

Thursday, March 24, 2016
POSTER SESSION II: DIFFERENTIATED METEORITES (EXCEPT HED)
 6:00 p.m. Town Center Exhibit Area

[R616]

Riches A. J. V. Burton K. W. Nowell G. M.
 Dale C. W. Irving A. J. et al.

POSTER LOCATION #217

[Refining Theories of Accretion in the Early Solar System: Petrographic, Major-,
 Platinum-Group Element, and Osmium Isotope Characteristics of Angrite Metals](#) [#2858]

Petrographic and compositional data of metals in distinct portions of coarse-grained metal-bearing angrites NWA 4590, NWA 4801, and 'dunitic' angrite NWA 8535.

Bell A. S. Burger P. V. Shearer C. K.

POSTER LOCATION #218

[Cr K-Edge XANES Anisotropy and Olivine Orientation: Developing a Technique for the
 Assessment of the Oxidation State of the Angrite Parent Body](#) [#1502]

This abstract outlines the development of a XANES based technique for measuring the fO_2 of magmatism on the angrite parent body.

Karner J. M.

POSTER LOCATION #219

[Chromium Partitioning Between Olivine/Melt in Experimental Partial Melts of the Allende and
 Murchison Chondrites](#) [#1113]

Chromium partitioning between olivine/melt is explored in experimental partial melts of the Allende and Murchison chondrites.

van Westrenen W. Steenstra E. S. Knibbe J. S. Lin Y. H. Rai N. et al.

POSTER LOCATION #220

[Metal-Silicate Partitioning of P, V, Co, Mo, Ge, and W and Core Formation in the
 Angrite Parent Body](#) [#1630]

The Angrite Parent Body formed its core under mildly reducing conditions and is not necessarily devolatilized.

Hwang S. L. Shen P. Chu H. T. Yui T. F. Varela M. E. et al.

POSTER LOCATION #221

[Tsangpoite: The Unknown Calcium Silico Phosphate Phase in the Angrite D'Orbigny](#) [#1466]

We report about the new mineral tsangpoite (2014-110) an hexagonal polymorph of silicocarnotite, described as silica-phosphate in the angrite D'Orbigny.

Rai N. Downes H. Smith C. L.

POSTER LOCATION #222

[Bulk Compositions of the Ureilite Parent Body and Vesta: Constraints from Oxygen Isotopes](#) [#1702]

Using oxygen isotope signatures, we modelled possible building blocks of the ureilite parent body (UPB) and Vesta from a range of known nebular matter.

Hoffmann V. H. Kaliwoda M. Hochleitner R. Funaki M. Decker S.

POSTER LOCATION #223

[A Real Space Rosetta Stone — The Almahata Sitta Meteorite](#) [#1874]

A statistical overview of all classified individuals of Almahata Sitta and magnetic classification of the new sample set MS-MU 001-028 is given.

Inoue M. Mikouchi T. Goodrich C. A.

POSTER LOCATION #224

[Petrography and Mineralogy of Calama 001, Catalina 037, Northwest Africa 2895: New
 Augite-Bearing Ureilites](#) [#2045]

We studied three augite-bearing ureilites. Calama 001 and NWA 2895 are offset from the Fe-Mn-Mg trend of olivine-low Ca pyroxene ureilites, and similar to Hughes 009.

Wilson L. Goodrich C. A.

POSTER LOCATION #225

[The Formation Time and Thermal History of the Ureilite Parent Body](#) [#1557]

Thermal models for asteroids are very sensitive to bulk Al content and removal of melts from the source. The ureilite parent body accreted ~0.63 Ma after CAI.

Tkalcec B. J. Brenker F. E. **POSTER LOCATION #226**
[Initial Results of Structural Analysis of Ureilites to Investigate the Possible Occurrence of Shear Deformation on the Ureilite Parent Body](#) [#3029]

Investigation for signs of plastic deformation on ureilites, to indicate shear deformation on the ureilite parent body as metal-silicate segregation enhancer.

Dunlap D. R. Wadhwa M. Romaiello S. J. **POSTER LOCATION #227**
[⁵³Mn-⁵³Cr Systematics of Brachina Revisited in High Precision](#) [#3055]

High-precision ⁵³Mn-⁵³Cr systematics are presented here for the enigmatic achondrite Brachina in an effort to better understand the timing of formation.

Hasegawa H. Mikouchi T. Yamaguchi A. **POSTER LOCATION #228**
[Mineralogical and Petrofabric Study of Brachinite-Like Meteorites Miller Range 090206, 090340 and 090405](#) [#2131]

In MIL 090206/090340/090405, we found the b axis concentration CPO patterns of olivine crystal, which are different from those in NWA 6112.

Srinivasan P. Shearer C. K. McCubbin F. M. Bell A. S. Agee C. B. **POSTER LOCATION #229**
[Examining Metasomatism in Low fO₂ Environments: Exploring Sulfidation Reactions in Various Planetary Bodies](#) [#1623]

Examining sulfide-silicate intergrowths in a suite of achondritic meteorites to assess the planetary-wide phenomenon of sulfidation.

Srinivasan P. McCubbin F. M. Agee C. B. **POSTER LOCATION #230**
[Assessing the Formation of Ungrouped Achondrite Northwest Africa 8186: Residue, Crystallization Product, or Recrystallized Chondrite?](#) [#1620]

Investigating the origins of CK-like achondrite NWA 8186 from bulk compositional data.

Chen X. Lapen T. J. Andreasen R. Righter M. Irving A. J. et al. **POSTER LOCATION #231**
[Silicon Isotope Composition of Ungrouped Achondrite Northwest Africa 7325](#) [#2812]

Si isotopic compositions of NWA 7325 were measured for the first time to better understand its relation to other planetary materials.

Archer G. J. Walker R. J. Irving A. J. Amelin Y. **POSTER LOCATION #232**
[Highly Siderophile Element and ¹⁸⁷Re-¹⁸⁷Os Isotopic Systematics of Ungrouped Achondrite Northwest Africa 6704](#) [#2578]

Highly siderophile elements and ¹⁸⁷Re-¹⁸⁷Os isotope systematics are used to investigate differentiation and late accretion on the NWA 6704 parent body.

Sanborn M. E. Yin Q.-Z. Schmitz B. Amelin Y. **POSTER LOCATION #233**
[Northwest Africa 5400/6077: Deciphering the Origin of the Mysterious Achondrite with a New Look at the Isotopic Composition](#) [#2309]

We present a new look at the Cr isotopic composition of NWA 5400/6077 to investigate the composition of its source reservoir, as well as its ⁵³Mn-⁵³Cr age.

Cloutis E. A. Gaffey M. J. Applin D. M. **POSTER LOCATION #234**
[Spectral Reflectance Properties of Aubrites](#) [#1709]

Reflectance spectra of aubrites are characterized by spectral slopes and pyroxene absorption band depths that vary as a function of physical state.

Uribe D. D. Izawa M. R. M. McCausland P. J. A. Flemming R. L. **POSTER LOCATION #235**
[Mineralogy, Petrology, and Mineral Chemistry of Northwest Africa 8173: An Anomalous Enstatite Achondrite with Evidence for High-Temperature Silicate Sulphidation](#) [#2797]

NWA 8173 has many features unique among enstatite meteorites that may best be explained as the result of high-temperature metal-silicate-sulphide interaction.

Uribe D. D. McCausland P. J. A. Izawa M. R. M.

POSTER LOCATION #236

[*A Comparative Study of the Zaklodzie and Northwest Africa 4301 Anomalous Enstatite Achondrites*](#) [#3071]

NWA 4301 is an enstatite achondrite similar to Zaklodzie, with mineral and petrographic evidence for melting and extensive annealing of an EL-like precursor.

Righter K. Yang S. Humayun M.

POSTER LOCATION #237

[*Apatite/Melt Partitioning Experiments Reveal Redox Sensitivity to Cr, V, Mn, Ni, Eu, W, Th, and U*](#) [#2168]

We investigate apatite/melt partitioning for many trace elements at several fO_2 and demonstrate redox sensitivity of elements previously unstudied in detail.

Ward D. Bischoff A. Roszjar J. Whitehouse M. J.

POSTER LOCATION #238

[*Trace Element Inventory of Meteoritic Ca-Phosphates*](#) [#1456]

Apatite and merrillite are accessory phases and major REE hosts in meteorites. Both show variations in REE enrichment and distinct shapes of their REE-patterns.

Hooper N. Elvis M.

POSTER LOCATION #239

[*A Database of Meteorite Minerals*](#) [#2684]

Early solar system conditions create 'meteorite minerals' not found naturally occurring on Earth. We present a compilation of meteorite minerals and properties.

Hooper N. L.

POSTER LOCATION #240

[*A Database of Fe Meteorite Elemental Abundances*](#) [#3030]

We have compiled a database of iron meteorite trace element data consisting of Cu, Ga, Ge, As, Sb, W, Re, Au, Pt, It, Os, Pd, Ru and Ru in units of $\mu\text{g/g}$.