Opportunity Title: Astrophysics: Direct Exoplanet and Disk Imaging with the JWST
Opportunity Reference Code: 0235-NPP-NOV23-GSFC-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0235-NPP-NOV23-GSFC-Astrophys

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

Description The direct detection of exoplanets and circumstellar disks using high contrast imaging requires the suppression of star light using novel hardware, observations, and data processing. The James Webb Space Telescope (JWST) is NASA's newest astrophysics Flagship mission and carries multiple instruments capable of new breakthroughs in direct imaging. The JWST Project Office is at NASA's Goddard Space Flight Center, thereby offering unique opportunities for collaboration with experts in JWST instruments, operations, and observations.

We seek a postdoctoral candidate with experience and/or interest in using JWST to study exoplanets and circumstellar disks via direct imaging. We anticipate the candidate will work on one or more projects to:

1.) Develop techniques for JWST direct imaging data analyses,

2.) Apply these techniques to data from approved or archival JWST General Observer (GO) programs, Guaranteed Time Observing (GTO) programs, and/or Early Release Science (ERS) observations,

3.) Analyze the direct imaging results to discover and characterize wide-orbit exoplanets, place new constraints on this population, and study circumstellar disk properties,

4.) Pursue additional JWST direct imaging observations via the JWST GO program.

We also anticipate opportunities to combine JWST direct imaging observations and analyses with data from other space and ground-based facilities.

Qualifications for this opportunity include a Ph.D. in astronomy, physics, or a related discipline. Prior experience with high contrast imaging and post-processing techniques and interest in exoplanets and circumstellar disks are desirable.

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

Eligibility Requirements

- **Degree:** Doctoral Degree.