zintellect
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Opportunity Title: Scientific Applications of Atmospheric Radio Occultations
Opportunity Reference Code: 0033-NPP-MAR26-JPL-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0033-NPP-MAR26-JPL-PlanetSci

How to Apply All applications must be submitted in Zintellect

Please visit the NASA Postdoctoral Program website for application instructions and requirements: How to Apply | NASA Postdoctoral Program (orau.org)

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline 4/2/2026 6:00:59 PM Eastern Time Zone

Description **About the NASA Postdoctoral Program**

The NASA Postdoctoral Program (NPP) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

Radio occultation of the signals emitted by the Global Navigation Satellite System (GNSS) are being used to estimate vertical profiles of atmospheric density, pressure, temperature and water vapor. Radio occultation are limb soundings with high vertical resolution where the delays of the radio signal traversing the atmosphere are used to infer radio refractivity, a magnitude essentially proportional to atmospheric density and water vapor content. The radio refractivity profiles evolve in response to the dynamical and thermodynamical processes driving planetary atmospheres. Since the GNSS signals are radio signals that can penetrate through optically thick clouds, radio occultation provides a unique technique to characterize the thermodynamical state within those clouds. This research opportunity seeks to first exploit this unique characteristic of radio occultation towards characterizing the thermodynamical conditions within precipitating clouds. The candidate is welcome to propose his/her own approach as long as it uses extensively this remote sensing technique to characterize precipitation. Once this objective is achieved the candidate will explore the climate processes that influence precipitation. Combinations of radio occultation data with other observational techniques that add information on cloud physical variables in presence of precipitation will also be pursued.

Location:

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Jet Propulsion Laboratory
Pasadena, California

Field of Science: Planetary Science

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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);
- 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

Questions about this opportunity? Please email npp@orau.org

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.