

Wednesday, March 12, 2008
LUNAR REMOTE SENSING
1:30 p.m. Amphitheater

Chairs: P. D. Spudis
 C. M. Pieters

- 1:30 p.m. Frey H. V. *
Previously Unrecognized Large Lunar Impact Basins Revealed by Topographic Data [#1344]
 Lunar topographic data reveal a population of previously unknown large impact basins. We count 92 larger than 300 km diameter compared with 45 inventoried from photogeologic mapping.
- 1:45 p.m. Spudis P. D. * Plescia J. B. Bussey D. B. J. Josset J.-L. Beauvivre S.
The Geology of the South Pole of the Moon and Age of Shackleton Crater [#1626]
 New data of the lunar south pole permits geological relations and relative ages to be determined more precisely. We report the results of new geological mapping of the south pole and crater counts to determine the age of Shackleton crater.
- 2:00 p.m. Bussey D. B. J. * Josset J.-L. Beauvivre S. Spudis P. D.
A Comparison of Clementine and AMIE Lunar Polar Data [#1708]
 Analysis of AMIE data has identified regions near the Moon's south pole that may represent the best potential outpost sites.
- 2:15 p.m. Campbell B. A. * Hawke B. R. Campbell D. B.
Rugged Flow Morphology of Lunar Domes Revealed by Earth-based Radar [#1299]
 New radar data show that domes in the Marius Hills region have backscatter strength comparable to near-rim ejecta from young craters, and circular polarization ratio values similar to blocky terrestrial volcanic deposits like SP flow in Arizona.
- 2:30 p.m. Gupta V. * Ghent R. R.
Radar-Bright and Radar-Dark Haloes Around Craters on Lunar Nearside: Implications on Particle-Size Distribution of Ejecta [#1947]
 Detailed measurements of radar-bright and radar-dark ejecta haloes around numerous lunar nearside craters in order to understand particle size distribution in lunar ejecta blankets, with possible implications on ejecta production and emplacement.
- 2:45 p.m. Gasnault O. * Elphic R. C. Lawrence D. J. Karunatillake S. d'Uston C. Forni O.
A Gamma-Ray Perspective from Lunar Prospector [#2111]
 We propose to build on the lunar compositional maps derived from γ -ray spectroscopy aboard Prospector to outline provinces that can be further investigated by the new orbital missions. First results obtained with different methods are presented.
- 3:00 p.m. Hagerty J. J. * Lawrence D. J. Hawke B. R. Elphic R. C. Gaddis L. R.
Thorium Abundances on the Aristarchus Plateau: Insights into the Composition of the Aristarchus Pyroclastic Glass Deposits [#1304]
 We use forward modeling of Lunar Prospector Gamma Ray Spectrometer thorium data to show that pyroclastic deposits on the Aristarchus Plateau have elevated thorium abundances that are not related to ejecta from Aristarchus Crater.
- 3:15 p.m. Peters S. TM. * Foing B. H. Koschmy D. Rossi A. P. Josset J. L.
 Beauvivre S. SMART-1 AMIE Team
SMART-1/Clementine Study of Humorum and Procellarum Basins: Coupling Between Impacts, Volcanism and Tectonics [#2548]
 We combined SMART-1 AMIE and Clementine UV/VIS data for two end-member lunar basins to determine the coupling between basin and tectonics. For Humorum but not Procellarum, tectonic-induced features agree well with an idealized tectonic model.

- 3:30 p.m. Combe J.-Ph. * Le Mouélic S. Kramer G. Y. McCord T. B.
Mapping of the Mineralogy of the Moon with Clementine UVVIS and NIR Data Analyzed by a Multiple-Endmember Linear Spectral Unmixing Model (MELSUM) [#2247]
A newly calibrated mosaic of UVVIS-NIR data from the Clementine spacecraft is analyzed by a spectral unmixing algorithm to map surface minerals on the Moon. First results show the potential for global mapping and applications on future datasets.
- 3:45 p.m. Isaacson P. J. * Pieters C. M.
Detecting a Broader Lunar Magnesian Suite with Orbital Spectroscopy [#1783]
Trends in reflectance spectra of lunar olivine separates are analyzed with the MGM. Shifts in absorption bands with composition are consistent with analyses of terrestrial olivine, a key proof-of-concept for detection of an expanded lunar Mg-suite.
- 4:00 p.m. Gaskell R. W. * Mastrodemos N.
Lunar Topography from Stereophotoclinometry [#1152]
Lunar topography is being created at several hundred meter resolution by applying stereophotoclinometry to Clementine and Lunar Orbiter images. This will provide a framework for the rapid inclusion of data from current and upcoming missions.
- 4:15 p.m. Buratti B. J. * Staid M. Pieters C. M. Hicks M. D. Stone T. S.
A Wavelength Dependent Visible and Infrared Spectrophotometric Model for the Moon Based on ROLO Data [#1471]
A wavelength-dependent photometric model for the visible and infrared was developed for the lunar surface. The model is based on measurements from the Robotic Lunar Observatory (ROLO) and it is referenced to the Apollo 16 landing site.
- 4:30 p.m. Keszthelyi L. *
Inflated Pahoehoe at Rima Hadley [#2339]
Inflated flood lavas on Earth, Mars, Io, and now the Moon!