Opportunity Title: Predicting Precipitation-Driven Disruptions to Critical Infrastructure

Opportunity Reference Code: 0024-NPP-MAR26-GISS-EarthSci

Organization	National Aeronautics and Space Administration (NASA)
Reference Code	0024-NPP-MAR26-GISS-EarthSci
How to Apply	All applications must be submitted in [Zintellect](#)

Please visit the NASA Postdoctoral Program website for application instructions and requirements: [How to Apply | NASA Postdoctoral Program (orau.org)](#)

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline	4/2/2026 6:00:59 PM Eastern Time Zone
Description	**About the [NASA Postdoctoral Program](#)**

The [NASA Postdoctoral Program (NPP)](#) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

Extreme precipitation events are escalating hazards that contribute significantly to expensive disasters and impact critical infrastructure. Observations from NASA missions, including GRACE and GRACE-FO, confirm that the intensity and frequency of extreme rainfall is increasing globally. This non-stationary hazard creates a critical prediction gap: the rarity of these events confounds traditional predictive attempts and limits the availability of training data for high-resolution atmospheric and hydrological models. This limitation is compounded by the fact that many atmospheric reanalysis products, often used as forcing data, systematically underestimate the intensity of true extreme precipitation maxima.

This NPP fellowship seeks to overcome these fundamental limitations by employing advanced computational techniques grounded in physical laws. The research will accelerate the development of reliable predictive capabilities for high-impact, low-frequency rainfall extremes. The successful candidate will develop and implement large Earth foundation model pipelines. These pipelines will be utilized to generate synthetic datasets of precipitation events to predict infrastructure disruptions. Candidates must possess an exceptional background demonstrating expertise across atmospheric physics, computational modeling, and data science.

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Knowledge of atmospheric science or meteorology, and computer science is required.

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

Questions about this opportunity? Please email npp@orau.org

Point of Contact	Mikeala
Eligibility Requirements	• **Degree:** Doctoral Degree.