

Tuesday, March 18, 2003  
POSTER SESSION I  
7:00 p.m. Fitness Center

**Experiments: Rocks Made to Order**

Righter K. Campbell A. J. Humayun M.

*Experimental Determination of Spinel/Melt, Olivine/Melt, and Pyroxene/Melt Partition Coefficients for Re, Ru, Pd, Au, and Pt* [#1383]

Spinel/melt, olivine/melt, and pyroxene/melt partition coefficients for several highly siderophile elements have been measured in experimental samples. The results are applied to terrestrial komatiitic basalts, martian shergottites, and lunar basalts.

Dwarzski R. E. Herd C. D. K.

*Cobalt and Nickel Partitioning into Planetary Olivine* [#1625]

We examined the effect of temperature, bulk composition, and oxygen fugacity on the partitioning of Co and Ni into olivine by crystallization experiments. We found that temperature has the greatest effect on the partitioning of these trace elements.

Stimpfl M. Ganguly J. Hervig R.

*Ca and Mg Tracer Diffusion in Diopside: Experimental Determination and Applications to Cooling History of Planetary Samples* [#1497]

We report new data for Ca-Mg diffusion in diopside and discuss their potential implications for the determination of cooling history of planetary samples. In particular, a revised cooling rate for Moore County shows that the burial depth computed in previous studies was largely overestimated.

Toppani A. Libourel G. Robert F. Ghambaja J. Zimmermann L.

*Condensation Experimental Set-up Using Pulsed-Laser Evaporation: Preliminary Results* [#1790]

In order to better understand condensation processes in the primitive solar nebula, we have set up a new apparatus which allows to perform condensation experiments at high temperature and low vacuum from refractory complex gases.

Kenkmann T. Walther K. Frischbutter A. Scheffzük C. Eichhorn F. Daymond M. R.

*Strain Scanning Across a Shock-deformed Quartzite/Dunite Interface Using Neutron and Synchrotron Radiation* [#1374]

This is the first report of residual strain measurements in experimentally shocked rocks (quartzite, dunite). The present study is devoted to obtain a better understanding of shock related processes across planar interfaces.