

**Wednesday, May 25, 2016**  
**MAGMATIC EVOLUTION, VOLCANISM, LUNAR CRUST, AND LUNAR METEORITES**  
**8:30 a.m. Lecture Hall**

- Chairs:** Carle Pieters  
James Head III
- 8:30 a.m. Shearer C. K. \* Neal C. R. Gaddis L. R. Jolliff B. L. Bell A. S.  
[\*Magmatic Evolution 2. A New View of Post-Differentiation Magmatism\*](#) [#6003]  
Numerous missions, new state-of-the-art sample measurements, new lunar samples (meteorites), and sophisticated modeling have provided a new perspective on lunar magmatism. We use these new observations to expand our understanding of lunar magmatism.
- 8:45 a.m. Head J. W. III \* Wilson L.  
[\*Mare Basalt Volcanism: Generation, Ascent, Eruption, and History of Emplacement of Secondary Crust on the Moon\*](#) [#6007]  
Theoretical analyses of the generation, ascent, intrusion and eruption of basaltic magma provides new insight into magma source depths, supply processes, transport and emplacement mechanisms (dike intrusions, effusive and explosive eruptions).
- 9:00 a.m. Morota T. Haruyama J. \* Ohtake M. Ishihara Y. Cho Y. Kato S.  
Hiesinger H. LISM Working Group  
[\*Timing and Characteristics of Mare Volcanism on the Farside and in the Central Region of the PKT Revealed by Kaguya\*](#) [#6044]  
Unraveling the timing of mare volcanism on the Moon is essential for understanding its thermal evolution. Using Kaguya data, we have performed crater counting on mare basalts on the farside and in the PKT. Here we review our findings.
- 9:15 a.m. Glotch T. D. \* Greenhagen B. T. Hagerty J. J. Jolliff B. L. Ashley J. W.  
Williams J.-P. Petro N. E.  
[\*Silicic Volcanism Identified by the Diviner Lunar Radiometer Experiment\*](#) [#6043]  
The Diviner Lunar Radiometer Experiment on the Lunar Reconnaissance Orbiter has mapped and characterized a number of silicic volcanic constructs on the lunar surface. Here, we summarize Diviner's contributions to our understanding of these features.
- 9:30 a.m. Jolliff B. L. \* Clegg-Watkins R. N. Zanetti M. R. Lawrence S. J. Stopar J. D. Shirley K. A.  
Glitch T. D. Greenhagen B. T.  
[\*Felsic Volcanics on the Moon\*](#) [#6051]  
LRO data sets have been used to characterize sites of red-spot volcanism on the Moon, confirming that they are composed of silica-rich materials and establishing key morphometric parameters including shape, slopes, boulder contents, and photometry.
- 9:45 a.m. Pieters C. M. \* Elardo S.  
[\*Lunar Crustal Evolution: What Do We See?\*](#) [#6018]  
Topics are provided for discussion of lunar crustal evolution.
- 10:00 a.m. Break
- 10:15 a.m. Elardo S. M. \* Pieters C. M.  
[\*The Evolution of the Lunar Crust: The View from Samples, Experiments, and Geochemistry\*](#) [#6074]  
This abstract presents a very brief summary of some of the major areas of research regarding the lunar crust from a laboratory-based science perspective in order to fuel discussion and planning for the evolution of the lunar crust chapter.

- 10:30 a.m. Ohtake M. \* Yamamoto S. Uemoto K.  
[\*Composition of the Lunar Highland Crust and Mantle and Its Implications\*](#) [#6038]  
Recent remote sensing data suggest that extremely pure anorthosite (PAN) layer is a main component of the lunar highland crust and presence of crustal material with higher Mg# on the farside than the nearside.
- 10:45 a.m. Magna T. \* Neal C. R.  
[\*Non-Traditional Stable Isotope Constraints on the Evolution of Moon\*](#) [#6035]  
Non-traditional stable isotope systems provide constraints on the origin and evolution of the Moon. They have gained importance in disentangling the processes of the lunar differentiation, volatile loss, and hydrous vs. anhydrous nature of the Moon.
- 11:00 a.m. Joy K. H. \* Curran N. A. Pernet-Fisher J. F. Arai T.  
[\*Lunar Meteorites: New Insights into the Geological History of the Moon\*](#) [#6047]  
We outline how studies of lunar meteorites have brought new insights to the Moon's lithological diversity and geological history.
- 11:15 a.m. Monitored by Session Chairs  
*3-Minute Lightning Round of New Data and Perspectives*
- 11:30 a.m. DISCUSSION