R1/12

In Confidence: Not to be quoted without prior reference to the Laboratory 12SR82

FRV 'Scotia'

Cruise 12/82

REPORT

10-25 Nov 1982

Objectives

1. To replace the three current meter moorings deployed on Rockall Bank during May.

2. To deploy three current meter moorings in the Wyville-Thomson Ridge/Faroe-Shetland area as part of the NERC/MAFF/DAFS investigations of the Slope Current (CONSLEX).

3. To collect hydrographic/chemical/plankton samples in support of the current measurements.

NARRATIVE:

'Scotia' sailed from Aberdeen a day later than was programmed because of engine problems. Samples for radio-caesium analysis were collected off Aberdeen, in the Pentland Firth and off Cape Wrath whilst on route to Rockall. Severe weather off the west coast, however, further delayed the ship's arrival at Rockall which was reached by 14 November. Because of continuing poor weather the east Rockall mooring was not recovered until 15 November, during a brief interlude of reasonable conditions, and it was then decided to leave the Rockall area and the other two moorings deployed there. Very severe weather with winds frequently in excess of 70 knots accompanied the ship during her subsequent passage to the Faroe-Shetland area. As a partial result of damage sustained during this passage, 'Scotia' entered Broad Bay early on 17 November in order to make necessary repairs. However, while there, it became apparent that 'Scotia' had also suffered potentially serious damage to her engines and was forced to make an unscheduled call to Stornoway which she entered at 1300 on 18 November. The ship left Stornoway in reasonable weather at 1000 on 20 November and immediately made for the Wyville-Thomson Ridge where two moorings were deployed on 21 November. Severe conditions on the 22 November prevented the deployment of a third mooring in the Faroe-Shetland Channel until the 23 November. A small number of hydrographic stations were worked in this area before passage to Aberdeen was commenced later that day. Samples for radio-caesium analysis were collected from off Fair Isle before 'Scotia' docked at Aberdeen at 1930 on 24 November.

RESULTS

(1) Water and plankton sampling

Surface water properties were monitored throughout the cruise using the thermosalinograph. In addition surface and deep water samples were obtained for the analysis of the trace metals, lead, cadmium and copper. In general the levels of these metals were significantly higher in the coastal water than in the oceanic water where levels were barely above background.

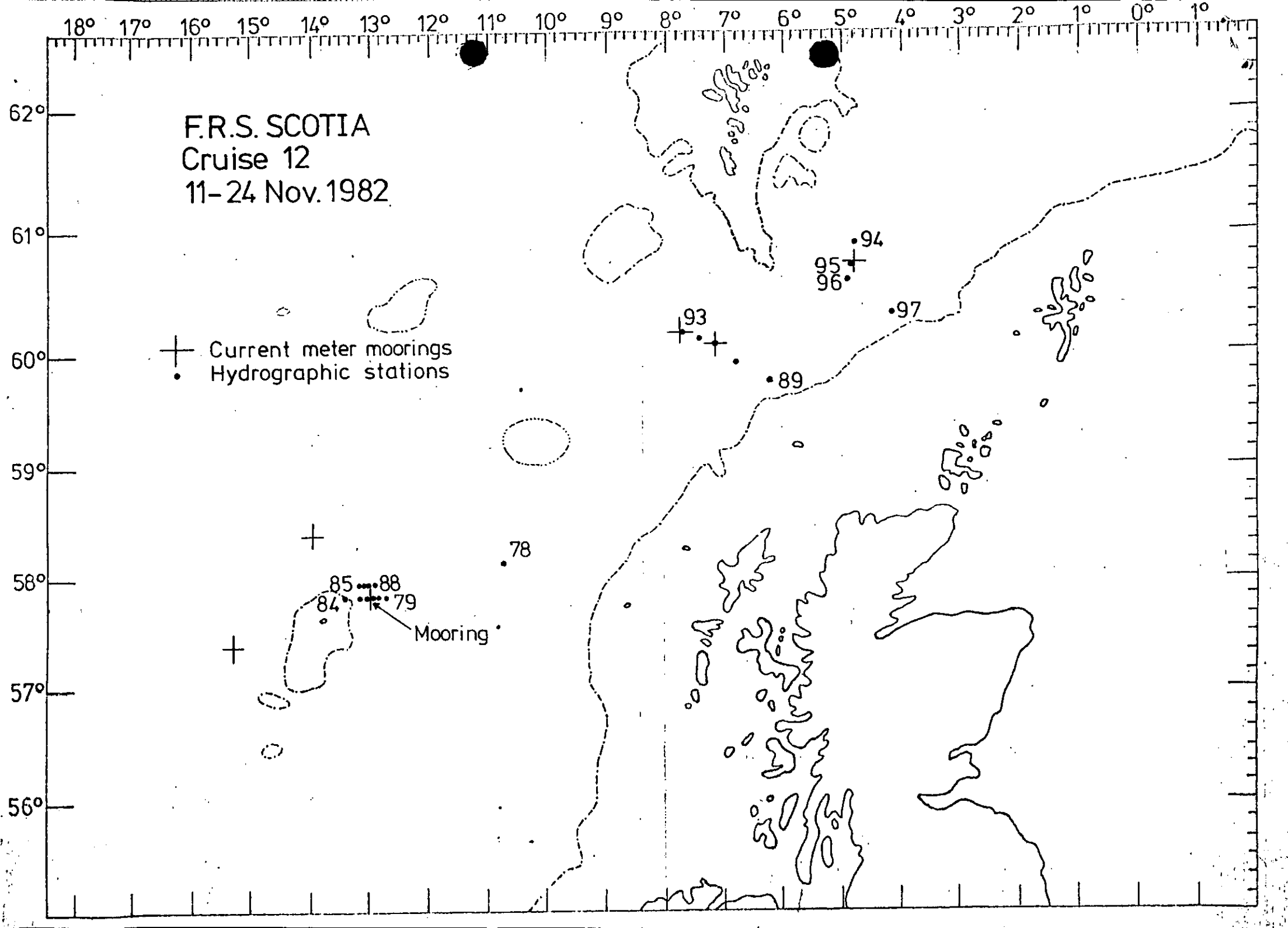
Only 20 stations were worked during the cruise, significantly less than the planned number. Plankton tows were undertaken at most of these stations.

(2) Current measurements

The only current meter mooring to be recovered during the cruise was that deployed east of Rockall in May. This mooring was in excellent condition upon recovery and this was the basis of the decision to leave the other two moorings until next May when both current meters and acoustic release are due to expire. The failure to replace the east Rockall mooring is, however, regrettable. One of the Wyville-Thomson moorings was deployed in a modified position in order to ensure that this part of the programme could be completed.

H D Dooley
15 December 1982

Seen in draft J W Gillon


F.R.S. SCOTIA
Cruise 12
11-24 Nov. 1982
Current meter moorings
Hydrographic stations
Mooring
18° 17° 16° 15° 14° 13° 12° 11° 10° 9° 8° 7° 6° 5° 4° 3° 2° 1° 0° 1°
62° 61° 60° 59° 58° 57° 56°
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