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FRV *Scotia*

Cruise 0610S

PROGRAMME

14 May – 1 June 2010

Loading: Aberdeen, 12 May

Unloading: Aberdeen, 1 June

Port Call: Torshavn / Lerwick (TBC)

Personnel

G Slesser	SIC
M Geldart	
D Lichtman	
A McIntosh	
L Morley	
N Collie	14-21 May
J Dunn	14-21 May
P Walsham	14-21 May
D Major	Aberdeen University 21May-1June
S McDonough	Aberdeen University
J Beaton	SAMS

Out-turn days per project: 19 AE11R0

Gear

Sea-Bird CTDs, ADCP and Current Meter instrumentation, Mooring Equipment, Recovery Trawl, Ocean Sampler

Objectives

1. Perform hydrographic surveys along the JONSIS standard section in the northern North Sea.
2. Perform biological sampling along the JONSIS standard section and East Coast section using the Ocean Sampler.
3. Recover and redeploy two current meter moorings East Shetland.
4. Perform a CTD survey East Shetland
5. Perform hydrographic surveys along the standard Faroe Shetland Channel sections.
6. Carry out deep sea coring at Nolso-Fugga station NOL-05.
7. Take samples for long term storage at Fair Isle – Munken stations FIM-01 and FIM-06.

8. Service three ADCP moorings in the Faroe Shetland Channel.
9. Deploy one additional ADCP moorings for the THOR project in the Faroe Shetland Channel.
10. Recover and redeploy a SAMS ADCP mooring on the Wyville-Thomson Ridge.
11. Perform CTD surveys across the Fair Isle channel and along the Shelf Edge as time allows.

Procedure

On sailing from Aberdeen the *Scotia* will sail to a suitable position to carry out trial CTD deployments before proceeding to the southern end of the East Coast section for sampling using the Ocean Sampler. On completion of this section passage will be made to the JONSIS section for sampling work using the CTD/carousel water sampler and Ocean Sampler. *Scotia* will then make way to East of Shetland where current meter moorings (60° 18.69'N 000° 41.80'W, 60° 09.98'N 000° 09.99'W) will be recovered, data downloaded from the moored instruments, moorings refurbished and the moorings redeployed. If time permits a search will be made for an acoustic release broken free from a previous current meter mooring suspected to have been trawled by a fishing boat. CTD surveys will also be performed along three CTD sections East of Shetland. At some point when working off East of Shetland passage will be made to Lerwick to allow three scientific personnel to disembark by small boat for return to Aberdeen and the embarkation of one Aberdeen University personnel.

On completion of the East of Shetland work passage will be made to sample the Nolso – Flugga standard section using the CTD and Carousel Water Sampler package. A break will be made at station NOL-05 to allow coring work to be undertaken by Aberdeen University personnel.

Scotia will then make passage to Torshavn / Lerwick for a half landing.

After the half landing *Scotia* will make directly to the SAMS ADCP Wyville-Thomson Ridge mooring (60 15.60'N 009 00.90'W) for recovery and redeployment (60 15.00 008 54.60'W). An attempt will also be made nearby to locate and recover a mooring (60 14.70'N 009 00.78'W) that failed to surface on an earlier SAMS cruise. Passage will then be made to the start of the western end of the Fair Isle – Munken standard section. This section will be sampled using the CTD and Carousel Water Sampler package. At stations FIM-01 and FIM-06 long term storage samples will be taken.

Following this sampling work the following ADCP mooring work will take place: the trawl proof ADCP mooring NWSF (60° 12.00'N 004° 00.00'W) for the THOR project will be deployed; NWOCE ADCP moorings NWSE (60° 16.50'N 004° 20.00'W), NWSD (60° 26.93'N 004° 22.24'W) and THOR NWSD* mooring (60 30.48'N 004 34.03'W) will be recovered, data downloaded and redeployed.

On completion of this work and given the time available additional CTD stations will be sampled from South Faroe to Cape Wrath, across the Fair Isle Channel and along and on the shelf edge before departing for Aberdeen.

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.

Submitted:
G Slesser
22 April 2010

Approved:
I Gibb
30 April 2010

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° 5.00' 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° 0.00' 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° 0.00' W	135 m	18.9 km
Totals				1180 m	126.9 km

Fair Isle - Munken (Ammended 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