



NOTIFICATION OF PROPOSED RESEARCH CRUISE

PART A: GENERAL

1. NAME OF RESEARCH SHIP: "G.O.Sars" CRUISE NO. 2016111

2. DATES OF CRUISE From: August 2, 2016 To: August 13, 2016

3. OPERATING AUTHORITY: Institute of Marine Research
P.O.Box 1870 Nordnes
N-5817 BERGEN NORWAY

TELEPHONE: 47-55238500
TELEFAX : 47-55238531
TELEX: 42297 OCEAN N

4. OWNER (if different from no. 3)

5. PARTICULARS OF SHIP: Name: "G.O.Sars"

Nationality: Norwegian

Overall length: 77,5 metres

Maximum draught: 7,30 metres

Net tonnage: 4067 tonnes

Propulsion: DC - Electric

Call sign: LMEL

Registration port and number
(if registered fishing vessel)
Bergen
Telephone: +47 55906440
Telefax:: +47 55906441
E-mail: GOSars@IMR.no

6. CREW Name of master: Preben Vindenes/ John Hugo Johnsen

Number of crew: 16



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7. SCIENTIFIC PERSONNEL
- | | |
|--|--|
| Name and address of scientist in charge: | Emil Jeansson
Uni Research Klima
Allégaten 70
N-5007 BERGEN
NORWAY |
| Tel/telex/fax no.: | +47 55589833/+47 55584330 |
| No. of scientists: | 16 |
8. GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE (with reference to latitude and longitude)
- Area of operation is the Greenland and the Iceland Seas. However, no sampling will be performed south of 70°N, and thus outside the Iceland EEZ. After that we will go to port in Reykjavik.
- 65°N-75°N
25°W-20°E
9. BRIEF DESCRIPTION OF PURPOSE OF CRUISE
- Observations of hydrography and inorganic chemistry in the water column.
10. DATES AND NAMES OF INTENDED PORTS OF CALL
2. August 2016, Tromsø, Norway, start of cruise.
13. August 2016, Reykjavik, Iceland, end of cruise.
11. ANY SPECIAL REQUIREMENTS AT PORTS OF CALL
- No



NOTIFICATION OF PROPOSED RESEARCH CRUISE

PART B: DETAIL

- 1. NAME OF RESEARCH SHIP: "G O Sars" CRUISE NO. 2016111
- 2. DATES OF CRUISE From 2 August 2016 To 13 August 2016

3. a) PURPOSE OF RESEARCH

The cruise is carried out as part of the Norwegian Research Council funded project Ventilation and remineralisation in polar and sub-polar regions as indicators for climate change (VENTILATE), aiming to evaluate the link between physical processes and fluxes of carbon, in the Nordic Seas and the Arctic Ocean. The project utilizes a combination of observational and model approaches to address these questions. At the cruise we will obtain seawater hydrography and chemistry data, with the main focus to study the ventilation state of the Greenland and the Iceland Sea, and the corresponding biogeochemical fluxes. More details on the project are available on the home page, www.bjerknes.uib.no/en/project/ventilate.

b) GENERAL OPERATIONAL METHODS (including full description of any fish gear, trawl type, mesh size, etc.)

CTD sonde and hydrocasts with 24 bottle rosette. The water that is sampled will be analysed for its concentrations of chlorofluorocarbon-12, sulphur hexafluoride, dissolved oxygen, macro nutrients, dissolved inorganic carbon, total alkalinity and distribution of stable carbon isotopes, $\delta^{13}C$, and C-14.

- 4. ATTACH CHART showing (on an appropriate scale) the geographical area of intended work, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment, areas to be fished
ATTACHED

- 5. a) TYPES OF SAMPLES REQUIRED (e.g., geological/water/plankton/fish/radionuclide).

Water

b) METHODS OF OBTAINING SAMPLES (e.g., dredging/coring/drilling/fishing, etc. When using fishing gear, indicate fish stocks being worked, quantity of each species required, and quantity of fish to be retained on board

CTD sonde and hydrocasts with 24 bottle rosette.

6. DETAILS OF MOORED EQUIPMENT

<u>Dates</u>		<u>Description</u>	<u>Depth</u>	<u>Latitude</u>	<u>Longitude</u>
<u>Laying</u>	<u>Recovery</u>				

- 7. ANY HAZARDOUS MATERIALS (chemicals/explosives/gases/radioactives, etc. (Use separate sheet if necessary)

- a) Type and trade name None
NIL
- b) Chemical content (and formula) NIL
- c) IMO IMDG code (reference and UN no.) NIL
- d) Quantity and method of storage on board NIL
- e) If explosives give date(s) of detonation NIL



- Method of detonation
- Position of detonation
- Frequency of detonation
- Depth of detonation
- Size of explosive charge in kg.

8. DETAIL AND REFERENCE OF

a) Any relevant previous/future cruises

The first part of the cruise will follow the WOCE line 75N, [http:// http://cchdo.ucsd.edu/search?q=75N](http://http://cchdo.ucsd.edu/search?q=75N)

b) Any previously published research data relating to the proposed cruise

9. NAMES AND ADDRESSES OF SCIENTISTS OF THE COASTAL STATE(S) IN WHOSE WATERS THE PROPOSED CRUISE TAKES PLACE WITH WHOM PREVIOUS CONTACT HAS BEEN MADE

Jón Ólafsson and Sólveig Ólafsdóttir, at the Marine Research Institute in Reykjavik, are partners of the project.

Address: Marine Research Institute, Skulagata 4, IS-121 Reykjavik, Iceland

Tel.: +3545752000; email: jon@hafro.is

10. STATE

a) Whether visits to the ship in port by scientists of the coastal state concerned will be acceptable (Yes/No)

Yes

b) Participation of an observer from the coastal state for any part of the cruise together with the dates and the ports for embarkation and disembarkation

Acceptable. Dates and ports to be closer settled if wanted by the coastal states.

c) When research data from the intended cruise is likely to be made available to the coastal state and by what means

Fall 2018. When the VENTILATE project ends all data will be transferred and made accessible at national and international data centres (i.e. Norwegian Marine Data Centre, PANGEA data publisher for Earth and Environmental Science and Bjerknes Climate Data Centre).



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PART C. SCIENTIFIC EQUIPMENT

Complete the following table using a separate page for each coastal state

Coastal state: Iceland

Port call: Tromsø (cruise depart from), to Reykjavik, Iceland

Indicate "YES or "NO"

Dates: 14 August-15 September 2016

				Distance from coast		
<u>List scientific work by function</u> e.g. Magnetometry Gravity Diving Seismics Seabed sampling Bathymetry Trawling Echo sounding Water sampling U/W TV Moored instr. Towed instr.	Water column including sediment sampling of the seabed	Fisheries research within fishing limits	Research concerning the natural resources of the continental shelf or its physical characteristics	Within 4 nm	Between 4-12nm	Between 12 and 200 nm
CTD sonde	0-3500 m	No	No	Yes	Yes	Yes
Water sampling	0-3500 m	No	No	Yes	Yes	Yes
Echo sounding (hull mounted)	n.a.	No	No	No	No	No
Sediment sampling	0-3500 m	No	No	No	No	No

Dated 23.3.16

NB. IF ANY DETAILS ARE MATERIALLY CHANGED REGARDING DATES/AREA OF OPERATION AFTER THIS FORM HAS BEEN SUBMITTED, THE COASTAL STATE AUTHORITIES MUST BE NOTIFIED IMMEDIATELY.



Additional information for Part B: Detail

3.b) GENERAL OPERATIONAL METHODS

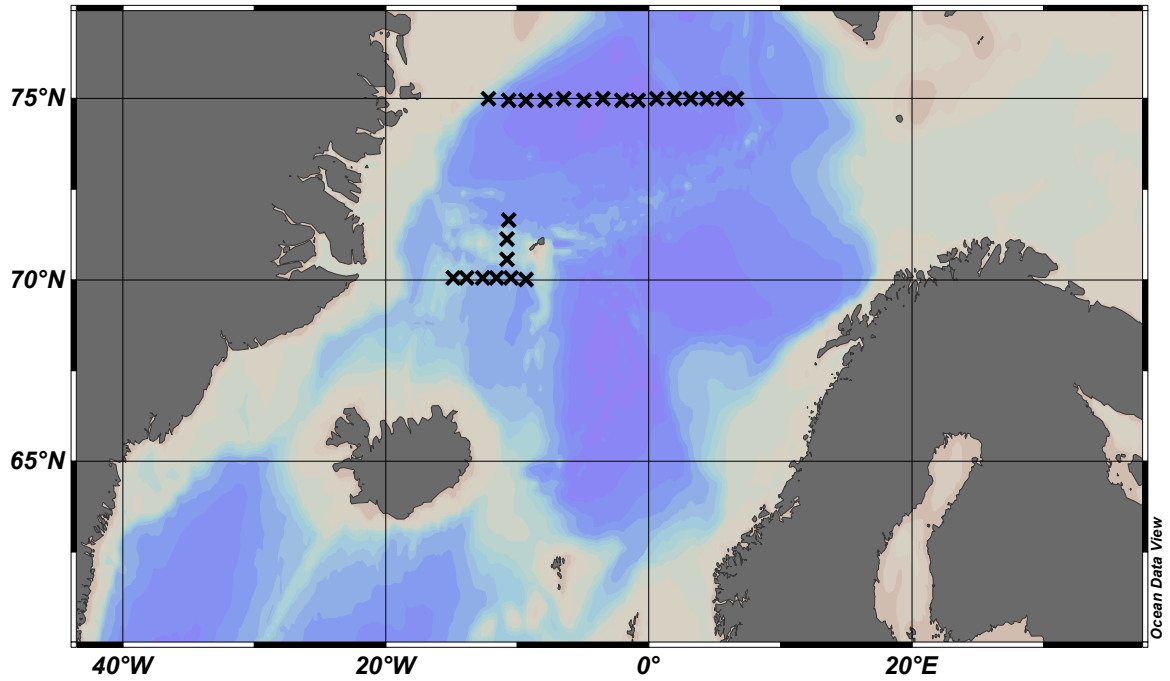
Hydrocasts with 24 bottle rosette with CTD sonde

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Preliminary water sampling locations (X) at the 2016 VENTILATE cruise.