LUNAR VOLCANISM: NEW PERSPECTIVES ON A DYNAMIC MOON

1:30 p.m. Waterway Ballroom 1

**Chairs:**
Lillian Ostrach
R. Aileen Yingst

**1:30 p.m.**
Sood R. * Chappaz L. Melosh H. J. Howell K. C. Milbury C.
Detection of Buried Empty Lunar Lava Tubes Using GRAIL Gravity Data [#1509]
GRAIL gravity data is utilized to detect the presence and extent of candidate empty lava tube structures beneath the surface of the lunar maria.

**1:45 p.m.**
The Bulk Density of the Small Lunar Volcanos Gruithuisen Delta and Hansteen Alpha: Implications for Volcano Composition and Petrogenesis [#1722]
GRAIL gravity shows that the lunar volcanos Gruithuisen Delta and Hansteen Alpha have bulk densities of ~2150 kg m$^{-3}$, consistent with a rhyolitic composition.

**2:00 p.m.**
Kreslavsky M. A. * Head J. W. Neumann G. A. Zuber M. T. Smith D. E.
Mare-Forming Lava Flows on the Moon Revealed by Detrended LOLA Topography [#1331]
High-precision topographic data from LOLA reveal boundaries of volcanic flow units forming lunar maria and kilometer-scale topographic patterns of some units.

**2:15 p.m.**
Elder C. M. * Hayne P. O. Ghent R. R. Bandfield J. L. Williams J.-P. et al.
Regolith Formation on Young Lunar Volcanic Features [#2785]
Regolith covers young volcanic features on the lunar surface.

**2:30 p.m.**
Clegg-Watkins R. N. * Jolliff B. L. Watkins M. J.
LRO NAC-Derived Albedo Map of Silicic Volcanics [#1125]
Hapke photometric parameter maps at the m-scale reveal differences in albedo at lunar silicic regions that may be attributed to compositional differences.

**2:45 p.m.**
Stopar J. D. * Lawrence S. J. Robinson M. S. Gaddis L. R. Giguere T. A. et al.
Proximal Volcanic Deposits: Roughness and Implications for Lunar Volcanism [#2555]
New details of small-area deposits (cones, layering, spatter deposits, lava breaches) in plains and shield-style volcanic terrains on the Moon.

**3:00 p.m.**
Alphonsus Crater: Compositional Clues to Eruption Styles of Lunar Small Volcanoes [#2065]
We use M$^3$ data to map volcanic glass and mafic minerals at volcanic centers in the floor of Alphonsus crater. Results support a Vulcanian eruption mechanism.

**3:15 p.m.**
Needham D. H. * Petro N. E. Bleacher J. E. Carter L. M.
Constraining Surface Characteristics that Influence the Morphology of Lunar Sinuous Rilles [#2351]
We analyze two lunar sinuous rilles and their surroundings to determine how surface properties influenced the final morphology of lunar sinuous rilles.

**3:30 p.m.**
The Volcanic Processes of the Gassendi Crater Interior [#1884]
The interior of Gassendi crater was investigated with LROC and other data. Three lava lakes were identified and characterized. Formation processes postulated.
3:45 p.m. Keske A. L. * Robinson M. S. Bennett K. A.
The Morphometry of Lunar Localized Dark Mantle Deposits [#3048]
NAC DTMs were used to analyze the volume relationship between localized dark mantle deposits and
their vents to determine the proportion of juvenile material.

4:00 p.m. Allen C. * Hayne P. Greenhagen B. Bandfield J. Lucey P. et al.
Aristarchus in Eclipse — Insights into a Pyroclastic Deposit [#1309]
Lunar eclipse temperatures show that Aristarchus pyroclastics have lower TI than nearby mare, due to
differences in rock populations in the upper millimeters.

4:15 p.m. van der Bogert C. H. * Gaddis L. Hiesinger H. Ivan M. Jolliff B. et al.
Revisiting the CSFDs of the Taurus Littrow Dark Mantle Deposit: Implications for Age Determinations
of Pyroclastic Deposits [#1616]
Thick DMDs at Taurus Littrow yield absolute model ages consistent with Apollo 17 basalt/glass
samples, despite having a deficiency of small diameter craters.

4:30 p.m. Lawrence S. J. * Stopar J. D. Ostrach L. R. Jolliff B. L. Robinson M. S.
Assessing the Relationship Between Absolute Age and Surface Roughness with LROC [#2755]
We explore the relationship between absolute age and surface roughness using LRO Narrow Angle
Camera DTMs.