

Opportunity Title: Coronal Mass Ejection (CME) propagation, magnetic connectivity, and Solar Energetic Particles (SEPs)

Opportunity Reference Code: 0186-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 This opportunity involves different aspects of modeling coronal mass ejection (CME) propagation, magnetic connectivity of observers to the Sun and CME, and solar energetic particles (SEPs) in the inner heliosphere. CME propagation modeling studies include quantifying the effect of the background solar wind through which the CME propagates, uncertainties in CME kinematic parameters, uncertainties in input magnetograms, and validating CME propagation to various locations. Comparing different models of magnetic connectivity will help us understand the accuracy in the background solar wind and particle acceleration models. The CCMC is working on system to run SEP models driven by a variety of heliospheric models. This research would also involve running these coupled models (as a chain), validating and calibrating results, and improving coupling algorithms when appropriate.

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

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



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