ACCESSION NUMBER 76-1893

DDF-B:1:01

DATA DOCUMENTATION FORM

TRØ705-727

NOAA FORM 24-13 (4-72)

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

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

F049

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

5-76

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

BIOLOGY DEPARTMENT, CITY COLLEGE OF NEW YORK, N.Y.C., N.Y. 10039

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

MESA N.Y. BIGHT BIOLOGICAL OCEANOGRAPHY PROGRAM.

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

FILE ID = 761103

BY VESSEL & # 1 - 23.

(sequential & inclusive)
[see separate listing]

4. PLATFORM NAME(S)

R.V. COMMONWEALTH
R.V. KELEZ
R.V. RORQUEL
R.V. ATLANTIC TWIN

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

SHIPS.

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
U.S	U.S.

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
—	—

8. ARE DATA PROPRIETARY?

☒ 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?)

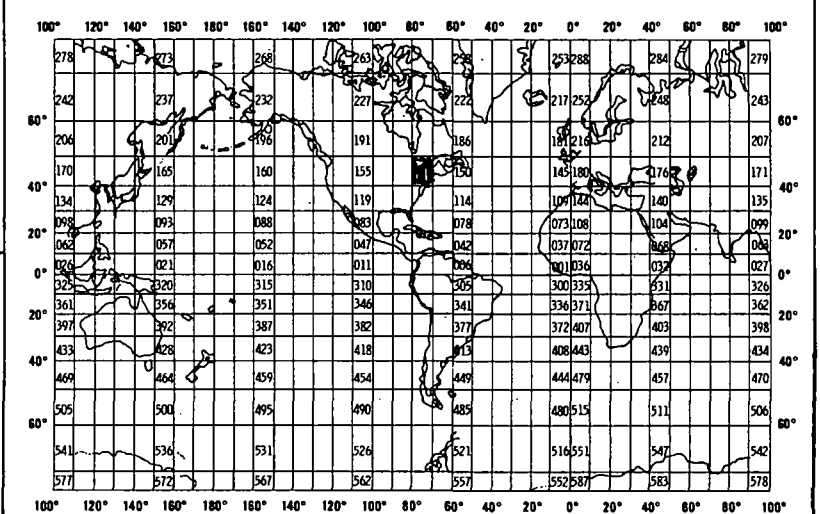
☑ NO ☐ YES ☐ PART *(SPECIFY BELOW)*

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

DR. T. C. MALONE
L.D.G.O
PALISADES, N.Y. 10964
914-359-2900

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

GENERAL AREA



NOAA FORM 24-13

USCOMM-DC 44289-P72

B. SCIENTIFIC CONTENT

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

EXAMPLE (HYPOTHETICAL INFORMATION)

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
Salinity	‰	Nansen bottles	Inductive salinometer (Hytech model S 510)	N/A (Not applicable)
		STD Bissett-Berman Model 9006	N/A	Values averaged over 5-meter intervals
Water color	Forel scale	Visual comparison with Forel bottles	N/A	N/A
Sediment size	ϕ units and percent by weight	Ewing corer	Standard sieves. Carbonate fraction removed by acid treatment	Same as "Sedimentary Rock Manual," Folk '65

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

B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
Temperature	°C	PROTECTED REVERSING THERMOMETERS Interocean 513 CSTD		
Salinity	°/oo	NISKINS Interocean 513 CSTD	Beckman Induction Salinometer	
NUTRIENTS NO_3, NO_2, NH_3 SiO_4, PO_4	mg at/l	NISKIN	TECHNICON AA II 3 channel auto-analyser	Strickland + Parsons '68
INCIDENT SOLAR RADIATION	G Cal/C m^2/Day mE/Cm^2/Day	Eppley Pyranometer Lambda quantum meter		
Downwelling light Intensity	mE/Cm^2/Day % light depth	Submarine quantum meter (Lambda) Secchi disc		
Zooplankton Biomass		½ meter, 202μ mesh plankton net with paired flow meters	microscopic work + Dry weights	
Chlorophyll a	mg/l	NISKIN	Fluorometry	STRICKLAND + Parsons '68

USCOMM-DC 44289-P72

B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
Primary Productivity	$gC/m^2/day$	Niskin	C^{14} incubation for 24 hours simulated insitu	liquid scintillation counter
Photosynthetic Capacity	mg/l	Niskin	C^{14} incubation for 24 hours fluorescent light incubators	liquid scintillation counter
Particulate Organic Carbon	G/m^2	Niskin	Combustion in Oxygen - Coleman 33 CH analyzer	
ATP	mg/m^2	Niskin	JRB - ATP Photometer	STANDARD METHODS

C. DATA FORMAT

This information is requested only for data transmitted on punched cards or magnetic tape. Have one of your data processing specialists furnish answers either on the form or by attaching equivalent readily available documentation. Identify the nature and meaning of all entries and explain any codes used.

1. List the record types contained in your file transmittal (e.g., tape label record, master, detail, standard depth, etc.).

2. Describe briefly how your file is organized.

3-13. Self-explanatory.

14. Enter the field name as appropriate (e.g., header information, temperature, depth, salinity.

15. Enter starting position of the field.

16. Enter field length in number columns and unit of measurement (e.g., bit, byte, character, word) in unit column.

17. Enter attributes as expressed in the programming language specified in item 3 (e.g., "F 4.1," "BINARY FIXED (5.1)").

18. Describe field. If sort field, enter "SORT 1" for first, "SORT 2" for second, etc. If field is repeated, state number of times it is repeated.

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

Five record types:
File Header (type 1); Station Header (type 2);
Environmental (type 3); Physical Chemical (type 4);
Pigments / Carbon Assimilation (type 5);
Differentiated by byte 10

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 JEAN GARSIDE 207-633-2173
ADDRESS BIGELOW LABS, WEST BOOTHBAY HBR, ME 04575

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 ☐ BINARY 111111

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

12. PHYSICAL BLOCK LENGTH IN BYTES
122

13. LENGTH OF BYTES IN BITS
8 6

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ *(e.g., bits, bytes)*	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

RECORD FORMAT DESCRIPTION

RECORD NAME _____

FIELD NAME	15. POSITION FROM-1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

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 (√)	(√)

Accession #76-1893 (Primary Productivity)

1975-1976 Data

TRØ705 – TRØ727

PLATFORM	CRUISE	DATE	
319H COMMONWEALTH	1	4/21/75	TRØ711
COMMONWEALTH	2	5/04/75	TRØ712
COMMONWEALTH	3	5/13/75	TRØ713
COMMONWEALTH	4	5/20/75	TRØ714
COMMONWEALTH	5	5/27/75	TRØ715
COMMONWEALTH	6	6/06/75	TRØ716
COMMONWEALTH	7	6/10/75	TRØ717
COMMONWEALTH	8	6/18/75	TRØ718
COMMONWEALTH	9	6/24/75	TRØ719
COMMONWEALTH	10	7/10/75	TRØ720
COMMONWEALTH	11	7/16/75	TRØ721
COMMONWEALTH	12	7/25/75	TRØ722
COMMONWEALTH	13	8/08/75	TRØ723
31RR RORQUAL	14	10/29/75	TRØ727
31KE KELEZ	15	11/12/75	TRØ724
KELEZ	16	11/24/75	TRØ725

PLATFORM	CRUISE	DATE	
ATLANTIC TWIN	17	2/07/76	TR0705
ATLANTIC TWIN	18	2/21/76	TR0706
ATLANTIC TWIN	19	3/01/76	TR0707
ATLANTIC TWIN	20	3/06/76	TR0708
32 ATLANTIC TWIN	21	3/14/76	TR0709
ATLANTIC TWIN	22	3/20/76	TR0710
KELEZ	23	3/31/76	TR0726

76-1893
76-1894

Bigelow Laboratory For Ocean Sciences
A Division of Northeastern Research Foundation, Inc.
McKown Point, West Boothbay Harbor, Maine 04575
207 633-2173

December 9, 1976

Mr. Paul Eiesen
Data Manager
MESA Office
Old Biological Building
State University of N.Y.
at Stony Brook
New York, New York 11794

Dear Paul,

To attempt to further clarify our phone conversation of today I am sending you the following information -

In IBM 1130 Fortran a blank read or written with an integer format is automatically converted to zero. Reprogramming to replace non-data with blanks would require each integer to be inspected separately and converted to character format before writing the tape.

The following convention was used in writing both the 73/74 data tape and the 75/76 tape:

a) when a field was never recorded (e.g. wind speed) it is recorded as blanks on the tape.

b) when a field was normally recorded, missing values are written on the tape as zero.

Some variables which are written in I-5 format had to be treated as two integers to prevent exceeding the maximum 1130 integer value of 32767, for example, a missing salinity value was written as blank, zero, blank, blank, zero.

c) leading zeros are suppressed throughout and written as blanks.

d) only zero depth is a real zero, all other zero values represent missing data.

Missing fields have been marked with an asterisk in the attributes column of the two enclosures. Zeros in other fields present blanks.

Hope this helps.

Regards,

Christopher Garside
Research Scientist

CG/lp
enclosures

Documentation

76-1893 TRØ7Ø5 thru TRØ727
Processed by M. Schaffer

1. Ships #s 1 thru 13 (Commonwealth) changed to track numbers TRØ711 thru TRØ723

2. Ship #s 14 (Rorqual) changed to track # TRØ727.

3. Ship # 15, 16, 23 (Kelez) changed to tracks TRØ724, TRØ725, TRØ726.

4. Ship # 17 thru 22 (Atlantic Twin) changed to tracks numbers TRØ7Ø5 thru TRØ71Ø.

5. Terminator records stripped (deleted).

6. Extinction coefficient blank in byte 79. Should be '+' or '-'. Byte 79 has had a '+' inserted into it.

7. "Total incident radiation" field contains three asterisks (***) in bytes 70 thru 72. These asterisks have been replaced by three blanks.

(over)

all 0's = blank

A follow-up call by Eisen on 12/10/76 revealed the following assessment on his two observations:

(1) ~~Two~~ stations have longitude values of zero. There are latitude values for these stations. The reason for the zero longitude values is that these are mid-channel locations in the Hudson River and, apparently, this was the way the PI handled the processing. The PI left it to the Bight Office to assign longitude values from a map or identify this condition on the DDF.

(2) There are records that contain zeros for parameter values where the zeros (fieldy) should be blank. This occurs where, at certain depths, the PI did not actually measure a value but the depth value was still entered.

Eisen asked that NODC make these minor corrections since he felt there would be a considerable delay by going back to the Boothbay Harbor Lab. for the revision. Can we do it without too much of a problem? Please let me know and, if necessary, I will get back with Eisen.

{ Station A1 : 40°52'53"N ; 73°56'10"W
{ Station A2 : 40°49'31"N ; 73°58'02"W

RECORD FORMAT DESCRIPTION

73/74

4-2?-76

RECORD NAME File Header Record (Primary Productivity 2)

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
File Type	1	3	Bytes	A3	Always '049'
File Identifier	4	6	Bytes	A6	Date of file creation (YYMMDD) or unique cruise number
Record Type	10	1	Bytes	I1	Always '1'
Vessel	11	11	Bytes	11A1	Left justified
Cruise Identification	22	6	Bytes	6A1	Originator's cruise identifier
Cruise Dates	28	17	Bytes	5(I2,A1),I2	Beginning month, day, year; Ending month, day, year XX/XX/XX-XX/XX/XX
Senior Scientist	45	19	Bytes	19A1	Left justified
Investigator/ Institution	64	42	Bytes	42A1	Responsible investigator/ institution, left justified

RECORD FORMAT DESCRIPTION

RECORD NAME Station Header Record (Primary Productivity 2)

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES		18. USE AND MEANING
File Type	1	3	Bytes	A3		Always '049'
File Identifier	4	6	Bytes	A6		Date of file creation (YYMMDD) or unique cruise number
Record Type	10	1	Bytes	I1		Always '2'
*Sequence Number	11	3	Bytes	I3		Sequence of this record type within station
Station Number	14	5	Bytes	A5		Station Identifier
Latitude,						
Degrees	19	2	Bytes	I2		
Minutes	21	2	Bytes	I2		
Seconds	23	2	Bytes	I2		
Hemisphere	25	1	Bytes	A1		'N' or 'S'
Longitude,						
Degrees	26	3	Bytes	I3		
Minutes	29	2	Bytes	I2		
Seconds	31	2	Bytes	I2		
Hemisphere	33	1	Bytes	A1		'E' or 'W'
Date,						
Year	34	2	Bytes	I6		00-99
Month	36	2	Bytes			01-12
Day	38	2	Bytes			01-31
Time,						G.M.T.
Hours	40	2	Bytes	I2	*	00-23
Tenths of Hours	42	1	Bytes	I1	*	0-9
Water Depth	43	5	Bytes	I5		Meters to tenths
Navigation Code	48	2	Bytes	I2		

f2

USCOMM-DC 44289-P72

RECORD FORMAT DESCRIPTION

RECORD NAME Station Header Record, continued (Primary Productivity 2)

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES		18. USE AND MEANING
MPZ Chlorophyll a	50	4	Bytes	I4	*	Mean Photic Zone Chlorophyll a, mg/m^3 to tenths
MPZ Phaeopigments	54	4	Bytes	I4	*	mg/m^3 to tenths
MPZ Carbon Assimilation	58	5	Bytes	I5	*	$(mgC/m^3)/hr$ to tenths
Transparency	63	4	Bytes	I4	*	SECCHI Disk Depth, meters to tenths
1% Light Depth	67	3	Bytes	I3	*	To whole meters
Total Incident Radiation	70	3	Bytes	I3	*	$(Cal/cm^2)/day$ to tenths
Photosynthetically Active Radiation	73	6	Bytes	I6	*	$(Einsteins/m^2)/day$ to thousandths
Extinction Coefficient	79	4	Bytes	I4		m^{-1} to hundredths (include sign, adjacent and to the left of value)
Surface Temperature	83	3	Bytes	I3	*	Degrees Celsius to tenths
Blank	86	20	Bytes	20X		

RECORD FORMAT DESCRIPTION

1-2?-76

RECORD NAME Environmental Record (Primary Productivity 2)

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	UNITS	17. ATTRIBUTES		18. USE AND MEANING
File Type	1	3	Bytes	A3		Always '049'
File Identifier	4	6	Bytes	A6		Date of file creation (YYMMDD) or unique cruise number
Record Type	10	1	Bytes	I1		Always '3'
*Sequence Number	11	3	Bytes	I3		Sequence of this record type within station
Station Number	14	5	Bytes	A5		Station identifier
Barometric Pressure	19	3	Bytes	I3	*	Millibars to tenths
Dry Bulb	22	4	Bytes	I4	*	Air temperature; degrees Celsius to tenths
Wet Bulb	26	4	Bytes	I4	*	Air temperature; degrees Celsius to tenths
Wind Direction	30	2	Bytes	I2	*	WMO Code 0877; tens of degrees
Wind Speed	32	2	Bytes	I2	*	Whole knots
Sea Direction	34	2	Bytes	I2	*	WMO Code 0885; tens of degrees
Sea Height	36	1	Bytes	A1	*	WMO Code 1555
Swell Direction	37	2	Bytes	I2	*	WMO Code 0885
Swell Height	39	1	Bytes	A1	*	WMO Code 1555
Weather	40	1	Bytes	I1	*	WMO Code 4501
Cloud Type	41	1	Bytes	A1	*	WMO Code 0500
Cloud Cover	42	1	Bytes	I1	*	WMO Code 2700
Visibility	43	1	Bytes	I1	*	WMO Code 4300
Blank	44	62	Bytes	62X		

4-23-76
6

RECORD FORMAT DESCRIPTION

RECORD NAME Physical/Chemical (Primary Productivity 2)

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES		18. USE AND MEANING
File Type	1	3	Bytes	A3		Always '049'
File-Identifier	4	6	Bytes	A6		Date of file creation (YYMMDD) or unique cruise number
Record Type	10	1	Bytes	A1		Always '4'
*Sequence Number	11	3	Bytes	I3		Sequence of this record within station
Station Number	14	5	Bytes	A5		Station identifier
Sampling Depth	19	4	Bytes	I4		Meters to tenths
Temperature	23	4	Bytes	I4		Degrees Celsius to hundredths
Salinity	27	5	Bytes	I5		Parts per thousand to thousandths
pH	32	3	Bytes	I3	*	To hundredths
Alkalinity, Total	35	3	Bytes	I3	*	Milli-equiv./liter to hundredths
Sigma-t	38	4	Bytes	I4	*	To hundredths
Dissolved Oxygen	42	4	Bytes	I4		mg/l to hundredths
Turbidity	46	4	Bytes	I4		In JTU to tenths (Jackson Turbidity Units)
Particulate Organic Carbon	50	5	Bytes	I5		mg/l to hundredths
Particulate Nitrogen	55	4	Bytes	I4	*	mg/l to hundredths
Total Microseston	59	5	Bytes	I5		mg/l to tenths
Ammonia	64	4	Bytes	I4		µg atoms/l to tenths
Nitrite	68	3	Bytes	I3	*	µg at./l to tenths
Nitrate	71	4	Bytes	I4		µg at./l to tenths
Urea	75	3	Bytes	I3	*	µg at./l to tenths
Silicate	78	4	Bytes	I4		µg at./l to tenths
Phosphate, Inorganic	82	3	Bytes	I3		µg at./l to tenths

RECORD FORMAT DESCRIPTION

RECORD NAME Physical/Chemical, continued (Primary Productivity 2)

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
Soluble Reactive Iron	85	4	Bytes	I4 *	µg at./l to tenths
Blank	89	17	Bytes	17X	

RECORD FORMAT DESCRIPTION

RECORD NAME Pigments/Carbon Assimilation (Primary Productivity 2)

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
File Type	1	3	Bytes	A3	Always '049'
File Identifier	4	6	Bytes	A6	Date of file creation (YYMMDD) or unique cruise number
Record Type	10	1	Bytes	I1	Always '5'
*Sequence Number	11	3	Bytes	I3	Sequence of this record type within station
Station Number	14	5	Bytes	A5	Station identifier
Sampling Depth	19	4	Bytes	I4	Meters to tenths
Chlorophyll a whole	23	4	Bytes	I4	µg/l to tenths
Chlorophyll b net	27	4	Bytes	I4 *	µg/l to tenths
Chlorophyll c nano	31	4	Bytes	I4 *	µg/l to tenths
Plant Carotenoids	35	4	Bytes	I4 *	µg/l to tenths
Phaeppigments	39	4	Bytes	I4	µg/l to tenths
Replicate Number	43	1	Bytes	I1	For Photosynthetic Capacity Experiment
Light Intensity	44	2	Bytes	I2 *	(Cal/cm^2)/minute to hundredths
Photosynthetic Capacity Experiment Elapsed Time	46	3	Bytes	I3	Hours to tenths
Photosynthetic Capacity Phytoplankton	49	5	Bytes	I5 *	(µg C/liter)/hour to tenths
Photosynthetic Capacity Net Plankton	54	5	Bytes	I5	(µg C/liter)/hour to tenths
Photosynthetic Capacity Nanoplankton	59	5	Bytes	I5	(µg C/liter)/hours to tenths
Photosynthetic Capacity Dissolved Organic Matter	64	5	Bytes	I5 *	(µg C/liter)/hour to tenths

NOAA FORM 24-13

USCOMM-OC 44289-P72

RECORD FORMAT DESCRIPTION

RECORD NAME Pigments/Carbon Assimilation, continued (Primary Productivity 2)

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
Total Photosynthetic Capacity	69	5	Bytes	I5 *	(µg C/liter)/hour to tenths
Replicate Number	74	1	Bytes	I1 *	For Primary Productivity Experiment
Percent Light	75	3	Bytes	I3 *	Whole numbers
Primary Productivity Experiment Elapsed Time	78	3	Bytes	I3	Hours to tenths
Primary Productivity Phytoplankton	81	5	Bytes	I5 *	(µg C/liter)/day to tenths
Primary Productivity Net Plankton	86	5	Bytes	I5 *	(µg C/liter)/day to tenths
Primary Productivity Nanoplakton	91	5	Bytes	I5 *	(µg C/liter)/day to tenths
Primary Productivity Dissolved Organic Matter	96	5	Bytes	I5 *	(µg C/liter)/day to tenths
Total Primary Productivity	101	5	Bytes	I5 *	(µg C/liter)/day to tenths

*The sequence number may be used as a record or file terminator. This would permit the appropriate format specification when a new record type is to be read. Bytes 1 through 10 are repeated. Bytes 14 to 105 are blank and '998' written in the sequence number to indicate the next record type is to follow. Similarly '999' in bytes 11-13 indicates the next record is also the start of a new file identifier.

049

SDF1 000659

SDF2 001800

ANSI 000640? 002604 CD2

TR 479-495, 705-739, 4504-4507

9445

tr 705–727 accession no: 76-1893

tr 728–739 accession no: 761894

Mesa Productivity

```
Password:
 accNo   fleA refNo  proj inst ship    startDate  cruise   catId
 ------- ---- ------ ---- ---- ------- ---------- -------- ----------
 7601893 F049 TR0705 0065 31U8 32AW    1976/02/07 17            301426
 7601893 F049 TR0706 0065 31U8 32AW    1976/02/21 18            301427
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 7601893 F049 TR0708 0065 31U8 32AW    1976/03/06 20            301429
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 7601893 F049 TR0710 0065 31U8 32AW    1976/03/20 22            301431
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 7601893 F049 TR0712 0065 31U8 319H    1975/05/04 2             301433
 7601893 F049 TR0713 0065 31U8 319H    1975/05/13 3             301434
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 7601893 F049 TR0715 0065 31U8 319H    1975/05/27 5             301436
 7601893 F049 TR0716 0065 31U8 319H    1975/06/06 6             301437
 7601893 F049 TR0717 0065 31U8 319H    1975/06/10 7             301438
 7601893 F049 TR0718 0065 31U8 319H    1975/06/18 8             301439
 7601893 F049 TR0719 0065 31U8 319H    1975/06/24 9             301440
 7601893 F049 TR0720 0065 31U8 319H    1975/07/10 10            301441
 7601893 F049 TR0721 0065 31U8 319H    1975/07/16 11            301442
 7601893 F049 TR0722 0065 31U8 319H    1975/07/25 12            301443
 7601893 F049 TR0723 0065 31U8 319H    1975/08/08 13            301444
 7601893 F049 TR0724 0065 31U8 31KE    1975/11/12 15            301445
 7601893 F049 TR0725 0065 31U8 31KE    1975/11/24 16            301446
 7601893 F049 TR0726 0065 31U8 31KE    1976/03/31 23            301447
 7601893 F049 TR0727 0065 31U8 31RR    1975/10/29 14            301448

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7601893	F049	TR0709	32AW	6	59	76/03/14	76/03/14
7601893	F049	TR0710	32AW	6	59	76/03/20	76/03/20
7601893	F049	TR0711	319H	11	102	75/04/21	75/04/21
7601893	F049	TR0712	319H	6	59	75/05/04	75/05/04
7601893	F049	TR0713	319H	6	59	75/05/13	75/05/13
7601893	F049	TR0714	319H	11	112	75/05/20	75/05/20
7601893	F049	TR0715	319H	6	59	75/05/27	75/05/27
7601893	F049	TR0716	319H	6	59	75/06/06	75/06/06
7601893	F049	TR0717	319H	6	59	75/06/10	75/06/10
7601893	F049	TR0718	319H	13	130	75/06/18	75/06/18
7601893	F049	TR0719	319H	6	59	75/06/24	75/06/24
7601893	F049	TR0720	319H	6	59	75/07/10	75/07/10
7601893	F049	TR0721	319H	13	130	75/07/16	75/07/16
7601893	F049	TR0722	319H	6	53	75/07/25	75/07/25
7601893	F049	TR0723	319H	2	11	75/08/08	75/08/08
7601893	F049	TR0724	31KE	13	130	75/11/12	75/11/12
7601893	F049	TR0725	31KE	9	86	75/11/24	75/11/24
7601893	F049	TR0726	31KE	13	130	76/03/31	76/03/31
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