

**Opportunity Title:** Structure and Energetics of Planetary Atmospheres

**Opportunity Reference Code:** 0010-NPP-MAR23-JPL-PlanetSci

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

**Reference Code** 0010-NPP-MAR23-JPL-PlanetSci

**Application Deadline** 3/1/2023 6:00:00 PM Eastern Time Zone

**Description** This research combines the acquisition, reduction and analysis of remote-sensing data on planetary atmospheres with theoretical models of structure and dynamics. Much of the data involves infrared imaging and spectroscopy, and data have been acquired from experiments on spacecraft such as Galileo, Cassini, Hubble and Spitzer. Observations are also acquired from a vigorous ground-based astronomy program emphasizing the near and middle infrared, but including other spectral regions. They have involved traditional, remote or service observing at NASA's Infrared Telescope Facility, Palomar, Keck, Gemini, Subaru and the Very Large Telescope. These observations have focused on deriving thermal structure, bulk and trace constituent abundances, and cloud properties. This work on data acquisition and analysis is combined with more recent efforts to simulate atmospheric dynamics and model energy transfer mechanisms in these atmospheres, as constrained by our acquired data. Opportunities exist over this broad range of research.

Burgdorf, G. S. Orton, G. R. Davis, S. D. Sidher, H. Feuchtgruber, M. H.

Griffin, and B. M. Swinyard. 2003. Neptune's far-infrared spectrum from the ISO Long-Wavelength and Short-Wavelength Spectrometers. *Icarus* 164}, 244-253.

G. S. Orton and P. A. Yanamandra-Fisher. 2005. Saturn's temperature field from high-resolution middle-infrared imaging. *Science* 307}, 696-701.

**Location:**

Jet Propulsion Laboratory  
Pasadena, California

**Field of Science:** Planetary Science

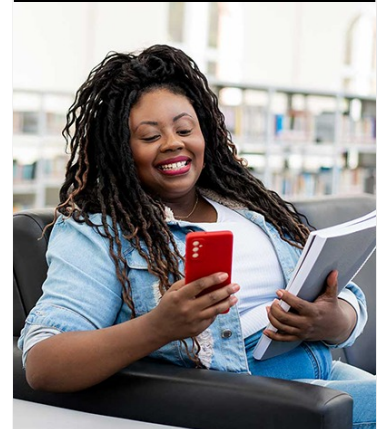
**Advisors:**

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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/oijr/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.