NOTIFICATION OF PROPOSED RESEARCH CRUISE

PART A: GENERAL

1. NAME OF RESEARCH SHIP: **RV POLARSTERN** — CRUISE NO.: **ANT-XXVIII/5**

2. DATES OF CRUISE: From 11.04.2012 To 16.05.2012

3. OPERATING AUTHORITY:
Stiftung Alfred-Wegener-Institute for Polar- and Marine Research
Am Handelshafen 12, 27570 Bremerhaven, Germany
Phone +49 (0) 471-4831-2241 , Fax +49 (0) 471-4831-1355, E-mail: Schiffskoord@awi.de

4. OWNER: **"Federal Ministry of Education and Research"**
- German Government -

5. PARTICULARS OF SHIP:

Name:	**POLARSTERN**
Nationality:	**GERMAN**
Overall length: (in metres)	**117.91**
Maximum draught: (in metres)	**11.21**
Net tonnage:	**3532.30**
Propulsion e.g. diesel/steam:	**diesel**
Call sign:	**DBLK**

6. CREW

Name of master:	**S.Schwarze**
Number of crew:	**43**

7. SCIENTIFIC PERSONNEL

Scientist in charge

Name and address :	Karl Bumke
Street	: Düsternbrooker Weg 20
City	: 24105 Kiel
Phone	: +49 431 600 4060
Fax	: +49 431 600 4060
E-mail	: kbumke@ifm-geomar.de

No. of Scientists : 42

8. GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE (with reference to latitude and longitude)
..... **See also attached maps.**
Entrance: 49°38'N / 03°41'W, Exit: 49°59'N / 02°02'W,
Entrance: 50°09'N / 01°08'W, Exit: 50°31'N / 00°56'E,
Entrance: 51°04'N / 01°37'E, Exit: 51°25'N / 02°05'E

9. BRIEF DESCRIPTION OF PURPOSE OF CRUISE

To perform basic marine research in geological, chemical, biological oceanography and atmospheric science.

10. DATES AND NAMES OF INTENDED PORTS OF CALL
16.05.2012 Bremerhaven, Germany

11. ANY SPECIAL REQUIREMENTS AT PORTS OF CALL

NOTIFICATION OF PROPOSED RESEARCH CRUISE

PART B: DETAILS

1. NAME OF RESEARCH SHIP **RV POLARSTERN** CRUISE NO. **ANT-XXVIII/5**

2. DATES OF CRUISE From 11.04.2012 To 16.05.2012

3. a) PURPOSE OF RESEARCH

Chemical and biological oceanography of the water column, air chemistry, underwater radiation measurements, energy budget at the air-sea interface, aerosol measurements, bird and whale observations, transport of living material, magnetic measurements, bathymetrie, atmospheric profiling, CTD-measurements

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

Water sampling nsing a CTD, air sampling and filtering, underwater radiation flux measurements from the zodiac, solar and thermal radiation measurements, turbulence measurements by using a sonic anemometer and an absorption hygrometer, magnetometer measurements, bathymetrie using a hydro sweep multibeam echo sounder, atmospheric sounding by weather ballons and a passive microwave radiometer, cloud observations by a full sky imager

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 Areas of planned operations

see attachment I

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

water samples with respect to oceanographic chemistry and biology
air samples with respect to air chemistry

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-rosette for getting water samples. **Air sampler and filtering systems**

6. DETAILS OF MOORED EQUIPMENT

None

Dates Laying	Recovery	Description	Depth	Latitude	Longitude

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

a) Type and trade name
b) Chemical content (and formula)
c) IMO IMDG code (reference and UN no.)
d) Quantity and method of storage on board
e) If explosives give dates of detonation
Method of detonation
Position 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

Previous: ANT-XXVII/1, ANT-XXVI/1, ANT-XXVI/5, ANT-XXV/4

Future: ANT-XXIX

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

All cruise reports with detailed station lists are published in the series "Reports on Polar Research" by Alfred-Wegener-Institute for Polar-und Marine Research, Bremerhaven.

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

none

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

Possible, but not planned

c) When research data from the intended cruise are likely to be made available to the coastal state and by what means
Data are available digitally within one year after the cruise. In addition, the data are published in the Reports of Polar Research by AWI and in other reports, papers and in international scientific journals.

PART C. SCIENTIFIC EQUIPMENT

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

Coastal state: United Kingdom

Port of call:
Dates:

Indicate "YES" or "NO"

				DISTANCE FROM COAST		
List scientific work by function add work if not listed below	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 3 nm	Between 3-12 nm	Between 12-200 nm
*Meteorological measurements	N	N	N	N	Y	Y
*Balloon sampling	N	N	N	N	Y	Y
*Air sampling	N	N	N	N	Y	Y
*Water sampling	Y	N	N	N	Y	Y
*Whale observing	N	N	N	N	Y	Y
*Waterdepth sounder	N	N	Y	N	Y	Y
**Sediment sounder	N	N	N	N	N	N
**Watercoloumn sounder	N	N	N	N	Y	Y
**(ADCP) Sea current measurement	N	N	N	N	Y	Y
**Magnetometry	N	N	N	N	Y	Y
**Gravity	N	N	N	N	N	N
***Seabed sampling	N	N	N	N	N	N
***Fishing	N	N	N	N	N	N
***Under water TV	N	N	N	N	N	N
***Moored instruments	N	N	N	N	N	N
***Towed instruments	N	N	N	N	N	N
***Seismics	N	N	N	N	N	N
Under water radiation	N	N	N	N	Y	Y

*Always measured **Optional ships equipment ***To be modified acc. to the scientific programm (own measurements)

Markus Hirsch

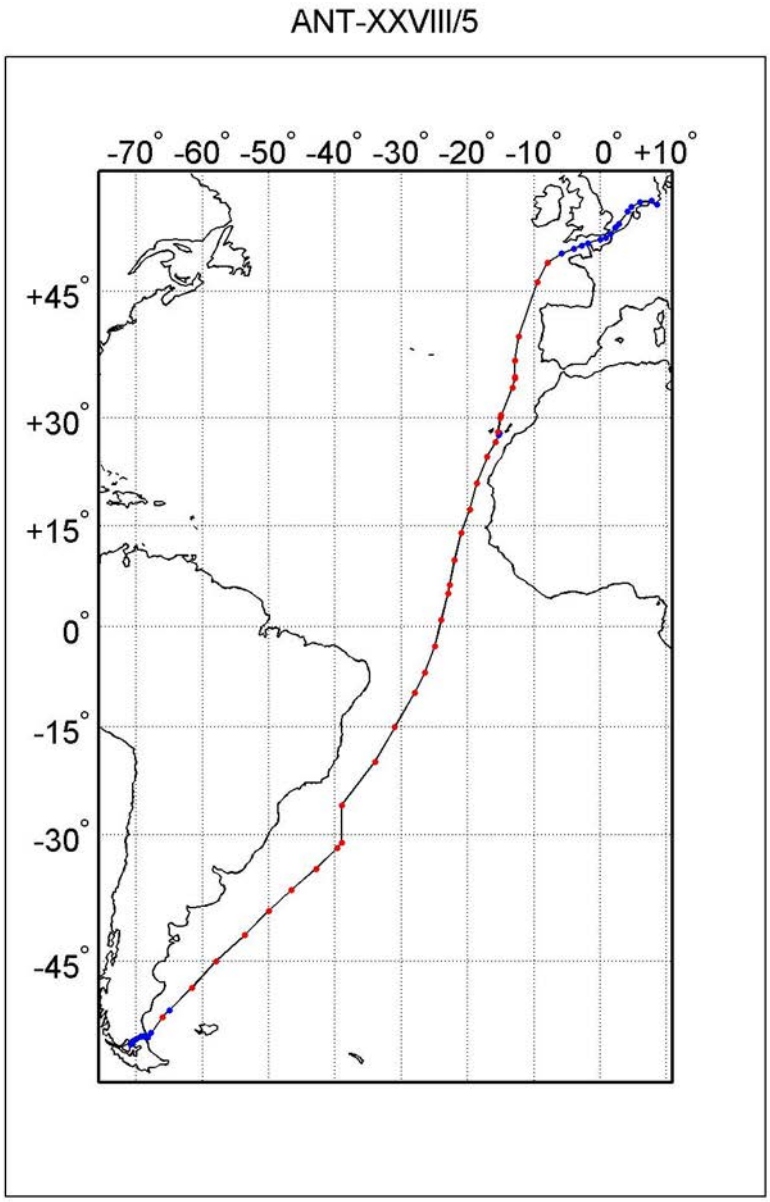
(On behalf of the Principal Scientist)

Dated 10.10.11

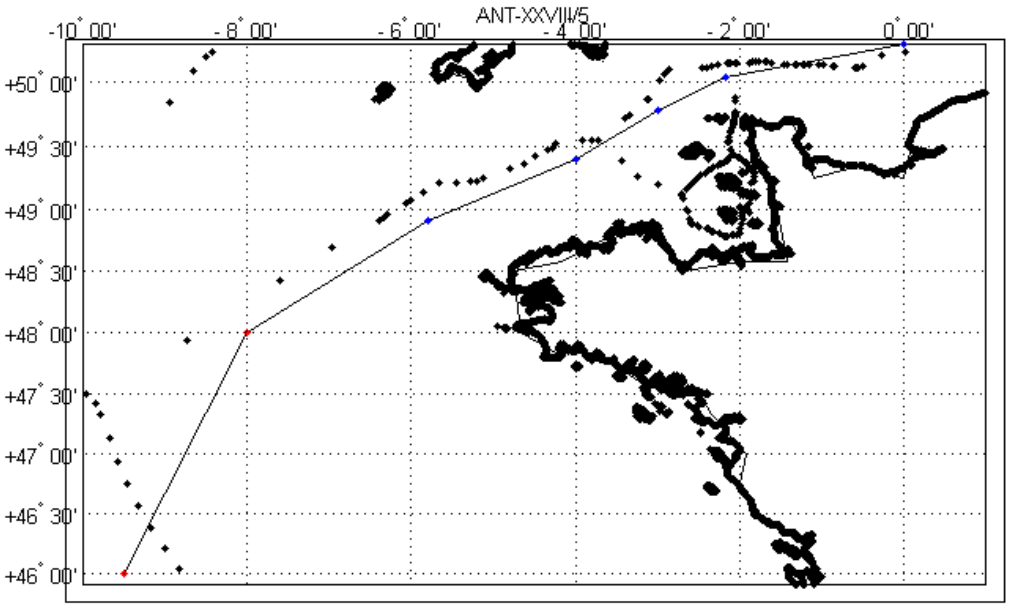
Stiftung Alfred-Wegener-Institut
für Polar- und Meeresforschung
in der Helmholtz-Gemeinschaft
Am Handelshafen 12
27570 Bremerhaven

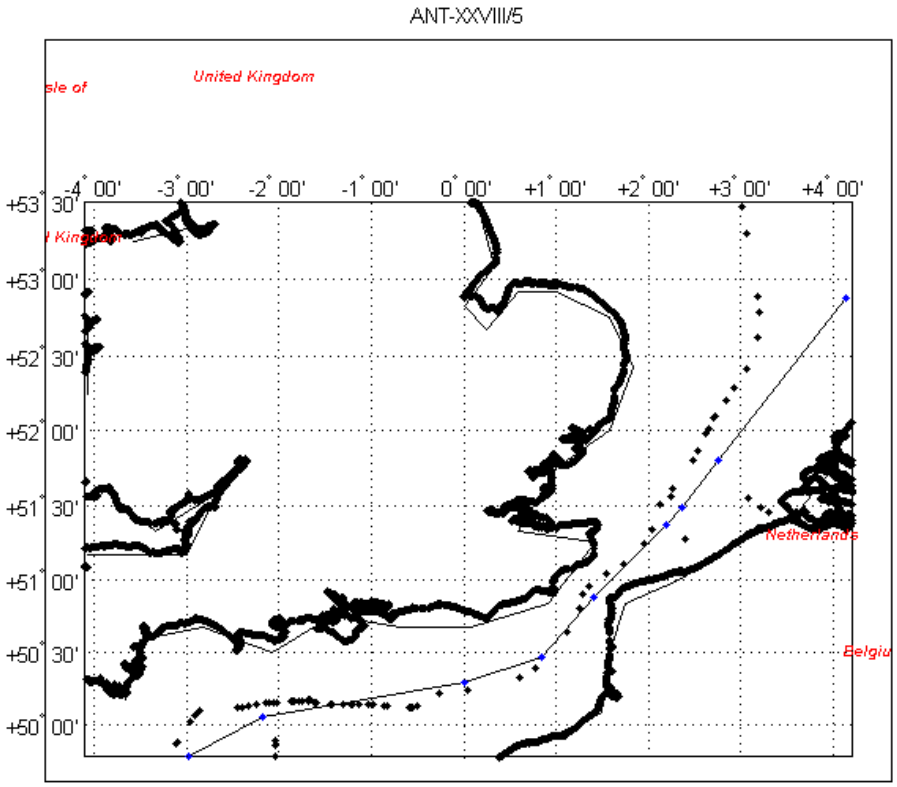
IF ANY DETAILS ARE MATERIALLY CHANGED REGARDING DATES/AREA OF OPERATION AFTER THIS FORM HAS BEEN SUBMITTED, THE COASTAL STATE AUTHORITIES MUST BE NOTIFIED IMMEDIATELY !

Attachment I. (maps)



Trackline for ANT-XXVIII/5. Red symbols depict planned stations





Trackline through the Gulf of Biscay, the Channel, and the Northsea, red symbols mark planned stations, blue ones indicate waypoints.

Attachment II. (Dangerous goods)

Name	IMO Class	UN Code	Amount
Liquid nitrogen	2,2	1977	200 L
Mercury	8	2809	2x 100g
Hydrofluoric Acid 40%	8	1790	50 ml
Acetic Acid 100%	8	2789	500 ml
Hydrochloric Acid 32%	8	1789	500 ml
Nitric Acid 65%	8	2031	2x 500 ml
Sulfuric Acid	8	1830	25 ml
Formaldehyde	8	2209	50 ml
Hydrogenperoxide	5.1	2014	200 ml
Hydrazin Sulfate	8	2928	5x 0,130g
Potassium Chlorate	5.1	1485	10x 2,45g
Cupferron	6.1	2811	5x 0,155g
1,3-Diphenylguanidine	6.1	2811	5x 0,211g
Nitrogen compressed	2.2	1066	3x 50L, steel cyl.
Corrosive liquid, acidic, inorganic N.O.S. Cont. Nitric Acid Solution (standard sol.)	8	2031	10 x 10mL
Sodium hydroxid for 5M	8	1823	2 x 20g in 100mL
Ammonia	8	2672	100mL
Isopropanol	3	1219	100mL
1M HCl (Hydrochloricaxyd)	8	1789	1L
Ethanol	3	1170	6L
NaOCl (Sodiumhypochlorite)	5.1	none	0,3 L
Aceton	3 / II	1090	2 L
Butan	2.1	1011	2.5 L (10 cartr. of 250 ml)
Corrosive liquid, toxic, n.o.s. (glutardialdehyde solution)	8 (6.1) / II	2922	750 mL
Ethanol	3.2 / II	1170	4 L
Ethylacetate	3.2 / II	1173	3 kg
Formaldehyde	8 / III	2209	4 L
Formamide	3 / III	2265	500 mL
Hydrochloric acid (6 N) (limited quantity)	8/ II	1789	1 L
Hydrochlorid acid (1 N) (limited quantity)	8 / II	1789	500 mL
Isopropanol (2-PROPANOL 70%)	3 / II	1219	1 L
1Methanol	3.2 /II	1230	4 L
Paraformaldehyde	4.1 / III	2213	100 g
Radioactive material (limited quantity)	7	2910	20 ml (5.0 E08 Bq)
Sodium Hydroxide (1 N)	8 / II	1823	500 mL
Trichloroacetic acid	8 / II	1839	5 kg
Triton X 100	9 / III	3082	10 mL

Attachment III

Station List:

Station	Latitude N	Longitude E	Begin	Action	End	Country
1	-50.6734	-66.0577	12-Apr-2012 15:22	CTD/RO, shallow&radiation	12-Apr-2012 15:55	AR
2	-47.7513	-61.5829	13-Apr-2012 15:37	CTD/RO, shallow&radiation	13-Apr-2012 16:12	AR
3	-45.0000	-58.0000	14-Apr-2012 13:27	CTD/RO, deep&radiation	14-Apr-2012 15:42	-
4	-42.1702	-53.6860	15-Apr-2012 15:51	CTD/RO, radiation	15-Apr-2012 17:22	-
5	-39.3802	-50.0009	16-Apr-2012 16:00	CTD/RO, shallow&radiation	16-Apr-2012 17:31	-
6	-36.8962	-46.5789	17-Apr-2012 14:34	CTD/RO, radiation	17-Apr-2012 16:05	-
7	-34.3287	-42.8937	18-Apr-2012 14:43	CTD/RO, radiation	18-Apr-2012 17:34	-
8	-31.6801	-39.7350	19-Apr-2012 15:05	CTD/RO, radiation	19-Apr-2012 16:36	-
9	-31.0000	-39.0000	19-Apr-2012 22:18	CTD/RO, VEMA1 deep&radiation	20-Apr-2012 00:51	-
10	-26.0000	-39.0000	21-Apr-2012 05:24	CTD/RO, VEMA2 radiation	21-Apr-2012 07:56	-
11	-20.0000	-34.0000	23-Apr-2012 02:51	CTD/RO, shallow&radiation	23-Apr-2012 04:21	-
12	-15.0000	-31.0000	24-Apr-2012 13:11	CTD/RO, deep&radiation	24-Apr-2012 16:08	-
13	-10.0000	-28.0000	26-Apr-2012 01:08	CTD/RO, shallow&radiation	26-Apr-2012 02:39	-
14	-7.0000	-26.5000	26-Apr-2012 21:56	CTD/RO, shallow&radiation	26-Apr-2012 23:26	-
15	-3.0000	-25.0000	27-Apr-2012 23:54	CTD/RO, shallow&radiation	28-Apr-2012 01:25	-
16	1.0000	-24.0000	29-Apr-2012 01:03	CTD/RO, deep&radiation	29-Apr-2012 03:24	-
17	5.0000	-23.0000	30-Apr-2012 03:02	CTD/RO, shallow&radiation	30-Apr-2012 04:33	-
18	6.3047	-22.7381	30-Apr-2012 12:31	CTD/RO, radiation	30-Apr-2012 14:02	-
19	10.0000	-22.0000	01-May-2012 11:40	CTD/RO, shallow&radiation	01-May-2012 13:10	-
20	14.0000	-21.0000	02-May-2012 12:47	CTD/RO, deep&radiation	02-May-2012 15:30	CV
21	17.3641	-19.7297	03-May-2012 12:05	CTD/RO, radiation	03-May-2012 13:35	MR
22	21.0915	-18.6768	04-May-2012 11:44	CTD/RO, radiation	04-May-2012 13:15	MA
23	24.7276	-17.0975	05-May-2012 11:43	CTD/RO, radiation	05-May-2012 13:25	MA
24	26.7665	-15.7813	06-May-2012 03:09	CTD/RO, radiation	06-May-2012 04:39	MA
25	28.15	-15.4167	06-May-2012 14:03	Las Palmas enter port		ES
26	28.15	-15.4167	06-May-2012 21:56	Las Palmas harbour sailing		ES
27	30.0078	-15.0794	07-May-2012 08:30	CTD/RO, shallow&radiation	07-May-2012 10:00	PT
28	30.387	-14.9917	07-May-2012 12:41	CTD/RO, radiation	07-May-2012 14:11	PT
29	33.8782	-13.2897	08-May-2012 11:53	CTD/RO, radiation	08-May-2012 11:58	PT
30	34.9567	-12.9233	08-May-2012 21:26	Hydrosweep	09-May-2012 17:26	-
31	35.1937	-12.9387	09-May-2012 19:05	CTD/RO, deep&radiation	09-May-2012 21:43	PT
32	37.1624	-12.9123	10-May-2012 08:26	CTD/RO, radiation	10-May-2012 10:02	ES
33	39.9745	-12.3594	11-May-2012 02:24	CTD/RO, shallow&radiation	11-May-2012 03:59	ES
34	46.0000	-9.5000	12-May-2012 16:49	CTD/RO, shallow&radiation	12-May-2012 18:17	ES
35	48.0000	-8.0000	13-May-2012 07:23	CTD/RO, shallow&radiation	13-May-2012 07:59	FR

Planned stations for CDT-rosette water cast, underwater radiation, and Hydrosweep measurements. Stations 8 and 9 are fixed in position, other stations may be shifted due to daytime and weather for underwater radiation measurements.