Monday, March 18, 2013 **[M103]**
LUNAR REMOTE SENSING
8:30 a.m. Waterway Ballroom 6

Chairs: **Lisa Gaddis**
Paul Hayne

8:30 a.m. Klima R. L. * Hagerty J. J. Cahill J. T. S. Lawrence D. J.
Integrating Near-Infrared Derived Mineralogy and Gamma Ray Derived Chemistry of the Moon: Probing Igneous Sources from Orbit **[#2158]**
We integrate M^3 and Lunar Prospector data to compare the mineralogy and hydroxyl content of thorium anomalies for several locations on the lunar nearside.

8:45 a.m. Crites S. T. * Lucey P. G. Norman J.
The Mafic Component of the Lunar Crust from a Survey of Small Craters **[#1810]**
We are performing a global survey of immature small lunar craters in order to study the source of the mafic component of the lunar feldspathic highlands.

9:00 a.m. Hayne P. O. * Ghent R. Bandfield J. L. Vasavada A. R. Siegler M. A. et al.
Formation and Evolution of the Moon's Upper Regolith: Constraints from Diviner Thermal Measurements **[#3003]**
We use Diviner data to constrain the Moon's upper regolith thickness and find that this correlates with ages of recent craters and mare basalts.

9:15 a.m. Kumamoto A. * Ono T. Kobayashi T. Oshigami S. Haruyama J.
Determination of the Permittivity of the Lunar Surface Based on the Radar Echo Intensity Observed by the Kaguya **[#1950]**
The permittivity of the lunar surface has been determined based on the radar echo intensity and roughness of the surface observed by the Kaguya spacecraft.

9:30 a.m. Lehman K. M. * Kramer G. Y. Mayne R. G. Kiefer W. S.
Composition Analysis of the Marius Hills Volcanic Coplex Uusing Diviner Lunar Radiometer Experiment and Moon Mineralogy Mapper **[#1225]**
The combined datasets allowed plagioclase-rich regions to be identified along with clarifying previous compositional assessments.

9:45 a.m. Bandfield J. L. * Cahill J. T. S. Carter L. M. Greenhagen B. T. Neish C. D. et al.
A Highly Unusual Series of Young Impact Melts and Rocky Surfaces Antipodal to Tycho Crater **[#1770]**
A unique set of features are present in LRO LROC, Diviner, and Mini-RF data. Rocky material impacted the surface from two azimuths across a 11000 sq. km region.

10:00 a.m. Hawke B. R. Giguere T. A. * Gaddis L. R. Gustafson J. O. Lawrence S. J. et al.
Cryptomare and Pyroclastic Deposits on the Northern East Side of the Moon **[#1883]**
We analyzed LROC images as well as other spacecraft data to identify and characterize cryptomare and pyroclastic deposits on the northern east side of the Moon.

10:15 a.m. Ashley J. W. * Robinson M. S. Stopar J. D. Glotch T. D. Hawke B. R. et al.
The Lassell Massif — Evidence for Complex Volcanism on the Moon **[#2504]**
New LROC Wide Angle Camera, Narrow Angle Camera digital elevation models, and Diviner data support a history of complex volcanism for the Lassell Massif region.

10:30 a.m. Braden S. E. * Robinson M. S. Stopar J. D. van der Bogert C. H. Hawke B. R.
Age and Extent of Small, Young Volcanic Activity on the Moon **[#2843]**
Crater counts provide upper and lower age estimates for a subset of newly mapped small volcanic features found throughout the lunar maria.

10:45 a.m. Gaddis L. R. * Weller L. Barrett J. Kirk R. Milazzo M. et al.
"New" Volcanic Features in Lunar, Floor-Fractured Oppenheimer Crater **[#2262]**
New high-resolution data of Oppenheimer crater reveal at least eight "new" volcanic features that were previously unrecognized.

11:00 a.m. Greenhagen B. T. * Neish C. D. Bandfield J. L. Ghent R. R. Hayne P. O. et al.
Anomolously Fresh Appearance of Tsiolkovskiy Crater: Constraints from Diviner, Mini-RF, and LROC **[#2987]**
Tsiolkovskiy Crater has massive impact melt and is 300 Ga younger than previously reported but appears anomalously fresh in Diviner thermophysical datasets.

11:15 a.m. Moriarty D. P. III * Isaacson P. J. Pieters C. M.
NW-Central South Pole-Aitken: Compositional Diversity, Geologic Context, and Implications for Basin Evolution **[#3039]**
Compositional diversity in Finsen, Leibnitz, and Davisson craters is investigated using M^3 data to constrain the evolution of the South Pole-Aitken Basin.

11:30 a.m. Poppe A. R. * Halekas J. S. Sarantos M. Delory G. T.
Model-Based Constraints on the Lunar Exosphere Derived from ARTEMIS Pick-Up Ion Observations **[#1678]**
We use ARTEMIS observations of pick-up ions in the terrestrial magnetotail to constrain the density and distribution of the lunar neutral exosphere.