

DDF A:2:21 DATA DOCUMENTATION FORM

TT5090-TT5091 F022

NOAA Form 24-1
4-71U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, D.C. 20535FORM A-24-1
M.B. No. 11-R-2
EXPIRES 81

329436-329437 C022

While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

This should accompany all data submissions to NODC. Section 4, 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 minutes, etc. which are readily available describing data collection, analysis, and for all 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

DEPT. OCEANOGRAPHY WB-10
UNIV. WASHINGTON
SEATTLE WA 98195

2. EXHIBITION PROJECT OR PROGRAM DURING WHICH DATA WERE COLLECTED

NORPAX PRE-FGGE
SHUTTLE

3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT

4. PLATFORM NAME(S)

NAKANA BEOKI

5. PLATFORM TYPE(S)
(E.G., SHIP, BUOY, ETC.)

SHIP

6. PLATFORM AND OPERATOR
NATIONALITY(IES)

SHIP OPERATOR
UNIV.
HAWAII

7. DATES

FROM: MO/YR TO: MO/YR
11/11/77 2/14/78

8. ARE DATA PROPRIETARY?

☒ YES

IF YES, WHEN CAN THEY BE RELEASED
FOR GENERAL USE? YEAR MONTH

11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.

GENERAL AREA

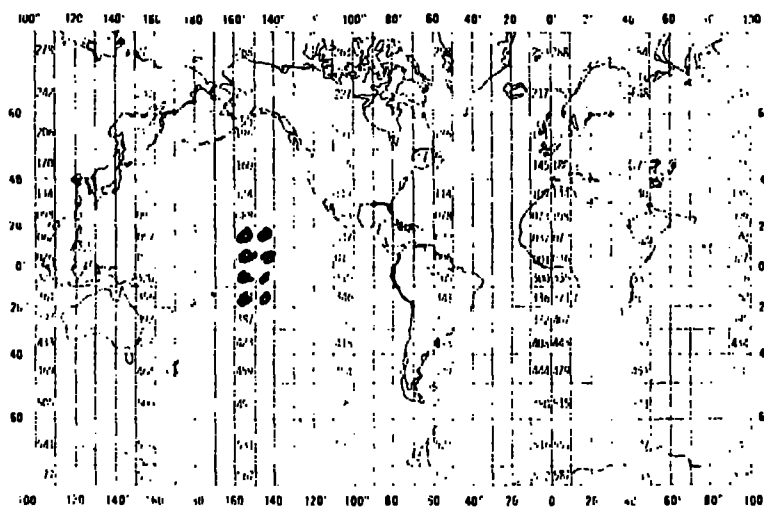
9. ARE DATA DECLARED NATIONAL PROGRAM DATA?

(I.E. SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

☒ YES ☐ PART (SPECIFY BELOW)

10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN IN TT-5-1)

BRUCE A. TAFT
(206) 324 4763



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
PRESSURE	db	CTD	N/A	Block averaged
TEMPERATURE	°C	CTD	N/A	and at 25 db intervals
SALINITY	‰	CTD	N/A	"
				"

C. DATA FORMAT

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

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

Each file has a header record followed by data records, one for each given pressure value. Both record types are 80 characters long. The record type is given by the character in position 80; it is "1" for a header record and "3" for a data record. The format for each record type is given on an attached sheet.

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

There is one file for each station; an EOF mark between files and after the last file.

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL
☐ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER

Paavo Kovala

ADDRESS *Dept. of Oceanography, Univ. of Washington, WB-10, Seattle, WA 98115*

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE <input type="checkbox"/> BCD <input type="checkbox"/> BINARY <input type="checkbox"/> ASCII <input checked="" type="checkbox"/> EBCDIC <input type="checkbox"/> _____	9. LENGTH OF INTER-RECORD GAP (IF KNOWN) <input type="checkbox"/> 3/4 INCH. <input checked="" type="checkbox"/> <i>0.6 inch</i>
6. NUMBER OF TRACKS (CHANNELS) <input type="checkbox"/> SEVEN <input checked="" type="checkbox"/> NINE <input type="checkbox"/> _____	10. END OF FILE MARK <input checked="" type="checkbox"/> OCTAL 170 <input type="checkbox"/> _____
7. PARITY <input checked="" type="checkbox"/> ODD <input type="checkbox"/> EVEN	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)
8. DENSITY <input type="checkbox"/> 200 BPI <input type="checkbox"/> 1600 BPI <input type="checkbox"/> 556 BPI <input checked="" type="checkbox"/> 800 BPI <input type="checkbox"/> _____	12. PHYSICAL BLOCK LENGTH IN BYTES <i>3200</i> 13. LENGTH OF BYTES IN BITS <i>6</i>



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.

[illegible]

TAPE OR DISK ASSIGNMENT SHEET
(MRL) 11/6/78
(Rev. 11/80)

ACCESSION/TRACK NO.:

TYPE OF TAPE	TAPE NUMBER	LABEL	LRECL	BLKSIZE	RECFM	REMARKS	# RECORDS
ORIGINATOR							
DUPLICATE							
REFORMATTED							
FIRST USER							
FINAL USER							
DISK FILE	DSN					REMARKS	# RECORDS
WORK DISK FILE							
EDITED DISK FILE							

DATE:

TO:

FROM:

SUBJECT: Error Correction in Processing of Data Set - Accession # _____

1) File Type: _____

2) Project Ident.: _____

3) Track Nos.: _____

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

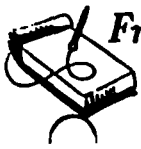
Correction Completed (Check)

III. Processor Name: _____

DATA SET ROUTE SHEET

ACCESSION/TRACK # _____

<u>Step</u>	<u>Completion Date/Init.</u>		<u>Tape # or DSN</u>	<u># of Files</u>	<u>BLKSIZE</u>	<u>LRECL</u>	<u># RECORDS</u>
ORIGINATOR TAPE #							
QUADI/SCAN TAPE #							
ASSIGNED FOR PROCESS.							
DDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE #							
WORK DISK FILE							
FINAL USER TAPE #							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							



From the desk of
NELSON ROSS

12/12

John :

If the attachment
does not adequately
answer the questions
you had raised, pls
contact Robert Williams
directly at (714) 452-4641.
(over)

ROUTING SLIP

TO	FROM	DATE	
1 Nelson Ross	Bob Williams		
2			
3			
ACTION	1 2 3	FILE	1 2 3
APPROVAL ✓		INFORMATION	
COMMENTS		INITIALING	
DISCUSSION		RETURN	
DISPOSITION		SIGNATURE & DISPATCHING	
DRAFT REPLY		SIGNATURE & RETURN	

REMARKS:

Please call if you need
any other information
Bob



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data and Information Service
Liaison Office
P. O. Box 271
La Jolla, California 92038

December 8, 1980

EDIS:NCR

TO: Robert Williams, S-001
FROM: *Nelson E. Russ, Jr.*, A-003
SUBJECT: Documentation of Processed STD

Dr. Bruce Taft, University of Washington forwarded to NODC a magnetic tape containing the CTD data for NORPAX's Pre-FGGE Shuttle. The data collection period was November 11, 1977 - February 14, 1978 and the platform was the Kana Keoki.

The letter of transmittal suggested that NODC contact you to answer some questions re the documentation relative to the Niel Brown CTD used during the cruise.

(✓) Would you kindly answer the portions of the attached form where indicated and return the form to me.

Thank you for your cooperation.

cc: Bruce Taft, University of Washington
NODC

RE: LL
DEC 9 1980



Documentation of Processed STD Velocimeter Data

National Oceanographic Data Center

September 1971

Please use this form as a supplement to the NODC "Data Definition Form, General Information."

All items on this form are considered of importance to the archive processing and future use of STD-velocimeter data. In submitting computer processed data, it is especially important to complete the section titled "Reduction-Processing."

A. Instrument - Sensors

✓ 1. Instrument - Sensors

- a. Manufactuerer *Neil Brown Instrument Systems*
- b. Model *MARK III*
- c. Serial
- d. Sensors (The questions asked about each sensor, listed may serve as a guide for information to be submitted about other sensors.) *P, T, G, O₂*

2. Salinity (Compensated Conductivity)

- a. Model *NBIS*
- b. Serial

✓ c. Date of last calibration *Calibration based on check samples collected during casts.*

3. Temperature

- a. Model *ROSEMOUNT PLATINUM RESISTANCE THERM*
- b. Serial

✓ c. Date of last calibration *calibration based on check samples*

4. Pressure

- a. Model
- b. Serial

✓ c. Date of last calibration *calibration based on unpressurized depth sensor in use during cruise*

d. If pressure is recorded as depth, what relationship was used to arrive at depth?

5. Sound Velocity

- a. Model
- b. Serial number
- c. Date of last calibration

- d. Is raw calibration data available? Yes _____ No _____
- e. Person to be contacted for calibration information.
- f. Reference equation used for sound velocity (i.e., Wilson, Greenspan, etc., or variations thereon).

6. Conductivity (if used)

- a. Model
- b. Serial
- c. Date of last calibration

7. Other (Attach a list for other parameters such as ambient light, transmissivity, etc.)

- ✓ 8. Is calibration data for the above sensors available? Yes ☒ No _____
- ✓ 9. Have you modified your instrument and/or sensors? yes (data format)
- ✓ 10. Which parameters are affected by the modifications? none
- ✓ 11. What is the result of the modification with respect to the accuracy, resolution, and precision of the data? no effect.

8. Operational Methods

1. Mode of use

- a. Platform is affected by pitch and roll which is not decoupled from the package.
- b. Platform is stable or platform motion is decoupled from package.
- c. Unit is freefalling.
- d. Other (describe).

2. Lowering rate (meters/min)

- a. Enter lowering rate in regions of high parameter gradients
- b. Enter lowering rate in regions of low parameter gradients

3. Time Response

- a. Unit measures continuously
- b. Unit measures _____ samples per _____
- c. Samples are averages of measurements over _____ time or _____ depth.

✓ 4. Power Supply

- a. Power supply is unstabilized _____ Maximum fluctuations \pm _____ Volts about _____ volts nom
- b. Power supply to the following portions of the system is stabilized. *all*

✓ 5. Field Checks (Indicate any operational "Deck" tests routinely made on the system (e.g., ice point tests on temperature sensors, electrical tests, etc.). (Describe) *comparisons of CTD data with Dapson reversing thermometers and salt water samples*

✓ 6. Thermal Environment *are done on a routine basis not applicable*

- a. Instrument stored in water bath at _____ °C to _____ °C

C. Reduction-Processing

1. Primary Data Output

- a. Strip chart (state scale setting(s))
- b. Paper tape
- c. Magnetic tape

- (1) Digital
- (2) Analog

2. Initial Reduction

- a. Down trace only
- b. Down trace and up trace processed

- (1) Separate
- (2) Averaged

- c. Multiple lowerings _____ through depth interval _____
- d. Values smoothed against depth. Describe (e.g., running average, etc.)
- e. Special routines to compensate for "spiking" (describe)
- f. Compression applied to final data record (i.e., vertical spacing, averaging or depth, temperature, salinity, etc.)

3. Corrections

- a. Were corrections applied to final data?
- b. Corrections based on (by parameter)

- (1) Surface sample
- (2) On-line samplers (give depth relation to probe)
- (3) Separate lowerings (Nansen casts, other probes)
- (4) Other _____

c. For corrected data, what is the estimated average accuracy of the final data? For uncorrected data, what is the average bias (if known)?

- | | | |
|--------------------|---|-------|
| (1) Depth-pressure | + | _____ |
| (2) Temperature | + | _____ |
| (3) Salinity | + | _____ |
| (4) Sound Velocity | + | _____ |



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data and Information Service
Liaison Office
P. O. Box 271
La Jolla, California 92038

December 8, 1980

EDIS:NCR

TO: Robert Williams, S-001
FROM: Nelson C. Ross, Jr., A-003
SUBJECT: Documentation of Processed STD

Dr. Bruce Taft, University of Washington forwarded to NODC a magnetic tape containing the CTD data for NORPAX's Pre-ECSE Shuttle. The data collection period was November 11, 1977 - February 14, 1978 and the platform was the Kana Keoki.

The letter of transmittal suggested that NODC contact you to answer some questions re the documentation relative to the Niel Brown CTD used during the cruise.

Would you kindly answer the portions of the attached form where indicated () and return the form to me.

Thank you for your cooperation.

cc: Bruce Taft, University of Washington
NODC



G.P.O. 1979-665-010/1041 REG. #6	
DATE 12/18	REF. NO. OF ROOM, BLDG. 00/D7372
U.S. DEPT. OF COM. TRANSMITTAL SLIP	REF. NO. OR ROOM, BLDG.
John Frank Nelson	
ACTION	
NOTE AND FILE <input checked="" type="checkbox"/> PER OUR CONVERSATION	NOTE AND RETURN TO ME <input type="checkbox"/> PER YOUR REQUEST
RETURN WITH MORE DETAILS <input type="checkbox"/> FOR YOUR APPROVAL	NOTE AND SEE ME ABOUT THIS <input type="checkbox"/> FOR YOUR INFORMATION
PLEASE ANSWER <input type="checkbox"/> FOR YOUR COMMENTS	PREPARE REPLY FOR MY SIGNATURE <input type="checkbox"/> SIGNATURE
TAKE APPROPRIATE ACTION <input type="checkbox"/> INVESTIGATE AND REPORT	



2000
12/1/80
JMS

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Department of Oceanography WB-10

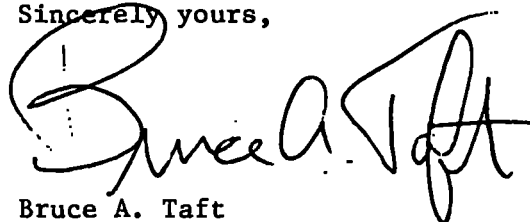
25 November 1980

Mr. Robert Stone OA/D7513
NOAA/EDIS/NODC
2001 Wisconsin Ave. NW
Washington, D.C. 20235

Dear Mr. Stone,

Enclosed is a transmittal tape for the four NORPAX pre-FGGE Shuttle CTD sections along 150°W. The documentation is complete except for several questions about calibration that need to be addressed to Mr. Robert Williams at the Physical and Chemical Oceanographic Data Facility at Scripps. In the interest of avoiding a delay, I suggest that these can be addressed directly to Bob by Nelson Ross. I have indicated on the forms where supplemental data are needed.

Sincerely yours,



Bruce A. Taft

BAT:HMB

Encl.

cc: C. Collins, NSF
D. Cutchin, SIO
S. Stillwaugh, PMEL

21/1/80
J/1/8

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Department of Oceanography WB-10

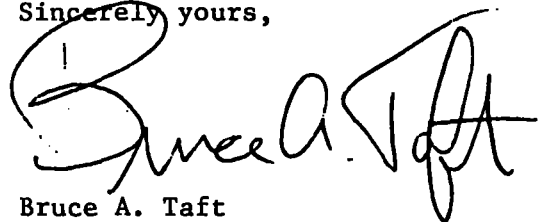
25 November 1980

Mr. Robert Stone OA/D7513
NOAA/EDIS/NODC
2001 Wisconsin Ave. NW
Washington, D.C. 20235

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Sincerely yours,



Bruce A. Taft

BAT:HMB

Encl.

cc: C. Collins, NSF
D. Cutchin, SIO
S. Stillwaugh, PMEL

Documentation of Processed STD Velocimeter Data

National Oceanographic Data Center

September 1971

Please use this form as a supplement to the NODC "Data Definition Form, General Information."

All items on this form are considered of importance to the archive processing and future use of STD-velocimeter data. In submitting computer processed data, it is especially important to complete the section titled "Reduction-Processing."

A. Instrument - Sensors

1. Instrument - Sensors

- a. Manufacturer **NEIL BROWN CTD**
- b. Model
- c. Serial
- d. Sensors (The questions asked about each sensor listed may serve as a guide for information to be submitted about other sensors.)

2. Salinity (Compensated Conductivity)

- a. Model
- b. Serial
- c. Date of last calibration

3. Temperature

- a. Model
- b. Serial
- c. Date of last calibration

4. Pressure

- a. Model
- b. Serial
- c. Date of last calibration
- d. If pressure is recorded as depth, what relationship was used to arrive at depth?

Obtain from Mr. Robert W. ...
at PACODE



5. Sound Velocity

- a. Model
- b. Serial number
- c. Date of last calibration
- d. Is raw calibration data available? Yes _____ No _____
- e. Person to be contacted for calibration information.
- f. Reference equation used for sound velocity (i.e., Wilson, Greenspan, etc., or variations thereon).

6. Conductivity (if used)

- a. Model
- b. Serial
- c. Date of last calibration

7. Other (Attach a list for other parameters such as ambient light, transmissivity, etc.)

8. Is calibration data for the above sensors available? Yes _____ No _____

9. Have you modified your instrument and/or sensors?

10. Which parameters are affected by the modifications?

11. What is the result of the modification with respect to the accuracy, resolution, and precision of the data?

? ask PACODF
?
?
?
?"

B. Operational Methods

1. Mode of use

- ✓ a. Platform is affected by pitch and roll which is not decoupled from the package.
- b. Platform is stable or platform motion is decoupled from package.
- c. Unit is freefalling.
- d. Other (describe).

2. Lowering rate (meters/min)

- a. Enter lowering rate in regions of high parameter gradients 60 m min⁻¹
- b. Enter lowering rate in regions of low parameter gradients 90 m min⁻¹

3. Time Response

- a. Unit measures continuously

- b. Unit measures 30 samples per second
 c. Samples are averages of measurements over _____ time or
 _____ depth.

4. Power Supply

- a. Power supply is unstabilized _____ Maximum fluctuations + _____
 Volts about _____ volts nom
 b. Power supply to the following portions of the system is
 stabilized.

5. Field Checks (Indicate any operational "Deck" tests routinely made
 on the system (e.g., ice point tests on temperature sensors,
 electrical tests, etc.). (Describe)

6. Thermal Environment

- a. Instrument stored in water bath at _____ °C to °C

C. Reduction-Processing

1. Primary Data Output

- a. Strip chart (state scale setting (s))
 b. Paper tape
 c. Magnetic tape

(1) Digital

(2) Analog ✓

2. Initial Reduction

- a. Down trace only ✓
 b. Down trace and up trace processed

(1) Separate

(2) Averaged

- c. Multiple lowerings _____ through depth interval _____
 d. Values smoothed against depth. Describe (e.g., running
 average, etc.) Block averaged to 2.5 db intervals
 e. Special routines to compensate for "spiking" (describe)
 f. Compression applied to final data record (i.e., vertical
 spacing, rounding of depth, temperature, salinity, etc.)

→ { Conductivity $< 20 \text{ mho cm}^{-1}$
 Temperature $< -20^\circ\text{C}$, $> 32^\circ\text{C}$
 pressure outside maximum pressure of cast.
 Threshold notes
 1. All data outside $\pm 5 \pm 0.004\% (^\circ\text{C})$ rejected.
 resolution
 2. All data outside $\pm 10 \pm 0.004\% (^\circ\text{C})$ were
 rejected

3. Corrections

a. Were corrections applied to final data?

b. Corrections based on (by parameter)

(1) ☒ Surface sample

(2) ☒ On-line samplers (give depth relation to probe)

(3) Separate lowerings (Hansen casts, other probes)

(4) Other. _____

c. For corrected data, what is the estimated average accuracy of the final data? For uncorrected data, what is the average bias (if known)?

(1) Depth-pressure

+ 4 db

(2) Temperature

+ σ = 0.019°C

(3) Salinity

+ σ = 0.007‰

(4) Sound Velocity

+ _____

} worst possible case

TAPE OR DISK ASSIGNMENT SHEET
(MRL) 11/6/78
(Rev. 11/80)

ACCESSION/TRACK NO.:

TYPE OF TAPE	TAPE NUMBER	LABEL	LRECL	BLKSIZE	RECFM	REMARKS	# RECORDS
ORIGINATOR							
DUPLICATE							
REFORMATTED							
FIRST USER							
FINAL USER							
DISK FILE	DSN					REMARKS	# RECORDS
WORK DISK FILE							
EDITED DISK FILE							

DATE:

TO:

FROM:

SUBJECT: Error Correction in Processing of Data Set - Accession # _____

1) File Type: _____

2) Project Ident.: _____

3) Track Nos.: _____

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

DATA SET ROUTE SHEET

ACCESSION/TRACK # _____

<u>Step</u>	<u>Completion Date/Init.</u>		<u>Tape # or DSN</u>	<u># of Files</u>	<u>BLKSIZE</u>	<u>LRECL</u>	<u># RECORDS</u>
ORIGINATOR TAPE #							
QUADI/SCAN TAPE #							
DDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE #							
WORK DISK FILE							
FINAL USER TAPE #							
FINAL MULCHEK							
TESTED DISK FILE							
DATA SET "FINALIZED"							

TRANSMISSION TAPE WRITTEN 24 SEP 1979 22 Apr. 1978

NINE TRACK 800BPI EBCDIC. INDEXING NORMAL PARITY ODD
LOGICAL RECORD LENGTH 80 CHARACTERS. NO. LOGICAL RECORDS PER PHYSICAL RECORD 40
NO TAPE LABELS
EOF MARK BETWEEN STATIONS
DATA ENDS WITH EOF MARK

HEADER FORMAT

A20 CRUISE NAME
A20 SHIP NAME
I4 GOG REFERENCE
I4 STATION NUMBER
I2 CAST NUMBER
I1 UP/DOWN INDICATOR (UP = 1, DOWN = 2)
I4 TOTAL NUMBER OF LOGICAL DATA RECORDS (FRAMES) FOR THIS STATION FILE
F9.3 DECIMAL LATITUDE (N = +, S = -)
F9.3 DECIMAL LONGITUDE (E = +, W = -)
3I2 MONTH DAY YEAR (-1900)
TAB80,I1 RECORD TYPE (= 1)

DATA RECORD FORMAT

F8.1 PRESSURE
F8.1 DEPTH
DEPTH CALCULATED FROM PRESSURE USING MEAN DENSITY EQUATION
F8.3 TEMPERATURE
F8.3 SALINITY
F8.3 POTENT TEMP
F8.3 SIGMA THETA
F8.3 SIGMA Z
23X TAB80,I1 RECORD TYPE (= 3)

COMPOSITE FORMAT

(F8.1, F8.1, F8.3, F8.3, F8.3, F8.3, F8.3, T 80.1H3)

Lamont - Doherty Geological Observatory
of Columbia University

Palisades, N.Y. 10964

Cable: LAMONTGEO

Palisades New York State

TWX-710-576-2663

Telephone: Code 914, Elmwood 2900

December 29, 1980

Mr. Richard Kuhn
Code D75
National Oceanographic Data Center
Washington, D. C. 20235

Dear Mr. Kuhn:

Enclosed are two 9-track tapes and listings of CTD and bottle data from ARA ISLAS ORCADAS, Cruise 12. Also accompanying the tapes is documentation describing the data format. This is the same format as IO Cruise 16 (sent to you on August 6, 1980) and IO Cruise 11 (sent on August 18, 1980).

Sincerely,

Sarah Rennie

Sarah Rennie

SR/atb

encs.

NODC ACC # 81 0043 1
~~SR R C 81 0043 1~~

DATA TAPE DESCRIPTION - ARA ISLAS OPCADAS
Cruises 11, 12, 15, 16

TAPE CHARACTERISTICS: 9 track, 800 BPI, 2400 feet

Tape 1: CTD DATA

Parameters Recorded:

Pressure (decibars); in situ Temperature (°C); Potential Temperature (°C); Salinity (o/oo); Dissolved Oxygen (in raw form, as oxygen sensor current and oxygen sensor temperature).

Format:

The data are presented at 1 decibar levels in CTD-78 format (described in detail in enclosed excerpt from WHOI Tech. Memo 78-43), one station per file following a tape header file.

Instrumentation:

Neil Brown Mark III CTD with dissolved oxygen sensor.

Tape 2: WATER SAMPLE DATA

<u>Parameter (Units)</u>	<u>Method or Comments</u>
Pressure (d bars) }	From CTD values recorded at
Temperature (°C) }	time bottle was tripped
Potential temperature (°C)	Computed from CTD P & T and bottle salinity
Salinity (o/oo)	Guildline AUTOSAL
Dissolved Oxygen (ml/l)	Winkler titration
Silicate (µg-At/l) }	Beckman DU spectrophotometer,
Phosphate (µg-At/l) }	method as described in Strickland and Parsons
σ_t Potential density: $\sigma_0, \sigma_2, \sigma_4$	Computed from CTD P & T and bottle salinity

Parameter (Units)

Method or Comments

Flag

Quality indicators and manipulation record. Flags are a combination of letters and numbers with the following interpretation:

Letters:

- A - Average of 2 or more samples
- B - Bucket (surface) sample
- C - Salinity is from CTD
- D - Data of doubtful quality
- E - Order of bottles has been rearranged to compensate for pre-trips, etc.

Numbers:

- 1 - Salinity
- 2 - Oxygen
- 3 - Silicate
- 4 - Phosphate
- 5 - Silicate and Phosphate
- 6 - Pressure
- 7 - Temperature

If no number follows a letter, the flag applies to all variables.

Examples: A1 - Salinity is an average
D23 - Oxygen and silicate are doubtful.

Format:

The water sample data is on the second tape. Data is in ASCII code, one station per file; one bottle per record (characters). Enclosed there is also a listing of the bottle data as it appears on the tape.

EXCERPTED FROM WHOI TECH. MEMO 78-43

I. Tape Structure

CTD-78 is a multiframe tape format, with each record identified by a keyword. The first file of every tape contains the Tape Header record. After this file are the station files, one file per CTD station or cast. Files are separated by EOF marks, and there is a double EOF after the last station file on the tape.

Within each CTD station file, there are two kinds of records: labeling records which document the station file and data records containing CTD data. The first record of each station file is a Station File Header record, and the last is always a File Trailer record. Any condition other than this is an error condition, probably indicating an incomplete file. Between the station file header and file trailer records are a CTD scale factor record and then the CTD data records. A Scale Factor record must always precede the Data records it is describing.

II. Record Types

There are five records defined in the CTD-78 format Version 1 as listed in Table 1. Different record types are distinguished by keywords, which are always the first word of the record, and are two's complement integers. CTD Data records have consecutively increasing positive integers for

the keyword; this also serves as the record number. All other records are distinguished by zero and negative keywords.

Data and Scale Factor records are 1032 HP words long; all other records are 90 HP words long. All the 90-word records have the last 36 words (72 bytes) reserved as a comment field. The comments will differ in nature from record type to record type, but they will always be 72 bytes of ASCII characters, padded at the end with blanks.

Information fields have the following default values: ASCII fields are blank; most two's complement integers (TCI) and floating point are zero; and unsigned integers (USI) have all bits set to one. Unused fields are set equal to two's complement integer zeros. Special default values are set for certain fields. Time, latitude, longitude, wind speed, minimum pressure and timer unit words are all -9999.

This section gives the purpose of each currently defined record type followed by a brief description of the information content.

Table I Record Types

Keyword	Record Length bytes/H.P. Words inches at 800 b.p.i.*		Record Name	Description
+N	2064/1032		CTD data	Data digitized by CTD instruments is stored. N is the consecutive record number.
0	180/90	.225	Tape header	Always the first record on tape. It identifies the tape.
-1	180/90	.225	File trailer	Always the last record of a station file.
-2	180/90	.225	Station file header for acquisition data	Always the first record of a station file. Contains station cataloging information.
-3	180/90	.225	Station file header for edited data	
-4	2064/1032	2.58	Raw data scale factor	Always immediately precedes associated data records. Contains conversions to physical units.
-5			Derived data scale factor	

* Note - Interrecord gaps are nominally .75 inches long and End of File marks are nominally 3 inches long.

A. Tape Header Record

Each tape begins with a tape header record which contains the tape name, date created, project code, tape format version number, and a comment relevant to the overall objectives of the tape. The tape header record or records comprise the first file on a tape followed by an end-of-file mark.

A tape format version number is included and this report documents tape format version number one. The unused fields in Version 1 records provide some room for expansion in future versions, beyond which new record types may be created.

TAPE HEADER RECORD

<u>Word#</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
1	KEYWORD	Equals 0 for the tape header record	TCI
2	PROJECT CODE (cruise #)	This number uniquely identifies stations of common purpose	TCI
3-5	DATE TAPE CREATED	The year, month, day that this tape was created	TCI
6-7	TAPE NAME	A unique 4-character name given the tape	ASCII
8-9	SOURCE TAPE NAME	The 4-character input tape name. First input tape name for merged files	ASCII
10	FORMAT VERSION	A positive integer to uniquely link the format version to documentation	TCI
11-54	UNUSED	Unused in Format Version 1	TCI
55-90	COMMENT	Comments on the objective of the tape	ASCII

B. Station File Header Record

This record type contains the bookkeeping and processing information to identify the station file, such as ship, cruise, station number, date, time, position, and data version. Processing programs can use the information stored in this record to sort and catalog data files.

There are edited station file header records distinguished by the keyword -3.

STATION FILE HEADER RECORD

<u>Word#</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
1	KEYWORD	Equals -3 for the edited file header	TCI
2	PROJECT CODE	A unique number to identify stations of common purpose	TCI
3	SHIP CODE	A 2-character mnemonic to uniquely identify the ship	ASCII
4	CRUISE NUMBER	A unique cruise or expedition number	TCI
5	STATION NUMBER	A unique station number assigned consecutively within the cruise	TCI
6	DATA VERSION	A code that indicates the stage of data processing	TCI
7-9	DATE OF STATION (START)	The year, month, and day that the station was collected	TCI
10	TIME (START)	The Greenwich Mean Time at the start of the station	TCI

B. Station File Header Record

This record type contains the bookkeeping and processing information to identify the station file, such as ship, cruise, station number, date, time, position, and data version. Processing programs can use the information stored in this record to sort and catalog data files.

There are edited station file header records distinguished by the keyword -3.

STATION FILE HEADER RECORD

<u>Word#</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
1	KEYWORD	Equals -3 for the edited file header	TCI
2	PROJECT CODE	A unique number to identify stations of common purpose	TCI
3	SHIP CODE	A 2-character mnemonic to uniquely identify the ship	ASCII
4	CRUISE NUMBER	A unique cruise or expedition number	TCI
5	STATION NUMBER	A unique station number assigned con- secutively within the cruise	TCI
6	DATA VERSION	A code that indicates the stage of data processing	TCI
7-9	DATE OF STATION (START)	The year, month, and day that the station was collected	TCI
10	TIME (START)	The Greenwich Mean Time at the start of the station	TCI

STATION FILE HEADER RECORD (CONT'D)

<u>Word#</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
11-12	LATITUDE (START)	The beginning latitude of the station	TCI
13-14	LONGITUDE (START)	The beginning longitude of the station	TCI
15	WORDS PER SCAN	The number of HP words per scan in the CTD data records	TCI
16	SCAN RATE	The number of CTD data scans per sec (100 x number of scans/sec)	TCI
17	TIME UNIT FREQUENCY	The number of computer timer pulses per second multiplied by 100	TCI
18	PRESSURE SAMPLING INTERVAL	The sampling interval in uniform pressure series; 10 times the number of decibars	TCI
19-20	LATITUDE (END)	The latitude at the end of the station	TCI
21-22	LONGITUDE (END)	The longitude at the end of the station	TCI
23	TIME (END)	The Greenwich Mean Time at the end of the station	TCI
24	MINIMUM PRESSURE	The minimum pressure recorded in the file (nearest decibar)	TCI
25	MAXIMUM PRESSURE	The maximum pressure recorded in the file (nearest decibar)	TCI
26-27	JULIAN DAY	The Julian day number has an offset of 244×10^4	TCI
28	INSTRUMENT	A unique identification number for the CTD under- water unit	TCI
29	QUALITY FLAG	Indicator for the overall data quality of the file	TCI

STATION FILE LEADER RECORD (CONT'D)

<u>Word#</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
30-32	EDIT DATE	The year, month, day of the station file edit	TCI
33	WATER SAMPLES	The number of water samples collected with this station	TCI
34	POSITION METHOD	A 2-character mnemonic indicating the method used to determine station position	ASCII
35	WIND SPEED	Anemometer reading, in meters/sec	TCI
36	WATER DEPTH	The corrected bottom depth to the nearest meter	TCI
37	STATION TYPE	A 2-character mnemonic describing the collection method	ASCII
38	CAST NUMBER	A number assigned con- secutively within each station	TCI
39-54	UNUSED	Unused in Version 1	TCI
55-90	COMMENT	The first 10 characters are for the last name of person creating the file. The last 8 characters are reserved for program version	ASCII

C. Scale Factor Record

The scale factor records contain the parameters necessary to convert the data into physical units. The keywords distinguish two types of scale factor records: 1) Raw data refers to data as digitized by the instrument; 2) Derived data has conversion algorithms applied to the measured parameters to form variables such as salinity and oxygen.

The scale factor records are 1032 words long and consist of program control information plus sets of variable descriptors, each describing an HP data word.

Words 1 through 8 of the scale factor record are program control words. Word 1 is the keyword equal to -5. Word 2 gives the number of variable descriptors in the record. The length of the variable descriptor in HP words is contained in Word 3 and the number of floating point words of the variable descriptor in Word 5. Word 4 gives the number in HP words in a data scan. Words 6 through 8 are currently unused.

SCALE FACTOR RECORD

(Program Control Words = Words 1-8)

<u>Word #</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
1	KEYWORD	Equals -5 for derived data	TCI
2	NUMBER OF VARIABLES	The number of variable descriptors in the record	TCI
3	DESCRIPTOR LENGTH	Length of the variable descriptor in HP words. Equals 34 for format Version 1	TCI
4	WORDS PER SCAN	The number of HP words in a data scan	TCI

SCALE FACTOR RECORD CONT'D

<u>Word#</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
5	NUMBER OF FLOATING POINT VALUES	The number of FP values in the descriptors. Equals 5 for Version 1	TCI
6-8	UNUSED	Unused in Version 1	TCI
9-1022	VARIABLE DESCRIPTORS	Variable descriptor 1: applies to first HP word of data scan Variable descriptor 2: applies to second HP word of data scan . . . Variable descriptor N: applies to N th HP word of data scan	

The variable descriptors begin at word 9. Each variable descriptor is associated with an HP word within a data scan in the same order. Each variable descriptor is an even number of HP words in length to allow storing of floating point information.

Nth VARIABLE DESCRIPTOR IN SCALE FACTOR RECORD

To find the starting HP word number of this descriptor, subtract 1 from the variable number, then multiply by the descriptor length (scale factor record word 3) and add 9.

<u>Relative Word</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
1-4	VARIABLE NAME	The name of the variable, in English, 8 characters	ASCII
5-9	DIMENSIONAL UNITS	The units of variable, in English, 10 characters	ASCII
10	VARIABLE IDENTIFIER	A 2-character mnemonic which identifies the variable	ASCII

CONFIDENTIAL VARIABLE DESCRIPTOR IN SCALE FACTOR RECORD

<u>Relative Word</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
11	LAG CORRECTION WINDOW	The number of scans to use for sensor lag correction	TCI
12	QUALITY FLAG	An indicator of the quality of the sensor calibration	TCI
13	BITS RESOLUTION	The number of bits resolution for instrument variables	TCI
14	DELTA EDIT CRITERION	The edit criterion for differencing, in digitizer units	TCI
15	SENSOR NUMBER	The identification number of the sensor	TCI
16-18	DATE OF CALIBRATION	The year, month, day of calibration of the sensor	TCI
19*	SIGN BIT WORD	The location within the data scan of the sign bit word for this variable	TCI
20*	SIGN BIT MASK	The mask applied to the sign bit word to extract the sign bit: the bit is on for negative data	TCI
21	LEAST SIGNIFICANT BITS WORD	The location within the data scan of least significant bits for this variable	TCI
22	LEAST SIGNIFICANT BITS MASK	The mask applied to L.S.B. word to extract the least significant bits	TCI
23	DIGITIZING PERIOD	The period of updating the variable's data, in scans	TCI
24	DATA MASK	The mask applied to instrument data before outputting to tape to insure zero for unused high order bits	TCI

*See Appendix I for Hewlett-Packard CTD data manipulation

Relative Word	Item	Description	Type
FROM END:			
4-5	ATTRIBUTES 1 AND 2	To be assigned for scaling or other data attributes as needed	HF FLOATING PCINT
3*	SLOPE	The slope to be applied to data	"
2*	BIAS	The bias to be applied to data (in Physical units)	"
1	SENSOR LAG	The time constant of the sensor, in seconds	"

SAMPLE
IO SCALE FACTOR RECORD

IN	NAME	UNIT	SENSOR	CA	TIME	LAG	SLOPE	BIAS
PR	PRESSURE	PSI/INCH	1	0.0	0.0	0.0	0.0	0.0
TE	TEMP	DEGREES C	1	0.0	0.0	0.0	0.0	0.0
PT	POT TEMP	DEGREES C	1	0.0	0.0	0.0	0.0	0.0
SA	SALINITY	PPM	1	0.0	0.0	0.0	0.0	0.0
OD	OXY CURR	MICROAMPS	0	0.0	0.0	0.0	0.0	0.0
OT	OXY TEMP	DEGREES C	0	0.0	0.0	0.0	0.0	0.0
TT	TIMER ON	TIMER UNIT	0	0.0	0.0	0.0	0.0	0.0

Identical for all stations

IN	NAME	UNIT	SENSOR	CA	TIME	LAG	SLOPE	BIAS
PR	PRESSURE	PSI/INCH	1	0.0	0.0	0.0	0.0	0.0
TE	TEMP	DEGREES C	1	0.0	0.0	0.0	0.0	0.0
PT	POT TEMP	DEGREES C	1	0.0	0.0	0.0	0.0	0.0
SA	SALINITY	PPM	1	0.0	0.0	0.0	0.0	0.0
OD	OXY CURR	MICROAMPS	0	0.0	0.0	0.0	0.0	0.0
OT	OXY TEMP	DEGREES C	0	0.0	0.0	0.0	0.0	0.0
TT	TIMER ON	TIMER UNIT	0	0.0	0.0	0.0	0.0	0.0

IN	ATTR. 1	TIME	END. TIME	SCALE	ATTR. 2
PR	.462000E+02	1.000000E+01	.000000E+00	.000000E+00	.000000E+00
TE	.114000E+02	.500000E+02	.000000E+00	.000000E+00	.000000E+00
PT	.000000E+00	.000000E+02	.000000E+00	.000000E+00	.000000E+00
SA	.589000E+06	1.000000E+03	1.000000E+00	.000000E+00	.000000E+00
OD	.000000E+00	.500122E+03	.000000E+00	.000000E+00	.000000E+00
OT	.000000E+00	.128000E+03	.000000E+00	.000000E+00	.000000E+00
TT	.000000E+00	.100000E+01	.000000E+00	.000000E+00	.000000E+00

value may vary from static to static

* See Appendix I for Hewlett-Packard CTD data manipulating routines.

D. CTD Data Records

The CTD data records are 1032 HP words long, which makes them compatible with early CTD formats (Tollics et al., 1971). The first 8 words pertain to the record as a whole. The rest of the record is made up of data scans of unsigned integer words (program generated), with each scan having the same number of words, and always in the same order as the data descriptors in the scale factor record. The number of words in a data scan is specified both in word 15 of the File Header record and in word 4 of the CTD scale factor record. Three kinds of unsigned integer words are stored in a data scan:

1. most significant 16 bits of a variable;
2. sign bits;
3. program generated words (e.g. quality or time),

The signs of the data are stored in a separate word. This CTD data has been converted to a uniform pressure series with one data scan associated with each pressure interval (1 db). All gaps in the data have been filled in with an estimate. Any scan that has been filled in is marked as such by setting the most significant bit of its sign word to 1, (i.e. the decimal value of the sign word is negative).

Algorithms for decoding the unsigned integer sign for each variable are given in Appendix I with an example of their use.

CTD 1 Records

<u>Word#</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
1	KEYWORD	A positive integer, equals the CTD data record number	TCI
2	TIME	Not valid for 1 dr data	TCI
3	TIMER UNITS	"	TCI
4	LOST SCANS	"	TCI
5	RECORD TAG	"	TCI
6	NUMBER OF ERRORS	"	TCI
7	NUMBER OF SCANS	The number of data scans in this record	TCI
8	DATA CHECKSUM	Checksum on the data in the rest of the record	TCI
$\text{CHECKSUM} = \sum_{n=9}^{1032} \text{IDATA}(N)$			
9-1032	CTD DATA	The data is organized in scans, one after the other, until the scan number specified by word 7, after which the record is padded with USI 65535	TCI

10 1 DECIBAR DATA SCAN

Pressure	Temp.	Pot. Temp.	Salinity	Oxygen Current	Oxygen Temp.	Timer Units	Sign Bits
----------	-------	------------	----------	----------------	--------------	-------------	-----------

E. File Trailer Record

The station file trailer record stores information available at the completion of a station file. The file trailer record is always the last record of a station file and is used as a data terminator by the processing programs.

File Trailer Record

<u>Word #</u>	<u>Item</u>	<u>Description</u>	<u>Type</u>
1	KEYWORD	Equals -1 for File Trailer Record	TCI
2	TIME (END)	GMT on a 24-hr clock, at the end of the station	TCI
3	TIMER UNITS	The number of timer units elapsed since the last minute in word 2	TCI
4	ABORT FLAG	Equals 0 if the station terminated normally Equals 1 if the station is aborted	TCI
5	SYNC ERRORS	The number of scans with synchronization errors in the station file	TCI
6	EDIT ERRORS	The number of scans with edit error flags	TCI
7	QUALITY FLAG	An indicator of the overall quality of the file	TCI
8-9	LATITUDE (END)	The latitude at the end of the station	TCI
10-11	LONGITUDE (END)	The longitude at the end of the station	TCI
12-14	DATE OF STATION (END)	Year, month, day at the end of the station	TCI
15-54	UNUSED	Unused in Version 1	TCI
55-90	COMMENTS	Final comments on file	ASCII

F. Time

Station header words 10, 17, and 23: Data records and file trailer words 2 and 3

1. When resolution is only needed to minutes, the Greenwich Mean Time (GMT) is stored as a Two's Complement Integer as follows: the hour number on a 24-hr clock is multiplied by 100 and added to the number of minutes within that hour. For example, 16 minutes past 2 o'clock in the afternoon, GMT, would be represented as 1416. This form is easy to print using decimal format conversion in FORTRAN (such as F5.2), but more difficult to work with for computing elapsed times. ✓

G. Position

Latitude and Longitude - Station header words 11-14 and 19-22, file trailer words 8-11

Latitudes north of the equator are positive, south are negative, and longitudes east of Greenwich are positive, west are negative. Latitude and longitude are each expressed as a pair of two's complement integers which are either both positive, both negative, or one of them is zero. The first word is the number of degrees, and the second is the number of minutes multiplied by 100.

Station Type - Station header word 37

Cable lowered (down and up) - CL

Cable down - CD

Cable up - CU

Ship towed - ST

Free Fall - FF

Variable I.D. - Each scale factor descriptor word 10

Pressure - PR

Temperature - TE

Conductivity - CO

Timer units - TI

Oxygen current - OC

Oxygen temperature - OT

Salinity - SA

Oxygen - OX

Potential Temperature - PT

Sign word - SW

Quality - QU

HP Data TypesASCII

American Standard Code for Information Interchange is an eight-level code with seven bits plus parity. ASCII fields are used for comments, data label, and mnemonic identifiers (variable type, ship name). The first two are free field, but a fixed number of characters, and padded with blanks. The latter are fixed at two characters (an HP word) and can be used by programs for testing and searching.

Two's Complement Integer

This is a standard HP 16-bit Two's complement integer. Its range is -32768 to 32767, and the default value, used if a field is unfilled for some reason, is zero (all bits set to 0).

Unsigned Integer

This 16-bit integer format is used for all the actual data in the data records. Its range is from zero (all bits set to 0) to 65535 (all bits set to 1). For values from 0 to 32767 the USI and TCI representations are identical. For numbers greater than 32767 the sign of the TCI is interpreted as the most significant bit in the conversion to floating point.

Floating Point (Hewlett-Packard 2100 Series 32-bit FP)

These fields are 32 bits (two HP words) with a 23-bit fraction, a seven-bit exponent, and sign bits for both fraction and exponent. Their approximate range is $\approx 10^{38}$ to $\approx 10^{-39}$, and they are used for scaling the data words. See Appendix I, data conversion to physical units, for example.

Appendix I

To convert the unsigned 16-bit integer data to real units:

$V(N)$ = 16-bit unsigned integer in word N of the scan

$SIGN = 1$

IF (IAND (Sign Bit Word(N), Sign Bit Mask(N)) .NE. 0) $SIGN = -1$

$V(N) = V(N) * SIGN$

$V(N) = V(N) * SLOPE(N) + BIAS(N)$ (see page 11)

Appendix II - DATA CALIBRATION

The data have been calibrated by comparing the raw CTD pressure and temperature and salinity computed from CTD pressure, temperature and conductivity to values obtained from discrete water samples (Rosette Bottles and reversing thermometers). Differences between rosette and CTD values were computed and a least-squares curve of maximum degree 2 was fit to the differences. The resulting polynomial coefficients are represented in the scale factor records by the BIAS, ATTRIBUTE 1 (A1) and ATTRIBUTE 2 (A2). The only coefficient which must be applied to the signed, raw values is the BIAS; A1 and A2 have already been applied and are present in the scale factor records for the purpose of documentation only.

Dissolved oxygen concentration was measured both discretely (Rosette samples) and continuously with the CTD. The CTD oxygen values are reported here in raw form as oxygen sensor current (OC) in microamps and oxygen sensor temperature (OT). The characteristics of the sensor used have not yet been determined to a degree sufficient to allow final processing of the oxygen data; information relevant to converting the raw values to in situ dissolved oxygen concentration will be provided at a later date.

Appendix III

HEWLETT - PACKARD DATA FORMATS

HP CHARACTER SET

A

Table A-1 presents the character set in ascending order according to the octal equivalents of the ASCII characters.

Table A-2 presents the binary 7-bit code of each ASCII character.

Table A-1. ASCII/Octal Conversion in Collating Sequence

ASCII Character	First Character Octal Equivalent	Second Character Octal Equivalent	ASCII Character	First Character Octal Equivalent	Second Character Octal Equivalent
NULL	000000	000000	0	030000	000060
SOH	000400	000001	1	030400	000061
EOA	001000	000002	2	031000	000062
EOM	001400	000003	3	031400	000063
EOT	002000	000004	4	032000	000064
WRU	002400	000005	5	032400	000065
RU	003000	000006	6	033000	000066
BELL	003400	000007	7	033400	000067
FE ₀	004000	000010	8	034000	000070
HT/SK	004400	000011	9	034400	000071
LF	005000	000012	:	035000	000072
VTAB	005400	000013	:	035400	000073
FF	006000	000014	<	036000	000074
CR	006400	000015	=	036400	000075
SO	007000	000016	>	037000	000076
SI	007400	000017	?	037400	000077
DC ₀	010000	000020	@	040000	000100
DC ₁	010400	000021	A	040400	000101
DC ₂	011000	000022	B	041000	000102
DC ₃	011400	000023	C	041400	000103
DC ₄	012000	000024	D	042000	000104
ERR	012400	000025	E	042400	000105
SYNC	013000	000026	F	043000	000106
LEM	013400	000027	G	043400	000107
S ₀	014000	000030	H	044000	000110
S ₁	014400	000031	I	044400	000111
S ₂	015000	000032	J	045000	000112
S ₃	015400	000033	K	045400	000113
S ₄	016000	000034	L	046000	000114
S ₅	016400	000035	M	046400	000115
S ₆	017000	000036	N	047000	000116
S ₇	017400	000037	O	047400	000117
space(blank)	020000	000040	P	050000	000120
!	020400	000041	Q	050400	000121
"	021000	000042	R	051000	000122
#	021400	000043	S	051400	000123
\$	022000	000044	T	052000	000124
%	022400	000045	U	052400	000125
&	023000	000046	V	053000	000126
'	023400	000047	W	053400	000127
(024000	000050	X	054000	000130
)	024400	000051	Y	054400	000131
*	025000	000052	Z	055000	000132
+	025400	000053	[055400	000133
,	026000	000054	\	056000	000134
-	026400	000055]	056400	000135
.	027000	000056	(A) ↑	057000	000136
/	027400	000057	- (-)	057400	000137
			ACK	076000	000174
			Ⓢ	076400	000175
			ESC	077000	000176
			DEL	077400	000177

* Characters between the space and — (←) are printable. On some devices, the underscore (—) prints as a left arrow (←) and the caret (^) as an up arrow (↑).

APPENDIX A

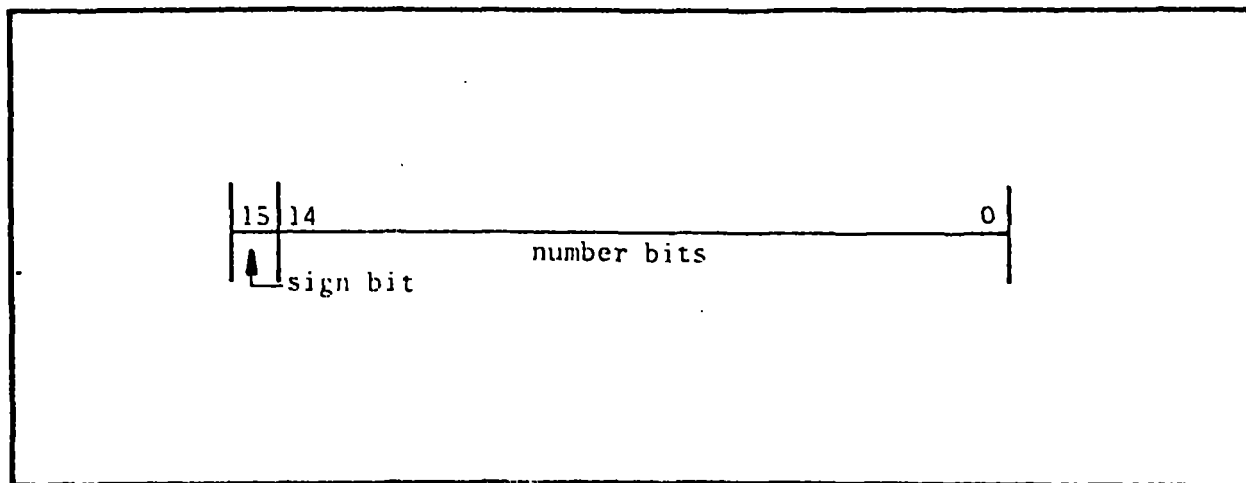
DATA FORMAT IN MEMORY

The six types of data used in HP FORTRAN IV (integer, real, double precision, complex, logical, and Hollerith) have the following format when stored in memory.

INTEGER FORMAT

PURPOSE: An integer datum is always an exact representation of a positive, negative or zero valued integer, occupies one 16-bit word and has a range of -2^{15} to $2^{15}-1$.

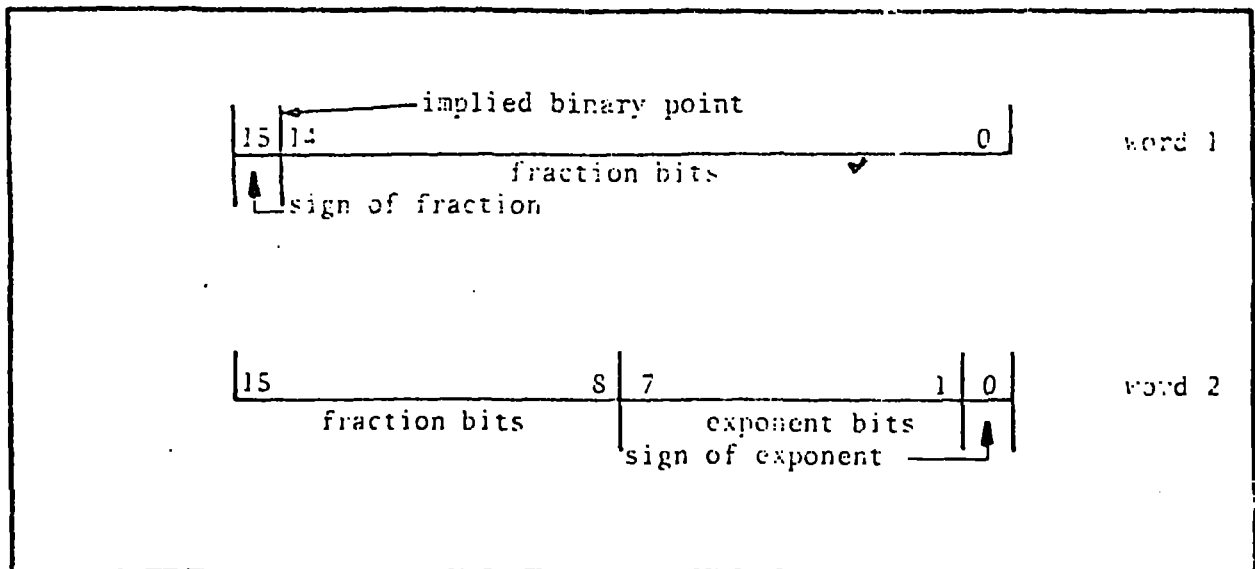
FORMAT:



REAL FORMAT

PURPOSE: A real datum is a processor approximation to the positive, negative or zero valued real number, occupies two consecutive 16-bit words in memory and has an approximate range of 10^{-38} to 10^{38} .

FORMAT:



COMMENTS: A real number has a 23-bit fraction and a 7-bit exponent.

Significance (to the user) is to six or seven decimal digits, depending upon the magnitude of the leading digit in the fraction.

ACCESSION NO. 8100432 FILETYPE F022TRACK NO. TT5090-5091 PROJECT IDENTIFICATION IDOE/NORPAX

STEP	DATE	INIT.	TAPE OR DISK DSN	NO. FILES	LRECL	BLK SIZE	NO. RECORDS
ORIG. TAPE		JBR	SUØØØ1	290	80	3200	
DUPLICATE TAPE		JBR	W12631	290	80	3200	
REFORMATTED TAPE							
REFORMATTED DISK			TAHITI OUT.				26,595
FIRST MULCHEK	4/3/86	CBS	SEL DATA. F022 TT5090	1	80		1
FINAL MULCHEK				1	1		1
MPD75 OR F022	4/4/86		F022. TT5090/F022	1	1		1
DATA SET FINALIZED	4/4/86	CBS	"	1	80		26595

ERRORS REPORTED TO PRINCIPAL INVESTIGATOR:

ADDITIONAL ERRORS/CORRECTIONS (NOT REPORTED TO P.I.)

NONE

COMMENTS (TRACKS DELETED, FIELDS DELETED, ETC.)

006078

DATA ENTRY INFORMATION SYSTEM
(DATASET INVENTORY)

RPS

DATE OF ENTRY: 03/17/86

REFERENCE NUMBER: TT5090

ACCESSION NUMBER: 8100432

FORMER REFERENCE NUMBER: _____ FORMER ACCESSION NUMBER: _____ (RESUB ONLY)

INVENTORY

MEDIA-IN: 01 - Digital Magnetic Tape DINDB CODE 09

EXCHANGE (FORMAT): E095 - University of Washington STD

PROCESSING (FORMAT): F022 - CTD/STD

* NOTE * If data is F022, create an additional record for C022.

INSTITUTE (COUNTRY AND INSTITUTE CODES): 3109

PLATFORM (COUNTRY AND PLATFORM CODES): 32KK

PLATFORM TYPE: 9 - Ship DINDB CODE 09

ORIGINATORS FILE ID: _____

ORIGINATORS CRUISE ID: TAHITI SHUTL

CRUISE START DATE: 11/10/77

CRUISE END DATE: 12/17/77

Press PgDn

PROJECT CODE: 0078

DATA USE CODE (DUC): 3

to continue

VOLUME - NUMBER OF STATIONS: 131 NUMBER OF RECORDS: 10,898

If STA/REC counts are not appropriate then enter -

NUMBER: _____ UNITS: _____

OCEAN AREA

CODE 1: 57A

MEANING: NW Pacific (limit-180)

CODE 2: 61B

MEANING: SW Pacific (limit-140 W)

CODE 3: _____

MEANING: _____

DINDB TRACK TRANSACTION GENERATED: / /

006080

DATA ENTRY INFORMATION SYSTEM
(DATASET INVENTORY)

RPS

DATE OF ENTRY: 03/17/86

REFERENCE NUMBER: TT5091 ACCESSION NUMBER: 8100432
FORMER REFERENCE NUMBER: FORMER ACCESSION NUMBER: (RESUB ONLY)

INVENTORY

MEDIA-IN: 01 - Digital Magnetic Tape DINDB CODE 09
EXCHANGE (FORMAT): E095 - University of Washington STD
PROCESSING (FORMAT): F022 - CTD/STD

* NOTE * If data is F022, create an additional record for C022.

INSTITUTE (COUNTRY AND INSTITUTE CODES): 3109
PLATFORM (COUNTRY AND PLATFORM CODES): 32KK
PLATFORM TYPE: 9 - Ship DINDB CODE 09

ORIGINATORS FILE ID: ORIGINATORS CRUISE ID: TAHITI SHUTL
CRUISE START DATE: 01/05/78 CRUISE END DATE: 02/07/78 Press PgDn
PROJECT CODE: 0078 DATA USE CODE (DUC): 3 to continue

VOLUME - NUMBER OF STATIONS: 159 NUMBER OF RECORDS: 15,697

If STA/REC counts are not appropriate then enter -

NUMBER: UNITS:

OCEAN AREA

CODE 1: 57A MEANING: NW Pacific (limit-180)
CODE 2: 61B MEANING: SW Pacific (limit-140 W)
CODE 3: MEANING:

DINDB TRACK TRANSACTION GENERATED: / /

DATA DOCUMENTATION FORM

DDF A:2:21

NOAA FORM 24-13
(11-77)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

(82NODC 211)

(While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

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 DEPT. OCEANOGRAPHY WB-10 UNIV. WASHINGTON SEATTLE WA 98195			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED NORPAX PRE-FGGE SHUTTLE		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT (Tahiti Shuttles)	
4. PLATFORM NAME(S) RYKANA KEOKI	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.) SHIP	6. PLATFORM AND OPERATOR NATIONALITY(IES) PLATFORM OPERATOR SHIP UNIV. HAWAII	7. DATES FROM: MO, DAY, YR TO: MO, DAY, YR 11/11/77 2/14/78
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL U.S. YEAR MONTH		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED. GENERAL AREA	
9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?) <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)			
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN ITEM-1) BRUCE A. TAFT (206) 324 4763			

B. SCIENTIFIC CONTENT

Include enough information concerning manner of observation, instrumentation, analysis, and data reduction routines to make them understandable to future users. Furnish the minimum documentation considered relevant to each data type. Documentation will be retained as a permanent part of the data and will be available to future users. Equivalent information already available may be substituted for this section of the form (i.e., publications, reports, and manuscripts describing observational and analytical methods). If you do not provide equivalent information by attachment, please complete the scientific content section in a manner similar to the one shown in the following example.

EXAMPLE (HYPOTHETICAL INFORMATION)

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
Salinity	7or	Nansen bottles	Inductive salinometer (Hytech model S510)	N/A (Not applicable)
		STD Bissett-Berman Model 9006	N/A	Values averaged over 5-meter intervals
Water color	Forel scale	Visual comparison with Forel bottles	N/A	N/A
Sediment size	ϕ units and percent by weight	Ewing corer	Standard sieves. Carbonate fraction removed by acid treatment	Same as "Sedimentary Rock Manual," Folk '65

(SPACE IS PROVIDED ON THE FOLLOWING
TWO PAGES FOR THIS INFORMATION)

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
PRESSURE	db	CTD	N/A	Block averaged
TEMPERATURE	°C	CTD	N/A	and at 2.5 m intervals
SALINITY	‰	CTD	N/A	"
				"

C. DATA FORMAT

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

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

Each file has a header record followed by data records, one for each given pressure value. Both record types are 80 characters long. The record type is given by the character in position 80; it is "1" for a header record and "3" for a data record. The format for each record type is given on an attached sheet.

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

There is one file for each station; an EOF mark between files and after the last file.

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL
☐ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER

*Paavo Kovala*ADDRESS *Dept. of Oceanography, Univ. of Washington, WB-10, Seattle, WA 98115*

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

<p>5. RECORDING MODE</p> <p><input type="checkbox"/> BCD <input type="checkbox"/> BINARY</p> <p><input type="checkbox"/> ASCII <input checked="" type="checkbox"/> EBCDIC</p> <p><input type="checkbox"/> _____</p>	<p>9. LENGTH OF INTER-RECORD GAP (IF KNOWN) <input type="checkbox"/> 3/4 INCH.</p> <p><input checked="" type="checkbox"/> <i>0.6 inch</i></p>
<p>6. NUMBER OF TRACKS (CHANNELS)</p> <p><input type="checkbox"/> SEVEN</p> <p><input checked="" type="checkbox"/> NINE</p> <p><input type="checkbox"/> _____</p>	<p>10. END OF FILE MARK <input checked="" type="checkbox"/> OCTAL 170</p> <p><input type="checkbox"/> _____</p>
<p>7. PARITY</p> <p><input checked="" type="checkbox"/> ODD</p> <p><input type="checkbox"/> EVEN</p>	<p>11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME KEY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)</p>
<p>8. DENSITY</p> <p><input type="checkbox"/> 200 BPI <input type="checkbox"/> 1600 BPI</p> <p><input type="checkbox"/> 556 BPI</p> <p><input checked="" type="checkbox"/> 800 BPI</p> <p><input type="checkbox"/> _____</p>	
<p>12. PHYSICAL BLOCK LENGTH IN BYTES</p> <p><i>3200</i></p>	
<p>13. LENGTH OF BYTES IN BITS</p> <p><i>6</i></p>	

Obtain information from Mr. Robert Williams at PACODF at
UCSD

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 (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALI- BRATED (✓)
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	



From the desk of
NELSON ROSS

12/12

John :

If the attachment
does not adequately
answer the questions
you had raised, pls
contact Robert Williams
directly at (714) 452-4641.
(over)

ROUTING SLIP

TO	1 Nelson Ross			FROM	Bob Williams			DATE
2								
3								
ACTION	1	2	3	FILE	1	2	3	
APPROVAL				INFORMATION				
COMMENTS				INITIALING				
DISCUSSION				RETURN				
DISPOSITION				SIGNATURE & DISPATCHING				
DRAFT REPLY				SIGNATURE & RETURN				

REMARKS:

Please call if you need
any other information
Bob



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data and Information Service
Liaison Office
P. O. Box 271
La Jolla, California 92038

December 8, 1980

EDIS:NCR

TO: Robert Williams, S-001
FROM: Nelson C. Ross, Jr., A-003
SUBJECT: Documentation of Processed STD

Dr. Bruce Taft, University of Washington forwarded to NODC a magnetic tape containing the CTD data for NORPAX's Pre-FCGE Shuttle. The data collection period was November 11, 1977 - February 14, 1978 and the platform was the Kana Keoki.

The letter of transmittal suggested that NODC contact you to answer some questions re the documentation relative to the Niel Brown CTD used during the cruise.

(✓) Would you kindly answer the portions of the attached form where indicated and return the form to me.

Thank you for your cooperation.

cc: Bruce Taft, University of Washington
NODC

RECEIVED

DEC 9 1980



Documentation of Processed STD Velocimeter Data

National Oceanographic Data Center

September 1971

Please use this form as a supplement to the NODC "Data Definition Form, General Information."

All items on this form are considered of importance to the archive processing and future use of STD-velocimeter data. In submitting computer processed data, it is especially important to complete the section titled "Reduction-Processing."

A. Instrument - Sensors

✓ 1. Instrument - Sensors

- a. Manufacturer *Neil Brown Instrument Systems*
- b. Model *MARK III*
- c. Serial
- d. Sensors (The questions asked about each sensor, listed may serve as a guide for information to be submitted about other sensors.) *P, T, C, O₂*

2. Salinity (Compensated Conductivity)

- a. Model *NBIS*
- b. Serial

✓ c. Date of last calibration *calibration based on check samples collected during casts.*

3. Temperature

- a. Model *ROSEMONT PLATINUM RESISTANCE THERM*
- b. Serial

✓ c. Date of last calibration *calibration based on check samples*

4. Pressure

- a. Model
- b. Serial

✓ c. Date of last calibration *calibration based on temperature*

d. If pressure is recorded as depth, what relationship was used to arrive at depth?

5. Sound Velocity

- a. Model
- b. Serial number
- c. Date of last calibration

- d. Is raw calibration data available? Yes _____ No _____
- e. Person to be contacted for calibration information.
- f. Reference equation used for sound velocity (i.e., Wilson, Greenspan, etc., or variations thereon).

6. Conductivity (if used)

- a. Model
- b. Serial
- c. Date of last calibration

7. Other (Attach a list for other parameters such as ambient light, transmissivity, etc.)

✓ 8. Is calibration data for the above sensors available? Yes ☒ No _____

✓ 9. Have you modified your instrument and/or sensors? yes (date format)

✓ 10. Which parameters are affected by the modifications? none

✓ 11. What is the result of the modification with respect to the accuracy, resolution, and precision of the data? no effect

8. Operational Methods

1. Mode of use

- a. Platform is affected by pitch and roll which is not decoupled from the package.
- b. Platform is stable or platform motion is decoupled from package.
- c. Unit is freefalling.
- d. Other (describe).

2. Lowering rate (meters/min)

- a. Enter lowering rate in regions of high parameter gradients
- b. Enter lowering rate in regions of low parameter gradients

3. Time Response

- a. Unit measures continuously
- b. Unit measures _____ samples per _____
- c. Samples are averages of measurements over _____ time or _____ depth.

✓ 4. Power Supply

- a. Power supply is unstabilized _____ Maximum fluctuations \pm _____ Volts about _____ volts nom
- b. Power supply to the following portions of the system is stabilized. *all*

✓ 5. Field Checks (Indicate any operational "Deck" tests routinely made on the system (e.g., ice point tests on temperature sensors, electrical tests, etc.). (Describe) *comparison of CTD data with Dapson, measuring temperature and salinity samples*

✓ 6. Thermal Environment *see above and routine bath*

- a. Instrument stored in water bath at _____ °C to _____ °C

C. Reduction-Processing

1. Primary Data Output

- a. Strip chart (state scale setting(s))
- b. Paper tape
- c. Magnetic tape

- (1) Digital
- (2) Analog

2. Initial Reduction

- a. Down trace only
- b. Down trace and up trace processed
 - (1) Separate
 - (2) Averaged
- c. Multiple lowerings _____ through depth interval _____
- d. Values smoothed against depth. Describe (e.g., running average, etc.)
- e. Special routines to compensate for "spiking" (describe)
- f. Compression applied to final data record (i.e., vertical spacing, rounding of depth, temperature, salinity, etc.)

3. Corrections

- a. Were corrections applied to final data?
- b. Corrections based on (by parameter)

- (1) Surface sample
- (2) On-line samplers (give depth relation to probe)
- (3) Separate lowerings (Nansen casts, other probes)
- (4) Other _____

c. For corrected data, what is the estimated average accuracy of the final data? For uncorrected data, what is the average bias (if known)?

- | | | |
|--------------------|---|-------|
| (1) Depth-pressure | + | _____ |
| (2) Temperature | + | _____ |
| (3) Salinity | + | _____ |
| (4) Sound Velocity | + | _____ |

TRANSMISSION TAPE WRITTEN 24 SEP 1979

22 Apr 1978

LINE TRACK 900SPI EBCDIC INDEXING NORMAL PARITY ODD

LOGICAL RECORD LENGTH 80 CHARACTERS NO LOGICAL RECORDS PER PHYSICAL RECORD 40

NO TAPE LABELS

EOF MARK BETWEEN STATIONS

DATA ENDS WITH EOF MARK

HEADER FORMAT

A20 CRUISE NAME

A20 SHIP NAME

I4 GGG REFERENCE

I4 STATION NUMBER

I2 CAST NUMBER

I1 UP/DOWN INDICATOR (UP = 1, DOWN = 2)

I4 TOTAL NUMBER OF LOGICAL DATA RECORDS (FRAMES) FOR THIS STATION FILE

F9.3 DECIMAL LATITUDE (N = +, S = -)

F9.3 DECIMAL LONGITUDE (E = +, W = -)

I2 MONTH DAY YEAR (-1900)

TAR80.11 RECORD TYPE (= 1)

DATA RECORD FORMAT

F8.1 PRESSURE

F8.1 DEPTH

DEPTH CALCULATED FROM PRESSURE USING MEAN DENSITY EQUATION

F8.3 TEMPERATURE

F8.3 SALINITY

F8.3 POTENT TEMP

F8.3 SIGMA THETA

F8.3 SIGMA 2

23X TAR80.11 RECORD TYPE (= 3)

COMPOSITE FORMAT

(F8.1, F8.1, F8.3, F8.3, F8.3, F8.3, F8.3, T 80.1H3)

DATE: .

TO: D711

FROM: D713

SUBJECT: Error Correction in Processing of Data Set - Accession # 8100432

- 1) File Type: C139 (CTD-78 of originator)
- 2) Project Ident.: NORPAX
- 3) Track Nos.: _____

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

DATA SET ROUTE SHEET

ACCESSION/TRACK # 8100432

Step	Completion Date/Init.	Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE	<u>Old data</u> } <u>gpp</u>	SUPP01	290	3200	80	
QUADI/SCAN TAPE		W12631	290	3200	80	
ASSIGNED FOR PROCESS.						
DDF EVALUATION						
QUALITY REVIEW						
PRELIMINARY DATA SORT						
PRELIMINARY MULCHEK						
FIRST USER TAPE						
WORK DISK FILE						
FINAL USER TAPE						
FINAL MULCHEK						
EDITED DISK FILE						
DATA SET "FINALIZED"						

TAPE OR DISK ASSIGNMENT SHEET
(MRL) 11/6/78
(Rev. 11/80)

ACCESSION/TRACK NO.: **8100432**

TYPE OF TAPE	TAPE NUMBER	LABEL	LRECL	BLKSIZE	RECFM	REMARKS	# RECORDS
ORIGINATOR	S40001	N	80	3200		9TRK 800BPI ODD PARITY EBCDIC	
DUPLICATE	W12631	5 DNOBCX S40001	80	3200	U	4TRK 1600BPI ODD PARITY ASCII	290 files
REFORMATTED							
FIRST USER							
FINAL USER							
DISK FILE	DSN					REMARKS	# RECORDS
WORK DISK FILE							
EDITED DISK FILE							

Password:

accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
8100432	C022	329436	0078	3109	32KK	1977/11/10	TT5090	314309
8100432	C022	329437	0078	3109	32KK	1978/01/05	TT5091	314310
8100432	F022	TT5090	0078	3109	32KK	1977/11/10	TAHITI S	314311
8100432	F022	TT5091	0078	3109	32KK	1978/01/05	TAHITI S	314312

(4 rows affected)

Password:

accNo	fleA	refNo	ship	staCnt	recCnt	startDate	endDate
-----	-----	-----	-----	-----	-----	-----	-----
8100432	C022	329436	32KK	131	261	77/11/10	77/12/17
8100432	C022	329437	32KK	159	316	78/01/05	78/02/14
8100432	F022	TT5090	32KK	131	10898	77/11/10	77/12/17
8100432	F022	TT5091	32KK	159	15697	78/01/05	78/02/14

(4 rows affected)

DINDB QUERY LISTING
06/13/1988

*	ACC-NO	REFNO	F-A	PROJ	INST	PLAT	CRUISE	***CRUISE DATES***	STA	STA
								START END	IN	OUT

*	8100432	329436	C022	0078	3109	32KK	TT5090	11/10/1977 12/17/1977	131	131

KANA KEOKI

100E/NORWAY 179.26 A-7

HAUSEN REF. #

329436

MULDARS TRACK #

TT5090

MONITOR: CONTACT

SELKIRK

LOCATION OF F022 SOURCE

ARCHIVES

RECORD ALL ERRORS FOUND

CONSEC(S)

ERRORS FOUND

NONE need repairing

*All consecs have time of 000 hours.
These were deleted in the station data.*

DINDB QUERY LISTING
06/13/1988

* ACC-NO	REFNO	F-A	PROJ	INST	PLAT	CRUISE	***CRUISE DATES*** START END	STA IN	STA OUT

* 8100432	329437	C022	0078	3109	32KK	TT5091	01/05/1978 02/14/1978	159	159

NORWAY

139.26A-8

HANSEN REF. #

329437

MULDARS TRACK #

TT5091

MONITOR: CONTACT

Gerald W. Damon

LOCATION OF FO22 SOURCE

Archives (TT5091)

RECORD ALL ERRORS FOUND

CONSEC(S).

ALL

ERRORS FOUND

Time Delete 000 throughout

NONE

Password:

accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
-----	----	-----	----	----	-----	-----	-----	-----
8100432	C022	329436	0078	3109	32KK	1977/11/10	TT5090	314309
8100432	C022	329437	0078	3109	32KK	1978/01/05	TT5091	314310
8100432	F022	TT5090	0078	3109	32KK	1977/11/10	TAHITI S	314311
8100432	F022	TT5091	0078	3109	32KK	1978/01/05	TAHITI S	314312

(4 rows affected)

Password:

accNo	fleA	refNo	ship	staCnt	recCnt	startDate	endDate
-----	-----	-----	-----	-----	-----	-----	-----
8100432	C022	329436	32KK	131	261	77/11/10	77/12/17
8100432	C022	329437	32KK	159	316	78/01/05	78/02/14
8100432	F022	TT5090	32KK	131	10898	77/11/10	77/12/17
8100432	F022	TT5091	32KK	159	15697	78/01/05	78/02/14

(4 rows affected)