Opportunity Title: Effect of Wildfires on Ocean Biogeochemistry
Opportunity Reference Code: 0333-NPP-MAR26-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0333-NPP-MAR26-GSFC-EarthSci

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 4/2/2026 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:

Droughts and wildfires have become more frequent in the last decades, leading to loss of habitats in terrestrial ecosystems and the emission of substantial amounts of atmospheric aerosols. Aerosol emissions from wildfires can lead to the atmospheric transport of macronutrients and bio-essential trace metals such as nitrogen and iron, which are later deposited over the ocean, potentially fertilizing marine planktonic ecosystems. For example, the 2019-2020 Australian wildfires triggered widespread phytoplankton blooms, evidenced in chlorophyll data obtained from satellite remote sensing and in situ profiling (BGC-Argo) floats (https://www.nature.com/articles/s41586-021-03805-8).

The NASA Ocean Biogeochemical Model (NOBM) has recently been coupled to the Subseasonal to Seasonal Prediction Version 3 (S2S-V3) system used for seasonal climatological forecasting within the Goddard Earth Observing System (GEOS) models developed by the Global Modeling Assimilation Office (GMAO). S2S-V3 is informed by changes in atmospheric aerosols from wildfires, but the potential deposition of dust over the ocean and its impact on nutrients is not yet parameterized within the NOBM. This project seeks to explore ways to include this parameterization and improve the representation of ocean productivity and biogeochemical cycling within GEOS.

Field of Science: Earth Science

Advisors:

Cecile Rousseaux

Opportunity Title: Effect of Wildfires on Ocean Biogeochemistry
Opportunity Reference Code: 0333-NPP-MAR26-GSFC-EarthSci

cecile.s.rousseaux@nasa.gov
(443) 739-0093

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/oiir/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

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.