

Tuesday, March 24, 2009

POSTER SESSION I: CRASHING CHONDRITES: IMPACT, SHOCK, AND MELTING
6:30 p.m. Town Center Exhibit Area

Frank E. A. Wittmann A. Kring D. A.

[*Petrography and Metallographic Cooling Rate of H-Chondrite Impact Melt Breccia LAP 04751*](#) [#2034]

An impact event melted a portion of the H-chondrite parent body, mixing with surviving clastic material. The melt-rich breccia was deposited as a thin unit at a depth <10 m, implying an ejecta blanket or the uppermost fraction of a breccia lens.

Schrader D. L. Laurretta D. S. Connolly H. C. Jr. McCoy T. J. Greenwood R. C. Franchi I. A.

[*NWA 4477: A Unique Impact Melt Breccia*](#) [#1854]

We discuss a unique impact melt breccia, NWA 4477.

Ozawa S. Ohtani E. Terada K.

[*Pressure and Timing of the Shock Events Recorded in L6 Chondrites*](#) [#1474]

Shock pressures of two L6 chondrites (Sahara 98222 and Yamato 74445) were estimated based on the mineralogy of shock melt veins. We also estimated the impact age of Sahara 98222 based on U-Pb dating of phosphates in and around the shock melt veins.

Fürj J. Gyollai I. Bérczi Sz. Gucsik A. Nagy Sz. Veres M.

[*Raman Spectroscopy of Shocked Olivine in the Hungarian L-Chondrite, Mócs*](#) [#1110]

Mócs (L5) meteorite contains shock-metamorphic effects in olivines: (1) weak-moderate shock mosaicism, (2) PF's and PDF's, and (3) presence of highly deformed olivine grains indicated by wadsleyite peaks of their Raman spectra.

Hutson M. L. Hugo R. Ruzicka A. M. Rubin A. E.

[*Olivine Microstructures in the Miller Range 99301 \(LL6\) Ordinary Chondrite*](#) [#1081]

We used Transmission Electron Microscope (TEM) imaging to examine microstructures in MIL 99301 (LL6) olivine grains in order to understand more fully this meteorite's deformation and thermal history.

Gyollai I. Fürj J. Bérczi Sz. Gucsik A. Nagy Sz.

[*Petrographic Study of Thermal and Shock Metamorphism of the Hungarian L-Chondrites: Mezomadaras \(L3,7\), Knyahinya \(L5\), and Mócs \(L6\)*](#) [#1066]

We studied by optical microscopy and Raman spectroscopy three Hungarian L-chondrites and we observed mineralogical signals of the shock stages of Mezomadaras (S2-S3), Knyahinya (S4), and Mócs (S3-S5).

Izawa M. R. M. Flemming R. L. Banerjee N. R.

[*Shock Stage Assessment and Petrography of 11 Antarctic Enstatite Chondrites*](#) [#1322]

EH and EL chondrites from a range of metamorphic grades were assessed for petrographic indicators of shock. A micro X-ray diffraction technique was used to determine lattice mosaicity. Mosaicity and petrographic shock stage are well correlated.

Dixon L. Herd R. K. Samson C. Hunt P. A.

[*A Detailed Investigation of the Mineralogy and Textures of the L4 Ordinary Chondrite Saratov*](#) [#1465]

SEM documentation and textural interpretation of 370 chondrules >100 microns in diameter, in a single polished thin section of Saratov, is revealing their complex histories. A revised classification scheme for chondrules is envisaged, reflecting their origins and processing.