

Thursday, March 10, 2011

POSTER SESSION II: MARS DATA ANALYSIS, PROCESSING, AND GLOBAL MAPPING
6:00 p.m. Town Center Exhibit Area

Tanaka K. L. Fortezzo C. M. Dohm J. M. Irwin R. P. III Kolb E. J. Skinner J. A. Jr. Hare T. M. Platz T. Robbins S.

[Completing the New Global Geologic Map of Mars](#) [#2265]

We describe new and updated aspects of our mapping approaches, progress to date, current issues, and plans for completion.

Chuang F. C. Crown D. A. Berman D. C. Skinner J. A. Tanaka K. L.

[Martian Lobate Debris Aprons: Compilation of a New GIS-Based Global Map](#) [#2294]

Compilation of a new GIS-based global map of lobate debris aprons is underway to better understand the global inventory of these relict ice-rich features. We welcome contributions of GIS-based data from other investigators.

Whelley P. L. Rosenburg M. Glaze L. S. Calder E. S.

[Global Roughness Texture of the Moon and Mars](#) [#2118]

Statistical measures of patterns in surface roughness are used to differentiate regional geomorphic units on the Moon and Mars. This new methodology, developed for differentiating terrestrial volcanic deposits, is tested on two global data sets.

Campbell B. A. Putzig N. E.

[Surface Roughness Maps of Mars Based on SHARAD Echoes](#) [#1489]

SHARAD captures echoes from subsurface geologic layering with dielectric contrasts, but significant information on topographic roughness properties can also be recovered from the amplitude and time-delay characteristics of the initial surface echo.

Ivanov A. Plaut J. Gim Y. Orosei R. Cicchetti A. Giuppi S. Cartacchi M. Noschese R. Piccardi G.

[Updated Algorithm to Remove Ionospheric Distortion from MARSIS Data](#) [#1873]

We present a new algorithm to remove signature of ionosphere from MARSUS subsurface data, using a topographic clutter model. Subsurface data are now more consistent with MOLA DEM, especially in the polar regions. We also report on TEC analysis.

Walter S. Kirk R. McGuire P. C. Neukum G.

[Systematic Photometric Modeling for Correcting Topographic Shading Effects on HRSC Imagery](#) [#2198]

We want to use orientation information of HRSC and the surface to derive a photometric model and compare it with the HRSC image. This model can then be used for several purposes, e.g. to correct the acquired image to standard lighting geometry.

Mattson S. Kirk R. L. Heyd R. McEwen A. S. Eliason E. Hare T. Beyer R. Howington-Kraus E. Okubo C. Herkenhoff K.

[Release of HiRISE Digital Terrain Models to the Planetary Data System](#) [#1558]

HiRISE DTMs are produced at 1 m/px and 2 m/px, depending on source image mode. The procedure used to create the DTMs and their associated orthoimages is described here, as well as the products being made available via the PDS starting in 2010.

Kim JR. Lin SH. Hong JW. Park DI. Yoon SY. Kim YH.

[Very High Resolution Martian Topographic Data Processing and Its Application for Virtual Reality Implementation](#) [#1841]

It demonstrates how the modern photogrammetry and the visualization technician can reconstruct virtual martian surface. The DTMs and ortho imagery from stereo cameras were processed. Then the topographic data were indigested into a VR system to demonstrate the potentials.