

Thursday, March 19, 2015
AEOLIAN PROCESSES
8:30 a.m. Waterway Ballroom 1

[R401]

Chairs: Jani Radebaugh
Kirby Runyon

- 8:30 a.m. Burr D. M. * Bridges N. T. Marshall J. R. Smith J. K. White B. R. et al.
[Experimentally-Derived Saltation Threshold Wind Speeds for Titan: Underprediction by Terrestrial Models](#) [#1027]
 Aeolian threshold models underpredict wind speeds on Titan required to move sand. The finding provides input into mechanisms for dune elongation by westerlies.
- 8:45 a.m. Méndez Harper J. S. * McDonald G. D. Dufek J. Hayes A. G. Malaska M. J. et al.
[Triboelectric Charging of Titan Dune Grains: Effect on Sediment Transport](#) [#1637]
 We quantify the triboelectric charging behavior of Titan dune grain analogues, and discuss implications for sediment transport.
- 9:00 a.m. Esposito F. * Molinaro R. Popa C. I. Molfese C. Cozzolino F. et al.
[The Strong Relationship Between Dust Lifting and Atmospheric Electric Properties During Aeolian Processes](#) [#2553]
 Results of field campaigns performed in the Sahara desert during the dust storm season. Focus on the observed enhancement of atm. E-field during dust events.
- 9:15 a.m. Malaska M. J. * Lopes R. M. Hayes A. G. Radebaugh J. Lorenz R. et al.
[Material Flux on Tital: The Fate of Dune Materials](#) [#3024]
 Titan surface streaks/Indicate all they are is/Just dust in the wind.
- 9:30 a.m. Cisneros J. * McDonald G. D. Hayes A. G. Smyth T. Ewing R. C.
[Morphologic and Computational Fluid Dynamic Analysis of Sand Dune-Topographic Obstacle Interactions on Earth and Titan](#) [#2683]
 The aim of our analyses is to determine how the dunes interact with obstacles and how this can be used to determine wind direction.
- 9:45 a.m. Radebaugh J. * Lorenz R. D. Paillou P. Farr T. G.
[Possible Yardangs of Titan and Western China Reveal Winds and Surface Erosion](#) [#2746]
 Titan, China winds/Carve elongate forms in clays/Landscape deflating.
- 10:00 a.m. Silvestro S. * Vaz D. A. Di Achille G. Popa C. Esposito F.
[Relict Aeolian Bedforms and a New Type of Wind Streak in the ESA ExoMars 2016 Landing Ellipse in Meridiani Planum, Mars](#) [#1155]
 We report the presence of a complex pattern formed by relict aeolian bedforms and a new type of wind streak in the 2016 ExoMars landing site in Meridiani Planum.
- 10:15 a.m. Quintana S. N. * Schultz P. H. Horowitz S. S.
[Experimental Results Supporting an Impact-Related Blast Wind Formation Mechanism for Some Wind Streaks on Mars](#) [#2469]
 Laboratory experiments resolve the different contributions to impact-generated winds, which may be the cause of blast wind streaks around some craters on Mars.
- 10:30 a.m. Daubar I. J. * McEwen A. S. Golombek M. P.
[Albedo Changes at Martian Landing Sites](#) [#2225]
 Spacecraft create low-albedo areas when landing. We measure the amount of darkening and rate of subsequent brightening, and predict when they will disappear.

- 10:45 a.m. Day M. D. * Anderson W. Kocurek G. A.
[*Aeolian Sediment Transport in Martian Craters*](#) [#1250]
Wind blown sand changes/Mars crater morphology/New model agrees.
- 11:00 a.m. Lapotre M. G. A. * Ehlmann B. L. Ayoub F. Minson S. E. Bridges N. T. et al.
[*The Bagnold Dunes at Gale Crater — A Key to Reading the Geologic Record of Mount Sharp*](#) [#1634]
We report on spatial mineral sorting at the active Bagnold dunes of Gale Crater from orbital data to shed light on sandstone formation and future rover science.
- 11:15 a.m. Runyon K. D. * Bridges N. T. Ayoub F.
[*Internal Boundary Layer Effects on Morphologic and Sediment Flux Transitions in Mars' Dunefields*](#) [#1999]
Winds blow and sands move/Atmo boundary layer?/Marching dunes of Mars.
- 11:30 a.m. Bridges N. T. * Spagnuolo M. G. de Silva S. L. Zimbelman J. R. Neely E. M.
[*Formation and Stabilization of Coarse Grain-Mantled Megaripples on Earth and Mars: Insights from the Argentinean Puna and Wind Tunnel Experiments*](#) [#1948]
The origin of gravel megaripples in the Puna is constrained using wind measurements and wind tunnel runs. Results are applied to understanding martian TARs.