

**Tuesday, May 16, 2017**  
**POSTER SESSION: GRAINS ALOFT AND ON THE GROUND**  
**6:00 p.m. Zion Room**

Hayward R. K. Titus T. N. Bogle R.

[\*Mars Aeolian Analog: Multi-Layer Saltation Sensor\*](#) [#3004]

Research at Grand Falls will characterize saltation and sand transport when two sediment populations are involved, arrive at sediment estimates for bimodal sand populations on Earth and Mars, and field test a multi-layer solid-state saltation sensor.

Sunda A. M. Hawyard R. K. Titus T. N.

[\*An Analysis of Grain Size Distribution of Mobilized Sand at the Grand Falls Dune Site\*](#) [#3017]

The Grand Falls dune study site is located 40 miles northeast of Flagstaff, Arizona on the Navajo Reservation; dunes are composed of fine-grain quartz sand and coarse-grain basalt sand.

Raack J. Reiss D. Balme M. R. Taj-Eddine K. Ori G. G.

[\*In Situ Sampling of Terrestrial Dust Devils and Implications for Mars\*](#) [#3006]

We report on first very detailed in situ sampling of relative dust devil particle loads and their vertical grain size distributions in heights up to 4 m.

Reiss D.

[\*Orbital Observations of Terrestrial Dust Devils\*](#) [#3029]

Terrestrial dust devils have not yet been observed directly in satellite imagery. Here we report about orbital dust devil observations in the Taklamakan desert. Results are compared to orbital dust devil studies in Amazonis Planitia on Mars.

Bristow C. S. Moller T.

[\*Dust Production from Saltation of Aeolian Basalt Sands: Analogue for Mars\*](#) [#3034]

We have measured the amount of dust produced by basalt sand in a saltation chamber. The results indicate that saltation of basalt sand is a viable method for the production of dust on Mars.

Charles H. R. Titus T. N. Hayward R. K.

[\*The Mars Global Digital Dune Database: Exploring Dune Field Mineral Composition\*](#) [#3060]

The Mars Global Digital Dune Database (MGD3) is a comprehensive compilation of the properties of martian dune fields. The next planned release will add mineral composition data for the larger dune fields in the equatorial and south polar regions.

Lorenz R. D. Horst S. He C.

[\*Do Titan's Dunes Glow in the Dark?\*](#) [#3018]

Titan's carbon sands / May fluoresce pretty colors / When hit by UV.

Yu X. Hörst S. M. He C. McGuiggan P. Bridges N. T.

[\*Direct Measurement of Interparticle Adhesion of Titan Aerosol Analogs \('Tholin'\) Using Atomic Force Microscopy\*](#) [#3048]

First direct measurements of interparticle forces between Titan aerosol/sand analog ('tholin') particles. Inform future theoretical and experimental studies of threshold wind speed.