

**Job Advertisement 2024-19**

12.11.2024

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

**PhD Student, Exploring Atmospheric Dynamics with MAARSY-3D (f/m/d)**

The position is initially offered for **three years** with a **starting date in the first half of 2025**. The salary is according to class EG 13 TV-L (approx. 40 000 €/year). The fixed-term contract is based on § 2 WissZeitVG.

Join us in advancing atmospheric research and unlocking new insights into high-latitude atmospheric dynamics with MAARSY-3D!

**About MAARSY-3D:**

MAARSY-3D (Middle Atmosphere ALOMAR Radar SYstem) is one of the world’s most advanced radar systems, designed to study atmospheric dynamics and lower ionospheric instabilities at high latitudes. Situated in Andenes, Norway, MAARSY-3D offers unprecedented insights into the mesosphere and lower thermosphere (MLT) through unique radar techniques, such as 4D radar imaging and MIMO radar. This versatility has enabled the discovery of kilometer-scale mesospheric instabilities, meteor-head echoes, and more.

Recently, a new radio array was installed ~50 km from MAARSY, facilitating multistatic observations that provide unparalleled measurements of mesospheric and meteor echoes. These efforts are part of a global network of 3D radar projects, including Jicamarca-3D (Peru), SYISR-3D (China), and EISCAT-3D (Northern Scandinavia). By joining our team, you’ll collaborate with international research initiatives dedicated to studying the atmosphere from multiple latitudes.

**Your Tasks:**

- Design and conduct experiments with MAARSY-3D, leveraging its unique capabilities to explore MLT processes.
- Develop new configurations and methodologies, including advanced radar techniques (e.g., multistatic radar, radar imaging, MIMO, compressed sensing).

- Analyze radar and atmospheric data using modern signal processing and data science approaches to characterize mesospheric instabilities and meteor echoes.
- Potentially utilize Direct Numerical Simulations (DNS) to model atmospheric phenomena.
- Contribute findings that may be applied to global MLT research initiatives, including Jicamarca-3D.

This role is ideal for a candidate passionate about radar technology, atmospheric dynamics, and exploring the intersection of data science and atmospheric physics.

***Your Qualifications / Experience:***

- A Master's degree (or equivalent) in physics, engineering, or a related field.
- A strong interest in atmospheric dynamics, radar techniques, and data processing.
- Solid communication skills and an ability to work independently and responsibly.
- Proficiency in English for collaboration and documentation.

***What we offer:***

- A vibrant research environment near the beautiful Baltic Sea (German Riviera).
- Access to modern research facilities and tools, alongside collaborative opportunities in international settings.
- Flexible working hours and options for remote work (where applicable).
- Competitive benefits including participation in the German public sector pension scheme (VBL).
- Support for work-life balance, including family-friendly policies and services.
- An opportunity to be part of a renowned institute within the Leibniz Association, known for its commitment to equality, flexibility, and professional growth.

***Who we are:*** Our institute's mission is to advance the scientific understanding of the mesosphere and lower thermosphere, focusing on atmospheric physics, instrumentation, data analysis, and modeling. As part of the Leibniz Association, we prioritize research that addresses pressing societal challenges, such as climate change, while fostering an inclusive and supportive work environment. Our partnerships include collaborations with the University of Rostock and other research institutions worldwide, ensuring a strong network for academic exchange and development.

### Interested?

Please send your application as one pdf 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: **2024-19**

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

Please send applications by **January 15, 2025**. Applications beyond this date will be considered until the position is filled. 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. Jorge Chau ([chau@iap-kborn.de](mailto:chau@iap-kborn.de)) or inform yourself under [www.iap-kborn.de](http://www.iap-kborn.de).

