

OCEANOGRAPHICAL OBSERVATIONS
IN THE INDIAN OCEAN IN 1962
H.M.A.S. *DIAMANTINA*
Cruise Dm 2/62

OCEANOGRAPHICAL CRUISE REPORT
NO. 15

DIVISION OF FISHERIES AND OCEANOGRAPHY
COMMONWEALTH SCIENTIFIC AND INDUSTRIAL
RESEARCH ORGANIZATION, AUSTRALIA 1964

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MELBOURNE, 1964

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When citing this report, abbreviate as follows:
C.S.I.R.O. Aust. Oceanogr. Cruise Rep. No. 15

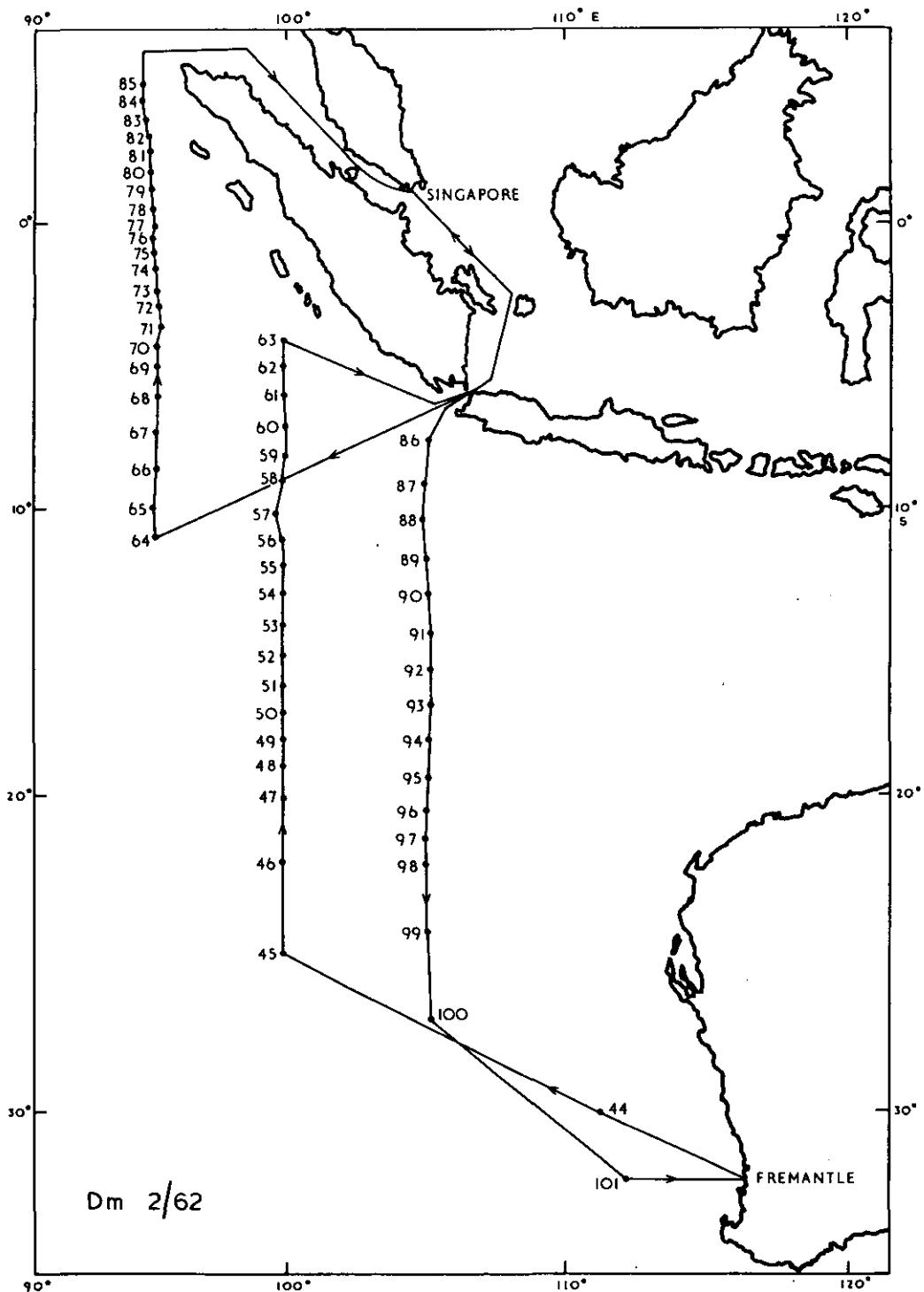


Fig. 1. - Track Chart

OCEANOGRAPHICAL CRUISE REPORT

No. 15

Oceanographical Observations in the Indian Ocean in 1962

H.M.A.S. DIAMANTINA

Cruise Dm 2/62

July 16 - August 25, 1962

I. INTRODUCTION

Data are recorded for the second cruise in 1962 of H.M.A.S. Diamantina, Royal Australian Navy frigate, in the south-east Indian Ocean.

Objectives

The cruise was planned to make a detailed study of the hydrological structure of the south-east Indian equatorial current and the divergence along its northern boundary, to study the eastern end of the counter current and the southern boundary of the monsoon current during the period of the strongest monsoons, and to study the biological systems associated with these currents.

Itinerary

The cruise commenced at Fremantle on July 16, worked a series of stations north along the 100° E. meridian thence to Singapore via Sunda Strait. The cruise then returned to and crossed the 100° E. meridian around 10°S. and worked a line of stations north near the 105°E. meridian, then returned to Singapore via Malacca Strait. Finally, a line of stations was worked south along 105°E. and the cruise terminated at Fremantle (Fig. 1).

2.

Personnel

B. Hamon (Cruise Leader)
K. Fleming
J. Klye
C. Middleton
J. Prothero
B. Scott

The analyses of hydrological samples made in the ship's laboratory were carried out by Messrs Fleming, Klye, and Prothero, and the samples returned to Cronulla were analysed by Messrs Davies, Klye, and Walker. The primary production and pigment samples were taken and filtered by Mr Scott, who also made the counts of ^{14}C samples. Pigment determinations were made at Cronulla by Mr Wootton. Zooplankton was collected by Mr Middleton and the samples were weighed at Cronulla by Mr Tranter.

The data were processed under the direction of Mr Crooks by Mrs Derrick, Mrs Tarbett, and Misses Johnston, Lalor, and Wanstall. The plots were prepared for publication by Mr Breach and Mrs Cozens.

II. WORK ACCOMPLISHED

Bathythermograph casts were made at 57 stations. The following samples were collected:

surface hydrology	at 57 stations
sub-surface hydrology	49 stations
primary production	28 stations
pigments	28 stations
zooplankton	23 stations

The temperature-salinity-depth recorder was used at 14 stations. Table 1 shows the work done at each station.

TABLE 1
WORK DONE AT EACH STATION

Station Number	BT	Hydrology		Primary Production	Pig- ments	Zoo- plankton	T.S.D.
		Surface	Deep				
44	+	+	+	+	+		+
45	+	+	+	+	+	+	+
46	+	+	+	+	+	+	
47	+	+	+				+
48	+	+	+	+	+	+	
49	+	+	+	+	+	+	+
50	+	+	+				
51	+	+	+	+	+		
52	+	+	+	+	+		
53	+	+	+				
54	+	+	+	+	+		
55	+	+	+	+	+		
56	+	+	+				
57	+	+	+				
58	+	+	+	+	+		
59	+	+	+				
60	+	+	+				
61	+	+	+	+	+		
62	+	+	+	+	+		
63	+	+	+				
64	+	+	+	+	+	+	
65	+	+	+				
66	+	+	+	+	+	+	
67	+	+	+	+	+	+	
68	+	+	+				
69	+	+	+	+	+	+	+
70	+	+					
71	+	+	+	+	+		
72	+	+					
73	+	+	+				
74	+	+					
75	+	+	+	+	+		+
76	+	+					

TABLE 1 Cont'd...

Station Number	BT	Hydrology		Primary Production	Pigments	Zoo-plankton	T.S.D.
		Surface	Deep				
77	+	+	+	+	+		
78	+	+					
79	+	+	+				
80	+	+					
81	+	+	+	+	+		+
82	+	+					
83	+	+	+	+	+		+
84	+	+					
85	+	+	+				
86	+	+	+	+	+	+	+
87	+	+	+			+	-
88	+	+	+	+	+	+	+
89	+	+	+	+	+	+	+
90	+	+	+			+	
91	+	+	+	+	+	+	+
92	+	+	+	+	+	+	
93	+	+	+			+	
94	+	+	+	+	+	+	+
95	+	+	+			+	
96	+	+	+				
97						+	
98	+	+	+	+	+	+	
99	+	+	+			+	+
100	+	+	+			+	
101	+	+	+			+	

BT Bathythermograms

T.S.D. Temperature salinity depth recorder

III. METHOD OF COLLECTION AND ANALYSIS OF SAMPLES

1. Physics

Temperature.- Water temperatures were taken with deep-sea reversing thermometers; protected thermometers with a

range of -2° to 30° , and unprotected thermometers with a range of -2° to 30° , or -4° to 60° . The accuracy of the temperatures is considered to be ± 0.03 . The readings are recorded in degrees Celsius.

Bathythermograph.- A 900 ft bathythermograph was used at the stations indicated in Table 1. A photograph of each slide is filed at Cronulla.

Thermometric Depth.- Depth calculations were made by the method described by Pollak (1950), and are considered accurate to ± 15 m below 1000 m and to 1% above that depth.

σ_t .- Sigma-t values were calculated by computer, using the Table of σ_t given by the U.S. Hydrographic Office (1955).

Temperature-Salinity-Depth Recorder.- This instrument was tested during the cruise, mainly to determine the behaviour of an acoustic telemetering link between the underwater unit and the ship. No temperature or salinity data from this instrument are included in this report.

2. Chemistry

Salinity.- Salinity was measured on board with an inductive salinometer (Brown and Hamon 1961). Duplicate samples from depths below 4000 m were returned to Cronulla for checks.

Dissolved Oxygen.- The standard Winkler method (Jacobsen, Robinson and Thompson 1950) was used with potassium iodate as the iodometric standard. Samples were collected in 275-300 ml capacity bottles and 100 ml duplicate aliquots were titrated to a starch end point. Values are given as ml/l. Duplicate titrations agreed to better than 0.03 ml O₂/l.

Oxygen Saturation.- Oxygen percentage saturation values were calculated by computer using the equation of Richards and Corwin (1956).

6.

Inorganic Phosphate.- The method of Atkins (1923) was used with 1 ml molybdate reagent (300 ml 10% ammonium molybdate and 100 ml 50% sulphuric acid) and 0.1 ml 1% stannous chloride diluted afresh from a 40% stock solution in hydrochloric acid, which was kept under paraffin. The reagents were automatically dispensed by a piston dispenser.

Standard phosphate solutions were made up in distilled water. At air temperatures less than 25° analyses were carried out in batches of 10; readings were begun within 10 minutes of adding reagents, and completed within 10 minutes. At air temperatures greater than 25° batches of 6 were analysed; readings were commenced within 5 minutes of adding reagents and completed within 7 minutes. Each batch was compared with a distilled water blank and a 0.65 µg at./l standard in a Hilger Spekker absorptiometer using 4 cm cells and Ilford 608 filters. Each week a complete check was made using standards up to 3.25 µg at./l. Results are given as µg at./l without any correction for salt error and are precise to \pm 10% for values less than 0.5 µg at./l and \pm 5% for higher values. If it is wished to correct for salt effects the results given should be multiplied by 1.15.

Total Phosphorus.- 100 ml samples were drawn from the Nansen bottles into 150 ml Pyrex conical flasks, 0.2 ml of 72% perchloric acid was added and digestion at 200°-250° carried out immediately on a sand tray. After evaporation of water, heating was continued until fuming of the salt residue commenced. The samples were then allowed to cool and 100 ml of distilled water and 2 drops of 2% phenolphthalein were added. If alkaline, perchloric acid was added until a slight acidity persisted. The flasks were allowed to stand for about 24 hours to allow the salts to dissolve. Phosphate was then determined as described above for inorganic phosphate. Results are given as µg at./l, without salt correction. If it is wished to correct for salt effects, the results given should be multiplied by 1.15.

Nitrate.- After collection, water samples were stored in plastic bottles and preserved with 2 drops of saturated HgCl_2 .

Nitrate was determined at Cronulla by the strychnidine method (Rochford 1947). The reagent was prepared by the addition of 0.64 g strychnidine to a litre of nitrate-free sulphuric acid. 5 ml of this reagent were added, with minimum agitation, to 5 ml sea water or standard nitrate solution. The standards were made up in a mixture of equal volumes of artificial sea water and nitrate-free sulphuric acid. The standards and samples were shaken to distribute the reagent, and the colour developed for 2 hours. The solutions were read in a UNICAM SP 600 spectrophotometer at a wavelength of 530 μ using a 5 mm cell. Samples with an extinction greater than that of the standard corresponding to 14.4 μ g at./l were diluted with artificial sea water-sulphuric acid mixture before reading. Results are given in μ g at./l.

3. Primary Production

Water samples were aliquots of those taken in a 5 l plastic sampler for pigment measurements. Incubation was carried out in a light bath at 1100 ft candles in 300 ml Pyrex bottles. Otherwise the techniques used were as in Jitts (1957) except that counting was done with a windowless Geiger counter on board and standardization of the ^{14}C solutions was made by the method of Jitts and Scott (1961).

4. Pigments

Water samples were taken with a plastic sampler and filtered within one or two hours through HA Millipore filters. The filters were placed in envelopes and stored in metal desiccators over silica gel. The analyses were carried out at Cronulla using the method given by Humphrey (1960), except that 4 cm spectrophotometer cells were used.

5. Zooplankton

Duplicate samples were taken with the Indian Ocean Standard net (Currie 1962, Motoda 1962, Tranter 1963). The net was hauled vertically from 200 m to surface at approximately 1 m/sec. On this cruise no allowance was made for wire stray, but ship handling was such that the wire

angle averaged not more than 20°. Samples were weighed at Cronulla using the method described in Tranter (1962).

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IV. DATA SHEETS AND TABLES

The data were listed on an I.B.M. 1401. An explanation of the headings for each set of data sheets is given at the beginning of the relevant part.

DATA

PART 1

HYDROLOGY

DEEP STATIONS

EXPLANATION OF HEADINGSPart 1 Hydrology - Deep Stations

STATION Gives the station identification, for example,
Dm 2/44/62 signifies the 44th station worked
from Diamantina in 1962, on her 2nd cruise
for that year

DATE Given as day/month/year

TIME Given in Zone Time, and is the time at the
beginning of the first cast. The code
letter used for the time zone (Table 2)
follows the time

TABLE 2CODE FOR TIME ZONES

Exceeding	Longitude	Time	
	Up to but not exceeding	Zone (hrs)	Code
07°30'E. -	22°30'E.	-1	A
22°30'E. -	37°30'E.	-2	B
37°30'E. -	52°30'E.	-3	C
52°30'E. -	67°30'E.	-4	D
67°30'E. -	82°30'E.	-5	E
82°30'E. -	97°30'E.	-6	F
97°30'E. -	112°30'E.	-7	G
112°30'E. -	127°30'E.	-8	H
127°30'E. -	142°30'E.	-9	I
142°30'E. -	157°30'E.	-10	K
157°30'E. -	172°30'E.	-11	L
172°30'E. -	180°	-12	M
180° -	172°30'W.	+12	Y
172°30'W. -	157°30'W.	+11	X
157°30'W. -	142°30'W.	+10	W

Exceeding	Longitude Up to but not exceeding	Time Zone (hrs)	Code
142°30'W. -	127°30'W.	+9	V
127°30'W. -	112°30'W.	+8	U
112°30'W. -	97°30'W.	+7	T
97°30'W. -	82°30'W.	+6	S
82°30'W. -	67°30'W.	+5	R
67°30'W. -	52°30'W.	+4	Q
52°30'W. -	37°30'W.	+3	P
37°30'W. -	22°30'W.	+2	O
22°30'W. -	07°30'W.	+1	N
07°30'W. -	07°30'E.	0	Z

LATITUDE LONGITUDE Given in degrees and minutes

SONIC DEPTH Given in metres, measured at standard sound velocity of 800 fm (1463 m) per second

AIR TEMP.
WET DRY Recorded from wet and dry bulb thermometers in °C

WIND DIR. SP. Wind direction and speed are coded using Tables 8 and 9 in U.S. Hydrogr. Office (1955)

ANEM. HEIGHT The average height of the anemometer above sea level, given in metres

CLOUD TYPE AMT. Cloud type and amount are coded using Tables 2 and 3 in U.S. Hydrogr. Office (1955)

VIS. Visibility is coded using Table 4 in U.S. Hydrogr. Office (1955)

SEA DIR. AMT. Sea direction and amount are coded using Tables 5 and 8 in U.S. Hydrogr. Office (1955)

14.

SWELL DIR. AMT.	Sea swell direction and amount are coded using Tables 6 and 8 in U.S. Hydrogr. Office (1955)
ATMOS. PRESSURE	Atmospheric pressure given in millibars
WIRE ANGLES CAST 1 CAST 2	Wire angles are measured at the surface and expressed in degrees for each cast. An asterisk indicates that the wire angle was not measured
CAST	The cast number corresponding to the wire angle is shown
DEPTH	Actual sampling depth, given in metres
TEMPERATURE	Sea temperatures recorded in °C
SALINITY	Given in parts per thousand
OXYGEN	Given in ml/l
INORG. P, TOTAL P and NITRATE	Given in µg at./l
***	Indicates no data available

STATION

LONGITUDE

LATITUDE

TIME

DATE

DM 27 44/62

17/ 7/62

0800 H

30 01 S 111 07 E

SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRES CAST 1 CAST 2
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
5121	14.4	16.7	18 01	16	6	8	21	20	1
	2	0	19.89	35.713	25.35	5.12	107	0.17	0.34
	2	24	19.76	35.721	25.39	5.12	106	0.20	***
	2	48	19.41	35.768	25.52	5.00	103	0.15	0.46
	2	72	19.44	35.778	25.52	5.12	106	0.19	***
	2	96	18.90	35.849	25.71	4.94	101	0.23	0.44
	2	145	16.88	35.781	26.16	4.94	97	0.31	***
	2	194	15.01	35.619	26.46	5.23	92	0.36	0.46
	2	293	12.60	35.263	26.69	5.40	97	0.50	***
	2	491	9.54	34.765	26.87	5.52	93	0.77	2.60
	3	690	7.60	34.542	26.99	4.94	79	0.34	1.43
	3	890	4.69	34.411	27.27	4.37	65	1.61	1.65
	1	1098	3.96	34.514	27.43	3.45	51	1.90	1.74
	1	1296	3.50	34.581	27.53	3.28	48	1.80	1.81
	1	1495	3.04	34.623	27.60	3.45	50	1.59	2.07
	1	1991	2.37	34.715	27.74	3.62	51	1.59	2.01
	1	2488	2.01	34.751	27.79	3.91	55	1.59	1.90
	1	2986	1.69	34.732	27.80	4.08	57	1.56	1.94
	1	3465	1.42	34.727	27.82	4.25	59	1.58	1.87
	1	3983	1.28	34.722	27.82	4.43	61	1.59	1.69
	1	4482	1.16	34.722	27.83	4.54	62	1.53	3.03
	1	4981	1.08	34.718	27.83	4.71	64	1.48	30.5

15.

STATION	DATE	TIME	LATITUDE	LONGITUDE					
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2
DM 2 / 45/62	19 / 7/62	2015 H	25 00 S	100 00 E					
5029	16.1	18.3	09 01	16	8	3	8	09	1 17 1 1025.5 *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	21.70	35.418	24.64	4.95	10.6	0.12	0.34	***
2	2.5	21.66	35.424	24.65	4.95	10.6	0.12	0.80	***
2	4.9	21.66	35.433	24.66	4.89	10.5	0.13	0.37	***
2	7.4	20.85	35.677	25.07	4.95	10.5	0.15	0.34	***
2	9.8	19.36	35.709	25.36	4.72	9.8	0.16	0.34	***
2	14.7	16.23	35.798	25.84	4.67	9.4	0.19	0.28	01.4
2	19.7	16.86	35.778	26.16	4.84	9.5	0.26	0.28	01.1
2	29.5	13.87	35.472	26.60	5.24	9.7	0.33	0.53	03.1
2	49.4	10.53	34.916	26.81	5.52	9.5	0.72	0.84	11.5
2	69.3	6.44	34.623	26.93	5.18	8.5	1.06	1.26	18.2
2	89.2	5.11	34.428	27.23	4.27	6.5	1.55	1.79	27.3
1	108.7	4.19	34.522	27.41	3.24	4.8	1.62	2.00	29.4
1	128.4	3.64	34.583	27.51	3.13	4.6	1.88	2.00	31.9
1	148.0	3.17	34.634	27.60	3.19	4.6	1.93	1.99	31.8
1	197.1	2.35	34.719	27.74	3.53	5.0	1.83	1.88	33.8
1	246.4	1.94	34.734	27.79	3.87	5.4	1.90	1.90	31.6
1	295.8	1.66	34.733	27.81	4.04	5.6	1.80	1.90	34.8
1	345.2	1.40	34.728	27.82	4.27	5.9	1.86	1.90	28.3
1	394.8	1.19	34.722	27.83	4.50	6.2	1.72	1.84	28.5
1	444.3	1.08	34.716	27.83	4.67	6.4	1.62	1.82	28.9
1	494.2	1.10	34.713	27.83	4.67	6.4	1.79	1.82	33.0

16.

STATION

TIME

LONGITUDE

DATE

LATITUDE

DM 2 / 46/62

20 / 7/62

100 00 E

CAST	DEPTH	TEMP.	WIND DIR. DRY	ANEM. SP.	HEIGHT	CLOUD TYPE AMT.	VIS.	SEA AMT.	DIR. AMT.	SWELL	DIR. AMT.	ATMOS. PRESSURE	1020.2	* * *	WIRE ANGLES CAST 1 CAST 2	
5609	16.9	21.7	03 01	16	6	7	8	*	*	14	1	1020.2	*	*	*	
2	0	21.52	35.562	24.80	5.01			107		0.13		0.31				
2	25	21.34	35.565	24.85	4.95			106		0.11		0.29*				
2	50	21.31	35.577	24.87	4.89			104		0.15		0.34				
2	75	21.28	35.586	24.88	4.95			105		0.14		0.34*				
2	100	20.78	35.799	25.18	5.01			106		0.19		0.34				
2	125	19.51	35.778	25.50	4.72			98		0.19		0.34*				
2	149	18.57	35.795	26.76	4.67			95		0.27		0.35				
2	194	17.98	35.806	26.13	4.84			96		0.30		0.40				
2	249	15.96	35.661	26.49	4.95			94		0.47		0.47				
2	299	13.91	35.659	26.73	4.89			91		0.36		0.44				
2	399	11.44	35.074	26.77	5.35			94		0.74		0.77				
1	491	9.85	34.808	26.85	5.35			91		0.90		1.00				
1	698	7.00	34.520	27.06	4.50			71		1.43		1.49				
1	893	5.45	34.599	27.33	2.62			40		2.17		2.12				
1	1084	4.80	34.641	27.44	2.39			36		2.20		2.25				
1	1282	4.14	34.642	27.51	2.67			39		2.17		2.27				
1	1480	3.54	34.656	27.58	2.90			42		2.17		2.17				
1	1478	2.48	34.714	27.72	3.41			48		2.06		2.06				
1	2476	1.97	34.731	27.78	3.70			52		2.06		2.06				

17.

STATION		DATE		TIME		LATITUDE		LONGITUDE	
SONIC DEPTH	AIR TEMP. WET	WIND DRY	ANEM. DIR.	CLOUD SP.	VIS. HEIGHT	SEA TYPE AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRES CAST 1 CAST 2
5577	21.1	23.3	14	01	16	0	2	7	* * * * *
								09 1	1021.0
CAST	DEPTH	TEMP.		SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P
2	0	24.01		34.964	23.63	4.72	105	0.14	0.40
2	25	23.99		34.978	23.65	4.61	103	0.10	***
2	50	23.97		35.029	23.69	4.67	104	0.13	***
2	75	22.06		35.178	24.36	4.15	89	0.34	***
2	100	21.07		35.388	24.79	4.21	89	0.30	0.44
2	125	19.74		35.251	25.04	3.53	73	0.57	***
2	150	19.16		35.472	25.36	3.87	79	0.50	0.9
2	200	17.58		35.563	25.82	3.98	79	0.52	0.61
2	250	16.01		35.588	26.22	4.50	87	0.46	***
2	300	14.13		35.462	26.53	4.84	90	0.47	0.59
2	400	10.48		34.923	26.83	5.24	90	0.77	0.92
1	491	9.28		34.733	26.88	5.18	87	0.88	0.94
1	688	7.26		34.532	27.04	5.53	56	1.51	1.57
1	888	5.21		34.623	27.37	2.33	35	2.06	2.13
1	1083	4.49		34.644	27.47	2.44	36	2.07	2.15
1	1281	3.94		34.663	27.55	2.62	39	1.92	31.9
1	1478	3.48		34.679	27.61	2.79	41	2.13	***
1	1972	2.43		34.721	27.73	3.41	48	1.89	31.0
1	2466	1.97		34.729	27.78	3.64	51	1.89	31.0

STATION	DATE	TIME	LATITUDE		LONGITUDE	
			18° 53' S	100° 00' E	100° 00' E	100° 00' E
DM 2 / 48/62	21/ 7/62	0847 H				
SONIC AIR TEMP.	WIND DIR.	ANEM.	CLOUD TYPE	VIS.	SEA AMT.	SWELL AMT.
WET DRY DEPTH	SP.	HEIGHT	AMT.	AMT.	DIR.	DIR.
5760 20.6 23.3	15 02	16	6	7	15	2
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.
3	0	25.00	34.650	23.10	4.60	104
3	25	24.96	34.653	23.11	4.48	101
3	49	24.79	34.948	23.39	4.60	104
3	74	23.67	35.214	23.92	4.71	104
3	99	22.25	35.259	24.36	4.25	92
3	123	21.13	35.451	24.82	4.43	94
3	148	19.93	35.458	25.13	4.02	84
3	198	18.66	35.743	25.69	4.48	91
3	247	16.58	35.609	26.10	4.31	84
3	296	14.51	35.474	26.46	4.71	88
3	395	11.00	34.991	26.79	5.23	91
3	494	9.39	34.747	26.88	5.35	90
3	691	6.26	34.522	27.16	3.79	59
3	889	5.34	34.637	27.37	2.30	35
1	1093	4.65	34.657	27.46	2.30	34
1	1291	3.95	34.663	27.55	2.58	38
1	1469	3.44	34.684	27.61	2.87	42
1	1784	2.12	34.722	27.76	3.39	48
1	2477	1.92	34.732	27.79	3.62	51
1	2965	1.64	34.729	27.80	3.91	54
2	3370	1.48	34.722	27.81	4.08	56
2	3858	1.32	34.720	27.82	4.14	57
2	4352	1.22	34.716	27.82	4.43	61
2	4848	1.14	34.715	27.83	4.43	61
2	5344	1.17	34.714	27.83	4.60	63

19.

STATION	DATE		TIME		LATITUDE		LONGITUDE		
DM 2 / 49/62	21/ 7/62		1830 H		18 00 S		100 00 E.		
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA SWELL	DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2
5303	20.6	23.9	14 02	16	6	8	8	1020.0	25 *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN %	SAT.	INORG. P	TOTAL P
2	0	25.09	34.665	23.08	4.67	106	0.13	0.32	***
2	25	25.20	34.666	23.05	4.50	102	0.12	***	***
2	49	25.23	34.660	23.04	4.55	103	0.14	0.23	***
2	74	25.20	34.662	23.05	4.61	104	0.15	***	***
2	98	22.48	35.057	24.15	4.10	89	0.36	0.49	***
2	123	21.09	35.383	24.78	4.27	91	0.30	***	01.0
2	148	20.42	35.511	25.06	4.15	87	0.31	0.42	01.1
2	197	18.94	35.637	25.54	4.04	83	0.44	0.49	02.4
2	246	17.58	35.732	25.95	4.67	93	0.38	***	01.9
2	295	15.63	35.635	26.34	4.67	90	0.41	0.50	02.2
2	394	11.80	35.115	26.74	4.89	87	0.70	0.74	07.4
1	449	10.36	34.894	26.83	5.07	87	0.81	1.93	11.0
1	640	7.70	34.559	26.99	4.27	69	1.44	1.54	24.3
1	832	5.70	34.623	27.31	2.39	37	2.05	2.12	33.2
1	1020	5.02	34.673	27.44	2.22	34	2.10	2.21	33.6
1	1210	4.36	34.672	27.51	1.82	27	2.08	2.24	36.3
1	1400	3.67	34.678	27.59	2.67	39	2.06	2.13	35.0
1	1877	2.62	34.724	27.72	3.13	45	1.99	1.91	33.8
1	2353	2.06	34.734	27.78	3.47	49	1.98	2.04	33.8

STATION

TIME

LATITUDE

LONGITUDE

DATE

DN 2 / 50/62

0145 H

22 / 7/62

100 00 E

CAST	DEPTH	TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2		
										OXYGEN	OXYGEN % SAT.	INORG. P
2	0	26.01	34.470	22.65	4.38	100	0	0	1020.5	0.31	0.12	0.31
2	25	25.99	34.467	22.66	4.21	96	0	0	1020.5	***	0.12	***
2	50	25.98	34.467	22.66	4.50	103	0	0	1020.5	***	0.13	0.34
2	74	25.48	34.554	22.88	4.32	98	0	0	1020.5	***	0.20	***
2	99	20.15	34.862	24.64	2.56	53	0	0	1020.5	***	0.64	0.76
2	124	19.11	35.233	25.19	3.36	69	0	0	1020.5	***	0.62	10.2
2	147	18.33	35.269	25.41	3.41	69	0	0	1020.5	***	0.68	0.73
2	198	17.07	35.433	25.85	3.64	72	0	0	1020.5	***	0.57	0.83
2	248	13.81	35.116	26.33	3.36	62	0	0	1020.5	***	0.75	0.66
2	297	12.88	35.263	26.64	4.72	86	0	0	1020.5	***	0.58	11.9
2	397	10.09	34.882	26.86	4.84	82	0	0	1020.5	***	0.92	0.7
1	451	9.09	34.743	26.92	4.44	74	1	1	1020.5	***	1.10	1.17
1	634	7.02	34.649	27.16	2.39	38	1	1	1020.5	***	1.90	2.15
1	824	5.87	34.662	27.32	1.93	30	2	2	1020.5	***	2.08	2.24
1	1014	5.17	34.666	27.41	1.99	30	2	2	1020.5	***	1.17	1.07
1	1208	4.42	34.664	27.50	2.22	33	2	2	1020.5	***	2.21	2.69
1	1405	3.82	34.677	27.57	2.50	37	2	2	1020.5	***	1.14	2.35
1	1897	2.61	34.725	27.72	3.07	44	2	2	1020.5	***	2.08	2.24
1	2594	2.04	34.736	27.78	3.41	48	1	1	1020.5	***	2.10	31.6

21.

STATION	DATE		TIME		LATITUDE		LONGITUDE			
DM 2 / 51/62	22/ 7/62		0815 H		16 09 S		100 00 E			
SONIC DEPTH	AIR TEMP.	WIND DIR.	ANEM.	CLOUD TYPE	VIS.	SEA AMT.	DIR. AMT.	SWELL	ATMOS.	WIRE ANGLES
WET DRY	SP.	HEIGHT	TYPE	AMT.	AMT.	AMT.	AMT.	CAST 1	PRESSURE	CAST 1 CAST 2
5349	21.7	24.7	10	02	16	8	6	7	12	2
									12	1
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN %	SAT.	INORG. P	TOTAL P	NITRATE
2	0	25.17	34.731	23.11	4.60	104	0.17	0.36	***	***
2	25	25.16	34.733	23.11	4.48	101	0.15	***	***	***
2	50	25.23	34.622	23.16	4.48	102	0.14	0.36	***	***
2	75	20.42	34.785	24.51	2.76	58	0.91	***	11.0	11.0
2	100	18.42	34.919	25.12	2.58	52	0.96	0.96	15.2	15.2
2	125	17.56	35.019	25.41	2.87	57	0.94	***	11.1	11.1
2	150	16.44	34.914	25.60	2.76	54	1.02	1.48	15.3	15.3
2	200	15.44	35.254	26.09	3.56	68	0.86	0.97	10.7	10.7
2	250	14.78	35.530	26.45	4.83	91	0.50	***	03.0	03.0
2	300	12.73	35.264	26.67	4.89	88	0.64	0.76	08.7	08.7
2	400	10.08	34.866	26.85	5.17	88	0.86	0.90	03.0	03.0
1	479	8.63	34.686	26.95	4.66	77	1.07	1.02	19.0	19.0
1	674	6.64	***	***	2.18	**	1.85	1.95	32.0	32.0
1	869	5.65	34.668	27.36	1.95	30	2.15	2.22	33.6	33.6
1	1065	4.93	34.660	27.44	2.07	31	2.26	***	32.9	32.9
1	1261	4.34	34.659	27.50	2.24	33	2.01	2.11	34.8	34.8
1	1458	3.75	34.690	27.59	2.53	37	2.06	2.04	33.8	33.8
1	1950	2.68	34.732	27.72	3.22	46	2.06	2.04	35.3	35.3
1	2444	2.06	34.740	27.78	3.62	51	2.01	1.97	37.4	37.4

STATION	DATE	TIME	LATITUDE	LONGITUDE							
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	CAST 1	CAST 2	WIRE ANGLES
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
DM 2 / 52/62	22/ 7/62	1545 H	15 00 S	100 00 E							
5231	22.2	26.1	07 02	16	6 6	8	10 2	10 1	1018.0	*	*
2	0	26.80	34.369	22.33	4.43	103	0.20	0.28	00.0	***	***
2	25	26.81	34.365	22.32	4.31	100	0.22	0.22	***	***	***
2	50	25.66	34.608	22.87	4.43	101	0.20	0.20	***	***	***
2	74	25.19	34.798	23.16	4.48	101	0.16	0.16	***	***	***
2	99	22.01	35.219	24.40	4.48	96	0.20	0.37	00.3	0.37	00.3
2	124	20.94	35.389	24.83	4.14	88	0.28	0.28	00.9	0.28	00.9
2	149	19.64	35.479	25.24	3.91	81	0.45	0.45	03.5	0.62	03.5
2	199	17.98	35.650	25.79	4.14	83	0.44	0.44	03.3	0.44	03.3
2	249	15.38	35.382	26.20	3.91	75	0.77	0.77	09.2	0.77	09.2
2	298	13.16	35.213	26.54	4.02	73	0.81	0.81	11.3	0.75	11.3
2	398	10.60	34.938	26.82	4.60	79	0.90	0.90	12.4	0.85	12.4
1	495	8.44	34.682	26.98	2.87	47	1.62	1.62	25.9	***	25.9
1	694	6.75	34.663	27.21	2.12	32	2.14	2.14	34.1	***	34.1
1	893	5.68	34.658	27.35	1.95	29	2.19	2.19	34.1	***	34.1
1	1092	4.92	34.641	27.43	2.07	30	2.11	2.11	36.3	***	36.3
1	1291	4.26	34.655	27.52	2.18	31	2.18	2.18	33.8	***	33.8
1	1491	3.75	34.680	27.58	2.41	34	2.18	2.18	34.4	***	34.4
1	1989	2.61	34.728	27.73	3.10	42	1.89	1.89	34.4	***	34.4
1	2488	1.99	34.738	27.80	3.56	48	1.97	1.97	34.4	***	34.4

23.

STATION	DATE	TIME	LATITUDE	LONGITUDE					
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST 1 CAST 2
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
DM 2 / 53/62	22/ 7/62	2230 H	14 00 S	100 00 E					
5486	23.9	26.7	12 02	16	6	2	7	12	2
									1019.0 *
									24.
2	0	26.84	34.283	22.25	4.48	104	0.13	0.34	***
2	25	26.85	34.279	22.24	4.43	103	0.13	***	***
2	50	26.87	34.280	22.24	4.48	104	0.13	0.33	***
2	75	26.85	34.281	22.25	4.48	104	0.15	***	***
2	100	26.80	34.290	22.27	4.25	99	0.21	0.37	***
2	125	21.04	34.760	24.32	3.22	68	0.71	***	***
2	150	19.45	35.128	25.02	3.22	69	0.63	***	07.8
2	200	15.85	34.914	25.73	2.76	53	0.92	1.07	09.1
2	250	13.17	34.707	26.15	2.41	44	1.18	***	15.3
2	300	12.04	34.739	26.40	2.35	42	1.12	1.55	21.9
2	400	10.19	34.746	26.74	2.47	42	1.36	***	22.6
2	500	8.99	34.717	26.92	2.47	41	1.48	1.65	30.3
2	700	7.28	34.669	27.14	2.12	34	1.78	2.09	28.7
2	900	5.98	34.648	27.30	1.95	30	1.92	2.53	33.2
1	1052	5.45	34.657	27.37	1.89	29	1.97	2.25	36.0
1	1242	4.74	34.657	27.45	2.18	33	2.01	2.35	36.6
1	1432	4.20	34.658	27.52	2.24	33	1.93	***	34.1
1	1912	2.88	34.724	27.70	2.93	42	1.86	2.53	33.5
1	2392	**	34.740	**	3.39	***	1.81	2.08	32.0
1	2874	1.79	34.733	27.80	3.74	52	1.73	***	32.3
1	3360	1.47	34.725	27.81	3.97	55	1.73	1.84	32.9
1	3851	1.33	34.721	27.82	4.20	58	1.69	1.76	32.3
1	4347	1.21	34.717	27.83	4.20	58	1.69	1.82	32.9
1	4844	1.16	34.714	27.83	4.43	61	1.68	***	30.2

STATION DM 2 / 34/62 DATE 23 / 7/62 TIME 0645 H LATITUDE 13 00 S LONGITUDE 100 00 E

	SONIC DEPTH	AIR TEMP. WET	TEMP. DRY	WIND DIR.	ANEM. SP.	HEIGHT	CLOUD TYPE	VIS.	DIR. AMT.	SEA SWELL	DIR. AMT.	ATMOS. PRESSURE	WIRES CAST1	WIRES CAST2
CAST	DEPTH	TEMP.	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE			
5852	22.8	24.4	11	02	16	8	6	6	13	2	13	1	1017.6	*
														*
2	0	27.13	34.186	22.09	4.31	100	100	0.12	0.29	***				
2	25	***	34.184	22.09	4.14	96	0.10	***	***					
2	50	27.13	34.190	22.09	4.31	100	0.11	0.40	***					
2	75	27.00	34.248	22.17	4.31	100	0.12	***	***					
2	100	26.24	34.499	22.60	3.39	78	0.36	0.41	02.0					
2	125	23.76	34.817	23.59	2.81	62	0.76	***	08.7					
2	150	20.60	34.533	24.27	2.76	58	0.85	0.89	13.1					
2	175	17.15	34.762	25.32	1.95	38	1.21	1.10	21.2					
2	200	14.25	34.687	25.91	2.01	37	1.34	***	21.7					
2	225	12.26	34.636	26.28	2.18	39	1.27	1.28	24.8					
2	250	10.58	34.780	26.70	2.01	35	1.57	1.78	27.3					
1	477	9.66	34.753	26.84	2.24	38	1.62	1.73	28.3					
1	672	7.61	34.669	27.09	2.07	33	1.89	1.99	30.3					
1	867	6.32	34.651	27.26	1.89	29	2.14	2.32	33.3					
1	1060	5.28	34.638	27.38	2.01	31	2.11	2.27	34.0					
1	1253	4.66	34.647	27.46	2.18	33	2.20	2.16	35.7					
1	1447	4.10	34.678	27.54	2.24	33	1.80	1.97	34.5					
1	1932	2.84	34.732	27.71	2.87	41	1.76	2.07	33.3					
1	2423	2.24	34.739	27.77	3.28	1.93	2.06							

STATION DATE TIME LATITUDE LONGITUDE
DM 2 / 55/62 23 / 7/62 1500 H 12 00 S 100 00 E

CAST	DEPTH	TEMP.	WIND DIR.	ANEM. SP.	HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA SWELL	DIR. ANG.	DIR. ANG.	ATMOS. PRESSURE	WIRES CAST 1	WIRES CAST 2	TOTAL P	NITRATE	
SONIC DEPTH	WET DEPTH	AIR TEMP.	WIND DRY	ANEM.	HEIGHT	CLOUD	TYPE	AMT.	VIS.	SEA SWELL	DIR. ANG.	DIR. ANG.	ATMOS. PRESSURE	WIRES CAST 1	WIRES CAST 2	TOTAL P	NITRATE
***	23.1	26.7	14	02	16	6	6	8	13	2	12	1	1012.5	*	*	*	
2	0	26.56	34.004			22.13	4.39		101		0.20		0.43			***	
2	20	26.53	34.001			22.14	4.34		100		0.22		**			***	
2	40	26.53	34.001			22.14	4.51		104		0.16		0.32			***	
2	61	26.49	34.055			22.19	4.28		99		0.20		**			***	
2	82	24.79	34.519			23.06	3.10		70		0.56		0.42			05.3	
2	104	22.71	34.511			23.67	2.93		64		0.76		**			08.3	
2	126	20.53	34.482			24.25	2.82		59		0.90		0.85			12.5	
2	170	17.74	34.723			25.14	2.36		47		1.17		1.33			16.2	
2	217	15.66	34.798			25.69	2.08		40		1.39		**			20.7	
2	266	13.15	34.640			26.10	2.14		39		1.44		1.56			24.1	
2	365	10.62	34.622			26.57	2.25		39		1.68		1.67			27.3	
1	448	9.82	34.805			26.85	2.36		40		1.61		1.83			29.4	
1	636	7.84	34.715			27.09	2.08		34		1.94		**			32.0	
1	826	6.51	34.667			27.25	1.91		30		2.19		**			33.5	
1	1017	5.33	34.632			27.37	2.14		33		2.19		**			34.7	
1	1210	4.64	34.641			27.45	2.03		30		2.21		**			34.5	
1	1402	4.00	34.678			27.55	2.42		36		2.20		**			33.9	
1	1883	2.88	34.739			27.71	2.82		40		2.08		**			33.5	
1	2370	2.11	34.749			27.78	3.38		47		2.04		**			31.7	

STATION DATE TIME LATITUDE LONGITUDE
OM 2/ 56/62 23/ 7/62 2145 H 11 00 S 100 00 E

SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR.	ANEM. SP.	HEIGHT	CLOUD TYPE	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRES CAST 1	CAST 2
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE				
2	0	26.67	34.084	22.16	4.34	100	0.15	0.44	***				
2	17	26.69	34.082	22.15	4.34	100	0.12	***	***				
2	35	26.72	34.095	22.15	4.23	98	0.12	0.42	***				
2	55	26.71	34.120	22.17	4.34	100	0.10	***	***				
2	76	25.75	34.569	22.81	3.49	80	0.42	0.51	02.8				
2	97	23.09	34.489	23.54	2.98	65	0.68	***	08.6				
2	118	20.21	34.733	24.52	2.42	50	0.99	1.11	12.5				
2	163	16.26	34.746	25.51	2.03	39	1.23	1.54	20.8				
2	209	14.00	34.743	26.01	2.36	44	1.25	***	20.4				
2	257	12.12	34.681	26.34	2.08	37	1.48	1.65	22.5				
2	354	10.62	34.802	26.71	1.97	34	1.62	1.97	27.1				
1	452	9.19	34.774	26.93	2.31	39	1.33	1.21	26.9				
1	648	7.70	34.744	27.14	1.69	27	1.98	2.18	30.5				
1	835	6.42	34.686	27.27	1.86	29	2.17	2.28	32.8				
1	1022	5.09	34.635	27.40	1.97	30	2.18	***	32.9				
1	1211	4.38	34.647	27.49	2.03	30	2.19	2.42	31.2				
1	1398	3.86	34.684	27.57	2.31	34	2.12	2.24	33.4				
1	1872	2.75	34.745	27.73	2.87	41	2.00	2.17	30.1				
1	2354	2.09	34.740	27.78	3.38	47	2.00	2.10	31.2				

STATION	DATE	TIME	LATITUDE	LONGITUDE					
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2
DM 2 / 57/62	24/ 7/62	0645 H	10 00 S	99 49 E					
5852	25.6	26.1	13 02	16	8	6	13	1	1016.0 *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN %	SAT.	INORG. P	TOTAL P
2	0	27.54	33.790	21.66	4.34	10.1	0.24	0.17	***
2	25	27.51	33.780	21.66	4.00	9.3	0.12	**	***
2	50	27.57	33.793	21.65	4.28	10.0	0.11	0.19	***
2	75	26.98	34.134	22.12	4.28	9.9	0.16	***	***
2	100	26.85	34.195	22.18	3.89	9.0	0.18	0.29	00.5
2	124	23.26	34.789	23.72	3.04	6.7	0.68	***	05.9
2	149	20.47	34.801	24.51	2.19	4.6	0.89	1.07	13.9
2	197	16.12	34.741	25.54	1.86	3.6	1.24	1.28	19.4
2	244	13.31	34.688	26.11	2.03	3.7	1.41	***	22.6
2	290	11.67	34.667	26.41	1.91	3.4	1.38	1.33	25.4
2	380	10.23	34.807	26.78	2.08	3.6	1.60	1.51	26.5
1	436	9.40	34.790	26.91	2.31	3.9	1.62	1.58	27.6
1	615	7.47	34.692	27.13	1.80	2.9	2.01	2.15	32.7
1	796	5.98	34.642	27.29	1.86	2.9	2.07	2.26	34.5
1	978	4.97	34.621	27.40	2.03	3.1	2.10	2.13	34.5
1	1163	4.43	34.638	27.47	2.08	3.1	2.20	2.19	33.1
1	1352	3.92	34.683	27.56	2.25	3.3	2.12	***	01.4
1	1830	2.80	34.747	27.72	2.93	4.2	1.90	1.94	29.3
1	2314	2.12	34.740	27.78	3.27	4.6	1.99	***	31.0

28.

STATION	DATE			TIME			LATITUDE			LONGITUDE					
	DM 2 /	58/62	24/ 7/62	0123	I	08	57	S	08	57	S	100	00	E	
SONIC DEPTH	AIR TEMP. WET	WIND DRY	ANEM. DIR.	SP.	HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRES CAST 1	WIRES CAST 2
5486	25.0	27.8	12	02	16	6	6	8	13	2	14	1	1016.5	10	*
2	0	27.85	***	***	***	4.38	***	***	0.12	0.12	0.31	***	***	***	***
2	25	27.86	33.849	21.60	4.21	9.9	0.12	0.12	0.17	0.17	0.25	0.25	0.25	0.25	0.25
2	49	27.85	33.843	21.60	4.32	10.1	0.17	0.17	0.40	0.40	0.40	0.40	0.40	0.40	0.40
2	74	27.25	***	***	3.81	***	0.81	0.81	1.14	1.14	0.93	0.93	0.93	0.93	0.93
2	99	24.22	34.932	23.55	2.50	5.6	0.81	0.81	1.11	1.11	1.11	1.11	1.11	1.11	1.11
2	123	20.36	34.943	24.64	1.99	4.2	0.50	0.50	1.18	1.18	1.18	1.18	1.18	1.18	1.18
2	147	17.42	34.680	25.19	2.05	4.0	1.53	1.53	1.44	1.44	1.74	1.74	1.74	1.74	1.74
2	196	15.10	34.882	25.88	1.53	2.9	1.28	1.28	1.47	1.47	1.47	1.47	1.47	1.47	1.47
2	243	12.45	34.695	26.28	1.87	3.3	1.47	1.47	1.76	1.76	1.76	1.76	1.76	1.76	1.76
2	291	11.17	34.715	26.54	1.82	3.2	1.54	1.54	1.90	1.90	1.90	1.90	1.90	1.90	1.90
2	385	10.05	34.800	26.81	2.10	3.6	1.60	1.60	2.01	2.01	2.01	2.01	2.01	2.01	2.01
2	478	9.08	34.792	26.96	1.82	3.0	1.76	1.76	2.01	2.01	2.01	2.01	2.01	2.01	2.01
2	673	**	34.721	***	1.65	**	2.01	2.01	2.21	2.21	2.21	2.21	2.21	2.21	2.21
2	872	**	34.659	***	1.93	**	2.07	2.07	2.41	2.41	30.1	30.1	30.1	30.1	30.1
1	1073	4.83	34.655	27.44	1.99	3.0	2.17	2.17	2.38	2.38	31.9	31.9	31.9	31.9	31.9
1	1268	4.16	34.683	27.54	2.27	3.4	2.17	2.17	2.36	2.36	33.8	33.8	33.8	33.8	33.8
1	1463	3.69	34.731	27.63	2.33	3.4	2.16	2.16	2.33	2.33	32.6	32.6	32.6	32.6	32.6
1	1949	2.56	34.749	27.75	3.01	4.3	2.02	2.02	2.25	2.25	32.6	32.6	32.6	32.6	32.6
1	2435	2.01	34.743	27.79	3.36	4.7	1.98	1.98	2.02	2.02	33.7	33.7	33.7	33.7	33.7
1	2920	1.69	34.734	27.80	3.58	5.0	1.97	1.97	2.09	2.09	31.7	31.7	31.7	31.7	31.7
1	3407	1.38	34.724	27.82	3.93	5.4	1.97	1.97	2.59	2.59	29.7	29.7	29.7	29.7	29.7
1	3899	1.29	34.720	27.82	4.15	5.7	1.85	1.85	1.96	1.96	31.6	31.6	31.6	31.6	31.6
1	4392	1.19	34.721	27.83	4.21	5.8	1.87	1.87	2.15	2.15	30.4	30.4	30.4	30.4	30.4
1	4890	1.18	34.718	27.83	4.10	5.6	1.86	1.86	2.23	2.23	29.4	29.4	29.4	29.4	29.4
1	5390	1.24	34.720	27.83	4.27	5.9	1.86	1.86	1.76	1.76	31.6	31.6	31.6	31.6	31.6

29.

STATION	DATE	TIME	LATITUDE	LONGITUDE										
	24 / 7/62	2130 H	08 00 S	100 03 E										
SONIC DEPTH	AIR TEMP.	WIND DIR.	ANEM.	CLOUD HEIGHT	VIS.	TYPE AMT.	SEA SWELL	ATMOS. PRESSURE	WIRES CAST 1	WIRES CAST 2				
5303	24.4	26.1	12 02	16	6	4	7	12	2	13	1	1017.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE				
2	0	27.87	34.071	21.76	4.50	10.6	0.15	0.41	0.41	***				
2	24	27.86	34.067	21.76	4.32	10.2	0.17	0.43	0.43	***				
2	47	27.89	34.085	21.76	4.38	10.3	0.15	0.43	0.43	***				
2	69	26.86	34.750	22.59	3.93	9.1	0.30	0.58	0.96	05.6				
2	91	25.30	35.034	23.30	3.01	6.8	0.58	1.03	1.03	***	14.9			
2	113	22.57	35.029	24.10	1.99	4.3	1.03	1.11	1.39	18.7				
2	136	19.28	34.982	24.96	1.70	3.5	1.11	1.39	1.39	18.7				
2	181	15.47	34.787	25.72	1.76	3.3	1.36	1.76	1.76	18.0				
2	229	12.34	34.737	26.34	1.70	3.0	1.51	1.51	1.51	25.4				
2	278	11.40	34.798	26.56	1.65	2.9	1.48	1.48	1.48	2.03	27.5			
2	376	10.66	34.917	26.79	1.59	2.7	1.61	1.61	1.61	1.71	28.7			
1	455	10.00	34.891	26.89	1.59	2.7	1.72	1.72	1.72	2.03	29.4			
1	646	8.69	34.805	27.04	1.70	2.6	1.71	1.71	1.71	2.29	31.6			
1	838	6.05	34.705	27.33	1.70	2.6	1.97	1.97	1.97	2.55	32.9			
1	1034	5.08	34.694	27.45	1.93	2.9	2.24	2.24	2.24	2.19	33.4			
1	1229	4.52	34.715	27.53	2.05	3.1	2.13	2.13	2.13	2.19	34.9			
1	1425	3.98	34.735	27.60	2.22	3.3	2.10	2.10	2.10	2.13	34.9			
1	1917	2.48	34.746	27.75	3.07	4.4	1.83	1.83	1.83	2.13	34.9			
1	2409	2.05	34.745	27.79	3.30	4.6	1.81	1.81	1.81	2.13	32.6			

30.

STATION

TIME

LATITUDE

LONGITUDE

DM 2 / 60/62

0430 H

07 00 S

100 04 E

	SONIC DEPTH	AIR TEMP. WET	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST 1 CAST 2
5048	24.4	27.2	12	01	16	8	2	8	1014.0	*

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	27.78	34.035	21.76	4.44	104	0.13	0.36	***
1	25	27.78	34.028	21.76	4.27	100	0.11	***	***
1	49	27.84	34.116	21.80	4.38	103	0.15	0.34	***
1	74	26.09	34.873	22.93	3.58	82	0.41	***	02.6
1	98	24.49	35.140	23.62	2.90	65	0.61	0.78	08.0
1	123	19.09	34.656	24.75	2.50	51	0.99	***	15.3
1	147	18.49	35.085	25.23	2.22	45	1.19	1.29	20.0
1	197	13.97	34.680	25.97	2.10	39	1.40	1.43	22.8
1	247	12.89	34.911	26.36	1.53	28	1.61	***	25.9
1	296	11.27	34.785	26.58	1.70	30	1.64	1.78	27.4
1	396	10.15	34.861	26.84	1.99	34	1.69	1.73	29.6
2	426	10.02	34.896	26.89	2.22	38	1.77	1.83	30.3
2	605	7.96	34.769	27.12	1.70	28	2.12	2.17	33.3
2	788	6.47	34.738	27.31	1.65	26	2.23	2.35	33.3
2	977	5.19	34.684	27.42	1.93	29	2.09	2.23	32.4
2	1169	4.60	34.711	27.51	2.05	31	2.16	2.34	31.7
2	1360	4.16	34.769	27.61	2.16	32	2.30	2.23	32.6
2	1842	2.82	34.761	27.73	2.90	41	2.12	***	32.1
2	2328	1.91	34.750	27.80	3.36	47	2.13	***	30.4

31.

STATION	LATE	TIME	LATITUDE	LONGITUDE					
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS. TYPE AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2
DM 2 / 61/62	25 / 7/62	1130 H	06 00 S	100 00 E					
5057	23.9	28.3	12 02	16	8 3	7	12 2	13 1	1015.5 *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN %	SAL.	INORG. P	TOTAL P
2	0	28.34	33.977	21.54	4.43	105	0.11	0.27	***
2	24	28.33	33.972	21.54	4.08	97	0.08	***	***
2	48	28.33	34.219	21.72	4.48	106	0.11	0.35	***
2	73	26.29	34.774	22.79	3.68	85	0.39	***	02.1
2	97	**	34.597	**	3.05	**	0.69	0.86	17.5
2	121	20.45	35.105	24.74	1.95	41	0.96	***	17.7
2	145	17.72	34.877	25.26	2.18	43	1.19	1.36	19.5
2	192	14.19	34.640	25.89	2.47	46	1.26	1.29	21.2
2	239	12.68	34.765	26.29	1.89	34	1.48	***	24.9
2	285	11.36	35.003	26.62	1.66	29	1.51	1.72	25.3
2	375	10.36	34.911	26.84	1.61	28	1.59	1.70	27.1
1	430	9.75	34.871	26.91	1.84	31	1.75	1.90	28.6
1	614	7.91	34.793	27.14	2.12	34	1.83	2.14	29.3
1	800	6.65	34.769	27.31	1.89	30	2.06	2.57	30.2
1	987	5.88	34.770	27.41	1.55	24	***	***	31.6
1	1177	4.91	34.753	27.51	1.72	26	2.00	2.14	31.6
1	1370	4.29	34.774	27.60	1.55	23	2.07	2.32	31.0
1	1850	2.82	34.768	27.74	2.87	41	1.79	2.19	30.7

STATION

TIME

LONGITUDE

D^W 2 / 62/62

DATE 25 / 7/62 TIME 0190 I LATITUDE 04 53 S

SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL AMT. DIR. AMT. ATMOS. PRESSURE WIRES ANGLES CAST1 CAST2

DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. 5306 24.4 26.1 12 02 16 5 4 8 12 2 13 1 1012.8 * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOCTAL P	NITRATE
2	0	28.74	34.063	21.47	4.34	104	0.10	1.65	***
2	22	28.71	34.045	21.47	4.17	99	0.10	***	***
2	43	23.73	34.047	21.46	4.45	106	0.10	1.73	***
2	64	27.29	34.401	21.77	4.23	100	0.18	***	00.3
2	86	26.52	34.781	22.79	3.44	79	0.41	1.60	03.3
2	107	22.51	35.035	24.12	2.31	50	0.88	***	13.2
2	128	19.44	34.761	24.64	2.25	46	1.05	1.45	15.8
2	171	14.54	34.831	25.96	1.74	33	1.38	2.07	20.6
2	215	11.12	34.556	26.43	2.25	39	1.50	***	23.9
2	259	10.73	34.672	26.59	1.97	34	1.61	2.68	25.3
2	348	10.39	34.721	26.84	1.57	27	1.65	2.66	26.4
1	448	9.26	34.672	27.00	1.52	25	1.81	2.25	27.7
1	612	9.63	34.896	27.12	1.29	21	1.99	4.17	29.3
1	777	7.15	34.803	27.26	1.57	25	1.80	***	29.5
1	959	6.28	34.808	27.39	1.46	23	1.84	***	30.1
1	1145	5.49	34.805	27.49	1.57	24	1.92	6.48	30.7
1	1334	4.51	34.781	27.58	1.97	29	1.90	2.70	30.1
1	1812	3.16	34.788	27.72	2.53	37	1.82	2.62	29.7
1	2278	2.20	34.756	27.78	3.15	44	1.76	2.30	29.3

33.

STATION	DATE	TIME	LATITUDE	LONGITUDE						
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	DIR. AMT.	SWELL DIR.	ATMOS. PRESSURE	WIRES CAST1 CAST2
DM 2 / 63/62	26 / 7/62	0110 H	04 00 S	100 00 E						
4389	28.3	28.9	11 02	16	8	2	7	13	1	1012.5 *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN %	SAT.	INORG. P	TOTAL P	NITRATE
2	0	29.14	34.065	21.34	4.31	103	0.13	0.23	***	***
2	25	29.16	34.061	21.33	4.37	105	0.14	0.22	***	***
2	50	29.20	34.080	21.33	4.37	105	0.12	0.35	***	***
2	75	**	34.122	***	4.37	**	0.13	***	***	***
2	100	26.53	34.611	22.59	3.51	81	0.44	0.71	03.2	03.2
2	125	15.79	34.970	25.79	1.66	32	1.40	1.40	22.2	22.2
2	150	13.63	34.764	26.26	1.49	27	1.54	1.54	24.5	24.5
2	200	12.32	35.032	26.57	1.61	29	1.65	1.60	25.4	25.4
2	250	11.72	35.023	26.69	1.70	29	1.65	1.65	27.2	27.2
2	300	10.97	34.984	26.79	1.78	31	1.35	1.74	26.6	26.6
2	400	9.99	34.924	26.91	1.55	26	1.54	1.85	28.4	28.4
2	499	9.27	34.908	27.02	1.38	23	1.89	2.13	28.4	28.4
2	697	8.37	34.924	27.18	1.20	20	1.92	2.22	28.4	28.4
2	896	7.25	34.893	27.32	1.20	19	2.14	2.36	30.7	30.7
1	1089	5.98	34.829	27.44	1.43	22	2.25	2.49	31.1	31.1
1	1283	5.30	34.862	27.55	1.55	24	2.31	2.37	31.4	31.4
1	1475	4.42	34.805	27.61	2.01	30	1.70	2.49	31.0	31.0
1	1956	2.66	34.769	27.75	2.81	40	1.65	2.09	29.5	29.5
1	2443	2.04	34.753	27.79	3.28	46	1.54	2.14	29.7	29.7
1	2932	1.76	34.744	27.81	3.45	48	1.56	2.14	29.7	29.7
1	3423	1.45	34.733	27.82	3.74	52	1.57	2.17	29.8	29.8
1	3915	1.14	34.721	27.83	4.14	57	1.65	2.08	29.8	29.8
1	4407	1.17	34.720	27.83	4.25	58	1.76	2.12	30.1	30.1

STATION	DATE	TIME	LATITUDE	LONGITUDE								
SONIC DEPTH	AIR TEMP. WET	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS.	SEA DIR.	SWELL AMT.	DIR.	AMT.	ATMCS. PRESSURE	WIRES CAST1	WIRES CAST2
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN %	SAT.	INORG.	P	TOTAL P	NITRATE	
DM 2 / 65/62	6 / 8/62	0050 H	09 45 S	94 58 E								
5029	27.2	27.2	08 01	16	8	2	8	08	1	1016.5	*	
											*	
2	0	27.68	34.210	21.93	4.44	104	0.14	0.30			***	
2	25	27.63	34.205	21.94	4.38	103	0.14	0.26			***	
2	50	27.63	34.207	21.94	4.44	104	0.14	0.26			***	
2	74	26.77	34.603	22.51	3.93	91	0.33	0.6			***	
2	99	23.65	34.857	23.66	2.62	58	0.78	0.86			0.8	
2	124	21.87	34.984	24.26	2.16	46	0.95	1.33			0.0	
2	149	18.40	34.758	25.01	1.93	39	1.28	1.28			13.3	
2	198	15.18	34.858	25.84	1.87	35	1.53	1.41			17.4	
2	248	12.69	34.700	26.24	1.93	35	1.67	1.67			23.5	
2	297	11.50	34.742	26.50	1.82	32	1.75	1.75			24.8	
2	397	10.00	34.800	26.82	2.27	39	1.73	1.73			24.8	
2	503	8.67	34.730	26.98	2.16	36	2.06	2.06			25.5	
1	678	7.16	34.704	27.18	1.76	28	2.24	2.24			26.9	
1	872	5.74	34.642	27.32	1.99	31	2.34	2.34			28.6	
1	1067	4.89	34.660	27.44	2.05	31	2.18	2.18			29.8	
1	1262	4.33	34.670	27.51	2.22	33	2.36	2.36			29.8	
1	1457	3.74	34.717	27.61	2.39	35	2.35	2.35			30.9	
1	1944	2.51	34.741	27.74	3.13	44	2.27	2.27			30.7	
1	2436	1.90	34.737	27.79	3.53	49	2.14	2.14			30.5	
											30.1	

36.

STATION

DM 2 / 66/62

LONGITUDE

95 00 E

LATITUDE

08 30 S

TIME

0845 H

SONIC DEPTH AIR TEMP. WIND DIR. SP. ANEM. CLOUD HEIGHT TYPE AMT. VIS. SWELL DIR. AMT. ATMOS. PRESSURE CAST# WIRE ANGLES

5212 24.4 26.7 12 01 16 8 2 8 12 1 13 1 1014.5 * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	27.73	34.291	21.97	4.27	100	0.18	0.34	***
2	23	27.70	34.290	21.98	4.21	99	0.21	***	***
2	46	27.72	34.290	21.98	4.38	103	0.22	0.29	***
2	68	27.42	34.415	22.16	4.27	100	0.29	***	***
2	91	22.63	34.766	23.88	3.41	74	0.72	0.85	09.0
2	114	20.19	35.009	24.74	1.87	39	0.95	***	19.0
2	137	17.57	34.901	25.32	1.65	33	1.27	1.39	19.3
2	184	14.44	34.725	25.90	1.93	36	1.40	1.54	24.0
2	231	12.23	34.646	26.29	2.10	37	1.57	***	26.2
2	279	11.51	34.773	26.52	1.82	32	1.38	1.59	26.6
2	373	10.59	34.889	26.78	2.27	39	1.54	***	26.0
2	475	9.40	34.815	26.93	2.27	38	1.54	1.74	28.8
1	642	7.82	34.764	27.14	1.76	28	1.70	2.21	30.6
1	833	6.38	34.724	27.31	1.70	27	1.93	2.28	32.0
1	1028	5.26	34.628	27.43	1.87	28	1.78	2.25	30.9
1	1222	4.37	34.670	27.51	2.16	32	1.78	2.29	32.4
1	1417	3.85	34.718	27.60	2.33	34	1.79	2.30	33.3
1	1906	2.59	34.747	27.74	2.96	42	1.65	2.17	32.4
1	2394	2.03	34.744	27.79	3.41	48	1.70	2.15	29.2

37.

STATION	DATE	TIME	LATITUDE	LONGITUDE					
SONIC DEPTH	AIR TEMP. WET	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST 1 CAST 2
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
DM 2 / 67/62	6/ 8/62	1645 H	07 15 S	95 00 E					
4938	26.1	27.2	10 01	16 2	2 2	7	11 1	11 1	1011.2 *
2	0	28.01	34.147	21.77	4.38	103	0.14	0.44	***
2	24	27.93	34.142	21.79	4.32	102	0.13	***	***
2	47	27.90	34.146	21.81	4.44	105	0.16	0.43	***
2	70	26.97	34.442	22.33	4.27	99	0.24	***	***
2	92	23.75	34.974	23.72	3.24	72	0.60	0.89	04.4
2	115	21.30	34.982	24.42	2.44	52	0.89	***	13.4
2	127	19.18	35.027	25.02	1.70	35	1.25	***	20.1
2	182	14.81	34.796	25.88	1.76	33	1.47	1.57	25.0
2	227	12.91	34.898	26.35	1.59	29	1.61	***	26.2
2	272	11.88	34.887	26.54	1.59	28	1.61	1.74	27.0
2	361	10.58	34.879	26.78	1.76	30	1.76	***	28.5
2	449	9.73	34.867	26.91	1.82	31	1.88	2.06	29.7
2	520	8.35	34.821	27.10	1.53	25	2.01	2.33	32.5
2	790	6.87	34.774	27.28	1.70	27	2.24	2.50	33.4
1	1080	5.22	34.709	27.44	1.93	29	2.10	2.59	33.4
1	1273	4.39	34.736	27.56	2.10	31	2.27	2.51	32.6
1	1465	3.88	34.748	27.62	2.33	34	2.27	2.39	32.9
1	1957	2.55	34.754	27.75	3.07	44	2.11	2.39	32.0
1	2450	2.00	34.746	27.79	3.41	48	2.03	2.19	31.5
1	2944	1.70	34.737	27.81	3.64	51	1.99	2.27	32.6
1	3447	1.39	34.727	27.82	3.98	55	1.96	2.27	30.6
1	3932	1.16	34.721	27.83	4.27	58	1.88	2.19	31.2
1	4428	1.17	34.717	27.83	4.27	58	1.96	2.14	32.0

STATION	DATE	TIME	LATITUDE	LONGITUDE							
DM 2 / 68/62	7 / 8/62	0140 H	06 00 S	95 00 E							
CAST	DEPTH	TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA SWELL	DIR. AMT.	DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST 1 CAST 2
4938	25.6	27.8	12 01	16	8	2	8	12	1	1014.0	*
	2	28.07	34.193	21.79	4.32	102	0.18	0.35	0.21	***	***
	2	28.04	34.190	21.80	4.21	99	0.21	***	0.22	0.82	0.0.2
	2	28.06	34.190	21.79	4.38	103	0.22	0.82	0.23	***	0.0.1
	2	28.01	34.196	21.81	4.38	103	0.23	***	0.23	***	39.
	2	21.65	34.912	24.27	2.05	44	0.86	1.68	1.68	14.0	
	2	18.78	35.026	25.12	1.59	32	1.10	***	1.10	18.6	
	2	16.20	34.921	25.66	1.53	30	1.46	2.69	2.69	23.4	
	2	13.14	34.940	26.34	1.48	27	1.58	1.66	1.66	26.4	
	2	12.10	34.975	26.57	1.65	29	1.40	***	1.40	27.0	
	2	29.2	11.13	34.938	26.72	1.59	28	1.57	2.65	27.9	
	2	39.0	10.32	34.935	26.87	1.53	26	1.65	2.44	28.2	
	2	48.9	9.10	34.840	27.00	1.53	25	1.86	2.17	30.9	
	1	68.0	7.75	34.840	27.21	1.36	22	1.87	2.79	33.0	
	1	87.4	6.31	34.784	27.36	1.59	25	2.00	3.18	34.2	
	1	106.8	5.44	34.767	27.46	1.70	26	1.86	2.59	34.2	
	1	126.1	4.85	34.787	27.55	1.93	29	1.86	2.71	33.3	
	1	145.5	4.13	34.794	27.63	2.22	33	1.94	2.57	32.7	
	1	194.0	2.76	34.765	27.74	2.90	41	1.67	2.70	33.3	
	1	242.4	2.07	34.749	27.79	3.36	47	1.69	2.03	33.3	

STATION	DATE	TIME	LATITUDE	LONGITUDE								
DEPTH	SONIC WET	AIR TEMP. DRY	WIND DIR.	ANEM. SP.	CLOUD TYPE	VIS.	SEA DIR.	SWELL AMT.	DIR. AMT.	ATMOS. PRESSURE	WIRES CAST 1	WIRES CAST 2
DM 2 / 69/62	7 / 8 / 62	0845 H	04 45 S							1013.0	*	*
4773	27.2	27.8	10	01	16	8	5	7	10	1	12	1
CAST	DEPTH	TEMP.	SALINITY	SIGMAG-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE			
2	0	28.52	34.399	21.79	4.36	104	0.23	0.27	***			
2	25	28.49	34.403	21.81	4.41	105	0.20	**	***			
2	50	28.50	34.403	21.80	4.41	105	0.23	0.29	***			
2	75	26.63	34.803	22.71	4.30	100	0.35	***	***	00.6		
2	100	26.40	35.152	23.05	2.73	63	0.77	0.89	07.9			
2	125	19.42	34.943	24.89	1.86	38	1.28	***	***	27.6		
2	150	16.92	35.037	25.58	1.86	36	1.36	1.69	22.2			
2	200	12.67	34.807	26.33	1.74	31	1.61	1.74	24.0			
2	250	11.78	34.919	26.59	1.56	28	1.69	**	**	25.8		
2	300	11.08	34.907	26.71	1.62	28	1.56	1.80	27.0			
2	400	9.90	34.888	26.90	1.68	28	1.76	2.01	28.8			
2	500	9.16	34.878	27.02	1.45	24	1.90	**	**	30.6		
1	696	7.73	34.859	27.22	1.39	22	2.15	2.33	31.8			
1	894	6.52	34.832	27.37	1.51	24	2.28	2.43	32.1			
1	1107	5.53	34.795	27.47	1.74	27	2.19	2.28	31.8			
1	1292	4.91	34.796	27.55	1.91	29	2.26	6.62	30.6			
1	1491	4.10	34.788	27.63	2.26	33	2.24	3.25	33.6			
1	1988	2.66	34.765	27.75	3.02	43	2.07	2.37	30.9			
1	2485	2.03	34.749	27.79	3.43	48	2.04	2.12	31.8			

40.

STATION

DATE

TIME

LONGITUDE

DM 2 / 71/62

7 / 8/62

1730 H

95 07 E

 SONIC AIR TEMP. WIND CLOUD SWELL ATMOS. WIRES ANGLES
 DEPTH DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. PRESSURE CAST 1 CAST 2

4755 27.8 28.9 10 01 16 8 2 7 12 1 12 1 1010.2 * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN

 2 0 29.07 34.358 21.58 4.32 104 0.11 0.43 ***
 2 25 29.00 34.352 21.60 4.15 100 0.11 *** 0.04
 2 49 29.02 34.353 21.59 4.32 104 0.14 0.34 0.04
 2 74 28.94 34.356 21.62 4.32 104 0.16 *** 0.02
 2 98 24.10 35.027 23.65 2.79 62 0.59 0.77 0H.2
 2 123 20.51 35.130 24.74 1.87 39 0.99 *** 17.6
 2 147 15.87 34.928 25.74 1.65 32 1.16 *** 25.8
 2 195 12.10 34.732 26.54 1.53 27 1.27 1.72 26.1
 2 244 11.70 35.031 26.69 1.82 32 1.32 *** 26.4
 2 293 11.04 35.000 26.79 1.87 33 1.38 1.29 25.5
 2 390 9.91 34.912 26.92 1.82 31 1.42 *** 29.1
 2 484 9.14 34.897 27.04 1.53 26 1.61 2.03 29.4
 2 674 8.28 34.929 27.20 1.31 21 2.06 2.15 31.2
 2 866 7.14 34.906 27.35 1.25 20 2.29 2.32 34.5
 1 1081 5.84 34.835 27.46 1.48 23 2.22 2.35 34.5
 1 1276 5.02 34.829 27.56 1.76 27 2.22 2.27 34.8
 1 1470 4.33 34.826 27.63 2.10 31 *** 2.24 32.4
 1 1958 2.77 34.777 27.75 3.41 49 2.02 2.32 32.7
 1 2448 2.08 34.751 27.79 3.30 46 2.04 2.03 31.2
 1 2937 1.73 34.731 27.80 3.64 51 1.92 2.03 33.0
 1 3406 1.43 34.727 27.82 3.87 53 1.89 2.00 30.6
 1 3915 1.17 34.721 27.83 4.27 58 1.78 1.98 31.2
 1 4407 1.17 34.719 27.83 4.38 60 1.61 1.93 30.9

STATION	DATE		TIME		LATITUDE		LONGITUDE		
	WET	DRY	DIR.	SP.	8 / 8 / 62	H	02	15 S	95 00 E
SONIC DEPTH	AIR TEMP.	WIND DIR.	ANEM.	CLOUD HEIGHT	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST 1 CAST 2
4389	26.1	28.3	13 01	16	8	2	8	13 1	1012.0 *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	29.05	34.271	21.52	4.38	105	0.13	0.34	***
2	25	29.03	34.268	21.53	4.32	104	0.14	**	00.7
2	50	29.06	34.276	21.52	4.32	104	0.14	0.59	***
2	75	28.68	34.660	21.94	4.27	102	0.20	***	
2	100	27.69	34.632	22.24	3.98	94	0.24	0.51	01.8
2	125	19.08	35.189	25.16	1.82	37	1.10	***	19.5
2	150	13.77	35.029	26.28	1.59	29	1.46	1.78	23.4
2	200	12.27	35.061	26.60	2.05	37	1.49	1.79	23.1
2	250	11.56	35.044	26.73	2.10	37	**	**	22.8
2	300	11.09	35.016	26.79	2.16	38	1.57	1.79	25.5
2	400	10.15	34.958	26.91	1.87	32	1.40	1.60	26.1
2	500	9.29	34.962	27.06	1.93	32	1.83	2.01	27.9
1	697	8.47	34.966	27.20	1.36	22	2.04	2.08	30.3
1	896	7.84	34.974	27.30	1.13	18	2.18	2.47	32.1
1	1094	6.24	34.908	27.47	1.36	21	2.21	2.37	33.6
1	1292	5.15	34.867	27.57	1.76	27	2.32	2.49	33.6
1	1490	4.41	34.840	27.64	2.05	31	2.25	2.43	31.5
1	1984	2.72	34.780	27.76	2.90	41	2.08	2.41	31.2
1	2477	2.02	34.751	27.79	3.36	47	2.00	2.32	32.4

STATION	DATE	TIME	LATITUDE	LONGITUDE								
CM 2 / 75/62	6 / 8/62	0940 H	01 00 S	94 59 E								
CAST	DEPTH	TEMP.	AIR TEMP. WET DEPTH	WIND DIR.	ANEM. SP.	HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRES CAST1 CAST2
4480	27.2	28.9	12	01	16	4	6	8	*	*	1014.0	*
									14	1		*
												*
							OXYGEN	SAT.	INORG.	P	TOTAL P	NITRATE
							SIGMA-T	OXYGEN				
							SALINITY					
2	0	29.21	34.159	21.38	4.23			102		0.16	0.42	***
2	24	29.14	34.156	21.41	4.23			102		0.14	***	00.8
2	49	29.13	34.154	21.41	4.17			100		0.18	0.40	***
2	73	29.11	34.199	21.45	4.17			100		0.19	***	***
2	97	28.05	34.627	22.27	3.77			89		0.31	0.48	00.7
2	121	17.88	35.126	25.42	1.63			33		1.27	***	20.0
2	146	13.36	35.074	26.40	1.52			28		1.50	1.63	24.0
2	194	12.18	35.065	26.62	1.69			30		1.52	1.70	24.9
2	243	11.78	35.050	26.69	1.57			28		1.62	***	25.8
2	291	11.29	35.032	26.77	1.80			31		1.42	1.62	27.0
2	389	10.68	35.009	26.86	1.80			31		1.62	1.81	28.2
2	486	9.94	34.983	26.97	1.46			25		1.85	1.98	31.5
1	631	8.64	34.984	27.18	1.18			19		2.07	2.39	34.2
1	818	8.27	34.984	27.24	1.07			18		2.16	2.45	32.7
1	1004	6.62	34.915	27.43	1.24			20		2.29	2.83	33.0
1	1190	5.48	34.879	27.54	1.57			24		2.27	2.52	31.8
1	1377	4.94	34.864	27.60	1.74			26		2.29	2.47	31.8
1	1842	2.95	34.791	27.75	2.65			38		2.00	2.35	30.6
1	2313	2.19	34.759	27.79	3.04			43		2.07	2.24	30.9

43.

STATION	DATE	TIME	LATITUDE	LONGITUDE						
SONIC DEPTH	AIR TEMP. WET	WIND DRY. SP.	ANEM. DIR. SP.	CLOUD HEIGHT	VIS. TYPE AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRES CAST 1	ANGLES CAST 2
DM 2 / 77/62	8/ 8/62	1630 H	00 00	95 00 E						
4389	27.8	28.9	12 01	16	8	3	8	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMAR-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
2	0	29.35	34.109	21.30	4.40	10.6	0.25	0.43	00.1	
2	25	29.10	34.108	21.38	4.34	10.4	0.21	***	00.1	
2	49	29.11	34.105	21.38	4.46	10.7	0.22	0.45	***	
2	74	29.06	34.152	21.43	4.34	10.4	0.25	***	***	
2	99	24.91	34.981	23.38	3.28	7.4	0.71	0.78	05.1	
2	124	16.67	35.123	25.70	1.52	3.0	1.44	***	18.8	
2	149	12.89	35.082	26.50	1.52	2.8	1.71	***	23.1	
2	198	12.21	35.067	26.62	1.64	2.9	1.67	1.82	23.4	
2	248	11.35	35.042	26.76	1.82	3.2	1.75	***	24.3	
2	297	11.13	35.030	26.79	1.82	3.2	1.66	***	26.7	
2	396	10.71	35.018	26.86	1.70	2.9	1.76	***	27.6	
2	495	10.14	34.995	26.94	1.58	2.7	1.89	1.95	26.4	
1	691	8.51	34.999	27.22	1.17	1.9	2.30	2.40	29.4	
1	883	7.82	34.959	27.29	1.17	1.9	2.33	***	29.7	
1	1072	5.92	34.895	27.50	1.46	2.3	2.35	2.38	31.2	
1	1262	5.33	34.873	27.56	1.70	2.6	2.35	2.39	30.3	
1	1452	4.48	34.846	27.63	1.99	3.0	2.31	***	30.6	
1	1940	2.75	34.780	27.75	2.81	4.0	2.14	2.17	28.8	
1	2428	2.17	34.754	27.78	3.23	4.5	2.13	2.18	28.2	
1	2916	1.73	34.738	27.80	3.58	5.0	2.13	2.14	27.9	
1	3405	1.50	34.729	27.81	3.81	5.3	2.00	***	27.9	
1	3893	1.17	34.719	27.83	4.28	5.9	2.01	2.00	28.5	

44.

STATION

TIME

LONGITUDE

DATE

DM 2 / 79/62

0115 H

9/ 8/62

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	ATMOS. PRESSURE			WIRE ANGLES			
										WIND DIR.	SP. HEIGHT	ANEM.	CLOUD TYPE	AMT.	DIR.	AMT.
4297	27.8	28.6	14 01	16	8	1	8	*	*	1015.0	*	*	*	*	*	*
	2	0	29.18	33.998	21.27	4.39	105	0.16	0.30	***						
	2	25	29.04	34.039	21.35	4.28	103	0.16	0.30	***	0.0.0					
	2	50	29.02	34.104	21.41	4.28	103	0.15	0.34	***						
	2	75	28.70	34.568	21.86	4.17	100	0.17	0.34	***						
	2	100	26.03	34.752	22.86	3.38	78	0.46	0.58	03.4						
	2	125	16.37	35.120	25.77	1.41	27	1.34	1.34	***	21.0					
	2	150	13.69	35.070	26.32	1.18	22	1.67	1.61	24.9						
	2	200	12.12	35.064	26.64	1.18	21	1.66	1.59	25.5						
	2	250	11.65	35.059	26.72	1.63	29	1.67	1.67	25.5						
	2	300	11.23	35.042	26.79	1.74	30	1.59	1.59	***	24.0					
	2	400	10.40	35.009	26.91	1.63	28	1.71	1.78	27.6						
	2	500	9.99	35.013	26.98	1.29	22	2.00	1.92	27.9						
	1	693	8.61	35.004	27.20	1.07	18	1.90	1.98	30.9						
	1	890	7.64	34.985	27.34	1.01	16	1.91	1.91	***	31.5					
	1	1087	5.87	34.902	27.51	1.35	21	1.92	1.84	31.5						
	1	1284	5.30	34.880	27.57	1.57	24	2.11	2.11	***	31.2					
	1	1481	4.34	34.851	27.65	1.97	29	2.21	2.20	31.2						
	1	1974	2.60	34.782	27.77	2.82	40	2.10	1.95	29.7						
	1	2466	2.08	34.760	27.79	3.21	45	1.89	1.86	29.4						

45°

STATION	DATE	TIME	LATITUDE	LONGITUDE					
SONIC DEPTH	AIR TEMP. WET	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRES CAST1 CAST2
OK 2 / 31/62	9/ 8/62	0855 H	02 30 N	94 43 E					
3292	23.3	30.6	00 01	16	1 2	8 *	*	1014.5	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	28.60	33.708	21.25	4.36	10.4	0.22	0.43	***
2	24	28.55	33.722	21.28	4.24	10.1	0.18	**	***
2	48	28.58	33.765	21.30	4.36	10.4	0.20	0.53	***
2	72	28.22	33.796	21.44	4.24	10.0	0.23	***	***
2	96	27.36	34.393	22.17	3.72	8.7	0.38	0.81	00.9
2	120	22.36	34.993	24.13	2.61	5.6	0.95	***	10.2
2	144	15.53	35.053	25.90	1.16	2.2	1.58	2.08	22.5
2	192	12.34	35.065	26.59	1.16	2.1	1.76	1.75	24.9
2	240	11.92	35.073	26.68	1.45	2.6	1.67	***	25.5
2	289	11.50	35.066	26.75	1.62	2.8	1.45	2.27	24.0
2	387	10.90	35.045	26.85	1.62	2.8	1.75	***	25.5
2	486	9.90	35.030	27.01	1.04	1.8	1.95	2.33	30.0
1	698	8.60	35.013	27.21	1.04	1.7	2.29	2.44	30.3
1	897	7.80	34.980	27.31	1.10	1.8	2.36	2.60	29.4
1	1095	5.79	34.902	27.52	1.51	2.3	2.36	2.60	29.4
1	1293	5.26	34.877	27.57	1.74	2.6	2.34	2.60	29.4
1	1491	4.28	34.847	27.66	2.15	3.2	2.35	2.33	29.7
1	1986	2.66	34.780	27.76	2.96	4.2	2.17	2.17	29.4
1	2481	2.04	34.756	27.80	3.37	4.7	2.13	2.19	30.0
1	2976	1.76	34.744	27.81	3.60	5.0	2.13	***	29.7

STATION DATE TIME LATITUDE LONGITUDE
DM 2 / 83/62 9 / 8/62 1730 H 03 45 N 94 38 E

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	ATMOS. WIRE ANGLES										
										SONIC	AIR TEMP.	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS.	TYPE AMT.	DIR. AMT.	SWELL AMT.	DIR. AMT.	CAST1
1	0	28.71	33.792	21.28	4.28	102	0.22	0.38	***	***	***	***	***	21.41	4.28	101	0.20	0.20	***	***
1	25	28.31	33.800	21.41	4.28	101	0.22	0.46	***	***	***	***	***	21.45	4.34	103	0.22	0.46	***	***
1	50	28.35	33.866	21.45	4.34	103	0.19	0.46	***	***	***	***	***	21.54	4.28	101	0.19	0.46	***	***
1	75	28.28	33.963	21.54	4.28	101	0.19	0.46	***	***	***	***	***	22.97	3.21	73	0.60	0.85	14.6	14.6
1	100	25.59	34.719	22.97	3.21	73	0.60	0.85	***	***	***	***	***	19.73	34.909	24.78	1.20	1.20	1.9.9	1.9.9
1	125	19.73	34.909	24.78	1.86	38	1.20	1.20	***	***	***	***	***	13.85	35.017	26.25	0.95	1.54	2.00	2.00
1	150	13.85	35.017	26.25	0.95	18	1.54	1.54	***	***	***	***	***	12.26	35.062	26.61	1.12	1.77	2.9.5	2.9.5
1	200	12.26	35.062	26.61	1.12	20	1.77	1.77	***	***	***	***	***	11.87	35.066	26.68	1.24	1.65	29.3	29.3
1	250	11.87	35.066	26.68	1.24	22	1.65	1.65	***	***	***	***	***	11.34	35.056	26.78	1.24	1.84	2.00	2.00
1	300	10.63	35.043	26.90	1.18	20	1.86	1.86	***	***	***	***	***	9.53	35.013	27.06	1.12	2.11	2.08	31.2
1	400	9.53	34.996	27.21	1.01	19	2.11	2.11	***	***	***	***	***	8.50	34.996	27.21	1.01	2.17	2.17	34.4
1	500	7.36	34.963	27.36	1.12	17	2.17	2.17	***	***	***	***	***	7.00	34.963	27.36	1.12	2.57	3.3.8	33.8
1	900	6.57	34.933	27.45	1.35	18	2.22	2.22	***	***	***	***	***	900	7.36	34.963	27.36	2.44	35.6	35.6
1	1000					21	2.20	2.20	***	***	***	***	***					2.40	40.2	40.2

STATION		DATE		TIME		LATITUDE		LONGITUDE	
SONIC DEPTH	AIR TEMP.	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS. TYPE AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRES ANGLES CAST1 CAST2
DM 2 / 85/62		10 / 8/62		0035 H		05 00 N		94 30 E	
2560	27.2	28.3	24	01	16	1	1	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMANT	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	28.13	33.375	21.09	4.28	10.1	0.20	0.35	***
2	22	28.13	33.345	21.13	4.28	10.1	0.20	0.38	***
2	43	28.05	33.355	21.16	4.39	10.3	0.20	0.38	***
2	65	26.80	33.654	21.94	3.60	8.3	0.48	0.29	02.9
2	86	24.06	34.475	23.25	2.42	5.4	0.82	1.00	12.3
2	107	20.54	34.888	24.55	1.91	4.0	1.13	***	16.4
2	127	16.30	34.934	25.65	1.24	2.4	1.50	1.75	23.3
2	167	12.97	34.983	26.40	0.73	1.3	1.80	2.08	27.2
2	205	12.00	35.025	26.63	0.84	1.5	1.84	***	27.2
2	243	11.62	35.048	26.72	1.07	1.9	1.76	2.03	27.4
2	322	10.90	35.051	26.85	1.18	2.0	1.80	2.08	28.3
2	412	10.53	35.041	26.91	1.12	1.9	1.83	2.05	29.4
1	648	8.84	35.011	27.17	0.95	1.6	2.17	2.58	29.4
1	843	7.76	34.975	27.31	1.12	.18	2.17	2.24	29.4
1	1038	6.43	34.919	27.45	1.41	2.2	2.14	2.22	30.2
1	1234	5.68	34.892	27.53	1.57	2.4	2.13	2.24	30.0
1	1430	5.32	34.879	27.56	1.69	2.6	2.19	2.40	31.9
1	1925	**	34.858	**	1.91	**	2.11	2.27	32.1
1	2418	4.63	34.856	27.63	2.03	3.0	2.16	2.37	29.4

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STATION

TIME

LONGITUDE

DATE

LATITUDE

E

DM 2 / 86/62

1230 H

17 / 8/62

07 41 6

105 01 E

SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRES
 DEPTH DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. PRESSURE ANGLES
 DEPTH WET 27.8 10 01 16 8 7 8 08 2 10 1 1015.7 * * *
 3383 26.1 27.8 10 01 16 8 7 8 08 2 10 1 1015.7 * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	27.79	33.237	21.16	4.51	105	0.14	0.21	***
2	23	27.73	33.232	21.18	4.45	104	0.12	***	***
2	46	28.02	33.525	21.30	4.34	102	0.14	0.25	***
2	69	26.14	34.142	22.37	4.56	104	0.15	***	***
2	91	22.31	34.528	23.79	3.04	65	0.66	0.96	08.5
2	114	19.19	34.554	24.65	2.76	56	0.92	***	13.9
2	137	16.45	34.621	25.37	2.59	50	1.36	1.48	16.3
2	183	12.79	34.645	26.18	2.19	39	1.42	1.80	21.3
2	228	10.98	34.714	26.58	1.97	34	1.57	***	24.6
2	274	10.50	34.810	26.74	1.80	31	1.60	2.01	25.7
2	367	9.72	34.828	26.88	1.86	31	1.69	2.19	24.6
2	463	8.43	34.717	27.01	1.97	32	1.84	2.48	27.4
1	697	6.95	34.712	27.22	1.69	27	2.02	2.30	30.2
1	896	5.65	34.709	27.39	1.86	29	2.02	2.27	30.5
1	1095	4.68	34.668	27.47	2.19	33	2.05	2.61	30.5
1	1293	4.18	34.685	27.54	2.31	34	2.07	2.54	31.3
1	1492	3.78	34.739	27.62	2.42	35	2.13	2.61	30.2
1	1988	2.50	34.760	27.76	3.49	49	1.94	2.46	29.7
1	2481	1.90	34.740	27.79	3.15	44	1.88	2.01	29.7

49.

STATION	DATE	TIME	LATITUDE	LONGITUDE					
DM 2 / 87/62	17/ 8/62	2130 H	09 00 S	104 58 E					
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
5669	25.6	26.7	11 01	16 6	3 7	11 2	12 1	1017.0	*
									*
2	0	26.32	34.271	22.41	4.60	10.6	0.23	0.28	***
2	22	26.33	34.271	22.40	4.43	10.2	0.20	0.20	***
2	44	25.55	34.220	22.61	4.31	9.8	0.29	0.48	00.7
2	66	22.64	34.463	23.65	2.99	6.5	0.73	***	09.2
2	89	21.45	34.512	24.02	2.87	6.1	0.76	0.94	10.2
2	111	19.59	34.502	24.51	2.81	5.8	0.91	***	13.3
2	134	17.51	34.541	25.06	2.70	5.3	1.07	***	17.3
2	179	14.44	34.546	25.76	2.58	4.8	1.24	1.36	21.3
2	225	12.38	34.641	26.26	2.18	3.9	1.45	***	24.4
2	271	11.41	34.691	26.48	1.95	3.4	1.60	1.72	25.1
2	363	10.08	34.759	26.77	1.95	3.3	1.65	***	27.5
2	455	9.02	34.755	26.94	2.12	3.5	1.75	1.87	28.5
2	633	7.07	34.688	27.19	1.78	2.8	2.03	2.18	31.9
2	833	5.75	34.658	27.34	1.95	3.0	2.07	2.27	32.9
2	1029	4.71	34.651	27.45	2.12	3.2	2.14	2.30	34.0
1	1252	4.11	34.682	27.54	2.24	3.3	2.14	2.25	34.0
1	1443	3.61	34.719	27.62	2.47	3.6	2.11	2.23	36.3
1	1917	2.56	34.749	27.75	2.99	4.2	2.03	2.17	31.9
1	2388	2.04	34.745	27.79	3.39	4.7	2.00	2.14	32.1
1	2861	1.72	34.737	27.80	3.62	5.0	1.97	2.08	31.9
1	3337	1.45	34.727	27.82	3.91	5.4	1.85	2.06	31.2
1	3815	1.19	34.718	27.83	4.25	5.8	1.86	2.03	31.1
1	4297	1.15	34.717	27.83	4.31	5.9	1.88	2.03	31.2
1	4780	1.20	34.716	27.83	4.31	5.9	1.91	1.98	29.1
1	5267	1.23	34.715	27.82	4.43	6.1	1.90	1.96	

50.

STATION

TIME

LONGITUDE

DATE

DM 2 / 88/62

0700 H

18/ 8/62

LATITUDE

10 15 S

CAST	DEPTH	TEMP.	SALINITY	SIGMATT	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	WIRE ANGLES	
										CAST 1	CAST 2
2	0	26.28	34.264	22.41	4.56	105	0.12	0.37	***	***	***
2	23	26.29	34.264	22.41	4.56	105	0.11	***	***	***	***
2	46	26.28	34.279	22.42	4.62	106	0.11	0.34	***	***	***
2	69	25.59	34.280	22.64	4.11	93	0.27	***	01.6	01.6	01.6
2	92	23.52	34.444	23.38	3.21	71	0.60	0.73	06.4	06.4	06.4
2	115	20.99	34.554	24.18	2.82	59	0.87	***	10.5	10.5	10.5
2	138	18.77	34.547	24.75	2.70	55	0.89	1.15	93.1	93.1	93.1
2	184	14.89	34.655	25.75	2.36	44	1.08	1.37	21.4	21.4	21.4
2	231	13.28	34.661	26.10	2.19	38	1.32	***	22.7	22.7	22.7
2	278	11.54	34.654	26.43	2.08	36	1.66	1.69	25.6	25.6	25.6
2	372	9.87	34.709	26.77	2.19	37	1.75	1.79	27.5	27.5	27.5
2	470	8.74	34.716	26.96	2.08	34	2.00	2.06	***	***	***
1	658	7.36	34.708	27.16	1.74	28	2.13	2.25	31.5	31.5	31.5
1	852	5.83	34.640	27.31	1.97	30	2.30	2.33	31.2	31.2	31.2
1	1043	4.82	34.627	27.42	2.14	32	2.26	2.33	30.9	30.9	30.9
1	1235	4.31	34.650	27.50	2.25	33	2.26	2.21	31.2	31.2	31.2
1	1427	3.78	34.700	27.59	2.36	35	2.27	2.23	30.9	30.9	30.9
1	1906	2.66	34.743	27.73	3.04	43	2.23	2.21	32.5	32.5	32.5
1	2386	2.04	34.741	27.78	3.44	48	2.12	2.18	31.8	31.8	31.8

51.

STATION	DATE	TIME	LATITUDE	LONGITUDE					
SONIC DEPTH	AIR TEMP. WET	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST 1 CAST 2
DM 2 / 89/62	18 / 8/62	1610 H	11 39 5	105 00 E					
2286	24.7	26.1	11 02	16	8	5	8	11	2 12 1 1016.3 *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	25.84	34.145	22.46	4.56	10.4	0.23	0.41	***
2	21	25.82	34.166	22.48	4.56	10.4	0.20	0.42	***
2	43	25.62	34.140	22.52	4.45	10.1	0.24	0.42	***
2	63	25.52	34.323	22.69	4.34	9.9	0.37	0.42	***
2	85	24.33	34.385	23.10	3.27	7.3	0.64	0.77	00.4
2	105	22.88	34.514	23.62	3.04	6.6	0.75	0.77	05.8
2	126	21.19	34.491	24.08	2.82	6.0	0.91	0.96	08.0
2	168	17.46	34.589	25.11	2.65	5.2	1.13	1.28	10.9
2	210	15.42	34.563	25.56	2.59	4.9	1.27	1.38	16.0
2	252	12.95	34.548	26.07	2.42	4.4	1.44	1.51	17.8
2	339	10.41	34.656	26.63	2.36	4.0	1.65	1.71	21.3
2	428	9.33	34.703	26.85	2.19	3.7	1.86	1.89	24.5
1	600	7.41	34.657	27.11	2.03	3.2	2.02	2.11	27.0
1	775	6.01	34.623	27.27	2.03	3.1	2.12	2.28	29.9
1	950	5.17	34.615	27.37	2.08	3.2	2.17	2.26	29.5
1	1125	4.47	34.625	27.46	2.14	3.2	2.15	2.22	31.0
1	1300	3.87	34.667	27.56	2.36	3.5	2.15	2.37	31.0
1	1735	3.02	34.724	27.68	2.76	4.0	2.20	2.26	31.9

STATION DATE TIME LATITUDE LONGITUDE
DM 2 / 90/62 19/ 8/62 0010 H 12 45 6 105 03 E

SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR.	ANEM. SP.	HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
5121	***	10 02	16	8	3	8	10	1	1019.0	*
										*
2	0	26.18	34.412	22.56	4.38	101	0.15	0.45	***	
2	25	26.17	34.416	22.56	4.32	99	0.15	0.35	***	
2	49	26.19	***	**	4.50	**	0.19	0.35	***	
2	74	26.18	34.420	22.56	4.38	101	0.20	0.47	***	
2	99	26.19	34.423	22.56	4.44	102	0.19	0.47	***	
2	124	26.18	34.431	22.57	4.38	101	0.22	0.22	***	
2	148	21.70	34.716	24.11	2.56	55	0.82	1.06	12.5	
2	198	17.82	34.742	25.14	2.16	43	1.10	1.36	18.6	
2	248	13.81	34.684	26.00	2.16	40	1.38	1.38	24.4	
2	297	12.28	34.663	26.29	2.16	38	1.41	1.62	24.0	
2	397	10.12	34.747	26.75	2.62	45	1.48	1.81	25.0	
2	497	8.73	34.679	26.93	2.16	36	1.51	2.06	28.4	
2	668	7.18	34.649	27.14	1.93	31	2.00	2.42	28.8	
1	858	6.05	34.622	27.27	2.05	32	2.00	2.30	32.2	
1	1046	5.13	34.612	27.37	2.16	33	2.09	2.32	31.3	
1	1233	4.43	34.637	27.47	2.22	33	2.14	2.37	31.6	
1	1420	3.64	34.673	27.58	2.50	36	2.07	2.30	32.4	
1	1886	2.68	34.731	27.72	3.01	43	2.08	2.25	30.9	
1	2361	2.06	34.739	27.78	48	48	2.10	2.10	29.9	

53.

STATION	DATE	TIME	LATITUDE	LONGITUDE					
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2
DM 2 / 91/62	19 / 8/62	0815 H	14 00 S	105 09 E					
5760	23.9	25.6	10 01	16	8	14	2	1019.0	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL N	NITRATE
2	0	26.01	34.398	22.60	4.55	104	0.26	0.29	***
2	24	25.98	34.402	22.61	4.44	102	0.23	**	***
2	49	25.99	34.396	22.60	4.50	103	0.24	0.29	***
2	73	25.98	34.400	22.61	4.50	103	0.25	**	***
2	97	26.02	34.401	22.60	4.44	102	0.25	0.45	***
2	121	25.89	34.433	22.66	4.32	99	0.31	**	00.4
2	146	22.13	34.489	23.81	2.50	64	0.93	1.04	12.9
2	194	17.59	34.834	25.26	2.50	50	1.12	1.42	14.8
2	243	14.12	34.672	25.93	2.16	40	1.38	**	22.4
2	292	12.32	34.753	26.35	2.44	44	1.38	1.70	24.5
2	387	10.25	34.789	26.76	2.84	49	1.53	1.74	25.2
2	481	9.03	34.716	26.91	3.13	52	1.65	1.74	24.0
2	672	7.10	34.653	27.15	2.05	33	1.99	2.66	30.3
2	868	5.89	34.636	27.30	1.99	31	2.14	2.55	31.5
1	1071	4.93	34.626	27.41	2.16	33	2.17	2.46	32.1
1	1262	4.31	34.639	27.49	2.27	34	2.22	2.55	32.6
1	1452	3.78	34.667	27.57	2.50	37	2.22	2.62	36.3
1	1930	2.74	34.726	27.71	3.01	43	2.13	2.55	32.1
1	2408	2.11	34.739	27.78	3.41	48	2.01	1.95	32.0
1	2884	1.67	34.732	27.80	3.81	53	2.01	2.29	32.1
1	3363	1.42	34.728	27.82	3.98	55	1.88	2.10	31.2
1	3843	1.25	34.721	27.83	4.21	58	1.93	2.09	32.0
1	4330	1.20	34.717	27.83	4.10	66	1.93	2.29	30.5
1	4816	1.20	34.715	27.82	4.38	60	1.90	2.17	31.7
1	5313	1.19	34.715	27.83	4.50	62	1.85	2.22	31.0

STATION	DATE	TIME		LATITUDE		LONGITUDE	
		19/ 8/62	1800 H	15	15 S	105	05 E
SONIC DEPTH	AIR TEMP.	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS. TYPE AMT.	SEA SWELL	ATMOS. WIRE ANGLES
6035	23.9	26.7	11	02	16	8	CAST1 CAST2
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P TOTAL P NITRATE
2	0	26.17	34.354	22.52	4.61	106	0.21 ***
2	24	26.12	34.351	22.53	4.55	104	0.21 ***
2	47	26.11	34.347	22.53	4.61	106	0.21 0.36 ***
2	72	26.07	34.351	22.54	4.61	106	0.23 ***
2	96	26.08	34.364	22.55	4.50	103	0.23 0.36 0.4
2	120	22.69	34.899	23.97	3.93	85	0.50 ***
2	144	20.65	35.127	24.71	3.41	72	0.66 0.73
2	193	18.20	35.193	25.39	3.30	66	0.96 0.95
2	242	16.20	35.464	26.08	3.98	77	0.75 ***
2	291	13.85	35.226	26.41	3.75	69	0.94 0.99
2	387	10.64	34.923	26.80	4.15	72	1.11 1.16
2	489	8.69	34.705	26.96	4.04	67	1.38 1.44
1	685	6.78	34.653	27.20	2.27	36	2.06 2.18
1	880	5.78	34.655	27.33	1.99	31	2.22 2.31
1	1076	4.91	34.639	27.42	2.16	33	2.25 2.37
1	1272	4.25	34.643	27.50	2.27	34	2.25 2.26
1	1466	3.69	34.672	27.58	2.50	37	2.18 2.27
1	1957	2.60	34.730	27.73	3.13	44	2.16 2.21
1	2451	1.99	34.740	27.79	3.53	49	2.07 2.14

55.

STATION	DATE	TIME	LATITUDE	LONGITUDE							
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS. TYPE AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2		
DM 2 / 93/62	20/ 8/62	0140 H	16 30 S	105 06 E							
5669	22.2	23.9	14 01	16	8	1	*	*	56.		
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	OXYGEN %	SAT.	INORG. P	TOTAL P	NITRATE
2	0	24.86	34.538	23.06	4.55	102	0.12	0.21	***	***	***
2	23	24.83	34.546	23.07	4.55	102	0.12	0.21	***	***	***
2	47	24.75	34.575	23.12	4.61	104	0.13	0.21	***	***	***
2	70	24.59	34.603	23.19	4.50	101	0.13	0.20	***	***	***
2	94	24.10	34.843	23.51	4.04	90	0.15	0.20	0.16	0.20	0.16
2	118	20.24	34.832	24.59	2.67	56	0.83	***	0.66	0.66	0.66
2	141	19.30	34.870	24.86	2.79	57	0.87	0.89	0.69	0.69	0.69
2	189	17.74	35.119	25.45	3.13	62	0.83	0.94	1.13	1.13	1.13
2	237	15.93	35.278	26.00	3.53	68	0.82	***	1.09	1.09	1.09
2	286	14.38	35.333	26.38	3.98	74	0.75	0.89	1.39	1.39	1.39
2	383	11.04	34.989	26.78	4.67	81	0.83	1.28	17.6	17.6	17.6
2	482	9.41	34.775	26.90	4.78	80	1.06	1.17	2.43	2.43	2.43
1	695	6.79	34.614	27.16	2.73	43	1.87	1.98	27.6	27.6	27.6
1	894	5.67	34.664	27.35	2.05	31	2.20	2.20	2.91	2.91	2.91
1	1092	4.90	34.656	27.44	2.10	32	2.19	2.32	29.5	29.5	29.5
1	1289	4.32	34.659	27.50	2.22	33	2.11	2.23	***	***	***
1	1486	3.64	34.681	27.59	2.62	38	2.09	2.18	2.18	2.18	2.18
1	1978	2.51	34.728	27.73	3.13	44	1.99	2.12	2.91	2.91	2.91
1	2470	1.99	34.734	27.78	3.41	48	1.96	2.13	29.8	29.8	29.8

STATION DM 2 / 94/62 DATE 20 / 8/62 TIME 0935 H LATITUDE 17 45 S
LONGITUDE 105 03 E

CAST	DEPTH	TEMP.	WIND DIR.	SP.	ANEM.	HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA SWELL	DIR. AMT.	DIR. AMT.	ATMOS. PRESSURE	CAST 1	CAST 2	WIRE ANGLES	
OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE													
2	0	24.09	34.734	23.43	4.37	97	0.15	0.36	***								
2	24	23.84	34.802	23.56	4.77	106	0.15	***	***								
2	49	23.53	34.906	23.73	4.77	105	0.14	0.32	***								
2	73	23.45	34.907	23.75	4.71	104	0.13	***	***								
2	97	21.80	35.115	24.38	3.85	83	0.44	0.63	04.1								
2	122	20.51	35.220	24.81	3.68	77	0.52	***	05.4								
2	146	19.78	35.267	25.04	3.56	74	0.57	0.78	09.0								
2	195	18.18	35.481	25.61	3.91	79	0.55	0.74	06.4								
2	244	17.50	35.736	25.98	4.43	88	0.38	***	02.9								
2	294	14.18	35.291	26.39	4.02	75	0.79	0.90	11.3								
2	393	11.01	34.988	26.78	5.00	87	0.85	0.97	21.5								
2	492	9.07	34.732	26.92	5.00	83	1.12	1.20	25.3								
1	665	6.78	34.571	27.13	3.28	52	1.78	2.14	14.4								
1	856	5.72	34.646	27.33	2.18	34	2.21	2.35	30.7								
1	1050	5.00	34.658	27.43	2.18	33	2.21	2.35	32.7								
1	1240	4.44	34.661	27.49	2.35	35	2.22	2.38	32.5								
1	1431	3.83	34.673	27.57	2.53	37	2.17	2.31	31.9								
1	1918	2.66	34.718	27.71	3.22	46	2.05	2.21	32.1								
1	2405	2.08	34.733	27.77	3.39	48	1.97	2.10	30.7								

STATION

DM 2 / 95/62

DATE

20 / 8/62

TIME

1800 H

LATITUDE

19 00 S

LONGITUDE

105 02 E

 SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. PRESSURE CAST1 CAST2

5212 24.4 26.7 13 01 16 6 4 7 13 1 14 1 1019.0 * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE

2	0	23.95	34.905	23.61	4.60	102	0.10	0.49	***
2	25	23.63	34.911	23.71	4.54	100	0.11	***	***
2	49	23.62	34.912	23.71	4.60	102	0.11	0.38	***
2	74	23.58	34.914	23.72	4.66	103	0.15	***	***
2	99	23.51	34.913	23.74	4.37	96	0.16	0.44	00.3
2	124	20.32	34.895	24.62	2.99	62	0.71	***	10.4
2	148	19.22	34.985	24.97	2.99	61	0.71	***	11.4
2	198	17.19	35.170	25.62	3.16	62	0.73	0.96	11.4
2	248	16.94	35.724	26.09	4.48	88	0.36	***	03.2
2	297	13.82	35.423	26.57	4.43	82	0.47	0.72	04.3
2	396	11.37	35.053	26.77	5.12	90	0.68	***	09.6
2	493	9.23	34.750	26.91	4.94	82	0.97	1.24	16.9
2	685	6.54	34.571	27.17	3.28	51	1.56	1.91	27.1
2	865	5.74	34.646	27.33	2.18	34	1.99	2.16	31.2
1	1076	5.04	34.658	27.42	2.12	32	2.00	2.34	31.3
1	1271	4.47	34.661	27.49	2.35	35	1.90	***	31.3
1	1465	3.82	34.673	27.57	2.64	39	2.01	2.20	31.8
1	1955	2.65	34.718	27.71	3.16	45	1.77	2.15	30.7
1	2448	2.06	34.733	27.77	3.56	50	1.78	2.22	29.7
1	2866	1.71	34.730	27.80	3.91	54	1.83	2.04	29.7
1	3435	1.38	34.724	27.82	3.97	55	1.80	2.06	29.4
1	3931	1.28	34.736	27.84	4.14	57	1.90	1.94	30.2
1	4428	1.20	34.717	27.83	4.25	58	1.83	1.87	30.0
1	4914	1.20	34.717	27.83	4.31	59	1.82	2.08	30.2

58.

STATION	DATE		TIME		LATITUDE		LONGITUDE	
	DM 2 / 96/62	21/ 8/62	0024 I	20 15 S	105 00 E			
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS.	SEA SWELL.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2
5394	21.7	22.8	05 01	16	8 6	7 *	1016.2	*
						*	08 1	*
						*	1016.2	*
						*		*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P
2	0	23.55	34.880	23.70	4.79	106	0.16	0.36
2	24	23.46	34.905	23.75	4.79	106	0.17	***
2	48	23.45	34.909	23.76	4.73	104	0.17	0.34
2	73	23.36	34.928	23.79	4.73	104	0.18	***
2	97	23.33	34.935	23.81	4.68	103	0.19	0.33
2	121	23.02	35.111	24.03	4.45	97	0.27	***
2	146	21.89	35.384	24.56	4.39	94	0.32	0.44
2	195	18.93	35.360	25.33	3.60	73	0.62	0.69
2	244	17.51	35.554	25.83	4.00	80	0.56	***
2	293	15.83	35.477	26.17	4.00	77	0.62	0.73
2	392	12.98	35.275	26.63	4.79	87	0.66	0.74
2	491	10.07	34.856	26.86	4.51	74	0.88	1.06
1	653	7.31	34.571	27.05	4.11	63	1.53	1.63
1	842	6.19	34.626	27.25	2.25	33	2.15	2.40
1	1032	5.44	34.648	27.37	2.08	30	2.25	2.40
1	1220	4.82	34.650	27.45	2.14	31	2.25	2.35
1	1410	4.18	34.655	27.54	2.42	34	2.27	2.35
1	1889	2.92	34.706	27.69	3.04	42	2.12	2.25
1	2384	2.18	34.729	27.78	3.49	47	2.07	2.15

59.

STATION	DATE	TIME	LATITUDE	LONGITUDE					
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2
4938	25.8 26.4	00 00	16 0	0 0	8 00	0 00	1 06	1020.0	* * *
2	0	20.93	35.497	24.91	4.94	105	0.16	0.22	***
2	25	20.64	***	***	5.00	***	0.16	***	***
2	50	20.60	***	***	4.94	***	0.16	0.23	***
2	75	20.59	***	***	4.94	***	0.17	***	***
2	100	20.56	***	***	4.94	***	0.15	0.24	01.3
2	125	20.28	***	***	4.70	***	0.22	***	00.6
2	150	19.36	35.754	25.52	4.59	95	0.28	0.31	01.0
2	200	17.85	35.792	25.93	4.65	93	0.30	0.34	00.9
2	250	16.26	35.738	26.27	4.88	95	0.33	***	02.3
2	300	14.16	35.475	26.54	5.11	95	0.42	0.51	03.7
2	400	11.07	35.004	26.78	4.82	84	0.74	0.77	07.5
2	500	9.11	34.709	26.89	5.34	89	1.02	1.05	11.9
1	699	6.11	34.462	27.14	4.41	68	1.60	1.67	27.9
1	898	4.69	34.532	27.36	3.13	47	2.06	2.12	30.6
1	1097	3.83	34.562	27.48	3.13	46	2.10	2.22	31.5
1	1296	3.43	34.613	27.56	3.13	45	2.13	2.13	30.0
1	1495	3.00	34.670	27.64	3.19	46	2.13	2.01	32.1
1	1988	2.29	34.718	27.74	3.48	49	2.04	2.13	31.1
1	2480	1.90	34.727	27.78	3.83	53	1.98	2.01	30.9

60.

STATION

DATE

LONGITUDE

DM 2 / 98/62

TIME

LATITUDE

21 / 8/62

104 57 E

SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRES ANGLES
 DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2

3017	22.2	23.9	09	01	16	8	4	8	*	*	24	1	1018.4	*	*
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CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE

2	0	23.52	34.546	23.46	4.61	101	0.15	0.30	***	***	61.				
2	25	23.32	34.551	23.52	4.67	102	0.16	0.30	***	***					
2	50	23.29	34.550	23.53	4.55	100	0.15	0.40	***	***					
2	75	23.23	34.547	23.54	4.61	101	0.19	0.38	***	***					
2	100	23.22	34.544	23.55	4.67	102	0.20	0.29	***	***					
2	125	21.82	35.022	24.31	3.47	74	0.56	0.54	***	***					
2	150	19.87	35.122	24.91	3.24	67	0.64	0.81	0.75	0.75					
2	200	17.48	35.259	25.61	3.36	67	0.73	0.77	10.6	10.6					
2	250	16.90	35.508	25.95	3.87	76	0.63	0.63	0.53	0.53					
2	300	16.07	35.650	26.25	4.55	88	0.44	0.59	0.35	0.35					
2	400	12.89	35.292	26.66	5.01	91	0.53	0.65	0.55	0.55					
2	500	10.63	34.942	26.82	5.24	90	0.72	0.84	0.14	0.14					
1	696	7.39	34.552	27.03	5.01	80	1.35	1.44	2.1.8	2.1.8					
1	895	5.68	34.603	27.30	2.44	37	2.01	2.09	30.8	30.8					
1	1094	4.90	34.623	27.41	2.33	35	2.04	2.37	32.6	32.6					
1	1294	4.31	34.642	27.49	2.56	38	2.09	2.15	30.7	30.7					
1	1493	3.67	34.654	27.57	2.84	41	2.01	2.12	32.8	32.8					
1	1991	2.54	34.714	27.72	3.24	46	1.79	2.06	29.9	29.9					
1	2487	2.00	34.731	27.78	3.58	50	1.94	2.02							

STATION	DATE	TIME	LATITUDE	LONGITUDE								
SONIC DEPTH	AIR TEMP.	WIND DIR.	ANEM.	CLOUD SP.	HEIGHT	VIS.	SEA TYPE AMT.	DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRES CAST 1	CAST 2
DM 2/100/62	22/ 8/62	1545 H	27 00 S	105 02 E								
4663	16.1	20.0	22	01	16	5	7	7	22	1	1020.7	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE		
2	0	20.69	35.520	24.99	4.90	10.3	0.9	0.38	***			
2	24	20.56	35.540	25.04	4.85	10.2	0.13	***	***			
2	49	19.52	35.790	25.51	4.96	10.3	0.1	0.42	***			
2	73	19.45	35.847	25.57	5.01	10.4	0.12	***	***			
2	98	19.05	35.874	25.69	4.90	10.1	0.13	0.35	00.2			
2	122	18.63	35.861	25.79	4.85	9.9	0.18	***	00.4			
2	147	18.04	35.874	25.95	4.73	9.5	0.22	***	01.0			
2	196	16.85	35.767	26.17	4.85	9.5	0.31	0.42	01.1			
2	246	15.33	35.650	26.42	4.96	9.5	0.34	***	08.9			
2	295	13.84	35.454	26.59	5.13	9.5	0.42	0.57	03.5			
2	394	11.70	35.119	26.76	5.30	9.4	0.66	***	08.0			
2	493	10.22	34.866	26.83	5.41	9.2	0.83	0.94	12.3			
2	692	8.44	34.615	26.93	4.23	6.9	1.07	1.19	18.1			
2	891	5.60	34.441	27.18	5.13	7.9	1.59	1.75	27.6			
1	1087	4.23	34.501	27.39	3.49	5.2	1.88	1.98	29.8			
1	1282	3.72	34.580	27.50	3.15	4.6	2.08	2.09	30.7			
1	1477	3.28	34.620	27.58	3.10	4.5	2.00	2.12	32.3			
1	1960	2.49	34.712	27.72	4.51	6.4	1.94	1.76	28.0			
1	2447	1.97	34.730	27.78	4.51	6.3	1.61	1.95	31.3			
1	2937	1.68	34.733	27.80	3.55	4.9	1.79	1.95	29.0			
1	3414	1.40	34.731	27.82	3.77	5.2	1.73	1.99	28.3			
1	3930	1.19	34.724	27.83	3.94	5.4	1.54	1.82	28.3			
1	4428	1.07	34.718	27.84	4.17	5.7	1.75	1.88	27.6			

STATION	DATE	TIME	LATITUDE		LONGITUDE	
			32 00 S	32 00 H	112 00 E	112 00 W
DN 2/101/62	24/ 8/62	0300 H				
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR.	ANEM. SP.	CLOUD HEIGHT	VIS. TYPE AMT.	SEA SWELL
4846 15.0 17.8	30 01 16	*	7	7	28 1	24 2
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.
2	0	19.63	35.640	25.37	5.01	104 0.19
2	25	19.60	35.661	25.39	4.96	103 0.15
2	50	19.62	35.646	25.37	4.90	101 0.15
2	75	19.61	35.658	25.38	5.07	105 0.15
2	100	19.61	35.657	25.38	4.90	101 0.17
2	125	19.63	35.659	25.38	5.01	104 0.16
2	150	19.63	35.660	25.38	5.01	104 0.14
2	200	19.64	35.661	25.38	4.96	103 0.17
2	250	19.42	35.737	25.49	4.90	101 0.19
2	300	17.71	35.798	25.97	4.96	99 0.21
2	400	15.52	35.352	26.58	5.18	95 0.45
2	500	10.91	34.952	26.77	5.41	94 0.69
2	700	8.87	34.660	26.89	5.41	90 1.05
2	900	6.62	34.466	27.07	4.62	72 1.44
1	1020	4.70	34.386	27.25	4.34	65 1.72
1	1207	3.78	34.463	27.40	3.77	55 1.92
1	1395	3.31	34.540	27.51	3.49	50 1.98
1	1873	2.58	34.679	27.69	3.44	49 1.93
1	2352	2.13	34.725	27.76	3.72	52 1.89
1	2835	1.81	34.730	27.79	3.89	54 1.84
1	3302	1.53	34.726	27.81	4.11	57 1.81
1	3812	1.30	34.723	27.82	4.28	59 1.88
1	4305	1.28	34.718	27.82	4.28	59 1.87

63.

DATA

PART 2

PRIMARY PRODUCTION

EXPLANATION OF HEADINGS

Part 2 Primary Production

STATION	Gives the station identification, for example, Dm 2/44/62 signifies the 44th station worked by Diamantina in 1962, on her 2nd cruise for that year.
DATE	Given as day/month/year.
TIME	Given in Zone Time (Table 2, p12).
LATITUDE LONGITUDE	Given in degrees and minutes.
INCUBATION METHOD	Artificial constant light incubation.
^{14}C STOCK	Stock number used.
ACTIVITY CPM	Activity of ^{14}C stock used, recorded in counts per minute.
BACKGROUND	Background count is recorded in counts per minute.
DEPTH	Depth of sampling in metres.
LIGHT	The counts per minute of the filters from the duplicate clear bottles.
MEAN	The mean of the two Light Counts. If the difference between this mean and the light counts is more than 50% of the mean, it is considered aberrant, and the symbol "N" placed after it. However, it is used for calculations of production.
DARK	The counts per minute of the filter from the dark bottle. If the Dark Count is more than 50 cpm and also more than 10% of the mean light count, it is considered aberrant, is not used, and the symbol "B" placed after it.
DARK USED	This is usually the same as the Dark Count. If the Dark Count is aberrant the mean of all the dark counts for samples from that station is used (symbol "E").
NETT	The difference between MEAN and DARK USED.
INC. PER.	Incubation period.
PRODUCTION A	The calculated rate of production in mg of carbon per hour per cubic metre.
PRODUCTION B	The integrated production under one square metre from the surface to the given depth in g of carbon per day per square metre. A day has been taken to equal 10 hours.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 44/62	17/ 7/62	1200 H	30 01 S	111 07 E

INCUBATION METHOD		PERIOD		14C STOCK		ACTIVITY CPM		BACKGROUND	
ARTIFICIAL CONSTANT LIGHT		0	4 HOURS	10		8.97 MILLION		10 CPM	
DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B	
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.	
0	1100	1095	1098	13	1085	04.00	00.74	00.00	
25	803	841	822	18	804	04.00	00.55	00.16	
50	50	48	49	4	45	04.00	00.03	00.23	
75	26	21	24	8	16	04.00	00.01	00.24	
100	14	13	14	11	11	04.00	00.00	00.24	
150	19	14	17	13	13	4	04.00	00.00	

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2/ 45/62	19/ 7/62	2130 H	25 00 S	100 00 E

INCUBATION METHOD		PERIOD		14C STOCK		ACTIVITY CPM		BACKGROUND	
ARTIFICIAL CONSTANT LIGHT		0	4 HOURS	10		8.97 MILLION		10 CPM	
DEPTH	LIGHT	MEAN	DARK	DARK USED	NET	INC. PER.	PRODUCTION A	PRODUCTION B	
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C./HR./CU.M.	G.C./DAY/SQ.M.	
0	108	110	109	56	25	E	84	00.06	00.00
25	125	113	119	22	22		97	04.00	00.07
50	91	103	97	27	27		70	04.00	00.05
75	91	99	95	24	24		71	04.00	00.05
100	77	53	65	24	24		41	04.00	00.03
150	138	63	101	30	30	N	71	04.00	00.05

E MEAN NON-ABERRANT DARK USED
N DUPLICATE VALUES ABERRANT

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 46/62	20 / 7/62	1515 H	22 00 S	100 00 E
INCUBATION METHOD	PERIOD	¹⁴ C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0	4 HOURS	10	8.97 MILLION
DEPTH	LIGHT	MEAN	DARK USED	NETT
M	CPM	CPM	CPM	CPM

69.

B ABERRANT VALUE, NOT USED
 E MEAN NON-ABERRANT DARK USED

	0	25	50	75	100	113	150
352	238	269	263	315	109	28	28
292	281	278	325	111	109	27	27
278	271	271	320	111	111	28	23
315	325	325	320	111	111	23	23
113	109	109	109	111	111	28	28
150	28	28	27	27	27	23	23
						18	18
						23	23
						5	5
						04.00	04.00
						93	93
						04.00	04.00
						5	5
						00.06	00.06
						04.00	04.00
						00.00	00.00
							00.18
						04.00	04.00
						228	253
						04.00	04.00
						290	04.00
						04.00	04.00
						04.00	04.00
						00.16	00.17
						00.20	00.16
						00.06	00.08
						00.00	00.13
						00.00	00.16
						00.00	00.00
							00.18

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 48/62	21 / 7/62	1015 H	18 53 S	100 00 E

70.

0	588	524	556	16	540	04.00	00.37	00.00
25	658	658	658	10	648	04.00	00.44	00.10
50	492	489	491	9	482	04.00	00.33	00.20
75	418	392	405	8	397	04.00	00.27	00.28
100	237	239	238	37	37	04.00	00.14	00.33
150	40	30	35	27	27	04.00	00.01	00.37

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 49/62	21 / 7/62	2015 H	18 00 S	100 00 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 HOURS	10	8.97 MILLION	10 CPM

DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	209	304	257	13	13	244	04.00	00.17
25	238	256	247	13	13	234	04.00	00.16
50	235	233	234	20	20	214	04.00	00.15
75	243	234	239	20	20	219	04.00	00.15
100	21	23	22	6	6	16	04.00	00.01
150	8	13	11	8	8	3	04.00	00.00

71.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 52/62	22 / 7/62	1615 H	15 00 S	100 00 E

INCUBATION METHOD		PERIOD		14C STOCK		ACTIVITY CPM		BACKGROUND	
ARTIFICIAL CONSTANT LIGHT		0	4 HOURS	10		8.97 MILLION		10 CPM	
DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B	
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C./HR./CU.M.	G.C./DAY/SQ.M.	
0	379	414	397	13	384	04.00	00.26	00.00	
25	361	409	385	14	371	04.00	00.25	00.06	
50	318	358	338	20	318	04.00	00.22	00.12	
75	233	244	239	14	225	04.00	00.15	00.17	
100	29	35	32	8	24	04.00	00.02	00.19	
150	31	15	23	5	18	04.00	00.01	00.20	
								N DUPLICATE VALUES ABERRANT	

STATION

TIME

LATITUDE

LONGITUDE

DM 2/ 54/62

0800 H

13 00 S

100 00 E

INCUBATION METHOD

PERIOD

14C STOCK

BACKGROUND

ARTIFICIAL CONSTANT LIGHT 0 4 HOURS

ACTIVITY CPM

10 CPM

DEPTH LIGHT MEAN DARK DARK USED NETT INC. PER.

M CPM CPM CPM CPM HOURS

ACTIVITY CPM

PRODUCTION A

PRODUCTION B

MG.C/HR./CU.M.

G.C/DAY/SQ.M.

73.

0	1182	1080	1131	4	1127	04.00	00.77	00.00
25	1239	1052	1146	12	1134	04.00	00.78	00.19
50	766	833	800	12	788	04.00	00.54	00.36
75	1344	1503	1424	13	1411	04.00	00.97	00.55
100	122	120	121	13	108	04.00	00.07	00.68
150	42	53	48	23	25	04.00	00.02	00.70

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2/ 55/62	23/ 7/62	1550 H	12 00 S	100 00 F

INCUBATION METHOD		PERIOD		14C STOCK		ACTIVITY CPM		BACKGROUND	
ARTIFICIAL CONSTANT LIGHT		0 4 HOURS		10		8.97 MILLION		10 CPM	
DEPTH	LIGHT	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	1163	1199	1181	22	22	1159	04.00	00.79	00.00
25	1220	1267	1244	23	23	1221	04.00	00.84	00.20
50	1163	1241	1202	25	25	1177	04.00	00.81	00.41
75	230	276	253	5	5	248	04.00	00.17	00.53
100	23	23	23	7	7	16	04.00	00.01	00.55
150	11	17	14	9	9	5	04.00	00.00	00.55

74°

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 58/62	24/ 7/62	1350 H	08 57 S	100 00 E

INCUBATION METHOD	PERIOD	¹⁴ C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM

DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/MR./CU.M.	G.C/DAY/SQ.M.
0	653	595	624	15	15	609	04.00	00.42
25	667	660	661	14	14	647	04.00	00.44
50	698	630	664	23	23	641	04.00	00.44
75	21	34	28	N	27	1	04.00	00.22
100	10	21	16	N	8	8	04.00	00.28
150	27	20	24		5	19	04.00	00.01

N DUPLICATE VALUES ABERRANT

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 62/62	25 / 7/62	1915 H	04 53 S	100 01 E

INCUBATION METHOD	ARTIFICIAL CONSTANT LIGHT	PERIOD	14C STOCK			ACTIVITY CPM	BACKGROUND	
			0	4 HOURS	10			
DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	113	98	106	27	79	04.00	00.05	00.00
25	118	108	113	28	85	04.00	00.06	00.01
50	90	96	93	28	65	04.00	00.04	00.02
75	101	100	101	27	74	04.00	00.05	00.03
100	16	24	20	20	0	04.00	00.00	00.04
150	16	17	17	13	4	04.00	00.00	00.04

STATION DATE TIME LATITUDE LONGITUDE
DM 2 / 61/62 25 / 7/62 1150 H 06 00 S 100 00 E

INCUBATION METHOD PERIOD ^{14}C STOCK ACTIVITY CPM BACKGROUND
ARTIFICIAL CONSTANT LIGHT 0 4 HOURS 10 8.97 MILLION 10 CPM

DEPTH LIGHT MEAN DARK DARK USED NETT INC. PER. PRODUCTION A PRODUCTION B
M CPM CPM CPM CPM HOURS MG.C/HR. /CU.M. G.C/DAY/SQ.M.
0 433 475 454 19 19 435 04.00 00.30 00.00
25 588 657 623 20 20 603 04.00 00.41 00.09
50 343 388 366 31 31 335 04.00 00.23 00.17
75 36 40 38 17 17 21 04.00 00.01 00.20
100 25 30 28 10 10 18 04.00 00.01 00.20
150 30 37 34 16 16 18 04.00 00.01 00.21

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 64/62	5 / 8/62	1645 H	10 55 S	94 59 E

INCUBATION METHOD	PERIOD	¹⁴ C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM

DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	181	198	190	23	23	167	04.00	00.11
25	215	195	205	26	26	179	04.00	00.12
50	197	149	173	32	32	141	04.00	00.10
75	117	153	135	27	27	108	04.00	00.07
100	37	40	39	8	8	31	04.00	00.02
150	30	25	28	14	14	14	04.00	00.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 66/62	6/ 8/62	0905 H	08 30 S	95 00 E

INCUBATION METHOD	PERIOD	¹⁴ C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM

DEPTH M	LIGHT CPM	LIGHT CPM	MEAN CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER.	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	478	460	469	12	12	457	04.00	00.31	00.00
25	403	403	403	14	14	389	04.00	00.27	00.07
50	365	367	366	14	14	352	04.00	00.24	00.13
75	378	352	365	11	11	354	04.00	00.24	00.19
100	21	23	22	7	7	15	04.00	00.01	00.22
150	10	11	11	5	5	6	04.00	00.00	00.22

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 67/62	6 / 8/62	1705 H	07 15 S	95 00 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM

DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	127	132	130	8	8	122	04.00	00.08
25	192	190	191	15	15	176	04.00	00.12
50	143	174	159	16	16	143	04.00	00.10
75	155	155	155	20	20	135	04.00	00.09
100	19	18	19	8	8	11	04.00	00.01
150	11	9	10	6	6	4	04.00	00.00

80.

STATION DM 2 / 69/62 DATE 7 / 8 / 62 TIME 0925 H LATITUDE 04 45 S LONGITUDE 05 00 E

INCUBATION METHOD ARTIFICIAL CONSTANT LIGHT PERIOD 0 4 HOURS
^{14C STOCK}

ACTIVITY CPM 8.97 MILLION

DEPTH M	LIGHT CPM	MEAN CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. CPM	PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	499	497	498	7	491	04.00	04.00	00.34	00.00
25	546	543	545	8	537	04.00	04.00	00.37	00.09
50	492	566	529	7	522	04.00	04.00	00.36	00.18
75	477	438	458	5	453	04.00	04.00	00.31	00.26
100	19	20	20	5	15	04.00	04.00	00.01	00.30
150	12	18	15	6	9	04.00	04.00	00.01	00.31

81.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 71/62	7 / 8/62	1745 H	03 30 S	95 07 E

INCUBATION METHOD		PERIOD		14C STOCK		ACTIVITY CPM		BACKGROUND	
ARTIFICIAL CONSTANT LIGHT		0	4 HOURS	10		8.97 MILLION		10 CPM	
DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B	
M	CPM	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	244	262	253	11	11	242	04.00	00.17	00.00
25	261	262	262	35	35	227	04.00	00.16	00.04
50	208	202	205	32	32	173	04.00	00.12	00.08
75	362	270	316	24	24	292	04.00	00.20	00.12
100	26	33	30	13	13	17	04.00	00.01	00.15
150	11	53	32	2	2	30	04.00	00.02	00.16
N		DUPLICATE	VALUES	ABERRANT					

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 75/62	8 / 8/62	0930 H	01 00 S	94 59 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM

DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	616	597	607	8	599	04.00	00.41	00.00
25	658	665	662	17	645	04.00	00.44	00.11
50	645	670	658	11	647	04.00	00.44	00.22
75	535	587	561	11	550	04.00	00.38	00.32
100	44	59	52	3	49	04.00	00.03	00.37
150	20	23	22	6	16	04.00	00.01	00.38

83.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 77/62	8 / 8/62	1655 H	00 00	95 00 E

INCUBATION METHOD	PERIOD	14C STOCK			ACTIVITY CPM			BACKGROUND	
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	MEAN	DARK	DARK USED	NETT.	INC. PER.	PRODUCTION A	PRODUCTION B	
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.	
0	384	354	369	18	351	04.00	00.24	00.00	
25	410	405	408	36	372	04.00	00.25	00.06	
50	374	350	362	42	320	04.00	00.22	00.12	
75	420	439	430	34	396	04.00	00.27	00.18	
100	32	29	31	16	15	04.00	00.01	00.22	
150	27	27	27	10	17	04.00	00.01	00.23	

84.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 81/62	9 / 8/62	0910 H	02 30 N	94 43 E
INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM
DEPTH	LIGHT	MEAN	DARK USED	NETT
M	CPM	CPM	CPM	CPM
0	500	482	491	23
25	520	543	532	25
50	597	641	619	9
75	190	234	212	13
100	111	108	110	22
150	271	240	256	49
				468
				04.00
				00.32
				00.00
				00.35
				04.00
				04.00
				00.42
				04.00
				00.14
				00.25
				04.00
				00.06
				00.14
				00.33

8.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 83/62	9 / 8/62	1755 H	03 45 N	94 38 E
INCUBATION METHOD	PERIOD	^{14}C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM
DEPTH	LIGHT	MEAN	DARK USED	NETT
M	CPM	CPM	CPM	CPM
0	362	378	26	344
25	241	196	43	176
50	188	206	39	158
75	467	480	13	461
100	26	21	4	20
150	8	9	6	3
M	CPM	CPM	CPM	CPM
HOURS				
PRODUCTION A				
MG.C/HR./CU.M.				
PRODUCTION B				
G.C/DAY/SQ.M.				

86.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 86/62	17/ 8/62	1330 H	07 41 S	105 01 E

INCUBATION METHOD		PERIOD		14C STOCK		ACTIVITY CPM		BACKGROUND	
ARTIFICIAL	CONSTANT LIGHT	0	4 HOURS	10	8.97 MILLION	10	8.97 MILLION	10	10 CPM
DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B	
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	6.C/DAY/SQ.M.	
0	1482	1509	1496	34	34	1462	04.00	01.00	00.00
25	1386	1409	1398	47	47	1351	04.00	00.92	00.24
50	1755	1497	1626	15	15	1611	04.00	01.10	00.49
75	236	248	242	10	10	232	04.00	00.16	00.65
100	41	42	42	4	4	38	04.00	00.03	00.67
150	42	60	51	8	8	43	04.00	00.03	00.69

DATA
18/ 8
STATION 2 / 88/62

DATE	TIME	LATITUDE	LONGITUDE
18/ 8/62	0735 H.	10 15 S	104 50 E

INCUBATION METHOD	PERIOD	^{14}C STOCK	ACTIVITY CPM	BACKGROUND CPM
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM

DEPTH M.	LIGHT		MEAN		DARK	DARK USED	NETT	INC. PER.	PRODUCTION A		PRODUCTION B	
	CPM	CPM	CPM	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.	
0	1368	1316	1342	11	11	11	1331	04.00	00.91	00.00	00.00	
25	1465	1443	1454	11	11	12	1443	04.00	00.99	00.24	00.24	
50	969	1058	1014	12	12	12	1002	04.00	00.69	00.45	00.45	
75	204	231	218	11	11	11	207	04.00	00.14	00.55	00.55	
100	28	37	33	10	10	10	23	04.00	00.02	00.57	00.57	
150	36	36	36	17	17	17	19	04.00	00.01	00.58	00.58	

88.
00.00
00.24
00.45
00.55
00.57
00.58

STATION DM 2 / 89/62 DATE 18/ 8/62 TIME 1640 H LATITUDE 11 39 S LONGITUDE 105 00 E

INCUBATION METHOD ARTIFICIAL CONSTANT LIGHT PERIOD 0 4 HOURS
14C STOCK ACTIVITY CPM

DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. CPM	PER. CPM	HOURS	ACTIVITY CPM	BACKGROUND CPM
M	CPM	CPM	CPM							
0	2174	2097	2136	33	2103	04.00			01.44	00.00
25	1595	1644	1620	29	1591	04.00			01.09	00.32
50	281	252	267	17	250	04.00			00.17	00.48
75	69	77	73	18	55	04.00			00.04	00.51
100	56	46	51	12	39	04.00			00.03	00.52
150	18	42	30	8	22	04.00			00.02	00.53

N DUPLICATE VALUES ABERRANT

89.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DW 2 / 91/62	19 / 8/62	0910 H	14 00 S	105 08 E

INCUBATION METHOD		PERIOD		14C STOCK	ACTIVITY CPM		BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0	4 HOURS		10	8.97 MILLION		10 CPM
DEPTH LIGHT	LIGHT	MEAN	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.
0	1947	1863	1905	19	1886	04.00	01.29
25	1673	1709	1691	16	1675	04.00	01.15
50	1754	1802	1778	18	1760	04.00	01.20
75	1426	1544	1485	17	1468	04.00	01.00
100	795	942	869	24	845	04.00	00.58
150	28	32	30	11	19	04.00	00.01

90.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 92/62	19 / 8/62	1820 H	15 15 S	105 05 E
INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 - 4 HOURS	10	8.97 MILLION	10 CPM
DEPTH	LIGHT	MEAN	DARK USED	NETT
M	CPM	CPM	CPM	CPM
0	551	559	26	529
25	498	463	27	454
50	341	294	26	292
75	652	649	20	631
100	692	721	9	698
150	25	58	7	35
		42 N	7	04.00
				00.02
				00.00
				00.31
				00.08
				00.20
				00.14
				00.43
				00.22
				00.33
				00.48
				00.02
				00.46

N DUPLICATE VALUES ABERRANT

STATION	DATE		TIME	LATITUDE	LONGITUDE
DM 2 / 94/62	20 / 8/62		0955 H	17 45 S	105 03 E
INCUBATION METHOD		PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT	LIGHT	0	4 HOURS	10	8.97 MILLION
DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT
M	CPM	CPM	CPM	CPM	INC. PER.
0	708	706	707	8	699
25	705	737	721	19	702
50	474	548	511	15	496
75	449	440	445	13	432
100	28	28	28	10	18
150	25	21	23	11	12
				HOURS	PRODUCTION A
				MG.C/HR./CU.M.	G.C/DAY/SQ.M.
					92.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 95/62	20/ 8/62	1813 H	19 00 S	105 02 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM

DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	637	632	635	21	21	614	04.00	00.42
25	437	437	437	39	39	398	04.00	00.27
50	527	516	522	26	26	496	04.00	00.34
75	696	730	713	9	9	704	04.00	00.48
100	347	352	350	4	4	346	04.00	00.24
150	11	31	21	4	4	17	04.00	00.01

N DUPLICATE VALUES ABERRANT

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 98/62	21 / 8/62	1235 H	21 57 S	104 57 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM

DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	1159	1096	1128	11	11	1117	04.00	00.76
25	1346	1489	1418	18	18	1400	04.00	00.96
50	1221	1343	1282	14	14	1268	04.00	00.87
75	986	1062	1024	12	12	1012	04.00	00.69
100	439	451	445	7	7	438	04.00	00.30
150	34	20	27	7	7	20	04.00	00.01

94.

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2/100/62	22/ 8/62	1605 H	27 00 S	105 02 E

INCUBATION METHOD	PERIOD	¹⁴ C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	0 4 HOURS	10	8.97 MILLION	10 CPM

PRODUCTION B					
DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT
M	CPM	CPM	CPM	CPM	CPM
0	213	213	29	29	184
25	365	361	12	12	349
50	225	179	202	20	182
75	170	154	162	7	155
100	145	123	134	2	132
150	18	21	20	2	18

PRODUCTION A					
DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT
M	CPM	CPM	CPM	CPM	CPM
0	213	213	29	29	04.00
25	356	361	12	12	04.00
50	225	179	202	20	04.00
75	170	154	162	7	04.00
100	145	123	134	2	04.00
150	18	21	20	2	04.00

G.C./DAY/SQ.M.					
DEPTH	LIGHT	MEAN	DARK	DARK USED	NETT
M	CPM	CPM	CPM	CPM	CPM
0	213	213	29	29	04.00
25	356	361	12	12	04.00
50	225	179	202	20	04.00
75	170	154	162	7	04.00
100	145	123	134	2	04.00
150	18	21	20	2	04.00

DATA

PART 3

PIGMENTS

EXPLANATION OF HEADINGSPart 3Pigments

STATION	Gives the station identification, for example, Dm 2/44/62 signifies the 44th station worked by <u>Diamantina</u> in 1962, on her 2nd cruise for that year
DATE	Given as day/month/year
TIME	Given in Zone Time (Table 2, p12)
LATITUDE	Given in degrees and minutes
LONGITUDE	
DEPTH	Actual sampling depth, given in metres
CHLOROPHYLL	A and B given in mg/m ³
A B C	C given in MSPU/m ³
ASTACIN	Given in MSPU/m ³
NON-ASTACIN	

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 44/62	17 / 7/62	0800 H	30 01 S	111 07 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.18	0.11	0.63	0.08	- 0.01
25	0.17	0.10	0.44	0.09	- 0.00
50	0.06	0.05	0.37	0.07	- 0.01
75	0.06	0.04	0.32	0.06	- 0.00
100	0.05	0.03	0.31	0.07	- 0.00
150	0.04	0.06	0.35	0.11	- 0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 45/62	19 / 7/62	2015 H	25 00 S	100 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.09	0.06	- 0.02	0.03	0.06
50	0.13	0.04	0.55	0.08	- 0.01
75	0.12	0.05	0.48	0.09	- 0.01
100	0.18	0.09	0.38	0.03	0.07
150	0.06	0.03	0.34	0.05	0.01

100.

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 46/62	20 / 7/62	1400 H	22 00 S	100 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.02	0.01	0.15	0.02	0.03
25	0.04	0.03	0.10	0.03	0.02
50	0.04	0.02	0.19	0.02	0.02
75	0.12	0.06	0.40	0.07	0.01
150	0.07	0.04	0.41	0.06	0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 46/62	21 / 7/62	0847 H	13 53 S	100 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.04	0.02	0.17	0.03	0.02
25	0.06	0.02	0.22	0.04	0.01
50	0.08	0.03	0.31	0.04	0.01
75	0.13	0.06	0.60	0.08	0.00
100	0.17	0.10	0.56	0.08	0.02
150	0.12	0.10	0.62	0.09	- 0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DN 2 / 49/62	21 / 7/62	1830 H	18 00 S	100 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.10	0.09	0.56	0.10	- 0.04
25	0.13	0.07	0.50	0.08	- 0.00
50	0.12	0.04	0.51	0.07	- 0.00
75	0.11	0.04	0.59	0.07	0.00
150	0.13	0.10	0.64	0.09	- 0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DN 2 / 51/62	22 / 7/62	0815 H	16 09 S	100 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
25	0.13	0.08	0.41	0.08	0.01
50	0.15	0.09	0.48	0.08	0.02
75	0.23	0.13	0.66	0.08	0.03
100	0.09	0.06	0.27	0.04	0.03
150	0.12	0.10	0.62	0.10	- 0.00

STATION		DATE		TIME		LATITUDE		LONGITUDE
DM 2 / 52/62		22 / 7/62		1545 H		15 00 S		100 00 E
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN		NON-ASTACIN		
0	0.18	0.11	0.91	0.76	-	0.42		
25	0.14	0.09	0.60	0.10	-	0.02		
50	0.19	0.13	0.80	0.11	-	0.03		
75	0.12	0.08	0.48	0.11	-	0.02		
100	0.31	0.15	0.78	0.06	0.07			
150	0.08	0.07	0.41	0.08	-	0.02		

STATION		DATE		TIME		LATITUDE		LONGITUDE
DM 2 / 54/62		23 / 7/62		0645 H		13 00 S		100 00 E
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN		NON-ASTACIN		
25	0.12	0.09	0.41	0.08	0.02			
75	0.25	0.08	1.04	0.12	-	0.01		
100	0.36	0.19	0.81	0.11	0.07			
150	0.07	0.06	0.61	0.10	0.01			

STATION	DATE		TIME	LATITUDE	LONGITUDE
DM 2 / 55/62	23 / 7/62		1500 H	12 00 S	100 00 E
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.16	0.05	0.65	0.08	0.02
25	0.20	0.10	0.58	0.08	0.02
50	0.33	0.12	0.87	0.11	0.02
75	0.19	0.07	0.78	0.09	0.01
100	0.12	0.09	0.54	0.08	0.01
150	0.05	0.04	0.30	0.07	- 0.01

STATION	DATE		TIME	LATITUDE	LONGITUDE
DM 2 / 58/62	24 / 7/62		1230 H	08 57 S	100 00 E
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.08	0.06	0.28	0.06	0.01
25	0.10	0.06	0.40	0.08	- 0.00
50	0.13	0.05	0.38	0.11	- 0.03
75	0.31	0.21	0.87	0.10	0.05
100	0.15	0.09	0.62	0.08	0.02
150	0.08	0.05	0.57	0.09	- 0.02

STATION		DATE		TIME		LATITUDE		LONGITUDE
DM 2 / 61/62		25 / 7/62		1130 H		06 00 S		100 00 E
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C		ASTACIN		NON-ASTACIN	
0	0.06	0.02	0.27		0.06		0.01	
50	0.22	0.06	0.67		0.10		0.01	
75	0.36	0.18	1.00		0.10		0.07	
150	0.06	0.05	0.35		0.06		0.00	

STATION		DATE		TIME		LATITUDE		LONGITUDE
DM 2 / 62/62		25 / 7/62		1900 H		04 53 S		100 01 E
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C		ASTACIN		NON-ASTACIN	
0	0.08	0.06	0.45		0.11		0.01	
25	0.08	0.07	0.42		0.09		0.03	
50	0.08	0.07	0.26		0.07		0.01	
75	0.36	0.19	0.81		0.09		0.05	
100	0.22	0.15	0.70		0.09		0.04	
150	0.10	0.08	0.46		0.07		0.01	

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 64/62	5 / 8 / 62	1600 H	10 55 S	94 59 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.14	0.10	0.65	0.15	0.01
25	0.13	0.09	0.64	0.08	- 0.02
50	0.20	0.14	0.79	0.12	- 0.06
75	0.21	0.07	0.58	0.08	0.01
100	0.59	0.24	1.54	0.11	0.09
150	0.16	0.12	0.93	0.09	- 0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 66/62	6 / 8 / 62	0845 H	08 50 S	95 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.12	0.06	0.39	0.08	- 0.00
25	0.11	0.04	0.28	0.06	0.01
75	0.23	0.09	0.50	0.08	0.03
100	0.35	0.17	0.71	0.07	0.10
150	0.12	0.12	0.55	0.12	- 0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 67/62	6 / 8/62	1645 H	07 15 S	95 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.13	0.10	0.56	0.09	- 0.02
25	0.12	0.07	0.50	0.08	0.00
50	0.12	0.06	0.33	0.06	0.02
75	0.44	0.16	0.90	0.11	0.07
100	0.36	0.20	0.63	0.12	0.06
150	0.10	0.07	0.66	0.09	- 0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 69/62	7 / 8/62	0845 H	04 45 S	95 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.12	0.06	0.37	0.08	- 0.01
25	0.12	0.08	0.51	0.09	- 0.01
50	0.12	0.07	0.52	0.09	- 0.02
75	0.30	0.12	0.68	0.10	0.02
150	0.10	0.06	0.39	0.08	- 0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 71/62	7 / 8/62	1730 H	03 30 S	95 07 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
C	0.10	0.06	0.37	0.07	- 0.01
25	0.12	0.08	0.46	0.08	- 0.00
50	0.15	0.06	0.49	0.08	- 0.01
75	0.14	0.05	0.40	0.07	0.01
100	0.43	0.16	0.94	0.07	0.17
150	0.13	0.07	0.21	0.09	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 75/62	8 / 8/62	0940 H	01 00 S	94 59 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.12	0.07	0.49	0.07	- 0.00
25	0.16	0.08	0.58	0.09	- 0.02
50	0.17	0.06	0.47	0.12	- 0.02
75	0.33	0.07	0.63	0.09	0.02
100	0.33	0.15	0.78	0.07	0.12
150	0.06	0.04	0.27	0.07	- 0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 77/62	8 / 8/62	1630 H	00 00	35 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.13	0.04	0.52	0.09	- 0.01
25	0.11	0.04	0.31	0.06	0.01
50	0.14	0.07	0.49	0.07	0.02
75	0.21	0.06	0.56	0.08	0.01
100	0.23	0.14	0.69	0.07	0.06
150	0.06	0.04	0.41	0.08	- 0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 81/62	9 / 8/62	0855 H	02 30 N	94 43 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.15	0.06	0.35	0.08	- 0.00
50	0.16	0.06	0.48	0.10	0.01
75	0.54	0.11	0.75	0.06	0.14
100	0.19	0.10	0.68	0.12	0.01
150	0.09	0.06	0.40	0.08	- 0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 83/62	9 / 8/62	1730 H	03 45 N	94 38 E
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN
0	0.13	0.05	0.39	0.09
25	0.18	0.08	0.47	0.09
50	0.18	0.07	0.39	0.07
75	0.21	0.08	0.46	0.09
100	0.36	0.20	0.98	0.12
150	0.10	0.07	0.64	0.14

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM 2 / 86/62	17 / 8/62	1230 H	07 41 S	105 01 E
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN
0	0.28	0.07	0.61	0.15
25	0.33	0.10	0.52	0.08
50	0.52	0.09	0.68	0.07
100	0.19	0.10	0.71	0.10
150	0.06	0.07	0.43	0.11

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 88/62	18 / 8/62	0700 H	10 15 S	104 50 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.15	0.08	0.42	0.07	0.00
25	0.22	0.06	0.49	0.08	0.01
50	0.19	0.08	0.42	0.07	0.01
75	0.27	0.14	0.65	0.08	0.06
100	0.14	0.09	0.49	0.08	0.01
150	0.08	0.06	0.49	0.07	0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 89/62	18 / 8/62	1610 H	11 39 S	105 00 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.53	0.07	0.73	0.07	0.10
25	0.48	0.07	0.69	0.08	0.07
50	0.33	0.06	0.60	0.08	0.03
75	0.17	0.05	0.56	0.11	- 0.02
100	0.17	0.04	0.30	0.05	0.01
150	0.32	0.05	0.63	0.08	0.05

111.

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 91/62	19 / 8/62	0815 H	14 00 S	105 09 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.35	0.08	0.71	0.07	0.09
25	0.35	0.12	0.90	0.12	0.03
50	0.32	0.08	0.56	0.07	0.05
75	0.28	0.10	0.75	0.09	0.03
100	0.37	0.14	1.04	0.10	0.05
150	0.09	0.06	0.40	0.07	- 0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 92/62	19 / 8/62	1800 H	15 15 S	105 05 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.24	0.08	0.70	0.08	0.02
25	0.19	0.10	0.40	0.06	0.03
50	0.32	0.13	0.79	0.08	0.07
75	0.35	0.08	0.64	0.07	0.05
100	0.12	0.09	0.63	0.09	- 0.01
150	0.12	0.08	0.34	0.08	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 94/62	20 / 8/62	0935 H	17 45 S	105 03 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.14	0.11	0.57	0.09	0.02
25	0.15	0.05	0.36	0.07	0.01
50	0.20	0.06	0.45	0.08	0.01
75	0.32	0.07	0.59	0.07	0.06
100	0.36	0.13	0.73	0.04	0.15
150	0.08	0.03	0.47	0.06	0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 95/62	20 / 8/62	1830 H	19 00 S	105 02 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.15	0.07	0.45	0.07	0.01
25	0.23	0.05	0.36	0.07	0.03
50	0.33	0.10	0.69	0.10	0.02
75	0.29	0.08	0.66	0.08	0.05
100	0.23	0.06	0.60	0.08	0.04
150	0.09	0.08	0.44	0.08	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 98/62	21/ 8/62	1210 H	21 57 S	104 57 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.19	0.06	0.67	0.09	0.01
25	0.21	0.07	0.56	0.08	0.01
50	0.33	0.10	0.54	0.07	0.07
75	0.36	0.10	0.72	0.09	0.06
100	0.26	0.05	0.53	0.06	0.05
150	0.10	0.08	0.53	0.09	- 0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE	
DM 2 / 100/62	22/ 8/62	1545 H	27 00 S	105 02 E	
DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.08	0.06	0.44	0.08	- 0.01
25	0.19	0.06	0.43	0.06	0.03
50	0.19	0.07	0.51	0.06	0.03
75	0.28	0.11	0.64	0.08	0.04
100	0.33	0.13	0.86	0.10	0.06
150	0.13	0.04	0.40	0.06	0.01

DATA

PART 4

ZOOPLANKTON BIOMASS

VERTICAL HAULS : INDIAN OCEAN STANDARD NET

200-0 m

STATION	DATE	TIME	LATITUDE	LONGITUDE	DEPTH m	VOLUME FILTERED m ³	BIOMASS mg/m ³
Dm2/45/62	19.7.62	2000	25°00'S*	100°00'E*	5029	200	22
46	20.7.62	1345	22°00'S*	100°00'E*	5669	200	10 x
48	21.7.62	0815	18°53'S*	100°00'E*	5760	200	10 x
		0830	18°53'S*	100°00'E*	5760	200	
49		1815	18°00'S*	100°00'E*	5303	200	16
		1830	18°00'S*	100°00'E*	5303	200	36 x
61	25.7.62	1245	6°00'S*	100°00'E*	5057	200	37
		1305	6°00'S*	100°00'E*	5057	200	11 x
64	5.8.62	1545	10°55'S*	94°59'E*	5210	200	11
		1600	10°55'S*	94°59'E*	5210	200	7 x
66	6.8.62	1020	8°30'S*	95°00'E*	5210	200	9
		1030	8°30'S*	95°00'E*	5210	200	17 x
67		1625	7°15'S*	95°00'E*	4930	200	20
		1635	7°15'S*	95°00'E*	4930	200	14 x
68	7.8.62	1045	4°45'S*	95°00'E*	4770	240	18
		1057	4°45'S*	95°00'E*	4770	200	14 x
86	17.8.62	1425	7°41'S*	105°01'E*	3383	200	12
		1440	7°41'S*	105°01'E*	3383	200	37 x
87		2105	9°00'S*	104°58'E*	5669	200	35
		2125	9°00'S*	104°58'E*	5669	200	64 x
							57

x Sample sent to Indian Ocean Biological Centre, Ernakulam, India

STATION	DATE	TIME	LATITUDE	LONGITUDE	DEPTH m	VOLUME FILTERED m ³	BIOMASS mg/m ³
Dm2/88/62	18.8.62	0840	10°15'S.	104°50'E.	2926	200	52 x
		0850	10°15'S.	104°50'E.	2926	200	48
89		1735	11°39'S.	105°00'E.	2186	200	54 x
		1745	11°39'S.	105°00'E.	2186	200	52
90	19.8.62	0145	12°45'S.	105°03'E.	5121	200	55 x
		0135	12°45'S.	105°03'E.	5121	200	53
91		1125	14°00'S.	105°09'E.	5760	200	38 x
		1135	14°00'S.	105°09'E.	5760	200	45
92		1915	15°15'S.	105°05'E.	6035	200	30
		1925	15°15'S.	105°05'E.	6035	200	28 x
93	20.8.62	0305	16°30'S.	105°06'E.	5669	200	26 x
		0315	16°30'S.	105°06'E.	5669	200	26
94		1115	17°45'S.	105°03'E.	5669	200	17 x
		1125	17°45'S.	105°03'E.	5669	200	21
97	21.8.62	0910	21°07'S.	104°58'E.	4023	200	19
98		1330	21°57'S.	104°57'E.	3017	200	26
		1345	21°57'S.	104°57'E.	3017	200	24 x
99	22.8.62	0102	24°00'S.	105°00'E.	4938	200	24 x
		0115	24°00'S.	105°00'E.	4938	200	25
100		1737	27°00'S.	105°02'E.	4663	200	11 x
		1752	27°00'S.	105°02'E.	4663	200	12
101	23.8.62	0515	32°00'S.	112°00'E.	4846	200	14
		0530	32°00'S.	112°00'E.	4846	200	28 x

x Sample sent to Indian Ocean Biological Centre, Ernakulam, India

OCEANOGRAPHICAL CRUISE REPORTS

1. Oceanographical observations in the Indian Ocean in 1959. H.M.A.S. *Diamantina* Cruises Dm1/59 and Dm2/59.
2. Oceanographical observations in the Indian Ocean in 1960. H.M.A.S. *Diamantina* Cruise Dm1/60.
3. Oceanographical observations in the Indian Ocean in 1960. H.M.A.S. *Diamantina* Cruise Dm2/60.
4. Oceanographical observations in the Indian Ocean in 1960. H.M.A.S. *Diamantina* Cruise Dm3/60.
5. Oceanographical observations in the Pacific Ocean in 1960. H.M.A.S. *Gascoyne* Cruise G1/60 and G2/60.
6. Oceanographical observations in the Pacific Ocean in 1960. H.M.A.S. *Gascoyne* Cruise G3/60.
7. Oceanographical observations in the Indian Ocean in 1961. H.M.A.S. *Diamantina* Cruise Dm1/61.
8. Oceanographical observations in the Pacific Ocean in 1961. H.M.A.S. *Gascoyne* Cruise G1/61.
9. Oceanographical observations in the Indian Ocean in 1961. H.M.A.S. *Diamantina* Cruise Dm2/61.
11. Oceanographical observations in the Indian Ocean in 1961. H.M.A.S. *Diamantina* Cruise Dm3/61.
14. Oceanographical observations in the Indian Ocean in 1962. H.M.A.S. *Diamantina* Cruise Dm1/62.
15. Oceanographical observations in the Indian Ocean in 1962. H.M.A.S. *Diamantina* Cruise Dm2/62.