DONE. 9 RECORDS WRITTEN. UNIQUE'S 179789 THRU 179797 . 8700347

INVENTORY Record found
ord 7462 on screen
798 DATA ENTRY INFORMATION SYSTEM SJH
(DATASET INVENTORY)

DATE OF ENTRY: 01/03/89

REFERENCE NUMBER: 313464 ACCESSION NUMBER: 8700347
FORMER REFERENCE NUMBER: FORMER ACCESSION NUMBER: (RESUB ONLY)

INVENTORY
MEDIA-IN: 01 - Digital Magnetic Tape DINDB CODE 09
EXCHANGE (FORMAT): E003 - Ocean Station Data (SD2-112 Byte)
PROCESSING (FORMAT): C100 - Ocean Station Data (SD2 Format)

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

INSTITUTE (COUNTRY AND INSTITUTE CODES): 3109
PLATFORM (COUNTRY AND PLATFORM CODES): 31T3
PLATFORM TYPE: 5 - Ice Island DINDB CODE 05

ORIGINATORS FILE ID: ORIGINATORS CRUISE ID: T3
CRUISE START DATE: 10/09/68 CRUISE END DATE: 04/22/74 Press PgDn
PROJECT CODE: DATA USE CODE (DUC): 3 to continue
F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

ENTORY

VOLUME - NUMBER OF STATIONS: 114 NUMBER OF RECORDS: 3,486

If STA/REC counts are not appropriate then enter -

NUMBER: UNITS:

AVERAGE REC SIZE: 112 MBYTES: 0.390432

OCEAN AREA
CODE 1: 17 MEANING: Arctic Ocean
CODE 2: MEANING:
CODE 3: MEANING:

DINDB TRACK TRANSACTION GENERATED: / /

F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

Univ. Washington physical Oceanographic data

ACCESSION NO. 8700347 FILETYPE C100 TRACK NO. 313404 PROJECT IDENTIFICATION

STEP	DATE	INIT.	TAPE OR DISK DSN	NO. FILES	LRECL	BLK SIZE	NO. RECORDS
ORIG. TAPE	11/17/87	CMH	A00589	3	120	3000	
DUPLICATE TAPE	11/30/87	CMH	W00829 *	3	120	3000	5583
REFORMATTED TAPE	12-27-89	R.P.S.	W15090 * *	1	112	11200	3348
REFORMATTED DISK							
FIRST MULCHEK							
FINAL MULCHEK							
MPD75 OR F022							
DATA SET FINALIZED							

ERRORS REPORTED TO PRINCIPAL INVESTIGATOR: 9TK, SL, 1600 bpi
* DNODC * 8700347-01.

ADDITIONAL ERRORS/CORRECTIONS (NOT REPORTED TO P.I.) ** LABEL = DNODC * WASHOUT.

COMMENTS (TRACKS DELETED, FIELDS DELETED, ETC.)

USER NAME	PHONE #	ORG/TASK #	DATE SUBMITTED	DATE DUE	BIN #
Cliff Hartley	673-5636	EG1200&N3AH9	11/24/87	ASAP	09

EQUIPMENT TO BE USED AND FUNCTION TO BE PREFORMED

- Copy files 1-3 only to a 'W' tape
- Scan 'W' tape

INPUT MEDIUM
PAPER CARD DISK (TAPE)
DISKETTE OTHER(SPECIFY)

OUTPUT MEDIUM
CARD DISK (PRINT) (TAPE) PLOT
DISKETTE OTHER(SPECIFY)

TAPE/DISKETTE INFORMATION

	(TAPE #/ DISKETTE)	SLOT #	TRK	DENSITY	PARITY	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# OF FILES
INPUT	A00589		9	1600	ODD	NL	FB	120	3000	3
	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII (EBCDIC) BCD SDF OTHER(SPECIFY)				DATA SET NAME			PURGE DATE
	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# OF FILES
	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII EBCDIC BCD SDF OTHER(SPECIFY)				DATA SET NAME			PURGE DATE
	(TAPE #/ DISKETTE)	SLOT #	TRK	DENSITY	PARITY TYPE	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# OF FILES
OUTPUT	W40829		9	1600	ODD	SL	FB	120	3000	3
	SECTOR SIZE	EXCHANGE TYPE	CODE: (ASCII) EBCDIC BCD SDF OTHER(SPECIFY)				DATA SET NAME DNODC*8700347-01.			PURGE DATE

SPECIAL INSTRUCTIONS

Please send 'W' tape to Asheville, N.C.

ESTIMATED EXECUTION TIME

D731 USE ONLY

JOB #	DATE JOB COMPLETED	START TIME	END TIME	PRIORITY	DEVICES USED, NUMBER OF TAPE MOUNTS, LINES PRINTED DISKETTES USED, CARDS PUNCHED, CARDS KEYVERIFIED
L71134Q7	11/30/87	0825	0830	C	COMPLETED BY J.S.

COMMENTS

USER NAME	PHONE #	ORG/TASK #	DATE SUBMITTED	DATE DUE	BIN #
Cliff Hartley	673-5636	EG12008N3HH9	11/10/87	ASAP	09

EQUIPMENT TO BE USED AND FUNCTION TO BE PREFORMED

Please scan files 1-3 only of this tape

~~1-3~~

INPUT MEDIUM	OUTPUT MEDIUM
PAPER CARD DISK TAPE DISKETTE OTHER(SPECIFY)	CARD DISK PRINT TAPE PLOT DISKETTE OTHER(SPECIFY)

TAPE/DISKETTE INFORMATION

	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# OF FILES
INPUT	A00589		9	1600						
	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII EBCDIC BCD SDF OTHER(SPECIFY)				DATA SET NAME			PURGE DATE
	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# OF FILES
	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII EBCDIC BCD SDF OTHER(SPECIFY)				DATA SET NAME			PURGE DATE
	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY TYPE	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# OF FILES
OUTPUT										
	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII EBCDIC BCD SDF OTHER(SPECIFY)				DATA SET NAME			PURGE DATE

SPECIAL INSTRUCTIONS

Please return tape A00589 to Bin 09

ESTIMATED EXECUTION TIME

D731 USE ONLY

JOB #	DATE JOB COMPLETED	START TIME	END TIME	PRIORITY	DEVICES USED, NUMBER OF TAPE MOUNTS, LINES PRINTED DISKETTES USED, CARDS PUNCHED, CARDS KEYVERIFIED
87110 003	11/17/87	0855	0900	C	COMPLETED BY J.S

COMMENTS

10-26-87

CLIFF:

Please MAKE TWO FOLDERS;

FILES 1-3 LABEL = DNODC#8700347-01.

FILES 4-5 ↓ ↓ #8700347-02.

#306/14-8-87

NOAA FORM 24-5
(8-73)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

TRANSMITTAL AND RECEIPT RECORD

(Please sign and return carbon copy acknowledging receipt)

TO:	REFER TO
NOAA/NESDIS/NODC 1825 Connecticut Ave NW Washington DC 20235	ATTENTION E/OC13, Dr. Anthony R. Picciolo

THE ITEM(S) LISTED BELOW WERE FORWARDED TO YOU BY

☐ ORDINARY MAIL ☐ REGISTERED MAIL ☐ AIR MAIL ☒ CERTIFIED MAIL ☐ GOVERNMENT TRUCK ☐ BY HAND ☐ OTHER

Cert. no. 523153

Enclosed, find documentation (including 28 DDF's, printouts of the digital data, and data formats) and one (1) magnetic data tape containing a total of five (5) files of the Fletchers Ice Island T-3 hydrographic, chlorophylls and primary productivity data as received from Drs. Rita Hornér, Karl Banse and Mr. Jim Postel, UW, oceanography dept..

Tape layout

Files 1-3 contain the hydrographic (station, physical oceanographic) data. ✓
File 4 is the chlorophyll data.
File 5 is the primary productivity data.

**Please refer to the enclosed cover letter, it contains complete information regarding both the tape layout and tape specifications.

cc: Dr. Rita Horner, UW, oceanography

8700347

A00589

FORWARDED BY (Signature)	TITLE	DATE FORWARDED
Sid Stillwaugh	NODC Liaison Officer, Seattle	10-05-87
RECEIVED BY (Signature)	TITLE	DATE RECEIVED
Francis Mitchell		10-8-87

NOAA FORM 24-5 (8-73)

#306/18-8-87

School of Oceanography,WB-10
University of Washington
Seattle, Washington 98195
August 31, 1987

Mr. Sid Stillwaugh
Northwest Liaison Office
NOAA/NESDIS/NODC
Bin C15700/Building 1
7600 Sand Point Way NE
Seattle, Washington 98115

Dear Sid:

Enclosed are the file format descriptions to accompany the data tape I created on the University of Washington CYBER 180-855 computer with Tom English's hydrographic, chlorophyll, and productivity data from Ice Island T-3.

There are five separate files on the magnetic tape. The first three files contain hydrographic data in the "Station Data I File" format (Attachment A). (I have left the various 'flag' columns blank for NODC to fill in after they read and accept the data.). There are three files of hydrographic data just because that gave me convenient file sizes to use on the CYBER. The fourth file contains chlorophyll data in the format specified in Attachment B. The fifth file contains the productivity data in the format specified in Attachment C. If there are any questions about these formats I will be happy to clarify them for you.

For ease in writing this tape for you, I wrote all files as though the record length was 120 characters, resulting in a lot of blank columns in the chlorophyll and the productivity files. The first four files start right out with the data. The productivity file starts out with four comment lines that tells you that the station names cannot be matched directly with station names in the other two file types because Tom's group kept different station sequences for each data type.

The following information will aid in reading this tape.

Attributes as expressed in FORTRAN.
Responsible Computer Specialist: James R. Postel (206) 543-6141 or
(206) 543-5093
School of Oceanography, WB-10
University of Washington
Seattle, WA 98195

Recording Mode: EBCDIC
Number of Tracks: Nine
Parity: Odd
Density: 1600 bpi
Length of inter-record gap: 3/4 inch
End of File Mark: Tape Mark
Record Length: 120 characters
Block Length: 3000 characters (25 records/block)
Paper Label: VSN = NDCENG; T3 DATA TO NODC (5 files);
Originator = T.S. English & K. Banse

Sincerely,
James R. Postel
James R. Postel

ATTACHMENT A

#3 06/14-8-87

RICK RINN

Code: D763 Date: MARCH 1980
Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: MASTER RECORD

RELATION OF RECORD TO THE FILE:

ELEMENT NAME AND LEVEL	LOCATION / LENGTH: Position	Units	Number	Units	REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	1-2	CHAR	2	BYTE		CHAR (2)	Originator's Nationality	NODC Country Code
	3-4	"	2	"		" (2)	Ship Name	NODC Ship Code
	5	"	1	"		" (1)	Latitude Hemisphere	'N' or 'S'
	6-7	"	2	"		" (2)	Degrees of Latitude	0 - 90
	8-10	"	3	"		" (3)	Minutes of Latitude	0 - 60,pos 10 blank or tenths
	11	"	1	"		" (1)	Longitude Hemisphere	'E' or 'W'
	12-14	"	3	"		" (3)	Degrees of Longitude	0 - 180
	15-17	"	3	"		" (3)	Minutes of Longitude	0 - 60,pos 17 blank or tenths
	18-20	"	#3	"		" (#)3	Marsden Square	
	21	"	1	"		" (1)	Blank	
	22-23	"	2	"		" (2)	Year	1900 to Present
	24-25	"	2	"		" (2)	Month	01 - 12
	26-27	"	2	"		" (2)	Day	
	28-30	"	3	"		" (3)	Station Time	000 - 99.9 or blank
	31-33	"	3	"		" (3)	Originator's Cruise ID	Alphanumeric
	34-42	"	9	"		" (9)	Originator's Station ID	Alphanumeric
	43-47	"	5	"		" (5)	Depth to Bottom	Meters
	48	"	1	"		" (1)	Data Use Code	1 - 5,blank
	49-50	"	2	"		" (2)	No. of Observations	No. of Observed depth levels per station
	51-52	"	2	"		" (2)	Water Color	Forel-Ule Scale (00-21)
	53-54	"	2	"		" (2)	Water Transparency	Secchi Disc-Meters (00-99)
	55-56	"	2	"		" (2)	Wave Direction	WMO Codes 0885 + 0887
	57	"	1	"		" (1)	Wave Height	WMO Code 1555
	58	"	1	"		" (1)	Wave Amount	WMO Code 3700
	59	"	1	"		" (1)	Wave Period	WMO Code 3155
will change code →	60-61	"	2	"		" (2)	Wind Direction	WMO Code 0885 + 0887
	62	"	1	"		" (1)	Wind Indicator	'F'-(Beaufort) or 'K'-(Knots)

Code: D763 Date: MARCH 1980
Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: MASTER RECORD (continued)

RELATION OF RECORD TO THE FILE:

63-64 Wind Speed

ELEMENT NAME AND LEVEL	LOCATION/LENGTH: Position	Units	Number	Units	REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	65-67	CHAR	3	BYTE		CHAR (3)	Barometric Pressure	Millibars to 1/10
	68	"	1	"		" (1) ✓	Dry Bulb Temp. Sign	'+' or '-'
	69-71	"	3	"		" (3)	Dry Bulb Temperature	Centigrade
	72	"	1	"		" (1)	Wet Bulb Temp. Sign	'+' or '-'
	73-75	"	3	"		" (3)	Wet Bulb Temperature	Centigrade
	76-77	"	2	"		" (2)	Weather Code	WMO Codes 4677 + 4501
								When position 76 contains
								an 'X' and a digit appears
								in position 77 - WMO Code
								4501 was used.
	78	"	1	"		" (1)	Cloud Type Code	WMO Code 0500
	79	"	1	"		" (1)	Cloud Amount Code	WMO Code 2700
	80-82	"	3	"		" (3)	Blank	
	83-86	"	4	"		" (4)	NODC Reference No. ✓	Assigned by NODC
	87-90	"	4	"		" (4)	NODC Station ID No.	Assigned by NODC
	91	"	1	"		" (1)	Cruise Flag	'I' = Cruise number differs
								from PARM field on
								control card. (Fatal)
	92	"	1	"		" (1)	Ship Flag	'I' = Ship Code differs from
								preceding stations.
	93	"	1	"		" (1)	Consec Flag	'I' = Any blank or over-
								punch in consecutive
								number (Fatal)
	94	"	1	"		" (1)	Date-Time Flag	'I' = Date + Time are less
								than those on preceding
								station

Code: D763 Date: MARCH 1980

Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: MASTER RECORD (continued)

RELATION OF RECORD TO THE FILE:

ELEMENT NAME AND LEVEL	LOCATION / LENGTH: Position	Units	Number	Units	REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGUAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	95	CHAR	1	BYTE		CHAR (1)	Month Flag	'1'=Blank in month or month greater than 12 or less than 01 or overpunched (fatal)
	96	CHAR	1	BYTE		CHAR (1)	Day Flag	'1'=One Blank in day (but not all blank) or day greater than 28 thru 31 depending on month or overpunch in day. (Fatal)
	97	CHAR	1	BYTE		CHAR (1)	Obs. Flag	'1'=Number of observed records does not equal number in master record.
	98	CHAR	1	BYTE		CHAR (1)	Hour Flag	'1'=First two positions of time blank but not all blank. Overpunch in field or time greater than 23.9. (Fatal)
	99	CHAR	1	BYTE		CHAR (1)	LL Minutes Flag	'1'=Greater than 60 or one blank in minutes of lat. and/or long. Overpunch in tens or tenths. (Fatal)
	100	CHAR	1	BYTE		CHAR (1)	LL Degrees Flag	'1'=Blank or overpunch in lat. and/or long. degrees,or lat. greater than 90 or long. greater than 180. (Fatal)
	101	CHAR	1	BYTE		CHAR (1)	Year Flag	'1'=one blank or overpunch in field (Fatal)

Code: D763 Date: MARCH 1980
Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: MASTER RECORD (continued)

RELATION OF RECORD TO THE FILE:

ELEMENT NAME AND LEVEL	LOCATION / LENGTH				REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGUAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	Relation	Units	Number	Units				
	102	CHAR	1	BYTE		CHAR (1)	Card Type 3 or 4 Flag	'1'=No observed record types 3 or 4 (Fatal).
	103	CHAR	1	BYTE		CHAR (1)	Country Flag	'1'=Any blank in country code. (Fatal)
	104	CHAR	1	BYTE		CHAR (1)	DNP Flag	'1'=Invalid entry for DNP Code
105-	106	CHAR	2	BYTE		CHAR (2)	Max Day Flag	Two byte code giving maximum no. of days in month: 00=29, 01=30, 10-31, 11=28.
	107	CHAR	1	BYTE		CHAR (1)	Dep to Bot Flag	'1'=Any blank in Depth to bottom or overpunch in last 3 positions. (Fatal)
	108	CHAR	1	BYTE		CHAR (1)	Fatal Flag	'1'=Station contains an error which must be correcte or blanked out before it car be finalized.
	109	CHAR	1	BYTE		CHAR (1)	Sequence Flag	'1'=Consec No. not one greate than preceding no.
110-	111	CHAR	2	BYTE		CHAR (2)	Rate of Speed	Knots. - If speed between stations is greater than 30,31 knots is shown.
	112	CHAR	1	BYTE		CHAR (1)	Record Type	Always '1'

RICK RINN
Code: D763 Date: MARCH 1980
Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: OBSERVED RECORD (#3 or #4)

RELATION OF RECORD TO THE FILE:

ELEMENT NAME AND LEVEL	LOCATION / LENGTH: Relative	Units	Number	Units	REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	1-27	CHAR	27	BYTE		CHAR (27)	Duplicates first 27 charaters of Master Record	
	28-30	"	3	"		" (3)	Messenger Time or Cast No.	00.0-99.9 or blank (GMT)
								(If messenger time not given,
								individual casts (1-9) are
								identified in position 30)
	31-36	"	6	"		" (6)	Depth of Sample	Meters to Tenths - position
								31 blank or 'T' for thermo-
								metric depth, position 36
								numeric or blank
	37	"	1	"		" (1)	Depth Quality Indicator	6 - 9
								'6'=Uncorrected "wire out"
								depth
								'7'=Implausible depth as
								marked by NODC
								'8'=Doubtful depth as
								marked by originator
								'9'=Blank depth of sample
	38-42	"	5	"		" (5)	Temperature	-2.4 -44.0 Celcius position
								38 is minus sign if negative
								else numeric value if positive
	43	"	1	"		" (1)	Temp. Quality Indicator	7-9 (see Depth Indicator)
	44-48	"	5	"		" (5)	Salinity	0.0-45.000 parts/thousand
	49	"	1	"		" (1)	Salinity Quality Indicator	7-9 (See Depth Indicator)
	50	"	1	"		" (1)	Sigma-T Sign	plus (+) or minus (-)
	51-54	"	4	"		" (4)	Sigma-T	-4.00 -45.00
	55-58	"	4	"		" (4)	Sound Velocity	1300.0 - 1600.0 meters/sec
	59-62	"	4	"		" (4)	Oxygen	00.0-14.00 milliliters/liter

RICK RINN

Code: D763 Date: MARCH 1980
Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: OBSERVED RECORD (continued)

RELATION OF RECORD TO THE FILE:

ELEMENT NAME/LOCATION/LENGTH AND LEVEL	Position	Units	Number	Units	REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	63	CHAR	1	BYTE		CHAR (1)	Oxygen Quality Indicator	'8'=Doubtful as marked by originator'9'=Blank oxygen fiel
	64-66	"	3	"		" (3)	Inorganic Phosphate	microgram-atoms/liter to Hundreths (See Note)
	67-69	"	3	"		" (3)	Total Phosphorus	microgram-atoms/liter to Hundreths (See Note)
	70-72	"	3	"		" (3)	Nitrite - Nitrogen	microgram-atoms/liter to Hundreths (See Note)
	73-75	"	3	"		" (3)	Nitrate - Nitrogen	microgram-atoms/liter to Tenths (See Note)
	76-79	"	4	"		" (4)	Silicate - Silicon	microgram-atoms/liter to Tenths (See Note)
	80-82	"	3	"		" (3)	pH	to Hundreths
	83-90	"	8	"		" (8)	Duplicates positions 83-90 from	Master Record
	91	"	1	"		" (1)	Last Depth Flag	'1'=Depth of last observed card exceeded depth to bottom shown on master record by over 10%
	(continued on next page)							
NOTE:	All chemistries will contain their appropriate numeric values or the alpha characters 'TRC' for trace or 'EXC' for excess.							

Code: 0763 Date: MARCH 1980
Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: OBSERVED RECORD (continued)

RELATION OF RECORD TO THE FILE:

ELEMENT NAME AND LEVEL	LOCATION / LENGTH: Position	Units	Number	Units	REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGUAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	92	CHAR	1	BYTE		CHAR (1)	Record ID Flag	'1'= Positions 1 to 27 and 83 to 90 of detail card do not match those of master record. Common care of detail records is not edited or altered except th first position of cruise nu (pos. 83) is made zero if blank. (Fatal)
	93	CHAR	1	BYTE		CHAR (1)	Decreasing Depth Flag	'1'=depths in detail records do not increase. (Fatal)
	94	CHAR	1	BYTE		CHAR (1)	PO4 Flag	'1'=Phosphate (PO4-P) is greater than 4.00
	95	CHAR	1	BYTE		CHAR (1)	Total P Flag	'1'=Total phosphorus is less than PO4-P. Compared if bo are present on same detail record and entry is other than TRC.
	96	CHAR	1	BYTE		CHAR (1)	SIO3 Flag	'1'=Silicate-silicon (SIO3-Si) greater than 3.0
	97	CHAR	1	BYTE		CHAR (1)	NO2 Flag	'1'=Nitrite-nitrogen (NO2-N) greater than 4.00
	98	CHAR	1	BYTE		CHAR (1)	NO3 Flag	'1'=Nitrate-nitrogen (NO3-N) greater than 45.00
	99	CHAR	1	BYTE		CHAR (1)	pH Flag	'1'=PH less than 7.40 or more than 8.50

Code: D763 Date: MARCH 1980
Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: OBSERVED RECORD (continued)

RELATION OF RECORD TO THE FILE:

FIELD NAME AND LEVEL	LOCATION / LENGTH: Position	Units	Number	Units	REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	100	CHAR	1	BYTE		CHAR (1)	Blank Depth Flag	'1'=Embedded blank in depth field of detail record. (Fat
	101	CHAR	1	BYTE		CHAR (1)	Temperature Flag	'1'=Blank in first 3 position of temperature or temp less than - 2.4 degrees or greate than 44.0 (Fatal)
	102	CHAR	1	BYTE		CHAR (1)	Salinity Flag	'1'=Blank in first three positions of salinity or salinity greater than 45.0 (Fatal)
	103	CHAR	1	BYTE		CHAR (1)	Cast Time Flag	'1'=One blank in first 2 positions of cast time
	104	CHAR	1	BYTE		CHAR (1)	Depth Quality Flag	'1'=Quality indicator for depth is not a number, blank or 'P','Q' or 'Z'
	105	CHAR	1	BYTE		CHAR (1)	Temp. Quality Flag	'1'=Quality indicator for temp. is not a number, blank, or 'P' or 'Q'
	106	CHAR	1	BYTE		CHAR (1)	Salinity Quality Flag	'1'=Quality indicator for salinity is not a number, blank, or 'P' or 'Q'
	107	CHAR	1	BYTE		CHAR (1)	Blank Oxygen Flag	'1'=Blank in first two positions of oxygen but whole field is not blank

Code: D763 Date: MARCH 1980
Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: OBSERVED RECORD (continued)

RELATION OF RECORD TO THE FILE:

ELEMENT NAME AND LEVEL	LOCATION / LENGTH				REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGUAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	Position	Units	Number	Units				
	108	CHAR	1	BYTE		CHAR (1)	Blank Chemistry Flag	'1'=Blank in first two positions of one or more fields of chemistry, but whole field is not blank
	109	CHAR	1	BYTE		CHAR (1)	Sigma-T Anomaly Flag	'1'=Sigma-T decreases by more than 0.02
	110--111	CHAR	2	BYTE		CHAR (2)	BLANK	
	112	CHAR	1	BYTE		CHAR (1)	Record Type	'3' or '4' 3=Normal Observed Record 4=Literature Record

RICK RINN

Code: D763 Date: MARCH 1980
Revision 3

RECORD DESCRIPTION

FILE NAME: STATION DATA I FILE RECORD NAME: STANDARD RECORD (#6 or #7)

RELATION OF RECORD TO THE FILE:

ELEMENT NAME AND LEVEL	LOCATION: Position	LOCATION: Units	LENGTH: Number	LENGTH: Units	REPEAT FACTOR	ATTRIBUTES: TYPE, BASE, MODE, LANGAGE, PRECISION, ETC.	USAGE AND MEANING OF ELEMENT	CONDITIONS
	1-27	CHAR	27	BYTE		CHAR (27)	Duplicates first 27 characters of Master Record	
	28-30	"	3	"		" (3)	BLANK	
	31-36	"	6	"		" (6)	Depth	meters-pos 31 + 36 blank
	37	"	1	"		" (1)	Temperature Sign	plus (+) or minus (-)
	38-41	"	4	"		" (4)	Temperature	Celcius
	42-43	"	2	"		" (2)	BLANK	
	44-47	"	4	"		" (4)	Salinity	parts/thousand
	48-49	"	2	"		" (2)	BLANK	
	50	"	1	"		" (1)	Sigma-T Sign	plus (+) or minus (-)
	51-54	"	4	"		" (4)	Sigma-T	
	55-58	"	4	"		" (4)	Sound Velocity	meters/second
	59-62	"	4	"		" (4)	Oxygen	milliliters/liter
	63	"	1	"		" (1)	BLANK	
	64	"	1	"		" (1)	Dynamic Depth Sign	plus (+) or minus (-)
	65-68	"	4	"		" (4)	Dynamic Depth Anomaly	
	69	"	1	"		" (1)	Spec. Val. Sign	plus (+) or minus (-)
	70-75	"	6	"		" (6)	Specific Volume Anomaly	
	76-82	"	7	"		" (7)	BLANK	
	83-90	"	8	"		" (8)	Duplicates positions 83-90 of Master Record	
	91-108	"	18	"		" (18)	Unused Flags	All zero
	109	"	1	"		" (1)	Sigma-T Anomaly Flag	'1'=Sigma-T decreases by more than 0.02
	110-111	"	2	"		" (2)	BLANK	
	112	"	1	"		" (1)	Record Type	'6' or '7' 6=Normal standard record 7=Originator interpolated depths

UNIVAC SD1 RECORD FOR

Rows 1–3 (columns 1–47)

Column(s)	Field
1–2	CNTRY CODE
3–4	SHIP CODE
5	LAT HEM
6–7	LAT DEG
9–10	LAT MIN
11	LONG HEM
12–13	LONG DEG
15–16	LONG MIN
19–20	WMO SQR
22	YR
24	MO
26	DA
29–30	STA TIME
31–33	ORIG CRU ID
34–36	ORIG STA ID
44	DEPTH
45–46	TO FCT

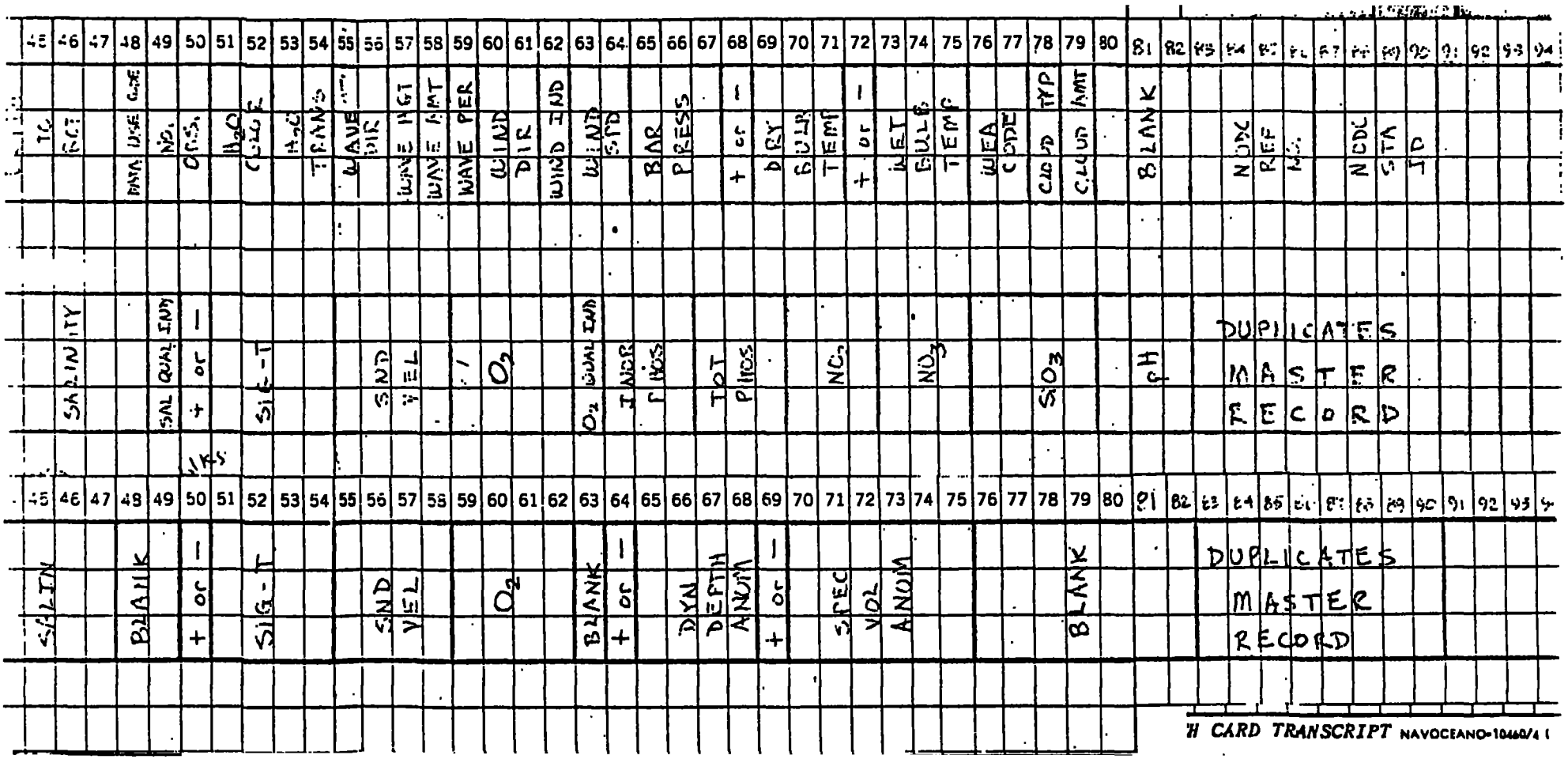
Rows 6–8

Column(s)	Field
2–25	DUPLICATES MASTER RECORD
28–29	MESS. TIME
32–34	DEPTH OF SAMPLE
37	DEP QUAL IND
39	TEMP
43	TEMP QUAL IND
46	SALINITY

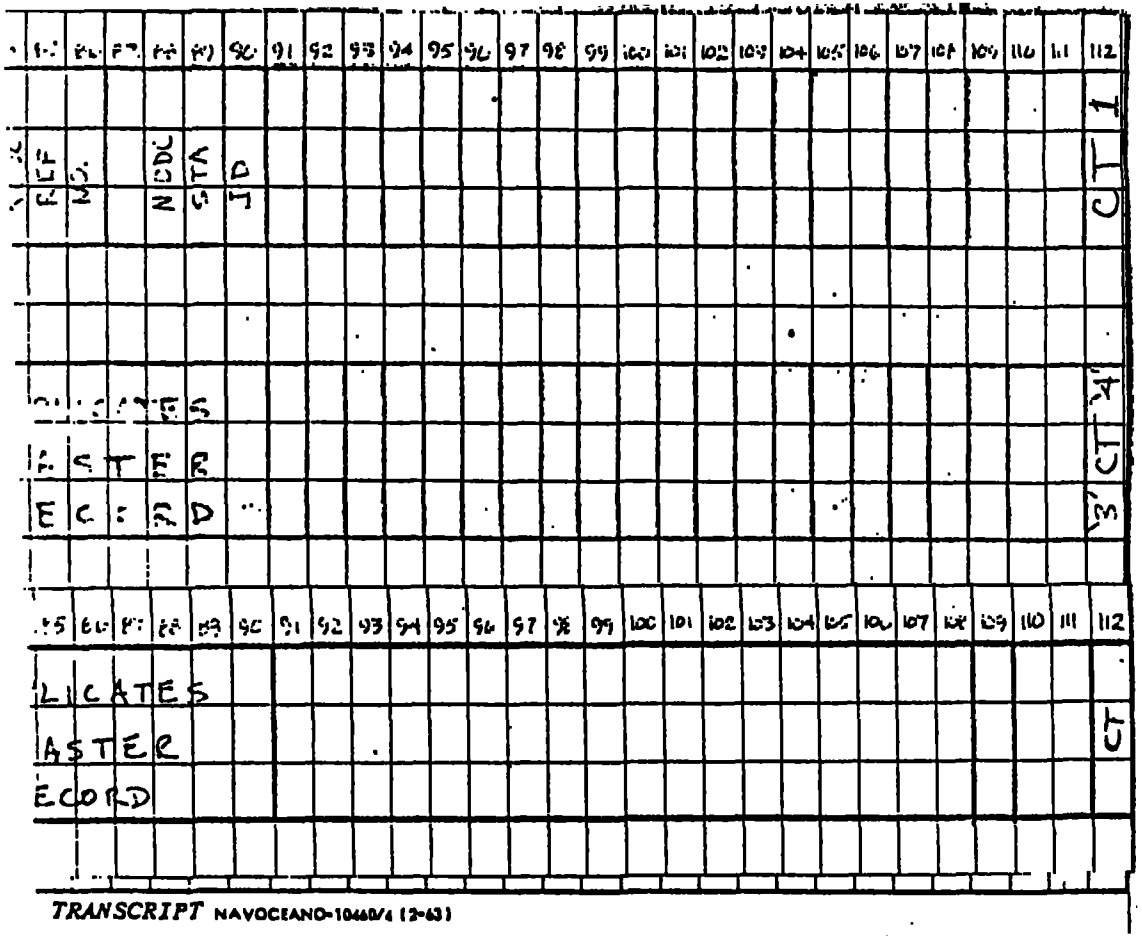
Second card (rows 1–5, columns 1–47)

Column(s)	Field
2–25	DUPLICATES MASTER RECORD
29	BLANK
33	DEPTH
37	− or +
39	TEMP
42	BLANK
46	SALIN

FORMAT ~~(Revision 3)~~ (Revision 4)



H CARD TRANSCRIPT NAVOCEANO-10460/4 (


REF
NO.
NEDC
STA
ID
CT 1
CT 4
CT
TRANSCRIPT NAVOCEANO-10460/4 (2-63)

```
Password:
 accNo   fleA refNo  proj inst ship    startDate  cruise   catId
 ------- ---- ------ ---- ---- ------- ---------- -------- ----------
 8700347 C100 313404 9999 3109 31T3    1968/10/09 T3            174837

(1 row affected)
```

```
Password:
 accNo   fleA refNo  ship staCnt recCnt startDate  endDate
 ------- ---- ------ ---- ------ ------ ---------- ----------
 8700347 C100 313404 31T3 114    144    68/10/09   74/04/22

(1 row affected)
```

#306/10-8-87

NOAA FORM 24-5
(8-73)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

TRANSMITTAL AND RECEIPT RECORD

(Please sign and return carbon copy acknowledging receipt)

TO:	REFER TO
NOAA/NESDIS/NODC 1825 Connecticut Ave NW Washington DC 20235	ATTENTION E/OC13, Dr. Anthony R. Picciolo

THE ITEM(S) LISTED BELOW WERE FORWARDED TO YOU BY

☐ ORDINARY MAIL ☐ REGISTERED MAIL ☐ AIR MAIL ☒ CERTIFIED MAIL ☐ GOVERNMENT TRUCK ☐ BY HAND ☐ OTHER

Cert. no. 523153

Enclosed, find documentation (including 28 DDF's, printouts of the digital data, and data formats) and one (1) magnetic data tape containing a total of five (5) files of the Fletchers Ice Island T-3 hydrographic, chlorophylls and primary productivity data as received from Drs. Rita Horner, Karl Banse and Mr. Jim Postel, UW, oceanography dept..

Tape layout

Files 1-3 contain the hydrographic (station, physical oceanographic) data.
File 4 is the chlorophyll data.
File 5 is the primary productivity data.

**Please refer to the enclosed cover letter, it contains complete information regarding both the tape layout and tape specifications.

cc: Dr. Rita Horner, UW, oceanography

8700347

A00589

FORWARDED BY (Signature)	TITLE	DATE FORWARDED
Sid Stillwaugh	NODC Liaison Officer, Seattle	10-05-87
RECEIVED BY (Signature)	**TITLE**	**DATE RECEIVED**
FRANCIS MITCHELL		10-8-87

NOAA FORM 24-5 (8-73)

School of Oceanography,WB-10
University of Washington
Seattle, Washington 98195
August 31, 1987

Mr. Sid Stillwaugh
Northwest Liaison Office
NOAA/NESDIS/NODC
Bin C15700/Building 1
7600 Sand Point Way NE
Seattle, Washington 98115

Dear Sid:

Enclosed are the file format descriptions to accompany the data tape I created on the University of Washington CYBER 180-855 computer with Tom English's hydrographic, chlorophyll, and productivity data from Ice Island T-3.

There are five separate files on the magnetic tape. The first three files contain hydrographic data in the "Station Data I File" format (Attachment A). (I have left the various 'flag' columns blank for NODC to fill in after they read and accept the data.). There are three files of hydrographic data just because that gave me convenient file sizes to use on the CYBER. The fourth file contains chlorophyll data in the format specified in Attachment B. The fifth file contains the productivity data in the format specified in Attachment C. If there are any questions about these formats I will be happy to clarify them for you.

For ease in writing this tape for you, I wrote all files as though the record length was 120 characters, resulting in a lot of blank columns in the chlorophyll and the productivity files. The first four files start right out with the data. The productivity file starts out with four comment lines that tells you that the station names cannot be matched directly with station names in the other two file types because Tom's group kept different station sequences for each data type.

The following information will aid in reading this tape.

Attributes as expressed in FORTRAN.
Responsible Computer Specialist: James R. Postel (206) 543-6141 or
(206) 543-5093
School of Oceanography, WB-10
University of Washington
Seattle, WA 98195

Recording Mode: EBCDIC
Number of Tracks: Nine
Parity: Odd
Density: 1600 bpi
Length of inter-record gap: 3/4 inch
End of File Mark: Tape Mark
Record Length: 120 characters
Block Length: 3000 characters (25 records/block)
Paper Label: VSN = NDCENG; T3 DATA TO NODC (5 files);
Originator = T.S. English & K. Banse

Sincerely,

James R. Postel

ATTACHMENT B

RECORD FORMAT DESCRIPTION

RECORD NAME: Chlorophyll Cruise Master (Card Type = 0)

Field Name	Columns Start	End	Length	Attributes	Use and Meaning
	1	1	1	1X	Blank
Cruise	2	7	6	A6	P.I.'s Designation
	8	9	2	2X	Blank
Record Type	10	10	1	I1	0 = Cruise Header
Platform	11	21	11	A11	Always "T3 ICE ISLD"
Cruise	22	27	6	A6	Repeat Col. 2-7
Beginning Year	28	29	2	I2	Last 2 digits of year
Slash	30	30	1	A1	Always "/"
Beginning Month	31	32	2	I2	Local month(01-12)
Slash	33	33	1	A1	Always "/"
Beginning Day	34	35	2	I2	Local day(01-31)
Dash	36	36	1	A1	Always "-"
Ending Year	37	38	2	I2	Last 2 digits of year
Slash	39	39	1	A1	Always "/"
Ending Month	40	41	2	I2	Local month(01-12)
Slash	42	42	1	A1	Always "/"
Ending Day	43	44	2	I2	Local day(01-31)
Investigator	45	63	19	A19	Always"T.S. ENGLISH "
Institution	64	75	12	A12	Always "UNIV OF WASH"
	76	120	44	44X	Blank

RECORD NAME: Chlorophyll Station Header (Card Type = 1)

Field Name	Columns Start	End	Length	Attributes	Use and Meaning
	1	1	1	1X	Blank
Cruise	2	7	6	A6	P.I.'s Designation
	8	9	2	2X	Blank
Record Type	10	10	1	I1	1 = Station Header Record
	11	12	2	2X	Blank
Station Name or Number	13	15	3	A3	P.I.'s Designation
Latitude	16	21	6	I2,F4.1	Latitude as DDMM.M
Latitude Hemisphere	22	22	1	A1	Always "N"
Longitude	23	29	7	I3,F4.1	Longitude as DDDMM.M
Longitude Hemisphere	30	30	1	A1	Always "W"
Station Date	31	36	6	3I2	Local Date as YYMMDD
Station Time	37	40	4	2I2	Local Time as HHMM
	41	120	80	80X	Blank

RECORD NAME: Chlorophyll Station Detail (Card Type = 3)

Field Name	Columns Start	End	Length	Attributes	Use and Meaning
	1	1	1	1X	Blank
Cruise	2	7	6	A6	P.I.'s Designation
	8	9	2	2X	Blank
Record Type	10	10	1	I1	3 = Station Detail Record
	11	12	2	2X	Blank
Station Name or Number	13	15	3	A3	'P.I.'s Designation
	16	16	1	1X	Blank
Depth	17	20	4	F4.1	Meters to tenths (xxx.x)
	21	21	1	1X	Blank
Chlorophyll a	22	24	3	F3.2	MG/M3 to hundreths (x.xx)
	25	120	96	6X	Blank

ATTACHMENT C

RECORD FORMAT DESCRIPTION

RECORD NAME: Productivity Station Header (Card Type = 1)

Field Name	Columns Start	End	Length	Attributes	Use and Meaning
	1	6	6	6X	Blank
Cruise	7	12	6	A6	P.I.'s Designation
	13	13	1	1X	Blank
Station Name or Number	14	16	3	A3	P.I.'s Designation
	17	17	1	1X	Blank
Station Date	18	23	6	3I2	Local Date as YYMMDD
	24	25	2	2X	Blank
Latitude	26	29	4	2I2	Latitude as DDMM
Latitude Hemisphere	30	30	1	A1	Always "N"
	31	31	1	1X	Blank
Longitude	32	36	5	I3,I2	Longitude as DDDMM
Longitude Hemisphere	37	37	1	A1	Always "W"
	38	38	1	1X	Blank
Millicuries C-14 Added	39	42	4	F4.2	Amount to hundreths(xx.xx)
	43	46	4	4X	Blank
Total Incubation Length	47	49	3	F3.1	Hours to hundreths(x.xx)
	50	54	5	5X	Blank
Station Time	55	58	4	2I2	Local Time as HHMM
	59	59	1	1X	Blank
Record Type	60	60	1	I1	1 = Station Header Record
	61	120	60	60X	Blank

RECORD NAME: Productivity Station Detail (Card Type = 3)

Field Name	Columns Start	End	Length	Attributes	Use and Meaning
	1	6	6	6X	Blank
Cruise	7	12	6	A6	P.I.'s Designation
	13	13	1	1X	Blank
Station Name or Number	14	16	3	A3	P.I.'s Designation
	17	17	1	1X	Blank
Depth	18	21	4	F4.1	Meters to tenths (xxx.x)
	22	22	1	1X	Blank
Chlorophyll a	23	26	4	F4.2	MG/M3 to hundreths(xx.xx)
	27	27	1	1X	Blank
Light Source Intensity	28	31	4	I4	Foot-candles (xxxx)
	32	32	1	1X	Blank
Sample Light Level	33	35	3	I3	Percent (xxx%)
	36	38	3	3X	Blank
Light Bottle C-14 Uptake	39	43	5	F5.3	MG/M3/HR to thousandths
	44	45	2	2X	Blank
Dark Bottle C-14 Uptake	46	50	5	F5.3	MG/M3/HR to thousandths
	51	53	3	3X	Blank
Net C-14 Uptake(light-dark)	54	58	5	F5.3	MG/M3/HR to thousandths
	59	59	1	1X	Blank
Record Type	60	60	1	I1	3 = Station Detail Record
	61	120	60	60X	Blank

NOAA FORM 24-5
(8-73)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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cc: Dr. Rita Horner, UW, oceanography

FORWARDED BY *(Signature)*	TITLE	DATE FORWARDED
Sid Stillwaugh	NODC Liaison Officer, Seattle	10-05-87
RECEIVED BY *(Signature)*	**TITLE**	**DATE RECEIVED**

NOAA FORM 24-5 (8-73)

References

Goldman, C. R. 1963. The measurement of primary productivity and limiting factors in freshwater with carbon-14, pp. 103-113. In M. S. Doty, ed., Proceedings of the Conference on Primary Productivity Measurement, Marine and Freshwater, University of Hawaii, 1961. U.S. Atomic Energy Commission TID-7633.

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Strickland, J. D. H., and T. R. Parsons. 1968. A Parctical Handbook of Seawater Analysis. Bull. Fish. Res. Board Canada 167:1-311.

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Wüst, G. 1933. Thermometric measurement of depth. Hydrog. Rev. 10: 28-49.

Hughes, K. H. 1963. Seasonal vertical distributions of copepods in the Arctic water in the Canadian Basin of the North Pole. Ph.D. thesis, Univ. Wash., Seattle, 84 pp.

CHECK

with pumping stations to assure comparability.

Sampling with a 2 m^2 closing umbrella net began in September 1967 (Scott 1969). Mesh size was 215 and 569 μm. This net was the principal sampling device throughout the remaining field program though the netting itself was replaced with a high filtration type mesh in March 1972. Samples were collected from as deep as 2500 m.

Two other kinds of nets were sometimes employed: a 3 m^2 closing net with 300 μm mesh in summer 1968 and a 1 m plummet net with 571 μm mesh initially in May 1971 and periodically thereafter.

Sorting, identifying, and counting of samples were done in Seattle.

Echo-sounding was conducted from April 1970 to April 1974. A modified Ross 200A (100 kHz) echo-sounder and a 10° transducer with an impedance matching box scanned depth ranges of 0-50, 50-100, 100-150, and 150-200 fm. The 0-50 fm depth range was emphasized because of interest in the scattering layer often found at 25 fm. The system included the standard Ross 200A transceiver unit, recorder unit, and a Sony TC-5600 stereo tape recorder. During regular operation, echosounding was conducted continuously, normally on the 0-50 fm scale. Daily recordings of 15-45 min were made using all depth ranges.

Modifications of this general sampling and analysis scheme, if any, are given with the individual cruise data documentation forms.

AIDJEX data

RU 359 - ~~Any FT 029 - Dr. T.S English~~

T-3 data ✓

Echosounder data are 1/4" tapes

location, date, machine type and depth ranges and frequencies are known and available:

(April 1970 - 1974)

modified Ross 200A echosounder

* 21 reels of tape (Don Scott, Ocean Sciences 805-965-6575) / HI - Bill Friedl - Control NOSC 808-254-4448

1000-2000 -

~~H,000~~ plus zooplankton samples counts data

most were analyzed for copepods only -

pteropods counts also

lab sheets - date, time, by implication - position

depth of haul, gear type - some even have haul log sheets

(2 - 5 ft long shelves of lab books)

need a copy of the Lamont - Doherty Report (see separate sheet) - for station locations

come back Thurs. - bring AIDJEX files and OCSEAP data tracking.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13 (4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

(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

T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-01

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island (T-3)	Ice island	USA	USA	03/16/66	04/09/66

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?

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

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Should be available for international exchange

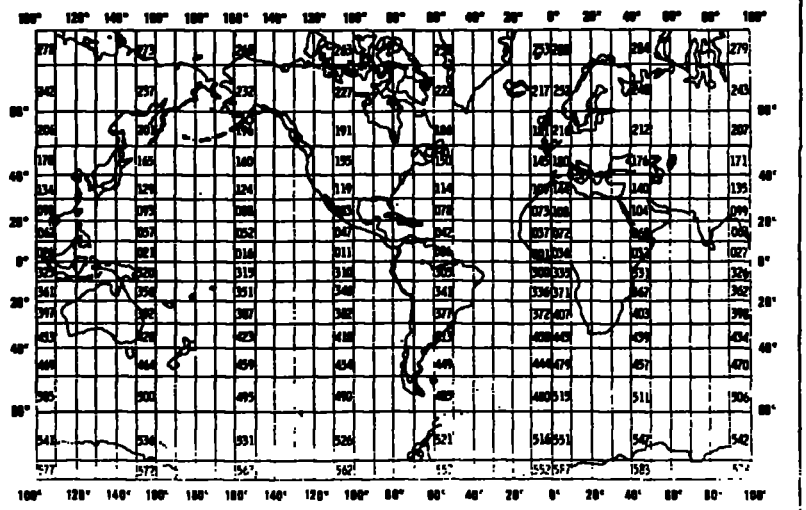
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

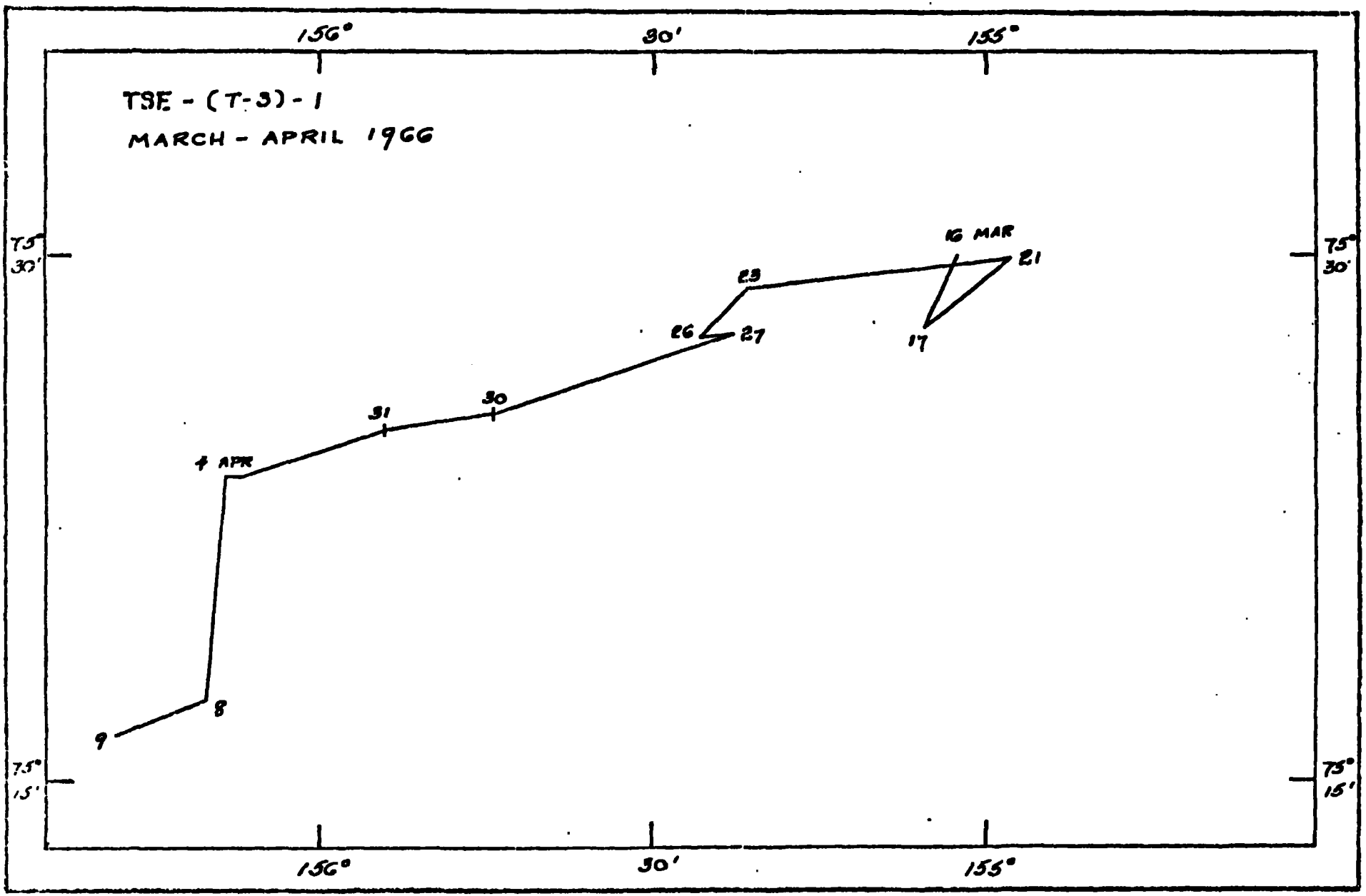
(206) 543-5079

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

GENERAL AREA



NOAA FORM 24-13


TSE - (T-3) - 1
MARCH - APRIL 1966
156°
30'
155°
75° 30'
75° 15'
16 MAR
21
23
26
27
17
31
30
4 APR
8
9

TSE-(T-3)-01 16 Mar - 09 Apr 1966

Modifications to basic Program Methods

Thirty-eight (38) zooplankton samples were collected with an open 0.5 m ring net having a mesh size of 215 μm. Vertical hauls were taken at intervals between the surface and 3800 m.

Two hydrographic station were taken and samples (48 each) were collected for temperature, salinity, and dissolved oxygen. For hydrographic data see:

Tripp, R. B. 1967. Physical and chemical data from Fletcher's Ice Island (T-3): Beaufort Sea area, January-May 1966. University of Washington, Department of Oceanography Technical Report No. 187. 62 pp.

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
Water transparency	meters	Secchi Disk	N/A	N/A
Depth of Sample	meters	Wire out	N/A	N/A
Temperature	°C	Reversing thermometers	N/A	N/A
Salinity	°/₀₀	Nansen bottles, modified Van Dorn bottles	Salinometer, University of Washington	N/A
Sigma-t	-	"	-	N/A
Dissolved oxygen	ml/l	"	Winkler	N/A
PO_4	µg-atom/l	"	See Strickland and Parsons (1968)	N/A
NO_3	"	"	"	N/A
SiO_4	"	"	"	N/A
Chlorophyll a	mg m^{-3}	Van Dorn bottles	Spectrophotometer, fluorometer (Strickland and Parsons 1968)	N/A
Primary productivity (^{14}C uptake)	mg C m^{-3} h^{-1}	"	Strickland and Parsons (1968)	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

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER _____

ADDRESS _____

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE
☐ BCD ☐ BINARY
☐ ASCII ☒ EBCDIC
☐ _____

6. NUMBER OF TRACKS (CHANNELS)
☐ SEVEN
☒ NINE
☐ _____

7. PARITY
☒ ODD
☐ EVEN

8. DENSITY
☐ 200 BPI ☒ 1600 BPI
☐ 556 BPI
☐ 800 BPI
☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN)
☒ 3/4 INCH
☐ _____

10. END OF FILE MARK
☐ OCTAL 17
☒ Tape Mark

11. PASTE-ON-PAPER LABEL DESCRIPTION *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE VOLUME NUMBER)*

Ice Island T-3 hydro, chlorophyll, & Productivity data sets.
Specs.- 9 track, EBCDIC, odd parity, 1600 bpi, 5 files, D=PE, RL=120, MBL = 3000, CV=EB, F=S, LB=KU

12. PHYSICAL BLOCK LENGTH IN BYTES

FL=120 MBL=3000 Char.

13. LENGTH OF BYTES IN BITS

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 CALIBRATED
		YOUR ORGANIZATION (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (√)	ONLY AFTER REPAIR (√)	ONLY WHEN NEW (√)	(√)
Fluorometer Turner Model 111		X			X				
Reversing thermometers		X	manufacturer		X				
Salinometer Univ. Washington		X			X				
Naval Arctic Research Lab.		X			X				

NOAA FORM 24-13

Primary Production and Energy Flow

The program was directed by the late Dr. T. Saunders English and funded by the Office of Naval Research Contract Nonr-477 (37) Project NR 083 12 and Contract N00014-67-0103-0005. Users of the data are requested to acknowledge the agency support.

The methods used by biological oceanographers of the Department of Oceanography, University of Washington, Seattle, from 1966 to 1974 on Fletcher's Ice Island (T-3) drifting in the Arctic Ocean (Fig. 1) are given below. These methods are to compliment the entries in the individual cruise Data Documentation Forms where modifications, if any, are given.

General

The field program was maintained at various intensities for eight years (March 1966 to June 1974), with personnel on T-3 continuously from April 1968 until the island was evacuated in June 1974. During this period, divided into 28 cruises (Table 1), biological and environmental parameters were measured (Table 2). The sampling program was structured to monitor periods of active change in the various parameters. Thus, hydrography and zooplankton sampling was a year round pursuit, field and logistic conditions permitting, whereas chlorophyll *a* concentrations and primary productivity (^{14}C uptake) were usually measured only during the summer (June to September). Various gear types, methodologies, and sampling strategies were tried and tested throughout the field program.

The oceanographic working area was located on 3-4 m thick sea ice in Colby Bay adjacent to the ice island. All sampling was done from inside a heated building positioned over a hole, ca. 1.5 m on a side, cut in the ice. The hut contained a space heater, oceanographic sampling equipment, and a Rankin winch powered by a 5 hp Wisconsin gasoline engine. The drum on the winch held about 4000 m of 5/32 inch hydrographic wire. The wire ran through a meter wheel attached to a tripod erected over the hole.

Geographic positions were provided by the Lamont-Doherty Geological Observatory, Palisades, NY (Hunkins and Tiemann 1977). Hydrography and biology (chlorophyll *a* and primary productivity) samples were not always taken from the same bottle cast or on the same day. Each kind of data has a separate sample numbering scheme. As a result, station positions may not always agree between the hydrographic and biological data. See individual cruise Data Documentation

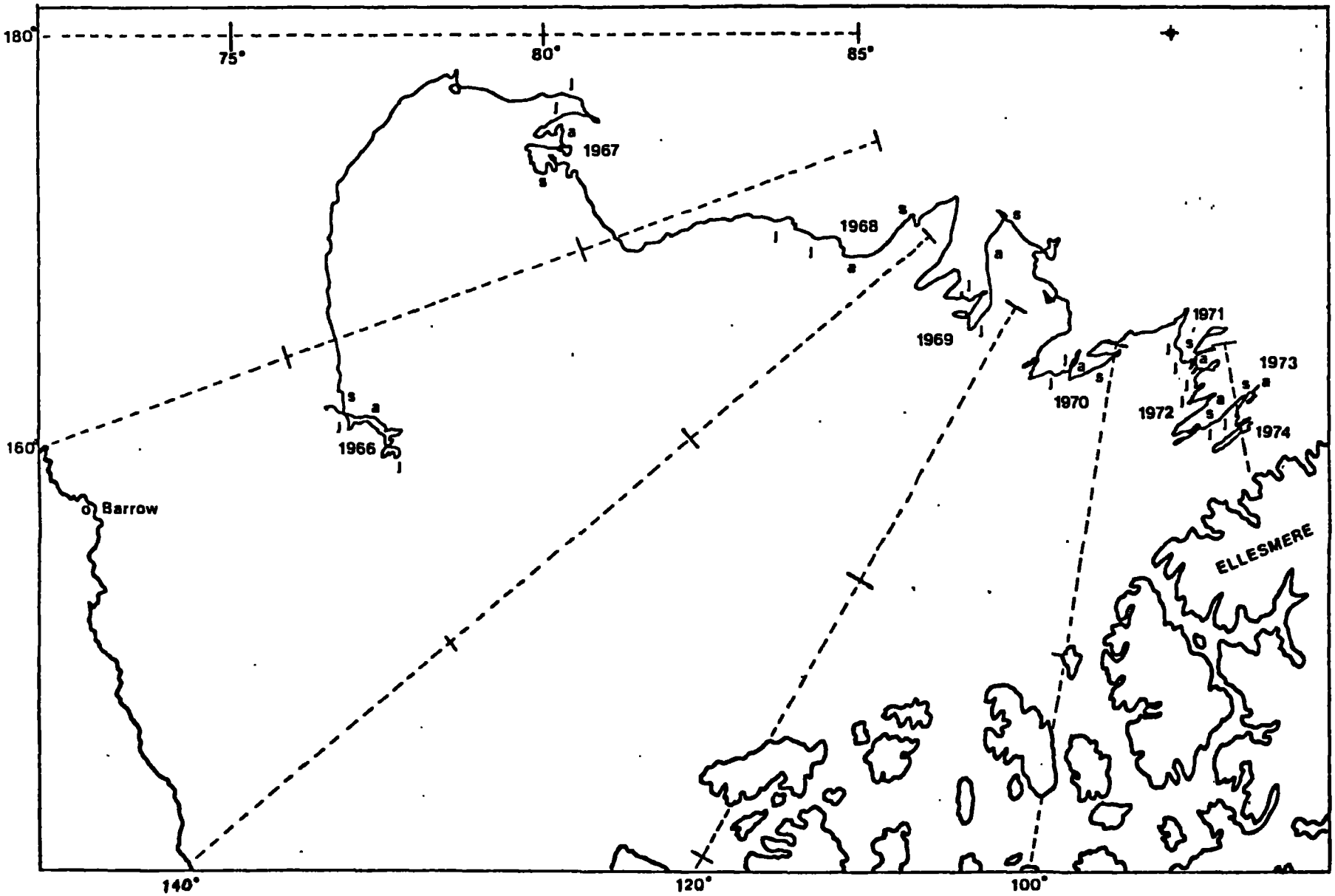


Fig. 1. Drift track of T-3 from June 1966 to April 1974. The months of June, July, August, and September are indicated in small letters for each year.

Table 1. Cruise numbers and dates of T-3 field program

Cruise Number	Duration	Cruise Number	Duration
01	16 Mar 66 - 9 Apr 66	15	5 Oct 70 - 30 Dec 70
02	2 Jun 66 - 18 Oct 66	16	1 Jan 71 - 30 Mar 71
03	1 Feb 67 - 15 Feb 67	17	30 Mar 71 - 30 May 71
04	4 Jun 67 - 11 Sep 67	18	30 May 71 - 1 Oct 71
05	12 Sep 67 - 24 Sep 67	19	1 Oct 71 - 20 Dec 71
06	27 Apr 68 - 9 Jun 68	20	20 Dec 71 - 20 Mar 72
07	10 Jun 68 - 20 Sep 68	21	20 Mar 72 - 31 May 72
08	21 Sep 68 - 31 Jan 69	22	31 May 72 - 29 Sep 72
09	31 Jan 69 - 13 Jun 69	23	29 Sep 72 - 13 Dec 72
10	13 Jun 69 - 3 Oct 69	24	13 Dec 72 - 7 Apr 73
11	4 Oct 69 - 5 Jan 70	25	7 Apr 73 - 28 May 73
12	5 Jan 70 - 23 Mar 70	26	28 May 73 - 19 Oct 73
13	23 Mar 70 - 7 Jun 70	27	31 Oct 73 - 8 Mar 74
14	7 Jun 70 - 5 Oct 70	28	8 Mar 74 - 1 Jun 74

Table 2. Field data collected at T-3, March 1966 to June 1974

Parameter	Total Number of Samples	1966 J	F	M	A	M	J	J	A	S	O	N	D	1967 J	F	M	A	M	J	J	A	S	O	N	D	1968 J	F	M	A	M	J	J	A	S	O	N	D
Hydrography																																					
Salinity	5354				X																														X	X
Temperature	5354				X																														X	X
Dissolved oxygen	5198				X																														X	X
Nutrients																																					
Nitrate	3611																																				
Silicate	3440																																				
Phosphate	3440																																				
Phytoplankton																																					
Chlorophyll a	8022							X	X										X	X	X	X									X	X	X	X			
Productivity	4978																		X	X	X											X	X	X			
Cell Counts	5838																															X	X	X	X		
Zooplankton																																					
Acoustic traces	40 mo																																				
Plankton pump	427							X	X	X	X	X				X			X	X	X	X															
Nets (mesh size μm)																																					
0.5 m ring (215)	38			X	X																																
1 m closing ring (110)	355																															X	X	X	X		
1 m closing ring (215)	318																		X	X	X																
1 m^2 plummet (571)*	56																																				
2 m^2 umbrella (223)†	9112																				X											X	X	X	X	X	X	X
2 m^2 umbrella (569)	95																																	X	X		
3 m^2 umbrella (300)	104																															X	X	X			

* A net that catches while descending
† A collapsible net that can be lowered and retrieved through a hole in the ice

Table 2. (cont.)

Parameter	Total Number of Samples	1969 J	F	M	A	M	J	J	A	S	O	N	D	1970 J	F	M	A	M	J	J	A	S	O	N	D	1971 J	F	M	A	M	J	J	A	S	O	N	D
Hydrography																																					
Salinity	5354				X	X				X				X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X
Temperature	5354				X	X				X				X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X
Dissolved oxygen	5354				X	X				X				X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X
Nutrients																																					
Nitrate	3611																		X	X	X	X	X	X			X			X	X	X	X	X	X	X	X
Silicate	3440																		X	X	X	X	X	X			X			X	X	X	X	X	X	X	X
Phosphate	3440																		X	X	X	X	X	X			X			X	X	X	X	X	X	X	X
Phytoplankton																																					
Chlorophyll a	8022					X	X	X	X										X	X	X	X					X			X	X	X	X				
Productivity	4978					X	X	X	X										X	X	X	X									X	X	X	X			
Cell Counts	5838				X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X				
Zooplankton																																					
Acoustic traces	40 mo																X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X
Plankton pump	427																																				
Nets (mesh size μm)																																					
0.5 m ring (215)	38																																				
1 m closing ring (110)	355			X																																
1 m closing ring (215)	318					X	X																													
1 m^2 plummet (571)*	56																																				
2 m^2 umbrella (223) †	9112		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 m^2 umbrella (569)	95																																				
3 m^2 umbrella (300)	104																																				

* A net that catches while descending

† A collapsible net that can be lowered and retrieved through a hole in the ice

Table 2 (cont.)

Parameter	Total Number of Samples	1972 J F M A M J J A S O N D	1973 J F M A M J J A S O N D	1974 J F M A M J J A S O N D
Hydrography				
Salinity	5354	X X X X X X X X X X X X	X X X X X X X X X X X X	X X X X X X
Temperature	5354	X X X X X X X X X X X X	X X X X X X X X X X X X	X X X X X X
Dissolved oxygen	5198	X X X X X X X X X X X X	X X X X X X X X X X X X	X X X X X X
Nutrients				
Nitrate	3611	X X X X X X X X X X X X	X X X X X X X X X X X X	X X X X X X
Silicate	3440	X X X X X X X X X X X X	X X X X X X X X X X X X	X X X X X X
Phosphate	3440	X X X X X X X X X X X X	X X X X X X X X X X X X	X X X X X X
Phytoplankton				
Chlorophyll a	8022	X X X X	X X X X	
Productivity	4978	X X X X X	X X X X	
Cell Counts	5838	X X X X X	X X X X X X X X X X	X X X X X X
Zooplankton				
Acoustic traces	40 mo	X X X X X X X X X X X X	X X X X X X X X X X X X	X X X X
Plankton pump	427			
Nets (mesh size μm)				
0.5 m ring (215)	38			
1 m closing ring (110)	355			
1 m closing ring (215)	318			
1 m^2 plummet (571)*	56	X X		
2 m^2 umbrella (223) †	9112	X X X X X X X X X X X X	X X X X X X X X X X X X	X X X X X X
2 m^2 umbrella (569)	95			
3 m^2 umbrella (300)	104			

* A net that catches while descending
† A collapsible net that can be lowered and retrieved through a hole in the ice

Forms for kind of sampling bottle used.

Hydrography and Nutrients

Temperature, salinity, oxygen, and nutrient determinations were made on water collected with Van Dorn polyvinylchloride or uncoated Nansen water sampling bottles. The Van Dorn bottles contained surgical tubing which may or may not be toxic to organisms (see Price et al. 1986). In general, the upper 100 m was sampled at 5 m intervals, 125-375 m at 25 m intervals, 400-500 m at 50 m intervals, 600-1000 m at 100 m intervals, and 1000 m to the bottom at 250 m intervals with a 30 m interval between the last bottle and the bottom. Periodically, additional samples were taken at 2 m intervals around the pycnocline (usually 40-60 m). In periods when weekly casts were taken, an alternating pattern of sampling, 0-100 m, 0-500 m, 0-100 m, 0-deep, allowed a more frequent survey of short-term variation in the near-surface stratum without the additional burden of time-consuming deep casts. Because of heat lamps and cables and the accumulation of freshwater in the hydrohole, surface readings would not have been representative, therefore the top bottle of a hydrocast was usually placed 5 m below the water surface.

The highest observed wire angles during these cruises were about 4°. For a 1000 m cast, this would yield a true depth of 998 m at the bottom. Computations of thermometric depths (Wüst 1933) were performed for those observations deeper than 250 m where unprotected thermometers were used for which calibrations were still available (262 depths at 45 stations). With the exception of two casts (Cruise 11, station 1, cast 5, 1400-2000 m and Cruise 13, station 12, cast 5, 500-1300 m), all calculated values were generally within 2-3% of the nominal depths sampled. These two casts were corrected. All other depths reported here are uncorrected, but should be within 2-5% of the true value.

Temperatures were determined from reversing thermometers on each water bottle; protected thermometers were usually deployed in pairs. Bottles were tripped about 5 min after the top bottle reached its intended depth. Thermometers were read using a lighted magnifying glass about 15 min after retrieval. Readings were corrected from the auxiliary thermometers and the thermometer constants by an IBM 1130 program at the Department of Oceanography, University of Washington.

Over 100 reversing thermometers were used during the course of these observations. They were calibrated either by the manufacturers or at various times at the University of Washington. Calibration data available from the

latest date preceding the use of each thermometer on T-3 were used to correct the thermometer readings. The calibrations were usually 0.5-3 yr old when they were applied to these data.

Salinity samples were drawn into 250 ml clear polyethylene bottles, tightly sealed, and allowed to come to room temperature. Determinations were made on T-3 using an Industrial Instruments Model RS-7A (Industrial Instruments Co., Cedar Grove, NJ) or a Beckman Model RS-7B (Beckman Instruments, Inc., Fullerton, CA) portable induction salinometer calibrated against a standard seawater sample obtained from the Laboratoire Hydrographique (Copenhagen, Denmark). Substandards of seawater (ca. 34.9°/$_{oo}$ collected from ca. 500 m) were used after each 10 samples and at the end of a run. Salinity was calculated using the tables in the salinometer manual (Industrial Instruments 1964). These values are considered to have an accuracy of ± 0.003 ppt.

Dissolved oxygen was analyzed by a modified Winkler method (Strickland and Parsons 1965). Brown BOD bottles of 250 ml capacity, an automatic 100 ml pipet, an automatic 25 ml burette readable to 0.01 ml, and an electric stirrer were used.

Nutrients were determined by the methods in Strickland and Parsons (1968). The samples were either analyzed immediately after collection or frozen for later analysis either on the ice, or during April and May 1971, at the University of Washington using a Beckman DU spectrophotometer (Beckman Instruments, Inc., Fullerton, CA) with 1 cm cells. After December 1972, nitrate determinations were run on a Brinkman PC/1000 colorimater (Brinkman Instruments, Westbury, NY) with a fiber optics probe and calibrated against the spectrophotometer. Reagents and standards were prepared from water filtered through an Ion-X-Change column, Grade 1, consisting of a mixed bed non-regenerable resin (Illinois Water Treatment Co.) that produces triple distilled water. Comparisons between reagents and standards made up with this water and with distilled water sent from the Naval Arctic Research Laboratory at Barrow showed these proceures to be adequate. Standards were run with each set of samples and for each nitrate column.

Chlorophyll a

Chlorophyll a was determined according to Strickland and Parsons (1968). In 1968 through 1970, water was filtered through 47 mm 0.45 µm Millipore filters (Millipore Corporation, Bedford, MA). Suction pressure was less than 250 mm Hg. In 1971 through 1973, Gelman A/E glass fiber filters (approximate

pore size = 1.0 μm) (Gelman Instrument Co., Ann Arbor, MI) were used. $MgCO_3$ was added to all filters near the end of the filtration. In 1968, samples of about 4 liters of water were analyzed using a Beckman DK spectrophotometer in Seattle and chlorophyll *a* was calculated using the SCOR-UNESCO equations (Unesco 1966). For 1968 through 1973, samples of about 2 liters of water were filtered and a Turner Model 111 fluorometer (G. K. Turner Associates, Palo Alto, CA) was used for analysis. Fluorometer filters were 5-60 and 2-64. The fluorometer was calibrated using either a Beckman DU spectrophotometer on T-3 or a Beckman DK scanning spectrophotometer in Seattle. For samples analyzed with the fluorometer, chlorophyll *a* was calculated using equations in Holm-Hansen et al. (1967). Phaeopigments were not determined.

Primary Productivity

Primary productivity was measured during the summers by the radiocarbon technique of Steemann-Nielsen (1952) as detailed by Strickland and Parsons (1968). Two experimental schemes were used:

1. Depth series - paired 130 ml light and dark bottles were filled with water collected from a number of depths and incubated under constant high illumination (for the level of irradiance, see below).

2. Graduated light series - five light and one dark bottle containing water from one depth were incubated under 0, 10, 25, 50, 75, and 100% irradiance provided by glass neutral density filters over the incubation bottles.

For both series, dark bottles were pre-wrapped with black tape and then covered with aluminum foil to insure complete darkness. Depths and frequencies of sampling varied from year to year.

The plastic incubator box was fronted with clear plexiglass and had a wheel that rotated in the vertical plane. The wheel accomodated 12 ground-glass stoppered 130 ml bottles. At various times, because of stripped gears, the wheel did not rotate or was manually turned periodically during incubation. Light, provided by a bank of 12 GE Cool-White fluorescent lamps (General Electric Corporation, Stamford, CT), and amount of radioactivity added varied from year to year. Highest irradiance (= 100%) in the incubator was between 1100 and 1400 ft-c measured with a GE Model No. 214 photometer (General Electric Corporation, Stamford, CT). A pumped water flow-through system maintained ambient incubator temperature near 0°C. Samples were incubated for 6 or 12 hr.

At the end of the incubation, the samples were filtered (suction pressure

less than 250 mm Hg) onto 25 mm, 0.45 µm Millipore filters, washed with filtered seawater, air-dried, and stored over desiccant until analyzed. Filters were fumed over concentrated HCl and counted three times for 1000 counts, using a gas flow proportional counter (Nuclear Chicago Corporation, Des Plaines, IL). Counting was done either in Seattle using a Nuclear Chicago Model D-47 counter with micromil window, C-110 automatic sample changer, 161-A scaler, and C111B printing timer, or on T-3 using a Nuclear Chicago manual, end-window Model 8770 scaler, Model 3053 sample changer, Model 108 G-M detector, and Model 8420 dual timer.

Carbon uptake was calculated from

$$P = (L-D)(W)(1.05)/(Z)(T)$$

where P is in mg C m^{-3} h^{-1}; L-D is the difference between the light and dark bottle in counts per minute corrected for machine background and coincidence; W is the total carbonate in mg C m^{-3} calculated from $W = (810)(S°/_{oo})$ as suggested by Dr. G. C. Anderson, Department of Oceanography, University of Washington; 1.05 is the isotope discrimination factor (Strickland 1960); Z is the total activity in counts per minute added to the sample and corrected for the counter efficiency of about 22.8%; T is the incubation time (6 or 12 hr).

All ^{14}C ampoules used on T-3 were prepared in the Department of Oceanography, University of Washington, from aqueous sodium carbonate obtained from Nuclear Chicago Corporation. All glassware was rinsed with distilled water and autoclaved. The amount of solution to be made was determined by dividing the activity of the stock aqueous sodium carbonate by the desired activity per ml of final solution. Glass distilled water was filtered through 47 mm, 0.45 µm Millipore filters. The pH was adjusted to 9.5-9.7 with NaOH. The solution was well mixed, and after adding the commercial sodium carbonate, mixed again. Glass ampoules holding 2 or 5 ml of solution were filled by an automatic volume dispenser. The ampoules were sealed using propane torches. The sealed ampoules were placed in large beakers, covered with water to which methylene blue dye was added, and autoclaved for ca. 1 hr at 120°C. After washing away the dye, the ampoules were inspected for any sign of color inside them. Ampoules that were even slightly discolored were discarded. The filled ampoules were color-coded with spray paint and stored.

Several ampoules from the beginning, middle, and end of the filling process were kept separate to be used for standardization. Standardization was done using methods then employed by the Department of Oceanography, University of Washington, where ampoules were either sent to Dr. C. R. Goldman, University of

California, Davis, and analyzed using gas phase (Goldman 1963; Steemann-Nielsen 1974) or, in the Department of Oceanography, University of Washington, were compared to samples obtained from the National Bureau of Standards. From 1970-1973, ampoules were standardized by liquid scintillation techniques and external standards at the Department of Oceanography.

Phytoplankton Cell Counts

Samples for phytoplankton identification and cell counts were usually taken from Nansen bottles during hydrocasts and stored in 250 ml glass jars. They were preserved with 4% formalin, buffered (sodium borate) or unbuffered, for a final strength of approximately 1%. Samples were shipped to Seattle for later analysis. Some samples were collected from a water pumping system during summer 1970 (see below).

Phytoplankton species were enumerated for some of the samples collected in the summers of 1968, 1969, and 1971 with the inverted microscope method (Hasle 1978a, b). Samples were individually counted or samples from two, three, or four days were combined for each depth. The samples combined to make a composite were separated in time by one week or less. After thorough mixing, the samples were poured into 5 and 50 ml Zeiss counting chambers (Carl Zeiss, Oberkochen Würt, FRG) and allowed to settle at least 20 hr before counting. A Zeiss inverted microscope was used for all enumerations. The 5 ml chamber was counted at 390 X using a 25 X objective, 12.5 X oculars, and a magnification factor of the optics carrier of 1.25. The 50 ml chamber was counted at 156 X with a 10 X objective, 12.5 X oculars, and the 1.25 X magnification factor. Cell counts were converted to cells per liter, cell volumes (Larrance 1964), and cell carbon (Mullin et al. 1966). These data are contained in an unpublished manuscript (Walline 1973) available from the School of Oceanography, University of Washington.

Zooplankton

Zooplankton sampling was maintained from March 1966 through April 1974. Gear types, sampling periods, and depth intervals sampled varied between and within years. Regardless of the gear used, all samples were concentrated and preserved in 4% V/V formalin (final concentration) buffered with either sodium acetate or sodium borate.

Initially, samples were taken with an open 0.5 m diameter ring net with 215 µm mesh gauze. From June 1966 through July 1967, a 7.6 cm centrifugal

pump system with a 10 cm diameter hose intake was lowered. A 25 kg weight at the end of the wire held down the hose intake. Since wire angles were low, the depth of sampling was estimated from the length of the wire. Maximum depth of sampling was about 185 m. Samples of 5 to 18 m^3 of water were filtered at a rate of 0.2 to 0.6 m^3 per min through a net of 215 µm mesh size. Beginning in early July 1967, a closing 1 m diameter ring net of either 110 or 215 µm mesh was used to sample to 1000 m. This sampling overlapped with pumping stations to assure comparability.

Sampling with a 2 m^2 closing umbrella net began in September 1967 (Scott 1969; Macaulay and Daly 1987). Mesh size was 223 and 569 µm. This net, with a filtration ratio of 1.25:1, was the principal sampling device throughout the remaining field program though the netting itself was replaced with a high filtration type mesh (4:1 filtration ratio) in March 1972. All subsequent samples were collected with the 4:1 filtration ratio net.

An overlapping sampling scheme was used starting in October 1969. Sampling depths were at 10 m intervals from 300 to 10 m, 100 m intervals from 1000 to 10 m, and 500 m intervals from the bottom to 10 m. The 10 m upper limit was chosen to protect the net during retrieval through the hydrohole. Samples were collected from as deep as 2500 m.

Two other kinds of nets were sometimes employed: a 3 m^2 closing umbrella net with 300 µm mesh in summer 1968 and a 1 m^2 plummet net with 571 µm mesh initially in May 1971 and periodically thereafter. The plummet net is a downward fishing net with an opening-closing mechanism activated with a messenger (Macaulay 1978; Macaulay and Daly in prep.).

Sorting, identifying, and counting of some samples were done in Seattle (Table 3). Other samples have been analyzed for some groups of organisms, primarily copepods. These data are available in the School of Oceanography, but obtaining them will require an investigator to visit the University of Washington.

Echo-sounder

Echo-sounding was conducted from April 1970 to April 1974. A modified Ross 200A (100 kHz) echo-sounder and 10° transducer with an impedance matching box scanned depth ranges of 0-50, 50-100, 100-150, and 150-200 fm. The 0-50 fm depth range was emphasized because of interest in the scattering layer often found about 25 fm. The system included the standard Ross 200A transceiver unit, recorder unit, and a Sony TC-5600 stereo tape recorder. During regular

Table 3. List of T-3 zooplankton samples analyzed and used in theses, reports, and publications

Hughes (1968)	399 samples collected with a plankton pump		
	Cruises:	02	22 Jun - 15 Jul 1966
			27 Jul - 25 Aug
			30 Aug - 17 Oct
		03	5 Feb - 14 Feb 1967
Scott (1969)	523 samples collected with a pump, 1 m closing ring net and 2 m^2 umbrella net		
	Cruises:	02	22 Jun - 15 Jul 1966
			27 Jul - 25 Aug
			30 Aug - 17 Oct
		03	5 Feb - 14 Feb 1967
		04	10 Jul - 6 Sep 1967
		05	13 Sep - 23 Sep 1967
Damkaer (1976)	52 samples collected with a 1 m closing ring net		
	Cruises:	04	12 Jul - 8 Sep 1967
		06	5 May 1968
		07	10 Jun - 18 Aug 1968
Heron and Damkaer (1976)	2 samples collected with a 1 m closing ring net		
	Cruises:	07	10 Jun 1968
			12 Jun 1968
Pautzke (1979)	16 samples collected with a 2 m^2 umbrella net		
	Cruises:	14	7 Jun - 5 Oct 1970
		18	30 May - 1 Oct 1971
		22	31 May - 29 Sep 1972
		26	28 May - 19 Oct 1973
Heron, English, and Damkaer (1984)	54 samples collected with a 1 m closing ring net and 3 m^2 umbrella net		
	Cruises:	06	5 May 1968
		07	10 Jun - 20 Sep 1968
		08	21 Sep 1968

operation, echo-sounding was conducted continuously, normally on the 0-50 fm scale. Daily recordings of 15-45 min were made using all depth ranges. Some of these data are available on 1/4 inch magnetic tape, but retrieval will be difficult.

Data Management

The data were available from computer printouts or raw data sheets. The original punched data cards could not be located so the data were re-entered directly to disk files on the University of Washington Cyber 180-855 computer using a Tandy Model DT-1 data terminal. After editing the files to correct data entry errors or to fill in gaps in the data, the files were transferred to a 9-track, EBCDIC-coded magnetic tape for NODC. The resulting tape contains three files of hydrographic data, one file of chlorophyll data, and one file of primary productivity data.

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	ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

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

Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-02

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
06/02/66	10/18/66

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

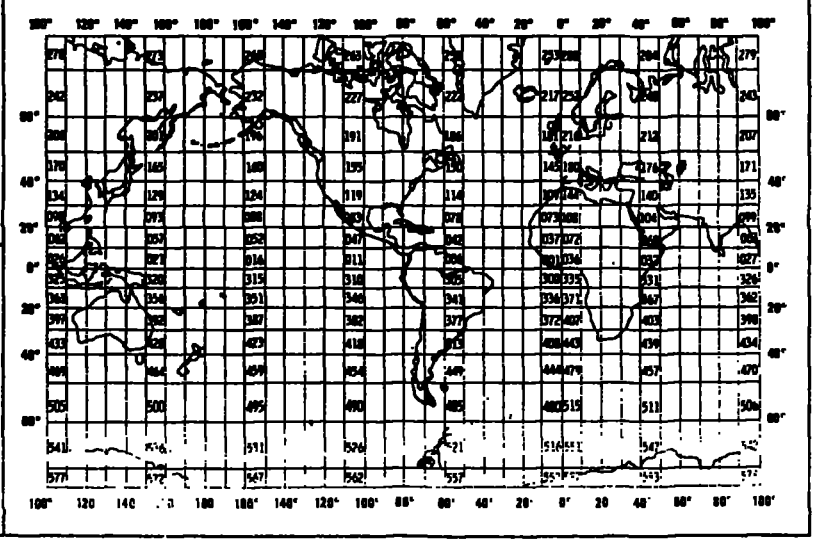
Data should be available for international exchange

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

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195
(206) 543-5079

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

GENERAL AREA



NOAA FORM 24-13

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
Water transparency	meters	Secchi Disk	N/A	N/A
Depth of Sample	meters	Wire out	N/A	N/A
Temperature	°C	Reversing thermometers	N/A	N/A
Salinity	°/₀₀	Nansen bottles, modified Van Dorn bottles	Salinometer, University of Washington	N/A
Sigma-t	-	"	-	N/A
Dissolved oxygen	ml/l	"	Winkler	N/A
PO_4	µg-atom/l	"	See Strickland and Parsons (1968)	N/A
NO_3	"	"	"	N/A
SiO_4	"	"	"	N/A
Chlorophyll a	mg m^{-3}	Van Dorn bottles	Spectrophotometer, fluorometer (Strickland and Parsons 1968)	N/A
Primary productivity (^{14}C uptake)	mg C m^{-3} h^{-1}	"	Strickland and Parsons (1968)	N/A

TSE-(T-3)-02 02 Jun 1966 - 18 Oct 1966

Modifications to the basic Program Methods

Zooplankton samples were collected with a 7.6 cm centrifugal pump with water pumped through 10 cm diameter underwater hose clamped to the hydrographic wire. Rate of discharge varied from ca. 0.2 to 0.6 m^3 per min. The water was filtered through a conical net having a base of 0.5 m and a height of 0.6 m suspended in a 0.1 m^3 container. Net mesh size was 215 μm.

Samples were collected at 5 m intervals over a depth range of 5 to 180 m for periods of 20 and 30 min. Volumes ranged from .5 to 18 m^3.

20% methanol (final concentration unspecified) was added to the samples for antifreeze.

225 samples were collected (120 day, 105 night).

For sample analysis, see Hughes 1968; Scott 1969.

Data from 4C chlorophyll a samples collected with Van Dorn bottles during this cruise were lost.

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Dr. T. Saunders English
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University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary Production and energy flow

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

TSE-(T-3)-03

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
02/01/67	02/15/67

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Should be available for international exchange

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Dr. Karl Banse
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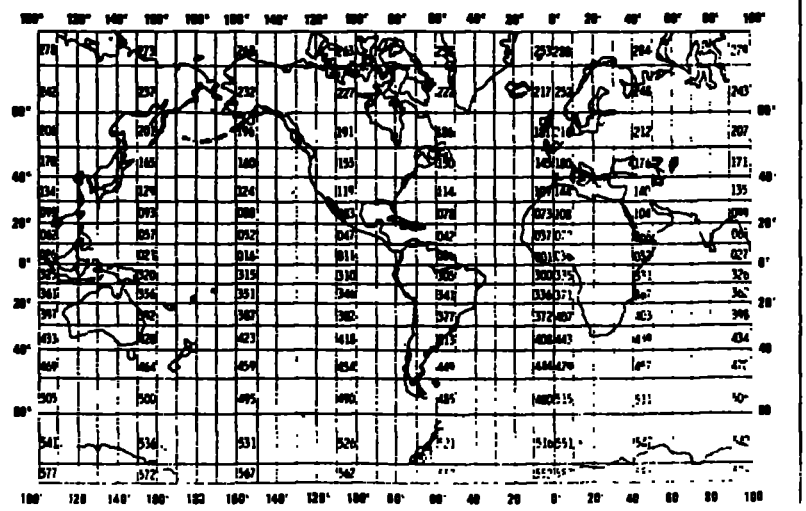
University of Washington
Seattle, WA 98195

(206) 543-5079

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

GENERAL AREA



NOAA FORM 24-13

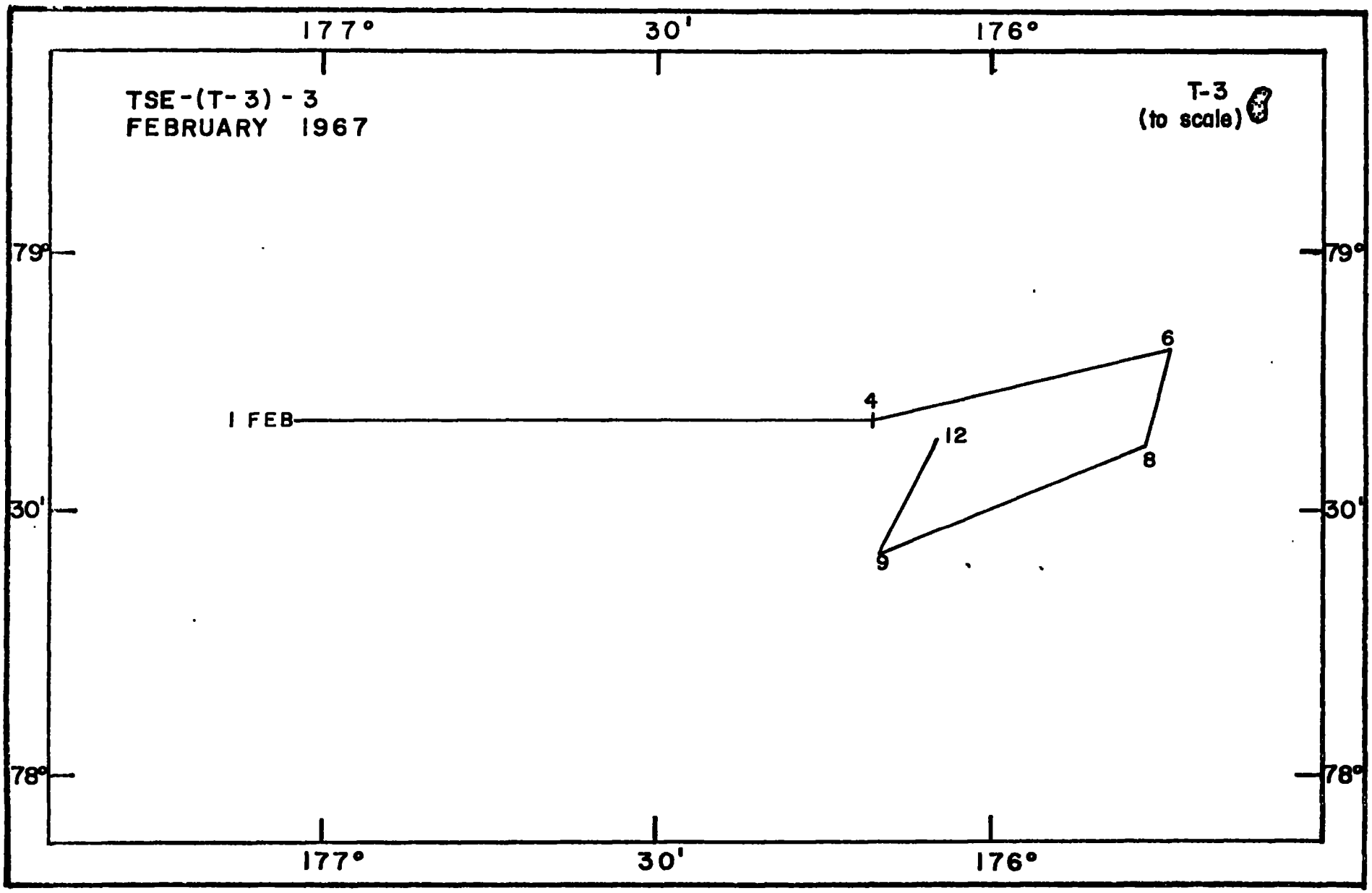

177°
30'
176°
TSE-(T-3)-3
FEBRUARY 1967
T-3
(to scale)
79°
30'
78°
1 FEB
4
6
8
9
12

FIG. 1

TSE-(T-3)-03 01 Feb 1967 - 15 Feb 1967

Modifications to the basic program methods

Zooplankton samples were collected with a 7.6 cm centrifugal pump with water pumped through 10 cm diameter underwater hose clamped to the hydrographic wire. Rate of discharge varied from ca. 0.2 to 0.6 m^3 per min. The water was filtered through a conical net having a base of 0.5 m and height of 0.6 m suspended in a 0.1 m^3 container. Net mesh size was 215 μm.

Samples were collected at 5 m intervals over a depth range of 10 to 185 m for periods of 20 and 30 min. Volumes ranged from 5 to 18 m^3.

174 samples were collected (87 day, 87 night).

For sample analysis, see Hughes 1968; Scott 1969.

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School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-04

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
06/04/67	09/11/67

8. ARE DATA PROPRIETARY?

[x] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[x] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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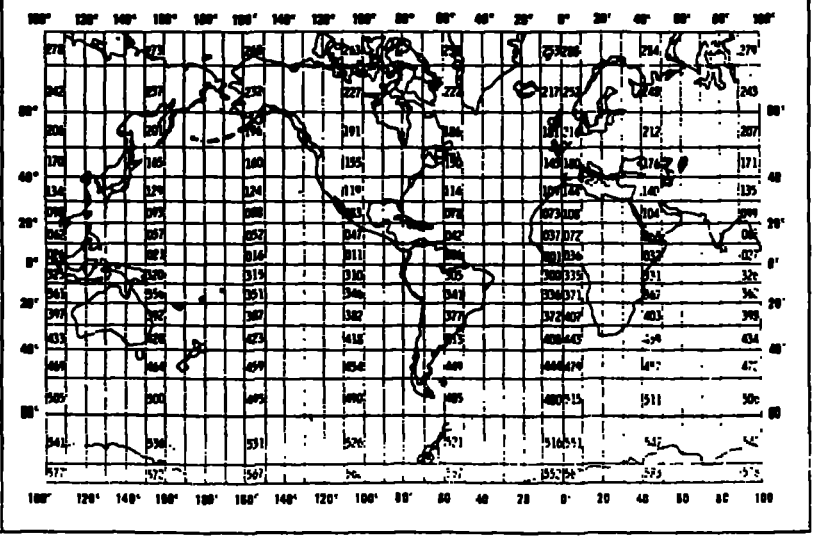
GENERAL AREA



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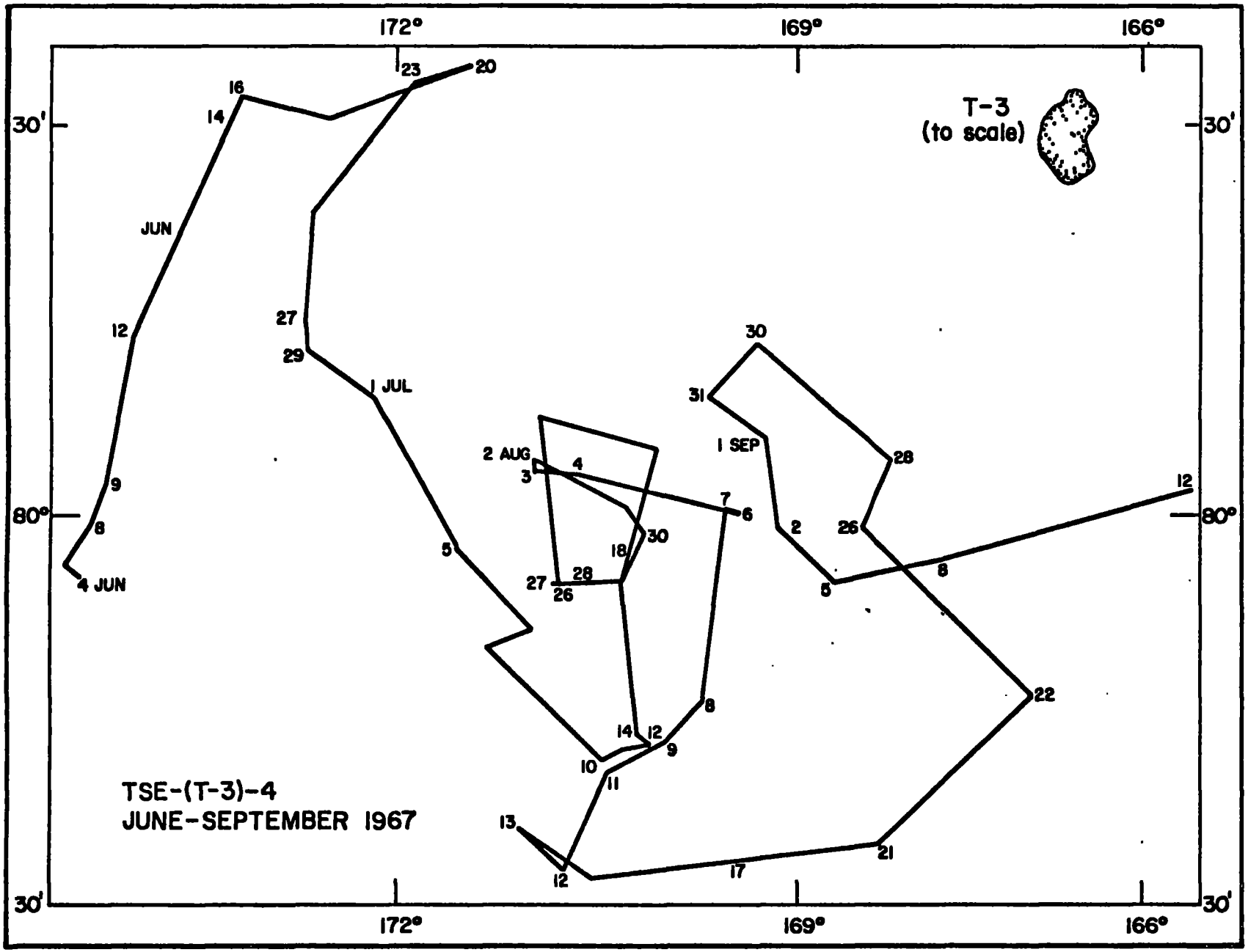
172°
169°
166°
30'
80°
T-3
(to scale)
JUN
4 JUN
1 JUL
2 AUG
1 SEP
TSE-(T-3)-4
JUNE-SEPTEMBER 1967

FIG. 1

TSE-(T-3)-04 04 Jun 1967 - 11 Sep 1967

Modifications to the basic program methods

Zooplankton samples were collected at 25 and 45 m with a 7.6 cm centrifugal pump with water pumped through 10 cm diameter underwater hose clamped to the hydrographic wire. Approximately 10 m^3 of water were filtered through a 215 µm mesh net. Fourteen day and fourteen night samples were collected.

Zooplankton samples were also collected with a 1 m closing ring net, mesh size 215 µm, over 10 m depth intervals from 10 - 100 m, 20 m intervals from 100 - 200 m, 50 m intervals from 200 - 400 m, and 100 m intervals from 400 - 1000 m. Two hundred forty-three samples were collected.

Chlorophyll a and primary productivity data collected during this cruise were lost.

For zooplankton sample analysis see Hughes 1968; Scott 1969; Damkaer 1976.

ACCESSION NUMBER

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University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-05

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
09/12/67	09/24/67

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?

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

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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Seattle, WA 98195

(206) 543-5079

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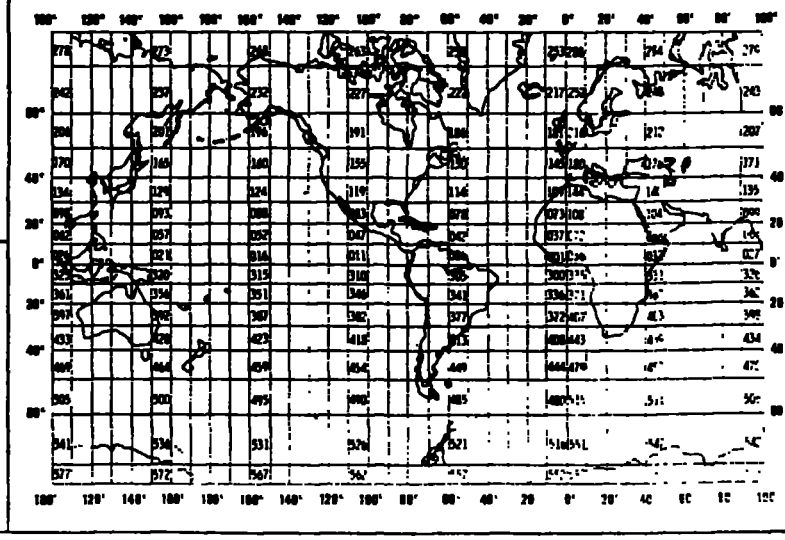
GENERAL AREA



NOAA FORM 24-13

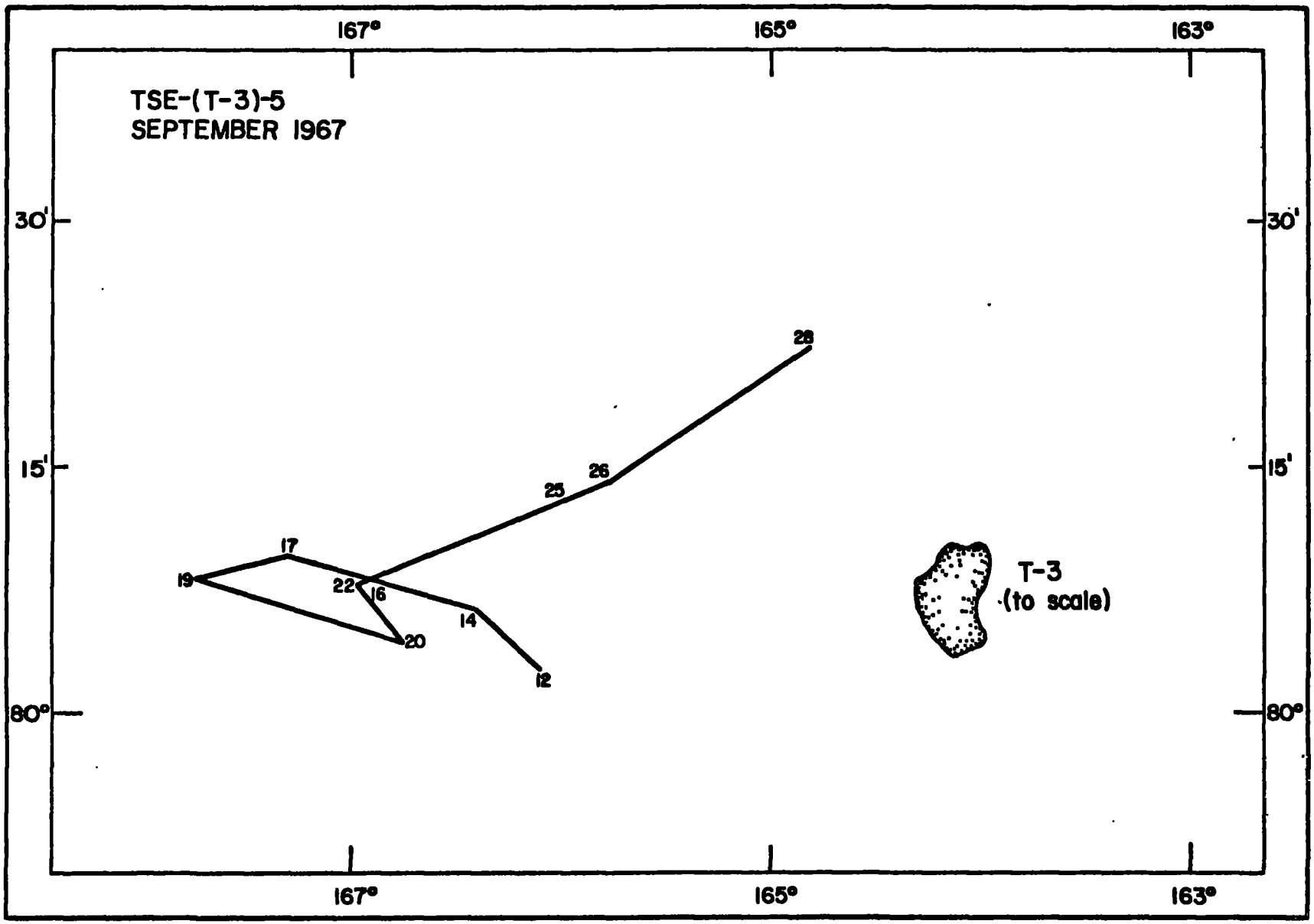

167°
165°
163°
TSE-(T-3)-5
SEPTEMBER 1967
30'
15'
80°
28
26
25
17
19
22
16
14
20
12
T-3
(to scale)

FIG. 1

TSE-(T-3)-05 12 Sep 1967 - 24 Sep 1967

Modifications to the basic program methods

Zooplankton samples were collected using a 1 m diameter closing ring net and a 2 m^2 closing umbrella net, both with 223 µm mesh. Sampling was done over 20 m depth intervals between 0 and 200 m, 50 m intervals between 200 and 300 m, 100 m intervals between 300 and 1000 m, and 500 m intervals between 1000 and 2000 m. Ninety-three (93) samples were collected: 44 with the 1 m net and 59 with the 2 m^2 net.

For sample analysis see Scott 1969.

ACCESSION NUMBER

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(4-77)

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2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-06

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
04/27/68	06/09/68

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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University of Washington
Seattle, WA 98195

(206) 543-5070

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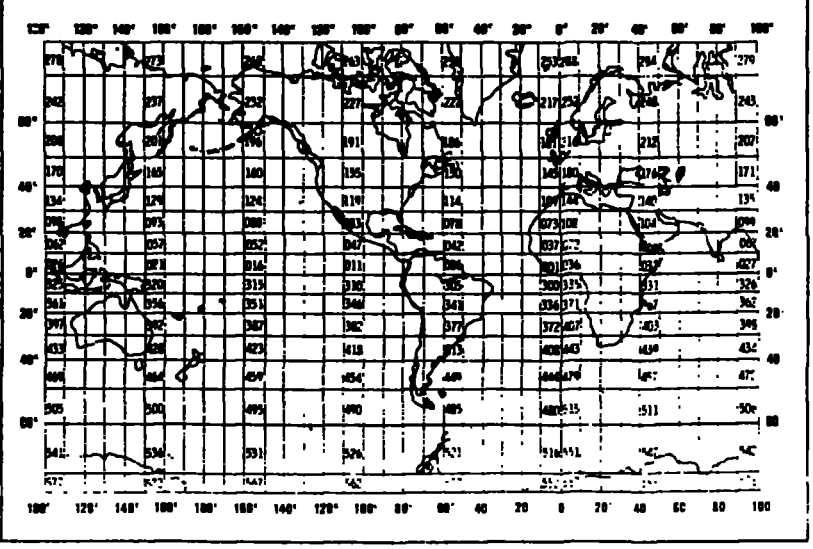
GENERAL AREA



NOAA FORM 24-13

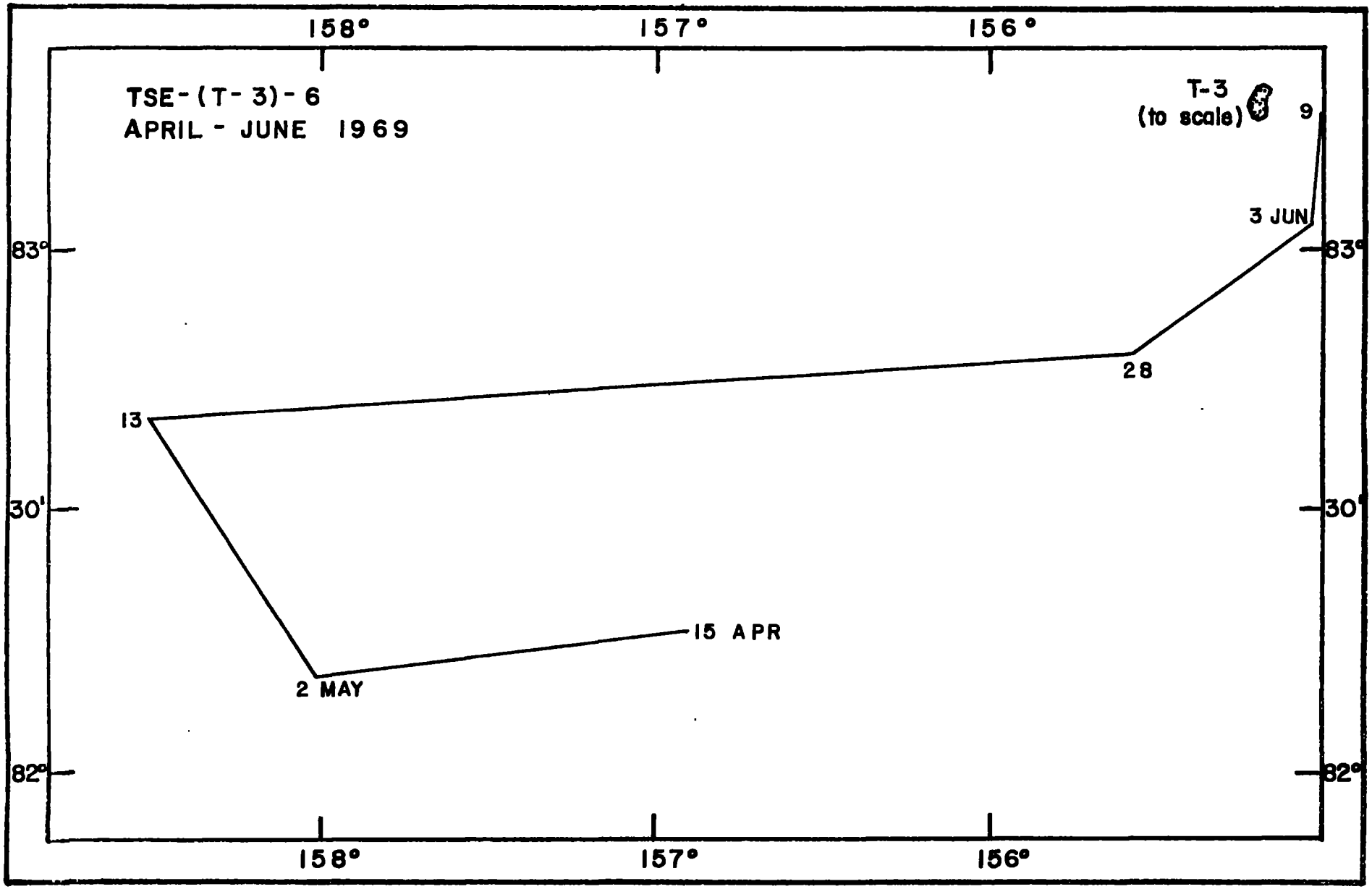

158°
157°
156°
TSE-(T-3)-6
APRIL - JUNE 1969
T-3
(to scale)
9
3 JUN
83°
28
13
30'
15 APR
2 MAY
82°
158°
157°
156°

FIG. 1

TSE-(T-3)-06 27 Apr 1968 - 09 Jun 1968

Modifications to the basic program methods

Fifty-nine (59) zooplankton samples were collected with a 1 m closing ring net having a mesh size of 100 µm. Samples were collected over 10 m depth intervals from 0-100 m, 20 m intervals from 100-200 m, 50 m intervals from 200-300 m, 100 m intervals from 300-500 m, and 500 m intervals from 500-1000 m.

For sample analysis see Damkaer 1976; Heron, English, and Damkaer 1984

One hundred twelve samples each were collected with Van Dorn bottles for chlorophyll *a* determinations and phytoplankton cell counts. Primary productivity was measured at 2 stations, 6 depths each.

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(4-77)

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School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-07

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
06/10/68	09/20/68

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?

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

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

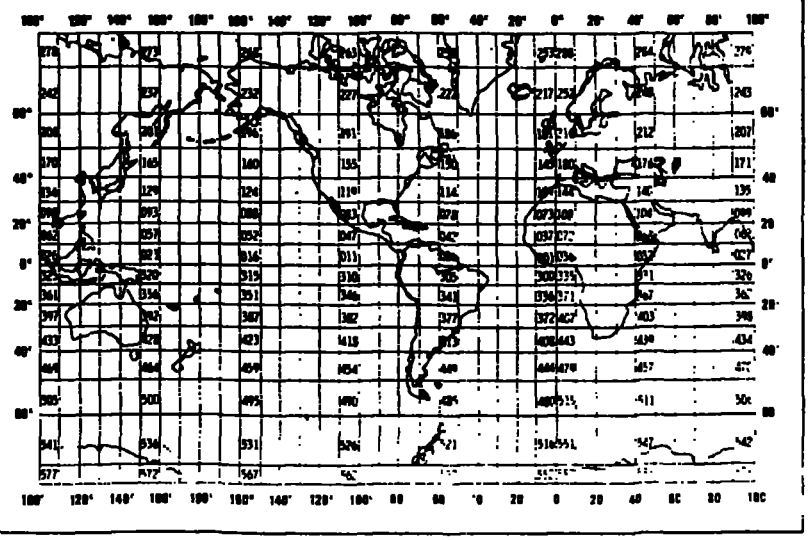
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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

GENERAL AREA



NOAA FORM 24-13

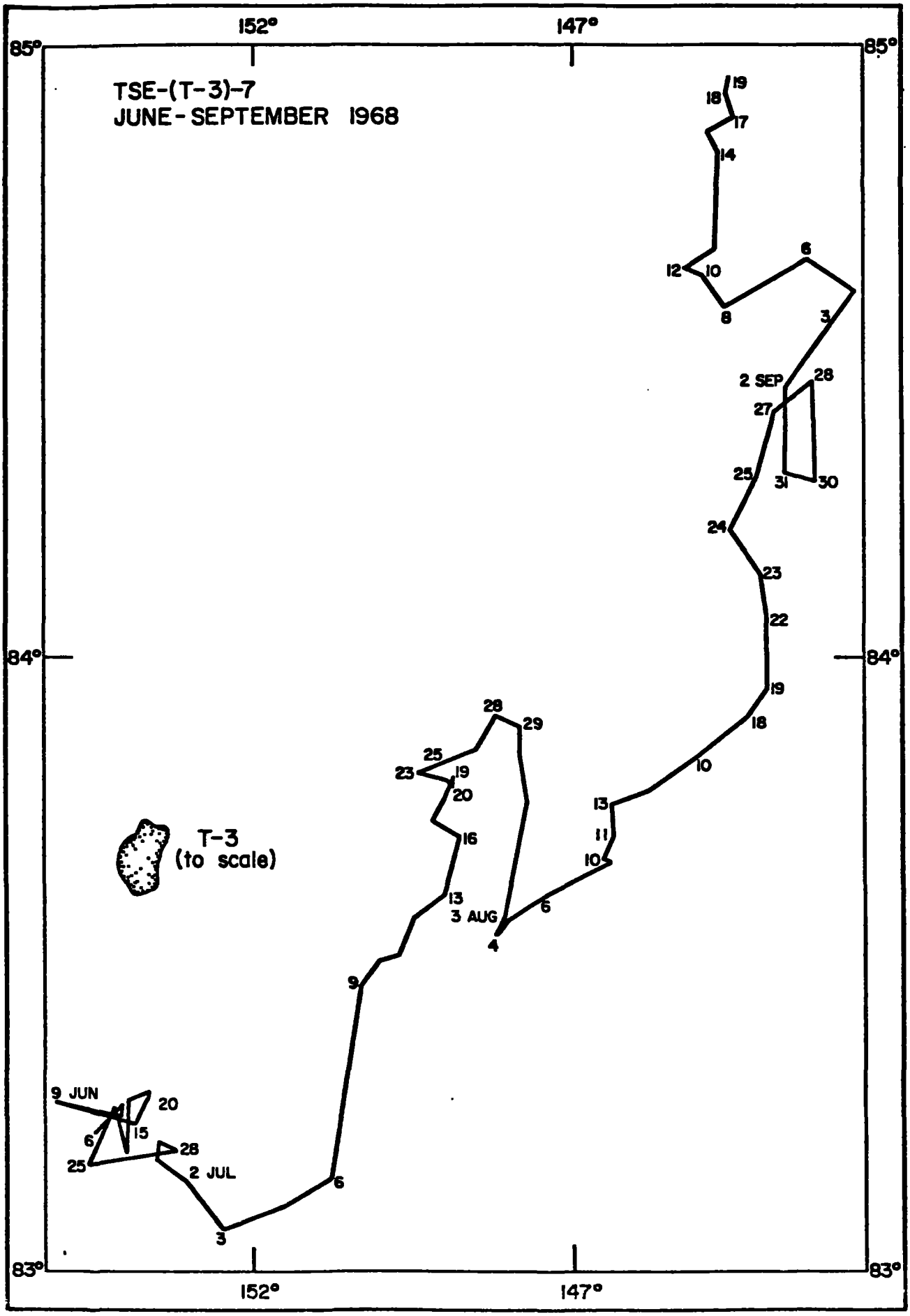

152°
147°
85°
84°
83°
TSE-(T-3)-7
JUNE - SEPTEMBER 1968
T-3
(to scale)
9 JUN
2 JUL
3 AUG
2 SEP

FIG. 1

TSE-(T-3)-07 10 Jun 1968 - 20 Sep 1968

Modifications to the basic program methods

Zooplankton samples were collected with three closing nets:

Dates	Net (m)	Mesh Aperture (μm)	# Samples	Depth (m) Min	Max
10 Jun-19 Sep	1	110	272	0	3000
21 Jun-10 Sep	2^2	223	285	5	2500
12 Aug-03 Sep	2^2	569	95	5	2500
28 Jun-22 Aug	3^2	300	104	5	2500

Sampling was done over 10 m depth intervals from 10 to 100 m, over 20 m intervals from 100 to 200 m, over 50 m intervals from 200 to 400 m, over 100 m intervals from 400 to 1000 m, and over 500 m intervals from 1000 to 2500 m

For some sample analysis, see Damkaer 1976; Heron and Damkaer 1976; Heron, English and Damkaer 1984.

Chlorophyll a (565) and phytoplankton cell count (529) samples were collected with Van Dorn bottles from 5, 7.5, 10, 12.5, 15, 17.5, 20, 25, 30, 40, 50, 60, 70, 80, 100, and 200 m at 35 stations between 11 June and 4 September. Primary productivity experiments were run at 8 stations between 5 Jul and 4 Sep at depths of 5, 10, 15, 20, 40, and 60 m. Incubations were all done at one light intensity.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13 (4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

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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

Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-08

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island (T-3)	Ice island	USA	USA	09/21/68	01/31/69

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR___ MONTH___

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

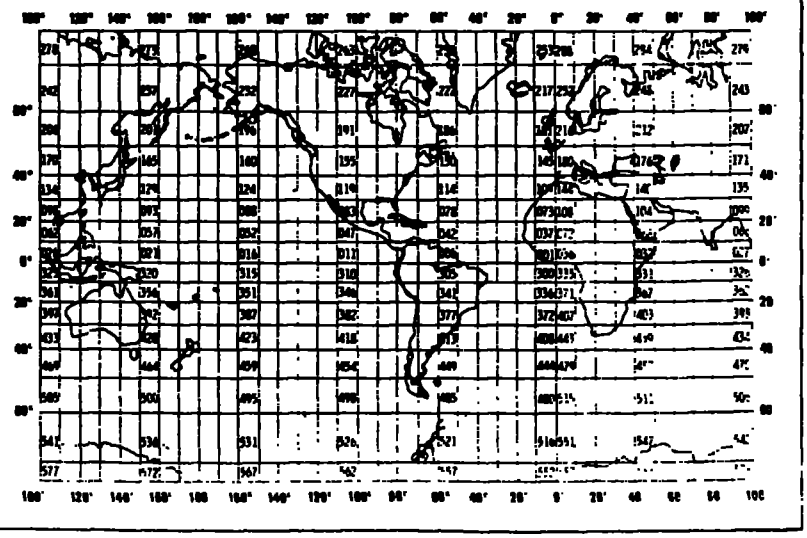
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

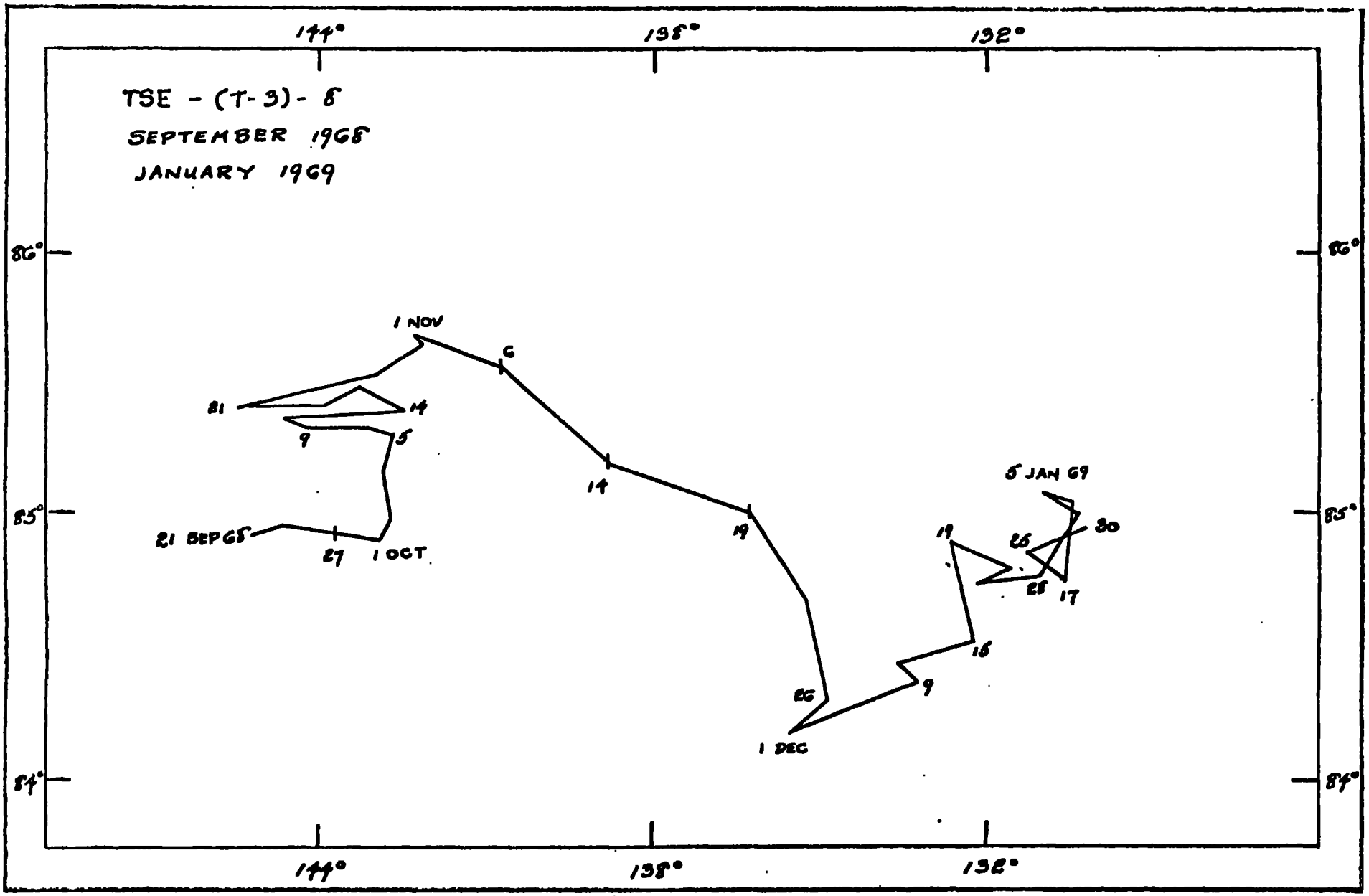
Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206)543-5079

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

GENERAL AREA




144°
138°
132°
TSE - (T-3) - 8
SEPTEMBER 1968
JANUARY 1969
86°
85°
84°
1 NOV
6
14
19
1 DEC
26
9
16
5 JAN 69
19
26
30
28
17
21 SEP 68
27
1 OCT
81
14
9
5

Modifications to the basic program methods

Zooplankton samples (71) were collected with a 2 m^2 closing net with a mesh size of 223 µm. Sampling was done over 10 m depth intervals from 0-100 m, over 20 m intervals from 100-200 m, over 100 m intervals from 200-500 m, and over 500 m intervals from 500-2000 m.

Two hydrographic casts were done and 46 samples each were collected for temperature, salinity, and dissolved oxygen measurements, however oxygen values are missing from the data.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13 (4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-09

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
01/31/69	06/13/69

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

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

Dr. Karl Banse
School of OCeanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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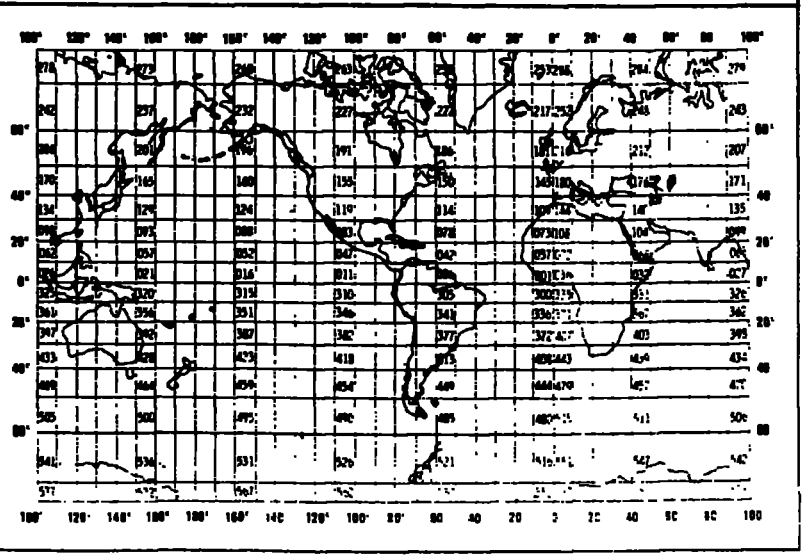
GENERAL AREA



NOAA FORM 24-13

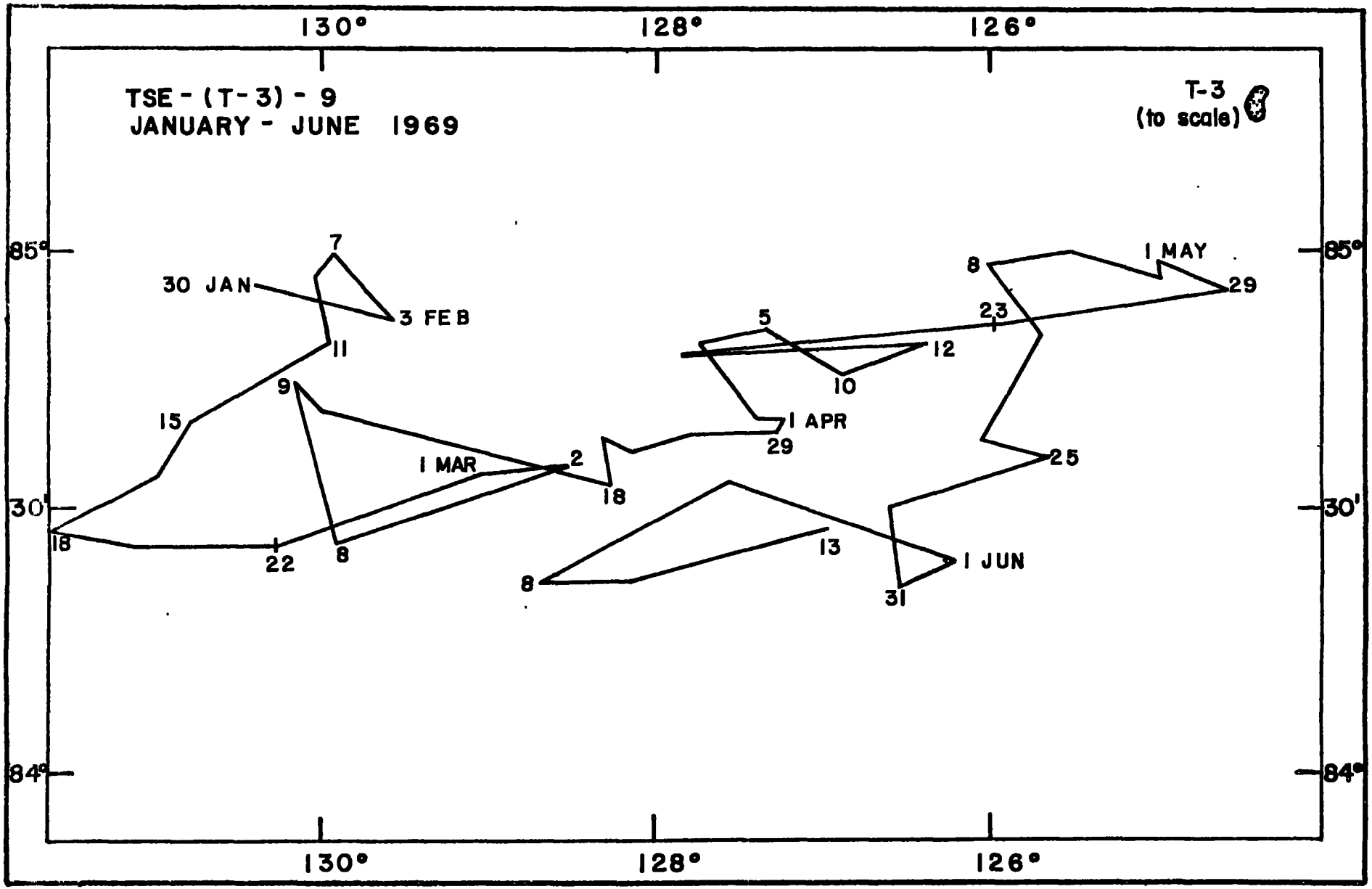

130°
128°
126°
TSE - (T-3) - 9
JANUARY - JUNE 1969
T-3
(to scale)
85°
84°
30'
30 JAN
3 FEB
1 MAR
1 APR
1 MAY
1 JUN
7
11
9
15
18
22
8
2
18
29
5
10
12
23
8
29
25
8
13
31

FIG. 1

TSE-(T-3)-09 31 Jan 1969 - 13 Jun 1969

Modifications to the basic program methods

Zooplankton samples were collected with three closing nets:

Dates	Net (m)	Mesh Aperture (μm)	# Samples	Depth (m) Min	Max
18 Mar-28 Mar	1 (diam)	110	24	10	2000
10 Apr-28 May	2 (sq)	223	39	10	2000
31 May-09 Jun	1 (diam)	215	31	10	2000
			94		

Depth intervals were 10 m between 10 and 300 m, 20 m between 10 and 200 m, 50 m between 200 and 400 m, 100 m between 10 and 1000 m, and 500 m between 10 and 2000 m.

Phytoplankton cell count samples were collected with Van Dorn bottles at 5, 10, 15, 30, 60, 100, and 200 m on 8 dates between 22 April and 9 June. Three sets of hydrographic observations were obtained with 51 samples each collected for temperature, salinity and dissolved oxygen.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-10

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
06/13/69	10/03/69

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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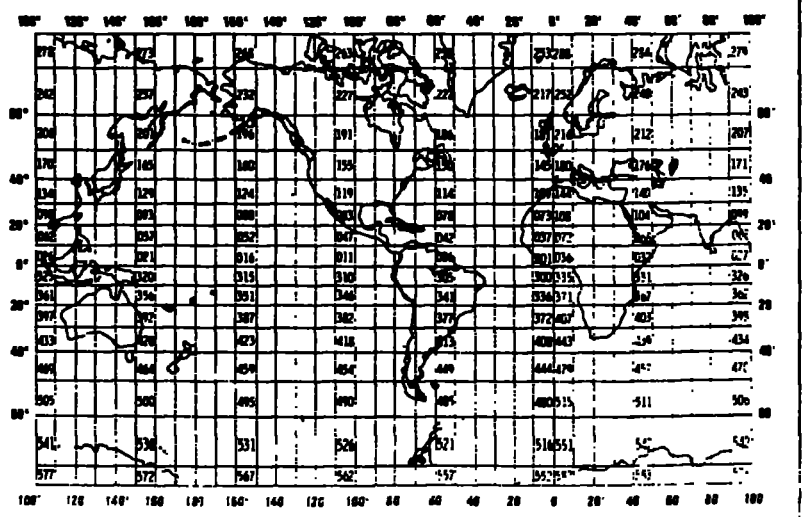
Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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

GENERAL AREA



NOAA FORM 24-13

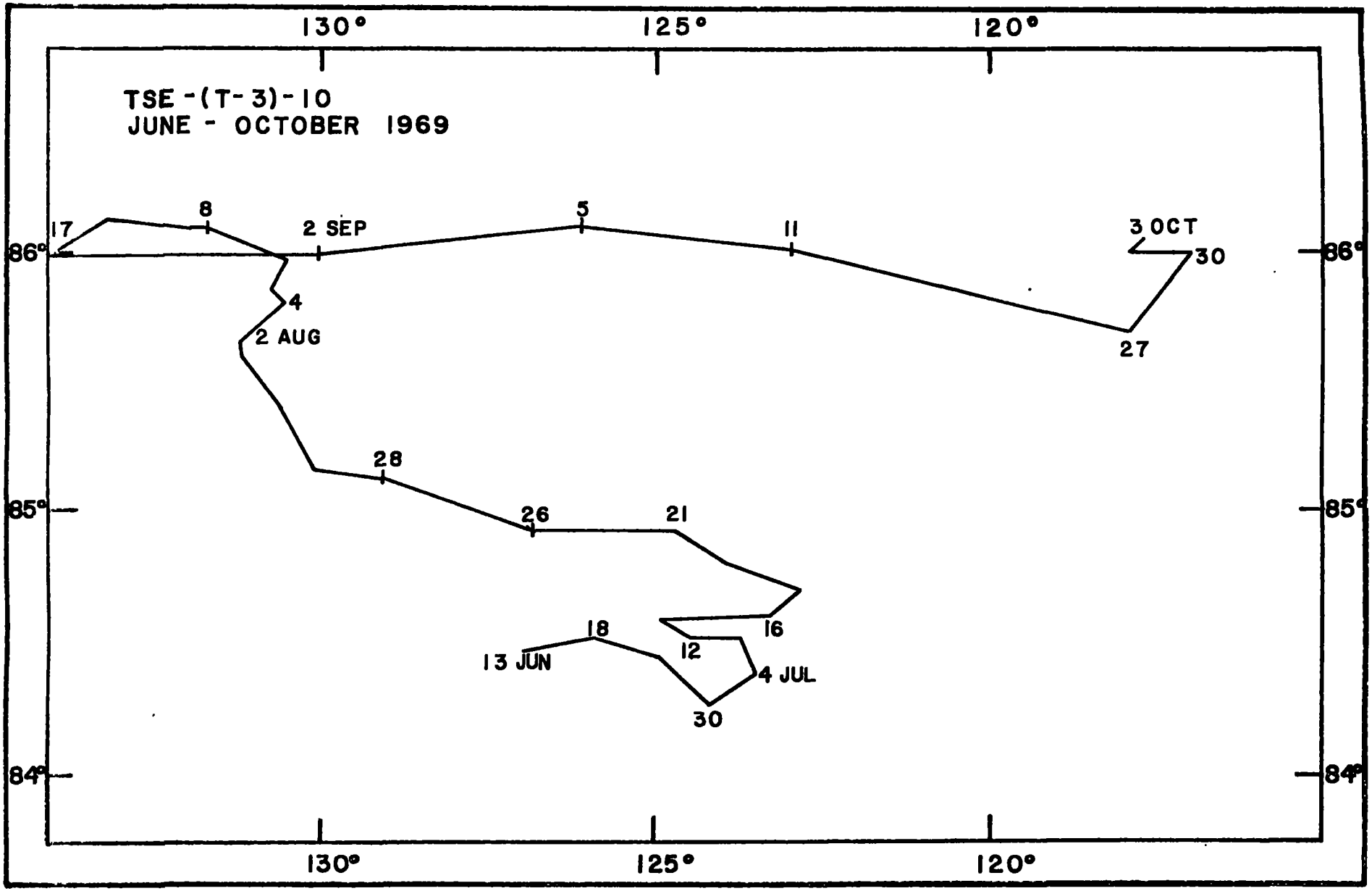

130°
125°
120°
TSE-(T-3)-10
JUNE - OCTOBER 1969
17
8
2 SEP
5
11
3 OCT
30
4
2 AUG
27
28
26
21
16
18
12
13 JUN
4 JUL
30
86°
85°
84°

FIG. 1

TSE-(T-3)-10 13 Jun 1969 - 03 Oct 1969

Modifications to the basic program methods

Zooplankton samples (37) were collected with a 2 m^2 closing umbrella net having a mesh size of 223 µm over depth intervals of 10 m between 10 and 60 m, 20 m intervals between 60 and 100 m, and 100 m intervals between 200 and 1000 m.

Chlorophyll a samples were taken at 2 m intervals from 2 to 50 m and at 10 m intervals from 50 to 80 m; samples were also taken at 100 and 200 m. 1684 samples were collected at 56 stations. Phytoplankton cell count samples were taken over the same depth intervals at 52 stations for a total of 1612 samples. Primary productivity experiments were run at 27 stations (459 samples). Incubations were done at constant or graded light levels. All phytoplankton samples were collected with Van Dorn bottles.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

U.S. DEPARTMENT OF COMMERCE
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NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 09195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-11

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
10/04/69	01/05/70

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

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

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

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

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195
(206) 543-5079

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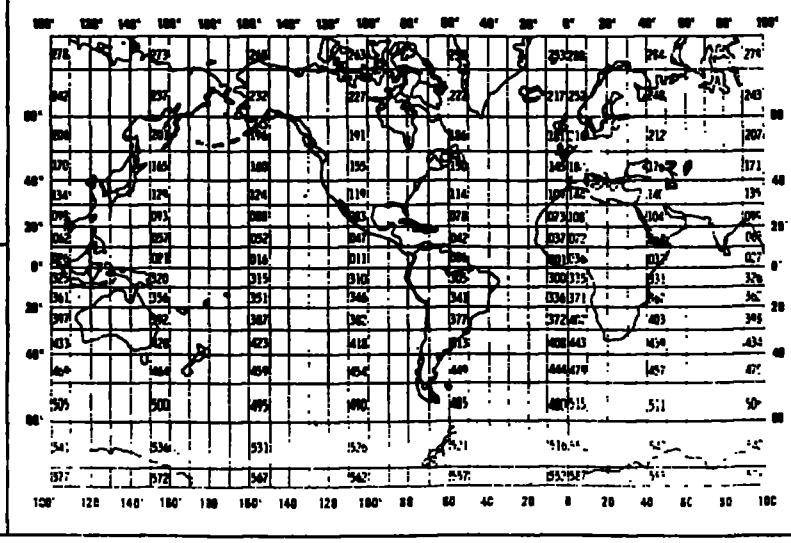
GENERAL AREA



NOAA FORM 24-13

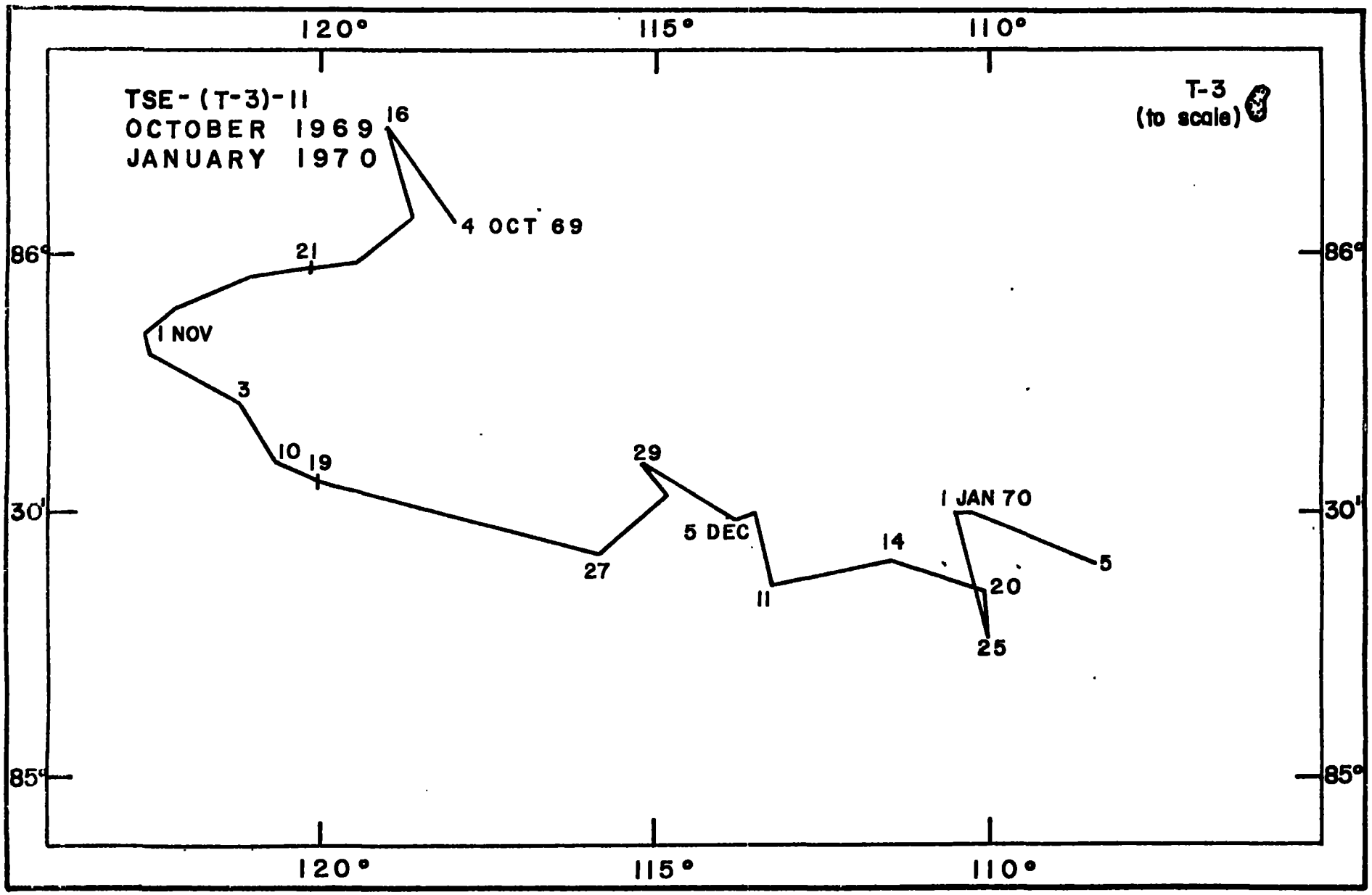

TSE-(T-3)-11
OCTOBER 1969
JANUARY 1970
T-3
(to scale)
120°
115°
110°
86°
85°
30'
16
4 OCT 69
21
1 NOV
3
10
19
29
27
5 DEC
11
14
1 JAN 70
5
20
25

FIG. 1

TSE-(T-3)-11 04 Oct 1969 - 05 Jan 1970

Modifications to the basic program methods

Zooplankton samples were collected using a 2 m^2 umbrella net, mesh size 223 µm. Fifty-four (54) samples were collected.

Two hydrographic series were done using Nansen bottles. Samples were collected for temperature, salinity, dissolved oxygen, and phytoplankton cell counts. 108 samples each were collected.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13 (4-77)

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NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

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EXPIRES 1-81

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-12

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island (T-3)	Ice island	USA	USA	01/05/70	03/23/70

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?

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

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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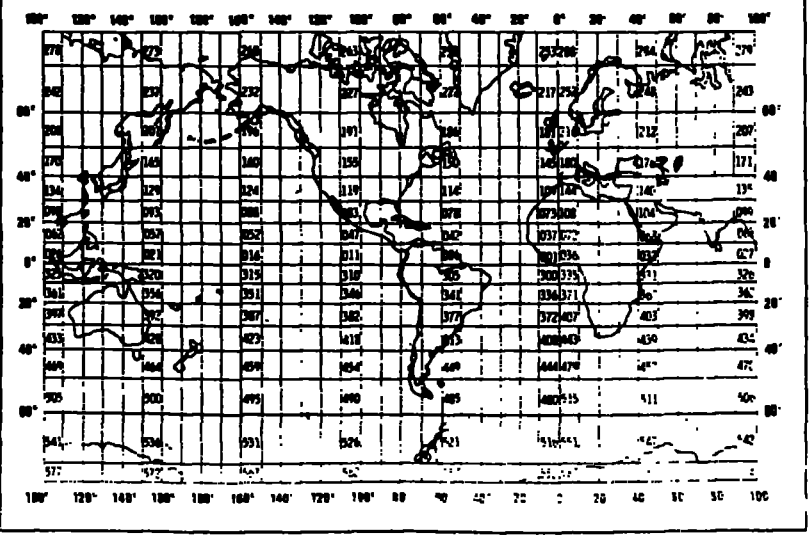
Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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

GENERAL AREA



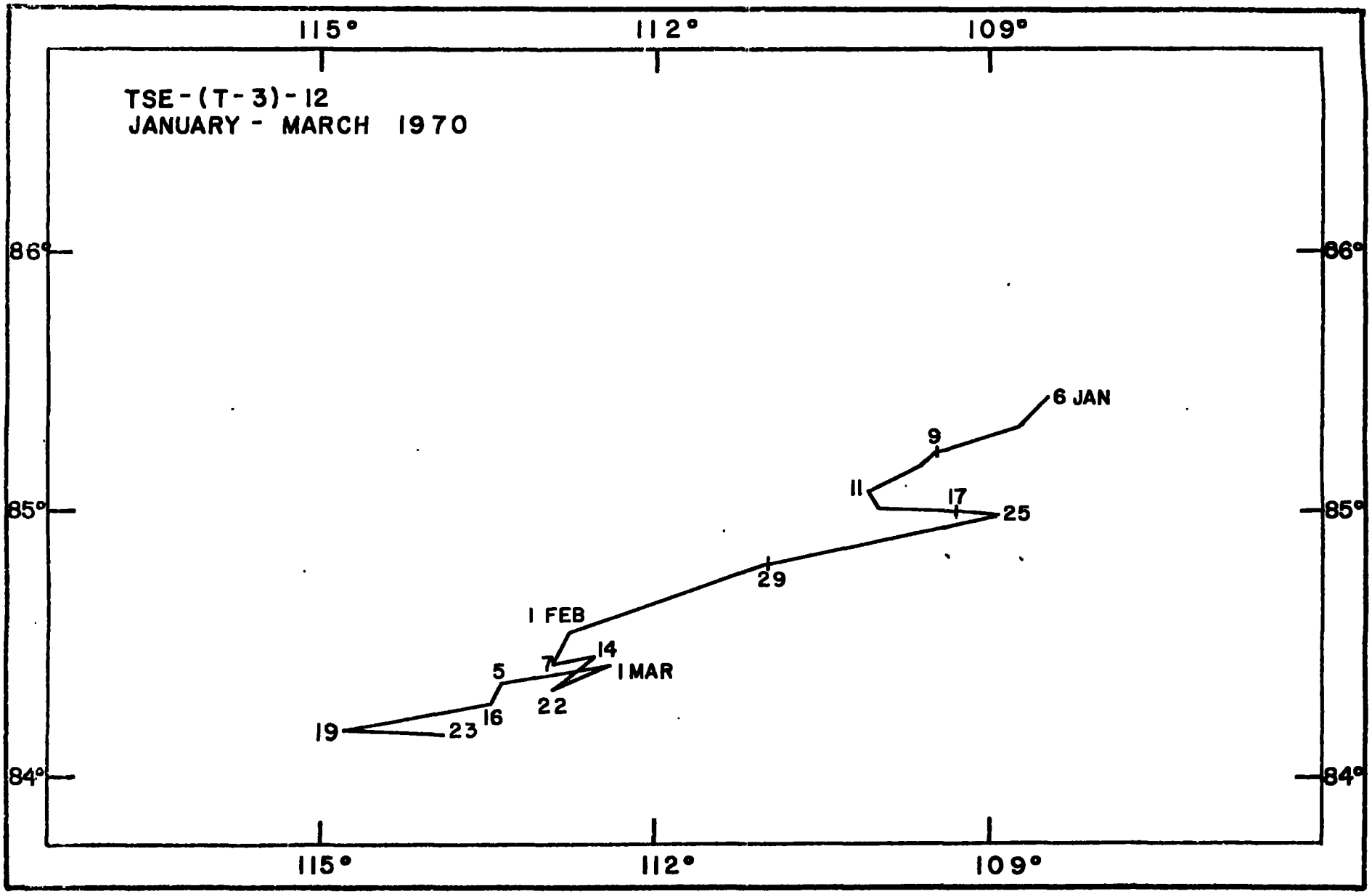

TSE-(T-3)-12
JANUARY - MARCH 1970
115°
112°
109°
86°
85°
84°
6 JAN
9
11
17
25
29
1 FEB
14
7
5
1 MAR
22
16
19
23

FIG. 1

TSE-(T-3)-12 05 Jan 1970 - 23 Mar 1970

Modifications to the basic program methods

628 zooplankton samples were collected with a 2 m^2 umbrella net with a mesh size of 223 µm.

Hydrographic stations were taken with Nansen bottles approximately weekly (9 stations, 291 bottles). Salinity, temperature, and dissolved oxygen samples were taken at all stations and phytoplankton cell count samples were taken at 7 stations (242 samples).

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

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

Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-13

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
03/23/70	06/07/70

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

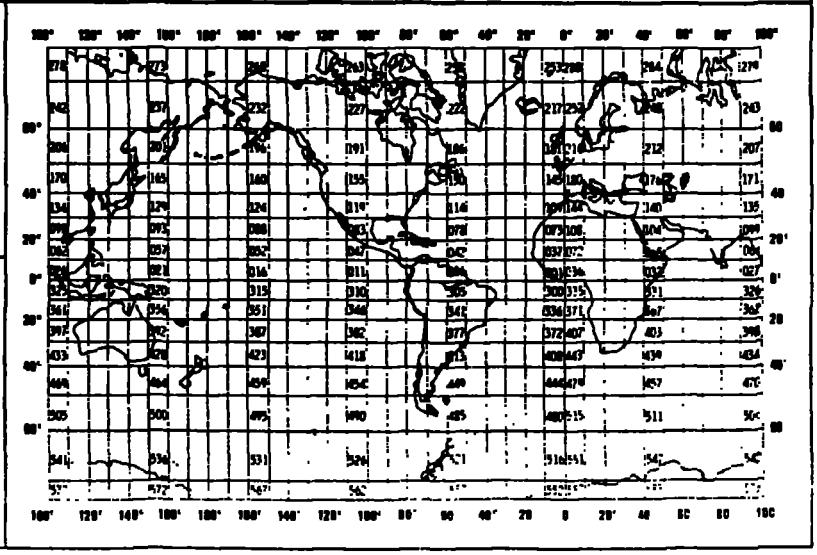
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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

GENERAL AREA



NOAA FORM 24-13

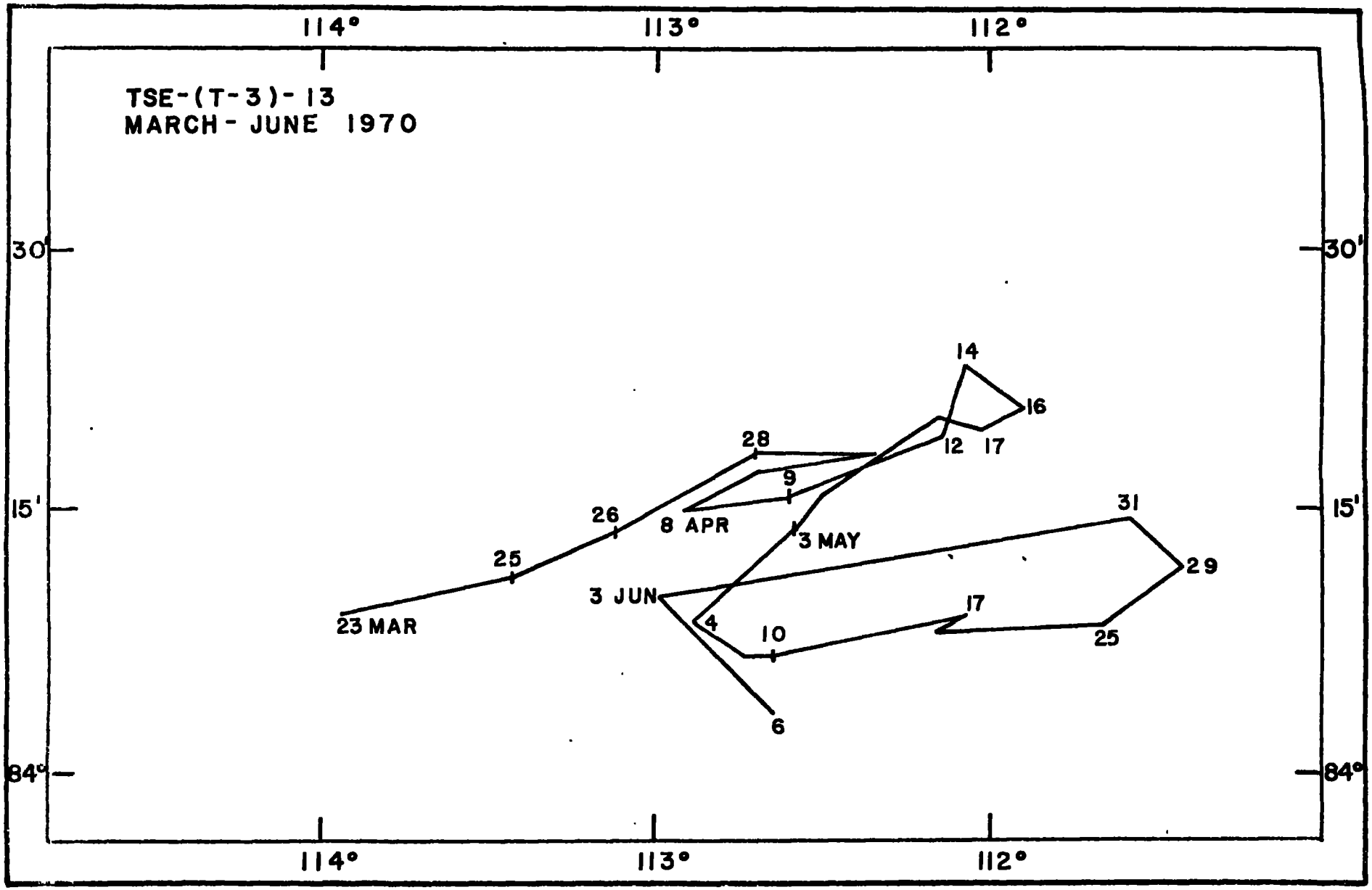

TSE-(T-3)-13
MARCH - JUNE 1970
114°
113°
112°
30'
15'
84°
14
16
12
17
28
9
8 APR
26
25
23 MAR
3 MAY
31
29
3 JUN
4
10
17
25
6

FIG. 1

TSE-(T-3)-13 23 Mar 1970 - 07 Jun 1970

Modifications to the basic program methods

541 zooplankton samples were collected with a 2 m^2 umbrella net, mesh size 223 μm.

Hydrographic stations (7) were taken with Nansen bottles approximately weekly with samples (205 each) collected for temperature, salinity, dissolved oxygen, and phytoplankton cell counts. Additional hydrographic stations over the range of 40 to 60 m with bottles spaced at 2 m intervals were taken for Lamont-Doherty Geological Observatory. Only temperature and salinity values were measured.

Echo-sounder observations were started during this cruise and were done on an intermittent basis.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

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

Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary productivity and energy flow

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

TSE-(T-3)-14

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
06/07/70	10/05/70

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

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

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

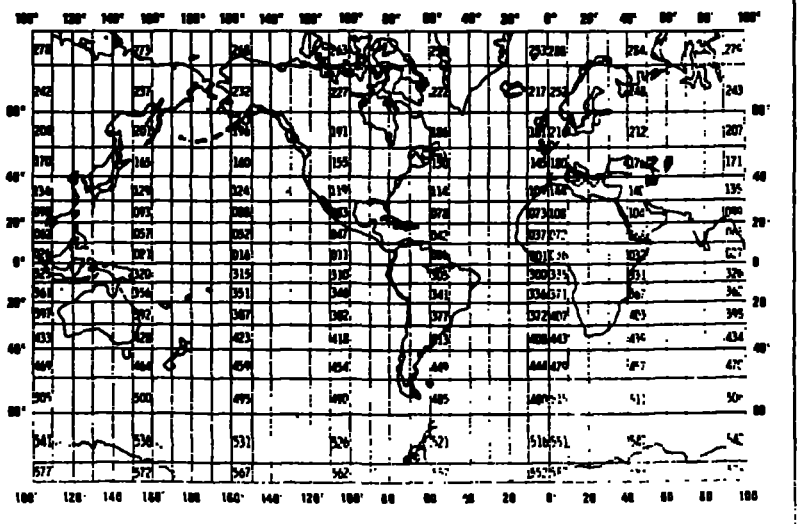
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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

GENERAL AREA



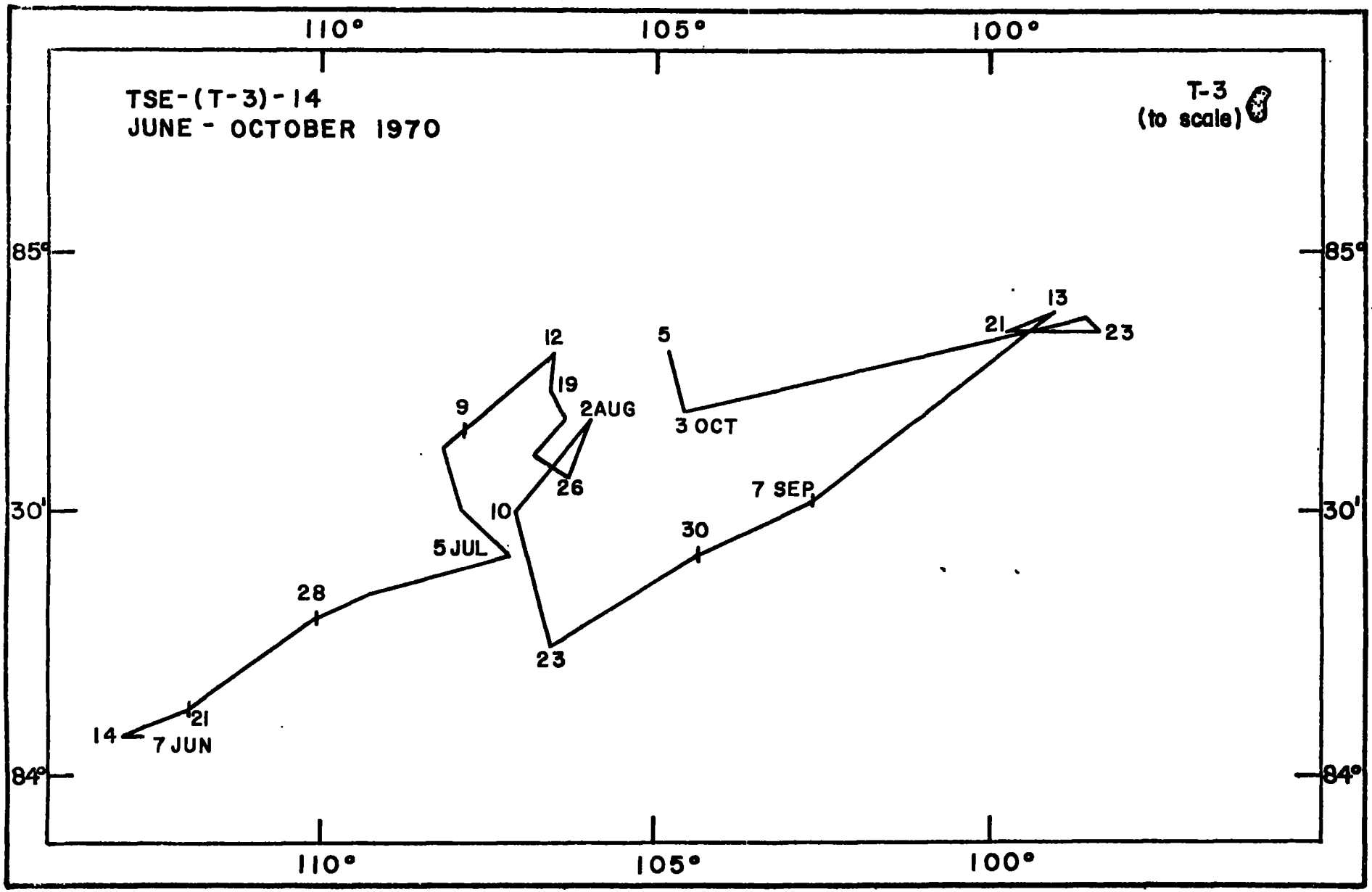

110°
105°
100°
TSE-(T-3)-14
JUNE - OCTOBER 1970
T-3
(to scale)
85°
30'
84°
13
21
23
12
5
19
9
2AUG
3 OCT
26
7 SEP
10
30
5 JUL
28
23
21
14
7 JUN

FIG. 1

TSE-(T-3)-14 07 Jun 1970 - 05 Oct 1970

Modifications to the basic program methods

1149 zooplankton samples were collected with a 2 m^2 umbrella net, mesh size 223 µm. The sampling frequency was 10 m, 100 m, and 500 m hauls made in the ratio of 4:2:1.

Sixteen (16) regular hydrographic stations were taken with Nansen bottles (513 bottles) at approximately weekly intervals. Temperature, salinity, dissolved oxygen, and phytoplankton cell count samples were taken at all stations; nutrient samples (437) were taken at 14 stations. Eleven (11) special hydrographic stations were taken for Lamont-Doherty Geological Observatory. These consisted of 11 bottles spaced at 2 m intervals over the depth range of 40 to 60 m. Only temperature and salinity samples were taken.

Chlorophyll a samples were collected from 0-100 m using either Van Dorn bottles or a 1/2 hp Webtrol submersible pump. Pumped samples were analyzed using the flow-through door of the fluorometer. Chlorophyll samples were collected at 79 stations, usually at 30 depths per station. Some duplicate stations were also sampled. Fluorometric chlorophyll analyses totaled 3004; 277 additional samples collected either from the fluorometer discharge or with Van Dorn bottles were filtered and used as calibration filters.

Primary production was measured at 83 stations (439) samples with graduate light series being done at 59 stations (295 samples) and constant light series being done at 24 stations (144 samples). Samples were collected with Van Dorn bottles.

For chlorophyll and productivity sample analyis see Pautzke 1979.

Echo-sounder traces were obtained continuously.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13 (4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-15

4. PLATFORM NAME(S)

Fletcher's Ice Island

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
10/05/70	12/30/70

8. ARE DATA PROPRIETARY?

[x] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[x] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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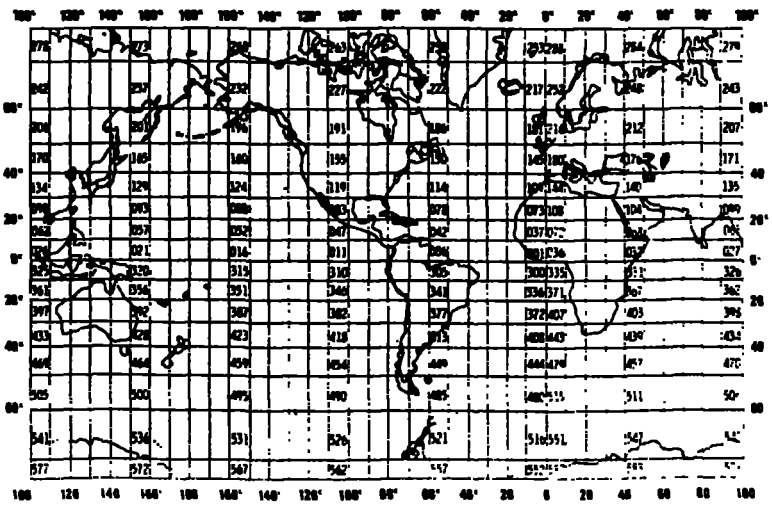
GENERAL AREA



NOAA FORM 24-13

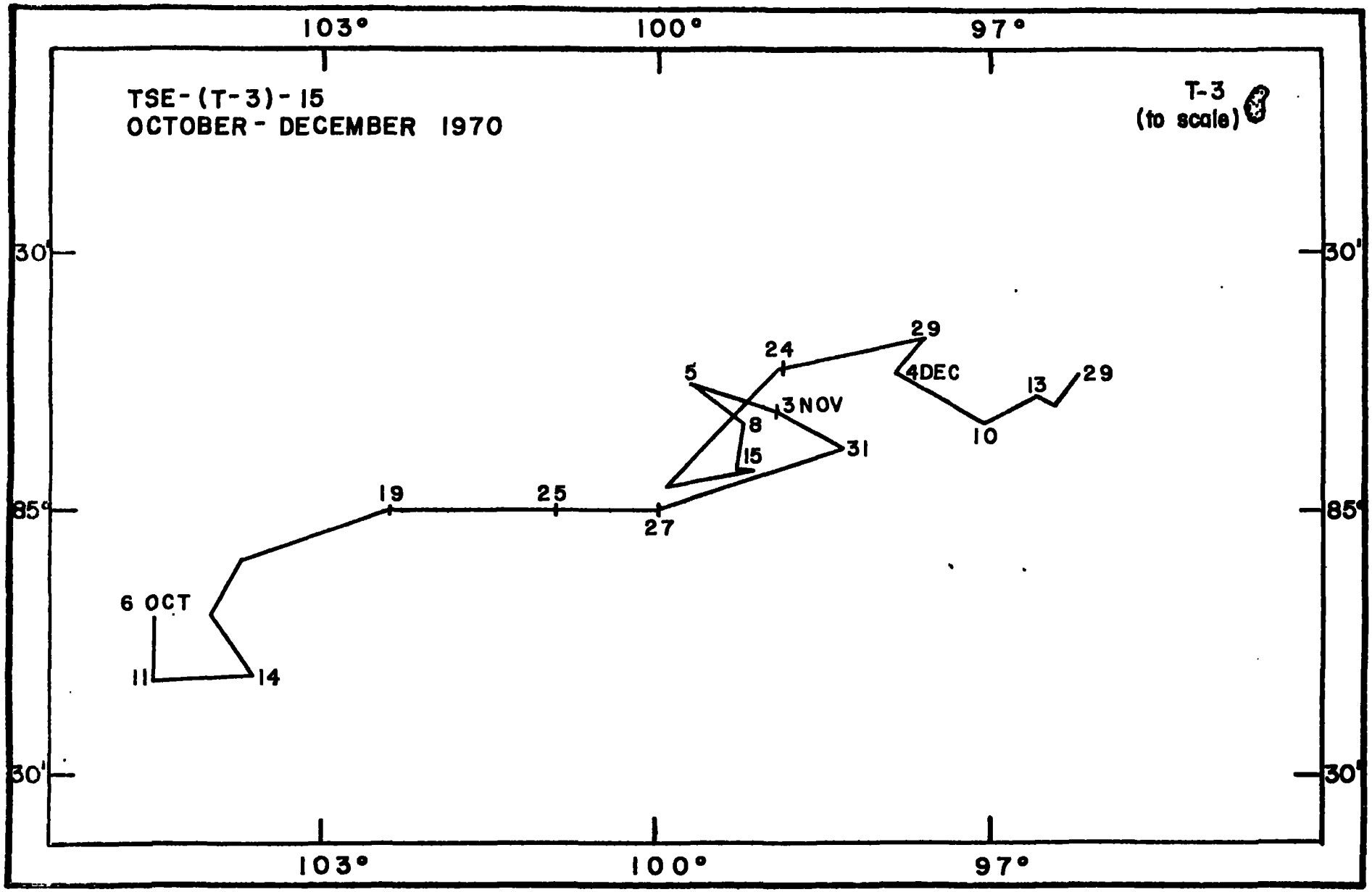

103°
100°
97°
TSE-(T-3)-15
OCTOBER - DECEMBER 1970
T-3
(to scale)
30'
85°
6 OCT
11
14
19
25
27
5
24
29
4DEC
13
29
3 NOV
8
15
31
10

FIG. 1

TSE-(T-3)-15 05 Oct 1970 - 30 Dec 1970

Modifications to the basic program methods

182 zooplankton samples were collected with a 2 m^2 umbrella net, mesh size 223 µm.

Hydrographic stations were taken approximately weekly in October and once per month in November and December (7 stations, 245 samples). Temperature, salinity, dissolved oxygen, and phytoplankton cell count samples were collected on all casts; nutrients were collected on 3 casts (123 samples). Oxygen samples (68) were lost for 2 casts when the hydro-hut froze and the sample bottles broke.

Eight (8) special hydrocasts were done for Lamont-Doherty Geological Observatory over the depth range 40 to 60 m with bottles spaced at 2 m intervals. Only temperature and salinity (88 samples each) were collected.

Echo-sounding was limited to periods when the hydrohole was not in use and was therefore done on an irregular basis.

	ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

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NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA. 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-16

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island	Ice island	USA	USA	01/01/71	03/30/71

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?

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

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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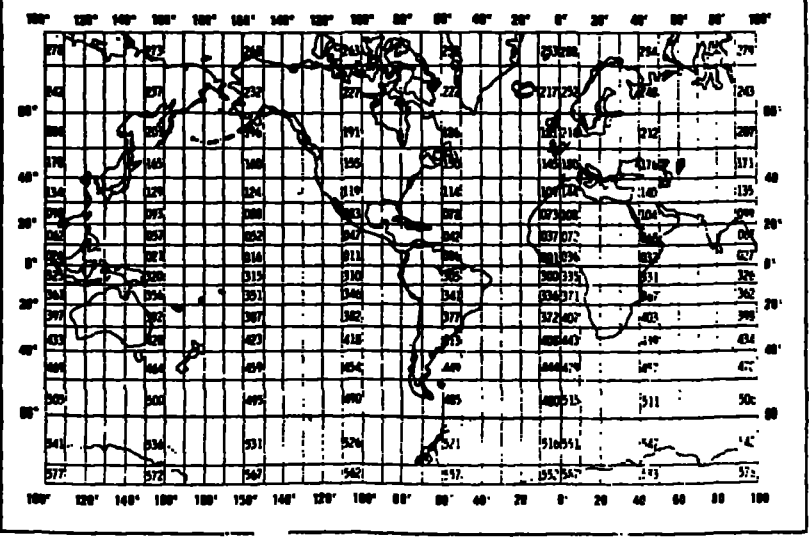
Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 09195

(206) 543-5079

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

GENERAL AREA



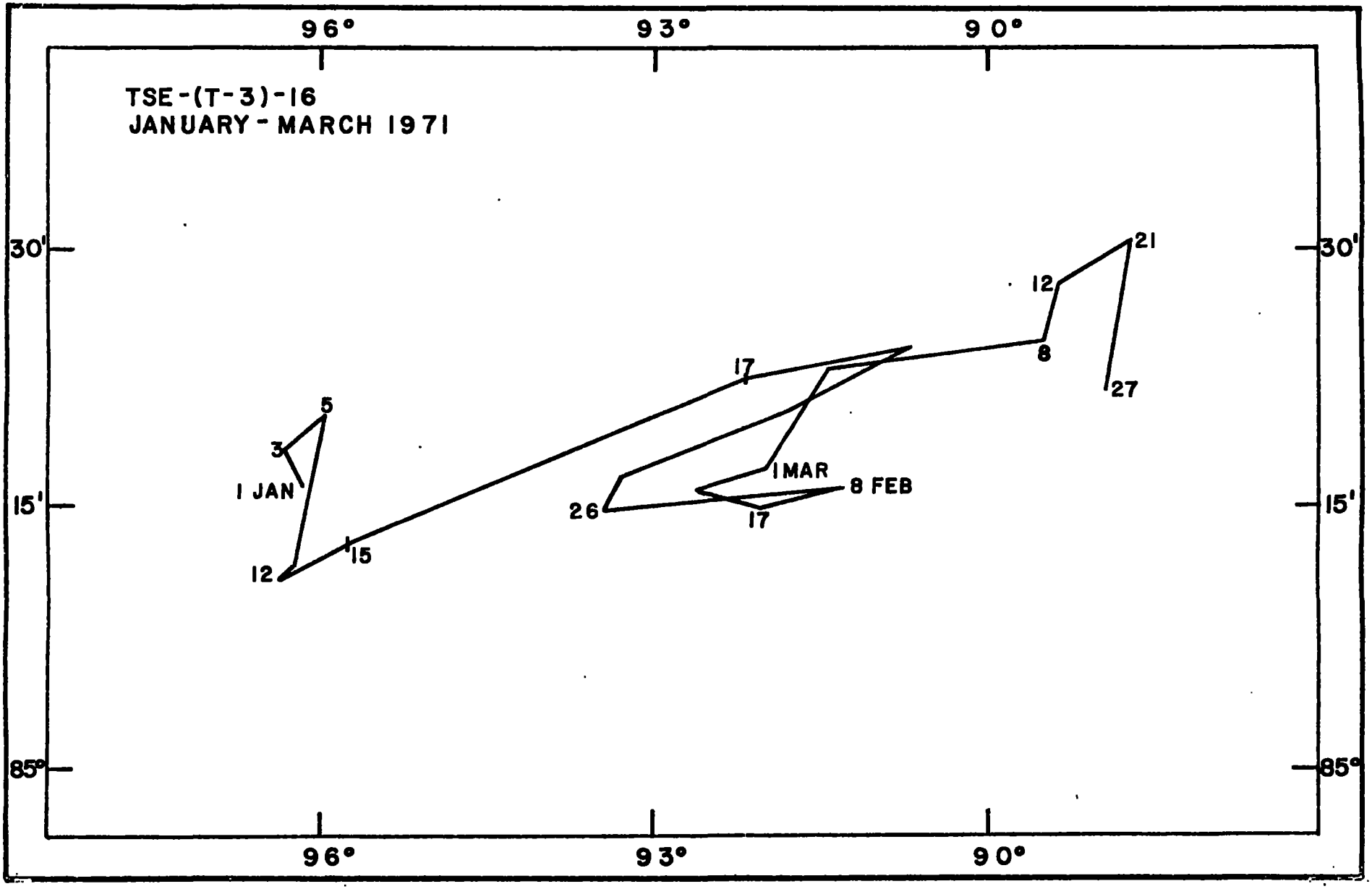

96°
93°
90°
TSE-(T-3)-16
JANUARY-MARCH 1971
30'
15'
85°
1 JAN
3
5
12
15
17
26
1 MAR
8 FEB
17
8
12
21
27

FIG. 1

TSE-(T-3)-16 01 Jan 1970 - 30 Mar 1970

Modifications to the basic program methods

71 zooplankton samples were collected with a 2 m^2 umbrella net, mesh size 223 µm.

One hydrographic station was taken with 48 bottles. Samples were collected for temperature, salinity, dissolved oxygen, and phytoplankton cell counts.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

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NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-17

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island (T-3)	Ice island	USA	USA	03/30/71	05/30/71

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

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University of Washington
Seattle, WA 98195

(206) 543-5079

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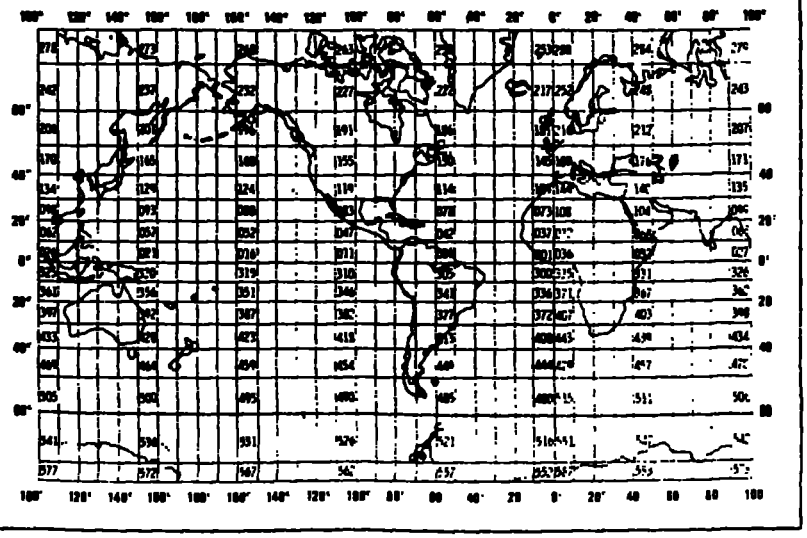
GENERAL AREA



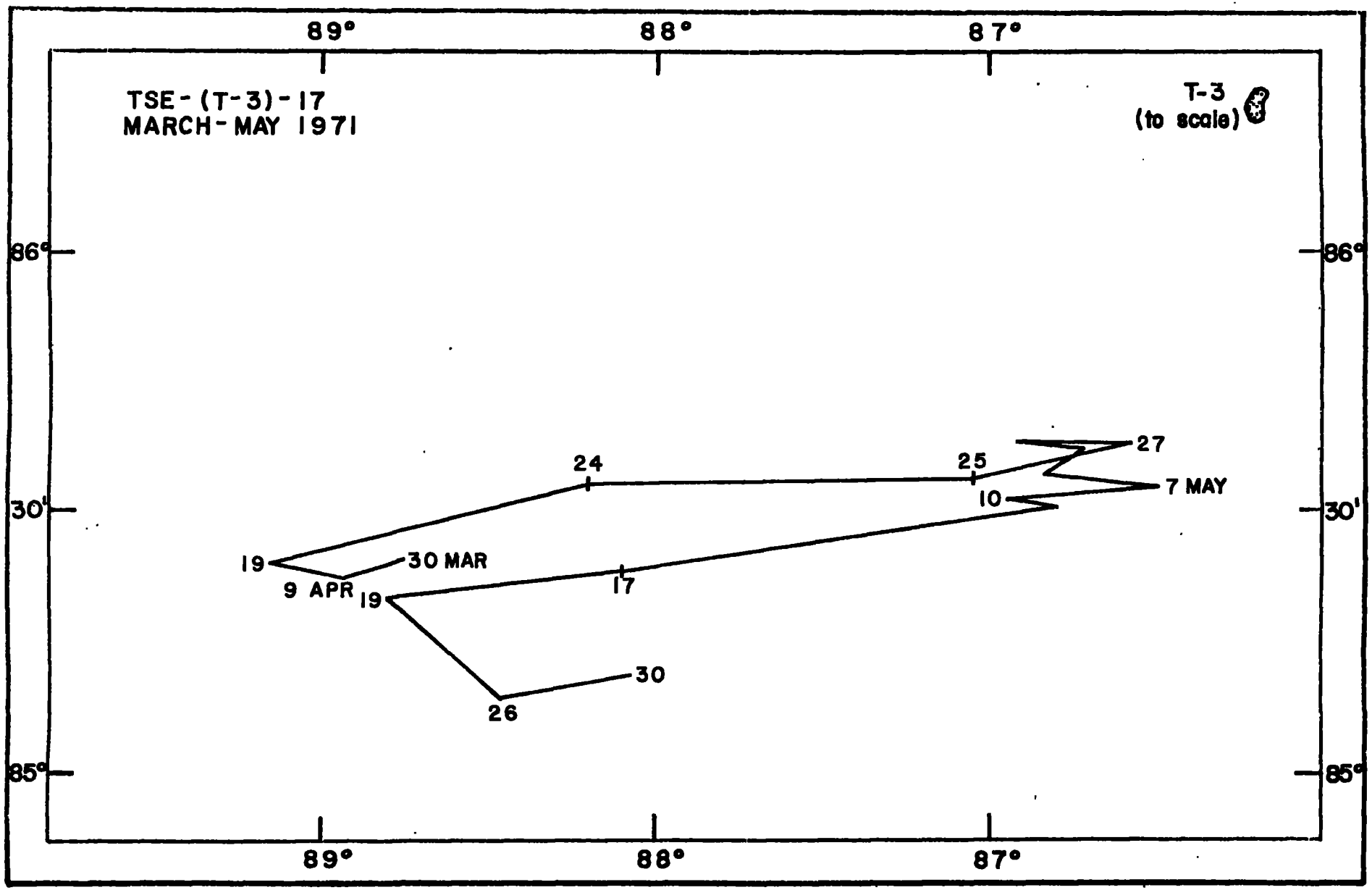

89°
88°
87°
TSE-(T-3)-17
MARCH-MAY 1971
T-3
(to scale)
86°
30'
85°
24
25
27
7 MAY
10
19
30 MAR
9 APR
19
17
30
26

FIG. 1

TSE-(T-3)-17 30 Mar 1971 - 30 May 1971

Modifications to the basic program methods

175 zooplankton samples were collected with the 2 m^2 umbrella net, mesh size 223 μm. Three high speed zooplankton hauls were made through the scattering layer with the 2 m^2 umbrella net, mesh size 223 μm: Depth range for the high speed samples was from 170 to 51 m.

A 1 m^2 plummet net consisting of two nets, one that fishes downward and one that fishes upward, was tested during this cruise.

Eight calibration hauls were taken with the 2 m^2 umbrella net, mesh size 223 μm. A TSK flowmeter was attached to the net frame. Depth range for these hauls was from 200 to 10 m.

One hydrographic station was taken with 36 bottles. Samples were collected for temperature, salinity, dissolved oxygen, nutrients and phytoplankton cell counts. An additional station was taken over the depth range of 40 to 62 m (12 bottles) for temperature and salinity.

The echo-sounder was operated on a continuous basis.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-18

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island	Ice island	USA	USA	05/30/71	10/01/71

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR___ MONTH___

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
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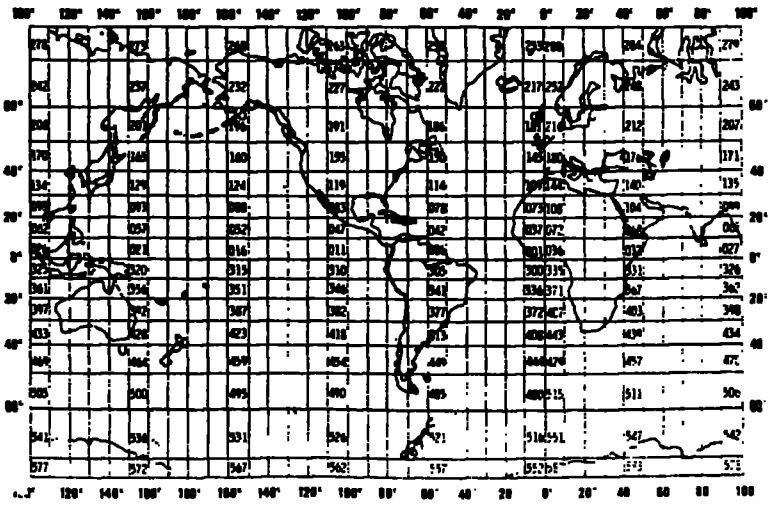
GENERAL AREA



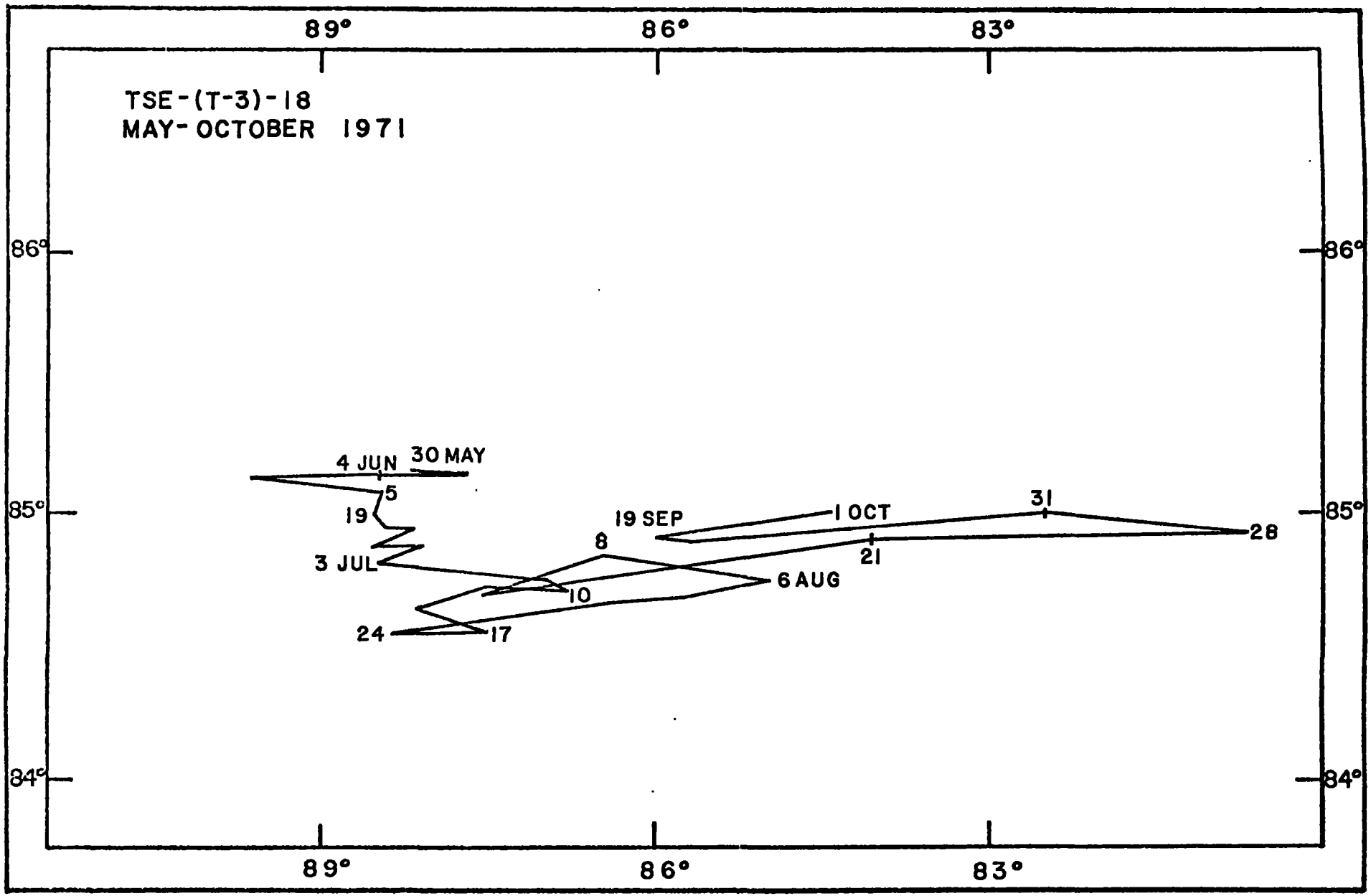

89°
86°
83°
TSE-(T-3)-18
MAY-OCTOBER 1971
86°
85°
84°
4 JUN
30 MAY
5
19
3 JUL
10
24
17
8
19 SEP
6 AUG
1 OCT
21
31
28

FIG. 1

TSE-(T-3)-18 30 May 1971 - 01 Oct 1971

Modifications to the basic program methods

1217 zooplankton samples were collected with the 2 m^2 umbrella net, mesh size 223 μm. 29 samples were collected with the 1 m^2 plummet net, mesh size 571 μm, fishing in the downward direction only.

Hydrographic observations were made using Van Dorn bottles. Samples were collected approximately weekly with 541 samples being collected for temperature, salinity, dissolved oxygen, and phytoplankton cell counts and 515 samples for nutrients. Twice per month the 40 to 60 m depth range was sampled with the bottles spaced at 2 m intervals for Lamont-Doherty Geological Observatory.

1792 chlorophyll determinations were made during the summer using the fluorometer. Calibrations were done with a spectrophotometer.

946 primary productivity filters were collected with experiments being done either with constant or graduated light lives.

Chlorophyll and productivity samples were collected with Van Dorn bottles.

For analysis of the chlorophyll and productivity data, see Pautzke 1979.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
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University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-19

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island	Ice island	USA	USA	10/01/71	12/20/71

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?

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

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

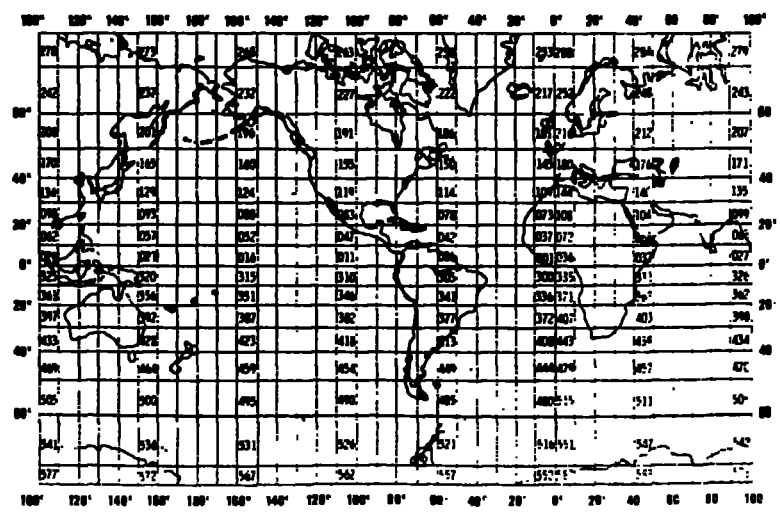
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

Dr. Karl Banse
School of OCeanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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

GENERAL AREA



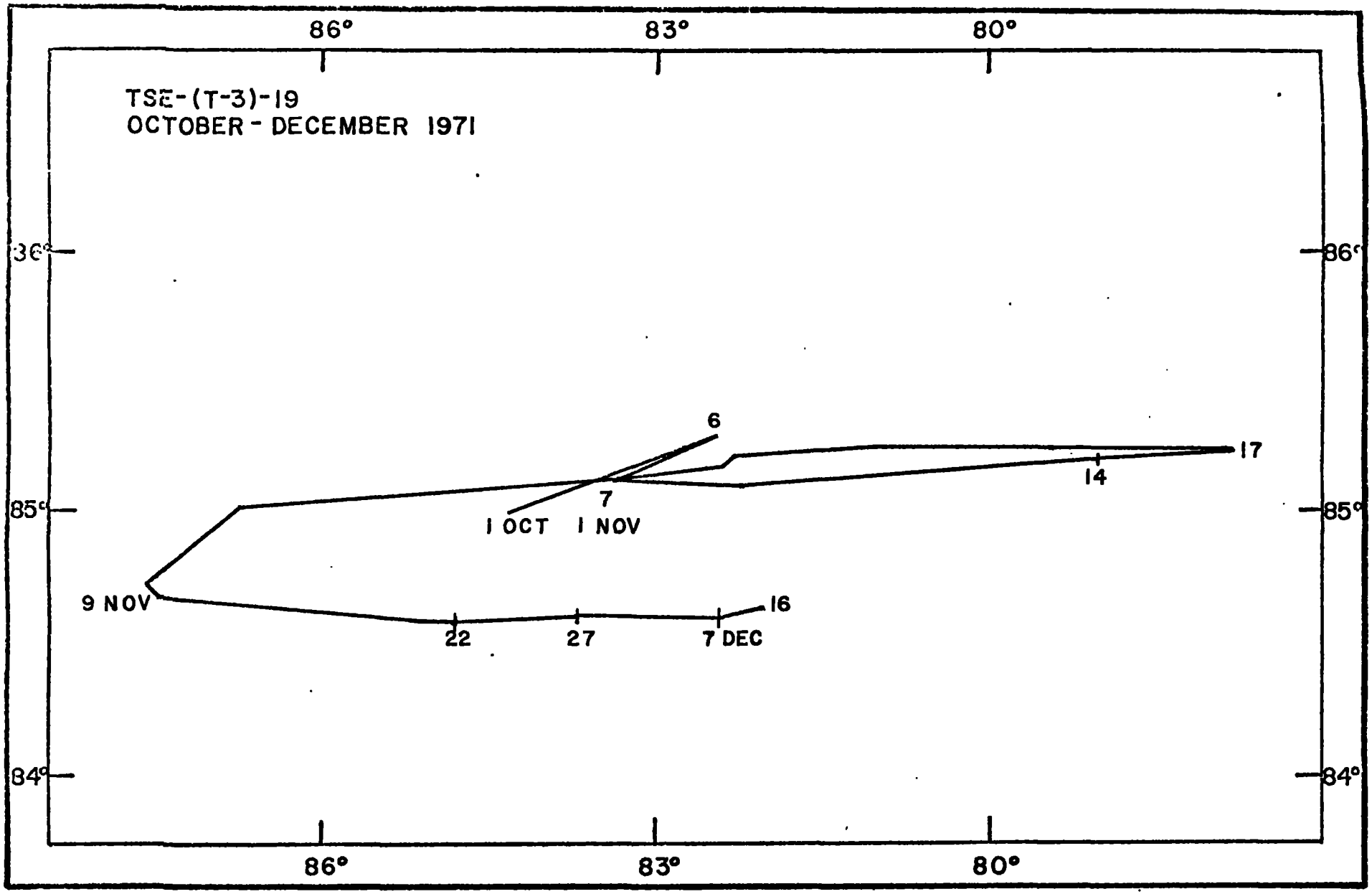

86°
83°
80°
TSE-(T-3)-19
OCTOBER - DECEMBER 1971
36°
85°
84°
6
17
14
7
1 OCT
1 NOV
9 NOV
16
22
27
7 DEC

FIG. 1

TSE-(T-3)-19 01 Oct 1971 - 20 Dec 1971

Modifications to the basic program methods

292 zooplankton samples were collected with a 2 m^2 umbrella net, mesh size 223 µm. Five (5) zooplankton samples were collected with the 1 m^2 plummet net, mesh size 571 µm.

Hydrographic stations (8) were taken approximately weekly. Temperature, salinity, and dissolved oxygen determinations were made at all stations (264 each) and nutrient determinations were made at 4 stations (148).

The echo-sounder was run on a continuous basis.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

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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

Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-20

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
12/20/71	03/20/72

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195
(206) 543-5079

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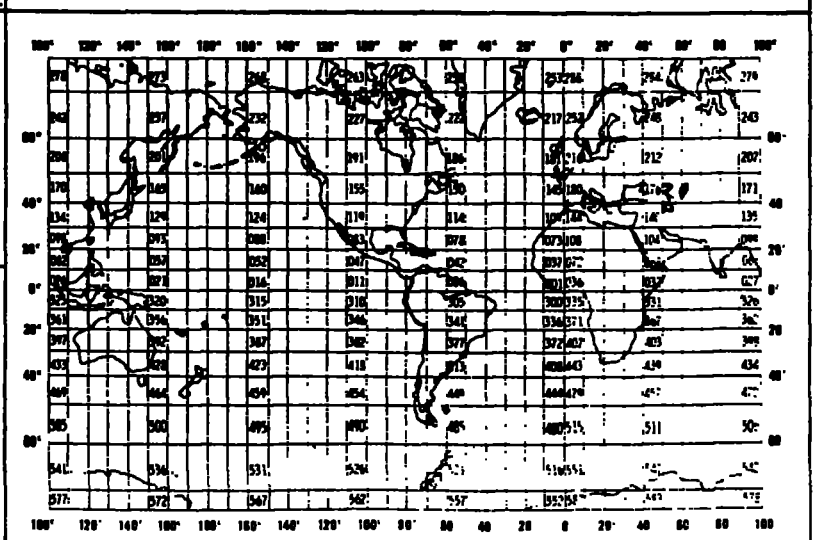
GENERAL AREA



NOAA FORM 24-13

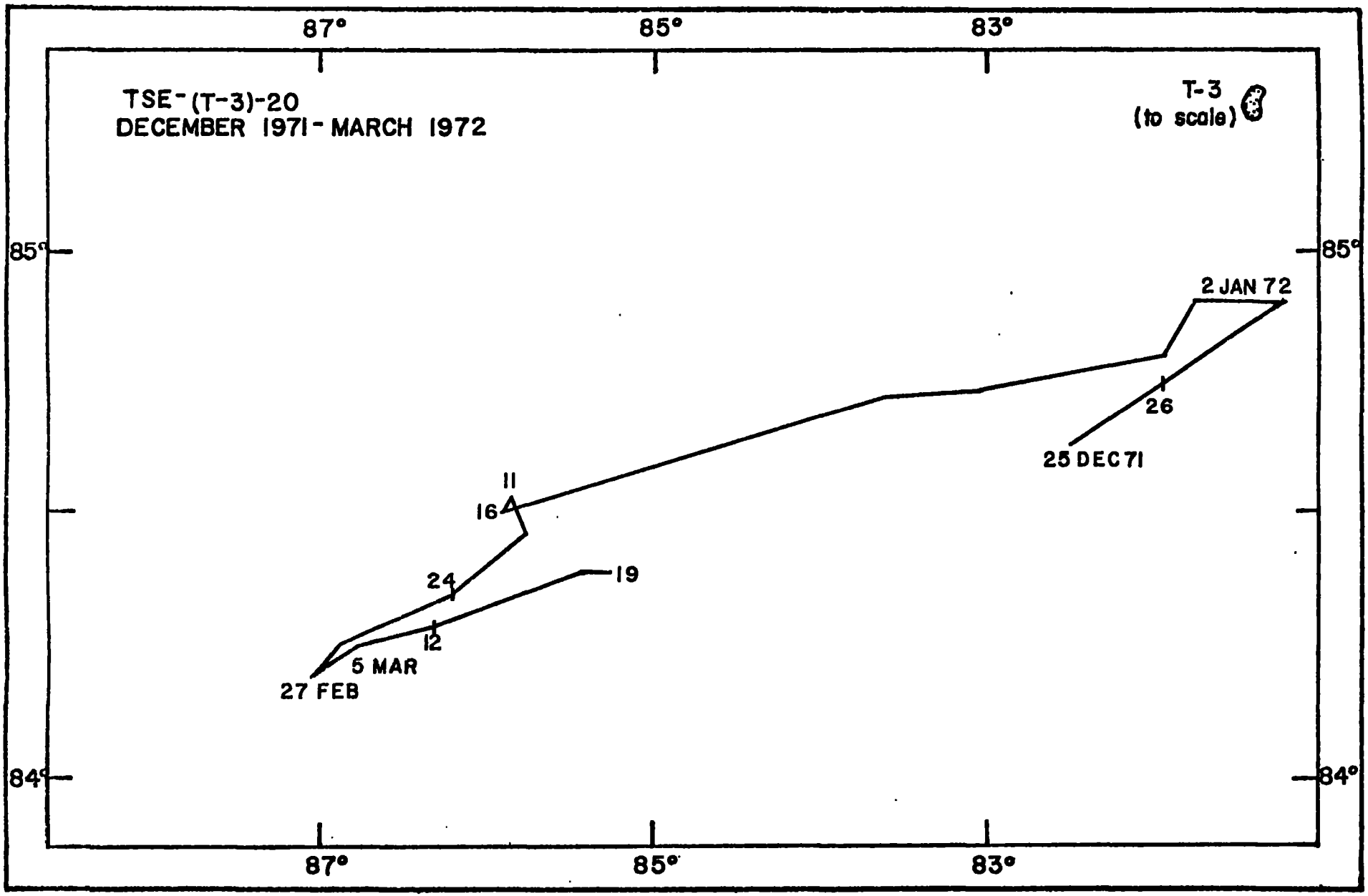

87°
85°
83°
TSE-(T-3)-20
DECEMBER 1971 - MARCH 1972
T-3
(to scale)
85°
84°
2 JAN 72
26
25 DEC 71
11
16
24
19
12
5 MAR
27 FEB

FIG. 1

TSE-(T-3)-20 20 Dec 1971 - 20 Mar 1972

Modifications to the basic program methods

Zooplankton samples were collected with a 2 m^2 umbrella net, mesh size 223 µm. At the beginning of the cruise, 100 samples were collected with the standard 1.25:1 net, but in March, a new 4:1 high filtration net was obtained and 29 samples were collected with it.

Thirteen hydrographic stations were taken. Samples were collected for salinity, temperature, dissolved oxygen (421 each) and nutrients (131).

The echo-sounder was run continuously on the 0-50 fm scale with 15-45 min recordings daily using the other depth ranges.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

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NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-21

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island (T-3)	Ice island	USA	USA	03/20/72	05/31/72

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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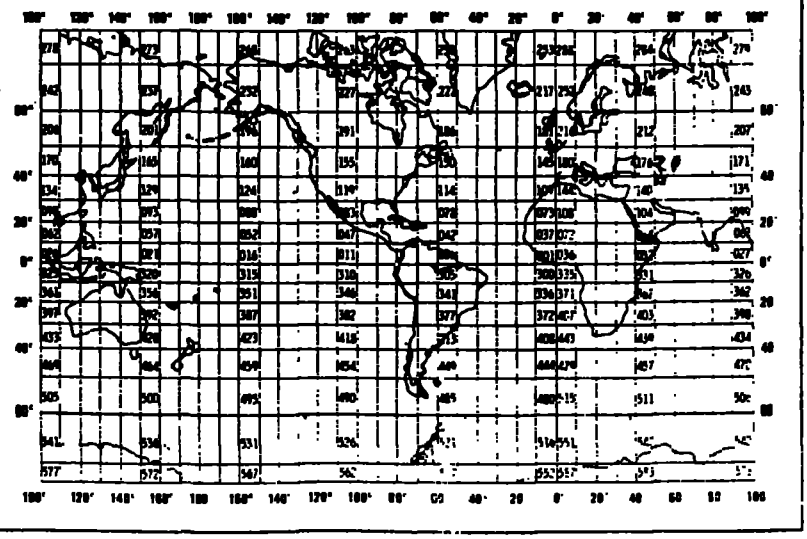
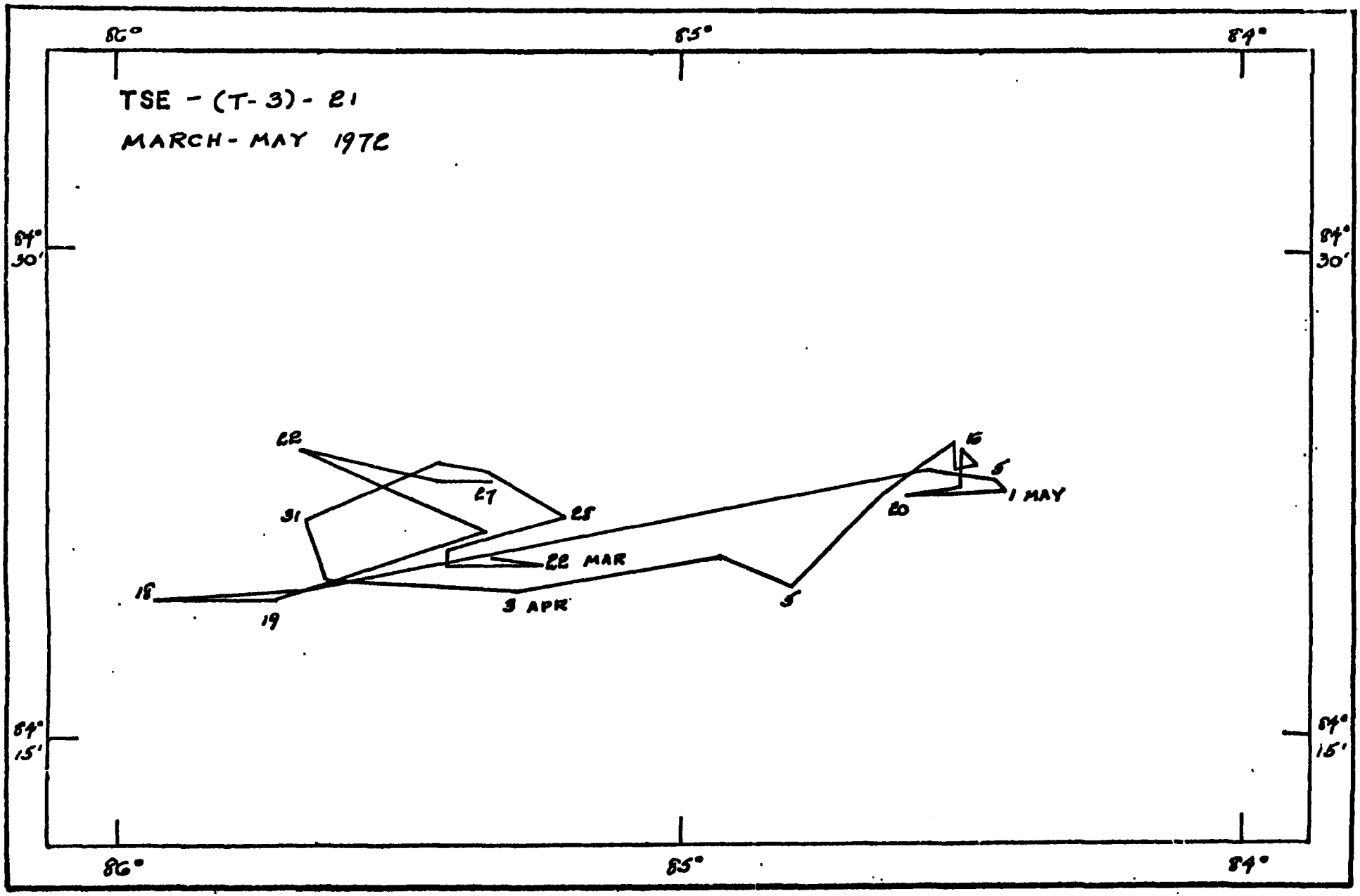
GENERAL AREA



NOAA FORM 24-13


86°
85°
84°
TSE - (T-3) - 21
MARCH - MAY 1972
84° 30'
84° 15'
22
27
25
31
18
19
22 MAR
3 APR
5
20
15
5
1 MAY

TSE-(T-3)-21 20 Mar 1972 - 31 May 1972

Modifications to the basic program methods

Zooplankton were collected with the high filtration (4:1) 2 m^2 umbrella net, mesh size 223 µm. 671 samples were collected.

14 samples were collected with the 2 m^2 umbrella net to be used for biomass determinations. The samples were dried in an oven, weighed on a Kahn electro-balance, ashed in a muffle furnace, and weighed again to obtain the ash-free dry weight.

22 samples were collected with the 1 m^2 plummet net, mesh size 571 µm.

Hydrographic stations were taken approximately every two weeks. Samples were collected for temperature and salinity (135 each), dissolved oxygen and nutrients (87 each). 24 samples (every 5 m to 100 m plus 125, 150, 175, and 200 m) were collected with Nansen bottles for phytoplankton cell counts. They were preserved in 1% formalin buffered with sodium acetate.

Echo-sounding was done on a continuous basis, usually on the 0-50 fm range.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13 (4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

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

T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-22

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island (T-3)	Ice island	USA	USA	05/31/72	09/29/72

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

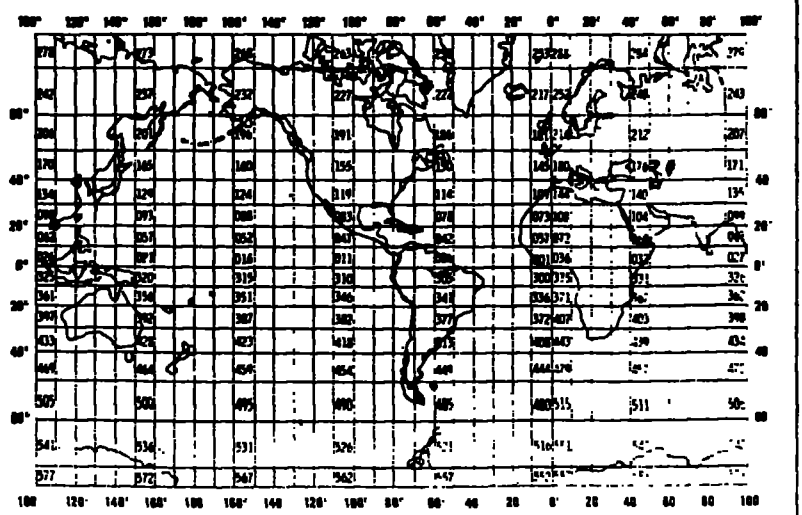
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

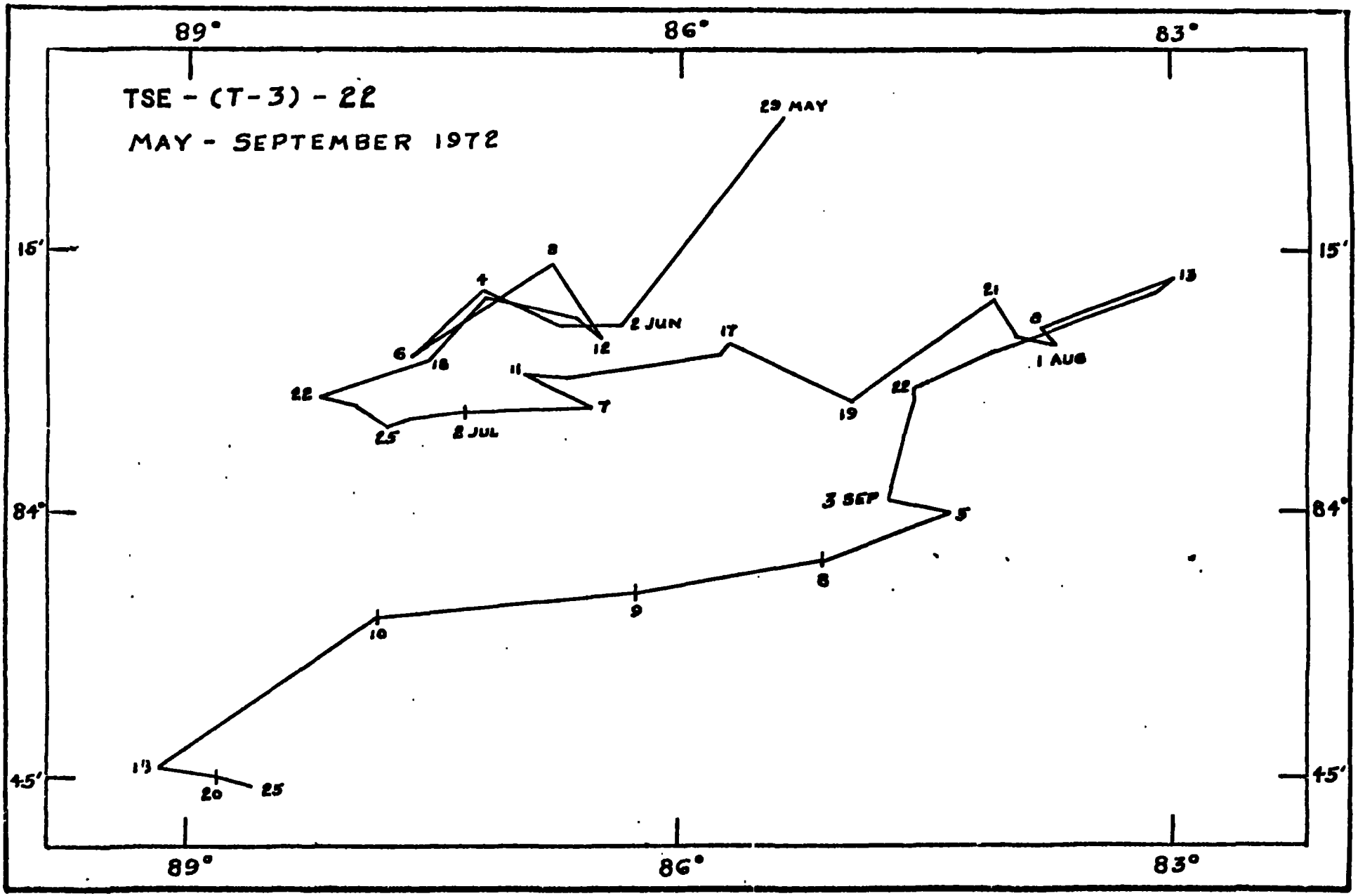
(206) 543-5079

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

GENERAL AREA



NOAA FORM 24-13


89°
86°
83°
TSE - (T-3) - 22
MAY - SEPTEMBER 1972
15'
84°
45'
29 MAY
2 JUN
1 AUG
3 SEP
2 JUL
4
6
8
10
12
13
15
17
18
19
20
21
22
25
5
7
9
11

TSE-(T-3)-22 31 May 1972 - 29 Sep 1972

Modifications to the basic program methods

970 zooplankton samples were collected with the 2 m^2 umbrella net, mesh size 223 μm.

Hydrographic stations were occupied approximately weekly (16 stations taken) using Nansen bottles. Samples were collected for temperature, salinity, dissolved oxygen (524 each), nutrients (488), and phytoplankton cell counts (476).

Chlorophyll a samples were collected with Van Dorn bottles from 7.5, 10, 12.5, 15, 17.5, 20, 22.5, 25, 30, 35, 40, 45, 50, 60, 70, 80, 100, 150, and 200 m. 1274 samples were collected.

Primary productivity experiments were run on samples collected with Van Dorn bottles using both graded light and constant light. 1216 samples were collected for primary productivity and an additional 406 samples were collected for chlorophyll a determinations.

A Coulter counter was used for 5 experiments to try to differentiate between groups of phytoplankton on the basis of size. Duplicate samples were collected for counting with the inverted microscope. 10 samples were settled for 72 h, partially decanted, and settled for an additional 72 h before counting and identifying the cells using the inverted microscope.

The echo-sounder was run on a continuous basis.

For analysis of the chlorophyll and productivity data, see Pautzke 1979.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary production and energy flow

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

TSE-(T-3)-23

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
09/29/72	12/13/72

8. ARE DATA PROPRIETARY?

[x] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[x] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

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School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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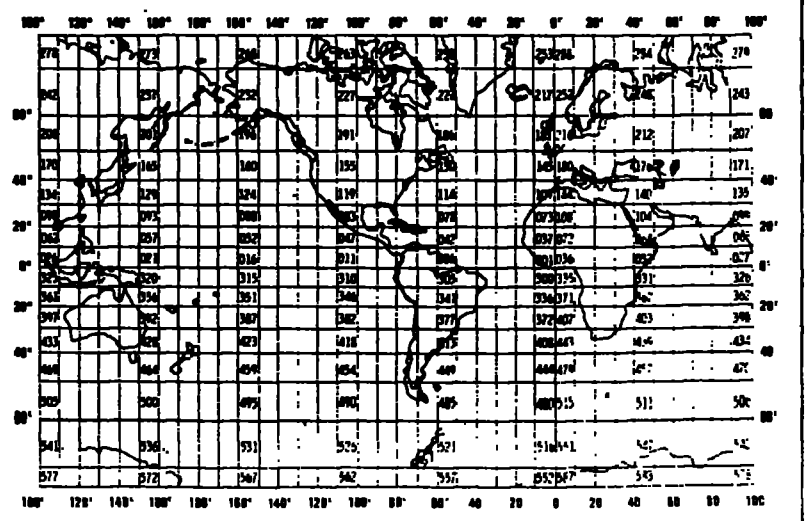
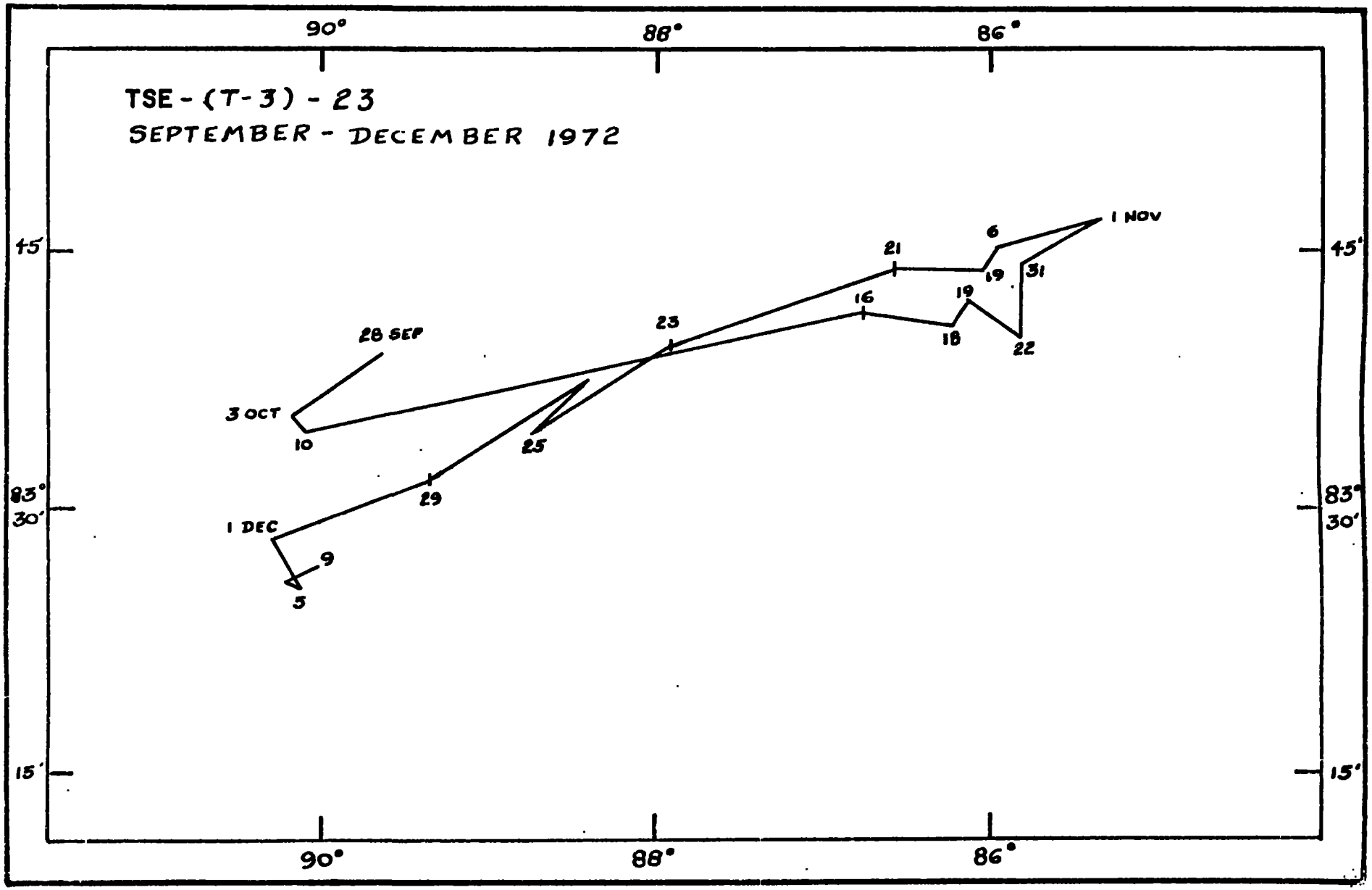
GENERAL AREA



NOAA FORM 24-13


90°
88°
86°
TSE - (T-3) - 23
SEPTEMBER - DECEMBER 1972
15'
45'
83°
30'
83°
30'
15'
28 SEP
3 OCT
10
23
25
29
1 DEC
9
5
16
21
6
1 NOV
19
31
19
18
22
90°
88°
86°

TSE-(T-3)-23 29 Sep 1972 - 13 Dec 1972

Modifications to the basic program methods

Zooplankton samples were collected using a 2 m^2 umbrella net, mesh size 223 µm and a 4:1 filtration ratio.

Seven hydrographic stations were taken. At one station, samples were collected every 5 m from 5 to 500 m. Samples were collected for temperature, salinity (255 each), dissolved oxygen (244), nutrients (220), and phytoplankton cell counts (60).

One primary productivity station was taken with samples collected at 5, 7.5, 10, 15, 20, 30, 40, 50, 80, 100, 150, and 200 m. The kind of sampling bottle used was not specified, but presumably Van Dorn bottles were used.

The echo-sounder was run on a continuous basis except between 28 Nov and 13 Dec when a damaged transducer had to be replaced.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13 (4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary Productivity and energy flow

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

TSE-(T-3)-24

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island (T-3)	Ice island	USA	USA	12/13/72	04/07/73

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR___ MONTH___

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

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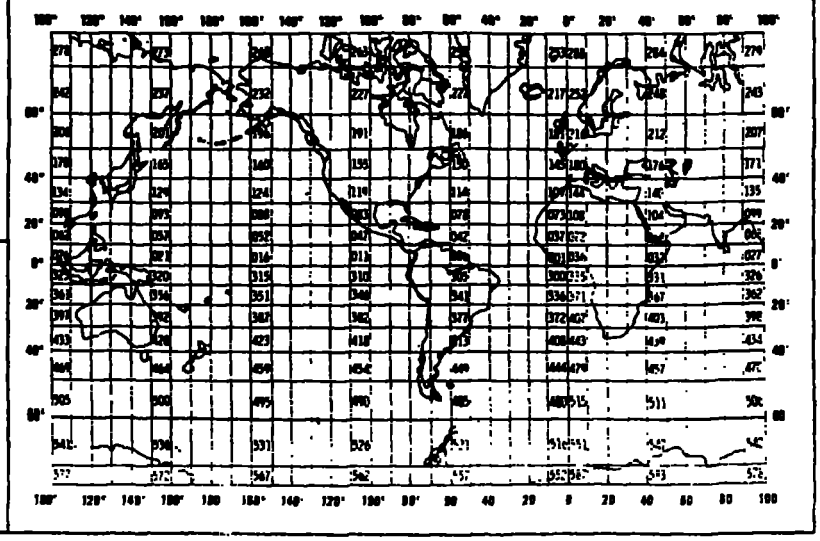

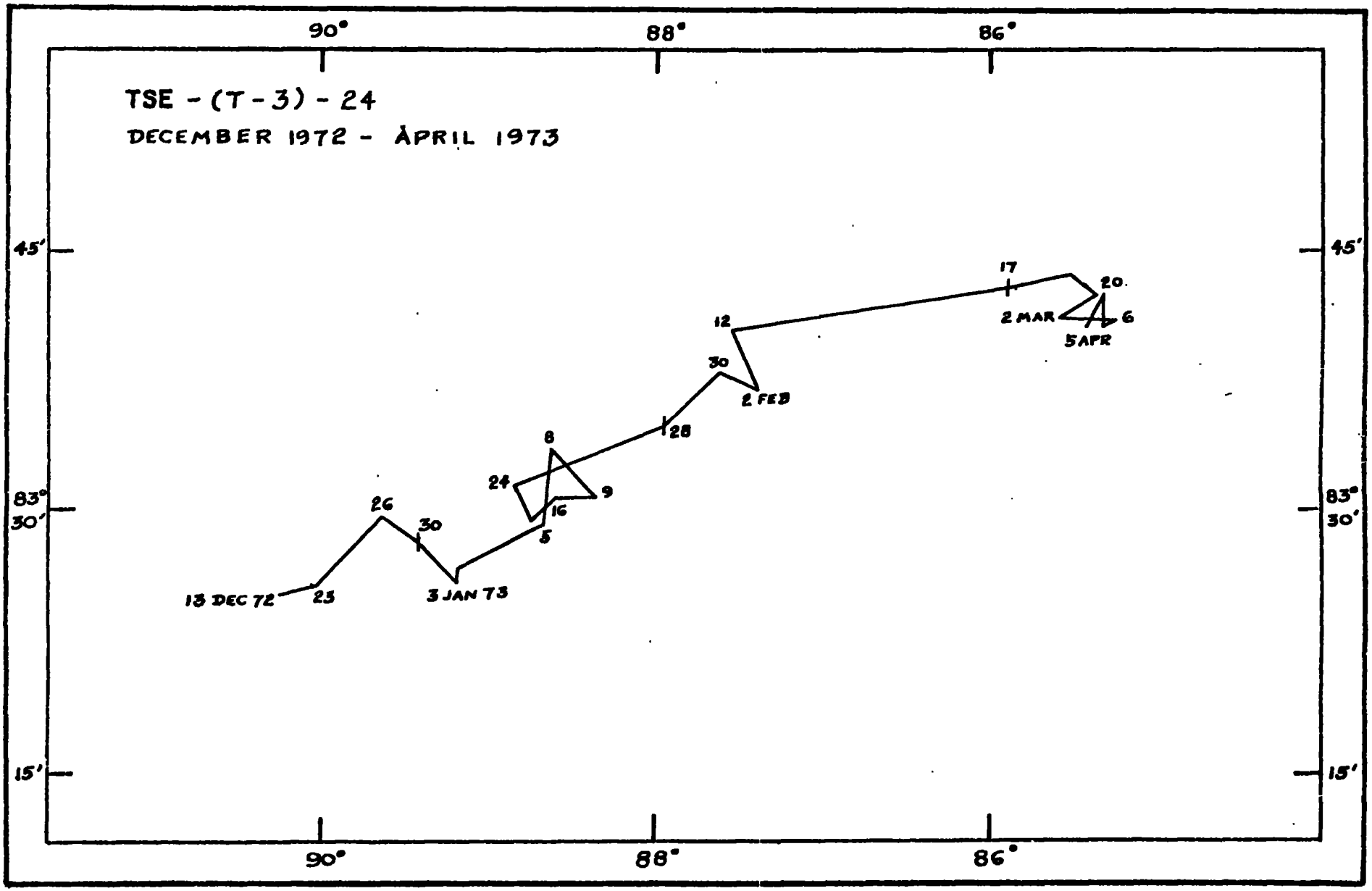
90°
88°
86°
TSE - (T-3) - 24
DECEMBER 1972 - APRIL 1973
45'
83°
30'
15'
13 DEC 72
25
26
30
3 JAN 73
5
16
9
24
8
28
30
2 FEB
12
17
20
2 MAR
6
5 APR

TSE-(T-3)-24 13 Dec 1972 - 07 Apr 1973

Modifications to the basic program methods

Zooplankton samples were collected with a 2 m^2 umbrella net, mesh size 223 μm and 4:1 filtration ratio. 168 samples were collected.

Hydrographic stations (12) were taken approximately weekly. Samples were collected for temperature, salinity, dissolved oxygen (336 each), nutrients (168), and phytoplankton cell counts (312).

The damaged transducer was replaced at the beginning of this cruise. The echo-sounder was monitored continuously until early January (no date specified) when the chart recorder failed.

	ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

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NATIONAL OCEANOGRAPHIC DATA CENTER
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University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary productivity and energy flow

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

TSE-(T-3)-25

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
04/07/73	05/28/73

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR___ MONTH___

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

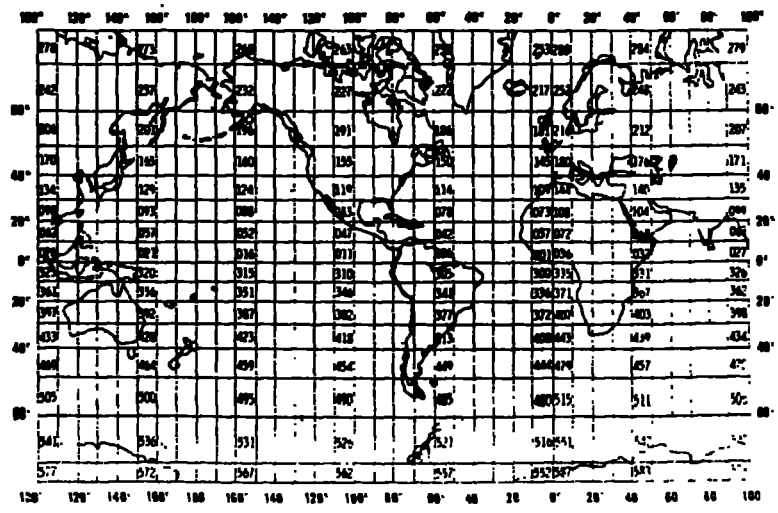
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER ***(AND ADDRESS IF OTHER THAN IN ITEM-1)***

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

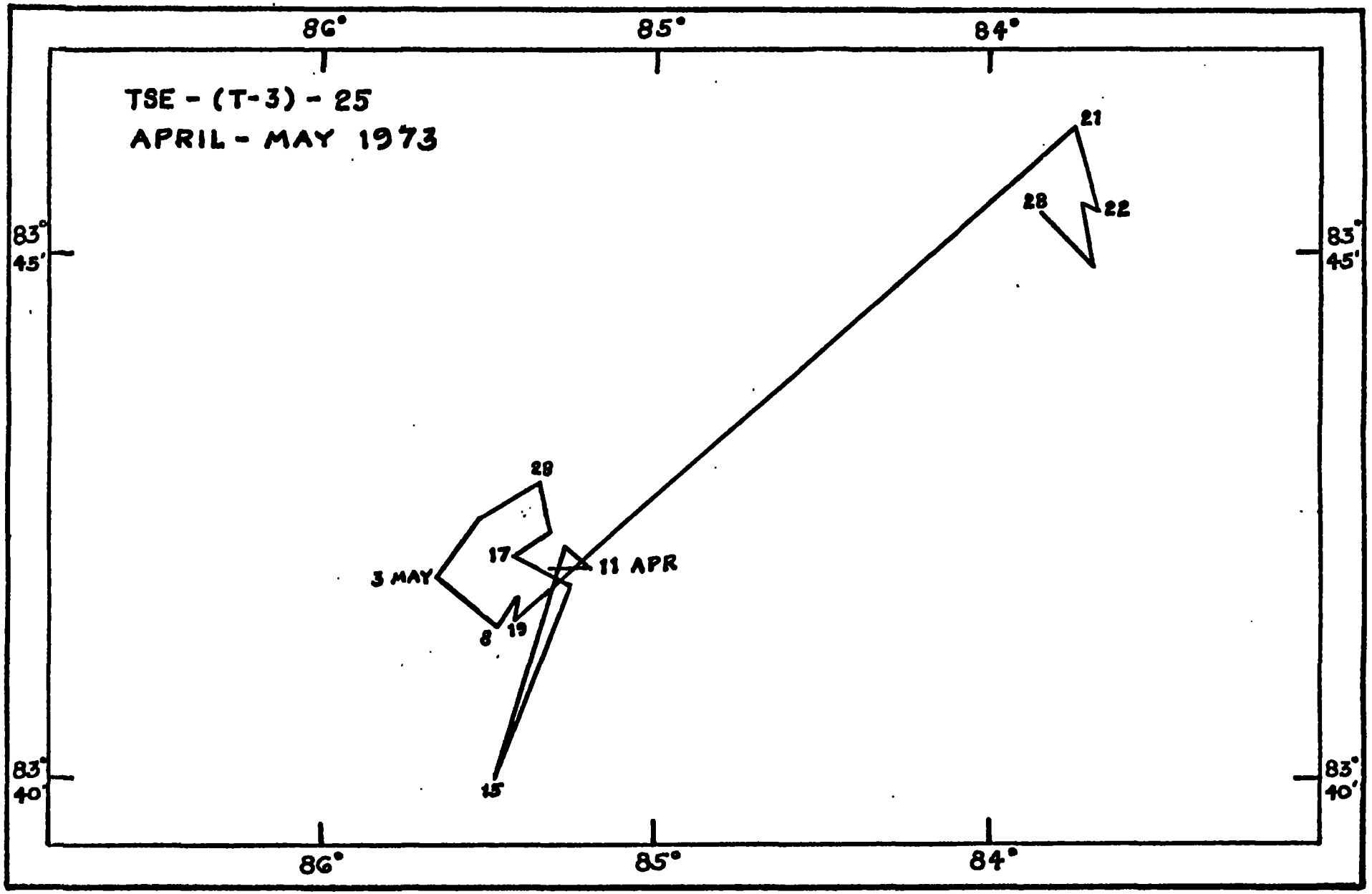
(206)543-5079

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

GENERAL AREA



NOAA FORM 24-13


86°
85°
84°
TSE - (T-3) - 25
APRIL - MAY 1973
21
28
22
83° 45'
83° 45'
28
17
11 APR
3 MAY
8
19
15
83° 40'
83° 40'
86°
85°
84°

TSE-(T-3)-25 07 Apr 1973 - 28 May 1973

Modifications to the basic program methods

595 zooplankton samples were collected with the 2 m^2 umbrella net, mesh size 223 µm and a 4:1 filtration ratio.

Hydrographic stations (7) were taken weekly. Samples were collected for temperature, salinity, dissolved oxygen (192 each), nutrients (168), and phytoplankton cell counts (192).

The echo-sounder was not used until the end of the cruise because of problems repairing the chart recorder.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

(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

Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary productivity and energy flow

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

TSE-(T-3)-26

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Fletcher's Ice Island (T-3)	Ice island	USA	USA	05/28/73	10/19/73

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*
Data should be available for international exchange

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

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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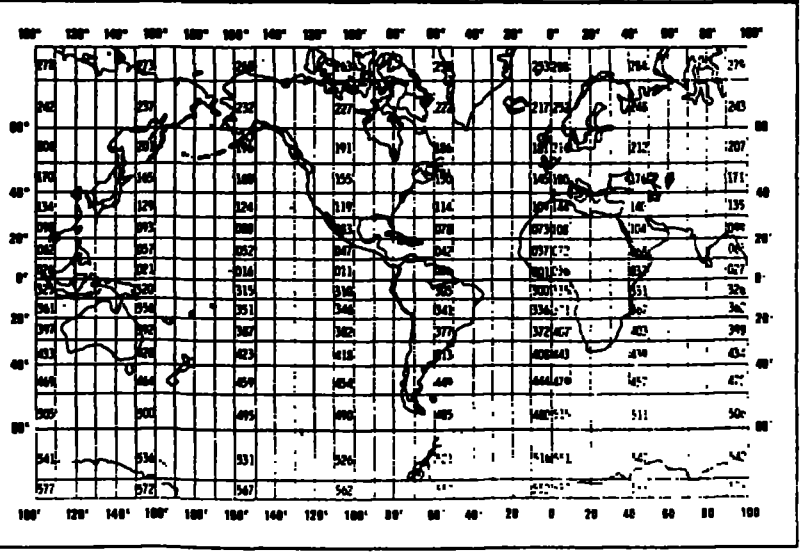
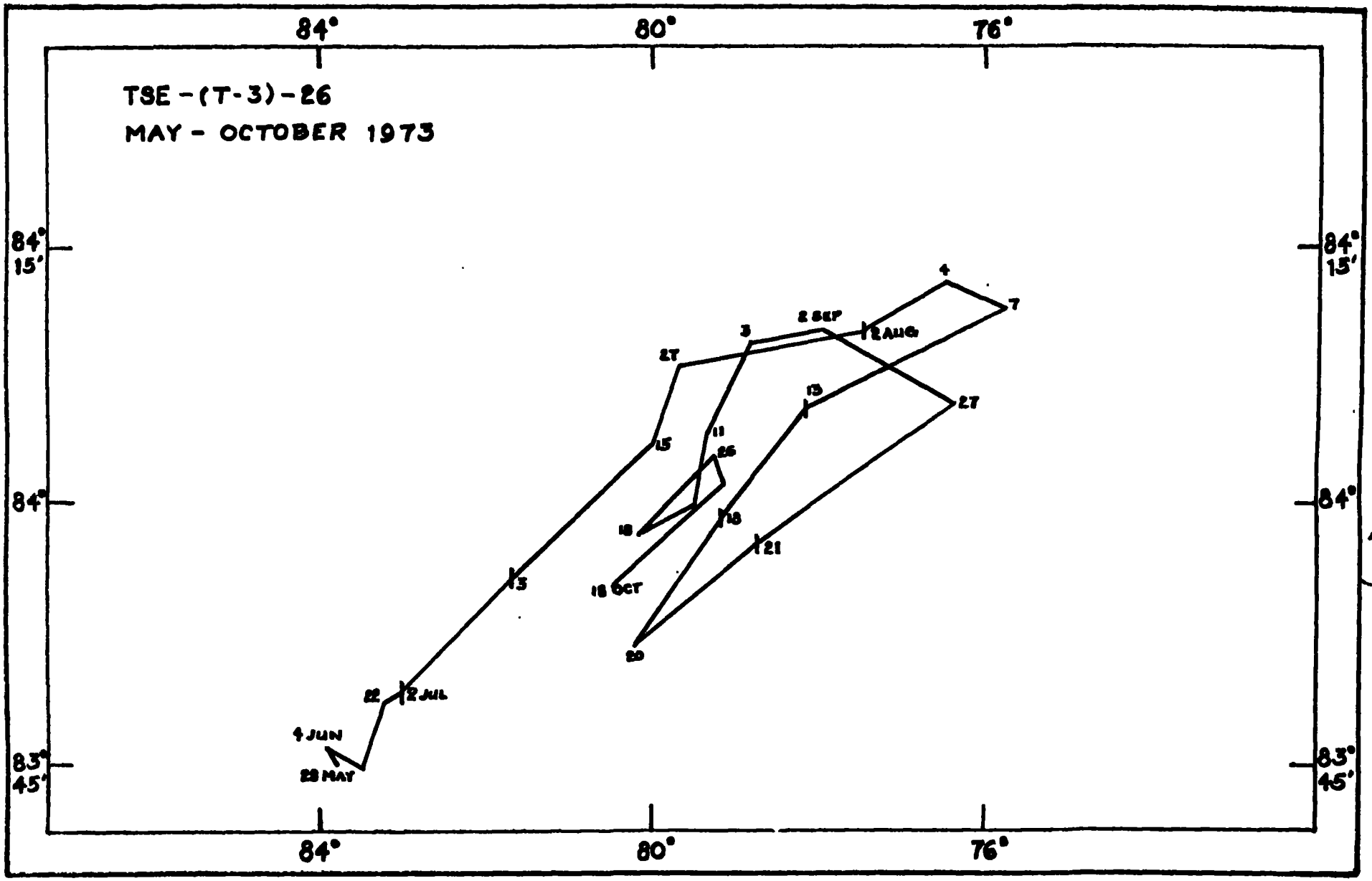
GENERAL AREA



NOAA FORM 24-13


84°
80°
76°
TSE-(T-3)-26
MAY - OCTOBER 1973
84° 15'
84°
83° 45'
4
7
2 SEP
2 AUG
3
27
15
11
26
13
27
18
18
21
18 OCT
20
5
22
2 JUL
4 JUN
28 MAY

TSE-(T-3)-26 28 May 1973 - 19 Oct 1973

Modifications to the basic program methods

Zooplankton samples (1007) were collected with a 2 m^2 umbrella net, mesh size 223 µm.

Hydrographic stations whre taken periodically with 516 samples each collected for temperature, salinity, dissolved oxygen, and nutrients. In addition, 189 samples were collected at 8 depths for nitrate and ammonia analysis. Phytoplankton cell count samples (505) were collected during the hydrocasts.

Chlorophyll a (1768) and primary productivity (1828) samples were collected with Van Dorn bottles. Productivity experiments were run with either graded or constant light conditions.

The echo-sounder was run continuously at the 0-50 fm range with daily runs at other ranges.

Zooplankton samples (343) were collected at 10 m intervals from the upper 150 m to be used for biomass estimates.

For analysis of chlorophyll and productivity data, see Pautzke, 1979.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

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Dr. T. Saunders English
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary productivity and energy flow

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

TSE-(T-3)-27

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
10/31/73	03/08/74

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR____ MONTH____

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?

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

[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

Data should be available for international exchange

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

Dr. Karl Banse
School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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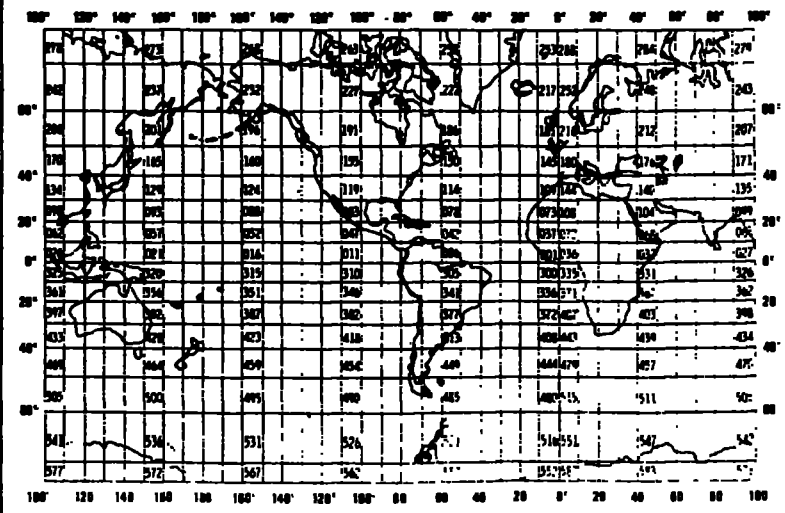
GENERAL AREA



TSE-(T-3)-27 31 Oct 1973 - 08 Mar 1974

Modifications to the basic program methods

Zooplankton samples (202) were collected with the 2 m^2 umbrella net, mesh size 223 µm. 174 samples were collected at 10 m intervals from 300 to 10 m; one extra sample was collected at 100 to 90 m. 24 samples were collected at 100 m intervals from 800 to 10 m; one sample each was collected at 1000 to 900 m and 900 to 800 m. One sample was collected from 500 to 10 m.

Hydrographic stations were taken periodically with 271 samples each collected for temperature, salinity, and dissolved oxygen, 177 samples for nutrient analyses, and 114 samples for phytoplankton cell counts.

The colorimeter was used to analyze all nutrient samples.

The echo-sounder was run until late February, date not specified.

ACCESSION NUMBER

DATA DOCUMENTATION FORM

NOAA FORM 24-13
(4-77)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
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FORM APPROVED
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School of Oceanography WB-10
University of Washington
Seattle, WA 98195

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

Primary productivity and energy flow

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

TSE-(T-3)-28

4. PLATFORM NAME(S)

Fletcher's Ice Island (T-3)

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

Ice island

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
USA	USA

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
03/08/74	06/01/74

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR___ MONTH___

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
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School of Oceanography WB-10
University of Washington
Seattle, WA 98195

(206) 543-5079

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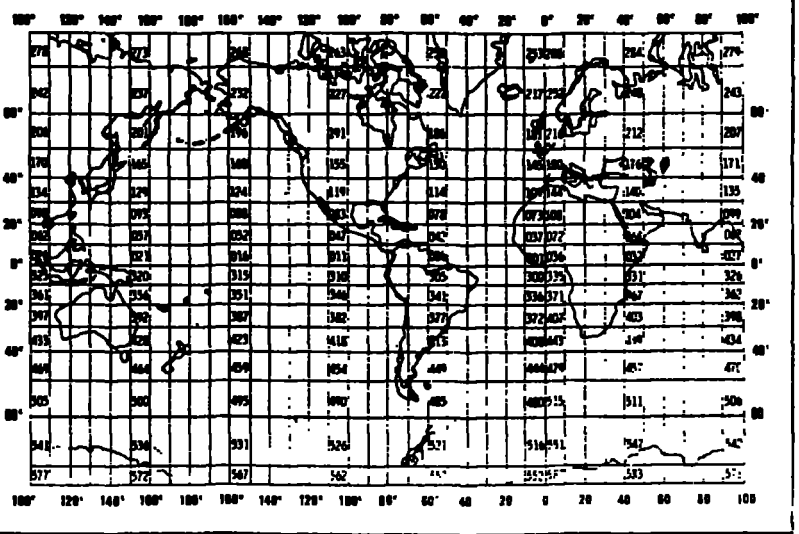
GENERAL AREA



NOAA FORM 24-13

TSE-(T-3)-28 08 Mar 1974 - 01 Jun 1974

Modifications to the basic program methods

Zooplankton samples (141) were collected with the 2 m^2 umbrella net, mesh size 223 μm.

Four hydrocasts were done during March and April 1974, with 111 samples each collected for temperature, salinity and phytoplankton cell counts; 77 samples for dissolved oxygen, and 58 samples for nutrients. Nutrient samples were analyzed with the colorimeter.

The echo-sounder was run for only 4 days during this cruise with continuous readings on the 0-50 fm range and 15 min daily recordings at each of the other depth ranges.

An underwater camera equipped with a sonically triggered strobe flash and shutter was used in conjunction with the echo-wounder in an attempt to photograph fish, zooplankton and the 50 m scattering layer. The camera was initially lowered to 30 m where the echo-sounder indicated that fish were present. After 2 days, a scattering layer occurred at 50 m and the camera was lowered to just above the layer. The camera and related gear were retrieved when the frame counter indicated that film was all exposed. No time period indicated.

Ftetcher Ice Island Data Sets - T3

Location - Arctic Ocean data, approx. 75°N (most data are N of 80°), long. approx. 80° W to 180°W.

Total observatiions are approx. 6 yrs., from 1966 to 1974

Data types - of greatest importance is the hydrographic data that exists on punch cards in an NODC format (most likely the station data format). These data include:

5500 recs. temperature data
5500 recs. salinity data
5100 recs. O_2 data
3300 recs. phosphate data
3000 recs. silicate data

Media - these data exist on punch cards in an NODC format and are currently being digitized onto a magnetic data tape in our Station Data format, by the UW/APL - Polar Science Center.

Avialability - these data should be available to me for NODC in approx. 6 months.

Other data - include 6200 chlorophyll records, and 4000 C_{14} production. There is also a listing of 11000 zooplankton hauls that include position, depth, and net type (mesh), as well as status (counted or not).

******

Sid - info

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

School of Oceanography, WB-10

18 December 1987

Mr. Kent Hughes
National Oceanographic Data Center
Washington, D. C. 20235

Dear Kent:

We have a couple of additions to the Data Documentation Form for the TSE T-3 data. We would like to substitute a new page 14 (copy enclosed) in the general methods.

I also enclose copies of the two Tech Reports. I think they came out rather well. Copies have been sent to oceanographic institutions, libraries, and interested polar zooplankton researchers around the world - about 45 in al. Additional copies are still available if you know anyone who wants them.

I, too, wish we could think of a memorial for Tom. There is a memorial fund at the UW for him and also for Dick Richards. I don't think it is specially earmarked for anything.

Sincerely,

Rita

Rita Horner

1/4/88

OCI

Tony —

This came from Rita at UW.

t, 2, 35, 24, 15.

T-3 Cruise Reports.

TSE - T-3 - 1	16 Mar - 9 Apr 1966	Lewis
-2	2 Jun - 18 Oct 1966	Lewis (Bloomfield)
-3	1 Feb - 15 Feb 1967	Hughes, Lewis
-4	4 Jun - 12 Sept 1967	Lewis, Ferguson
-5	12 Sept - 26 Sept 1967	Ferguson, Hughes, Scott
-6	27 Apr - 9 Jun 1968	English, Ferguson, Hughes
-7	10 Jun - 20 Sep 1968	Ferguson, Vanderbark, Pautzke, Specher,
-8	21 Sept 1968 - 31 Jan 1969	Ferguson
-9	21 Jan - 13 June 1969	Lewis
-10	13 Jun - 3 Oct 1969	Ferguson, Grant, Hollins
-11	4 Oct 1969 - 5 Jan 1970	Lewis
-12	5 Jan - 23 Mar 1970	Elwell, Nipamnis
-13	23 May - 7 Jun 1970	Bingham, Richinger
-14	7 Jun - 5 Oct 1970	Elwell, Ricinger, Slonburg, Hollins
-15	5 Oct - 30 Dec 1970	Bingham
-16	1 Jan - 30 Mar 1971	Lewis
-17	30 Mar - 30 May 1971	Moore, English, Ferguson, Macaulay
-18	30 May - 1 Oct 1971	Elwell, Turner, Moore, Pearck, Tomlinson
-19	1 Oct - 30 Dec 1971	Macaulay, Stinker
-20	30 Dec 1971 - 20 Mar 1972	Richinger
-21	20 Mar - 31 May 1972	Moore, English, Ferguson, Kirby, Macaulay
22	31 May - 29 Sept 1972	Tomlinson, Anderson, [illegible] Olson, [illegible], Pautzke(?), [illegible]
23	29 Sept - 13 Oct 1972	English, Ferguson, Macaulay,
24	13 Oct 1972 - 1 [illegible] 1972	Richinger, Pearck, Smith
25	1 Apr 28 May 1973	Moore, [illegible]
26	28 May - 19 Oct 1973	Pautzke, Bel, [illegible], [illegible]
-27		
-28		

(TRIP?, Coperwood, ARCARR?)

Status of Arctic Data Transferral to NODC

Year	Cruise	Tape Sent	Cards Sent
1964-65	Arlis II (AR2)	9/66	
1965	T3 (W01)	6/67	
	T3 (W02)		
1966	T3 (W03)		
	T3 (W04)		
	T3 (W05)		
1967	T3 (W06)		
	T3 (W07)	3/68	
	T3 (W08)	4/69	
	TT-010	3/68	
1968	T3 (W09)	4/69	
	WE-1		
	SI-1	12/69	
1969	KB-002	11/69	
	TT-041	12/69	
	SI-2	12/69	
	WE-2	3/70	
	T3 (W10)	3/70	
1970	C2 (W11)	11/70	
	T3 12	11/70	
	T3 13	11/70	
	TT-050	11/70	
	WE-WE3 (hydro)	11/70	
	WE-WE3 (STD)	12/70	
	T3-014	12/70	
	T3-13	6/72	
	~~T3-14~~	~~6/72~~	duplicate sent by mistake
	T3-15	6/72	

Status of Arctic Data Transferral to NODC

Year	Cruise	Tape Sent	Cards Sent
1971	C2 (W12)	6/72	
	T3 W13	↓	
	T3 018		
	TT 062		
1972	AX (W14)	2/73	
	TT 71	2/73	