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FRV *Scotia*

Cruise 1609S

PROGRAMME

2-16 December 2009

Loading: Aberdeen, 27 November 2009
Unloading: Aberdeen, 16 December 2009

In setting the cruise programme and specific objectives, etc the Scientist-in-Charge needs to be aware of the restrictions on working hours and the need to build in adequate rest days and rest breaks as set out in Marine Scotland's Working Time Policy (Lab Notice 34/03). In addition, the Scientist-in-Charge must formally review the risk assessments for the cruise with staff on-board before work is commenced.

In the interest of efficient data management it is now mandatory to return the Cruise Report, to I Gibb and the Cruise Summary Report (old ROSCOP form) to D Lichtman, within four weeks of a cruise ending. In the case of the Cruise Summary Report a nil return is required, if appropriate.

Personnel

J Dunn (In charge)
B Berx
N Collie
K Cook
J Hunter
D Lichtman
J Rasmussen
S Robinson

Project: AE11r - 15days

Sampling gear: Hydrographic CTD; Plankton nets (ARIES)

Fishing gear: None

Area: North western North Sea-Faroe Shetland Channel.

Objectives

1. To conduct routine hydrographic sampling at stations along the standard JONSIS, Fair Isle-Munken and Nolso-Flugga survey lines.

2. To conduct plankton and hydrographic sampling with ARIES in the Faroe Shetland Channel

General Procedure

On sailing from Aberdeen the vessel should proceed to the eastern end of the JONSIS line and complete both hydrographic stations and ARIES deployments in a westerly direction (Table 1, Figure 1). Hydrographic sampling with the CTD/carousel will then commence on the Fair Isle-Munken line. Towed deployments of the ARIES sampler will be carried out at up to three of the deepest stations along the line (Table 2, Figure 1).

On completion of the Fair Isle-Munken line the vessel will proceed to conduct hydrographic sampling along the Nolso-Flugga survey line. Towed deployments of the ARIES sampler will be carried out at up to four of the deepest stations along the line (Table 3, Figure 1).

Scientific Procedures

It is expected that deployments of hydrographic equipment will be carried out with the CTD crane whilst the vessel is on station.

ARIES deployments from the trawl deck will use the plankton crane.

Three container laboratories will be required (one wet chemical analysis laboratory, two dry containers for electronics work and communications with sampling equipment). Plankton sample sorting and processing will be carried out in part of the fish laboratory.

Hydrophones for receiving data from the plankton samplers will be installed on the drop keel before the start of the cruise.

All plankton samples will be preserved in formaldehyde solution. It is expected that a proportion of the samples will be sorted fresh, with specimens of *Calanus finmarchicus* being preserved in liquid nitrogen and ethanol. All CTD, Optical Plankton Counter and ARIES data will be worked up at sea.

Hydroacoustic data will be recorded for later analysis, though some preliminary analysis will be undertaken at sea.

Normal contacts will be maintained with the Laboratory.

Submitted
J Dunn
9 November 2009

Table 1

JONSIS line stations

Name	Latitude	Longitude	Depth	Spacing
JO 1	59□17.00'N	02□14.00'W	75 m	
JO 1A	59□17.00'N	02□5.00'W	90 m	8.5 km
JO 2	59□7.00'N	01□56.00'W	100 m	8.5 km
JO 3	59□17.00'N	01□48.00'W	80 m	7.6 km
JO 4	59□17.00'N	01□40.00'W	90 m	7.6 km
JO 5	59□17.00'N	01□30.00'W	95 m	9.5 km
JO 6	59□17.00'N	01□20.00'W	110 m	9.5 km
JO 6A	59□17.00'N	01□10.00'W	120 m	9.5 km
JO 7	59□17.00'N	01□0.00'W	125 m	9.5 km
JO 8	59□17.00'N	00□40.00'W	120 m	18.9 km
JO 9	59□17.00'N	00□20.00'W	140 m	18.9 km
JO10	59□17.00'N	00□0.00'W	135 m	18.9 km

Table 2

Fair Isle - Munken line stations

Name	Latitude	Longitude	Depth	Spacing	
FIM-01	60° 10.00' N	03° 44.00' W	150 m		CTD
SEFOS-1	60° 13.00' N	03° 51.50' W	170 m	8.9 km	CTD
FIM-02	60° 16.00' N	03° 59.00' W	200 m	8.9 km	CTD
SEFOS-2	60° 18.00' N	04° 04.50' W	330 m	6.3 km	CTD, ARIES
FIM-03	60° 20.25' N	04° 09.00' W	390 m	6.3 km	CTD
FIM-04	60° 25.00' N	04° 19.00' W	655 m	12.4 km	CTD
FIM-05	60° 29.00' N	04° 26.00' W	995 m	9.8 km	CTD,ARIES
FIM-06	60° 35.00' N	04° 45.00' W	1090 m	20.6 km	CTD, ARIES, MIKT Priority station for ARIES
FIM-6a	60° 38.00' N	04° 54.00' W	1030 m	9.9 km	CTD
FIM-07	60° 43.00' N	05° 06.00' W	915 m	14.3 km	CTD, ARIES
FIM-08	60° 47.00' N	05° 16.00' W	830 m	11.7 km	CTD
FIM-09	60° 51.00' N	05° 29.00' W	600 m	13.9 km	CTD
FIM-10	61° 02.00' N	05° 57.00' W	280 m	32.4 km	CTD, ARIES
FIM-11	61° 12.00' N	06° 22.00' W	240 m	29.1 km	CTD

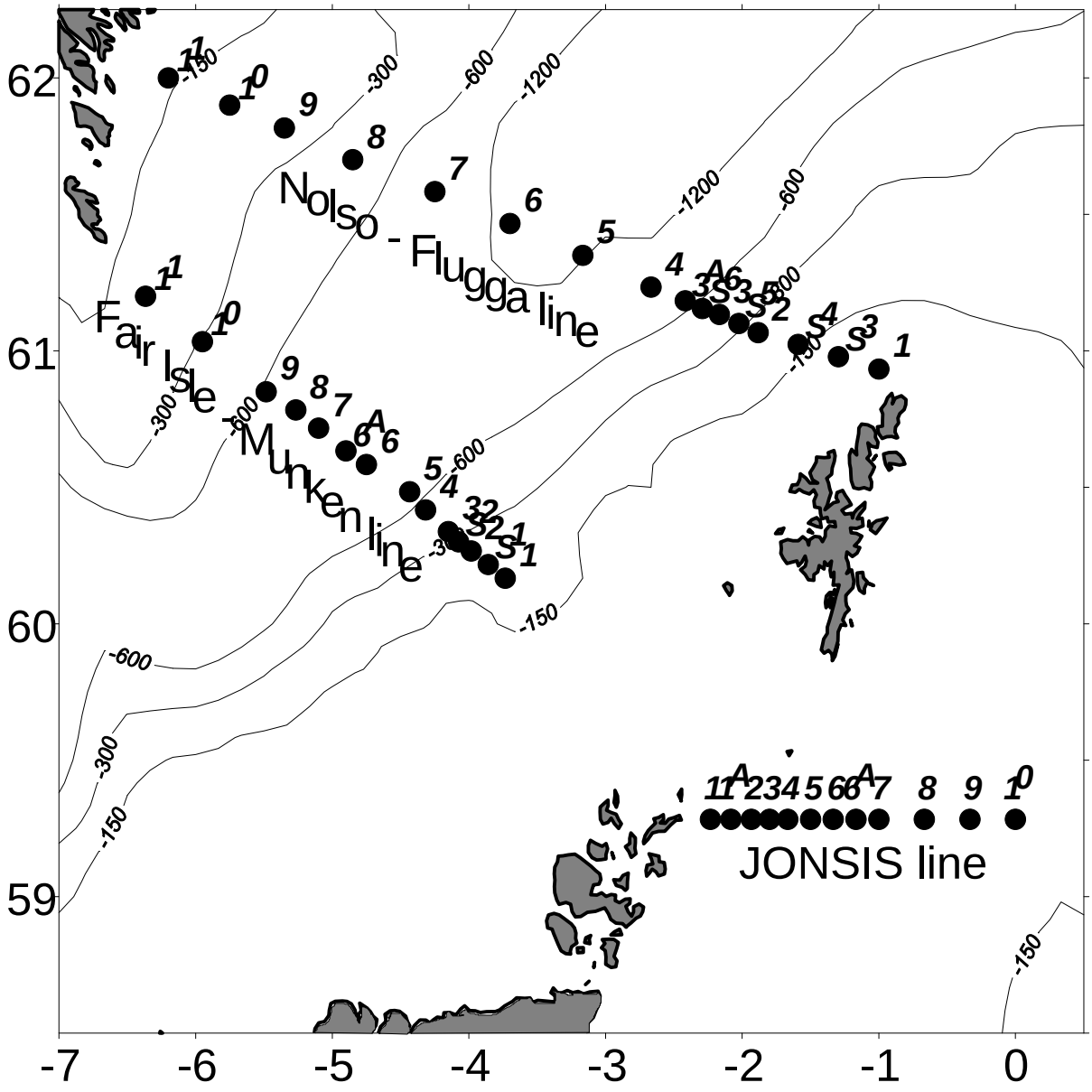
Table 3

Nolso - Flugga line stations

Name	Latitude	Longitude	Depth	Spacing	
NOL-11	62° 00.00' N	06° 12.00' W	125 m		CTD
NOL-10	61° 54.00' N	05° 45.00' W	290 m	26.0 km	CTD
NOL-09	61° 49.00' N	05° 21.00' W	180 m	22.9 km	CTD
NOL-08	61° 42.00' N	04° 51.00' W	235 m	29.3 km	CTD, ARIES
NOL-07	61° 35.00' N	04° 15.00' W	990 m	34.2 km	CTD, ARIES
NOL-06	61° 28.00' N	03° 42.00' W	1235 m	31.9 km	CTD, MIKT, ARIES Priority station for ARIES
NOL-05	61° 21.00' N	03° 10.00' W	1370 m	31.2 km	CTD, ARIES Priority station for ARIES
NOL-04	61° 14.00' N	02° 40.00' W	1080 m	29.6 km	CTD, ARIES
NOL-3a	61° 11.00' N	02° 25.00' W	730 m	14.5 km	CTD
SEFOS-6	61° 09.30' N	02° 17.50' W	630 m	7.4 km	CTD
NOL-03	61° 08.00' N	02° 10.00' W	550 m	7.1 km	CTD
SEFOS-5	61° 06.00' N	02° 01.50' W	440 m	8.5 km	CTD, ARIES
NOL-02	61° 04.00' N	01° 53.00' W	270 m	8.5 km	CTD
SEFOS-4	61° 01.40' N	01° 35.40' W	155 m	16.7 km	CTD
SEFOS-3	60° 58.70' N	01° 17.70' W	125 m	16.7 km	CTD, ARIES
NOL-01	60° 56.00' N	01° 00.00' W	110 m	16.7 km	CTD

Figure 1

North Sea and Faroe-Shetland Channel stations



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FRV *Scotia*

Cruise 1609S

2-16 December 2009

PROGRAMME AMENDMENT

Neil Morrison (Engineering) will replace Barbara Berx on this cruise.

J Cahill
24 November 2009