Opportunity Title: Venus Surface-Atmosphere Experimental Studies
Opportunity Reference Code: 0193-NPP-MAR26-GSFC-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0193-NPP-MAR26-GSFC-PlanetSci

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:

Venus is a hot, dry planet with an inhospitable atmosphere and is Earth‘s nearest planetary neighbor, excluding the moon. Earth and Venus are about the same size and mass, yet that is where the similarities end. Even with the array of missions that were sent to Venus starting in the early 1960‘s, we know surprisingly little about its chemistry either on the surface or in the lower atmosphere. In order to combat this knowledge gap, modeling and lab experiments are used to investigate possible Venus surface-atmosphere reactions. Venus‘ surface temperature and pressure (740K and 95.6 bar) suggest that chemical weathering is likely.

The research in this lab is mostly experimental though theoretical modeling is also encouraged. The main focus is exploring possible surface-atmospheric reactions through the use of multiple high-temperature (maximum 1000 °C) room pressure furnaces and/or a unique small, dual high temperature/high pressure system aptly named vici (Venus In situ Chamber Investigations) that enables experiments at Venus surface conditions under a carbon dioxide atmosphere (nitrogen and/or sulfur dioxide can also be introduced). This pressure system is not limited to geochemistry experiments; it can also include component testing under high temperatures and pressures. Even though Venus is the primary focus for current research, this doesn‘t preclude the use of the chamber or furnaces for other planetary targets; for example experiments could be

designed to target exoplanets and their potential conditions. Ultimately, these types of experiments will lead to a greater understanding of our Solar System and potential change over time.

Location:
Goddard Space Flight Center
Greenbelt, Maryland

Field of Science: Planetary Science

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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

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

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.