



ALFRED-WEGENER-INSTITUT
HELMHOLTZ-ZENTRUM FÜR POLAR-
UND MEERESFORSCHUNG



The Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research (AWI) is a member of the Helmholtz Association (HGF) and funded by federal and state government. AWI focuses on polar and marine research in a variety of disciplines such as biology, oceanography, geology, geochemistry and geophysics, thus allowing multidisciplinary approaches to scientific goals.

PostDoc in Oceanography (m/f/d)

The section **Physical Oceanography of the Polar Seas** invites applications for the position of a **PostDoc in Oceanography** in the framework of the EU project **VERTical EXchange** in the **Southern Ocean** (VERTEXO). The position will perform water mass analysis using physical and biogeochemical ocean tracer data.

Background

The overall objective of VERTEXO is to advance our understanding of vertical exchange processes in the Southern Ocean and to assess their impact on global climatic changes. In particular, it aims to assess the role of convection in the vertical exchange of climate-relevant tracers such as carbon and heat between the surface and deep waters in the seasonally ice-covered ocean. This position will use biogeochemical Argo data and data from ship-board observations to study convection and quantify its impact on the vertical tracer distribution and deep water ventilation in the Southern Ocean. In order to understand the role that sinking surface waters under sea ice play in the winter-time ventilation process of the pycnocline, we will differentiate the contributions of these surface waters and the upwelling deep waters in the upper ocean.

Tasks

As part of this project, you will have the opportunity to

- combine under-ice biogeochemical and physical data collected by Argo floats to identify source water signals of the winter-time surface waters and upwelling deep waters for broad regions of the upper water column in the Southern Ocean.
- subsequently perform a water mass analysis to identify the horizontal, vertical, and temporal contributions of these waters to the composition of the upper water column.
- apply empirical and machine learning methods to explore processes in the under-ice environment.
- validate the results of the analysis using ship-board observations of further ocean tracers.

Requirements

- PhD degree in oceanography or a related field (applications of candidates that are about to complete their PhD will also be considered)
- extensive experience in data analysis and programming
- a competitive publication record through first-author publications

- very good communication skills in English—both written and oral—are mandatory

Additional skills and knowledge

- Either fluid dynamics, biogeochemistry, or statistical methods for the analyses of time series and spatial patterns are desirable.

Further Information

Please contact **Dr. Alexander Haumann** (alexander.haumann@awi.de) for further information.

This full time position is limited to 2 years. It is also suitable for part-time employment. The salary will be paid in accordance with the Collective Agreement for the Public Service of the Federation (Tarifvertrag des öffentlichen Dienstes, TVöD Bund), up to salary level **13**. The place of employment will be **Bremerhaven**.

Postdocs have to register with AWI's postdoc office [PROCEED](#), thereby gaining access to a set of tailor-made career development tools.

The AWI is characterised by

- our scientific success - excellent research
- collaboration and cooperation - intra-institute, national and international, interdisciplinary
- opportunities to develop – on the job, aiming at other positions and beyond AWI
- a culture of reconciling work and family – an audited and well-supported aspect of our operation
- our outstanding research infrastructure – ships, stations, aircraft, laboratories and more
- an international environment – everyday contacts with people from all over the world
- having an influence – fundamental research with social and political relevance
- flat hierarchies – facilitating freedom and responsibility
- exciting science topics, with opportunities also in technology, administration and infrastructure

Equal opportunities are an integral part of our personnel policy. The AWI aims to increase the number of female employees and therefore strongly encourages qualified women to apply.

AWI offers the possibility of mobile working to the extent of up to 50% of regular working hours.

Disabled applicants will be given preference when equal qualifications are present.

The AWI fosters the compatibility of work and family in various ways and has received a number of awards as a result of this engagement.

We look forward to your application!

Please submit your application by **February 12th 2023**, exclusively online.

Reference number: 23/6/D/Kli-b

[Apply here](#)