

The Division of Climate- and Environmental Physics, Physics Institute, University of Bern opens a position for a

## **PostDoc**

### **to understand and attribute past and future changes in ocean extreme events**

Extreme climate and weather events shape the structure of biological systems and affect the biogeochemical functions and services they provide for society in a fundamental manner. There is overwhelming evidence that the frequency, duration, intensity and timing of extreme events on land are changing under global warming, increasing the risk of severe, pervasive and in some cases irreversible impacts on natural and socio-economic systems. In contrast, we know very little how extreme events in the ocean, especially those associated with warming, acidification, deoxygenation and nutrient stress will unfold in time and space, and how these extreme events will impact marine organisms and ecosystems services.

It is planned that the candidate will perform and evaluate novel high-resolution simulations with a coupled global Earth system model to (i) quantify and understand future changes in ocean extreme events and to (ii) assess the attributable risk of marine heat waves and ocean acidification extreme events to past greenhouse gas emissions and natural variability. A recently established attribution framework will be further developed and applied to ocean variables. The candidate is also encouraged to work on related topics and to develop her/his own project, if it is well aligned with my self-interest.

The research work will be embedded within the collaborative project *OceanX* funded by the Swiss National Science foundation (SNSF), which aims at discovering and attributing past and future changes in ocean extremes, and at assessing and mapping the risks of the extreme events for marine organisms and ecosystems. The research is closely linked to the activities of the Oeschger Centre for Climate Change Research of the University of Bern. The salary is according to the guidelines of the Swiss National Science Foundation and University of Bern. The term of appointment is for one year with the possibility of a 2-year renewal based on satisfactory performance.

We are looking for an outstanding postdoctoral researcher with a PhD in physical sciences, Earth Sciences, mathematics, or related fields. Candidates with strong backgrounds in

climate modeling, the analysis of large datasets and in extreme value analysis are preferred. The position requires the ability and interest to work across disciplines, and the proven ability to work independently.

In order to receive full consideration, applications must be submitted before June 15, 2017, but the positions will stay open until filled. Applications should include a CV, a publication list, a statement of research interests (max. 2-3 pages), a web link to the PhD thesis, and the names and addresses of 3 references as a single pdf file to Prof. Dr. Thomas Frölicher ([froelicher@climate.unibe.ch](mailto:froelicher@climate.unibe.ch)).

The start of the PhD project is scheduled for September 2017, or by agreement.

Bern, 22 May, 2017