

Tuesday, July 24, 2018  
**PRESOLAR GRAINS AND ISOTOPIC ANOMALIES**  
 3:00 p.m. Green Room

**Chairs: Bradley Meyer**

**Maximilien Verdier-Paoletti**

- 3:00 p.m. Liu N. \* Stephan T. Boehnke P. Gallino R. Cristallo S. Trappitsch R. Davis A. M. Nittler L. R. Alexander C. M. O'D. Pellin P.  
[Stellar Origins of Presolar Y and Z Grains: Constraints from Their Molybdenum Isotopic Compositions](#) [#6040]  
 We present Mo isotopic compositions of 42 presolar Y and Z grains obtained by the CHILI instrument and discuss the stellar origins of Y and Z grains by comparing the grain data with Torino AGB model calculations for low-metallicity AGB stars.
- 3:15 p.m. Verdier-Paoletti M. J. \* Nittler L. R. Stroud R. M. Wang J.  
[High-Resolution Isotopic Study of Fe,Ni and Ti\(C,N\) Subgrains in the Largest Known Presolar SiC X-Grain](#) [#6258]  
 We report high-resolution measurements of Ti,Fe and Ni isotopes in 100's nm long subgrains in a FIB lift-out of Bonanza, the largest known SiC grain formed in a Type II supernovae (SNe). Their isotopic compositions favor an exsolution formation.
- 3:30 p.m. Kodolányi J. \* Hoppe P. Vollmer C.  
[The Formation of Large SiC Grains in Clumpy Supernova Ejecta](#) [#6222]  
 We modelled the growth of graphite and SiC grains in SN ejecta of different compositions. SiC grains larger than ca. 1  $\mu\text{m}$  most likely form in high-density "clumps" of their parent gas. Some SiC grains form without prior condensation of graphite.
- 3:45 p.m. Lewis J. B. \* Floss C. Isheim D. Seidman D. N.  
[Study of Asymptotic Giant Branch Stars and Type II Supernovae Via nm-Scale Isotopic Analyses of Presolar Silicon Carbide by Atom-Probe Tomography](#) [#6269]  
 Nanometer-scale spatially resolved analysis of presolar SiC can probe AGB and SNII phenomena. We study SiC grains using atom-probe tomography both in situ and after acid separation from the matrix of carbonaceous chondrites.
- 4:00 p.m. Meyer B. S. \* Bojazi M. J.  
[The Age Spectrum of Isotopes in the Early Solar System and Implications for Cosmic Chemical Memory](#) [#6331]  
 We use an inhomogeneous chemical evolution model to compute the age spectrum of isotopes in the solar system. We expect that the younger an isotope is the more likely it is to be found in small dust grains and/or in the surface of dust grains.
- 4:15 p.m. Smith R. L. \* Blake G. A. Boogert A. C. A. Pontoppidan K. M. Tucker M. A.  
[Carbon Reservoirs in Protoplanetary Systems Surveyed Across the Galaxy](#) [#6362]  
 We present our most current  $^{12}\text{C}/^{13}\text{C}$  Keck survey results that include 19 massive YSOs, 5 low-mass YSOs, and 2 Galactic Center targets. We find cold CO along a metallicity gradient for massive YSOs, and warm-phase similarities in a range of YSOs.