Opportunity Title: Advances in Satellite Remote Sensing of Ocean Phytoplankton and Biogeochemistry
Opportunity Reference Code: 0266-NPP-NOV26-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0266-NPP-NOV26-GSFC-EarthSci

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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 11/1/2026 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:

The objectives of this research are to take advantage of the hyperspectral and ultraviolet capabilities on NASA's current and upcoming ocean color satellite missions, PACE and GLIMR, to infer biological and biogeochemical constituent concentrations and rates from the derived optical properties. Specifically, the aims are to develop advanced algorithms to retrieve from PACE and GLIMR remote sensing reflectance one or more of the following data products, (1) dissolved and particulate organic carbon concentrations and fluxes in coastal ocean and estuarine systems, (2) phytoplankton community composition targeting the major taxonomic groups or harmful algal blooms and track the formation and succession of phytoplankton populations, (3) surface water velocity vectors and trajectories of materials such as suspended sediments and organic matter, and (4) to discern changes in ocean color properties to quantify event-based (e.g., freshet, storms, etc.) impacts to phytoplankton and organic matter. Existing and newly developed algorithms are applied to generate regional or global satellite time-series observations to investigate phytoplankton communities, biogeochemical cycling, and the coupling between physical and biogeochemical processes on time scales of days to years. A critical component of this research includes determining uncertainties of these ocean remote sensing data products and derived geophysical trends. Potential research areas include ship- and laboratory-based measurements to enable development of in situ bio-optical algorithms for ocean color satellite retrievals and validation.

Field of Science: Earth Science

Advisors:

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Point of Contact Mikeala

Eligibility Requirements

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