

**Opportunity Title:** Heliophysics Science: Radiation Belt and Ring Current Modeling

**Opportunity Reference Code:** 0065-NPP-NOV23-GSFC-HelioSci

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

**Reference Code:** 0065-NPP-NOV23-GSFC-HelioSci

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

**Description:** Radiation belt and ring current plasmas are hazardous to systems and to humans in space. It is important to understand the processes controlling their buildup and decay in order to predict and forecast the development of these high-energy plasmas. We conduct theoretical research and computer simulation. Modeling tools include global magnetohydrodynamic models, kinetic models, and single particle trajectory tracing. To validate these theories and models, extensive comparison with observations of energetic particles is also conducted, including remote sensing of energetic neutral atoms. Opportunities exist to develop new theories, improve existing models, and analyze available data.

**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/oijr/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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