

Rabe Crater Noachis Terra, Mars

This Viking 3-D view of Mars features Rabe, a 110-kilometer-wide impact crater in the cratered highlands west of the Hellas impact basin. Most of the craters in this area appear to be very degraded. Raised rims, terraces, central peaks, and other morphologic features and structures that characterize relatively fresh craters are virtually absent or highly muted. Only one crater, at the bottom of the scene, looks fresh. The process of degrading the topography of features on Mars is termed "terrain softening."

Terrain softening may be due to the slow but steady downslope movement of soil, a process called creep. This process may indicate the presence of ground ice on Mars because ice in the soil would enhance creep. In this and other areas of the highlands, dark spots are found in the floors of craters. At higher resolution, these spots are resolved into fields of dunes. The dunes may be the remnants of crater-filling deposits or accumulations of windblown sand that formed in the topographic trap at the bottom of the crater.

Location: 44.0° S, 325.0° W
Quadrangle: MC-27 (Noachis)
Mission: Viking 1
Image Numbers: 510A29, 094A49

3-D Tour of the Solar System
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use 3-D glasses to view image

