Opportunity Title: Analytical and numerical modelling of magnetic flux rope structures in the heliosphere
Opportunity Reference Code: 0251-NPP-MAR26-GSFC-HelioSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0251-NPP-MAR26-GSFC-HelioSci

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 3/1/2026 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:

This project will be focused on the development of analytical and numerical modeling of magnetic flux rope structures in the heliosphere. This includes (1) axial of cross-sectional deformations due to self-interaction or external factors such as the coronal magnetic field or variations in the solar wind, (2) structural time evolution such as expansion or the evolution of magnetic twist, (3) stability constraints or conditions, (4) model configuration for comparison to real-world in-situ magnetic field measurements. The theoretical approaches that are developed within this program can be validated close to the Sun or near to Earth by using in-situ or remote imaging data from currently operating missions such as Parker Solar Probe or STEREO.

Field of Science: Heliophysics Science

Advisors:

Teresa Nieves-Chinchilla
teresa.nieves@nasa.gov
(301) 286-8681

Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of

Opportunity Title: Analytical and numerical modelling of magnetic flux rope structures in the heliosphere
Opportunity Reference Code: 0251-NPP-MAR26-GSFC-HelioSci

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.