Opportunity Title: Operational Concepts and Technology Development for Passive Radar Sounding
Opportunity Reference Code: 0327-NPP-MAR26-JPL-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

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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 3/1/2026 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:

This opportunity solicits proposals to advance passive radar sounding for planetary exploration through a combination of technology development, field validation, and operational concept studies. Passive radar sounding, which exploits naturally occurring radio emissions as signals of opportunity, presents unique challenges compared to active systems, including variability in signal availability, geometric constraints, and the need for specialized processing. Proposals should address these challenges directly, with an emphasis on operational strategies that enable reliable data acquisition and interpretation under realistic planetary conditions.

Projects may include the design and maturation of new passive radar technologies, the development of signal processing and data analysis methods, and the integration of passive sounding with complementary datasets to extract subsurface structure and volatile information. Field demonstrations using drones or other platforms to replicate mission-relevant geometries are strongly encouraged, as they provide essential opportunities to test and validate operational concepts under controlled but realistic conditions. The overarching goal of this opportunity is to bridge the gap between conceptual feasibility and mission readiness for passive radar sounding, advancing both the scientific and technical foundations required

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for its future use in planetary exploration.

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

Qualifications Prior research experience in planetary science.

Demonstrated expertise in the analysis of radar data, including active or passive radar sounding.

Field work experience, particularly in terrestrial analog environments relevant to planetary exploration.

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.