

Opportunity Title: N-IR Descent Imaging of Venus for Composition, Topography, and Morphology

Opportunity Reference Code: 0262-NPP-JUL25-GSFC-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0262-NPP-JUL25-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 7/1/2025 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 DAVINCI mission to Venus will conduct multi-scale descent imaging of landscapes on Venus at scales not previously accessible in studies about Venus and its highlands (tesserae). Specifically, mission goals embrace the scientific interpretation of multiple spatial scales of band-ratio imaging in 3D context, together with digital topography at scales from < 100m to 5-10m (horizontally), and very fine scale geomorphological imaging at scales < 1.5 m per pixel of local areas in the complex ridged terrains of Venus. These science goals and imaging capabilities are multi-disciplinary in that they connect rock unit composition to landscape geomorphology for the unique tesserae "mountains" of Venus at sampling scales more typical of high-resolution satellite imaging of the Earth, Mars, or the Moon.

The selected applicant will evaluate how quantitative geomorphological investigations of local area landscape systems (including sedimentary materials and associated depositional processes) on Earth can inform Venus investigations and will develop approaches for building models that can be used to test hypotheses for Venus-relevant regions here on Earth and/or Mars. This will be done by working with analogue DEM (define) datasets from multiple regions on Earth, and the descent imaging data from Mars Curiosity and Mars Perseverance Rovers. Specific challenges to note are isotropic illumination, Rayleigh scattering-induced pixel blurring, and limited areal fields of view (FOV).



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The ideal candidate will have experience in on or more of the following: remote sensing, generating digital elevation models (DEMs), image analysis, quantitative geomorphology, and mapping.

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/oair/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.