

## Postdoc position: “Advancing fast Earth system models”

(2 years, with the possibility for extension)

Climate and Environmental Physics is a division of the Physics Institute of the University of Bern, Switzerland. We are committed to understand the processes of Earth System on time scales from seasons to a million years.

In the framework of the HORIZON EUROPE funded project "Past to Future: towards fully paleo-informed future climate projections (P2F)" the Division of **Climate and Environmental Physics at the Physics Institute**, University of Bern, Switzerland, invites applications for the vacant position opening **1st February 2025**.

### Tasks

The P2F project aims to create a framework that uses new knowledge of past climatic conditions to project future climate change on spatio-temporal scales relevant for societies, ecosystems, and the planet as a whole. The postdoc will contribute to the development and improvement of an intermediate complexity Earth system model (Bern3D) to perform long transient climate simulations. The candidate will leverage machine learning technology to incorporate bias correction and downscaling schemes for key variables, such as temperature and precipitation. These advancements will improve consistency of the coupled Earth system model, a crucial step to better understand feedback mechanisms and tipping point behavior in the climate system.

This project offers the opportunity to work with experts in past and future climate modeling, proxy reconstructions, and climate impact studies within the P2F project, the Climate and Environmental Physics Division, and the Oeschger Centre for Climate Change Research ([www.oeschger.unibe.ch](http://www.oeschger.unibe.ch)), providing an inspiring environment for Early Career Scientists in this field. The successful candidate will actively contribute to the new Global Biogeochemical Modeling Group, presenting results at international scientific conferences and publishing in the peer-reviewed literature.

### Requirements

The successful candidate holds a PhD degree in Oceanography, Climate Science, Physics, or a related field, or will have completed the degree before the start of the project. The candidate should have a deep interest in climate modeling and possess advanced programming skills (e.g., in Python, Fortran, R, Julia) and data handling skills. Additionally, the candidate should have a passion for interdisciplinary and collaborative research and be proficient in both written and spoken English. Knowledge of machine learning technology would be considered an advantage.

### We offer

The envisaged starting date is 1st February 2025 or upon agreement. Employment conditions and remuneration are in accordance with the standards of the University of Bern, Switzerland. Secondments to the other project partners are planned. The initial appointment is for two years, with the potential for extension.

All applications received before 25th October 2024 will be reviewed, and further applications will be considered until the position is filled. Please send your **application documents in one PDF-file** including a motivation letter, CV, degree certificates and contact information for two references by e-mail to Dr. Frerk Pöppelmeier ([frerk.poeppelmeier@unibe.ch](mailto:frerk.poeppelmeier@unibe.ch)).

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