

**Opportunity Title:** Heliophysics: Linking the Solar Interior to Solar Activity

**Opportunity Reference Code:** 0104-NPP-NOV23-GSFC-HelioSci

**Organization** National Aeronautics and Space Administration (NASA)

**Reference Code** 0104-NPP-NOV23-GSFC-HelioSci

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

**Description** The Solar Physics Laboratory is active in all phases of obtaining and analyzing various solar observations. Opportunities exist for participating in research on new techniques of analysing and interpreting data, empirical modeling of solar conditions, and theoretical modeling of the solar interior and activity.

A program of research to connect conditions in the solar interior to changes in the solar exterior is being carried out using a combination of theoretical and data analysis investigations. New observations to be obtained with instruments on the NASA Solar Dynamics Observatory (SDO) will be an integral part of this research. The data comprise EUV spectral irradiances at a 10 second cadence, full-disk spectroheliograms at 10 wavelengths at a cadence of 8 images every 10 seconds, and full-disk Dopplergrams and vector magnetograms at cadences between 45 seconds and 10 minutes. Theoretical studies and computer modeling of the internal structure of the Sun will be used to study how internal flows could be manifested in the observations. Solar activity predictions are one area that would benefit from this research. Data from other missions are also available, including the Transition Region and Coronal Explorer (TRACE), instruments on the Solar and Heliospheric Observatory (SOHO), and instruments on the twin spacecraft of the Solar Terrestrial Relations Observatory (STEREO).

**Location:**

Goddard Space Flight Center  
Greenbelt, Maryland

**Field of Science:**Heliophysics Science

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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/oiiir/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.