The Institute for Geophysics and Meteorology, University of Cologne (IGMK), Germany, invites applications for a

Research Assistant positions
with the opportunity for graduation

Using radar Doppler spectra to assess the microphysics of Arctic atmospheric models

The position is related to the Collaborative Research Center TR172 ArctiC Amplification: Climate Relevant Atmospheric and SurfaCe Processes, and Feedback Mechanisms $(AC)^3$ http://www.ac3-tr.de/ ,which was recently approved by the German Research Foundation for an initial four year period and has started 1 January 2016. Within the TR172, IGMK together with the collaboration partners (Universities of Leipzig and Bremen, TROPOS and Alfred Wegener Institute) aim to better observe, understand and model processes leading to Arctic amplification. The position (at least 65% TV-L E13) is awarded for at least 3 years. We offer a productive and interdisciplinary working atmosphere including comprehensive supervision and integration into the thriving Graduate School of Geosciences http://www.geosciences.uni-koeln.de/. Details on the individual projects are given below.

Requirements

We expect strong interest in atmospheric science with specialization in cloud modeling and observations, remote sensing, or statistical modelling, depending on the topic. Applicants should have a Master-of-Science-equivalent university degree in meteorology, geophysics, physics or mathematics. Experience in scientific programming, preferably in a UNIX/LINUX environment, and knowledge in computational modelling is highly desirable. Candidates must possess excellent communication skills both in written and spoken English.

Applications

Interested candidates should send a CV; a cover letter describing background, training and research interests; certificates; and the contact information of two referees as a single PDF to meteo-jobs[at]uni-koeln.de. Please clearly indicate which position you apply for. Review of applications will begin immediately and continue until the positions have been filled, March 3 latest.

Selection

The selection for the positions will be based solely on merit without regard to gender, religion, national origin, political affiliation, marital or family status or other differences. Among equally qualified candidates, handicapped candidates will be given preference.

Detailed project description

Climate models have significant deficits in predicting the globally above-average temperature increase in the Arctic. A major source for these deficits is due to a lack in capturing Arctic low-level mixed-phase clouds and their related feedback mechanisms with the sea ice and the open ocean. In this project, the PhD candidate will carry out and employ AC3 observations from combined active and passive remote sensing instruments during surface-based, ship-based and airborne flight campaigns. A special focus will be on using cloud radar Doppler spectra for optimally charactering mixed-phase cloud microphysics. This data will be used to evaluate different microphysical schemes in Arctic clouds models of different scales (single column climate model and Large Eddy Simulation (LES) model). For more information contact PD Dr. Ulrich Löhnert: loehnert[at]meteo.uni-koeln.de.