**Thursday, March 13, 2008**
**POSTER SESSION II: MARS AEOLIAN PROCESSES**
**6:30 p.m. Fitness Center**

Hall N. W. Lemmon M. T.
*Determination of the Mass Flux Within and Out of Martian Dust Devils as a Function of Height and Dust Devil Morphology* **[#2452]**
An examination of images from MER to find the quantity of dust added to the martian atmosphere by dust devils as a function of height.

Soderblom J. M. Wolff M. J. Bell J. F. III
*Temporal Variations in the Size Distribution of Martian Atmospheric Dust from Mars Exploration Rover Navcam Observations* **[#1884]**
Calibrated near-Sun Navcam images are modeled to constrain the size distribution of dust aerosols. The $r_{eff}$ observed by MER-A is found to be ~1.3–1.7 μm and by MER B ~1.4–1.8 μm (±~0.1 μm). A positive correlation between $r_{eff}$ and t is observed.

Geissler P. E. Tornabene L. L. Verba C. Bridges N. T. HiRISE Team
*HiRISE Observations of Martian Albedo Boundaries* **[#2352]**
MRO HiRISE images are used to study two prominent albedo boundaries in Utopia Planitia that show close similarities in morphology but drastic differences in their behavior over time.

Michaels T. I.
*Modeling Mars Wind Streak Formation* **[#2362]**
Successful simulation of wind streak formation may lead to greater understanding about past and present Mars aeolian processes. Detailed mesoscale and microscale atmospheric simulations of wind streaks are presented and discussed.

Kaczmarowski A. Burleigh K. Precie A. Hunt N. Adler K. Birch R. Gordon N. Miller H. Carpenter J. Rawlings L.
*Wind Streaks in the Tharsis and Syrtis Major Regions* **[#1436]**
Mars Odyssey Spacecraft THEMIS infrared images were used to analyze the heat signatures of wind streaks in the Tharsis and Syrtis Major regions. The data was then used to construct models for wind streak formation in the two regions.

Amara A. Burleigh S. Dasgupta A. Hendershot C. Lightbody D.
*Analysis of Correlations Between Crater Diameter and Thermal Inertia of Associated Wind Streaks on Mars* **[#1520]**
Using images from the THEMIS camera of the Mars Odyssey Spacecraft, we collected average thermal inertia data from selected wind streaks and compared these to the diameter of associated craters.

Zeng Z. Xie H. Birnbaum S. J. Ackley S. F. Liu L.
*A Structural Solution for the Formation of Dunes in the Martian Polar Region* **[#2050]**
Geometry and location of linear and rhombus dunes at the polar regions of Mars are controlled by en echelon and conjugate fractures, respectively. The processes of the formation and evolution of dunes provide information of climate change on Mars.

Szynkiewicz A. Pratt L. M. Glamoclija M. Bustos D.
*Gypsum Dunes from White Sands National Monument — Potential Analog to North Polar Dunes on Mars* **[#2080]**
Three aspects of White Sands gypsum dunes evolution relating to climate variation are discussed in comparison to Olimpia Undae gypsum-rich dunes on Mars: gypsum source, groundwater discharge into interdunes areas, and desiccation of dunes.

Hayward R. K. Fenton L. K. Tanaka K. L. Mullins K. F. Titus T. N. Bourke M. C. Hare T. M. Christensen P. R.
*Mars Global Digital Dune Database: Distribution in North Polar Region and Comparison to Equatorial Region* **[#1208]**
The north polar portion of the Mars Global Digital Dune Database ($MGD^3$) extends coverage of medium to large-sized dark dunes to include the region from 65°N to 90°N, building on the previously released equatorial portion that spans 65°S to 65°N.

Shockey K. M. Zimbelman J. R. Gregg T. K. P.
*Transverse Aeolian Ridges Across the Dichotomy Boundary of Mars* **[#1686]**
To determine if there is a systematic distribution of transverse aeolian ridges (TARs) across the martian dichotomy boundary, we examined Mars Orbiter Camera (MOC) images from 60°N to 60°S and 0° to 20°W.

Berman D. C. Balme M. R. Bourke M. C. Zimbelman J. R.
*The Distribution of Transverse Aeolian Ridges on Mars* **[#1784]**
We have conducted a survey of all high-resolution (~1–11 m/pixel) Mars Orbiter Camera (MOC) images (~10,000 images) in a pole-to-pole swath between 0° and 45°E longitude to identify and classify Transverse Aeolian Ridges (TARs) on Mars.

Zimbelman J. R. Williams S. H.
*Inferences About Sand Dunes on Mars Derived from the Analysis of Two HiRISE Images* **[#1699]**
Sand dunes and ripples in two HiRISE images provide important new insights into aeolian processes on Mars. Both dune-related and ripple-related processes contribute to the landform development.

Grant J. A. Wilson S. A. Cohen B. A. Golombek M. Geissler P. E. Sullivan R. Kirk R. L. Parker T. J.
*Degradational Modification of Victoria Crater, Mars* **[#1878]**
Morphology in and around Victoria crater indicates that it was originally a 625–650 m diameter primary crater that has been eroded and infilled by mostly eolian and mass-wasting processes.

Howald T. V. Schieber J. Yawar Z.
*Textural Features Produced by Aoelian Erosion of Mudstones* **[#2052]**
Textural features and characteristics of mudstones eroded by eolian processes and how they may fit into the martian rock record.

Mandt K. E. de Silva S. Zimbelman J. R.
*Erosional Progressions in the Medusae Fossae Formation, Mars* **[#2086]**
Erosional progressions observed in Mars Orbiter Camera images of the Medusae Fossae Formation are outlined for yardang and mesa formation.

Keszthelyi L. Jaeger W. L.
*HiRISE Observations of the Medusae Fossae Formation* **[#2420]**
The Medusae Fossae Formation is likely to be basaltic pumice (reticulite).