

Thursday, July 27, 2017

POSTER SESSION II: CARBONACEOUS CHONDRITES AND THEIR PARENTS

5:30 p.m. Poster Area

Bischoff A. Ebert S. Metzler K. Lentfort S.

[Breccia Classification of CM Chondrites](#) [#6089]

CM chondrites are heavily brecciated rocks. We suggest to classify CM chondrites in the same way as ordinary chondrite breccias and reclassify Nogoya as CM2.2–2.6, Cold Bokkeveld as CM2.1–2.6, and Jbilet Winselwan as CM2.0–2.6.

Harrington R. S. Righter K.

[Carbonaceous Chondrite Thin Section Preparation](#) [#6304]

The thin section preparation methods used at NASA Johnson Space Center that are specific to carbonaceous chondrite meteorites are presented.

Ma C.

[Discovery of New Mineral Butianite, Ni₆SnS₂, an Alteration Phase from Allende](#) [#6032]

Butianite (Ni₆SnS₂) is a new chalcogenide mineral from an Allende CAI, along with nuwaite (Ni₆GeS₂), formed from a late-stage sulfidation process, where Ni-Fe metals reacted with a low-temperature fluid enriched in S, Ge, Sn and Te.

Patzek M. Hoppe P. Alfing J. Bischoff A.

[Brecciation of CI Chondrites: Uncoupled D/H and Elemental Ratios in Individual Fragments — Evidence for a Low Variability in D/H Ratio After Alteration](#) [#6185]

Ivuna is heavily brecciated CI chondrite. Despite a high variability in mineralogy, the D/H ratios of various lithologies do not correlate with any elemental ratio implying a low variability in D/H ratio after the aqueous alteration.

Macke R. J. Britt D. T. Schultz C. Consolmagno G. J.

[Low-Temperature Heat Capacity and Thermal Cycling of CI Simulant Material](#) [#6199]

We measured the heat capacity of simulated CI material by LN₂ immersion. As a bonus, this provided an opportunity to put upper bounds on the effects of diurnal thermal stress on analogous asteroid surfaces.

Voropaev S. A. Korochantsev A. V. Fedulov V. S. Kuzina D. M.

[Thermogravimetric Studies of Outgassing of Meteorite Allende CV3](#) [#6038]

We explore outgassing of chondrites and its relationship with microstructure and porosity by means of thermogravimetry combined with FT-IR spectroscopy. First results for Allende, carbonaceous chondrite CV3, are presented.

Yesiltas M. Young J. M. Glotch T. D.

[Spectroscopic Characterization of CK and CV Chondrites for Understanding Their Parent Body Histories](#) [#6196]

Several CV and CK chondrites were measured using confocal Raman imaging spectroscopy for understanding their parent body histories.

Kletetschka G.

[Inverse Thermo-Remanent Magnetization of Extraterrestrial Allende Material](#) [#6181]

Deformation processes during the Allende's terrestrial descent are capable of reaching local pressures in GPa range. Such pressures are capable of triggering accumulation of the crystalline anisotropy energy within the involved pyrrhotite grains.

Vacher L. G. Marrocchi Y. Verdier-Paoletti M. J. Villeneuve J. Gounelle M.

[Isotopic Recording of Contribution of Outer Disk Water Ices in CM Chondrites](#) [#6043]

CM Paris contains carbonates whose O-isotopic compositions require an 8–35% contribution of outer water ices. This is supported by its high D/H ratio compared to other CM chondrites. These imply an efficient radial mixing in the protoplanetary disk.

Greshake A. Ziegler K. Mahlow K. Wirth R. Schmitt-Kopplin Ph.

[Northwest Africa 11118: A Unique Accretionary Aggregate](#) [#6208]

The CM-like carbonaceous chondrite Northwest Africa 11118 is an unique very loosely consolidated highly porous accretionary aggregate that will allow new and largely undisturbed insights into early solar nebula accretion processes.

Brusnitsyna E. V. Muftakhetdinova R. F. Grokhovsky V. I.

[Metallographic Cooling Rates Estimation in Different Lithologies of the Chelyabinsk LL5 Meteorite](#) [#6029]

We studied both small fragments with monolithology and large pieces with a suevite structure. The microstructure of the meteoritic metal was examined with the Zeiss Axiovert 40 MAT inverted microscope and SIGMA VP electron micro-scope with the EDS.

Gritsevich M. Sonnett S. Torppa J. Muinonen K. Mainzer A. Penttila A. Martikainen J. Grav T. Masiero J. Bauer J. Kramer E.

[Shapes and Rotational Properties of the Selected Hilda and Trojan Asteroids](#) [#6073]

We aim to identify binary asteroids within Trojan and Hilda populations by searching for light curve features indicative of binarity. Binary asteroid systems contain key information about the dynamical and chemical environments in which they formed.

Kochemasov G. G.

[Two-Lobed Shape and Clear "Neck" of Asteroids 2014JO25 and 1999JD6 as an Indication of Their Similar Deformation by the Fundamental Wave Rising One Hemisphere and Pressing in the Opposite One](#) [#6050]

Asteroids and other small bodies often acquire peculiar shapes. Two-lobed forms with a "neck" between the lobes are observed. This form is created by the inertia-gravity wave l warping body moving in keplerian orbit with changing accelerations.