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Mapping features potentially related to glacio-volcanic activity in Utopia Planitia, Mars

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[POSTER]

The Utopia Planitia region is one of the basins on the northern hemisphere of Mars. The landscape consists of structures related to impact cratering and permafrost processes: e.g. scallops, polygons, pits, and texture terrains. We have performed a detailed mapping campaign using Mars Orbiter Laser and CTX images. Couple of features have not been identified before: e.g. "crater-like" features and mounds. "Crater-like" features are irregular holes that are 100 - 500 m in diameter; often aligned in small clusters or in even a line. Their shape, sizes, distribution and alignment suggest they were not made by the impact process. Mounds are 200 - 300 m long and 5 - 50 m high, sometimes they have elongated cracks on the top. Those fissures suggest that formation of those mounds is associated with moving of material below the surface. We suggest that those features are associated with endogenic activity in the past, as it is relatively close to a volcanic region of Elysium Planitia.



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