

**Job Advertisement 2026-03**

26.02.2026

At the Leibniz Institute of Atmospheric Physics (IAP), a part-time position (75%) in the Department “Modelling of Atmospheric Processes” is available as

**PhD student, “*Generative diffusion models for atmospheric data assimilation*” (f/m/d)**

The position is offered for three years with a start date as soon as possible. The salary is according to class EG 13 TV-L. The fixed-term contract is based on § 2 WissZeitVG.

**Your Tasks:**

Generative diffusion models (DMs) learn to reverse a diffusion process from an analytically known prior distribution to a target distribution that is inferred from data. The conditioning of diffusion models during the inference stage makes them competitive tools for solving inverse problems, suggesting that they can be repurposed for highly efficient data assimilation. The task for the successful candidate is to generate atmospheric fields for given time instances that are as close as possible to a given set of pointwise observations. The candidate will train a diffusion model on circulation fields from numerical models, enabling the generation of new fields that should be as close as possible to the observational values at the observation locations while preserving the dynamical and statistical characteristics of the numerical model data. The candidate shall explore whether the above data assimilation can be done in one step for full 3D fields, or if it is advantageous to decompose the task into generating individual 2D horizontal layers separately in order to save GPU memory resources.

**Your Qualifications / Experience:**

- completed MSc university degree in mathematics, informatics, physics or a related field
- strong expertise in machine learning
- strong interest in high performance computing on CPUs and GPUs
- proficiency in Fortran, Python, shell scripting
- proficiency with Linux command-line environments (including remote systems via SSH) and Windows
- interest in modern software engineering practices (testing, code review, modular design)
- fluency in English as working language

**What we offer:**

- an attractive working place near the Baltic Sea
- modern equipment
- engagement in an international work environment
- participation in the company pension scheme (VBL)
- employment relationship in accordance with the provisions of the Collective Agreement for the Public Service of the Federal States (TV-L)
- flexible working hours and mobile working within the framework of the applicable regulations
- family office

**Who we are:** Our mission is to advance the scientific knowledge of the mesosphere and lower thermosphere by developing and exploiting expertise in atmospheric physics, instrumentation, analysis and modelling to serve emerging societal needs – such as questions regarding climate change.

On the regional level, we closely cooperate with the University of Rostock and are an integral part of the teaching program of the Institute of Physics. Our network includes the research community worldwide. As an institute of the Leibniz Association, we distinguish ourselves as a modern and innovative employer that highly values family friendliness, equality of opportunity and flexibility.

**Interested?**

Please send your application with complete, informative documents, including

- motivational letter
- curriculum vitae
- diploma with indication of final grade
- copy of certificates, possibly testimonies and references

under indication of the keyword: **2026-03**

to: [personal@iap-kborn.de](mailto:personal@iap-kborn.de)

Applications received before April 14 will receive full consideration. Unfortunately, application and travel costs cannot be covered by the state of Mecklenburg-Vorpommern. By submitting your application, you consent to the processing of your personal data for the purpose of the application process.

**Equal Opportunities:** We pursue a family-friendly personnel policy, and strive to increase the proportion of women. Qualified women are therefore explicitly encouraged to apply. People with disabilities are given preference if they have the same qualifications.

**Contact:** For further information, please contact Prof. Dr. Claudia Stephan (CCStephan@iap-kborn.de) or inform yourself under [www.iap-kborn.de](http://www.iap-kborn.de).

