Wednesday, May 25, 2016
POSTER SESSION: NEW VIEWS OF THE MOON 2
5:30–6:30 p.m. Great Room

Donaldson Hanna K. L. Cheek L. C. Pieters C. M. Mustard J. F. Greenhagen B. T. Bowles N. E.
Global Assessment of Pure Crystalline Plagioclase Across the Moon: Implications for the Evolution of the Primary Crust **[#6017]**
Global characterization of pure crystalline plagioclase across the Moon using Moon Mineralogy Mapper (M^3) and Diviner Lunar Radiometer observations.

Ling Z. C. Jolliff B. L.
New Views of Lunar Compositions and Rock Types Revealed by Spectroscopic Data from Chang'e-1 and Chang'e-3 Missions **[#6057]**
Global hyperspectral imaging datasets of Chang'e-1 IIM have brought new science returns of lunar surface compositions and rock types. The in-situ spectroscopic measurements by Yutu yielded compositional constraints of a new type of basaltic rock.

Pernet-Fisher J. F. Joy K. H.
Developments in Our Understanding of Lunar Crustal Formation and Evolution **[#6049]**
Our recent understanding of lunar crustal formation has developed through the combination of analytical advances, and the increased availability of anorthositic material sampled as clasts within meteorite regolith breccias.

Weber R. C. Nahm A. L. Yanites B. Schmerr N.
Mass Wasting on the Moon: Implications for Seismicity **[#6009]**
Here we investigate the regional effects of lunar seismicity with the goal of determining whether surface features such as landslides and boulder trails on the Moon are triggered by fault motion.

Yamamoto S. Nakamura R. Matsunaga T. Ishihara Y. Ohtake M. Haruyama J.
Global Distributions of Large Exposed Areas of Lunar Major Minerals and Its Implications **[#6034]**
We review the global distributions of large exposure areas of the various lunar major minerals revealed by the recent remote-sensing hyperspectral observations, and discuss possible implications for lunar crust and mantle.

Matsumoto K. Harada Y. Ishihara Y. Haruyama J.
Low-Velocity and Low-Viscosity Zone at the Lowermost Mantle of the Moon **[#6037]**
Tidal response of the Moon indicates the existence of a low-velocity/viscosity zone at the base of the mantle which needs to be thicker than 170 km to fit observation. The inferred density of the layer suggests lunar magmas with high TiO_2 content.

Lemelin M. Lucey P. G. Gaddis L. R. Miljkovi? K. Ohtake M.
The Composition of the Lunar Crust: An In-Depth Remote Sensing View **[#6055]**
We conduct a quantitative survey of the mineralogy of the inner most ring of 13 impact basins, constrain the depth of origin of the material exposed on these rings, and study the composition of the lunar crust with depth.

Fa W. Cai Y.
Mini-RF PSR Observations: Water Ice or Rocks? **[#6014]**
The enhanced CPRs in the interior of anomalous craters in Mini-RF images are most probably caused by meter-scale rocks, suggesting that ice deposits, if present, are not the only physical agent causing the enhanced CPR.

Greenwood J. P. Itoh S. Sakamoto N. Warren P. H. Singer J. A. Lowe M. E.
Mahmood S. Yurimoto H.
Water and Volatiles in Apollo Rocks: The View from Sapporo and Connecticut **[#6056]**
We will review 1000's of measurements made of volatiles in Apollo rocks since 2009. This comprehensive analysis allows a cohesive model to explain amounts of lunar volatiles and D/H of the Moon.

Barnes J. J. Tartese R. Anand M. McCubbin F. M. Neal C. R. Franchi I. A.
The Chlorine Isotopic Composition of Lunar urKREEP **[#6091]**
We have measured the Cl isotopic composition of apatite in a range of lunar rocks using NanoSIMS. We find a correlation between Cl isotopes and bulk rock chemistry which strongly suggesting urKREEP was characterized by heavy Cl.

Carter L. M. Campbell B. A. Morgan G. A. Ghent R. R. Neish C. D.
Recent Radar Imaging Observations of the Moon: New Views of Pyrocastics, Mare Basalts, Impact Crater Deposits, and the Lunar Subsurface **[#6050]**
In the last decade, radars with different wavelengths have provided polarimetric imaging of the lunar surface. These data sets have yielded new information about topics such as pyroclastics, mare basalts, cryptomare, and impact ejecta and melt flows.

Hayne P. O. Bandfield J. L. Vasavada A. R. Ghent R. R. Siegler M. A. Williams J.-P.
Greenhagen B. T. Elder C. M. Paige D. A.
Global Regolith Properties from Diviner Thermal Infrared Measurements **[#6065]**
We used Diviner infrared data to map regolith properties globally. These maps reveal a variety of interesting features with distinct thermophysical properties, opening a fruitful area for future study.

Williams J.-P. Paige D. A. Greenhagen B. T. Sefton-Nash E.
Impacts Large and Small: Modification of the Lunar Regolith Observed by LRO Diviner **[#6084]**
Diviner reflectance and infrared observations reveal how impact craters from meter-scale to basin-scale modify the thermophysical and radiative properties of the regolith globally.

Valencia S. N. Jolliff B. L. Korotev R. L.
The NWA 773 Clan: A Unique Group of Lunar Meteorites **[#6059]**
The NWA 773 Clan is a unique group of lunar meteorites that represents an intrusive and extrusive magmatic system on the Moon, spanning from early, magnesian lithologies, to late, ferroan lithologies.

Grava C. Hurley D. M. Cook J. C. Retherford K. D. Gladstone G. R. Greathouse T. K. Stern S. A.
Feldman P. D. LRO/LAMP Team
Lunar Atmospheric Campaigns of the UV Spectrograph LAMP on Board of the Lunar Reconnaissance Orbiter **[#6032]**
We present a summary of the LAMP atmospheric campaigns performed so far, to study the composition and the properties of the lunar atmosphere, as well as its temporal variations.

Athiray P. S. Narendranath S. Sreekumar P. C1XS Team
New Views of Southern Nearside Lunar Highland Composition from the Chandrayaan-1 X-ray Spectrometer (C1XS) **[#6062]**
Lunar surface elemental abundances - Results from Chandrayaan-1 X-ray Spectrometer (C1XS) on-board Chandrayaan-1 and goals for the upcoming Chandrayaan-2 Large Area Soft X-ray Spectrometer (CLASS) experiment on-board Chandrayaan-2.