



Ice-related landforms in Hydræ chasma, Mars

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Hydræ Chasma is one of the smaller chasma of Valles Marineris. It is a circular depression approximately 50 kilometers across and 4 kilometers deep, located to the north of Coprates Chasma and south of Juventae Chasma. A morphological survey of Hydræ Chasma through an analysis of the available Mars images was performed. The features of the landforms were investigated through an integrated analysis of Reconnaissance Orbiter (MRO) High Resolution Imaging Science Experiment (HiRISE) and Context Camera (CTX) data.

Landforms interpreted as due to ice-related processes, resembling similarly ice-related landforms found both in the cold-climate non glacial regions of the Earth, and putatively in other areas of Mars, was observed.

These landforms are attributed to the presence of ground ice and/or ice-melting processes reflect significant climatic changes and different climatic conditions than those existing now. Moreover, they appear to display young erosional age, suggesting that are probably of Amazonian age.