

**Thursday, May 4, 2017**  
**POSTER SESSION**  
**5:30 p.m. Foyer**

Gaddis L. R. Bennett K. Horgan B. McBride M. Stopar J. Lawrence S. Gustafson J. O. Giguere T.  
[Complex Volcanism at Lunar Floor-Fractured Crater Oppenheimer U](#) [#6012]

Here we examine the floor of Oppenheimer U Crater and show evidence for multiple eruptive episodes, resulting in a pyroclastic deposit with compositional diversity within a single floor-fractured crater.

Assis Fernandes V. Burgess R. Cooper L. Czaja P. Khan A. Liebske C. Neal C.  
 Sliwinski J. Zhu M.-H.

[Type, Chemistry, Ar-Isotopes and Magma Generation of New Apollo 17 Basaltic Regolith Fragments](#) [#6011]

Six new Apollo 17 regolith basaltic fragments: Petrology, bulk composition, Ar-Ar and CRE age, magma generation, and initial comparison with orbital data.

Lemelin M. Lucey P. G. Crites S. T. Jha K.

[Mineralogy and Iron Content of the Lunar Polar Regions Using the Kaguya Spectral Profiler and the Lunar Orbiter Laser Altimeter](#) [#6005]

We use reflectance data from LOLA and reflectance ratio from SP to derive FeO maps of the polar regions at 1 km per pixel and compare them with lunar propector-derived abundances. We model mineral abundances using SP data and FeO as a constraint.

Vanderliek D. M. Becker H. Rocholl A.

[Petrologic Context and Dating of 4.2 Ga Old Zircon in Lunar Impactites — 67955 Revisited](#) [#6026]

New U-Pb data for zircons from different lithologies of impactite 67955 confirm the occurrence of one or several large impacts at 4.2 Ga. The importance of textural and compositional information will be discussed.

Varatharajan I. Sruthi U.

[Impact Geology of Fresh Simple Craters on Moon](#) [#6015]

Detailed morphologic and mineralogical mapping of impact features of fresh simple craters on Moon using high resolution datasets and their relationship to Earth's Lonsdale Crater.

Anderson F. S. Whitaker T. J. Wiesendanger R. Wurz P. Beck S. Levine J.

[Revising Lunar History with In-Situ Dating of the Moon](#) [#6030]

We have developed a mission concept to address  $\pm 1$  Ga year uncertainties in the history of the Moon by obtaining 10 or more Rb-Sr and Pb-Pb radiometric dates in-situ, ultimately constraining the age of the surface to well within  $\pm 200$  Ma ( $2\sigma$ ).

Lawrence S. J. Gaddis L. R. Joy K. H. Petro N. E.

[Lunar Exploration Missions Since 2006](#) [#6051]

Here, we describe the vision for the Recent Lunar Missions chapter, which will tersely summarize missions that have explored the Moon between 2006 and 2017.

Weitz C. M. Staid M. I. Gaddis L. R. Besse S. Sunshine J. M.

[Investigation of Lunar Spinel at Sinus Aestuum](#) [#6003]

We have analyzed Moon Mineralogy Mapper (M3) data of spinels at Sinus Aestuum. Our results indicate that Fe- or Cr-spinels with 0.7  $\mu\text{m}$  absorptions are mixed into most of the DMD across the Sinus Aestuum highlands. Cr-spinels with 0.7  $\mu\text{m}$  absorptions are mixed into most of the dark mantle deposit (DMD) across the Sinus Aestuum highlands.