

Opportunity Title: Multiangle and Polarimetric Remote Sensing of Aerosols and Clouds

Opportunity Reference Code: 0072-NPP-NOV23-JPL-EarthSci

Organization National Aeronautics and Space Administration (NASA)

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

Description This research opportunity involves using remotely sensed multiangle spectral radiometric and/or polarimetric imagery and derived aerosol products, ground-based particulate matter (PM) sensor measurements, and atmospheric model information for mapping near-surface speciated PM concentrations and their impact on air quality. Sources of remote sensing data include the Multi-angle Imaging SpectroRadiometer (MISR) instrument, currently flying on NASA's Terra satellite, or the Airborne Multiangle SpectroPolarimetric Imager (AirMSPI), with an eye toward the upcoming Multi-Angle Imager for Aerosols (MAIA) investigation, planned for launch in mid-to-late 2022. PM monitors include a suite of instruments installed on a rooftop at JPL as well as sensors in other locations around the world. Postdoctoral fellows will participate in the application of these data to scientific problems related to particulate air pollution and/or development of advanced algorithms for determining ambient speciated PM exposure. Techniques for distinguishing thick smoke and dust plumes from water clouds are also of interest. For additional information, see:

<https://misr.jpl.nasa.gov>

<https://airbornescience.jpl.nasa.gov/instruments/airmspi/>

<https://maia.jpl.nasa.gov>

Diner, D.J., et al. (2018). "Advances in multiangle satellite remote sensing of speciated airborne particulate matter and association with adverse health effects: from MISR to MAIA." *Journal of Applied Remote Sensing* 12 (4): 042603.

Location:

Jet Propulsion Laboratory
Pasadena, California

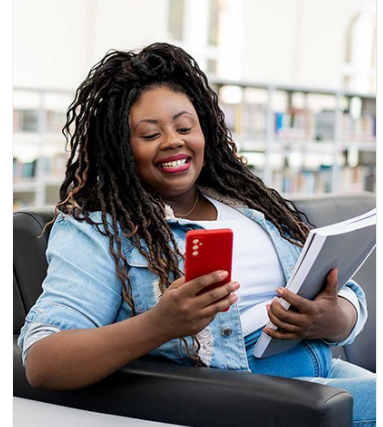
Field of Science:Earth Science

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:



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- 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.