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

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1984 RESEARCH VESSEL PROGRAMME

REPORT : RV CIROLANA: CRUISE 8

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

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# DURATION

Sailed from Grimsby 17.45h 25 September Docked in Grimsby 05.35h 11 October All times are Grennwich Mean Time

## LOCALITY

Iberian Abyssal Plain - NE Atlantic

# AIMS .

- 1. To launch 6 SOFAR floats to a depth of 2500m
- 2. To complete an XBT and CTD survey of the float launch area
- 3. To collect water for  $^{14}\mathrm{C}$  analysis if time permits
- 4. To collect surface water samples for  $^{137}\mathrm{Cs}$  analysis

## NARRATIVE

RV CIROLANA sailed from Grimsby on the evening tide on 25 September and proceeded to the SOFAR float launch area. On arrival, the first float (number 31) was launched and its descent tracked acoustically. A ballasting calculation error resulted in this float sinking to the seabed and further float deployments were suspended until after consultation with the laboratory and IOS, Wormley. The XBT/CTD grid was commenced, working north/south legs from the south west corner.

1.15kg was removed from all the batch 2 float payloads to correct the ballasting error. After completing just over half the XBT/CTD grid a second float was launched and this was observed to sink to approximately 1860m. A third floor also went to approximately 1900m, but then bad weather delayed further deployments for 1½ days. Two of the remaining floats were then launched, but malfunctions of the final two prevented their launch.

The XBT/CTD grid was completed, and all the floats listened to check their final depth.

En route to Grimsby, surface water samples were collected in the Channel and Southern North Sea. RV CIROLANA docked on the morning tide on 11 October.

## RESULTS

- Five SOFAR floats were launched. One sank to bottom because of the ballasting information supplied being incorrect. The remaining four telemetered their depths as 1914db, 1948db, 2512db and 1862db respectively. Two floats were not launched; one had a clock error (jumped 100 s) and the other refused to transmit.
- 2. 62 T7 and 10 T5 XBT probes were launched. (See figure).
- 3. 11 CTD stations were worked. Four were full depth, five to 2500m and two to 600m. Duplicate salinity samples: were taken from the rosette sampler on each station and nitrate/phosphate and silicate samples were taken on all except three stations.
- 4. An altimeter was successfully used on the deep CTD stations when sampling close to the seabed. The CTD was observed to rise and fall over a distance of 5m as a result of ship motion.
- Direct data capture of CTD log sheet data was tried using the TELEPAD digitiser. The error rate was too high for this to be acceptable.
- 6. Seven 501 surface water samples were collected in the English Channel and southern North Sea.
- 7. Initial analysis of the data collected was started on the way back but computer disc problems restricted the amount which could be attempted.
- 8. No water samples for radiocarbon were collected because of lack of time.

P A Gurbutt (Scientist-in-Charge) 15 October 1984

SEEN IN DRAFT J French (Master)
E Pearson (Fishing Skipper)
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# DISTRIBUTION

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