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CTD

R1/12

In Confidence: Not to be quoted without prior reference to the Laboratory 3SR83

FRV 'Scotia'

Cruise 3/83

Report

6-21 April 1983

Objectives

1. To service the three Rockall Bank current meter moorings.
2. To work hydrographic and plankton sections across Rockall Bank and in the Rockall Trough.
3. To check the moorings presently deployed on the Wyville-Thomson Ridge and work hydrographic stations in their vicinity.

Narrative

'Scotia' left Aberdeen at 1600 on 6 April and made passage to Rockall Bank where she arrived at 0800 on 8 April. The mooring position at Rockall East was re-occupied later that day and the moorings at Rockall North and West, deployed in May 1982, were serviced by the evening of 10 April. Despite a search involving creeping and trawling, the Rockall West mooring could not be found. Hydrographic and plankton stations were worked across the Bank until 16 April apart from a total of about 17 hours when work ceased due to weather. The ship then made passage to the Wyville-Thomson Ridge and Faroe-Shetland Channel areas where hydrographic and plankton stations were worked in the vicinity of the moorings presently deployed in these regions. This continued until late evening on 19 April when poor weather caused a further cessation to activities and the ship made passage for Aberdeen. Further stations were worked east of Ratray Head on 20 April immediately prior to docking in Aberdeen at 2200.

Results

1. Hydrography

The type and quality of hydrographic data was influenced by the failure of the CTD early in the cruise and the continuing problems with the wire measuring system. Bottles were deployed by means of the number of barrel widths of wire deployed or, in shallow depths, by counting revolutions of the winch drum.

The Rockall North mooring, which supported two current meters, was the only one to be recovered. Preliminary on board analysis of the records shows that the 330 days of data from each of these instruments are without fault. It also reveals that the strength of the circum-bank circulation, which is believed to control the Bank's flushing mechanisms, was much greater in summer than in winter when it often disappeared. This seasonal variation is consistent with theoretical considerations.

2. Plankton

Plankton hauls over Rockall Bank revealed a preponderance of blue whiting larvae, especially within the 200 m contour. Haddock larvae were rarely encountered but were very abundant at the edge of the north-east corner of the Bank. A short trawl haul confirmed that haddock spawning was just getting underway. This haul yielded, amongst other things, about 15 large female haddock. The ovaries were removed from these and preserved for Dr Hialop.

A notable feature of the hauls in the Faroe-Shetland Channel were the substantial quantities of Calanus located within the semi-permanent cold water eddy in the centre of the Channel. The distribution of Calanus was extensive and, in places, was concentrated enough to colour the sea.

H D Dooley

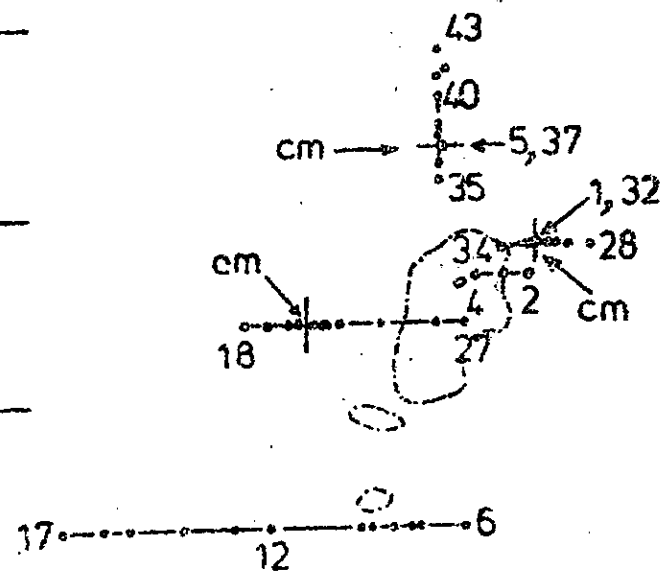
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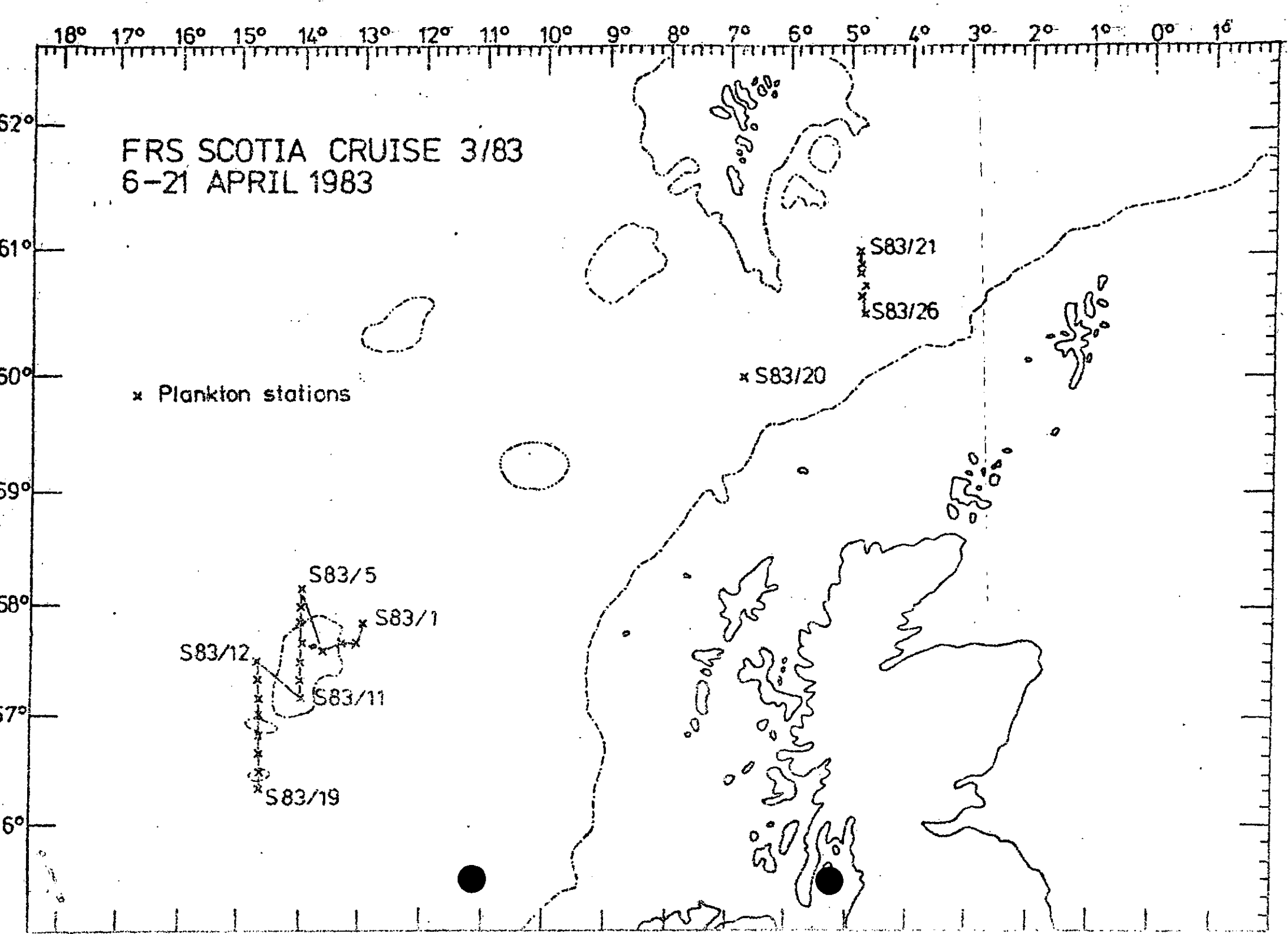
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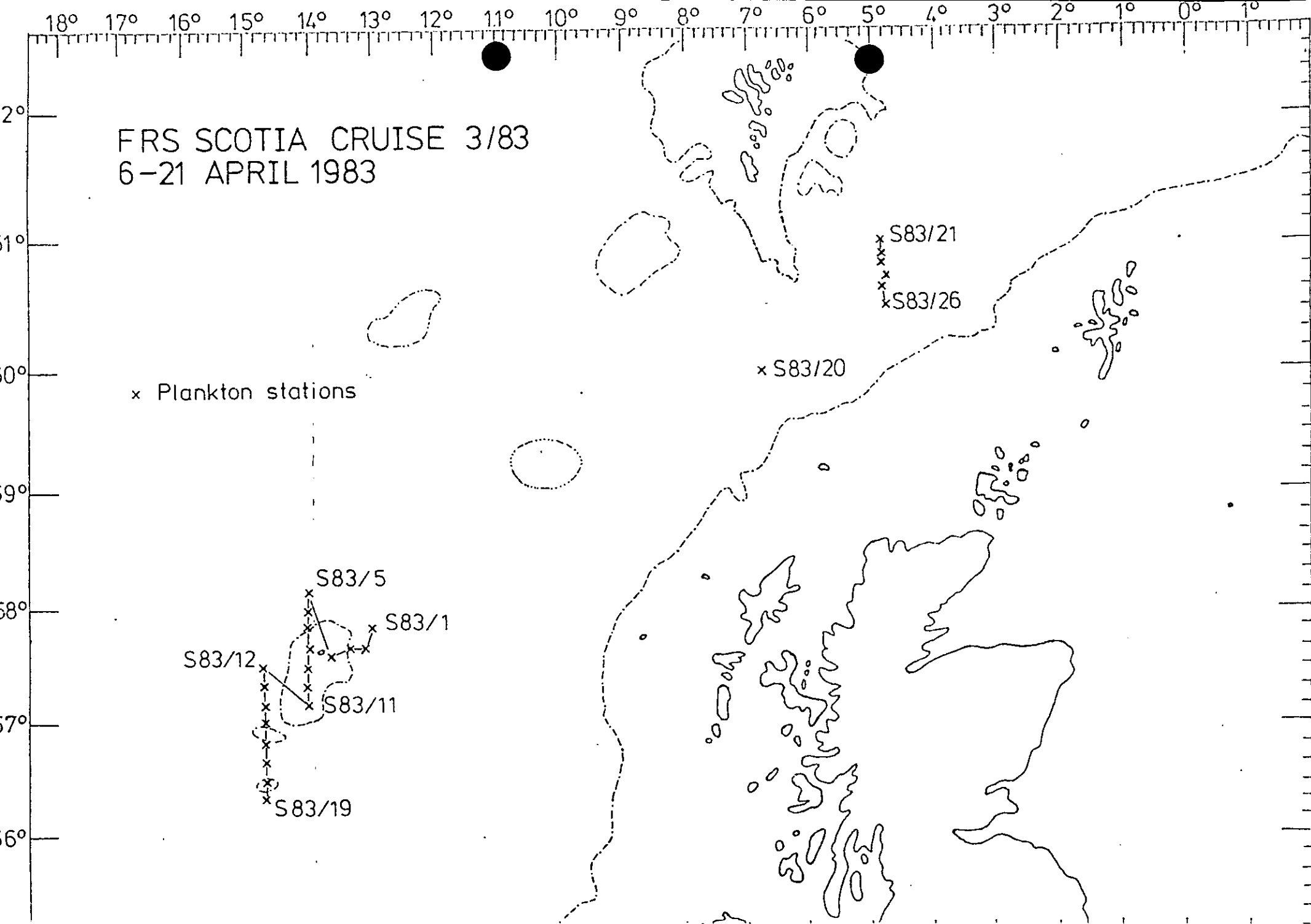
Seen in draft J W Gillon

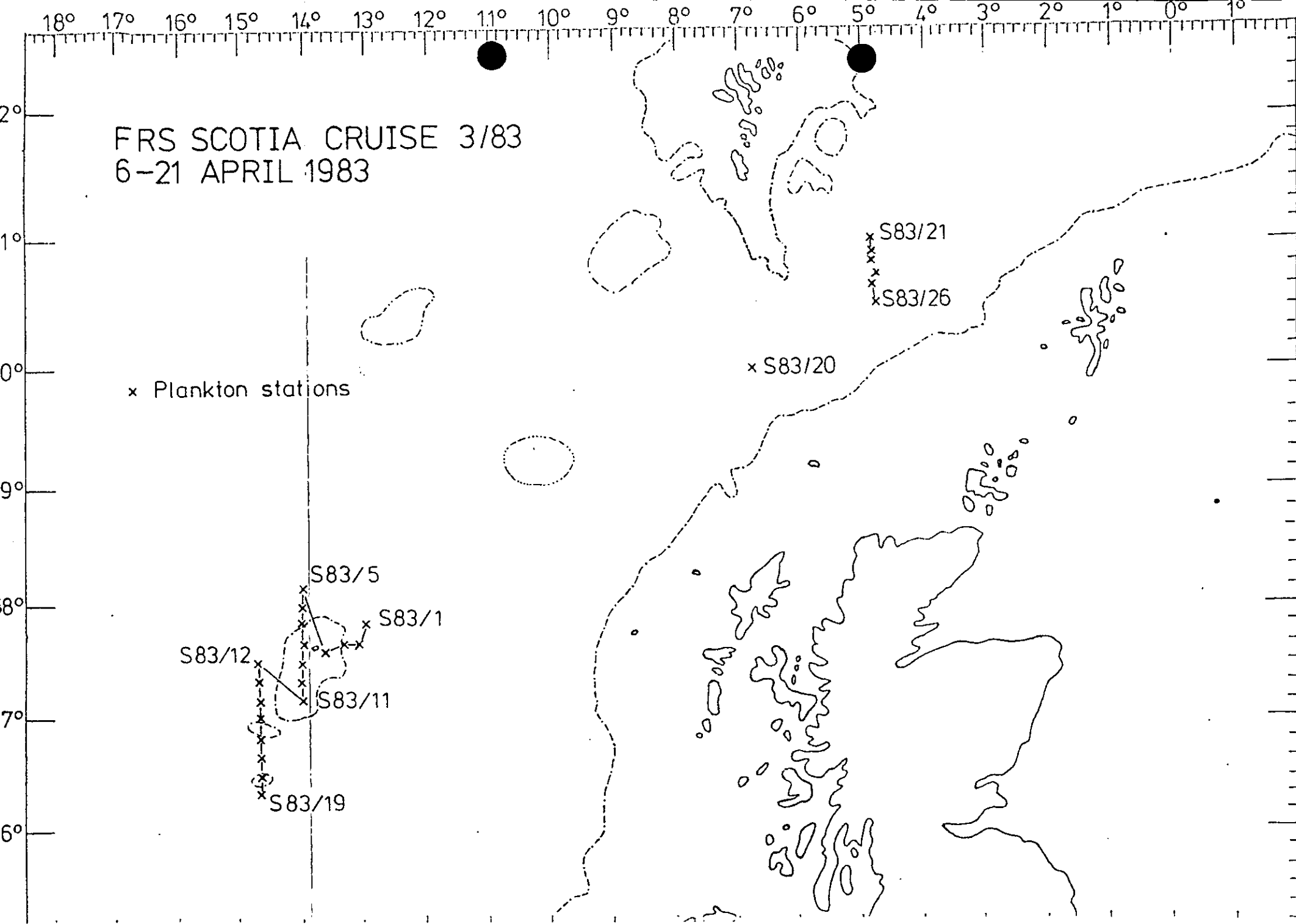
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● Hydrographic stations



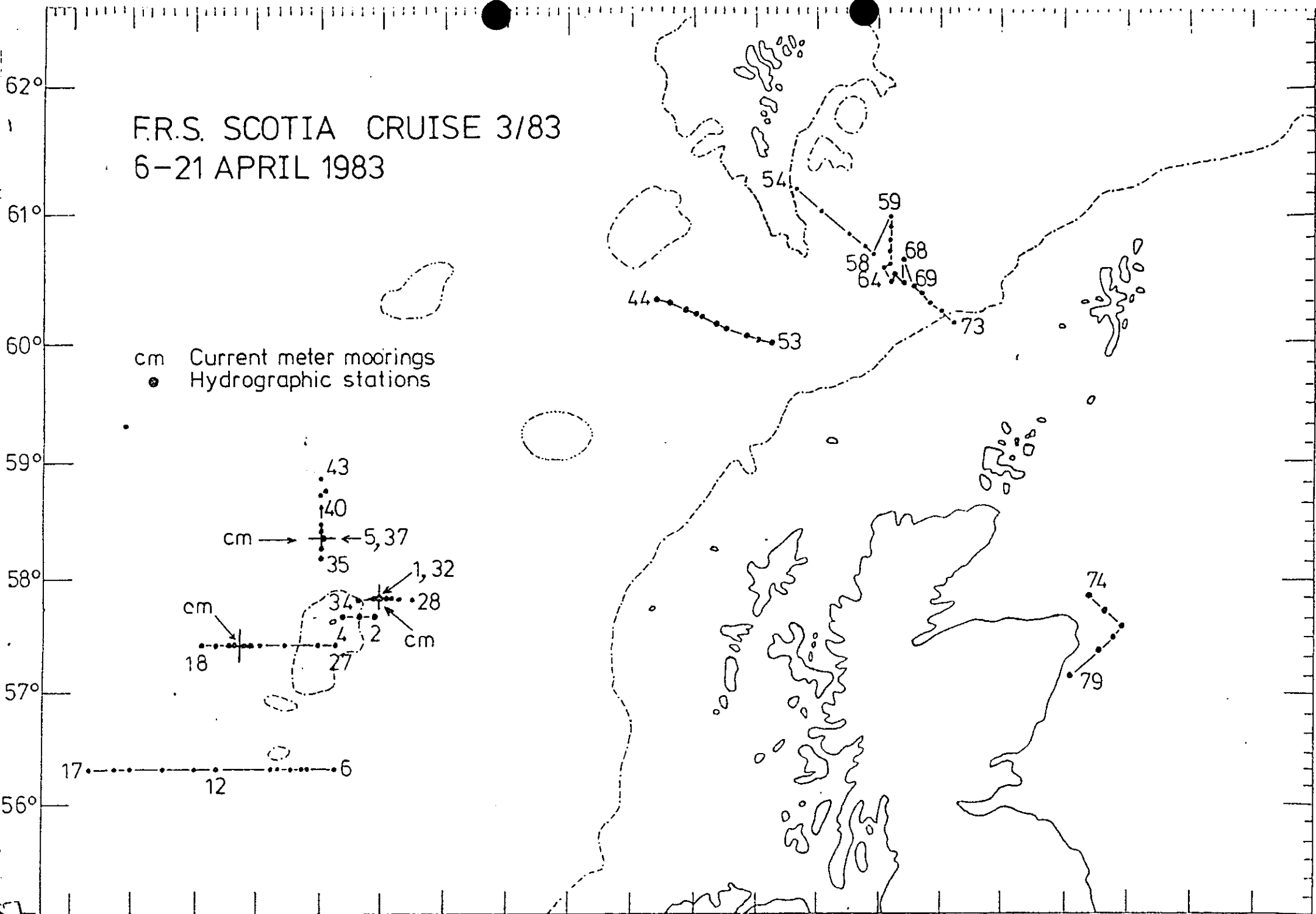






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