Tuesday, August 9, 2016
ASTEROIDAL AND COMETARY GRAINS – SMALL IS BEAUTIFUL I
8:30 a.m.   Room D

Chairs:        Susan Taylor
               Matthias Meier

8:30 a.m.      Taylor S.  *  Lever J. H.  Alexander C. M. O’D.  Brownlee D. E.  Messenger S.  Littler L. R.
               Messenger S.  Littler L. R.  Stroud R. M.  Wozniakiewicz P.  Clement S.
               Sampling Interplanetary Dust Particles from Antarctic Air [#6162]
               We are undertaking a NASA and NSF supported project to filter large volumes of clean Antarctic air to
               collect a broad range of cosmic dust, including CP-IDPs, rare ultra-carbonaceous particles and particles
               derived from specific meteor streams.

8:45 a.m.      Keller L. P.  *  Snead C. J.  McKeegan K. D.
               Coordinated Analyses of Hydrated Interplanetary Dust Particles:  Samples of Primitive Solar
               System Bodies [#6183]
               The unusual oxygen isotopic compositions and high C contents suggest that hydrated IDPs are derived
               from primitive sources not yet represented in meteorite collections such as outer main belt P- and D-type
               asteroids or possibly comets.

9:00 a.m.      Flynn G. J.  *  Keller L. P.  Wirick S.  Hu W.  Li L.  Yan H.  Huang X.  Nazaretski E.
               Lauer K.  Chu Y. S.
               High-Nickel Iron-Sulfides in Anhydrous, GEMS-Rich IDPs [#6205]
               We used the new Hard X-ray Nanoprobe at the NSLS II to map the element distributions, with ~15 nm
               spatial resolution, in anhydrous, GEMS-rich IDPs and found high-Ni, Fe-sulfides, previously thought
               only to form by hydrous alteration on parent bodies.

9:15 a.m.      Ott U.  *  Baecker B.  Trieloff M.  Cordier C.  Folco L.
               Noble Gas Inventory of Transantarctic Mountain Micrometeorites:  Insights into
               Their Provenance [#6210]
               We summarize results from a noble gas study of micrometeorites collected in traps on the tops of the
               Transantarctic Mountains. Cosmogenic Ne is compared with model predictions. One micrometeorite
               may be linked to an achondritic source.

9:30 a.m.      Genge M. J.  *  Davies B.  Van Ginneken M.  Tomkins A.
               Volatile-Bearing Phases in the Precursors of Iron-Type Cosmic Spherules [#6377]
               We report the presence of re-entrant metal beads in I-type cosmic spherules in which veins of metal are
               extruded into surrounding wustite. The phase relations of Fe-Ni-O and the mechanism of extrusion
               suggest the presence of volatile elements.

9:45 a.m.      Larsen J.  *  Genge M. J.
               The Collection of Urban Micrometeorites — Not an Urban Myth [#6341]
               We report the discovery of >500 micrometeorites (150–600 µm in size) collected from roofs in urban
               areas in Europe. They are shown to consist of S-type cosmic spherules on the basis of their textures,
               mineralogies and bulk compositions.