

Opportunity Title: Tropical meteorology, cloud and precipitation variability

Opportunity Reference Code: 0258-NPP-NOV23-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0258-NPP-NOV23-GSFC-EarthSci

How to Apply All applications must be submitted in [Zintellect](#)

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

Description Description:

Clouds, convection and precipitation on Earth are organized in myriad ways: by variations in water vapor, by radiative feedbacks, by the circulations they inhabit. Their organization ranges from shallow cumuli excited around a cold pool, to hurricanes and basin-scale equatorial waves. This variability offers a lens through which to test the assumptions used in global climate and weather models.

In the NASA Global Modeling and Assimilation Office (GMAO) we develop the GEOS modeling system, used for near-real-time weather forecasts, seasonal prediction, and reanalysis production. Our tools include single column modeling, large eddy simulation, global cloud-resolving simulations, and a wide range of satellite observations. We invite applicants interested in all aspects of cloud, convection and precipitation variability, and their interaction with water vapor and other feedbacks.

Potential research topics include: cloud radiative feedbacks; convection or precipitation-humidity relationships; size distributions of precipitation or cloud features; convectively coupled equatorial waves or the MJO, including the influence of the maritime continent; gross moist stability or other cloud/convection diagnostics; and the diurnal cycle of convection.

Field of Science: Earth Science

Advisors:

Nathan Arnold

nathan.arnold@nasa.gov

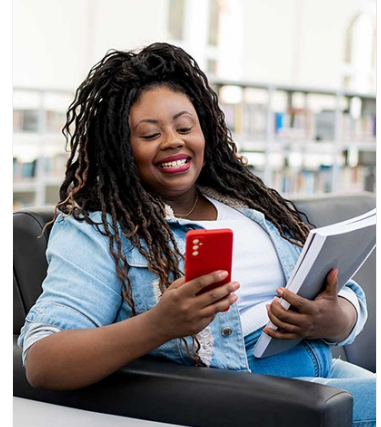
(301) 614-5651

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



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valid EAD card and 2) I-485 or I-589 forms in pending status

Eligibility Requirements

- **Degree:** Doctoral Degree.