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## Stratigraphic mapping of hydrated phases in Western Ius Chasma, Mars

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Recent mapping with the Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) and Observatoire pour la Minéralogie, l'Eau, les Glaces et l'Activité (OMEGA) has revealed a wide range of hydrated minerals throughout Valles Marineris. Noctis Labyrinthus has interbedded polyhydrated and monohydrated sulfates, with occasional beds of nontronite (Weitz et al. 2010, Thollot et al. 2012). Tithonium Chasma has interbedded poly- and monohydrated sulfates (Murchie et al. 2012); Juventae has poly- and monohydrated sulfates and an anhydrous ferric hydroxysulfate-bearing material (Bishop et al. 2009); and Melas and Eastern Candor contain layers of poly- and monohydrated sulfates (e.g., Roach et al. 2009). Though each chasm displays its own mineralogy, in general, the eastern valles tend to be dominated by layered sequences with sulfates; whereas, the far western valles (Noctis Labyrinthus) has far more mineral phases, possibly due to a wider variety of past environments or processes affecting the area. Ius Chasma, which is situated between Noctis Labyrinthus and the eastern valles and chasmata, also displays a complex mineralogy, with polyhydrated sulfates, Fe/Mg smectites, hydrated silica, and kieserite (e.g. Roach et al. 2010). Here, we present mapping of recently acquired CRISM observations over Ius Chasma, combining the recent CRISM cubes with topographic terrains produced using High Resolution Stereo Camera (HRSC) data from the Mars Express spacecraft. Stratigraphic columns are produced along the length of Ius Chasma, and compared to stratigraphic columns produced throughout the Valles Marineris

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