

Tuesday, March 11, 2008
POSTER SESSION I: CHONDRITES
6:30 p.m. Fitness Center

Horan M. F. Alexander C. M. O'D. Walker R. J.

An Evaluation of Evidence for Early Solar System Processes Preserved in the Highly Siderophile Elements of Chondrite Components [#1448]

Separated metal and non-metal components from Ochansk (H4) show contrasting distributions of highly siderophile elements (Re, Os, Ir, Ru, Pt, Pd) that reflect their distinct histories.

Pack A.

Fractionation of Refractory Lithophile Elements in Bulk Chondrites and Chondrite Components [#1237]

I present results of REE and Y concentrations measurements on bulk chondrites and chondrite component. The data suggest that volatility-controlled refractory lithophile element fractionation can be traced in bulk chondrites.

Kring D. A. Swindle T. D.

Impact Cratering on the H-Chondrite Parent Body: Implications for the Collisional Evolution of the Inner Solar System [#1305]

H-chondrite impact melt breccias reveal their depositional setting and a chronology of cratering in the asteroid belt.

Cheek L. C. Kring D. A.

Cooling Rate Determination for H Chondrite Impact Melt Breccia LAP 02240 [#1169]

An impact melt breccia produced 3.9 Ga on the H-chondrite parent body had a shallow burial depth and cooled at $\sim 10^3$ – 10^4 degrees C/s.

Badjukov D. D. Brandstätter F. Kurat G. Raitala J.

Hydrous Iron Phosphates in the Chondritic Impact Melt Breccia NWA 4218 [#1606]

The chondritic melt rock NWA 4218 contains within the melt matrix regions rich in an iron phosphate mineral. The hydrous phosphate could be formed either (1) by weathering in an acid environment or (2) by terrestrial alteration of a primary phosphate.

Niihara T. Imae N. Kojima H.

Petrology and Mineralogy of an Impact Melted H Chondrite, LAP 02240 [#1856]

We report mineralogy and petrology of LAP 02240 and Y-791088.

Dunn T. L. McSween H. Y. Jr. McCoy T. J. Cressey G.

Mineralogical and Chemical Evidence for Intragroup Oxidation State Variations in Equilibrated Ordinary Chondrites [#1306]

Here we use X-ray diffraction-measured modal abundances of a large number of ordinary chondrites, along with supplemental chemical analyses, to address the question of intragroup redox state variations in the equilibrated ordinary chondrites.

Saunier G. Poitrasson F. Moine B. Grégoire M.

Modification of the Iron Mineralogy, Chemistry and Isotopic Composition of H5 and L6 Ordinary Chondrites During Desertic Weathering [#1534]

Ordinary chondrites from hot deserts are affected by terrestrial weathering that modifies their mineralogy and geochemistry. This also leads to increasing iron isotope signatures corresponding to the preferential retention of isotopically heavy, oxidized iron.

Fagan T. J. Kataoka S. Matsui K. Norose K. Yoshida A.

Equilibration Reactions Between Silicates, Sulfides and Fe,Ni-Metal in EH Chondrites [#1604]

An algebraic approach ("reaction space") is used to model the main transfers of mass between silicates, sulfides and metal in EH chondrites. Petrologic observations, in the context of the model, show some pre-parent body vs. parent body effects.

Choi B.-G. Guan Y. Rubin A. E. Wasson J. T.

SIMS Measurements on Oxygen-Isotopic Compositions of Chondrules and Matrix in the Yamato 691 EH3 Chondrite [#1006]

Oxygen-isotopic composition of chondrules and matrix of the EH3 chondrite, Yamato 691 were measured using Cameca 7F GEO. Our data show that ECs are oxygen isotopically homogeneous relative to the other chondrites even in microscale.

Sugiura N. Fujiya W.

Al-Mg Age of the Zaklodzie Enstatite Meteorite [#1503]

An Al-Mg study of Zaklodzie shows that the initial $^{26}\text{Al}/^{27}\text{Al}$ ratio is 3.1×10^{-7} .

Craig J. P. Sears D. W. G.

The Nature and Origin of Semarkona Fine-Grained Matrix: An Induced Thermoluminescence Study [#1081]

A combined study of induced thermoluminescence and composition has identified forsterite as a principle mineral phase in Semarkona matrix. Terrestrial forsterite shows a difference in TL and may be indicative of the processes from which Semarkona forsterites were formed.

Yamamoto Y. Muramatsu Y.

Depth Profile of Halogen Concentration in Antarctic and Non-Antarctic Chondrites [#1771]

Antarctic and non-Antarctic chondrites were analyzed for Cl, Br and I. The correlations between concentrations of halogen and depth from surface of Antarctic and non-Antarctic meteorites were discussed.