

Fully Funded Ph.D. Student Position in Cloud Observations and Modeling at the University of Oklahoma

Cloud Physics Group at the University of Oklahoma (<http://mcfarq.oucreate.com>) is excited to announce a **fully funded** Ph.D. student position starting in **Fall 2025**. This opportunity is part of a Department of Energy (DOE)-funded project focused on the **impacts of cloud-aerosol-meteorology interactions in mixed-phase clouds on radiative fluxes over high latitudes**. The successful candidate will work at the forefront of research on mixed-phase and ice cloud processes, which represent key uncertainties in climate science.

This project leverages observations from the DOE-supported **Cloud and Precipitation Experiment at Kenauok (CAPE-K)** field campaign over the Southern Ocean and integrates data from prior field campaigns such as MARCUS, MICRE, and COMBLE. The research aims to understand how aerosols, cloud dynamics, and meteorological conditions influence cloud and precipitation properties and their subsequent effects on radiative fluxes. The candidate will also contribute to modeling efforts with DOE-supported high-resolution and large-scale numerical models.

Responsibilities:

- Conduct high-quality research under the supervision of the project's Principal Investigators, **Drs. Greg McFarquhar** (<http://mcfarq.oucreate.com>) and **Yongjie Huang** (<http://huangyj.oucreate.com>).
- Analyze multi-source observations, including radar, lidar, microwave radiometer, and aerosol measurements, from CAPE-K and related campaigns.
- Use and evaluate high-resolution numerical models, including LES and ESM configurations (e.g., E3SM SCM and DP-SCREAM).
- Publish research findings in peer-reviewed journals and present research at national and international conferences.

Qualifications:

- A master's degree (or equivalent) in Atmospheric Sciences, Meteorology, or a closely related field. Exceptional candidates with a bachelor's degree will also be considered.
- Strong background in cloud microphysics, atmospheric dynamics, or radiative transfer.
- High motivation with strong analytical and problem-solving skills.
- Experience with data analysis and/or numerical modeling.
- Proficiency in programming (e.g., Python, Fortran, MATLAB).
- Excellent written and verbal communication skills.

Benefits:

- A competitive monthly stipend as part of a fully funded Research Assistantship, including full tuition coverage.
- Opportunities for professional development, including funding for conference travel.
- A dynamic, collaborative research environment at one of the top meteorology programs in the U.S.
- Extensive opportunities for collaboration with leading scientists worldwide.

Application Process:

- The application deadline for **Fall 2025** is **December 1, 2024**. Early applications are encouraged, particularly for international students requiring a visa.
- For application details, visit the School of Meteorology "ADMISSIONS REQUIREMENTS AND APPLICATION PROCESS" (<https://www.ou.edu/ags/meteorology/people/graduate-students>) and the Graduate College page at <https://www.ou.edu/gradcollege/apply>.
- For inquiries about this position, please contact: Dr. Yongjie Huang (Yongjie.Huang@ou.edu).

The University of Oklahoma is an equal opportunity employer. We celebrate diversity and are committed to creating an inclusive environment for all.