

Opportunity Title: Research opportunity in Geospace at the Community

Coordinated Modeling Center

Opportunity Reference Code: 0175-NPP-NOV23-GSFC-HelioSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0175-NPP-NOV23-GSFC-HelioSci

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

Description The coupled magnetosphere, ionosphere and thermosphere system spans most of the near-Earth space environment. It is strongly driven by the interaction of the solar wind with the geomagnetic field that transfers electromagnetic and charged particle energy into the magnetosphere and down into the ionosphere and thermosphere. This region is highly time-dependent and encompasses charged and neutral particle populations, complex photo-chemical processes, field-aligned currents and wave-particle interactions. The region also has crucial implications for space weather. During enhanced geomagnetic activities, these systems evolve rapidly and could pose hazards to space-based systems and satellites including deep dielectric charging, surface charging, enhanced satellite drag, ionospheric scintillations affecting telecommunications, navigation, and other activities. The accurate modelling of the near-Earth environment to reach predictive capabilities is of crucial importance for communication and spacecraft operations. This opportunity calls for investigations covering broad topics that are relevant for this region with a focus on how the mass, momentum and energy is transferred throughout the coupled magnetosphere - ionosphere -thermosphere system. The research areas covered by this opportunity include physics of the inner magnetosphere, the dynamically coupled magnetosphere and ionosphere system, high-latitude ionospheric electrodynamics, transient ionospheric and magnetospheric phenomena, and ionosphere-thermosphere coupling. Potential candidates are expected to be involved in model verification and validation efforts to support CCMC's community-wide challenges while contributing to the focused research area(s).

Location:

Goddard Space Flight Center

Greenbelt, Maryland

Field of Science:Heliophysics Science

Advisors:

Yihua Zheng

Yihua.Zheng@nasa.gov

301-286-0111

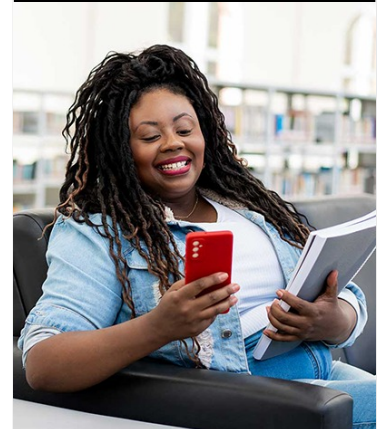
Maria M. Kuznetsova

Maria.M.Kuznetsova@nasa.gov

301-286-9751

Lutz Rastaetter

lutz.rastaetter-1@nasa.gov



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301-286-1085

Katherine Garcia-Sage

katherine.garcia-sage@nasa.gov

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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.