Application for Consent to conduct
Marine Scientific Research

Date: November 26nd 2014

1. General Information

1.1 Cruise name and/or number: P471 – Leg 3

1.2 Sponsoring Institution(s):	
Name:	Institute for Oceanography
Address:	Bundesstraße 53, 20146 Hamburg
Name of Director:	Prof. Jan Backhaus

1.3 Scientist in charge of the Project:	
Name:	Dr. Kerstin Jochumsen
Country:	Germany
Affiliation:	University of Hamburg – Institute for Oceanography
Address:	Bundesstraße 53 20146 Hamburg
Telephone:	+49 40 42838 7070
Fax:	+49 40 42838 7477
Email:	kerstin.jochumsen@zmaw.de
Website (for CV and photo):	http://www.ifm.zmaw.de/mitarbeiter/dr-k-jochumsen/#c4092

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:	
Name:	Dr. Barbara Berx
Affiliation:	Marine Scotland
Address:	PO Box 101, 375 Victoria Road, Aberdeen AB11 9DB. UK
Telephone:	+44 1224 876544
Fax:	+44 1224 295511
Email:	b.berx@marlab.ac.uk
Website (for CV and photo):	

2. Description of Project

2.1 Nature and objectives of the project:
Study of exchange across the Greenland – Scotland Ridge

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:
EU FP7 NACLIM, University of Hamburg

2.3 Relevant previous or future research projects:
EU FP7 THOR

2.4 Previous publications relating to the project:
Paka, V., V. Zhurbas, B. Rudels, D. Quadfasel, A. Korzh, and D. Delisi (2013): Microstructure measurements and estimates of entrainment in the Denmark Strait overflow plume. Ocean Sci. Discuss., 10, 1067-1098, doi:10.5194/osd-10-1067-2013. ***Voet, G. and D. Quadfasel (2010): Entrainment in the Denmark Strait overflow plume by meso-scale eddies. Ocean Sci. 6, 301-310.*** ***Jochumsen, K., D. Quadfasel, H. Valdimarsson and S. Jonsson (2012): Variability of the Denmark Strait Overflow: moored time series from 1996 – 2011, J. Geophys. Res., 117, doi:10.1029/2012JC008244.*** ***Serra, N., R. H. Käse, A. Köhl, D. Stammer, and D. Quadfasel, (2010): On the low-frequency phase relation between the Denmark Strait and the Faroe-Shetland Channel dense overflow. Tellus, 62, 530—550, DOI: 10.1111/j.1600-0870.2010.00445.***

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.
61°N 9°W – 59.5° N 6°W
59,5° N 6° W - 61°N 6,5° W
61°N 6,5° W – 60,5° N 2° W
CTD stations every 3 – 5 nautical miles

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.

4. Methods and means to be used

4.1 Particulars of vessel:	
Name:	**POSEIDON**
Type/Class:	RV
Nationality (Flag State):	German
Identification Number (IMO/Lloyds No.):	7427518
Owner:	Ministerium für Wissenschaft und Wirtschaft des Landes Schleswig-Holstein vertreten durch das GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel Wischhofstraß3 1-3 24148 Kiel
Operator:	GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel Wischhofstraße 1-3 24148 Kiel
Overall length (meters):	60,80 m
Maximum draught:	04,90 m
Displacement/Gross Tonnage:	1105 BRZ
Propulsion:	Diesel Electric
Cruising & maximum speed:	9 kn, max.10 kn
Call sign:	DBKV
INMARSAT number and method and capability of communication (including emergency frequencies):	**Telephone: 00870761651773** Telefax: 00870600273636 Mobile GSM: 0049 1716070932
Name of Master:	Matthias Günther
Number of Crew:	15
Number of Scientists on board:	11

4.2 Particulars of Aircraft:	
Name:	
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:	
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:

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):
Hydrography	**CTD Water sampling**	**CTD Rosette**	**Yes**
Currents	**SW ADCP**	**Ship ADCP**	**Yes**
Surface thermosalinograph	**CTD**	**Thermosalinograph**	**Yes**

4.6 Indicate nature and quantity of substances to be released into the marine environment:
n/a

4.7 Indicate whether drilling will be carried out. If yes, please specify:
n/a

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:
n/a

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):
Recovery PIES 60.0682°N 006.1648°W

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:
July 19th 2014 // July 23rd 2014
6.2 Indicate if multiple entries are expected:
Yes

7. Port Calls

7.1 Dates and Names of intended ports of call:
No ports of call in United Kingdom

7.2 Any special logistical requirements at ports of call:

7.3 Name/Address/Telephone of shipping agent (if available):
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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:
Upon request to chief scientist

8.2 Proposed dates and ports for embarkation/disembarkation:
14.07.2014 Akureyri to 24.07.2014 Trondheim

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:
- **Cruise Report three months after finishing the research cruise.**

9.2 Anticipated dates of submission to the coastal State of the final report:
- **Scientific publication within the following three years.**

9.3 Proposed means for access by coastal State to data (including format) and samples:
Upon request to chief scientist

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:
Trough publications

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples And research results:
Upon request to the chief scientist

9.6 Proposed means of making results internationally available:
Scientific publications

10. Other permits Submitted

10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending):
n/a

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:

Signature:

Dr. Kias S. Lackschewitz
GEOMAR
Helmholtz-Zentrum
für Ozeanforschung Kiel
Forschungsschiffe/Research Vessels
Wischhofstraße 1-3
24148 Kiel

Contact information of the focal point:

Name: ZE Forschungsschiffe
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Appendix:

Planned cruise Track of RV POSEIDON cruise P471