

Opportunity Title: Investigating Spectroscopic and X-ray Diffraction Properties of Mars Analog Sulfate Minerals

Opportunity Reference Code: 0101-NPP-NOV22-ARC-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

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How to Apply All applications must be submitted in [Zintellect](#)

Application Deadline 11/1/2022 6:00:00 PM Eastern Time Zone

Description Description:

Mars is a comparatively sulfur rich planet. Extensive occurrences of sulfate minerals have been documented in martian rocks and soils by orbital and ground-based spacecraft. These minerals provide important clues into the aqueous history, as well as past and present conditions on the planet. Despite this, a full understanding of the influence of Mars relevant physical parameters on the stability and occurrence of the large number of possible minerals and sulfate phases remains incomplete. This opportunity will involve work to enhance knowledge in this area, with particular focus on the impact of environmental conditions on the the X-ray diffraction characteristics of Ca, Mg, and Fe sulfates, which are particularly abundant on Mars.

Field of Science: Planetary 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/oirr/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

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



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