Thursday, March 21, 2013 **[R729]**
POSTER SESSION: PLANETARY AEOLIAN PROCESSES: EROSION, DEPOSITION, BEDFORMS, AND SIMULATIONS
6:00 p.m. Town Center Exhibit Area

Williams D. A. ***POSTER LOCATION #550***
NASA's Planetary Aeolian Laboratory: Exploring Aeolian Processes on Earth, Mars, and Titan **[#1226]**
This presentation reviews the facilities, equipment, and new procedures to use NASA's Planetary Aeolian Lab, including wind tunnels to conduct aeolian research.

Kienenberger R. L. Greeley R. Williams D. A. ***POSTER LOCATION #551***
Distribution of Windblown Sediment in Small Craters on Mars: Preliminary Wind Tunnel Simulations **[#1670]**
We present the results of preliminary wind tunnel simulations for comparison to asymmetric aeolian deposits within secondary craters in Gusev Crater, Mars.

Mills N. T. Radebaugh J. Le Gall A. ***POSTER LOCATION #552***
Ongoing Measurements of Dune Width and Spacing on Titan Reveal Dune Field Properties **[#2305]**
Saturn's moon Titan is home to dunes similar to those found on Earth. Measurements of dune parameters have been made in order to help interpret Titan's climate.

Arnold K. Radebaugh J. Le Gall A. Turtle E. P. Lorenz R. D. et al. ***POSTER LOCATION #553***
Total Sand Volume Estimates on Titan from Cassini SAR, HiSAR, and ISS **[#2457]**
The total organic inventory from dunes on Saturn's moon, Titan, measured in SAR and HiSAR images is ~150,000–300,000 km^3 or ~14% global coverage.

Hayward R. K. Fenton L. K. Titus T. N. ***POSTER LOCATION #554***
Mars Global Digital Dune Database: Global Wind Direction Observations **[#1075]**
We discuss global distribution of dune fields and discuss global wind directions, as derived from dune centroid azimuth and slipface orientations.

Sefton-Nash E. Teanby N. A. Clancy R. Newman C. ***POSTER LOCATION #555***
Comparison of Short and Long-Lived Aeolian Feature Orientation with GCM Vectors to Infer Past Climate Variability on Mars **[#3074]**
We compare short (dune) and long-lived (yardang) aeolian feature orientation with GCM vectors to infer past climate variability on Mars.

Vincendon M. Audouard J. Altieri F. Bibring J. -P. Gondet B. et al. ***POSTER LOCATION #556***
Mars Albedo Changes During 2004–2010 **[#2221]**
We used OMEGA data to calculate the hemispherical solar albedo of Mars' surface. Observations obtained over 4 Mars years show major and noncyclic surface changes.

Chilton H. Phillips C. ***POSTER LOCATION #557***
Temporal Contrast Changes in Dark Slope Streak on Mars **[#3109]**
We attempt an initial evaluation of changes in Mars dark slope streak brightness relative to surroundings, corrected for incidence angle based on MOLA data.

Kozakiewicz J. ***POSTER LOCATION #558***
Automated Image Analysis for Measuring Size and Shape of Martian Sand Grains: A Tool to Estimate Threshold Shear Velocities and to Compare Different Sand Samples **[#2906]**
Automated image analysis approach allows fast estimation of the size and shape of grains. For several types of sand threshold shear velocities were estimated.

Friday M. E. Fedo C. M. McGlynn I. O. McSween H. Y. ***POSTER LOCATION #559***
The Accuracy of 2D Assessment of Sediment Textures, and Application to Mars **[#2361]**
We compared textural parameters from 2-D photos of basaltic sediment with 3-D data to determine inaccuracies in performing 2-D analyses on Mars sediment.

Statella T. Pina P. Silva E. A. ***POSTER LOCATION #560***
Automated Determination of Martian Dust Devil Tracks Main Direction **[#1092]**
We present and evaluate three automated methods for calculating the main martian dust devil tracks direction in MOC and HiRISE images.

Statella T. Pina P. Silva E. A. ***POSTER LOCATION #561***
Albedo Contrast Determination in the Neighbourhood of Martian Dust Devil Tracks **[#1091]**
We calculated albedo contrast between dust devil tracks and their surroundings in 100 HiRISE images. It can be used to infer relative dust coat depth.

Reiss D. Spiga A. Erkeling G. ***POSTER LOCATION #562***
Dust Devil Horizontal Velocities and Directions of Motion on Mars Derived from CRISM and CTX/HiRISE Observations **[#2141]**
We introduce new method for measuring horizontal speeds and directions of motion of larger-scale active features on Mars (e.g., dust devils, dust storms).

Price M. A. Ramsey M. S. Crown D. A. ***POSTER LOCATION #563***
Thermophysical Characteristics of Mantled Terrestrial Volcanic Surfaces: Infrared Analogs to the Arisa Mons Flows **[#1640]**
Preliminary field and lab results from mantled Mono Craters using a combination of TIR/VNIR image processing, lab spectroscopy, and field geomorphic analysis.

Silvestro S. Vaz D. A. Ewing R. C. Rossi A. P. Fenton L. K. et al. ***POSTER LOCATION #564***
Pervasive Aeolian Activity Along Rover Curiosity's Traverse in Gale Crater, Mars **[#2022]**
We present evidence of ripple and dune migration and further estimate wind directions within the MSL landing site through analysis of ripple, dunes, and modeling.

Cardinale M. Silvestro S. Vaz D. A. Michaels T. I. Marinangeli L. et al. ***POSTER LOCATION #565***
Evidences for Sand Motion in Herschel Crater (Mars) **[#2259]**
We show that in the Herschel Crater the dominant winds from the north are able to keep the ripples and dunes active in the actual atmospheric conditions.

Desai Ami. J. Murty S. V. S. ***POSTER LOCATION #566***
Morphological Investigations of Nicholson Crater, Mars: Identification of Aeolian Processes **[#1180]**
The present work focuses on the morphological investigation of Nicholson crater. From the results based on our inferences we favor an aeolian morphology.

Atwood-Stone C. McEwen A. S. ***POSTER LOCATION #567***
Measuring Dynamic Angle of Repose in Low Gravity Environments Using Martian Sand Dunes **[#1727]**
We measure the dynamic angle of repose on Mars using HiRISE DTMs of active dune fields and find that decreased gravity does not have an effect on this angle.

Baskakova M. A. Kreslavsky M. A. Karachevtseva I. P. ***POSTER LOCATION #568***
Aeolian Bedforms in Tharsis, Mars: New Insight from Populations of Small Craters **[#1104]**
Aeolian bedforms are currently inactive, but were active in the geologically recent past. This indicates changes in wind regimes and/or atmospheric pressure.

Johnson M. B. Zimbelman J. R. ***POSTER LOCATION #569***
Characterization of Small Sand Dunes on Mars **[#2111]**
Ripples on sand dunes provide information about recent wind patterns. Mapping these features will further the understanding of martian winds and dune formation.

Berman D. C. Balme M. R. Michalski J. R. Michaels T. I. ***POSTER LOCATION #570***
Further Investigations of Transverse Aeolian Ridges on Mars **[#2359]**
We examine TARs in terms of their morphology/morphometry, mapping deposits, comparison with meteorology, composition, and their age and changes in time.

Sullivan R. Zimbelman J. ***POSTER LOCATION #571***
Wind Tunnel and Field Studies of Coarse-Grained Ripples, Analogs for Features Examined at both MER Sites on Mars **[#2219]**
Coarse-grained ripples (common at some Mars landing sites) are evaluated in the field and the lab to indicate how they might be recognized in ancient martian rocks.

Szumila I. T. Bishop J. L. Fenton L. K. Brown A. J. ***POSTER LOCATION #572***
Composition and Morphology of Gypsum Dunes in Olympia Undae on Mars **[#2123]**
Our analyses showed that gypsum is more abundant in primary dune crests than in secondary dunes and that TARs have been fully reoriented by the NE wind.

Ahrens C. J. Titus T. N. ***POSTER LOCATION #573***
Mineral Analysis of Martian Dunes: Sediment Composition of Martian Dune Fields Using the Thermal Emission Spectrometer **[#2096]**
In our study on mineral percentage conformity of the martian dune site, we evaluated Thermal Emission Spectrometer data and studied our analysis technique.

Tirsch D. Sowe M. Kneissl T. Jaumann R. ***POSTER LOCATION #574***
Constraining the Exposure Time of the Dark Dune Material on Mars **[#1928]**
We determine the maximum time of the dark aeolian sediment's exposure to the martian atmosphere by determining the age of surfaces featuring emerging material.

Smith I. B. Holt J. W. Spiga A. Howard A. D. ***POSTER LOCATION #575***
Aeolian Processes as Drivers of Landform Evolution on the South Pole of Mars **[#1240]**
Visual observations and atmospheric modeling are combined to study the wind regime of the SPLD. Processes are similar to but more complicated than in the north.

Schwegman R. D. Bourke M. C. ***POSTER LOCATION #576***
Analysis of Rock Breakdown Features at Gusev Crater Mars **[#3086]**
Facet mapping technique applied to martian rocks can distinguish breakdown features between rock types.