Wednesday, March 21, 2018 [W403]
AEOLIAN GEOLOGY II: THE ANSWER IS BLOWIN' IN THE WIND
8:30 a.m. Waterway Ballroom 5

Chairs: **Stephen Sutton**
Ingrid Daubar

8:30 a.m. Radebaugh J. * Barnes J. W. Mackenzie S. Horst S. Yu X. et al.
The Importance of Sand for Understanding Dune Processes and Surface Conditions of Titan **[#2870]**
A handful of sand / Brought by wind from close and far / The world in a dune.

8:45 a.m. Golombek M. * Charalambous C. Pike W. T. Sullivan R.
The Origin of Sand on Mars **[#2319]**
Quantitative models of impact and eolian fragmentation can produce the surface layer of mostly sand and match the particle size frequency distribution on Mars.

9:00 a.m. Yu X. * Hörst S. M. He C. Crawford B. McGuiggan P.
Where Does Titan Sand Come From: Insight from Mechanical Properties of Titan Organic Analogs **[#1786]**
Organic sand on Titan / Soft and brittle / Is unable to travel from the pole / To form the equatorial dunes.

9:15 a.m. Howl B. * Horgan B.
A New CRISM Investigation of Martian Global Dunes: Glass-Rich Sands on Mars **[#2603]**
Dunes on Mars are not / As was thought, all the same rocks. / Classes have we made.

9:30 a.m. Rampe E. B. * Bristow T. F. Blake D. F. Vaniman D. T. Achilles C. N. et al.
Mineralogy of Aeolian Sand in Gale Crater, Mars **[#1654]**
Wind in Gale Crater / Minerals in martian sands / Change across dune field.

9:45 a.m. Chojnacki M. * Banks M. E. Urso A. C.
Boundary Condition Control on High Sand Flux Regions of Mars **[#2331]**
High sand flux regions of Mars share certain environmental boundary conditions, while site-specific conditions may enhance or diminish sand mobility/erosion.

10:00 a.m. Sutton S. L. F. * Burr D. M.
Avalanching on Aeolian Dunes: Kinematic Modeling Using a Discrete Element Framework, with Implications for Dune Behavior **[#2147]**
Modeling dune avalanches show emergent systems behavior, implying changing avalanche characteristics (magnitude, minimum height) on different planetary bodies.

10:15 a.m. O'Connell-Cooper C. D. * Spray J. G. Thompson L. M. Gellert R. Boyd N. I. et al.
Soils, Eolian Dune Sands, and Mega-Ripple Sands in Gale Crater, Mars **[#2802]**
APXS-MSL Analysis of sands (barchan dunes, linear dunes, mega-ripple sands) and soils in Gale Crater.

10:30 a.m. Ojha L. * Lewis K. Karunatillake S. Schmidt M.
Global Dust from the Deflation of the Medusae Fossae Formation on Mars **[#1250]**
We propose that long term deflation of the MFF has been a primary contributor to the global martian dust reservoir.

10:45 a.m. Jodhpurkar M. * Anderson R. B. Lewis K. Rubin D. Edgar L. et al.
Bedding Geometry in the Medusae Fossae Formation **[#2695]**
The Medusae Fossae Formation displays convoluted bedding patterns that are interpreted to indicate cross-bedding, consistent with an aeolian dune field origin.

11:00 a.m. Runyon K. D. * Burr D. M. Emery J. P. Sutton S. S. Nield E. V. et al.
Titan's Aeolian Saltation Threshold Conditions: Initial Results **[#1291]**
From wind tunnel measurements, Titan has threshold friction speeds of ~0.05 m/s to move tholin sands. We also consider values for paleo-pressure conditions.

11:15 a.m. Nield E. V. * Burr D. M. Emery J. P. Sutton S. L. F. Kok J. F. et al.
A Wind Tunnel Study of the Effect of Density Ratio on Saltation Threshold Conditions **[#2141]**
Threshold speed model / Revised with new data from / Titan Wind Tunnel.

11:30 a.m. Sakimoto S. E. H. * Burr D. M.
Corroboration of Titan Wind Tunnel Experiments and Computational Fluid Dynamics Modeling of Titan Sediment Transport **[#2005]**
This study corroborates empirical results from the Titan Wind Tunnel (TWT) with a series of Computational Fluid Dynamics (CFD) simulations.