

**Opportunity Title:** Solar System Exploration: Radiative Transfer Modeling of Infrared Spectra for Planetary Atmospheres

**Opportunity Reference Code:** 0038-NPP-NOV23-GSFC-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** Radiative transfer modeling of infrared observations of the planets and their satellites from spacecraft, balloons, and ground-based telescopes yield information on the thermal structure and composition of the atmospheres, as well as composition and temperatures of surfaces. For example, infrared spectra returned from the Voyager 1 and 2 IRIS and Cassini CIRS instruments at the outer planets, and the Mars Global Surveyor TES and Mars Reconnaissance Orbiter CRISM instruments at Mars have allowed for the retrieval of atmospheric temperatures, gas abundances, aerosol composition, optical depth and physical properties. The objective of this task is the development of radiative transfer models and retrieval algorithms to quantitatively characterize the state of planetary atmospheres.

**Location:**

Goddard Space Flight Center  
Greenbelt, Maryland

**Field of Science:** Planetary 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>.



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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 pending status

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