

Wednesday, March 21, 2018  
**TAURUS-LITTROW VALLEY I: 45 YEARS AFTER APOLLO 17**  
 8:20 a.m. Waterway Ballroom 6

[W404]

**Chairs:** Amy Fagan  
 Erica Jawin

- 8:20 a.m. G. Griffin \*  
*Overview of Apollo 17 from the Apollo 17 Flight Director*
- 8:30 a.m. Schmitt H. H. \* Petro N. E. Robinson M. S. Wells R. A. Mercer C. M. et al.  
[Apollo 17 Exploration of Taurus-Littrow: Summary of Major Findings](#) [#2961]  
 After 45 years of thought, analysis, and remote sensing, their detailed integration with field observations and sampling has produced a number of conclusions.
- 9:00 a.m. Wells R. A. \* DeChant L. F. Weiss B. P. Schmitt H. H.  
[Photodocumenting Sample Sites by Close-Range Photogrammetry on a New Crewed Mission to the Moon](#) [#1085]  
 Upgraded 3D models of Apollo 17 rock sample 70019's *in situ* orientation are given and discussed in relation to crew field techniques on future Moon missions.
- 9:15 a.m. Sun L. \* Taylor G. J. Martel L. M. V. Lucey P. G.  
[A Comprehensive Study of Mineralogy at Apollo 17 Landing Site](#) [#1693]  
 We combine quantitative XRD analysis of 43 Apollo 17 lunar soil samples from 19 stations and MI mineral maps to study the detailed mineralogy of this area.
- 9:30 a.m. Moriarty D. P. III \* Petro N. E. Pieters C. M.  
[Compositional Assessment of the Taurus-Littrow Region Through Integration of Apollo 17 Samples and Moon Mineralogy Mapper Data](#) [#1625]  
 Compositional diversity of the Taurus-Littrow region is investigated using M<sup>3</sup> spectral parameters and unmixing with endmembers derived from Apollo 17 samples.
- 9:45 a.m. Hahn T. M. Jr. \* Watkins R. N. Schonwald A. R. Jolliff B. L.  
[Regional-Scale LROC NAC Photometric Analysis of the Taurus-Littrow Valley: A Coordinated Investigation and Calibration Using Soil Compositional Data](#) [#2637]  
 First regional Hapke photometric parameter map at NAC resolutions for the Taurus-Littrow Valley; Use Apollo 17 soils data to create compositional calibrations.
- 10:00 a.m. Norman M. D. \*  
[Impact Melt Rocks from Apollo 17: A Brief Review](#) [#1745]  
 Apollo 17 melt rocks probably formed as basin ejecta, but which one?
- 10:15 a.m. Mercer C. M. \* Hodges K. V. Jolliff B. L. van Soest M. C. Wartho J.-A. et al.  
[Taking a Close Look at Dating Old Impact Melt Rocks: High Spatial Resolution <sup>40</sup>Ar/<sup>39</sup>Ar Geochronology of Some Apollo 17 Samples](#) [#2528]  
 High spatial resolution <sup>40</sup>Ar/<sup>39</sup>Ar geochronology of Apollo 17 impact melt rocks provides new insights into the impact record preserved at Taurus-Littrow Valley.
- 10:30 a.m. Zellner N. E. B. \* Nguyen P. Q. Swindle T. D. Beard S. Isachsen C.  
[Apollo 17 Lunar Impact Glasses: Ages Evaluated via Statistical and Compositional Studies](#) [#2487]  
 Taurus-Littrow site / Impact ages are wide spread / Glasses tell the tale.

- 10:45 a.m. Kring D. A. \* Needham D. H. Walker R. J. Nemchin A. A. Schmitt H. H.  
[\*Apollo 17, Station 2, Boulder 1: Revisiting Consortium Indomitabile\*](#) [#1323]  
We review Station 2, Boulder 1 analyses that we and others have produced and suggest a new consortium study is warranted to understand basin ejecta.
- 11:00 a.m. Petro N. E. \* Schmitt H. H. Hayne P. Hollibaugh-Baker D. Moriarty D. et al.  
[\*Volcanic Fissure and Associated Deposit on the North Massif of the Taurus-Littrow Valley: Distribution of Ash and Sample Implications\*](#) [#2631]  
A probably pyroclastic deposit is characterized in the Taurus-Littrow valley. Recent remote sensing data and samples collected by Apollo 17 are evaluated.
- 11:15 a.m. Ni P. \* Zhang Y.  
[\*Testing the Possibility of a Volatile-Enriched Origin for Sample 74220\*](#) [#2838]  
In this abstract, 74220 is compared to other lunar samples with new and previous melt inclusion data on volatile and moderately volatile elements.
- 11:30 a.m. Milliken R. E. \* Li S. Huber C.  
[\*Orbital Evidence for Water in Pyroclastics at Taurus-Littrow and Other Dark Mantle Deposits on the Moon: Abundance, Resource Implications, and Future Directions\*](#) [#2639]  
M<sup>3</sup> data are used to map water at Apollo 17 landing site for comparison with eruption models.