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FRV *Clupea*

Cruise 1400C Part II

REPORT

16-18 October 2000

Ports

Loading: Fraserburgh, 16 October 2000
Unloading: Fraserburgh, 19 October 2000

Personnel

D C Moore (In charge)
M Burns
N Morrison
Eric Brechet (RGU)

Objectives

1. To collect real time, *in situ* measurements of tracer material at the experimental trawl disturbance site.
2. To collect sediment samples by Day grab for tracer assessment.

Out-turn day per project: 3 days AE0857.

Narrative

Scientific staff joined *Clupea* in Fraserburgh on 16 October. On completion of loading, the equipment was assembled and prepared for sea. Weather conditions were initially unsuitable for working and sailing was delayed until late afternoon. *Clupea* proceeded to the experimental trawl disturbance area off Fraserburgh and the modified Agassiz trawl with fibre optic sensors was successfully deployed. The CCTV camera deployed on the trawl successfully observed that the behaviour of the frame was as predicted and it was deemed that sufficient quantities of sediment were passing into the funnel. Only once was is necessary to recover the trawl for maintenance, and a series of measurements were recorded of the in-situ fluorescence. These were to be subject to analysis on return to Aberdeen. Due to deteriorating weather conditions *Clupea* returned to Fraserburgh in the early hours of 17 October. During the daylight hours of 17 October, preliminary analysis of the data was undertaken.

Weather conditions did not improve sufficiently to allow sailing during 17 October and therefore the cruise was terminated on the morning of 18 October when staff returned to Aberdeen.

Results

The cruise successfully demonstrated that the sea bed technology worked to specification and it was possible to expose the fibre optic sensors to a cloud of sediment. However, the sensitivity of the fibre optic sensors will need to be improved before a viable integrated system can be produced.

Due to weather constraints and the lack of definitive data from the sensors, no grab samples were obtained during this cruise.

D C Moore
20 March 2001

Seen in draft: A Simpson, OIC