

Tuesday, March 15, 2005
POSTER SESSION I: MARS CRATERING AND ANALOGS
7:00 p.m. Fitness Center

Buczowski D. L. Frey H. V. McGill G. E.

Effect of Cover Thickness on the Relationship of Surface Relief to Diameter of Northern Lowland QCDs on Mars [#1106]

Analytical analysis of QCDs predicts that the relationship of surface relief to diameter varies depending on the thickness of the cover material. Comparison to actual QCDs in Utopia, Isidis and Acidalia implies that this prediction is accurate.

Buczowski D. L. Frey H. V. McGill G. E.

Geographic Distribution of QCDs Around the Northern Plains Basins of Mars and the Relationship to Lowland Materials [#1215]

We explore the geographic distribution of QCDs around the Utopia, Isidis and Acidalia basins and compare their location to geologic units and materials. We also compare evidence for relative thickness of cover material at the three basins.

Howenstine J. B. Kiefer W. S.

Morphometry of Large Martian Impact Craters [#1742]

We have measured crater depths and rim heights for large craters on Mars. The results constrain fill thickness on crater floors and will support forth-coming gravity modeling. Gusev crater has between 0.8 and 2.2 km of post-impact fill on its floor.

Jaret S. J. Albin E. F.

Crater Count Chronology and Timing of Ridged Plains Emplacement at Schiaparelli Basin, Mars [#1922]

Found in eastern portion of the Terra Meridiani region of Mars is Schiaparelli, a 470-km diameter impact structure. Our investigation seeks to compare the age of ridged plains material, interpreted as volcanic lava flows, within and adjacently exterior to the basin rim.

Morris A. R. Mouginiis-Mark P. J.

Thermally Distinct Craters Near Hrad Vallis, Mars [#1493]

In this study we examine the characteristics and possible formation mechanisms of thermally distinct craters near Hrad Vallis, Mars, using MOC, THEMIS and MOLA data.

Ackerman E. S.

Volumetric Analysis of Martian Rampart Craters [#2151]

Viking images and MOLA data were used to calculate ejecta volumes and transient cavity volumes for Martian rampart craters. Comparing these volumes may indicate whether there is a volatile component being added to the ejecta flow.

Matias A. Jurdy D. M.

Study of a 15 km Crater with Diverse Morphology, Elysium Planitia, Mars [#1163]

We examine the nature of the 14.9 km diameter crater (28.3 N, 116.7 E) with an unusual lobe on its southwestern rim, part of an assessment of rampart craters on northwestern Elysium Planitia.

Fagents S. A. Baloga S. M. Mouginiis-Mark P. J.

Boundary Conditions on the Formation of Ramparts on Fluidized Ejecta Deposits Around Martian Impact Craters [#2127]

We present a model for the formation of rampart deposits and explore various source boundary conditions. We find that only modest initial velocities (<40 m/s) and source flow depths (<30 m) are required to reproduce observed morphologies.

Mest S. C. Crown D. A.

Impact Crater Deposits in the Martian Highlands [#1785]

Impact craters in the martian highlands preserve long and complex histories of degradation, and contain interior deposits that may be sedimentary, mass wasting, (and) or volcanic in origin. Crater morphologies, geologies and ages are being determined.

Peet V. M. Ramsey M. S. Crown D. A.

*Comparison of Terrestrial Morphology, Ejecta, and Sediment Transport of Small Craters:
Volcanic and Impact Analogs to Mars* [#2080]

Two terrestrial craters are examined as a Mars analog for formation and sediment transport processes. It is hypothesized that an analog for formational and surface processes on Mars pertaining to small craters can be developed that distinguishes one crater type from the other.

Farr T. G.

Visible-Near Infrared Imaging Spectrometer Data of Explosion Craters [#2365]

New high resolution visible-near infrared imaging spectrometer data of explosion craters at the Nevada Test Site will allow study of ejecta patterns, compositional modifications due to the explosions, and the role of craters as subsurface probes.