Thursday, March 10, 2011
POSTER SESSION II: MOON: REMOTE SENSING NUTS AND BOLTS
6:00 p.m. Town Center Exhibit Area

Speyerer E. J. Robinson M. S. Denevi B. W. LROC Science Team
Lunar Reconnaissance Orbiter Camera Global Morphological Map of the Moon **[#2387]**
This spring, the LROC science team will be releasing a monochrome (643 nm) global morphological basemap through the LROC website (http://lroc.sese.asu.edu) and the PDS. The basemap will reflect the latest calibration and the 100 m/pixel WAC DTM.

Nagasubramanian V. Radhadevi P. V. Krishna Sumanth T. Sudheer Reddy D. Saibaba J. Varadan G.
3D Visualization of the Lunar Surface from Images of Terrain Mapping Camera **[#1389]**
This paper explains a simple method of relative orientation of images from the Terrain Mapping Camera and generating relative digital elevation models and three-dimensional views of the lunar surface.

Vickers M. J. Cook A. C.
Textural Analysis of the Lunar Surface Using a Shaded Digital Elevation Model **[#2465]**
This paper presents the application of an automated texture classification technique to a lunar digital elevation model (DEM) with the aim of assisting researchers in searching through this vast amount of data for morphological features of interest.

Li R. Wang W. He S. Yan L. Meng X. Crawford J. Robinson M. S. Tran T. Archinal B. A. LROC Team
Latest Results of 3D Topographic Mapping Using Lunar Reconnaissance Orbiter Narrow-Angle Camera Data **[#2010]**
This abstract presents the latest research results and quantitative analysis of topographic mapping using Lunar Reconnaissance Orbiter Camera (LROC) Narrow Angle Cameras (NAC) conducted at the Ohio State University.

Boyd A. Tran T. Robinson M. S. Scholten F. Oberst J. LROC Team
Categorization of Lunar Terrain Using High Resolution WAC DTM Data **[#2684]**
The Lunar Reconnaissance Orbiter Camera WAC GLD 100 DTM was used to characterize terrain by slope, roughness, and elevation. Mare and highland plains were automatically identified by slope and roughness parameters.

Scholten F. Oberst J. Matz K.-D. Roatsch T. Wählisch M. Gläser P. Robinson M. S. Mazarico E. Neumann G. A. Zuber M. T. Smith D. E.
Complementary LRO Global Lunar Topography Datasets —A Comparison of 100 Meter Raster DTMs from LROC WAC Stereo (GLD100) and LOLA Altimetry Data **[#2080]**
We compared two topographic datasets of the LRO mission: the LROC WAC 100 m raster DTM (GLD100) and LOLA altimetry data.

Grumpe A. Wöhler C.
A Photometric Approach to the Construction of Lunar Digital Elevation Maps Using Chandrayaan-1 M^3 Imagery in Combination with Laser Altimetry Data **[#1478]**
In this abstract we present a photometric DEM construction method that makes use of existing laser altimetry data to obtain large-scale convergence. We demonstrate the simultaneous generation of detailed elevation maps and nonuniform albedo maps.

Lončarić S. Salamunićcar G. Grumpe A. Wöhler C.
Automatic Detection of Lunar Craters Based on Topography Reconstruction from Chandrayaan-1 M^3 Imagery **[#1454]**
We make use of the Chandrayaan-1 Moon Mineralogy Mapper dataset and laser altimetry data to construct a DEM of high lateral resolution, and show that it can be used with our DEM-based crater detection algorithm.

Boardman J. W. Pieters C. M. Green R. Lundeen S. R. Varanasi P. Nettles J. Petro N. Isaacson P. Besse S. Taylor L. A.
Full-Mission Selenolocation Progress for the Moon Mineralogy Mapper on Chandrayaan-1 **[#2012]**
M^3, a NASA imaging spectrometer, acquired near-global coverage of the Moon on ISRO's Chandrayaan-1. We discuss challenges to the selenolocation of the data, describe our current models and results, and provide suggestions for improved processing.

Green R. O. Pieters C. M. Boardman J. Lundeen S. Staid M. M^3 Team
The Moon Mineralogy Mapper Data Set Delivered to the Planetary Data System and Calibration and Validation Status **[#2089]**
The Moon Mineralogy Mapper data set delivered to the Planetary Data System and calibration and validation status.

Matsunaga T. Yokota Y. Yamamoto S. Nakamura R. Ohtake M. Haruyama J.
Lunar Global Spectral Reflectance Data Set by Kaguya Spectral Profiler **[#2200]**
By applying the photometric correction, Lunar Global Spectral Reflectance data set were generated from Kaguya Spectral Profiler data. Principal component (PC) analysis to this global data set gave PCs which show various spectral features in both global and regional scales.

Paige D. A. Williams J. P. Sullivan M. T. Greenhagen B. T.
LRO Diviner Lunar Radiometer Global Mapping Results and Gridded Data Product **[#2544]**
The LRO Diviner Lunar Radiometer global gridded dataset reveals the extreme nature of the lunar thermal environment and its diurnal and seasonal variability.

Greenhagen B. T. Lucey P. G. Bandfield J. L. Hayne P. O. Williams J. P. Paige D. A.
The Diviner Lunar Radiometer Compositional Data Products: Description and Examples **[#2679]**
Diviner's first derived compositional data products will be released into the Planetary Data System by mid-March, 2011. This presentation describes the creation and provides examples of Diviner's compositional data products.

Williams J.-P. Paige D. A. Vasavada A. R.
Interpreting LRO Diviner Surface Temperatures: Modeling Lunar Regolith Thermophysical Properties and Topography in Three-Dimensions **[#2808]**
We are developing a three-dimensional finite-difference model of the lunar regolith including topography and ray tracing to understand how small-scale slopes, shadows, and rocks within a Diviner surface footprint influence temperatures derived from Diviner observations.

Smith D. E. Zuber M. T. Neumann G. A. Mazarico E. Head J. III
Torrence M. H. LOLA Science Team
Results from the Lunar Orbiter Laser Altimeter (LOLA): Global, High Resolution Topographic Mapping of the Moon **[#2350]**
The laser altimeter on LRO has been collecting altimeter, surface slope, surface roughness, and reflectance measurements since starting operation in early July 2009; models of the lunar topography and surface structure have been developed from these measurements.

Sugawara T. Kitazato K. Ogawa Y. Hirata N. Matsunaga T. Nakamura R. Yamamoto S. Yokota Y.
Evaluation of Thermal Components in the Kaguya SP/NIR2 Spectral Data **[#2256]**
This study focuses on determining thermal components of the NIR2 spectral data for its calibration. We evaluated thermal flux from the instrument interior using the observing data of the onboard calibration module.

Yamashita N. Reedy R. C. Kobayashi S. Hareyama M. Kobayashi M. Hasebe N. Karouji Y. d'Uston C. Gasnault O. Forni O. Kim K. J. Kaguya Gamma Ray Spectrometer Team
Background Peaks in the Kaguya Gamma-Ray Spectra **[#2405]**
Background peaks in Kaguya gamma-ray spectra were studied, including a spectrum obtained while looking away from the Moon. Some peaks for U, Th, and Ca are not good for determining elemental abundances.

Hareyama M. Karouji Y. Kobayashi S. Yamashita N. Gasnault O. Reedy R. C. Hasebe N. KGRS Team
An Estimation Method of the Lunar Fast Neutron Distribution Derived from a Gamma Ray Spectrometer Using a Ge Crystal **[#1687]**
This report proposes a new method to estimate relative distribution of lunar fast neutron flux based on the data observed by Kaguya GRS.

Blanchette-Guertin J.-F. Johnson C. L. Lawrence J. F.
Characterization of Scattering in Lunar Seismic Coda **[#1374]**
We characterize long-duration APSE lunar seismic codas via their rise times and their characteristic decay times. We compared them to synthetically generated signals in order to indentify suites of interior structure models compatible with the data.