

Computed Tomography (CT) in Aircraft Accident Investigations

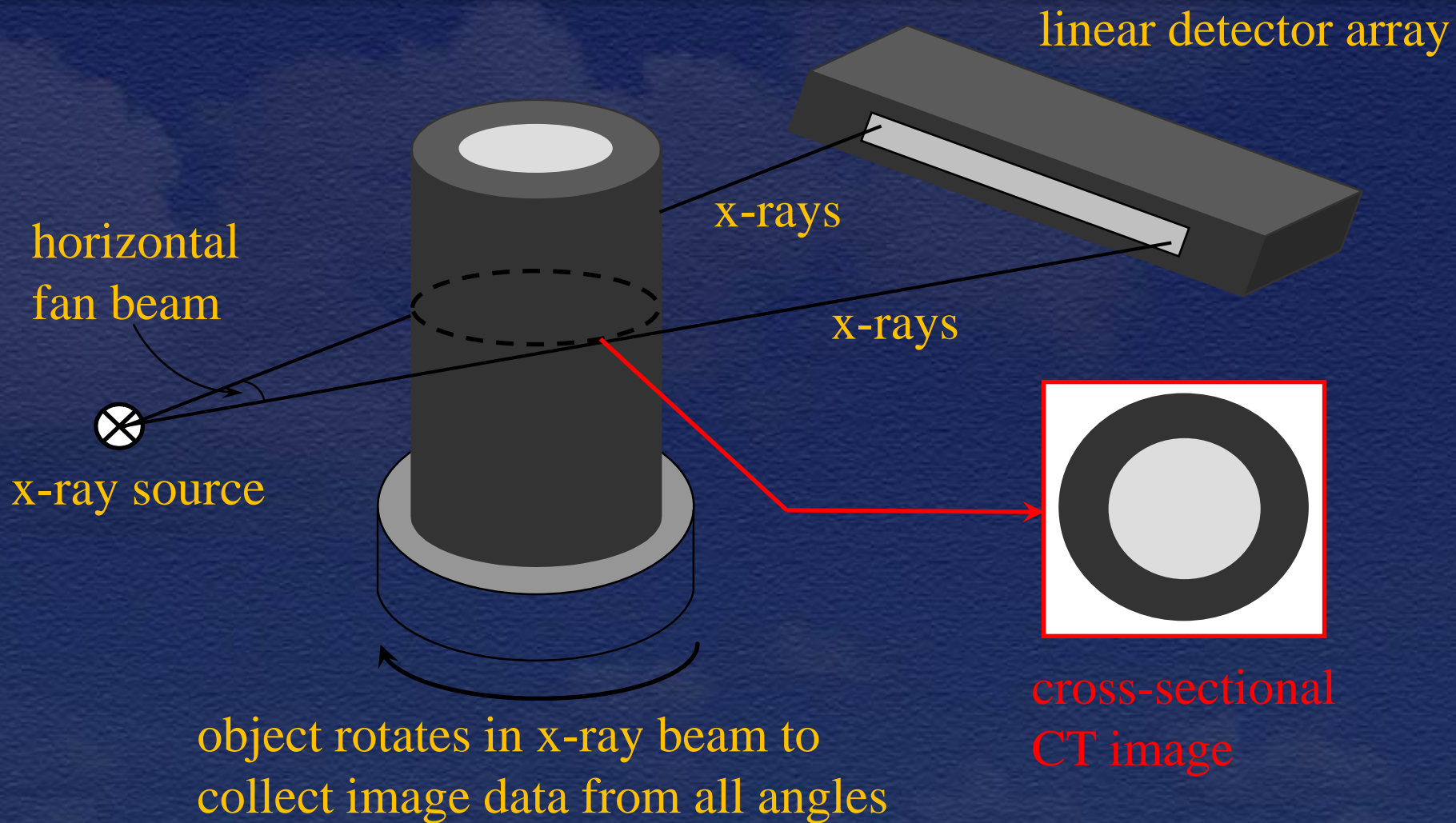
Benefits of CT Imaging

- Document internal arrangement of a component
- Provide guidance for further testing or teardown activities
- Evidence (or lack of evidence) of an actual malfunction or problem with the component

CT Process at the NTSB (2015)

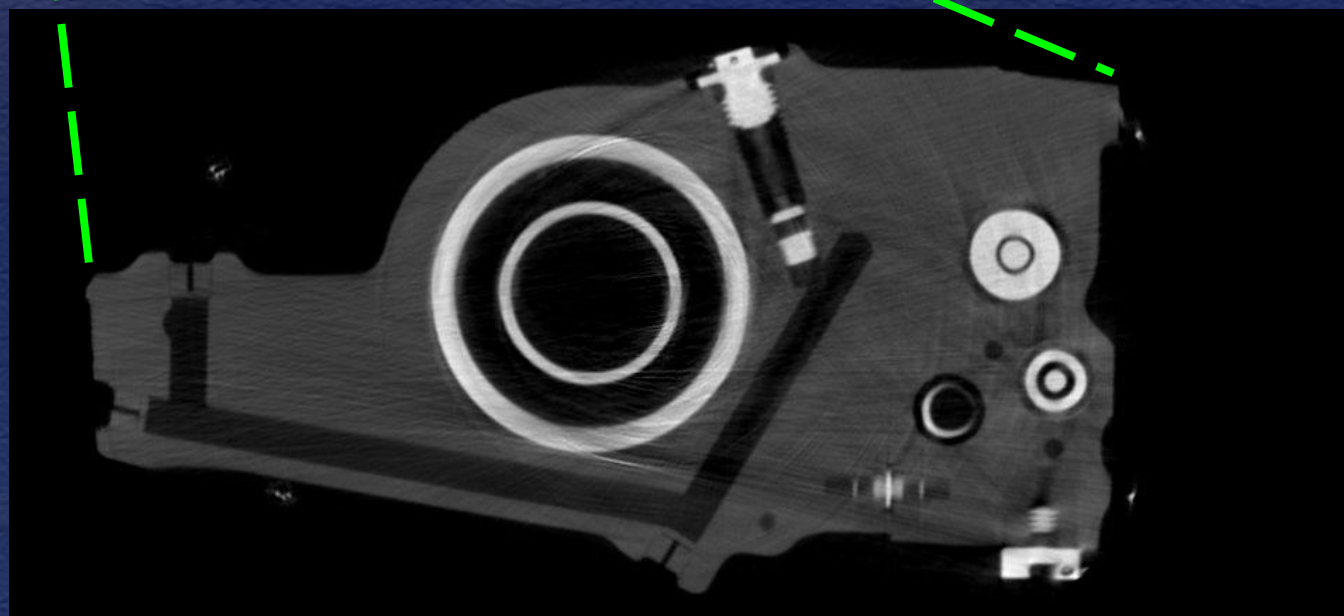
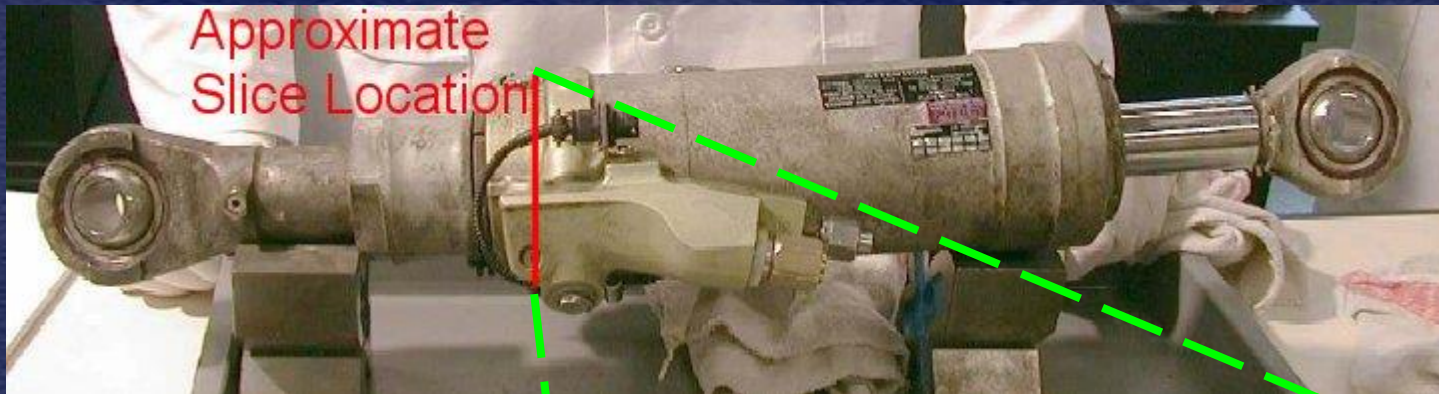
- NTSB contracts with the CT facility
- Scans conducted under direction of NTSB (even remotely)
- Axial slices provided to NTSB for analysis
- NTSB uses its software to analyze component and produce desired images
- Machines include:
 - 225 kV microfocus
 - 450 kV standard focus
 - 1 MeV linatron

CT Scan Creation

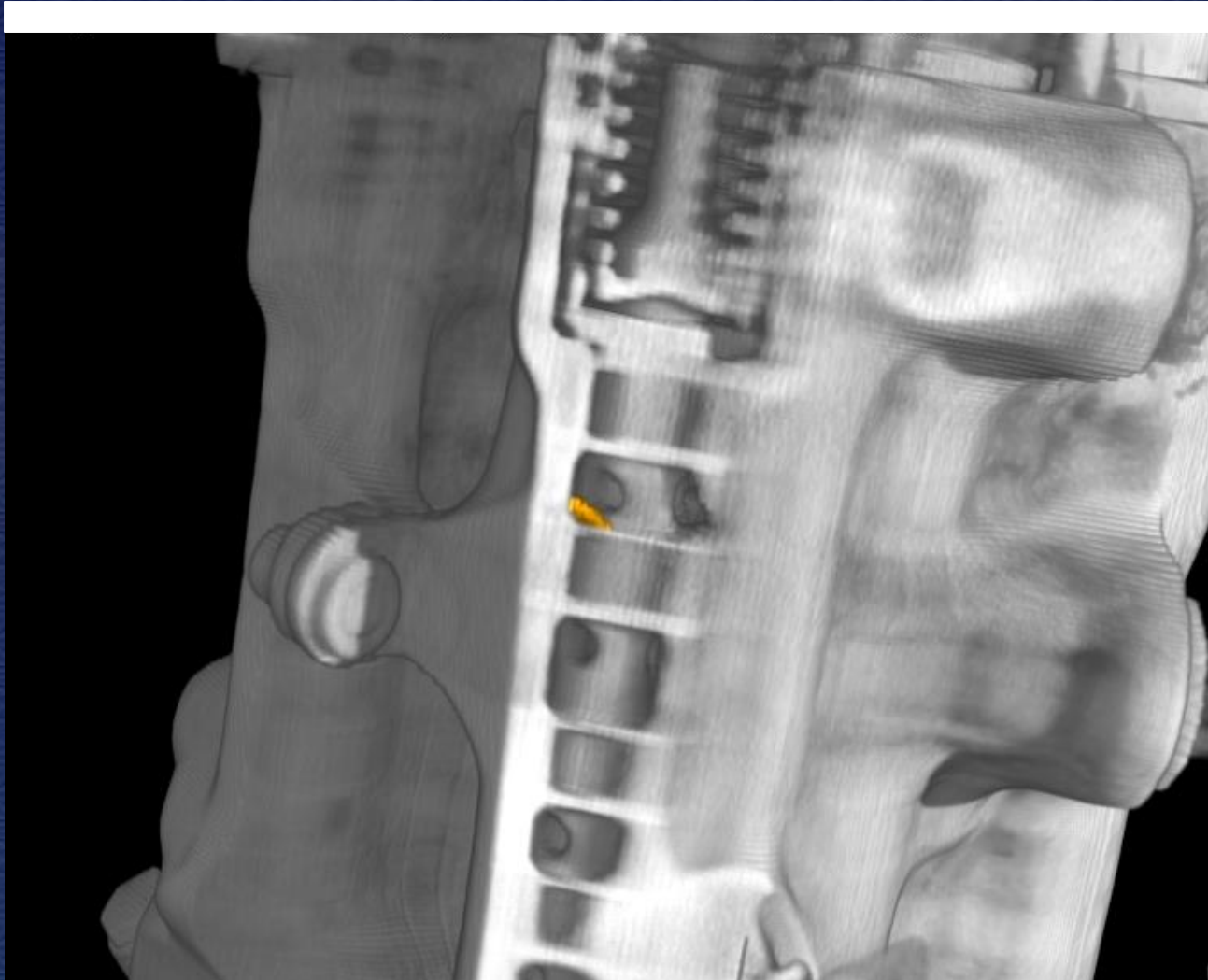


CT Scan Slice

Approximate
Slice Location



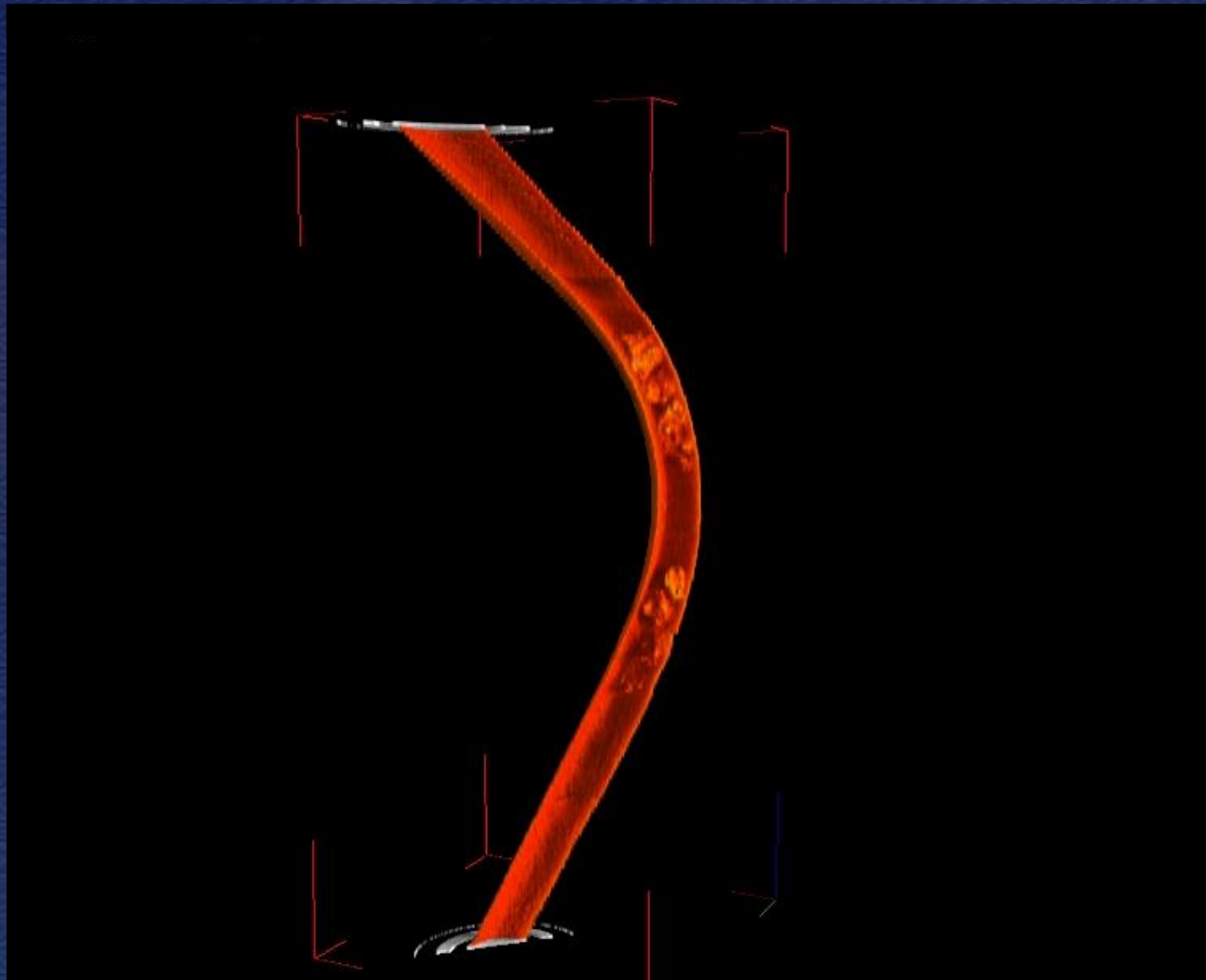
Actuator Image



NTSB



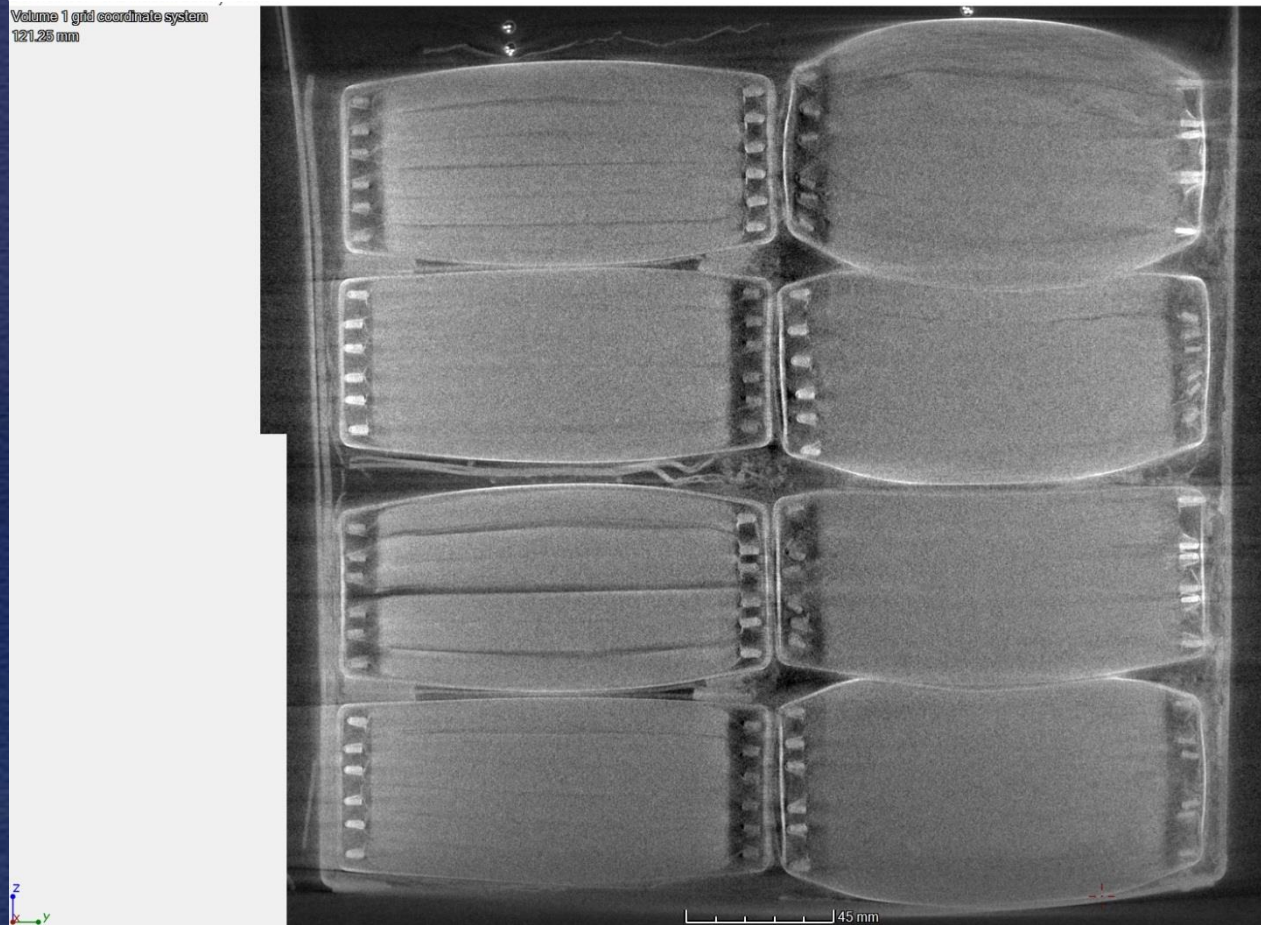
Engine Vent Tube Image



Battery Scan

Volume 1 grid coordinate system
121.25 mm

Right 1

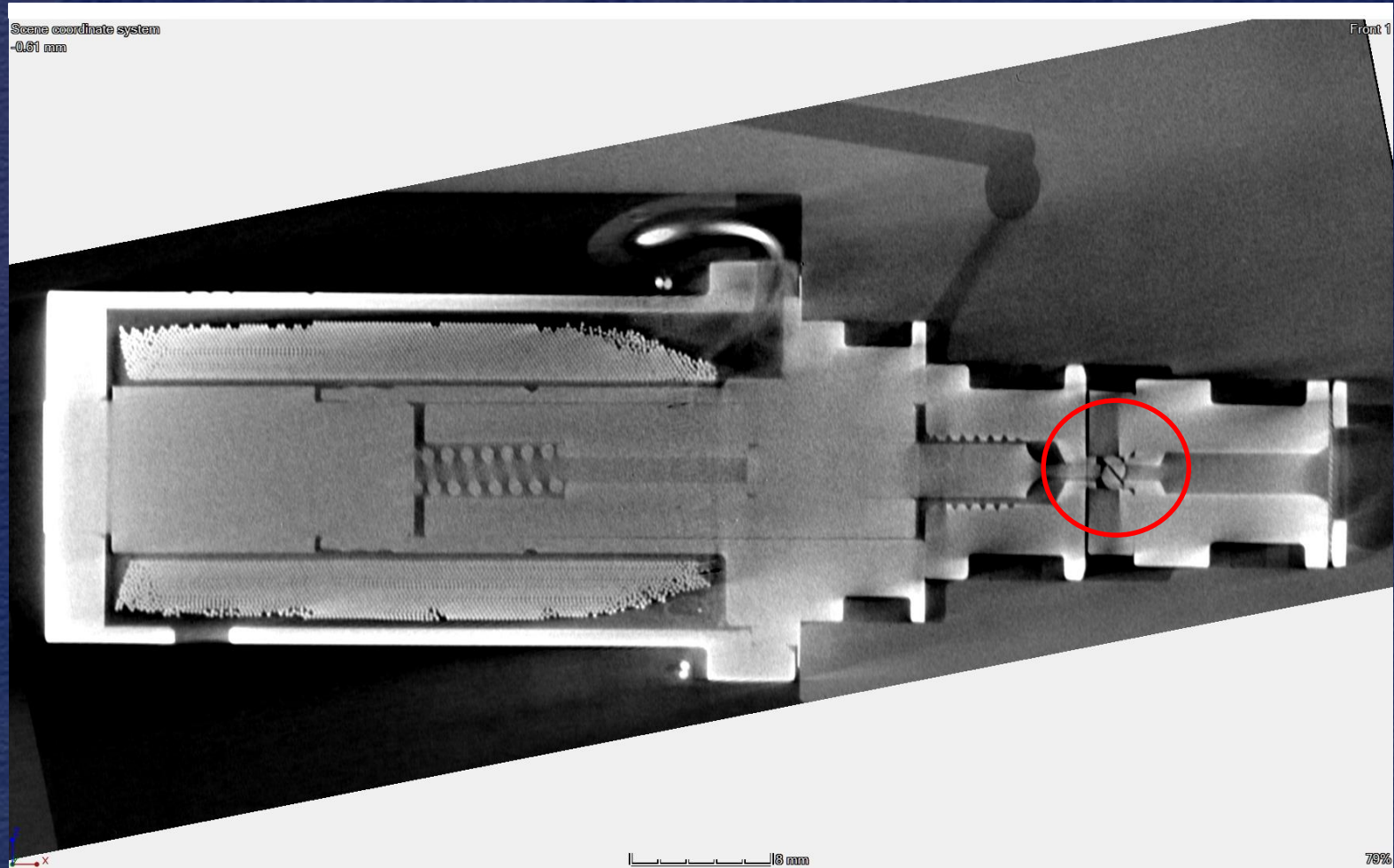


63%

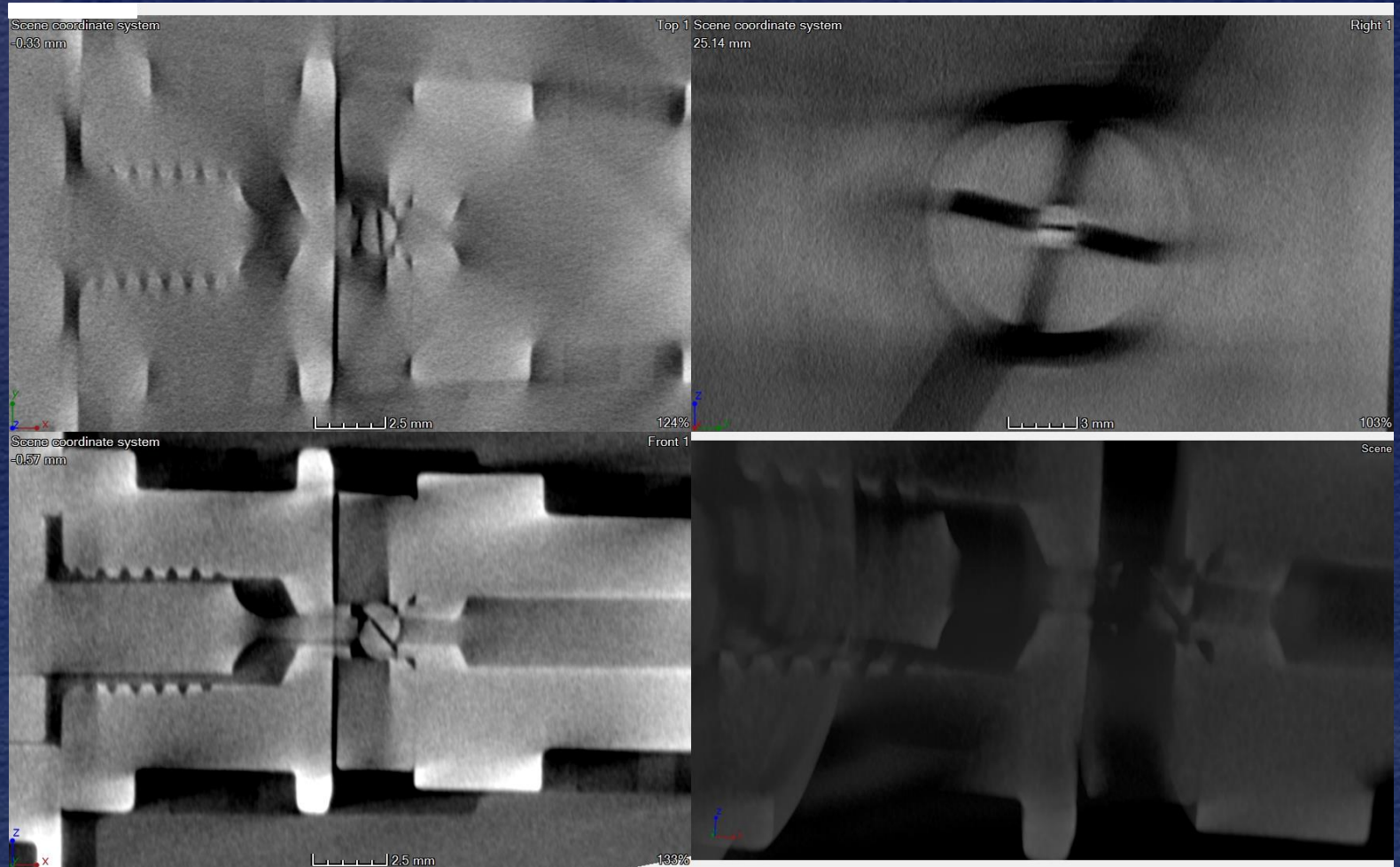
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Solenoid Image



Solenoid Image--microfocus

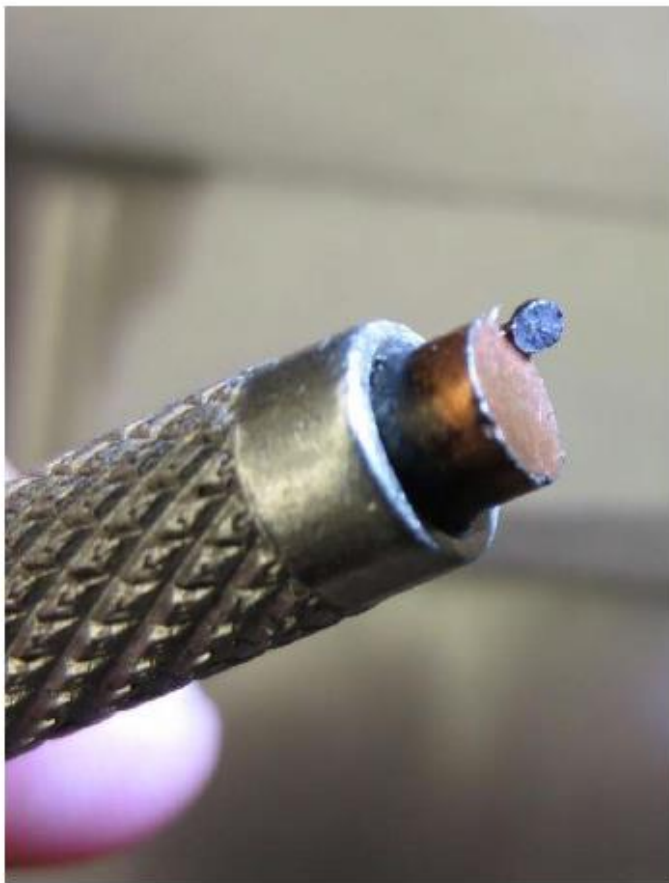


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Sikorsky S-76C PDTA

Solenoid Teardown



Upper half of fractured ball

Solenoid Image

