

Opportunity Title: Mid-infrared Laser and Lidar Development

Opportunity Reference Code: 0015-NPP-NOV23-LRC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0015-NPP-NOV23-LRC-EarthSci

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

Description A research group in the laser remote sensing branch, engineering directorate at NASA Langley research center focus on laser and lidar developments that is relevant to NASA's earth science priorities. The research group develops solid state laser technology that is more efficient, compact and powerful to provide capabilities meeting the laser transmitter requirements called out in the missions by the recent Earth Science Decadal Survey. In particular, the group develops the state-of-the-art mid-IR lasers at 2-micron wavelength for global wind and CO2 measurements. In addition, the group also works on precisely laser wavelength tuning, wavelength locking, wavelength switching and laser wavelength conversion by non-linear optics techniques various remote sensing instrument needs.

The research group also develops lidar system for atmospheric wind and trace gas measurements in the ground and airborne platforms, that include design of telescope and aft optics, precisely beam controlling, detector characterization, signal processing algorithm development. The field deployment of these lidars supports Earth science missions.

Location:

Langley Research Center
Hampton, Virginia

Field of Science:Earth Science

Advisors:

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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



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pending status

Eligibility Requirements

- **Degree:** Doctoral Degree.