

Tuesday, May 19, 2015
WIND REGIMES AND BEDFORM RESPONSE
1:00 p.m. Lookout Room

How Aeolian Features Record and Respond to Wind Regimes, both Measured and Modeled.

Chairs: Laura Kerber
William Anderson

- 1:00 p.m. Narteau C. * Courrech du Pont S. Lü P. Dong Z. Rodriguez S. Fernandez-Cascales L.
[*Two Independent Dune Growth Mechanism in Laboratory and Landscape-Scale Experiments*](#) [#8043]
 We identify two independent dune growth mechanisms in laboratory and landscape-scale experiments that can together provide less uncertainties on the estimation of the wind regime that have been responsible for the development of bedforms.
- 1:30 p.m. Lv P. * Narteau C. Dong Z. B.
[*Raked Linear Dunes as an Example of the Coexistence of two Modes of Crest Orientation*](#) [#8009]
 Here we show that the raked linear dune morphology results from the coexistence of two dune growth mechanisms.
- 2:00 p.m. Lucas A. Rodriguez S. * Narteau C. Charnay B. Courrech du Pont S. Tokano T.
 Garcia A. Thiriet M. Hayes A. G. Lorenz R. D. Aharonson O.
[*Growth Mechanism and Dune Orientation on Titan*](#) [#8011]
 Herein, we present a comprehensive analysis of Titan's dune orientations by coupling a new dune growth mechanism with actual wind fields generated by climate modelling.
- 2:30 p.m. BREAK
- 3:00 p.m. Newman C. E. * Richardson M. I. Bridges N. T. Lewis K. W. Gómez-Elvira J.
 Navarro S. Marín Jiménez M.
[*Winds and Aeolian Activity in Gale Crater on Mars: Model Results and Comparison with Observations*](#) [#8034]
 We will show comparisons between measured winds in Gale Crater, aeolian features seen by MSL, and predictions from the MarsWRF model. We will also use MarsWRF to predict dune characteristics over the rest of Gale, focusing on active dunes near MSL.
- 3:30 p.m. Middlebrook W. Ewing R. C. * Ayoub F. Bridges N. T. Smith I. Spiga A.
[*Boundary Conditions and the Aeolian Sediment State of the Olympia Undae Dune Field, Mars*](#) [#8051]
 We evaluate the boundary conditions in Olympia Undae. We map two and three dimensional dune parameters from two locations proximal and distal to Planum Boreum and constrain sediment fluxes. We compare our results with a mesoscale atmospheric model.
- 4:00 p.m. Michaels T. I. * Fenton L. K.
[*A Tale of Two Wind Paradigms: Unraveling a Paradox in Meridiani Planum, Mars*](#) [#8032]
 High-resolution atmospheric modeling is used to make sense of two observed dominant wind paradigms (that each somehow affect only certain aeolian features/areas) in Meridiani Planum.
- 4:30 p.m. DISCUSSION