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Opportunity Title: Earth Science: frozen hydrometeor remote sensing; ML/AI application to retrieve and track clouds; atmosphere coupling
Opportunity Reference Code: 0283-NPP-NOV26-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0283-NPP-NOV26-GSFC-EarthSci

How to Apply All applications must be submitted in Zintellect

Please visit the NASA Postdoctoral Program website for application instructions and requirements: How to Apply | NASA Postdoctoral Program (orau.org)

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline 11/1/2026 6:00:59 PM Eastern Time Zone

Description **About the NASA Postdoctoral Program**

The NASA Postdoctoral Program (NPP) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

This opportunity is closed to applicants who are Senior Fellows (5-years or more past PhD).

Clouds, in particular the frozen phase, bring about the largest challenge and uncertainties to the weather prediction and climate projections. This is mainly due to our lack of understanding of cloud/snow ice microphysics and over-simplified representation in models. On a broader sense, although weather systems and their evolvement are largely determined by the large-scale dynamics, the details are highly coupled among hydrometeor microphysics, wave dynamics (turbulence) and large-scale dynamics, and it's the itsy bitsy details that impact our daily life and decision makings. This position opens multitude directions under this general topic. Depending on the applicant's interests and strengths, you can consider one or multiple subtopics that our group is particular interested in and invests on: (1) ice microphysics remote sensing from infrared to microwave spectra (TIR, FIR, sub-mm, MW); (2) cloud retrieval algorithm development with focus on using the polarimetric signals, the new FIR or sub-mm bands, and/or the ML/AI approach; (3) ML/AI application on system/pattern tracking on satellite images across different platforms; (4) cloud-wave coupling at turbulence to gravity wave scales, from planetary boundary layer to the mesosphere and above.

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Field of Science: Earth Science

Advisors:

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Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States. A complete list of Designated Countries can be found at: https://www.nasa.gov/oiir/export-control.

Eligibility is currently open to:

- U.S. Citizens;
- U.S. Lawful Permanent Residents (LPR);
- Foreign Nationals eligible for an Exchange Visitor J-1 visa status; and,
- Applicants for LPR, asylees, or refugees in the U.S. at the time of application with 1) a valid EAD card and 2) I-485 or I-589 forms in pending status

Questions about this opportunity? Please email npp@orau.org

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.