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Not to be cited without prior reference to the FRS Marine Laboratory, Aberdeen

FRV *Scotia*

Cruise 1407S

PROGRAMME

2–16 October 2007

Loading: Aberdeen

Unloading: Aberdeen

Personnel

G Slesser In charge

D Lichtman

J Dunn

N Collie

M Geldart

M Rose

D Watson

D Mayor Aberdeen University

E Gontikaki Aberdeen University

Out-turn days per project: 15 AE11R0

Gear

Sea-Bird CTDs, ADCP and Current Meter Moorings, Thermosalinograph, Recovery Trawl, Maxicorer.

Objectives

1. Perform hydrographic surveys along the JONSIS standard section in the northern North Sea.
2. Perform hydrographic surveys along the standard Faroe Shetland Channel sections.
3. Service two ADCP moorings in the Faroe Shetland Channel.
4. To recover and redeploy two current meter moorings E of Shetland.
5. To perform hydrographic surveys E of Shetland.
6. To take core samples for benthic productivity in the Faroe-Shetland.
7. To perform hydrographic surveys W of Shetland and on the Shelf Edge as time allows.

Procedure

On sailing from Aberdeen, the *Scotia* will carry out a trial CTD deployment. Thereafter, passage will be made to the start of the JONSIS standard line, which will be surveyed using the CTD/rosette package. Passage will then be made to East of Shetland where the two East of Shetland moorings (60 28.55'N 000 7.92'W, 60 34.42'N 000 38.13'W) will be recovered and redeployed. Three CTD lines E of Shetland will also be sampled either before or after the mooring work.

The *Scotia* will then proceed with hydrographic survey work in the Faroe-Shetland Channel area. The two standard lines, the Fair Isle - Munken and the Nolso - Flugga sections will be worked. This will be followed by the recovery, servicing and redeployment of two NWOCE ADCP moorings, NWSD (60 26.97'N 004 22.54'W) and NWSE (60 16.62'N 004 20.08'W).

As the opportunity arises, deep sea coring will take place at a selected site in the Faroe-Shetland Channel.

Finally, as time allows, CTD work will be carried out West of Shetland on the shelf edge before returning to Aberdeen.

At a convenient point during the latter half of the cruise, a visit to Stornoway will be made to allow one of the scientific personnel to depart the vessel via small boat.

The thermosalinograph will be run throughout the cruise.

(NOTE: The survey will take *Scotia* into the Foinaven Development Area. This is now standard practice, and normal on-site communications will be established with the Foinaven co-ordinating officer).

Normal contacts will be maintained with the laboratory.

J A Morrison
16 August 2007

JONSIS Line

	Name	Latitude	Longitude	Depth	Spacing
01	JO 1	59° 17.00' N	02° 14.00' W	75 m	
02	JO 1A	59° 17.00' N	02° 05.00' W	90 m	8.5 km
03	JO 2	59° 17.00' N	01° 56.00' W	100 m	8.5 km
04	JO 3	59° 17.00' N	01° 48.00' W	80 m	7.6 km
05	JO 4	59° 17.00' N	01° 40.00' W	90 m	7.6 km
06	JO 5	59° 17.00' N	01° 30.00' W	95 m	9.5 km
07	JO 6	59° 17.00' N	01° 20.00' W	110 m	9.5 km
08	JO 6A	59° 17.00' N	01° 10.00' W	120 m	9.5 km
09	JO 7	59° 17.00' N	01° 00.00' W	125 m	9.5 km
10	JO 8	59° 17.00' N	00° 40.00' W	120 m	18.9 km
11	JO 9	59° 17.00' N	00° 20.00' W	140 m	18.9 km
12	JO10	59° 17.00' N	00° 00.00' W	135 m	18.9 km
Totals				1180 m	126.9 km

Fair Isle - Munken (Amended for presence of Foinaven oil platform)

	Name	Latitude	Longitude	Depth	Spacing
01	FIM-01	60° 10.00' N	03° 44.00' W	150 m	
02	SEFOS	60° 13.00' N	03° 51.50' W	170 m	8.9 km
03	FIM-02	60° 16.00' N	03° 59.00' W	200 m	8.9 km
04	SEFOS	60° 18.00' N	04° 04.50' W	330 m	6.3 km
05	<i>FIM-03</i>	<i>60° 20.25' N</i>	<i>04° 09.00' W</i>	<i>390 m</i>	<i>6.3 km</i>
06	FIM-04	60° 25.00' N	04° 19.00' W	655 m	12.4 km
07	FIM-05	60° 29.00' N	04° 26.00' W	995 m	9.8 km
08	FIM-06	60° 35.00' N	04° 45.00' W	1090 m	20.6 km
09	FIM-6a	60° 38.00' N	04° 54.00' W	1030 m	9.9 km
10	FIM-07	60° 43.00' N	05° 06.00' W	915 m	14.3 km
11	FIM-08	60° 47.00' N	05° 16.00' W	830 m	11.7 km
12	FIM-09	60° 51.00' N	05° 29.00' W	600 m	13.9 km
13	FIM-10	61° 02.00' N	05° 57.00' W	280 m	32.4 km
14	FIM-11	61° 12.00' N	06° 22.00' W	240 m	
Totals				7,585.0 0	155.40

Nolso-Flugga

	Name	Latitude	Longitude	Depth	Spacing
01	NOL-01	60° 56.00' N	01° 00.00' W	110 m	
02	SEFOS	60° 58.70' N	01° 17.70' W	125 m	16.7 km
03	SEFOS	61° 01.40' N	01° 35.40' W	155 m	16.7 km
04	NOL-02	61° 04.00' N	01° 53.00' W	270 m	16.7 km
05	SEFOS	61° 06.00' N	02° 01.50' W	440 m	8.5 km
06	NOL-03	61° 08.00' N	02° 10.00' W	550 m	8.5 km
07	SEFOS	61° 09.30' N	02° 17.50' W	630 m	7.1 km
08	NOL-3a	61° 11.00' N	02° 25.00' W	730 m	7.4 km
09	NOL-04	61° 14.00' N	02° 40.00' W	1080 m	14.5 km
10	NOL-05	61° 21.00' N	03° 10.00' W	1370 m	29.6 km
11	NOL-06	61° 28.00' N	03° 42.00' W	1235 m	31.2 km
12	NOL-07	61° 35.00' N	04° 15.00' W	990 m	31.9 km
13	NOL-08	61° 42.00' N	04° 51.00' W	235 m	34.2 km
14	NOL-09	61° 49.00' N	05° 21.00' W	180 m	29.3 km
15	NOL-10	61° 54.00' N	05° 45.00' W	290 m	22.9 km
16	NOL-11	62° 00.00' N	06° 12.00' W	125 m	26.0 km
Totals				8250 m	301.20 km