

Opportunity Title: Analysis of Sub-orbital and Satellite-based Observations for Advances in Societal Benefit

Opportunity Reference Code: 0254-NPP-NOV23-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0254-NPP-NOV23-GSFC-EarthSci

How to Apply All applications must be submitted in [Zintellect](#)

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

Description Description:

NASA GSFC seeks a highly motivated candidate to foster an interdisciplinary approach at understanding the Earth Science System. This position will combine NASA Earth observations from satellites and sub-orbital remote sensing, ground-based in-situ datasets, regulatory inventories, and the U.S. Census database to describe the scale of the changing chemical lifetimes and dominant regimes pertinent to NASA's goals and those of the decadal survey. Satellite remote sensing has contributed substantially to our understanding of inter-urban NO₂ distributions, providing spatially continuous maps of NO₂ columns across cities; however, space borne sensors have generally lacked the spatial resolution required to capture intra-urban variability. Questions that need answering in the changing environment are:

1. To what extent are intra-urban communities exposed to higher ground level pollutants, and how can this be better quantified with NASA Earth observations?
2. How do the pollution/emission sources and sinks vary between intra-urban communities, and how can this be better quantified with NASA Earth observations?
3. How can we design the next generation of air quality studies that encompasses the various facets of NASA Earth observations in the framework of future geo-stationary satellites?

This research centers on measurements of a number of important atmospheric parameters, such as trace gases and aerosols in the troposphere and convective boundary layer, ranging from space borne assets to low cost sensor networks. Specifically, candidates will conduct research investigations to understand atmospheric trace gases and their role in both tropospheric air quality and environmental justice. This includes tropospheric pollution monitoring and their impacts on atmospheric chemistry. Candidates who have experience in utilizing active passive and remote sensing of air pollution data sets such as ozone, NO₂, and HCHO are strongly encouraged to apply.

Field of Science: Earth Science

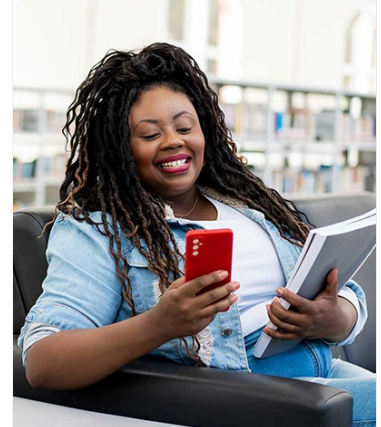
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Applications with citizens from Designated Countries will not be accepted at this time,



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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.