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Opportunity Title: Assimilation of Hyperspectral Infrared Radiance Observations in the GEOS
Opportunity Reference Code: 0282-NPP-MAR26-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0282-NPP-MAR26-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 3/1/2026 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).

The Goddard Earth Observing System (GEOS) global 4D hybrid Ensemble-Variational (EnVar) data assimilation system at Global Modeling and Data Assimilation Office (GMAO) has been supporting NASA research and Earth Science missions. Among the millions of observations assimilated at each analysis cycle in the GEOS system, hyperspectral infrared satellite radiance data have been used extensively and they have proved significant impact on reducing model forecast errors and constraining atmospheric states. This NPP opportunity invites proposals that are focused on the usages of IR radiance observations to improve atmospheric states and model forecasts, especially, proposals with the following foci

- Assimilation of radiance data from new hyperspectral infrared instruments such as IASI-NG, MTG-IRS Enhancement of CrIS radiance assimilation algorithm are highly encouraged.

- Use machine learning methods to cope with model biases are particularly encouraged.

Field of Science: Earth Science

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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

Qualifications

An advanced university degree in Physics, Maths, Meteorology or related fields, ideally to PhD level, or equivalent proven research experience

At least one-year relevant work experience

Familiarity with satellite data analysis and data assimilation

Strong computing skills are required, obtained in a Unix/Linux environment, and ideally including Fortran/C++ coding, as well as analysis tools such as Python, IDL

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.