

Opportunity Title: Advancing the retrieval of aquatic optical properties using multi-angle polarimetry

Opportunity Reference Code: 0265-NPP-NOV23-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0265-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:

Satellite measurements from radiometers observing the ultraviolet-to-shortwave infrared spectral range have revolutionized our understanding of Earth's atmospheres and oceans over the past four decades. The majority of these satellite radiometers, however, rely on the scalar treatment of light, thus neglecting the polarization components of that light. Polarized light emerging from the Earth system carries a plethora of information about both the atmosphere and the ocean that is, in particular, underutilized in ocean remote sensing. Several new satellite missions are in development that will host advanced multi-angle polarimeters – including the NASA Plankton, Aerosol, Cloud, and ocean Ecosystem (PACE) mission, the NASA Earth System of Observatory's Atmosphere Observing System (AOS), and EUMETSAT Polar System-Second Generation Metop-SG programme. Furthermore, there is now an increasing availability of in- and above-water instruments to measure the polarization state of seawater. Following, the time is right to pursue novel remote sensing methods that strengthen our understanding about information contained in polarization signals for use in ocean remote sensing applications.

The Ocean Ecology Laboratory (GSFC Code 616) seeks an NPP fellow to pursue novel remote sensing and bio-optical approaches for deriving aquatic optical properties from multi-angle polarimetry, with a primary focus on satellite data records. The candidate should have educational experience in remote sensing, radiative transfer theory, and polarimetry. An ideal candidate will also have experience in bio-optical modeling, polarimeter architecture and design, and performance assessments using data collected at-sea, while also being adept at collaborating with others and communicating results to colleagues, program managers, the community, and the general public.

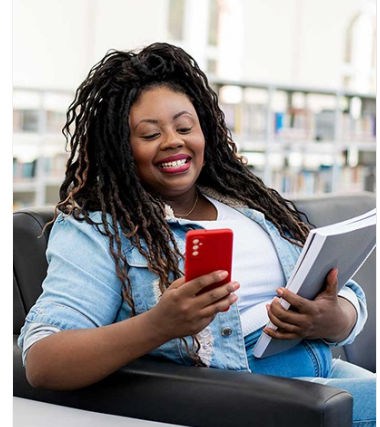
Field of Science: Earth Science

Advisors:

Amir Ibrahim
amir.ibrahim@nasa.gov
(301) 635-8679

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/oirr/export-control>. ?



Whether you are just starting your career or already at a senior level, ORAU offers internships, fellowships, research opportunities, and contract positions that can provide you with invaluable experience. Download the ORAU Pathfinder mobile app and find the right opportunity to propel you along your career path!

Visit ORAU Pathfinder [↗](#)



Opportunity Title: Advancing the retrieval of aquatic optical properties using multi-angle polarimetry

Opportunity Reference Code: 0265-NPP-NOV23-GSFC-EarthSci

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

**Eligibility
Requirements**

- **Degree:** Doctoral Degree.