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Opportunity Title: X-ray laboratory astrophysics
Opportunity Reference Code: 0208-NPP-MAR26-GSFC-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0208-NPP-MAR26-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 4/2/2026 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:

Analysis of data from calorimeter and grating instruments for high resolution x-ray spectroscopic observations of astrophysical objects requires high quality atomic data. Providing this data and an understanding of its limitations requires a joint program of theory development and laboratory benchmark experiments. We participate in several ongoing laboratory astrophysics collaborations aimed at providing data for interpretation of observations by Chandra, XMM, and the future XRISM, Athena, Arcus, and Lynx missions. We have deployed high resolution X-ray calorimeter arrays using doped silicon thermistors and featuring better than 5 eV FWHM spectral resolution at a variety of facilities, including the LLNL electron beam ion trap (EBIT) laboratory and the SLAC linac coherent light source (LCLS), allowing measurements of transition energies, oscillator strengths, and electron impact excitation cross sections. In the near future we will deploy a calorimeter array featuring transition edge sensors (TES) to LLNL/EBIT. In conjunction with experiments, we participate in the activities of archiving and publicizing atomic data, along with astrophysical modeling utilizing this data. In addition, we carry out a targeted program of atomic physics calculations.

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Location:
Goddard Space Flight Center
Greenbelt, Maryland

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.