

# Few-view, High Resolution Inspection

Jonathan Foley, Brian Tracey, Eric Miller

Tufts University

Department of Electrical and Computer Engineering

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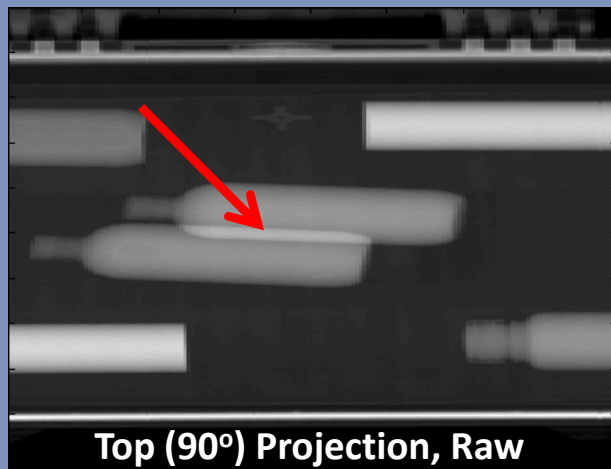
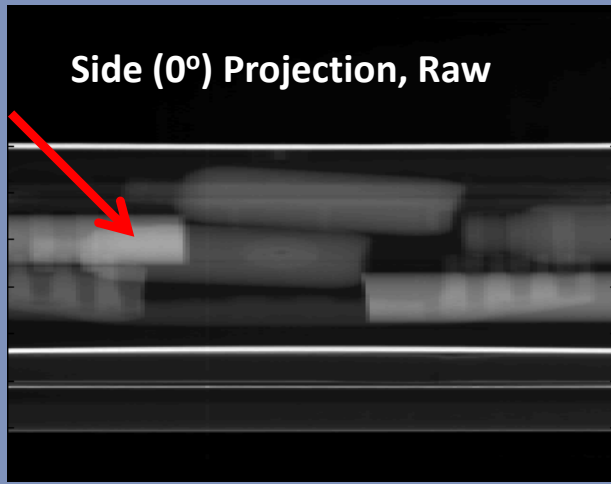
## Acknowledgements

- Data provided by ALERT via Task Order 3
- JF summer support provided by AS&E gift to ALERT



## Problem:

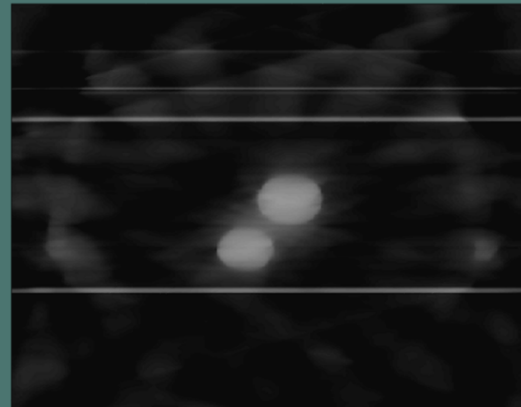
- 1) Obscured objects
- 2) Few-view\* systems



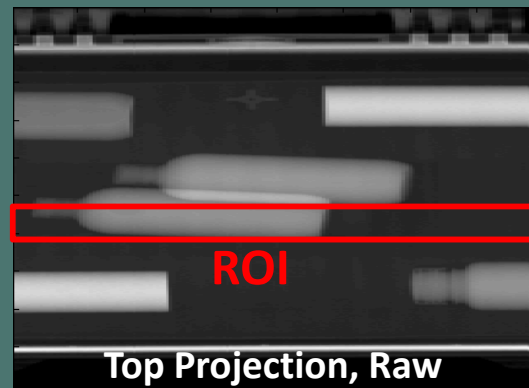
\* too many views for easy manual review, but too few for high-res 3D recon

## Solution: use coarse 3-D recon to highlight ROI in projection data

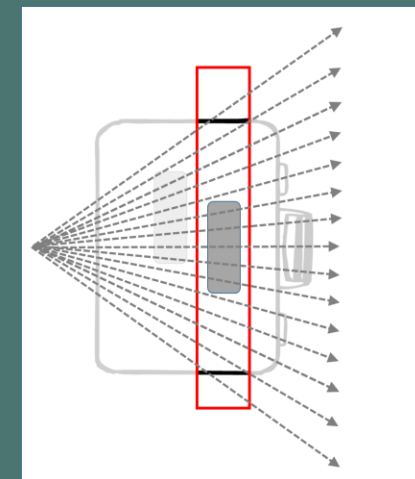
- 1) Form coarse 3D recon



- 2) Identify / scan through Regions of Interest



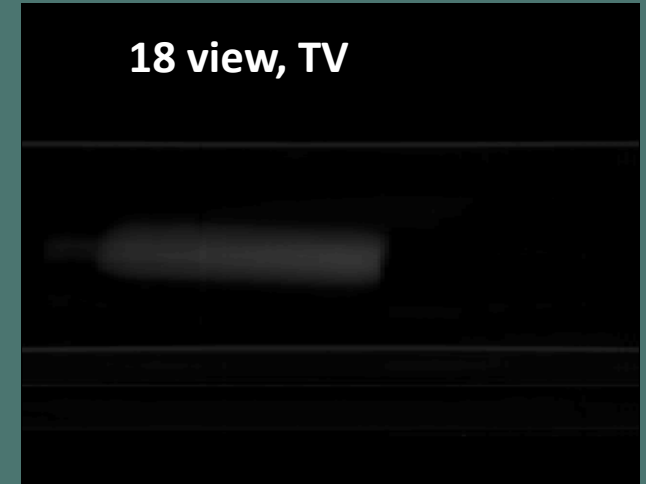
- 3) Do ROI-based processing



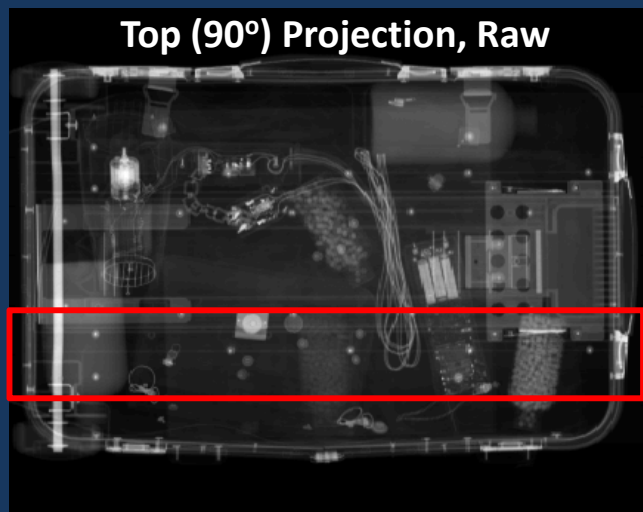
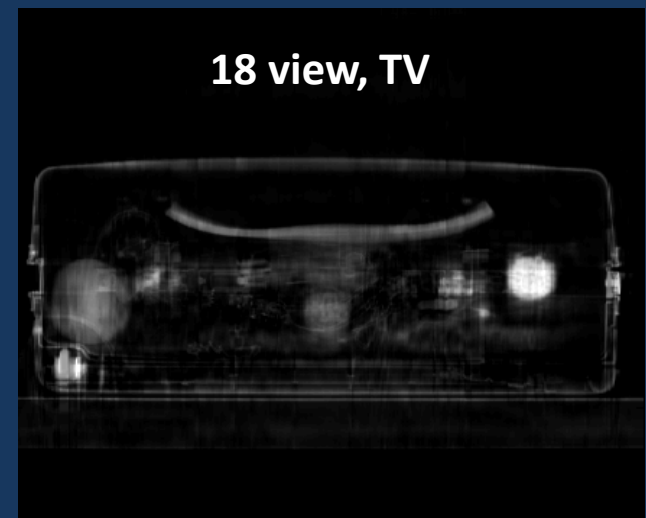
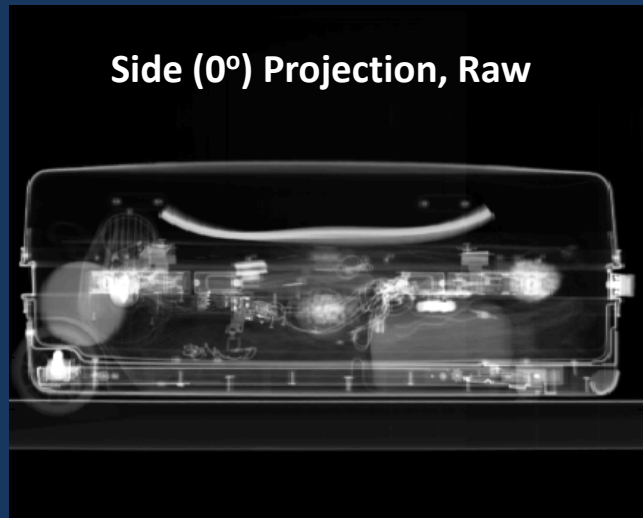
$$y' = f(y, \text{ROI}, x)$$

y = projection, x = recon

- 4) Side projection, ROI highlighted



# Medium Clutter Dataset



ROI



## Ongoing work:

- Investigate different recon methods and strategies for ROI based processing
- Understand how results depend on system geometry (# views, spacing)

Questions?