

**Opportunity Title:** Coupled retrieval of aerosol/ocean/land properties from airborne and satellite polarimeter data

**Opportunity Reference Code:** 0028-NPP-NOV23-LRC-EarthSci

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

**Reference Code** 0028-NPP-NOV23-LRC-EarthSci

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

**Description** The Advanced Polarimetry Remote Sensing group is based in the Lidar Science Branch of the Science Directorate at NASA's Langley Research Center. We specialize in the retrieval of aerosol and cloud optical and microphysical properties together with ocean sub-surface biophysical properties (ocean optics) and land surface properties. Our research seeks to improve the characterization of aerosol absorption in the atmosphere to study radiative effects and air quality, to shed light on ocean optics in coastal zones and complex waters, and to understand the impact of aerosol-cloud interactions and cloud-processing on aerosol-cloud optical and microphysical properties. Airborne experiments and large-scale field missions may be conducted on the NASA DC-8, P-3B, HU-25C, B200 or UC-12 aircraft. Qualified applicants may participate in a number of new and ongoing projects including the Aerosol Cloud meTeorology Interactions oVer the western ATlantic Experiment (ACTIVATE, <https://activate.larc.nasa.gov/>). Tasks associated with these efforts include operation of instruments aboard NASA aircraft; deployments to domestic and foreign locations; operational processing of polarimeter/lidar airborne and satellite data; testing and implementing improvements to polarimeter/lidar atmosphere/ocean/land retrieval algorithms; developing innovative methods for using these new retrieval products in scientific applications to monitor and understand the Earth's atmosphere-ocean-land systems; analysis and reporting of results for peer-reviewed publications. Recent graduates with strong backgrounds in two or more of the following areas are particularly welcome to apply: radiative transfer, optimal estimation, aerosol/cloud/ocean optics, airborne/satellite remote sensing, machine learning and programming (C++, Fortran, and/or Python).

**Location:**

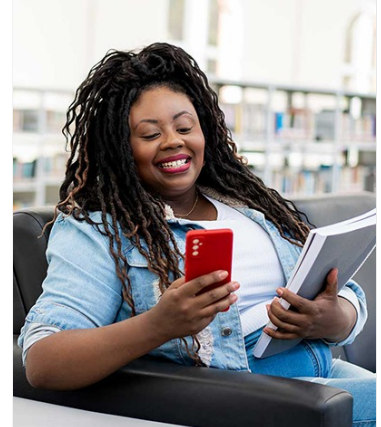
Langley Research Center  
Hampton, Virginia

**Field of Science:**Earth Science

**Advisors:**

Snorre Stamnes  
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(757) 864-5801

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.