



Geologic analysis of sedimentary deposits occurring in chaotic terrains within the Chryse region on Mars

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Chaotic terrains on Mars are mainly located in the source regions of the outflow channels East of Valles Marineris. They are supposed to be formed by fluidisation of an incompetent layer underlying material that is more competent. Various states of disruption are observed especially in chasmata where some knobs are present. The Mars Express HRSC provides 3D-images of the Martian surface in high resolution while the OMEGA-/Mars Express spectrometer produces data characterising the mineralogical composition of the surface. Very high-resolution MOC images sometimes reveal the texture of the layer, whereas the relative mean grain size and structure of the material is given by THEMIS night time-infrared data. Using HRSC-, OMEGA-, THEMIS- and MOLA-data, a stratigraphic profile of the chaotic terrains in Valles Marineris from Eos Chasma to Meridiani Planum is made. Here we present a characterisation of the layers forming a chosen sample of chaotic terrain by the following parameters: albedo, thickness, chemical composition, colour, physical properties, stratigraphic position, and elevation.