

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

## 1987 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE : CRUISE 1

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

## STAFF:

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## DURATION:

7-19 January 1987: Left Lowestoft 1400 h 7 January  
Arrived Lowestoft 2235 h 18 January

## LOCATION:

Eastern Irish Sea

## AIMS:

1. To deploy the near bed velocity recorder and its three guard buoys.
2. To deploy six current meter moorings.
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 anchored stations.
5. To undertake CTD sections between the Isle of Man and the Scottish/English/Welsh coast.
6. To release seabed drifters at two locations east of the Isle of Wight.
7. To collect near surface and near bed water samples for caesium analysis.

## NARRATIVE:

Sailing on the afternoon tide of 7 January, RV CLIONE set course for the Irish Sea. The following morning fifty seabed drifters were released at two positions east of the Isle of Wight.

Making good progress RV CLIONE arrived in the vicinity of the proposed Near Bed Velocity Recorder (NBVR) position, AA, during late afternoon of 10 January. At 1720 h the first guard buoy was deployed and work begun in assembling and programming the NBVR. It was successfully deployed, at the second attempt, at 1010 h, 11 January. During the first attempt the strap supporting the recovery float canister parted and a temporary support provided for the duration of its forthcoming deployment. Two other guard buoys were positioned approximately two

cables from the NBVR. Three current meter moorings, P, Q and R, were deployed by 1641 h, 11 January. The following day the three remaining current meter moorings at M, S and V were deployed. Fresh winds and a moderate swell prevented any of the proposed CTD sections being undertaken and RV CLIONE made for shelter off St Beas Head.

The first thorium station Th12 was completed at 1305 h, 13 January after a CTD profiler, complete with transmissometer to measure turbidity, was lowered and water samples for thorium and sediment analyses collected. Samples for thorium and sediment analyses were also obtained using a box corer. Other thorium stations Th13, Th14 and Th15 could not be occupied because of fresh NNE winds, but conditions at the three stations Th09, Th10 and Th11 did allow them to be completed by 1910 h, 13 January. Conditions improved slightly overnight and thorium station Th13 was completed by 1006 h, 14 January. At station Th16, occupied in the hope of obtaining some shelter from moderate NE winds, water samples from near the seabed only were obtained; it was by now difficult to handle the rosette containing large Niskins on RV CLIONE's after deck and it was decided not to collect samples by this means. Instead near surface water samples were taken via the ship's stainless steel pump and sediment samples were obtained with the box corer. Later that afternoon near surface thorium and sediment load samples were obtained at stations Th14(Q) and Th15(R), but by pumping the water onboard with a compressed air pump and not the ship's stainless steel pump. Although conditions did not allow for the CTD to be used or for near bed water samples to be collected, good cores were obtained with the box corer. At both of these stations near surface water samples were collected for caesium analysis. In worsening conditions RV CLIONE steamed for shelter, collecting a near surface water sample, for caesium analysis, at Th13(P) en route.

At 0632 h, 15 January RV CLIONE anchored at a position near to the NBVR. During a twelve hour period CTD profiles and water samples for suspended load and particle size analysis were collected at hourly intervals. DRCM measurements were made continuously. On completion of this station RV CLIONE steamed through positions M, N, S, V, W and Y, when near surface water samples for caesium analysis were collected, and then headed for Lowestoft, docking at 2235 h, 18 January.

#### SUMMARY:

1. The near bed velocity recorder and its three guard buoys were deployed;
2. Six moorings, each including two current meters, were deployed;
3. Eight core samples, six near bed water samples and eight near surface water samples (but one via ship's stainless steel pump) were collected for thorium and sediment analyses and six CTD and transmissometer profiles obtained;
4. Thirteen CTD and transmissometer profiles and fifty-two samples for sediment analysis were collected over a tidal cycle, when continuous DRCM measurements were made, at an anchored station;
5. Weather conditions did not allow working of the CTD sections;
6. Fifty seabed drifters were released at two positions east of Isle of Wight;
7. Nine near surface water samples for caesium analysis were collected.

The co-operation and assistance of the officers and crew of RV CLIONE in pursuing the aims of this cruise is gratefully acknowledged.

K J Medler  
22 January 1987

SEFN IN DRAFT:

F M

INITIALLED:

H W H

DISTRIBUTION:

Basic List +

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D S Kirkwood  
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A K Young  
S M Blazeby  
Dr Kershaw

# THORIUM STATION POSITIONS :

SHOWING :

STATION NUMBER

COASTLINE



