

Title:

506-5 - A Recent Volcanic Eruption, Holuhraun, in the Central Highlands of Iceland as a Mars analog: The 2018 Field Campaign of FELDSPAR

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Abstract:

In summer 2018, FELDSPAR conducted an analog sampling expedition to the Holuhraun volcano in the central highlands of Iceland that erupted from August 2014 to February 2015. Holuhraun has steep gradients within an otherwise relatively controlled region, and thus served as the primary Mars analog site for the 2018 FELDSPAR field campaign. Samples along gradients of mineralogy as measured via near-IR and visible reflectance spectroscopy, temperature as measured by an IR probe, and physical location about the fissure (slope incline, directionality, height up the slope, etc.) were analyzed in-field with reflectance spectroscopy and X-ray fluorescence, in the field lab for adenosine triphosphate (ATP) as an indicator of metabolic activity, and after return to the home lab for both geochemical and geophysical parameters (moisture content, grain size, X-ray diffraction) and biochemical parameters (DNA content and speciation). This abstract represents the first report on the 2018 field campaign with initial results and interpretation. This work is part of Field Exploration and Life Detection Sampling for Planetary Analogue Research (FELDSPAR), on Facebook @FELDSPARResearch.

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