Thursday, March 18, 2004
POSTER SESSION II: MARS: WIND, DUST, SAND, AND DEBRIS
7:00 p.m. Fitness Center

Neakrase L. D. V. Greeley R. Foley D.
Mars Exploration Rovers: Laboratory Simulations of Aeolian Interactions **[#1402]**
A preparatory study for the Mars Exploration Rover Missions involving laboratory simulations of aeolian processes in order to assess potential hazards and scientific analyses.

Schneider R. D. Hamilton V. E.
Thermal and Spectral Analysis of an Intracrater Dune Field in Amazonis Planitia **[#1470]**
An intracrater dune field and surrounding materials are studied using THEMIS thermal infrared images, TES albedo and thermal inertia measurements, and a MOC wide- angle image.

Bourke M. Balme M. Beyer R. A. Williams K. K. Zimbelman J.
How High is that Dune? A Comparison of Methods Used to Constrain the Morphometry of Aeolian Bedforms on Mars **[#1713]**
Dune and ripple height is estimated by four different methods. A comparison of the results indicates good agreement. However, each technique has limiting factors that must be noted.

Neakrase L. D. V. Greeley R. Iversen J. D.
Dust Devils on Mars: Scaling of Dust Flux Based on Laboratory Simulations **[#1395]**
Laboratory dust devil dust flux results are not the same for Earth and Mars so a scaling factor must be determined to compare dust fluxes. Methods currently being used involve adjusting flux values to magnitude of pressure well as a percentage of ambient atmospheric pressure.

Towner M. C. Ringrose T. J. Patel M. R. Balme M. Metzger S. M. Greeley R. Zarnecki J. C.
A Close Encounter with a Terrestrial Dust Devil **[#1259]**
We report on an extremely well characterised encounter with a terrestrial dust devil, and its comparison with martian dust devils.

Stanley B. D. Adcock C. T. Marston R. A.
Interpretation of Wind Direction from Eolian Features: Herschel Crater, Mars **[#1307]**
We use eolian features identified in Herschel Crater to determine the prominent wind direction of the crater. The wind direction is inferred by eye from these features through geomorphic analogy to Earth and then plotted on an image of the crater.

Thomson B. J. Schultz P. H.
Erosion Rates at the Viking 2 Landing Site **[#1885]**
Near the Viking 2 Lander, erosion rates are estimated using measurements of pedestal crater relief. Results confirm relatively high post-Noachian deflation rates in certain terrains.

Mazumder M. K. Saini D. Biris A. S. Srirama P. K. Calle C. Buhler C.
Mars Dust: Characterization of Particle Size and Electrostatic Charge Distributions **[#2022]**
Preliminary results of a Mars Dust Particle analyzer are given that show the instrument's ability to measure simultaneously a particle's size and electrostatic charge.

Howard A. D.
Simple Non-fluvial Models of Planetary Surface Modification, with Application to Mars **[#1054]**
Simple, non-fluvial geomorphic models of erosion and deposition explain certain Martian landforms.

Adcock C. T. Stanley B. D. Marston R. A.
Comparison of Geomorphically Determined Winds with a General Circulation Model: Herschel Crater, Mars **[#1215]**
General circulation models (GCM) for Mars have not been thoroughly validated due to a lack of ground truth data. Interpretation and correlation of wind regimes from geomorphic analogy may be useful for validating GCM in the absence of ground truth data.

Piatek J. L. Crown D. A. Moersch J. E. Christensen P. R.
Analysis of Martian Debris Aprons in Eastern Hellas Using THEMIS **[#2024]**
THEMIS observations are used to identify spatial variations in the thermal properties of debris aprons in the Reull Vallis region. Changes in these properties across the surfaces of the aprons may be related to formation and modification processes.

Li H. Robinson M. S. Jurdy D. M.
Origin of Martian Northern Hemisphere Mid-Latitude Lobate Debris Aprons **[#2120]**
MOLA topographic profiles are used to study the origin and evolution of debris aprons on Mars. Our analysis supports previous interpretations that debris aprons are formed due to deformation of ice rich mixtures and therefore indicate past Martian permafrost/glacial conditions.

Chuang F. C. Crown D. A.
Debris Aprons in the Tempe/Mareotis Region of Mars **[#1199]**
Debris aprons are considered to be geomorphic indicators of ground ice on Mars. Their presence suggests storage of ice in the Martian regolith. This work focuses on aprons located along the northern lowlands-southern highlands boundary in the Tempe/Mareotis region (43–55 N, 274–294 E).

Barnouin-Jha O. S. Bulmer M. H.
Constraining Flow Dynamics of Mass Movements on Earth and Mars **[#1588]**
We utilize topographic data of mass movements obtained both on Earth and Mars to estimate their flow velocity. By comparing these estimates with simple flow models, we begin to constrain their flow dynamics.