

Friday, March 11, 2011
MARS AEOLIAN PROCESSES: SUSPENSION, SALTATION,
AND BEDFORM MIGRATION
8:30 a.m. Waterway Ballroom 1

Chairs: Paul Geissler
Nathan Bridges

- 8:30 a.m. Bridges N. T. * Bourke M. C. Colon C. M. Diniega S. Geissler P. E. Golombek M. P. Hansen C. J. Mattson S. McEwen A. S. Stantzos N.
[Planet-Wide Sand Movement on Mars as Documented by the HiRISE Camera](#) [#1215]
 Bedform migration and sand changes are documented over much of Mars. This shows that winds in Mars' present low density atmosphere are sufficient to move dunes and ripples in many areas of the planet.
- 8:45 a.m. Geissler P. E. * Stantzos N. W. Bridges N. T. HiRISE Science Team
[Shifting Sands on Mars: 3 Case Studies](#) [#2537]
 Repeated HiRISE observations show evidence for sand movement in intracrater dune deposits in the martian tropics, as well as in the north polar erg. These observations suggest that martian dunes are presently active, and not fossil relics of an earlier climatic epoch.
- 9:00 a.m. Bourke M. C. * Wray J. J.
[Interdune Deposits Suggest High Groundwater in an Equatorial Crater on Mars](#) [#2749]
 Strata exposed in an equatorial dunefield suggest a phase of high groundwater along a valley coincided with active aeolian dune migration.
- 9:15 a.m. Montgomery D. R. Becker S. K. Bandfield J. L. *
[Wind-Carved Transverse Erosional Ridges on Mars](#) [#2488]
 While the presence of active aeolian dunes has been clearly established on Mars, we report that some martian mega-ripple-like landforms are erosional features.
- 9:30 a.m. Sullivan R. * Banfield D. Collins L. R. Heineck J. T. Korda D. T.
[Determining the Minimum Saltation Grain Size on Mars](#) [#2651]
 The transition grain size between wind-driven saltation (ripples, dunes) and suspension (dust storms) on Mars is explored using numerical simulations and wind tunnel experiments. Results predict 20–70 μm , in accord with MER observations.
- 9:45 a.m. Waller D. A. * Greeley R.
[Active Dust Devils on Mars: A Comparison of Data Returned from Six Spacecraft Landing Sites](#) [#1122]
 Dust devils were imaged or inferred from meteorological measurements at all six successful martian landing sites. To study how these processes vary with location, dust devil sizes, speeds, normalized frequencies, dust flux, and dust loading were compared.