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# Morphometric analysis of a sulphate body in east Tithonium Chasma, Mars.

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Tithonium Chasma is a part of the western troughs of Valle Marineris where have been found the outcrops of magnesium sulphate bodies interpreted as evaporitic deposits. We studied a dome-shaped body located in the eastern part of the canyon system, which display the presence of magnesium sulphates (kieserite). We used HRSC, MOC and THEMIS data to analyze of the main morphometric characteristics of the dome, in particular basal diameter, mean flank slopes, height, width, basal elevation, and to relate them to its morphological features. The dome raises about 3400 m from the chasma floor, shows an elongate elliptical shape and displays a NNW-SSE elongate trend with evident. The longer axis has length of about 23.5 km., while the width vary between 10 and 14 km. The dome body shows an asymmetric flank topography and a crestal region that lies in the central part, built of about 7 km. long moderate vaulted plateau that display a very gentle slope of about 5.5%. Some of the morphometric variations observed seems not related to spatial heterogeneity of the body material and may suggests that are due to the intensity of erosive processes related to other factors such as, different tectonic movements or some catastrophic flood discharge or landslide events that may have locally destroyed the previous existing shape. The Martian dome characterization should provide useful elements for the identification of Earth analogues.