meters
Maximum Depth of Cast	1/4	To whole meters
Wave Direction	1/2	Tens of degrees (eg. 355° 4° = 36)
Wave Height	I/3	To tenths

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	1/1	Always '3'	
Station Number	I/5		
Depth	I/5	To tenths (but not used)	(Scan Data)
Temperature	1/5	To thousandths	(Scan Data)
Salinity	I/5	To thousandths	(Scan Data)
Sigma-t	1/4	To hundredths	(Scan Data)
4th Channel	1/6	To thousandths	(Scan Data)
Scan Condition Code	1/1	Code describing how data (See attached)	arrived at. (Scan Data)
Scan Data	4*26	Repitition of above	
Sequence Number	1/5	Ascending numeric, 1st D 2nd Data Record = 2, etc	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

NUMBER

DATA DOCUMENTATION FORM

8400210 TT1914

NOAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED Q.M.B. No. 41-R265

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF IN UNIVERSITY OF	•	ATORY, OF	R ACTIVITY WIT	H WHICH SUBM	ITTED DATA AF	RE ASSOCIATED
INSTITUTE OF N						1
DATA MANAGEMEN						Į.
O'NEAL BUILDIN	•					İ
FAIRBANKS, ALA						
2. EXPEDITION, PROJECT, O DATA WERE COLLECTED	R PROGRAM DURING	WHICH		BER(S) USED E	Y ORIGINATOR	TO IDENTIFY
			TT13	8 LEG 3		ļ
PROBES						1
4. PLATFORM NAME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO		6. PLATFORM A NATIONALIT			TES
_		Ì	PLATFORM	OPERATOR	FROM: MODAY,YIR	TO: MO/DAY/YR
THOMPSON						
	SHIP		USA	USA	5/25/79	6/15/79
					'	'
8. ARE DATA PROPRIETARY	?	11. PLEAS	E DARKEN ALI	MARSDEN SQL	UARES IN WHICH	H ANY DATA
		CONT	AINED IN YOUR	SUBMISSION W	ERE COLLECT	ED.
X NO YES						1
IF YES, WHEN CAN TH				GENERAL AR	EA	ł
FOR GENERAL USET						
9. ARE DATA DECLARED NA PROGRAM (DNP)?	TIONAL	100° 120° 1	40° 100° 100° 100° 140	120° 100° 00° 00°	40" 20" 0" 20"	er er er 100°
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NO X YES PART	(SPECIFY BELOW)	206	4 201	101	11/12/1432	212 207
		45.	165 160	y 155 2900		1762
		134 145	27 129 124 073 088	119 114		Ahou Caroni
		70' 04'	057 052	DE SE	037 072	700
10. PERSON TO WHOM INQUIRED DATA SHOULD BE ADDRES			021 016 320 315		300)334	631 027 631 326
PHONE NUMBER (AND ADD	20. 20.	V\ 556	346 341		367 362	
THAN IN ITEM-I)) 197 197	342 777	3772407	439 434
DATA MANAGER		469	944 8 69	Ga 8 5 44	 	657 670
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(907) 474-7836 (9	07) 474-7092	•••		1		••
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		188" 128"	144° 188° 188° 188° 144	. 158. 188. 88. 88.	46. 38. 8. 58.	49" 50" 50" 100"
NOAA FORM 24-13				···		



NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING . AND AVERAGING
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AA FORM 24-13 (3-72)	<u> </u>	<u> </u>		USCOMM-DC 4428

C. DATA FURMA

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES GIVE METHOD OF IDE	CONTAINED IN THE TRANSMITT ENTIFYING EACH RECORD TYPE	AL OF YOUR FILE			
See attac	ched "CTD Record format	Description"			
2. GIVE BRIEF DESCRIF	PTION OF FILE ORGANIZATION				
See attached "CTD Record Format Description"					
ATTRIBUTES AS EXPRESSED IN PL-1 ALGOL COBOL X FORTRAN LANGUAGE 1. RESPONSIBLE COMPUTER SPECIALIST: NAME AND PHONE NUMBER Data Manager (907) 474-7836 (907) 474-7092					
_	SECTION IF DATA ARE ON MAGNI	titute of Marine Science, Fairbanks, AK. 99701			
5. RECORDING MODE	BCD BINARY X ASCII BECDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 10. END OF FILE MARK OCTAL 17			
6. NUMBER OF TRACKS (CHANNELS) 7. PARITY	SEVEN MINE	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES CTO/FLUOROMETER DATA CRUISE: TT/38 LEG 3 (PTL-20) 5/25/37 (1/5/2007)			
8. DENSITY	Z ODD EVEN 200 BPI 1600 BPI	5/25/79 -6/15/79 DR. COACHMAN STATIONS: 3001-3177, 1155 RECORDS NO. OF FILES = 1.			
	556 BPI 800 BPI	12. PHYSICAL BLOCK LENGTH IN BYTES 5-150 bytes/block 13. LENGTH OF BYTES IN BITS 8 bits byte			
NOAA FORM 24-13		U\$COMM-DC 44289-P72			

RECORD FORMAT DESCRIPTION

14. FIELD NAME	15. POSITION FROM - 1 MEASURED	i	GTH	17. ATTRIBUTES	18. USE AND MEANING
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	(6.8. 516. 57166)				
See attac	hed "CTD I	Record	Forma	Description"	
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IOAA FORM 24-13					USCOMM-0C 44289-P7

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("\sum'") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INCORPORATION TARREST		INSTRUMENT WAS	CALIBRATED BY	CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS
INSTRUMENT TYPE DATE OF LAST CALIBRATION	YOUR ORGANIZATION . (V.)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE	ONLY AFTER REPAIR (√)	ONLY WHEN NEW	NOT CALI- BRATED	
PLESSEY STD MODEL 9040	2/18		NRCC	l year					
1									
									
									M-DC 44289



University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	I/5 ·	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	I/5	
Latitude:		
Degrees	I/2	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'N' or 'S'
Longitude:	•	
Degrees	I/3	
Minutes	I/2	
Hundreths of		
Minutes	I/2	
Hemisphere	A/1	'E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE/BYTES	USE AND MEANING	
Cruise identification	A/10		
Number of Scans	1/5	Number of 'scans'of station data. (Five scans per Data Record - same as number of depths.)	
Year	1/2	Last two digits of year (GMT)	
Month	I/2	1-12 (GMT)	
DAY	1/2	1-31 (GMT)	
Hour	1/2	0-23 (GMT)	
Minutes	I/2	0-59 (GMT)	
Depth Interval Indicator	I/l	Always '1' for equally spaced depths	
Depth interval	1/3	Depth interval to tenths (should always be 010)	
Barometr i c Pressure	1/5	To tenths	
Wet bulb temperature	1/4	To tenths	
Dry bulb temperature	1/4	To tenths	
Wind Direction	1/2	Tens of degrees (eg. 145°=15)	
Wind speed	1/2	Whole knots	
Weather Code	1/1	WMO Code 4501	
Sea State Code	1/1	WMO Code 3700	
Visibility Code	1/1	WMO Code 4300	
Cloud Type Code	I/1 .	WMO Code 0500	
Cloud Amount Code	1/1	WMO Code 2700	
nstrument Information	A/20	Type and Serial Number	
Station Name	A/6		
Depth to Bottom	I/5	To whole meters	
Maximum Depth of Cast	1/4	To whole meters	
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)	
Wave Height	I/3	To tenths	

PROBES

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	I/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	1/1	Always '3'	
Station Number	I/5		
Depth	I/5	To tenths (but not used)	(Scan Data)
Temperature	I/5	To thousandths	(Scan Data)
Salinity	1/5	To thousandths	(Scan Data)
Sigma-t	I/4	To hundredths	(Scan Data)
4th Channel	I/6	To thousandths	(Scan Data)
Scan Condition Code	1/1	Code describing how data (See attached)	arrived at. (Scan Data)
Scan Data	4*26	Repitition of above	
Sequence Number	I/5	Ascending numeric, 1st Da 2nd Data Record = 2, etc.	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

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Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

WHITER

DATA DOCUMENTATION FORM

8400210

FORM APPROVE

F. LE # 9

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

THIS SECTION WOST BE COMP	LEIED BY DONOR	OR ALL L	AIA IKANSHII	1463			
. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED							
UNIVERSITY OF							
INSTITUTE OF 1	MARINE SCIENCE						
DATA MANAGEMEI	Tr						
O'NEAL BUILDI	NG, ROOM 111						
FAIRBANKS, ALA						j	
2. EXPEDITION, PROJECT, O		WHICH	3 CRITISE NUM	BERKS HEED B	Y ORIGINATOR	TO IDENTIFY	
DATA WERE COLLECTED	K PROGRAM DORING	WHICH	_	IS SHIPMENT	TO ORIGINATION	. TO IDENTIFY	
			_				
PROPEC			TT	149 LEG	\mathcal{I}	Į.	
PROBES							
							
4. PLATFORM NAME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO		6. PLATFORM A NATIONALIT		7. DA	TES	
	(2.0., 3, 500	.,	PLATFORM	OPERATOR	FROM: MODAY, YR	TO: MO/DAY/YR	
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THOMPSON	SHIP		TTC A	TIC A	1.6	1-10-	
	SHIP		USA	USA	3/24/80	4/3/80	
	•				'		
8. ARE DATA PROPRIETARY	?		E DARKEN ALI				
X NO YES		CONT	AINED IN YOUR	SUBMISSION WI	ERE COLLECT	ED.	
IF YES, WHEN CAN TH				GENERAL AR	EA		
FOR GENERAL USE? 9. ARE DATA DECLARED NA					· · · · · · · · · · · · · · · · · · ·		
PROGRAM (DNP)?	HONAL	188° 128° 1	40" 100" 100" 100" 140	- 128° 198° 88° 88°	49" 20" 0" 20"	40° 80° 100°	
(I.E., SHOULD THEY BE IN		278	208	100 Jes	\$ 279288	284 () 12 270	
DATA CENTERS HOLDINGS TIONAL EXCHANGE?)	FOR INTERNA-					No WY	
HONAL EXCHANGE!		242	272	227 27 222		20	
NO X YES PAR	T (SPECIFY BELOW)	206	4, 201	191	in Signal	212 207	
		40- 170	165 160) US S D		2762	
		- <u>- 1</u>	2 129 124 124 1063	119 114		7 140 135	
		70. 063	093 068 052	007-5		1000 200	
10. PERSON TO WHOM INQUIR	ES CONCERNING	. 24	021 016	310		03,7 027	
DATA SHOULD BE ADDRES PHONE NUMBER (AND ADD	SED WITH TELE-	361	320 315 V 356 4 351	310 36		631 120 867 362	
THAN IN ITEM-1)		20. 20. 20. 20. 20. 20. 20. 20. 20. 20.	307 387	382 377		403 398	
DATA MANAGER		40 63	454 5 650	419 75	 	430 634	
DAIM FIMINAGER		409	 		 	657 670	
(007) 474 7026 (0	07\ /7/ 7000	w· 505	500 495	90 9 42	480519	511 506	
(907) 474–7836 (9	0/) 4/4-/092	│ <mark>┡</mark> ╍╁╌┼╌┼╸	534 534	326	516551	149 July 1	
		577	572 567	557	. 552,540	580 578	
		160" 120"	140° 199° 199° 190° 140	r 129° 199° 68° 69°	40. 20. 6. 20.	49" 60" 50"	
NOAA FORM 24-13		<u> </u>			USCO	MM-DC 44289-P72	



NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING - AND AVERAGING
	SEE ATTACHMEN	ŢS.	!	
	-			
	1	·		
	<u> </u>			USCOMM-DC 4420

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR SISC SUBMISSIONS.

1. LIST RECORD TYPES GIVE METHOD OF IDE	CONTAINED IN THE TRANSMITTA	AL OF YOUR FILE					
See attad	ched "CTD Record format I	escription"					
2. GIVE BRIEF DESCRIF	PTION OF FILE ORGANIZATION						
See attad	See attached "CTD Record Format Description"						
4. RESPONSIBLE COMPI	ATTRIBUTES AS EXPRESSED IN PL-1 ALGOL COBOL X FORTRAN LANGUAGE RESPONSIBLE COMPUTER SPECIALIST: NAME AND PHONE NUMBER Data Manager (907) 474-7836 (907) 474-7092 ADDRESS University of Alaska, Institute of Marine Science, Fairbanks, AK. 99701						
COMPLETE THIS	SECTION IF DATA ARE ON MAGNE	TIC TAPE					
5. RECORDING MODE	BCD BINARY X ASCII BECDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X 56 10. END OF FILE MARK					
6. NUMBER OF TRACKS	SEVEN	X Octal 23					
	MINE	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES CTD DATA					
7. PARITY	X ODD EVEN	(PTL-27) TT149 LEG 1 3/24/80 - 4/3/80 DR. COACHMAN STATIONS: 1001-1053					
8. DENSITY	200 BPI 1600 BPI	FILE: 499 RECORDS					
	556 BPI	12. PHYSICAL BLOCK LENGTH IN BYTES 5-150 bytes/block					
	X 800 BPI	13. LENGTH OF BYTES IN BITS					
NO AA FORM 24-13		8 bits byte					

RECORD FORMAT DESCRIPTION

RECORD NAME						······································
14. FIELD NAME	15. POSITION FROM - 1 MEASURED		GTH	17. ATTRIBUTES	18. USE AND MEANING	
	l in	NUMBER	UNITS			
						/
See a	attached "CTD I	Record	Forma	Description"		
					-	
			,			
					·	
					f	
NOAA FORM 24-18		l			·	JSCOMM-DC 44289-P72

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE DATE OF LAST (MFR., MODEL NO.) CALIBRATION	0.77	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS
	YOUR ORGANIZATION . (√.)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE	ONLY AFTER REPAIR (√)	ONLY WHEN NEW	NOT CALI- BRATED (√)	
PLESSEY STD MODEL 9040	2/18		NRCC	l year					L
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University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	1/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	I/5	
Latitude:		
Degrees	1/2	
Minutes	1/2	
Hundreths of		
Minutes	I/2	
Hemisphere	A/1	'N' or 'S'
Longitude:		
Degrees	1/3	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	I/5	Number of 'scans' of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	1/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	I/2	0-23 (GMT)
Minutes	1/2	0-59 (GMT)
Depth Interval Indicator	1/1	Always '1' for equally spaced depths
Depth interval	1/3	Depth interval to tenths (should always be 010)
Barometric Pressure	1/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	1/2	Tens of degrees (eg. 145°=15)
Wind speed	1/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	I/1	WMO Code 3700
Visibility Code	I/1	WMO Code 4300
Cloud Type Code	I/1	WMO Code 0500
Cloud Amount Code	1/1	WMO Code 2700
nstrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	1/5	To whole meters
Maximum Depth of Cast	1/4	To whole meters
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)
Wave Height	1/3	To tenths

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA /NO. TYPE / BYTES	USE AND MEANING
File Type	A/3	Always '022'
File Identification	A/6	
Record Type	1/1	Always '3'
Station Number	I/5	
Depth	I/5	To tenths (but not used) (Scan Data)
Temperature	I/5	To thousandths (Scan Data)
Salinity	1/5	To thousandths (Scan Data)
Sigma-t	1/4	To hundredths (Scan Data)
4th Channel	I/6	To thousandths (Scan Data)
Scan Condition Code	1/1	Code describing how data arrived at. (Scan Data (See attached)
Scan Data	4*26	Repitition of above
Sequence Number	1/5	Ascending numeric, 1st Data Record =1, 2nd Data Record = 2, etc.



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

HUMBER

DATA DOCUMENTATION FORM

8409210 TT1916

NOAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED O.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

INST DATA O'NE FAIR	MANAGEMEN AL BUILDIN BANKS, ALA PROJECT, O	MARINE SCIENCE	WHICH		NUMBER(S) (This shipm		RIGINATOR	R TO IDENTIFY
PROB	ES	_		7	T149 L	LEG 2		
4. PLATFORM N	AME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO			RM AND OPES	RATOR 7.	DA	TES
		, 5 , 500		PLATFOR		TOR FROM	Mi MODAY,YI	TO: MO/DAY/Y
THOMPSO	ON .	SHIP		USA	USA	İ		4/23/80
	WHEN CAN TH	EY BE RELEASED YEARMONTH			OUR SUBMISS			H ANY DATA ED.
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NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
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C. DATA FURMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR SISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE GIVE METHOD OF IDENTIFYING EACH REC	TRANSMITTAL OF YOUR FILE
See attached "CTD Record	format Description"
2. GIVE BRIEF DESCRIPTION OF FILE ORGAN	NIZATION
See attached "CTD Record	Format Description"
4. RESPONSIBLE COMPUTER SPECIALIST: NAME AND PHONE NUMBER Da	ta Manager (907) 474-7836 (907) 474-7092 aska, Institute of Marine Science, Fairbanks, AK. 99701
COMPLETE THIS SECTION IF DATA ARE	
5. RECORDING MODE	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56
6. NUMBER OF TRACKS SEVEN (CHANNELS) X NINE	II. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES CTO DATA
7. PARITY X ODD EVEN	TT149 LEG 2 (PTL-32 IRIS:TIOSTD) 4/7-4/15,4/18-4/23/80 PI=CODISPOTI STATIONS: 2001-2100
8. DENSITY 200 BPI 1600	I FILE G76 PECARDS
NO A A FORM 24-13	8 bits byte

RECORD FORMAT DESCRIPTION

4. FIELD NAME	15. POSITION FROM - 1 MEASURED	ł	GTH	17. ATTRIBUTES	18. USE AND MEANING
	(o.g., bits, bytes)	NUMBER	UNITS		
See att	ached "CTD	Record	Forma	: Description"	
				,	
		,			
	1 1				

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("/") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE		INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS
INSTRUMENT TYPE DATE OF LAST CALIBRATION	YOUR ORGANIZATION . (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (√)	ONLY AFTER REPAIR (√:)	ONLY WHEN NEW	NOT CALI- BRATED	
PLESSEY STD MODEL 9040	2/18		NRCC	l year					
	·								
,									
								USCOM	W-DC



University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	I/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	I/1	Always '2'
Station Number	I/5	
Latitude:		
Degrees	I/2	
Minutes	1/2	
Hundreths of	·	
Minutes	I/2	
Hemisphere	A/1	'N' or 'S'
Longitude:		
Degrees	1/3	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE BYTES	USE AND MEANING		
Cruise identification	A/10			
Number of Scans I/5		Number of 'scans' of station data. (Fix scans per Data Record - same as number of depths.)		
Year	1/2	Last two digits of year (GMT)		
Month	1/2	1-12 (GMT)		
DAY	1/2	1-31 (GMT)		
Hour	I/2	0-23 (GMT)		
Minutes	1/2	0-59 (GMT)		
Depth Interval Indicator	1/1	Always '1' for equally spaced depths		
Depth interval	1/3	Depth interval to tenths (should always be 010)		
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Wet bulb temperature	1/4	To tenths		
Dry bulb temperature	1/4	To tenths		
Wind Direction	I/2	Tens of degrees (eg. 145°=15)		
Wind speed	1/2	Whole knots		
Weather Code	1/1	WMO Code 4501		
Sea State Code	I/l	WMO Code 3700		
Visibility Code	1/1	WMO Code 4300		
Cloud Type Code	1/1	WMO Code 0500		
Cloud Amount Code	1/1	WMO Code 2700		
nstrument Information	A/20	Type and Serial Number		
Station Name	A/6			
Depth to Bottom	I/5	To whole meters		
Maximum Depth of Cast	I/4	To whole meters		
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)		
Wave Height	1/3	To tenths		

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	1/1	Always '3'	
Station Number	1/5		
Depth	1/5	To tenths (but not used)	(Scan Data)
Temperature	1/5	To thousandths	(Scan Data)
Salinity	1/5	To thousandths	(Scan Data)
Sigma-t	1/4	To hundredths	(Scan Data)
4th Channel	1/6	To thousandths	(Scan Data)
Scan Condition Code	1/1	Code describing how data (See attached)	arrived at. (Scan Data
Scan Data	4*26	Repitition of above	
Sequence Number	1/5	Ascending numeric, 1st Da 2nd Data Record = 2, etc	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

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Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

DATA DOCUMENTATION FORM

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F. L = 11

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

	1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED UNIVERSITY OF ALASKA					
INSTITUTE OF MARINE SCIENCE						
DATA MANAGEME						
O'NEAL BUILDI						
FAIRBANKS, AL	•					1
2. EXPEDITION, PROJECT, O		WUICH	2 CRUSE NUM	BEDIST HEED I	A OBIGINATOR	TO IDENTIFY
DATA WERE COLLECTED	A PROGRAM DORING	WHICH		IS SHIPMENT	ST ORIGINATOR	(TO IDENTIFY
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PROBES]			
4. PLATFORM NAME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO		6. PLATFORM A NATIONALIT			TES
			PLATFORM	OPERATOR	FROM: MO,DAY,YF	TO: MO,DAY,YR
THOMPSON						
1 ///01 // 2011	SHIP		USA	USA	4/27/80	5/18/80
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8. ARE DATA PROPRIETARY	?		E DARKEN ALL			
X NO YES		CONTA	AINED IN YOUR	SUBMISSION W	ERE COLLECT	ED.
IF YES, WHEN CAN TH FOR GENERAL USE?				GENERAL AF	REA	
9. ARE DATA DECLARED NA		l				
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NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
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	SEE ATTACHMENT	5		
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AA FORM 24-13 (9-72)		<u> </u>		USCOMM-DC 4428

C. DATA FORMA

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR SISC SUBMISSIONS.

	CONTAINED IN THE TRANSMITT ENTIFYING EACH RECORD TYPE	AL OF YOUR FILE					
See atta	ched "CTD Record format	Description"					
2. GIVE BRIEF DESCRIP	PTION OF FILE ORGANIZATION						
See atta	See attached "CTD Record Format Description"						
4. RESPONSIBLE COMP NAME AND	ATTRIBUTES AS EXPRESSED IN PL-1 ALGOL COBOL X FORTRAN LANGUAGE RESPONSIBLE COMPUTER SPECIALIST: NAME AND PHONE NUMBER Data Manager (907) 474-7836 (907) 474-7092						
		titute of Marine Science, Fairbanks, AK. 99701					
5. RECORDING MODE	BCD BINARY X ASCII BECDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56					
6. NUMBER OF TRACK (CHANNELS)	SEVEN SEVEN	Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE. VOLUME NUMBER) PROBES CTD DATA					
7. PARITY 8. DENSITY	X 000 EVEN	TT149 LEG 3 (PTL-33 IRIS:TIISTD) PI = DR. GOERING 4/27 - 5/18/80 STATIONS: 3001-3050, 3052-3145 I FILE-1092 RECORDS. DATE WRITEN 7/31/80					
	536 BPI	12. PHYSICAL BLOCK LENGTH IN BYTES 5-150 bytes/block 13. LENGTH OF BYTES IN BITS 8 bits byte					
NOAA FORM 24-13		USCOMM-DC 44289-P72					

RECORD FORMAT DESCRIPTION

14. FIELD NAME	FROM - 1 MEASURED		GTH	17. ATTRIBUTES	18. USE AND MEANING
	(e.g., bits, bytes)	NUMBER	UNITS		
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See at	tached "CTD	Record	Forma	Description"	
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USCOMM-DC 44289-P72

NOAA FORM 24-13

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("V") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

. INSTRUMENT THE		INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS
(MFR., MODEL NO.)	RUMENT TYPE DATE OF LAST CALIBRATION	YOUR ORGANIZATION . (√.)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (√)	ONLY AFTER REPAIR (√)	ONLY WHEN NEW	NOT CALI- BRATED
PLESSEY STD MODEL 9040	2/18		NRCC	1 year					
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7 / · · · · · · · · · · · · · · · · · ·	<u> </u>	<u> </u>			<u> </u>	<u> </u>	<u>L</u>	1	M-DC 44289

University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	I/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	I/5	
Latitude:		
Degrees	I/2	
Minutes	I/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'N' or 'S'
Longitude:		
Degrees	I/3	
Minutes	I/2	
Hundreths of		
Minutes	I/2	
Hemisphere	A/1	E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	1/5	Number of 'scans' of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	1/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	1/2	.0-23 (GMT)
Minutes	1/2	0-59 (GMT)
Depth Interval Indicator	1/1	Always 'l' for equally spaced depths
Depth interval	1/3	Depth interval to tenths (should always be 010)
Barometric Pressure	1/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	I/2	Tens of degrees (eg. 145°=15)
Wind speed	I/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	1/1	WMO Code 3700
Visibility Code	I/1	WMO Code 4300
Cloud Type Code	I/1 .	WMO Code 0500
Cloud Amount Code	1/1	WMO Code 2700
nstrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	1/5	To whole meters
Maximum Depth of Cast	I/4	To whole meters
Nave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)
Nave Height	1/3	To tenths

PROBES

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	I/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
File Type	A/3	Always '022'
File Identification	A/6	
Record Type	1/1	Always '3'
Station Number	1/5	
Depth	1/5	To tenths (but not used) (Scan Data)
Temperature	1/5	To thousandths (Scan Data)
Salinity	1/5	To thousandths (Scan Data)
Sigma-t	I/4	To hundredths (Scan Data)
4th Channel	I/6	To thousandths (Scan Data)
Scan Condition Code	1/1	Code describing how data arrived at. (Scan Data) (See attached)
Scan Data	4*26	Repitition of above
Sequence Number	1/5	Ascending numeric, 1st Data Record =1, 2nd Data Record = 2, etc.



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments.

The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge $et\ al.$ (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

DATA DOCUMENTATION FORM

F. LG #12

NOAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

INIS SECTION MOST BE COMP	LEIED BI DONOK I	OR ALL L	ZATA IKANSMI			
1. NAME AND ADDRESS OF IN	. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED					
	UNIVERSITY OF ALASKA					
INSTITUTE OF 1	MARINE SCIENCE					[
DATA MANAGEMEI	· · · ·					i
O'NEAL BUILDI	NG, ROOM 111					
FAIRBANKS, AL	ASKA 99701					ŀ
2. EXPEDITION, PROJECT, O	R PROGRAM DURING	WHICH	3. CRUISE NUN	BER(S) USED E	Y ORIGINATOR	TO IDENTIFY
DATA WERE COLLECTED			DATA IN TH	IS SHIPMENT]
			}			
			TT 1	49 LEG	4	
PROBES			'''	. ,	•	}
3.110.2.2						1
4. PLATFORM NAME(S)	S. PLATFORM TYPE	E(S)	6. PLATFORM	ND OPERATOR	7. DA	TES
	(E.G., SHIP, BUO		NATIONALIT			
			PLATFORM	OPERATOR	FROM: MO,DAY,YR	TO: MO/DAY/YR
THOMPSON						
7776711 2011	SHIP		USA	USA	5/22/80	6/8/80
				i		7,9,0
8. ARE DATA PROPRIETARY	7	11 PI FA	SE DARKEN AL	MARSOENSO	LUARES IN WHIC	H ANY DATA
					ERE COLLECT	
X NO YES						ł
IF YES, WHEN CAN TH	EY BE RELEASED			GENERAL AR	E A	
FOR GENERAL USET						
9. ARE DATA DECLARED NA PROGRAM (DNP)?	TIONAL	100° 120°	148° 168° 168° 168° 146	r 150° 100° 00° 00°	49" 29" 8" 29"	
(I.E., SHOULD THEY BE IN	CLUDED IN WORLD	ज्ञासन्त्र	Born Just	Table Total	\$ 5×100	784 A DAY 270
DATA CENTERS HOLDINGS						Will fair
TIONAL EXCHANGE?)		242	237	221 7 6 72		705 203
NO X YES PAR	T (SPECIFY BELOW)	206	4, 201	101 7	19,514	212 207
	(,	170	165 160	155)	2762 0 171
		I III	129 124	119 114		
• •		70' 000 5	057 052	047 3 04	1	200 200
10. PERSON TO WHOM INQUIR		E C	021 016	011	101036	032 027
DATA SHOULD BE ADDRESSED WITH TELE- PHONE NUMBER (AND ADDRESS IF OTHER		101	320 315 V 356 4 351	310 9		531 326 567 362
THAN IN ITEM-1)		29.	387	382 37	, , , , , , , , , , , , , , , , , , , 	403 306 28°
DATTA MANACED		40 63 4	- (28 pg 423	419		439
DATA MANAGER		469	Yes 2 500		╊ ╌╂╌╂╌╂╌╂╌╂╌╂	67 470
(007) (7) 700()	07) /7/ 7000	se 505	500 495	70 70	480 515	511 506
(907) 474–7836 (9	0/) 4/4-7092	541	536 531	526	516551	99 90
		577	572 541	562 55	552 547	383 578
	!	100" 120"	148" 188" 188" 188" 14	p. 120° 100° 60° 00°	46, 55, 1, 31,	er er ser ser
NOAA FORM 24-13		<u> </u>		· · · · · · · · · · · · · · · · · · ·	USCO	MM-DC 44289-P72



NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING, AND AVERAGING
	·			
	SEE ATTACHMEN	rs ·		
			·	,
•				
				:
				<u></u> -
DAA FORM 24-13 (3-72)			L	USCOMM-DC 44289-

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR BISC SUBMISSIONS.

1. LIST RECORD TYPES GIVE METHOD OF 1D	S CONTAINED IN THE TRANSMITT ENTIFYING EACH RECORD TYPE	AL OF YOUR FILE				
See atta	ched "CTD Record format	Description"				
2. GIVE BRIEF DESCRIP	PTION OF FILE ORGANIZATION					
See atta	ched "CTD Record Format	Description"				
4. RESPONSIBLE COMP	ATTRIBUTES AS EXPRESSED IN PL-1 ALGOL COBOL LANGUAGE LANGUAGE					
COMBLETE THIS	SECTION IF DATA ARE ON MAGNI	ETIC TARE				
5. RECORDING MODE	BCD BINARY X ASCII BECDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 10. END OF FILE MARK OCTAL 17				
6. NUMBER OF TRACKS	S SEVEN	X _ Octal 23				
(CHANNELS)	X NINE	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES CTD DATA				
7. PARITY 8. DENSITY	X ODD EVEN	TT149 LEG 4 PTL-34 IRIS:TIZSTD PI = DR: W. REEBURGH 5/22-6/8/80 I FILE 926 RECORDS: STATIONS: 4001-4051, 4051-4099,				
	200 BPI 1600 BPI	A0990-4134. DATE WRITEN: 7/31/80 12. PHYSICAL BLOCK LENGTH IN BYTES				
	556 BPI	1				
	X 800 BPI	5-150 bytes/block				
]	8 bits byte				
NOAA FORM 24-13		USCOMM*DC 44289*P72				

RECORD FORMAT DESCRIPTION

14. FIELD NAME	15. POSITION FROM - 1		GTH	17, ATTRIBUTES	18. USE AND MEANING
	MEASURED IN				
	(e.g., bits, bytee)	NUMBER	UNITS		
5	had Homp		F	D	
see attac	ned CID	Kecora	rorma	Description"	
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USCOMM-DC 44289-P72

NOAA FORM 24-13

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking (" /") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE		INSTRUMENT WAS	CALIBRATED BY	CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS	
(MFR., MODEL NO.)	DATE OF LAST CALIBRATION	YOUR ORGANIZATION . (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE	ONLY AFTER REPAIR (√:)	ONLY WHEN NEW	NOT CALI- BRATED	
PLESSEY STD MODEL 9040	2/18		NRCC	l year						
				·						
ı										
· <u> </u>										
										
	<u> </u>	1	<u> </u>	<u> </u>	L	l	L	USCOM	M-DC 44289-P7	

University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	1/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING		
FILE TYPE	A/3	Always '022'		
FILE IDENTIFICATION	A/6	Unique identifier for this cruise		
Record Type	I/1	Always '2'		
Station Number	I/5			
Latitude:				
Degrees	1/2			
Minutes	I/2			
Hundreths of				
Minutes	1/2			
Hemisphere	A/1	'N' or 'S'		
Longitude:				
Degrees	1/3			
Minutes	1/2			
Hundreths of				
Minutes	I/2			
Hemisphere	A/1	'E' or 'W'		

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA NO. TYPE BYTES	USE AND MEANING	
Cruise identification	A/10		
Number of Scans	1/5	Number of 'scans' of station data. (Five scans per Data Record - same as number of depths.)	
Year	1/2	Last two digits of year (GMT)	
Month	I/2	1-12 (GMT)	
DAY	1/2	1-31 (GMT)	
Hour	1/2	0-23 (GMT)	
Minutes	1/2	0-59 (GMT)	
Depth Interval Indicator	1/1	Always '1' for equally spaced depths	
Depth interval	1/3	Depth interval to tenths (should always be 010)	
Barometr i c Pressure	1/5	To tenths	
Wet bulb temperature	I/4	To tenths	
Dry bulb temperature	1/4	To tenths	
Wind Direction	1/2	Tens of degrees (eg. 145,°=15)	
Wind speed	1/2	Whole knots	
Weather Code	1/1	WMO Code 4501	
Sea State Code	I/1	WMO Code 3700	
Visibility Code	I/1	WMO Code 4300	
Cloud Type Code	I/1	WMO Code 0500	
Cloud Amount Code	1/1	WMO Code 2700	
nstrument Information	A/20	Type and Serial Number	
Station Name	A/6		
Depth to Bottom	1/5	To whole meters	
Maximum Depth of Cast	1/4	To whole meters	
Nave Direction	I/2	Tens of degrees (eg. 355° 4' = 36)	
Nave Height	1/3	To tenths	

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	1/1	Always '3'	
Station Number	I/5		
Depth	1/5	To tenths (but not used)	(Scan Data)
Temperature	1/5	To thousandths	(Scan Data)
Salinity	1/5	To thousandths	(Scan Data)
Sigma-t	I/4	To hundredths	(Scan Data)
4th Channel	I/6	To thousandths	(Scan Data)
Scan Condition Code	I/l	Code describing how data (See attached)	arrived at. (Scan Data)
Scan Data	4*26	Repitition of above	
Sequence Number	I/5	Ascending numeric, 1st D 2nd Data Record = 2, etc	The state of the s



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

DATA DOCUMENTATION FORM

FILE # 13

NOAA FORM 24-13 (4-72) U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCK VILLE, MARYLAND 20852

FORM APPROVED O.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

	. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED UNIVERSITY OF ALASKA					
	MARINE SCIENCE					
DATA MANAGEME						
O'NEAL BUILDING, ROOM 111						,
FAIRBANKS, AL						
2. EXPEDITION, PROJECT, O		WUICU	la course with	DED(S) USED E	Y OBIGINATOR	TO IDENTIFY
DATA WERE COLLECTED	N PROGRAM BURNING	WAICA		IS SHIPMENT	or originator	CIOIDENTIFI
			7-	T 159 LEG	: 1	
PROBES			/ /	15/224	-	
FROBES						
4. PLATFORM NAME(S)	5. PLATFORM TYPE	=(5)	6. PLATFORM A	NOORERATOR	7 OA	TES
4. PEATFORM NAME(3)	(E.G., SHIP, BUO		NATIONALIT			
			PLATFORM	OPERATOR	FROM: MO,DAY,YF	TO: MO/DAY/YR
THOMPSON					Ì .	1 , ,
	SHIP		USA	USA	4/11/80	4/26/80
				ļ.	' '	
8. ARE DATA PROPRIETARY	?		E DARKEN ALI			
X NO YES	•	CONT	AINED IN YOUR	SUBMISSION W	ERE COLLECT	ED.
<u></u>						
IF YES, WHEN CAN TH				GENERAL AR	EA	
FOR GENERAL USE? 9. ARE DATA DECLARED NA		<u></u>				
PROGRAM (DNP)?		100° 120° 1	40" 108" 100" 150" 140	120° 100° 00° 00°	40" 20" 0" 20"	40° 50° 50° 100°
(I.E., SHOULD THEY BE IN DATA CENTERS HOLDING		278	258	200 200	\$ 57200	284 7 279
TIONAL EXCHANGE?)	S FOR IN LANA	242	237 232	27 2	217252	170 5V8 500
		206	2 2011	0 101	1 3 20	212 207
NO X YES PAR	T (SPECIFY BELOW)	170	165 160	155	18 180	1076₽ ₽ 171
		49. 34 14	129 124	119 114	- Dist	
		20. 000 6	093 088	98 071		104 7000
10. PERSON TO WHOM INQUIR	ES CONCERNING		057 052 021 016	011 05	037072	032 027
DATA SHOULD BE ADDRE PHONE NUMBER (AND ADD		Z SV	315 V 354 351	310 92 346 34		531 326
THAN IN ITEM-1)	DKE33 IF OTHER	29 307	387	382 377	377,407	403 398 28*
DAMA MANAGER		40. 433	(ca p (c)	418 2 27	┩┈╽┈╏╶┞┈┇┈╏╶┨╸ ╬╼┿	439 434
DATA MANAGER		469	464 S 59	50 ()		657 470
(007) 474 7826 (0	07) /7/ 7002	505	5000 695	70 2	480\$15	5111 506
(907) 474–7836 (9	0/) 4/4-/092	541	536 531	326	516551	99 92
		577 120°			552 547 An an an	583 578
		1.5			- 4 7 7	
NOAA FORM 24-13					USC	DMM-DC 44289-P72

B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING, AND AVERAGING
	SEE ATTACHMEN	ne.		
	SEE ATTACHTEN			
				-
0AA FORM 24-13 (\$-72)			<u> </u>	USCOMM-DC 44288-

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR BISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL GIVE METHOD OF IDENTIFYING EACH RECORD TYPE	L OF YOUR FILE				
See attached "CTD Record format De	escription"				
2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION					
See attached "CTD Record Format Description"					
T FORTRAN X FORT	ALGOLCOBOLLANGUAGELANGUAGE				
COMPLETE THIS SECTION IF DATA ARE ON MAGNET	CC TAPE				
5. RECORDING MODE BCD BINARY X ASCII EBCDIC	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X 56 10. END OF FILE MARK OCTAL 17				
NUMBER OF TRACKS (CHANNELS) SEVEN 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATION OF DATA TYPE, VOLUME NUMBER) PROBES CTD DATA TTI59 LEG L					
7. PARITY X ODD EVEN 8. DENSITY 200 BPI 1600 BPI	04/11/81 - 04/26/81 S SMITH - PI 3 FILES: 344 BLOCKS - FILE 1 401 BLOCKS - FILE 2 194 BLOCKS - FILE 3				
X 800 8PI	12. PHYSICAL BLOCK LENGTH IN BYTES 5-150 bytes/block 13. LENGTH OF BYTES IN BITS 8 bits byte				

RECORD FORMAT DESCRIPTION

FIELD NAME	15. POSITION FROM - 1 MEASURED		GTH	17. ATTRIBUTES	18. USE AND MEANING
	(e.g., bits, bytee)	NUMBER	UNITS		
				i	
See att	ached "CTD	Record	Forma	Description"	
			i		
	ļ		1		
	i:				
					,

USCOMM-DC 44289-P72

NOAA FORM 24-18

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("/") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INCTOLUCE THE	INSTRUMENT TYPE DATE OF LAST		INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED				INSTRU- MENT IS
INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	YOUR OTHER ORGANIZATION (GIVE NAME)		AT FIXED INTERVALS	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE	ONLY AFTER REPAIR (√)	ONLY WHEN (V)	NOT CALI- BRATED
PLESSEY STD MODEL 9040	2/18		NRCC	l year					
,									
									
	<u> </u>	<u> </u>	l	I	L	L		USCOM	M-DC 44289-P7



University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	I/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	. I/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	1/5	
Latitude:		
Degrees	1/2	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'N' or 'S'
Longitude:		•
Degrees	I/3	
Minutes	I/2	
Hundreths of		
Minutes	I/2	
Hemisphere	A/1	'E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA/NO. TYPE/BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	1/5	Number of 'scans'of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	I/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	1/2	0-23 (GMT)
Minutes	I/2	0-59 (GMT)
Depth Interval Indicator	I/l	Always '1' for equally spaced depths
Depth interval	1/3	Depth interval to tenths (should always be 010)
Barometric Pressure	1/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	1/2	Tens of degrees (eg. 145,°=15)
Wind speed	1/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	1/1	WMO Code 3700
Visibility Code	1/1	WMO Code 4300
Cloud Type Code	1/1	WMO Code 0500
Cloud Amount Code	1/1	WMO Code 2700
nstrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	I/5	To whole meters
Maximum Depth of Cast	1/4	To whole meters
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)
Wave Height	1/3	To tenths

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2	To nearest second
Blank	X/27	

DATA_RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	······································
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	1/1	Always '3'	
Station Number	1/5		
Depth	I/5	To tenths (but not used)	(Scan Data)
Temperature	I/5	To thousandths	(Scan Data)
Salinity	I/5	To thousandths	(Scan Data)
Sigma-t	1/4	To hundredths	(Scan Data)
4th Channel	I/6	To thousandths	(Scan Data)
Scan Condition Code	1/1	Code describing how data (See attached)	arrived at. (Scan Data)
Scan Data	4*26	Repitition of above	
Sequence Number	1/5	Ascending numeric, 1st Da 2nd Data Record = 2, etc.	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

DATA DOCUMENTATION FORM

TT1920

NOAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED O.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF IN	STITUTION, LABOR	ATORY, OF	R ACTIVITY WIT	H WHICH SUBM	ITTED DATA AF	RE ASSOCIATED
UNIVERSITY OF ALAS	SKA					
INSTITUTE OF MARIN	NE SCIENCE					
DATA MANAGEMENT						
ROOM 111 O'NEAL BU	JILDING					
FAIRBANKS, ALASKA	99701					
2. EXPEDITION, PROJECT, O DATA WERE COLLECTED	R PROGRAM DURING	WHICH		IBER(S) USED (IS SHIPMENT	Y ORIGINATOR	TO IDENTIFY
PROBES			77/	159 LEG	2	·
4. PLATFORM NAME(S)	5. PLATFORM TYPE (E.G., SHIP, BUO		6. PLATFORM A NATIONALIT		1	TES
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R/V ALPHA HELTX	SHIP		USA	USA	04/30/81	
8. ARE DATA PROPRIETARY	?		E DARKEN ALI			
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THAN IN ITEM-1)		<u> </u>			77 mm	on Oa
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(907) 474-7836		203	200 495		460)15	511 504
(307) 474-7032		343	534 531	524	514951	99 99
		<u>₩</u>		1 100 1 100		90
ĺ		100" 120"	140° 160° 160° 160° 140	r 120° 100° 00° 00°	4r 2r r 2r	# # # # INT
NOAA FORM 24-13					USCO	DMM-DC 44289-P72

B. SCIENTIFIC CONTENT

b. Scientific Content							
NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING			
		. 7	-				
SALINITY	0.001 °/。。	NANSEN BOTTLES & NEIL BROWN MARK IIIB CTD/O	DESCRIPTION OF BASIC PROCESSING ATTACHED.	N/A			
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DEPTH	0.1M (1M = 1db)	THERMOMETRIC DEPTH & ? NEIL BROWN MARK TITE CTD/O	, , ,	N/A			
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C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

	MUDEE DEACED MINES ::	TOUTH ETLE OUNE 22
	THREE RECORD TYPES W	ITHIN FILE TYPE 22
	Designated by byte 1	0:
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	"2" for Master Re "3" for Detail Re	
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GIVE BRIEF DESCRI	PTION OF FILE ORGANIZATIO	N
	File 22, STD/CTD: 0	to 99,999 Text records, followed by
	1	Master record, followed by
	0	to 99,999 Detail records
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ATTRIBUTES AS EX	PRESSED IN PL-1	ALGOL COBOL LANGUAGE
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RESPONSIBLE COMP NAME AND ADDRESS	TORTRAN PUTER SPECIALIST: PHONE NUMBERData_Ma	nager (907) 474-7836 Institute of Marine Science, Fairbanks, Alaska
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RESPONSIBLE COMP NAME AND ADDRESS COMPLETE THIS	Tortran Puter specialist: Phone number Data Mai University of Alaska, Section if Data are on Ma	nager (907) 474-7836 Institute of Marine Science, Fairbanks, Alaska GRETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 inch
RESPONSIBLE COMP NAME AND ADDRESS COMPLETE THIS RECORDING MODE	Tortran Puter specialist: Phone numberData_Ma: University of Alaska, Section if Data are on ma BCDBinary ASCII X EBCDIC	LANGUAGE nager (907) 474-7836 Institute of Marine Science, Fairbanks, Alaska (GNETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 inch
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RESPONSIBLE COMP NAME AND ADDRESS COMPLETE THIS RECORDING MODE	Tortran Puter specialist: Phone numberData_Ma: University of Alaska, Section if Data are on ma BCDBinary ASCII X EBCDIC	Inager (907) 474-7836 Institute of Marine Science, Fairbanks, Alaska GRETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X 56 inch 10. END OF FILE MARK OCTAL 17 X Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)
RESPONSIBLE COMP NAME AND ADDRESS COMPLETE THIS RECORDING MODE	Tortran Puter specialist: Phone numberData_Ma: University of Alaska, Section if Data are on ma BCDBinary ASCII X EBCDIC SSEVEN X NINE	Institute of Marine Science, Fairbanks, Alaska GRETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 inch 10. END OF FILE MARK OCTAL 17 X Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) O22 TTISPIZIMS R/V THOMPSON CRUISE 159 LEG 2
RESPONSIBLE COMP NAME AND ADDRESS COMPLETE THIS RECORDING MODE	TO THE SPECIALIST: PHONE NUMBER Data Ma University of Alaska, SECTION IF DATA ARE ON MA BCD BINARY ASCII X EBCDIC S SEVEN	Institute of Marine Science, Fairbanks, Alaska GRETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH \[\text{X} \] .56 inch 10. END OF FILE MARK 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) 022 TTISP12 IMS R/V THOMPSON CRUISE 159 LEG 2 04/30/81 - 05/27/81 DR IVERSON BERING SEA
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RESPONSIBLE COMP NAME AND ADDRESS COMPLETE THIS RECORDING MODE	Tortran Puter specialist: Dephone number Data Ma: University of Alaska, Section if Data are on ma BCD Binary ASCII X EBCDIC S SEVEN X NINE Z ODD EVEN 200 BPI X 1600 BPI	Institute of Marine Science, Fairbanks, Alaska GRETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH 10. END OF FILE MARK 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) 022 TT15912 IMS R/V THOMPSON CRUISE 159 LEG 2 04/30/81 - 05/27/81 DR. IVERSON BERING SEA STATIONS: 2002-2002, 2004-2006, 2009-2120. 9 TRK, 1600 BPI. NIAB, EBCOK, ODD.
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RECORD FORMAT DESCRIPTION

RECORD NAME STD RECORD FORMAT DESCRIPTION, FILE TYPE 22

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN	·		17. ATTRIBUTES	18. USE AND MEANING
	(e.g., bite, bytee)	NUMBER	UNITS		
FILE TYPE "22" AS FROM THIS TYPE, E	DESIGNATE	D BY (CSEP A	ND NODC. THER	E ARE NO INTENDED DEVIATIONS
	1. Col. 5	0-53	alini	y in °/ (I4	to 1/100ths)
					·

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("\(\subseteq \cdot \)") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE		INSTRUMENT WAS	CALIBRATED BY	CHECK ONE: INSTRUMENT IS CALIBRATED				INSTRU- MENT IS	
INSTRUMENT TYPE DATE OF LAST (MFR., MODEL NO.) CALIBRATION	YOUR ORGANIZATION	OTHER ORGANIZATION (GIVE NAME)	AT FIXED	BEFORE OR AFTER USE	BEFORE AND AFTER USE	ONLY AFTER REPAIR	NEM MHEN ONFA	NOT CALI- Brated	
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DATA DOCUMENTATION FORM

EIFE # 72

HOAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEANOGRAPHIC DATA CENTER RECORDS SECTION ROCK VILLE, MARYLAND 20852 FORM APPROVED Q.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED UNIVERSITY OF ALASKA						
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DATA MANAGEME						
O'NEAL BUILDI						1
FAIRBANKS, AL						
				 		
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			PLATFORM	OPERATOR	FROM: MO,DAY,YR	TO: MO/DAY/YR
THOMPSON						
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IF YES, WHEN CAN THE FOR GENERAL USE? 9. ARE DATA DECLARED NA PROGRAM (DNP)? (I.E., SHOULD THEY BE IN DATA CENTERS HOLDING: TIONAL EXCHANGE?)	TIONAL CLUDED IN WORLD S FOR INTERNA-	242	277 286 237 232 257 232 266 160 129 124 973 288	33 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	21/232 P	212 207 2142 171
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IF YES, WHEN CAN THE FOR GENERAL USE? 9. ARE DATA DECLARED NA PROGRAM (DNP)? (I.E., SHOULD THEY BE IN DATA CENTERS HOLDING: TIONAL EXCHANGE?) NO X YES PAR 10. PERSON TO WHOM INQUIRED DATA SHOULD BE ADDRES	TIONAL CLUDED IN WORLD S FOR INTERNA- T (SPECIFY BELOW) ES CONCERNING SSED WITH TELE-	242 206 1/70 134 109 20 002 002 003 003 003 003 003 003 003	272 246 237 232 251 252 251 266 252 260 253 260 254 260 254 260 255 26	227 227 227 227 227 227 227 227 227 227	21/253 21/253 18/214 18/180 (07/072 (07/072 (01/203)	212 207 2162 171 2162 171 200 200 207 201 207 201 207
IF YES, WHEN CAN THE FOR GENERAL USE? 9. ARE DATA DECLARED NA PROGRAM (DNP)? (I.E., SHOULD THEY BE IN DATA CENTERS HOLDING! TIONAL EXCHANGE?) NO X YES PARE 10. PERSON TO WHOM INQUIRE	TIONAL CLUDED IN WORLD S FOR INTERNA- T (SPECIFY BELOW) ES CONCERNING SSED WITH TELE-	242 206 206 170 134 210 210 210 210 210 210 210 210 210 210	272 286 237 232 201 202 166 160 166 100 127 032 037 032 021 016 320 315 321 337	33 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	253200 217253 217253 217253 217253 207500 207500 207500 207500 207500 207500 207500 207500 207500 207500 207500 207500 207500	212 207 214 207 215 207 216 207 216 207 217 207 218 207 219 219 207 219 219 207 219 219 207 219 207
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NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING * AND AVERAGING
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AA FORM 24-13 (3-72)				USCOMM-DC 44289-1

C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR SISC SUBMISSIONS.

1. LIST RECORD TYPES GIVE METHOD OF IDE			L OF YOUR FILE
See attac	ched "CTD Re	ecord format D	escription"
2. GIVE BRIEF DESCRIF	TION OF FILE	ORGANIZATION	
See attac	ched "CTD Re	ecord Format D	escription"
	JTER SPECIALI	st: R Data Manage	LANGUAGE r (907) 474-7836 (907) 474-7092 itute of Marine Science, Fairbanks, AK. 99701
COMPLETE THIS	SECTION IE DAT	TA ARE ON MAGNE	TIC TAPE
S. RECORDING MODE	BCD X	BINARY	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56
6. NUMBER OF TRACKS			X Octal 23
(CHANNELS) 7. PARITY	SEVEN NINE		11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) PROBES CTD DATA TTIS9 LEG 3 05/03/81 - 05/27/81 CODISPOTI = PI
8. DENSITY	X ODD EVEN	1600 BP1	STATIONS: 3001-3028, 3032-3154. 9 TRACK, 800BPI, ASCII, NO LABEL, ODD PARITY IRIS NAME = 774STD
	556 BPI		12. PHYSICAL BLOCK LENGTH IN BYTES 5-150 bytes/block
	□ 800 8PI		13. LENGTH OF BYTES IN BITS
	<u> </u>		8 bits byte
NOAA FORM 24-13			UECOMA-DC 44320 073

RECORD FORMAT DESCRIPTION

FI	OSITION 16. LE	NGTH	17. ATTRIBUTES	18. USE AND MEANING	
IN	EASURED NUMBE	RUNITS			•
See attached	"CTD Record	l Forma	Description"		
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USCOMM-DC 44289-P72

NOAA FORM 24-18

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("V") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE	2475.051.457	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS	
(MFR., MODEL NO.)	DATE OF LAST CALIBRATION	YOUR ORGANIZATION	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS	BEFORE OR AFTER USE	BEFORE AND AFTER USE	ONLY AFTER REPAIR	ONLY WHEN NEW	NOT CALI- BRATED	
PLESSEY STD MODEL 9040	2/78	. (√)	NRCC	(√) l year	(√)	(√)	(√)	(√)	(√)	
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University of Alaska, Fairbanks

Fairbanks, Alaska 99701 PROBES

CTD RECORD FORMAT DESCRIPTION

COMMENT RECORD(S) (REQUIRED): (Analogous to NODC TEXT record)

These records should contain all pertinent information concerning data quality as determined during processing. Cruise dates and responsible Principal Investigator(s) should be logged here as well as calibration information.

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier of cruise
RECORD TYPE	1/1	Always '1'
STATION NUMBER	1/5	
TEXT	A/130	Comments/pertinent information
SEQUENCE (RECORD) NUMBER	1/5	Ascending numeric, 1st comment record=1, 2nd comment record=2,etc.

HEADER_RECORD: (Analogous to NODC's Master Record)

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
FILE TYPE	A/3	Always '022'
FILE IDENTIFICATION	A/6	Unique identifier for this cruise
Record Type	1/1	Always '2'
Station Number	I /5	
Latitude:		
Degrees	1/2	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	'N' or *S'
Longitude:		
Degrees	1/3	
Minutes	1/2	
Hundreths of		
Minutes	1/2	
Hemisphere	A/1	"E' or 'W'

-2-PROBES

CTD RECORD FORMAT DESCRIPTION (CONT'D):

HEADER RECORD (CON'T):

FIELD	DATA NO. TYPE BYTES	USE AND MEANING
Cruise identification	A/10	
Number of Scans	I/5	Number of 'scans' of station data. (Five scans per Data Record - same as number of depths.)
Year	1/2	Last two digits of year (GMT)
Month	1/2	1-12 (GMT)
DAY	1/2	1-31 (GMT)
Hour	1/2	0-23 (GMT)
Minutes	I/2	0-59 (GMT)
Depth Interval Indicator	1/1	Always '1' for equally spaced depths
Depth interval	1/3	Depth interval to tenths (should always be 010)
Barometric Pressure	1/5	To tenths
Wet bulb temperature	1/4	To tenths
Dry bulb temperature	1/4	To tenths
Wind Direction	1/2	Tens of degrees (eg. 145,°≈15)
Wind speed	1/2	Whole knots
Weather Code	1/1	WMO Code 4501
Sea State Code	1/1	WMO Code 3700
Visibility Code	1/1	WMO Code 4300
Cloud Type Code	1/1	WMO Code 0500
Cloud Amount Code	1/1	WMO Code 2700
nstrument Information	A/20	Type and Serial Number
Station Name	A/6	
Depth to Bottom	I/5	To whole meters
Maximum Depth of Cast	1/4	To whole meters
Wave Direction	1/2	Tens of degrees (eg. 355° 4' = 36)
Wave Height	1/3	To tenths

CTD RECORD FORMATION DESCRIPTION (CONT'D):

HEADER RECORD (CONT'D):

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING
Wave Period	1/2 -	To nearest second
Blank	X/27	

DATA RECORD: (analogous to NODC Detail Record)

Usually there will be Comment Records followed by one Header Record followed by N number of Data Records where N= number of depths per cast divided by 5. (5= number of scans' of data per Data Record.)

FIELD	DATA / NO. TYPE / BYTES	USE AND MEANING	
File Type	A/3	Always '022'	
File Identification	A/6		
Record Type	1/1	Always '3'	
Station Number	1/5		
Depth	1/5	To tenths (but not used)	(Scan Data)
Temperature	1/5	To thousandths	(Scan Data)
Salinity	1/5	To thousandths	(Scan Data)
Sigma-t	1/4	To hundredths	(Scan Data)
4th Channel	I/6	To thousandths	(Scan Data)
Scan Condition Code	1/1	Code describing how data (See attached)	arrived at. (Scan Data)
Scan Data	4*26	Repitition of above	
Sequence Number	1/5	Ascending numeric, 1st Day 2nd Data Record = 2, etc	



METHODS

Temperature and Salinity

The salinities and temperatures for the bottle data were taken from Plessy 9040 Series salinity, temperature vs. depth (STD) instruments. The STD data are averaged over 1 meter intervals. Precision of the complete operation does not justify finer resolution than this. Depth corrections are not computed because it is felt that STD (CTD) depths are much better than thermometric depths. However, thermometric checks are made on each field calibration cast as an operational check. Smoothing is not done on temperature or salinity values because an adequate method has not been found to evaluate thermal response problems. Spikes are chopped at the limits of the STD (CTD) scales. Meter intervals for which no data was recorded (rare at the sample rate of 0.2 sec) are linearly interpolated to provide a value at all depths. A field calibration consisting of one sample bottle per cast on casts over 200 m is taken.

Dissolved Oxygen

Oxygen concentrations were determined using the Chesapeake Bay Institute technique (Carpenter, 1965).

Inorganic Nutrients

Nutrient analyses were performed with a 5-channel Technician Auto Analyzer using methods described by Whitledge et al. (1981).

Note

Some stations (e.g. Station 2057) are mixtures of hydrographic and productivity nutrient observations and are not duplicates.

922

84NODC181

DATA DOCUMENTATION FORM

8400210

F. LE # 16

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF IN	STITUTION, LABOR	ATORY, OF	R ACTIVITY WIT	H WHICH SUBM	ITTED DATA AF	RE ASSOCIATED				
UNIVERSITY OF ALASKA										
INSTITUTE OF MARIN	E SCIENCE									
DATA MANAGEMENT						1				
ROOM 111 O'NEAL BU										
FAIRBANKS, ALASKA										
2. EXPEDITION, PROJECT, OF DATA WERE COLLECTED	R PROGRAM DURING	WHICH		BER(S) USED E IS SHIPMENT	BY ORIGINATOR	TO IDENTIFY				
PROBES	•		TTI	59 LE	64					
, , , ,					•					
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R/V ALPHA HELIK	SHIP					, ,				
11, 7 222 22 22 22			USA	USA	06/27/81	07/21/81				
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8. ARE DATA PROPRIETARY?			SE DARKEN ALL							
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B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
		7		
SALINITY	0.001 °/	NANSEN BOTTLES & NEIL BROWN MARK ITTE CTD/O	BESCRIPTION OF BASIC PROCESSING ATTACHED.	N/A
TEMPERATURE	°C	DSR-THERMOMETERS & NEIL BROWN MARK IIIB CTD/O	" ?	N/A
DEPTH	0.1M (1M = 1db)	THERMOMETRIC DEPTH & NEIL BROWN MARK TITE CTD/O	"	N/A
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C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

	THREE RECORD TYPES WIT	HIN FILE TYPE 22
	Designated by byte 10:	
	"1" for Text Record "2" for Master Reco "3" for Detail Reco	rd
GIVE BRIEF DESCRI	PTION OF FILE ORGANIZATION	
	File 22, STD/CTD: 0 to	99,999 Text records, followed by
	1 Ma	ster record, followed by
	0 to	99,999 Detail records
	Repe	ats
	PHONE NUMBER Data Mana	ger (907) 474-7836
•	university of Alaska, in.	
COMPLETE THIS	SECTION IF DATA ARE ON MAGN	stitute of Marine Science, Fairbanks, Alaska 9
COMPLETE THIS	SECTION IF DATA ARE ON MAGN	stitute of Marine Science, Fairbanks, Alaska S
COMPLETE THIS	SECTION IF DATA ARE ON MAGN	stitute of Marine Science, Fairbanks, Alaska 9 HETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH
COMPLETE THIS RECORDING MODE	SECTION IF DATA ARE ON MAGN BCD BINARY ASCII X EBCDIC	Stitute of Marine Science, Fairbanks, Alaska 9 HETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 inch
COMPLETE THIS RECORDING MODE	SECTION IF DATA ARE ON MAGN	Stitute of Marine Science, Fairbanks, Alaska 9 SETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 inch 10. END OF FILE MARK OCTAL 17 X Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS
COMPLETE THIS RECORDING MODE NUMBER OF TRACK (CHANNELS)	SECTION IF DATA ARE ON MAGN BCD BINARY ASCII X EBCDIC S SEVEN	Stitute of Marine Science, Fairbanks, Alaska 9 METIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X 56 inch 10. END OF FILE MARK OCTAL 17 X Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) 0727 TTIGOLAMAC
COMPLETE THIS RECORDING MODE NUMBER OF TRACK (CHANNELS)	SECTION IF DATA ARE ON MAGN BCD BINARY ASCII X EBCDIC S SEVEN	Stitute of Marine Science, Fairbanks, Alaska 9 NETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 inch 10. END OF FILE MARK OCTAL 17 X Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) OZZ TTISPLAIMS R/VTHOMPSON CRUISE 159 LEG 4 OG/27/81 - 07/21/81
COMPLETE THIS RECORDING MODE NUMBER OF TRACK (CHANNELS)	SECTION IF DATA ARE ON MAGN BCD BINARY ASCII X EBCDIC S SEVEN X NINE X ODD EVEN	Stitute of Marine Science, Fairbanks, Alaska 9 NETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 inch 10. END OF FILE MARK OCTAL 17 X Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) OZZ. TTISPLAIMS R/VTHOMPSON CRUISE 159 LEG 4 OG/27/81 - O7/21/81 DR. REEBURGH BERING SEA STATIONS: 4001-4055, 4058-405
COMPLETE THIS RECORDING MODE NUMBER OF TRACK (CHANNELS)	SECTION IF DATA ARE ON MAGN BCD BINARY ASCII X EBCDIC S SEVEN X NINE X ODD EVEN 200 BPI X 1600 BPI	Stitute of Marine Science, Fairbanks, Alaska S SETIC TAPE 9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH X .56 inch 10. END OF FILE MARK OCTAL 17 X Octal 23 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) OZZ TTISPLA IMS R/V THOMPSON CRUISE 159 LEG 4 O6/27/81 - 07/21/81
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RECORD FORMAT DESCRIPTION

RECORD NAME STD RECORD FORMAT DESCRIPTION, FILE TYPE 22

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D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("\(\subseteq

INSTRUMENT TYPE DATE OF LAST (MFR., MODEL NO.) CALIBRATION		INSTRUMENT WAS	CALIBRATED BY	CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRU- MENT IS
	YOUR ORGANIZATION (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR After Use (√)	BEFORE AND AFTER USE ()	OHLY AFTER REPAIR ()	ONLY WHEN NEW (V)	NOT CALI- BRATED	
EIL BROWN MARK 14TH TD/O Microprofiler			NEIL BROWN			·			
		7							
									·
OTE: ALL STD OR CY STANDARD LABO	D UNITS ARE FIE RATORY CALIBRAT	LD CORRECTED B	COMPARISON W	TH DISCRE	E SAMPLES	TO INCREASE	ACCURAC	OVER	

NANSEN REF. # 319407

MULDARS TRACK #

773104

MONITOR: CONTACT

J. Frank

LOCATION OF FO22 SOURCE

Archives (TT3104)

RECORD ALL ERRORS FOUND

Consec(s)

143 Pore Change Lat. from 55 to 56

Change Long: from 165 to 166°

Jarost Wish Month.

Unality Indicators were applied to three stations

NANSEN REF. # 3194/6

MULDARS TRACK #

773107

MONITOR: CONTACT

J. Frank

LOCATION OF FO22 SOURCE

Archives (TT3107)

RECORD ALL ERRORS FOUND

CONSEC(S).

Delete station

Dord 185 66/16/85 000

Quality indicators were applied to 10 stations

NANSEN REF. # 319417

MULDARS TRACK #

773092

MONITOR: CONTACT

J. Frank

LOCATION OF FO22 SOURCE Archives (TT3092)

RECORD ALL ERRORS FOUND

CONSEC(S)

36

ERRORS FOUND

Change Latitude from 58° to 56°

Mulans mude 3/29/85

Quality indicators were added to eight stations

NANSEN REF. #
3/94/5

MULDARS TRACK #

773091

MONITOR: CONTACT

J. Frank

Archives (773091)

RECORD ALL ERRORS FOUND

CONSEC(S)

8

38

69

87

117

ERRORS FOUND

Change Deg. of Lat. from 55 to 56

Change Dag of Long . from 163 to 164

Change Deg. of Lat. from 57 to 55

Delete Station

Delete Time

Jord 186

Parameter Quality Indicators were applied to 4 stations

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accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
8400210	F022	TT3103	0104	3117	31TT	1978/04/10	NULL	150297
8400210	C022	319402	0104	31I7	31TT	1978/04/10	TT3103	150298
8400210	F022	TT3104	0104	3117	31TT	1979/04/14	NULL	150299
8400210	C022	319407	0104	31I7	31TT	1979/04/14	TT3104	150300
8400210	F022	TT3105	0104	31I7	31TT	1980/03/24	NULL	150301
8400210	C022	319410	0104	31I7	31TT	1980/03/24	TT3105	150302
8400210	F022	TT3106	0104	31I7	31TT	1981/04/11	NULL	150303
8400210	C022	319414	0104	31I7	31TT	1981/04/11	TT3106	150304
8400210	F022	TT3091	0104	31I7	31 TT	1981/04/30	NULL	150305
8400210	C022	319415	0104	31I7	31TT	1981/04/30	TT3091	150306
8400210	F022	TT3107	0104	31I7	31TT	1981/05/31	NULL	150307
8400210	C022	319416	0104	3117	31TT	1981/05/31	TT3107	150308
8400210	F022	TT3092	0104	3117	31TT	1981/06/27	NULL	150309
8400210	C022	319417	0104	3117	31TT	1981/06/27	TT3092	150310

(14 rows affected)

Password:	-	refNo	ship	staCnt	recCnt	startDate	endDate
8400210 8400210 8400210 8400210 8400210 8400210 8400210 8400210 8400210	C022 F022 C022 F022 C022 F022 C022 F022 C022	319402 TT3104 319407 TT3105 319410 TT3106 319414 TT3091 319415	31TT 31TT 31TT 31TT 31TT 31TT 31TT 31TT	406 406 382 381 433 427 119 117	12741 430 11741 401 12913 446 4077 127 2684 118	78/04/10 78/04/10 79/04/14 79/04/14 80/03/24 80/03/24 81/04/11 81/04/11 81/04/30 81/04/30	78/07/06 78/07/06 79/06/15 79/06/15 80/06/08 80/06/08 81/04/26 81/04/26 81/05/27 81/05/27
8400210 8400210 8400210 8400210	C022 F022	TT3092	31TT 31TT	131	4321 154 4663 139	81/05/31 81/05/31 81/06/27	81/06/23 81/06/23 81/07/21
0700210	C022	317411	TIT	TOT	133	81/06/27	81/07/21

(14 rows affected)