Tuesday, March 14, 2006
POSTER SESSION I: DIFFERENTIATED METEORITES
7:00 p.m. Fitness Center

Amelin Y. Wadhwa M. Lugmair G.
Pb-Isotopic Dating of Meteorites Using ^{202}Pb-^{205}Pb Double-Spike: Comparison with Other High-Resolution Chronometers **[#1970]**
We report high-precision Pb isotopic dates for achondrites A-881394, Ibitira and Acapulco, and discuss their implications for the early solar system timescale and homogeneous vs. heterogeneous distribution of short-lived radioactive isotopes.

Burbine T. H. Dyar M. D. Seaman S. J. McCoy T. J.
Water Content of Nominally Anhydrous Minerals in the Ibitira Eucrite **[#2220]**
We have used Fourier transform infrared (FTIR) spectroscopy to quantify the possible presence of CO, CO_2, and H_2O in nominally anhydrous minerals in the vesicle-rich eucrite Ibitira.

Warren P. H. Huber H.
Chromium-Silicates, Feldspars and Highly Silicic Glasses Formed from Felsic Melts in Post-Depressurization Ferroan Ureilites, Especially LEW 88774 **[#2400]**
We describe the diverse suite of post-depressurization redox phases in the LEW 88774 ureilite, and discuss the origin of these materials, including the highly silicic (typically ~70 wt% SiO_2) glasses that are associated with Cr-spinels.

Goodrich C. A.
Composition of Ureilite Precursors Materials **[#1194]**
Reexamination of constraints on ureilite precursors in MAGPOX and MELTS indicates that they had Ca/Al ~2.5 × CI but were otherwise CV-like. The ureilite parent body likely accreted with an Fe-rich CV-like composition.

Welten K. C. Nishiizumi K. Caffee M. W. Hillegonds D. J.
Cosmogenic Radionuclides in Ureilites from Frontier Mountain, Antarctica: Evidence for a Polymict Breccia **[#2391]**
Cosmogenic radionuclides in 11 Antarctic ureilites provide evidence that 9 fragments represent a polymict ureilite breccia. The results are discussed in terms of target element composition, exposure history and terrestrial age of these ureilites.

Wright A. Parnell J. Tsikos H.
Interpreting the Carbon Isotopic Composition of Ureilites **[#1056]**
The carbon isotopic shift between carbonaceous chondrites and ureilites is of similar magnitude and direction as the shift observed between country rock and mobilized graphite in a case study, removing a problem in this widely inferred relationship.

Danielson L. R. Humayun M. Righter K.
Highly Siderophile Elements in Pallasites and Diogenites, Including the New Pallasite, CMS 04071 **[#2304]**
Trace element LA-ICP-MS analyses were conducted on individual phases in four pallasites and three metal bearing diogenites in order to understand pallasite formation and possible magmatic processes which may link pallasites to IIIAB irons and HEDs.

Sadilenko D. A. Borisovskiy S. E. Korochantsev A. V. Abdrakhimov A. M. Ivanova M. A. Zhuravlev D. I.
Discovery, Petrography, Mineralogy, and Chemistry of Pallasovka, a New Pallasite from Russia **[#1623]**
Pallasovka, a new stony-iron meteorite, was found recently in the Volgograd region of Russia. It belongs to the main group of pallasites, though its chromite is different in composition from other pallasites.

Tomiyama T. Huss G. R.
Minor and Trace Element Zoning in Pallasite Olivine: Modeling Pallasite Thermal History **[#2132]**
Minor and trace element profiles of pallasite olivine were obtained by ion microprobe analysis. Cooling history of pallasite was discussed based on diffusion calculations.

McCausland P. J. A. Flemming R. L.
Preliminary Bulk and Grain Density Measurements of Martian, HED and Other Achondrites **[#1574]**
We report preliminary bulk and/or grain density measurements for ten achondrites (including two martian, six HED, a ureilite and a winonaite), mostly from North West Africa

Maruoka T. Varela M. E. Kurat G. Zinner E.
Isotopically Heavy and Heterogeneous C in Graphite of the Vaca Muerta Mesosiderite **[#1449]**
We report on C-bearing Fe-Ni metal objects of Vaca Muerta and C isotopic ratios of graphite associated with the metal. Our results severely constrain the conditions prevailing during formation of the Vaca Muerta mesosiderite.

Cook D. L. Wadhwa M. Davis A. M. Clayton R. N.
Heterogeneity of the Hoba IVB Iron Meteorite: Implications for Its Use as an Analytical Standard **[#2116]**
Electron probe and scanning electron microscope analyses of a polished section of the Hoba IVB iron meteorite reveal fine-scale textural and compositional heterogeneities.

Markowski A. Quitté G. Kleine T. Bizzarro M. Leya I. Wieler R. Ammon K. Halliday A. N.
Early and Rapid Differentiation of Planetesimals Inferred from Isotope Data in Iron Meteorites and Angrites **[#2000]**
We will be presenting Hf-W data in some iron meteorites and angrite (SAH99555) in order to refine the chronology of the early solar system.

Johanesen K. J. Watson H. C. Fei Y.
Compositional Dependence of Au Diffusion in Fe-Ni Alloys: Implications for Meteorite Cooling Rate Models **[#2392]**
An experimental study to determine the effect of Ni concentration on diffusion of siderophile elements in Fe-Ni alloys relevent to iron meteorites. The implications that this has on current meteorite cooling rate models is also discussed.