zintellect
climb higher

Opportunity Title: Data Assimilation of Combined Lidar and Polarimeter Observations for the AOS Mission
Opportunity Reference Code: 0309-NPP-MAR26-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0309-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 forthcoming Atmosphere Observing System (AOS) mission aims to provide spaceborne observations to better understand aerosol, cloud, and precipitation processes and their interaction through a constellation of instruments in low earth orbit (aos.gsfc.nasa.gov) that includes a 3-channel Raman LIDAR and a 9-channel multi-angle polarimeter. The combined capabilities from these two instruments will provide unprecedented characterization of aerosol optical and physical properties, and their vertical distribution on a global scale. This project will focus on developing a strategy to best utilize this data in a global atmospheric data assimilation framework.

Activities that would be involved in this project include (but are not limited to):

- Develop algorithms to characterize aerosol speciation from LIDAR fluorescence signals
- Develop machine learning emulators to represent forward operators for polarimeter-only and combined polarimeter and lidar observations for

Opportunity Title: Data Assimilation of Combined Lidar and Polarimeter Observations for the AOS Mission
Opportunity Reference Code: 0309-NPP-MAR26-GSFC-EarthSci

atmospheric data assimilation
- Utilize plume object tracking algorithms to characterize the source, transformation, and sinks of aerosols

Field of Science: Earth Science

Advisors:

Patricia Castellanos
patricia.castellanos@nasa.gov
(301) 614-6574

Arlindo da Silva
arlindo.m.dasilva@nasa.gov
(301) 614-6174

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.