Monday, March 19, 2012
MIND THE GAP: LUNAR PETROLOGY AND REMOTE SENSING
2:30 p.m. Waterway Ballroom 4

Chairs: **Juliane Gross**
Rachel Klima

2:30 p.m. Ohtake M. * Takeda H. Mastunaga T. Yokota Y. Haruyama J. Morota T. Yamamoto S. Ogawa Y. Hiroi T. Karouji Y. Saiki K. Lucey P. G.
Primitive Farside Highland Materials Detected by Mg Number **[#1977]**
We utilize a new algorithm that derives Mg# from spectral reflectance data to derive a global map of Mg#. The derived Mg# distribution of the lunar highlands clearly indicates its dichotomic distribution, with a higher Mg# in the farside highlands than in the nearside.

2:45 p.m. Takeda H. * Nagaoka H. Ohtake M. Kobayashi S. Yamaguchi A. Morota T. Karouji Y. Haruyma J. Katou M. Hiroi T. Nyquist L. E.
Comparisons of Mineralogy of Lunar Meteorites Possibly from the Farside and the Kaguya Remote Sensing Data to Reconstruct the Earliest Anorthositic Crust of the Moon **[#1379]**
Comparisons of mineralogy of lunar meteorites (Dhofar 911, etc.) from the farside and the Kaguya Th concentrations a to reconstruct the earliest, asymmetric anorthositic crust of the Moon. We propose that these meteorites might have come from the Dirichlet-Jackson basin.

3:00 p.m. Isaacson P. J. * Hiroi T. Pieters C. M. Liu Y. Patchen A. Taylor L. A.
Spectroscopy of Lunar Meteorites for Expanded Sample Collection Diversity: Initial Results of Component Analyses **[#1668]**
We present spectral reflectance and associated geochemistry/abundance data for mineral/lithic components of lunar meteorites. These results will enable investigation of the geologic context of the meteorite samples through remote sensing.

3:15 p.m. Davenport J. D. * Neal C. R.
Revisiting the Lunar Magma Ocean Crystallization: Creating a Unified Hybrid Model **[#1546]**
Lunar magma ocean theory (LMO) has been given much consideration recently. This study uses work on modeling the LMO to create a hybrid model. This will give insight into the formation of the Moon as well as using it for comparative planetary studies.

3:30 p.m. Prissel T. C. * Parman S. W. Jackson C. R. M. Dhingra D. Ganskow G. Cheek L. C. Rutherford M. J. Hess P. Pieters C. M.
Melt-Wallrock Reactions on the Moon: Experimental Constraints on the Formation of Newly Discovered Mg-Spinel Anorthosites **[#2743]**
Here, we provide experimental evidence suggesting the formation of newly discovered lunar Mg-rich spinel anorthosite via melt-wallrock reaction between known lunar basalts and an anorthositic crust.

3:45 p.m. Jackson C. R. M. * Cheek L. C. Parman S. W. Cooper R. F. Pieters C. M.
Compositional Constraints on Lunar Spinel Anorthosite: Synthesis of Spinel with Variable Iron Content **[#2335]**
Fe-bearing spinels were synthesized under reducing conditions applicable to the Moon. The spectra of these minerals will place improved compositional constraints on the newly identified spinel anorthosite (M^3).

4:00 p.m. Jolliff B. L. * Zanetti M. Shirley K. A. Accardo N. J. Lauber C. Robinson M. S. Greenhagen B. T.
Compton-Belkovich Volcanic Complex **[#2097]**
We present new information on volcanic features at the Compton-Belkovich Volcanic Complex, and we discuss timing and petrogenesis, including intrusion and inflation, effusion, magma chamber collapse, and emplacement of late-stage differentiates.

4:15 p.m. Klima R. L. * Lawrence D. Cahill J. T. S. Hagerty J.
Bullialdus Crater: Correlations Between KREEP and Local Mineralogy **[#2517]**
We explore the pyroxenes in and around Bullialdus Crater, examining relationships between lithology, thorium content, and hydroxylated material to help constrain about the source region and character of KREEP on the lunar nearside.

4:30 p.m. Nekvasil H. * Ustunisik G. Lindsley D. H.
Large Scale Lunar Magmatism: Inferences from the Moscoviense Basin **[#2178]**
Phase equilibria computations have constrained the compositions of parental liquids that can give rise the lithologies observed by M^3 at Moscoviense Basin and indicated evolution of residual melts to rhyolitic compositions.