

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD  
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1993 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES: CRUISE 12a

STAFF:

I Huggins (5-13 November)  
W Meadows (13-24 November)  
G Round  
A Baxter  
R Read  
P Caldwell (13-24 November)  
T Bailey (5-13 November)  
J Tipple  
M Allison

DURATION:

Left Lowestoft 1310 h 5 November  
Arrived Lowestoft 1810 h 24 November

All times are Greenwich Mean Time

LOCALITY:

English Channel, Celtic Sea, Irish Sea, West and North of Scotland, North Sea

AIMS:

To collect seawater samples to study further the distribution of  $^{137}\text{Cs}$  in UK waters and of tritium in the Irish Sea.

NARRATIVE:

CORYSTES sailed from Lowestoft at 1310 h on 5 November and proceeded first to a site off Corton to swing the compass then south about on two engines to the Irish Sea. Fourteen surface sea water samples at approximately 30 nautical miles intervals were taken on passage to the St Georges Channel using the ships dedicated sea water supply.

The Irish Sea stations commenced at 2200 h on 7 November. To avoid conflict with scheduled firing trials at the Aberporth Range, CORYSTES first completed stations in Cardigan Bay. Bottom samples were collected using 30 L Niskin bottles.

The bottom samples at stations 37 to 39 were not collected due to freshening winds but once in the lee of Anglesey the scheduled sampling programme was resumed and on 11 November the programme was sufficiently advanced to allow the collection of bottom samples at substitute stations.

The grid of Irish Sea stations was completed with some of the North Channel stations on 14 November, when staff were transferred and the FSI CTD collected at Ayr using the ships Sea Rider.

On completion of transfer and installation of new FSI CTD unit on the Rosette sampler, the remaining North Channel stations and 9 stations to the north of Ireland were sampled until 0800 h on 15 November. Rapidly deteriorating conditions (southerly force 9 winds) prevented further work and the ship dodged in sheltered waters of the Ross of Mull.

Bad weather continued through 15 November, so all staff received training in the use of the FSI CTD with two trial casts. At 0100 h on 16 November the weather moderated sufficiently to allow passage north inside the Minches, sampling 6 stations with CTD and Niskin.

On rounding the Butt of Lewis heavy seas prevented further work and the ship anchored in Loch A Tuath from 2200 h on 16 November. On 19 November the weather was still foul outside the Minches. The weather forecast did not report southerly gales moderating for a few days, so the programme of stations was revised with the aim of checking uniformity of radiocaesium levels in different areas of the Minches. At 1500 h sampling commenced in suitably sheltered sites between the mainland and the Isles using CTD and Niskin.

At 2300 h on 20 November the remaining western-most stations had to be abandoned to meet the cruise schedule and the ship left the Minches to sample two stations to the north of Cape Wrath. As winds moderated further, 13 northerly stations were sampled but prevailing sea states limited sampling to surface only. The sampling grid was finished by 1800 h on 22 November. CORYSTES steamed for Lowestoft taking surface samples every half degree of Latitude.

## RESULTS:

All stations on passage to the Irish Sea were completed as planned. On some Irish Sea stations the sampling plan was modified to suit the weather conditions. Severe weather conditions curtailed and modified much of the sampling to the West and North of Scotland.

The following samples were collected. Caesium samples were processed on board for subsequent radiometric analysis.

| Area                        | Number of stations | Number of caesium samples | Number of tritium samples |
|-----------------------------|--------------------|---------------------------|---------------------------|
| On passage to the Irish Sea | 15                 | 15                        | 0                         |
| Irish Sea                   | 80                 | 137                       | 45                        |
| W of Scotland               | 31                 | 57                        | 0                         |
| N of Scotland               | 9                  | 14                        | 0                         |
| On passage to Lowestoft     | 14                 | 14                        | 0                         |

I Huggins SIC Part 1  
W Meadows SIC Part 2  
10 December 1993

SEEN IN DRAFT:

M J W  
R F G

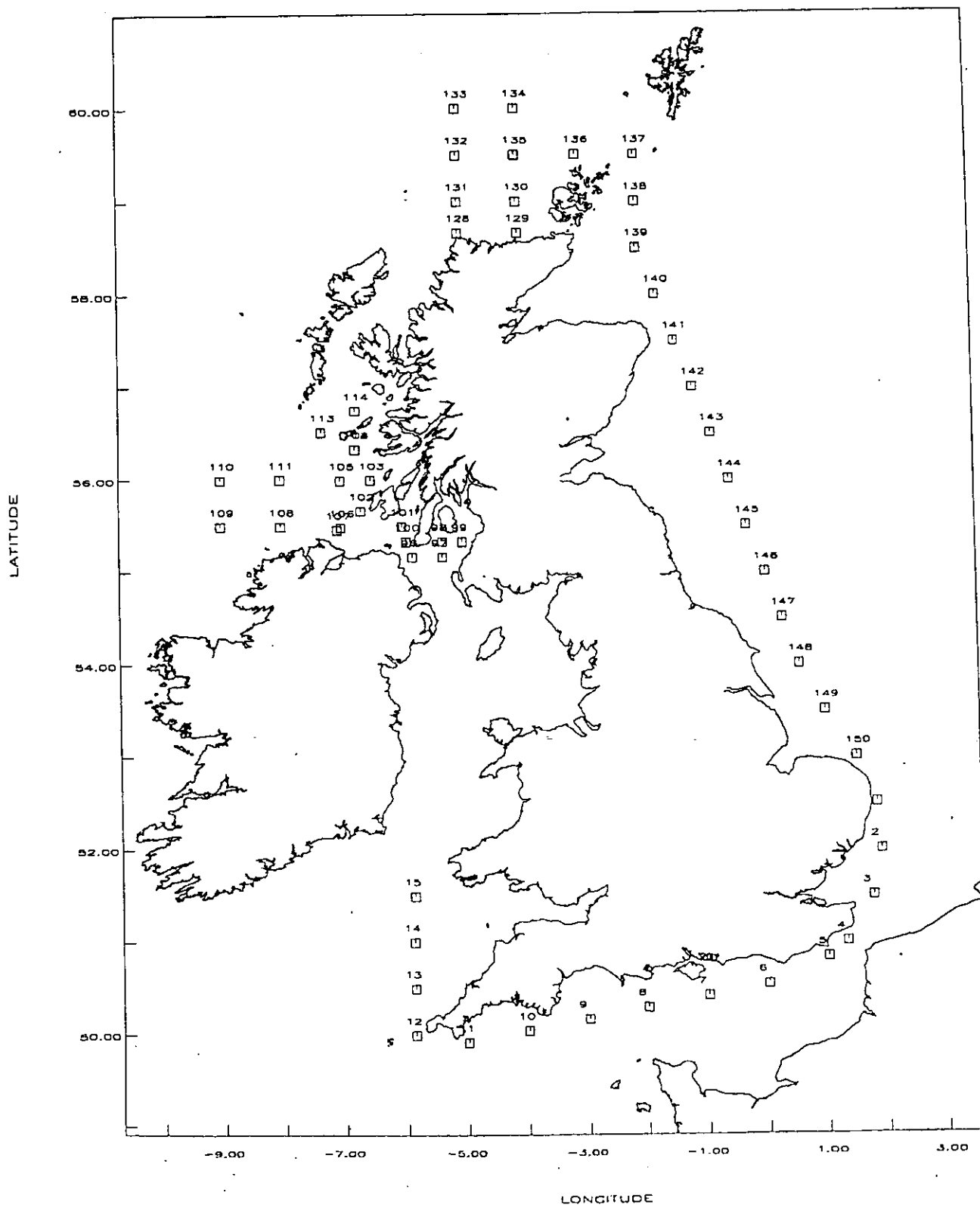
INITIALLED: *RFS*

DISTRIBUTION:

Basic List +  
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M J Beach  
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P Caldwell  
M R Allison  
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Cumbria SFC  
Director of Marine Research, Dublin via FCO  
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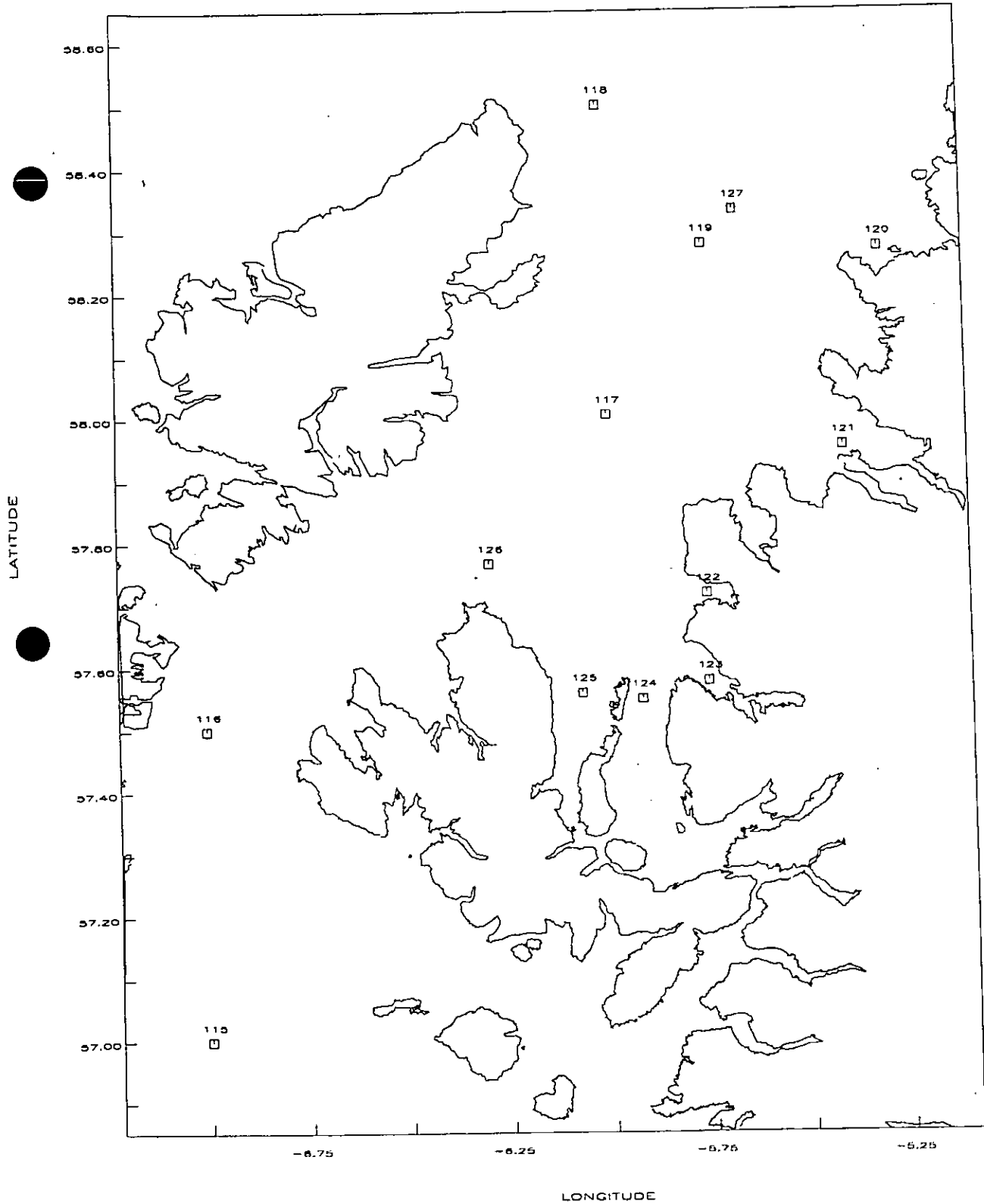
# CORYSTES 12A/93

SHOWING :  
STATION POSITION  
STATION NUMBER  
COASTLINE



# CORYSTES 12A/93

SHOWING :  
STATION POSITION  
STATION NUMBER  
COASTLINE



# CORYSTES 12A/93

SHOWING :  
CRUISE TRACK  
STATION POSITION  
STATION NUMBER  
COASTLINE

