

Thursday, March 20, 2014
POSTER SESSION: EOLIAN PROCESSES
6:00 p.m. Town Center Exhibit Area

[R711]

Arnold K. Radebaugh J. Christiansen E. H. Morris T. H. **POSTER LOCATION #221**
[*Sand Sea Area on Titan from Cassini SAR and ISS and a New Volumetric Estimation Method for Total Organic Inventory from Dunes*](#) [#2887]

Total area of dunefields on Saturn's moon, Titan, from Cassini SAR and ISS data is ~12 million km³ or ~14% global coverage. A new volumetric method is given.

Lorenz R. D. Miller R. McG. Hayes A. G. Radebaugh J. Barnes J. W. et al. **POSTER LOCATION #222**
[*Roter Kamm Impact Structure, Namibia: New Field and Remote Sensing Insights and Analogies with Titan Dune: Crater Interactions*](#) [#1479]

Deep in Sperrgebeit / Crater battles with sand dunes / Much like on Titan.

Lapotre M. G. A. Ehlmann B. L. Arvidson R. E. **POSTER LOCATION #223**
[*Quantitative Composition and Granulometry of Aeolian Bedforms in Endeavour and Gale Craters Inferred from Visible Near-Infrared Spectra*](#) [#1431]

We invert for mineral abundances and grain sizes of aeolian dunes in Endeavour and Gale Craters from CRISM spectra and compare our results to rover data.

Michaels T. I. **POSTER LOCATION #224**
[*Further Characterization of the Aeolian Transport Environment Near Endeavour Crater*](#) [#2897]

Mesoscale atmospheric modeling near Endeavour Crater is compared to observations and used to further characterize winds that drive aeolian change there.

Johnson M. B. Zimbelman J. R. **POSTER LOCATION #225**
[*Documentation of Sand Ripple Patterns and Recent Surface Winds on Martian Dunes*](#) [#1518]

Using HiRISE images, we investigate martian sand dunes and document their surface ripple patterns in order to assess recent wind flows.

Bourke M. C. McGaley-Towle Z. **POSTER LOCATION #226**
[*Latitudinal Variation in Sand Furrows in the North Polar Region of Mars*](#) [#2716]

Sand furrow density varies with latitude and topography. Seasonal ice thickness and wind regimes are important controls.

Liu Z.Y.-C. Zimbelman J. R. **POSTER LOCATION #227**
[*Documentation of Recent Surface Winds on Small Sand Dunes West of Mars' Hellas Basin*](#) [#2809]

Used HiRISE images to map sand ripple orientations on martian small dunes; evaluated the recent local wind flow; results can facilitate martian wind modeling.

Garcia G. C. Fenton L. K. **POSTER LOCATION #228**
[*Determining the Dune-Construction Wind Regime in Eastern Olympia Undae, Mars*](#) [#2792]

North Polar Sand Sea / The geomorphology / Tells of a new wind.

Grindrod P. M. Warner N. H. **POSTER LOCATION #229**
[*Landslides as Indicators of the Past Extent of Interior Layered Deposits in Valles Marineris*](#) [#1744]

We use obstructed landslides to determine the previous extent and loss rate of interior layered deposits in Valles Marineris.

Day M. D. Kocurek G. A. Anderson W. E. Hamed A. Christensen K. T. **POSTER LOCATION #230**
[*Aeolian Erosion of Filled Martian Craters*](#) [#2296]

Several modeling techniques are used to determine whether aeolian erosion could remove material from filled craters and lead to central mound formation.

Brothers T. C. Holt J. W. Spiga A. **POSTER LOCATION #231**
[Ascertaining the Temporal Stability of Water Ice in Korolev Crater, Mars](#) [#2536]
The age of ice in Korolev Crater is crucial for understanding circumpolar water flux. Here we use the LMD atmospheric model to constrain age of Korolev's ice.

Reiss D. Hoekzema N. M. Stenzel O. J. **POSTER LOCATION #232**
[Dust Deflation by Dust Devils on Mars Derived from Optical Depth Measurements Using the Shadow Method in HiRISE Images](#) [#1994]
Optical depth measurements of three individual dust devils and their surroundings with the shadow method in HiRISE images.

Reiss D. **POSTER LOCATION #233**
[Morphology, Formation and Distribution of Dust Devil Tracks on Mars: Insights from Terrestrial Analogs](#) [#2011]
Dust devil track morphologic types on Earth and Mars are summarized. Hypotheses of martian and terrestrial dust devil track formation are discussed.

Gadhiraju S. V. Shah V. Krishna Mohan **POSTER LOCATION #234**
[Unchanging Desert Sand Dunes](#) [#1769]
A method of clustering and monitoring sand dunes through imagery captured by remote sensing sensors is presented.

Scheidt S. P. Zimbelman J. R. Johnson M. B. **POSTER LOCATION #235**
[Multiview Stereo Photogrammetry of Mars Aeolian Analogs](#) [#1446]
We summarize recent work applying multiview stereo photogrammetry to create 3D digital models of dunes, ripples, and TARs for the purpose of Mars analog studies.

Altomare C. M. Fagan A. L. Kring D. A. **POSTER LOCATION #236**
[Eolian Deposits of Pyroclastic Volcanic Debris in Meteor Crater](#) [#1448]
Mineral chemistry and potential sources of an pyroclastic vesicular volcanic ash and cinder within Barringer Meteorite Crater are determined.

Zimbelman J. R. Scheidt S. P. de Silva S. L. Bridges N. T. Spagnuolo M. G. **POSTER LOCATION #237**
[Roughness Height Measurements for Megaripples in the Puna of Argentina, Form Flow over the Largest Megaripples, and Implications for Mars](#) [#1359]
Wind-profile measurements indicate aerodynamic roughness heights of 1 to 3 cm for fields of gravel-coated megaripples that are up to 1 m in height.

Bridges N. T. Spagnuolo M. G. de Silva S. L. Zimbelman J. R. Neely E. M. **POSTER LOCATION #238**
[Formation of Coarse-Grained Megaripples on Earth and Mars: Insight from Wind Tunnel Experiments and the Argentinean Puna](#) [#1855]
We report on wind speeds needed to move clasts of the specific size, density, and shape that we find in the Puna megaripples that are analogs to martian TARs.

Neely E. M. Spagnuolo M. G. de Silva S. L. Bridges N. T. Zimbelman J. R. **POSTER LOCATION #239**
[Methodology of Wind Tunnel Experiments Applied to Gravel Megaripple Formation on Earth and Mars](#) [#2767]
The abstract discusses methodology of wind tunnel experiments conducted with gravel megaripple clasts from the Argentine Puna, as a terrestrial analog for Mars.