Astronomy Colloquium

Dr. Alicia Rutledge

Northern Arizona University

Fantastic analogs and where to find them: Using natural laboratories on Earth to understand planetary surfaces

What is a planetary analog? Why are they used and what can be learned from them? In this talk, I will explore how we can use natural laboratories on Earth - often located in extreme environments - to better understand processes on other planets such as Mars. We will examine different types of analog studies encompassing both science and space exploration. I will explain the conceptualization of planetary field analog studies, from development of a scientific question and selection of an analog site, to designing a field season and collecting and analyzing data. I will also present initial results from an ongoing polythermal glacial weathering analog study from Arctic Sweden.

Dr. Alicia “Allie" Rutledge is a planetary geologist and an assistant research professor in the Department of Astronomy and Planetary Science at Northern Arizona University. Her work focuses on the spectral and mineralogical signatures of chemical alteration on planetary surfaces using measurements from satellites, laboratory work, and planetary analog field studies. She has worked extensively in the Arctic and mountain areas such as Iceland, Greenland, Sweden, the Canadian Rockies, and others. She lives in Flagstaff, Arizona with her husband and two children.

Monday, November 18th, 2024
3:30 PM MST
Room 103 in the Physical Sciences building 19

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