

Second National Mars Science Seminar

Geomorphological mapping of Meridiani Planum along the Opportunity rover traverse

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[POSTER]

We present first results of geomorphological mapping of Meridiani Planum. The study area covers terrain around the Opportunity rover traverse. In our novel method, we use HiRISE images, Digital Terrain Model, as well as the images acquired by the Opportunity rover cameras. Employing the data, we performed visual detection and interpretation of landforms, such as: wind streaks, ripples, dunes, sand shadows, sand sheets, ventifacts, deflation pavements, grabens, and craters of different size and age. We present an exemplary geomorphological map with proposed symbology based partially on symbology used in terrestrial mapping. The obtained results will be used for mapping of other regions, without surface image coverage, and as training data for automatic landform recognition using machine learning.