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MĀNOA

Postdoctoral Position in Stratospheric Transport, Dynamics, and Aerosols at the University of Hawaii

Description:

Prof. Hongwei Sun (<https://hongwei8sun.github.io/>) at the University of Hawaii at Manoa invites applications for a postdoctoral scholar position to conduct innovative research on *Stratospheric Transport, Dynamics, and Aerosols*, with a focus on advancing fundamental atmospheric understanding of Stratospheric Aerosol Injection (SAI).

The successful candidate will have the opportunity to collaborate with multiple research teams and contribute to projects in the following areas:

- Contributing to the development of the [plume-in-grid model](#), including: (1) implementing aerosol microphysical schemes, particularly bin schemes, to simulate plume-scale aerosol microphysical processes in the stratosphere; and (2) optimizing turbulence parameterizations to more accurately represent line-shaped plume dispersion in the stratosphere.
- Estimating stratospheric turbulence by using numerical models and observations.
- Evaluating stratospheric transport (and its dynamic drivers) by comparing GCM outputs with reanalysis data, particularly from a [Lagrangian perspective](#).
- Using numerical models (GCM or CTM) to simulate stratospheric aerosols (from volcano eruptions or SAI) and estimate their climatic impacts.

Depending on the specific project, the postdoctoral researcher will join different research teams and collaborate with scientists from various institutions. The candidate will also have opportunities to propose new research ideas that are related to the *Stratospheric Transport, Dynamics, and Aerosols*.

Qualifications:

- Ph.D. in atmospheric science or related fields (e.g., math, physics, or computer science).
- Experience in numerical models (GCMs, CTMs, WRF, etc.) is preferred.
- Excellent communication and scientific writing skills.

Applications:

To apply, please email Dr. Hongwei Sun (hongwei8@hawaii.edu) with the following:

- Curriculum vitae.
- Cover letter (1 page) describing research interests, plans, and qualifications.
- The names and contact information of three references.

Please use the subject line "Postdoc Application in Stratosphere". Applications will be reviewed starting on August 1, 2025, on a rolling basis.

The initial position is for one year, with the possibility of renewal for an additional 1-2 years, contingent on satisfactory progress and funding availability. While the start date can be flexible, the position will be available from September 1, 2025, and will remain open until filled. The starting salary will be \$75K annually with benefits.

For more information about the Department of Atmospheric Sciences and the research carried out at the School of Ocean and Earth Science and Technology, see our sites on the web:

<http://www.soest.hawaii.edu/atmo/> and <http://www.soest.hawaii.edu/>.