

Friday, March 24, 2017

[F702]

MARS: RECURRING SLOPE LINEAE (RSL), GULLIES, AND LANDSLIDES**8:30 a.m. Waterway Ballroom 4**

**Chairs: Virginia Gulick
Tanya Harrison**

- 8:30 a.m. Grimm R. E. * Stillman D. E.
[Discharge-Driven Hydrogeology of Modern Mars](#) [#2695]
Groundwater must deliver nutrients to and remove waste from subsurface microbes. Lacking contemporary recharge, discharge from outflows and RSL must drive flow.
- 8:45 a.m. Stillman D. E. * Grimm R. E. Calef F. J. Lu Y. Michaels T. I.
[Dark Lineae on the Equatorial Layered Deposits: Are these Recurring Slope Lineae \(RSL\) or Small Debris Flows?](#) [#1494]
Opportunity (MER-B) imaged a candidate RSL. Could this candidate RSL and many others on the layered deposits be evidence that water is current flowing on Mars?
- 9:00 a.m. Schaefer E. I. * McEwen A. S. Sutton S.
[Recurring Slope Lineae \(RSL\) at Tivat Crater: Part of an Assemblage of Darkening Features?](#) [#2770]
Two types of diffuse darkening at Tivat that are spatially and temporally associated with RSL may provide insight into the nature of RSL.
- 9:15 a.m. Dundas C. M. * McEwen A. S. Chojnacki M. Milazzo M. P. Byrne S.
[A Granular Flow Model for Recurring Slope Lineae on Mars](#) [#2399]
Recurring Slope Lineae topography suggests that they form by dry granular flow processes, possibly with some involvement of H₂O.
- 9:30 a.m. Schmidt F. * Andrieu F. Costard F. Kocifaj M. Meresescu A. G.
[RSL as Dry Granular Flows Induced by Natural Pump](#) [#1858]
RSL is proposed to be triggered by Knudsen pump in the porous space of the martian soil.
- 9:45 a.m. Diniega S. * Bourke M. Hansen C. J. McElwaine J. Nield J. et al.
[Morphology-Derived Constraints on Martian Linear Gully Formation Mechanics](#) [#2340]
Linear gullies' / Regional differences / Give process insight.
- 10:00 a.m. Harrison T. N. * Osinski G. R. Tornabene L. L. Stuurman C. M.
[Multiple Generations of Gully Activity in Western Utopia Planitia, Mars](#) [#1497]
Many climate swings / Formed Utopia's gullies / Carved, buried, exhumed.
- 10:15 a.m. Godin E. * Pontefract A. Harrison T. N. Osinski G. R.
[Characterization of Gullies and Their Controls at Thomas Lee Inlet, Devon Island, Nunavut, and Considerations as Analogues to Mars](#) [#1579]
Gullies on Devon Island (Nunavut) were scanned for their geomorphology using a LIDAR. Morphometrics were interpreted using Mars gully classification models.
- 10:30 a.m. Gulick V. C. * Glines N. H. Freeman P. M. Morkner P. Narlesky C. et al.
[Geomorphic Analysis of Intergrated Gully Systems on Mars](#) [#1970]
Results of studies of gullies in a variety of environmental setting on Mars using HiRISE images and DTMs.

- 10:45 a.m. Cox R. * Gilmore M. S.
[Madagascar's Unusual Gullies \(Lavaka\) Are a Possible Analogue for Mid-Slope Alcove Gullies on Mars](#) [#2386]
Malagasy lavakas share many features in common with classic martian alcove gullies, and may therefore provide insights into controls on martian gully formation.
- 11:00 a.m. Parker T. J. * Golombek M. P. Lamb M. Palucis M. C. Athena Science Team
[An Opportunity to Inspect a Martian Gully Up Close](#) [#2468]
Opportunity is 1 km from the first martian gully visited by a spacecraft from Earth and will investigate the gully for evidence of water or dry sediment flow.
- 11:15 a.m. Hager A. Schedl A. D. *
[Classification and Ages of Landslides Within Valles Marineris](#) [#2076]
We dated, mapped, and classified landslides >500 km² in area in Valles Marineris. Most landslides are classified as complex and 14 of 29 landslides are <1 Ga.
- 11:30 a.m. Chilton H. T. * Schmidt B. E. Ferrier K. Hughson K. H. G. Scully J. E. et al.
[Ceres and Mars: Unusual Flows and Comparison of Planetary Landslide Analysis Techniques](#) [#2596]
Landslides analyzed / Methodologies compared / For Ceres and Mars.