

Opportunity Title: Physicochemical State of the Martian Surface

Opportunity Reference Code: 0004-NPP-NOV23-JSC-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0004-NPP-NOV23-JSC-PlanetSci

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

Description The general objective of this continuing research program is to understand the mineralogical and elemental composition of surficial material on Mars and to determine the weathering processes that evolved the surface to its current state. Specific tasks include studies of geologic samples that have been weathered in terrestrial environments considered to be analogous in some important respects to those on Mars and theoretical and experimental studies of the optical properties of pure and substituted iron-bearing compounds, including nanophase materials. Emphasis is placed on multidisciplinary analyses of samples to maximize comparison with the data base available for Mars from the Viking, Phobos-2, Mars Pathfinder, and Mars Global Surveyor missions and telescopic observations. Experimental and analytical facilities include ferromagnetic resonance spectroscopy, vibrating sample magnetometer, Mossbauer spectroscopy, ultraviolet-visible-infrared spectroscopy, and x-ray diffraction.

Location:

Johnson Space Center
Houston, Texas

Field of Science: Planetary Science

Advisors:

Richard Van Morris
richard.v.morris@nasa.gov
281-483-5040

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

Eligibility Requirements

- **Degree:** Doctoral Degree.



Whether you are just starting your career or already at a senior level, ORAU offers internships, fellowships, research opportunities, and contract positions that can provide you with invaluable experience. Download the ORAU Pathfinder mobile app and find the right opportunity to propel you along your career path!

Visit ORAU Pathfinder [↗](#)

