

Opportunity Title: Direct Imaging of Circumstellar Disks & Exoplanets

Opportunity Reference Code: 0149-NPP-NOV23-JPL-Astrophys

Organization National Aeronautics and Space Administration (NASA)

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

Description ?Circumstellar disks are an integral component of planetary systems. They provide the raw material and host environment for planet formation, and persist into mature planetary systems as debris from ongoing collisions of remnant planetesimals. Their internal structure can show the dynamic imprint of any planets within. We are conducting observational research on circumstellar disks with the goals of imaging new systems; understanding their structure, dust properties, and evolution via multiwavelength observations; and searching for associated planets. Recent imaging data from the Hubble Space Telescope, James Webb Space Telescope, and the Atacama Large Millimeter Array, combined with infrared photometry and imaging from the Spitzer Space Telescope and Herschel Space Observatory, are compared with numerical models to derive disk properties.

Supporting science data is obtained with groundbased observatories such as Keck and Palomar.

Related research in this opportunity includes the structure of outflows from protoplanetary disk host stars; preparatory work for the Roman Space Telescope coronagraph technology demonstration; science performance goals, metrics, and modeling for the future Habitable Worlds Observatory; and updates/improvements to the website <http://circumstellardisks.org>. JPL has a dynamic environment for exoplanet research with the Exoplanet Discovery and Science group, the Roman Coronagraph Instrument team, access to the Palomar 5m telescope, and collaborations with local exoplanet researchers at the Caltech Astronomy Department and the NASA Exoplanet Science Institute. Candidates with interests in protoplanetary/debris disks, exoplanet direct imaging, or high contrast observation techniques are encouraged to apply.

Location:

Jet Propulsion Laboratory
Pasadena, California

Field of Science:Astrophysics

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/oiiir/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

**Eligibility
Requirements**

- **Degree:** Doctoral Degree.