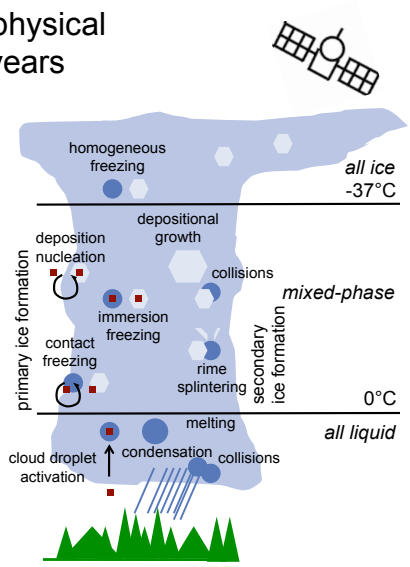
Karlsruhe Institute of Technology

European Research Council

Whether and where **clouds consist of liquid water, ice or both** (i.e. their thermodynamic phase distribution), has major impacts on the clouds' dynamical development, their radiative properties, their efficiency to form precipitation, and their impacts on the atmospheric environment. Cloud ice formation in the temperature range between 0 and -37°C is initiated by aerosol particles acting as heterogeneous ice nuclei and propagates through the cloud via a multitude of microphysical processes. Enormous progress has been made in recent years concerning the understanding and model parameterization of primary ice formation. In addition, high-resolution atmospheric models with complex cloud microphysics schemes can now be employed for realistic case studies of clouds. Finally, new retrieval schemes for the cloud (top) phase have recently been developed for various satellites, including passive polar orbiting and geostationary sensors, which provide a good spatial and temporal coverage and a long data record. In the **ERC Starting Grant project C2Phase (Closure of the Cloud Phase)**, we aim to merge the bottom-up, forward modeling approach for the cloud phase distribution with the top-down view of satellites.




Within this exciting project, the **Institute of Meteorology and Climate Research (Department Troposphere Research, IMK-TRO) at Karlsruhe Institute of Technology (KIT)** in Germany invites applications for two open positions in the field of cloud physics:

- **A 3 year position for a doctoral researcher (PhD student)** with background in meteorology, atmospheric science or a related field, ideally with previous experience in numerical modelling and/or analysis of remote sensing observations of clouds. The topic of this PhD thesis will be numerical model studies of **mixed-phase mid-level clouds**. Satellite observations will be used to identify typical regimes of these clouds and their physical properties, for which model simulations with the Icosahedral Non-hydrostatic model (ICON) will then be used to understand and improve the liquid/ice partitioning in the clouds and to evaluate their radiative impact.

- **A 2.5 year position for a postdoctoral researcher** with experience in numerical modelling and/or analysis of remote sensing observations of clouds. The overarching goal of this project are **closure studies** between observations of mixed-phase clouds with passive satellite sensors and cloud resolving model simulations, both by direct comparison and in a statistical sense. This position leaves a considerable degree of freedom for the candidate to develop the project according to his/her own interests.

We are looking for highly motivated, independent candidates. We offer a dynamic work environment at one of Germany's largest research institutions for atmospheric sciences (read more at http://www.imk.kit.edu) with attractive programs for early-career researchers (http://www.khys.kit.edu) and payment according to TV-L E 13 (75% for the doctoral researcher position, 100% for the postdoctoral position). Both positions are **available from 1st April 2019 or later**.

Please send applications for these positions to **Prof. Dr. Corinna Hoose** (corinna.hoose@kit.edu), including (in one pdf file) a letter of motivation, CV, certificates/transcripts of records, preferred starting date, and names of at minimum two referees.

Review of applications for the positions will start on **February 28, 2019**, and will continue until the positions are filled.