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CTD

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

1985 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 5b  
(Provisional: Not to be quoted without prior reference to the author)

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DURATION: Left Fleetwood 1130h 21 April  
Arrived Lowestoft 0420h 29 April

All times are Greenwich Mean Time

LOCALITY: North Channel

AIMS:

1. To recover the 11 current meter stations laid by CLIONE cruise 4/85.
2. To relay 6 of the above stations.
3. To make a CTD survey of the North Channel.
4. To release sea bed drifters at each current meter station.
5. To take water samples for caesium analysis in the North Channel and on passage from the Irish Sea.

NARRATIVE:

RV CLIONE sailed from Fleetwood at 1130h on Sunday 21 April and proceeded to the first caesium water sample station south of the Isle of Man. Three surface water samples were taken before the vessel arrived at the first current meter station at first light on 22 April. This station (L) had moved 2 miles out of position and the subsurface buoy was floating near to the surface buoy. The acoustic release was interrogated and responded but did not release. The meter wire was recovered from the subsurface buoy and was unshackled from the ground wire. Only the bottom meter was recovered as the A-frame for the top meter had fallen to pieces. The second station K was in the correct position but in a similar condition. The acoustic release at this station operated correctly and the subsurface buoy, meter wire, bottom meter and acoustic release were recovered. At neither station was there any sign of interference; the loss of the top meters appeared to be due to equipment failure. By 2013h all current meters had been recovered from the rest of the stations using the acoustic release at all but three. At one station the release did not operate and at two others the release indicated that it was not vertical. These three stations were recovered complete and the surface buoys dismantled.

After some minor problems with the transfer of the current meter data to the computer were sorted out processing of the data began at 1000h on 22 April and continued for the next 36 hours. Meanwhile the vessel anchored for the night of 22 April to the west of the Mull of Galloway. Current meters and acoustic releases were prepared for re-use before the vessel sailed at 1100h on 23 April to begin a search for the current meter station G which could not be found on the previous cruise. The hydrophone was lowered on the CTD cable in an attempt to put it nearer to the release on the rig. Four lowerings of the transducer to 200m were made during the 3 hour search but no sound from the station was heard and there were some doubts that the system was working correctly. The search was abandoned at 1520h, when wire testing of the acoustic releases began and continued until 2012h. Once the current meter data processing was completed the results were assessed and the six stations to be relaid chosen.

The next morning recovery of the remaining surface buoys and laying of the six stations began with the Belfast Lough station at 0430h and was completed by 1912h. After spending the night at a sheltered anchorage in Luce Bay RV CLIONE began a CTD section along the line of current meters from the Scottish to Irish coasts. The first station began at 0842 on 25 April and the section was completed by 1910h. Nutrient and salinity samples were taken at each station and 251 caesium samples were taken at 5 stations. Sea bed drifters were released at each of the relaid current meter stations.

On completion of the CTD section RV CLIONE set course for Lowestoft taking surface water samples en route. A short stop was made at Torquay to collect additional water sample containers to replace those used on the first part of the cruise.

As most of the current meter gear in the North Channel had been recovered there was sufficient gear to lay the Nab tower station off Selsey Bill. The deployment commenced at 0445h on 28 April and was completed by 0530h. The vessel then continued on passage to Lowestoft and docked at 0430h on 29 April.

#### RESULTS:

1. All the 11 current meter stations laid in the North Channel by RV CLIONE on cruise 4/85 were recovered; two current meters and a number of weights were lost.
2. The data from all recovered meters were processed on board. Of the 21 meters recovered 14 gave full, or almost full, records and 6 gave partial records.
3. 6 current meter stations were relaid and sea bed drifters released at each.
4. A CTD section across the North Channel was completed, and nutrient samples were taken.
5. Water samples for caesium analysis were taken in the North Channel and on passage to Lowestoft. Four stations were not sampled, two because they had been sampled on cruise 5a and two because they required a one hundred mile detour.

6. The Nab Tower current meter station was laid.

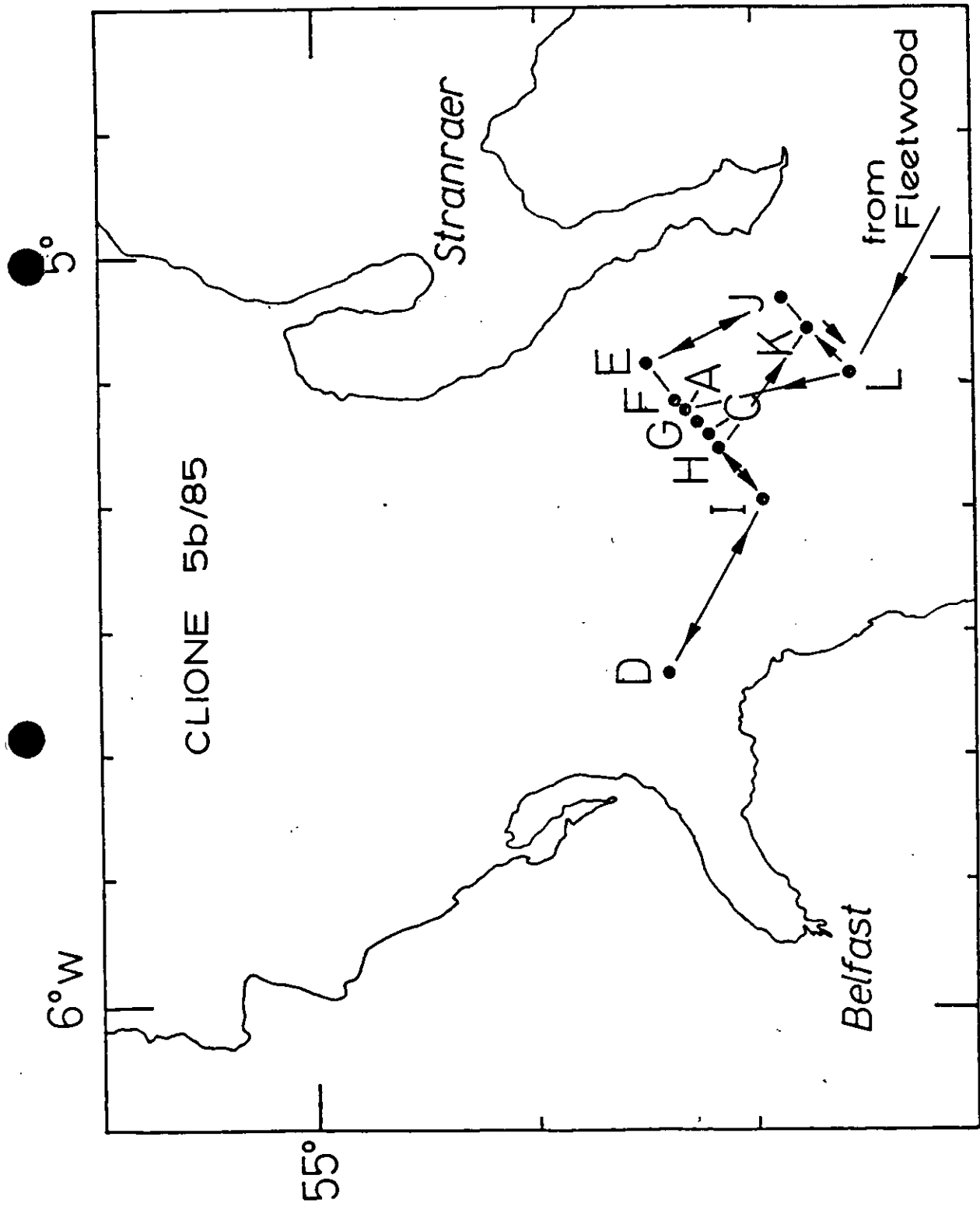
J A Durance  
29 April 1985

SEEN IN DRAFT: J R French (Master)  
E W Pearson

INITIALLED: HWH

DISTRIBUTION:

Basic List +  
R R Dickson  
J A Durance  
R D Milliner  
K J Medler  
J W Read  
S R Jones  
J Rees



Moored current meters

4.

6°

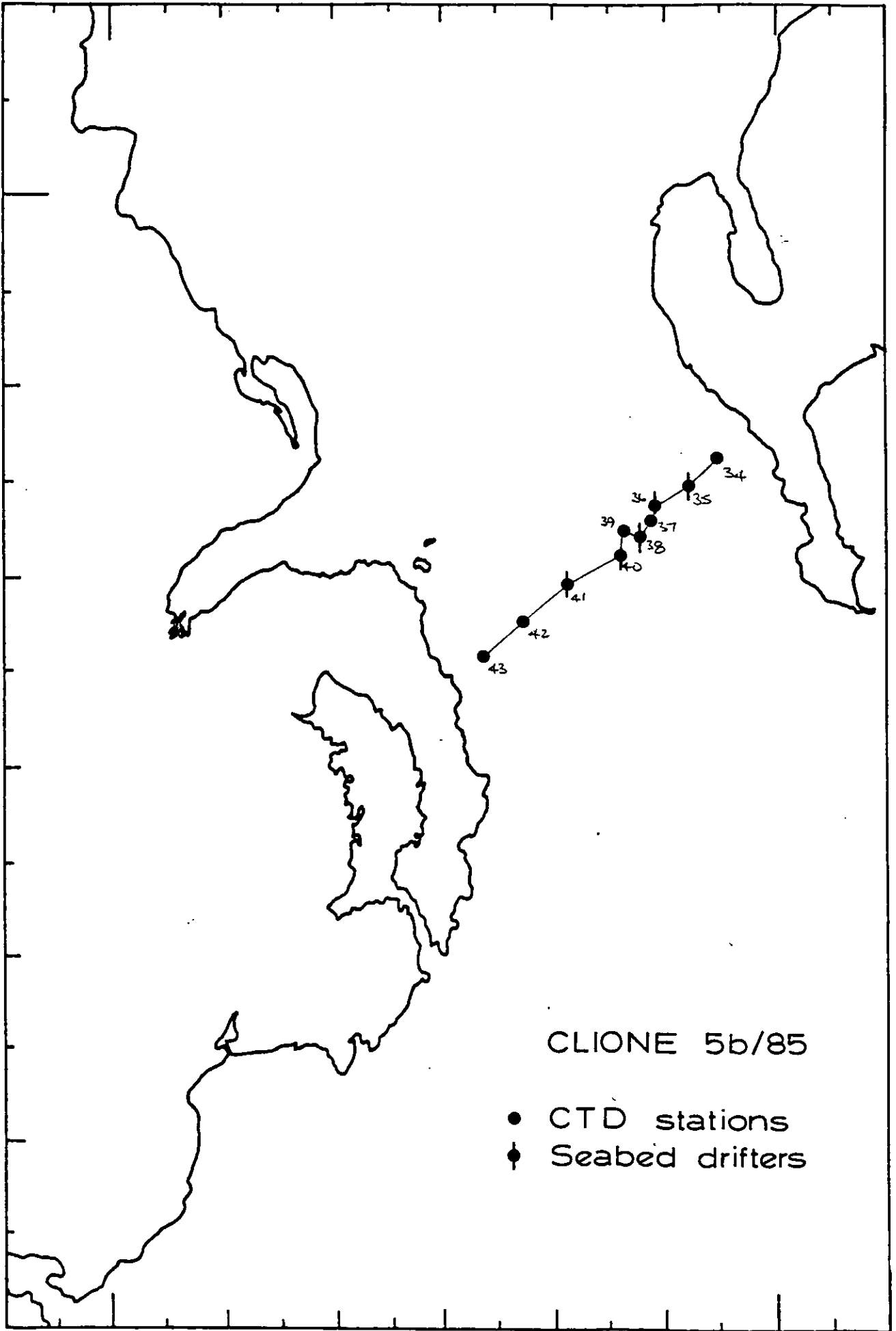
30'

5°

55°

30'

54°



CLIONE 5b/85

- CTD stations
- ◆ Seabed drifters