

**Opportunity Title:** Heliophysics Science: Ionospheric Modeling (International Reference Ionosphere)

**Opportunity Reference Code:** 0041-NPP-NOV23-GSFC-HelioSci

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

**Reference Code** 0041-NPP-NOV23-GSFC-HelioSci

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

**Description** Research opportunities in this area include statistical analysis of long data records to establish the regular and irregular variation patterns of ionospheric parameters (electron and ion densities and temperatures) and the representation of these variations with appropriate mathematical functions. The primary goal is to improve the International Reference Ionosphere (IRI), which is the international standard for ionospheric parameters. We are specifically interested in studies related to the variation of ionospheric densities and temperatures with the 11-year solar cycle using the large volume of *in situ* data from several ionospheric satellite missions available in the National Space Science Data Center (NSSDC) archive. Many of these data sets are available for browsing and plotting in the ATMOWeb system. Other IRI-related projects include the study of ionospheric storm effects and their representation in IRI; of special interest are the positive storm effects that are not yet included in IRI.

**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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