Abstract Submitted
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Spectral Mapping Using CRISM Data in the Northwest Noachis Region.[1] JESSICA HARRYMAN, University of Maryland, Baltimore County, KIM SEELOS, DEBRA BUCZKOWSKI, CHRISTINA VIVIANO, John's Hopkins University Applied Physics Laboratory — Launched in 2005, the Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) is an instrument that measures the composition of Mars's surface and allows scientists to understand climate patterns that relate to the presence of water on the planet. Our effort consisted of assisting in ongoing mapping by validating and compositionally mapping using CRISM images in three unique areas: Northwest Noachis Terra (this work), Terra Sabaea, and Central Valles Marineris. Spectral analysis utilizing image analysis software of each regions of interest were compared with reference spectra in the MICA library, a compilation of the best CRISM end member mineral detections, in order to identify and label minerals in the regions of interest. Compositionally, the NW Noachis Terra region revealed large amounts of low calcium and high calcium pyroxene (LCP and HCP, respectively), magnesium smectite, and iron smectite. This concentration of minerals suggests an aqueous past, as smectite phyllosilicates generally form as a result of aqueous alteration.

[1]NASA Mars Data Analysis Program, CRISM investigation through JPL subcontract for APL, CIRCUIT program at APL.

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