

Opportunity Title: High-Speed Digital Electronics for Astrophysics

Opportunity Reference Code: 0337-NPP-NOV26-GSFC-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0337-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](#)

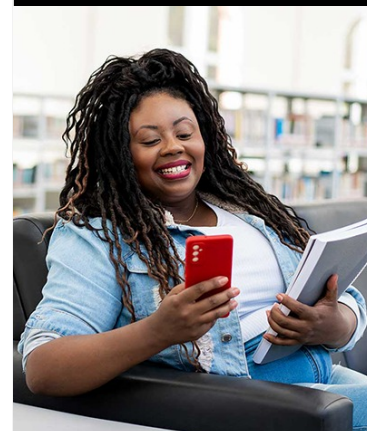
The [NASA Postdoctoral Program \(NPP\)](#) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

Modern astrophysical instruments are making increasing use of advances in high-speed digital electronics to enable new discoveries. The current focus of our group at Goddard is developing readout electronics for microwave multiplexing of large arrays of superconducting transition-edge sensor (TES) bolometers and kinetic inductance detectors (KIDs) to enable the next generation of ground-based, balloon-borne, and space instruments; however, the hardware, firmware, and software approaches developed have diverse applications including space-based interferometry and advanced radar systems.

The successful candidate should have familiarity with some combination of superconducting detector testing, microwave engineering, digital signal processing and FPGA firmware design, and data analysis in modern programming languages like Python. The group currently leads development of spaceflight readout electronics for the Probe Far-Infrared Mission for Astrophysics (PRIMA) and the balloon-borne EXperiment for Cryogenic Large Aperture Intensity Mapping (EXCLAIM), and we are working on next-generation readout electronics systems for the Habitable Worlds Observatory, far-infrared flagship missions, and a cosmic microwave background space probe.

Field of Science: Astrophysics



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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.