
**METEOROLOGISCHES INSTITUT**
**LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN**

LMU MIM

Pending approval of external funding, the *Meteorological Institute of the Ludwig-Maximilians-Universität Munich (LMU)* invites applications for a

**Position as PhD student (75% E13 TV-L)**

within the Priority Programme 2115 „Fusion of Radar Polarimetry and Numerical Atmospheric Modelling Towards an Improved Understanding of Cloud and Precipitation Processes“ (PROM). See https://www2.meteo.uni-bonn.de/spp2115 for more information on PROM and a complete list of job postings within the priority programme.

The representation of microphysical processes in numerical weather models is a main source of uncertainty. Due to operational constraints numerical models run at insufficient resolution and use strongly simplified parameterizations. Novel observations are needed to evaluate and improve these parameterizations at the level of detail currently in use in numerical models. Observations have to provide variables that form the basis of current parameterizations, e.g. spatial distributions of dominant cloud particle sizes, and typical timescales in cloud development. Aim of this project is to exploit the synergy of two full polarimetric radars, the C-band POLDIRAD at DLR Oberpfaffenhofen west of Munich and the Ka-band MIRA-35 at LMU LMU in the city centre of Munich to study convective initiation. Being almost perfectly aligned along the average wind direction and thunderstorm path in this area, this setup allows tracking convective clouds for a significant fraction of their lifetime. Numerical modeling using a nested WRF high-resolution weather model setup will allow to analyze the performance of microphysics parameterizations with varying levels of complexity.

LMU offers a position “The life-cycle of cloud and precipitation microphysics in radar observation and numerical model”. This topic is closely linked to a second PhD position at DLR on “Investigating the role of ice for the evolution of precipitation using multi-wavelength radar measurements” within the joint SPP 2115 project *ICEPolCKa*.

The positions will be offered for 3 years with start in January 2019.

**Requirements**

We expect a strong background in physics, mathematics, meteorology or atmospheric sciences. Knowledge in cloud physics, radiative transfer, remote sensing as well as programming skills would be beneficial. A contribution to teaching at LMU is possible. A good Master level degree in physics, atmospheric physics or a comparable degree is required.

**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 *tobias.zinner@lmu.de*. The deadline for *all* applications in PROM is **15 September 2018**.

**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. Potential candidates will be invited to a joint selection colloquium for all positions in PROM on **17-18 October 2018**