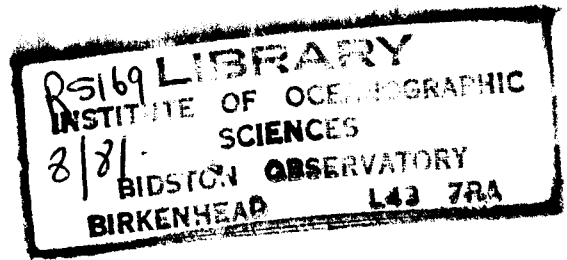


9-2-71



BRITISH IRISH SEA OCEANOGRAPHIC PROJECT, 1971

D A T A R E P O R T

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Introduction

At a meeting of the NERC Sub-Committee on Ocean Data Stations in November 1969, it was suggested that a joint oceanographic study should be undertaken to further our knowledge of the Irish Sea. In early 1970 four research centres began planning the project, these being the Fisheries Research Laboratory, Lowestoft; the Institute of Coastal Oceanography and Tides, Birkenhead (now the Bidston Laboratory of the Institute of Oceanographic Sciences); Liverpool University, Department of Oceanography and the Marine Sciences Laboratory, Menai Bridge. At three of the above locations numerical models of various degrees of sophistication were being developed for the Irish Sea and St Georges Channel (Heaps, in press; Hunter, 1972), all of which needed good quality synoptic data from tide gauges and recording current meters around the shores and across the two entrances, to provide boundary conditions, and also within the sea, to provide check points. Moreover, the time series would ideally be of at least thirty-two days duration so that accurate tidal analyses could be performed, not only to achieve adequate separation of the tidal constituents but also to identify the non-tidal residuals. These requirements, together with the opportunity to provide further information concerning the circulation of the Irish Sea, determined the format of the British Irish Sea Oceanographic Project 1971, (BISOP 71).

The data acquisition system was planned for the period between 28th August and 11th October, 1971. The records from permanent tide gauges at the harbours of Portpatrick, Heysham, Liverpool (three gauges), Holyhead, Fishguard, Dublin, Belfast, Douglas and Peel were to be collected and, in addition, temporary pneumatic tide gauges (Pugh, 1971) installed by ICOT at Llandudno, Nefyn, Rosslare and Larne (see map, fig 1). To help determine the tidal elevations across the southern boundary an off-shore tide gauge (Collar and Spencer, 1970) was also to be deployed in the middle of the St Georges Channel.

An array of 14 current meter rigs, involving 41 recording current meters, was planned. 7 of the rigs, with 24 meters, were to be deployed for about 40 days - 6 positioned across the 2 entrances to the Irish Sea and 1 on the Dublin - Holyhead line. The other 7 rigs were to be maintained for about 20 days and were deployed around the Irish Sea. The positions of rigs D, E, F, G, M and N were chosen to coincide with those of previous current meter stations (Baxter and Bedwell, 1972; Ramster and Hill, 1969) so that their results could be compared. Of the 41 instruments, 34 were

Plessey recording current meters (Hodges, 1967) (27 owned by Lowestoft and 7 by the NERC Research Vessel Base, Barry) and 7 were Bergen recording current meters (Aanderaa, 1964) (6 owned by ICOT and 1 by Liverpool University). Because there were two types of meter an intercalibration rig, G, was planned (Ramster and Howarth, 1973). All current meters were moored in a standard shelf seas rig (fig 2) consisting of a sub-surface buoy and a toroidal surface marker with a flashing light and radar reflector.

In order to estimate the mean flow across various sections of the Irish Sea Liverpool University were to monitor four telephone cables:-

Portpatrick-Donaghadee: Cemaes Bay-Port Erin: Port Erin-Bally Hornan: Nefyn-Howth (Hughes, 1969). The basis of the experiment is to measure the difference of earth potential which is induced across a channel by the movement of sea water, an electrical conductor, through the earth's magnetic field. The induced electromotive force is reduced by electric current flowing in the sea bed and it is therefore necessary to calibrate the system by means of conventional current meters to obtain a continuous measurement of water transport along the channel.

Estimates of the Lagrangian flow, as against the Eulerian flow given by the recording current meters and submarine cables, were to be gained from tracking parachute drogues (Hunter, 1972) launched by Menai Bridge and Liverpool University and also from the positions and times of recovery of bottom drifters (Woodhead and Lee, 1960), fifty of which were to be released at each of the current meter rigs.

Further insight to the vertical structure of the currents was to be gained by maintaining 25 hour direct reading current meter (DRCM) stations at rigs B and J and near the Cemaes Bay-Port Erin cable. For a more detailed picture of the horizontal structure a geomagnetic electro-Kinetograph (GEK) survey (von Arx, 1950) was to be carried out along the lines A-C, Dublin-Holyhead and H-K. This is a method of calculating currents by measuring the potential differences between two electrodes towed behind a ship and then employing principles similar to those used for the submarine telephone cables. To complete this study into the physical oceanography of the Irish Sea (c.f. Bowden, 1955) it was agreed to carry out a survey of salinity and temperature of the area using Nansen bottles and hence to estimate the density field.

Three ships were necessary to service the exercise - R.V. Clione from MAFF, R.R.S. John Murray from RVB and available to both ICOT and Liverpool

University and R.V. Prince Madog from Menai Bridge. Thus BISOP 71 represented a far bigger study of the Irish Sea than any one research centre could hope to plan or execute alone.

Narrative of the cruises

R.R.S. John Murray sailed from Barry on the evening tide of 27 August, 1971. The next day, in fairly rough weather, current meter rigs K and J were laid and the off-shore tide gauge launched. As the weather improved rigs H and G were laid on 29 August and rigs A, B and C on 30 August. The ship berthed at Liverpool on 31 August having successfully launched seven current meter rigs and one off-shore tide gauge in four days. The R.R.S. John Murray was then taken over for the period 2 - 28 September by Liverpool University who carried out a programme of monitoring currents in the vicinity of the Cemaes Bay-Port Erin cable, for calibration purposes, and dye diffusion experiments unconnected with BISOP 71.

Meanwhile, R.V. Clione sailed from Lowestoft on 3 September, arriving in the Irish Sea on 5th. By early morning on 7th she had deployed rigs L, F, M, N, E, D and P and checked the complete network of buoys whilst launching fifty bottom drifters at each rig. For the period 7 - 18th she proceeded to carry out a hydrosurvey of the Irish Sea plus hydrographic sections and GEK measurements along the lines ABC, FGM, and HJKL and 25 hour DRCM stations at B and J. She also continued to check the buoys and discovered that the surface buoy at K was not on station. In this connection a buoy had been reported drifting in the St Georges Channel by Anglesey Radio on 7th. On 14th rig B was recovered, having been found $1\frac{1}{2}$ miles NNW of its correct position and close to a shipping route. Its sub-surface buoy had collapsed and in consequence the meters had fallen to the sea floor. Station P was therefore lifted to re-equip the more strategic station at B and this was successfully accomplished by mid-day on 15th. The only other interruption to the survey occurred when the R.V. Clione answered a Mayday call on 17th from a Fleetwood trawler on fire.

At first light on 19 September R.V. Clione began to recover the rigs she had launched, starting with station N, where the surface buoy was missing. Dragging was conducted without success and consequently a box search was inaugurated which revealed the buoy to be four miles south-west of its correct position. One meter was recovered; the snap shackles on the surface buoy strops were found to have been replaced by ordinary shackles and the whole rig had been dragged some distance through thick mud.

On the way to rig F two of the four drogue buoys launched by Menai Bridge on 9 September from R.V. Prince Madog were sighted. Stations F and M were recovered successfully on 20th; the snap shackles had been stolen from the surface buoy strops of rig F and the sub-surface buoy at rig M had been damaged, probably by a ship's propeller. After recovering rigs D and E on the morning of 21st and rig L on the afternoon of 22nd, R.V. Clione sailed for the North Sea where she performed other duties before docking at Lowestoft on 27 September.

R.R.S. John Murray sailed from Barry on the evening tide of 5 October and the following morning began dragging for rig K. In the early afternoon the ground line was caught and one meter was recovered. After a search for the off-shore tide gauge, rig J was recovered during the afternoon of 7th about $1\frac{1}{2}$ miles north of the position it was laid. As the sub-surface buoy was floating on the surface it was hauled onto the deck first and three meters recovered. The bottom meter, however, and the meter anchor were missing. On to rig H where the surface buoy was found semi-submerged after a 2 hour search. The top meter and sub-surface buoy were missing and the two meters recovered had obviously spent some time on the sea floor. Rig G was recovered in good condition early on the morning of 8th and the search for the off-shore tide gauge was then resumed near J till the afternoon of 10th.

Rigs A, B and C were successfully recovered on 11 October - at rig A everything was in good condition, at rig B all the meters were recovered but the sub-surface buoy had again collapsed, and at rig C two of the meters' fins were damaged and the sub-surface buoy was missing. En route to Liverpool the ship called at Ardglass in Northern Ireland to collect one sub-surface buoy and one current meter from rig N which had been found drifting by a fishing vessel. The ship berthed on 12th at Liverpool and then sailed to Barry making another search for the off-shore tide gauge on the way. She docked in Barry on the evening of 14 October. The off-shore tide gauge was found floating by a French trawler on 12 December, 1971 and was collected by ICOT from Lorient on 3 February, 1972. Of the equipment missing from rig K one of the two aluminium spheres which made up the sub-surface buoy was found on Ainsdale Beach, near Southport, sometime in October or November, 1971 and was returned to ICOT in May, 1972 and the middle meter was recovered off Tuskar Rock in February, 1972 by a Milford Haven trawler and returned to ICOT.

Results

1. Hydrosurvey, wind and DRCM

Fig 3 shows the positions of the 149 hydro-stations carried out from

R.V. Clione, figs 4 and 5 the distributions of surface salinity and temperature and fig 6 the hydrographic sections of the North Channel and St Georges Channel. Fig 7 displays the winds recorded at three places which are representative of the whole of the Irish Sea (the only strong winds occurred during the first few days of the exercise). Table A contains the direct reading current meter data obtained with a Kelvin Hughes meter during 25 hour stations at rigs B and J. In both cases a neutrally buoyant rig was used to minimise the effects of ship motion on the meter and readings were taken both on the way down and on the way up. A check meter was operated at 10 m depth at rig B.

2. Tide gauges

Despite its trials and tribulations, the off-shore tide gauge has returned 29 days good data from its pressure sensor, although its temperature sensor failed a few hours after the gauge was immersed. The records from the 15 shore based tide gauges have missing a total of only 294 hours in the 45 day period 28 August - 11 October, the rest of the data being of normal quality for tide gauges. The results from the shore based tide gauges are shown in table B in the form of hourly values of tidal height in centimetres relative to a tide gauge datum. The title for each gauge gives the manufacturer of the gauge, its position and the identification of the tide gauge datum with respect to the appropriate national reference.

3. Current meters

Tables 1, 2 and 3 display details of the 14 rigs and 41 current meters deployed, how they fared during the exercise and the percentage data returns. Only 4 recording current meters (all Plessey) were lost, as were 2½ sub-surface buoys and 1 surface buoy. 2 sub-surface buoys were crushed and subsequent tests showed that this type of buoy would implode at a depth of 35 m.

Table C shows the results from the current meters. Although each of the current meters recorded at 10 minute sampling interval, the data has been converted to hourly values of current speed and direction, water temperature (where applicable, all the Bergen meters but only some of the Plessey meters were fitted with thermistors) and pressure (one Plessey meter was fitted with a pressure sensor). The conversion was carried out by first filtering the 10 minute data (Quraishee, 1967) and then correcting any timing errors by linear interpolation. For each meter there is a header page of positional information and comments on the rig or meter performance and at the head of each page there is included reference information.

Fig 8 displays the daily mean Eulerian residuals for meters in the BISOP network. These progressive vector diagrams were drawn using 24 hour 50 minute averages centred on mid-day GMT. Fig 9 displays in greater detail the same data for the inter-calibration rig, G, and this demonstrates satisfactory agreement between the two types of meter.

4. Telephone cables

Table D contains hourly values of voltage recorded at three of the cables - Cemaes Bay to Port Erin, Bally Hornan to Port Erin and Nefyn to Howth. The calibration constant to convert these voltages to water transport in million cumecs is displayed at the top of each page and is subject to revision.

5. Drogues and bottom drifters

The returns of the 200 sea bed drifters recovered, out of 700 released are displayed in fig 10. 2 of the 4 drogues launched from R.V. Prince Madog on 9 September were recovered and their tracks are displayed in fig 11.

Acknowledgements

It will be readily apparent that a large number of scientists contributed to the success of BISOP, many of whom are listed below. However, there remain a number who have not been specifically mentioned but to whom grateful thanks are due. Thanks are also due to the captains and crews of R.V. Clione, R.R.S. John Murray and R.V. Prince Madog, without whose skill and assistance the exercise would not have been accomplished, and to the operators of the telephone repeater stations at Bally Hornan, Cemaes Bay, Donaghadee, Howth, Nefyn, Port Erin and Portpatrick.

Scientists on board R.R.S. John Murray for launch and recovery legs :

L.M. Skinner (Chief Scientist; IOS, Bidston)
A.J. Harrison (IOS, Bidston)
M.J. Howarth (IOS, Bidston)
B. Hughes (IOS, Bidston)
A.G. Kerr (IOS, Bidston)
R. Spencer (IOS, Wormley)
J.W. Ramster (launch only; MAFF, Lowestoft)
A.R. Folkard (recovery only; MAFF, Lowestoft)

Scientists on board R.V. Clione :

H.W. Hill (Chief Scientist; MAFF, Lowestoft)
G.C. Baxter (MAFF, Lowestoft)
A.J. Bowen (IOS, Bidston)
A.R. Folkard (MAFF, Lowestoft)
R.L. Keable (MAFF, Lowestoft)
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Installation of shore based tide gauges :

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A.D. Banaszek (IOS, Bidston)
B. Hughes (IOS, Bidston)
C.J. Walker (IOS, Bidston)

Data Processing :

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J. Bedwell (MAFF, Lowestoft)
A.A.H. El Gindy (Liverpool University)
A.R. Folkard (MAFF, Lowestoft)
Mrs. V. Harris (MAFF, Lowestoft)
P. Hughes (Liverpool University)
J.R. Hunter (Marine Sciences Laboratory, Menai Bridge)
S.R. Jones (MAFF, Lowestoft)
S.G. Loch (IOS, Bidston)
K.J. Medler (MAFF, Lowestoft)
D.T. Pugh (IOS, Bidston)
J.W. Ramster (MAFF, Lowestoft)

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Rig	Position	Water depth below chart datum (m.)	Number of current meters	Dates of		Comments
				Launch	Recovery	
A	55°05'N 05°50'W	91	3	30 August	11 October	
B1	54°59'N 05°37'W	148	4	30 August	14 September	Sub-surface buoy imploded
B2	54°58'N 05°37'W	148	4	15 September	11 October	Sub-surface buoy imploded
C	55°02'N 05°19'W	73	3	30 August	11 October	Sub-surface buoy missing on recovery
D	54°00'N 03°54'N	35	3	6 September	21 September	
E	53°36'N 03°42'W	35	2	6 September	21 September	
F	53°24'N 05°50'W	42	2	6 September	20 September	
G	53°26'N 05°33'W	86	4	29 August	8 October	
H	52°10'N 06°12'W	68	3	29 August	7 October	One meter and one sub-surface buoy missing on recovery
J	52°05'N 05°46'W	101	4	28 August	7 October	Rig moved about 1½ miles. Sub-surface buoy on surface. One meter missing.
K	52°05'N 05°26'W	73	3	28 August	6 October	Two meters, one sub-surface and one surface buoy missing on recovery. One meter and part of sub-surface buoy later recovered.
L	52°05'N 05°08'W	48	3	5 September	22 September	
M	53°24'N 05°07'W	99	2	6 September	20 September	
N	54°04'N 05°19'W	108	3	7 September	29 September	Sub-surface buoy and two meters missing on recovery. Sub-surface buoy and one meter later recovered.
P	54°14'N 04°11'W	27	2	6 September	15 September	Recovered early to provide equipment for B2.

Table 1: Rig positions for BISOP 71

Rig	Water depth below chart datum (m.)	Meter identi- fication	Ht. above sea floor (m.)	Hours of useful data	Comments
A	91	B 295	79	1010	All meters recorded temperature
		B 213	42	1010	
		Li236	05	1010	
B1	148	L 429	128	143	Sub-surface buoy collapsed after 143 h Meter stopped
		L 306	109	143	
		L 328	36	40	
		L 260	5	143	
B2	148	L 306	133	90	Sub-surface buoy collapsed after 90 h Meter fouled No velocity record
		L 595	90	90	
		L 260	48	-	
		L 562	5	-	
C	73	R 19	60	884	Sub-surface buoy missing Records show it broke free 5 hours before recovery
		R 24	33	1002	
		R 21	5	1002	
D	35	L 588	24	-	No velocity record
		L 295	15	339	
		L 316	5	339	
E	35	L 166	23	349	Both meters recorded temperature
		L 249	5	349	
F	42	L 300	30	343	This meter recorded pressure
		L 153	5	343	
G	86	L 293	63	947	This meter recorded temperature
		B 294	62	947	
		L 436	6	947	This meter recorded temperature
		B 212	5	947	
H	68	R 20	55	-	Meter lost Sub-surface buoy missing on recovery Meters on sea floor after 617 h. Both meters record- ed temperature
		B 214	29	617	
		B 160	5	617	
J	101	L 322	80	178	Tape tangled Meter recorded temp., tape out of guide posts
		L 220	55	170	
		L 234	30	951	
		L 332	5	-	
K	73	R 22	60	-	On recovery surface buoy, sub-surface buoy and top two meters missing. Middle meter turned up later
		R 23	33	842	
		R 25	5	622	
L	48	L 277	34	-	No record Meter fouled
		L 291	20	409	
		L 197	5	-	

Rig	Water depth below chart datum (m.)	Meter identi- fication	Ht. above sea floor (m.)	Hours of useful data	Comments
M	99	L 569	88	-	No record
		L 583	5	346	
N	108	L 217	95	253	On recovery top two meters and sub-surface buoy missing. Top meter and sub-surface buoy found floating later
		L 287	50	-	
		L 457	5	254	
P	27	L 595	12	193	
		L 562	5	193	

Table 2: Current meter performance. L stands for Plessey meter belonging to MAFF, B stands for Aanderaa meter belonging to ICOT, Li stands for Aanderaa meter belonging to Liverpool University and R stands for Plessey meter belonging to RVB. Lowestoft processed all its own data and ICOT processed the rest.

	Anderaa	Plessey (RVB)	Plessey (Lowestoft)	Overall
Number of instruments deployed	7	7	27	41
Number of instruments recovered	7	5	25	37
Planned meter-hours in the sea	6,810	6,769	15,066	28,645
Number of meter-hours lost because of mooring failures of any kind	652	2,299	4,569	7,520
Number of hours meters in operational mode	6,158	4,470	10,497	21,125
Number of meter-hours of good data	6,158	4,352	7,562	18,072
Gross percentage data return	90%	64%	50%	63%
Percentage loss because of mooring failure	10%	34%	30%	26%
Percentage loss because of instrumental failure	0%	2%	20%	11%
Percentage data return for period meters operational	100%	97%	72%	86%

Table 3: Data returns. Planned meter-hours in the sea is defined as the number of instruments launched at each rig multiplied by the number of hours elapsing between the launch and recovery of the station.

Figures

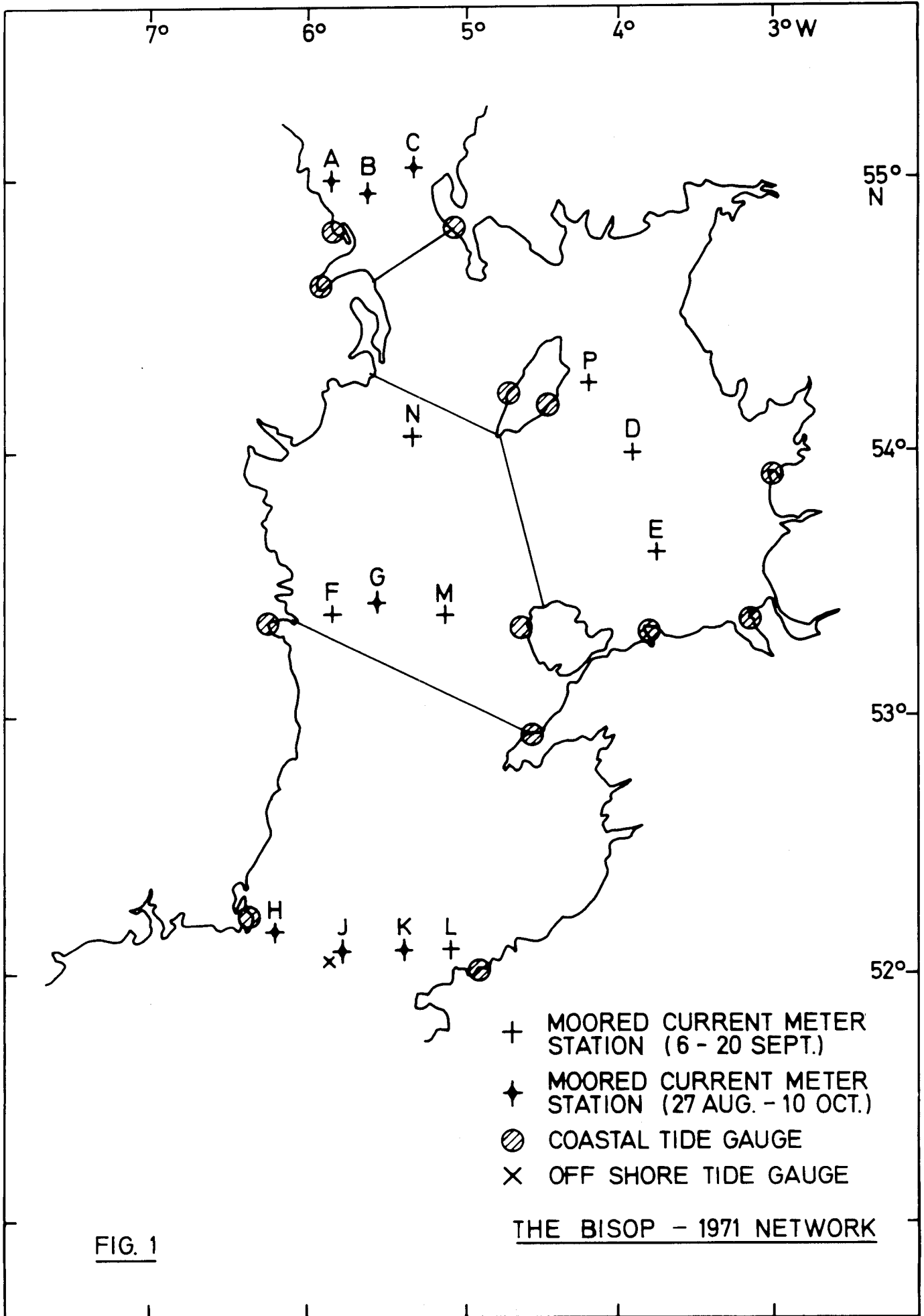


FIG. 1

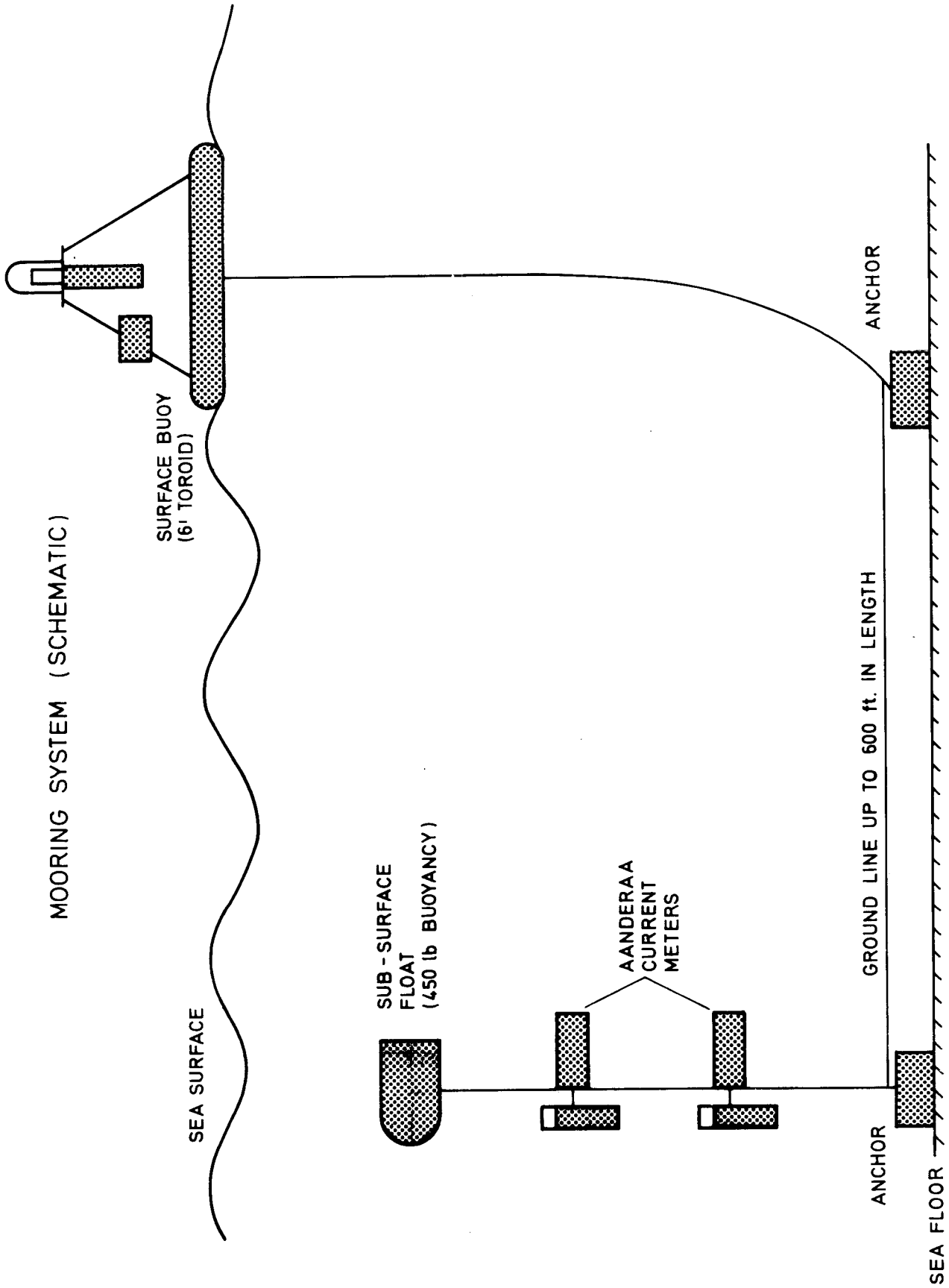
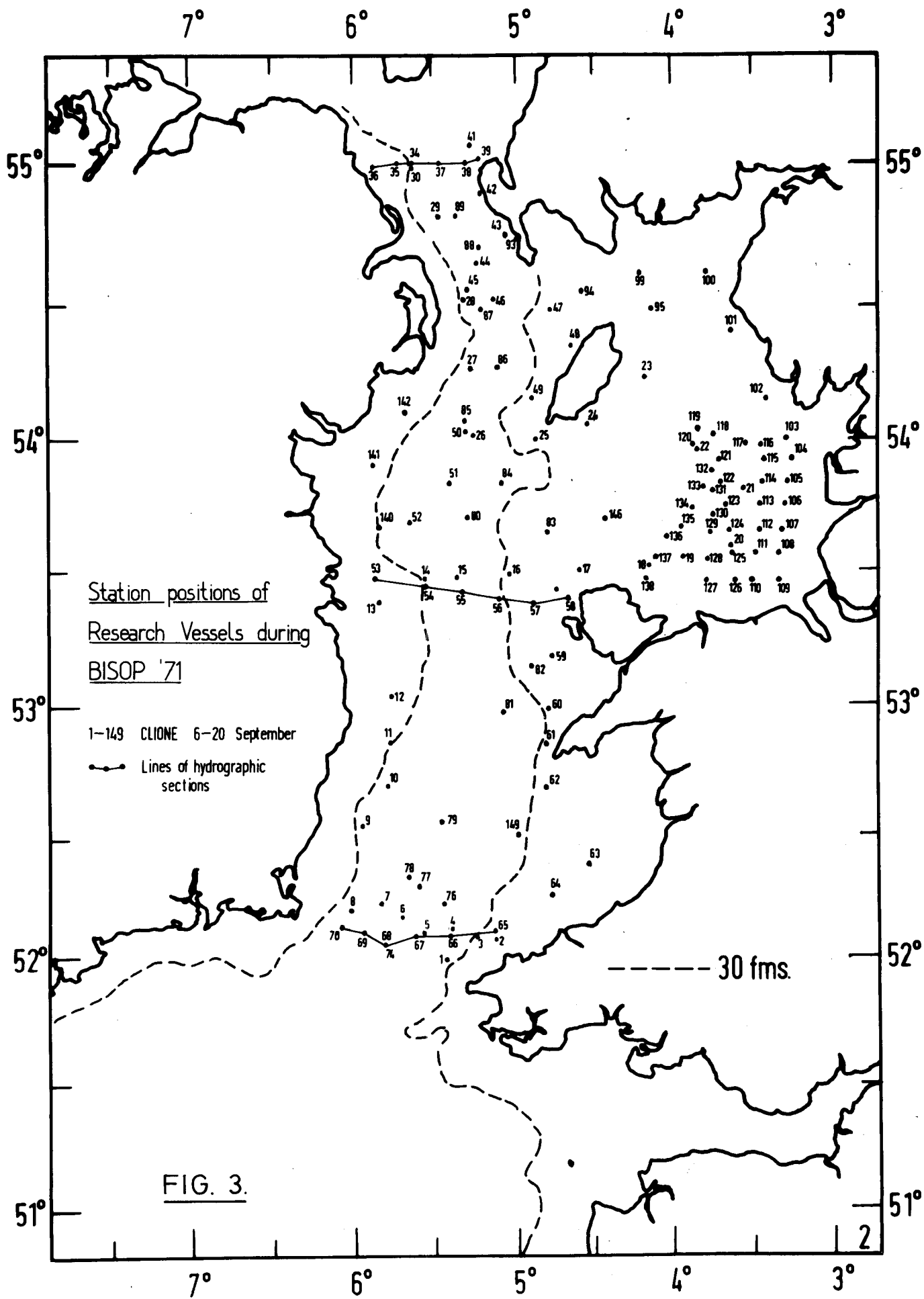
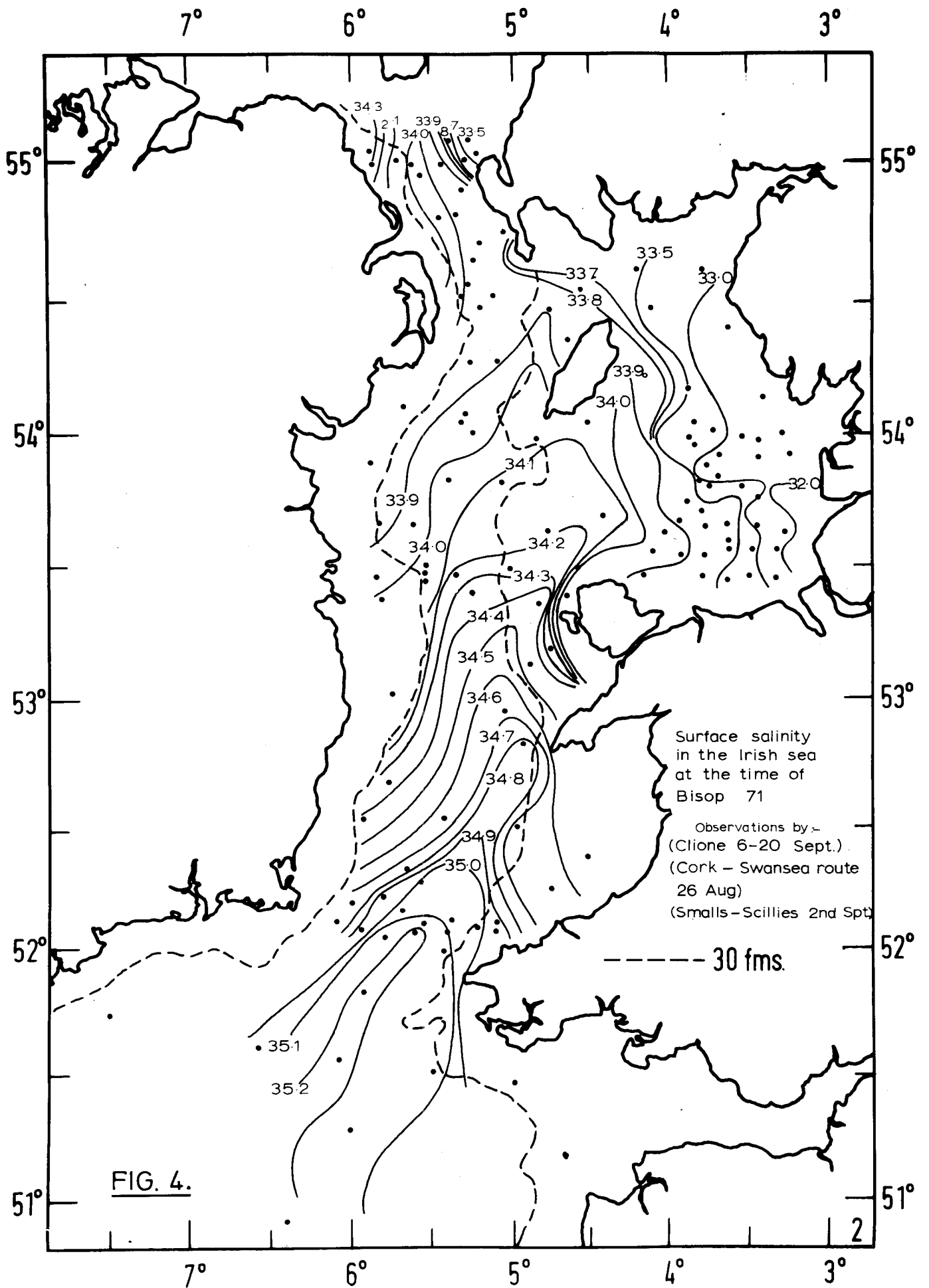
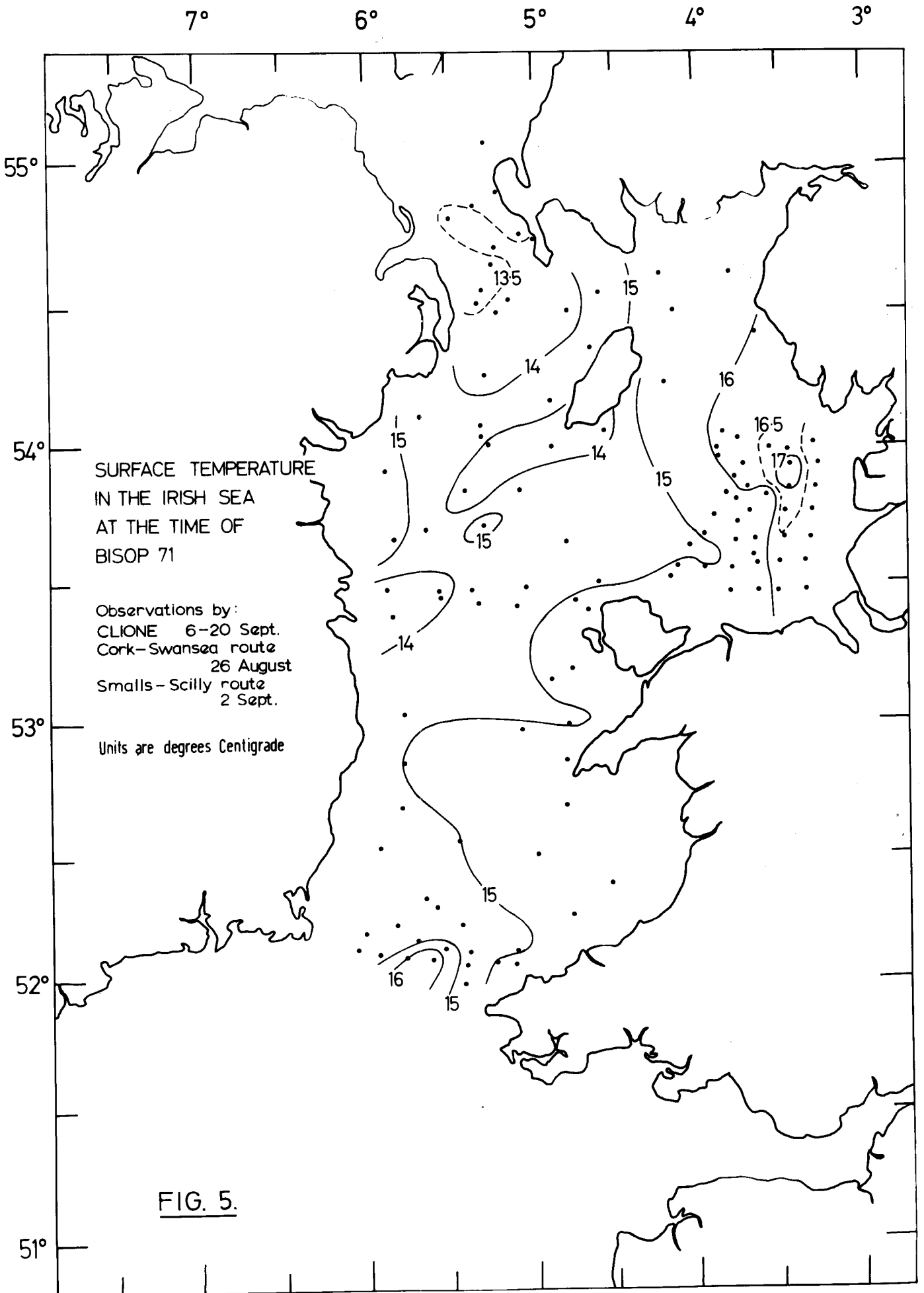


FIG. 2.







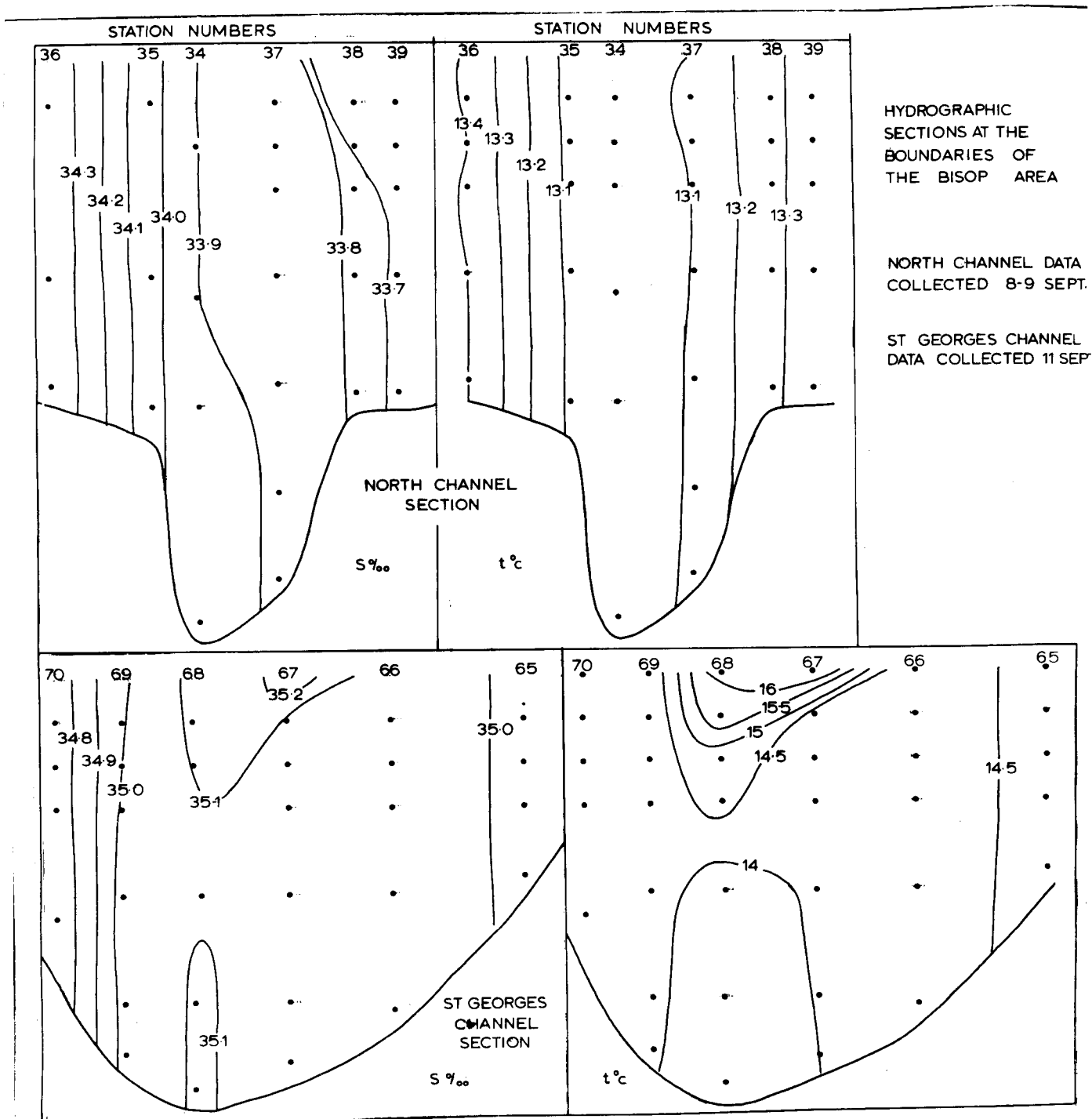


FIG. 6.

DAILY MEAN WINDS FOR
THREE STATIONS SPREAD OVER THE BISOP AREA

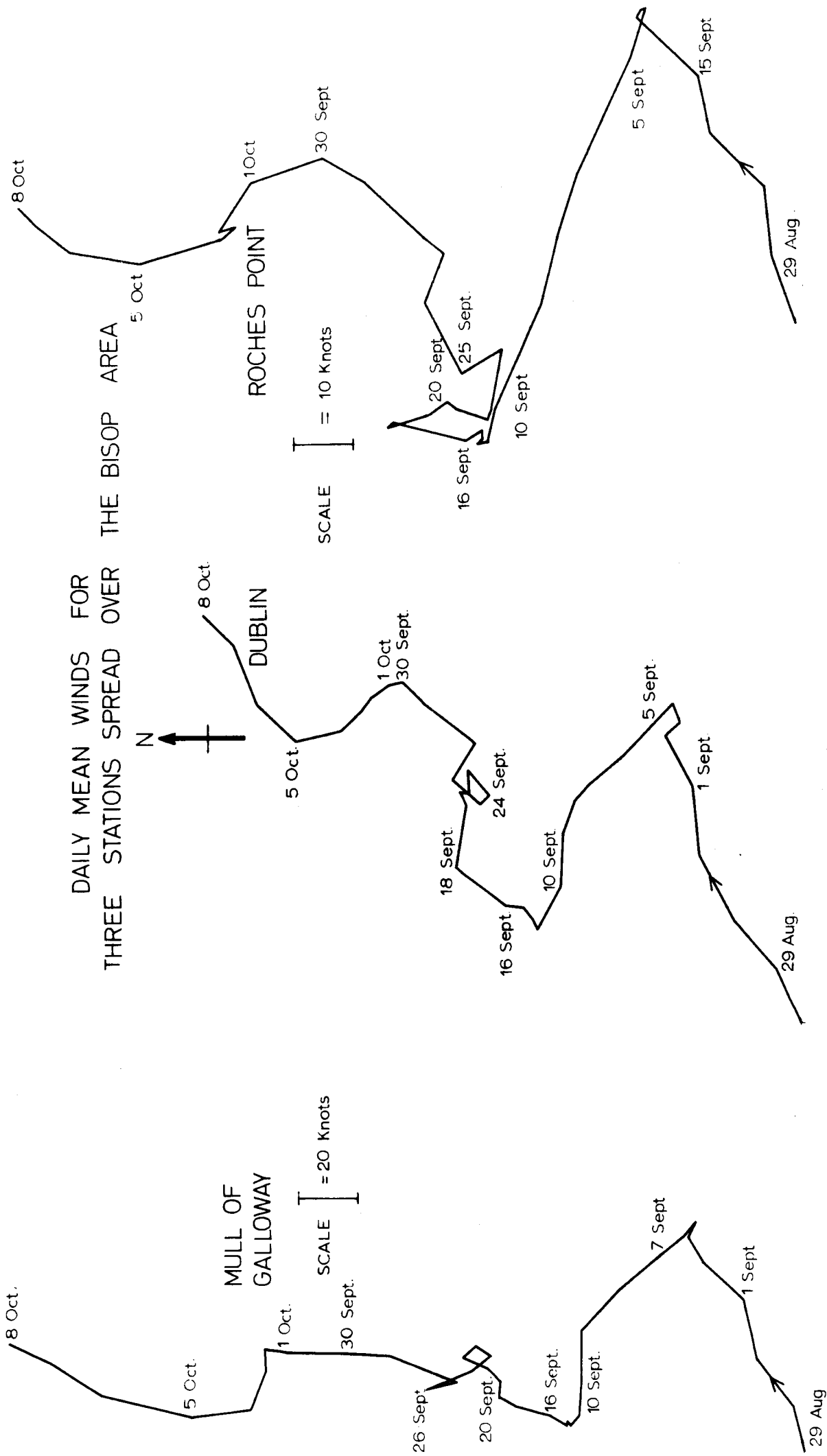
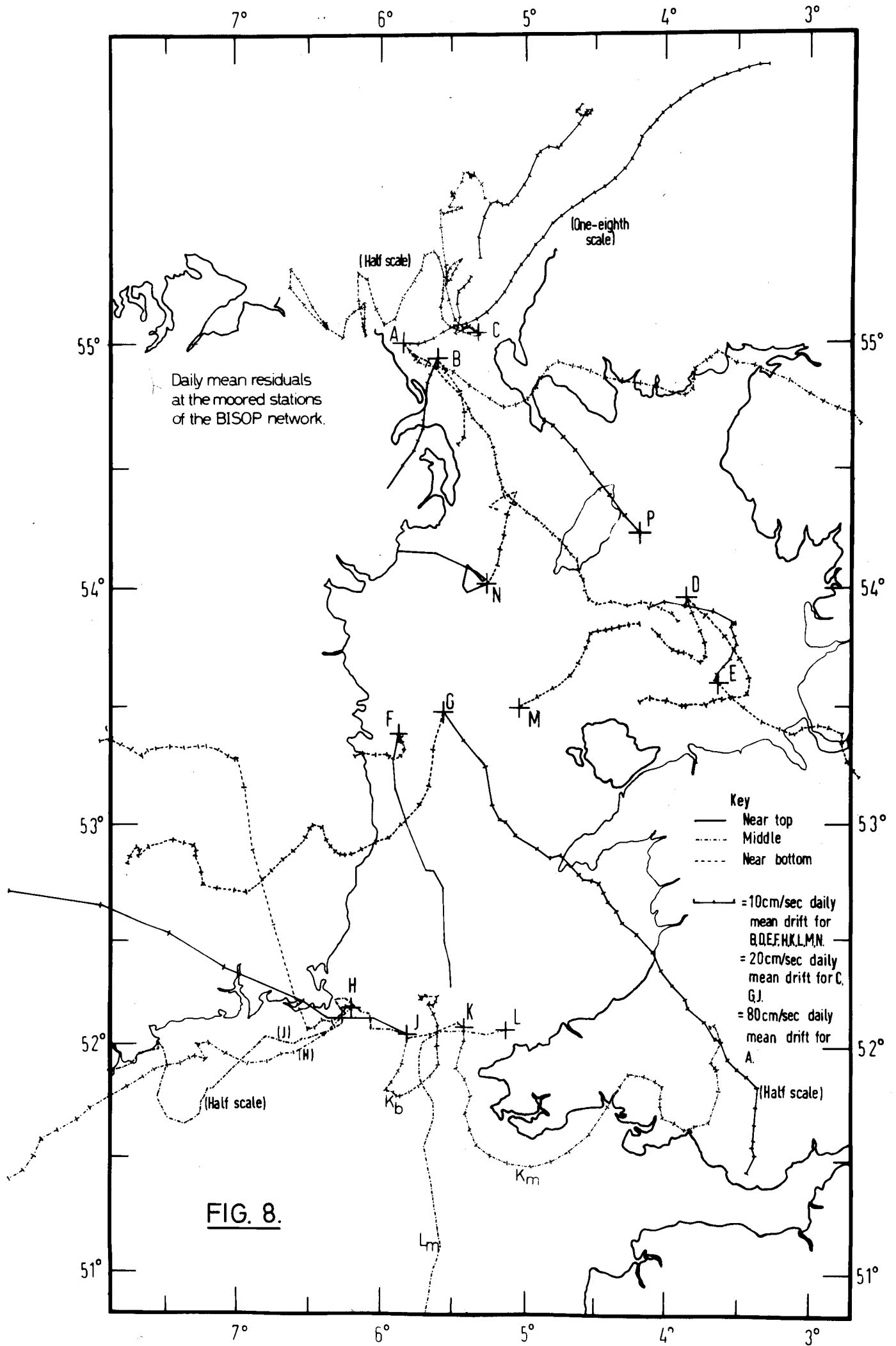


FIG. 7.



Comparison of estimates of daily mean drift computed from the two sets of BISOPS inter-calibration data recorded at station G.

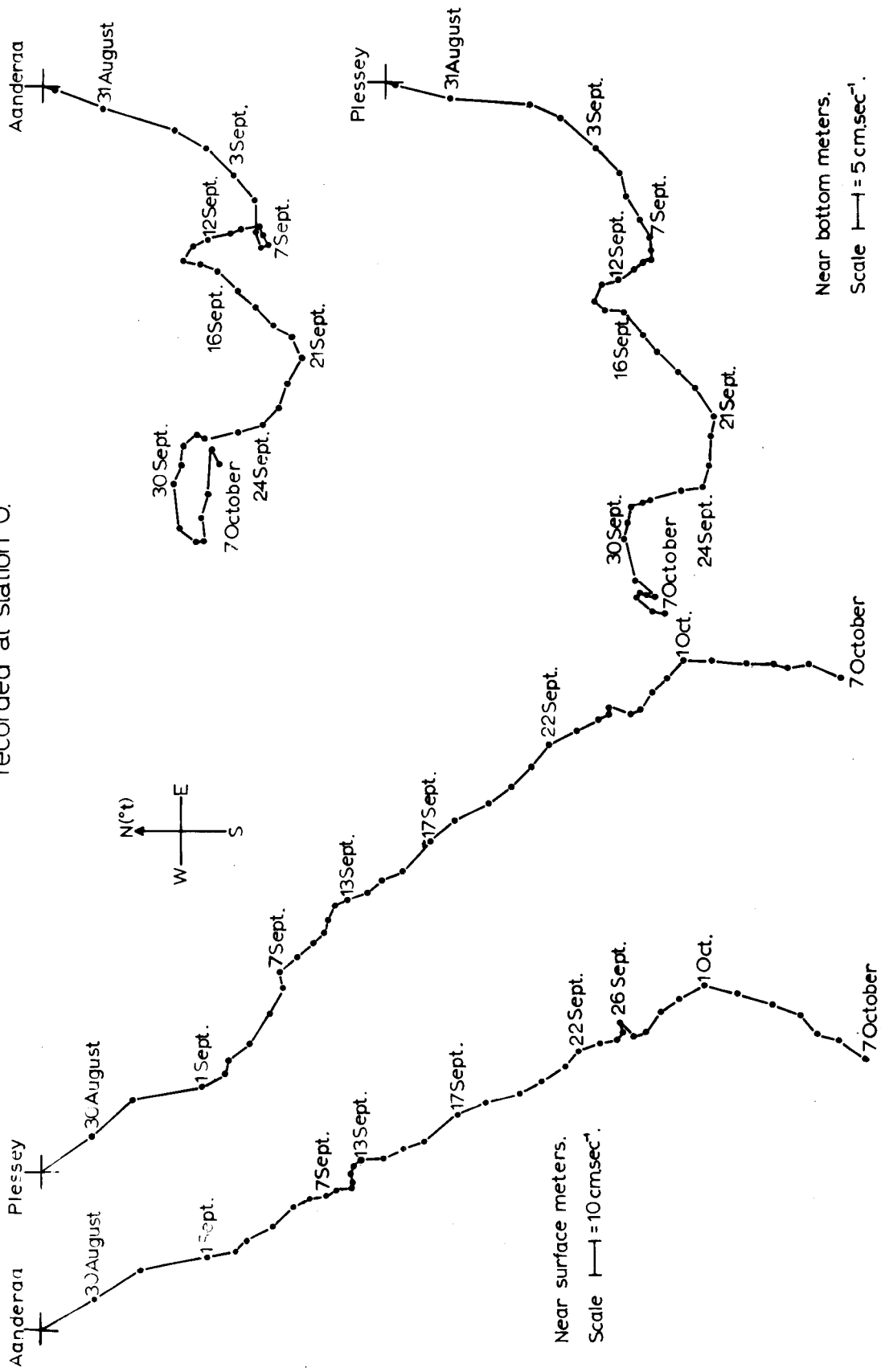
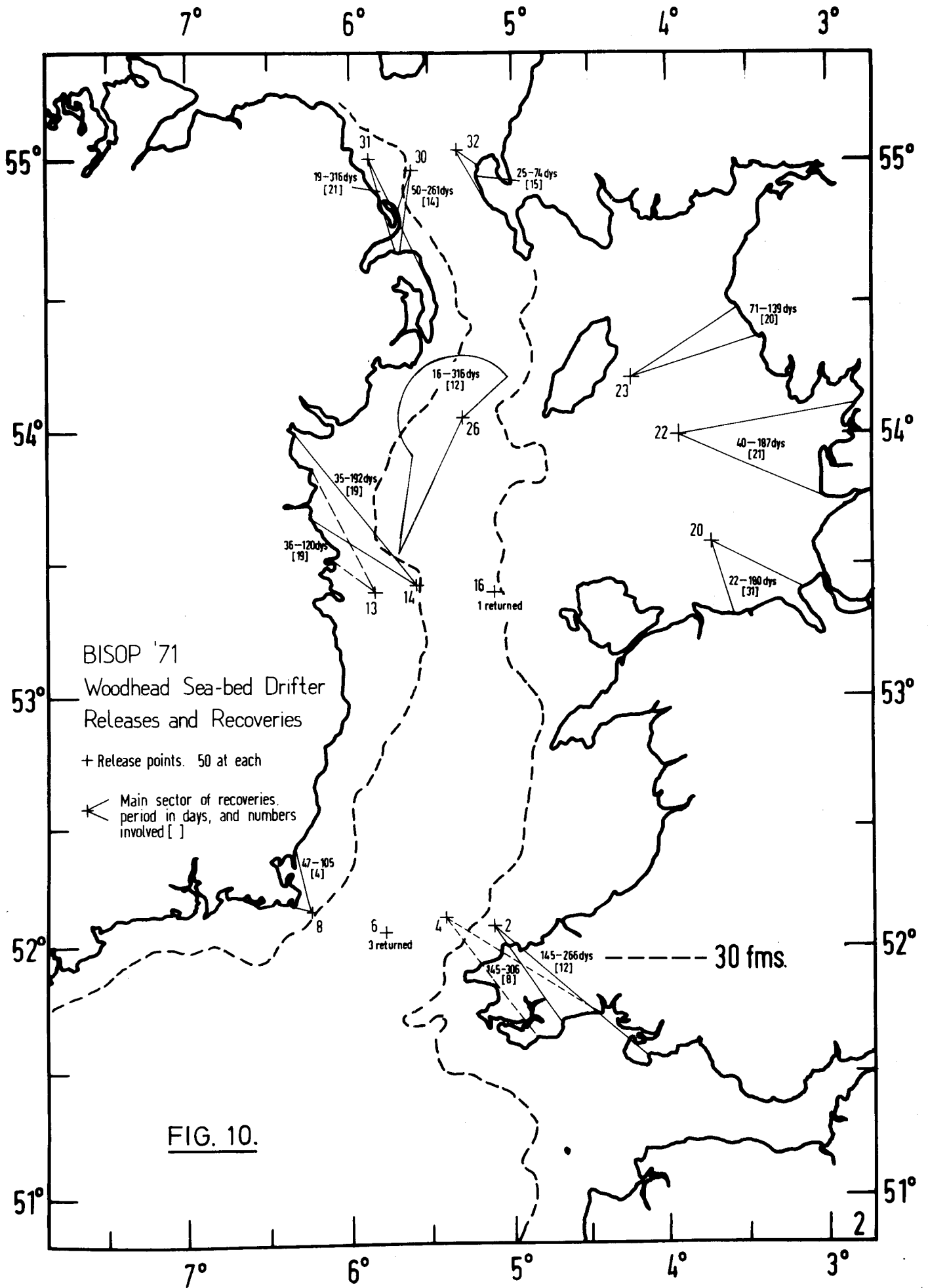


FIG. 9.



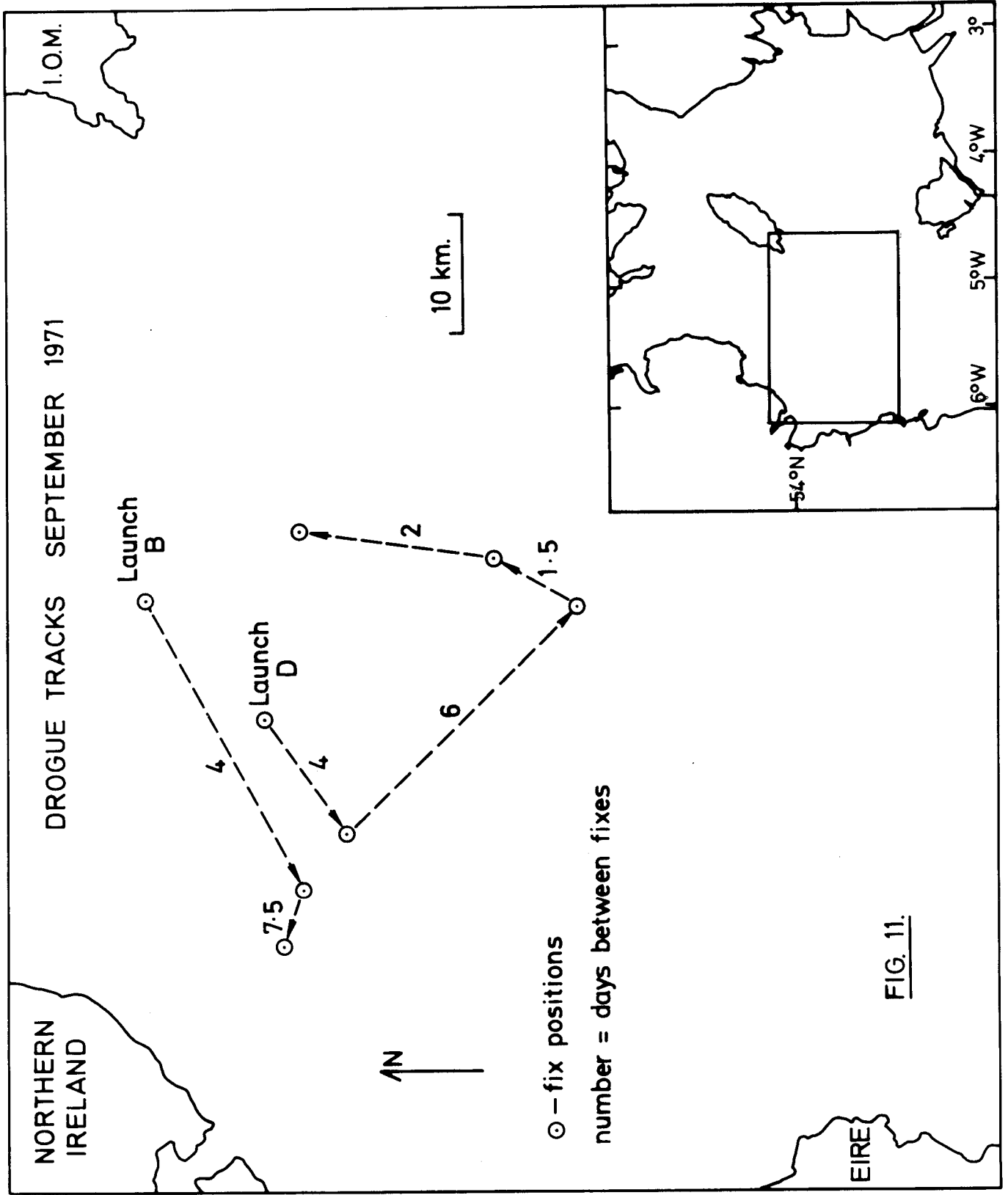


Table A

MAFF, LOWESTOFT, KELVIN HUGHES DIRECT RECORDING CURRENT METER DATA - STATION: 33; 55°N 5°38'W (BUOY B)
 PERIOD: 2005, 7 SEPT - 0821, 8 SEPT, 1971

Note: Neutral Buoyancy Rig Used. V - speed in cm/sec, D - direction, WA - wire angle

TIME OF OBSERVATION	0m			10m			10m (check meter)										
	V	D	WA	V	D	WA	V	D	WA								
2005-2030	86	232		98	235	20	90	158	40	97	177	75	146		86	150	
2100-	115	228	25	125	229		104	180	45	125	195	115	152		118	152	
2200-2218	120	232	35	124	235	30	117	198	60	116	198	112	165		107	154	
2300-	92	245	18	95	241	20	98	193	40	98	182	86	168		77	158	
0001-0026	40	244	5	00	-	0	43	180	5	00	-	47	194		20	150	
0100-0120	35	276	8	56	286	10	31	314	10	56	315	33	337		44	334	
0200-0224	92			101			75	310	30	93	315	80	330		100	321	
0300-0323	115	285		122		38	110	306	45	114	307	108	328		110	330	
0400-0419	128			125			120	315	40	115	314	120	340		120	342	
0500-0521	122			105			108	319	45	101	322	112	345		96	344	
0600-0619	65			54			55	330	15	47	323	55	345		40	335	
0700-0715	5						5	325	0	5	90	12	260		17	90	
0800-0821				16		0	36	153	5	42	155	32	132		40	129	

TIME OF OBSERVATION	20m				30m				40m					
	V	D	WA	UP D	V	D	WA	UP D	V	D	WA	UP D	WA	
2005-2030	90	146		96	175		96	175	96	175		90	175	
2100-	104	153		112	158		111	151	111	151	50	112	151	
2200-2218	115	165	60	115	162	55	117	158	111	156	55	115	162	60
2300-	96	167	50	85	152	55	86	151	91	143	55	65	139	55
0001-0026	40	180	5	26	138	0	32	173	21	138	5	35	176	5
0100-0120	26	326	10	51	326	22	< 8	338	42	328	18	< 8	346	12
0200-0224	71	322	35	105	319	45	72	329	94	320	40	71	330	50
0300-0323	107	326	50	107	326	50	97	330	105	330	60	97	329	60
0400-0419	108	332	55	112	334	53	110	338	112	339	60	110	389	60
0500-0521	97	334	52	100	336	55	100	339	101	339	60	96	339	60
0600-0619	52	339	25	45	336	15	50	340	46	339	20	50	353	30
0700-0715	5	?	0	7	105	0	5	115	7	114	0	5	130	0
0800-0821	37	151	7	43	145	5	33	156	40	144	10	31	151	12

STATION: 33, 55°N 5°38'W (BUOY B), PERIOD: 0900-2120, 8 SEPT, 1971,

Note: Neutral Buoyancy Rig Used, +ship beginning to swing

TIME OF OBSERVATION	Om			lOm			lOm (check meter)		
	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	
0900-0922	85 240 20	102 250 25	77 154 30	105 173 40	74 146	95 158			
1000-1031	98 240 30	128 255 25	93 163 40	95 205 35	68 110	103 162			
1100-	92 244 25	80 245 15	78 152 30	83 192 30	93 160	73 182			
1157-	65 237 20	58 226 10	57 172 20	57 173 18	58 154	55 162			
1300-1317	25 260 0	25 270 0	22 255 0	13 275 0	27 247	26 290			
1400-	64 282 12	78 268 20	12 272 10	78 300 30	39 326	66 320			
1457-	90 280 30	71 275	80 310 40	63 315 20	75 320	77 320			
1600-	66 282	110 287	77 311 20	105 308 45	30 313	105 326			
1700-	112 290 25	112 290	90 325 40	112 316 45	112 339	110 340			
1800-1820	74 286	62 289	65 336 25	66 330 22	71 334	57 345			
1900-	0	<8 335	<8	<8 40	28 30	0			
2000-2021		70 235 10	0 115 0	73 154 25	22 140	70 145			
2100-2120	86 240 20	98 240 25	82 165 35	95 167 45	85 142	110 143			

TIME OF OBSERVATION	20m			30m			40m		
	DOWN V D WA	UP V D WA		DOWN V D WA	UP V D WA		DOWN V D WA	UP V D WA	
0900-0922	68 117 35	100 145 50		56 94 35	98 140 50		80 94 30	86 135 45	
1000-1031	73 130 45	115 173 55		97 110 42	123 157 63		95 93 55	115 148 65	
1100-	73 129 35	82 166 50		107 128 55	93 161 55		112 134 61	95 155 60	
1157-	52 164 20	56 159 25		53 162 30	59 159 30		55 156 35	62 155 35	
1300-1317	10 270 0	10 280 0		5 298 0	4 50 0		3 280 0	5 0 0	
1400-	11 315 10	71 324 30		36 325 20	63 324 30		41 337 35	75 327 40	
1457-	76 315 40	59 310 18		84 315 45	63 305 33		67 315 45	84 310 45	
1600-	64 311 35	92 326 50		65 318 40	77 326 50		54 313 40	74 322 50	
1700-	85 337 50	107 337 55		86 342 55	97 339 55		77 340 65	100 341 60	
1800-1820	56 345 30	67 340 25		53 344 32	60 342 40		50 344 38	66 339 45	
1900-	<8	<8 340		<8	<8 265		<8	<8 140	
2000-2021	0 120 02	80 132 40		17+ 155 0	77 125 45		27 140	55 98 30	
2100-2120	78 145 45	90 147 50		78 144 45	87 143 55		80 145 50	84 145 55	

TIME OF OBSERVATION	50m				60m				70m			
	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA		
0900-0922	87 95 50	61 96 45	70 96 52		70 96 52							
1000-1031	87 117 57	104 140 60	88 129 55		88 129 55							
1100-	110 135 60	104 150 60	108 142 65		108 142 65							
1157-	54 157 35	57 155 35	52 157 35		52 157 35							
1300-1317	1 210 0	2 70 0	2 10 0		2 10 0							
1400-	21 305 10	70 330 40	7 290 10		7 290 10		58 330 40		37 320 35			
1457-	60 324 45	76 320 50	74 326 50		74 326 50							
1600-	52 315 45	67 317 50	55 320 55		55 320 55							
1700-	73 339 60	95 339 65	71 339 65		71 339 65							
1800-1820	52 340 45	57 340 45	50 340 45		50 340 45							
1900-	< 8	< 8 200	< 8 70		< 8 70		< 8 40		< 8 95			
2000-2021	5 130 7	40 95 20	32 125 10		32 125 10		35 105 20		20 115 17			
2100-2120	80 140 60	85 147 57	80 122 57		80 122 57							

STATION: 74, 52°03'N 5°49'W (BUOY J), PERIOD: 1630, 11 SEPT - 0834, 12 SEPT, 1971

Note: Neutral Buoyancy Rig Used.

TIME OF OBSERVATION	Om				10m				10m			
	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA
1630-	20 170 0		35 205 5		35 205 5	?	195	38	72 (at 1530)			
2120-2132	20 235 0	15 230	20 210 0		20 210 0	18	210					
2220-2233			25 335 5		25 335 5	45	345 10					
2320-2335			62 28 15		62 28 15	62	25 20					
0020-0035			80 30 20		80 30 20	77	30 20					
0120-0135			70 35 20		70 35 20	88	350 35					
0220-0240	75 305 7	67 310 10	72 8 16		72 8 16	62	13 15					
0320-0336	35 296 5	28 290 0	32 19 5		32 19 5	29	15 5					
0420-0438	7 280 0	14 245 0	4 192 0		4 192 0	14	191 0					
0520-0537	37 240 5	45 242 5	40 226 10		40 226 10	49	220 12					
0620-0638	65 242 8	67 241 10	57 214 15		57 214 15	62	212 17					
0720-0739	67 245 12	65 245 10	70 210 22		70 210 22	73	210 17					
0820-0834	55 242	53 248	60 208 15		60 208 15	56	205 15					

TIME OF OBSERVATION	20m			30m			40m								
	V	D	WA	V	D	WA	V	D	WA	V	D	WA			
1630-	45	232	10	?	222		48	250	17	232		52	250	22	232
2120-2132	13	215	0	11	218		5	140	0	8	145	12	85	0	8 118 0
2220-2233	31	340	10	43	350	10	28	350	10	26	5	32	355	12	23 5 10
2320-2335	70	32	30	77	30	35	70	32	30	80	30	65	32	35	72 32 40
0020-0035	82	35	30	83	33	35	78	35	35	87	35	80	32	35	86 35 45
0120-0135	76	20	25	97	350	45	78	20	30	98	0	77	30	30	62 25 35
0220-0240	61	12	20	66	5	21	46	12	25	62	8	37	18	25	50 14 32
0320-0336	27	25	5	25	29	5	27	17	8	27	15	22	9	8	24 10 7
0420-0438	15	175	0	18	195	3	23	205	5	30	234	26	232	5	32 240 5
0520-0537	55	232	12	58	224	18	56	234	20	64	229	60	240	22	64 235 26
0620-0638	56	225	20	61	220	20	58	220	25	69	220	62	226	30	72 220 32
0720-0739	65	220	25	64	214	25	64	222	25	65	218	67	218	35	74 218 32
0820-0834	60	207	20	50	203	20	52	210	22	50	208	50	212	25	57 215 26

* Increase in velocity and shift in direction at 30m. Confirmed as real by change in wire angle?

STATION: 74, 52°03'50.49"W (BUOY J), PERIOD: 0920-2232, 12 SEPT, 1971

Note: Neutral Buoyancy Rig Used

TIME OF OBSERVATION	Om				10m				10m (check meter)			
	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA	DOWN V D WA	UP V D WA		
0920-0930	34 235	21 213	34 186 0	22 182 0	34 186 0	22 182 0	34 186 0	22 182 0	34 186 0	22 182 0		
1020-1029	17 0	20 0	16 145 0	20 107 0	16 145 0	20 107 0	16 145 0	20 107 0	16 145 0	20 107 0		
1120-1130	42 311	52 302	38 41 8	51 30 10	38 41 8	51 30 10	38 41 8	51 30 10	38 41 8	51 30 10		
1220-1234	60 310	62 308	64 35 15	67 21 15	64 35 15	67 21 15	64 35 15	67 21 15	64 35 15	67 21 15		
1320-1335	57 306	55 304	60 21 12	54 21 10	60 21 12	54 21 10	60 21 12	54 21 10	60 21 12	54 21 10		
1420-1433	62 296 10	60 312 7	60 12 15	60 10 15	60 12 15	60 10 15	60 12 15	60 10 15	60 12 15	60 10 15		
1520-1535	42 312 0	38 300 0	35 21 5	31 6 5	35 21 5	31 6 5	35 21 5	31 6 5	35 21 5	31 6 5		
1620-1635	5 180 0	5 10 0	8 320 0	8 330 0	8 320 0	8 330 0	8 320 0	8 330 0	8 320 0	8 330 0		
1720-1738	17 200 0	47 225 0	7 208 0	35 205 10	7 208 0	35 205 10	7 208 0	35 205 10	7 208 0	35 205 10		
1820-1840	60 258 5	65 258 10	58 228 10	57 233 15	58 228 10	57 233 15	58 228 10	57 233 15	58 228 10	57 233 15		
1920-1940	87 240 10	88 255 17	78 235 22	79 233 28	78 235 22	79 233 28	78 235 22	79 233 28	78 235 22	79 233 28		
2020-	80 247 14	78 253	60 233 20	62 232 20	60 233 20	62 232 20	60 233 20	62 232 20	60 233 20	62 232 20		
2120-	58 259	54 253	53 215 12	47 218 10	53 215 12	47 218 10	53 215 12	47 218 10	53 215 12	47 218 10		
2220-2232	23 253	18 262	13 200 4	16 186 2	13 200 4	16 186 2	13 200 4	16 186 2	13 200 4	16 186 2		

TIME OF OBSERVATION	20m				30m				40m									
	DOWN		UP		DOWN		UP		DOWN		UP							
	V	WA	V	D	V	WA	V	D	V	WA	V	D	WA					
0920-0930	28	192	5	20	190	0	26	202	12	33	232	5	22	217	10	26	218	7
1020-1029	10	152	0	5	100	0	8	148	0	8	55	0	10	110	0	12	93	0
1120-1130	46	38	12	67	36	15	48	34	15	62	36	20	48	43	17	60	38	20
1220-1234	62	37	20	76	29	25	62	34	23	74	23	30	63	34	30	82	31	35
1320-1335	64	26	18	63	29	25	58	27	25	70	31	30	69	27	30	73	27	35
1420-1433	44	22	20	52	12	20	44	22	20	53	13	25	46	10	20	55	8	25
1520-1535	33	30	10	28	6	5	27	15	10	27	358	10	27	30	10	25	25	10
1620-1635	5	270	0	4	280	0	3	195	0	0	0	0	4	225	0	4	225	0
1720-1738	20	192	0	37	200	10	30	201	0	43	190	15	35	205	10	47	199	15
1820-1840	51	220	20	62	228	20	65	220	25	73	225	30	68	220	30	78	225	35
1920-1940	73	230	30	81	223	33	70	230	40	80	223	40	77	225	42	79	225	43
2020--	62	225	23	74	231	25	62	221	27	68	224	30	64	216	32	73	220	35
2120--	37	227	12	44	215	14	36	224	12	43	218	14	39	226	15	47	220	16
2220-2232	8	200	5	12	193	2	13	193	5	18	198	4	20	228	5	23	230	5

Table B

PORT PATRICK 54 50 N, 05 07 W.

O/S GRID REFERENCE OF GAUGE NW99765420

PORT PATRICK HARBOUR COMMISSIONERS' LEA GAUGE LOCATED AT WEST CORNER OF NEW HARBOUR.

LEVELS IN CENTIMETRES RELATIVE TO NEWLYN DATUM TAKEN FROM MARK AT GRID REFERENCE NW99765421 (+5.011 M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	35	102	151	175	163	127	66	5	-44	-66	-62	-29	17	72	120	151	151	127	84	29	-26	-62	-69	-56
29	-20	29	87	127	145	133	99	53	5	-32	-44	-38	-8	32	78	120	145	145	117	78	29	-14	-41	-50
30	-38	-5	38	84	114	127	111	84	44	2	-29	-38	-32	-8	29	72	108	133	136	120	90	44	5	-29
31	-41	-38	-14	17	56	90	108	105	87	59	23	-8	-29	-32	-17	17	53	96	130	145	142	120	84	38
1/ 9/71	5	-23	-26	-11	23	59	96	127	145	136	105	44	14	-26	-44	-41	-14	26	69	105	130	130	105	62
2	8	-44	-87	-96	-81	-38	20	78	127	151	145	114	66	11	-35	-59	-50	-17	35	90	142	172	169	136
3	75	5	-62	-108	-120	-96	-44	20	87	133	145	136	90	29	-35	-84	-99	-81	-32	32	105	157	187	181
4	136	66	-17	-90	-136	-139	-99	-35	44	114	157	169	136	78	5	-72	-117	-126	-96	-35	44	120	178	197
5	172	111	29	-62	-136	-172	-163	-111	-29	59	133	175	172	127	53	-26	-99	-136	-133	-87	-11	78	157	206
6	218	175	99	5	-93	-160	-184	-160	-90	11	102	163	191	169	108	26	-56	-123	-151	-130	-66	23	120	194
7	233	218	160	72	-26	-117	-172	-181	-136	-56	38	123	178	194	157	84	-2	-84	-142	-154	-117	-44	53	145
8	209	239	212	145	50	-50	-130	-172	-166	-111	-26	66	145	187	187	142	66	-20	-96	-139	-139	-93	-17	78
9	157	218	233	197	123	32	-62	-126	-154	-136	-78	5	90	157	191	178	123	47	-32	-99	-133	-123	-75	2
10	87	163	209	212	172	105	29	-59	-111	-126	-105	-50	26	108	166	191	169	117	41	-29	-87	-108	-96	-56
11	11	84	151	187	187	148	87	17	-50	-87	-96	-75	-23	41	111	157	175	151	105	41	-23	-69	-90	-84
12	-50	5	69	123	154	151	123	78	20	-29	-62	-72	-56	-20	35	93	136	151	133	96	41	-14	-56	-78
13	-78	-53	-14	38	84	120	130	117	87	44	2	-32	-53	-50	-20	26	75	114	136	133	105	62	17	-26
14	-56	-72	-62	-35	5	47	87	111	114	99	66	23	-14	-44	-50	-32	8	53	99	127	139	127	90	41
15	-11	-59	-84	-87	-62	-23	23	75	111	123	114	81	35	-14	-50	-66	-50	-11	41	96	139	154	142	102
16	47	-14	-72	-102	-102	-102	-29	29	87	127	142	123	81	26	-32	-72	-81	-56	-5	56	117	160	172	154
17	102	35	-35	-90	-114	-105	-66	-5	62	120	151	151	117	62	2	53	-81	-78	-41	20	93	150	172	154
18	151	87	8	-66	-111	-123	-96	-41	26	93	142	157	139	93	29	-38	-87	-105	-87	-32	41	117	175	200
19	181	127	50	-32	-96	-123	-120	-81	-14	59	120	157	160	120	62	-11	-75	-114	-114	-75	-11	72	145	187
20	197	160	90	8	-72	-126	-136	-108	-47	29	102	148	166	142	90	17	-53	-108	-126	-105	-47	32	114	172
21	197	178	123	44	-38	-105	-133	-120	-75	-5	75	136	169	169	127	62	-14	-81	-117	-114	-75	-5	75	148
22	191	194	151	84	-2	-75	-120	-130	-99	-38	38	108	157	175	148	93	23	-50	-99	-114	-105	-38	38	114
23	175	200	181	127	53	-26	-90	-111	-111	-81	-26	38	102	151	169	148	96	29	-38	-90	-102	-66	-2	69
24	136	175	181	145	78	5	-66	-105	-99	-53	14	84	145	178	175	133	69	-5	-69	-105	-102	-87	-38	29
25	96	148	172	157	111	47	-23	-78	-99	-90	-53	5	66	123	157	157	123	72	5	-50	-81	-84	-56	-2
26	59	120	157	166	142	93	35	-20	-53	-59	-41	-2	53	108	151	172	163	127	72	17	-29	-50	-41	-17
27	26	78	123	148	148	120	66	11	-38	-62	-66	-47	-8	35	84	117	130	120	87	44	-2	-38	-56	-53
28	-32	8	53	96	120	123	99	62	20	-17	-41	-44	-26	5	47	90	120	133	123	96	56	17	-20	-44
29	-47	-32	5	47	87	117	127	127	96	62	26	-5	-17	-17	5	41	78	111	133	133	114	81	38	-5
30	-41	-59	-53	-29	14	56	99	123	127	108	69	26	-11	-41	-47	-26	8	56	102	139	154	145	108	56
1/10/71	-5	-56	-87	-87	-59	-8	47	102	139	148	130	87	32	-20	-59	-66	-44	2	62	117	160	178	160	111
2	44	-26	-87	-117	-114	-75	-11	62	123	163	169	136	75	11	-56	-93	-93	-59	-2	69	136	181	194	166
3	102	23	-62	-126	-151	-133	-75	5	90	151	181	172	123	56	-20	-87	-114	-105	-53	17	102	172	206	206
4	154	78	-14	-105	-163	-178	-145	-75	17	99	157	184	163	102	23	-59	-123	-145	-123	-59	26	117	181	218
5	203	145	59	-38	-123	-172	-175	-123	-44	53	139	194	200	157	84	-5	-87	-139	-148	-111	-38	53	145	212
6	239	209	139	47	-53	-136	-166	-154	-93	-8	84	160	212	200	151	72	-20	-102	-145	-142	-93	-14	84	163
7	227	242	206	133	38	-59	-126	-151	-136	-69	17	108	175	209	191	130	47	-44	-117	-148	-139	-84	-2	87
8	172	221	224	178	105	17	-69	-117	-130	-96	-29	56	136	194	212	181	110	114	-56	-114	-133	-114	-59	20
9	102	166	206	203	160	90	8	-56	-96	-96	-62	-2	78	148	194	200	166	105	26	-44	-93	-105	-90	-41
10	26	96	154	187	178	139	81	17	-38	-62	-56	-20	35	105	166	200	203	169	114	50	-14	-59	-72	-56
11	-17	35	93	139	163	160	130	84	35	-11	-32	-8	35	-32	90	139	169	169	139	93	38	-17	-53	-69

PRINCE'S PIER 53 24 N, 02 59 W.

O/S GRID REFERENCE OF GAUGE SJ333615390589

MERSEY DOCK AND HARBOUR BOARD LEGE GAUGE LOCATED AT SOUTH-WEST CORNER OF NO. 2 BAGGAGE EXAMINATION HALL.

LEVELS IN CENTIMETRES RELATIVE TO NEWLYN DATUM TAKEN FROM MARK AT GRID REFERENCE SJ333643390570 (+7.273 M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	75	209	294	319	267	151	38	-74	-163	-199	-187	-111	20	154	261	301	273	176	57	-44	-129	-187	-196	-157
29	-50	84	191	252	258	203	112	14	-68	-132	-160	-141	-68	51	157	233	258	227	145	54	-29	-96	-138	-144
30	-108	-29	75	163	215	205	112	87	14	-56	-108	-132	-120	-65	23	115	188	227	218	166	87	11	-53	-108
31	-132	-120	-77	8	96	160	185	172	121	54	-13	-77	-129	-117	-53	44	133	200	233	218	157	75	2	
1/ 9/71	-71	-123	-138	-111	-32	72	172	233	249	212	139	57	-29	-99	-144	-151	-111	-13	102	206	264	258	182	66
2	-44	-141	-221	-254	-227	-135	5	139	240	282	261	154	38	-68	-166	-224	-224	-160	-4	154	279	346	334	215
3	69	-62	-187	-285	-321	-288	-154	48	206	310	337	273	127	-13	-151	-260	-324	-312	-181	20	212	346	413	361
4	215	17	-132	-263	-358	-376	-279	-80	145	304	392	374	240	75	-80	-224	-346	-404	-333	-141	115	304	429	450
5	331	139	-38	-199	-340	-440	-443	-300	-41	206	361	435	374	203	-141	-291	-410	-437	-327	-74	203	389	499	499
6	465	297	90	-93	-257	-401	-486	-443	-242	51	279	422	459	349	148	-32	-202	-352	-458	-449	-279	14	273	444
7	523	444	249	44	-141	-306	-443	-501	-416	-169	133	334	453	444	291	87	-93	-257	-397	-477	-419	-205	102	331
8	471	514	389	185	-13	-184	-337	-455	-483	-349	-71	203	374	459	401	224	35	-135	-285	-407	-449	-352	-114	169
9	355	474	471	322	124	-56	-215	-349	-437	-413	-242	20	246	383	425	334	157	-10	-163	-294	-388	-401	-273	-44
10	197	352	435	404	252	78	-77	-218	-324	-373	-324	-148	84	255	355	374	276	121	-26	-154	-260	-321	-309	-193
11	2	197	322	374	328	188	44	-84	-199	-279	-294	-230	-74	108	243	313	316	224	99	-23	-129	-215	-257	-245
12	-151	8	151	255	294	261	151	41	-62	-151	-205	-215	-169	-53	84	191	249	252	191	93	2	-87	-160	-202
13	-205	-160	-47	81	182	230	227	163	75	-10	-87	-144	-163	-144	-80	23	121	197	227	209	142	60	-23	-99
14	-166	-199	-187	-117	-4	108	188	221	200	127	44	-35	-105	-157	-166	-132	-47	56	169	240	252	209	108	17
15	-77	-166	-227	-239	-193	-74	69	182	246	246	182	75	-26	-120	-190	-218	-190	-93	48	176	267	294	249	133
16	17	-99	-199	-276	-294	-236	-93	84	212	288	288	200	75	-47	-157	-236	-263	-224	-96	72	215	313	340	273
17	136	-1	-132	-242	-315	-321	-227	-44	148	273	337	313	188	44	-90	-205	-285	-291	-193	-20	166	297	377	371
18	230	72	-74	-205	-306	-352	-318	-157	60	230	340	361	264	108	-41	-175	-285	-340	-300	-154	51	221	352	404
19	328	169	11	-135	-263	-355	-373	-266	-65	157	304	380	352	197	35	-117	-248	-340	-361	-266	-77	145	307	401
20	398	264	93	-65	-209	-321	-388	-346	-175	63	246	368	395	288	108	-44	-193	-315	-382	-349	-187	35	233	365
21	416	337	166	2	-148	-279	-370	-385	-269	-50	179	325	395	358	200	32	-123	-257	-352	-373	-269	-71	151	310
22	401	389	249	78	-74	-218	-327	-379	-303	-151	78	255	365	389	276	105	-50	-190	-303	-361	-324	-163	57	237
23	361	401	307	139	-10	-151	-269	-343	-333	-196	11	209	337	392	331	179	23	-117	-239	-315	-315	-209	-29	166
24	310	374	343	203	54	-87	-209	-300	-333	-266	-99	108	258	343	340	227	81	-56	-178	-273	-303	-260	-126	60
25	218	316	337	255	118	-16	-138	-233	-297	-282	-172	-1	163	273	313	270	142	14	-105	-205	-263	-263	-184	-44
26	121	237	291	273	176	54	-56	-157	-224	-239	-190	-71	87	212	285	297	227	108	5	-90	-163	-196	-175	-96
27	35	151	240	267	224	124	26	-68	-144	-187	-190	-141	-41	78	176	230	230	169	78	-10	-90	-151	-175	-157
28	-84	20	118	185	203	176	105	29	-44	-105	-144	-151	-114	-32	63	148	200	209	166	96	17	-56	-120	-157
29	-151	-106	-32	63	139	185	185	154	90	26	-41	-93	-120	-114	-68	8	102	182	215	209	154	72	-7	-90
30	-151	-178	-166	-105	-7	99	182	221	212	148	60	-32	-114	-175	-196	-169	-77	57	179	261	282	230	121	14
1/10/71	-99	-190	-254	-257	-196	-68	87	206	279	194	75	-41	-148	-230	-260	-227	-102	63	209	325	349	264	118	
2	-20	-148	-260	-330	-337	-236	-47	127	261	361	343	197	54	-87	-209	-306	-346	-282	-99	118	270	407	404	273
3	99	-56	-205	-324	-407	-388	-236	5	206	355	410	340	176	14	-141	-276	-376	-397	-273	-35	215	383	474	429
4	252	54	-117	-276	-407	-480	-425	-212	75	288	410	438	304	118	-53	-212	-352	-440	-260	32	276	441	499	
5	389	194	-4	-178	-333	-361	-495	-388	-111	176	361	462	429	261	72	-108	-266	-407	-480	-419	-184	130	349	493
6	499	352	145	-47	-218	-367	-477	-486	-318	-10	252	413	477	395	209	73	-151	-303	-428	-474	-358	-84	206	401
7	508	474	297	96	-84	-242	-376	-455	-416	-196	90	297	429	447	328	139	-38	-196	-333	-434	-428	-263	14	258
8	410	474	401	224	44	-123	-263	-370	-404	-297	-74	176	343	432	407	267	96	-59	-202	-318	-391	-349	-172	69
9	258	386	416	328	157	2	-135	-248	-321	-309	-193	11	200	331	386	343	206	60	-74	-196	-291	-318	-254	-99
10	102	246	337	346	255	108	-13	-126	-215	-254	-224	-108	57	206	310	349	304	185	60	-44	-138	-205	-230	-178
11	-68	81	206	276	282	218	108	8	-77	-138	-169	-151	-77	44	163	243	270	240	154	57	-32	-111	-175	-202

NEW BRIGHTON

53 26 N, 03 02 W.

O/S GRID REFERENCE OF GAUGE SJ31479428

I.C.O.T. LEGE GAUGE LOCATED AT END OF PIER.

LEVELS IN CENTIMETRES RELATIVE TO NEWLYN DATUM TAKEN FROM MARK AT GRID REFERENCE SJ31219410 (+6.95 M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	105	224	291	297	237	124	8	-96	-172	-199	-172	-87	51	166	264	285	243	145	35	-65	-144	-193	-196	-132
29	-20	105	200	243	237	176	84	-7	-87	-141	-160	-126	-41	75	169	233	243	203	118	32	-47	-111	-144	-138
30	-93	-4	96	172	209	197	142	69	-4	-68	-117	-132	-111	-47	44	130	191	221	197	142	66	-10	-71	-117
31	-132	-114	-59	26	108	163	179	154	102	38	-29	-87	-123	-132	-102	-26	66	151	206	224	200	133	57	-16
1/ 9/71	-90	-135	-138	-102	-7	93	182	227	233	188	115	32	-50	-117	-154	-144	-87	23	133	221	252	224	139	26
2	-74	-169	-236	-254	-205	-96	57	182	252	273	224	124	11	-96	-184	-230	-215	-120	35	185	294	334	291	169
3	32	-102	-215	-297	-321	-260	-108	87	227	310	313	224	87	-50	-175	-279	-330	-288	-144	63	243	355	389	313
4	154	-7	-151	-276	-364	-370	-269	-65	160	307	374	346	218	51	-102	-239	-352	-404	-318	-117	133	313	419	413
5	294	105	-65																					
6																								
7																								
8	474	480	352	142	-38	-202	-349	-455	-455	-318	-35	230	383	438	371	194	8	-157	-300	-474	-401	-163	136	349
9	377	465	435	282	90	-80	-233	-361	-428	-391	-199	63	267	330	398	301	127	-35	-184	-309	-394	-382	-239	11
10	237	368	419	365	212	44	-105	-236	-337	-370	-294	-105	118	270	349	343	240	90	-53	-178	-276	-324	-288	-148
11	51	227	325	352	288	154	17	-111	-215	-282	-285	-199	-35	139	255	307	285	188	66	-50	-154	-230	-257	-221
12	-111	41	176	258	279	227	124	17	-84	-166	-212	-209	-141	-23	105	200	246	237	172	81	-10	-96	-166	-193
13	-166	-99	-13	99	191	230	200	145	63	-20	-96	-144	-163	-135	-62	41	133	197	218	188	121	41	-41	-117
14	-175	-196	-172	-90	23	127	194	209	179	108	29	-50	-117	-160	-163	-114	-20	93	185	237	237	182	90	-7
15	-99	-178	-233	-230	-160	-35	102	197	240	224	148	54	-47	-135	-199	-215	-166	-56	84	203	273	279	212	99
16	-16	-135	-221	-282	-282	-190	-35	130	237	285	255	160	35	-80	-181	-251	-257	-184	-41	127	255	322	313	215
17	84	-47	-172	-269	-324	-294	-163	26	191	294	322	267	136	-1	-132	-236	-294	-269	-151	32	209	325	371	322
18	188	38	-102	-224	-315	-349	-276	-102	108	261	340	334	227	75	-74	-205	-306	-340	-263	-99	112	273	371	377
19	285	130	-23	-163	-282	-364	-352	-221	-4	203	328	371	310	157	-4	-151	-273	-352	-346	-218	-10	203	340	401
20	355	215	54	-99	-230	-337	-382	-309	-114	118	285	374	365	246	75	-84	-224	-337	-379	-309	-123	108	279	389
21	389	285	121	-35	-175	-300	-376	-361	-218	8	224	346	386	316	157	-7	-157	-282	-361	-352	-218	-7	206	355
22	395	346	200	41	-111	-239	-340	-373	-288	-96	130	285	368	352	233	66	-84	-218	-321	-358	-282	-108	118	285
23	377	377	276	115	-32	-166	-279	-343	-312	-169	44	237	343	374	304	151	-4	-141	-251	-318	-300	-175	14	212
24	319	361	310	172	29	-111	-227	-309	-327	-242	-62	139	273	337	313	197	51	-80	-196	-282	-303	-236	-90	108
25	240	316	313	224	90	-38	-157	-251	-297	-263	-144	29	185	282	297	240	118	-10	-126	-218	-266	-251	-157	-4
26	145	249	282	249	151	35	-77	-169	-227	-236	-169	-44	112	224	282	276	200	87	-16	-108	-172	-196	-160	-62
27	60	176	240	252	200	105	5	-84	-154	-193	-187	-123	-20	99	185	224	212	145	60	-29	-105	-160	-178	-141
28	-59	41	133	185	191	154	87	11	-56	-114	-151	-144	-105	-23	72	151	197	200	157	87	8	-65	-126	-157
29	-151	-99	-23	72	142	179	176	142	84	17	-47	-96	-120	-111	-62	20	112	182	209	194	139	60	-20	-99
30	-154	-178	-157	-90	11	112	185	212	197	136	48	-41	-123	-178	-196	-154	-50	81	191	258	267	206	102	-10
1/10/71	-111	-199	-251	-251	-172	-35	112	218	273	258	176	60	-56	-160	-236	-260	-205	-71	105	240	322	325	243	99
2	-32	-160	-266	-330	-321	-209	-20	166	285	337	304	185	38	-99	-218	-312	-343	-254	-65	157	310	395	377	249
3	84	-74	-215	-330	-401	-370	-209	32	233	355	392	319	163	-1	-154	-285	-379	-385	-245	-1	240	486	456	389
4	221	35	-129	-276	-407	-471	-407	-190	99	294	404	407	294	108	-65	-218	-355	-452	-422	-233	57	288	435	474
5	371	172	-20	-184	-333	-455	-480	-370	-90	194	358	444	407	246	54	-120	-276	-413	-477	-401	-157	160	358	480
6	474	331	127	-59	-221	-364	-461	-468	-300	5	258	407	456	374	185	-1	-172	-315	-437	-468	-346	-62	221	407
7	489	441	276	81	-99	-248	-379	-449	-404	-181	102	310	419	429	310	121	-53	-209	-343	-431	-425	-263	14	258
8	398	453	383	209	29	-129	-263	-373	-404	-297	-74	169	331	407	383	255	81	-71	-212	-324	-394	-349	-172	69
9	261	371	395	310	151	-1	-138	-251	-321	-193	2	197	319	365	322	194	48	-87	-294	-294	-321	-260	-102	69
10	93	240	322	325	105	-16	-129	-215	-224	-114	4	48	197	294	331	288	179	54	-56	-144	-215	-233	-184	69
11	-74	72	194	261	270	212	112	11	-77	-141	-172	-157	-87	32	148	227	255	230	157	60	-32	-114	-175	-202

HILBRE ISLAND

53 23 N, 03 13 W.

O/S GRID REFERENCE OF GAUGE SJ18368821

MERSEY DOCK AND HARBOUR BOARD LEGE GAUGE LOCATED AT SOUTH-WEST CORNER OF OLD LIFEBOAT HOUSE.

LEVELS IN CENTIMETRES RELATIVE TO NEWLYN DATUM TAKEN FROM MARK AT GRID REFERENCE SJ18368822 (+9.220 M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	93	215	288	294	243	145	26	-84	-160	-187	-166	-87	44	169	258	282	243	154	48	-53	-132	-178	-178	-126
29	-23	99	197	246	237	182	99	2	-74	-129	-148	-117	-35	69	169	230	237	203	130	44	-35	-99	-126	-126
30	-87	-4	93	169	203	194	148	81	5	-62	-108	-126	-102	-44	41	127	188	215	200	145	75	2	-59	-102
31	-120	-105	-53	29	105	160	176	154	108	48	-23	-77	-114	-123	-90	-16	66	151	203	221	194	133	60	-7
1/ 9/71	-84	-120	-123	-84	2	102	188	230	230	185	115	29	-53	-114	-141	-132	-71	29	142	224	255	224	142	48
2	-68	-157	-221	-233	-187	-77	66	191	261	270	224	136	23	-90	-175	-212	-196	-102	44	197	304	334	288	191
3	48	-90	-209	-282	-294	-233	-87	87	240	313	304	224	102	-44	-175	-269	-300	-254	-126	66	255	361	389	304
4	182	14	-144	-263	-340	-340	-251	-62	154	310	374	340	221	63	-102	-245	-337	-364	-285	-99	130	328	425	407
5	313	139	-53	-215	-340	-413	-397	-260	-20	221	371	407	337	185	5	-169	-306	-391	-391	-269	-32	227	416	480
6	432	291	90	-114	-273	-388	-449	-394	-202	66	301	422	422	316	136	-62	-233	-355	-425	-391	-221	54	319	465
7	499	419	246	32	-163	-318	-422	-461	-361	-132	145	355	444	404	267	75	-126	-282	-391	-437	-355	-148	136	365
8	480	480	371	185	-26	-205	-343	-434	-434	-297	-44	221	389	435	361	209	17	-160	-300	-388	-401	-291	-59	197
9	380	468	432	304	115	-80	-239	-352	-407	-355	-184	60	276	389	392	294	139	-35	-190	-306	-367	-337	-202	8
10	215	368	416	368	240	66	-99	-230	-315	-337	-263	-93	121	285	355	334	237	99	-50	-178	-263	-297	-254	-126
11	29	215	325	349	291	176	32	-102	-209	-263	-260	-178	-29	139	258	304	279	194	81	-41	-141	-215	-236	-199
12	-117	26	166	252	273	230	142	32	-71	-151	-196	-193	-129	-20	108	200	240	227	169	84	-10	-96	-160	-190
13	-187	-129	-20	93	182	218	206	148	69	-16	-93	-138	-151	-120	-50	48	139	200	215	188	127	48	-35	-111
14	-163	-184	-160	-87	17	121	188	206	176	115	38	-47	-111	-151	-148	-102	-13	96	188	237	230	179	99	2
15	-87	-169	-218	-215	-154	-38	93	194	237	218	154	60	-44	-132	-187	-196	-148	-44	90	206	273	212	115	2
16	2	-114	-212	-266	-260	-184	-44	118	237	279	252	166	48	-74	-175	-233	-233	-166	-32	127	261	322	310	227
17	112	-32	-160	-254	-300	-273	-160	11	185	291	316	258	142	2	-132	-230	-273	-239	-129	38	212	334	368	316
18	212	57	-93	-215	-300	-321	-254	-96	102	267	340	325	227	78	-77	-205	-291	-309	-239	-84	112	282	374	371
19	288	142	-23	-175	-285	-343	-318	-199	5	209	337	365	297	160	-10	-163	-273	-330	-309	-193	-1	206	352	398
20	352	227	60	-108	-239	-327	-352	-276	-102	118	294	374	349	233	75	-96	-236	-321	-346	-276	-108	105	294	389
21	386	291	139	-35	-187	-297	-352	-324	-193	17	227	355	380	304	160	-13	-169	-279	-337	-312	-193	5	215	355
22	395	340	209	41	-123	-248	-327	-340	-254	-71	142	304	371	340	224	66	-99	-227	-306	-321	-245	-80	130	301
23	380	371	273	124	-38	-178	-276	-318	-276	-138	60	243	352	365	285	148	-7	-148	-251	-294	-263	-154	29	209
24	322	358	304	185	32	-111	-227	-291	-294	-209	-47	142	285	337	301	197	57	-80	-196	-266	-276	-209	-71	99
25	240	316	310	227	102	-35	-157	-239	-276	-236	-126	35	188	279	294	233	124	-4	-123	-209	-248	-227	-138	2
26	142	246	282	249	163	48	-68	-160	-215	-215	-154	-35	112	230	282	273	200	102	-4	-99	-163	-178	-144	-56
27	60	172	240	249	203	121	20	-74	-141	-178	-169	-114	-13	102	188	224	209	151	69	-20	-96	-148	-160	-123
28	-56	41	130	182	191	160	99	23	-47	-105	-138	-132	-87	-4	84	157	197	194	151	84	11	-62	-117	-138
29	-129	-90	-16	78	145	179	176	142	87	17	-44	-90	-108	-96	-44	35	124	188	209	194	142	66	-16	-93
30	-144	-160	-138	-74	26	121	191	215	194	136	51	-38	-120	-166	-172	-126	-29	96	209	264	261	200	108	5
1/10/71	-108	-193	-233	-224	-148	-20	121	233	276	252	182	66	-50	-157	-221	-233	-178	-50	115	252	325	322	243	139
2	-20	-163	-254	-306	-288	-187	-13	166	297	337	301	188	51	-99	-218	-294	-303	-224	-50	163	325	401	374	276
3	108	-65	-212	-315	-370	-333	-187	32	240	368	392	322	179	5	-166	-285	-358	-343	-202	23	258	410	456	380
4	246	44	-138	-291	-391	-440	-370	-166	102	313	416	398	279	96	-96	-260	-370	-425	-364	-166	93	331	465	462
5	361	179	-35	-215	-352	-443	-449	-312	-56	215	386	450	389	237	32	-163	-315	-410	-437	-333	-96	188	407	499
6	465	334	130	-74	-251	-373	-449	-422	-242	35	288	435	453	355	182	-26	-205	-333	-416	-413	-266	-7	267	444
7	499	441	294	84	-108	-260	-367	-419	-346	-138	118	334	435	419	304	118	-74	-233	-346	-407	-361	-193	60	294
8	413	453	380	227	38	-135	-266	-349	-355	-254	-47	185	349	416	377	249	84	-90	-227	-318	-355	-291	-123	93
9	264	383	398	323	169	8	-135	-242	-294	-273	-169	20	209	331	371	316	203	54	-90	-205	-276	-285	-218	-77
10	90	246	328	328	252	133	2	-117	-196	-230	-199	-96	60	209	304	331	282	182	63	-53	-141	-196	-209	-157
11	-65	81	197	267	273	221	130	26	-65	-126	-154	-135	-62	57	163	237	258	227	154	63	-29	-108	-163	-184

HOLYHEAD

53 18 N, 04 37 W.

G/S GRID REFERENCE OF GAUGE SH24798221

BRITISH RAIL LEA GAUGE LOCATED AT SOUTH END OF INNER HARBOUR.

LEVELS IN CENTIMETRES RELATIVE TO NEWLYN DATUM TAKEN FROM MARK AT GRID REFERENCE SH24798221 (+4.7±3 M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	108	153	172	156	105	31	-36	-87	-115	-97	-48	22	89	141	166	159	117	59	- 8	-66	-109	-109	-78	-23
29	38	92	129	141	138	83	28	-30	-69	-84	-66	-23	31	86	123	141	141	108	59	7	-45	-75	-84	-66
30	-17	34	77	105	114	102	65	19	-26	-60	-75	-69	-36	13	62	102	123	129	111	74	25	-23	-60	-75
31	-72	-42	- 2	38	71	92	98	80	44	1	-39	-66	-75	-60	-20	25	74	111	132	141	144	111	47	-26
1/ 9/71	-72	-78	-57	- 8	44	86	123	135	129	83	25	-30	-72	-94	-84	-42	13	74	117	147	141	105	38	-33
2	-103	-145	-158	-121	-57	19	86	135	156	147	95	22	-51	-109	-130	-112	-51	28	102	166	196	190	129	41
3	-60	-142	-188	-194	-139	-54	38	114	169	199	156	80	1	-97	-179	-194	-158	-72	34	135	202	233	202	123
4	16	-94	-182	-234	-225	-158	-54	59	144	202	205	159	47	-69	-170	-231	-237	-173	-60	62	166	233	251	202
5	92	-39	-161	-249	-286	-252	-145	-20	92	190	233	208	135	1	-121	-219	-264	-243	-139	- 5	123	227	278	275
6	187	56	-84	-206	-283	-304	-237	-112	13	150	223	251	199	92	-45	-173	-258	-286	-237	-109	31	166	257	300
7	269	162	16	-121	-240	-304	-298	-206	-84	80	184	245	248	172	50	-90	-209	-279	-286	-203	-72	77	196	278
8	300	245	126	-14	-148	-249	-295	-267	-173	- 8	111	202	245	227	141	13	-109	-212	-264	-252	-161	-26	105	211
9	275	281	184	98	-36	-151	-234	-261	-225	-97	25	135	205	233	193	102	-14	-124	-203	-237	-206	-109	7	123
10	205	251	242	172	68	-51	-145	-203	-212	-42	62	144	199	208	172	89	-11	-100	-164	-185	-158	-72	25	114
11	178	214	199	141	56	-36										89	-11	-100	-164	-185	-158	-72	25	132
12																								
13																								
14	-118	-94	-48	7	56	98	117	114	86	31	-20	-66	-90	-87	-17	31	80	111	129	123	92	41	-17	-72
15	-118	-145	-133	-87	-23	41	92	129	135	102	44	-20	-78	-115	-124	-78	-11	59	117	156	196	138	80	- 2
16	-84	-145	-176	-164	-103	-23	56	117	150	153	105	31	-48	-112	-145	-139	-84	- 5	80	147	187	190	147	68
17	-26	-112	-176	-194	-164	-84	7	92	150	178	159	89	1	-87	-148	-170	-139	-60	38	126	193	223	208	141
18	41	-60	-145	-200	-203	-142	-45	53	135	187	193	141	50	-48	-133	-185	-191	-133	-36	68	156	214	230	190
19	98	-11	-118	-191	-222	-191	-103	10	105	178	208	181	102	-11	-109	-185	-212	-185	-97	13	117	193	233	217
20	144	38	-75	-167	-222	-225	-151	-45	68	156	205	208	147	44	-69	-161	-215	-219	-151	-48	65	159	220	233
21	187	92	-23	-127	-200	-228	-191	-97	22	126	193	220	187	102	-14	-112	-188	-215	-185	-94	16	120	196	230
22	214	141	34	-75	-167	-212	-209	-139	-30	77	159	211	211	147	47	-57	-148	-197	-197	-136	-36	74	162	220
23	230	184	95	-14	-109	-173	-200	-164	-69	38	129	184	217	184	102	- 5	-100	-164	-185	-154	-69	31	123	184
24	211	187	120	22	-69	-145	-185	-179	-112	-14	80	153	193	190	138	50	-45	-121	-164	-167	-112	-26	65	135
25	181	190	150	77	- 8	-87	-142	-164	-136	-63	22	102	156	175	156	92	10	-69	-121	-145	-127	-66	13	89
26	144	169	162	120	50	-20	-81	-118	-118	-75	- 5	68	126	166	172	144	86	22	-42	-84	-97	-75	-20	44
27	102	141	150	135	89	31	-30	-78	-103	-103	-69	-11	44	92	120	126	102	56	1	-48	-84	-94	-75	-33
28	22	65	95	111	105	77	34	-11	-51	-75	-78	-51	- 8	41	83	111	123	108	74	25	-23	-63	-84	-81
29	-57	-14	31	71	98	111	108	77	34	- 8	-39	-60	-57	-23	22	71	105	126	129	105	56	1	-51	-94
30	-106	-90	-45	4	56	95	123	126	98	50	-11	-66	-103	-106	-78	-20	47	114	147	162	141	86	13	-60
1/10/71	-121	-151	-145	-90	-17	56	114	153	162	126	62	-14	-87	-133	-142	-106	-30	56	135	184	202	169	86	-11
2	-106	-173	-203	-179	-100	- 2	86	156	193	187	129	38	-60	-142	-191	-185	-118	-11	95	184	233	236	175	65
3	-54	-158	-225	-243	-191	-87	34	126	196	230	199	117	1	-109	-197	-234	-203	-106	22	141	233	275	254	156
4	25	-106	-219	-283	-283	-197	-69	56	159	230	242	187	80	-51	-170	-249	-273	-212	-87	53	178	260	291	242
5	126	-23	-161	-261	-301	-270	-158	-20	105	202	251	248	166	38	-100	-219	-283	-279	-188	-45	98	217	287	297
6	223	89	-57	-188	-276	-301	-243	-118	22	141	227	266	236	132	- 5	-136	-240	-286	-264	-151	- 8	132	236	291
7	284	193	62	-81	-191	-261	-267	-191	-66	65	172	239	257	205	98	-30	-148	-234	-267	-237	-124	7	132	223
8	266	251	169	47	-75	-176	-231	-228	-145	-23	92	184	233	239	181	83	-33	-136	-209	-231	-191	-90	22	126
9	202	236	211	138	34	-66	-145	-185	-170	-94	7	105	175	214	211	159	74	-26	-112	-170	-188	-151	-69	28
10	111	169	193	175	114	31	-45	-109	-139	-121	-60	22	102	162	193	193	153	86	10	-60	-112	-133	-112	-54
11	22	86	132	156	153	114	56	- 5	-57	-84	-81	-42	16	77	123	153	156	132	83	22	-36	-87	-112	-112

NEFVN

52 56 N, 04 33 W.

O/S GRID REFERENCE OF GAUGE SH279419

I.C.O.T. NEYRPIC GAUGE LOCATED AT PORTH DINLLAEN LIFEBOAT SLIP.

LEVELS IN CENTIMETRES RELATIVE TO APPROXIMATE MEAN SEA LEVEL 5.057M BELOW TIDE GAUGE BENCH MARK.

TGBM IS PIPE NAIL IN STEP TO S DOOR OF LIFEBOAT HOUSE .THIS HAS NOT BEEN CONNECTED TO NEWLYN DATUM.

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	133	138	120	89	41	- 4	-44	-72	-72	-40	15	73	116	131	123	96	59	13	-32	-60	-76	-58	-17	36
29	81	104	105	93	68	32	- 3	-31	-53	-48	-20	23	74	100	107	103	83	54	20	-12	-40	-51	-44	-12
30	30	64	81	81	71	55	29	1	-29	-48	-49	-31	5	46	76	93	95	86	66	39	5	-26	-46	-49
31	-32	- 5	28	51	62	65	60	43	18	-11	-39	-52	-46	-20	18	54	81	94	99	86	58	23	-13	-44
1/ 9/71	-56	-44	- 9	31	67	92	101	94	70	38	- 7	-39	-64	-65	-40	10	58	95	106	104	78	37	-12	-64
2	-106	-123	-109	-56	11	63	102	110	105	78	31	-19	-64	-97	-90	-51	23	93	141	154	141	102	43	-22
3	-81	-132	-153	-135	-63	18	88	122	128	109	66	3	-60	-122	-146	-144	-80	13	101	159	177	162	109	37
4	-48	-119	-174	-190	-153	-56	47	125	157	150	113	50	-28	-103	-168	-196	-166	-69	44	143	197	198	163	92
5	- 1	-94	-177	-231	-230	-153	-32	83	157	176	157	107	28	-56	-140	-203	-216	-158	-32	98	197	234	217	160
6	70	-30	-132	-214	-253	-224	-118	17	130	188	192	156	86	- 5	-98	-183	-233	-224	-130	13	145	228	247	212
7	141	44	-62	-165	-237	-256	-202	-64	69	167	201	186	134	58	-39	-130	-212	-240	-198	-72	69	190	252	251
8	203	120	17	-85	-181	-239	-236	-149	-19	107	183	198	167	109	28	-57	-142	-205	-217	-156	-19	104	196	234
9	216	161	88	- 4	-97	-174	-213	-188	-98	22	123	174	179	144	93	22	-58	-130	-180	-185	-129	-24	83	172
10	202	186	136	69	- 9	-85	-143	-167	-133	-47	45	124	158	155	123	78	12	-54	-113	-143	-130	-70	18	102
11	151	157	139	97	45	-15	-69	-114	-121	-85	-18	60	109	129	123	100	61	14	-37	-82	-107	-102	-60	6
12	65	103	109	98	75	38	- 3	-42	-81	-88	-73	-24	41	77	94	94	78	55	22	-17	-56	-88	-97	-75
13	-28	-21	-60	25	78	69	53	22	-16	-46	-64	-62	-33	12	51	70	81	81	70	50	13	-27	-65	-91
14	-89	-58	-13	28	54	68	70	64	40	4	-34	-64	-72	-57	-15	30	69	90	95	91	64	23	-24	-73
15	-108	-117	-92	-37	15	58	79	84	75	47	1	-46	-81	-95	-81	-31	31	81	108	116	102	62	14	-41
16	-100	-136	-143	-115	-47	21	73	97	97	77	39	-18	-66	-107	-121	-100	-35	42	102	132	133	108	60	- 8
17	-74	-130	-162	-152	-90	-10	63	111	119	105	65	10	-50	-102	-135	-132	-85	- 2	85	143	165	147	107	46
18	-26	-97	-150	-174	-146	-62	30	103	135	131	103	52	-18	-87	-140	-162	-142	-63	33	114	163	167	134	75
19	- 3	-77	-140	-180	-185	-126	-26	70	131	146	125	77	9	-64	-133	-175	-177	-125	-21	77	149	173	157	110
20	39	-38	-116	-173	-194	-167	-77	30	116	152	147	101	35	-41	-115									
21	120	52	-23	-97	-159	-174	-143	-51	46	131	173	149	96	23	-52	-122	-167	-167	-108	- 6	96	166	187	170
22	143	87	15	-56	-116	-152	-145	-84	13	99	164	157	118	58	-17	-87	-142	-162	-135	-49	50	133	178	179
23	148	105	42	-27	-87	-132	-145	-110	-32	52	119	149	141	107	58	- 8	-61	-113	-130	-113	-42	37	108	148
24	141	117	71	15	-40	-91	-122	-118	-66	6	74	120	131	116	80	28	-25	-72	-103	-106	-72	- 9	56	107
25	122	117	94	54	7	-37	-73	-88	-72	-20	41	94	123	126	110	83	36	- 4	-40	-64	-60	-28	26	77
26	108	110	99	75	38	- 2	-39	-65	-77	-61	-24	22	61	86	85	74	49	18	-17	-46	-67	-61	-40	3
27	43	65	73	68	56	33	9	-22	-44	-55	-48	-18	19	56	66	81	79	64	36	5	-30	-54	-63	-56
28	-24	14	39	57	66	70	63	41	15	-16	-36	-38	-30	4	45	73	89	91	78	57	19	-21	-58	-80
29	-80	-54	- 9	32	65	81	85	76	51	11	-31	-64	-83	-69	-32	24	75	105	114	106	75	23	-31	-82
30	-120	-124	-96	-35	29	79	105	107	91	52	2	-51	-99	-115	-96	-32	42	108	143	148	125	78	13	-59
1/10/71	-124	-163	-161	-109	-21	58	117	137	132	100	42	-26	-90	-143	-155	-119	-29	73	152	186	180	134	69	-10
2	-91	-167	-201	-187	-99	10	105	158	168	147	100	20	-59	-143	-186	-181	-110	8	119	197	220	196	132	45
3	-57	-153	-225	-246	-201	-83	46	143	186	177	141	75	-15	-103	-186	-224	-190	-80	47	170	230	236	193	112
4	14	-88	-190	-248	-245	-173	-32	96	184	210	185	124	45	-54	-146	-223	-241	-178	-44	88	196	246	237	189
5	110	15	-92	-188	-250	-245	-158	-16	112	195	211	189	127	39	-56	-153	-225	-239	-175	-45	98	204	245	227
6	169	88	-13	-107	-188	-228	-194	-89	44	151	204	201	160	94	2	-86	-167	-218	-208	-130	- 7	114	195	217
7	191	134	54	-30	-111	-174	-189	-143	-33	78	157	190	177	135	75	4	-71	-144	-180	-163	-82	30	130	180
8	186	164	111	43	-25	-90	-132	-134	-84	7	93	161	177	162	120	62	- 2	-64	-116	-139	-121	-55	31	108
9	145	149	131	87	37	-17	-63	-94	-92	-48	23	98	143	158	146	116	75	25	-25	-67	-94	-84	-40	28
10	83	113	118	109	85	53	16	-21	-46	-48	-26	23	74	111	122	117	101	72	33	- 6	-47	-74	-49	-77

RUSSLARE HARBOUR 52 15 N, 06 21 W.

I.C.O.T. NEYRPIG GAUGE LOCATED BELOW JETTY BY DOCKING RAMP.

LEVELS IN CENTIMETRES RELATIVE TO DUBLIN DATUM TAKEN FROM MARK ON RAILWAY BRIDGE(+11.826M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	233	248	261	265	256	231	197	185	184	187	200	220	242	267	288	306	310	301	220	202	195	197	203	216
29	211	234	259	272	285	281	259	228	194	175	168	179	196	226	255	285	310	317	304	241	210	190	189	194
30	178	199	230	263	285	300	295	267	228	187	159	150	160	182	221	260	296	318	325	309	265	220	180	160
31	150	157	181	224	261	290	304	298	261	213	169	141	135	149	178	221	270	307	334	339	321	271	218	179
1/ 9/71	151	143	154	187	234	273	305	318	307	260	206	159	132	130	144	179	231	281	318	345	346	311	258	207
2	168	148	144	163	202	251	289	317	323	300	241	191	146	126	129	152	194	246	291	327	346	340	297	244
3	197	165	155	160	185	229	274	305	325	319	284	229	178	145	137	147	176	222	270	305	334	341	325	277
4	230	192	172	173	191	224	264	299	321	329	310	269	218	178	156	158	176	210	247	285	311	328	319	291
5	248	212	188	184	199	223	253	284	307	318	313	287	246	207	178	171	187	214	244	273	296	310	313	297
6	268	235	205	191	199	222	250	276	297	308	308	294	265	233	205	188	191	213	239	259	277	289	294	284
7	264	237	212	193	190	207	234	257	276	287	292	287	269	250	226	205	193	199	218	242	257	264	270	269
8	260	245	226	209	195	191	207	231	253	269	278	283	281	271	256	238	219	207	208	222	237	252	257	260
9	261	257	248	234	219	203	194	200	218	236	252	265	274	285	284	276	262	241	222	212	212	222	233	241
10	249	258	263	261	249	233	210	194	185	193	212	232	251	273	288	296	293	276	248	221	199	192	200	210
11	226	242	260	270	273	262	240	212	186	173	176	195	221	249	277	296	306	303	281	249	216	193	183	192
12	204	223	247	269	283	284	272	240	206	176	162	170	191	223	256	286	309	319	312	288	249	214	191	186
13	191	211	235	264	285	298	294	272	234	196	168	157	167	191	226	260	293	313	320	306	268	228	193	173
14	172	186	210	243	274	294	303	295	262	220	179	154	150	167	199	237	275	302	318	316	289	246	205	174
15	162	169	191	223	258	289	305	306	283	239	194	160	146	150	174	210	251	288	308	318	305	265	221	179
16	163	161	178	209	245	280	301	312	303	268	222	182	157	154	170	201	242	281	307	321	318	287	242	201
17	174	165	175	200	236	271	298	312	311	288	243	202	170	158	168	195	234	271	300	318	324	306	267	226
18	193	177	178	199	231	265	296	313	318	301	266	221	189	173	173	193	224	259	290	309	319	310	280	239
19	205	184	180	195	222	255	283	304	312	306	278	240	207	185	178	190	218	249	279	302	314	313	287	252
20	217	189	179	189	214	243	272	291	302	299	281	251	217	191	179	185	208	247	266	287	302	304	289	260
21	229	205	188	195	215	244	269	289	301	303	292	267	241	220	204	202	219	246	271	290	301	303	293	273
22	247	221	204	200	213	234	255	272	283	285	278	260	238	219	204	197	204	226	246	264	277	285	282	268
23	249	228	211	199	199	217	238	260	272	282	284	277	263	245	227	216	212	216	234	249	261	268	270	269
24	258	245	229	216	214	214	222	243	259	270	281	283	284	279	268	254	237	224	218	222	233	240	248	254
25	257	260	254	244	231	213	202	202	216	226	243	256	268	282	285	283	267	244	221	206	203	207	219	231
26	246	263	273	276	267	247	221	199	187	191	205	226	251	275	297	306	306	288	256	224	199	188	188	199
27	216	240	265	283	290	281	256	222	191	174	176	161	145	124	124	145	155	187	232	273	302	321	290	244
28	185	210	244	277	299	307	296	259	220	183	161	161	176	203	241	284	315	336	336	311	262	216	179	159
29	153	167	193	237	273	299	309	295	253	203	163	140	138	156	189	236	283	317	340	339	303	248	198	161
30	142	140	160	201	248	288	316	321	296	242	188	145	126	129	153	190	242	286	321	339	332	288	232	186
31	152	140	149	176	222	268	302	317	318	284	227	175	143	127	135	160	204	255	296	326	337	318	268	218
32	179	158	154	171	206	250	289	317	329	316	272	219	172	143	140	155	187	232	273	302	322	321	290	244
33	201	173	164	174	201	238	278	307	326	323	299	255	209	176	161	168	190	221	254	284	304	312	300	266
34	226	193	176	183	206	237	268	297	315	324	314	286	248	211	189	183	197	223	247	271	288	297	292	272
35	241	211	191	182	198	227	254	280	298	307	308	291	266	237	211	202	208	228	250	266	280	288	289	277
36	256	232	211	194	196	217	246	272	291	302	308	304	287	267	246	227	219	227	245	259	270	279	282	279

DUBLIN

53 21 N, 06 13 W.

DUBLIN PORT AND DOCKS BOARD KELVIN HUGHES GAUGE LOCATED AT NORTH WALL LIGHTHOUSE.

LEVELS IN CENTIMETRES RELATIVE TO DUBLIN DATUM TAKEN FROM MARK AT S.W. OF ALEXANDRA BASIN (+5.785M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	275	318	364	385	382	358	309	245	190	169	175	211	257	309	345	373	379	364	318	257	202	175	172	193
29	233	278	312	345	370	364	339	294	242	202	184	190	226	263	303	339	354	354	318	257	202	175	172	193
30	208	233	269	300	324	345	348	321	287	242	205	187	190	220	257	290	327	354	364	351	324	281	239	199
31	190	193	211	242	269	303	330	339	327	300	260	220	196	190	208	239	272	306	342	367	367	345	312	263
1/ 9/71	226	196	184	208	245	278	321	348	364	361	333	287	245	208	190	190	226	260	303	339	361	361	339	290
2	236	178	141	135	159	205	257	306	348	379	373	342	287	226	178	166	181	223	275	333	373	394	394	361
3	303	226	150	111	114	150	199	269	321	367	385	373	321	254	178	123	117	150	220	287	348	394	419	409
4	364	278	187	105	80	95	156	226	303	354	391	400	364	300	211	123	83	98	150	233	321	379	422	431
5	403	336	233	129	59	50	89	169	257	321	379	409	406	364	272	169	86	62	98	178	275	364	412	443
6	449	400	312	196	86	34	50	117	202	290	354	403	425	400	336	233	123	59	59	120	214	312	388	434
7	470	452	388	284	166	59	28	62	138	233	318	376	419	425	385	306	193	92	47	71	138	242	336	397
8	452	470	443	367	257	141	59	47	89	178	263	336	388	419	373	278	178	86	59	92	172	263	348	348
9	415	455	458	425	348	239	135	77	80	132	208	284	342	391	415	406	354	269	169	98	83	123	193	269
10	351	403	437	440	403	327	233	147	105	117	166	230	294	342	385	409	394	351	275	196	135	120	147	196
11	281	339	385	409	412	385	318	242	175	141	144	184	239	287	336	373	391	382	342	275	208	156	138	150
12	205	257	300	342	373	385	361	312	251	196	166	166	196	233	272	309	342	367	364	333	284	223	175	150
13	153	187	226	269	306	342	364	361	324	278	230	193	184	196	223	254	287	327	354	367	354	312	257	211
14	169	156	169	196	239	275	315	348	354	333	300	254	211	190	190	205	242	281	318	354	373	370	336	284
15	220	166	144	147	178	217	263	309	345	361	348	312	257	211	178	175	193	233	278	324	364	385	379	348
16	278	211	150	123	129	172	223	281	321	358	379	351	306	242	187	156	156	190	242	294	345	385	400	388
17	336	257	181	126	111	135	187	248	303	348	379	379	348	284	217	156	141	159	211	272	336	385	412	412
18	379	318	226	147	105	108	150	214	281	333	376	388	370	318	242	166	120	120	162	226	297	354	394	415
19	406	358	272	181	108	86	114	178	254	315	361	388	385	348	272	193	120	98	123	181	257	330	376	409
20	425	379	312	223	135	89	95	144	217	287	342	382	394	367	315	226	144	98	102	144	223	294	354	388
21	422	400	348	269	175	105	89	123	190	263	327	373	400	394	351	275	190	120	98	126	187	263	327	370
22	415	415	379	309	220	135	98	105	156	226	300	348	388	400	376	318	236	159	114	117	159	230	303	348
23	400	422	400	354	272	190	126	111	135	202	272	333	379	403	397	354	281	205	135	120	141	196	260	312
24	367	397	400	373	294	226	150	120	126	169	236	294	345	379	388	370	318	248	172	129	129	166	211	272
25	324	364	385	379	333	272	196	141	126	144	193	251	303	345	373	370	342	287	226	166	144	150	190	239
26	294	333	370	379	364	318	257	199	159	156	190	233	284	324	348	385	379	351	294	239	196	172	184	217
27	263	294	336	361	361	342	300	242	196	162	159	181	223	260	300	333	348	342	318	284	226	187	169	178
28	211	242	272	306	333	342	327	300	254	211	184	181	196	226	260	303	333	351	351	327	281	242	202	172
29	175	196	226	245	294	327	348	348	327	294	257	214	202	211	226	251	294	321	345	361	342	303	257	214
30	208	159	132	138	175	223	275	324	354	333	303	251	205	172	169	190	233	272	318	358	376	364	327	275
1/10/71	211	159	132	138	175	223	275	324	354	333	303	251	205	172	169	190	233	272	318	358	376	364	327	275
2	257	175	111	92	120	172	239	303	354	388	394	361	315	251	190	150	184	239	297	348	388	403	382	342
3	321	226	129	77	68	114	187	266	327	379	409	400	351	266	172	98	83	123	196	284	364	412	443	437
4	379	287	175	74	31	50	117	202	287	348	397	419	394	324	223	120	59	65	120	211	312	382	431	452
5	431	364	254	135	47	25	65	150	239	324	379	425	425	379	287	178	74	34	59	138	242	342	406	443
6	461	425	348	226	117	44	38	89	181	272	348	400	434	422	364	260	150	62	41	77	166	272	358	409
7	458	461	419	330	217	108	59	68	132	220	303	364	409	428	403	345	242	138	68	56	98	187	272	342
8	409	440	434	394	306	205	114	80	105	166	242	318	370	409	425	394	333	242	147	89	83	129	196	269
9	342	394	422	415	379	300	214	141	120	141	196	260	318	370	406	412	385	327	245	166	117	114	150	205
10	272	324	373	394	394	364	294	226	175	153	169	211	272	327	370	403	415	388	348	272	202	156	147	169
11	211	263	309	348	373	382	358	312	254	211	193	196	226	269	309	342	376	388	376	336	284	217	175	153

BELFAST

54 36 N, 05 55 W.

BELFAST HARBOUR COMMISSIONERS' LEGE GAUGE LOCATED AT ENTRANCE TO SPENCER DOCK.

LEVELS IN CENTIMETRES RELATIVE TO BELFAST DATUM TAKEN FROM MARK AT 33508W,37582N(+2.889M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	30	85	119	131	112	70	21	-40	-83	-95	-80	-40	3	55	88	109	103	76	30	-16	-64	-95	-92	-77
29	-34	9	55	91	106	82	55	6	-40	-70	-77	-61	-28	15	58	97	106	94	61	21	-31	-64	-80	-77
30	-52	-19	27	55	85	82	73	30	-3	-49	-70	-77	-64	-34	6	45	76	97	91	73	33	3	-43	-67
31	-80	-70	-46	-6	24	58	67	64	36	9	-28	-58	-77	-73	-46	-19	24	58	94	106	103	67	36	-6
1/ 9/71	-43	-67	-64	-34	-3	36	67	88	94	82	51	21	-31	-64	-80	-61	-28	12	48	76	91	76	45	-3
2	-55	-101	-128	-122	-89	-46	9	58	94	103	94	48	6	-37	-77	-98	-70	-34	21	70	109	122	106	61
3	6	-64	-122	-147	-141	-101	-49	15	58	97	97	79	15	-22	-89	-125	-128	-92	-37	24	79	122	131	122
4	70	6	-67	-128	-165	-153	-113	-40	30	91	109	106	61	3	-55	-116	-150	-137	-92	-31	42	100	137	137
5	106	39	-28	-113	-174	-192	-165	-107	-25	48	103	115	100	48	-16	-77	-134	-159	-131	-80	-3	64	128	149
6	149	103	30	-43	-134	-192	-192	-147	-80	6	79	115	122	91	27	-34	-107	-159	-156	-113	-43	39	112	158
7	170	143	73	3	-83	-156	-183	-156	-116	-34	39	103	131	131	85	15	-49	-125	-159	-144	-86	-9	73	146
8	176	179	134	67	-6	-89	-156	-171	-147	-98	-16	67	115	137	125	64	-0	-67	-131	-150	-122	-73	6	82
9	149	176	179	137	67	-13	-98	-156	-153	-125	-61	12	82	128	140	115	55	-9	-80	-134	-141	-113	-61	18
10	82	146	164	164	115	58	-19	-89	-134	-125	-104	-43	24	85	134	146	128	67	12	-61	-110	-125	-98	-61
11	9	67	122	143	143	94	39	-25	-86	-113	-107	-80	-34	24	79	125	134	119	64	15	-52	-95	-110	-101
12	-70	-22	33	79	109	112	82	30	-19	-64	-86	-92	-73	-46	-0	48	88	106	109	67	15	-40	-86	-101
13	-104	-80	-46	3	45	76	88	79	42	9	-31	-61	-73	-67	-37	6	55	91	106	97	61	15	-31	-70
14	-92	-98	-77	-43	3	39	67	82	76	61	24	-9	-52	-70	-73	-43	-0	48	85	109	109	91	48	-0
15	-49	-86	-110	-101	-73	-31	15	55	82	85	61	24	-19	-61	-89	-92	-67	-25	33	79	109	109	85	24
16	-28	-86	-122	-134	-119	-80	-34	21	61	85	85	67	18	-25	-80	-104	-104	-64	-13	48	97	128	125	85
17	24	-28	-92	-131	-141	-119	-70	-13	42	88	100	91	48	6	-49	-98	-107	-86	-37	24	79	128	143	128
18	67	12	-58	-116	-150	-144	-95	-40	18	64	100	100	79	24	-25	-86	-122	-122	-86	-31	42	100	143	143
19	112	48	-9	-86	-137	-153	-122	-80	-13	42	88	103	97	51	-3	-64	-125	-141	-122	-67	-3	64	122	140
20	134	79	18	-52	-122	-156	-150	-107	-46	21	73	106	103	85	24	-28	-92	-137	-141	-104	-49	24	85	134
21	137	112	48	-9	-86	-144	-147	-119	-64	-3	55	100	112	109	64	12	-49	-110	-137	-116	-73	-6	61	128
22	137	131	67	9	-73	-125	-153	-119	-80	-19	42	91	119	125	91	33	-22	-86	-122	-116	-73	-19	48	122
23	149	155	128	64	-0	-67	-116	-119	-92	-43	21	79	122	137	131	73	30	-37	-86	-113	-92	-55	3	61
24	115	140	143	103	42	-22	-95	-128	-113	-80	-31	33	82	112	119	94	42	-9	-73	-119	-122	-89	-43	21
25	76	122	128	103	42	-9	-80	-116	-116	-89	-49	6	55	103	115	105	55	-0	-52	-92	-113	-92	-58	6
26	55	103	125	122	88	36	-16	-61	-89	-80	-52	-6	39	91	119	134	119	79	30	-22	-61	-77	-64	-43
27	12	55	97	115	109	73	27	-31	-80	-98	-86	-61	-13	30	67	88	94	73	36	-6	-28	-73	-83	-67
28	-43	-0	39	76	85	79	42	-0	-37	-64	-80	-77	-52	-19	27	61	85	94	76	36	-0	-37	-70	-86
29	-83	-55	-16	33	64	85	88	67	39	6	-22	-49	-55	-49	-22	12	51	79	85	82	51	21	-25	-61
30	-92	-95	-80	-43	3	39	73	82	76	48	15	-34	-64	-86	-83	-49	-0	39	79	100	106	82	45	-9
1/10/71	-55	-107	-125	-116	-73	-25	33	73	97	91	64	15	-28	-73	-98	-98	-61	-13	42	85	122	128	106	42
2	-9	-80	-131	-153	-128	-83	-19	42	97	109	103	55	6	-52	-104	-125	-107	-64	-3	55	109	134	134	94
3	30	-31	-116	-177	-177	-141	-73	6	73	115	122	97	42	-9	-73	-125	-141	-110	-52	24	82	137	149	137
4	76	9	-70	-150	-201	-192	-137	-55	21	88	122	122	122	82	18	-37	-116	-159	-156	-107	-37	42	112	149
5	103	36	-40	-119	-186	-198	-159	-92	-9	70	122	134	122	64	-0	-77	-150	-168	-141	-86	-9	64	134	164
6	164	125	51	-22	-107	-171	-177	-144	-86	-3	70	131	146	131	73	9	-64	-134	-159	-134	-83	-9	64	137
7	170	179	134	67	-13	-95	-159	-162	-131	-67	15	79	131	146	128	55	-13	-101	-162	-156	-122	-58	18	100
8	152	170	155	91	30	-43	-113	-141	-128	-86	-9	55	119	152	155	103	39	-34	-104	-147	-144	-107	-49	24
9	91	146	161	146	97	36	-37	-95	-122	-113	-61	6	70	128	155	152	100	42	-25	-95	-125	-125	-98	-49
10	21	79	122	143	131	79	30	-28	-73	-89	-70	-28	24	85	140	161	158	106	61	-6	-58	-92	-98	-73
11	-40	18	70	109	125	115	82	33	-6	-49	-61	-61	-25	21	73	115	140	137	103	55	-0	-52	-95	-98

ISLE OF MAN HARBOUR BOARD MUNRO GAUGE LOCATED AT SEAWARD END OF CENTRAL JETTY.

LEVELS IN CENTIMETRES RELATIVE TO ISLE OF MAN DATUM TAKEN FROM COPING ON SOUTH SIDE OF VICTORIA PIER (+6.334 M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	48	140	213	237	210	140	48	-43	-110	-147	-141	-83	5	109	185	219	207	149	73	-13	-86	-135	-147	-116
29	-37	48	127	182	198	167	103	33	-40	-92	-119	-104	-49	27	109	167	188	173	127	60	-13	-68	-104	-116
30	-74	-25	45	109	149	158	137	85	27	-37	-80	-129	-123	52	12	82	140	170	170	140	88	24	-37	-80
31	-104	-98	-62	-7	54	109	134	134	103	51	-7	-55	-86	-98	-77	-31	39	106	161	182	173	134	79	9
1/ 9/71	-31	-92	-104	-80	-25	48	121	170	182	158	109	39	-31	-86	-116	-113	-71	2	85	158	194	188	137	60
2	-34	-116	-171	-190	-162	-92	12	112	176	204	179	118	27	-59	-129	-171	-162	-101	-1	109	204	249	231	164
3	54	-62	-162	-238	-251	-211	-113	12	134	213	231	185	91	-16	-129	-208	-241	-214	-123	5	146	252	292	262
4	158	33	-101	-220	-281	-284	-217	-92	63	194	274	265	188	70	-62	-180	-263	-287	-238	-113	48	201	304	322
5	246	130	-19	-171	-281	-342	-321	-220	-62	106	249	304	268	164	30	-116	-232	-308	-308	-220	-68	112	274	353
6	341	243	97	-74	-223	-330	-360	-311	-180	-1	179	298	322	255	127	-22	-171	-284	-336	-302	-190	-13	176	326
7	374	344	213	51	-119	-266	-354	-360	-281	-129	63	234	322	310	222	79	-74	-217	-311	-342	-281	-141	45	225
8	347	371	310	167	15	-159	-284	-348	-336	-232	-68	115	265	322	286	179	39	-110	-235	-308	-315	-229	-80	97
9	255	347	347	262	115	-40	-183	-284	-324	-281	-165	-1	164	274	298	249	137	2	-135	-235	-290	-269	-180	-37
10	127	255	316	298	207	76	-62	-177	-251	-272	-217	-104	45	179	255	268	210	109	-7	-116	-202	-238	-220	-135
11	-7	121	225	265	240	158	51	-62	-156	-211	-217	-165	-62	60	164	225	225	173	88	-7	-98	-168	-196	-180
12	-110	-13	85	167	201	185	124	42	-49	-116	-159	-165	-129	-52	39	121	173	182	146	85	5	-71	-135	-168
13	-165	-123	-52	36	109	152	158	121	70	-4	-68	-110	-132	-116	-74	-7	73	134	161	155	115	57	-19	-86
14	-135	-159	-150	-104	-31	48	112	146	140	97	39	-28	-86	-123	-132	-104	-43	36	112	164	179	152	94	15
15	-71	-141	-183	-190	-150	-74	21	109	158	164	130	63	-19	-95	-147	-165	-141	-71	24	118	188	207	182	109
16	12	-89	-171	-220	-226	-171	-80	39	140	194	194	140	54	-43	-129	-183	-196	-156	-68	48	158	231	243	194
17	106	-10	-123	-211	-247	-232	-159	-40	91	188	231	207	130	27	-83	-171	-217	-208	-135	-22	112	222	274	262
18	182	63	-65	-180	-257	-272	-217	-110	33	158	237	243	182	82	-40	-150	-226	-251	-202	-104	36	167	265	289
19	237	130	-1	-132	-232	-284	-266	-180	-43	109	216	265	228	137	15	-110	-214	-266	-257	-177	-43	109	234	283
20	277	191	66	-74	-196	-272	-290	-232	-110	15	158	252	271	207	97	-37	-159	-251	-281	-244	-144	2	152	262
21	295	255	146	12	-126	-232	-287	-275	-190	-55	103	225	280	249	161	33	-98	-208	-269	-266	-193	-68	85	213
22	286	277	201	79	-62	-183	-263	-281	-232	-116	30	170	262	255	201	88	-40	-156	-241	-263	-220	-116	24	164
23	265	289	237	134	2	-119	-217	-260	-241	-150	-19	124	234	274	240	146	30	-92	-187	-238	-232	-159	-43	88
24	207	258	249	170	57	-68	-171	-238	-251	-193	-86	48	167	237	240	182	79	-31	-135	-214	-226	-196	-104	15
25	140	219	240	198	109	-4	-110	-190	-226	-208	-135	-25	97	185	219	198	127	30	-68	-147	-199	-196	-141	-49
26	66	158	207	207	149	73	-31	-110	-165	-177	-141	-65	42	140	201	213	179	109	27	-55	-123	-147	-135	-80
27	5	91	158	182	164	109	33	-52	-116	-156	-159	-119	-52	30	103	152	158	127	70	-7	-74	-123	-141	-129
28	-83	-13	60	109	140	127	88	30	-37	-86	-119	-123	-95	-40	30	91	140	149	130	82	18	-43	-95	-126
29	-123	-98	-43	24	85	124	134	115	76	24	-31	-74	-98	-59	-4	60	121	155	152	121	63	-7	-74	
30	-123	-147	-138	-95	-25	54	115	152	146	112	48	-25	-92	-138	-153	-123	-59	33	121	179	198	170	103	12
1/10/71	-80	-156	-199	-199	-147	-62	48	140	194	194	146	66	-31	-116	-177	-196	-156	-71	45	158	231	246	201	112
2	-4	-123	-214	-257	-244	-174	-55	82	191	246	231	158	51	-71	-171	-241	-244	-187	-71	76	207	286	289	219
3	100	-40	-174	-272	-308	-275	-171	-22	134	249	289	249	146	9	-123	-232	-284	-272	-177	-34	137	271	332	310
4	207	60	-101	-244	-336	-354	-290	-159	12	179	292	310	237	109	-37	-180	-281	-330	-290	-171	2	182	316	359
5	316	185	24	-147	-281	-357	-354	-269	-107	85	237	298	292	210	70	-86	-226	-318	-345	-281	-135	54	237	350
6	368	292	149	-19	-183	-305	-360	-339	-226	-49	146	286	335	295	176	30	-126	-254	-333	-336	-244	-89	103	274
7	359	356	265	115	-49	-199	-305	-336	-287	-159	21	194	310	322	262	137	-10	-153	-269	-324	-305	-199	-37	140
8	277	338	313	210	66	-77	-202	-181	-293	-232	-86	76	225	304	298	225	103	-28	-153	-247	-287	-257	-150	-7
9	149	255	298	268	164	42	-86	-183	-238	-232	-159	-37	109	327	277	262	188	79	-37	-141	-214	-238	-202	-110
10	15	140	222	246	213	130	27	-74	-150	-183	-174	-104	9	127	216	255	240	179	88	-7	-95	-153	-177	-153
11	-86	12	109	179	201	179	118	39	-40	-101	-129	-126	-80	2	88	161	198	194	149	79	2	-74	-129	-156

PEEL 54 14 N, 04 24 W. O/S GRID REFERENCE OF GAUGE SC24368468

ISLE OF MAN HARBOUR BOARD MUNRO GAUGE LOCATED AT A THIRD WAY ALONG INNER WALL OF BREAK WATER.

LEVELS IN CENTIMETRES RELATIVE TO ISLE OF MAN DATUM TAKEN FROM MARK AT GRID REFERENCE SC24658414(+16.855M)

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	-78	-69	-39	4	47	83	102	105	83	41	-5	-45	-69	-75	-51	-14	47	89	132	147	144	108	59	10
1/ 9/71	-39	-69	-72	-42	4	53	98	135	144	123	80	25	-30	-75	-90	-75	-33	25	80	129	150	141	95	34
2	-42	-118	-148	-148	-109	-39	31	105	153	169	150	92	22	-45	-100	-118	-100	-33	44	123	178	202	184	120
3	28	-60	-133	-176	-185	-124	-39	53	126	172	181	135	59	-30	-112	-164	-173	-127	-36	65	150	214	230	193
4	108	4	-103	-182	-215	-194	-115	-14	89	169	208	196	129	31	-72	-161	-209	-197	-124	-14	98	190	242	245
5	175	68	-51	-167	-240	-258	-209	-100	19	129	205	227	190	105	-11	-121	-206	-234	-194	-87	34	153	239	275
6	248	156	31	-100	-209	-270	-258	-173	-54	68	178	242	248	187	83	-36	-148	-225	-240	-173	-54	77	199	275
7	297	254	144	13	-118	-222	-267	-246	-148	-17	105	205	251	239	156	44	-75	-185	-246	-234	-145	-14	117	223
8	284	291	223	108	-23	-148	-237	-261	-215	-109	22	138	217	245	217	126	10	-106	-197	-234	-206	-106	19	144
9	233	278	266	193	77	-51	-161	-225	-231	-167	-63	56	156	220	236	190	95	-14	-115	-194	-212	-170	-75	38
10	147	227	257	236	156	53	-54	-148	-194	-185	-121	-26	71	159	211	214	166	83	-14	-103	-161	-173	-130	-51
11	47	132	196	217	193	126	38	-51	-124	-154	-142	-84	-5	77	150	187	190	144	71	-8	-81	-130	-139	-112
12	-54	22	95	147	169	156	108	38	-26	-87	-115	-115	-75	-14	53	111	150	156	129	74	7	-57	-103	-124
13	-115	-72	-14	47	98	129	135	108	62	4	-48	-84	-94	-75	-33	25	80	123	141	132	95	41	-17	-75
14	-109	-118	-100	-51	7	59	95	117	117	83	31	-23	-66	-90	-94	-60	-5	56	108	141	147	123	71	4
15	-60	-118	-142	-136	-94	-30	38	92	126	132	102	47	-17	-75	-112	-121	-84	-17	53	117	159	169	144	80
16	7	-81	-145	-173	-161	-106	-33	47	108	150	150	108	41	-36	-106	-142	-142	-94	-14	71	144	190	193	150
17	77	-17	-109	-170	-188	-161	-87	4	83	153	178	159	98	16	-69	-130	-158	-136	-63	28	120	190	220	208
18	144	47	-57	-145	-194	-197	-136	-48	47	129	181	187	141	59	-33	-118	-173	-182	-130	-36	65	156	214	227
19	190	102	-5	-109	-182	-209	-182	-100	-2	92	166	196	181	108	10	-90	-167	-200	-179	-97	7	111	193	230
20	220	150	47	-60	-158	-209	-209	-145	-48	65	153	205	202	144	50	-51	-142	-194	-197	-136	-39	71	169	227
21	233	181	95	-14	-118	-194	-212	-170	-75	25	126	193	211	184	105	7	-94	-170	-197	-167	-81	22	123	202
22	223	211	138	34	-69	-161	-203	-194	-118	-23	80	163	208	205	144	50	-48	-133	-182	-182	-118	-20	80	169
23	223	230	187	98	-5	-100	-170	-185	-148	-60	38	129	193	211	187	111	16	-72	-145	-173	-151	-75	16	108
24	181	208	199	135	41	-57	-136	-179	-170	-106	-17	71	150	190	193	141	62	-26	-109	-158	-167	-118	-36	53
25	132	184	193	156	86	-2	-84	-145	-161	-133	-63	16	95	156	178	163	102	28	-51	-115	-142	-130	-69	4
26	92	144	175	172	129	59	-17	-78	-118	-118	-75	-11	62	126	169	181	153	98	28	-39	-84	-97	-78	-30
27	28	89	135	153	147	95	34	-33	-84	-109	-109	-66	-11	50	105	120	126	111	62	4	-51	-84	-94	-81
28	-36	19	68	108	123	117	80	31	-17	-63	-78	-78	-51	-2	47	95	120	132	114	74	25	-26	-63	-81
29	-81	-51	-8	41	83	114	120	111	74	34	-14	-45	-66	-54	-17	31	74	114	135	138	108	59	1	-51
30	-87	-100	-90	-45	-2	62	108	129	129	95	44	-14	-66	-97	-100	-63	-5	59	117	156	169	144	83	10
1/10/71	-63	-121	-142	-133	-78	-8	68	129	163	163	120	50	-23	-90	-130	-130	-75	-2	80	153	199	205	163	86
2	-11	-100	-167	-188	-161	-84	7	95	169	199	187	120	31	-60	-136	-173	-161	-87	10	108	193	233	230	169
3	68	-48	-151	-215	-225	-167	-66	44	138	205	227	187	105	-2	-106	-179	-203	-164	-63	47	156	236	266	242
4	147	25	-100	-206	-258	-249	-164	-45	71	169	230	233	169	68	-51	-161	-225	-234	-164	-45	80	193	263	278
5	227	120	-14	-142	-240	-267	-231	-127	1	123	217	257	233	150	34	-90	-197	-246	-231	-136	-5	123	230	291
6	291	217	95	-39	-167	-246	-261	-197	-84	47	163	242	263	217	120	1	-118	-209	-246	-203	-100	34	156	254
7	294	278	193	71	-60	-173	-231	-231	-151	-39	83	187	248	257	193	86	-26	-139	-218	-237	-179	-69	47	166
8	245	272	242	156	38	-75	-170	-206	-191	-106	7	120	205	248	242	169	71	-39	-136	-203	-203	-142	-42	68
9	169	230	245	205	123	22	-75	-148	-170	-142	-63	34	129	196	230	214	144	59	-39	-124	-170	-164	-112	-30
10	68	147	199	208	172	105	22	-57	-112	-124	-90	-26	59	138	196	220	205	150	74	-5	-75	-118	-121	-81
11	-14	59	120	169	178	153	105	38	-26	-69	-78	-60	-14	47	108	159	178	169	123	62	-5	-66	-103	-112

Table C

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION A - LAT. 55 ON LONG. 5 50W.
TIME = 30/ 8/71 TO 11/10/71.
WATER DEPTH = 91M. BELOW CHART DATUM.
CURRENT METERS AT 79, 42, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
ALL METERS RETURNED GOOD DATA.

STATION A + METER 79M. ABOVE SEA FLOOR + METER I.C.O.T. BERGEN 295 + DATA REDUCTION BY I.C.O.T.
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
28/08/71	V																									
	D																									
	T																									
29/08/71	V																									
	D																									
	T																									
30/08/71	V											006	022	039	051	055	047	027	012	025	039	045	042	031		
	D											027	124	126	130	133	138	158	249	322	331	336	342	350		
	T											134	134	134	134	134	135	135	135	135	135	134	134	134		
31/08/71	V	16	19	33	45	47	40	22	2	20	33	36	31	19	14	32	50	59	58	46	27	9	24	37	41	
	D	31	105	122	127	130	133	139	353	342	339	343	351	8	89	122	127	127	133	132	126	72	343	337	338	
	T	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	135	135	135	135	135	135	135	135	135	
01/09/71	V	33	17	16	37	55	62	59	43	21	12	31	38	36	29	21	40	59	70	71	55	24	13	37	54	
	D	342	4	105	125	127	129	132	133	132	7	343	343	349	2	78	122	130	135	139	140	130	7	346	343	
	T	135	135	135	135	135	135	135	134	134	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	
02/09/71	V	60	48	23	18	45	67	77	70	45	14	27	54	67	61	40	16	40	71	87	84	59	17	28	63	
	D	344	345	0	106	125	127	128	134	133	117	341	344	345	347	354	51	121	128	135	142	144	162	327	337	
	T	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	
03/09/71	V	83	82	60	29	27	60	85	92	74	41	11	45	77	87	72	38	22	59	90	101	83	50	3	48	
	D	341	343	346	7	100	124	129	132	134	130	53	345	343	345	348	360	95	123	128	137	138	133	106	341	
	T	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	136	136	136	
04/09/71	V	87	104	91	60	26	42	82	101	95	72	34	26	72	102	101	73	32	32	78	107	110	87	49	10	
	D	342	341	343	351	24	112	125	134	131	126	115	10	350	344	342	346	3	110	126	132	137	132	133	348	
	T	135	135	135	135	135	135	135	135	135	136	137	137	137	136	135	135	135	135	135	135	136	137	137	137	
05/09/71	V	69	116	119	98	52	6	56	94	110	103	77	24	32	90	123	113	77	15	46	91	117	119	84	30	
	D	343	343	342	346	340	148	128	128	132	128	130	173	330	349	343	345	343	340	334	140	131	127	130	135	143
	T	137	136	135	135	135	135	135	135	135	137	137	138	138	138	137	136	136	135	135	135	136	136	138	138	138
06/09/71	V	36	94	135	133	87	27	43	81	103	119	115	71	11	51	107	133	105	35	39	79	108	131	122	76	
	D	327	342	342	341	339	360	123	123	127	130	133	134	154	233	330	345	343	340	334	140	131	127	130	135	143
	T	138	138	137	136	135	135	135	135	136	137	138	138	138	138	138	138	136	136	135	135	136	137	138	139	138
07/09/71	V	8	56	109	144	127	58	22	64	98	104	124	114	47	28	71	122	137	88	26	44	85	112	132	107	
	D	204	333	344	344	340	340	53	125	130	119	119	132	160	294	338	349	346	342	0	124	127	124	123	135	
	T	138	138	138	137	136	135	135	135	136	137	138	139	139	139	139	138	137	136	136	136	136	137	139	139	
08/09/71	V	53	21	77	121	141	115	68	30	57	91	106	115	85	35	34	81	127	125	84	23	42	90	114	124	
	D	147	322	337	344	342	343	352	40	110	126	125	128	138	197	310	346	348	347	347	356	115	122	133	137	
	T	139	139	139	139	138	137	136	135	136	137	138	139	139	139	139	139	138	137	137	137	136	137	138	139	
09/09/71	V	86	35	32	83	120	133	105	58	31	61	82	95	96	63	7	54	101	129	119	78	29	40	78	101	
	D	138	166	315	338	346	347	350	357	66	111	125	132	130	127	123	349	346	346	349	351	12	103	118	130	
	T	139	139	139	139	139	138	137	136	136	136	137	139	139	139	140	140	139	138	137	136	136	136	138	139	
10/09/71	V	103	74	17	36	78	113	123	94	51	26	52	73	81	76	46	10	49	90	116	101	66	26	34	63	
	D	129	131	151	332	343	344	346	347	354	66	109	116	126	132	130	35	344	344	348	351	16	100	114	114	
	T	140	140	140	140	140	139	138	137	136	136	137	138	139	140	140	140	140	140	140	138	137	136	136	137	137
11/09/71	V	80	81	54	13	33	71	107	114	87	52	25	38	61	70	61	35	5	41	74	99	86	55	22	24	
	D	127	134	131	152	335	342	348	347	347	351	36	99	112	121	126	132	344	338	342	348	348	348	8	94	
	T	139	140	140	140	140	140	138	137	136	137	137	137	138	139	140	141	141	141	141	140	138	136	137	137	

STATION A + METER 79M. ABOVE SEA FLOOR + METER I.C.O.T. BERGEN 295 + DATA REDUCTION BY I.C.O.T.
 DATE HOURS IN G.M.T.

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
12/09/71	V	46	56	59	51	22	15	44	77	89	67	35	6	23	41	50	51	35	7	28	52	74	78	62	36
	D	110	115	123	134	149	307	338	349	351	347	337	349	114	110	111	127	146	201	322	339	350	349	351	359
	T	137	137	139	140	140	140	140	139	137	137	137	137	137	137	138	140	140	140	140	140	138	137	137	137
13/09/71	V	18	33	48	52	47	29	2	28	50	70	65	46	29	25	38	49	50	41	23	5	31	54	73	64
	D	47	99	110	111	121	140	252	332	345	351	350	352	15	70	101	108	112	123	129	2	343	350	349	347
	T	137	137	137	137	139	140	140	140	137	137	137	137	137	137	137	137	138	140	140	140	140	140	137	137
14/09/71	V	47	26	23	40	52	53	41	20	11	33	56	68	55	35	22	31	47	57	54	37	10	20	45	66
	D	355	15	80	108	113	121	128	359	347	351	352	351	0	48	98	109	111	122	131	141	337	343	349	349
	T	137	137	137	137	137	138	140	141	141	140	139	137	137	137	136	136	137	138	140	141	141	141	141	139
15/09/71	V	73	58	32	18	42	61	64	55	32	2	30	53	70	66	43	24	39	59	70	67	44	11	26	55
	D	349	352	5	75	108	113	118	130	135	24	343	346	350	352	357	49	100	110	121	138	140	143	333	336
	T	137	137	137	136	136	137	139	140	141	141	141	140	138	137	137	137	137	137	137	139	141	140	141	141
16/09/71	V	75	83	64	34	30	59	76	77	60	25	15	46	67	80	72	46	32	53	77	84	71	38	7	47
	D	344	349	352	8	86	111	119	134	138	135	339	339	341	348	354	10	64	105	120	134	139	142	315	329
	T	140	138	137	137	137	137	138	140	141	141	141	141	141	140	138	137	137	137	137	140	141	141	141	141
17/09/71	V	75	95	96	64	28	48	79	87	83	54	15	35	65	80	88	69	40	46	74	92	88	63	22	26
	D	336	345	351	354	28	99	117	129	135	132	94	347	338	342	352	358	31	96	117	133	132	131	142	333
	T	141	140	138	138	138	138	139	141	141	141	141	141	141	141	139	138	138	139	140	141	141	141	141	141
18/09/71	V	66	94	103	90	52	34	64	87	93	75	39	11	54	84	101	90	54	32	61	91	101	86	53	5
	D	341	342	347	353	5	68	113	127	135	132	127	5	344	341	346	351	4	62	110	129	135	136	139	110
	T	141	141	140	139	138	138	138	139	140	141	142	142	142	141	140	139	139	139	140	140	141	142	142	142
19/09/71	V	46	82	101	99	73	40	49	83	102	95	67	25	32	72	97	99	73	42	46	81	104	99	70	30
	D	338	340	344	350	356	28	98	124	131	134	131	114	354	344	344	349	357	25	94	121	132	136	133	127
	T	142	142	141	140	139	139	139	141	142	142	142	143	143	142	142	141	140	140	140	140	141	142	143	143
20/09/71	V	22	72	100	104	85	52	35	68	97	102	80	43	20	61	93	104	90	57	33	66	101	108	89	54
	D	349	343	342	346	354	10	76	115	131	135	131	123	18	347	344	345	353	1	64	113	131	134	132	131
	T	143	143	142	141	140	140	140	141	142	143	143	143	144	143	143	143	142	141	140	140	141	142	143	144
21/09/71	V	11	47	87	104	97	70	40	53	87	104	97	63	13	40	77	101	102	76	40	47	79	105	100	70
	D	81	347	344	344	349	359	37	102	128	135	134	132	103	346	344	345	349	356	25	96	123	136	137	135
	T	144	144	143	142	141	140	140	141	142	143	144	144	144	144	144	144	142	141	141	141	143	144	144	144
22/09/71	V	27	28	70	97	105	88	47	37	68	98	104	77	37	19	61	89	102	91	53	34	65	95	103	83
	D	126	348	342	344	348	353	4	81	115	131	135	131	124	9	346	343	347	350	1	66	112	130	137	136
	T	143	143	144	144	143	141	141	141	142	143	144	144	144	144	144	144	143	141	141	141	142	143	144	144
23/09/71	V	45	10	53	86	101	100	68	35	50	81	101	68	57	14	38	71	88	93	74	44	46	70	93	88
	D	133	23	343	341	344	350	354	35	99	123	134	133	132	103	344	343	344	349	357	25	84	121	137	136
	T	144	144	144	144	143	142	141	141	141	143	144	144	144	144	144	144	144	144	143	141	140	142	144	144
24/09/71	V	61	26	26	64	86	101	91	57	39	59	81	88	68	25	16	54	80	97	95	63	35	48	70	80
	D	131	126	351	343	344	349	355	9	61	102	125	136	135	131	339	340	339	347	354	4	38	92	115	131
	T	144	144	144	144	143	142	141	140	140	141	143	144	144	144	144	144	144	144	143	141	141	141	141	142
25/09/71	V	68	37	7	43	71	92	100	70	39	34	58	74	70	45	5	35	64	89	101	81	51	31	42	59
	D	133	131	40	343	342	347	353	352	15	76	110	123	135	137	173	336	340	346	351	352	1	46	95	112
	T	144	144	144	144	143	142	140	140	140	140	141	142	144	144	144	144	144	143	142	141	140	140	140	141
26/09/71	V	60	45	14	32	59	87	102	81	56	37	36	49	57	51	24	14	45	72	88	81	57	28	24	39
	D	125	139	144	346	339	346	350	348	355	24	90	107	113	119	146	305	343	348	350	352	17	84	107	107
	T	143	143	143	143	143	142	140	140	140	140	140	140	140	142	143	144	143	142	141	140	140	140	140	140

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION A - LAT. 55 ON LONG. 5 50M.
TIME = 30/ 8/71 TO 11/10/71.
WATER DEPTH = 91M. BELOW CHART DATUM.
CURRENT METERS AT 79, 42, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
ALL METERS RETURNED GOOD DATA.

STATION A + METER 42M. ABOVE SEA FLOOR + METER I.C.G.T. PERSEN 213 + DATA REDUCTION BY I.C.O.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
28/08/71	V																								
	D																								
	T																								
29/08/71	V																								
	D																								
	T																								
30/08/71	V																								
	D																								
	T																								
31/08/71	V	2	18	30	39	39	30	16	2	19	30	31	25	12	8	26	40	45	41	29	12	11	27	38	37
	D	69	158	153	151	152	153	159	353	337	337	339	339	338	173	155	155	154	154	155	155	345	337	336	337
	T	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	129	129	129	129	129	129
01/09/71	V	27	10	15	34	48	50	41	28	6	18	31	38	34	24	3	29	46	56	54	40	14	14	35	49
	D	342	0	148	151	153	154	154	156	173	328	330	331	332	335	66	149	151	150	149	151	159	340	336	335
	T	128	128	128	128	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
02/09/71	V	50	37	14	16	42	59	61	53	32	6	29	51	58	50	29	3	31	53	61	57	40	8	29	58
	D	336	337	342	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344	344
	T	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
03/09/71	V	71	65	44	12	26	57	73	72	59	30	9	45	67	70	52	21	20	56	79	83	71	40	4	44
	D	332	334	337	4	138	148	148	151	151	147	0	337	334	333	335	343	143	148	149	150	149	152	304	333
	T	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	130	130	130
04/09/71	V	76	84	68	43	13	43	76	87	81	61	23	26	65	86	79	55	16	36	76	96	94	75	36	17
	D	335	333	332	344	42	137	147	149	148	145	130	359	343	336	335	342	14	138	146	148	147	147	148	339
	T	129	129	129	129	129	129	129	129	129	130	131	131	130	129	129	129	129	129	129	129	130	131	131	131
05/09/71	V	65	94	94	75	34	15	57	89	97	89	64	16	34	75	90	81	51	11	48	89	108	100	63	13
	D	341	338	335	338	334	160	147	148	148	144	144	172	338	345	339	337	330	240	147	147	147	147	153	182
	T	131	130	129	129	129	129	129	129	129	130	131	131	131	131	130	129	129	129	129	129	130	130	132	132
06/09/71	V	44	87	102	98	62	6	47	77	95	106	97	56	9	48	85	93	73	21	41	75	103	117	100	57
	D	331	337	338	339	332	5	150	149	147	142	144	161	265	332	343	339	334	305	162	148	146	145	146	157
	T	132	132	131	130	129	129	129	129	130	131	132	132	132	132	132	132	131	130	129	129	130	130	132	132
07/09/71	V	7	58	94	105	93	37	18	69	93	102	109	93	40	20	64	94	102	65	10	45	84	108	115	85
	D	260	330	339	338	333	331	132	148	148	146	141	146	166	312	342	341	338	332	346	147	146	144	142	151
	T	132	152	132	132	130	130	130	129	130	131	132	133	133	133	133	133	132	131	130	130	130	131	132	133
08/09/71	V	40	22	74	101	103	79	36	17	64	89	99	97	72	26	33	71	88	77	52	10	42	83	105	104
	D	163	319	333	340	335	334	340	113	143	147	145	142	152	194	316	343	341	337	328	293	147	147	147	145
	T	133	133	133	133	132	131	131	130	130	131	132	132	133	133	133	133	133	133	132	131	130	130	132	133
09/09/71	V	68	25	36	79	95	89	65	26	25	62	81	89	78	47	5	54	83	82	65	41	5	41	74	92
	D	152	180	315	334	339	336	337	344	144	147	147	147	144	136	68	347	342	339	336	337	69	141	146	149
	T	133	133	133	133	133	132	132	131	131	131	132	132	132	133	133	133	133	133	133	133	131	131	132	133
10/09/71	V	87	57	12	37	70	83	74	58	25	19	48	68	76	62	32	14	47	70	73	62	37	3	34	58
	D	147	149	158	337	340	338	336	335	346	137	144	146	149	147	139	17	344	341	342	336	336	117	146	140
	T	133	134	134	134	134	133	133	132	131	131	131	132	133	133	134	134	134	134	134	133	132	131	131	132
11/09/71	V	75	67	42	6	34	60	67	68	58	29	9	36	54	59	49	25	10	38	57	64	57	35	7	18
	D	147	149	150	111	340	339	339	340	339	338	135	133	140	147	148	143	11	343	341	346	337	329	322	136
	T	133	134	134	134	134	134	134	133	131	131	131	131	132	133	134	134	134	134	134	134	132	131	131	131

STATION A + METER 42M. ABOVE SEA FLOUR + METER I.C.O.T. FERGLEN 213 + DATA REDUCTION BY I.C.O.T.
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
12/09/71	V	35	55	38	12	18	41	50	52	46	22	5	21	39	50	42	24	2	26	43	49	54	42	19
	D	133	141	147	151	165	328	338	342	341	335	322	208	146	136	145	152	156	342	336	341	344	339	341
	T	131	132	134	134	134	134	134	133	131	131	131	131	131	132	133	134	134	134	134	133	132	131	131
13/09/71	V	6	25	39	50	40	19	5	26	40	46	33	12	11	27	43	43	30	13	9	29	44	52	48
	D	136	137	141	146	151	154	349	340	344	342	347	11	125	142	144	148	148	140	11	348	347	345	342
	T	131	131	132	134	134	134	134	134	133	131	131	131	131	132	133	134	134	134	134	134	134	133	131
14/09/71	V	31	6	16	30	46	45	32	12	11	30	41	46	38	18	6	24	43	52	44	27	4	22	40
	D	348	25	133	139	146	148	149	145	355	345	347	345	343	351	105	147	147	148	146	145	120	342	343
	T	131	131	131	131	133	134	134	134	134	134	133	131	131	131	132	133	134	134	134	134	134	134	134
15/09/71	V	52	38	12	15	34	52	56	45	23	5	30	46	47	40	7	37	58	63	54	31	0	29	50
	D	341	345	357	137	142	148	150	150	150	348	337	339	341	337	335	162	156	150	149	151	154	353	335
	T	132	131	131	131	131	133	134	134	134	134	134	134	134	132	132	133	134	134	134	134	134	134	134
16/09/71	V	57	52	40	8	25	51	67	65	47	18	16	43	56	51	34	14	17	49	68	52	23	14	46
	D	340	339	337	320	158	149	148	150	151	146	344	337	336	339	336	334	154	149	148	150	151	150	348
	T	134	133	132	132	132	133	134	134	134	134	134	134	134	134	133	133	132	133	134	134	135	135	135
17/09/71	V	64	64	50	31	6	39	65	74	66	40	9	35	59	63	52	33	5	35	69	80	71	49	12
	D	338	340	338	331	201	154	147	149	151	146	77	346	336	337	341	336	339	148	147	151	152	151	157
	T	135	134	134	133	132	133	134	135	135	135	135	135	135	135	134	133	133	134	135	135	135	135	135
18/09/71	V	61	75	67	46	18	20	57	80	80	62	30	14	52	71	67	45	16	20	57	82	84	69	38
	D	336	336	337	335	333	150	148	147	149	146	142	1	341	337	337	337	340	147	147	149	150	150	152
	T	135	135	135	134	133	133	134	134	135	135	135	135	135	135	135	134	134	134	134	135	135	135	136
19/09/71	V	48	74	78	60	29	9	49	80	88	78	52	13	35	68	75	64	33	10	45	78	91	82	57
	D	334	335	333	336	343	123	144	147	148	149	146	119	345	339	337	336	343	105	147	147	148	148	149
	T	136	135	135	135	134	134	134	135	135	136	136	136	136	136	135	135	134	134	134	135	135	136	137
20/09/71	V	25	66	82	75	49	16	30	68	88	87	67	30	22	60	79	77	51	17	25	66	90	90	73
	D	343	337	336	338	342	10	134	144	147	148	147	137	358	342	339	338	342	354	138	145	148	149	148
	T	137	136	136	135	135	135	134	135	135	136	137	137	137	137	137	136	136	135	135	135	136	136	137
21/09/71	V	6	48	76	81	66	34	13	52	82	91	81	48	6	42	71	80	67	37	9	45	75	88	54
	D	15	340	338	338	348	101	142	147	148	148	145	74	344	339	338	338	340	346	88	140	144	149	149
	T	137	137	137	136	135	135	135	136	136	136	137	137	137	137	137	137	136	136	136	136	136	137	137
22/09/71	V	12	34	68	82	74	46	12	30	67	89	85	60	24	22	59	75	69	46	13	25	62	85	66
	D	140	341	337	335	339	339	351	139	144	146	147	136	353	341	338	337	337	337	344	142	145	148	149
	T	137	137	137	137	137	136	135	135	136	137	137	137	137	137	137	137	137	137	137	136	136	137	137
23/09/71	V	32	13	52	75	77	59	25	12	50	78	85	72	43	7	39	67	72	60	30	12	43	71	82
	D	146	2	340	336	335	340	345	139	144	147	150	149	151	75	345	338	335	338	351	121	140	145	150
	T	137	137	137	137	137	137	136	136	136	137	137	137	137	137	137	137	137	137	137	136	136	137	137
24/09/71	V	50	15	29	60	71	67	42	7	28	60	76	73	54	20	19	52	67	63	43	17	9	44	68
	D	151	138	344	337	339	340	340	340	147	146	147	150	149	142	349	340	336	338	343	339	130	144	147
	T	137	137	137	137	137	137	136	136	136	136	137	137	137	137	137	137	137	137	137	136	135	136	137
25/09/71	V	55	27	9	42	64	64	52	38	9	25	55	68	60	35	4	29	52	58	51	41	19	14	40
	D	150	148	9	339	335	340	343	339	358	130	142	148	150	148	110	338	335	339	342	337	348	117	134
	T	137	137	137	137	137	137	136	135	135	135	136	137	137	137	137	137	137	137	136	135	134	134	135
26/09/71	V	57	39	11	25	48	58	57	50	31	10	33	47	55	43	23	9	36	55	61	55	34	8	16
	D	152	151	132	342	336	339	336	333	338	95	141	142	147	150	157	312	336	338	336	336	334	304	160
	T	137	137	137	137	137	137	136	135	134	134	135	136	136	137	137	137	137	136	135	134	134	134	134

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION A - LAT. 55 ON LONG. 5 50W.
TIME = 30/ 8/71 TO 11/10/71.
WATER DEPTH = 91M. BELOW CHART DATUM.
CURRENT METERS AT 79, 42, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
ALL METERS RETURNED GOOD DATA.

STATION A + METER 5M. ABOVE SEA FLOOR + METER L.U. BERGEN 236 + DATA REDUCTION BY I.C.D.T.

DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
12/09/71	V	44	42	37	25	6	18	31	32	23	9	13	26	33	35	34	28	15	8	23	32	28	19	18	19
	D	152	142	138	141	115	348	343	342	340	312	204	182	168	149	141	139	132	42	350	341	341	331	296	231
	T	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	135	134	133	133
13/09/71	V	30	34	35	33	26	13	11	21	26	22	14	10	17	25	31	30	27	20	10	11	24	28	22	16
	D	189	174	156	141	139	132	41	357	346	341	331	281	223	193	171	153	143	139	126	18	348	341	337	319
	T	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	135	134	134
14/09/71	V	16	17	28	34	32	29	21	8	10	23	24	17	10	13	22	31	34	35	30	18	4	19	30	29
	D	280	225	185	170	155	144	145	150	351	346	346	341	303	235	197	174	156	148	144	144	77	351	344	340
	T	134	134	134	134	134	135	135	135	135	135	135	135	134	134	134	134	134	135	135	135	135	135	135	135
15/09/71	V	20	19	18	28	37	39	36	29	15	7	25	31	25	14	11	24	35	39	42	37	22	3	25	38
	D	328	288	235	186	165	156	147	148	146	2	344	342	340	322	245	200	174	159	152	147	147	23	347	341
	T	135	134	134	134	135	135	135	135	135	135	135	135	135	135	134	135	135	135	135	135	135	135	135	135
16/09/71	V	38	27	19	20	34	42	45	33	12	16	34	40	33	18	14	29	40	46	47	36	15	16	16	38
	D	337	330	291	223	182	160	147	147	146	132	357	344	337	336	320	240	187	164	151	147	147	128	10	344
	T	135	135	134	134	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135
17/09/71	V	46	43	27	13	26	41	48	50	42	25	7	30	45	45	32	13	22	40	52	58	54	35	6	27
	D	336	334	332	275	198	171	152	145	147	147	73	348	334	332	331	299	192	164	152	150	150	146	138	343
	T	135	135	135	134	134	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135
18/09/71	V	47	55	45	23	11	31	49	58	58	45	20	16	41	52	46	26	7	29	49	60	62	49	24	11
	D	342	336	331	317	239	172	156	150	153	150	135	0	343	340	337	328	250	166	153	153	153	150	145	353
	T	135	135	135	135	134	134	135	135	135	135	136	136	136	135	135	135	135	134	135	135	135	136	136	136
19/09/71	V	39	54	55	38	13	18	45	61	66	58	37	8	32	52	55	41	16	14	42	58	66	61	41	12
	D	342	339	335	332	318	177	155	153	156	152	141	76	348	341	337	334	328	166	153	151	154	152	148	140
	T	136	136	136	135	135	135	135	135	136	136	136	137	137	136	136	135	135	135	135	135	136	137	137	137
20/09/71	V	23	50	62	53	30	2	32	55	65	65	50	20	22	47	58	52	30	3	32	55	66	69	54	27
	D	344	338	335	333	333	232	157	150	153	153	147	132	357	344	339	336	333	223	160	151	154	154	148	143
	T	137	137	136	136	135	135	135	135	136	136	137	137	137	137	137	136	136	136	136	136	136	137	137	138
21/09/71	V	9	39	55	58	42	17	16	47	63	69	60	33	7	37	53	59	44	16	15	42	56	66	60	38
	D	5	344	339	336	335	340	155	150	150	155	153	146	36	349	344	336	338	335	166	150	149	155	153	146
	T	138	138	137	137	136	136	136	136	136	137	138	138	138	138	138	137	137	136	136	136	137	137	138	138
22/09/71	V	6	31	52	59	50	26	7	35	55	64	60	43	17	22	46	55	47	25	8	31	51	62	62	48
	D	108	346	341	337	338	333	220	162	153	152	151	147	132	353	343	340	339	331	230	163	152	152	152	153
	T	138	138	138	138	138	137	137	136	137	137	138	138	138	138	138	138	138	138	137	137	137	138	138	138
23/09/71	V	21	14	42	56	57	37	11	22	43	58	62	51	27	10	35	49	52	41	15	16	38	55	61	56
	D	144	359	345	340	337	333	305	175	153	149	151	150	141	41	347	340	335	336	329	185	157	152	151	150
	T	138	138	138	138	138	138	137	137	137	138	138	138	138	138	138	138	138	138	138	137	137	138	138	138
24/09/71	V	36	8	26	47	53	45	24	8	30	47	56	53	39	14	20	41	47	43	25	6	20	39	48	50
	D	149	128	348	341	333	334	333	224	162	146	150	151	146	127	353	342	339	338	337	298	161	153	148	145
	T	138	138	138	138	138	137	137	137	137	137	137	138	138	138	138	138	138	138	137	137	137	137	137	138
25/09/71	V	39	19	10	35	47	45	30	8	20	37	45	47	42	25	7	25	39	43	29	10	16	32	40	41
	D	146	141	5	341	339	338	336	316	182	160	146	144	140	77	350	341	338	339	315	194	169	153	144	144
	T	138	138	138	138	137	137	137	137	137	137	137	137	138	138	138	138	138	138	137	137	137	137	137	138
26/09/71	V	39	26	6	20	36	39	31	23	15	32	41	40	35	27	14	8	28	34	30	27	21	11	23	30
	D	148	148	123	348	339	335	327	300	247	179	166	154	148	146	150	333	340	340	326	313	304	261	188	169
	T	137	137	138	138	137	137	137	136	136	136	137	137	137	137	137	137	137	137	137	137	137	135	135	136

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION B - LAT. 54 59N LONG. 5 37W.
TIME = 30/ 8/71 TO 14/ 9/71.
WATER DEPTH = 148M. BELOW CHART DATUM.
CURRENT METERS AT 128,109, 36, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

FIRST LAUNCH AT B FROM R.V. JOHN MURRAY. THE SUB-SURFACE BUOY IMPLoded AFTER
143 HRS. GOOD RECORDS RETURNED BY ALL METERS EXCEPT LOWER MIDDLE.

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION B - LAT. 54 59N LONG. 5 37W.
TIME = 30/ 8/71 TO 14/ 9/71.
WATER DEPTH = 148M. BELOW CHART DATUM.
CURRENT METERS AT 128,109, 36, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

FIRST LAUNCH AT B FROM R.V. JOHN MURRAY. THE SUB-SURFACE BUOY IMPLoded AFTER
143 HRS. GOOD RECORDS RETURNED BY ALL METERS EXCEPT LOWER MIDDLE.

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION B - LAT. 54 59N LONG. 5 37W.
TIME = 30/ 8/71 TO 14/ 9/71.
WATER DEPTH = 148M. BELOW CHART DATUM.
CURRENT METERS AT 128,109, 36, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

FIRST LAUNCH AT B FROM R.V. JOHN MURRAY. THE SUB-SURFACE BUOY IMPLoded AFTER
143 HRS. GOOD RECORDS RETURNED BY ALL METERS EXCEPT LOWER MIDDLE.

STATION B + METER 36M. ABOVE SEA FLOOR + METER LOWESTOFF PLESSEY 328 + DATA REDUCTION BY LOWESTOFF
 DATE HOURS IN 5.M.T.

28/08/71 V D
 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

29/08/71 V D

30/08/71 V D
 038 042 037 030 015 005 023 034 037 027 014
 158 153 153 147 143 323 331 330 329 326 306

31/08/71 V D
 7 22 34 40 36 28 12 5 21 28 29 20 4 17 35 46 50
 188 159 156 155 154 156 323 331 328 326 327 284 163 156 157

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION B - LAT. 54 59N LONG. 5 37W.
TIME = 30/ 8/71 TO 14/ 9/71.
WATER DEPTH = 148M. BELOW CHART DATUM.
CURRENT METERS AT 128,109, 36, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

FIRST LAUNCH AT B FROM R.V. JOHN MURRAY. THE SUB-SURFACE BUOY IMPLoded AFTER
143 HRS. GOOD RECORDS RETURNED BY ALL METERS EXCEPT LOWER MIDDLE.

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION B - LAT. 54 58N LONG. 5 37W.
TIME = 15/ 9/71 TO 11/10/71.
WATER DEPTH = 148M. BELOW CHART DATUM.
CURRENT METERS AT 133, 90, 48, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

SECOND LAUNCH AT B FROM R.V. CLIONE. THE SUB-SURFACE BUOY IMPLoded AFTER 90 HRS.
ONLY TWO TOP METERS RETURNED GOOD RECORDS.

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION B - LAT. 54 58N LONG. 5 37W.
TIME = 15/ 9/71 TO 11/10/71.
WATER DEPTH = 148M. BELOW CHART DATUM.
CURRENT METERS AT 133, 90, 48, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

SECOND LAUNCH AT B FROM R.V. CLIONE. THE SUB-SURFACE BUOY IMPLoded AFTER 90 HRS.
ONLY TWO TOP METERS RETURNED GOOD RECORDS.

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION C - LAT. 55 2N LONG. 5 19W.
TIME = 30/ 8/71 TO 11/10/71.
WATER DEPTH = 73M. BELOW CHART DATUM.
CURRENT METERS AT 60, 33, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH FROM R.V. JOHN MURRAY. THE SUB-SURFACE BUOY IMPLoded ABOUT 5 HRS.
BEFORE THE STATION WAS RECOVERED. NO METERS WERE LOST.
THIS METER APPEARS TO HAVE STOPPED BETWEEN 09/09/71 AND 14/09/71. THE TIME OF
RESTART WAS ESTIMATED BY COMPARING THE RESULTS FROM ALL METERS AT C.

STATION C + METER 60M. ABOVE SEA FLOOR + METER R.V.B. PLESSEY 19 + DATA REDUCTION BY I.C.O.T.
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
12/09/71	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/09/71	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/09/71	V	0	0	0	0	0	0	0	53	36	32	23	12	7	18	29	33	25	10	14	32	41	37	34
	D	0	0	0	0	0	0	0	241	338	341	333	327	72	122	138	149	150	141	351	341	342	342	341
15/09/71	V	27	10	11	26	37	38	22	6	25	42	45	39	33	21	3	23	36	40	29	8	19	42	50
	D	341	321	137	134	146	150	147	62	348	344	346	345	342	342	128	137	143	155	157	144	343	335	340
16/09/71	V	41	29	11	24	39	44	35	15	14	38	54	56	49	35	18	14	31	42	41	28	9	30	51
	D	343	345	44	139	148	155	161	156	355	340	342	345	344	346	6	105	142	155	165	173	236	324	339
17/09/71	V	61	47	26	20	34	46	49	42	21	17	46	62	62	49	25	14	31	48	53	41	17	21	50
	D	348	354	18	92	133	150	159	165	181	319	341	346	350	355	9	98	130	144	153	165	185	323	338
18/09/71	V	68	53	31	9	31	45	53	50	29	7	42	65	67	55	30	3	32	51	55	51	34	3	31
	D	347	349	353	78	147	149	149	155	162	356	348	348	349	351	348	194	156	157	157	157	159	133	346
19/09/71	V	67	60	39	10	24	47	62	63	47	14	26	52	61	55	37	14	28	49	62	66	54	26	13
	D	347	346	347	334	163	159	160	161	159	137	357	349	347	345	350	37	134	156	162	162	162	159	353
20/09/71	V	58	59	47	23	19	43	59	68	65	42	7	34	60	67	54	30	7	39	61	66	61	46	17
	D	342	343	352	17	118	140	153	166	169	174	220	339	345	347	351	348	135	155	152	158	169	175	192
21/09/71	V	56	66	59	38	11	28	51	64	63	51	26	19	54	67	61	42	10	24	45	60	63	55	29
	D	343	345	347	355	35	147	159	160	164	168	186	322	345	346	349	354	9	144	151	155	161	164	168
22/09/71	V	43	62	64	52	29	8	34	55	62	60	40	7	37	59	66	57	35	4	30	53	62	58	40
	D	344	347	348	353	355	108	150	152	159	165	169	227	342	347	348	350	346	38	150	151	156	166	175
23/09/71	V	31	53	62	55	36	11	21	43	58	58	46	17	22	50	62	59	40	17	21	40	54	56	44
	D	336	345	346	346	346	18	135	147	154	164	170	178	337	345	347	349	351	23	109	138	154	163	168
24/09/71	V	15	41	55	56	46	28	14	27	45	54	50	29	4	36	52	56	47	31	16	24	39	48	45
	D	341	346	346	347	350	357	56	130	147	163	168	168	331	347	346	346	349	3	49	123	142	154	167
25/09/71	V	6	25	43	50	47	34	14	18	34	43	46	36	12	18	39	48	49	41	26	13	25	38	39
	D	169	340	343	346	346	348	19	119	139	150	165	169	177	338	344	345	346	347	0	73	137	151	156
26/09/71	V	13	15	34	45	50	47	36	17	18	30	35	31	20	8	24	39	44	43	38	25	10	20	33
	D	180	338	345	347	347	349	358	27	122	143	146	151	147	65	354	348	350	348	351	7	51	134	143

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION C - LAT. 55 2N LONG. 5 19W.
TIME = 30/ 8/71 TO 11/10/71.
WATER DEPTH = 73M. BELOW CHART DATUM.
CURRENT METERS AT 60, 33, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH FROM R.V. JOHN MURRAY. THE SUB-SURFACE BUOY IMPLoded ABOUT 5 HRS.
BEFORE THE STATION WAS RECOVERED. NO METERS WERE LOST.

STATION C + METER 33M. ABOVE SEA FLOOR + METER R.V.B. PLESSEY 24 + DATA REDUCTION BY I.C.O.I.
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
28/08/71	V																									
	D																									
29/08/71	V																									
	D																									
30/08/71	V																									
	D																									
31/08/71	V	2	7	14	17	16	10	4	13	22	25	23	15	4	5	13	20	21	6	13	29	37	34	22	12	
	D	339	162	168	170	166	175	277	324	335	339	341	344	3	141	157	166	176	200	341	344	336	332	320	290	
01/09/71	V	13	23	36	39	30	12	13	34	43	42	33	23	12	10	30	42	39	22	15	17	3	19	33	37	
	D	220	182	174	177	175	175	353	350	348	350	347	333	312	191	177	176	172	170	182	183	283	344	342	335	
02/09/71	V	31	19	10	15	28	38	38	25	4	21	38	44	39	30	20	8	16	35	43	35	13	16	40	54	
	D	329	315	268	206	175	176	177	175	178	353	348	348	349	344	327	295	182	177	176	170	173	347	351	350	
03/09/71	V	55	51	37	17	12	32	48	50	29	5	28	50	61	57	39	22	7	28	47	53	36	11	26	56	
	D	350	349	348	356	117	153	170	180	190	259	341	348	348	349	345	350	93	148	161	173	186	218	336	347	
04/09/71	V	71	66	49	20	14	31	41	49	40	14	17	48	68	67	47	27	6	30	53	58	54	32	3	39	
	D	349	347	345	328	200	166	154	160	163	183	330	350	350	348	344	342	271	170	159	163	168	165	9	349	
05/09/71	V	69	79	66	45	20	15	51	67	58	39	10	24	56	75	73	53	23	13	48	71	73	55	23	18	
	D	348	348	346	347	346	347	346	162	163	156	152	155	347	349	348	348	348	348	151	160	165	170	166	163	348
06/09/71	V	59	78	80	63	31	6	43	71	75	64	39	3	36	65	75	66	42	5	33	67	81	71	47	9	
	D	349	347	347	348	352	99	156	158	159	164	164	165	348	348	348	346	342	340	160	161	166	170	173	170	
07/09/71	V	31	65	79	76	57	21	21	57	77	77	58	19	24	56	72	70	57	33	4	45	78	83	66	32	
	D	346	346	346	346	347	352	150	156	159	163	163	155	357	350	348	346	347	343	184	161	161	165	168	164	
08/09/71	V	9	46	73	78	72	49	11	32	62	77	70	46	14	23	55	70	65	47	17	20	55	77	76	57	
	D	11	350	349	347	344	345	4	152	155	161	167	162	133	358	350	347	346	345	333	169	161	161	166	168	
09/09/71	V	22	18	53	69	71	58	29	5	36	63	69	59	38	3	33	55	61	52	40	14	21	51	67	64	
	D	166	352	349	347	343	344	339	211	162	158	162	164	162	128	352	347	343	340	337	327	162	160	163	168	
10/09/71	V	49	18	14	40	58	56	44	23	10	37	54	56	49	31	5	23	42	47	40	28	10	16	41	58	
	D	168	168	350	347	345	339	336	336	178	159	160	166	169	168	153	348	343	337	330	317	293	172	168	171	
11/09/71	V	59	44	20	9	34	44	42	35	19	5	26	46	54	46	27	5	17	33	42	39	25	15	9	20	
	D	169	165	157	6	350	346	336	333	332	204	163	167	167	169	166	164	345	343	337	335	324	289	227	156	

STATION C + METER 33M, ABOVE SEA FLOOR + METER R.V.B. PLESSEY 24 + DATA REDUCTION BY I.C.O.T.
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
12/09/71	V	38	47	38	21	8	22	33	37	31	16	6	23	37	41	34	19	6	13	26	33	32	27	11	7
	D	156	164	173	188	251	322	344	354	355	349	210	172	163	163	168	175	213	308	324	337	351	1	1	195
13/09/71	V	22	31	32	34	25	10	14	29	36	32	19	3	11	24	29	27	22	16	10	16	28	36	36	25
	D	175	166	159	171	186	216	313	335	347	353	1	23	183	169	164	161	172	198	245	311	337	349	356	0
14/09/71	V	9	2	16	32	38	34	21	8	20	34	39	32	19	5	10	25	33	33	24	14	10	27	42	47
	D	1	173	161	158	164	174	193	270	335	347	352	357	359	31	150	154	155	157	167	198	294	336	346	349
15/09/71	V	39	21	6	10	28	40	36	24	11	21	37	46	42	26	11	4	24	37	37	28	12	16	36	51
	D	350	354	9	137	149	154	161	178	232	330	346	350	351	349	338	162	156	157	157	170	206	317	341	348
16/09/71	V	51	41	27	9	12	30	40	38	21	6	33	50	53	45	30	15	5	27	38	37	22	1	27	51
	D	349	349	345	358	358	158	157	159	173	180	323	347	349	348	345	340	159	162	162	168	177	281	345	347
17/09/71	V	63	57	39	18	5	25	40	43	32	9	18	44	61	55	40	19	7	25	41	44	33	11	17	45
	D	349	348	347	345	155	149	159	172	173	168	349	348	349	349	348	342	184	161	156	161	165	167	348	347
18/09/71	V	62	62	50	29	3	24	41	48	43	24	5	34	59	64	53	31	3	26	47	53	45	26	3	30
	D	349	349	344	340	14	152	160	160	160	161	8	350	349	349	348	342	280	169	165	165	163	159	38	351
19/09/71	V	53	65	59	36	12	16	40	58	58	42	11	22	48	62	56	35	7	22	45	59	45	20	11	
	D	348	347	347	342	322	173	165	167	167	167	155	355	350	349	348	346	342	158	167	168	168	166	168	353
20/09/71	V	39	57	61	46	20	13	35	55	62	58	37	5	26	54	63	49	25	4	34	59	64	53	36	10
	D	348	345	343	348	9	113	143	160	166	168	169	169	349	348	348	349	340	195	163	162	162	167	170	178
21/09/71	V	22	52	63	55	37	10	19	44	60	56	40	16	16	48	64	58	37	10	17	39	55	57	46	24
	D	336	345	348	345	343	353	353	151	157	162	163	168	177	341	350	348	347	346	155	153	158	160	163	162
22/09/71	V	4	36	58	58	45	23	5	30	49	56	51	32	4	26	50	58	47	26	4	26	48	58	51	30
	D	4	350	347	348	346	340	187	158	155	159	164	163	139	350	349	349	345	337	279	165	156	158	163	163
23/09/71	V	4	23	46	55	50	31	7	16	38	54	54	38	12	16	44	57	54	37	10	14	34	49	51	37
	D	155	349	348	347	346	343	340	155	157	159	163	169	160	359	350	348	348	347	337	154	152	157	160	162
24/09/71	V	17	9	31	46	50	40	23	3	23	43	51	45	26	2	28	45	49	39	19	3	20	35	45	43
	D	155	13	352	347	347	348	349	67	152	157	161	164	165	60	352	348	346	347	347	110	147	152	155	160
25/09/71	V	28	6	18	36	50	68	71	61	33	28	42	43	33	12	11	28	39	40	30	17	1	19	33	37
	D	163	139	352	350	326	300	285	271	241	158	153	160	162	155	357	350	349	347	339	330	43	148	153	157
26/09/71	V	31	15	6	24	39	42	39	29	13	12	25	29	27	17	7	19	32	38	35	27	17	10	15	24
	D	155	151	18	350	348	350	10	20	34	140	164	173	176	181	252	323	343	351	2	17	36	78	142	165

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.

POSITION = STATION C - LAT. 55 2N LONG. 5 19W.

TIME = 30/ 8/71 TO 11/10/71.

WATER DEPTH = 73M. BELOW CHART DATUM.

CURRENT METERS AT 60, 33, 5 M. ABOVE SEA FLOOR.

CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.

CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH FROM R.V. JOHN MURRAY. THE SUB-SURFACE BUOY IMPLoded ABOUT 5 HRS.
BEFORE THE STATION WAS RECOVERED. NO METERS WERE LOST.

STATION C + METER 5M. ABOVE SEA FLOOR + METER R.V.B. PLESSEY 21 + DATA REDUCTION BY I.C.O.T.
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
28/08/71	V	5	10	17	23	20	12	4	11	19	20	18	11	2	13	22	27	25	19	7	10	21	26	20	16
	D	224	166	154	150	154	156	69	359	347	343	343	343	226	170	161	156	160	171	184	344	341	343	335	330
30/08/71	V	13	4	18	28	33	31	20	5	14	25	26	24	23	16	13	19	27	30	25	11	16	24	29	27
	D	336	226	179	176	169	168	175	158	355	347	339	326	308	278	229	186	170	163	163	140	48	13	355	341
01/09/71	V	25	20	20	22	28	30	28	16	5	24	33	34	30	23	19	22	29	35	37	27	3	24	40	45
	D	323	294	253	212	185	180	183	185	2	14	7	352	341	322	275	227	200	187	184	187	187	10	4	357
02/09/71	V	42	32	23	10	14	30	41	38	22	4	30	43	45	37	26	23	25	35	43	42	27	6	33	49
	D	347	329	302	275	168	169	175	172	171	295	348	354	349	339	304	260	211	182	176	174	181	302	345	347
03/09/71	V	56	48	33	17	23	35	40	41	33	12	20	47	58	55	43	25	17	37	48	48	43	24	12	42
	D	346	341	328	282	196	172	158	165	171	179	345	350	347	345	339	316	234	184	172	171	168	158	26	355
05/09/71	V	59	59	53	41	21	17	46	57	49	32	12	28	50	61	60	45	21	16	49	61	58	42	17	19
	D	346	343	341	344	344	344	161	163	165	152	110	5	351	345	345	342	340	169	166	168	170	168	157	348
06/09/71	V	55	68	68	56	32	9	41	60	60	52	32	1	37	58	61	54	38	3	34	58	66	57	37	1
	D	348	345	342	345	351	90	152	156	160	165	165	56	347	346	344	344	343	317	165	163	164	169	172	139
07/09/71	V	38	59	63	59	49	20	22	49	55	53	49	35	38	60	55	32	13	45	58	56	50	39	16	9
	D	348	344	343	341	345	350	149	154	157	163	167	167	171	174	178	191	303	343	355	2	9	6	12	144
08/09/71	V	14	43	59	59	56	44	12	33	55	61	55	41	24	7	18	23	25	17	43	54	51	43	25	6
	D	22	357	347	340	339	345	15	150	155	157	166	168	153	69	352	196	215	300	341	354	6	11	6	169
09/09/71	V	38	57	64	56	35	17	41	54	54	49	39	12	19	20	4	25	37	36	33	47	48	42	33	21
	D	174	177	178	180	196	278	340	352	5	13	15	17	168	175	329	349	338	322	320	343	358	11	15	9
10/09/71	V	7	36	50	54	45	29	17	36	49	45	37	28	5	24	41	39	4	22	29	28	32	40	31	19
	D	152	167	174	175	180	204	284	342	359	12	16	7	47	164	171	177	258	332	324	314	332	352	349	341
11/09/71	V	8	7	28	45	46	37	21	16	34	42	38	24	10	5	14	35	41	35	7	24	28	25	23	27
	D	330	184	169	171	176	178	190	288	331	352	352	341	313	281	178	172	170	170	164	344	330	317	313	326

STATION C + METER 5M. ABOVE SEA FLOOR + METER R.V.B. PLESSEY 21 + DATA REDUCTION BY I.C.O.T.
 DATE HOURS IN G.M.T.

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
12/09/71	V	16	8	21	34	41	41	34	21	6	14	26	29	24	12	14	31	36	35	29	20	8	20	34	29
	D	319	196	174	174	179	184	181	173	173	343	343	348	352	355	155	164	170	180	183	173	184	341	343	341
13/09/71	V	15	3	3	16	27	32	31	26	19	8	10	26	31	26	16	5	21	30	29	26	19	13	7	16
	D	337	255	283	180	179	179	181	182	173	176	337	340	334	331	330	236	177	177	181	183	178	189	250	331
14/09/71	V	28	15	8	23	16	16	30	35	33	27	18	11	21	29	26	19	13	5	18	30	33	32	27	17
	D	346	333	218	184	190	191	188	184	177	175	190	255	317	331	336	345	342	274	198	194	193	189	186	195
15/09/71	V	6	20	16	17	31	36	34	29	36	40	34	24	10	16	32	36	33	24	8	16	30	34	33	26
	D	278	336	331	192	180	179	182	185	184	181	180	186	223	320	330	334	343	352	347	173	173	180	182	186
16/09/71	V	11	12	31	41	36	15	43	36	19	12	35	35	22	10	27	42	44	39	26	8	12	28	32	31
	D	212	319	330	334	340	198	178	174	175	185	175	180	193	256	325	335	343	349	353	358	169	170	177	184
17/09/71	V	23	10	25	42	47	46	36	7	29	17	15	43	14	11	19	39	43	41	33	15	11	31	39	38
	D	193	241	324	334	340	349	355	353	169	151	10	354	339	209	316	329	335	343	352	0	150	162	163	167
18/09/71	V	30	16	14	34	42	46	44	32	11	16	15	26	50	56	45	36	47	52	48	34	8	23	40	45
	D	180	199	314	334	347	354	354	353	359	163	162	353	349	346	341	331	336	344	351	358	28	156	165	169
19/09/71	V	40	30	12	27	45	54	54	39	17	7	32	48	41	21	50	37	16	11	46	37	14	16	39	48
	D	177	191	237	318	335	346	351	353	1	157	176	179	180	333	340	331	304	317	348	357	17	159	168	172
20/09/71	V	49	42	27	12	32	51	54	43	25	3	20	43	52	51	40	12	12	15	36	44	11	5	28	47
	D	176	182	197	277	354	9	5	356	0	23	174	176	175	183	187	214	308	200	173	171	173	63	162	171
21/09/71	V	54	48	39	20	16	40	53	50	41	21	10	34	48	50	42	25	8	35	15	36	45	44	35	35
	D	176	182	186	202	317	349	359	1	4	10	157	168	172	175	183	194	308	346	4	156	162	162	158	155
22/09/71	V	45	48	41	28	8	32	48	51	44	23	10	31	42	44	44	34	15	24	43	49	37	16	38	29
	D	162	171	180	186	258	331	343	354	8	15	115	157	160	166	176	183	215	313	334	346	357	157	165	163
23/09/71	V	9	6	41	36	14	19	38	46	45	36	16	14	36	45	46	40	22	12	36	48	39	17	15	
	D	134	148	179	184	203	320	340	350	356	2	25	149	159	164	173	183	196	315	338	345	354	4	27	140
24/09/71	V	16	11	24	33	11	7	27	40	44	37	22	8	26	39	44	41	30	11	21	39	43	39	24	10
	D	137	54	4	344	311	279	334	344	352	357	10	100	156	164	168	176	183	202	327	341	351	359	7	90
25/09/71	V	25	34	13	19	27	29	26	32	40	41	28	12	19	35	41	39	31	18	11	27	36	37	29	16
	D	150	159	157	343	339	343	340	338	347	353	3	50	140	153	158	168	180	194	285	322	339	352	0	22
26/09/71	V	13	23	31	34	27	10	26	23	16	21	35	27	13	12	26	32	30	21	8	18	33	39	34	22
	D	109	141	154	168	179	330	342	334	343	12	10	14	37	123	151	163	172	181	218	309	320	329	338	346

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION D - LAT. 54 ON LONG. 3 54W.
TIME = 6/ 9/71 TO 21/ 9/71.
WATER DEPTH = 35M. BELOW CHART DATUM.
CURRENT METERS AT 24, 15, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V.CLIONE.
TOP METER DID NOT RECORD VELOCITY.

STATION D + METER 15M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 295 + DATA REDUCTION BY LOWESTOFT
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
05/09/71	V																								
	D																								
06/09/71	V																						074	057	
	D																						071	059	
07/09/71	V	23	29	53	65	66	58	41	22	45	72	80	66	38	16	42	62	67	62	47	30	40	67	78	72
	D	25	290	269	255	245	239	225	170	102	85	75	63	48	330	273	256	245	237	222	184	117	91	77	66
08/09/71	V	50	17	34	61	70	67	55	34	25	56	77	76	56	25	24	47	62	63	54	38	27	51	70	73
	D	56	10	282	262	251	243	235	214	137	95	83	72	63	37	298	268	253	243	234	215	156	106	89	76
09/09/71	V	63	37	18	40	59	65	59	44	23	34	61	71	61	41	14	29	47	58	56	47	31	26	52	66
	D	61	45	326	274	258	249	243	233	193	113	91	83	69	54	0	282	263	249	240	228	201	130	94	84
10/09/71	V	63	48	24	19	41	54	55	47	33	18	35	56	58	47	28	13	30	47	51	46	34	18	25	45
	D	72	60	35	305	271	258	248	239	225	171	106	91	79	67	51	331	274	260	252	241	230	193	119	96
11/09/71	V	51	47	34	16	22	39	48	46	36	23	15	31	43	41	29	17	16	30	40	40	35	24	12	21
	D	84	69	54	22	292	269	255	246	238	214	152	105	91	79	59	28	313	278	266	257	248	234	189	115
12/09/71	V	36	40	31	21	14	24	35	39	34	25	14	12	25	34	33	25	17	19	30	36	34	26	18	10
	D	98	89	75	49	348	298	278	269	258	243	214	145	102	92	79	53	13	321	291	278	267	257	243	197
13/09/71	V	14	25	34	36	24	13	15	28	34	32	23	14	8	14	26	33	31	17	8	18	27	33	31	24
	D	129	104	92	79	57	9	307	287	273	261	255	236	180	107	86	78	65	50	330	292	276	265	259	251
14/09/71	V	18	10	14	26	33	34	22	9	18	25	29	27	21	13	4	17	30	36	28	14	1	18	30	34
	D	236	197	120	97	85	73	58	354	299	281	264	253	241	228	153	100	88	84	80	73	315	273	268	258
15/09/71	V	33	26	15	9	23	35	38	29	13	12	21	33	35	28	17	8	18	35	40	36	23	18	26	39
	D	249	242	228	144	97	85	78	65	29	312	275	263	257	251	234	173	96	87	81	71	43	333	295	273
16/09/71	V	43	38	28	18	13	30	43	43	32	14	23	34	39	37	25	16	14	31	45	46	33	16	17	34
	D	262	252	238	214	141	98	87	74	54	8	299	282	271	259	244	215	141	97	87	76	65	40	306	280
17/09/71	V	45	46	40	27	14	22	45	51	44	28	22	33	49	49	40	28	14	13	37	51	48	29	15	29
	D	271	264	252	237	192	111	89	80	65	39	338	299	284	275	261	240	216	103	87	81	72	52	344	292
18/09/71	V	45	50	48	39	23	16	36	54	55	41	23	25	42	52	51	40	25	13	35	54	57	42	26	19
	D	278	268	258	249	227	150	100	86	77	65	29	313	285	269	261	252	233	157	97	85	76	63	37	328
19/09/71	V	34	52	55	46	34	18	25	51	62	50	35	22	29	45	48	44	34	21	23	48	60	54	40	20
	D	282	265	261	251	238	202	119	91	79	67	44	0	295	273	265	256	240	203	121	89	79	67	53	15

STATION D + METER 15M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 295 + DATA REDUCTION BY LOWESTOFT
DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
20/09/71	V	26	41	49	50	40	26	17	40	61	61	46	23	18	37	49	50	42	28	18	37	58			
	D	301	274	263	255	243	223	147	97	84	70	58	34	313	272	264	255	243	222	161	103	85			

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION D - LAT. 54 ON LONG. 3 54W.
TIME = 6/ 9/71 TO 21/ 9/71.
WATER DEPTH = 35M. BELOW CHART DATUM.
CURRENT METERS AT 24, 15, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V.CLIONE.
TOP METER DID NOT RECORD VELOCITY.

STATION D + METER 5M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 316 + DATA REDUCTION BY LOWESTOFT
 HOURS IN G.M.T.
 DATE

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
05/09/71	V																								
	D																								
06/09/71	V																						063	049	
	D																						065	052	
07/09/71	V	26	23	47	58	51	35	28	47	64	69	58	34	15	37	51	56	50	38	29	44	61	67	64	
	D	31	290	261	250	236	228	207	150	103	83	71	61	45	328	268	253	243	227	208	162	111	88	75	
08/09/71	V	46	14	30	51	59	56	45	29	36	54	67	65	50	23	41	51	52	45	31	30	49	61	62	
	D	52	4	274	252	244	235	220	190	128	97	80	69	57	29	293	260	245	234	222	201	139	103	84	
09/09/71	V	54	32	17	37	49	53	48	35	25	39	56	58	50	35	14	26	41	48	46	37	28	35	49	
	D	56	41	315	265	247	237	234	220	168	113	89	78	61	46	352	277	253	240	229	216	182	129	101	
10/09/71	V	50	40	20	18	35	44	44	37	27	23	39	49	45	38	23	13	28	38	40	37	28	18	30	
	D	69	53	27	299	260	245	238	227	207	149	109	95	77	58	38	315	268	255	240	232	215	171	116	
11/09/71	V	41	36	26	13	20	33	38	36	30	22	26	37	36	28	19	16	17	28	34	32	27	19	14	
	D	82	62	43	0	276	256	242	228	217	188	140	112	93	73	39	353	301	274	260	244	231	219	163	
12/09/71	V	34	28	18	16	23	30	34	33	27	19	13	18	27	28	17	4	19	27	32	32	29	22	15	
	D	102	86	52	345	310	285	272	259	246	231	193	131	107	92	77	315	313	297	281	268	258	248	233	
13/09/71	V	18	27	27	21	13	12	11	25	29	26	19	12	8	16	25	25	18	14	8	10	23	28	26	
	D	124	107	92	71	29	0	311	282	272	257	238	222	173	105	88	76	56	36	0	281	272	264	259	
14/09/71	V	16	11	17	24	24	17	13	13	17	23	24	22	17	12	13	22	24	22	15	6	12	19	25	
	D	225	170	115	95	81	59	13	331	294	277	263	246	225	194	138	106	88	74	58	9	294	273	259	
15/09/71	V	26	20	13	16	27	27	21	16	20	28	32	31	28	21	15	15	25	29	24	17	19	25	33	
	D	241	225	193	130	103	88	61	15	327	302	283	266	251	235	200	143	106	96	73	36	342	312	284	
16/09/71	V	37	30	23	15	20	33	31	24	20	16	16	25	32	33	27	18	13	24	36	37	30	19	16	
	D	253	242	220	184	117	93	86	66	49	18	317	284	268	256	248	223	171	112	93	81	66	36	325	
17/09/71	V	35	41	38	28	19	16	32	42	35	24	24	30	38	42	37	29	20	18	33	41	34	25	21	
	D	273	264	255	238	212	140	99	85	77	36	341	307	284	271	261	241	204	135	99	87	73	43	0	
18/09/71	V	34	41	41	36	26	17	28	42	42	31	23	27	35	40	43	39	29	15	26	42	43	33	24	
	D	280	266	256	247	234	180	116	93	85	61	18	326	294	271	259	251	235	191	111	91	85	65	28	
19/09/71	V	29	38	47	44	36	23	20	38	45	36	30	25	26	34	42	41	35	24	20	36	44	40	38	
	D	290	264	253	250	236	214	143	104	93	71	40	2	313	275	259	254	239	213	150	106	93	71	51	

STATION D + METER 5M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 316 + DATA REDUCTION BY LOWESTOFT
DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
20/09/71	19	31	40	40	35	28	18	30	46	45	43	29	17	29	40	42	38	30	20	30	46	45		
D	324	276	256	249	241	228	183	114	99	78	57	41	327	278	257	245	235	224	186	120	103	81		

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION E - LAT. 53 36N LONG. 3 42W.
TIME = 6/ 9/71 TO 21/ 9/71.
WATER DEPTH = 35M. BELOW CHART DATUM.
CURRENT METERS AT 23, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH AND RECOVERY FROM R.V.CLIONE. ALL METERS RETURNED GOOD DATA.

STATION E + METER 23M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 166 + DATA REDUCTION BY LOWESTOFT
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
05/09/71	V	13	38	69	82	80	67	44	1	57	97	100	70	28	20	55	75	77	67	48	10	46	93	102	77
	D	32	287	277	271	269	272	271	180	94	95	96	92	72	303	278	271	269	271	274	276	92	98	98	89
	T	153	153	153	153	153	154	156	157	156	153	153	153	153	153	153	153	153	154	156	157	156	154	153	153
06/09/71	V	41	13	47	73	80	74	58	29	17	70	99	88	55	14	34	61	73	71	58	30	15	64	97	94
	D	75	337	283	275	268	267	269	272	87	93	99	94	85	45	287	276	271	268	271	282	58	92	96	94
	T	153	152	153	153	153	153	154	156	156	155	153	153	153	152	152	153	153	153	154	156	157	156	154	153
07/09/71	V	65	27	21	54	71	73	67	43	13	39	79	93	73	40	12	37	59	65	61	45	18	26	68	90
	D	85	68	301	281	272	267	267	277	315	81	95	97	93	77	355	286	275	269	267	271	286	79	93	98
	T	153	152	152	152	153	153	153	155	156	156	154	153	153	152	152	152	153	153	154	155	156	156	155	154
08/09/71	V	79	51	17	25	52	62	63	53	33	8	41	73	78	57	28	13	35	52	55	50	31	7	29	59
	D	93	82	54	293	280	272	265	269	281	7	91	100	97	87	67	328	285	275	271	268	272	304	88	98
	T	153	152	151	151	152	153	153	153	154	155	154	154	153	152	152	151	152	153	153	154	154	155	155	154
09/09/71	V	73	61	36	11	26	47	53	52	39	19	11	41	62	62	41	18	16	33	45	46	42	27	4	20
	D	96	89	81	27	293	279	273	269	282	68	94	99	95	83	52	313	286	276	271	271	272	297	93	93
	T	153	152	151	151	152	152	152	153	153	154	154	153	153	152	152	152	152	152	152	153	153	153	154	154
10/09/71	V	45	58	50	29	8	22	37	41	35	29	15	9	29	48	47	31	16	16	27	34	36	30	21	10
	D	96	94	87	76	7	294	281	274	267	266	259	126	108	100	91	81	50	320	292	282	275	266	259	241
	T	153	153	152	152	152	152	152	152	153	153	153	153	153	153	152	152	152	152	152	152	153	153	153	153
11/09/71	V	11	33	44	44	30	13	16	28	32	30	25	16	6	21	33	38	36	19	14	26	35	34	31	29
	D	128	108	101	89	75	29	313	293	283	272	261	252	180	113	102	92	77	54	330	299	292	285	268	258
	T	153	153	153	153	153	152	152	153	153	153	153	153	153	153	153	153	154	153	152	153	153	153	154	154
12/09/71	V	20	5	17	36	41	31	18	9	26	36	35	33	23	9	9	28	40	38	32	18	3	21	39	46
	D	261	217	111	103	93	75	52	342	298	291	285	272	257	243	117	105	89	81	83	84	315	273	279	281
	T	154	153	153	153	154	154	154	153	152	153	153	154	154	154	154	153	154	154	152	151	150	151	152	153
13/09/71	V	37	28	14	11	34	46	48	31	11	10	31	42	41	32	18	8	28	46	47	40	22	4	23	41
	D	272	260	253	112	102	89	82	79	68	287	279	284	280	265	243	157	108	89	84	86	85	326	277	278
	T	153	154	154	154	154	154	154	152	151	151	151	152	153	154	154	154	153	154	153	151	151	151	151	151
14/09/71	V	53	48	36	19	9	43	56	64	65	47	17	15	44	48	37	19	9	39	57	61	45	21	10	33
	D	281	272	265	264	111	101	89	86	89	82	285	275	276	277	265	254	139	103	89	91	94	87	287	275
	T	152	154	156	156	155	155	154	152	151	152	151	151	151	153	155	155	155	154	154	152	152	152	152	152
15/09/71	V	51	60	53	43	22	17	51	65	53	33	4	30	50	62	56	46	24	10	46	63	55	33	7	30
	D	274	278	271	271	292	73	93	89	89	85	27	278	275	277	274	274	285	73	94	92	94	88	27	284
	T	152	153	155	156	157	157	155	154	152	152	152	152	152	153	155	156	157	157	156	155	153	152	152	152
16/09/71	V	54	70	70	62	40	4	33	64	65	47	17	15	44	63	69	62	39	4	33	64	67	50	23	11
	D	276	276	273	274	274	284	92	92	89	89	83	281	274	276	275	272	269	225	95	93	91	89	88	280
	T	153	154	155	157	158	158	157	156	154	153	153	153	154	154	156	157	158	158	158	156	155	153	153	153
17/09/71	V	40	62	75	71	51	19	22	58	72	59	33	3	36	62	73	69	51	18	23	61	77	65	39	8
	D	273	275	275	272	269	267	100	98	95	89	87	0	278	278	279	272	269	257	105	98	93	89	86	50
	T	153	153	155	157	157	158	158	157	156	154	154	153	153	154	155	155	157	158	158	158	156	155	154	154

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION E - LAT. 53 36N LONG. 3 42W.
TIME = 6/ 9/71 TO 21/ 9/71.
WATER DEPTH = 35M. BELOW CHART DATUM.
CURRENT METERS AT 23, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH AND RECOVERY FROM R.V. CLIONE. ALL METERS RETURNED GOOD DATA.

STATION E + METER 5M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 249 + DATA REDUCTION BY LOWESTOFT

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
05/09/71	V	15	35	58	67	65	49	30	25	60	83	81	57	25	19	48	61	53	33	23	53	78	83	66
	D	32	288	276	271	265	229	151	102	94	94	86	69	298	276	271	265	260	241	151	106	95	91	87
	T	153	153	154	154	153	154	155	156	156	154	153	153	153	154	154	153	154	155	155	155	154	154	154
06/09/71	V	37	11	41	61	68	61	45	20	37	70	82	73	47	14	31	49	57	55	44	25	25	58	79
	D	74	338	281	271	267	265	258	217	117	97	93	88	79	39	289	277	269	264	258	228	140	105	97
	T	153	153	153	154	154	154	155	155	155	155	154	153	153	153	153	153	154	154	154	155	155	154	154
07/09/71	V	57	27	17	44	57	61	54	35	19	46	70	76	62	35	12	31	45	51	48	35	19	34	60
	D	81	68	310	281	272	266	258	243	171	113	98	94	88	75	5	291	276	266	258	245	198	124	101
	T	153	153	152	153	154	154	154	155	155	155	154	154	153	153	152	153	153	154	154	154	155	155	154
10/09/71	V	66	44	21	16	36	50	52	43	24	16	44	64	65	46	24	13	30	42	43	38	26	15	32
	D	87	77	61	308	279	271	267	258	240	145	103	94	91	83	62	331	287	274	265	256	241	184	118
	T	154	153	152	151	152	153	153	154	154	155	154	154	153	153	152	152	152	153	153	154	154	154	154
11/09/71	V	60	49	29	12	21	37	45	41	31	15	17	40	52	49	32	16	13	27	36	36	30	19	13
	D	94	86	72	24	295	276	269	263	257	228	130	104	98	92	79	45	328	292	278	272	262	238	176
	T	154	153	152	152	152	152	153	153	154	154	154	154	153	153	152	152	152	152	153	153	153	154	154
12/09/71	V	41	45	35	22	11	16	30	34	31	25	12	13	30	38	33	24	16	11	22	30	29	22	18
	D	104	98	87	66	34	297	282	273	263	258	235	132	107	99	88	68	43	333	294	282	276	265	243
	T	154	153	153	152	152	152	153	153	153	153	153	153	153	153	153	153	152	152	152	153	153	153	153
13/09/71	V	17	31	38	30	18	14	12	22	32	27	18	10	14	25	31	30	21	19	16	11	15	26	28
	D	135	112	102	92	61	30	340	297	286	278	267	225	150	122	107	96	71	39	22	345	298	283	278
	T	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	152	152	152	153	153
14/09/71	V	14	12	24	34	34	27	23	16	13	16	19	22	14	9	18	30	36	32	25	16	12	22	27
	D	234	171	123	107	95	75	49	22	333	297	276	273	262	193	137	114	101	88	72	50	336	300	283
	T	153	153	153	153	153	153	152	151	151	151	152	153	154	154	153	153	153	152	151	151	151	151	152
15/09/71	V	25	21	14	20	36	39	32	25	14	13	22	26	26	24	16	19	33	40	37	32	20	14	25
	D	261	247	210	139	111	99	85	64	36	318	291	281	268	255	220	155	121	103	88	76	57	343	304
	T	153	154	154	154	154	153	152	152	151	151	151	151	152	153	154	154	153	153	152	152	151	151	151
16/09/71	V	37	34	24	21	33	47	46	43	29	16	24	33	35	30	21	22	35	46	47	44	32	14	23
	D	272	256	228	177	129	107	94	78	63	11	312	288	275	264	235	177	131	108	96	85	72	34	311
	T	157	154	154	154	154	153	153	152	152	151	151	151	152	152	153	154	153	153	153	152	152	152	152
17/09/71	V	42	42	32	25	21	39	54	53	44	18	23	38	45	45	34	24	24	37	53	52	40	21	18
	D	277	266	252	223	172	122	103	89	79	52	315	290	274	265	256	218	173	123	101	91	84	59	322
	T	152	153	154	154	154	155	154	153	153	152	152	152	153	154	155	155	156	155	155	154	153	153	153
18/09/71	V	46	47	43	33	24	30	49	58	53	35	9	25	42	46	40	33	25	33	52	59	53	37	13
	D	277	269	261	243	202	146	110	94	88	80	32	284	275	274	260	237	196	141	110	95	84	76	48
	T	153	154	155	156	156	157	156	155	154	153	153	153	153	154	154	156	156	157	156	155	155	154	153
19/09/71	V	42	50	46	38	28	27	43	59	61	45	22	18	40	49	46	38	26	28	47	64	61	46	26
	D	282	277	265	250	226	160	119	101	89	77	54	319	290	278	268	252	220	157	119	101	89	79	51
	T	153	154	154	156	157	157	157	156	155	154	154	154	153	154	154	156	156	157	157	156	155	155	154

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION F - LAT. 53 24N LONG. 5 50W.
TIME = 6/ 9/71 TO 20/ 9/71.
WATER DEPTH = 42M. BELOW CHART DATUM.
CURRENT METERS AT 30, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V. CLIONE.
BOTH METERS RETURNED GOOD DATA. BOTTOM METER RECORDED PRESSURE.

STATION F + METER 30M. ABOVE SEA FLOUR + METER LOWESTOFT PLESSEY 300 + DATA REDUCTION BY LOWESTOFT
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
05/09/71	V																								
	D																								
06/09/71	V	059	035	006	051	077	076	053	017	024	057	075	076	062	037	004	047	073	078	061	026				
	D	174	178	351	002	002	359	352	336	199	185	179	176	175	178	346	000	003	004	000	342				
07/09/71	V	20	54	79	87	76	60	34	13	60	82	74	45	9	34	64	77	75	58	28	14	56	78	76	51
	D	210	187	181	176	176	180	351	358	359	358	352	311	192	182	179	178	176	178	0	1	1	1	1	356
08/09/71	V	16	29	64	83	85	72	53	16	33	70	81	67	36	8	43	69	79	71	53	21	24	61	79	68
	D	330	198	184	178	175	176	178	166	5	2	2	359	354	240	188	182	178	174	172	169	9	3	1	357
09/09/71	V	40	6	36	67	82	80	64	40	4	44	72	75	55	21	18	51	72	72	59	41	8	34	65	75
	D	354	309	189	182	175	174	175	173	104	1	2	3	358	349	196	183	176	175	173	170	130	5	2	2
10/09/71	V	60	32	5	40	65	74	67	47	20	13	48	68	66	43	14	26	52	66	63	48	30	1	33	57
	D	0	356	217	189	180	175	175	173	171	4	7	7	4	356	324	205	185	175	173	175	180	180	3	6
11/09/71	V	65	51	24	15	40	58	63	53	36	14	18	45	61	55	34	9	25	48	59	55	40	19	6	32
	D	5	358	341	228	189	177	174	172	170	144	16	9	4	350	306	198	185	174	175	173	168	31	7	7
12/09/71	V	48	54	42	17	15	38	50	52	42	28	11	15	35	47	47	28	4	22	40	48	46	37	27	7
	D	6	6	3	350	208	187	175	173	176	176	158	16	7	7	9	2	315	188	179	175	178	178	174	180
13/09/71	V	17	37	46	40	22	5	22	34	38	37	27	15	2	20	39	44	34	14	8	26	37	42	37	29
	D	357	0	7	7	357	259	190	177	171	177	180	180	297	351	4	9	8	0	203	184	175	173	178	182
14/09/71	V	16	2	26	42	44	35	18	1	17	32	36	32	25	7	14	33	41	38	26	8	12	31	41	42
	D	176	0	0	5	8	8	6	225	180	175	175	176	180	172	8	3	6	6	4	353	180	176	174	175
15/09/71	V	39	33	16	8	32	46	42	28	9	11	29	41	42	40	25	4	23	43	45	32	13	13	37	51
	D	174	169	166	0	356	2	4	2	6	170	174	174	177	174	169	76	2	359	4	4	9	180	182	178
16/09/71	V	56	52	38	14	12	39	52	46	28	4	22	44	56	45	23	4	35	54	51	32	10	23	46	
	D	176	175	177	176	9	7	3	4	358	346	188	183	178	177	177	182	333	358	2	1	353	315	200	185
17/09/71	V	59	63	56	38	12	21	49	55	45	20	10	36	57	61	53	35	12	19	48	59	52	31	5	32
	D	179	176	174	175	185	355	0	1	1	351	209	185	178	173	175	178	189	351	1	2	1	354	281	187
18/09/71	V	58	67	63	55	29	6	41	64	64	41	13	18	44	59	62	50	28	8	42	64	65	47	16	18
	D	180	177	174	177	184	329	359	0	0	1	351	189	180	176	174	177	178	23	7	4	3	0	356	186
19/09/71	V	48	64	67	60	42	12	25	54	65	53	27	10	40	60	64	59	42	22	16	53	68	58	33	6
	D	182	180	176	176	180	180	0	1	3	1	354	217	187	179	176	176	175	180	356	3	4	2	357	279

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION F - LAT. 53 24N LONG. 5 50W.
TIME = 6/ 9/71 TO 20/ 9/71.
WATER DEPTH = 42M. BELOW CHART DATUM.
CURRENT METERS AT 30, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
PRESSURE IS DENOTED BY P AND IS IN UNITS OF 10 CMS BELOW THE SEA SURFACE.

STANDARD LAUNCH AND RECOVERY FROM R.V. CLIONE.
BOTH METERS RETURNED GOOD DATA. BOTTOM METER RECORDED PRESSURE.

STATION F + METFR 5M. ABOVE SEA FLOOR + METFR LOWESTOFT PLESSEY 153 + DATA REDUCTION BY LOWESTOFT
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
05/09/71	V																							
	D																							
	P																							
06/09/71	V				034	016	028	049	057	054	039	015	028	046	049	047	038	019	021	043	054	056	044	020
	D	289	322	058	079	089	093	102	148	238	255	266	277	282	309	047	078	089	092	101	131			
	P	383	377	377	384	395	404	408	411	413	411	405	396	385	378	377	384	396	406	412	416			
07/09/71	V	23	47	56	55	34	18	38	54	60	54	34	12	34	50	52	48	36	16	27	49	59	55	40
	D	236	257	263	274	282	293	357	60	81	94	100	109	180	249	258	269	280	286	320	63	83	89	97
	P	418	417	412	402	389	379	374	377	386	397	405	408	410	411	408	401	390	379	374	376	385	398	406
08/09/71	V	14	31	53	59	48	28	18	41	55	58	51	27	16	41	50	49	46	30	12	31	50	58	50
	D	150	248	260	271	279	285	297	29	74	88	93	99	110	225	255	264	274	280	291	355	73	88	89
	P	415	416	414	408	397	384	376	374	379	389	400	405	408	409	409	406	398	387	378	375	379	388	400
09/09/71	V	29	10	36	52	56	55	41	21	23	44	54	42	17	21	43	46	45	41	25	14	36	49	50
	D	106	204	259	262	269	278	285	317	47	78	89	93	101	130	242	255	263	276	283	302	25	77	86
	P	411	414	414	411	404	394	383	376	376	382	392	401	405	407	409	404	395	385	378	378	376	381	390
10/09/71	V	43	23	13	39	48	47	47	35	13	24	40	48	44	31	12	30	45	43	38	33	15	17	35
	D	98	108	238	258	260	271	282	288	328	71	87	92	96	105	160	242	250	261	276	282	302	59	85
	P	406	408	411	411	408	402	392	383	378	380	385	393	400	404	407	407	403	395	386	381	380	384	391
11/09/71	V	41	34	19	16	37	42	40	37	23	8	24	37	40	36	24	11	26	37	34	31	27	11	15
	D	96	109	122	232	250	260	273	284	288	0	73	87	94	104	114	175	241	251	260	279	292	315	58
	P	399	404	406	408	408	405	400	391	385	382	383	387	387	394	400	403	406	407	403	396	388	383	385
12/09/71	V	35	34	25	10	21	34	33	31	27	15	8	24	33	32	29	18	9	26	30	29	28	22	11
	D	87	92	99	143	233	246	258	272	278	293	30	68	79	92	98	103	201	239	246	262	274	283	326
	P	390	396	401	404	406	406	404	400	393	387	384	385	388	393	398	402	404	405	405	402	397	390	385
13/09/71	V	29	33	30	26	13	10	25	25	21	21	17	8	17	25	26	29	24	6	14	26	25	16	20
	D	72	87	99	101	99	233	243	244	262	284	295	346	54	74	88	94	92	121	245	252	254	266	285
	P	384	388	392	397	401	403	405	404	401	396	391	387	387	388	391	396	400	403	405	405	404	400	394
14/09/71	V	7	17	27	27	24	24	10	11	21	22	21	20	13	9	20	25	27	25	15	8	21	28	30
	D	344	57	73	86	98	99	114	236	251	254	273	276	299	18	60	79	88	95	106	203	245	252	276
	P	384	383	385	389	393	398	402	404	404	402	398	393	389	387	387	390	394	399	403	405	406	405	402
15/09/71	V	24	16	17	29	33	32	28	16	10	21	29	30	26	19	11	20	32	35	32	19	9	20	34
	D	289	317	24	59	74	88	105	130	204	242	252	266	279	295	345	53	70	82	92	111	174	246	258
	P	389	385	383	384	387	392	398	402	404	405	403	400	394	389	386	386	389	394	400	404	406	407	406
16/09/71	V	35	28	15	15	29	37	39	33	20	9	26	37	35	29	18	11	26	39	41	35	22	11	29
	D	275	283	302	37	68	84	89	97	114	201	247	253	260	272	289	10	65	81	89	95	111	190	241
	P	397	389	383	382	383	387	393	400	403	405	406	404	400	393	387	384	385	389	396	402	406	408	407
17/09/71	V	38	36	28	15	22	39	44	41	29	19	26	37	38	35	28	13	14	35	44	43	34	21	25
	D	265	276	287	323	47	72	87	98	112	162	217	241	255	268	278	288	60	83	89	97	111	151	212
	P	403	395	386	381	380	383	389	397	402	405	407	406	403	397	389	384	383	385	392	400	405	408	409
18/09/71	V	39	41	36	22	14	28	41	44	38	26	16	30	40	39	33	23	7	27	44	47	42	28	16
	D	257	271	278	300	12	67	84	89	99	121	184	233	248	261	275	283	352	77	89	91	93	108	173
	P	406	400	391	383	379	380	385	393	400	404	406	407	405	400	392	384	381	382	387	395	402	406	409
19/09/71	V	42	44	41	33	18	20	37	46	46	37	21	22	40	45	35	19	17	36	46	49	40	22	16
	D	252	264	271	282	315	41	73	88	100	109	137	219	248	262	271	278	295	36	69	85	97	108	124
	P	409	404	404	396	386	380	378	382	389	398	403	406	407	404	397	387	381	379	383	390	400	405	408

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION G - LAT. 53 26N LONG. 5 33W.
TIME = 29/ 8/71 TO 8/10/71.
WATER DEPTH = 86M. BELOW CHART DATUM.
CURRENT METERS AT 63, 62, 6, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
THIS RIG WAS USED FOR INTERCOMPARISON OF PLESSEY AND BERGEN METERS.
ALL METERS RETURNED GOOD DATA.

STATION G + METER 63M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 293 + DATA REDUCTION BY LOWESTOFT
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
28/08/71	V																								
	D																								
29/08/71	V																					040	028	021	
	D																					162	131	087	
30/08/71	V	25	35	33	24	10	25	45	55	55	50	39	23	12	24	29	25	13	9	31	46	54	57	51	38
	D	37	22	21	30	73	153	171	177	172	164	150	135	66	12	16	23	27	148	171	175	173	168	163	155
31/08/71	V	20	8	19	30	26	13	18	32	43	48	46	40	26	5	13	32	37	31	21	24	43	55	60	59
	D	143	60	12	14	18	45	137	158	167	163	165	164	159	158	347	4	16	25	51	123	149	158	165	169
01/09/71	V	53	39	19	3	21	30	22	10	25	46	63	72	70	57	35	10	18	41	43	28	2	26	53	72
	D	164	154	152	18	349	12	30	84	157	166	173	173	174	180	177	186	319	335	339	339	0	164	167	169
02/09/71	V	80	72	53	24	15	46	66	65	44	16	32	60	73	76	61	34	5	37	65	76	61	29	22	61
	D	168	170	172	182	318	337	342	351	0	35	134	152	158	169	166	168	281	338	345	348	348	0	129	160
03/09/71	V	83	92	79	50	13	29	62	87	89	67	33	44	78	94	89	65	26	20	61	91	98	74	38	34
	D	165	169	171	174	193	335	340	340	345	358	38	129	152	163	169	175	182	333	338	339	346	359	25	114
04/09/71	V	76	104	108	89	61	14	40	82	104	94	57	17	55	95	111	102	69	24	30	78	106	99	62	18
	D	154	162	169	172	174	192	337	337	342	352	5	69	153	163	167	170	169	161	354	347	345	352	2	56
05/09/71	V	54	99	121	116	90	52	13	70	110	114	86	33	27	75	106	113	96	58	8	59	106	116	91	45
	D	153	165	168	169	168	158	45	358	358	355	358	9	147	162	166	168	170	167	113	354	356	357	357	1
06/09/71	V	16	69	111	126	112	81	31	40	99	122	106	65	13	44	89	115	112	82	38	25	90	120	113	77
	D	145	166	168	169	172	169	155	3	358	359	357	356	18	164	167	168	168	170	166	2	359	358	356	355
07/09/71	V	25	34	86	117	111	80	28	44	105	123	105	63	12	37	89	113	108	81	36	29	97	123	110	74
	D	355	170	171	171	168	169	167	352	358	359	357	357	0	169	170	169	168	168	167	2	359	357	357	357
08/09/71	V	21	36	87	115	118	103	66	11	57	111	118	92	48	8	59	97	109	99	69	17	49	103	117	97
	D	0	170	173	172	171	171	171	158	357	358	358	357	359	120	167	171	169	168	172	177	351	356	355	353
09/09/71	V	57	3	51	94	113	112	88	45	13	72	110	105	74	30	22	67	96	101	87	53	9	57	101	107
	D	357	45	171	171	171	168	167	171	342	354	357	357	359	6	150	167	171	169	167	178	252	347	354	356
10/09/71	V	83	38	12	54	86	99	92	62	20	34	80	100	90	58	12	34	69	89	88	69	33	13	62	91
	D	356	351	185	175	175	171	166	174	183	343	352	358	357	359	5	163	166	168	170	169	173	342	353	357
11/09/71	V	90	66	25	17	53	77	81	67	40	1	43	75	84	70	39	6	38	65	78	71	50	20	18	53
	D	357	358	358	177	171	170	168	170	170	45	353	358	0	0	3	81	163	165	168	169	172	174	354	356

STATION G + METER 63M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 293 + DATA REDUCTION BY LOWESTOFT
 DATE HOURS IN G.M.T.

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
12/09/71	V	74	73	50	16	19	46	63	66	56	30	2	33	56	67	58	33	6	30	53	62	62	47	22	7
	D	358	356	354	0	164	167	169	169	171	176	333	357	359	0	2	9	72	159	165	168	170	174	180	326
13/09/71	V	33	53	58	50	27	7	27	46	53	52	38	15	10	33	47	49	34	13	12	37	54	61	55	37
	D	346	350	354	358	6	98	156	164	167	170	174	188	323	340	348	352	355	0	149	160	166	169	173	175
14/09/71	V	15	11	33	47	47	35	15	12	33	50	54	44	26	4	19	38	46	42	28	8	30	56	71	70
	D	184	326	342	348	356	3	20	132	164	172	175	180	194	344	349	350	353	4	76	156	165	166	169	169
15/09/71	V	56	31	2	31	53	58	50	26	11	36	58	66	62	41	10	24	53	64	58	39	11	28	56	76
	D	170	167	63	353	348	348	352	7	112	161	166	165	163	164	163	358	355	349	347	353	22	153	164	166
16/09/71	V	81	68	44	12	32	63	79	63	34	2	32	66	83	77	55	21	20	58	80	75	47	10	31	73
	D	166	172	181	222	334	350	1	355	346	27	162	162	163	171	177	336	342	356	356	350	354	163	162	162
17/09/71	V	97	96	77	42	1	37	69	83	68	33	17	56	87	91	74	44	10	33	69	86	74	37	13	56
	D	164	169	169	166	225	347	348	354	3	5	115	153	158	164	167	163	127	355	352	359	0	2	119	155
18/09/71	V	96	107	96	69	27	26	66	91	88	60	23	36	76	97	98	78	40	16	63	93	95	71	28	30
	D	160	163	166	172	184	324	340	347	356	6	34	141	157	161	167	172	183	300	335	348	356	2	18	139
19/09/71	V	76	103	108	95	62	19	37	79	97	83	44	17	60	95	107	94	64	22	31	80	99	89	53	14
	D	160	163	169	173	174	198	326	337	350	359	9	118	156	162	168	170	170	177	329	336	351	0	6	82
20/09/71	V	55	94	109	99	71	32	16	60	96	98	67	23	42	82	103	97	73	37	12	62	94	99	73	24
	D	155	161	166	170	169	164	356	336	339	352	3	38	147	160	167	172	170	167	346	347	342	349	359	17
21/09/71	V	33	77	103	105	89	54	7	45	83	99	83	41	20	66	96	103	90	57	12	41	85	102	86	48
	D	147	159	164	168	170	167	153	348	343	344	355	14	123	159	164	167	170	170	160	353	355	350	352	6
22/09/71	V	12	57	91	103	97	67	26	23	71	98	92	56	11	43	80	98	94	69	27	22	68	94	93	63
	D	99	159	165	167	168	170	169	347	349	349	351	2	45	158	163	165	166	168	170	352	355	354	353	358
23/09/71	V	20	33	75	101	100	79	44	3	51	83	89	67	26	23	65	95	98	83	48	5	37	71	85	72
	D	20	157	165	166	166	167	171	288	347	350	351	354	9	151	165	167	167	169	172	180	340	342	348	352
24/09/71	V	35	12	54	87	98	86	59	20	28	69	87	80	43	4	40	74	91	84	61	25	21	64	84	78
	D	2	145	167	167	166	168	171	180	342	349	353	353	353	34	168	166	164	167	171	175	337	347	350	353
25/09/71	V	47	9	29	64	84	85	65	34	9	48	76	77	53	21	14	49	72	79	67	33	2	40	67	78
	D	351	347	172	172	169	168	170	170	6	354	353	353	355	352	176	174	171	168	163	169	27	0	353	347
26/09/71	V	63	34	4	31	54	62	55	37	11	23	51	66	64	48	19	19	45	64	68	51	23	6	32	53
	D	352	357	56	173	175	174	168	160	131	355	351	351	355	4	28	141	160	165	172	180	180	31	358	349

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION G - LAT. 53 26N LONG. 5 33W.
TIME = 29/ 8/71 TO 8/10/71.
WATER DEPTH = 86M. BELOW CHART DATUM.
CURRENT METERS AT 63, 62, 6, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
THIS RIG WAS USED FOR INTERCOMPARISON OF PLESSEY AND BERGEN METERS.
ALL METERS RETURNED GOOD DATA.

STATION G + METER 62M. ABOVE SEA FLOOR + METER I.C.O.T. BERGEN 294 + DATA REDUCTION BY I.C.O.T.
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
28/08/71	V	28	35	35	28	14	26	43	52	54	51	44	34	23	28	33	28	18	9	31	45	53	58	52	40
	D	40	19	23	30	78	163	184	187	176	163	152	138	96	29	19	25	25	173	184	182	178	174	171	167
	T	150	149	150	151	150	149	149	150	148	148	149	149	149	148	149	151	150	151	151	150	148	146	146	148
29/08/71	V	27	14	23	31	29	15	18	32	43	46	45	38	28	8	16	35	39	34	26	28	42	54	59	59
	D	160	97	23	12	16	49	144	164	171	171	172	174	171	184	1	6	21	30	60	119	155	168	169	173
	T	149	149	149	149	149	150	150	149	149	149	149	149	149	149	149	150	151	152	151	150	150	150	151	151
30/08/71	V	54	45	30	18	32	36	30	20	30	46	60	69	68	56	39	16	28	44	45	31	8	26	51	70
	D	176	165	143	46	16	10	19	87	158	175	179	173	175	180	189	229	326	340	343	349	34	167	174	177
	T	150	150	150	149	149	150	149	149	148	148	148	148	149	149	149	149	149	149	149	149	149	149	149	149
01/09/71	V	78	70	52	25	18	45	64	64	44	17	33	58	73	76	61	41	15	41	65	75	62	31	22	57
	D	179	174	176	192	314	343	347	353	0	46	140	155	163	171	176	184	258	338	350	352	353	6	124	164
	T	148	147	148	147	147	146	148	149	149	149	149	149	149	149	147	147	146	144	147	149	149	149	149	150
02/09/71	V	81	92	78	51	17	29	60	84	88	66	33	42	75	92	87	63	26	22	59	88	96	71	36	32
	D	172	175	175	181	207	336	345	346	352	3	41	133	158	170	176	182	194	334	344	346	353	1	29	119
	T	149	146	145	146	146	144	141	146	149	150	149	149	148	143	142	144	144	143	142	144	143	141	141	143
03/09/71	V	73	102	107	86	59	16	42	82	103	92	54	18	53	93	110	101	70	25	31	78	104	97	60	17
	D	158	167	175	179	178	205	342	344	348	354	8	79	158	170	174	176	174	166	360	352	351	358	6	60
	T	142	139	137	140	146	146	143	143	142	140	139	139	139	138	139	138	139	142	145	140	138	140	138	139
04/09/71	V	52	96	119	115	69	49	11	70	108	112	84	32	26	72	103	112	95	57	4	60	104	114	90	44
	D	157	171	173	175	174	162	38	356	357	358	358	9	153	169	171	173	176	175	105	358	357	357	1	5
	T	139	138	137	138	139	140	136	133	134	137	137	137	138	137	137	137	137	140	137	133	134	135	137	138
05/09/71	V	15	68	109	126	111	78	28	42	99	121	102	63	11	43	87	113	110	79	37	26	90	120	113	76
	D	148	174	176	176	180	177	166	3	1	0	353	358	18	170	175	176	174	177	175	4	1	0	359	356
	T	138	138	137	137	133	135	138	136	134	135	137	138	138	138	138	137	136	135	139	138	135	136	138	138
06/09/71	V	22	34	84	117	124	102	70	14	58	111	120	96	52	3	56	96	112	102	71	26	45	105	123	104
	D	357	178	177	177	177	180	180	186	356	357	358	354	358	128	176	177	176	174	170	171	358	1	359	355
	T	139	138	138	138	136	133	137	139	136	135	137	138	139	139	139	139	138	136	134	136	136	136	138	139
07/09/71	V	64	11	45	92	116	116	96	57	2	69	115	114	84	38	18	66	99	106	93	61	6	62	109	114
	D	356	353	180	178	179	177	175	177	294	358	359	355	358	5	151	175	176	174	174	179	198	358	360	358
	T	139	140	140	139	139	137	135	137	136	137	137	139	140	140	140	140	140	139	139	144	141	137	138	139
08/09/71	V	89	45	10	58	97	112	107	84	43	27	82	110	99	65	21	34	72	96	97	80	47	16	67	104
	D	357	359	171	177	178	179	179	178	185	343	357	359	1	0	22	156	173	177	175	171	179	306	352	358
	T	140	141	141	140	140	139	138	142	148	146	140	139	140	141	141	141	141	140	139	139	144	144	139	139
09/09/71	V	103	75	30	20	60	89	97	86	60	7	51	85	98	83	50	6	43	73	88	85	66	33	26	69
	D	360	359	349	191	181	177	175	176	173	220	357	359	0	359	0	72	172	176	175	177	173	167	353	356
	T	140	141	141	141	141	141	140	138	137	137	136	138	140	141	142	142	142	141	141	141	139	138	138	138
10/09/71	V	91	85	58	19	25	57	77	78	65	43	8	55	77	81	64	34	12	43	67	75	66	46	16	28
	D	1	0	357	340	185	174	176	176	180	184	326	359	3	4	2	8	121	171	173	174	175	177	170	355
	T	140	141	141	142	141	141	141	140	139	138	138	138	140	141	142	142	142	142	142	142	141	140	139	139

STATION G + METER 62M. ABOVE SEA FLOOR + METER I.C.O.T. BERGEN 294 + DATA REDUCTION BY I.C.O.T.
DATE

		HOURS IN G.M.T.																								
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
12/09/71	V	57	73	68	44	9	25	49	62	62	50	27	9	39	59	65	53	28	9	35	54	61	57	41	16	
	D	357	1	2	2	16	174	173	172	174	176	178	20	1	2	4	7	13	126	170	172	175	178	182	203	
	T	140	141	141	142	142	142	142	142	141	140	140	140	140	141	142	142	142	142	143	143	142	141	141	140	
13/09/71	V	16	39	54	57	45	22	12	32	48	52	48	34	11	17	37	49	46	32	10	19	41	54	59	51	
	D	340	353	357	1	6	20	132	167	173	175	178	185	221	337	351	357	359	2	27	158	168	173	175	179	
	T	140	141	141	142	142	143	143	143	142	142	142	141	141	141	141	142	142	143	144	143	143	142	142	142	
14/09/71	V	33	10	17	36	47	45	31	12	18	36	51	53	41	24	4	23	39	46	40	23	12	35	58	69	
	D	183	213	338	347	354	3	10	45	145	174	179	180	182	189	273	349	351	354	358	13	118	164	173	175	
	T	141	141	141	141	141	142	142	142	143	144	145	144	144	144	144	144	143	143	142	142	142	142	142	143	
15/09/71	V	66	50	25	7	38	54	56	45	20	17	41	58	64	57	34	5	31	55	63	56	35	8	36	62	
	D	176	177	176	360	353	353	355	360	23	141	170	173	171	169	172	153	357	354	350	353	359	80	162	171	
	T	143	142	142	143	142	142	143	144	143	143	144	144	144	144	142	140	141	140	141	142	143	145	146	144	
16/09/71	V	77	76	63	37	11	39	66	77	58	29	5	39	70	81	72	48	16	30	63	79	69	40	3	41	
	D	172	172	180	191	276	346	1	7	359	357	131	167	165	169	178	183	199	344	350	3	359	355	53	169	
	T	144	142	145	147	147	147	144	143	143	145	146	145	144	143	144	144	145	146	147	143	143	145	145	145	
17/09/71	V	78	96	92	71	39	7	45	72	81	60	26	22	63	89	89	70	43	13	43	73	83	66	29	22	
	D	167	171	176	177	174	40	358	353	1	6	15	137	158	164	170	174	164	101	356	356	4	4	11	142	
	T	144	141	141	145	147	146	146	148	144	143	145	147	146	143	139	145	152	152	148	144	143	143	144	145	
18/09/71	V	64	98	105	92	63	21	36	71	91	82	51	18	45	80	96	93	71	32	26	69	94	90	62	20	
	D	159	166	171	172	180	211	334	347	350	359	11	65	152	164	168	175	179	194	322	341	351	358	6	39	
	T	145	143	137	141	149	151	151	149	145	144	144	145	145	143	141	145	149	150	151	150	145	143	144	144	
19/09/71	V	39	81	104	104	86	52	13	46	84	94	75	33	25	66	97	103	85	54	11	42	84	98	82	42	
	D	151	165	170	178	180	184	242	336	345	356	3	20	138	163	170	177	177	174	199	336	343	355	3	11	
	T	144	142	140	137	142	147	147	148	147	144	143	143	142	142	139	138	141	143	144	146	149	143	142	143	
20/09/71	V	18	63	98	107	93	63	23	28	68	97	91	56	18	49	86	101	91	64	26	24	70	95	94	62	
	D	124	161	167	173	178	173	162	354	341	346	359	10	71	156	167	174	178	176	172	355	351	346	351	2	
	T	143	142	140	136	136	140	142	141	147	149	143	142	142	142	140	137	137	142	145	140	138	146	143	141	
21/09/71	V	16	42	83	104	103	82	45	4	56	86	97	74	30	30	73	97	101	83	47	1	54	91	100	78	
	D	40	157	165	171	174	176	174	11	352	348	350	1	27	147	169	173	175	177	174	128	357	358	352	357	
	T	141	141	141	138	137	141	144	142	138	144	146	142	142	141	140	139	139	142	145	145	138	137	141	141	
22/09/71	V	37	19	64	92	101	91	59	16	36	79	97	84	45	11	52	83	96	88	60	18	34	75	93	86	
	D	11	140	167	171	173	174	176	180	353	357	355	355	9	112	166	171	171	171	171	175	183	354	359	356	357
	T	140	140	140	139	138	138	142	145	141	138	140	141	140	140	140	140	141	140	139	140	143	140	139	139	140
23/09/71	V	53	11	42	80	100	94	70	33	16	61	86	84	58	17	32	72	95	94	74	37	9	47	74	83	
	D	3	49	165	173	173	171	173	180	340	354	356	354	1	26	164	171	172	172	175	178	340	346	350	353	
	T	140	140	140	140	140	139	138	142	144	140	139	139	140	140	140	141	142	140	139	142	145	145	144	141	
24/09/71	V	64	28	24	62	89	95	79	51	12	43	74	65	72	34	11	48	76	88	78	54	19	35	70	84	
	D	356	18	152	172	170	171	176	182	227	348	355	357	355	358	151	177	174	174	171	174	177	198	345	357	
	T	140	140	140	140	141	140	139	142	144	141	142	142	141	140	140	140	142	142	140	140	141	140	140	141	141
25/09/71	V	71	40	2	39	68	83	78	58	29	19	56	76	71	47	16	24	55	73	76	60	32	10	51	70	
	D	357	356	249	178	176	174	175	180	178	354	0	1	357	355	3	174	179	177	171	163	168	16	2	359	
	T	141	140	140	140	140	141	142	142	142	143	142	142	141	141	140	141	141	141	142	143	143	142	143	142	143
26/09/71	V	74	59	35	10	41	57	61	53	40	15	36	56	66	60	43	21	31	50	66	65	49	25	19	44	
	D	356	0	15	123	181	181	176	170	176	104	7	355	355	3	16	64	146	169	172	180	186	195	5	352	
	T	142	141	141	141	141	141	142	143	144	145	144	143	142	141	143	143	143	142	143	142	144	144	145	146	145

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION G - LAT. 53 26N LONG. 5 33W.
TIME = 29/ 8/71 TO 8/10/71.
WATER DEPTH = 86M. BELOW CHART DATUM.
CURRENT METERS AT 63, 62, 6, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
THIS RIG WAS USED FOR INTERCOMPARISON OF PLESSEY AND BERGEN METERS.
ALL METERS RETURNED GOOD DATA.

STATION G + METER 6M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 436 + DATA REDUCTION BY LOWESTOFT
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
28/08/71	V																								
	D																								
29/08/71	V																					024	013	004	
	D																					165	167	014	
30/08/71	V	21	32	36	29	11	9	21	30	29	24	18	9	9	23	31	29	19	6	13	25	29	29	27	19
	D	357	347	346	344	322	212	177	172	174	168	158	122	18	355	349	344	332	315	189	185	182	176	163	148
31/08/71	V	12	14	17	14	15	13	14	24	30	32	28	23	13	9	17	17	17	18	16	21	28	31	33	33
	D	104	56	28	339	307	288	240	208	192	184	176	170	153	63	31	13	350	322	281	225	207	193	180	171
01/09/71	V	27	15	3	19	23	15	12	11	21	32	40	44	41	30	12	12	25	28	18	9	19	35	42	48
	D	174	180	0	3	2	349	312	265	203	189	183	180	179	168	149	31	11	6	357	297	215	193	183	176
02/09/71	V	48	41	21	11	30	42	40	32	18	23	37	40	42	36	25	4	25	43	48	40	21	16	40	48
	D	172	170	157	63	21	10	1	342	304	229	202	192	184	175	171	135	12	4	358	348	332	232	200	190
03/09/71	V	53	54	45	24	9	37	53	52	34	19	34	46	52	49	39	27	6	34	54	56	44	23	26	49
	D	179	175	172	165	36	3	357	355	343	291	223	202	187	179	171	165	72	7	358	356	351	320	234	201
04/09/71	V	56	57	55	44	17	22	51	62	53	36	20	37	51	56	55	46	26	13	45	63	58	45	25	30
	D	189	183	174	169	152	21	6	0	355	341	281	214	196	183	178	170	159	29	5	3	0	342	310	221
05/09/71	V	54	64	66	63	45	11	35	61	67	57	42	18	41	58	61	55	41	13	31	60	69	66	51	23
	D	195	184	176	173	168	131	8	357	355	348	335	276	205	188	181	176	167	138	11	0	358	355	344	315
06/09/71	V	29	57	67	65	59	43	10	42	66	68	63	38	15	46	62	63	53	36	8	34	61	66	66	49
	D	202	183	179	175	167	168	135	4	351	345	346	337	238	190	182	178	175	167	150	358	354	356	350	346
07/09/71	V	13	39	65	70	64	59	31	18	51	64	69	63	33	21	53	66	64	53	31	15	48	61	67	65
	D	299	184	176	177	174	172	167	22	359	350	347	343	333	211	184	177	175	170	163	23	1	359	355	345
08/09/71	V	40	12	50	70	72	62	48	16	34	57	63	67	52	18	31	56	62	54	39	20	25	54	62	69
	D	338	228	181	177	174	174	167	135	14	0	351	343	340	315	193	181	177	177	168	143	18	2	354	345
09/09/71	V	58	27	20	55	67	67	57	40	9	38	59	62	60	37	11	38	56	59	47	31	10	34	57	61
	D	342	333	198	179	174	170	169	160	103	7	359	350	346	340	255	189	182	180	178	161	96	7	2	351
10/09/71	V	63	51	17	27	53	61	60	44	23	14	42	56	62	53	28	15	40	53	51	40	22	11	35	52
	D	346	345	327	188	176	173	172	166	151	36	5	353	348	341	330	222	187	179	176	171	159	56	12	359
11/09/71	V	58	54	36	9	27	47	53	46	32	11	19	41	53	53	42	19	17	37	45	43	34	20	8	29
	D	350	345	339	302	184	176	174	170	166	135	18	359	349	350	343	324	208	186	177	172	168	156	60	8

STATION G + METER 6M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 436 + DATA REDUCTION BY LOWESTOFT

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
12/09/71	V 47	51	44	28	8	25	40	40	34	23	11	16	34	44	45	37	17	12	28	34	32	28	17	4
	D 358	354	347	334	277	191	180	176	168	161	139	18	0	356	350	343	320	215	188	180	175	167	155	63
13/09/71	V 22	35	42	38	28	10	17	26	28	25	19	8	11	25	34	37	31	16	8	23	29	30	26	20
	D 5	0	357	351	341	307	205	191	182	175	168	135	38	11	3	358	356	342	230	193	186	182	171	162
14/09/71	V 10	11	25	34	34	29	18	13	22	27	27	24	16	6	17	30	34	33	22	10	20	30	35	30
	D 135	38	9	358	352	340	319	252	210	193	182	173	162	81	21	4	355	349	342	294	217	197	185	177
15/09/71	V 29	23	17	15	27	37	37	29	19	21	32	33	29	21	16	20	30	39	42	31	14	24	36	45
	D 170	151	118	53	20	355	341	326	288	229	200	169	184	161	117	49	27	9	356	343	300	218	195	184
16/09/71	V 43	41	32	10	23	39	40	35	30	14	24	42	42	38	31	14	19	38	44	41	32	16	23	45
	D 173	165	162	119	25	10	1	344	332	300	204	190	181	171	165	141	28	9	1	349	340	317	209	192
17/09/71	V 46	46	46	30	9	30	49	50	43	27	22	41	46	44	41	27	10	26	44	50	44	29	23	41
	D 182	173	167	157	96	12	1	355	348	324	246	205	189	179	173	160	101	16	3	350	342	324	247	206
18/09/71	V 49	51	52	40	19	15	41	51	47	38	21	29	46	48	42	33	21	13	41	55	50	41	23	24
	D 188	176	171	170	162	32	13	3	351	340	307	221	198	187	176	166	157	29	7	4	357	340	317	222
19/09/71	V 47	53	50	49	34	10	33	52	53	42	28	24	42	50	50	47	34	9	32	53	57	49	34	20
	D 198	189	174	162	163	101	14	5	357	345	319	246	207	192	180	171	168	111	13	6	4	349	330	261
20/09/71	V 41	54	54	53	42	20	20	50	62	52	36	22	35	52	56	54	43	23	14	46	62	56	42	24
	D 205	193	180	170	166	147	27	6	6	0	339	288	217	193	185	176	168	160	36	5	2	1	346	308
21/09/71	V 30	51	57	59	52	35	8	34	57	62	47	29	22	43	56	57	48	34	8	30	55	61	54	36
	D 222	195	184	174	169	164	104	7	357	0	351	324	246	202	188	179	174	170	130	4	358	354	350	337
22/09/71	V 17	37	55	58	50	38	14	23	49	59	56	41	21	28	47	54	48	36	15	18	45	59	59	45
	D 277	202	186	180	173	168	146	15	2	356	354	344	307	215	192	185	178	169	157	13	0	358	359	350
23/09/71	V 24	23	46	56	52	40	25	6	37	55	58	47	29	19	42	53	51	42	26	2	33	52	58	50
	D 322	218	191	183	180	174	169	45	358	358	355	347	324	242	197	183	182	176	172	63	0	2	358	350
24/09/71	V 33	13	33	48	49	44	39	17	20	44	53	50	39	18	20	41	47	40	31	15	17	38	50	53
	D 342	274	198	187	182	175	173	167	3	357	355	348	342	319	207	188	184	179	169	148	21	3	0	356
25/09/71	V 47	25	11	36	48	43	32	16	10	32	46	51	47	31	6	30	44	45	36	22	9	24	42	53
	D 347	334	214	182	179	177	171	153	17	0	354	353	350	345	261	184	176	174	171	158	108	15	359	356
26/09/71	V 49	37	11	20	38	43	38	19	4	25	43	50	48	36	16	13	32	39	37	28	13	12	30	39
	D 354	344	315	191	175	172	173	177	27	9	359	354	350	344	330	207	187	180	177	170	153	20	4	357

STATION G + METER 6M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 436 + DATA REDUCTION BY LOWESTOFT

DATE			HOURS IN G.M.T.																										
			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
27/09/71	V	D	40	34	20	6	27	38	38	36	23	10	20	33	37	34	26	12	16	28	33	29	20	9	13	25			
			351	345	336	231	184	180	174	164	149	84	18	3	355	345	335	301	210	188	178	172	160	122	42	11			
28/09/71	V	D	35	35	30	17	8	20	27	28	22	12	4	18	30	35	32	21	6	12	25	29	26	21	11	4			
			358	348	329	329	256	195	184	176	172	156	63	6	2	0	0	349	309	204	187	184	176	166	146	63			
29/09/71	V	D	15	28	31	29	20	9	15	22	22	21	17	11	7	18	26	27	24	14	10	22	28	26	25	19			
			356	349	346	346	340	297	222	207	183	169	159	131	56	9	2	352	345	324	253	216	203	182	178	171			
30/09/71	V	D	9	9	24	33	36	30	18	11	23	28	29	24	16	7	16	31	39	36	27	13	21	35	38	36			
			144	27	5	0	355	345	322	248	205	195	188	180	158	98	14	2	357	351	340	299	217	198	185	174			
01/10/71	V	D	33	22	7	22	40	45	40	29	23	30	38	40	37	27	9	16	40	49	45	34	19	29	43	49			
			169	162	98	10	354	346	333	314	268	221	197	183	177	172	148	11	3	355	344	332	288	218	196	185			
02/10/71	V	D	50	44	31	11	30	47	54	46	31	19	35	48	50	46	36	14	22	46	58	51	36	16	32	52			
			178	174	165	95	21	4	349	341	324	261	205	190	182	174	166	144	24	6	359	354	341	285	202	184			
03/10/71	V	D	60	57	48	26	14	46	58	59	55	36	12	39	56	54	45	30	8	37	57	61	59	42	8	39			
			180	176	169	162	34	7	3	1	348	336	246	187	180	178	167	160	76	9	4	356	349	345	300	181			
04/10/71	V	D	61	67	60	52	25	21	55	62	62	60	32	14	49	63	57	48	28	14	49	61	66	66	41	6			
			176	177	172	168	162	17	3	357	354	351	340	205	179	178	176	170	162	30	4	356	349	347	345	225			
05/10/71	V	D	47	68	69	58	46	12	34	61	69	69	55	20	28	59	68	65	45	21	21	53	68	73	61	32			
			174	172	173	172	169	166	0	356	350	347	345	330	184	174	172	172	167	152	17	0	353	351	350	342			
06/10/71	V	D	18	54	72	77	63	42	6	38	62	74	67	43	7	41	65	73	65	45	17	28	60	73	74	56			
			196	176	171	172	173	169	121	2	353	345	342	342	286	180	174	174	176	170	152	10	358	348	346	342			
07/10/71	V	D	18	31	61	72	71	58	35	14	46	64	72	62	32	16	50	67	66	54	37	10	40	63	70	67			
			319	186	174	174	173	171	160	54	10	358	348	345	336	210	181	177	176	173	163	84	12	359	348	343			
08/10/71	V	D	46	12	37	59																							
			338	290	185	176																							

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION G - LAT. 53 26N LONG. 5 33W.
TIME = 29/ 8/71 TO 8/10/71.
WATER DEPTH = 86M. BELOW CHART DATUM.
CURRENT METERS AT 63, 62, 6, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
THIS RIG WAS USED FOR INTERCOMPARISON OF PLESSEY AND BERGEN METERS.
ALL METERS RETURNED GOOD DATA.

STATION G + METER 5M. ABOVE SEA FLOOR + METER I.C.O.O.I. BERGEN 212 + DATA REDUCTION BY I.C.O.O.I.
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
28/08/71	V	19	29	32	26	13	9	19	26	27	22	17	12	8	20	27	26	17	4	12	23	27	26	24	17	
	D	6	354	355	355	337	233	191	185	185	181	172	143	56	8	354	348	343	338	189	191	190	184	169	156	
	T	135	135	136	138	138	138	138	137	137	137	134	133	133	134	135	136	137	137	137	137	137	137	136	131	
29/08/71	V	12	14	15	12	13	13	14	22	26	28	25	21	13	9	16	17	19	17	15	20	26	28	30	30	
	D	123	76	41	353	314	294	248	217	202	195	189	181	164	87	44	25	357	330	288	236	216	204	191	181	
	T	127	125	127	130	132	134	135	134	133	131	128	126	125	124	124	125	127	129	131	133	132	131	128	126	
01/09/71	V	25	16	4	18	20	13	12	12	20	29	37	40	37	27	13	11	23	25	21	9	18	31	39	44	
	D	183	188	314	6	7	345	313	275	218	201	190	187	186	182	168	53	23	17	12	328	231	205	193	187	
	T	125	124	124	124	125	125	126	128	128	127	126	125	124	123	123	123	123	123	124	124	124	124	124	124	
02/09/71	V	44	36	19	11	27	37	37	29	17	20	34	39	33	24	6	22	39	44	44	37	20	15	37	43	
	D	182	176	164	81	32	17	7	352	314	238	212	201	194	186	180	156	19	11	6	360	342	248	210	198	
	T	125	126	126	126	126	126	126	126	125	125	126	126	127	127	127	126	127	128	128	127	127	126	127	127	
03/09/71	V	48	49	41	23	8	33	48	48	32	18	30	41	46	45	36	25	7	30	49	52	40	23	23	44	
	D	188	181	177	172	54	12	8	5	351	301	234	209	194	185	179	171	92	16	7	5	356	330	245	212	
	T	128	128	127	125	125	126	127	129	129	129	129	128	128	128	128	126	125	124	125	127	129	130	130	129	
04/09/71	V	50	52	51	41	18	19	46	57	51	35	19	33	45	51	51	42	25	10	41	58	54	42	23	27	
	D	198	188	179	175	163	32	13	8	4	348	292	224	205	193	185	178	169	49	11	8	3	349	320	233	
	T	127	125	124	124	123	123	124	126	129	130	130	129	127	125	124	124	123	123	124	125	127	129	130	129	
05/09/71	V	47	56	59	56	42	12	31	56	63	53	38	17	35	52	55	51	38	14	27	55	65	63	48	22	
	D	205	188	177	175	175	142	18	4	358	356	343	289	213	199	188	183	175	147	22	4	360	356	349	325	
	T	128	126	125	124	123	122	123	124	126	129	130	129	127	126	125	124	124	123	124	125	127	129	131	132	
06/09/71	V	25	51	58	56	54	41	5	40	61	61	57	37	14	39	56	56	48	33	9	30	55	59	59	46	
	D	216	194	183	171	176	177	163	1	2	2	354	342	259	200	190	184	178	179	169	3	360	10	3	353	
	T	132	131	129	126	126	124	123	124	126	129	131	132	132	132	130	128	126	126	125	125	127	130	132	133	
07/09/71	V	13	34	58	60	55	53	31	13	46	57	59	57	32	18	47	59	57	47	31	10	42	55	59	59	
	D	314	195	184	176	173	177	176	42	10	10	12	351	336	226	194	186	182	177	177	45	6	8	17	360	
	T	133	133	133	131	129	127	124	123	124	123	124	127	131	133	133	133	132	130	128	125	123	124	128	132	133
08/09/71	V	39	9	43	62	62	54	45	17	29	52	55	48	20	25	50	50	55	48	36	20	21	48	54	58	
	D	348	256	191	183	171	169	171	148	20	7	18	12	354	326	209	190	184	183	178	156	31	10	3	6	
	T	134	134	134	133	133	130	126	123	124	126	129	133	134	134	134	134	133	131	127	126	126	127	130	134	
09/09/71	V	54	26	15	47	60	57	51	40	12	32	54	54	53	37	11	33	50	54	44	30	13	28	52	55	
	D	0	349	213	187	178	174	169	167	142	18	9	7	357	345	285	201	189	184	184	181	173	134	24	10	
	T	134	135	135	135	134	133	129	127	127	128	131	134	135	135	135	135	134	133	130	128	127	128	129	132	
10/09/71	V	57	48	19	21	47	56	53	41	25	12	36	52	57	50	27	11	35	47	48	38	25	11	29	47	
	D	359	355	343	205	189	184	180	178	165	74	17	2	353	352	345	246	196	188	182	181	172	100	26	9	
	T	134	135	136	136	136	135	134	131	129	128	129	131	134	135	136	136	135	135	134	133	131	130	130	132	
11/09/71	V	53	51	36	12	21	41	49	43	31	16	13	37	49	50	39	20	14	32	41	39	31	20	9	24	
	D	1	355	353	331	200	187	183	179	173	166	44	13	1	356	351	336	233	196	188	185	179	169	116	25	
	T	134	135	136	136	136	136	135	134	133	132	132	133	134	135	136	136	136	136	135	135	134	134	134	134	

STATION G + METER 5M. ABOVE SEA FLOOR + METER I.C.O.T. BERGEN 212 + DATA REDUCTION BY I.C.O.T.
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
12/09/71	V 43	48	42	28	8	21	35	37	31	25	14	12	30	40	42	34	18	11	24	30	29	26	17	4
	D 10	3	359	353	314	205	193	186	181	174	158	47	16	3	356	352	339	244	203	191	185	179	176	107
	T 134	135	136	136	136	136	136	136	135	135	135	135	135	135	136	136	136	136	136	136	136	136	135	135
13/09/71	V 18	31	38	35	26	11	14	23	24	23	18	10	9	22	31	34	29	17	5	19	25	26	24	19
	D 18	11	4	359	356	334	226	205	196	190	184	166	66	24	12	5	357	356	284	211	202	194	186	178
	T 135	135	136	136	136	137	136	136	136	136	136	136	136	136	136	136	137	137	137	137	137	136	136	136
14/09/71	V 12	8	21	30	32	27	18	12	19	23	23	22	16	6	14	26	31	30	22	10	17	26	30	32
	D 164	75	29	12	1	350	335	278	228	206	193	186	181	146	39	16	8	3	357	317	234	210	194	185
	T 136	136	136	136	136	136	136	136	137	137	137	137	137	137	136	136	136	136	136	137	137	137	138	138
15/09/71	V 27	21	16	13	22	32	34	27	17	18	26	30	27	20	15	16	27	33	38	29	14	19	33	39
	D 181	164	140	87	38	11	352	337	304	243	211	198	192	174	141	77	45	23	10	2	325	233	206	192
	T 138	137	134	131	131	135	137	137	137	138	138	138	138	138	134	132	132	134	137	138	138	138	139	138
16/09/71	V 39	37	30	12	18	33	37	32	27	16	18	36	37	35	30	16	14	34	40	37	30	17	17	38
	D 186	176	173	149	44	22	12	354	342	327	222	201	192	181	175	155	50	21	14	360	350	335	227	205
	T 138	134	128	126	126	127	128	130	134	138	138	137	134	130	128	126	126	127	128	131	135	138	138	136
17/09/71	V 41	41	42	31	13	23	43	47	39	26	20	34	40	38	38	27	13	19	39	46	41	29	19	35
	D 194	179	175	171	139	30	14	8	357	334	267	218	201	188	182	175	144	31	12	3	350	336	269	221
	T 133	130	127	126	126	126	127	128	131	134	135	134	131	129	127	126	125	126	127	128	131	134	135	133
18/09/71	V 42	45	46	37	22	9	34	46	43	36	22	23	40	43	39	32	22	7	33	49	47	39	24	18
	D 200	182	179	178	176	60	23	13	3	349	323	239	209	195	184	178	174	70	19	18	9	353	334	246
	T 132	130	127	124	124	123	124	126	128	132	134	134	131	128	125	125	124	124	125	126	128	132	135	135
19/09/71	V 39	46	44	44	34	12	25	45	50	40	27	20	35	44	44	42	32	11	24	46	53	45	33	18
	D 209	194	178	176	174	140	28	16	11	360	336	268	219	201	186	178	177	152	27	18	15	5	346	284
	T 132	128	126	125	124	124	124	124	125	127	129	132	132	131	128	126	125	125	125	126	127	129	132	133
20/09/71	V 34	47	48	46	40	22	13	42	57	49	34	22	28	44	49	48	40	24	8	38	56	53	40	24
	D 218	201	186	177	179	169	51	18	14	350	308	234	206	188	177	176	172	76	14	9	10	359	326	24
	T 132	129	127	126	125	125	125	126	126	128	131	132	131	129	127	126	126	126	126	126	127	128	130	132
21/09/71	V 24	43	49	51	47	35	11	27	50	57	44	28	19	35	47	51	45	32	13	21	48	56	49	35
	D 241	207	191	175	176	175	144	21	7	10	6	341	270	215	196	183	179	179	168	17	5	1	360	350
	T 132	130	127	126	126	126	126	126	126	127	128	130	132	132	131	129	127	127	126	126	127	129	130	132
22/09/71	V 18	28	47	52	46	36	19	14	41	54	52	39	22	21	40	48	45	35	17	11	38	53	54	43
	D 306	221	198	188	181	177	166	37	12	5	3	356	327	235	203	194	187	182	178	12	6	1	358	356
	T 132	132	130	128	127	127	127	127	127	129	131	132	133	132	131	130	128	128	127	127	127	128	130	131
23/09/71	V 26	18	37	48	48	38	25	5	29	48	54	46	29	15	33	46	47	39	31	6	25	44	53	47
	D 332	247	204	191	184	181	178	144	11	8	4	1	344	274	210	194	188	183	182	188	5	10	8	359
	T 133	133	132	131	129	128	128	127	128	129	131	133	134	134	133	132	130	129	128	128	128	129	132	133
24/09/71	V 33	15	24	41	45	40	35	18	13	36	47	47	38	21	13	35	42	37	29	19	9	31	44	49
	D 352	310	215	195	189	184	180	175	25	11	4	357	351	338	234	201	193	189	180	171	55	16	7	358
	T 134	134	134	133	131	130	129	128	127	128	131	133	134	133	134	134	133	131	130	129	129	129	131	134
25/09/71	V 45	28	7	28	42	40	32	19	4	26	40	47	44	32	10	22	37	41	35	22	13	17	35	48
	D 355	350	273	196	188	186	181	175	62	12	4	1	357	352	322	201	187	186	184	176	148	41	13	1
	T 135	135	135	135	135	133	132	130	130	131	133	135	136	135	135	135	135	135	135	135	134	133	134	136
26/09/71	V 47	38	16	14	33	39	37	24	4	20	37	45	45	35	19	10	26	34	34	29	17	7	25	35
	D 359	357	343	213	186	181	184	189	138	22	11	6	359	353	344	242	202	191	186	181	181	51	13	5
	T 136	136	136	135	135	136	136	136	135	135	136	136	136	136	136	136	136	136	135	135	135	136	136	136

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.

POSITION = STATION H - LAT. 52 10N LONG. 6 12W.

TIME = 29/ 8/71 TO 7/10/71.

WATER DEPTH = 68M. BELOW CHART DATUM.

CURRENT METERS AT 55, 29, 5 M. ABOVE SEA FLOOR.

CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.

CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH FROM R.V. JOHN MURRAY.

SUB-SURFACE BUOY AND TOP METER LOST, OTHER TWO METERS ON THE BOTTOM.

STATION H + METER 29M. ABOVE SEA FLOOR + METER I.C.O.T. BERGEN 214 + DATA REDUCTION BY I.C.O.T.
 DATE HOURS IN G.M.T.

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
28/08/71	V	40	44	42	32	16	32	62	80	86	64	33	10	40	51	55	46	30	23	44	66	76	77	58	34
	D	41	41	38	52	113	201	221	227	232	232	27	33	40	46	47	74	166	213	224	228	227	226	233	
	T	143	143	143	143	143	144	143	143	143	143	143	143	143	143	144	144	144	144	143	143	143	143	143	
29/08/71	V	40	44	42	32	16	32	62	80	86	64	33	10	40	51	55	46	30	23	44	66	76	77	58	34
	D	41	41	38	52	113	201	221	227	232	232	27	33	40	46	47	74	166	213	224	228	227	226	233	
	T	143	143	143	143	143	144	143	143	143	143	143	143	143	143	144	144	144	144	143	143	143	143	143	
30/08/71	V	40	44	42	32	16	32	62	80	86	64	33	10	40	51	55	46	30	23	44	66	76	77	58	34
	D	41	41	38	52	113	201	221	227	232	232	27	33	40	46	47	74	166	213	224	228	227	226	233	
	T	143	143	143	143	143	144	143	143	143	143	143	143	143	143	144	144	144	144	143	143	143	143	143	
31/08/71	V	10	32	46	47	39	26	13	38	61	72	64	42	16	27	47	60	56	43	29	19	47	70	81	70
	D	306	39	53	49	41	23	307	224	224	227	230	225	202	63	48	47	50	51	59	168	212	226	232	233
	T	145	145	144	144	144	144	144	144	144	144	145	145	145	145	145	144	144	144	145	145	145	145	144	143
01/09/71	V	50	22	33	50	61	58	40	13	40	65	91	97	74	42	7	38	49	55	44	22	26	63	97	106
	D	232	257	12	31	45	46	57	139	227	229	230	229	232	236	331	40	41	43	52	75	198	220	231	236
	T	144	145	145	145	145	144	144	144	144	144	144	143	143	144	144	144	144	145	145	145	146	146	145	145
02/09/71	V	88	52	6	47	78	93	82	53	19	32	69	91	94	66	20	39	79	94	83	60	20	37	81	117
	D	236	230	318	44	46	50	49	47	66	215	225	234	239	233	243	36	43	43	47	48	57	218	227	230
	T	147	148	148	148	147	145	145	145	145	145	145	145	146	146	146	146	146	146	145	145	145	145	145	145
03/09/71	V	118	98	51	19	75	110	112	91	50	10	53	98	125	115	73	16	55	106	118	94	55	7	58	112
	D	234	240	237	35	47	59	65	57	53	140	219	231	230	232	236	273	39	49	59	56	51	111	221	238
	T	144	145	147	148	147	145	144	144	144	144	144	145	145	145	146	147	146	145	144	144	144	144	145	145
04/09/71	V	150	147	103	29	49	102	132	119	83	40	21	80	128	146	120	56	24	92	132	130	91	39	23	86
	D	249	245	239	249	44	56	66	64	50	53	204	229	247	254	243	239	47	55	65	64	56	54	209	235
	T	145	145	147	148	148	147	145	145	144	144	144	145	145	145	146	147	147	147	145	145	145	145	145	145
05/09/71	V	144	167	149	97	19	80	138	149	122	77	21	45	105	149	151	110	35	59	124	150	130	81	22	50
	D	252	256	248	247	296	51	59	58	58	50	66	218	236	258	251	243	258	49	60	55	57	55	64	219
	T	145	145	146	148	149	148	146	145	145	145	145	145	146	145	146	148	148	148	148	146	146	146	146	146
06/09/71	V	117	164	162	137	69	40	118	159	155	112	60	10	72	134	163	150	93	2	91	147	156	124	67	6
	D	240	253	245	255	255	23	59	61	59	57	53	164	230	251	256	250	239	322	51	58	60	60	54	158
	T	146	145	146	148	149	149	148	147	145	145	146	145	146	146	146	147	149	149	149	147	146	146	145	144
07/09/71	V	73	148	181	174	124	30	74	141	160	143	100	47	31	97	161	170	134	69	33	113	155	149	106	46
	D	231	253	255	252	249	245	58	65	67	67	65	68	193	230	247	248	242	217	40	51	64	64	54	54
	T	145	146	146	147	148	149	149	148	146	145	145	144	144	145	146	146	146	149	149	148	147	146	145	144
08/09/71	V	24	94	156	168	145	85	24	111	143	153	130	83	28	44	103	150	159	115	37	52	117	150	134	87
	D	203	230	241	216	220	233	73	68	68	68	66	58	65	214	235	252	255	242	253	43	61	66	71	62
	T	144	145	146	146	147	148	149	149	148	148	146	145	145	146	146	146	146	148	148	148	148	146	145	146
09/09/71	V	31	34	101	164	177	142	69	21	96	136	135	109	68	22	54	108	143	138	95	17	66	111	135	118
	D	60	218	246	259	255	254	239	37	64	66	64	62	55	93	217	238	253	242	236	280	46	64	69	65
	T	145	146	147	146	146	148	148	148	148	148	146	146	146	146	147	147	147	146	147	149	149	148	146	146
10/09/71	V	77	27	36	96	138	151	114	52	26	85	117	115	92	59	18	54	99	125	116	81	22	52	102	112
	D	54	65	210	224	247	255	242	243	32	51	53	61	53	54	93	213	225	225	233	236	266	39	52	64
	T	147	147	147	148	146	146	148	148	148	148	147	145	146	148	148	148	147	147	145	146	148	148	147	146
11/09/71	V	96	64	24	32	78	115	125	98	50	13	67	96	93	75	51	18	46	83	108	103	73	32	31	72
	D	56	49	72	207	227	233	232	234	236	4	44	45	49	49	53	110	215	224	230	231	236	253	30	49
	T	146	147	148	148	147	146	145	146	147	148	147	145	145	146	147	147	147	147	146	145	146	147	147	146

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION H - LAT. 52 10N LONG. 6 12W.
TIME = 29/ 8/71 TO 7/10/71.
WATER DEPTH = 68M. BELOW CHART DATUM.
CURRENT METERS AT 55, 29, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH FROM R.V. JOHN MURRAY.
SUB-SURFACE BUOY AND TOP METER LOST, OTHER TWO METERS ON THE BOTTOM.

STATION H + METER 5M. ABOVE SEA FLOOR + METER I.C.O.D.T. BERGEN 160 + DATA REDUCTION BY I.C.O.D.T.
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/08/71	V	54	44	28	14	14	34	44	48	28	6	35	47	48	41	28	14	24	38	48	50	41	32	3
	D	61	57	48	31	277	252	239	227	223	222	117	56	53	50	42	31	346	270	243	232	231	227	225
	T	140	141	141	141	141	140	139	139	140	140	141	141	141	142	142	142	141	141	140	139	140	142	143
29/08/71	V	54	44	28	14	14	34	44	48	28	6	35	47	48	41	28	14	24	38	48	50	41	32	3
	D	61	57	48	31	277	252	239	227	223	222	117	56	53	50	42	31	346	270	243	232	231	227	225
	T	140	141	141	141	141	140	139	139	140	140	141	141	141	142	142	142	141	141	140	139	140	142	143
30/08/71	V	54	44	28	14	14	34	44	48	28	6	35	47	48	41	28	14	24	38	48	50	41	32	3
	D	61	57	48	31	277	252	239	227	223	222	117	56	53	50	42	31	346	270	243	232	231	227	225
	T	140	141	141	141	141	140	139	139	140	140	141	141	141	142	142	142	141	141	140	139	140	142	143
31/08/71	V	29	47	48	43	28	9	24	42	53	58	49	24	13	39	52	54	46	30	11	23	46	61	63
	D	52	55	53	58	61	105	208	220	219	221	223	217	78	52	46	40	35	34	359	240	223	222	227
	T	143	143	142	142	143	143	143	143	144	144	143	143	144	144	144	144	144	144	144	144	144	144	143
01/09/71	V	15	22	45	53	51	44	28	15	35	54	65	63	40	10	31	50	49	40	24	2	38	63	80
	D	240	45	47	43	37	33	21	300	240	229	226	227	194	70	61	52	42	38	195	228	226	225	222
	T	141	142	142	142	143	143	143	143	143	141	141	141	142	142	142	143	143	143	144	143	143	143	144
02/09/71	V	68	33	17	52	74	80	66	41	15	33	62	80	81	51	6	44	74	85	73	47	13	38	73
	D	223	228	41	44	42	43	36	27	343	245	229	224	224	226	188	44	40	36	33	32	0	231	226
	T	145	146	147	147	147	146	145	144	144	144	144	144	145	146	146	146	145	145	144	144	144	144	144
03/09/71	V	99	79	36	28	76	101	99	76	35	11	53	87	109	98	56	3	60	98	104	83	44	15	63
	D	224	225	229	34	40	43	41	40	36	245	223	221	221	219	222	353	41	44	44	41	47	186	213
	T	144	144	146	146	146	144	144	144	144	144	144	144	144	144	145	146	146	145	144	144	144	144	145
04/09/71	V	127	125	85	14	56	98	120	107	75	34	24	73	111	123	100	39	36	91	117	115	81	30	28
	D	225	226	220	231	45	43	38	42	44	49	205	221	227	221	216	221	40	47	41	40	44	45	208
	T	144	144	146	147	147	146	145	144	144	144	144	144	144	144	145	146	146	146	145	144	145	144	145
05/09/71	V	100	127	83	71	20	86	123	131	109	69	13	48	93	105	114	89	20	67	115	131	114	71	14
	D	264	306	258	232	356	42	36	31	37	44	60	212	222	255	232	225	262	42	42	30	34	42	57
	T	145	145	145	147	148	147	146	145	144	144	144	145	145	145	145	147	147	147	147	145	145	145	145
06/09/71	V	84	119	127	89	45	54	111	135	132	100	51	12	69	93	129	96	74	15	91	128	133	108	58
	D	236	309	311	245	246	29	37	26	27	36	39	188	220	269	306	264	231	20	36	27	26	38	37
	T	146	145	145	147	147	147	147	146	145	145	145	145	145	145	145	146	147	147	147	146	145	145	144
07/09/71	V	70	87	145	110	83	14	81	122	141	124	88	29	35	78	124	138	90	59	39	109	135	126	90
	D	224	280	313	295	221	195	51	36	23	33	42	43	216	239	289	302	269	214	35	32	22	25	42
	T	145	146	145	146	147	147	147	147	146	145	145	144	144	144	145	145	147	148	147	147	146	145	144
08/09/71	V	31	85	112	151	104	56	46	112	126	137	116	68	16	46	82	107	108	87	17	62	110	134	116
	D	225	230	279	305	285	224	63	51	37	33	41	39	35	218	227	287	285	231	259	37	40	35	37
	T	144	144	145	145	146	147	147	147	147	145	144	144	144	145	145	145	145	147	147	147	147	145	145
09/09/71	V	21	41	82	132	123	105	52	35	95	121	122	95	53	8	56	98	117	115	77	6	69	104	119
	D	26	223	246	296	291	233	222	43	48	44	42	45	41	110	210	221	234	227	225	335	40	41	39
	T	145	145	146	145	145	146	147	147	147	146	145	145	145	145	146	146	145	146	147	147	148	147	145
10/09/71	V	62	15	39	88	121	126	94	38	33	84	107	101	75	43	4	48	82	106	97	62	10	61	98
	D	40	46	208	208	216	220	219	227	36	43	45	42	36	35	110	217	227	228	224	230	297	37	42
	T	146	146	146	146	146	145	146	147	147	147	146	145	145	146	147	147	146	145	145	147	147	147	146
11/09/71	V	81	51	14	33	69	94	102	78	30	27	69	85	79	61	35	11	43	68	85	80	53	11	45
	D	40	38	51	215	224	224	216	220	233	30	43	40	37	39	28	289	231	227	227	228	228	265	38
	T	145	146	147	146	146	145	145	145	146	146	145	145	145	145	146	146	145	145	145	144	144	145	146

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION J - LAT. 52 5N LONG. 5 46W.
TIME = 28/ 8/71 TO 7/10/71.
WATER DEPTH = 101M. BELOW CHART DATUM.
CURRENT METERS AT 80, 55, 36, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
THIS RIG WAS MOVED BY ABOUT 2 MILES AND THE BOTTOM METER WAS LOST.
ONLY ONE METER RETURNED A GOOD RECORD.
TAPE TANGLED IN THIS METER, ONLY 178 HRS OF RECORD.

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION J - LAT. 52 5N LONG. 5 46W.
TIME = 28/ 8/71 TO 7/10/71.
WATER DEPTH = 101M. BELOW CHART DATUM.
CURRENT METERS AT 80, 55, 36, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.
WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
THIS RIG WAS MOVED BY ABOUT 2 MILES AND THE BOTTOM METER WAS LOST.
ONLY ONE METER RETURNED A GOOD RECORD.
TAPE JUMPED OUT OF SECURING GUIDES IN THIS METER, ONLY 170HRS OF RECORD.

STATION J + METER 55M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 220 + DATA REDUCTION BY LOWESTOFT
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
28/08/71	V	79	74	54	29	4	32	50	55	45	28	31	54	68	64	43	11	17	45	68	74	62	38	11	24
	D	21	19	15	12	243	216	214	212	215	266	343	13	14	13	13	10	213	213	220	223	223	222	248	353
	T	135	134	135	134	133	133	134	135	137	138	135	122	133	136	134	134	135	135	134	135	135	136	137	137
30/08/71	V	42	48	47	34	8	25	47	65	76	59	33	21	34	50	64	61	39	16	33	60	78	82	68	41
	D	357	2	18	32	76	192	205	216	223	227	241	289	337	357	7	19	42	108	182	204	212	219	227	245
	T	137	138	139	139	139	139	139	138	135	136	137	138	139	139	138	137	137	140	139	136	137	138	140	141
31/08/71	V	27	39	54	56	48	29	13	32	54	64	61	46	27	37	53	66	65	47	21	8	31	51	59	48
	D	298	341	355	7	23	46	148	200	209	213	222	238	280	343	8	17	25	35	45	194	209	220	222	223
	T	141	142	146	145	136	136	138	141	140	138	140	145	145	142	139	136	136	138	136	137	141	140	139	143
01/09/71	V	28	17	37	59	72	69	53	20	9	33	49	56	57	41	22	35	51	59	56	39	16	30	62	75
	D	229	294	347	5	12	16	21	20	193	205	215	216	214	229	288	347	6	8	7	4	322	229	211	203
	T	148	147	146	145	144	142	139	140	142	141	143	144	146	147	148	148	145	144	145	144	143	144	147	149
02/09/71	V	70	54	24	25	61	86	85	67	41	9	35	69	80	67	30	24	63	88	97	80	52	15	37	83
	D	210	213	237	351	14	20	21	21	16	328	215	211	214	213	228	348	11	12	16	20	13	349	214	209
	T	150	149	148	148	148	150	150	149	151	152	152	152	152	154	152	152	153	153	148	147	152	153	151	150
03/09/71	V	109	105	70	26	45	85	103	99	76	42	4	52	90	104	84	34	44	93	118	113	85	48	7	63
	D	208	211	219	266	355	11	15	15	15	15	236	204	205	207	215	240	352	17	21	21	16	2	243	207
	T	150	150	148	145	145	147	148	149	153	158	158	157	155	149	146	145	143	137	137	137	143	150	150	147
04/09/71	V	118	132	101	53	6	66	105	114	99	70	28	26	88	123	103	62	8	59	108	116	98	70	20	
	D	207	209	210	212	18	17	21	27	29	23	18	193	205	215	213	205	157	28	27	33	33	34	49	
	T	142	135	137	141	141	141	137	132	129	137	141	141	137	134	138	142	143	142	136	125	119	122	125	

029 061
 035 021
 138 137

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION J - LAT. 52 5N LONG. 5 46W.
TIME = 28/ 8/71 TO 7/10/71.
WATER DEPTH = 101M. BELOW CHART DATUM.
CURRENT METERS AT 80, 55, 36, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V. JOHN MURRAY.
THIS RIG WAS MOVED BY ABOUT 2 MILES AND THE BOTTOM METER WAS LOST.
ONLY ONE METER RETURNED A GOOD RECORD.

STATION J + METER 36M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 234 + DATA REDUCTION BY LOWESTOFT
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
28/08/71	V																						033	063	
	D																						041	033	
29/08/71	V	77	64	39	12	17	45	59	60	42	16	22	56	71	61	39	11	19	40	65	75	65	40	14	29
	D	34	33	35	24	237	229	228	224	223	240	10	23	22	17	9	326	238	224	223	223	223	227	278	0
30/08/71	V	43	43	43	34	11	18	42	54	63	54	32	18	28	41	52	52	38	13	13	36	52	40	24	
	D	7	4	9	19	41	189	201	208	217	226	242	308	354	7	17	22	23	42	209	219	222	220	214	215
31/08/71	V	1	24	40	49	44	35	17	8	31	46	45	30	6	30	48	60	63	56	36	7	27	48	51	42
	D	45	24	20	20	17	16	21	194	209	216	220	226	288	21	20	23	20	25	30	74	193	211	223	214
01/09/71	V	32	13	25	45	60	67	52	25	13	43	60	64	58	38	16	32	49	58	61	45	15	32	60	76
	D	216	266	0	18	18	17	22	37	153	198	209	210	206	220	292	4	24	18	13	20	53	193	206	208
02/09/71	V	84	64	27	35	64	75	71	61	41	6	35	62	69	59	26	32	71	95	82	59	36	9	59	95
	D	213	224	253	348	14	23	20	17	13	301	215	214	219	226	252	2	29	34	32	27	18	264	222	222
03/09/71	V	102	91	62	19	36	78	96	78	48	26	11	67	101	101	67	19	39	91	107	91	59	21	33	89
	D	220	219	224	254	16	35	41	38	30	23	221	213	217	221	222	238	23	37	40	36	33	29	225	222
04/09/71	V	115	106	82	46	18	66	97	95	74	52	16	47	97	106	88	56	15	64	102	103	85	48	13	62
	D	218	213	208	195	74	36	36	40	36	36	45	207	214	214	209	200	122	44	39	38	35	43	148	208
05/09/71	V	106	119	111	87	36	34	94	109	87	60	19	29	78	104	105	89	41	29	94	121	109	86	33	29
	D	214	212	207	202	196	40	41	41	31	26	36	211	221	220	213	205	196	46	39	37	35	36	31	215
06/09/71	V	87	119	121	113	79	14	58	112	116	91	58	15	51	100	114	107	79	21	54	113	124	105	74	26
	D	217	218	211	207	209	205	29	33	34	30	23	344	228	221	216	207	204	194	36	35	34	31	29	25
07/09/71	V	39	97	124	131	114	64	9	79	116	113	86	46	16	66	108	118	109	67	4	74	120	124	101	58
	D	220	217	215	207	205	208	49	30	31	30	28	18	285	226	220	214	207	206	124	33	32	30	28	24
08/09/71	V	12	62	110	128	131	103	42	31	91	116	106	75	34	28	76	108	112	96	49	20	86	118	116	88
	D	318	224	218	212	206	207	205	32	30	30	30	25	5	244	223	219	212	207	207	41	32	30	30	28
09/09/71	V	45	19	73	111	122	115	81	21	45	94	107	88	55	18	40	86	107	100	76	29	35	89	112	104
	D	17	254	222	218	212	207	208	205	29	28	29	32	26	0	228	222	217	211	207	205	33	32	33	31
10/09/71	V	77	35	21	69	100	102	88	54	9	55	92	94	76	46	10	33	71	91	81	56	16	37	80	95
	D	27	15	241	223	219	214	211	205	153	35	35	34	31	26	6	220	217	217	213	207	180	43	37	36
11/09/71	V	85	60	22	21	60	88	88	72	40	9	48	82	86	66	35	14	50	80	89	76	51	17	27	63
	D	31	30	30	231	219	218	215	211	202	84	38	37	35	30	20	282	236	226	220	215	208	183	51	39

STATION J + METER 36M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 234 + DATA REDUCTION BY LOWESTOFT

DATE	HOURS IN G.M.T.																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
12/09/71	V	82	74	50	27	22	47	76	80	61	32	7	43	70	73	59	35	14	30	62	78	75	61	30	12
	D	38	31	22	0	278	236	227	219	213	206	82	42	37	28	17	2	309	237	232	225	218	210	200	70
13/09/71	V	45	63	61	52	37	13	19	50	74	76	52	20	22	40	50	59	57	42	23	15	49	74	79	66
	D	40	29	16	12	19	29	216	219	221	222	227	252	347	0	1	12	21	28	49	152	203	211	217	226
14/09/71	V	34	22	37	51	64	62	43	19	32	59	75	74	59	32	22	41	54	57	45	21	21	62	92	35
	D	243	321	355	11	27	35	51	106	189	206	212	217	226	246	338	20	28	32	40	65	183	202	206	209
15/09/71	V	87	65	29	26	46	51	45	32	11	29	61	84	87	74	42	15	47	65	64	45	11	32	75	98
	D	216	225	250	349	16	29	32	35	80	192	204	207	211	216	230	328	25	32	28	24	22	208	211	211
16/09/71	V	98	88	65	26	30	55	63	50	29	10	51	82	86	74	47	10	35	67	78	65	38	11	52	86
	D	209	209	219	254	9	28	34	37	27	276	222	214	209	208	214	259	20	32	33	34	29	275	223	216
17/09/71	V	93	85	64	29	19	63	83	76	57	21	24	65	83	76	49	11	32	75	101	96	69	29	21	68
	D	213	207	208	214	21	27	30	29	35	41	208	214	218	216	212	195	30	32	34	33	34	25	229	217
18/09/71	V	96	95	78	51	8	45	81	89	74	45	3	44	81	90	74	45	2	53	91	98	84	56	16	37
	D	219	216	208	203	166	37	32	32	32	34	72	212	219	220	213	207	63	34	36	35	30	30	35	218
19/09/71	V	86	105	97	72	30	29	77	95	85	58	20	23	72	99	98	73	32	27	80	102	97	73	30	19
	D	221	220	214	207	192	56	41	39	36	35	27	223	222	220	213	208	198	51	39	37	32	29	28	227
20/09/71	V	66	102	108	93	56	13	59	96	97	80	43	6	54	95	104	92	57	12	57	98	105	92	55	10
	D	223	220	213	210	202	122	43	37	32	28	30	225	218	219	217	212	205	138	42	37	35	32	31	336
21/09/71	V	45	92	110	104	77	31	29	80	99	91	67	22	28	77	105	101	79	34	25	76	102	98	77	30
	D	225	217	215	210	207	199	44	36	33	31	32	39	206	209	211	209	206	197	45	34	32	29	31	34
22/09/71	V	24	70	101	105	92	54	6	57	94	99	83	44	6	50	86	102	87	53	5	53	92	100	87	49
	D	215	212	209	209	207	202	81	32	30	29	30	28	252	214	212	210	206	127	34	32	32	31	26	
23/09/71	V	10	52	87	103	97	73	28	28	75	95	90	59	11	37	73	96	95	74	33	19	64	89	91	69
	D	294	224	217	213	211	210	206	35	30	30	29	28	5	225	214	211	210	208	205	35	28	29	29	28
24/09/71	V	25	23	65	92	93	82	47	1	48	79	87	78	39	10	52	81	91	79	50	6	40	77	95	83
	D	18	225	212	208	207	207	208	0	26	26	25	30	30	253	223	214	214	212	208	198	28	28	31	30
25/09/71	V	51	13	40	78	93	83	60	23	22	64	87	74	53	22	22	57	77	78	59	30	9	51	76	73
	D	24	337	231	226	221	212	209	205	32	31	32	23	21	357	249	230	227	226	220	210	49	27	23	26
26/09/71	V	55	29	2	31	49	66	64	40	14	45	73	78	67	46	17	16	43	56	55	39	18	24	54	70
	D	32	35	153	212	221	224	228	236	306	6	18	27	28	20	357	240	229	229	221	222	248	355	20	25

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION K - LAT. 52 5N LONG. 5 26W.
TIME = 28/ 8/71 TO 6/10/71.
WATER DEPTH = 73M. BELOW CHART DATUM.
CURRENT METERS AT 60, 33, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH FROM R.V. JOHN MURRAY.
SURFACE BUOY, SUB-SURFACE BUOY AND TOP METER LOST. MIDDLE METER TRAWLED UP AFTER
5 MONTHS. BOTTOM METER ON BOTTOM.

STATION K + METER 33M, ABOVE SEA FLOOR + METER R.V.B. PLESSEY 23 + DATA REDUCTION BY I.C.O.T.
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
28/08/71	V	46	53	44	30	13	21	45	57	58	47	23	8	33	52	57	43	21	11	33	51	56	47	34	13
	D	34	36	34	21	351	231	215	209	202	197	188	72	38	34	36	11	267	216	207	207	207	205	191	
29/08/71	V	16	35	45	46	35	14	15	36	49	54	41	20	9	33	50	59	51	33	12	27	51	64	62	46
	D	45	35	37	39	37	23	228	211	205	208	212	201	65	38	35	36	34	23	327	235	216	211	210	215
01/09/71	V	18	15	41	61	63	48	22	10	33	56	66	57	40	12	20	47	60	52	30	5	27	54	70	77
	D	219	30	32	33	35	31	10	270	219	215	212	211	209	196	42	40	42	43	38	329	213	210	207	206
02/09/71	V	66	35	8	45	68	76	70	46	16	23	55	71	70	50	13	32	66	83	73	50	16	29	68	92
	D	204	200	69	32	32	35	30	6	223	211	208	204	203	183	40	36	36	35	31	38	201	209	212	
03/09/71	V	95	81	46	8	54	90	96	77	49	15	29	72	90	85	56	10	50	95	108	90	49	10	57	99
	D	206	204	201	77	33	32	33	32	42	208	209	207	205	201	164	35	33	33	31	21	293	216	209	
04/09/71	V	112	113	87	32	31	82	111	108	82	33	26	73	106	113	93	43	24	81	114	116	89	43	17	77
	D	205	206	207	204	35	30	30	29	28	16	230	211	206	204	207	203	47	33	30	31	27	14	241	215
05/09/71	V	121	135	123	78	11	62	112	128	113	75	28	37	93	122	120	85	23	53	110	132	122	82	30	37
	D	208	206	206	204	181	32	30	31	30	29	13	220	209	205	205	206	191	38	34	31	31	28	23	210
06/09/71	V	102	138	142	116	60	17	90	127	130	103	56	5	68	113	130	117	69	8	82	127	139	120	69	7
	D	208	205	205	209	208	37	31	29	29	31	30	249	207	205	208	207	58	34	33	31	31	30	47	
07/09/71	V	64	119	143	140	105	38	42	107	133	131	97	43	21	85	123	129	104	48	31	100	134	137	112	56
	D	208	205	204	205	207	206	32	31	30	31	32	27	210	207	208	207	200	44	33	31	29	29	31	
08/09/71	V	11	77	126	141	131	86	15	62	115	134	123	79	20	42	94	122	119	88	27	49	107	132	128	93
	D	193	205	205	205	206	206	198	33	31	29	27	29	43	199	206	206	206	203	190	40	34	30	29	31
09/09/71	V	38	24	87	124	133	113	62	6	73	113	123	109	63	8	47	94	116	105	68	11	58	105	124	121
	D	34	197	205	205	206	207	201	76	34	29	28	31	29	60	201	203	205	204	200	165	37	33	30	30
10/09/71	V	82	28	29	78	111	114	89	42	19	74	105	110	90	49	4	44	80	97	89	54	5	52	92	106
	D	32	33	201	204	204	205	208	205	38	32	29	26	28	29	93	205	207	207	206	203	150	35	33	30
11/09/71	V	98	64	21	23	61	87	90	69	31	20	65	89	88	74	42	2	37	67	80	72	47	8	40	74
	D	31	30	30	202	206	206	204	204	201	36	32	30	29	29	29	69	207	208	208	207	203	168	35	31

027
036

STATION K + METER 33M. ABOVE SEA FLOOR + METER R.V.B. PLESSEY 23 + DATA REDUCTION BY I.C.D.T.

DATE	00	01	02	03	04	05	06	07	08	09	HOURS IN G.M.T.														
											10	11	12	13	14	15	16	17	18	19	20	21	22	23	
12/09/71	V	85	76	58	28	9	41	62	70	54	21	19	54	72	60	35	7	23	49	63	60	43	12	28	
	D	32	31	29	33	178	206	207	207	205	197	33	30	31	29	31	21	208	211	212	209	204	183	38	
13/09/71	V	56	71	69	57	38	13	16	41	52	46	24	10	37	57	63	58	47	28	2	31	55	62	49	22
	D	34	32	31	29	31	28	217	212	211	212	206	53	31	31	32	33	31	32	173	210	212	213	210	209
14/09/71	V	8	39	59	65	60	50	29	2	29	49	52	39	8	24	49	61	61	53	37	7	29	60	76	71
	D	30	31	32	33	30	29	26	316	212	210	210	212	210	31	32	34	32	31	29	33	208	211	212	211
15/09/71	V	47	14	26	58	71	67	56	35	4	31	57	63	45	15	22	52	69	71	61	41	8	35	68	85
	D	207	207	29	31	32	31	30	30	348	215	212	211	212	206	36	34	35	32	29	26	14	216	213	211
16/09/71	V	77	50	5	38	69	82	76	62	35	7	42	63	69	52	15	32	68	88	86	62	25	26	67	91
	D	208	206	200	34	36	35	32	30	34	170	203	207	205	185	45	38	35	33	30	29	205	209	209	209
17/09/71	V	95	81	47	8	53	86	97	85	58	13	36	73	89	75	43	9	55	91	100	89	56	14	43	85
	D	208	206	202	100	39	35	31	29	30	30	204	207	209	208	201	98	41	36	32	30	24	332	218	209
18/09/71	V	108	105	76	31	30	77	103	105	84	41	11	57	87	97	76	29	29	76	104	106	82	41	20	69
	D	208	207	204	192	46	35	31	28	26	31	183	204	207	208	208	195	47	33	29	28	26	18	235	215
19/09/71	V	102	116	105	63	4	57	98	111	96	58	9	42	84	103	96	61	9	52	98	113	103	64	13	43
	D	208	207	208	208	167	32	28	29	30	27	20	210	209	207	206	205	176	33	31	31	29	29	355	216
20/09/71	V	89	113	111	85	31	33	86	111	110	81	34	22	72	103	107	83	35	30	83	110	110	86	40	20
	D	208	206	208	209	204	32	29	27	28	28	26	211	209	207	206	206	203	37	31	30	28	28	25	228
21/09/71	V	70	106	119	103	60	4	63	103	111	95	55	3	50	91	108	98	60	6	56	99	109	96	61	8
	D	210	207	207	207	206	110	33	30	30	30	29	337	206	207	206	204	203	134	33	31	29	28	26	356
22/09/71	V	46	88	112	110	80	25	39	87	109	102	76	28	26	70	100	103	78	28	34	82	107	108	87	35
	D	209	207	207	205	204	199	35	31	29	29	30	32	203	205	207	205	205	197	38	30	30	30	32	25
23/09/71	V	21	66	97	107	92	50	9	62	98	107	92	51	2	49	86	102	92	55	3	51	90	102	94	57
	D	220	207	208	205	203	200	58	33	29	28	31	31	142	204	206	208	205	203	180	32	32	31	32	34
24/09/71	V	7	40	74	98	96	68	20	37	81	101	97	70	25	24	60	86	91	69	27	24	69	94	96	74
	D	17	204	203	208	206	205	192	35	30	28	29	31	16	219	206	207	208	204	201	36	30	28	30	29
25/09/71	V	31	16	54	79	89	75	41	8	54	85	92	77	45	7	37	68	81	73	49	8	38	73	85	77
	D	27	191	206	206	205	208	208	44	30	27	30	31	29	73	202	209	208	205	203	193	30	30	31	29
26/09/71	V	57	34	4	43	67	67	51	17	27	65	82	75	55	33	5	37	61	65	57	30	10	47	69	74
	D	31	32	168	207	214	209	202	193	34	30	28	28	27	15	283	214	216	214	217	219	21	27	29	26

STATION K + METER 33M. ABOVE SEA FLOOR + METER R.V.B. PLESSEY 23 + DATA REDUCTION BY I.C.O.T.
 DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
27/09/71	V	67	46	16	24	46	64	63	42	10	26	55	66	62	46	20	5	25	46	57	48	24	6	35	53
	D	26	21	342	236	212	209	212	206	202	32	28	27	24	18	7	224	204	210	213	212	211	11	25	28
28/09/71	V	54	44	25	1	21	40	48	46	31	6	25	50	59	58	40	20	8	35	51	57	51	34	13	21
	D	32	31	27	65	204	209	212	214	213	218	32	29	30	37	37	34	200	208	210	215	218	224	256	9
29/09/71	V	44	52	51	41	23	6	27	42	48	44	27	9	33	51	58	51	33	13	21	44	60	61	49	27
	D	25	29	33	34	24	284	219	214	213	214	224	308	25	32	34	35	40	67	189	206	210	214	217	233
30/09/71	V	11	36	55	67	62	52	30	3	33	54	54	38	9	28	54	67	70	56	34	14	38	63	75	68
	D	343	26	29	28	30	33	33	67	197	200	207	212	220	29	32	34	34	22	10	301	227	212	207	205
01/10/71	V	40	4	39	63	74	73	60	37	16	49	67	67	47	10	39	70	86	85	67	30	30	59	86	97
	D	204	146	31	32	36	30	21	9	269	223	217	212	205	155	43	34	31	28	22	356	248	221	216	213
02/10/71	V	78	40	16	62	94	101	88	59	20	39	78	91	90	62	11	48	90	107	100	63	28	46	97	123
	D	208	199	67	36	33	31	28	21	346	230	219	209	202	200	179	38	36	33	29	16	331	234	215	210
03/10/71	V	117	91	40	28	84	111	113	88	44	17	72	111	117	96	53	17	74	109	113	83	36	26	90	123
	D	205	203	202	40	35	31	31	30	20	238	208	204	203	202	197	74	38	35	31	27	21	226	209	210

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.

POSITION = STATION K - LAT. 52 5N LONG. 5 26W.

TIME = 28/ 8/71 TO 6/10/71.

WATER DEPTH = 73M. BELOW CHART DATUM.

CURRENT METERS AT 60, 33, 5 M. ABOVE SEA FLOOR.

CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.

CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH FROM R.V. JOHN MURRAY.
SURFACE BUOY, SUB-SURFACE BUOY AND TOP METER LOST. MIDDLE METER TRAWLED UP AFTER
5 MONTHS. BOTTOM METER ON BOTTOM.

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION L - LAT. 52 5N LONG. 5 8W.
TIME = 5/ 9/71 TO 22/ 9/71.
WATER DEPTH = 48M. BELOW CHART DATUM.
CURRENT METERS AT 34, 20, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V. CLIONE.
TOP METER DID NOT RECORD ANY DATA. BOTTOM METER FOULED, RETURNED NO DATA.

STATION L + METER 20M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 291 + DATA REDUCTION BY LOWESTOFT
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
05/09/71	V	89	112	109	83	32	22	59	95	92	57	20	9	47	91	97	79	36	10	61	102	103	75	35	16
	D	236	238	238	237	236	36	53	58	56	61	70	174	228	243	243	245	246	66	58	55	51	49	51	218
																				100	081	047	006	046	
																				053	051	047	081	224	
06/09/71	V	89	112	109	83	32	22	59	95	92	57	20	9	47	91	97	79	36	10	61	102	103	75	35	16
	D	236	238	238	237	236	36	53	58	56	61	70	174	228	243	243	245	246	66	58	55	51	49	51	218
07/09/71	V	67	101	113	108	72	12	51	93	106	90	55	13	38	79	100	100	77	24	39	83	106	94	63	23
	D	232	240	240	240	242	256	48	55	53	52	49	18	230	232	238	240	240	240	50	57	54	51	51	49
08/09/71	V	28	78	105	112	101	59	5	61	95	104	76	35	5	41	76	92	94	68	20	34	79	100	93	62
	D	222	235	240	241	242	242	349	54	56	54	52	41	281	231	230	234	239	240	240	47	56	56	53	48
09/09/71	V	16	31	70	96	105	95	55	3	54	87	93	74	34	4	38	72	91	88	61	17	32	76	92	83
	D	35	232	231	238	240	240	237	342	53	56	53	48	43	124	212	228	230	232	233	237	49	60	55	52
10/09/71	V	52	14	27	63	86	95	79	38	13	54	78	80	63	34	2	30	62	78	76	55	14	32	63	75
	D	49	56	213	228	234	234	234	231	48	58	60	55	49	37	63	221	231	232	229	228	214	60	63	60
11/09/71	V	57	38	31	34	39	47	58	55	44	39	50	58	55	47	34	27	29	38	48	50	42	36	44	55
	D	78	53	11	334	305	283	264	242	212	168	130	109	89	67	40	2	322	293	272	251	223	188	149	128
12/09/71	V	65	53	29	18	33	46	57	58	40	8	21	38	52	51	33	9	16	39	50	57	50	29	1	25
	D	49	50	63	128	177	195	211	219	221	230	41	47	47	43	39	21	210	201	206	216	219	218	180	47
13/09/71	V	42	50	45	31	8	23	42	51	52	40	15	14	33	43	45	33	14	8	30	45	53	52	41	16
	D	50	49	45	48	83	187	199	207	215	219	222	34	47	44	44	51	56	203	214	213	217	222	223	225
14/09/71	V	24	25	36	42	45	32	15	16	30	39	43	41	26	17	29	41	45	35	19	14	30	46	57	61
	D	161	101	62	50	44	35	8	281	242	226	220	211	196	126	65	52	50	40	18	306	250	233	228	222
15/09/71	V	48	28	12	29	47	52	45	22	15	30	45	52	51	33	16	31	47	53	45	28	14	21	50	67
	D	213	195	125	56	52	50	46	18	298	244	228	223	217	203	140	71	59	53	45	23	352	241	231	230
16/09/71	V	69	54	26	9	35	56	62	49	20	3	29	56	65	56	35	19	37	56	61	52	29	4	31	64
	D	226	223	212	126	80	68	58	58	63	162	216	220	225	219	195	129	70	60	53	43	27	326	217	226
17/09/71	V	79	74	48	17	18	50	66	66	46	17	13	46	70	71	53	27	26	54	68	71	50	18	15	54
	D	229	227	223	213	131	81	63	56	58	65	209	221	228	224	210	178	88	66	60	52	41	22	217	222
18/09/71	V	82	85	69	39	14	43	65	73	63	32	5	32	66	78	70	41	14	44	67	72	65	36	6	37
	D	230	230	225	216	150	91	69	58	56	62	143	214	227	229	220	209	120	66	64	57	50	36	315	224
19/09/71	V	70	88	87	67	25	23	61	79	78	51	14	17	52	76	81	67	32	17	56	76	75	58	26	12
	D	228	231	232	230	225	41	59	59	52	42	21	220	224	228	226	226	215	62	63	63	54	44	37	211

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION M - LAT. 53 24N LONG. 5 7W.
TIME = 6/ 9/71 TO 20/ 9/71.
WATER DEPTH = 99M. BELOW CHART DATUM.
CURRENT METERS AT 88, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V.CLIONE.
NO DATA RECOVERED FROM TOP METER.

STATION M + METER 5M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 583 + DATA REDUCTION BY LOWESTOFT
 HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
05/09/71	V																								
	D																								
06/09/71	V									096	085	053	019	048	078	089	074	048	022	043	077	092	092	073	
	D									017	011	358	291	210	194	191	185	170	117	040	025	018	012	007	
07/09/71	V	28	40	76	90	87	68	35	29	66	89	95	85	49	21	54	80	86	73	45	22	59	86	96	88
	D	342	219	198	189	188	184	160	61	28	21	17	9	353	262	205	192	190	185	171	85	33	23	17	13
08/09/71	V	62	18	53	82	92	86	62	21	42	75	91	92	71	31	27	62	81	80	61	29	24	62	85	89
	D	4	304	208	193	186	187	183	143	40	22	18	16	8	341	228	201	192	189	184	168	60	29	21	14
09/09/71	V	83	53	15	55	77	83	76	50	16	44	76	91	88	62	23	33	61	76	71	52	23	31	67	86
	D	13	4	262	204	191	185	184	181	130	35	23	20	18	6	329	221	199	194	188	176	151	42	24	17
10/09/71	V	87	71	34	24	56	73	75	64	35	14	47	72	80	73	47	13	39	59	66	59	41	13	34	61
	D	12	8	357	234	201	192	189	187	175	73	28	21	17	12	4	302	212	196	190	186	180	135	32	19
11/09/71	V	76	76	58	28	25	50	62	60	49	23	18	47	64	68	58	36	16	37	52	56	46	31	12	25
	D	14	11	7	341	238	201	191	188	182	170	47	27	20	15	7	351	285	214	197	189	185	173	132	40
12/09/71	V	47	57	60	49	23	17	36	48	39	23	10	29	44	52	50	36	16	17	34	45	42	34	21	
	D	25	19	14	6	345	245	208	195	191	184	170	96	36	23	17	9	358	322	234	207	196	188	183	166
13/09/71	V	12	28	42	47	44	32	14	19	31	37	36	28	13	10	28	39	44	37	20	13	28	38	39	38
	D	85	35	24	18	11	0	315	231	209	193	185	184	167	53	27	21	14	8	345	266	215	198	189	180
14/09/71	V	27	11	13	31	39	41	35	20	11	23	34	37	34	25	11	23	38	44	41	32	11	22	36	48
	D	180	158	48	31	24	17	8	345	280	218	201	188	177	166	124	49	32	23	2	322	223	204	191	
15/09/71	V	49	43	26	7	29	45	47	46	36	16	22	38	45	44	35	15	22	41	51	55	42	20	22	42
	D	181	180	178	98	34	29	24	13	0	320	234	207	190	181	173	148	51	32	22	14	5	333	234	208
16/09/71	V	54	56	49	31	12	39	54	58	56	39	19	30	48	55	50	35	12	30	51	60	61	44	20	28
	D	196	186	186	176	85	37	29	21	12	356	302	225	202	190	185	178	125	37	26	21	13	0	323	225
17/09/71	V	54	67	62	48	25	23	47	63	67	56	33	14	39	58	59	49	27	12	41	61	69	61	37	15
	D	202	193	186	187	164	65	28	20	18	9	353	274	209	194	187	187	182	66	29	21	18	12	357	274
18/09/71	V	42	64	71	64	49	17	34	61	75	71	49	23	24	51	67	64	52	25	22	54	73	75	62	31
	D	210	194	186	184	185	147	37	22	19	18	8	340	235	202	193	188	182	162	54	28	22	15	7	349
19/09/71	V	20	51	72	76	65	39	14	43	70	80	70	43	15	41	66	73	63	42	15	41	70	82	75	49
	D	243	204	193	190	184	174	102	31	22	20	14	3	286	211	196	189	181	169	110	34	21	16	10	359

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.

POSITION = STATION N - LAT. 54 4N LONG. 5 19W.

TIME = 7/ 9/71 TO 19/ 9/71.

WATER DEPTH = 108M. BELOW CHART DATUM.

CURRENT METERS AT 95, 50, 5 M. ABOVE SEA FLOOR.

CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.

CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

WATER TEMPERATURE IS DENOTED BY T AND IS IN UNITS OF 0.1 DEGREES CENTIGRADE.

STANDARD LAUNCH FROM R.V.CLIONE. SUB-SURFACE BUOY AND TOP METER WASHED ASHORE.
MIDDLE METER LOST AND BOTTOM METER ON BOTTOM.

STATION N + METER 95M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 217 + DATA REDUCTION BY LOWESTOFT

DATE HOURS IN G.M.T.

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
05/09/71	V	7	13	22	24	19	19	20	19	14	10	5	11	17	19	12	4	3	13	21	27	23	14	4	4
	D	326	309	304	306	291	245	221	215	205	180	101	49	36	25	24	27	198	198	208	213	218	219	207	56
	T	139	137	136	134	128	133	136	137	138	137	136	135	137	142	143	143	143	142	142	142	142	137	136	137
06/09/71	V	10	15	14	7	1	6	14	16	14	9	1	14	26	27	17	7	2	10	14	19	21	15	5	11
	D	45	4	0	0	315	189	201	210	205	216	315	12	18	24	31	45	153	180	205	212	217	222	259	5
	T	139	142	144	143	144	145	145	145	146	147	146	146	146	147	146	145	143	145	147	147	146	147	148	147
07/09/71	V	22	22	18	10	7	3	3	9	11	9	2	12	21	28	24	16	7	1	2	5	8	9	5	1
	D	13	18	16	17	27	18	198	193	207	216	297	9	19	19	15	14	8	315	207	202	210	201	191	45
	T	146	145	143	142	143	142	145	144	144	144	145	145	144	144	145	144	144	144	144	144	144	144	145	145
08/09/71	V	7	12	14	13	7	3	3	4	5	6	3	2	7	10	9	5	2	9	11	12	12	12	12	9
	D	16	9	4	356	333	288	225	194	180	189	180	63	63	45	41	53	207	216	218	211	200	185	175	144
	T	145	144	145	145	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	145	144	144	144
09/09/71	V	9	10	6	3	1	3	3	5	9	12	12	9	8	9	6	3	2	8	6	2	6	8	9	8
	D	96	79	72	72	45	180	162	127	122	138	160	162	135	96	72	72	207	240	261	207	149	135	131	140
	T	142	141	141	142	143	144	144	144	144	142	141	141	141	140	140	140	140	140	141	141	141	142	142	142
10/09/71	V	5	2	1	2	4	5	3	2	1	1	2	2	4	5	6	8	6	2	2	3	3	1	0	0
	D	158	153	45	63	326	307	288	243	225	180	180	153	135	112	72	50	45	0	243	252	288	315	0	0
	T	142	140	140	139	140	141	141	141	141	141	141	141	141	141	141	140	140	140	140	140	140	141	141	141
11/09/71	V	0	1	2	4	7	9	7	6	3	1	1	5	8	6	4	8	10	9	5	3	6	8	10	11
	D	0	0	27	27	27	27	0	351	315	315	180	191	203	239	297	337	349	0	349	288	252	256	276	275
	T	140	140	140	140	140	141	141	140	141	141	141	142	143	144	144	143	142	142	141	141	141	141	141	141
12/09/71	V	10	8	8	9	13	14	14	13	13	14	17	18	16	16	12	10	10	14	16	15	13	13	13	14
	D	276	263	263	302	328	335	335	321	302	282	263	261	256	266	275	294	323	343	345	340	321	299	279	266
	T	142	142	140	139	138	138	139	140	141	142	140	137	138	137	137	138	139	139	140	140	140	140	140	138
13/09/71	V	14	15	14	13	7	2	4	11	12	9	9	14	17	16	15	12	7	2	2	3	6	8	11	16
	D	249	247	249	247	254	297	346	350	346	328	288	274	263	259	250	256	278	297	63	18	329	300	275	263
	T	139	140	141	141	140	140	140	141	141	141	141	141	141	141	141	141	141	141	141	142	142	143	143	143
14/09/71	V	17	17	15	11	13	11	9	5	6	11	15	21	24	27	30	28	25	23						
	D	260	249	247	236	209	218	238	259	288	265	259	256	246	237	233	224	212	205						
	T	142	142	143	143	143	140	140	140	140	140	140	140	140	140	137	139	142	142						

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION N - LAT. 54 4N LONG. 5 19W.
TIME = 7/ 9/71 TO 19/ 9/71.
WATER DEPTH = 108M. BELOW CHART DATUM.
CURRENT METERS AT 95, 50, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH FROM R.V. CLIONE. SUB-SURFACE BUOY AND TOP METER WASHED ASHORE.
MIDDLE METER LOST AND BOTTOM METER ON BOTTOM.

STATION N + METER 5M. ABOVE SEA FLOOR + METER LOWESTOFT PLESSEY 457 + DATA REDUCTION BY LOWESTOFT
 HOURS IN G.M.T.

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

DATE	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
05/09/71	V																								
	D																								
06/09/71	V																								
	D																								
07/09/71	V																								
	D																								
08/09/71	V	29	19	10	6	9	11	12	12	6	9	20	24	026	021	015	009	010	019	020	009	010	027	032	
	D	46	36	24	351	328	297	235	215	189	84	66	55	051	046	039	023	004	336	306	233	212	207	198	053
09/09/71	V	19	14	9	11	8	6	8	12	9	3	9	18	19	16	13	12	10	8	7	8	9	5	14	
	D	43	36	347	319	315	279	230	211	207	162	69	56	47	22	351	325	293	254	225	216	180	79	51	
10/09/71	V	19	18	10	6	7	8	9	9	10	6	4	14	20	19	13	12	9	8	6	3	3	4	11	
	D	43	29	17	329	278	256	249	221	209	198	76	60	41	25	4	329	311	284	279	252	198	162	104	63
11/09/71	V	18	19	14	8	6	5	5	4	3	1	1	6	13	15	13	8	4	7	8	9	7	3	2	8
	D	49	36	25	7	315	292	281	256	252	225	45	51	39	28	23	7	315	278	277	291	297	315	27	50
12/09/71	V	14	14	11	6	1	3	6	6	5	3	2	7	10	12	12	9	4	3	6	8	6	4	5	
	D	54	51	45	45	45	252	252	279	281	268	27	63	73	59	42	27	0	268	231	247	279	315	346	22
13/09/71	V	8	11	11	8	2	2	7	8	6	2	0	0	1	5	6	10	7	2	0	2	5	3	1	1
	D	45	56	52	45	27	297	278	277	279	297	0	0	45	79	50	37	27	27	0	297	292	315	315	0
14/09/71	V	4	6	7	8	4	1	4	6	8	8	5	3	3	3	1	0	0	0	3	8	11	13	13	
	D	27	45	56	67	63	45	326	309	284	284	281	252	225	225	225	0	0	0	252	240	232	231	231	225
15/09/71	V	13	14	15	13	9	6	4	8	12	10	8	3	1	7	10	9	4	0	1	3	5	2	1	1
	D	219	210	208	212	221	225	243	277	275	287	310	315	180	188	197	207	207	0	0	342	349	0	0	180
16/09/71	V	6	8	9	9	6	1	4	6	6	5	5	1	1	4	4	4	1	6	12	14	11	7	3	0
	D	198	194	193	193	189	135	76	72	45	0	338	0	225	214	207	194	180	81	81	69	56	34	18	0
17/09/71	V	0	0	2	2	1	4	16	21	19	16	12	7	2	0	1	9	9	1						
	D	0	0	207	207	180	76	63	61	54	45	31	8	0	0	225	216	212	225						

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION P - LAT. 51 14N LONG. 4 11W.
TIME = 6/ 9/71 TO 15/ 9/71.
WATER DEPTH = 27M. BELOW CHART DATUM.
CURRENT METERS AT 12, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V. CLIONE.
RECOVERY EARLY TO PROVIDE METERS FOR RELAUNCHING OF B.
BOTH METERS RETURNED GOOD RECORDS.

HOURLY VALUES FROM DATA RECORDED BY CURRENT METERS EVERY 10 MINS.
POSITION = STATION P - LAT. 51 14N LONG. 4 11W.
TIME = 6/ 9/71 TO 15/ 9/71.
WATER DEPTH = 27M. BELOW CHART DATUM.
CURRENT METERS AT 12, 5 M. ABOVE SEA FLOOR.
CURRENT SPEED IS DENOTED BY V AND IS IN UNITS OF CM/SEC.
CURRENT DIRECTION IS DENOTED BY D AND IS IN DEGREES TRUE.

STANDARD LAUNCH AND RECOVERY FROM R.V. CLIONE.
RECOVERY EARLY TO PROVIDE METERS FOR RELAUNCHING OF B.
BOTH METERS RETURNED GOOD RECORDS.

STATION P + METER 5M. ABOVE SEA FLUOR + METER LOWESTOFT PLESSEY 562 + DATA REDUCTION BY LOWESTOFT
 DATE HOURS IN G.M.T.

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
05/09/71	V																								
	D																								
06/09/71	V																								
	D																								
07/09/71	V	023	035	039	037	034	027	023	030	042	048	044	033	027	033	036	035	033	028	025	030	037	044	047	034
	D	277	272	258	239	220	197	155	105	073	049	031	007	324	288	262	239	219	199	162	118	084	055	034	034
08/09/71	V	41	30	31	38	40	37	30	20	16	34	45	48	42	29	31	34	34	30	25	27	32	39	44	44
	D	16	345	301	272	251	235	221	200	133	87	65	45	24	354	309	277	255	233	213	182	149	112	78	53
09/09/71	V	42	33	25	31	36	37	32	24	15	19	35	41	40	29	21	25	30	31	30	25	20	21	29	36
	D	34	11	326	287	262	246	229	208	176	108	75	58	42	22	341	291	264	248	230	206	177	135	94	69
10/09/71	V	37	34	24	22	30	35	33	25	17	12	22	34	34	31	23	16	22	28	27	22	16	19	28	28
	D	47	27	358	309	276	257	243	228	208	156	100	78	58	38	13	325	278	257	246	231	202	165	126	88
11/09/71	V	31	31	25	15	18	24	26	23	16	9	8	20	28	25	21	12	13	21	24	22	18	13	15	15
	D	68	48	32	352	297	272	259	241	223	207	130	96	86	63	39	5	297	273	255	243	227	198	162	127
12/09/71	V	21	25	21	15	9	13	21	22	17	12	7	6	14	19	16	14	8	9	15	18	16	12	6	1
	D	87	72	51	28	339	283	262	254	242	228	214	141	102	81	63	36	0	291	266	257	252	250	252	225
13/09/71	V	6	15	20	17	10	4	8	14	15	14	10	4	3	6	12	15	11	4	4	10	15	17	14	10
	D	81	82	75	62	45	346	284	274	259	253	246	225	162	99	76	70	63	34	284	259	254	253	253	246
14/09/71	V	6	2	5	11	14	11	6	4	9	12	13	12	9	4	7	13	17	14	5	2	11	17	17	17
	D	231	207	79	80	78	63	31	315	291	275	257	250	234	194	124	99	87	82	68	297	285	273	273	273

Table D

HOURLY VALUES OF VOLTAGE ACROSS THE BALLY HORNMAN TO PORT ERIN SUBMARINE CABLE.
 TO OBTAIN WATER TRANSPORT IN UNITS OF 10**6 CUBIC METRES PER SECOND MULTIPLY BY 0.0147
 POSITIVE NUMBERS INDICATE NORTHWARD TRANSPORT.

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	- 8	- 3	6	13	18	23	23	18	17	6	- 4	- 7	- 6	0	6	13	20	28	33	28	21	13	1	- 7
29	-11	- 5	- 0	6	14	18	20	20	20	15	6	2	- 2	- 3	- 1	2	7	17	21	25	24	19	9	0
30	- 4	- 8	- 6	0	3	6	12	15	16	16	16	13	4	- 2	- 6	- 7	4	9	13	20	20	20	17	6
31	- 2	- 3	-10	-12	-11	- 8	0	10	19	20	22	22	15	5	- 4	- 8	- 8	- 9	- 7	- 1	18	26	26	24
1/ 9/71	18	5	- 5	-18	-21	-22	-20	-15	- 1	7	17	19	12	0	-10	-21	-25	-25	-22	-14	6	21	30	32
2	28	14	2	-11	-21	-24	-22	-13	- 0	15	33	42	40	30	15	- 3	-16	-19	-18	-11	5	18	33	41
3	40	32	22	- 4	-18	-32	-33	-30	-16	5	26	42	44	41	26	6	-16	-31	-37	-33	-14	5	25	45
4	52	49	34	11	-10	-31	-42	-43	-31	- 9	19	41	54	56	44	21	- 6	-29	-43	-49	-40	-14	14	36
5	57	67	51	34	5	-17	-39	-46	-44	-30	2	27	46	65	64	45	13	-18	-43	-52	-53	-34	- 2	25
6	50	66	69	53	40	- 6	-34	-49	-50	-41	-12	15	40	66	72	67	30	6	-29	-54	-62	-53	-31	-24
7	30	57	76	66	48	17	-21	-47	-52	-49	-38	-11	27	50	70	70	46	25	0	- 5	-35	-47	-48	-36
8	6	42	62	73	72	39	1	-26	-46	-51	-44	-17	12	36	52	65	62	51	28	24	- 3	-29	-35	-36
9	-10	14	40	58	59	49	26	0	-27	-41	-37	-27	- 6	16	37	52	59	66	48	24	- 3	-29	-35	-36
10	-27	3	20	43	49	51	40	20	0	-19	-28	-23	-13	2	16	26	38	49	46	33	16	- 4	-23	-26
11	-23	-11	8	22	36	42	41	35	21	4	10	- 1	- 4	- 4	- 3	9	15	26	34	35	27	16	5	-28
12	-14	-13	- 7	1	7	14	25	30	31	23	10	- 1	- 4	- 4	- 3	0	- 6	- 3	4	12	22	31	29	27
13	2	- 5	- 8	- 9	- 8	- 3	3	21	27	26	25	18	10	2	- 3	- 4	- 6	- 3	4	12	22	31	29	27
14	15	8	- 6	-13	-14	-14	- 9	- 6	5	24	36	35	31	17	3	- 9	-12	-13	-11	- 6	8	18	30	32
15	28	20	6	- 6	-16	-20	-18	-27	-21	- 3	9	30	35	35	29	16	2	-11	-21	-22	- 7	6	18	37
16	34	35	13	1	-16	-26	-27	-21	-32	-17	- 1	20	38	48	45	31	8	-10	-38	-30	-27	- 7	18	40
17	43	41	27	11	- 8	-22	-31	-34	-35	-34	-12	10	39	49	51	45	22	10	-22	-30	-29	-15	10	24
18	46	50	45	25	-10	-28	-34	-35	-40	-40	-23	- 1	26	49	60	52	36	- 3	-28	-33	-29	-15	10	24
19	38	46	45	35	10	-15	-32	-48	-40	-40	-23	- 1	26	49	60	52	36	- 3	-28	-33	-29	-15	10	24
20	34	49	49	41	23	1	-23	-35	-41	-27	-12	18	42	55	59	45	23	- 1	-25	-45	-43	-37	-25	- 2
21	33	45	51	48	32	10	-15	-36	-43	-36	-18	9	33	50	58	51	33	13	- 9	-34	-38	-32	-15	2
22	22	40	51	56	42	21	- 2	-22	-36	-40	-32	-11	8	28	41	49	41	29	0	-19	-33	-39	-23	-10
23	11	28	42	47	41	27	7	-13	-33	-33	-30	-17	1	19	34	41	46	41	29	12	- 8	-24	-30	-17
24	1	19	33	42	43	33	18	- 1	-19	-28	-30	-17	1	19	34	41	46	41	29	12	- 8	-24	-30	-17
25	1	10	27	39	43	44	43	7	- 6	-17	-23	-24	- 9	7	26	36	38	37	28	19	4	- 4	-19	-13
26	1	5	11	24	34	36	34	25	14	- 2	- 9	-13	-13	- 7	9	24	32	33	33	27	4	- 6	-10	-11
27	-10	- 5	6	15	23	27	29	27	28	19	10	0	- 8	-10	-10	- 4	12	26	31	32	30	20	10	0
28	- 4	- 7	- 5	0	9	14	19	24	27	28	24	14	4	- 2	- 5	- 7	- 5	17	25	31	32	30	30	23
29	13	4	- 1	- 5	- 6	- 3	2	7	18	23	28	27	16	10	- 1	- 7	- 8	- 3	2	11	37	38	37	30
30	20	10	2	- 5	- 6	- 6	- 3	3	18	29	41	39	32	11	2	-10	-14	-16	-13	- 7	14	34	39	40
1/10/71	38	25	10	- 8	-17	-21	-22	-11	2	17	46	44	42	30	12	- 9	-22	-20	- 6	8	25	39	47	52
2	53	23	8	- 3	-25	-33	-34	-26	-20	8	33	46	51	39	20	- 2	-25	-40	-43	-29	-12	12	40	59
3	59	40	20	2	-10	-30	-36	-34	-27	-10	31	50	64	55	41	9	-20	-47	-49	-30	- 7	20	50	59
4	68	69	47	23	-13	-29	-52	-56	-45	-16	14	41	65	75	59	34	2	-25	-57	-50	-30	-30	26	35
5	63	83	67	57	14	-19	-42	-52	-48	-32	1	34	63	78	73	60	28	- 4	-35	-50	-44	-10	17	17
6	40	68	84	58	30	9	-28	-51	-58	-45	-24	12	43	65	77	74	40	13	-20	-44	-59	-57	-39	-15
7	19	46	65	65	50	22	- 9	-38	-57	-55	-35	- 4	20	44	61	67	57	35	10	-30	-58	-60	-50	-30
8	1	37	53	66	68	44	13	-11	-39	-47	-36	-17	2	15	39	50	54	49	36	7	-15	-30	-50	-32
9	-19	0	20	40	65	62	20	- 9	-25	-38	-38	-29	-17	5	10	26	36	46	44	20	3	-14	-25	-32
10	-29	-11	4	16	31	38	34	21	4	-7	-18	-21	-18	-12	- 2	7	16	25	33	32	25	8	- 4	-13
11	-18	-14	- 8	- 2	6	17	24	24	20	13	6	- 3	-12	-14	-13	- 8	-14	-16	14	23	24	27	22	-13

HOURLY VALUES OF VOLTAGE MEASURED ACROSS THE NEFYN TO HOWTH (EIRE) SUBMARINE CABLE.
 TO OBTAIN WATER TRANSPORT IN UNITS OF 10**6 CUBIC METRES PER SECOND MULTIPLY BY 0.0344
 POSITIVE NUMBERS INDICATE NORTHWARD TRANSPORT.

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	142	120	60	- 3	-57	-90	-95	-75	-35	19	84	142	163	145	95	21	-55	-78	-86	-70	-43	2	52	99
29	127	125	94	46	- 6	-46	-68	-69	-58	-19	39	99	137	140	110	65	15	-30	-57	-71	-56	-35	- 3	39
30	75	93	93	66	30	-15	-51	-68	-64	-40	- 3	35	77	104	104	89	57	20	-10	-38	-58	-66	-48	-10
31	32	64	92	97	92	72	41	- 7	-50	-59	-48	-15	19	54	89	100	99	80	46	7	-35	-55	-63	-52
1/ 9/71	-26	9	40	67	86	84	67	30	-15	-52	-65	-67	-43	-15	16	49	79	99	91	60	17	-32	-75	-90
2	-83	-63	-15	35	90	121	124	100	60	7	-35	-58	-67	-55	-35	9	71	129	144	129	82	14	-47	-93
3	-115	-107	-72	-28	45	107	148	147	119	64	2	-58	-92	-105	-84	-38	27	99	154	169	139	82	- 0	-73
4	-121	-133	-121	-75	- 6	75	142	172	166	115	59	-14	-86	-122	-129	-97	-35	57	142	182	127	50	- 0	-31
5	-105	-139	-151	-110	-57	27	120	180	197	172	112	29	-56	-106	-134	-137	-85	- 3	91	169	197	189	142	47
6	-55	-131	-158	-152	-113	-45	47	150	203	205	169	85	- 3	-88	-138	-155	-122	-63	37	127	199	212	169	88
7	- 5	-83	-135	-162	-140	-89	-19	69	164	209	208	162	77	-32	-103	-155	-165	-120	-43	44	137	202	208	149
8	69	-20	-104	-146	-157	-133	-78	7	105	174	216	201	135	44	-60	-133	-150	-133	-80	-12	97	169	210	195
9	139	55	-50	-132	-157	-149	-112	-51	37	134	196	212	178	107	2	-82	-148	-150	-112	-57	18	99	179	207
10	180	107	19	-55	-116	-143	-126	-88	-20	55	132	184	184	149	59	-20	-94	-126	-125	-93	-43	27	104	152
11	164	139	80	9	-66	-103	-113	-99	-58	0	67	142	177	167	102	35	-30	-83	-101	-100	-75	-30	37	92
12	135	145	122	69	15	-44	-78	-86	-75	-40	12	65	117	133	121	80	36	- 8	-50	-22	-23	-53	-72	-74
13	59	105	122	116	87	30	-15	-51	-78	-80	-49	2	49	92	111	112	93	60	22	-23	-53	-72	-74	-42
14	- 9	27	67	98	116	97	57	12	-28	-45	-47	-38	-20	14	56	89	112	109	79	30	-13	-51	-79	-85
15	-71	-36	12	64	104	127	122	87	34	-15	-48	-70	-53	- 9	39	86	124	126	99	59	5	5	-53	-90
16	-97	-75	-43	- 0	57	109	137	130	94	42	- 5	-68	-90	-90	-58	- 9	52	115	147	144	110	47	-33	-85
17	-122	-128	-93	-40	24	87	142	154	132	82	17	-43	-82	-98	-87	-45	12	92	142	154	142	94	16	-63
18	-108	-118	-100	-59	- 3	59	124	153	159	122	64	-17	-78	-108	-110	-79	-38	20	112	172	172	129	60	-13
19	-88	-125	-129	-115	-59	9	89	149	175	150	90	17	-50	-94	-118	-109	-68	5	77	139	179	165	112	32
20	-60	-117	-147	-136	-95	-22	55	13	97	159	177	159	103	16	-63	-110	-132	-115	-75	7	88	158	188	162
21	-15	-90	-130	-135	-112	-55	13	97	159	177	159	103	16	-63	-110	-132	-115	-75	7	88	158	188	162	105
22	22	-55	-114	-135	-124	-82	-41	25	99	159	174	152	94	21	-56	-111	-132	-107	-58	11	84	147	164	149
23	55	-26	-95	-128	-132	-100	-74	-16	55	122	164	164	123	55	-28	-91	-116	-111	-73	-25	34	105	162	167
24	91	15	-58	-107	-119	-111	-74	-27	31	101	148	152	135	89	22	-47	-92	-103	-83	-38	15	75	124	145
25	132	59	-14	-80	-110	-109	-73	-27	31	101	148	152	135	89	22	-47	-92	-103	-83	-38	15	75	124	145
26	137	95	24	-32	-70	-85	-81	-48	- 2	65	122	154	158	117	59	- 3	-52	-79	-85	-53	- 5	57	114	149
27	150	132	92	34	-22	-69	-96	-98	-72	-13	59	117	144	112	94	50	- 9	-54	-69	-61	-43	-15	29	80
28	109	118	97	56	17	-23	-55	-64	-56	-32	10	67	102	117	109	80	40	- 4	-33	-51	-50	-37	-15	19
29	60	92	101	96	75	44	0	-32	-48	-45	-28	5	44	76	94	107	94	65	22	-15	-35	-48	-50	-37
30	-18	28	71	104	111	101	79	27	22	-50	-58	-56	-36	- 5	52	95	117	116	107	72	26	-32	-72	-80
1/10/71	-70	-44	0	55	111	137	128	90	39	-20	-55	-82	-72	-48	- 0	45	112	144	151	120	62	-22	-73	-97
2	-102	-83	-52	17	89	149	172	152	90	18	-45	-88	-105	-106	-115	- 9	55	126	181	177	122	175	-36	-90
3	-120	-129	-102	-47	42	132	187	189	147	82	9	-58	-113	-139	-125	-69	10	99	179	200	172	107	13	-75
4	-140	-162	-145	-98	-30	69	150	197	200	149	72	- 5	-80	-128	-138	-115	-55	37	137	197	207	178	105	10
5	-78	-140	-161	-136	-78	5	106	190	214	190	137	59	-32	-112	-155	-148	-105	-26	75	171	219	220	157	65
6	-30	-117	-165	-165	-118	-52	35	127	200	226	192	122	32	-58	-127	-157	-160	-119	-10	98	179	209	199	129
7	34	-55	-133	-164	-155	-113	-46	46	136	194	207	172	87	- 5	-94	-141	-150	-123	-75	14	122	182	202	172
8	105	27	-65	-125	-148	-130	-86	- 7	72	152	195	193	148	58	-23	-95	-135	-130	-94	-29	42	124	177	187
9	157	97	5	-59	-100	-131	-96	-26	59	135	167	167	124	39	-40	-96	-96	-124	-122	-90	-19	58	122	152
10	150	118	65	- 8	-68	-95	-107	-89	-48	17	83	144	167	141	87	17	-45	-88	-102	-95	-66	- 8	42	100
11	132	137	111	59	1	-43	-75	-85	-65	-29	15	81	121	129	101	65	9	-42	-82	-98	-85	-53	-17	27

HOURLY VALUES OF VOLTAGE MEASURED ACROSS THE CEMAES BAY TO PORT ERIN SUBMARINE CABLE.
 TO OBTAIN WATER TRANSPORT IN UNITS OF 10**6 CUBIC METRES PER SECOND MULTIPLY BY 0.0195.
 POSITIVE NUMBERS INDICATE TRANSPORT INTO EAST IRISH SEA.

DATE	HOURS IN G.M.T.																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28/ 8/71	147	109	46	-23	-87	-122	-127	-105	-54	7	73	131	152	128	69	-9	-81	-115	-130	-113	-82	-29	29	85
29	115	118	79	27	-27	-76	-101	-98	-73	-38	22	77	117	123	93	39	-16	-62	-94	-99	-87	-61	-21	25
30	64	95	92	61	14	-31	-69	-84	-84	-60	-24	14	56	89	94	79	44	-2	-43	-75	-90	-98	-75	-31
31	3	49	70	79	83	25	1	-34	-70	-73	-63	-34	-11	27	63	89	92	66	27	-8	-90	-94	-85	-79
1/ 9/71	-50	-23	28	64	101	95	70	20	-23	-62	-79	-80	-71	-48	-4	39	80	105	90	46	-6	-64	-102	-123
2	-108	-82	-36	87	129	137	105	29	-6	-62	-62	-99	-114	-105	-72	-20	55	122	150	134	76	-3	-78	-132
3	-156	-145	-99	-59	22	102	162	165	126	57	-26	-98	-146	-151	-128	-78	-4	87	159	159	158	79	-24	-114
4	-171	-182	-160	-114	-39	55	146	196	186	126	38	-58	-142	-183	-179	-140	-74	30	137	205	213	154	54	-56
5	-185	-198	-206	-161	-104	-5	103	197	234	200	113	2	-110	-181	-204	-179	-121	-49	68	176	216	221	147	28
6	-100	-191	-222	-206	-156	-84	20	143	238	242	194	86	-39	-142	-203	-212	-180	-108	-5	111	216	247	209	107
7	-20	-141	-205	-230	-192	-139	-62	56	188	248	245	165	51	-82	-174	-221	-220	-168	-83	23	147	229	237	179
8	73	-55	-162	-216	-201	-180	-125	-27	98	206	248	226	135	13	-116	-194	-213	-190	-138	-54	58	170	236	278
9	156	41	-85	-176	-214	-202	-155	-90	7	123	218	237	187	88	-35	-132	-197	-194	-166	-105	-23	72	179	219
10	189	111	2	-93	-172	-192	-171	-127	-55	37	133	199	197	144	62	-52	-131	-172	-164	-132	-78	-4	82	155
11	183	152	83	-7	-98	-143	-157	-136	-94	-36	46	130	170	162	101	19	-60	-118	-141	-135	-111	-70	0	70
12	124	150	122	59	-8	-74	-4	-41	-73	-102	-75	-23	38	97	123	115	80	22	-8	-82	-99	-107	-92	-66
13	30	87	105	95	73	4	92	43	-2	-50	-78	-82	-77	-55	-21	26	66	104	105	75	16	-33	-83	-102
14	-51	-1	45	86	114	92	43	-2	-50	-78	-82	-77	-55	-21	26	66	104	105	75	16	-33	-83	-102	-114
15	-100	-68	-28	36	95	122	110	87	25	-26	-76	-106	-104	-81	-47	15	68	115	127	97	46	-22	-89	-129
16	-137	-112	-90	-28	42	113	153	143	101	24	-39	-107	-133	-126	-90	-38	31	101	148	151	110	37	-52	-102
17	-140	-145	-127	-77	-6	79	149	169	148	79	-3	-80	-129	-147	-128	-86	-18	69	138	159	148	97	4	-100
18	-147	-157	-150	-112	-5	57	111	171	174	139	49	-42	-131	-168	-159	-125	-70	1	107	180	188	134	64	-36
19	-122	-175	-179	-146	-100	-24	78	154	201	179	101	2	-89	-158	-179	-154	-103	-30	62	144	203	170	115	17
20	-89	-159	-191	-172	-127	-58	32	137	198	203	146	57	-53	-141	-188	-178	-141	-74	11	77	210	203	154	46
21	-38	-133	-184	-183	-151	-95	-17	82	172	211	184	107	-3	-106	-169	-187	-160	-111	-31	60	156	199	181	108
22	7	-94	-163	-179	-168	-125	-57	37	132	196	201	143	67	-56	-144	-180	-175	-136	-67	25	116	174	195	143
23	54	-47	-131	-174	-174	-140	-85	-5	87	165	197	168	93	-8	-103	-163	-178	-149	-94	-21	65	143	180	160
24	93	0	-89	-149	-168	-152	-110	-47	39	126	180	182	125	36	-59	-131	-161	-152	-114	-60	26	112	164	170
25	138	47	-31	-107	-135	-125	-87	-35	-3	82	136	155	130	69	-6	-103	-137	-150	-126	-80	-24	50	105	148
26	135	90	6	-59	-108	-129	-118	-186	-35	29	105	148	152	112	43	-29	-91	-119	-125	-96	-50	-10	42	92
27	108	95	78	-11	-76	-97	-136	-102	-74	-19	35	75	108	96	89	17	-30	-85	-125	-105	-77	-50	5	62
28	81	108	72	44	-5	-49	-78	-81	-85	-43	-14	35	70	98	97	68	25	-28	-62	-85	-92	-67	-50	-13
29	21	50	82	82	61	27	-18	-53	-69	-72	-55	-27	0	43	72	92	82	50	-0	-53	-66	-85	-90	-72
30	-42	-1	47	91	105	94	61	8	-35	-77	-85	-89	-64	-41	23	73	97	128	47	20	-12	-72	-137	-121
1/10/71	-107	-53	5	105	120	141	128	88	10	-52	-86	-124	-117	-90	-44	11	93	139	156	115	44	-49	-100	-163
2	-152	-145	-93	-14	69	144	188	171	73	7	-71	-137	-144	-154	-109	-48	39	128	167	196	127	27	-95	-127
3	-175	-185	-176	-76	14	115	199	217	168	84	-10	-105	-166	-193	-159	-111	-24	73	191	229	199	113	-1	-104
4	-206	-198	-194	-143	-77	43	151	226	230	175	71	-52	-148	-198	-201	-157	-100	-1	122	213	231	176	120	-41
5	-152	-197	-231	-179	-126	-41	85	201	248	231	151	35	-85	-177	-221	-201	-155	-77	39	164	241	242	179	66
6	-77	-181	-211	-228	-182	-102	-6	116	221	250	214	128	0	-122	-194	-212	-204	-148	-53	74	189	248	235	143
7	28	-97	-187	-221	-202	-157	-83	21	137	225	243	193	78	-43	-151	-200	-205	-178	-113	-40	106	133	242	197
8	114	17	-128	-189	-176	-170	-125	-45	49	157	227	216	149	36	-62	-153	-192	-194	-142	-88	2	111	175	210
9	170	82	-37	-114	-137	-143	-144	-127	-42	53	145	191	166	110	19	-77	-145	-162	-157	-142	-53	15	106	162
10	162	130	55	-32	-102	-138	-143	-120	-79	-6	71	141	168	143	83	0	-74	-125	-137	-125	-95	-51	15	82
11	130	138	112	53	-15	-72	-107	-112	-95	-54	-5	62	104	126	90	63	6	-61	-105	-119	-125	-79	-54	5