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Scottish Marine Biological Association

Dunstaffnage Marine Research Laboratory

CRUISE REPORT

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S.M.B.A., P.O. Box No. 3, Oban, Argyll, Scotland.

Scottish Marine Biological Association

Dunstaffnage Marine Research Laboratory

Cruise Report

R.R.S. Challenger

Cruise 10/84

16 Nov - 6 Dec 1984

RESEARCH VESSEL CRUISE REPORT

Scottish Marine Biological Association

Challenger Cruise 10/84

Dates: Nov 16 to Dec 6 1984

Ports: Leg 1: Ardrossan - Oban
Leg 2: Oban - Campbeltown

Scientific Staff :

Leg 1	Leg 2
A. Connelly	D. Booth
A. Edwards	A. Edwards (principal scientist)
J. Graham	C. Griffiths
C. Griffiths	N. MacDougall
N. MacDougall	N. Pascoe
D. Meldrum	K. Petre
J. Watson	
J. Read (MAFF, 15 to 19 Nov only)	

Aims:

1. To recover current meter mooring LG in Beaufort's Dyke, North Channel and to relay it with two additional moorings, LE and LF, for recovery in January 1985.

2. To collect bottom cores for plutonium analysis at the current meter sites LE, LF and LG in the North Channel and to take near bottom 60 litre water samples at the coring stations for the Fisheries Laboratory, Lowestoft.

3. To service SMBA current meter moorings F (57, 30.6'N., 12, 13.3'W.) and Y (Tiree Passage) and to lay a near surface current mooring S South-east of Islay (55, 35.0'., 6, 3.0'W.).

4. To work shelf CTD sections from the northern Irish Sea to the Butt of Lewis and to collect radiocaesium samples on some sections for the Chemistry Department, Glasgow University.

5. To collect surface, midwater and near-bottom samples for radiocaesium determination by the Fisheries Laboratory, Lowestoft, at ten standard positions between the Sound of Mull and the shelf edge, to make CTD observations at these sites and to take cores at stations with suitable bottom deposits.

6. To make a CTD survey of the Clyde Sea area.

Narrative /

Narrative:

Staff left Oban on the 15th November by minibus and joined "Challenger" during the evening. The ship sailed at 07.00h on 16th November for mooring LE. The CTD was tested satisfactorily en route and the mooring was laid successfully at about 1630h. In calm and stable conditions, CTD line X was completed by midnight and line Y by 0800h on the 17th. Mooring LF was laid before noon and the ship continued to LE for coring and 50 litre sampling at stations LE, LF and LG. CTD line Y was completed before midnight. CTD line A was completed in the early hours of 18th and the ship arrived at the site of LG at 0800h. There was no reponse from the mooring's acoustic release so dragging was started and, as it was unsuccessful, abandoned at noon. CTD line Z was completed during the afternoon and a ring (CL1 to CL9) of CTD station started in the Clyde Sea around Arran. At about 0100 on the 19th, J. Read left the ship by pilot boat for Ardrossan. The last station in the Clyde was finished at 1000 and the vessel steamed for mooring F, east of Rockall.

On the 20th November, the precision echo sounder transducer was launched at 1000h. A moderate swell was running and the transducer cable fouled the support sheave, passing between the pulley and cheek. The transducer was with some inconvenience recovered but was no longer safely usable. Mooring F acoustic release was tested on the hydrographic wire successfully and mooring F was later laid, south of its old position, at 57 25'N., 12 13'W. The mooring was left after the release had timed out and the old mooring F at 57 30'N., 12 14'W was sought, with the hull transducer. It was not found and the search was given up, the ship working on towards Rockall through CTD stations E to A. The ship returned to F on the 21st and started to work east through CTD stations G, H and I. I was completed at 0130h 22nd as conditions were worsening rapidly and the ship steamed for shelter east of the Butt of Lewis.

In shelter, it was possible to work line L which was completed about 1030h on the 23rd. The PES fish was rigged on a safety line and tested: it was useless because the cable was broken inside. The remainder of the day was spent on CTD line K, after which "Challenger" steamed to mooring Y. After a bumpy passage to Y the mooring was sighted in fading light in the late afternoon of the 24th but strong winds prevented any work there. Shelter was found in Tobermory Bay, and some engineering repairs made. The night was passed by working a line of CTD stations through the Sound of Mull and up Loch Linnhe. Conditions /

Conditions ameliorated and mooring Y was recovered at 0800h 25th. It was a little damaged and had to be repaired by welding during the day. CTD line G was started but abandoned in worsening weather. After passage through the Sound of Mull, CTD line E was worked in the upper part of the Firth of Lorne. The line was finished early on the 26th and the ship returned to Oban for fuel at 0700h, later lying at Dunstaffnage.

The ship was stormbound at Dunstaffnage until noon on the 1st December when it headed for the Tiree passage. Mooring Y was laid at 2000h and the course was laid for station 16G at 57 N., 9 W. From here stations were worked eastward on the 2nd until 7G was reached in the afternoon. Course for station DO was abandoned in the face of a south-easterly gale and shelter was obtained in the lee of Coll and Tiree until the evening of the 3rd December. Mooring S was reached and laid at about 0900 on the 4th and CTD lines B and F were completed during the remainder of the day. The vessel steamed to the North Channel during the night so that line Z could be finished on the morning of 5th. A core was obtained at station Z5 and the cruise finished with a final line of stations up Kilbrannan Sound, docking at Campbeltown at 0900h on the 6th December.

R.V. Challenger cruise 10/84 station list

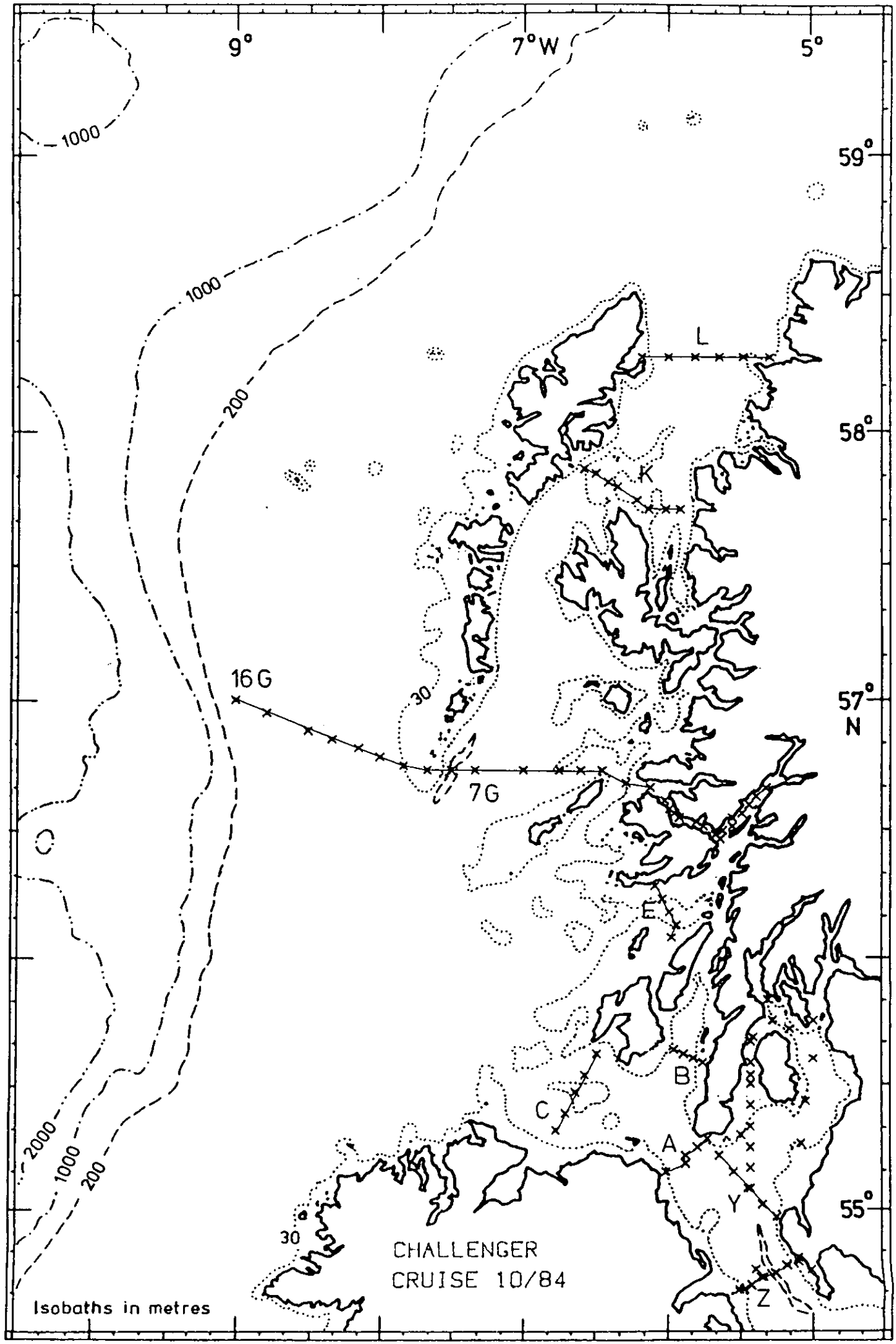
Station	Lat North	Long West	Time GMT	Date 1984	Dip No.
5X	54.36	4.54	1839	16/11	2
4X	54.34	4.48	1946	16/11	3
3X	54.28	4.36	2124	16/11	4
2X	54.25	4.36	2220	16/11	5
1X	54.25	4.30	2315	16/11	6
1X	54.25	4.30	2326	16/11	7
5W	54.26	4.21	33	17/11	8
4W	54.28	4.23	100	17/11	9
3W	54.33	4.21	209	17/11	10
2W	54.36	4.22	252	17/11	11
1W	54.33	4.23	340	17/11	12
LE	54.45	5.08	1500	17/11	0
Coring and 50 litre samples					
LF	54.44	5.07	1600	17/11	0
Coring and 50 litre samples					
LG	54.43	5.14	1700	17/11	0
Coring and 50 litre samples					
Y1	54.58	5.14	2018	17/11	13
Y2	55.01	5.20	2111	17/11	14
Y3	55.05	5.26	2201	17/11	15
Y4	55.09	5.32	2252	17/11	16
Y5	55.13	5.38	2343	17/11	17
A1	55.17	5.43	36	18/11	18
A2	55.15	5.47	120	18/11	19
A3	55.13	5.52	217	18/11	20
A4	55.11	5.55	258	18/11	21
A5	55.09	6.00	350	18/11	22
1Z	54.40	5.28	1303	18/11	23
2Z	54.41	5.25	1345	18/11	24
3Z	54.43	5.20	1433	18/11	25
4Z	54.44	5.15	1531	18/11	26
5Z	54.46	5.10	1634	18/11	27
6Z	54.48	5.06	1726	18/11	28
CL1	55.16	5.04	2125	18/11	29
CL2	55.26	5.02	2307	18/11	30
CL3	55.36	4.59	158	19/11	31
CL4	55.45	4.59	323	19/11	32
CL5	55.43	5.09	434	19/11	33
CL7	55.40	5.25	625	19/11	34
CL8	55.32	5.25	738	19/11	35
CL9	55.18	5.29	942	19/11	36
E	57.32	12.38	2316	20/11	37
Stored as two dips with same no.					
D	57.33	12.52	113	21/11	38
C	57.33	13.00	236	21/11	39
B	57.34	13.20	422	21/11	40
A	57.35	13.38	558	21/11	41
F	57.30	12.15	1313	21/11	42
G	57.29	11.51	1632	21/11	43
H	57.29	11.32	1948	21/11	44

R.V. Challenger cruise 10/84 station list

Station	Lat North	Long West	Time GMT	Date 1984	Dip No.
1	57.28	11.19	2313	21/11	45
1L	58.17	5.18	247	23/11	46
2L	58.17	5.29	537	23/11	47
3L	58.17	5.39	640	23/11	48
4L	58.17	5.49	750	23/11	49
5L	58.17	6.00	900	23/11	50
6L	58.17	6.11	1005	23/11	51
1K	5.52	6.35	1528	23/11	52
2K	57.51	6.30	1639	23/11	53
3K	57.49	6.25	1734	23/11	54
4K	57.48	6.21	1810	23/11	55
5K	57.45	6.13	1858	23/11	56
6K	57.43	6.08	1938	23/11	57
7K	57.43	6.01	2024	23/11	58
8K	57.43	5.55	2108	23/11	59
9K	57.43	8.48	2214	23/11	60
ML1	56.40	5.19	2143	24/11	61
ML2	56.38	5.23	2218	24/11	62
ML3	56.36	5.26	2257	2/11	63
ML4	56.34	5.29	2333	24/11	64
ML5	56.33	5.33	4	25/11	65
ML6	56.31	5.33	35	25/11	66
ML7	56.30	5.37	104	25/11	67
ML8	56.28	5.38	136	25/11	68
ML9	56.29	5.40	213	25/11	69
ML10	56.31	5.45	254	25/11	70
ML11	56.32	5.48	328	25/11	71
ML12	56.33	5.55	408	25/11	72
ML13	56.34	5.57	435	25/11	73
ML14	56.35	5.59	504	25/11	74
ML15	56.37	6.01	533	25/11	75
1G	56.40	6.07	931	25/11	76
2G	56.41	6.17	1121	25/11	77
4G	56.44	6.27	1229	25/11	78
5G	56.44	6.36	1516	25/11	79
6G	56.44	6.45	1628	25/11	80
5E	56.17	6.05	106	26/11	81
E4	56.14	6.02	145	26/11	82
E3	56.11	5.59	230	26/11	83
E1	56.05	5.58	348	26/11	85
G16	57.00	9.00	736	2/12	86
S	56.57	8.47	933	2/12	87
G15	56.53	8.30	1106	2/12	88
T	56.51	8.20	1238	2/12	89
14G	56.49	8.09	1400	2/12	0
Coring and 50 litre sample					
13G	56.47	8.00	1552	2/12	90
G12	56.45	7.50	1650	2/12	0
Salinity sample only					
11G	56.44	7.40	1735	2/12	91
10G	56.44	7.30	1930	2/12	0
Salinity sample only					

R.V. Challenger cruise 10/84 station list

Station	Lat North	Long West	Time GMT	Date 1984	Dip No.
9G	56.44	7.20	2056	2/12	92
7G	56.44	7.00	2305	2/12	93
5B	55.39	6.07	1002	4/12	94
4B	55.38	5.57	1038	4/12	95
3B	55.37	5.53	1122	4/12	96
2B	55.36	5.49	1200	4/12	97
1B	55.35	5.45	1244	4/12	98
1F	55.37	6.29	1818	4/12	99
2F	55.32	6.34	1953	4/12	100
3F	55.28	6.38	2058	4/12	101
4F	55.23	6.42	2157	4/12	102
5F	55.19	6.46	2254	4/12	103
1Z	54.40	5.30	825	5/12	104
2Z	54.41	5.25	906	5/12	105
3Z	54.43	5.21	947	5/12	106
4Z	54.44	5.15	1029	5/12	107
5Z	54.46	5.10	1118	5/12	108
6Z	54.48	5.05	1224	5/12	109
CL10	55.05	5.25	1450	5/12	110
CL11	55.10	5.25	1537	5/12	111
CL12	55.15	5.25	1632	5/12	112
CL13	55.20	5.25	1726	5/12	113
CL20	55.54	5.23	2216	5/12	114
CL19	55.50	5.18	2317	5/12	115
CL18	55.45	5.16	10	6/12	116
CL17	55.41	5.24	114	6/12	117
CL16	55.35	5.25	216	6/12	118
CL15	55.30	5.25	315	6/12	119
CL14	55.25	5.25	432	6/12	120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58°
57°
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55°
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L
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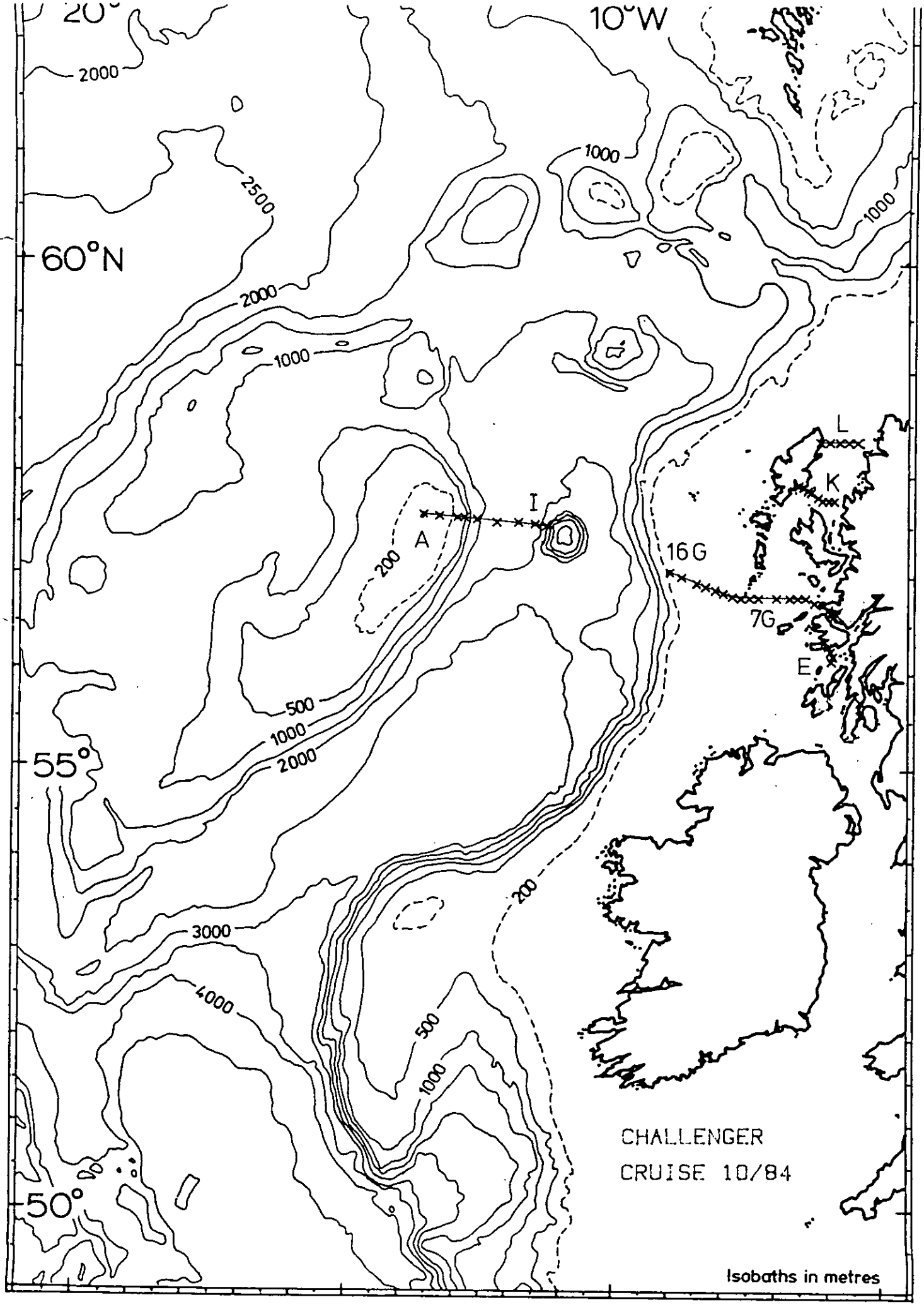
16G
7G
E
B
C
A
Y
Z
CHALLENGER
CRUISE 10/84
Isobaths in metres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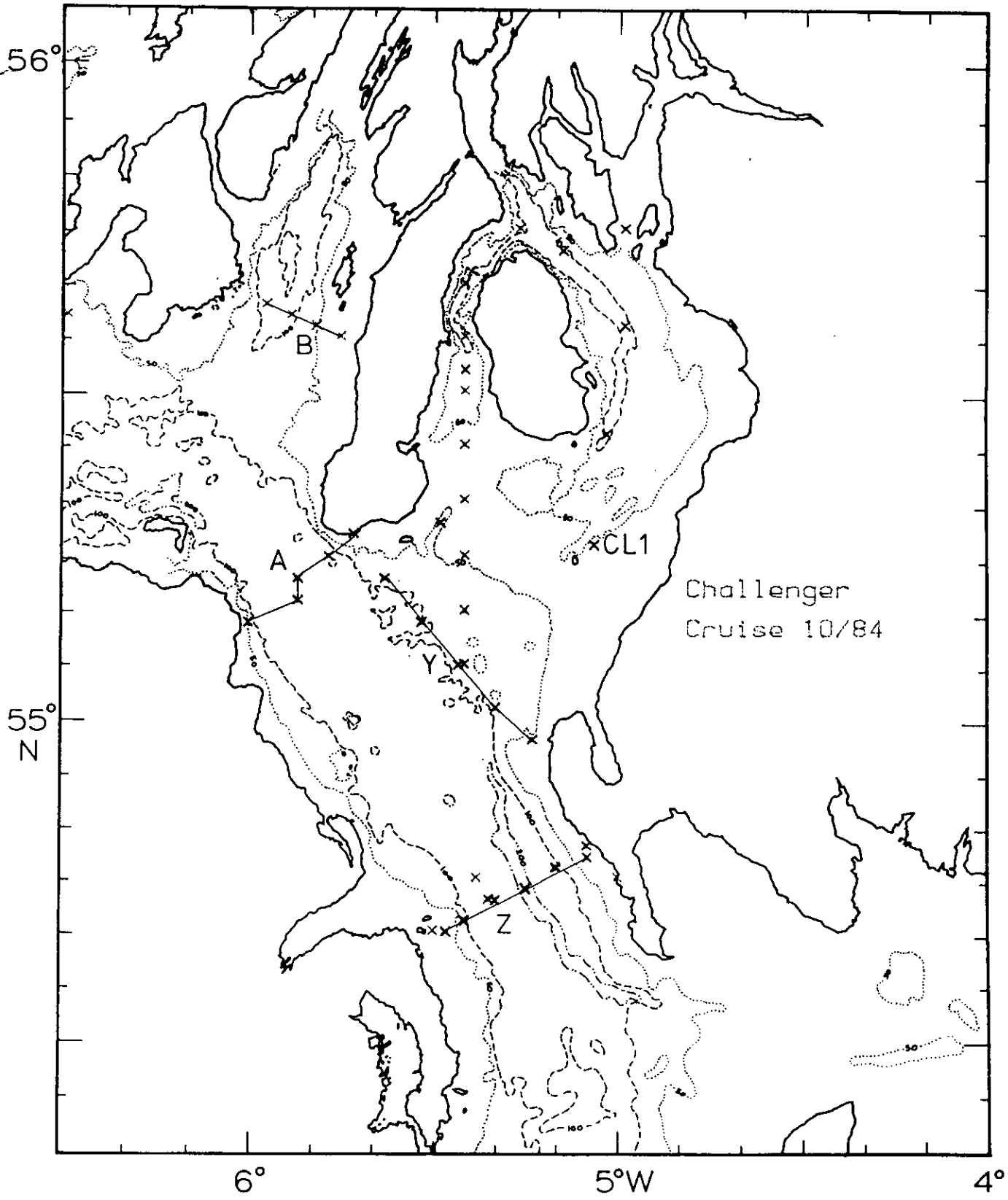
CHALLENGER
CRUISE 10/84
50°
Isobaths in metres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Challenger
Cruise 10/84