

**Opportunity Title:** Earth Science: Land-Atmosphere Interaction and Coupling  
Impacts on Energy and Water Cycle Prediction

**Opportunity Reference Code:** 0139-NPP-NOV23-GSFC-EarthSci

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

**Reference Code** 0139-NPP-NOV23-GSFC-EarthSci

**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 area of land-atmosphere interactions and coupling. The Lab has been leading community-wide efforts to improve quantification of the impact of land surface fluxes and states on water and energy cycling and atmospheric prediction. In addition, both the Land Information System (LIS) and the NASA-Unified Weather Research and Forecasting (NU-WRF) system are developed by experts in the Lab, and are combined with satellite remote sensing observations of the land surface and planetary boundary layer (PBL) to evaluate and improve coupled prediction. Research opportunities exist in all areas of land-atmosphere coupling including components, processes, and diagnostics linking soil moisture to evapotranspiration to PBL growth to clouds and precipitation. Studies may also utilize the optimization/calibration and data assimilation components of the LIS and NU-WRF systems in order to demonstrate the impact and improvement in fusing models with observations on prediction skill. The ideal candidate will have demonstrated an active research interest in the modeling, observation, and evaluation of land-PBL processes and interactions. A focus on local to regional prediction is desired, but not necessary, as land-atmosphere coupling assessments need to be made across scales up to and including global and climate model resolutions. To this end, collaboration with NASA's Global Modeling and Assimilation Office (GMAO) and their coupled climate modeling systems are also possible through this opportunity.

**Location:**

Goddard Space Flight Center  
Greenbelt, Maryland

**Field of Science:**Earth 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:



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- 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.