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Opportunity Title: Superconducting Nanowire Single Photon Detectors
Opportunity Reference Code: 0185-NPP-NOV26-JPL-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0185-NPP-NOV26-JPL-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:

We are seeking a postdoctoral researcher to develop superconducting nanowire single photon detectors (SNSPD) technology for applications in exoplanet transit spectroscopy, deep-space laser communication, and quantum optics. Our research group is focused on advancing the performance of these detectors in every metric, including efficiency at mid-infrared and ultraviolet wavelengths, active area, timing resolution, maximum count rate, dark count rate, and pixel count. The ideal candidate would have experience in one or more of the following areas: (1) superconducting detector characterization and testing, (2) device nanofabrication, (3) development of detector readout electronics, and (4) design and implementation of cryogenic detector instruments in field applications.

References:

F. Marsili et al, Nature Photonics 7, 210 (2013)

Location:
Jet Propulsion Laboratory
Pasadena, California

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Field of Science: Astrophysics

Advisors:
Matt Shaw
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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.