

Opportunity Title: Quantification of Mineral Dust Seasonal Dynamics, Regional Features, and Direct Radiative Effects Through Current and Improved MISR Products

Opportunity Reference Code: 0086-NPP-NOV23-JPL-PlanetSci

Organization: National Aeronautics and Space Administration (NASA)

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

Description: Through multi-angular viewing geometry, the MISR instrument on Terra provides unique constraints on dust properties including the ratio of dust coarse and fine modes and the dust fraction (i.e., fraction of nonspherical particles) in complex dust/pollution/biomass burning mixtures.

The postdoctoral fellow will help to:

1. Investigate linkages between experimentally measured dust properties and atmospheric radiances for selected dust events using available field measurements, new optical dust models, and the top of the atmosphere multi-angular radiances from MISR;
2. Analyze MISR current and new dust products in conjunction with transport model with the goals to:
 - Document inter-annual and seasonal variability of loadings and properties of atmospheric dust in the dust sources and downwind;
 - Determine climatological linkages between the dust source activities, mid-range, and long-range transport of dust;
 - Assess the importance of dust-pollution mixtures from MISR: frequency of the occurrence, evolution during the transport and implications to predicting the radiative forcing of dust.

Location:

Jet Propulsion Laboratory
Pasadena, California

Field of Science: Planetary Science

Advisors:

Olga Kalashnikova
Olga.Kalashnikova@jpl.nasa.gov
818-393-0469

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



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