Tuesday, March 20, 2018 **[T255]**
ORIGIN AND IGNEOUS EVOLUTION OF THE MOON
1:30 p.m. Waterway Ballroom 6

Chairs: **Tabb Prissel**
Edgar Steenstra

1:30 p.m. Fischer R. A. * Nimmo F. O'Brien D. P.
The Origin of the Moon's Earth-Like ^{182}W Isotopic Composition **[#2195]**
Based on dynamic simulations plus core formation, Earth and Theia did not have the same W anomaly, so the Moon obtained its Earth-like ^{182}W by another mechanism.

1:45 p.m. Steenstra E. S. * Fei Y. Matveev S. Berndt J. Klemme S. et al.
Assessment of a High-Energy Origin of the Moon from Metal-Silicate Partitioning of Siderophile Elements at High Temperatures **[#1198]**
We use new high-temperature metal-silicate partitioning data for siderophile elements obtained at up to 2873 K to assess a high-energy origin of the Moon.

2:00 p.m. Pieters C. M. * Hiroi T. Milliken R. E. Cheek L. C.
Abundance and Distribution of Lunar Primary Crust Anorthosite: The Featureless Plagioclase Challenge **[#1698]**
Primary anorthosite crust of the Moon is identified by diagnostic features; vast areas of featureless material should be related, but is undocumented by samples.

2:15 p.m. Crites S. T. * Lemelin M. Lucey P. G. Ohtake M.
Post-Magma Ocean Impact and Igneous Contributions to the Lunar Highlands Crust **[#1819]**
Typical anorthositic lunar highlands crust contains >10% mafic minerals. We revisit mixing models with new mineral maps to identify possible mafic contributors.

2:30 p.m. Torcivia M. A. * Neal C. R.
Ferroan Anorthosite 60025 — A Lunar Breccia **[#1331]**
A look at how a classic example of an LMO product may be more complicated than initially thought.

2:45 p.m. Elardo S. M. * Shearer C. K. McCubbin F. M.
Asymmetric Early Crust-Building Magmatism on the Lunar Nearside Due to KREEP-Induced Melting Point Depression **[#2344]**
The KREEP reservoir on the lunar nearside reduces the melting temperature of Mg-suite source rocks, which could lead to asymmetric crust-building magmatism.

3:00 p.m. Prissel T. C. * Gross J.
Re-Examining the Petrogenesis of Lunar Troctolites **[#2583]**
Re-examining / The Petrogenesis of / Lunar Troctolites: We relax the Mg# problem, and conclude formation via equilibrium crystallization of komatiite-like melts.

3:15 p.m. Robinson K. L. * Kring D. A.
The Northwest Africa 5744 Group: A Glimpse into Schrödinger-Like Lithologies? **[#1635]**
We present new data from two spinel-bearing troctolitic lunar meteorites that may be petrologically similar to Mg-suite rocks observed in Schrödinger Basin.

3:30 p.m. Pinet P. C. * Chevrel S. D. Daydou Y. H.
Characterization of the Olivine/Plagioclase Mineralogy at Copernicus Crater from MGM Deconvolution of M^3 Observations **[#1899]**
Advanced MGM deconvolution procedure is implemented on M^3 observations at Copernicus Crater to detect and map olivine and plagioclase-bearing minerals.

3:45 p.m. Bretzfelder J. M. * Klima R. L. Greenhagen B. T. Buczkowski D. L. Ernst C. M. et al.
Divining the Lunar Mantle: Spectral Analysis of the Imbrium Basin **[#1675]**
Where is the mantle? / Excavation by impact / May not expose it.

4:00 p.m. McCanta M. C. * Dyar M. D. Breitenfield L. Lanzirotti A.
Mapping of Ferric Iron Variation in Lunar Glass Beads: Observing Changing Oxidation Conditions In Situ **[#1073]**
We have obtained the first maps of ferric iron concentration in lunar glass beads. Late-stage magma ascent and eruption conditions are considered.

4:15 p.m. Gawronska A. J. * Cronberger K. Neal C. R.
Implications of Bimodal Olivine Compositions in VHK Basalts **[#1821]**
This study investigated the magma conditions that could have led to the stabilization of Fayalitic olivine in VHK basalts.

4:30 p.m. Christoffersen R. * Mouser M. D. Simon J. I. Ross D. K.
Multiple Alkali-Enriched Feldspar Generations in Felsite-Containing Lunar Breccia 12013 **[#2204]**
Feldspar-silica assemblages in lunar breccia 12013 are not limited to the granophyres, but include those generated by shock and perhaps fluid activity.