

NOTIFICATION OF A PROPOSED RESEARCH CRUISE

Part A: GENERAL

1. Name of Research Ship: **R.V. MARIA S. MERIAN** Cruise No. **MSM143**

2. Dates of Cruise: **Reykjavik, Iceland, May 14th 2026
to Reykjavik, Iceland, June 18th 2026**

3. Operating Authority: **Institute of Oceanography / University of Hamburg
Bundesstr. 53, D-20146 Hamburg, Germany
Telephone: +49 40 42838 3640**

4. Owner (if different from no. 3): **Federal State Mecklenburg-Vorpommern, Germany**

5. Particulars of ship:

Name	MARIA S. MERIAN
Nationality	German
Overall length	94,8 metres
Maximum draught	6,50 metres
Net tonnage	1.671 NT
Propulsion	Diesel Electric
Call sign	DBBT
IMO No.	9274197

6. Crew

Name of master	Björn Maaß
No of crew	max. 24

7. Scientific Personnel

Name and address of scientist in charge	Dr. Bettina Schramm BGR Federal Institute for Geosciences and Natural Resources, Germany
Phone:	+49 511 643 3956
Email:	bettina.schramm@bgr.de
No. of scientists:	max. 22

8. Geographical area in which the ship will operate (with reference to latitude and longitude)

The geophysical research will focus on one area in the Northeast Atlantic. In this area, seismic and magnetic data acquisition will take place. In addition, bathymetry and gravimetric data will be acquired as well. The area is the marked area in the map and is outside the 12 miles zone of Iceland (68.38°N,14.75°W; 69.47°N,11.37°W; 67.00°N,6.23°W; 65.77°N,5.69°W; 63.47°N,10.79°W; 64.08°N,12.28°W).

9. Brief description of purpose of cruise

Research cruise: With this marine geophysical survey, we aim to reveal the distribution of oceanic versus continental crust between the Jan Mayen Microplate Complex and the Faroe continental plateau. Major open question is the fate and amount of continental material now dispersed in the Northeast Atlantic as a consequence of the rift migration from the Aegir Ridge to the Kolbeinsey Ridge. Currently, competing hypotheses denote the crustal composition of the Iceland Plateau as (i) thickened oceanic (mafic) crust, (ii) stretched continental crust and possibly exhumed mantle or (iii) oceanic rift migration by rift jumps with embedded continental fragments.

10. Dates and names of intended ports of call (if applicable)

Reykjavik, Iceland:

For four days within the time window of 08.05.2026 to 17.05.2026

⇒ Planned so far from 11.05.2026 to 14.05.2026

(already applied for with notification of research cruise MSM142)

Reykjavik, Iceland:

For four days within the time window of 15.06.2026 to 24.06.2026

⇒ Planned so far from 18.06.2026 to 21.06.2026

11. Any special requirements at ports of call notification of proposed research cruise:

Crew change; unloading / loading of equipment; logistics; bunkering.

Part B: DETAILS

1. Name of Research Ship: **R.V. MARIA S. MERIAN** Cruise No. **MSM143**
2. Dates of Cruise: **Reykjavik, Iceland, May 14th 2026**
to Reykjavik, Iceland, June 18th 2026
3. Purpose of the research and general operational methods

a) Purpose of research

With this marine geophysical survey, we aim to reveal the distribution of oceanic versus continental crust between the Jan Mayen Microplate Complex, Iceland Plateau and the Faroe continental plateau. Major open question is the history and amount of continental material now dispersed in the Northeast Atlantic as a consequence of the rift migration from the Aegir Ridge to the Kolbeinsey Ridge. Currently, competing hypotheses denote the crustal composition of the Iceland Plateau as (i) thickened oceanic (mafic) crust, (ii) stretched continental crust and possibly exhumed mantle or (iii) oceanic rift migration by rift jumps with embedded continental fragments.

b) General operational methods (including full description of any fish gear, trawl type, mesh size, etc. & planned sampling)

During the cruise, the following instrument shall be used:

- Seismic streamer cable (Sentinel solid state), total length about 6000 m.
- Up to 35 ocean bottom seismometers (OBS), Type LOBSTER and NAMMU (manufactured by K.U.M. Kiel, Germany).
- As seismic sources, a G-Gun array consisting of 16 airguns (all Sercel BluePulse) will be used. Additionally, we will increase our G-Gun array consisting up to 20 airguns for the two seismic refraction lines.
- Two magnetometers are towed behind the vessel.
- A sea gravimeter is installed inside the research vessel
- A passive acoustic monitoring (PAM) cable for marine mammal observers will be towed behind the vessel
- Hull-mounted multibeam (Kongsberg EM122 / EM712) and sediment echosounder (Atlas PARASOUND DS P-70).
- At some reference points, CTD-measurements will be conducted within the water column.
- Underway permanent water sampling / thermosalinograph.
- Underway measurements with meteorological sensors.

The usage of moored or deployed instrumentation (OBS, Streamer cable, seismic sources, CTD, towed magnetometer) will be limited to the marked area. Ship-based methods (multibeam, sediment echosounder, gravimetry) will be applied in the whole working area inclusive transit outside the 12 miles zone of Iceland.

The seismic work of the cruise will be carried out under the observation of two professional/certified marine mammal observers. They will observe before and during

seismic work visually and acoustically (PAM). The start or the interruption of the seismic work will be decided based on the «German mitigation measures» as stated in the Appendix 3 of the following document:

https://www.portalforschungsschiffe.de/downloads/cruise_proposal_preparation_instructions_elan.pdf.

These mitigation measures are comparable to the international JNCC standard. In brief, this includes a pre-watch phase (60 minutes) of the mitigation radius (750 m). In case of no detected marine mammals the seismic work will be started with a soft start (20 minutes). During seismic work, the mitigation radius is monitored continuously, either visually or acoustically (PAM). Seismic work will be interrupted if a marine mammal is detected within the mitigation radius. After the mammal left the mitigation radius seismic work will be resumed with a soft start. All observations and measurements will be documented in the cruise report.

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

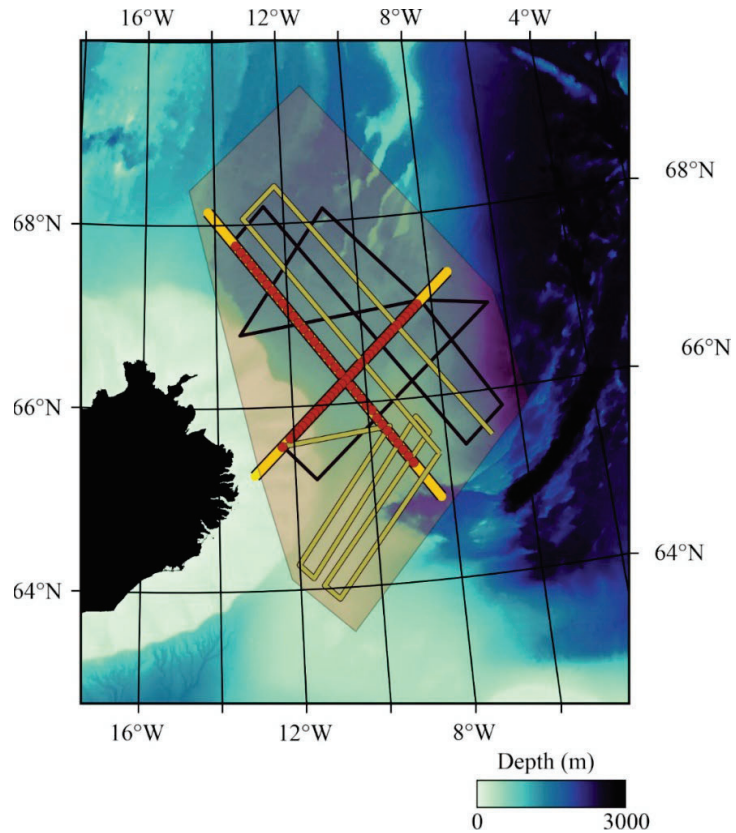


Figure.1: Map of the working area (marked box) with location of planned multi-channel reflection (black) and seismic refraction (thick yellow) lines. Red dots mark OBS positions. Light green lines indicate the magnetic survey.

Line	Length (nm)	Long (deg)	Lat (deg)
01	190	-13.50	67.81
02	31	-12.58	68.19
03	205	-7.50	65.44
04	35	-6.43	65.81
05	87	-8.29	67.06
06	132	-12.30	65.57
07	31	-11.45	65.19
08	161	-6.45	66.94
09	44	-8.29	67.06
10	120	-13.35	66.79
11	100	-10.86	68.15
12	88	-8.29	67.06
Start R1		-14.19	68.14
R1	243 (including run-in and run-out of 50 km)	-8.29	64.90

Iceland

Start R2		-13.05	65.26
R2	186 (including run-in and run-out of 50 km)	-7.46	67.33

The corner marks of the requested measuring area are: 68.38°N,14.75°W; 69.47°N,11.37°W; 67.00°N,6.23°W; 65.77°N,5.69°W; 63.47°N,10.79°W; 64.08°N,12.28°W

The survey area lies exclusively in Icelandic waters and outside the 12-mile zone.

Estimated date of first entry into EEZ of coastal state:

The research cruise MSM143 is going to start in the waters of Iceland (Reykjavik).

Estimated last exit from EEZ of coastal state:

The research cruise MSM143 is going to end in the waters of Iceland (Reykjavik).

Multiple EEZ entries/exits during the research cruise? **No**

5. Types of samples required (e.g., Geological / Water / Plankton / Fish / Radioactivity Isotope) and (b) methods by which samples will be obtained (including dredging / coring / drilling/ fishing etc.).

(a) Type of samples	(b) Method
Surface water samples	Permanent water sampling / Permanent surface water sampling / analysis (incl. Thermosalinograph)

6. Details of moored equipment:

Laying	Recovery	Description	Latitude	Longitude
Up to 35 Oceanbottom Seismometers (OBS) shall be deployed along the R1 and R2 profiles. Possible positions are marked on the chart (Fig.1).				

OBS station	Long (deg)	Lat (deg)
01	-13.4087	67.7695
02	-13.2618	67.6992
03	-13.1180	67.6281
04	-12.9744	67.5572
05	-12.8308	67.4862
06	-12.6896	67.4147
07	-12.5493	67.3432
08	-12.4075	67.2721
09	-12.2689	67.2003
10	-12.1295	67.1289
11	-11.9917	67.0569
12	-11.8547	66.9850
13	-11.7185	66.9130
14	-11.5832	66.8409

Iceland

15	-11.4487	66.7681
16	-11.3148	66.6961
17	-11.1825	66.6237
18	-11.0496	66.5509
19	-10.9189	66.4779
20	-10.7874	66.4052
21	-10.6575	66.3323
22	-10.5290	66.2591
23	-10.4006	66.1860
24	-10.2728	66.1129
25	-10.1451	66.0396
26	-10.0196	65.9659
27	-9.8905	65.9103
28	-9.7693	65.8186
29	-9.6459	65.7447
30	-9.5226	65.6706
31	-9.3990	65.5970
32	-9.2764	65.5228
33	-9.1572	65.4485
34	-9.0365	65.3744
35	-8.9166	65.2999
36	-8.4093	67.0128
37	-8.5305	66.9717
38	-8.6512	66.9305
39	-8.7716	66.8892
40	-8.8915	66.8479
41	-9.0111	66.8064
42	-9.1302	66.7648
43	-9.2490	66.7232
44	-9.3673	66.6814
45	-9.4852	66.6396
46	-9.6028	66.5977
47	-9.7199	66.5557
48	-9.8367	66.5136
49	-9.9530	66.4714
50	-10.0690	66.4291
51	-10.1846	66.3867
52	-10.2997	66.3442
53	-10.4145	66.3017
54	-10.5301	66.2596
55	-10.6428	66.2164
56	-10.7567	66.1737
57	-10.8702	66.1310
58	-10.9833	66.0881
59	-11.0957	66.0450
60	-11.2077	66.0018
61	-11.3196	65.9587

Iceland

62	-11.4309	65.9154
63	-11.5421	65.8721
64	-11.6526	65.8286
65	-11.7627	65.7850
66	-11.8728	65.7414
67	-11.9825	65.6979
68	-12.090	65.6542
69	-12.1990	65.6107
70	-12.3086	65.5667

7. Explosives: **No explosives**

Detail and reference of

- a. Any relevant previous/future cruises: **None**
- b. Any previously published research data relating to the proposed cruise: **None**

8. 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.

Prof. Dr. Ármann Höskuldsson, research professor. University of Iceland, Institute of Earth Sciences, Askja, Sturlugata 7, 102 Reykjavik, Iceland, phone: +354 525 4215, email: armh@hi.is

Dr. Anett Blischke, senior scientist. Iceland GeoSurvey (ÍSOR), Akureyri Branch, Rangárvöllum 2, hús 8, 603 Akureyri, Iceland, phone: +354 528 1591, email: Anett.Blischke@isor.is

9. State

- a. Whether visits to the ship in port by scientists of the coastal states concerned will be acceptable.

Yes, after discussion

- 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.

Embarkation: Reykjavik, Iceland, 13.05.2026

Disembarkation: Reykjavik, Iceland, 18.06.2026

- a) When research data from the intended cruise are likely to be made available to the coastal state and by what means:
 - **Cruise Report three months after finishing the research cruise**
 - **Scientific publication with the following three years**

Part C: SCIENTIFIC EQUIPMENT

COASTAL STATE: Iceland

11. Complete the following table - (indicate 'YES' or 'NO'):

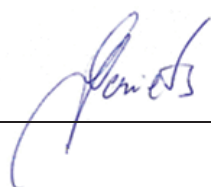
Please add in “b” the equipment you will bring to the vessel and complete the table with yes or no. Note that forgotten equipment can led to restrictions in research.

List of all major marine scientific equipment it is proposed to use.	Fisheries research within fishing limits	Research concerning continental shelf out to State's margin	Waters in which equipment will be deployed			
			within 3 NM	between 3-12 NM	between 12-50 NM	between 50-200 NM

a. vessel mounted systems						
ADCP & XBand radar currents	No	No	No	No	Yes	Yes
USBL underwater positioning	No	No	No	No	Yes	Yes
Multibeam echosounder	No	No	No	No	Yes	Yes
Sub-bottom profiler Parasound P70	No	No	No	No	Yes	Yes
Permanent surface water sampling / analysis (incl. Thermosalinograph)	No	No	No	No	Yes	Yes
b. mobile equipment						
Sound velocity probe AML SV PlusX	No	No	No	No	Yes	Yes
XSV Expendable Sound Velocimeter	No	No	No	No	Yes	Yes
Meteorological Sensors	No	No	No	No	Yes	Yes
Streamer (6 km long)	No	No	No	No	Yes	Yes
Airgun array	No	No	No	No	Yes	Yes
Ocean Bottom Seismometers	No	No	No	No	Yes	Yes
Magnetometry	No	No	No	No	Yes	Yes
Sea Gravimeter	No	No	No	No	Yes	Yes
Passive Acoustic monitoring (PAM)	No	No	No	No	Yes	Yes

Hamburg, 17.10.2026

Date



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 D-20146 Hamburg
 - Germany -

(On behalf of the principal scientist)