

Two Postdoctoral Researcher Positions

University of Hawai‘i at Mānoa – Department of Atmospheric Sciences

The Department of Atmospheric Sciences at the University of Hawai‘i at Mānoa invites applications for two (2) 2-year Postdoctoral Researcher positions as part of a DOE-funded initiative called “Perturbed Physics Ensemble Regression Optimization Center for ESM Evaluation and Development” (PROCEED). These positions are funded through the U.S. Department of Energy’s Earth and Environmental Systems Modeling program and are part of a multi-institution collaboration with the University of Wyoming.

About PROCEED

PROCEED aims to reduce uncertainty in climate projections by developing a deeper, process-level understanding of how aerosols, cloud microphysics, and atmospheric moisture processing shape the response of extratropical clouds to warming. A core theme of the project is to “connect the dots” from microscale cloud and precipitation physics all the way up to the behavior of Earth System Models (ESMs), including DOE’s E3SM.

Through a combination of hierarchical modeling, perturbed-physics ensembles, LES simulations, and machine-learning frameworks that fuse observations with models, PROCEED seeks to identify which physical processes in clouds and precipitation exert the strongest control on climate-scale variability and long-term projections. The postdocs at UH will contribute to these goals by advancing both high-resolution LES approaches and global ESM uncertainty quantification, working closely with collaborators at UW and DOE labs.

Position 1 -- Postdoctoral Researcher (LES, Aircraft Sampling & Observational Biases)

This position focuses on running large-eddy simulations (LES) on UH’s HPC cluster Koa, developing virtual flight-track sampling strategies, assessing observational biases, and linking high-resolution model output to in situ aircraft measurements. The researcher will help build frameworks that improve how we interpret observations and how we design future field campaigns. Experience with LES models (SAM, WRF), aircraft or in situ datasets, and strong programming skills are highly desirable.

Position 2 -- Postdoctoral Researcher (Earth System Models & Perturbed Physics Ensembles)

This researcher will run Earth System Models on Koa, conduct ensembles of future-climate experiments, and evaluate how parametric uncertainty in ESM physics affects simulations of extreme events. The position will contribute to PROCEED’s broader goal of tracing how changes in microphysical and dynamical parameterizations cascade into climate-scale projections. Experience with GCM/ESM frameworks (E3SM experience is a plus) and high-performance computing is preferred.

Application Process

Applicants must apply through the RCUH system: <https://www.rcuh.com/opportunities/job-openings>. (Positions will appear under “ATMO Postdoctoral Researcher”)

Required materials:

- Cover letter

- CV
- List of references
- Degree/transcript (unofficial acceptable initially)

Closing date: 01/02/2026 or until the positions are filled.

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