

NOTIFICATION OF PROPOSED RESEARCH CRUISE ICELAND

GENERAL

Page 1

Part A

01. Name of research ship: **MARIA S. MERIAN** Cruise No. **MSM05-4**
02. Dates of cruise **from 6. July, Nuuk, to 16. July 2007, 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 **Federal State Mecklenburg-Vorpommern, Germany**
05. Particulars of ship:
- |                 |                        |
|-----------------|------------------------|
| Name            | <b>MARIA S. MERIAN</b> |
| Nationality     | <b>German</b>          |
| Overall length  | <b>94,8 metres</b>     |
| Maximum draught | <b>6,5 metres</b>      |
| Nett tonnage    | <b>1750 NRZ</b>        |
| Propulsion      | <b>Diesel Electric</b> |
| Call sign       | <b>D B B T</b>         |
06. Crew
- |                |                           |
|----------------|---------------------------|
| Name of master | <b><u>K. Bergmann</u></b> |
| No. of crew    | <b><u>max. 23</u></b>     |
07. Scientific personnel:
- |   |  |
|---|--|
| Name and address of scientist in charge | <b><u>Prof. Dr. Detlef Quadfasel</u></b><br><b><u>University of Hamburg</u></b><br><b><u>Bundesstr. 53</u></b><br><b><u>D-20146 Hamburg, Germany</u></b> |
| Tel.                                    | <b><u>0049 40 42838 5756</u></b>   |
| Fax                                     | <b><u>0049 40 42838 7477</u></b>   |
| e-mail                                  | <b><u>detlef.quadfasel@zmaw.de</u></b>   |
| No. of scientists                       | <b><u>max. 23</u></b>  |
08. Geographical areas in which ship will operate  
***East Greenland Continental Slope, Denmark Strait 62 – 66 N, 25 - 39 W***
09. Brief description of purpose of cruise  
***The main aim of the research is to study the variability of the transports of waters flowing from the Nordic Seas into the Atlantic Ocean. The work carried out during the cruise includes mooring recoveries and deployments on the east Greenland Shelf, over the continental slope of the Irminger Basin and in Denmark Strait. Hydrographic data will also be collected. The study is part of the international Arctic-Subarctic Ocean Flux Programme (ASOF) which is sponsored by the respective German, British and Finnish national funding agencies.***
10. Dates and names of intended ports of call  
***Reykjavik, Iceland for three days in a period from July 14<sup>th</sup>-20<sup>th</sup>, 2007***  
***(intended so far: July 16<sup>th</sup>-18<sup>th</sup>, 2007)***
11. Any special logistic requirements at ports of call

**Container handling, bunkering, crew change**

DETAIL

Part B

01. Name of research ship **RV MARIA S. MERIAN** Cruise No. **MSM05-4**
02. Dates of cruise from: **6. July 2007** to: **16. July 2007**
03. Purpose of research and general operational methods  
**The main aim of the research is to study the variability of the transports of waters flowing from the Nordic Seas into the Atlantic Ocean. The work carried out during the cruise focuses on mooring recoveries and deployments on the east Greenland Shelf, over the continental slope of the Irminger Basin and in Denmark Strait. Hydrographic data will also be collected.**
04. Chart showing the geographical area of the intended work, positions of moorings (yellow) and tracks of hydrographic survey lines (red).



05. Types of samples required  
**water, hydro acoustic data,**  
  
and methods by which samples will be obtained  
**pumping, hydro acoustic measuring**
06. Details of moored equipment:

**Mooring recoveries:**

<b>Name</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Water depth</b>
<b>Tube - 28</b>	<b>63°00.216' N</b>	<b>040°32.730' W</b>	<b>305</b>
<b>ADCP GB-06</b>	<b>63°01.047' N</b>	<b>040°30.954' W</b>	<b>220</b>
<b>UK2 - 06</b>	<b>63°16.917' N</b>	<b>035°52.093' W</b>	<b>2358</b>
<b>G1 - 06</b>	<b>63°22.104' N</b>	<b>036°04.368' W</b>	<b>2160</b>
<b>UK1 - 06</b>	<b>63°29.009' N</b>	<b>036°17.977' W</b>	<b>1988</b>
<b>F112 - 06</b>	<b>63°35.482' N</b>	<b>036°39.256' W</b>	<b>1717</b>

**Mooring deployments:**

<b>Name</b>	<b>Latitude N</b>	<b>Longitude W</b>	<b>Water depth</b>
<b>TUBE - 29</b>	<b>63 00.00</b>	<b>40 33.00</b>	<b>300</b>
<b>TUBE - 30</b>	<b>63 04.00</b>	<b>40 45.00</b>	<b>300</b>
<b>ADCP GB - 07</b>	<b>63 02.00</b>	<b>40 39.00</b>	<b>220</b>
<b>G2-07</b>	<b>63 07.20</b>	<b>35 32.60</b>	<b>2545</b>
<b>UK2-07</b>	<b>63 16.90</b>	<b>35 52.00</b>	<b>2360</b>
<b>G1-07</b>	<b>63 22.10</b>	<b>36 04.30</b>	<b>2200</b>
<b>UK1-07</b>	<b>63 29.00</b>	<b>36 18.00</b>	<b>2000</b>
<b>F12-07</b>	<b>63 35.50</b>	<b>36 39.00</b>	<b>1687</b>
<b>ADCP HHDS1-07</b>	<b>66 07.25</b>	<b>27 16.20</b>	<b>580</b>
<b>ADCP HHDS2-07</b>	<b>66 11.42</b>	<b>27 35.19</b>	<b>497</b>
<b>PIES HHDS3-07</b>	<b>66 13.95</b>	<b>27 46.29</b>	<b>477</b>
<b>PIES HHDS4-07</b>	<b>66 35.00</b>	<b>27 05.00</b>	<b>500</b>
<b>TK HHDS5-07</b>	<b>66 36.00</b>	<b>27 02.00</b>	<b>500</b>

All moorings will be recovered in Summer/Fall 2008.

07. Explosives: **no explosives**

08. Detail and reference of

(a) Any relevant previous / future cruises

**RRS Charles Darwin cruise 163/164 September 2004**  
**RV Árni Friðriksson August 2005**  
**RRS DISCOVERY cruise D311 September/October 2006**

(b) Any previous published research data relating to the proposed cruise.

**Hansen, B., S. Østerhus, D. Quadfasel, W. Turrell (2004) Already the Day After Tomorrow? SCIENCE, 305, 953-954.**  
**Høyer, J.L., and D. Quadfasel (2001) Detection of cold overflows from altimeter satellites. Geophys. Res. Let., 28, 1611-1614.**  
**Käse, R.H., J. B. Girton and T. B. Sanford, 2003: Structure and variability of the Denmark Strait Overflow: Model and observations J. GEOPHYS. RES., 108, 3181, doi:10.1029/2002JC001548, 2003**  
**Rudels, B., D. Quadfasel, and H.J. Friedrich (1999) The Arctic circumpolar boundary current. Deep-Sea Res. II, 46, 1023-1062.**

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.

**Name: Dr. Héðinn Valdimarsson**  
**Marine Research Institute**  
**Address: Skulagata 4**  
**121 Reykjavik**  
**Iceland**  
**Telephone: 00354 552 0240**  
**Telefax: 00354 562 3790**  
**e-mail: hv@havro.is**

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, upon request 6. July Nuuk – 16. July Reykjavik**
- (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**

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	Between	Between	Between
			3 NM	3 - 12 NM	12 - 50 NM	50 - 200 NM

a) vessel mounted systems: hydroacoustic mapping / measuring (incl. ADCP, Parasound and multibeam)	No	Yes	No	Yes	Yes	Yes
permanent surface water sampling / pumping (incl. Thermosalinograph)	No	No	No	Yes	Yes	Yes
b) mobile equipment Hydrographic profiling: CTD and water sampling	No	No	No	Yes	Yes	Yes