

Tuesday, March 20, 2018

[T327]

**POSTER SESSION I: DIFFERENTIATED METEORITES II:
ALL THE ACHONDRITES (EXCEPT THE HEDS)
6:00 p.m. Town Center Exhibit Area**

Korchinos S. R. Tait K. T. Di Cecco V. E. **POSTER LOCATION #401**
[Carbon-Rich Nova 018: Diamonds Revealed](#) [#2237]

We analyzed the carbonaceous phases in the ureilite, Nova 018, and discovered abundant microdiamonds.

Riebe M. E. I. Busemann H. Goodrich C. A. Maden C. Shaddad M. **POSTER LOCATION #402**
[Noble Gases and Cosmic Ray Exposure Ages of the Newly Discovered Almahata Sitta C1+Ureilite Breccia Sample](#) [#2295]

The potential Almahata Sitta matrix sample AhS-91A has low and variable cosmic-ray-exposure ages compared to samples analyzed previously and no solar wind.

Goodrich C. A. Fioretti A. M. Zolensky M. Shaddad M.
Ross D. K. et al. **POSTER LOCATION #403**
[The Almahata Sitta Polymict Ureilite from the University of Khartoum Collection: Classification, Distribution of Clast Types in the Strewn Field, New Meteorite Types, and Implications for the Structure of Asteroid 2008 TC₃](#) [#1321]

The Almahata Sitta stones are even more diverse than thought. We report new types, including a ureilite-chondrite breccia that may represent most of 2008 TC₃.

Mikouchi T. Takenouchi A. Zolensky M. E. Hoffmann V. H. **POSTER LOCATION #404**
[Almahata Sitta MS-MU-011 and MS-MU-012: Formation Conditions of Two Unusual Rocks from the Ureilite Parent Body](#) [#2383]

We found that Almahata Sitta MS-MU-011 was formed under an oxidizing condition and MS-MU-012 experienced fast cooling history similar to other ureilites.

Hill P. J. A. Banerjee N. R. Nasir S. Osinski G. R. **POSTER LOCATION #405**
[Petrography and Geochemistry of Ureilites Jiddat al Harasis 1100, Jiddat al Harasis 1101, and Jiddat al Harasis 1102](#) [#2047]

An overview of the petrography and geochemistry of three recently classified ureilites: Jiddat al Harasis 1100, Jiddat al Harasis 1101, and Jiddat al Harasis 1102.

Li Y. McCausland P. J. A. Flemming R. L. **POSTER LOCATION #406**
[Quantification of Shock Stages in Ureilite Olivine by In Situ Micro-X-Ray Diffraction](#) [#2947]

Examining ureilites shock by micro-X-ray diffraction on ureilitic olivine grains along with Matlab analysis.

Neumann W. O. Breuer D. Spohn T. Henke S. Gail H.-P. et al. **POSTER LOCATION #407**
[Modeling the Evolution of the Parent Body of Acapulcoites and Lodranites: A Case Study for Partially Differentiated Asteroids](#) [#1170]

Parent body of acapulcoites and lodranites: differentiated interior, primordial exterior; thermo-chronological data fitted; composition matches the meteorites.

Garvie L. A. J. Ray S. Wadhwa M. Wittmann A. Domanik K. **POSTER LOCATION #408**
[Scrutinizing Six Silicide-Bearing Samples of Metal from the Norton County Aubrite](#) [#2104]

The correct empirical formula for perryite is based on a cation:anion ratio of 31:12. Norton County aubrite contains a new silicide — Ni₃Si.

Beard S. P. Weimer D. Busemann H. Maden C. Swindle T. D. **POSTER LOCATION #409**
[Cosmic-Ray Exposure Ages of Brachinites and Brachinite-Like Achondrites](#) [#2669]

We measured He, Ne, Ar, Kr, and Xe for 16 brachinite and brachinite-like achondrites. Preliminary Ne ages are reported here.

Dudley J. M. Greenwood J. P. Sakamoto N. Abe K. Kuroda M. et al. **POSTER LOCATION #410**
[Water Contents of Angrites, Eucrites, and Ureilites, and New Methods for Measuring Hydrogen in Pyroxene Using SIMS](#) [#2223]

Sample preparation and SIMS with live hydrogen imaging to determine water (<20 ppm) in achondrite pyroxene.

Hoffmann V. H. Wimmer K. Hochleitner R. Kaliwoda M. **POSTER LOCATION #411**
[Northwest Africa \(NWA\) 11119 — Probing an Unknown Early Planetary Body?](#) [#2468]

The preliminary results could support a general conclusion that NWA 11119 may probe a yet unknown early planetary body of our planetary system.

Vaci Z. Agee C. B. Ziegler K. Heizler M. T. **POSTER LOCATION #412**
[Magmatic Evolution Trends Within the Ungrouped Achondrite Meteorite Record](#) [#1256]

Both primitive and evolved ungrouped achondrites show distinct magmatic trends in their petrology, geochemistry, and isotopes, above and below the TFL.

Dunlap D. R. Koefoed P. K. Amelin Y. Wadhwa M. Agee C. B. **POSTER LOCATION #413**
[Pb-Pb Age of the Ungrouped Achondrite Northwest Africa 11119: Timing of Extraterrestrial Silica-Rich Volcanism](#) [#2302]

The ancient Pb-Pb age of NWA 11119 demonstrates that andesite-dacite crusts were forming on differentiated bodies within the first ~3 Ma of solar system history.

Huyskens M. H. Sanborn M. E. Yin Q. Z. Agee C. B. **POSTER LOCATION #414**
[Silica-Rich Magmatism in the Early Solar System: U-Pb and Al-Mg Chronology and Cr Isotopes of Ungrouped Achondrite Northwest Africa 11119](#) [#2311]

Andesitic meteorite NWA 11119 is one of the oldest achondrites found thus far with its source differentiation <3 Ma after CAI. But Pb-Pb age is 5 Ma younger.

Habermann M. A. Agee C. B. **POSTER LOCATION #415**
[Dark Xenolith in the Ungrouped Trachyandesitic Achondrite Northwest Africa 11575](#) [#2626]

This abstract focuses on the petrology and bulk composition of an angular dark xenolith in the ungrouped trachyandesitic achondrite Northwest Africa 11575.

Sanborn M. E. Yin Q.-Z. Hyde B. C. Tait K. T. Moser D. E. **POSTER LOCATION #416**
[Early Differentiation in the Carbonaceous Chondrite Forming Region of the Solar Nebula: New Insight from the Achondrites Northwest Africa 7680/6962](#) [#2296]

Mn-Cr systematics and ⁵⁴Cr of NWA 7680/6962 indicate early differentiation activity at ~4564 Ma on a parent body isotopically similar to CR chondrites.