

Cometary Cell C2044

Track 41

Images

Aerogel Cell:
[C044-01.jpg](#)

Track and Grains:
[C044_Track7.jpg](#)

[Track.JPG](#)

[Track_7_02.jpg](#)

[C044,0,41,2,0_and_41,3,0_naked_particles.pdf](#)

Track History: Keystone prepared by C. Snead and A. Westphal at Berkeley Feb 06.

Track Characteristics

Type: Turnip track

Length: ~4,000 μm

Grain diameters: Not measured

Allocation History

Microtomed samples:

Results

Track:

Markus *et al.* (various): Dozens of particles. They appear to be much more homogenous (e.g., Ni/Fe, Zn/Fe, FeXANES) than the particles in the smaller tracks. XANES shows Fe is Fe⁰. Implies a dependence of homogeneity of particle size.

Joswiak *et al.* (Ebeam): Present analyses of enstatite from the same ~5 μm grain that was present in the bulb area of the track. All enstatite analyses show Cr higher than Fe. Also, I observed 20 - 50 nm round Ni-free Fe inclusions (metal?) around or possibly in the enstatite grains. At first I thought these grains were present in the enstatite as inclusions but now I'm not so sure and need to go back sometime and check. Also, a few slivers in the interior of this 5 μm grain appear to be forsterite but edx analyses of these grains are non-stoichiometric (for olivine). Lots of the usual melt with metal beads is also present in the bulb area and also as a rim on the 5 μm grain which the enstatite analyses are from. Nice vesicles in SiO₂-rich glass with hollow Fe sulfides plating their interiors are visible as are solid Fe-Ni metal grains with Fe sulphide rims.

Data Files: No Data

