

Opportunity Title: Data Assimilation of Combined Lidar and Polarimeter

Observations for the AOS Mission

Opportunity Reference Code: 0309-NPP-NOV26-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0309-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.

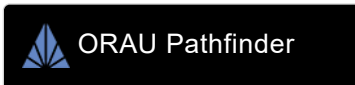
Description:

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

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



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: Data Assimilation of Combined Lidar and Polarimeter

Observations for the AOS Mission

Opportunity Reference Code: 0309-NPP-NOV26-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/oir/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.