

Faculty of Mathematics and Natural Sciences

PhD position on Arctic Amplification: Cloud process modelling (f/m/x)

Institute for Geophysics and Meteorology

We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

The position is funded within the Collaborative Research Center TRI72 Arctic Amplification (AC)³ (<u>www.ac3-tr.de</u>), whose third phase started in January 2024.

The overall aim of this specific project is to improve our process understanding of mixed-phase clouds and especially their representation in weather and climate models.

YOUR TASKS

- » Setting up and performing of simulations for Arctic regions with the ICON-LEM
- » Processing and analysing model data with a focus on cloud properties
- Preparation and support of the measurement campaign with dedicated simulation and pre-testing of different hypotheses
- » Evaluation of the large-scale driving forces and the influence of weather patterns on the representation of mixed-phase clouds in the model- e.g. formation and persistance
- Active participation in research communication (seminars, conferences, publication in international journals)

YOUR PROFILE

- » MSc in Meteorology, Physics, Mathematics or a related field
- Highly motivated person with strong interest in Arctic clouds, mathematical modelling and analysis of cloud processes
- » Experience in scientific programming and Linux / Unix operating systems
- High willingness to collaborate with scientists in- and outside of TR172 and to establish new scientific collaborations
- » Ability to work both in a team and independently
- » Very good communication skills in written and spoken English

WE OFFER

- Working in an inspiring and collaborative german-wide research project
- » A diverse working environment
- » Support in reconciling work and family life
- » Extensive advanced training opportunities
- » Occupational health management offers
- » Flexible working time models
- » Opportunity to work remotely

The University of Cologne is committed to equal opportunities and diversity. Women are especially encouraged to apply and will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from people with disabilities / special needs or of equal status.

The position is available immediately on a part-time basis (29,87 hours per week). It is limited to 3 years. If the applicant meets the relevant wage requirements and personal qualifications, the salary is based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please send your application with proof of the required qualifications without a photo online to:

<u>https://jobportal.uni-koeln.de</u>. The reference number is Wiss2402-22. The application deadline is 20.03.2024.

If you have any questions, please contact Vera Schemann (vera.schemann@uni-koeln.de).





Faculty of Mathematics and Natural Sciences

PhD position on moisture intrusions: Processes and climatological impacts (f/m/x)

Institute of Geophysics and Meteorology

We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

The position is funded within the Collaborative Research Center TRI72 Arctic Amplification (AC)³ (<u>www.ac3-tr.de</u>), whose third phase started in January 2024. The overall goal of this position is the investigation of precipitation in the changing Arctic (for more information about the project see <u>https://geomet.uni-koeln.de/en/</u>).

YOUR TASKS

- Compilation and intercomparison of precipitation products from satellite, airborne and ground-based remote sensing and in-situ sensors in cooperation with (international) partners
- » Evaluation of precipitation characteristics given by reanalyses and ICON simulations performed by project partners in TR172
- Analysis of Arctic precipitation, its phase and spatiotemporal variability in particular in relation to the occurrence of atmospheric rivers
- Investigation of precipitation properties associated with changes in thermodynamic profiles along and recycling of moisture during air mass transformations
- Active participation in research communication (seminars, conferences, publication in international journals)

YOUR PROFILE

- » MSc in Meteorology or a related field
- Convincing and demonstrable knowledge/experience in atmospheric remote sensing
- » Advanced programming experience with state-of-theart UNIX or LINUX operating system
- » High willingness to collaborate with scientists in- and outside of TR172 and to establish new scientific cooperations
- » Ability to work in a team and independently
- » Very good communication skills in written and spoken English

WE OFFER

- » Working in an internationally well-established working group
- » A diverse and fair working environment
- » Support in reconciling work and family life
- » Extensive advanced training opportunities
- » Occupational health management offers
- » Flexible working time models
- » Opportunity to work remotely

The University of Cologne is committed to equal opportunities and diversity. Women are especially encouraged to apply and will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from people with disabilities / special needs or of equal status.

The position is available immediately on a part-time basis (29,87 hours per week). It is limited to 3 years. If the applicant meets the relevant wage requirements and personal qualifications, the salary is based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please send your application with proof of the required qualifications without a photo online to:

https://jobportal.uni-koeln.de. The reference number is Wiss2402-23. The application deadline is 20.03.2024. If you have any questions, please contact Susanne Crewell (susanne.crewell@uni-koeln.de).