

Opportunity Title: CLARREO Pathfinder Science

Opportunity Reference Code: 0033-NPP-NOV23-LRC-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: CLARREO Pathfinder (CPF) (<https://clarreo-pathfinder.larc.nasa.gov/>) is expected to launch in late calendar year 2023, with science operations beginning in early calendar year 2024. CPF includes a reflected solar spectrometer that will take Earth spectral measurements at unprecedented high accuracy. The payload includes a pointing system that enables on-orbit solar-based calibration, direct intercalibration with other on-orbit reflected solar sensors, and characterization of other intercalibration targets (e.g. pseudo-invariant land sites, the Moon). With its high accuracy, spectral range (350 - 2300 nm), spectral sampling (3 nm), and spatial resolution (~0.5 km at nadir), CPF will provide novel, information-packed measurements of Earth. The CPF team at NASA Langley Research Center is seeking post-doctoral candidates who will focus on science research topics that leverage the wealth of information contained in CLARREO Pathfinder-like reflected solar spectral measurements of Earth's climate system including, but not limited to: refining climate benchmark measurement requirements, developing spectral fingerprinting algorithms, developing novel hyperspectral retrieval algorithms, additional intercalibration studies, and enhancing and advancing intercalibration algorithm approaches and hyperspectral analysis with machine learning. We are also interested in studies to evaluate decadal time-variant geophysical retrieval algorithm uncertainties and their impact on detecting geophysical variable trends.

Location:

Langley Research Center
Hampton, Virginia

Field of Science: Earth Science

Advisors:

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(757) 864-2507

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
 - **Degree:** Doctoral Degree.