Friday, March 23, 2012
LUNAR MAPPING
1:30 p.m. Waterway Ballroom 4

Chairs: **Lisa Gaddis**
C.k. Shum

1:30 p.m. Archinal B. A. * Kirk R. L. Gaddis L. R. Rosiek M. R.
Unifying Lunar Topographic and Other Datasets **[#2394]**
This abstract describes the steps needed to ensure development of high-value lunar products based on information fusion of data from multiple missions by national and international space agencies permitting comparative and synergistic use of the data.

1:45 p.m. Rosiek M. R. * Lee E. M. Howington-Kraus E. T. Fergason R. L. Weller L. A. Galuszka D. M. Redding B. L. Thomas O. H. Saleh R. A. Richie J. O. Shinaman J. R. Archinal B. A. Hare T. M.
USGS Digital Terrain Models and Mosaics for LMMP **[#2343]**
This abstract describes the USGS DTMs and mosaics produced for the Lunar Mapping and Modeling Program. The primary initial objective was to support exploration missions by making LRO-derived products useful and accessible to the Constellation Program.

2:00 p.m. Nefian A. V. * Moratto Z. Beyer R. A. Kim T. Broxton M. Fong T.
Apollo Metric Zone Terrain Reconstruction **[#2184]**
Using advanced and fully automated mapping and image processing techniques the Intelligent Robotics Group at NASA Ames has recently released the terrain map of the Apollo Metric zone that covers 18% of the lunar surface at 30 m/pixel.

2:15 p.m. Gusakova E. * Karachevtseva I. Shingareva K. Oberst J. Peters O. Wählisch M. Robinson M. S.
Mapping and GIS-Analyses of the Lunokhod-1 Landing Site **[#1750]**
Using GIS tools and high-resolutiom DEM derived from LRO NAC various morphometric parameters of the Lunokhod-1 area were calculated. The results of geoanalyses can be used for cartography at high level of detail as support of future landing mission.

2:30 p.m. Shum C. K. * Fok H. S. Yi Y. Dai C. L. Shang K. Wang L. Araki H. Matsumoto K. Sasaki S. Iz H. B. Ding X. L. Ping J. S.
Lunar Topography Model Determined by Integrating Laser Altimetry from Multiple Orbiters **[#2407]**
Multiple lunar orbiters carrying laser altimeters have distinct sampling and accuracy. We used the differenced altimeter technique for orbit adjustments to develop a combined lunar topography model with improved accuracy and resolution (1.89 km).

2:45 p.m. Retherford K. D. * Gladstone G. R. Stern S. A. Egan A. F. Miles P. F. Parker J. Wm. Kaufman D. E. Greathouse T. K. Versteeg M. H. Steffl A. J. Mukherjee J. Davis M. W. Slater D. C. Bayless A. J. Rojas P. M. Karnes P. L. Feldman P. D. Hurley D. M. Pryor W. R. Hendrix A. R.
LRO-Lyman Alpha Mapping Project (LAMP) Maps of Lunar Far-UV Albedo **[#2292]**
LAMP measurements indicate ~1–2% surface water frost abundances in a few PSRs based on spectral color comparisons, and we find that many PSRs may have porosities of ~0.7 based on relatively low albedos at Lyman-α.

3:00 p.m. Sato H. * Denevi B. W. Robinson M. S. Hapke B. W. McEwen A. S. LROC Science Operation Team
Photometric Parameter Maps of the Moon from LROC WAC Observations **[#1771]**
Photometric parameter maps in 2 × 2° tiles for global and 0.05 × 0.05° tiles near the Apollo 17 site were derived using 20 months of LROC WAC images. Variations of surface optical properties detected by parameter b,c (H-G double lobe) and hc will be presented.