Application for Consent to conduct
Marine Scientific Research

Date: 26.10.2015

1. General Information

| 1.1 Cruise name and/or number: **PS98** |
|---|
| |

| 1.2 Sponsoring Institution(s): | |
|---|---|
| Name: | **Alfred-Wegener-Institute for Polar- and Marine Research** |
| Address: | **Am Handelshafen 12<br>27570 Bremerhaven<br>Germany** |
| Name of Director: | **Prof. Dr. Karin Lochte** |

| 1.3 Scientist in charge of the Project: | |
|---|---|
| Name: | **Dr. Bernhard Pospichal** |
| Country: | **Germany** |
| Affiliation: | **University of Leipzig** |
| Address: | **Stephanstr. 3, 04103 Leipzig, Germany** |
| Telephone: | **+49-471-4831-1709** |
| Fax: | **+49-471-4831-1849** |
| Email: | **bernhard.pospichal@uni-leipzig.de** |
| Website (for CV and photo): | **http://www.uni-leipzig.de/~pospichal** |

| 1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project: | |
|---|---|
| Name: | **Not applicable** |
| Affiliation: | |
| Address: | |
| Telephone: | |
| Fax: | |
| Email: | |
| Website (for CV and photo): | |

2. Description of Project

| 2.1 Nature and objectives of the project: |
|---|
| **Transit from Chile to Germany after Antarctic expeditions 2014/15.**<br>**The cruise will start in Punta Arenas (Chile), via Las Palmas (Canary Islands) to Bremerhaven (Germany). The transect will be used for en route measurements, a training programme for students and to calibrate hydro-acoustic sensors.**<br>**See map attached.** |

| 2.2 If designated as part of a larger scale project, then provide the name of the project and the Organisation responsible for coordinating the project: |
|---|
| **Not applicable** |

| 2.3 Relevant previous or future research projects: |
|---|
| **Not applicable** |

| 2.4 Previous publications relating to the project: |
|---|
| **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.** |

3. Geographical Areas

| 3.1 Indicate geographical areas in which the project is to be conducted (with reference in Latitude and longitude in decimal degrees, including coordinates of cruise/track/way points/sampling stations). Please provide coordinates in a separate excel spreadsheet. |
|---|
| **Transfer of vessel from Punta Arenas, Chile via Las Palmas, Spain to Bremerhaven, Germany. The Transit from Bremerhaven to Las Palmas will be used for en route measurements of meteorological and oceanographic data, for a training programme for students (sediment measurements (multibeam with hydrosweep / parasound) and tests and calibrations of onboard sensors.**<br>Areas: South Atlantic Ocean, Tropical Atlantic Ocean, Cape Verde, Canary Islands, Bay of Biscay, English Channel, North Sea, German Bight<br>(Punta Arenas 53°S 70°W en route to Canary Islands 28°N 15°W and German Bight 53°N 8°E) See also attached maps.<br><br>The trackline through the Engl.Channel will follow the regular traffic ways and traffic separation schemes. All measurements will be done while underway. Therefore a separate excel-list is not attached, as waypoints may vary due to the traffic situation. Vessels speed will be between 5 to 10,5knots. |

| 3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical Areas of the intended work and, as far as practicable, the location and depth of sampling Stations, the tracks of survey lines, and the locations of installations and equipment. |
|---|
| **See Attachment I, Maps Only en route measurements.** |

4. Methods and means to be used

| 4.1 Particulars of vessel: | |
|---|---|
| Name: | **POLARSTERN** |
| Type/Class: | **RV / Icebreaker** |
| Nationality (Flag State): | **GERMAN** |
| Identification Number (IMO/Lloyds No.): | **8013132** |
| Owner: | **Federal Ministry of Education and Research, German Government** |
| Operator: | **Alfred-Wegener-Institut. Helmholtz-Zentrum für Polar- und Meeresforschung** |
| Overall length (meters): | **117.91** |
| Maximum draught: | **11.21** |
| Displacement/Gross Tonnage: | **17,300 t** |
| Propulsion: | **2 Propeller, 4 Engines, MDO** |
| Cruising & maximum speed: | **12,0kn and 15.5 kn** |
| Call sign: | **DBLK** |
| INMARSAT number and method and capability of communication (including emergency frequencies): | **Inmarsat**<br>**Telephone: 00871 32184 2611 or 2711**<br>**Fax: 00871 32184 2612 or 2712** |
| Name of Master: | **Stefan Schwarze** |
| Number of Crew: | **43** |
| Number of Scientists on board: | **30** |

| 4.2 Particulars of Aircraft: | |
|---|---|
| Name: | **Not applicable** |
| Make/Model: | |
| Nationality (flag State): | |
| Website for diagram & Specifications: | |
| Owner: | |
| Operator: | |
| Overall Length (meters): | |
| Propulsion: | |
| Cruising & Maximum speed: | |
| Registration No.: | |
| Call Sign: | |
| Method and capability of communication (including emergency frequencies): | |
| Name of Pilot: | |
| Number of crew: | |
| Number of scientists on board: | |
| Details of sensor packages: | |
| Other relevant information: | |

| 4.3 Particulars of Autonomous Underwater Vehicle (AUV): | |
|---|---|
| Name: | **Not applicable** |
| Manufacturer and make/model: | |
| Nationality (Flag State): | |
| Website for diagram & Specifications: | |
| Owner: | |
| Operator: | |
| Overall length (meters): | |
| Displacement/Gross tonnage: | |
| Cruising & Maximum speed: | |
| Range/Endurance: | |
| Method and capability of communication (including emergency frequencies): | |
| Details of sensor packages: | |
| Other relevant information: | |

| 4.4 other craft in the project, including its use: |
|---|
| **Not applicable** |

| 4.5 Particulars of methods, full description of scientific instruments to be used(for fishing gear specify type and dimension) and location | | | |
|---|---|---|---|
| Types of samples and Measurements: | Methods to be used: | Instruments to be used: | To be carried out within 12nm (yes or no): |
| **Meteorological measurements** | | **Miscl.** | **yes** |
| **Air sampling** | **Neutron detection & cosmic particles, pCO2** | **DOAS, pCO2, thermosalinograph, distrometer, watervapouranalyzer** | **yes** |
| **Water sampling** | **pCO2, temperature, salinity** | **Ferrybox, Temp. / salinity sensors, particlefilter** | **yes** |
| **Sea bottom topography** | **hydro-acoustics** | **Hydrosweep DSIII** | **yes** |
| **Sea currents** | **hydro-acoustics** | **ADCP** | **yes** |
| **Sediment** | **hydro-acoustics** | **Parasound** | **yes** |

| | | | |
|---|---|---|---|
| **measurements** | | | |
| **Water measurements** | **hydro-acoustics, multi frequency** | **EK60** | **yes** |
| **Endotherme Observation** | **Visual, IR-camera** | **IR-Camera** | **yes** |
| **Remote sensing** | **Optical sounding, radiometry** | **Radiometers, Raman lidar** | **yes** |

| 4.6 Indicate nature and quantity of substances to be released into the marine environment: |
|---|
| **None** |

| 4.7 Indicate whether drilling will be carried out. If yes, please specify: |
|---|
| **None** |

| 4.8 Indicate whether explosives will be used. If yes, please specify type and trade name, Chemical content, depth of trade class and stowage, size, depth of detonation, frequency of Detonation, and position in latitude and longitude: |
|---|
| No |

5. Installations and Equipment

| Details of installations and equipment (including dates of laying, servicing, method and Anticipated timeframe for recover, as far as possible exact locations and depth, and Measurements): |
|---|
| **Not applicable** |

6. Dates

| 6.1 Expected dates of first entry into and final departure from the research area by the research vessel and/or other platforms: |
|---|
| **Not applicable due to en route measurements. Vessel will be on transit from Punta Arenas to Bremerhaven. Route will follow regular vessel traffic separation schemes. Measurements will be done underway. Expected transit through the English channel: 09.05.2016 to 13.05.2016** |
| 6.2 Indicate if multiple entries are expected: |
| **Not applicable** |

7. Port Calls

| 7.1 Dates and Names of intended ports of call: |
|---|
| **Punta Arenas (Chile) : 10.04.2016 departure**<br>**Las Palmas (Spain) : 04.05.2016**<br>**Bremerhaven (Germany) : 14.05.2016 arrival** |

| 7.2 Any special logistical requirements at ports of call: |
|---|
| **Not applicable** |

| 7.3 Name/Address/Telephone of shipping agent (if available): |
|---|
| **Not applicable** |

8. Participation of the representative of the coastal State

| 8.1 Modalities of the participation of the representative of the coastal State in the research Project: |
|---|
| **Participation possible but not planned. Contact: Schiffskoord@awi.de** |

| 8.2 Proposed dates and ports for embarkation/disembarkation: | | | |
|---|---|---|---|
| **Las Palmas** | **(Spain)** | **:** | **04.05.2016** |
| **Bremerhaven** | **(Germany)** | **:** | **14.05.2016** |

9. Access to Data, Samples and Research Results

| 9.1 Expected dates of submission to coastal State of preliminary report, which should include The expected dates of submission of the data and research results: |
|---|
| **6 months after the end of the cruise** |

| 9.2 Anticipated dates of submission to the coastal State of the final report: |
|---|
| **12 months after the end of the cruise** |

| 9.3 Proposed means for access by coastal State to data (including format) and samples: |
|---|
| **Via Internet, through the Pangaea database accessible at http://www.pangaea.de/** |

| 9.4 Proposed means to provide coastal State with assessment of data, samples and Research results: |
|---|
| **Results are published in the Reports of Polar Research by AWI and in other reports, papers and in international scientific journals.** |

| 9.5 Proposed means to provide assistance in assessment or interpretation of data, samples And research results: |
|---|
| **Data including documentation and contact details of the responsible scientists are available through the Pangaea database accessible at http://www.pangaea.de** |

| 9.6 Proposed means of making results internationally available: |
|---|
| **Results are published in the Reports of Polar Research by AWI and in other reports, papers and in international scientific journals.** |

10. Other permits Submitted

| 10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending): |
|---|
| Similar notification to all coastal states en route |

11. List of Supporting Documentation

| 11.1 List of attachments, such as additional forms required by the coastal State, etc.: |
|---|
| • Attachment I/II: Maps |

On behalf of the chief scientist:

Signature:

26.10.2015

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


Contact information of the focal point:

| | | | |
|---|---|---|---|
| Name: | Marius Hirsekorn | Telephone: | +49-(0)471-4831-2241 |
| Country: | Germany | Email: | Schiffskoord@awi.de |
| Affiliation: | Alfred Wegner Institute | Address: | Am Alten Hafen 26 |

**Attachment I. (map of total cruise)**


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**Attachment II. (map of cruise section Las Palmas-Bremerhaven)**


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No specific research area in the Engl.Channel. Measurements to be done “en route” and underway following the regular traffic ways and separation schemes.