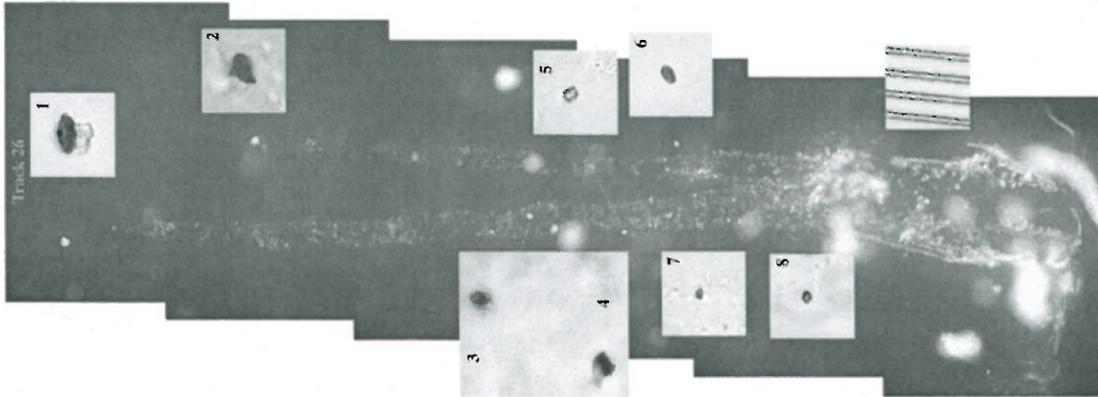


Track 26 (Ada): C2054,5,26



Type: A
Length: > 2 mm

Sample type: microtomed slices embedded in acrylic

Analysis method: TEM

State of samples: variable surface carbon contamination from electron beam, possible damage to internal crystalline structures

Mineralogy and apparent grain sizes

Terminal particle (20 x 30 μm) - Ada

*← early estimate
actual ~ 10 x 20 μm*

SiO₂ nodules (tridymite) with interstitial Mn-bearing fayalite.

Tridymite is beam sensitive and amorphitizes easily. DP matches tridymite.

Minor 50 nm Fe-sulfide inclusions.

Trace 75 nm Cu-bearing Fe-sulfide inclusions in SiO₂ host.

Partial compressed aerogel rim

Fragment 2 (size?) – Ada B

SiO₂ nodules (tridymite) with interstitial Mn-bearing fayalite. Mineralogy similar to TP.

Minor chromite inclusions in SiO₂ host.

Partial compressed aerogel rim.

Other minor/trace minerals observed:

Fe-sulfide

STARDUST SAMPLE RETURN FORM

PI Name	<input type="text" value="Don Brownlee"/>	Return Date	<input type="text" value="22 Aug 2014"/>
---------	---	-------------	--

Enter Return Sample Number(s):

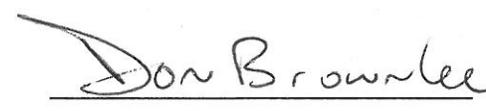
1.	<input type="text" value="C2054,5,26"/>	6.	<input type="text"/>
2.	<input type="text"/>	7.	<input type="text"/>
3.	<input type="text"/>	8.	<input type="text"/>
4.	<input type="text"/>	9.	<input type="text"/>
5.	<input type="text"/>	10.	<input type="text"/>

Comments:

This is the potted butt of the terminal particle of Track 26 (Ada A). It is mounted in acrylic in a raised mesa that was cut in the mount so that we could cut microtome sections. This is a ~20 μ m particle with an attached chunk of compressed aerogel that should not be confused with the comet sample. The rare sample is composed of Mn-bearing fayalite and silica.

Any SEM study of the potted butt should be done with the consideration that acrylic is more prone to distortion or even melting in the beam than epoxy is.

I am returning the above samples(s) that were assigned to me by the Stardust Sample Curator under the terms and conditions of the Stardust loan agreement:

	<u>22 Aug 2014</u>	
Signature	Date	Sender's name, printed

PLEASE SIGN THIS FORM AND INCLUDE IT WITH RETURNED SAMPLES SEND RETURNS TO THE STARDUST SAMPLE CURATOR

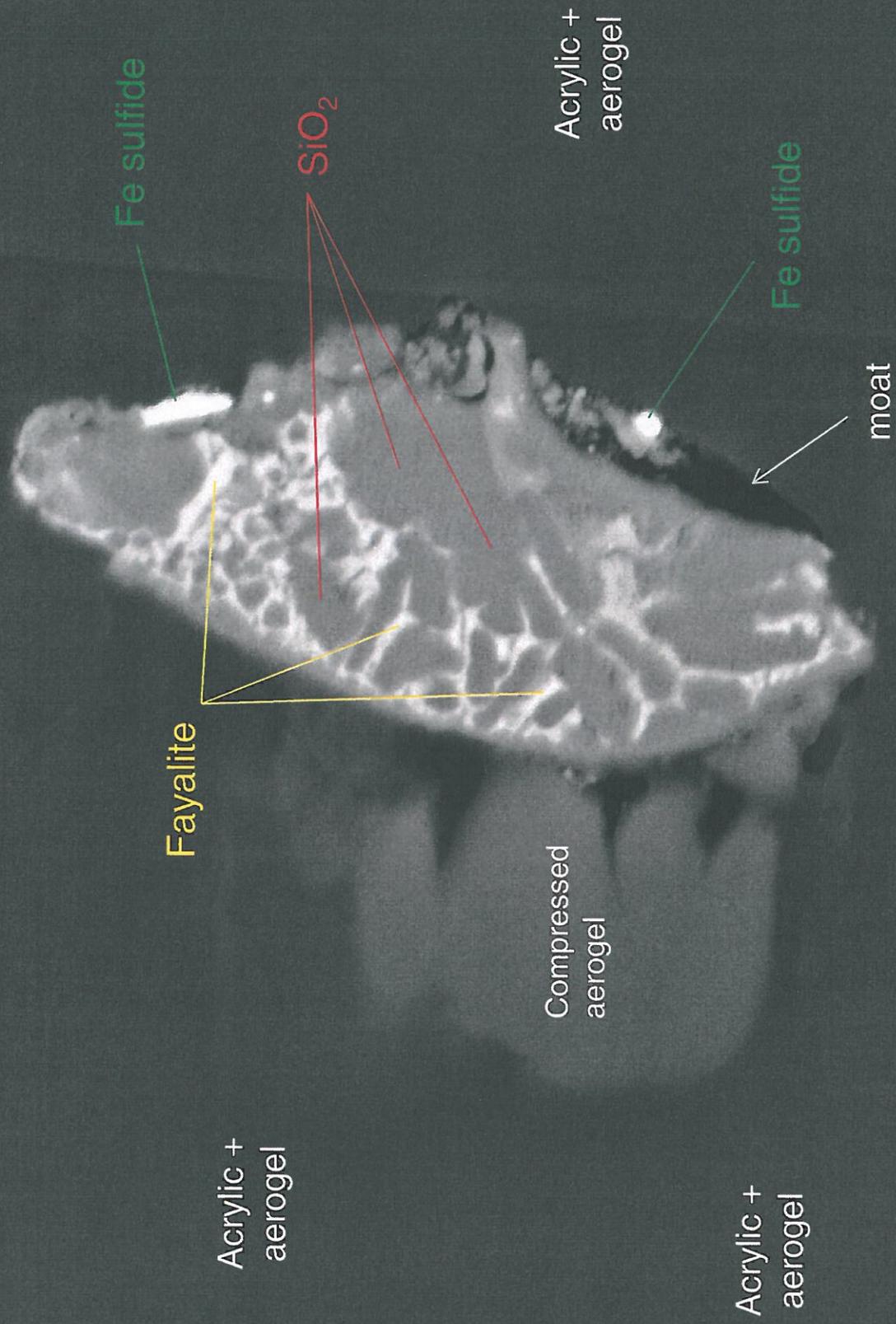
Dr. Michael Zolensky
National Aeronautics and Space Administration
Lyndon B. Johnson Space Center
Mail Code KT
2101 NASA Parkway
Houston, TX 77058-3696

For Internal Curation Use Only

Received:

Track 26 - ADA

BSE Image



UW JSM7000 COMPO 10.0kV X4,000 1µm WD 10.0mm

T26 (Ada) terminin particle
in acrylic potted butt



compressed aerogel

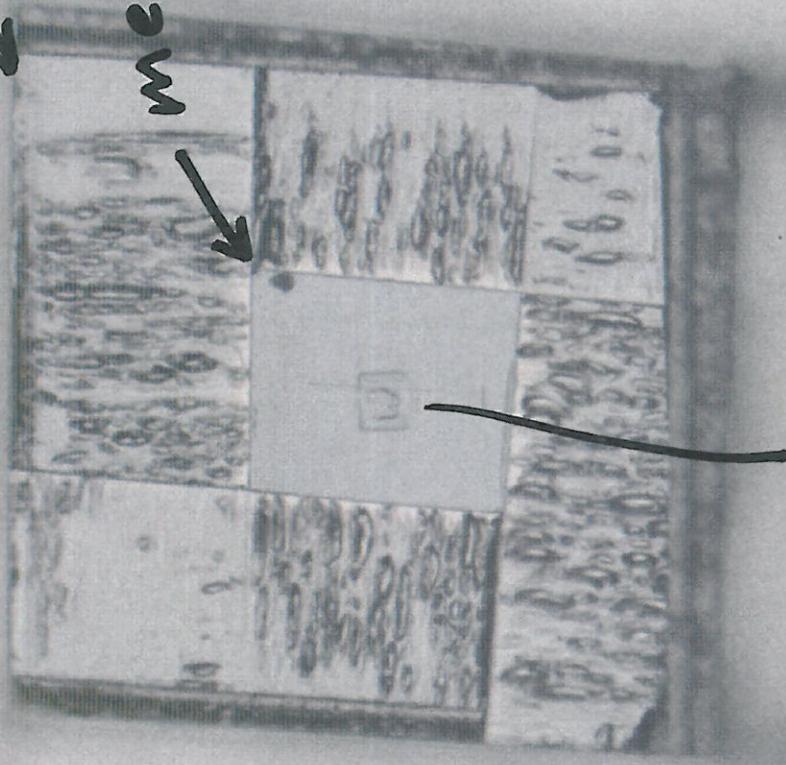


10µm scale bars

T26 (A13)
(low mag)

Trim mesa

mesa



Sample + raster burn

T26(Add)
(how many)

