

**Monday, March 18, 2013**  
**PLANETARY VOLCANISM IN THE SOLAR SYSTEM**  
**2:30 p.m. Waterway Ballroom 5**

[M154]

**Chairs:** Lynn Carter  
 Carlton Allen

- 2:30 p.m. Denevi B. W. \* Ernst C. M. Whitten J. L. Head J. W. Murchie S. L. et al.  
[\*The Volcanic Origin of a Region of Intercrater Plains on Mercury\*](#) [#1218]  
 We present evidence for the volcanic origin of a region of intercrater plains associated with an ancient impact basin approximately the same size as Caloris.
- 2:45 p.m. Vander Kaaden K. E. \* McCubbin F. M. Agee C. B.  
[\*Experimental Constraints on the Density and Compressibility of Lavas from the Northern Volcanic Plains of Mercury\*](#) [#1565]  
 The goal of our study is to determine the density and compressibility for a NVP composition in order to assess its eruptability onto the surface of Mercury.
- 3:00 p.m. Allen C. C. \* Donaldson Hanna K. L. Pieters C. M. Moriarty D. P. Greenhagen B. T. et al.  
[\*Pyroclastic Deposits in Floor-Fractured Craters — A Unique Style of Lunar Basaltic Volcanism?\*](#) [#1220]  
 Small pyroclastic deposits in the lunar floor-fractured crater Alphonsus are distinct from nearby mare basalts but similar to regional pyroclastic deposits.
- 3:15 p.m. Jozwiak L. M. \* Head J. W. Wilson L.  
[\*Consequences of Shallow Lunar Magmatic Intrusion: Venting, Pyroclastics, and Subsidence Associated with Floor-Fractured Craters\*](#) [#2170]  
 We examine the consequences of a magmatic intrusion beneath floor-fractured craters. We explore magma degassing, pyroclastic eruptions, and subsidence.
- 3:30 p.m. Thorey C. \* Michaut C.  
[\*Floor Fractured Craters on the Moon: An Evidence of Past Intrusive Magmatic Activity?\*](#) [#1508]  
 Our model for the spreading of a magmatic intrusion below a crater-like topography is able to reproduce the main features of lunar floor-fractured craters.
- 3:45 p.m. Edwards C. S. \* Bandfield J. L. Christensen P. R. Rogers A. D.  
[\*The Formation of Infilled Craters by Impact Induced Decompression Melting of the Martian Mantle\*](#) [#2153]  
 Decompression melting of the mantle via impact excavation is an important, widespread, and ancient process that has dramatically shaped the surface of Mars.
- 4:00 p.m. Dundas C. M. \* Keszthelyi L. P.  
[\*Modeling Steam Pressure Under Martian Lava Flows: Implications for Rootless Eruptions\*](#) [#2550]  
 Melting and boiling ground ice beneath martian lava flows can trigger rootless-cone-forming explosions for ice at tens of centimeters depth.

- 4:15 p.m. Huang J. \* Kraft M. Christensen P. R. Xiao L.  
[\*New Evidence for Early Explosive Volcanism on Mars\*](#) [#2288]  
We identified possible eroded remnants of pyroclastic flows on Noachian volcanoes to support that explosive volcanism was an important process on early Mars.
- 4:30 p.m. Rathbun J. A. \* Lopes R. M. Howell R. R. Tsang C. C. Spencer J. R.  
[\*Active Ionian Volcanoes from New Horizons: Combining Data from LORRI, MVIC, and LEISA\*](#) [#1418]  
New Horizons MVIC detected on Tvashtar and E. Girus while LORRI detected 54 emission sources. Seven hotspots were observed at short timescales with no variation.