Tuesday, March 8, 2011
POSTER SESSION I: ACHONDRITES
6:00 p.m. Town Center Exhibit Area

Izawa M. R. M. Flemming R. L. Banerjee N. R.
QUE 94204: A Primitive Enstatite Achondrite Produced by Partial Melting of an E-Chondrite-Like Protolith **[#1275]**
QUE 94204 is a coarse-grained, recrystallized, chondrule-free, unbrecciated rock dominated by equigranular enstatite, with textural, mineral, and chemical characteristics consistent with an origin via partial melting of an E-chondrite-like precursor.

Zhou Q. Yin Q.-Z. Shearer C. Li X.-H. Wu F.-Y. Li Q.-L. Liu Y. Tang G.-Q.
Dating the Earliest Felsic Asteroidal Crust in the Solar System: U-Pb Age of Phosphate from Antarctic Achondrite GRA 06129 **[#2424]**
Apatite U-Pb ages were determined from the first known andesitic meteorite GRA 06129 by the Cameca ims1280 ion probe.

Claydon J. L. Crowther S. A. Shearer C. K. Gilmour J. D.
I-Xe and Other Xenon Isotope Systematics in Irradiated GRA 06129. **[#2127]**
Xe isotopes produced from I, Ba and U are released together in four high T ranges, implying distinct host phases associated with plagioclase. Peak $^{129}Xe/^{132}Xe$ data are consistent with previous analyses, but no I-Xe correlation is observed.

Senshu H. Usui T.
Numerical Study on the Thermal Evolution and Birthplace of GRA 06128 and 06129 **[#2514]**
We carried out numerical simulation on the thermal evolution of the GRA parent body under a wide variety of parameters to constrain the physical condition and thermal evolution and birthplace of GRA.

Hunt A. C. Benedix G. K. Strekopytov S. Unsworth C. Hammond S. J. Bland P. A.
The Major and Trace-Element Composition of the Winonaites: Evidence for Heterogeneity and Implications for Geochemical Analysis **[#1809]**
Winonaites are primitive achondrites with chondritic mineralogy and textures which suggest partial melting. We aim to elucidate the thermal history of the winonaite/IAB parent body with new bulk major and trace element data.

Lorenz C. A. Teplyakova S. N. Humayun M. Ivanova M. A. Franchi I. Greenwood R.
Origin of the Ungrouped Achondrite NWA 4518: Mineralogy and Geochemistry of FeNi-Metal **[#1291]**
Ungrouped achondrite NWA 4518 is an ultramafic breccia with abundant siderophile rich IIA-like metal. Its silicate chemistry is similar to that of WINs, HEDs, and silicate inclusions of IIE irons. Oxygen isotopic composition is nearby IAB-IIICD-WIN.

Lorenz C. A. Kononkova N. N. Stehlik H. Franchi I. A. Greenwood R.
NWA 6356: Unequilibrated Polymict Ureilite **[#1293]**
Polymict ureilite NWA 6356 has not suffered an intensive metamorphism and keeps the evidence of multistage carbon injections, reducing sulphuric metasomatism, and consists of feldspathic clasts and best preserved CM-like chondrite fragments.

Shih C.-Y. Nyquist L. E. Reese Y. Goodrich C. A.
Sm-Nd Isotopic Studies of Ureilite Novo Urei **[#1627]**
Sm-Nd isotopic analyses were preformed on three bulk rock samples of ureilite Novo Urei. Both $^{143}Nd/^{144}Nd$ and $^{142}Nd/^{144}Nd$ data of the bulk rock support for a young metasomatism event at ~4.1 Ga ago on ureilite parent bodies.

Jercinovic M. J. Goodrich C. A.
Primary Chromite in Two More Main Group Ureilites — NWA 3109 (Fo 76) and EET 96328 (Fo 85). What Does Cr in Ureilites Tell Us? **[#1152]**
Primary chromite has previously been reported in only two, very ferroan (Fo 75–76) ureilites. We describe chromite in two more ureilites, one of which is Fo 85. The behavior of Cr in ureilites does not support the inference that Fo is correlated with fO_2.

Goodrich C. A. Wilson L. Michel P. Hartmann W. Sykes M. V.
What Is and What Isn't Wrong with Equilibrium Smelting Models for Ureilite Petrogenesis **[#1233]**
Equilibrium smelting is a debated model for ureilite petrogenesis. We discuss several arguments that have been raised against this model. Some of these arguments are valid and some of them are not.

Hoffmann V. H. Torii M. Funaki M. Hochleitner R. Kaliwoda M. Mikouchi T. Zolensky M.
Magnetic Phases of Almahata Sitta: New Results **[#2191]**
The multitude of magnetic phases identified in the Almahata Sitta ureilite requires investigating their individual role in terms of (1) (paleo-) magnetic record, origin and meaning, (2) physical and mineralogical background, as well as (3) petrogenesis and petrofabric.

Kaliwoda M. Hoffmann V. H. Hochleitner R. Mikouchi T. Gigler A.
New Raman Spectroscopy Data of Almahata Sitta **[#2225]**
Raman spectroscopy represents a highly valuable tool in support of our investigations on the magnetic signature of Almahata Sitta. Our main focus is on the Raman data collection of suessite and other unusual iron compounds in planetary materials.

Riches A. J. V. Day J. M. D. Liu Y. Simonetti A. Neal C. R. Taylor L. A.
Mineralogical and Trace-Element Constraints on the Petrogenesis of Angrites **[#2229]**
Texturally and compositionally diverse angrites are ancient solar system materials derived from multiple magma batches.

Mikouchi T. Sugiyama K. Satake W. Amelin Y.
Mineralogy and Crystallography of Calcium Silico-Phosphate in Northwest Africa 4590 Angrite **[#2026]**
We performed XRD on Ca silicophosphate (CSP) in the NWA 4590 angrite and found that it had an apatite structure. Since this result is consistent with our earlier work on CSP in other angrites by Raman and EBSD, all CSP in angrites may be silico-apatite.