

Opportunity Title: Star and Planet Formation

Opportunity Reference Code: 0042-NPP-NOV23-JPL-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0042-NPP-NOV23-JPL-Astrophys

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

Description The postdoctoral opportunities involve exploring planetary systems' formation in the disks of gas and dust found orbiting young stars. Researchers wishing to build and use computer models, or bring model results into contact with observations, to advance our understanding of key processes such as the transport of mass, angular momentum and energy, and the reprocessing of the primordial interstellar material through mixing, heating, chemical reactions, and solid bodies' growth, are invited to contact the advisor to discuss projects of mutual interest.

Approaches could include radiation hydrodynamics, MHD, chemical and N-body calculations of the evolution of the planets' raw materials using JPL and NASA supercomputing facilities. Especially welcome are ideas that will be tested against ground- and space-based observations, for example through the use of radiative transfer methods to produce synthetic observations that we can compare with data on protostellar disks, planets, or exoplanets, to strengthen our knowledge of how planets form.

""Radiation hydrodynamical models of the inner rim in protoplanetary disks."" Flock M., Fromang S., Turner N. J. & Benisty M. 2016, ApJ in press, arXiv:1604.04601.

""Transport and Accretion in Planet-Forming Disks."" Turner N. J., Fromang S., Gammie C., Klahr H., Lesur G., Wardle M. & Bai X.-N. 2014, in ""Protostars and Planets VI"", eds. H. Beuther, R. S. Klessen, C. P. Dullemond & Th. Henning (Tucson: Univ. of Arizona Press), pp.411-432.

Location:

Jet Propulsion Laboratory
Pasadena, California

Field of Science: Astrophysics

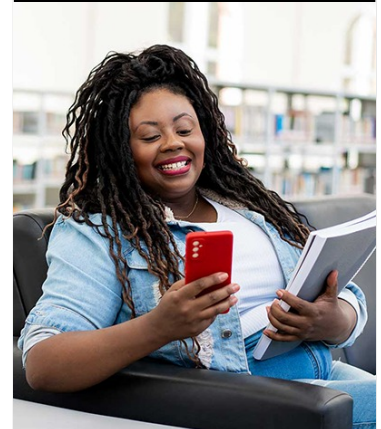
Advisors:

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(818) 393-0049

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;



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- 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.