Opportunity Title: Earth Sciences: Remote Sensing of Clouds and Aerosols
Opportunity Reference Code: 0068-NPP-NOV23-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0068-NPP-NOV23-GSFC-EarthSci

Application Deadline 11/1/2023 6:00:59 PM Eastern Time Zone

Description This research opportunity is about using theoretical and experimental investigations of the spectral, angular, and polarization properties of scattered sunlight to develop and apply techniques for inferring the optical and radiative properties of clouds and aerosol particles in the Earth's atmosphere. Satellite, aircraft, and ground-based remote observations collected during recent field experiments targeting marine stratocumulus, arctic stratus, boundary layer cumulus, and high-altitude cirrus clouds, in the presence and absence of sulfate, smoke, and dust aerosols, are jointly examined and compared with available in situ aircraft measurements in order to validate the cloud and aerosol properties derived from the remote-sensing measurements. The goal is to develop and apply methods to extract the optical thickness, effective size, and spectral absorption properties of cloud and aerosol particles. The data are also used to study the effect of aerosol particles on cloud microphysics and albedo. Ultimately, the derived properties of clouds and aerosols, and the understanding of how these two atmospheric constituents interact will be used to assess impacts on the Earth's radiation budget in studies of current and future climates.

Location:
Goddard Space Flight Center
Greenbelt, Maryland

Field of Science: Earth Science

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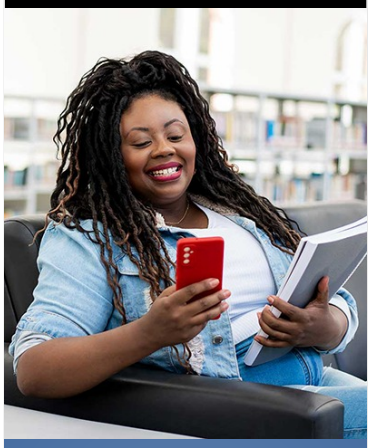
NPP NASA Postdoctoral Program

ORAU Pathfinder



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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

Eligibility Requirements

- **Degree:** Doctoral Degree.