

Thursday, March 18, 2004
POSTER SESSION II: MARS IMPACT CRATERING
7:00 p.m. Fitness Center

Farr T. G. Krabill W. Garvin J. B.

High Resolution Digital Elevation Models of Pristine Explosion Craters [#2146]

High resolution digital elevation models have been obtained for several explosion craters to support Mars landing and roving studies.

Forsberg-Taylor N. Howard A. D. Craddock R.

Crater Degradation in the Martian Highlands: Morphometric Analysis of the Sinus Sabaeus Region and Simulation Modeling Suggest Fluvial Processes [#1025]

The relative degree of crater infilling of craters in the Sinus Sabaeus region is bimodal, with Noachian craters showing a preponderance of deep sedimentation. This distribution is best explained by fluvial degradation.

Cull S. Barlow N. G.

Analysis of Impact Crater Preservation on Mars Using THEMIS Data [#1112]

We used THEMIS night-IR imagery to characterize the preservation state of 5545 impact craters in selected regions of Mars. Our results support previous reports about the ages of these regions, episodes of degradation, and stability of subsurface volatile reservoirs.

Hörz F. Cintala M. J. Rochelle W. C. Mitchell C. M. Smith R. N. Dobarco-Otero J.

Finch B. K. See T. H.

Atmospheric Entry Studies and the Smallest Impact Craters on Mars [#1116]

Centimeter-sized meteoroids may reach the surface of Mars to make impact craters smaller than 1 meter in diameter.

Hartmann W. K.

Updating the Crater Count Chronology System for Mars [#1374]

A new "2004 iteration" of the crater isochron system for measuring Martian surface ages is described. Results are similar to the "2002 iteration."

Rodriguez J. A. P. Sasaki S. Miyamoto H. Dohm J. M.

Control of Impact Crater-related Fracture Systems on the Subsurface Hydrology and Ground Collapse [#1676]

Impact-induced fracture systems dominate the fracture population in the ancient highlands, except in the Tharsis and Elysium regions, and that intermingling concentric and radial fracture systems from multiple impact crater events will result in complex crater fracture networks.

Ramsey M. S. Crown D. A.

Quantitative Analyses of Terrestrial Crater Deposits: Constraining Formation and Sediment Transport Processes on Mars [#2031]

This research examines small-scale (~ 1 km) terrestrial meteorite and volcanic crater deposits using field, laboratory, and newly-developed image processing models. The expected results will have direct extension to spacecraft/lander data of Mars because of the spectral/spatial scale similarities.

Boyce J. M. Mouginiis-Mark P. Garbeil H.

Predicted Effects of Surface Processes on Martian Impact Crater Depth/Diameter Relationships [#1816]

The abstract presents a systematic discussion of how to interpret the characteristic of depth/diameter relationships of Martian impact crater populations in order to gain insight into surface process(es) that have affected these populations.