

Tuesday, March 19, 2013

[T609]

POSTER SESSION:

TERRESTRIAL PLANETARY DIFFERENTIATION: CORE TO MANTLE

6:00 p.m. Town Center Exhibit Area

Shibazaki Y. Fei Y.

POSTER LOCATION #103

[Experimental Comparison of Densities Between Liquid and Solid Phases in the Fe-FeS System at High Pressure: Implications for the Evolution of Planetary Cores](#) [#1623]

Based on our high-pressure experiments, Fe-S liquid is denser than coexisting solid FeS. S-rich core would consist of outer solid core and inner liquid core.

Hillgren V. J. Fei Y.

POSTER LOCATION #104

[Metal-Silicate Partitioning of Si and S in Highly Reducing Conditions: Implications for the Evolution of Mercury](#) [#3078]

The strange composition of Mercury's surface may be the result of core formation under reducing conditions and high temperatures.

Marin N. Righter K. Danielson L. Pando K. Lee C.

POSTER LOCATION #105

[Metal-Silicate Partitioning of Bi, In, and Cd as a Function of Temperature and Melt Composition](#) [#1848]

New data for the systematic metal-silicate partitioning behavior of Bi, In, and Cd as a function of temperature, pressure, and melt composition was obtained.

Colson R. O. Anderson J. K. Buhr S. J. Ramsey M. Anderson L. K. et al.

POSTER LOCATION #106

[Measuring the Solubility of Neutral Nickel in Silicate Melts: Another Experimental Problem](#) [#1559]

New experiments indicate that exsolution of gas from the metal phase during quench can spew metal particles into the silicate melt.

Monteux J. Arkani-Hamed J.

POSTER LOCATION #107

[Thermal Consequences of Giant Impacts and Core Merging in Early Mars](#) [#1456]

We investigate the dynamics of core merging after a giant impact and explore the consequences of this process on the early martian thermal state.

Grocholski B. Cottrell E.

POSTER LOCATION #108

[Water Storage Capacity of Dense, Lower Mantle Minerals](#) [#1303]

We have found evidence of structurally bound water with IR absorption in the dense, high-pressure minerals that make up the lower mantle of terrestrial planets.