

Tuesday, March 22, 2016

[T251]

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. Kiefer W. S. * Taylor G. J. Andrews-Hanna J. C. Head J. W. Jansen J. C. et al.
[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 $\sim 2150 \text{ kg m}^{-3}$, 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. Gaddis L. R. * Horgan B. McBride M. Bennett K. Stopar J. et al.
[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. Giguere T. A. * Hawke B. R. Boyce J. M. Gillis-Davis J. J. Lawrence S. J. et al.
[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. Ivanov 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.