

Opportunities for behavioural studies on marine mammals in the Southern Ocean/Antarctica

Bremerhaven,
Dessau-Roßlau
18.12.2020

Dear colleagues

The Alfred Wegener Institute Helmholtz-Centre for Polar and Marine Research (AWI) and the German Environment Agency (UBA) would like to inform you about opportunities to carry out in-situ observational studies on marine mammals and underwater sound in the Southern Ocean/Antarctica.

The AWI is currently in the planning stage for the following research expeditions with RV *Polarstern* providing such opportunities:

1. **End 2022 to early 2023: Bellingshausen Sea and Amundsen Sea (WAIS-BELL; West Antarctica)** - see Annex 1;
2. **Early 2024: Davis Sea off Wilhelm II Land & Queen Mary Land (EASI-3; East Antarctica)** - see Annex 2.

Both expeditions will have the focus on geological and geophysical research projects (so-called primary projects). This provides opportunities for ancillary/secondary research projects to be carried out on the behavioural responses of marine mammals to underwater sound emissions, such as those generated by geophysical and bathymetric surveying methods (e.g. seismic airguns, multibeam echosounders). The expedition WAIS-BELL is more suited for ancillary/secondary research projects requiring additional ship time, while the expedition EASI-3 is better suited for a small observational ancillary/secondary research project that does not require additional ship time or excess personnel.

If you are interested, please note the following terms and conditions:

1. Application procedure for ship time

Proposals for RV *Polarstern* ship time for ancillary/secondary users have to be submitted to the German Research Vessels Portal¹. Applications for ancillary/secondary use can be submitted by 28 February and 31 August every year via this portal. They have to undergo a

¹ See <https://www.portal-forschungsschiffe.de/index.php?index=53>

scientific review before being evaluated by the portal experts. This is an independent process, which neither AWI nor UBA can influence. Further information and guidelines with respect to the application / submission and the review of proposals can be found on the portal.

2. Costs

The use of RV *Polarstern* (incl. the use of the onboard helicopters) is free of charge. For instance, if your project has been approved and is being included in one of the above expedition programmes, you do not have to pay for your stay onboard. However, you have to bear the costs for:

- your travel to (at the start of the expedition) and from (at the end of the expedition) RV *Polarstern*;
- transport of special equipment for your research to and from Bremerhaven, or in special circumstances directly to and from RV *Polarstern* (e.g. if there are time constraints because your research equipment is needed shortly before or after the expedition);
- your salaries and daily allowances.

3. Funding

The AWI is not able to fund your research project or to provide funds for project personnel while being on board RV *Polarstern* and for the data analysis. You have to secure funding from your organisation or from national or regional funding agencies. German research teams might consider applying for funds under the *Schwerpunktprogramm "Antarktischforschung mit vergleichenden Untersuchungen in arktischen Eisgebieten"*² of the German Research Foundation (DFG). There might also be funding available under the EU *Horizon Europe research programme* or under *JPI Oceans Action Underwater Noise in the Marine Environment*³. Under the latter, a call is due to be launched in Autumn 2021 with a two-fold focus:

- i. Effects of anthropogenic noise pollution on marine ecosystems;
- ii. Innovative seismic sources as an option for quieter and effective alternatives to conventional marine geophysical exploration.

In exceptional cases, the UBA might be able to fund special research projects.

4. Permits

Every activity in the Antarctic Treaty area is subject to a prior assessment of the impacts of this activity on the Antarctic environment. This means that in addition to applying for ship time (see above), you have to contact your national 'Competent Authority' for a permit or authorization to carry out your research in Antarctica or the Southern Ocean south of 60° South. This should be done well in advance of the envisaged expedition, especially if your

² See <https://www.spp-antarktischforschung.de>

³ See <https://www.jpi-oceans.eu/underwater-noise-marine-environment>

proposed research requires exceptions from regulations adopted under the Protocol on Environmental Protection⁴. Such an exception is e.g. necessary, if you cannot adhere in your scientific research to the minimum distances to be kept from Antarctic wildlife (incl. marine mammals), or if Antarctic native mammals or birds should be killed, injured, captured, handled or molested in the context of your research - e.g. if you want to tag marine mammals.

UBA is the national competent authority in Germany. Researchers from Germany are advised to apply for a permit at UBA following the information and procedures set out on the UBA website⁵. Researchers from other countries should contact their national competent authority⁶ for a permit or authorization.

5. Information for Polarstern expedition participants and logistical arrangements

Further information for *Polarstern* expedition participants is available on the AWI home page⁷. If you require or want to bring your own large research equipment (e.g. containers, zodiacs etc.), please inform the AWI as soon as your proposal has been approved.

For further information on the above outlined opportunities for behavioural studies on marine mammals and underwater sound in the Southern Ocean/Antarctica, please contact Heike Herata of UBA (heike.herata@uba.de) or Stefan Hain of AWI (stefan.hain@awi.de). For further information on the primary geoscientific research programs of the planned *Polarstern* expeditions, please contact Karsten Gohl (karsten.gohl@awi.de).


Kind regards,



Dr. Stefan Hain
(AWI)



Dr. Heike Herata
(UBA)



Dr. Ingo Schewe
(scientific coordinator RV POLARSTERN)

⁴ See <https://www.ats.aq/e/protocol.html>

⁵ See <https://www.umweltbundesamt.de/themen/nachhaltigkeit-strategien-internationales/antarktis/antragstellung-fuer-den-antarktisbesuch>

⁶ See <https://www.ats.aq/devAS/Ats/NationalCompetentAuthorities?lang=e>

⁷ See <https://www.awi.de/en/about-us/logistics/information-for-expedition-participants.html>

Annex 1

Polarstern-Expedition: *West Antarctic Ice Sheet history and processes in the Bellingshausen Sea sector (WAIS-BELL)*

Cruise leader: Dr. Karsten Gohl (AWI)
 PI Seismic: Dr. Gabriele Uenzelmann-Neben (AWI)
 Planned for Antarctic season: 2022/23

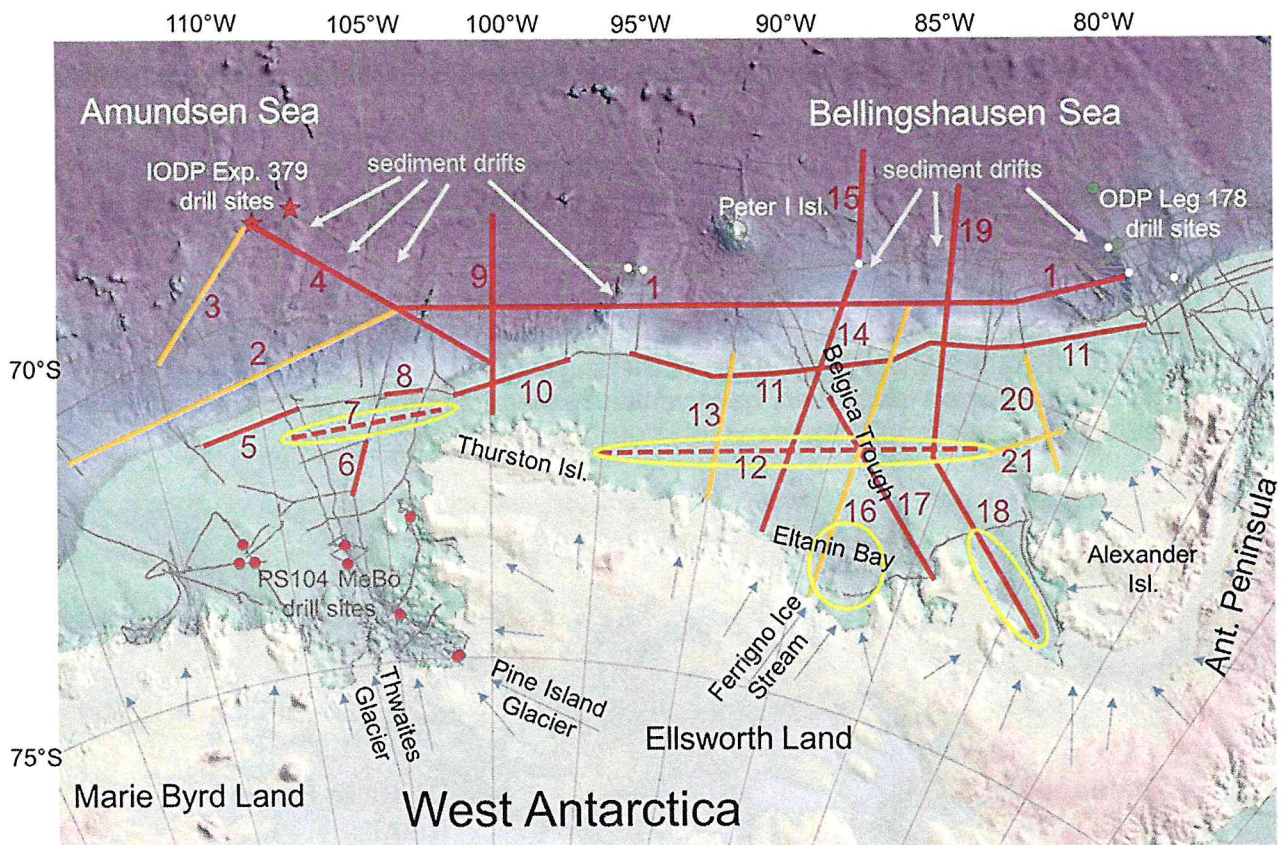


Fig. 1: Research area of the WAIS-BELL expedition with planned geophysical research activities / transects.

Annex 2

Polarstern-Expedition: *East Antarctic Ice Sheet Instabilities and its interaction with changes in Southern Ocean circulation (EASI-3)*

Cruise leader: Prof. Ralph Schneider (University of Kiel);
Pls Seismic: Dr. Karsten Gohl (AWI) & Dr. Sebastian Krastel (Univ. Kiel)
Planned for Antarctic season: 2023/2024

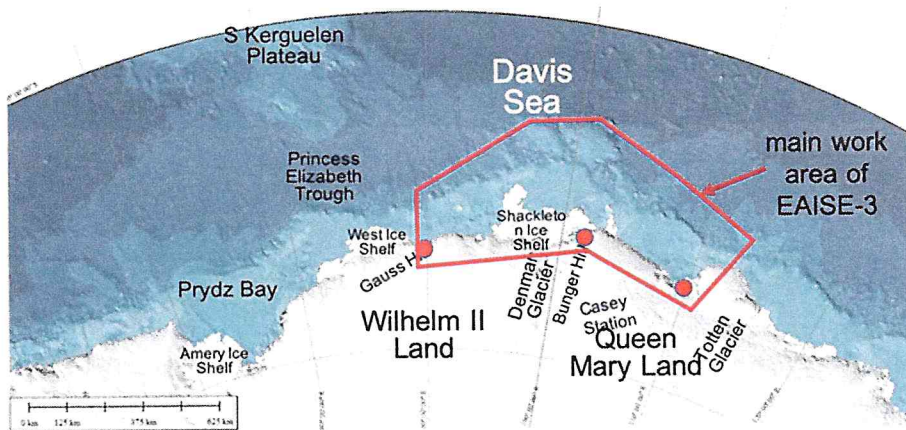


Fig. 2: Overview of EASI-3 research area

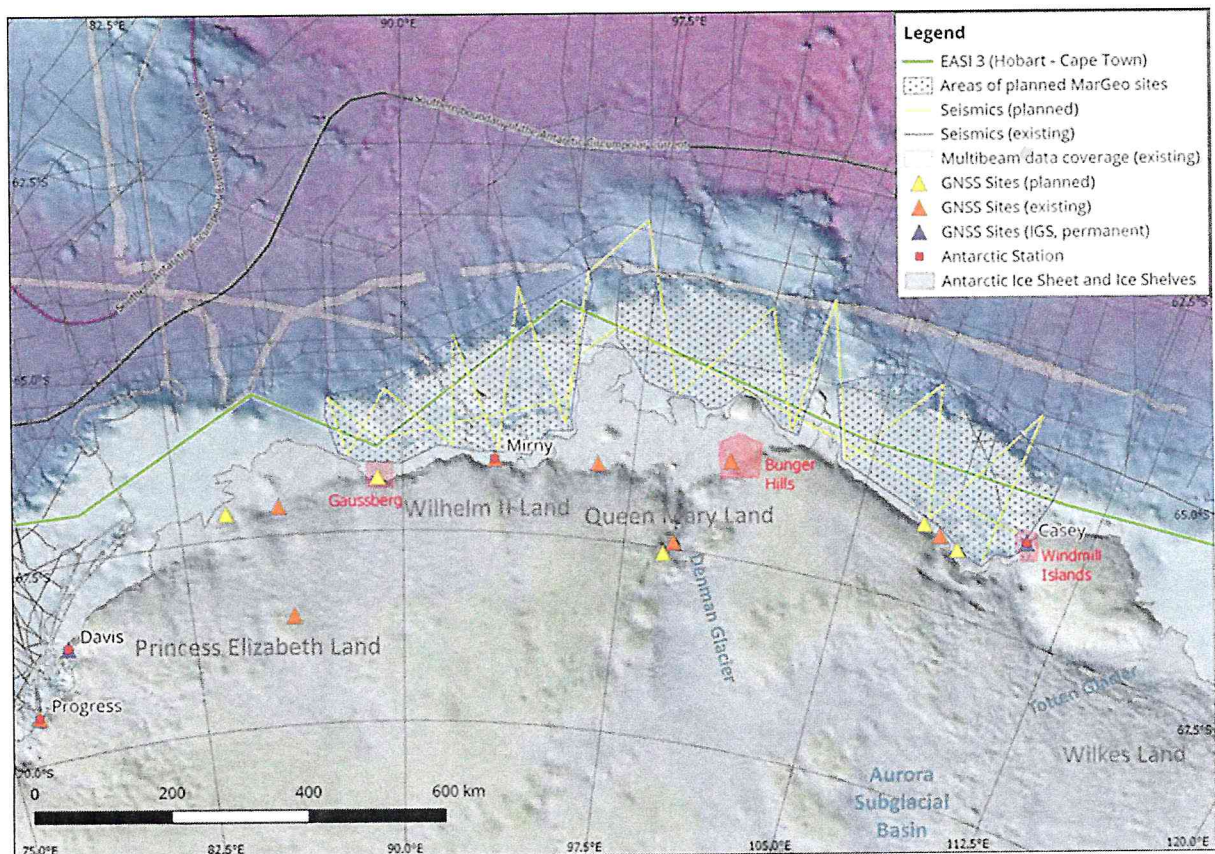


Fig. 3: Planned geophysical research activities / transects during EASI-3