Thursday, March 19, 2015
POSTER SESSION II: AEOLIAN PROCESSES
6:00 p.m. Town Center Exhibit Area

Calibration and Validation of the Titan Wind Tunnel: A Community Resource at the Planetary Aeolian Laboratory [#1028]
A high-pressure wind tunnel is available in the Planetary Aeolian Laboratory to simulate surface atmospheric conditions of Titan and other bodies.

Bridges N. T. Blaney D. L. Day M. D. Herkenhoff K. E. Lanza N. L. et al. POSTER LOCATION #219
Rock Abrasion and Landscape Modification by Windblown Sand as Documented by the MSL Curiosity Rover [#2324]
We provide the latest measurements and interpretations of the rock abrasion record in Gale Crater, through Sol 438+.

Statella T. Pina P. Silva E. A. POSTER LOCATION #220
Comparing Wind Directions Estimated from Dust Devil Tracks Analysis with Wind Directions Predicted by the Mars Climate Database (MCD) [#1014]
We have calculated the main direction of dust devil tracks in 200 images and have shown that the Mars Climate Database fails to predict local scale wind directions.

Hargitai H. Látos T. Horváth D. Bakos D. POSTER LOCATION #221
Wind Streak-Like Yardang Terrain in Daedalia-Mangala, Mars [#2273]
We describe features that appear as wind streaks but are intersecting yardang sets formed on one side of impact craters.

Pan C. Rogers A. D. POSTER LOCATION #222
Understanding the role of Aeolian Processes and Physical Sorting on Martian Surface Compositions Through Analysis of Spectrally and Thermophysically Heterogeneous Dune Fields [#1068]
We use orbital measurements to examine the compositional and thermophysical heterogeneity within martian dune fields.

Sullivan R. Zimbelman J. POSTER LOCATION #223
Megaripples and Their Sedimentary Deposits on Earth and Mars [#2762]
Fieldwork and wind tunnel experiments show grain sorting during megaripple migration helps distinguish ancient megaripple deposits as aeolian (vs. subaqueous).

Scheidt S. P. Zimbelman J. R. POSTER LOCATION #224
Gravel-Mantled Aeolian Bedforms from Mono-Inyo Domes, California, USA: Morphology, Characteristics and Relevance to Mars [#1056]
Terrestrial fieldwork characterizing the morphology of gravel-mantled ripples at the summit of North Mono Dome in California as an analog for martian TARs.

Berman D. C. Michalski J. R. Balme M. R. POSTER LOCATION #225
Analyses of Transverse Aeolian Ridges on Mars [#2210]
We examine TARs in terms of their mapped locations, morphology/morphometry, composition, and their age and changes in time.

Ebinger E. K. Zimbelman J. R. POSTER LOCATION #226
Geospatial Classification of Transverse Aeolian Ridges on Mars [#1137]
TARs were identified in ~1000 HiRISE images within pole-to-pole longitude swaths 290°–300°E and 240°–250°E. TAR abundance is highly spatially variable.
Geissler P. E.  Wilgus  J. T.  
Antidunes on Mars?  [#1149]
Martian transverse aeolian ridges could be sediments deposited by turbulent winds with suspended aerosols concentrated close to the surface.

Zimbelman J. R.  Johnson M. B.  
Surface Slope Effects for Ripple Orientations on Sand Dunes in Lopez Crater, Terra Tyrrhena Region, Mars  [#1478]
DTM of sand dunes in Lopez Crater was used to evaluate deflection of wind ripples; for dune slopes <10°, the deflection is <17°.

Johnson M. B.  Zimbelman  J. R.  
Ripple Orientations as an Indication of Recent Winds on Martian Dunes  [#1539]
Sand ripple patterns and DTMs are used to document recent winds, the possible effect of slope on ripple orientation, and other relationships.

Middlebrook W. M.  Ewing  R. C.  Bridges  N. T.  
Three-Dimensional and Multi-Temporal Dune-Field Pattern Analysis in the Olympia Undae Dune Field  [#2757]
Pattern and image analysis to study aeolian processes operating in the north polar Olympia Undae Dune Field during the martian summer.

Bishop B.  Radebaugh J.  Christiansen  E. H.  
Dune Widths in Titan’s Belet Sand Sea Reveal Patterns in Dune Formation and Stability  [#3007]
Titan dune width across Belet Sand Sea shows minor correlation; reveals increasing stability with increasing distance from sand sea margin.

Erkeling G.  Luesebrink D.  Hiesinger  H.  Reiss D.  Jaumann  R.  
The Multi-Temporal Database of High Resolution Stereo Camera (HRSC) Images: A Tool to Support the Identification of Surface Changes and Short-Lived Surface Processes  [#1847]
The HRSC database will help to identify areas with multi-temporal HRSC ND image coverage and gives researchers the option to easily detect surface changes.

Cardinale M.  Tangari A.  Pozzobon  R.  Marinangeli  L.  Pondrelli M.  
Preliminary Analysis of a Dark Layer as a Possible Local Source of Dark Sand in Moreux Crater (Mars)  [#1790]
Our analysis in Moreux Crater suggests that the studied crevasses represent one of the local sources for the circulating dark material in the crater.