

Friday, March 11, 2011
MARS GEOMORPHOLOGY: FLUVIAL
10:15 a.m. Waterway Ballroom 1

Chairs: **Devon Burr**
Justin Wilkinson

- 10:15 a.m. Gregg T. K. P. * Krysak D. J.
[Apollinaris Mons, Mars: A New Name and a New Past](#) [#1922]
 Geologic mapping of Apollinaris Mons, Mars, reveals that the volcano was active throughout the Hesperian and that the fan deposit is likely composed of pyroclastic or volcanoclastic materials.
- 10:30 a.m. Catling D. C. * Leovy C. B. Wood S. E. Day M. D.
[A Lava Sea in the Northern Plains of Mars: Circumpolar Hesperian Oceans Reconsidered](#) [#2529]
 The Vastitas Borealis Formation (VBF) in the martian northern plains is commonly attributed to sediments from a circumpolar Hesperian ocean of water. We present evidence that the VBF formed from a sea of flooded lava, not water.
- 10:45 a.m. Stepinski T. F. Luo W. *
[On Orientation of Martian Valley Networks](#) [#1266]
 Distribution of valley network orientations is shown to be consistent with distribution of orientations of long baseline slopes.
- 11:00 a.m. Mangold N. *
[Post-Early Mars Fluvial Landforms on Mid-Latitude Impact Ejecta](#) [#1378]
 Fluvial landforms on ejecta of large craters were found in the mid-latitude band in both hemispheres. Processes associated with impact craters such as shallow water ice melted by warm ejecta are favored to explain this fluvial activity.
- 11:15 a.m. Cannarsa F. * Ori G. G.
[Morphological Analyses of Relief-Inverted Channelled Distributary Systems in the Aeolis/Zephyria Plana Region: Insights from DEMs Data Set](#) [#2169]
 We report morphometric analyses of a distributary system in the Aeolis/Zephyria Plana region of Mars carried out with a series of topographic profiles derived from the DEMs data set.
- 11:30 a.m. Hughes A. C. G. * Burr D. M. Moersch J. E. Murchie S. L. Buczkowski D. L. Seelos F. P. Seelos K. D.
[A Mineralogic and Morphologic Analysis of Four New Phyllosilicate-Bearing Martian Fan Deposits](#) [#2301]
 Our study examines 33 fan deposits to test multiple hypotheses for the formation mechanisms of these fans. This abstract presents the mineralogic and morphologic results for four fans newly identified to contain phyllosilicates.
- 11:45 a.m. Ori G. G. * Salese F.
[Stratigraphic and Sedimentological Evidence for a Large-Scale Coarse-Grained Fluvial System \(Southwest Shoulder of Juventae Chasma\)](#) [#1806]
 The southwestern shoulder of the Juventae Chasma shows an extensive set of exhumed channels. The cliff bordering the Juventae Chasma cuts this fluvial system showing a conglomeratic unit interpreted as the result of braided channels deposition.