

Tuesday, March 14, 2006

POSTER SESSION I: AEOLIAN PROCESSES ON MARS: WAR OF THE WHIRLS
7:00 p.m. Fitness Center

Mullins K. F. Hayward R. K. Tanaka K. L.

Dune Forms and Ages and Associated Oblate Depressions in the Chasma Boreale Region of Planum Boreum, Mars [#1998]
 THEMIS and MOC images acquired over the Chasma Boreale contain key geologic and stratigraphic information relating to aeolian deposition and the PLD. Preliminary analyses of these images show a clear progression of morphologic change of dark albedo dune deposits along the chasma axis.

Williams K. K.

Are Martian Dunes Migrating? A Planet-wide Search for Dune Movement [#2322]

Overlapping MOC images containing dunes have been used to search for dune movement across the planet.

De Hon R. A.

Transitional Dune Forms on Mars [#1361]

A morphological progression from simple dome to intermediate, incipient dune-forms (fortune cookie and wedge dunes) to barchan and linear dunes suggests that dune development in a unidirectional wind regime is controlled by dune width and height of the growing dunes.

Dressing C. D. Andros J. L. Kashdan H. E. Zimbelman J. R. Hennig L. A.

Transverse Aeolian Ridges Observed at Pressure Extremes Within the Martian Atmosphere [#1740]

Transverse aeolian ridges are documented in MOC NA images of the summit of Ascraeus Mons and floor of the Hellas basin, which covers the pressure extremes within the Martian atmosphere.

Neakrase L. D. V. Greeley R. Haan F. L. Jr. Sarkar P. Iversen J. D. Balme M. R. Eddlemon E. E.

Dust Devils on Earth and Mars: Extension of Particle Threshold Laboratory Simulations [#1196]

Laboratory simulations were conducted for vortices approaching the size of natural dust devils to determine the threshold for sand-sized particles. Applications of this study pertain to scaling of field cases of martian and terrestrial dust devils.

Michaels T. I.

Numerical Modeling of Particle Transport by Mars Dust Devils [#2027]

Mars dust devils (DD) are thought to be an important part of the global dust cycle. What sizes of DD-lifted dust accomplish this, and which are quickly redeposited? How exactly does a DD create a "track" that can be seen from orbit? A 3D, DD-resolving model is used to investigate these questions.

Desch S. J. Wilson G. R. Perret B. Neakrase L. D. V. Greeley R.

Investigations into Dust Charging and Transport in Martian and Terrestrial Dust Devils [#1983]

Electrical discharges may occur in martian dust devils, but it is uncertain if they do. We plan wind-tunnel experiments using the Particle Charge Spectrometer to determine how dust grains charge, and numerical modeling of dust charging and transport in dust devils.

Abel M. F. Foley D. J. Neakrase L. D. V. Greeley R. Eddlemon E. E. Shakkottai P.

Aeolian Particle Transport as a Function of Spacecraft Design: An Experimental Study of Potential Forward Contamination [#1385]

Experimental results of aeolian particle transport as a function of spacecraft design. To mitigate potential forward contamination of planetary bodies, a method for predicting flow patterns, distribution zones, and static thresholds were devised.