Analyses of small particles from small bodies

2:00 p.m. Matsuno J. M. * Tsuchiyama A. T. Yagishita M. Y. Koyama S. K. Watanabe T. W.  
*Origin of GEMS from a Laboratory Experiment [#5129]
We performed a condensation experiment by using a thermal plasma to investigate whether GEMS can form from high temperature gas or not. We obtained submicrometer-sized amorphous silicate grain including a Fe metal grain.

2:15 p.m. Messenger S. * Nakamura-Messenger K. Keller L. P. Clemett S. J. Nguyen A. N.  
*Nitrogen Isotopic Composition of Organic Matter in a Pristine Collection IDP [#5334]
We present coordinated transmission electron microscopy and nitrogen-isotopic measurements of the carbonaceous material in an IDP collected without the use of silicone oil.

2:30 p.m. Snead C. J. * Keller L. P. Messenger S. Nakamura-Messenger K.  
*Mineralogy and Oxygen Isotope Compositions of Two C-Rich Hydrated Interplanetary Dust Particles [#5378]
We report the mineralogy and oxygen-isotope compositions of two hydrated, carbon-rich interplanetary dust particles.

2:45 p.m. Spring N. H. * Busemann H. Hoppe P. Nittler L. R.  
*A Comparative NanoSIMS and Raman Spectroscopy Study of 26 Interplanetary Dust Particles [#5394]
We have compiled data from a large IDP study in order to investigate the relationship between mineralogy, carbonaceous material, primitive isotopic characterisics and heavy noble gas content.

3:00 p.m. Flynn G. J. * Wirick S. Sutton S. R. Lanzirotti A. Rao W.  
*Fe-Metal in a Large Cluster IDP [#5014]
We identified one 8 µm pixel in L2009R2, a large chondritic cluster IDP, having an Fe-XANES spectrum consistent with Fe metal. This suggests the IDP parent body contains metal grains similar to the one identified by Ogliore et al. (2010) in Wild 2.

*Simeio: An Ultra Ni-Poor Metal Particle from Comet 81P/Wild2 [#5309]
We report the discovery of Simeio, an ultra Ni-poor metal particle in the Stardust cometary collection. The composition of Simeio is inconsistent with most chondritic metals, and appears to be most similar to rare Ni-poor metal particles in CM.

3:30 p.m. Frank D. R. * Zolensky M. E. Le L.  
*Deducing Wild 2 Components with a Statistical Dataset of Olivine in Chondrite Matrix [#5396]
We have compiled >10^3 EPMA analyses of matrix olivine in chondrite matrix. We use both the major-element distributions and minor-element abundances to deduce the relative contributions to Wild 2 from different chondrite-forming regions.

3:45 p.m. Stodolna J. * Gainsforth Z. Jacob D. Leroux H. Butterworth A. Westphal A. J.  
*TEM/STXM Analysis of Primitive Material from the Comet Wild2 [#5135]
We report the discovery of preserved primitive fine-grained material from Comet 81P/Wild 2. It is composed of silica-rich amorphous matrix embedded with iron sulfides and silicates. An enstatite whisker is identified inside the matrix.
4:00 p.m. Baecker B. * Cordier C. Folco L. Trieloff M. Cartwright J. A. Ott U.  
*Micrometeorites from the Transantarctic Mountains: Noble Gas Indications for Multiple Populations* [5044]  
We report noble gas results (He, Ne, Ar, Kr and Xe) for 18 micrometeorites (MMs) from the Transantarctic Mountains. Overall, the results for the noble gases show major differences between the MMs, which may be an indication for multiple populations.

4:15 p.m. Genge M. J. *  
*The Atmospheric Entry and Abundance of Basaltic Micrometeorites* [5078]  
Atmospheric entry heating simulations incorporating partial melting behaviour are used to predict the abundance of unmelted basaltic micrometeorites.

4:30 p.m. Haenecour P. * Floss C. Yada T.  
*Heterogeneous Distribution of Supernova Silicate and Oxide Grains in the Solar System?* [5220]  
The higher abundance of supernova grains in AMMs/IDPs than in meteorites suggests a heterogeneous distribution of presolar grains, which might reflect formation of these materials at different times or in different parts of the solar nebula.