

Tuesday, March 18, 2014
STARDUST MISSION AND COSMIC DUST
3:15 p.m. Waterway Ballroom 5

[T254]

Chairs: Andrew Westphal
Natalie Starkey

- 3:15 p.m. Westphal A. J. * Stroud R. M. Bechtel H. A. Brenker F. E. Butterworth A. L. et al.
[Final Reports of the Stardust ISPE: Seven Probable Interstellar Dust Particles](#) [#2269]
Here we present the final reports of the Stardust Interstellar Preliminary Examination. We describe seven probable interstellar dust impacts.
- 3:30 p.m. Joswiak D. J. * Brownlee D. E.
[Refractory-Rich Materials in Comets: CAIs, Al-Rich Chondrules and AOA's from Comet Wild 2 and a Giant Cluster Interplanetary Dust Particle \(IDP\) of Probable Cometary Origin and Comparison to Refractory-Rich Objects in Chondrites](#) [#2282]
Six refractory-rich cometary particles including CAIs, Al-rich chondrules, and an AOA are most similar to more evolved refractory materials in chondrites.
- 3:45 p.m. Nakashima D. * Ushikubo T. Weisberg M. K. Zolensky M. E. Ebel D. S. et al.
[Lack of Evidence of In-Situ Decay of Aluminum-26 in a FeO-poor Ferromagnesian Crystalline Silicate Particle, Pyxie, from Comet Wild 2](#) [#1172]
An FeO-poor ferromagnesian Wild 2 particle shows no resolvable excess of ^{26}Mg derived from in situ decay of ^{26}Al , suggesting late formation of the particle.
- 4:00 p.m. Gainsforth Z. * Ogliore R. C. Bustillo K. Westphal A. J. Butterworth A. L.
[Ni Zoned Nano-Pyrrhotite from Stardust Track C2062.2,162 \(Cecil\)](#) [#2637]
Condensation via troilite to pyrrhotite and other mechanisms are considered for a Ni-zoned pyrrhotite from a Stardust grain to understand its origin.
- 4:15 p.m. Snead C. J. * McKeegan K. D. Boehnke P.
[Oxygen Isotope Compositions of Two Stardust Impact Crater Residues](#) [#2928]
We measured the oxygen-isotope compositions of residues within two impact craters from Stardust foils.
- 4:30 p.m. Starkey N. A. * Franchi I. A. Lee M. R.
[Heavy Oxygen Isotope Ratios in an Interplanetary Dust Particle](#) [#1870]
The first report of heavy O-isotope ratios in an IDP investigated by NanoSIMS and TEM are discussed in relation to their potential formation and survival.
- 4:45 p.m. De Gregorio B. T. * Stroud R. M. Nittler L. R. Kilcoyne A. L. D.
[Extreme Aliphatic and Aromatic Organic Matter Preserved in Comet 81P/Wild 2](#) [#2759]
TEM, XANES, and NanoSIMS analysis of two C-rich cometary samples reveal that early nebular processes produced both refractory aliphatic and graphitic carbon.