

Opportunity Title: Earth Science: Analysis and Interpretation of Satellite-Based Spectroscopic Measurements

Opportunity Reference Code: 0004-NPP-NOV23-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0004-NPP-NOV23-GSFC-EarthSci

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

Description The acquisition of a long-term data base on high-altitude ozone, total ozone, and ultraviolet (UV) solar irradiance by instruments in Earth orbit is now allowing detailed studies of the driving mechanisms of and the time scales involved in upper-atmospheric variability. In addition, spectroscopic measurements of the Earth's backscattered spectrum as seen from space reveal the presence and variability of trace gases, such as nitric oxide and sulphur dioxide.

Projects currently under way include (1) evaluation and analysis of the long-term changes in stratospheric ozone, especially changes in the Antarctic ozone hole; (2) evaluation of solar variability in the UV using measurements from the Nimbus 7 Solar Backscattered Ultraviolet (SBUV) spectral radiometer; (3) studies of the response of upper-atmospheric ozone to solar activity using Nimbus 4, Nimbus 7, and SBUV/2 measurements; (4) analysis of data from the Total Ozone Mapping Spectrometer on the effect of volcanic emissions (sulfur dioxide and aerosols) from the Mt. Pinatubo and other eruptions, on the reported ozone densities; (5) studies of the sensitivity of the SBUV measurement technique to anthropogenic and solar-related ozone perturbations; and (6) analyses of test data from advanced SBUV instruments scheduled for future space flight.

Location:

Goddard Space Flight Center
Greenbelt, Maryland

Field of Science:Earth Science

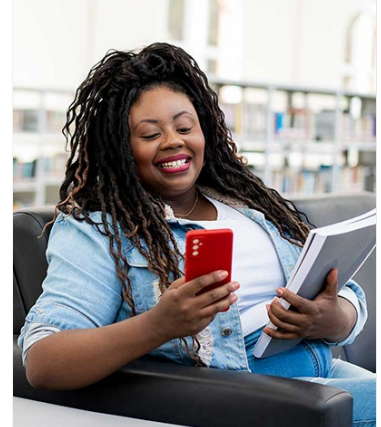
Advisors:

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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:

- U.S. Citizens;
- U.S. Lawful Permanent Residents (LPR);



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- 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.