

Thursday, March 10, 2011

POSTER SESSION II: GEOLOGY OF MARTIAN IMPACT CRATERS AND BASINS

6:00 p.m. Town Center Exhibit Area

Watters W. A. Bell J. III Calef F. Golombek M. Grant J. Hayes A. Li R. Parker T. Sullivan R. Squyres S. Wright S.

[*Structure and Morphology of Santa Maria Crater, Meridiani Planum, Mars*](#) [#2586]

We use MER and HiRISE observations to examine rim elevation and planform, ray remnants, target fracture distribution, bedding attitudes, and the distribution of ejecta blocks to gain new insights into small-crater formation and modification on Mars.

Jodlowski P. Gross C. Wendt L. Halbach P. Neukum G.

[*Geologic/Geomorphologic Mapping of a Complex Impact Crater in the Northern Plains of Mars*](#) [#1899]

Detailed maps are needed to correlate hyperspectral data from CRISM with geomorphologic units. Here we map a phyllosilicate bearing crater in the northern plains of Mars.

Wulf G. Poelchau M. H. Kenkmann T.

[*Structural Trends in the Central Uplift of an Unnamed Martian Crater as an Indicator for Impact Direction*](#) [#1440]

Structural deformations in central uplifts of oblique impact craters could provide evidence for the impact direction. An unnamed martian crater was geologically mapped to confirm strike orientation as indicator for impact direction.

Mest S. C. Weitz C. M. Tornabene L. L.

[*Correlation of Low-Albedo Deposits on the Floors of Oudemans Crater and Southeast Noctis Labyrinthus*](#) [#2547]

HiRISE and CTX images reveal a unique series of deposits on the floor of Noctis Labyrinthus that appear directly related to Oudemans crater, possibly consisting of impact-melt-bearing deposits to the north and ejecta to the northwest of Oudemans.

Boyce J. Mougini-Mark P. Tornabene L. Hamilton C. W. Allen J. Wilson L.

[*Pitted Deposits of Fresh Impact Craters*](#) [#2701]

Model of formation of pits in pitted terrain of impact craters is presented.

Chojnacki M. Moersch J. Wray J. J.

[*HiRISE Analysis of the Western Rim of Endeavour Crater, Meridiani Planum, Mars: Morphology, Composition and Topography.*](#) [#2272]

The Opportunity rover is currently en route to investigate the ~20-km diameter Endeavour Crater in Meridiani Planum. We present an analysis of Capes York, Tribulation, and Byron's mineralogy and topography using HiRISE band ratios and DEMs.

Caudill C. Tornabene L. McEwen A. Wray J.

[*Crater-Exposed Intact Stratigraphy Blocks and Volcanogenic Origin*](#) [#2393]

In this study, we strive to understand the geologic history of Mars through crater-exposed underlying stratigraphy with an emphasis on volcanogenic materials. These materials are evaluated using mineralogical, morphologic, and morphometric analyses.

Komatsu G. Cardinale M. Vaz D. A. Wray J. J.

[*Conical Features and Basin-Filling Deposits in Isidis Planitia, Mars*](#) [#1187]

The formation of conical features in Isidis Planitia on Mars is linked with the emplacement of the basin-filling Ali unit. We investigated their relationship in terms of cone distribution, their relation to basin topography, and spectral properties.

Ivanov M. A. Hiesinger H. Erkeling G. Reiss D.

[*Geologic History of Isidis Planitia on Mars*](#) [#1191]

We describe the morphology of the material units that make up Isidis Planitia, interpret their nature, give age estimates for the units, and, finally, outline the major steps in the geologic history of the region.