

Indexed AIR/

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

1987 RESEARCH VESSEL PROGRAMME

REPORT : RV CLIONE 5b

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF:

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DURATION:

Left Stranraer 21 April 1987  
Arrived Lowestoft 30 April 1987

LOCATION

Eastern Irish Sea

AIMS

1. To service 6 standard current meter moorings in the Eastern Irish Sea, positions M, P, Q, R, V and W, recover mooring S, and establish 2 new moorings at positions U and X.
2. To deploy and recover the Near Bed Velocity recorder (NBVR) and its 3 guard buoys at position 7.
3. To collect bottom and surface water samples for Thorium analysis plus ancillary sediment samples using box corer and transmissometer profiles at up to 8 stations.
4. To make DRCM, CTD and turbidity measurements and collect suspended sediment samples at hourly intervals for one tidal cycle at two anchored stations.
5. To undertake CTD sections between the Isle of Man and the Scottish/English/Welsh coast.
6. To release Sea Bed Drifters at two sites east of the Isle of Wight.

NARRATIVE:

RV CLIONE sailed at 1800h on 21 April and arrived at position M, the first current meter station, at 0500h the following morning. This mooring was serviced by 0708h, and the ship proceeded to the NBVR position. The chart depth at this position was 33m and the NBVR recovery line was marked 35m. After confirming with Lowestoft that the length was correctly marked, a new inshore position was selected where the depth was 25m. Laying of the first guard buoy commenced at 1045h and was completed by 1057h. The NBVR was prepared for launching and after some minor problems with the programming and the ship's crane were overcome the NBVR and the two remaining guard buoys were laid by 1412h. Servicing of moorings P and Q, and the recovery of buoy R was completed by 2000h. The mooring was prepared for relaying but it was then too dark to do so.

The laying of the rig began at 0515h the following morning, mooring S was recovered by 0650h and the vessel steamed south to station V arriving at 0928h. By 1030h this station had been serviced without incident. Recovery of buoy W began at 1142, during the recovery the pellet was seen beneath the surface. As the water depth was too great for the meter wire supplied a survey of the area was made. No suitable shallower sites were found so the meter wire was extended by 7m. On laying the subsurface buoy was not pulled clear of the meter weight and although all appeared to be well the pellet submerged again. Something was clearly wrong as with the additional 7m meter wire the pellet should have easily reached the surface. When the rig was recovered the meter wire was found to be tangled and the swivel on the Aanderaa meter was bent. No serious damage was done, the swivel was soon replaced and the mooring successfully relaid by 1326h.

Of the current meters recovered a number had recorded zero speeds. Two MO21F meters were required to complete the planned stations, and both of these had to be selected from the meters recovered on this cruise. Two good meters were selected and a modification to the rotor count circuit was made. The worst meter was similarly modified so that the effectiveness of the modification could be tested. The two new current meter stations south of W were laid without incident by 1709h, with the modified faulty meter added to station X in the midwater position. The CTD section from Anglesey to the Isle of Man was completed that evening before the vessel steamed overnight to St Bees Head for the first Thorium sample station.

At 0525h on 24 April RV CLIONE began the line of Thorium sample and CTD stations from St Bees head to the Isle of Man. This section was completed by 1653h, and the CTD section from the Isle of Man to Scotland was completed by 2034h.

At 0516h the following day the southern line of Thorium stations was begun. After completing two stations on this line RV CLIONE proceeded to the NBVR station to attempt recovery. Although the release instruction was sent to the instrument and a reply confirming release was received no recovery line appeared on the surface. Two further attempts to operate the release were made before the recovery attempt was abandoned at 0915h. The third Thorium station on the southern line was then completed before the vessel anchored off St Bees Head to begin the first anchor station at 1230h. This station was completed by 0145h on 26 April.

The final Thorium station to the north of St Bees Head began at 0530h, and was completed before the vessel returned to the NBVR station to see if the recovery line had worked free. There was still no sign of the recovery line on the surface and RV CLIONE returned to current meter station Q where the 2nd anchor station began at 0930h. This station was completed by 2245h and the vessel lay over night.

At 0500h on Monday 27 April a final return to the NBVR position was made. There was no sign of the recovery line, the sea was mirror calm and the line would easily have been seen if it was there. At 0515h the vessel set course for Lowestoft and docked at 1045h on the 30th April.

## RESULTS

1. Six of the current meter moorings laid by M V DAWN SKY in March were serviced and a seventh mooring recovered without losses.

The rotors of one Aanderaa meter (V top) and one Plessey meter (R bottom) were fouled, and one Plessey meter (Q top) leaked. Five other Plessey MO21F meters recorded zero velocities for all or part of the record. The overall good data return was approximately 60%.

2. Two new current meter stations south of station W were established.

3. The NBVR was laid at a position inshore of that proposed, but could not be recovered.

4. All eight Thorium water sample and box core stations were completed.

5. Two thirteen hour anchor stations for turbidity and sediment load were completed.

6. Three CTD sections from the Isle of man to the Scottish/English/Welsh coast were completed.

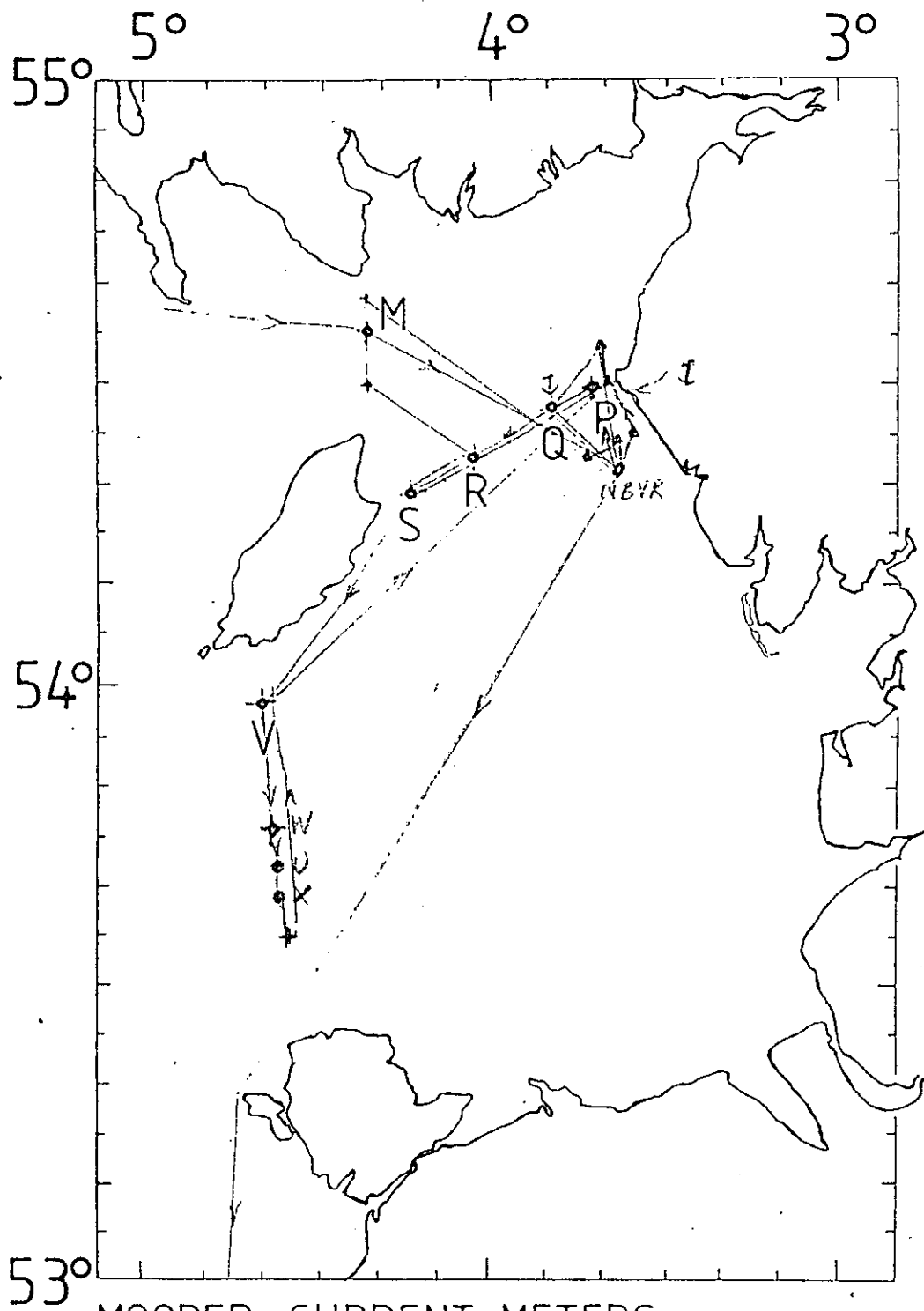
7. The sea bed drifter station positions to be provided by Southampton University were not received, so the drifters were not released.

J A Durance  
30 April 1987

SEEN IN DRAFT G Sinclair  
R C Newrick

INITIALLED H W H

DISTRIBUTION  
Basic List+  
Staff on cruise



MOORED CURRENT METERS  
 4 Aug 1986 until further notice

- CURRENT METERS
- + CTD
- ▲ TRACTION SAMPLES
- ▽ ANCHOR STATION