

Opportunity Title: Microwave Observations of Giant Planets

Opportunity Reference Code: 0079-NPP-NOV23-JPL-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0079-NPP-NOV23-JPL-PlanetSci

Application Deadline 11/1/2023 6:00:59 PM Eastern Time Zone

Description This Research Opportunity seeks candidates interested in using microwave observations to improve our understanding of giant planet atmospheres and magnetospheres. The focus is on centimeter wavelengths, which probe thermal emission from the deep tropospheres of these objects or---in the case of Jupiter---synchrotron emission from its magnetosphere. Using observatories such as the Very Large Array (VLA) in New Mexico, or antennas associated with NASA's Deep Space Network (DSN) in California, the postdoc will plan and carry out observations of interest to them, calibrate the data, and interpret the results. The data interpretation will require radiative transfer models and retrieval algorithms; the Advisor has access to existing software packages, but the candidate is encouraged to use their own or other tools available to them. Observations at shorter wavelengths, in particular those accessible by the Atacama Large Millimeter/Submillimeter Array (ALMA), are also of interest. Candidates should note that two of the DSN antennas available to them are associated with the Goldstone-Apple Valley Radio Telescope program (GAVRT). GAVRT is an educational effort in which middle, high-school, and community college students work with professional scientists. This allows candidates to incorporate educational and outreach activities into their proposal.

Location:

Jet Propulsion Laboratory
Pasadena, California

Field of Science: Planetary Science

Advisors:

Steven Levin
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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



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