

## NOTIFICATION OF PROPOSED RESEARCH CRUISE

### PART A: GENERAL

1. NAME OF RESEARCH SHIP CRUISE NO.  
**RV POLARSTERN** **ANT-XXV/5**
2. DATES OF CRUISE From To  
**11.04.2009** **24.05.2009**
3. OPERATING AUTHORITY:  
**Stiftung Alfred-Wegener-Institut für Polar-und Meeresforschung**  
**Postfach 12 01 61**  
**D-27515 Bremerhaven**
- TELEPHONE: **0049 471 4831-0**
- TELEFAX: **0049 471 4831 1355**
- TELEX: **238 695 polar d**
4. OWNER (if different from no. 3)
5. PARTICULARS OF SHIP:
- |   |                   |
|---|-------------------|
| Name:   | <b>POLARSTERN</b> |
| Nationality:  | <b>GERMAN</b>     |
| Overall length: (in metres)                                 | <b>117,91</b>     |
| Maximum draught: (in metres)                                | <b>11,21</b>      |
| Net tonnage:  | <b>3.532,30</b>   |
| Propulsion e.g. diesel/steam:                               | <b>diesel</b>     |
| Call sign:  | <b>DBLK</b>       |
| Registration port and number (if registered fishing vessel) |                   |
6. CREW
- Name of master: **Stefan Schwarze**
- Number of crew: **45**
7. SCIENTIFIC PERSONNEL
- Name and address of scientist in charge: **Dr. Saad El Naggat**  
**Stiftung Alfred-Wegener-Institut für Polar-und Meeresforschung (AWI)**  
**Postfach 12 01 61**  
**D-27515 Bremerhaven, Germany**
- Tel/fax no.: **0049 432 600 -4057/4052**
- No. of scientists: **30**
8. GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE (with reference to latitude and longitude)
- 53° N, 20° W**  
**54° S, 71° W** **see also maps attached**
9. BRIEF DESCRIPTION OF PURPOSE OF CRUISE
- To perform basic marine research in atmospheric and biological science.**
10. DATES AND NAMES OF INTENDED PORTS OF CALL
- Punta Arenas (RCH): arrival 09.04.2009, departure: 11.04.2009**  
**Las Palmas: some hours in time frame between 12. and 17.05.2009,**
11. ANY SPECIAL REQUIREMENTS AT PORTS OF CALL
- Punta-Arenas: partly exchange of personal, supply, and scientific crew**  
**Las Palmas: partly exchange of personal, Posidonia tests on roads, about 6 hours**

NOTIFICATION OF PROPOSED RESEARCH CRUISE

**PART B: DETAILS**

1. NAME OF RESEARCH SHIP CRUISE NO.  
RV POLARSTERN ANT-XXV/5
  
2. DATES OF CRUISE From To  
11.04.2009 24.05.2009
  
3. a) PURPOSE OF RESEARCH  
**Echo Sounding:** Personal training on the sediment echo sounder "PARASOUND DS III". No data will be recorded.  
**Remote sensing:** To make optical and biological measurements in the surface water as ground truthing for satellite observations.  
**Atmospheric Chemistry:** to study the distribution of persistent organic pollutants (POPs)  
**Atmospheric Profiling and Radiation Budget:** To perform continuous observations of vertical profiles of temperature and humidity as well as liquid water path, cloud cover, cloud type and radiation budget, validation of satellite based atmospheric profiling  
**Air-Sea Interaction:** To estimate the turbulent fluxes of momentum, sensible heat, latent heat, and CO<sub>2</sub>  
**Marine Chemistry:** To measure CO<sub>2</sub> fluxes between ocean and atmosphere  
**Physical Oceanography:** study of ocean currents and water mass properties  
**Marine Biology:** Physiological studies of marine animals  
  
b) GENERAL OPERATIONAL METHODS (including full description of any fish gear, trawl type, mesh size, etc.)  
Sediment Echo Sounding for training purposes only.  
Scientific measurement of water properties like temperature, salinity, oxygen, optical properties (beam transmission, chemical constituents, phytoplankton composition)  
Collect water samples, air samples, aerosol samples  
ADCP measurements of ocean currents  
Deployments of floats  
Make optical measurements in the atmosphere, deploy balloons with ozone and radiosondes.  
Measurement of spectral solar and UV radiation.  
Profiling of atmosphere with passive microwave radiometer  
Active remote sensing of cloud bottom height with standard ceilometer  
Whole sky imager for scene identification  
Pyranometer and pyrgeometer for surface radiation budget  
Infrared radiometer for skin sea surface temperature and cloud bottom temperature  
Hand-held sun-photometer for aerosol optical thickness  
Sonic-anemometer and open path LiCor for turbulent fluxes of latent and sensible heat, and CO<sub>2</sub>  
Transport of living marine animals from the Antarctic ocean to Bremerhaven
  
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 1.
  
5. a) TYPES OF SAMPLES REQUIRED (e.g., geological/water/plankton/fish/radionuclide)  
**Water (including phytoplankton), air, aerosol samples**  
  
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).  
  
Ship's seawater supply  
Air pump  
Balloon soundings  
Surface water sampling from moon pool  
Radiance measurements with taking online measurements of a radiometer suite mounted on the Ship's deck and also profiles during station time with an extra radiometer
  
6. DETAILS OF MOORED

<u>Dates</u>	<u>Recovery</u>	<u>Description</u>	<u>Depth</u>	<u>Latitude</u>	<u>Longitude</u>
<u>Laying</u>		No moorings			

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

**no hazardous material (except liquid nitrogen)**

- a) Type and trade name  
b) Chemical content (and formula)      **liquid nitrogen (200 l)**  
c) IMO IMDG code (reference and UN no.)  
d) Quantity and method of storage on board  
e) If explosives give dates of detonation      **no explosives**  
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:

POLARSTERN ANT XXIII/10	12.04. - 04.05. 2007
POLARSTERN ANT XXIV/1	26.10. - 26.11. 2007
POLARSTERN ANT XXIV/4	18.04. - 20.05. 2008

Future cruises are planned.

POLARSTERN ANT XXVI/1	10/11 2009
POLARSTERN ANT XXVI/5	04/05 2010
POLARSTERN ANT XXVII/1	10/11 2010

- 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

**Prof. Hein de Baar, Royal NIOZ, Texel, the Netherlands**  
**Dr. Gideon Henderson, Department of Earth Sciences, Parks Road, Oxford, UK**  
**Dr. Catherine Jeandel, LEGOS/Obs Midi-Pyrénées, Toulouse, France**  
**Dr. Jeronimo Lopez-Martinez, Faculty of Sciences Universidad Autónoma de Madrid, Spain**

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

Yes, dates see above.

- 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"

List scientific work <u>by function</u> e.g.	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	DISTANCE FROM COAST		
				Within 3 nm	Between 3-12 nm	Between 12-200 nm
Magnetometry	no	no	no	no	no	no
Gravity	no	no	no	no	no	no
Diving	no	no	no	no	no	no
Seismics	no	no	no	no	no	no
Seabed sampling	no	no	no	no	no	no
Bathymetry	no	no	no	no	no	yes
Trawling	no	no	no	no	no	no
Echo sounding	yes	no	no	no	no	yes
Water sampling	yes	no	yes	no	no	yes
U/W TV	no	no	no	no	no	no
Moored instr.	no	no	no	no	no	no
Towed instr.	no	no	no	no	no	no
beach sampling	no	no	no	no	---	---
Sampling of air				no	no	yes
Balloon sampling (ozone and radiosonde)				no	no	yes

Alfred-Wegener-Institut  
für Polar- und Meeresforschung  
Bereich Logistik  
Postfach 1201 61  
D-27515 Bremerhaven

*i.A. Anne Nisch*  
(On behalf of the Principal Scientist)

Dated 23. Dezember 2008

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

# Attachment 1

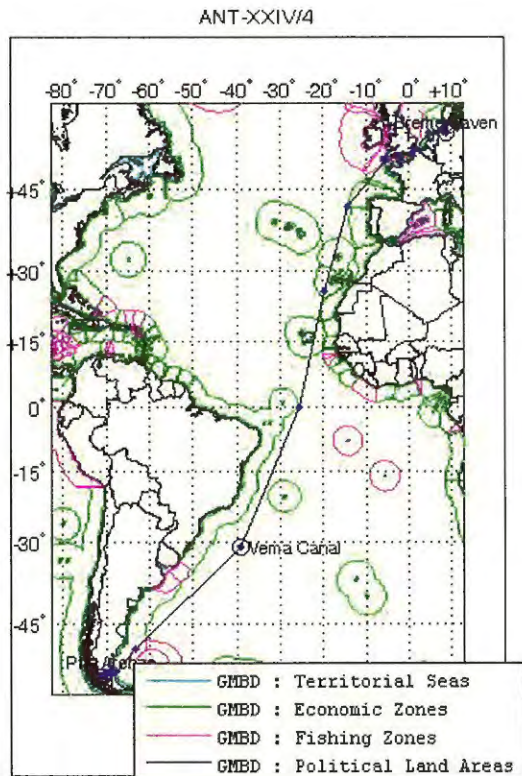
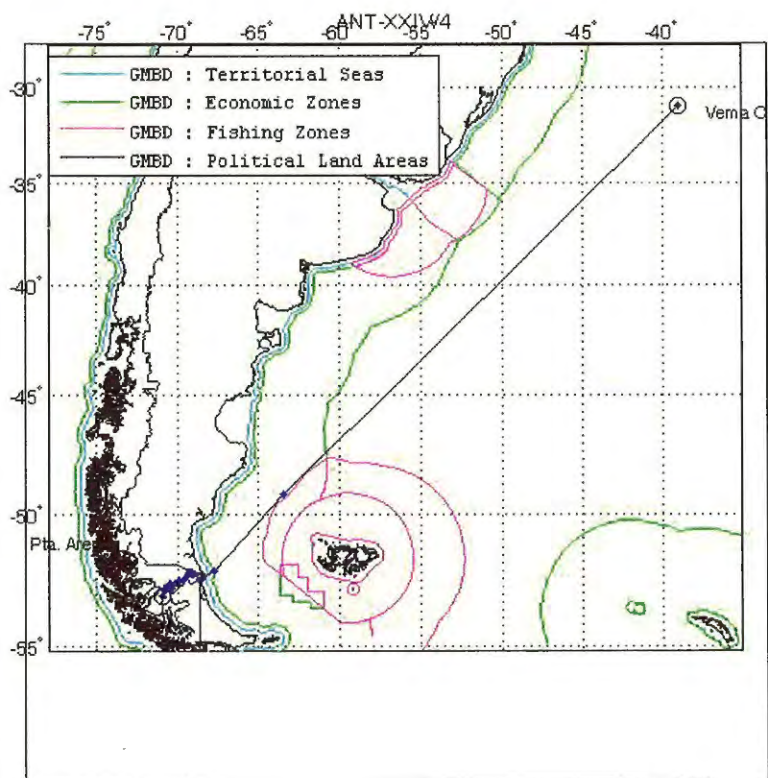
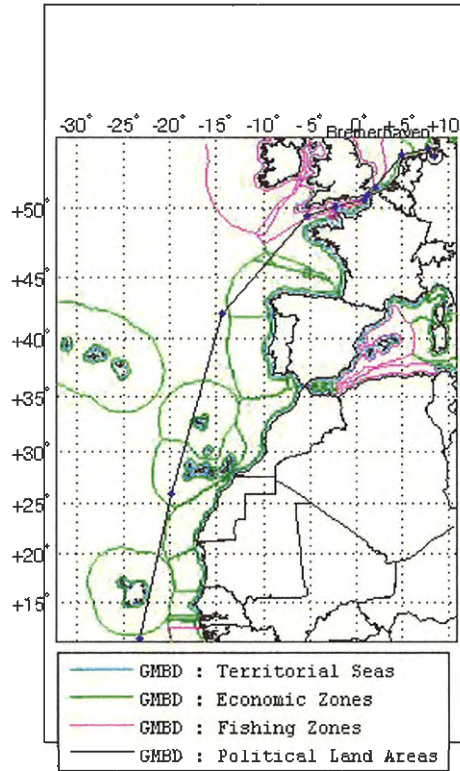


Fig. 1. Scheduled cruise track from Punta Arenas to Bremerhaven



ANT-XXIV/4



## Attachment 2 DG's

<i>No.</i>	<i>Name</i>	<i>IMO Class</i>	<i>UN Code</i>	<i>Amount</i>
1	Liquid nitrogen	2,2	1977	200 L