

Tuesday, March 20, 2012
POSTER SESSION I: MARTIAN CRATERS
6:00 p.m. Town Center Exhibit Area

Landis M. E. Barlow N. G.

[*Analysis of Impact Craters in the 0–20N, 0–30E Region of Arabia Terra, Mars and Implications for Volatiles*](#) [#1255]

We are classifying ejecta and interior morphologies of all craters 1 km and larger in the 0–20N 0–30E region of Arabia Terra to investigate the role of subsurface and surficial volatiles on this area. We find small craters are excessively deep.

Malinski P. T. Brusnahan H. Milam K. A.

[*A Morphometric Analysis of Martian Impact Craters 21–30 km in Diameter*](#) [#2848]

An ongoing MOLA analysis of the morphology of complex impact craters on Mars is being conducted to identify temporal changes in morphometric relationships between crater landforms.

Garner K. M. L. Barlow N. G.

[*Distribution of Rimmed, Partially Rimmed, and Non-Rimmed Central Floor Pits on Mars*](#) [#1256]

We have classified 798 central floor pit craters on Mars as to whether the pit is rimmed, partially rimmed, or non-rimmed. Our results suggest that target characteristics strongly influence the production of rimmed and non-rimmed pits.

Bamberg M. Jaumann R. Asche H.

[*Floor Fractured Craters Around Syrtis Major, Mars*](#) [#1833]

Floor-fractured craters can be found around Syrtis Major. The appearance of the craters is diverse, so it is likely that they were formed and modified by different geologic processes. Crater classification is used to analyze these processes.

Tewelde Y. Zuber M. T.

[*Determining the Fill of the Ghost Craters of Mars' Lowlands*](#) [#2475]

Many of the craters of Mars' lowlands are partially or completely buried by volcanic and sedimentary fill of unknown relative proportions. By using MOLA data we can determine minimum fill volumes and estimate a minimum volume for the northern plains.

Brusnahan H. M. Milam K. A.

[*How do the Relationships Between Crater Landforms Change over Time on a Geologically Dynamic Planet?*](#) [#2811]

In this study, we have subdivided the crater population into groups that correspond to the three martian geologic periods and have measured crater dimensions of each age population in an effort to track changes in crater morphometry over time.

Williams J.-P. Pathare A. V.

[*Scaling Effective Diameters of Small Impact Crater Clusters on Mars*](#) [#2881]

Approximately half of the fresh craters on Mars are observed to be crater clusters resulting from disruption of the projectile prior to impacting the surface. We explore how this can influence the crater size-frequency distribution.

Daubar I. J. McEwen A. S. Byrne S. Kennedy M. R.

[*Seasonal Variation in Current Martian Impact Rate*](#) [#2740]

Thirty-eight new craters on Mars have well-constrained formation dates. We present an updated prediction for an increased impactor population at aphelion, and examine whether such an aphelion enhancement is detectable in the current impact rate data.