

NOTIFICATION OF PROPOSED RESEARCH CRUISE

Page 1

GENERAL

Part A

01. Name of research ship: **MARIA S. MERIAN** Cruise No. **MSM-12/2**
02. Dates of cruise from **June 18th 2009 Reykjavik** to **July 12th 2009 Reykjavik**
03. Operating Authority **Institut für Meereskunde / University of Hamburg**
Bundesstr. 53, D-20146 Hamburg, Germany
Tel.: +49-40-42838-3974 - Fax: +49-40-42838-46 44
Telex: 212586 ifmhh d
04. Owner (if different from para 3) **Federal State Mecklenburg-Vorpommern, Germany**
-
05. Particulars of ship:
- | | |
|-----------------|------------------------|
| Name | MARIA S. MERIAN |
| Nationality | German |
| Overall length | 94,8 metres |
| Maximum draught | 6,5 metres |
| Nett tonnage | 1750 NRZ |
| Propulsion | Diesel Electric |
| Call sign | D B B T |
06. Crew
- | | |
|----------------|---------------------------|
| Name of master | Friedhelm von Staa |
| No. of crew | <u>max. 23</u> |
07. Scientific personnel:
- | | |
|---|--|
| Name and address of scientist in charge | Dr. Gabriele Uenzelmann-Neben
Alfred Wegener Institute for
Polar and Marine Research
Columbusstrasse
D-27568 Bremerhaven, |
|---|--|
- Germany**
- | | |
|-------------------|---|
| Tel. | +49-471-4831-1208 |
| Fax | +49-471-4831-1271 |
| E-mail | Gabriele.Uenzelmann-Neben@awi.de |
| No. of scientists | <u>max.23</u> |
08. Geographical areas in which ship will operate (with reference in latitude and longitude)
Irminger Sea and Labrador Sea off South Greenland;
56°-61°N and 40°-50°W

09. Brief description of purpose of cruise

The Eirik Drift has been documenting the sedimentation near southeast Greenland since the Miocene. This sediment drift forms an archive for the depositional processes in this region, which have been shaped by the Western Boundary Undercurrent (WBUC), the Greenland ice sheet and the material input from the Labrador Sea/Davis Strait. A detailed study and analysis of both structure and composition of the Eirik Drift via seismic profiling aided by geologic sampling will lead to information on the development of the WBUC as well as the dimensions and expansion/retreat of the Greenland ice sheet. Hence we get indications for the climatic development in this region. The incorporation of high resolution seismic reflection investigations with geologic sampling results in the combination of different timescales and a much clearer understanding of the evolution of the climate southwest of Greenland.

10. Dates and names of intended ports of call

Reykjavik, Iceland for 4 days in a period from June 12th – 21st 2009 (intended so far June 15th – 18th) - see Notification Cruise MSM12/1 - and

Reykjavik, Iceland for 4 days in a period from July 08th – 19st 2009 (intended so far July 12th – 15th)

11. Any special logistic requirements at ports of call

***Crew change, container handling, bunkering;
20 ton crane lifting facility is required***

DETAIL

Part B

01. Name of research ship: **MARIA S. MERIAN** Cruise No. **MSM-12/2**
02. Dates of cruise from **June 18th 2009 Reykjavik** to **July 12th 2009 Reykjavik**
03. Purpose of research and general operational methods

With a set of high resolution seismic reflection profiles aided by information resulting from geological sampling of the uppermost 15 m of the sedimentary layers information on the structure of the Eirik Drift, the development of the West Boundary undercurrent, and the extension/retreat of the Greenland ice sheet will be investigated. The proposed cruise will provide the base for numerical simulation of sediment transport and add new details to the input parameters needed for numerical simulations of climate developments.

04. Attach chart showing (on an appropriate scale) the geographical area of the intended work, positions of intended stations, tracks of survey lines, positions of moored / seabed equipment.

(see attachment)

05. Types of samples required, e.g. Geological / Water / Plankton / Fish / Radio-activity / Isotope

seismic and hydroacoustic (multi-beam bathymetry, sub-bottom profiler) data; geological samples (gravity corer, giant box corer, multi corer)

and methods by which samples will be obtained (including dredging / coring / drilling).

geophysical surveying, using standard multichannel seismics, as well as hydroacoustic measuring; gravity corer, giant box corer, and multi corer will be used to obtain samples from the uppermost 15 m of the sedimentary column

6. Details of moored equipment:
No moored equipment

07. Explosives: **no explosives**

- (a) Type and Trade name
- (b) Chemical content
- (c) Dept of Trade class and stowage
- (d) Size
- (e) Depth of detonation
- (f) Frequency of detonation
- (g) Position in latitude and longitude
- (h) Dates of detonation

08. Detail and reference of

- (a) Any relevant previous / future cruises

***RV "JOIDES" expedition 303 in 2005 (see Channell et al. 2006).
Future cruises are currently not planned.***

- (b) Any previous published research data relating to the proposed cruise.
(Attach separate sheet if necessary.)

Arthur MA, Srivastava SP, Kaminski M, Jarrard RD, Osier J (1989) SEISMIC STRATIGRAPHY AND HISTORY OF DEEP CIRCULATION AND SEDIMENT DRIFT DEVELOPMENT IN BAFFIN BAY AND THE LABRADOR SEA. In: Srivastava SP, Arthur M, Clement B, et al. (eds) Scientific Results, vol 105. Ocean Drilling Program, College Station, pp 957-988

Expedition_303_Scientists (2006a) Expedition 303 Summary. In: Channell JET, Kanamatsu T, Sato T, Stein R, Alvarez Zarikian CA, Malone MJ, Scientists E (eds) Proc IODP, vol 303/306. Integrated Ocean Drilling Program Management International, College Station, p 30

Expedition_303_Scientists (2006b) Site U1305. In: Channell JET, Kanamatsu T, Sato T, Stein R, Alvarez Zarikian CA, Malone MJ, Expedition303/306_Scientists (eds) Proc IODP, vol 303/306. Integrated Ocean Drilling Program Management International, College Station, p 93

Expedition_303_Scientists (2006c) Site U1306. In: Channell JET, Kanamatsu T, Sato T, Stein R, Alvarez Zarikian CA, Malone MJ, Expedition303/306_Scientists (eds) Proc IODP, vol 303/306. Integrated Ocean Drilling Program Management International, College Station, p 92

Expedition_303_Scientists (2006d) Site U1307. In: Channell JET, Kanamatsu T, Sato T, Stein R, Alvarez Zarikian CA, Malone MJ, Expedition303/306_Scientists (eds) Proc IODP, vol 303/306. Integrated Ocean Drilling Program Management International, College Station, p 66

Hunter S, Wilkinson D, Louarn E, McCave IN, Rohling E, Stow DAV, Bacon S (2007a) Deep western boundary current dynamics and associated sedimentation on the Eirik Drift, Southern Greenland Margin. Deep-Sea research I 54:2036-2066 doi:10.1016/j.dsr.2007.09.007

Hunter S, Wilkinson D, Stanford J, Stow DAV, Bacon S, Akhmetzhanov AM, Kenyon NH (2007b) The Eirik Drift: A long-term barometer of North Atlantic deepwater flux south of Cape Farewell, Greenland. In: Viana AR, Rebesco M (eds) Economic and Palaeoceanographic Significance of Contourite Deposits, Special Publications 276. Geological Society, London, pp 245-263

09. Names and addresses of scientists of the coastal state in whose waters the proposed cruise takes place with whom previous contact has been made.

10. State:

(a) Whether visits to the ship in port by scientists of the coastal state concerned will be acceptable.

Yes, upon request

(b) Whether it will be acceptable to carry on board an observer from the coastal state for any part of the cruise and dates and ports of embarkation / disembarkation.

Yes, after discussion.

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

- *Cruise Report* three months after finishing the research cruise

- *Scientific publication* within the following three years

Iceland

COASTAL STATE: Iceland

SCIENTIFIC EQUIPMENT

11. Complete the following table - SEPARATE COPY FOR EACH COASTAL STATE
(indicate 'YES' or 'NO')

List of all major Marine Scientific Equipment it is proposed to use and indicate waters in which it will be deployed	Fisheries Research within Fishing Limits	Research concerning Continental Shelf out to Coastal State's Margin	Within 3 NM	Between 3 - 12 NM	Between 12 - 50 NM	Between 50 - 200 NM

a)						
vessel mounted systems:						
hydroacoustic mapping / measuring (incl. ADCP, Parasound and multibeam)	No	Yes	No	Yes	Yes	Yes

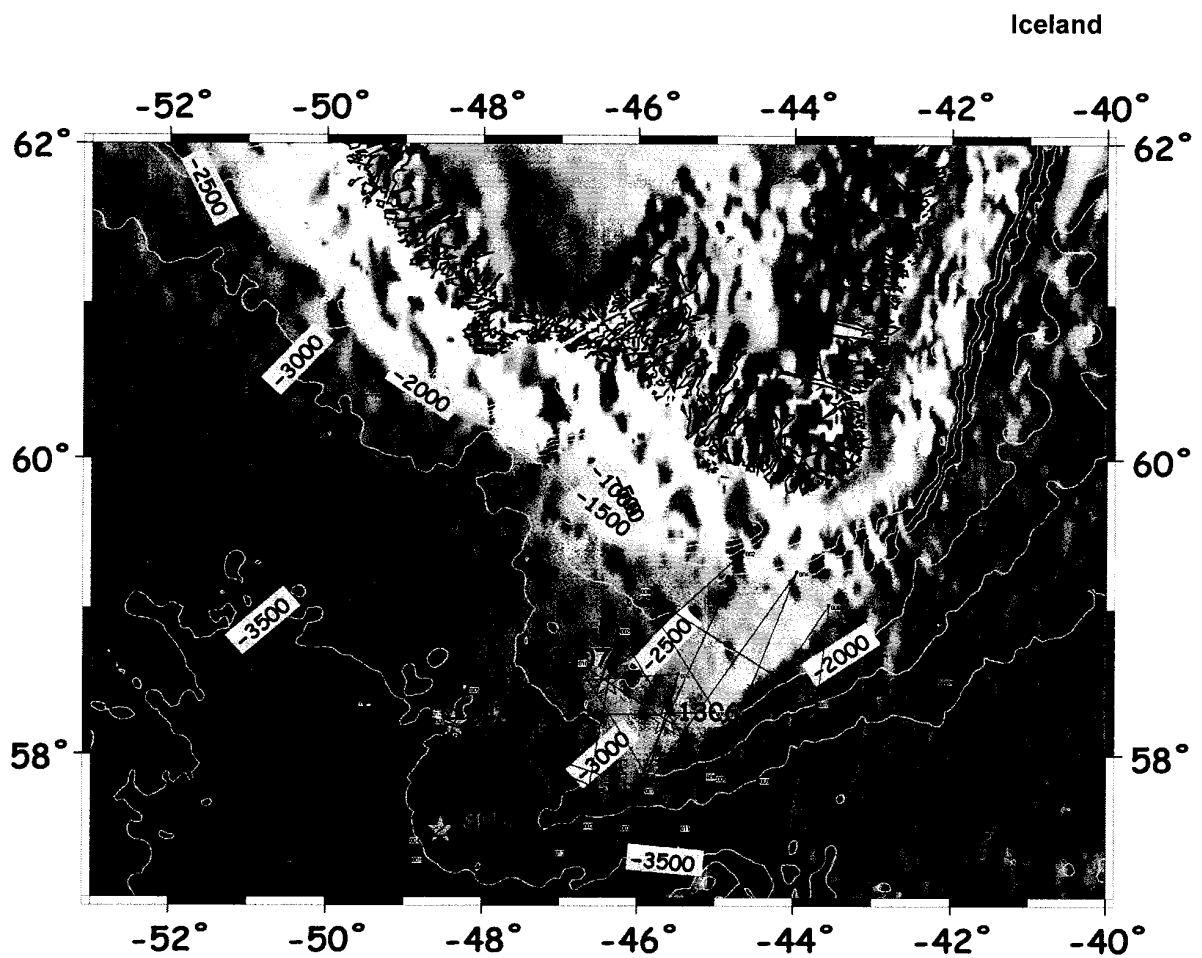


Fig. 1. Planned tracks and geophysical profiles of RV *Merian* cruise MSM-12/2 south of Greenland. Red lines 100, 200 und 300 are seismic reflection profiles, yellow stars mark ODP Leg 105 Site 646 and IODP expedition 302 Sites 1305, 1306, and 1307.



Embassy
of the Federal Republic of Germany
Reykjavik

FILE-NO: Wi-10-462.24 - Merian
Note No. 37/08

Note Verbale

The Embassy of the Federal Republic of Germany presents its compliments to the Ministry for Foreign Affairs of the Republic of Iceland and has the honour to communicate the following:

— The German Research Vessel "Maria S. Merian", call sign: DBBT operated by the "Institut für Meereskunde, University of Hamburg", intends to do geophysics research work on the cruise also inside the Icelandic Coastal Waters:

Cruise-No. MSM 12-2 from June 18th to July 12th 2009

Purpose of the cruise:

Detailed study and analysis of both structure and composition of the Eirik Drift via seismic profiling aided by geologic sampling.
Compare enclosure page 1 to 7.

Intended ports of call:

4 days in the period from June 12th to 21st, 2009 (intended so far: June 15th – 18th, 2009) at Reykjavik – see cruise MSM 12-1, note verbale no. 36/08, and
4 days in the period from July 8th to 18th, 2009 (intended so far: July 12th – 15th, 2009) at Reykjavik.

The Embassy would be grateful to the Ministry if it could kindly inform the relevant authorities of the Republic of Iceland accordingly, in order to achieve a permission that the above mentioned research work may be carried out and for the port of call in Reykjavik.

The Embassy of the Federal Republic of Germany avails itself of this opportunity to renew to the Ministry of Foreign Affairs to the Republic of Iceland the assurances of its highest consideration.

Reykjavik, 21st November 2008

L.S.

To the
Ministry for Foreign Affairs
of the Republic of Iceland
Reykjavík



Embassy
of the Federal Republic of Germany
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To the
Ministry for Foreign Affairs
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