

Tuesday, May 24, 2016

ORIGIN OF THE EARTH MOON SYSTEM AND PRIMORDIAL DIFFERENTIATION

1:30 p.m. Hess Room

Chairs: Kevin Righter
Paul Warren

- 1:30 p.m. Righter K. * Canup R. M.
[Testing and Resilience of the Impact Origin of the Moon](#) [#6080]
We summarize the geochemical and physical aspects of the Earth and Moon and discuss the implications for lunar origin models.
- 1:45 p.m. Warren P. H. * Siegler M. A. Greenwood J. P. Kohl I. E. Young E. D.
[The Bulk Composition of the Moon: Merely Earth-Like, or Earth-Lite?](#) [#6079]
New heat flow, isotopic and other data constrain the bulk composition of the Moon to be closely similar to that of the bulk silicate Earth.
- 2:00 p.m. Draper D. S. * Rapp J. F. Elardo S. M. Shearer C. K. Jr. Neal C. R.
[Experimental Simulations of Lunar Magma Ocean Crystallization: The Plot \(But Not the Crust\) Thickens](#) [#6020]
If we think we know/How lunar magma ocean worked,/We must think again.
- 2:15 p.m. Steenstra E. S. * van Westrenen W.
[Review of Geochemical Constraints on the Formation and Composition of the Lunar Core](#) [#6039]
Siderophile element depletions in the lunar mantle are an important tool to investigate the PT conditions during lunar core formation. Here, we summarize recent work that studied the PT conditions during core formation and lunar core composition.
- 2:30 p.m. Kramer G. Y. * Jaiswal B. Hawke B. R. Ohman T. Giguere T. A. Johnson K.
[Mare Frigoris: Window Into the Evolution of the Lunar Mantle](#) [#6024]
Mare Frigoris sat on a crack. Mare Frigoris got covered in KREEP. All the king's horses and all the king's men couldn't make Frigoris erupt anything besides high-Al basalts.
- 2:45 p.m. Klima R. L. *
[Assessing the Compositional Diversity of Intrusive Rocks on the Moon Using Near-Infrared Spectroscopic Data](#) [#6077]
Near-infrared, gamma-ray and neutron, and thermal-infrared observations have advanced our understanding of the compositional diversity, including minor components such as thorium and hydroxyl, of intrusive lithologies exposed on the lunar surface.
- 3:00 p.m. Break
- 3:15 p.m. Prissel T. C. *
[On the Provenance and Distribution of the Lunar Highlands Magnesian-Suite](#) [#6011]
The distribution and petrogenesis of the lunar highlands magnesian-suite is discussed in light of recent experimental and orbital data.
- 3:30 p.m. Monitored by Session Chairs
3-Minute Lightning Round of New Data and Perspectives
- 4:00 p.m. DISCUSSION