

Opportunity Title: Visualization of Heliophysics Multi-Spacecraft Data and Simulations

Opportunity Reference Code: 0088-NPP-NOV23-GSFC-HelioSci

Organization National Aeronautics and Space Administration (NASA)

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

Description Within NASA's Heliophysics Division, a primary goal is to understand how the Sun, heliosphere, and planetary environments are connected in a single system. Visualization of these three-dimensional systems is essential to reach a complete understanding of the dynamical interactions, and this is a very active area of investigation at NASA. Visualization is also useful to present ideas in scientific or educational forums or to funding agencies. Typical visualizations may employ models, simulations, and/or space data or consist of animations based on these. Models include empirically-based depictions, such as bow shock or magnetopause three-dimensional surfaces and magnetic field lines. Simulations include magnetohydrodynamic (MHD) models of Earth's magnetosphere run for particular solar wind conditions, or solar coronal models. Data come primarily from Heliophysics missions such as MMS, Van Allen Probes, SDO, Wind, ACE, and Geotail and will include data from missions such as Parker Solar Probe, Solar Orbiter, ICON, and GOLD. Advanced visualization techniques are being developed and commercial software such as Final Cut Pro, Adobe Premier and After Effects, and Lightwave are highly utilized. For more interactive and specifically scientific work, recent software based on, e.g., Python and javascript are becoming popular. Output options are ever faster and higher resolution, enabling increasingly realistic and helpful realizations of data and simulations.

Location:

Goddard Space Flight Center
Greenbelt, Maryland

Field of Science:Heliophysics Science

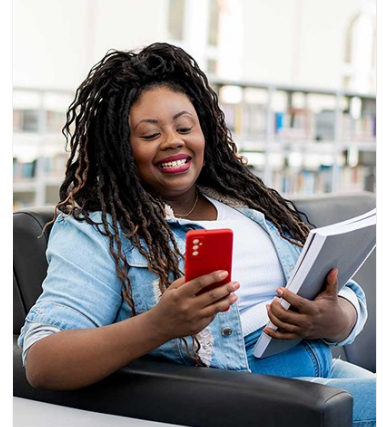
Advisors:

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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,



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- 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.