

Opportunity Title: Solar System Exploration: Support the SSERVI LEADER Lunar

Science Institute

Opportunity Reference Code: 0108-NPP-NOV23-GSFC-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

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

**Description** The Solar System Exploration Division at NASA's Robert H. Goddard Space Flight Center is seeking applications for 1-2 postdoctoral appointments to support the newly-formed Lunar Science Institute LEADER group at GSFC. Candidates are encouraged to contact Dr. Rosemary Killen (rosemary.killen@nasa.gov) directly to develop a research proposal. The "Lunar Environment And Dynamics for Exploration Research (LEADER)" is a new theory-model-data validation center at GSFC and funded under the auspices of the larger NASA Solar System Exploration Research Virtual Institute (SSERVI) program established by NASA's Planetary Division. The LEADER team's primary goal is to answer the guestion "how do the highly variable energy and matter in the inner heliosphere affect the volatile stability, exosphere formation, plasma interactions, dust migration, surface micro-structures and human systems at the Moon, and how does this change with human presence?" LEADER will develop and advance neutralplasma-dust models of the lunar environment and compare these to past, current, and future data sets. Special emphasis will be on the understanding of the Moon's reaction to extreme events such as severe solar storms and impacts, as well as human activities. The LEADER group will also study the effect of radiation on the Moon, and on human systems and humans on the Moon. The LEADER group seeks post docs with strong analytical and modeling skills - with priority given to those with knowledge in multi-dimensional kinetic simulation codes. We anticipate that any postdoc will support the efforts by (1) advancing and developing models of the lunar exosphere, exo-ionosphere, and plasma interactions, (2) applying these models as support for missions like LRO (3) integrating the models with other LEADER's plasma and exospheric co-investigation team members models, (4) disseminating results via conference presentations and publications, (5) participating in LEADER E/PO activities - especially presentations to the general public and k-12 activities, and (6) collaborating with other SSERVI teams in common areas, especially emphasized in the SSERVI Focus Team activities. Goddard is a vibrant and exciting science center and we strongly encourage interested new PhD. graduates to apply.

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## Location:

Goddard Space Flight Center Greenbelt, Maryland

Field of Science: Planetary Science

## Advisors:

Rosemary Killen Rosemary.Killen@nasa.gov 301-286-6574

Orenthal J. Tucker



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orenthal.j.tucker@nasa.gov 301-614-6941

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 • Degree: Doctoral Degree.

Requirements