

On estimate of roughness of the Martian surface by using MOLA data

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The surface roughness is an important indicator of the surface state of terrestrial planets. The roughness over wide range of the spatial scale is indispensable for evaluation of the evolution of surface. MOLA topography data has been used for the roughness estimate above km length scale. Here we propose MOLA pulse width data as an indicator of the roughness at 100m scale. We tested this by checking the data in Ceraunius Tholus volcano and confirmed that the pulse width data is a reliable indicator.