

**Opportunity Title:** Earth Science: Climate and Radiation Processes

**Opportunity Reference Code:** 0011-NPP-MAR22-GSFC-EarthSci

**Organization** National Aeronautics and Space Administration (NASA)

**Reference Code** 0011-NPP-MAR22-GSFC-EarthSci

**Application Deadline** 3/1/2022 6:00:00 PM Eastern Time Zone

**Description** This research focuses on understanding physical processes in the atmosphere and at the surface that affect radiation balance of the Earth's climate. Specific topics include (1) cloud radiative effects, and the dynamic and thermodynamic processes affecting the generation, maintenance, and dissipation of clouds; (2) micro- and macro-physical properties of clouds, and cloud liquid water content; (3) estimation of surface radiative fluxes, sensible, and latent heat fluxes over ocean and land; and (4) the greenhouse effect of clouds and water vapor, including the detection of climate variability and modeling trends from long-term satellite data. Investigations include modeling and analysis of radiation data from SORCE, radiation heat budget and TOVS data from NOAA operational satellites, and radiation measurements from the Department of Energy Atmospheric Radiation Measurement program. Cloud parameters derived from the MODIS, MISR, Cloudsat and CALIPSO satellites are used to study the effect of clouds on atmospheric and surface radiation. Research also involves developing new and improved techniques for remote sensing of atmospheric and surface parameters from TERRA, AQUA and AURA satellites and aircraft measurements. Opportunities exist to participate in national and international field experiments.

**Location:**

Goddard Space Flight Center  
Greenbelt, Maryland

**Field of Science:**Earth Science

**Advisors:**

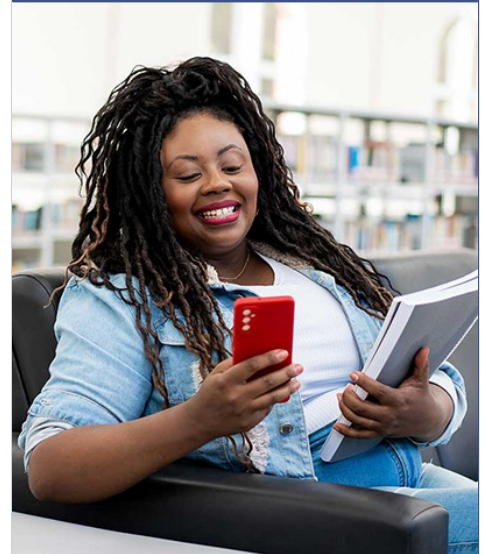
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301-614-5636

**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;
- Foreign nationals who are in the U.S. at the time of application and on a valid J1 visa; and,
- Foreign nationals, asylees or refugees in the U.S. at the time of application with a valid EAD card and pending I-485 or I-589 forms.

These temporary eligibility limitations have been put in place due to inaccessible U.S. consulates and travel restrictions resulting from the COVID-19 pandemic. Foreign nationals have made many substantive contributions to NASA, as well as to the greater scientific community throughout the life of the NPP. Therefore, we look forward to the time when the program will be open, once again, to all qualified scientists and engineers.

**Eligibility  
Requirements**

- **Degree:** Doctoral Degree.