

Preliminary Mapping Results from the Mars Orbiter Laser Altimeter

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Since arrival at Mars in Sept. 1997 the Mars Orbiter Laser Altimeter (MOLA) on the Mars Global Surveyor (MGS) spacecraft has obtained a number of topographic profiles across the northern hemisphere of Mars. The altimeter has a precision of a few tens of centimeters and able to provide topographic profiles with approximately 10 meter radial accuracy. The early results show the high northern latitudes to be low in elevation, very flat, and increasing in both elevation and surface roughness towards the equator. These data have provided a new estimate for the equatorial and north polar radii of Mars and a significantly improved description of the topography of the northern hemisphere.