

Opportunity Title: Earth Science: Remote Sensing and Modeling of Terrestrial

Seasonal Snow

Opportunity Reference Code: 0055-NPP-NOV23-GSFC-EarthSci

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 Hydrological Sciences Laboratory at NASA's Goddard Space Flight Center is seeking a post-doc candidate to conduct research in the remote sensing of terrestrial seasonal snow. The Lab has expertise in ground, airborne, and space based observation and modeling of snow, soil moisture, precipitation, and terrestrial water storage.

Research areas involving terrestrial seasonal snow could include snowpack physics, interactions between snowpacks and soil, vegetation, and/or the atmosphere (wind, rain, sun, etc), as well as snow-related societal uses of snow (applications) including water resources, natural hazards (floods and droughts), water security, and weather and climate. Exploring connections between terrestrial seasonal snow and other elements of the water cycle is facilitated by the synergistic expertises of other Lab members, and the candidate is encouraged to explore collaborative opportunities with other members of the Lab towards the goal of developing a comprehensive and complete understanding of the global water cycle. Furthermore, s/he is encouraged to develop collaborative relationships with other groups to assist in the enhancement of decision support tools at agencies using NASA Earth science products and technologies.

The remote sensing component of the candidate's research could include any combination of sensing techniques from passive and active microwave, to passive VIS/IR sensing, lidar, signals of opportunity, gravity and/or gamma radiation. Sensing tools could include those that are traditional as well as experimental. Sensing platforms could include everything from snowshoes to manned aircraft, UAVs, and satellites. The full exploitation of multi-sensor satellite data from US and non-US sources (e.g., SnowEx, NASA, ESA, and JAXA), combined with numerical models, in order to characterize snow is encouraged. The candidate may also contribute to the design, implementation, and science of a future snow remote sensing mission.

Opportunities for snow field work are highly likely as part of the SnowEx campaigns.

The ideal candidate will have experience or an educational background in the collection and use of remote sensing data, the design and improvement of algorithms and models, and the collection of field data and its use in validation studies. Computation-intensive projects can exploit NASA's supercomputers and the NASA cloud.

Location:

Goddard Space Flight Center
Greenbelt, Maryland



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Field of Science:Earth 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/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.