

Opportunity Title: Astrophysics: Galactic Outflows and the Circumgalactic Medium

Opportunity Reference Code: 0223-NPP-NOV23-GSFC-Astrophys

Organization National Aeronautics and Space Administration (NASA)

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

Description The balance of infall and outflow of circumgalactic gas determines the long-term evolution of a galaxy, so understanding how gas gets into and out of galaxies is essential to understanding our cosmic origins. This research program includes multiwavelength observational studies of starburst or AGN outflows, absorption and emission studies of the circumgalactic medium around the Milky Way and other galaxies, and studies of circumgalactic dust using ultraviolet and infrared data. The use of X-rays to characterize hot outflows and the hot circumgalactic medium is especially important, and this program may encompass analysis of data from the JAXA/NASA X-ray Imaging and Spectroscopy Mission (XRISM) and preparation for the planned ESA/NASA Athena X-IFU and proposed Arcus X-ray spectrometers. Theoretical inquiry and development of new data analysis techniques focused on circumgalactic gas and dust or galactic outflows are also encouraged.

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



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Eligibility Requirements • **Degree:** Doctoral Degree.