

Opportunity Title: Sources and Transformations of Organic Matter Across the Coastal Arctic River-to-Sea Continuum

Opportunity Reference Code: 0338-NPP-NOV26-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

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

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](#)

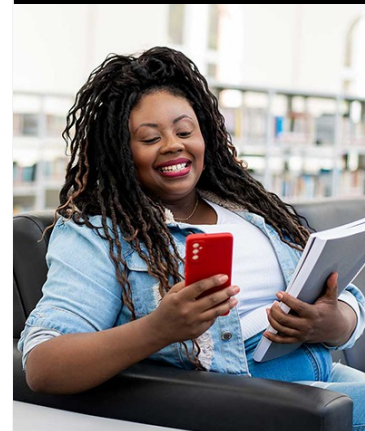
The [NASA Postdoctoral Program \(NPP\)](#) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

This research opportunity aims to characterize the seasonal variability of particle source materials and evaluate their nutritional content across the river-to-sea continuum of Alaska's North Slope. The specific objectives are to:

1. Apply biomarker lipidomics and other biomolecules to quantify the sources and fluxes of particles originating from permafrost, watershed vegetation, autochthonous riverine production, and autochthonous marine production.
2. Assign food-quality metrics to particles.
3. Link particle source and food quality to coincident optical and phytoplankton measurements collected by collaborating investigators, including remote sensing reflectance, absorption, scattering, particle size distributions, and phytoplankton community composition.
4. Develop remote sensing approaches to track particle sources and food-quality characteristics.

This study supports NASA's FORTE (<https://cce.nasa.gov/forte/>) and Arctic-COLORS (https://cce.nasa.gov/cce/arctic_colors_report.html) field campaign investigations. Alaska's North Slope and the broader coastal Arctic are experiencing rapid environmental change, including shifts in the



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timing of the spring freshet, permafrost thaw, seasonal landfast and offshore ice melt, and fall freeze-up. These changes have important implications for the Arctic marine ecosystem, which provides critical food resources for both marine mammals and local communities.

Field of Science: Earth Science

Advisors:

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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>.

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

Questions about this opportunity? Please email npp@orau.org

- Qualifications**
- Ph.D. in marine sciences, oceanography, chemistry or closely related discipline
 - Expertise with biogeochemical sample collection at sea, laboratory analysis, and data processing.
 - Experience with high-performance liquid chromatography (HPLC), gas chromatography-mass spectrometry (GC-MS), and/or LC-MS

Point of Contact [Mikeala](#)

- Eligibility Requirements**
- **Degree:** Doctoral Degree.