

Monday, March 19, 2018
PRESOLAR, INTERPLANETARY, AND COMETARY DUST
2:30 p.m. Waterway Ballroom 6

[M154]

Chairs: George Flynn
 Katherine Burgess

- 2:30 p.m. Liu N. * Gallino R. Davis A. M. Trappitsch R. Stephan T. et al.
[*New Constraints on the Major Neutron Source for s-Process Nucleosynthesis in AGB Stars*](#) [#2035]
 We provide new constraints on the ¹³C pocket in AGB stars by comparing MS, Y, and Z grain data with updated Torino AGB models for heavy-element isotopic ratios.
- 2:45 p.m. Amari S. * Kita N. T. Gyngard F.
[*Oxygen Isotopic Composition of Presolar Graphite Grains from Murchison Fraction KFB1*](#) [#1818]
 The O isotopic distribution of presolar graphite grains from Murchison fraction KFB1 is different from that of KFC1 grains.
- 3:00 p.m. Hoppe P. * Leitner J. Kodolányi J.
[*High-Resolution NanoSIMS Studies of Presolar Silicates: New Insights into the Galactic Chemical Evolution of Magnesium and Silicon Isotopes*](#) [#1123]
 We report high-resolution NanoSIMS isotope data acquired with the Oregon Physics RF plasma source for Mg and Si in presolar silicate grains from RGB/AGB stars.
- 3:15 p.m. Piquette M. * Poppe A. R. Bernardoni E. Szalay J. R. James D. et al.
[*Student Dust Counter: Status Report at 38 AU*](#) [#2537]
 SDC is a dust detector observing the interplanetary dust distribution from Earth to Pluto and beyond. We present observational results and model comparisons.
- 3:30 p.m. Burgess K. D. * Stroud R. M. Joswiak D. Brownlee D. M.
[*Hydrogen and Helium in Vesicles in IDP Grains Analyzed with Scanning Transmission Electron Microscopy*](#) [#1249]
 The contents of nanoscale vesicles in IDPs provide information about processes experienced by the grain in space, including solar wind irradiation and heating.
- 3:45 p.m. Oglione R. C. * Lewis J. B. Utt K. L. Nagashima K. Krot A. N. et al.
[*Oxygen Isotopic Composition of a Cometary Enstatite Ribbon: Evidence for Condensation from ¹⁶O-Poor Gas in the Outer Solar System*](#) [#2539]
 We measured an enstatite ribbon from a giant cluster interplanetary dust particle to be ¹⁶O-poor and discuss the implications.
- 4:00 p.m. Defouilloy C. * Joswiak D. J. Brownlee D. E. Kita N. T.
[*High Precision Oxygen Three-Isotope Analyses of Probable Cometary Material from a Giant Cluster IDP*](#) [#2167]
 Measurement of Oxygen 3-isotope ratios and Mg# in coarse silicate grains suggest strong link between an IDP of probable cometary origin and comet Wild 2.

- 4:15 p.m. Joswiak D. J. * Brownlee D. E. Gainsforth Z. Westphal A. J.
[*Fe-Ni Sulfides in Kool Grains from Comets: Support for High Temperature Igneous Origins*](#) [#1686]
The large range of Ni abundances in Fe-Ni sulfides in Kool grains from comet samples is consistent with high temperature igneous origins and variable S losses.
- 4:30 p.m. Haenecour P. * Howe J. Y. Zega T. J. Wallace P. Atsushi M. et al.
[*Mineralogy and ¹⁵N-Rich Organic Matter in the Fine-Grained Antarctic Micrometeorite T98G8: Evidence for a Cometary Origin?*](#) [#1507]
We report new 30kV EDS and EELS data on N isotopically anomalous organic matter in fine-grained Antarctic micrometeorite, T98G8.