

Opportunity Title: New developments in polarimetric ground-based instrumentation for remote sensing and validation of aerosols and clouds

Opportunity Reference Code: 0324-NPP-JUL25-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0324-NPP-JUL25-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 7/1/2025 6:00:59 PM Eastern Time Zone

Description About the [NASA Postdoctoral Program](#)

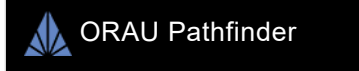
The [NASA Postdoctoral Program \(NPP\)](#) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed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

Description:

NASA has been making regular global measurements of aerosols and clouds from space for more than two decades. Validation of the accuracy of these measurements relies heavily on data from ground-based instrumentation, such as those managed by AERONET (AErosol RObotic NETwork). AERONET is comprised of sun photometers and radiometers that retrieve the atmospheric state by accurately measuring electromagnetic radiation scattered and transmitted through the atmosphere to the surface.

The recently launched Plankton, Aerosol, Cloud, ocean Ecosystem mission (PACE) is continuing heritage aerosol and cloud measurements while making new types of measurements that further describe aerosol and cloud properties. Validation of these new measurements is a challenge, requiring the development of alternative instrumentation with new and enhanced capabilities. These new instruments make use of additional aspects of electromagnetic radiation, such as the UV portion of the spectrum and linear polarization.

We seek a postdoctoral candidate to further the development and characterization of ground-based instruments that make use of linear polarization, UV, and other new capacities for improved and expanded validation. The candidate must have hands-on instrumentation experience



Whether you are just starting your career or already at a senior level, ORAU offers internships, fellowships, research opportunities, and contract positions that can provide you with invaluable experience. Download the ORAU Pathfinder mobile app and find the right opportunity to propel you along your career path!

Visit ORAU Pathfinder [↗](#)



Opportunity Title: New developments in polarimetric ground-based instrumentation for remote sensing and validation of aerosols and clouds

Opportunity Reference Code: 0324-NPP-JUL25-GSFC-EarthSci

and ability to connect this to atmospheric radiative transfer through an understanding of data processing and analysis. A successful candidate will have a joint appointment with both the NASA Goddard Space Flight Center's Ocean Ecology Laboratory, which houses the PACE Mission Project Science office, and the NASA Goddard Space Flight Center's Biospheric Sciences Laboratory, which houses the AERONET project. More details about the PACE Mission and AERONET Project are at <https://pace.gsfc.nasa.gov> and <https://aeronet.gsfc.nasa.gov>, respectively.

Field of Science: Earth Science

Advisors:

Kirk Knobelspiesse
kirk.d.knobelspiesse@nasa.gov
301-614-6242

Elena Lind
elena.lind@nasa.gov
509-432-4674

Pawan Gupta
pawan.gupta@nasa.gov
256-468-7651

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@oraui.org

Qualifications Ph.D. in Atmospheric Science, Physics, Engineering or similar

Expertise with instrument calibration, deployment and data processing

Expertise with remote sensing of the atmosphere (aerosols or clouds)

Expertise with the use of light polarization for remote sensing

Opportunity Title: New developments in polarimetric ground-based instrumentation for remote sensing and validation of aerosols and clouds

Opportunity Reference Code: 0324-NPP-JUL25-GSFC-EarthSci

Point of Contact [Mikeala](#)

Eligibility Requirements • **Degree:** Doctoral Degree.