Opportunity Title: Heliophysics Science: Transients Structures in the Ambient Solar Wind
Opportunity Reference Code: 0151-NPP-NOV23-GSFC-HelioSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0151-NPP-NOV23-GSFC-HelioSci

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

Description This research effort is on the origin and evolution of small scale transients in the ambient solar wind. Remote and in situ sensing instrumentation regularly observe quiet-time plasma density structures in the inner corona, through the inner Heliosphere, all the way out to 1 AU. Many of these density fluctuations may be a consequence of the turbulent cascade, but it has been shown through compositional data in situ and remote sensing data that many density structures are non-turbulent. Both turbulent and non-turbulent structures are created with specific properties as a consequence of their source locations, and/or the solar wind acceleration mechanism, so understanding their formation is a vital aspect of the Sun-Earth connection. Such density structures are pressure oscillations in the rest frame of solar system bodies such as Earth's magnetosphere, and have been shown to drive important dynamics and oscillations. Ongoing investigations include the analysis of both remote sensing data and in situ data, as well as the relationship between them; time series/spectral analysis of these data plays the primary role.

Location:
Goddard Space Flight Center
Greenbelt, Maryland

Field of Science: Heliophysics Science

Advisors:
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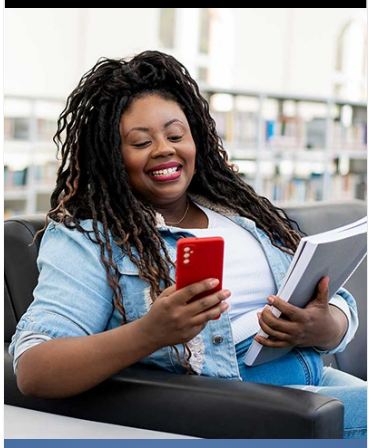
Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States. A complete list of Designated Countries can be found at: https://www.nasa.gov/oiir/export-control.

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

NPP NASA Postdoctoral Program

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Eligibility Requirements

- **Degree:** Doctoral Degree.