

Tuesday, March 2, 2010
POSTER SESSION I: UREILITES
7:00 p.m. Town Center Exhibit Area

Karczewska A. Jakubowski T.

[Raman Imaging of Ureilitic Diamonds](#) [#1639]

We performed Raman Imaging of diamonds from three ureilitic samples. Results show the coexistence of several diamond types based on the various observed shift positions in the studied ureilites.

Ash R. D. Goodrich C. A. Van Orman J. A. McDonough W. F.

[Petrography and Siderophile Geochemistry of Metal and Sulphide in Ureilites](#) [#1302]

We have measured highly siderophile elements in sulphides and metals in well characterised olivine-low Ca pyroxene ureilites with a range of petrogenetic characteristics. Metals are the dominant carriers of PGEs, but Pd may be affected by sulphides.

Ross A. J. Downes H. Smith C. L. Jones A. P.

[DaG 1047: A Polymict Ureilite Containing Exotic Clasts Including a Chondrite](#) [#2361]

We present EPMA data for the polymict ureilite DaG 1047. This meteorite contains multiple exotic clasts not found in monomict ureilites such as feldspars, Si-bearing metals (suessite) and a chondritic clast containing well-preserved chondrules.

Goodrich C. A.

[Late Orthopyroxene + Metal Assemblages in Ureilites, Brachinites, and Other Olivine-rich Achondrites](#) [#1091]

Fine-grained assemblages of orthopyroxene + metal in some brachinites and related olivine-rich achondrites may have formed by late reduction, similar to ureilites.

Warren P. H.

[Ureilites: Pigeonite Thermometry and the Unimportance of Pressure-buffered Smelting During Evolution as Asteroidal Mantle Restites](#) [#1530]

Ureilite equilibration T derived from pigeonite composition shows a strong (+) correlation with olivine Fo. Combinations of T and Fo implicit in combinations of P and Fo proposed for P-buffered smelting match real ureilite data very poorly.

Bischoff A. Horstmann M. Laubenstein M. Haberer S.

[Asteroid 2008 TC3 — Almahata Sitta: Not Only a Ureilitic Meteorite, but a Breccia Containing Many Different Achondritic and Chondritic Lithologies](#) [#1763]

Meteorite Almahata Sitta has been classified as a polymict ureilite. We have studied more than 30 fragments from the strewn field and found that Almahata Sitta is a complex mixture of ureilitic and chondritic lithologies.

Horstmann M. Bischoff A.

[Characterization of Spectacular Lithologies from the Almahata Sitta Breccia](#) [#1784]

Meteorite Almahata Sitta has been classified as a polymict ureilite, but it contains a huge number of spectacular fragments of different ureilitic and chondritic lithologies.

Zolensky M. E. Herrin J. Mikouchi T. Satake W. Kurihara T. Sandford S. A. Milam S. N. Hagiya K. Ohsumi K. Friedrich J. M. Jenniskens P. Shaddad M. H. Le L. Robinson G. A.

[Olivine in Almahata Sitta — Curiouser and Curiouser](#) [#2306]

Description of olivine in the Almahata Sitta ureilite.

Hoffmann V. H. Hochleitner R. Torii M. Funaki M. Mikouchi T. Almahata Sitta Consortium

[Magnetism and Mineralogy of Almahata Sitta](#) [#2120]

The aims of our investigations are unrevealing Almahata Sitta's (AS) magnetic signature, phase composition and mineralogy (main focus on the opaques) and getting new insights to the ureilite parent body magnetism (2008TC3 belongs to F-type asteroids).

Ott U. Herrmann S. Jenniskens P. M. Shaddad M.

[*A Noble Gas Study of Two Stones from the Almahata Sitta Meteorite*](#) [#1195]

Noble gases analyzed in two stones from the Almahata Sitta polymict ureilite indicate a cosmic ray exposure age of ~12.5 Ma. No evidence is seen for implanted solar wind, while heavy primordial noble gases show a typical ureilite pattern.

Hiroi T. Jenniskens P. M. Bishop J. L. Shatir T.

[*Reflectance Spectroscopy of Almahata Sitta Meteorite Samples from Asteroid 2008 TC₃*](#) [#1148]

As a preliminary study, the visible-NIR reflectance spectra of chip and powder samples of select stones of Almahata Sitta meteorite have been measured to provide insights into the surface and internal compositions and possibly the surface physical properties of 2008 TC₃.