

# Cometary Cell C2012

## Images

**Aerogel Cell:** [C2012-01.jpg](#)  
[C2012-20x.jpg](#)

**Cell History:** Cell C2012 was removed from the cometary grid on May 18, 2006.

**Track Information:** This cell had several notable tracks and over 50 small ones.

## Feature Images

## Allocation History

## Results

### Log Entries

**Note:** All track / features (e.g., T1) numbers assigned during the Level 3 scanning are to be considered “**Temporary**” and in do not relate to the “Official” track number that is assigned when a given features is extracted (e.g., Keystoned) from a tile. Abbreviations: EH – Entrance Hole, TP – Terminal Particle, MTW – Maximum Track / Bulb Width, TL – Track Length.

#### 05-22-06 – TH See

Jack Warren & Tom See began Level 3 on the tiles pulled last week by Mike, Fred, Jack, & Ron.

Began on tile **C012**  
Capture 7-depth profiles

This tile has numerous small tracks scattered about the entire tile. Several of the artificial tracks or fiducial marks are easily visible.

Front left fiducial measures ~ 976  $\mu\text{m}$  deep from what is visible in the image.

C012-T1 – 4 – The bifurcated track on the left side is ~ 300, 210, & 190  $\mu\text{m}$  in length with MTW ~ 28  $\mu\text{m}$ . The second longest on the far right side of image is ~ 190  $\mu\text{m}$  with EH of ~ 12 and MTW of ~ 25  $\mu\text{m}$ . Particles at the end of the bifurcated track are on the order of 5  $\mu\text{m}$  in size. One of the other two tracks in the image near the left side is ~ 170  $\mu\text{m}$  with EH of < 10 and MTW of ~ 15  $\mu\text{m}$ .

C012-T5 is on the order of 600  $\mu\text{m}$  in length. Particle is on the order of 10  $\mu\text{m}$  or smaller. MTW of ~ 22  $\mu\text{m}$ .

#### 05-23-06 – TH See

Failed to re-zero system, so the coordinates with the images files for Tracks 6 – 20 are not accurate.

C012-T6-8 – Again, a series of small tracks, one near the corner fiducial mark or poke. Small terminal particles visible on two of three tracks. All tracks small and only the one on the far left of the image is appears to be visible from the complete top to bottom. T6 is on the order 120  $\mu\text{m}$  in length, the middle track is very blurry and could be about 200  $\mu\text{m}$  in length, while the one on the right of the image is ~ 100  $\mu\text{m}$  in length.

C012-T9 – Small track near back surface. Track is on the order of ~1230  $\mu\text{m}$ , if not a bit longer based on the angle of the tile to the microscope system. Particles are less than 10  $\mu\text{m}$  in size. Several visible at end of track. EH of ~ 30 with MTW of ~ 60  $\mu\text{m}$ .

C012-T10-15 – Another cluster of small tracks, the longest being ~525  $\mu\text{m}$  long and the shortest being ~ 90  $\mu\text{m}$  in length. Left to right in image:

1. EH – 21, MTW - ~38, TL – 445
2. TL 250
3. EH – 14, MTW – 27, TL – 525
4. TL – 225
5. TL - 260
6. TL – 115
7. TL – 170
8. MTW – 35, TL – 330
9. TL – 217

C012-T16-17 – Feature on left, MTW ~ 22 and track length of 355. On right, EH of ~ 15 with TL of 378  $\mu\text{m}$ . Approximately 8.8 mm from left end.

C012-T18-20 – Left to right, MTW ~ 22 and TL of 500, TL ~ 100, and MTW ~ 20 and TL of 352  $\mu\text{m}$ . – These three are near the front surface ~ 9.8 mm from left end. Track on left has an ~ 8 to 10  $\mu\text{m}$  TP.

C012-T21 – Approximately 1 cm from left end and 6.5 mm in from front surface. Track is on the order of 250  $\mu\text{m}$  in length.

C012-T21 plus field of view shows nine small tracks, some may have already been imaged in previous track images. The longest of the cluster is ~500  $\mu\text{m}$ .

From Left to Right:

1. EH - 20, MTW - 31, TL – 550
2. EH - , MTW - , TL – 230
3. EH - 15, MTW - 26, TL – 520
4. EH - , MTW - , TL – 225
5. EH - , MTW - , TL – 125
6. EH - , MTW - , TL – 227
7. EH - 20, MTW - 31, TL – 350
8. EH - , MTW - , TL – 180
9. EH - , MTW - , TL – 356
10. EH - , MTW - , TL – 185

Largest visible TP is ~ 15  $\mu\text{m}$  that is associated with the middle track of the group.

C012-T30-31 – Near front surface. Longest is bifurcated with lengths of ~310 & 283  $\mu\text{m}$ . MTW of ~ 23  $\mu\text{m}$ . Shorter track is bulbous with EH of ~ 12, MTW of ~ 28, and track length of ~ 135  $\mu\text{m}$ . Particles present on the order of 10  $\mu\text{m}$  or less in size.

C012-T32-33 – 32 on left has an EH of ~ 18  $\mu\text{m}$ , a MTW of ~ 46  $\mu\text{m}$ , and a track length of ~ 660  $\mu\text{m}$ . The short 33 has an EH of ~ 15  $\mu\text{m}$ , a MTW of 35  $\mu\text{m}$ , and a track length of ~ 390  $\mu\text{m}$ .

C012-T34-36 – Left to right, 34 is very small ~ 67  $\mu\text{m}$  long. 35 is a small carrot-shaped track with an EH of ~11  $\mu\text{m}$ , a MTW of ~ 30  $\mu\text{m}$ , and a TL of ~ 162  $\mu\text{m}$ . The largest track (36) shows an EH of ~ 24  $\mu\text{m}$ , a MTW of ~ 92  $\mu\text{m}$ , and TL of ~ 360  $\mu\text{m}$ . All terminal particles visible are ~ 5  $\mu\text{m}$  in size.

C012-T37-41 – A series of small tracks. Again, left to right, 37 MTW is ~ 52 with a TL of ~ 215  $\mu\text{m}$ . 38 has a MTW of ~ 25 and length of ~ 163  $\mu\text{m}$ . 39 has a MTW of ~ 17 and length of ~ 220  $\mu\text{m}$ . Track 40 is ~ 145  $\mu\text{m}$  long. Too small or blurry to get an EH or MTW. **There is no 41. I simply miscounted. Track 41 N/A. Those track showing terminal particles suggest the particle size to be 5 to 8  $\mu\text{m}$  in size.**

C012-T42 - ~ Small narrow track with an EH of ~ 8  $\mu\text{m}$ , a MTW of ~ 28  $\mu\text{m}$ , and a length of ~ 450  $\mu\text{m}$ .

C012-T43-44 - ~ 43 shows an EH of ~ 15  $\mu\text{m}$ , a MTW of ~ 30  $\mu\text{m}$ , and a length of ~ 262  $\mu\text{m}$ . 44 is very small and narrow. Only a length of ~ 225  $\mu\text{m}$  could be obtained.

C012-T45-46 - 45, the larger or more bulbous of the two shows an EH of ~ 12, a MTW of ~ 30, and length of ~ 185  $\mu\text{m}$ . Only a track length was obtainable on 46 and it was ~ 154  $\mu\text{m}$ . Small < 5  $\mu\text{m}$  terminal particle visible with 46.

C012-T47-48 - Track 48 on the right of image is ~ 440  $\mu\text{m}$  in length with a MTW of ~ 24  $\mu\text{m}$ . Could not see the EH. Track 47 on the left may not actually be a track, but I think it is. What I could see, the track would be ~ 225  $\mu\text{m}$  long or so with what appears to be a large terminal particle of ~ 15  $\mu\text{m}$  across.

C012-T49 - May not be the entrance hole, but what I identified as the EH is ~ 20  $\mu\text{m}$  wide, while the MTW is ~ 34  $\mu\text{m}$  across. The track length is ~ 370  $\mu\text{m}$  and the TP is ~ 5  $\mu\text{m}$ .

C012-T50 - Small track, somewhat blurry in the image. Appears to have a MTW of ~ 25 and track length of ~ 395  $\mu\text{m}$ .

C012-T51 - Could not locate stylus or terminal particle out the bottom of this small bulbous track, but I suspect that one exists. EH is on the order of ~ 11  $\mu\text{m}$ , with MTW of ~ 33  $\mu\text{m}$  and length of visible bulbous portion of ~ 181  $\mu\text{m}$ .

C012-T52-57 - Numerous short tracks. All less than 150  $\mu\text{m}$  in length and some not even showing up in the image, so no associated measurements. For those that I could see well enough to measure, from left to right in the image, MTW of ~ 10 and length of ~ 78  $\mu\text{m}$ . Next a length of ~ 57  $\mu\text{m}$ . Next two, not measurable. Next one, MTW of ~ 5  $\mu\text{m}$  and length of 91  $\mu\text{m}$ . Last two have lengths of 53 & 68, respectively.

C012-T58 - EH is ~ 22, with MTW of ~ 62 and length of either ~ 1060 or 1290  $\mu\text{m}$  depending on the exact location of what I believe to be potential terminal particles.

Right Front Fiducial - Measures ~ 1040  $\mu\text{m}$  in length.

Took 7x & 20x top view mosaics.

Also acquire images of tile left side fiducial marks and two tracks with the tile compressed in the Level 3 holder as well as with all pressure released to compare the angle of these items. Mike Z liked what he saw and asked for similar images from other tiles as possible.