

Thursday, March 10, 2011
POSTER SESSION II: PLANETARY DIFFERENTIATION
6:00 p.m. Town Center Exhibit Area

Danielson L. R. Righter K. Newville M. Sutton S. Choi Y. Pando K.

[*Molybdenum Valence in Basaltic Silicate Melts: Effects of Temperature and Pressure*](#) [#2609]

Mo valence was determined using XANES for a suite of basaltic experimental run products, from 1 bar experiments at varying fO_2 , to high pressure runs from 10 kbar to 24 GPa. At pressures and temperatures relevant to core formation, Mo occurs as 3+.

Touboul M. Walker D. Ash R. D. Puchtel I. S. Walker R. J.

[*Simultaneous Experimental Determination of Metal-Silicate Partitioning of W, Mo, Ru, Pt and Pd Using Natural Abundances, Elevated P-T and Isotopic Tracers*](#) [#1727]

Metal-silicate distribution coefficients were determined at 10 kb and 1550 C for W, Mo, Ru, Pt and Pd using synthetic metal that had been isotopically modified.

Futó P. Gucsik A.

[*Carbon Planet Model with SiC Mantle Compound*](#) [#1227]

The existence of a carbon planet is highly probable by reason of astrophysical consideration. For the case of the same mass and core mass fraction (CMF) ratios their diameters are slightly larger than that of a terrestrial planet.

Takeda H. Yamaguchi A. Hiroi T. Nyquist L. E. Shih C.-Y. Ohtake M. Karouji Y. Kobayashi S.
[*Comparisons of Mineralogy Between Cumulate Eucrites and Lunar Meteorites Possibly from the Farside Anorthositic Crust*](#) [#1632]

We compared the mineralogies, reflectance spectra of the cumulate eucrites, Y-980433 and Y-980318, to those of the Dhofar 307 lunar meteorite of the Dhofar 489 group, to gain a better understanding of the feldspathic farside highlands and the Vesta-like body.

Castillo-Rogez J. C. Lunine J. I. Johnson T. V.

[*How Differentiated is Callisto?*](#) [#2580]

In our model, Callisto has differentiated an icy shell and rocky core, and in the latter a large fraction of the accreted water is stored in the form of water of hydration. This model is consistent with the observed moment of inertia.