

Thursday, March 21, 2013

[R710]

POSTER SESSION: DIFFERENTIATED METEORITES AND BODIES**6:00 p.m. Town Center Exhibit Area**

Fernandes V. A. Burgess R. Crowther S. A. Fritz J. P. Gilmour J. D. et al. **POSTER LOCATION #111**
[⁴⁰Ar-³⁹Ar and Noble Gas Systematics of the Ungrouped Achondrite Northwest Africa 6704](#) [#1956]

NWA 6704 petrology, noble gas and Ar-Ar data suggest this achondrite experienced at least two thermal events after crystallization: 4.52 ± 0.01 and $\leq 2.20 \pm 0.33$ Ga.

Buikin A. I. Verchovsky A. B. Lorenz C. A. Skripnik A. Ya. Korochantseva E. V. **POSTER LOCATION #112**
[Noble Gases and Nitrogen Released by Crushing from Pesyanoe Aubrite](#) [#1141]

Two enstatite lithologies of the Pesyanoe aubrite are different in Ar- and N-isotopic compositions.

Shirai N. Yamaguchi A. Sekimoto S. Ebihara M. **POSTER LOCATION #113**
[Geochemistry of Unbrecciated Diogenite, Yamato 002875](#) [#2058]

We analyzed unbrecciated diogenite Yamato 002875 for determination of bulk chemical compositions and compared this meteorite with other diogenites.

Wood I. Shearer C. K. Burger P. V. Agee C. B. **POSTER LOCATION #114**
[Exploring the Crust of 4 Vesta: Examination of Magmatic Clasts in Howardite NWA6817](#) [#1698]

We examine howardite NWA 6817 for additional 4 Vesta crustal lithologies and their implication for the thermal history of the parent body.

Irving A. J. Kuehner S. M. Ziegler K. **POSTER LOCATION #115**
[Petrology and Oxygen Isotopic Composition of Brachinite-Like Achondrites Northwest Africa 7388 and Northwest Africa 7605, and Evidence for Late-Stage Methane-Triggered Reduction](#) [#2192]

Secondary metal + opx assemblages in some brachinitic achondrites indicate pervasive reduction of olivine. The fabric of NWA 7605 implies plastic flow.

Singerling S. A. McCoy T. J. Gardner-Vandy K. G. **POSTER LOCATION #116**
[Possible Evidence for Sulfidization Reactions in the Miller Range Brachinites\(?\)](#) [#1669]

We studied the two-phase symplectite texture observed in the MIL 09 ungrouped achondrites and conclude that it is likely the result of a sulfidization reaction.

Aoyagi Y. Mikouchi T. Goodrich C. A. **POSTER LOCATION #117**
[New Observations on Grain Boundary Metal in Ureilitic Fragments of Almahata Sitta](#) [#1448]

We found mixtures of two iron phases, cohenite and schreibersite, in the Almahata Sitta #S138, suggesting shock remelting with different amounts of Fe, C, and P.

Corder C. A. Day J. M. D. Patchen A. P. Marti K. Taylor L. A. **POSTER LOCATION #118**
[Petrology of Acapulcoites and Iodranites and the Anomalous Achondrite Lewis Cliff 88763](#) [#2653]

Primitive achondrite petrology provides clues to early planetary differentiation and the achondrite LEW 88763 indicates multiple brachinite-like parent bodies.

Nagy Sz. Gyollai I. Bérczi Sz. **POSTER LOCATION #119**
[Microstructural and Chemical Characteristics of Akimotoite from NWA 5011 Meteorite](#) [#1345]

The abstract contains our results about the microstructural types of akimotoite, and high-temperature mineralogical evidence for the shock-vein formation.

Nagy Sz. Fintor K. Pál-Molnár E. Gyollai I. Veres M. **POSTER LOCATION #120**
[Evidence for Significant Cation Disordering in Ringwoodite from NWA 5011 and Tenham Shocked Chondrite: A Possible Disordered Unrelaxed Ringwoodite Structure](#) [#1177]

In this abstract we newly investigated and interpreted our earlier theory about the 880 cm^{-1} raman peak in ringwoodite spectra.

Sugiura N.

POSTER LOCATION #121

[*A Preliminary Petrographic Study of Several Mesosiderites*](#) [#1176]

Preliminary observations were made on several mesosiderites. Northwest Africa 1878 appears to be a primitive mesosiderite that experienced only minor reheating.

Sipiera P. P. Irving A. J. Kuehner S. M. Jerman G. Chen G. et al.

POSTER LOCATION #122

[*Mineralogy and Trace Element Chemistry of the Elizabeth \(Illinois\) and Fairburn \(South Dakota\) IAB Irons*](#) [#2624]

We document two American IAB irons, both of which have anomalous features.

Albarède F. Bouchet R. A. Blichert-Toft J.

POSTER LOCATION #123

[*Siderophile Elements in IVA Irons and the Compaction of Their Parent Asteroidal Core*](#) [#1416]

Siderophile-element variations in IVAs do not form a crystallization sequence but can be reconciled with compaction of a solid metal core with sulfide blebs.

Kruijer T. S. Sprung P. Kleine T. Leya I. Wieler R.

POSTER LOCATION #124

[*Abundance and Isotopic Composition of Cadmium in Iron Meteorites*](#) [#1980]

We report high-precision Cd concentration data for several irons, and investigate the potential of Cd isotopes as neutron dosimeter for iron meteorites.

Papanastassiou D. A. Chen J. H. Weiss B. P.

POSTER LOCATION #125

[*Fe-Ni Isotope Systematics in the Eagle Station Pallasite*](#) [#2684]

We investigated the short-lived ^{60}Fe - ^{60}Ni chronometer in pallasites and the potential for isotope anomalies in ^{64}Ni in the Eagle Station pallasite.

Korochantsev A. V. Lorenz C. A. Ivanova M. A.

Teplyakova S. N. Kononkova N. N. et al.

POSTER LOCATION #126

[*Karavannoe: A New Member of the Eagle Station Pallasite Grouplet*](#) [#2020]

We describe circumstances of the Karavannoe pallasite find and report results on its petrography, mineralogy, chemistry, and oxygen-isotope composition.

Olinger C. T. Espinoza C. J. Kwiatkowski K. K. Lopez J. D.

Fesseha G. M. et al.

POSTER LOCATION #127

[*Proton Tomography of Meteorites Milton and Abbott*](#) [#1756]

Proton radiography represents a new capability in nondestructive 3-D imaging of meteorites up to 12 cm, generating images similar to a CT scan.