Opportunity Title: Astrophysics: Discovery and Characterization of Transiting Exoplanets
Opportunity Reference Code: 0145-NPP-NOV26-GSFC-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0145-NPP-NOV26-GSFC-Astrophys

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 11/1/2026 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:

?Goddard manages a variety of NASA missions that are well-suited for transiting exoplanet science. These missions include the Transiting Exoplanet Survey Satellite (TESS), the Hubble Space Telescope (HST), the James Webb Space Telescope (JWST), and the upcoming Nancy Grace Roman Space Telescope (Roman). Transiting exoplanets found around nearby, bright stars with TESS are some of the best targets for detailed atmospheric characterization with state-of-the-art facilities like HST and JWST. HST provides ultraviolet to near-IR observations, while JWST extends from optical to mid-IR wavelengths. With their suite of on-board instruments, these observatories enable high-precision exoplanet transmission and emission spectroscopy. NASA's next flagship observatory, Roman, is currently being built and tested, with an anticipated launch by May 2027. Roman will perform large-scale surveys with a wide-field optical/IR camera, providing high-cadence light curves for hundreds of millions distant stars, enabling the study of transiting planets across our galaxy in environments like the galactic bulge that have yet to be explored.

We are seeking postdoctoral candidates with experience or interest in studying transiting exoplanets with data from space-based facilities like TESS, HST, JWST, and/or ground-based facilities, or with data simulations in preparation for Roman. Potential areas of research include:

(1) developing tools and techniques for both extraction of light curves and for searching light curves for transits;

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(2) modeling scientific yields and developing methods for assessing the completeness of survey data and for making statistical inferences from survey data;

(3) developing plans and techniques for follow-up observations of discovered exoplanets to measure masses and/or atmospheric properties;

(4) generating models of the atmospheres of discovered exoplanets and performing retrievals to aid the interpretation of atmospheric observations;

(5) performing simulations of transiting exoplanets with Roman and developing light curve detrending and transit search algorithms.

For each of these areas, we anticipate opportunities to work with current data and to obtain new observations of transiting exoplanets with ground-based and/or space-based facilities.

Interested applicants should reach out to at least one of the advisors listed here in advance of the application deadline to express interest and discuss potential research projects.

Location:
Goddard Space Flight Center
Greenbelt, Maryland

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/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.