Stardust SEM Bullet Survey Volume 1

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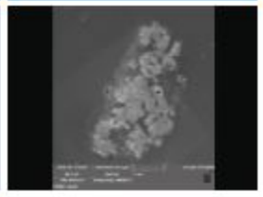
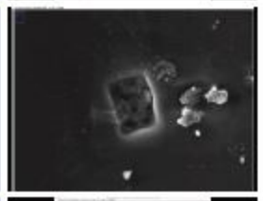
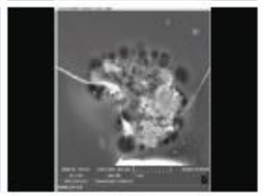
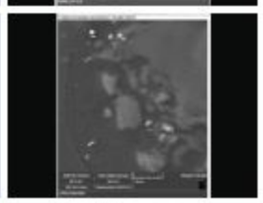
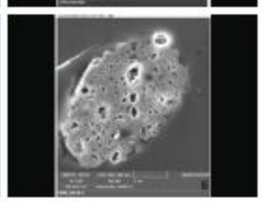
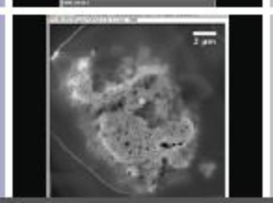
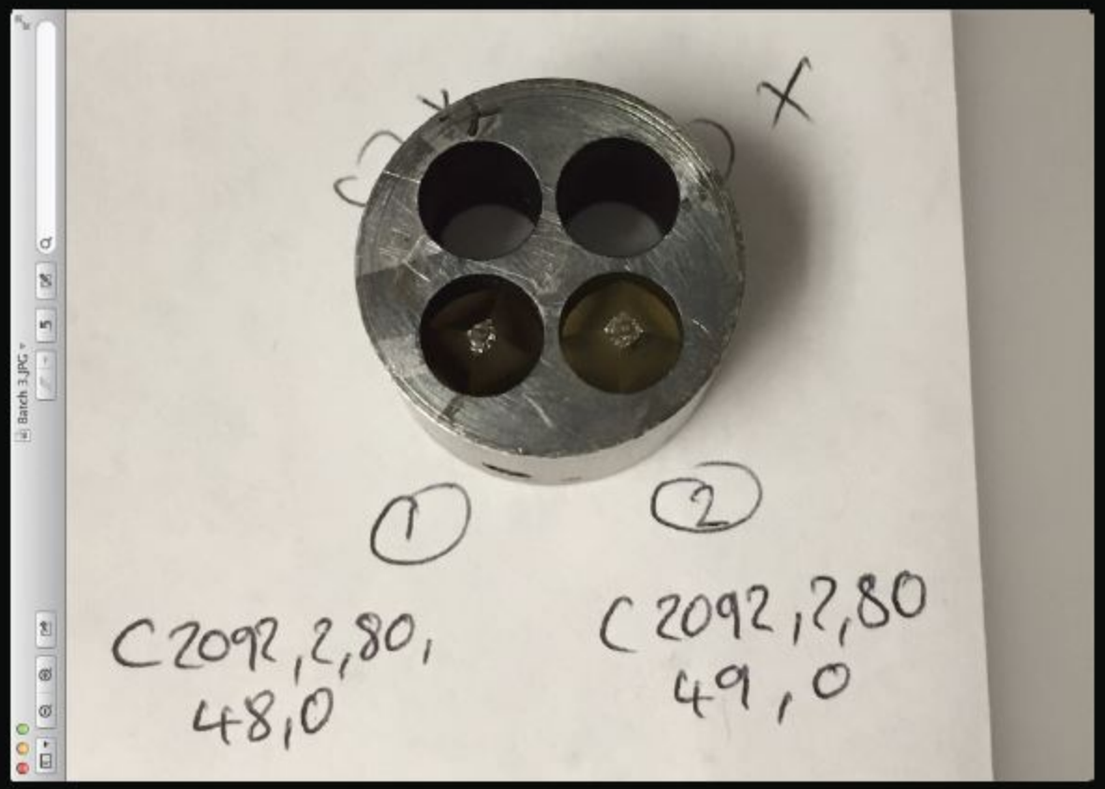
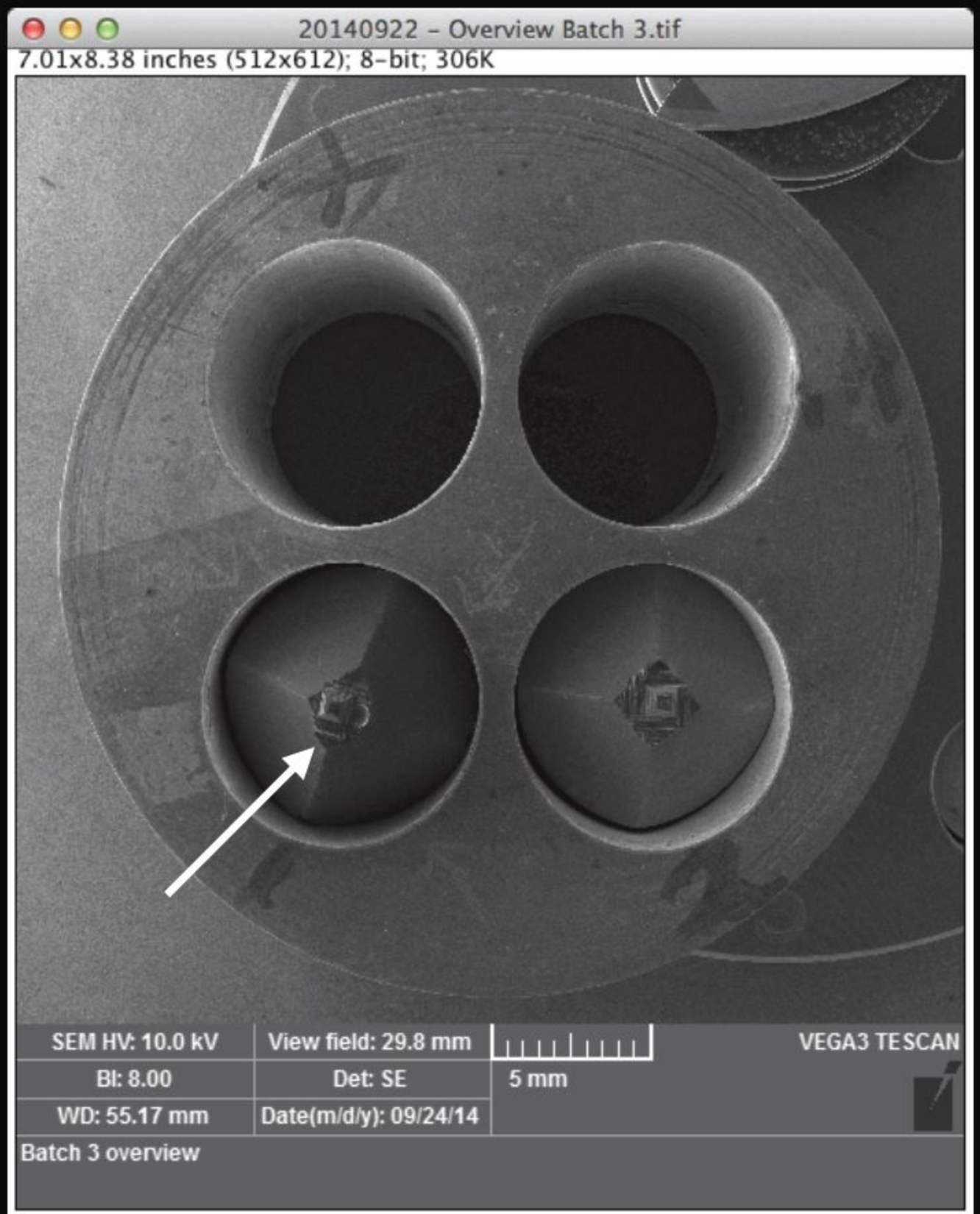
Summary

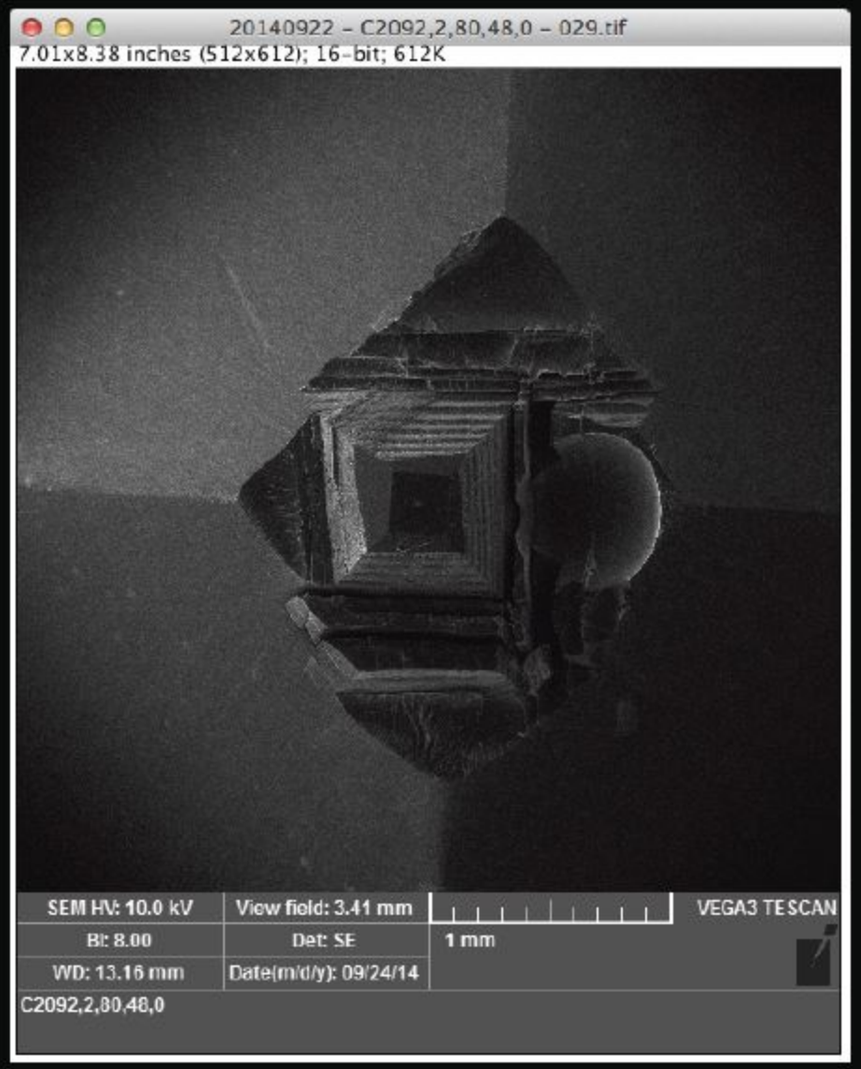
Bullet	Image	EDS	Summary	Recommend SIMS?
C2004,1,44,4,0		Y	Material clearly visible. Fine grained.	Y
FC12,0,16,1,0		N	Nothing visible.	N
FC3,0,2,2,0		N	Material visible, but likely altered by previous experiment.	N
C2054,0,35,16,0		N	Material visible, possibly altered by previous experiment	N
C2044,2,41,3,0		Y	Material visible. Heterogeneous assembly of different phases.	Y
C2092,2,80,46,0		Y	Aerogel visible, not clear if much track is present.	Y
C2092,2,80,48,0		Y	Material clearly visible. Fine grained.	Y
C2092,2,80,49,0		Y	Material clearly visible. Fine grained.	Y

Overview of third batch

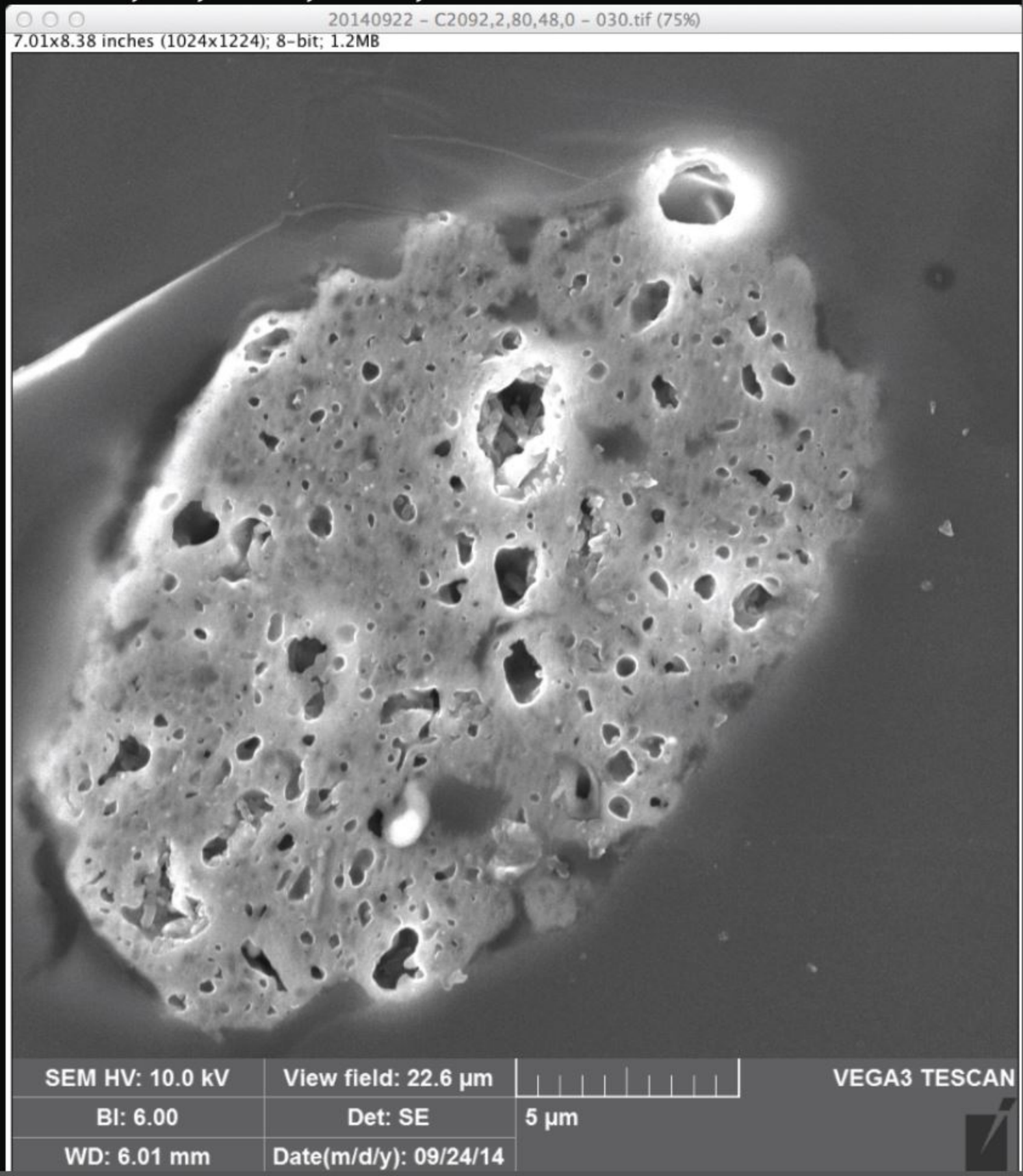




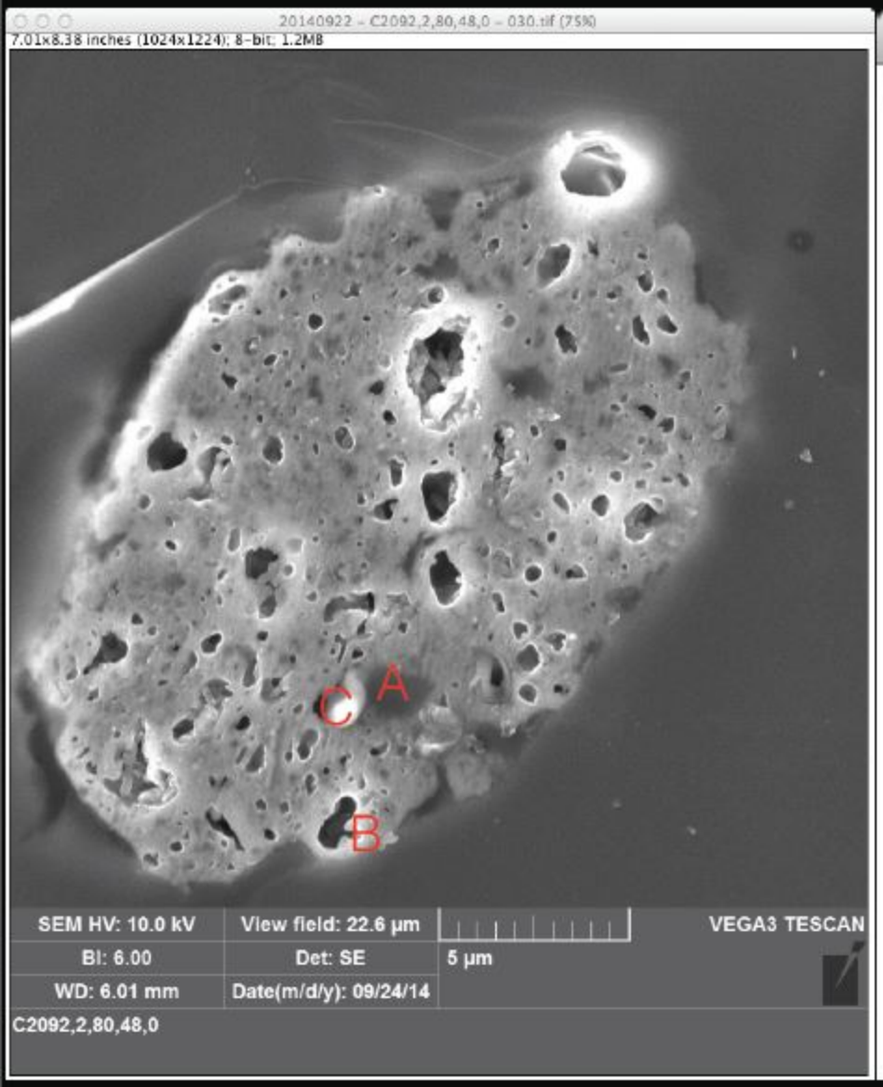
C2092,2,80,48,0

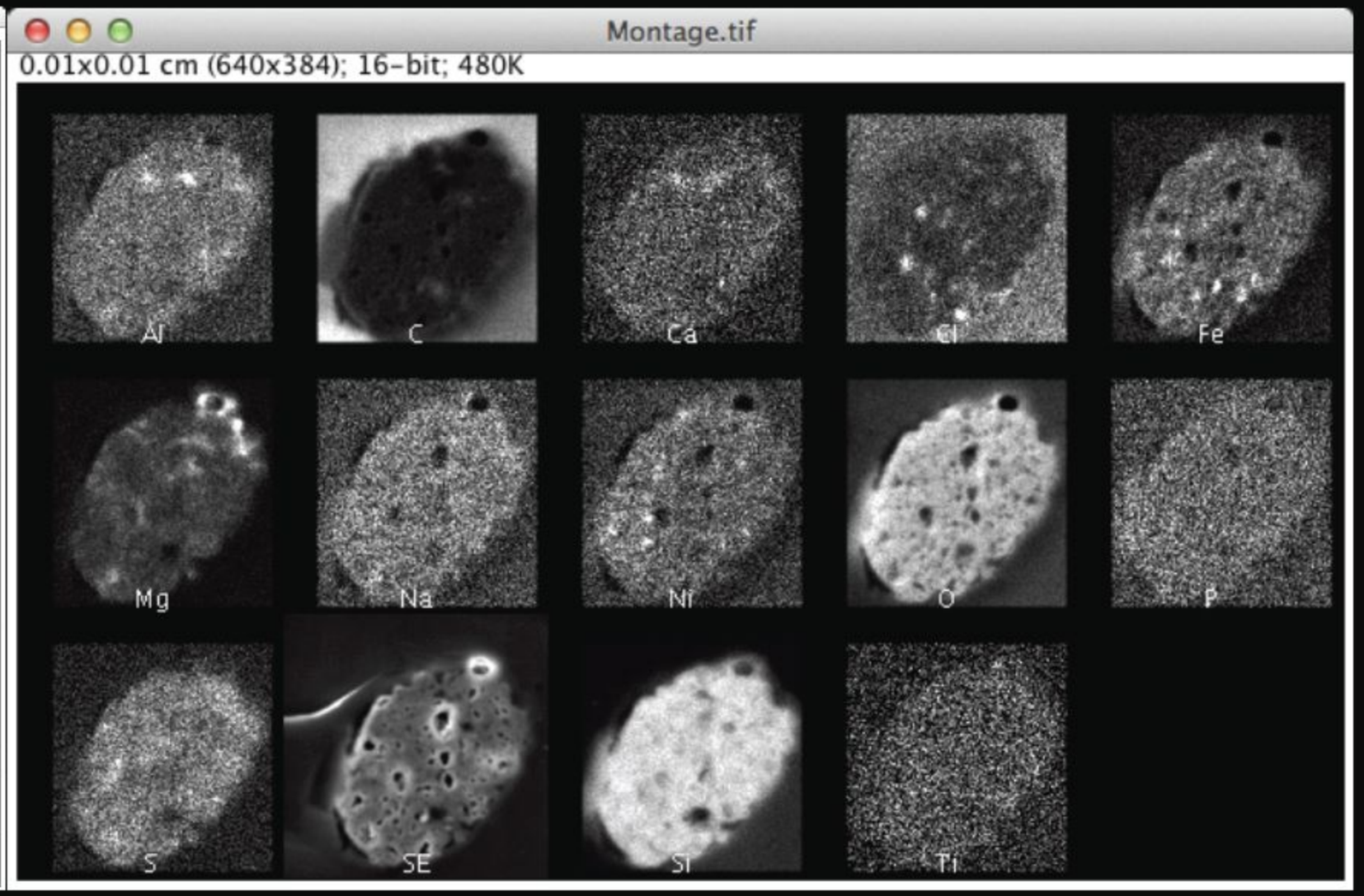


Well, well! That's a beaut!



C2092,2,80,48,0 - EDS





Notice the Cl hotspots. I don't think they are just a straightforward incorporation of epoxy because look at A vs B. A is looking like a little island of epoxy that impregnated the blob. However, B has an even higher Cl concentration which means either:

1) Cl was concentrated in the original impactor
2) Chemistry occurred between the epoxy and that portion which produced more epoxy cross-linking.

Now notice C. It is Fe rich. It is probably a grain — not just a shadow grain. It shows a well defined boundary in the SE image. There are some others to be seen around too — little bright spots mostly. The impregnation of epoxy throughout the center of this object show it was really fluffy. It would be neat to see how much OH there is in that glass.

C2092,2,80,48,0 - after EDS