Tuesday, September 9, 2014
POSTER SESSION I: DIFFERENTIATED METEORITES
6:00 p.m.  Tissint Room

Goryunov M. V.  Chukin A. V.  Oshtrakh M. I.
In this work four iron meteorites such as Sikhote-Alin IIAB and Anyujskij IIAB, Sterlitamak IIIAB and Aliskerovo IIIIE-an were chosen for the study using Mössbauer spectroscopy.

Fernandes V. A.  Burgess R.  Irving A.
A Report on the $^{40}$Ar-$^{39}$Ar Systematics of the Anomalous Potassic LL Metachondrite - NWA 7030 [#5073]
NWA 7030 is a 224g almost fully covered by black, glossy fusion crust and considered an anomalous potassic LL metachondrite completely devoid of chondrules. K-Ar systematics suggest two probable thermal events at ~4.12 Ga and ~2.39 Ga.

Dos Santos E.  Gattacceca J.  Rochette P.  Scorzelli R. B.
Kinetics of Tetrataenite Disordering [#5089]
Tetrataenite is a sensitive tracer of transient secondary thermal events that leads to disordering of tetrataenite into taenite. Thus, preliminary results concerning time-temperature data for tetrataenite disordering are presented.

Dos Santos E.  Munayco P.  Gattacceca J.  Rochette P.  Scorzelli R. B.  Folco L.
Gebel Kamil Iron Meteorite: $^{57}$Fe Mössbauer Spectroscopy and Magnetic Properties Data [#5090]
In this work, we present magnetic properties data along with mineralogical characterization by $^{57}$Fe Mössbauer spectroscopy for a shrapnel of Gebel Kamil meteorite, in order to evaluate the thermal/shock history revealed by these techniques.

Ray D.  Ghosh S.  Murty S. V. S.
Shock-Thermal History of Kavarpura (IVA) Iron: Evidences from Microtextures and Nickel Profiling [#5157]
Kavarpura is an inclusion-free, fine octahedrite, a member of high-Ni IVA group.

Van Roosbroek N.  Debaille V.  Pittarello L.  Hecht L.  Claeys Ph.
Veins in Silicates of IIE Iron Mont Dieu II: Melt Migration Caused by Impact? [#5178]
Mont Dieu II is a ~450kg meteorite classified as IIE iron. The primitive silicate inclusions can be linked to the H-chondrites. Thick metal veins with angular clasts crosscut these inclusions and could point to an impact-melt migration formation.
Tartese R. Mortimer J. I. Anand M. Verchovsky A. B. Franchi I. A.  
*Volatile Systematics (H, N, Cl, He, Ne, Ar) in the Achondrite Graves Nunataks 06128* [#5184]  
We present new bulk N and noble gas (Ne, Ar) data, and in-situ H and Cl isotope data obtained in phosphates, on the unique achondrite Graves Nunataks 06128, and discuss their possible significance.  

Varela M. E. Sylvester P. Souders K. Abdu Y. A. Zucolotto M. E.  
*Patos de Minas: A LA-ICP-MS Study of Kamacite and a Sulfide Globule* [#5264]  
We report on a trace element study of sulfides and metal in Patos de Minas (hexahedrite).  

Crowther S. A. Jastrzebski N. D. Weber I. Hiesinger H. Gilmour J. D.  
*Abundance and Isotopic Composition of Xenon in the Ungrouped Achondrite NWA 7325* [#5319]  
Xe releases from mid-temperature heating steps have a consistent $^{129}$Xe/$^{132}$Xe ratio suggesting a trapped component with a signature inherited from a reservoir affected by $^{129}$I decay. Higher temperature releases indicate an in situ component.  

Agee C. B. Muttik N. Ziegler K. McCubbin F. M. Sanborn M. E. Yin Q. Z.  
*NWA 8186 an Ungrouped Achondrite from the CK/CV Chondrite Parent Body* [#5385]  
We report here on a new ungrouped achondrite, NWA 8186, that has petrologic, geochemical and isotopic characteristics consistent with formation by melting of CK/CV chondrite material on its parent body.  

Tyminski Z. Brachaniec T.  
*Łowicz Meteorite — Mesosiderite from Vesta* [#5426]  
Different measurement methods imply the same parent body for MES and HED meteorites. Łowicz meteorite represents a unique type of breccia where the silica phases consist of a mixture of clasts related petrologically close to the HED suite.  

Irving A. J. Kuehner S. M. Ziegler K. Rumble D. Chen G. Conrey R. M.  
*Harzburgitic Achondrite Northwest Africa 7835 and its Potential Affinity to Ungrouped Metal-Poor “Ordinary” Chondrites* [#5332]  
This unique vesicular melt-matrix breccia shares many attributes documented in unusual metal-poor non-carbonaceous chondrites.  

Rai N. Downes H. Smith C. L.  
*Partitioning of Siderophile Elements in Partially Molten Fe-X (X= S, C, Si) Systems: Implications for Planetary Differentiation in the Ureilite Parent Body* [#5249]  
We report the solid phase - liquid phase partitioning behavior of a suite of elements in Fe-X (X = S, C, Si) systems by obtaining new element partitioning data at a pressure of 1 GPa and a range of temperature conditions between 1423–1623 K.  

Johnson D. Tyldesley J. Grady M. M.  
*Thermomechanical Properties of Meteorite Iron and the use of Meteorites in Antiquity* [#5266]  
This study aims to evaluate how people with minimal technological knowledge of iron successfully worked meteorites and if the mechanical properties of meteorite iron may have influenced the development of early metallurgical knowledge.  

Wasson J. T. Göpel C.  
*Cr and O isotopic Links Between HED, IIIAB Irons and PMG* [#5446]  
Compositions of Cr isotopes in IIIAB irons and main-group pallasites are the same as those in eucrites and diogenites. The similarity in Cr and O isotopes between HED and IIIAB is best explained if these meteorites originated on the same asteroid.