

Opportunity Title: Surface-Atmosphere Fluxes using Unmanned Systems

Opportunity Reference Code: 0051-NPP-NOV23-ARC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

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

Description Several NASA Earth Science disciplines including Carbon Cycle & Ecosystems, Biological Oceanography, and Tropospheric Chemistry would benefit from improved measurements of gas, heat, and momentum fluxes from ocean and land surfaces to the atmosphere. This project is focused on making use of NASA's unique capabilities in unmanned aircraft and remotely operated sensor systems to improve measurements of surface to atmosphere exchange and to apply the findings to improvements to NASA satellite data products and models. The proposer should have experience in integrating and operating payloads onto unmanned or manned aircraft and should ideally have experience in deriving 3D winds from aircraft. Several new instruments will be delivered over the next year including a 15Hz CO₂, CH₄, and water vapor gas analyzer, CO₂ isotope analyzer, and OCS/CO gas analyzer and it is expected that these instruments can be used to support this program element. Additionally this project would benefit from miniturization of existing instruments and components to enable improved measurements from small UAVs.

Location:

Ames Research Center
Moffet Field, California

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/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



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Eligibility Requirements • **Degree:** Doctoral Degree.