Thursday, March 26, 2009
POSTER SESSION II: PLANETARY DATA SYSTEMS, TECHNIQUES, AND INTERPRETATION
6:30 p.m. Town Center Exhibit Area

Oosthoek J. H. P. Kleuskens M. H. P.
3D Interpretation of SHARAD Radargram Data **[#2473]**
SHARAD radar data is interpreted in 3D using reservoiring engineering software. Here, the radar data is treated as seismic data. This enables us to distinguish between layers, which could help to better understand the formation process of the icecap.

Salamuniccar G. Loncaric S.
Morphometry, Votes-Analysis and Calibration Improvements of Crater Detection Algorithms Based on Edge Detectors and Radon/Hough Transform **[#1084]**
Six previously implemented Crater Detection Algorithms (CDAs) were improved using morphometry measurements (some new and some improved), votes-analysis and calibration. The results were analyzed using the Framework for Evaluation of CDAs (FECDA).

Robbins S. J. Hynek B. M.
Towards a New Catalog of Lobed Martian Craters Compared with a New Global Crater Database, Complete to 1.5 km **[#2460]**
Presenting preliminary results of a new crater database, focusing on lobed crater characteristics. Database is complete to at least 1.5 km-diameter craters and contains more characteristics of each crater than previous catalogs.

Nava R. A. Skinner J. A. Jr. Hare T. M.
Using Distributional Characteristics of Superposed Large-Scale Crater Clusters as Temporal Indicators of Geologic Processes **[#2530]**
We present a GIS-based tool that utilizes standard geoprocessing scripts to use the occurrence and orientation of large crater clusters as stratigraphic makers.

Stepinski T. F. Urbach E. R.
The First Automatic Survey of Impact Craters on Mars: Global Maps of Depth/Diameter Ratio **[#1117]**
The catalog of 75,919 craters on Mars is compiled by a computer algorithm. Using crater depths listed by this catalog, global maps of depth/diameter ratio are created. Such maps indicate existence of cryosphere at depths that varies with latitude.

Stepinski T. F. Bagaria C.
Automatic Mapping of Martian Physiography: Application to Tharsis Region **[#1118]**
Physiographic map of Tharsis region on Mars is created automatically by a computer algorithm. The map summarizes all relevant topographic features and presents them in a handy visual format that is also well suited for further quantitative analysis.

Salamuniccar G. Loncaric S.
Automated Depth/Diameter and Topographic-Cross-Profile Measurements Based on GT-57633 Catalogue of Martian Impact Craters and MOLA Data **[#1085]**
The methods for the automated depth/diameter and topographic-cross-profile measurements were applied to the newly available GT-57633 catalogue and MOLA data. The result is improved insight into the global geometric properties of martian craters.

Anderson S. W. Finnegan D.
Relationships Between Block Size Distributions and Topographic and Topographic Roughness: An Experimental Approach Using LIDAR Scanning and Variogram Analysis **[#2190]**
Block size distributions on rocky surfaces contain information regarding the lithologic material properties and the geologic processes creating the deposit. Here, we discuss experiments designed to show relationships between topographic roughness and block size.

Roark J. H.
Enhancements to Gridview: Software for Topography Data Analysis **[#1711]**
Gridview is an IDL software application designed to help users analyze, measure, and visualize gridded data. It has been used to study visible and buried basins on Mars, investigate the dichotomy boundary, and measure slope as well as volcano and crater geometry.

Clark C. S. Clark P. E.
Using Boundary-based Mapping Projections for Morphological Classification of Small Bodies **[#1133]**
We present a systematic approach to interpreting and classifying asteroids based on shape and surface morphology using Constant Scale Natural Boundary (CSNB) map projection applied to Deimos, Phobos, Eros, and Ida.

Kirk R. L. Howington-Kraus E. Rosiek M. R.
Build Your Own Topographic Model: A Photogrammetry Guest Facility for Planetary Researchers **[#1414]**
The USGS and NASA invite you to Flagstaff, where we will train you and help you collect high-resolution topographic data for your research, from spot heights to DTMs, using a state of the art stereo workstation and a wide variety of stereo images.

Walter S. H. G. Michael G. Neukum G.
Publishing Planetary Remote Sensing Data as OGC Web Services by Use of Open Source Software **[#1609]**
We will demonstrate techniques to deliver HRSC and SRC image data as well as OMEGA footprint data based on standards defined by the Open Geospatial Consortium (OGC) using open source software.

Parente M. Clark J. T. Bishop J. L. Brown A. J.
Simulating CRISM Images: A Tool for Researchers in Testing and Confirming Geologic Analyses of CRISM Images on Mars **[#2487]**
We present a system for simulating CRISM images as a tool to analyze the feasibility of mineral detections on the martian surface in different scenarios involving variable compositional,atmospheric and instrumental conditions.

Patterson G. W. Barnouin-Jha O. S. Murchie S. L. Seelos F. Ehlmann B. L. Mustard J. F.
Developing Tools to Highlight the Presence of Carbonates in CRISM Images of Mars **[#2361]**
CRISM hyperspectral images of Mars have recently been used to identify magnesium carbonate deposits. To better assess their spatial distribution and geological context, we are exploring improved techniques to identify these carbonates.

Dziková L. Dzik P. Fürstová J. Skála R.
Color of Moldavites Measured by Colorimetry **[#1720]**
Transmittance spectra of moldavites were measured to evaluate their color quantitatively. These data were converted to L*a*b* coordinates of the CIE color space. Cluster analysis was applied. The results were compared to empirical color assessment.

D'Amore M. Helbert J. Maturilli A.
Berlin Emissivity Database (BED) Archive **[#1024]**
The Berlin Emissivity Database ranges from 3 to 50 µm. BED comprises several grain-sized mineral, up to high temperature, and has a modular structure, to collect in the future Raman measurement, samples pictures, thin section images and so on.

Hare T. M. Skinner J. A. Jr. Tanaka K. L. Fortezzo C. M. Bleamaster L. F. III Sucharski R. M.
GIS-based Planetary Geologic Maps: Recommendations for Improved Preparation, Review, and Publication **[#2538]**
The PG&G funding opportunity this year will require geologic maps submitted after Jan. 2011 to be in a GIS-compatible format. To help alleviate this transition for the mapping community we have begun to implement several initiatives addressed here.

Hancher M. D. Beyer R. Broxton M. Gorelick N. Kolb E. Weiss-Malik M.
Visualizing Mars Data and Imagery with Google Earth **[#2308]**
The latest Google Earth and KML features aid in Mars data visualization, including full-resolution imagery, terrain maps, and coverage maps allowing scientists to browse satellite imagery from many instruments within a single easy-to-use interface.

Akins S. W. Gaddis L. Becker K. Barrett J. Bailen M. Hare T. Soderblom L. Raub R.
Status of the PDS Unified Planetary Coordinates Database and the Planetary Image Locator Tool (PILOT) **[#2002]**
The current status of the PDS Unified Planetary Coordinates (UPC) database and the Planetary Image Locator Tool (PILOT) web interface to search the UPC.

Wang J. Bennett K. J. Scholes D. Arvidson R. Ward J. G. Slavney S. Guinness E. A.
Stein T. C. Heil-Chapdelaine V.
Planetary Data Access Through the Orbital Data Explorer from the PDS Geosciences Node **[#1193]**
An overview of Orbital Data Explorer (ODE) developed at NASA's Planetary Data System's Geosciences Node. ODE provides web-based functions to search, retrieve, and download data from multiple missions and instruments in the rapidly expanding planetary data archives.

Slavney S. Arvidson R. E. Guinness E. A. Stein T. C.
PDS Geosciences Node Data and Services **[#1303]**
The PDS Geosciences Node archives science data related to the study of the terrestrial planets. The node provides services in the form of a web site where data may be browsed and downloaded, and specialized tools for orbital and landed data sets.

Hughes J. S. Crichton D. J. Mattmann C. A.
A Framework to Manage Information Models — The Planetary Data System Case Study **[#1139]**
The Planetary Data System (PDS) information model has been captured in an ontology based tool framework. A generated specification document now provides a basis for improving the PDS standards for use both within PDS and internationally.

Henneken E. A. Accomazzi A. Grant C. S. Kurtz M. J. Thompson D. Bohlen E. Murray S. S.
The SAO/NASA Astrophysics Data System: A Gateway to the Planetary Sciences Literature **[#1873]**
The SAO/NASA Astrophysics Data System (ADS) provides various free services for finding, accessing, and managing bibliographic data, including a basic search form, the myADS notification service, and private libraries, plus access to scanned published articles.