Opportunity Title: Astrophysics: High-Energy Astronomy
Opportunity Reference Code: 0002-NPP-NOV23-MSFC-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0002-NPP-NOV23-MSFC-Astrophys

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

Description Opportunities for research in high-energy astronomy emphasize the study of transient hard x-ray and gamma-ray sources using a variety of space-borne instruments. Extensive investigations are based around the Fermi Gamma-ray Burst Monitor (GBM), which was developed by the Huntsville team in collaboration with the German MPE, and launched in 2008. GBM's primary scientific objective is the study of Gamma Ray Bursts (GRBs) and has taken a key role in the detection of high-energy counterparts to gravitational wave detections; it also provides observations of solar flares, accreting pulsars, X-ray binaries including neutron stars or black holes, soft-gamma repeaters, and terrestrial gamma-ray flashes from thunderstorms. Beyond GBM, interests include the development of detectors and technology for future high-energy astrophysics mission. These missions include StarBurst, a Pioneer class mission to detect high-energy gamma rays in conjunction with future gravitational wave detections of neutron star mergers, MoonBEAM, a SmallSat designed to detect transient gamma-ray sources in cis-lunar space, Glowbug, a gamma-ray sensitive ISS payload scheduled to launch in ~2023, the LargE Area Polarimeter (LEAP), a gamma-ray burst polarimeter under study as an International Space Station (ISS) payload, development and participation in X-ray timing missions such as the Neutron star Interior Composition Explorer (NICER), operating on the ISS since 2017, and the Spectroscopic Time-Resolving Observatory for Broad-band Energy X-rays (STROBE-X), a probe-class mission under study, as well as collaborative studies using Fermi and high-energy ground-based facilities such as HAWC and VERITAS . MSFC scientists have extensive external collaborations, including those with GBM partner institutions: MPE, University of Alabama in Huntsville, Universities Space Research Association, and University College Dublin.

Location:
Marshall Space Flight Center
Huntsville, Alabama

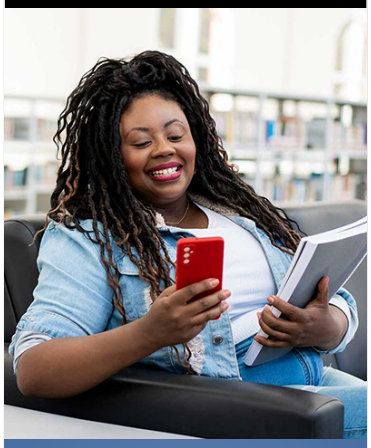
Field of Science: Astrophysics

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NPP NASA Postdoctoral Program

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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.