Tuesday, March 18, 2014 **[T612]**
POSTER SESSION: EMERGING WORLDS: PLANETARY DIFFERENTIATION
6:00 p.m. Town Center Exhibit Area

Bennett N. R. Fei Y. ***POSTER LOCATION #116***
The Effect of Thermal Gradients on the Major and Trace Element Distribution in Fe-Ni-O Melts: Implications for Chemical Redistribution During Planetary Accretion **[#1273]**
Fe-Ni-O melt subject to a thermal gradient develops a compositional profile. The magnitude of this profile helps describe element partitioning during accretion.

McDermott K. H. Burchell M. J. Cole M. J. Price M. C. ***POSTER LOCATION #117***
Melting and Mixing of Fe/Ni Projectiles and Chondritic-Like Target Bodies During Impact **[#1850]**
Hypervelocity impact experiments set out to test the current formation theories for the silicate-bearing IIE iron meteorites.

Chabot N. L. Wollack E. A. McDonough W. F. Ash R. ***POSTER LOCATION #118***
The Effect of Light Elements in Metallic Liquids on Partitioning Behavior **[#1165]**
Partitioning behaviors in the Fe-Ni system were determined experimentally and used in new parameterization expressions for the S-, P-, and C-bearing systems.

Zhang H. Hirschmann M. M. ***POSTER LOCATION #119***
Effect of Pressure on Fe^{3+}/Fe^{T} in Silicate Liquids, Accurate Determination of Fe^{3+}/Fe^{T} in Silicate Glasses by Mössbauer Spectroscopy, and Applications to Magma Oceans **[#2442]**
We determine Fe^{3+}/Fe^{T} accurately in silicate glasses and investigate the pressure effect on fO_2 in a magma ocean, with consequences for planetary differentiation.

Armstrong L. S. Hirschmann M. M. Stanley B. D. Jacobsen S. D. ***POSTER LOCATION #120***
Speciation and Solubility of C-O-H Volatiles in Reduced Basaltic Melts: Implications for Planetary Volcanism and Magma Oceans **[#2591]**
Most C in lunar and martian basalts may be contained in reduced CO-species; a potentially N- and C-bearing species is important for a terrestrial magma ocean.

Moore W. B. Simon J. I. Webb A. A. G. ***POSTER LOCATION #121***
Heat Pipe Planets **[#1951]**
When volcanism dominates heat transport, a terrestrial body enters a heat-pipe mode, in which hot magma moves through the lithosphere in narrow channels.

Davenport J. D. Longhi J. Neal C. R. Bolster D. Jolliff B. L. ***POSTER LOCATION #122***
Simulating Planetary Igneous Crystallization Environments (SPICEs): A Suite of Igneous Crystallization Programs **[#1111]**
Long-established, reliable programs for calculating magma evolution have been given a facelift and used for modeling the crystallization of Apollo 17 basalts.