

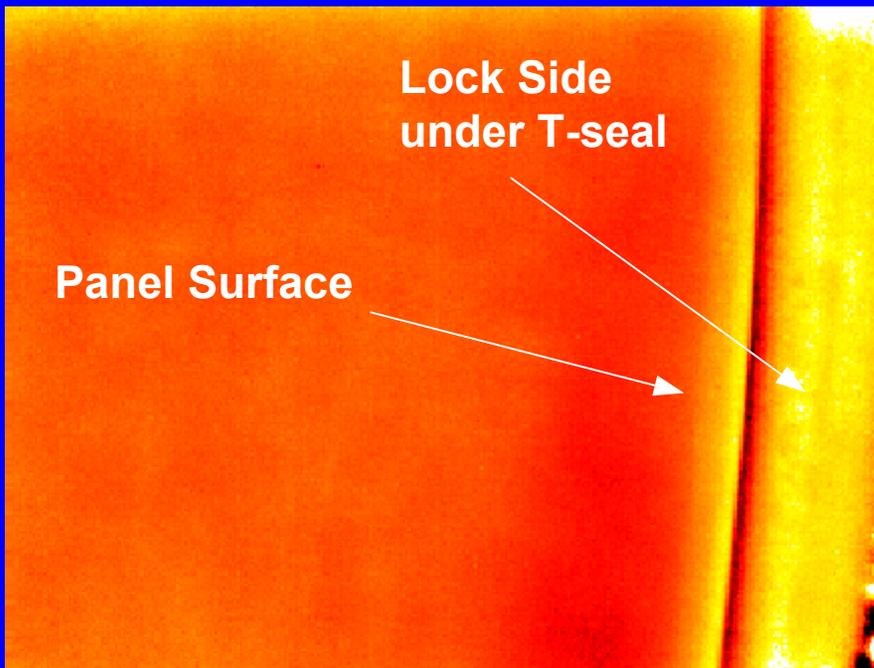
Ground Inspection

Jose Hernandez

Structural Engineering Division

Thermography Inspections

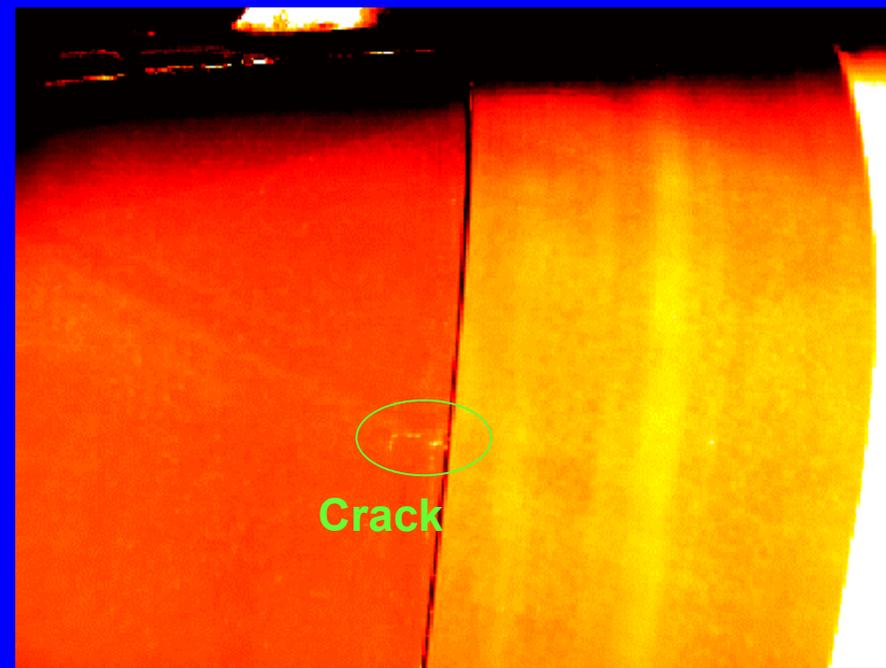
OV-103 6L Pre Impact



Thermal Image of the location of the crack

**Outboard
(W/out T-seal)**

OV-103 6L Post Impact



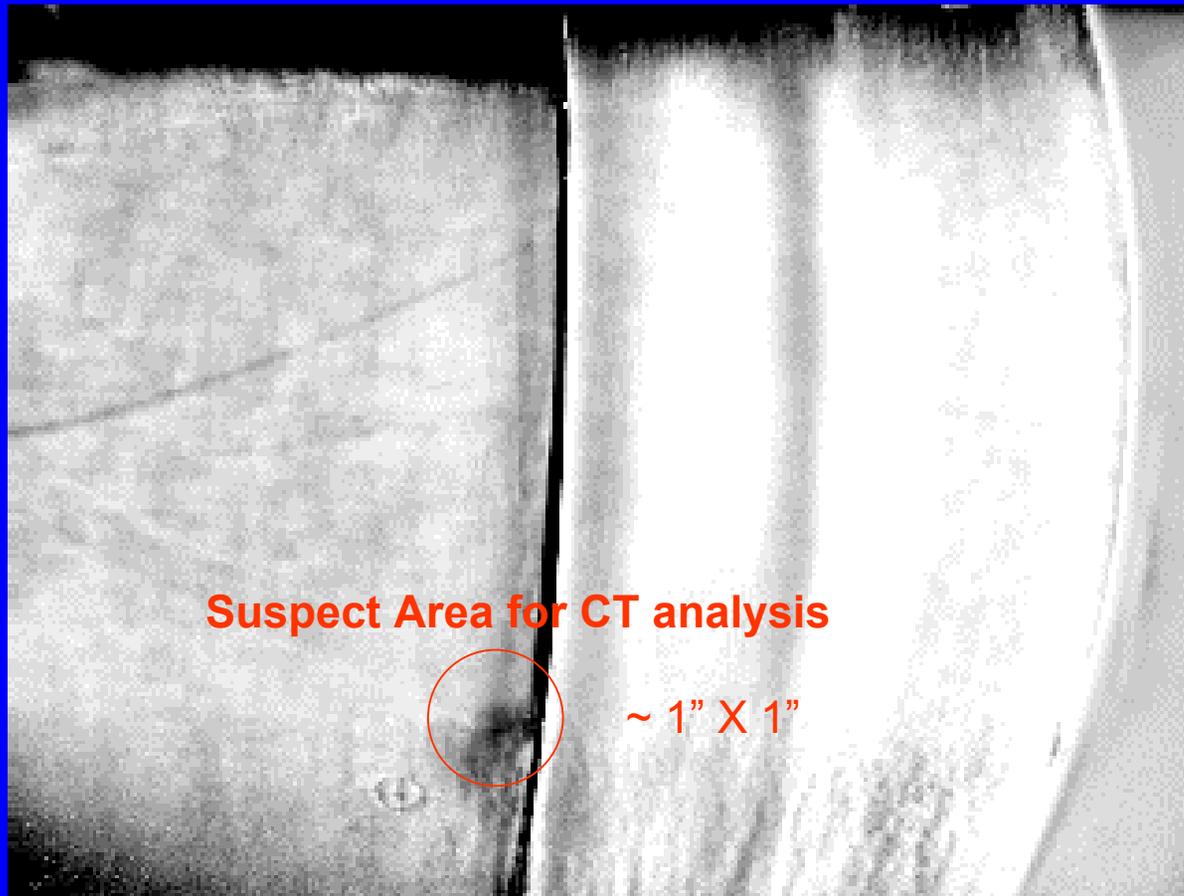
Thermal Image of the crack through the part

**Outboard
(W/ T-seal)**

OV-103 6L Post Impact

Thermography Inspections

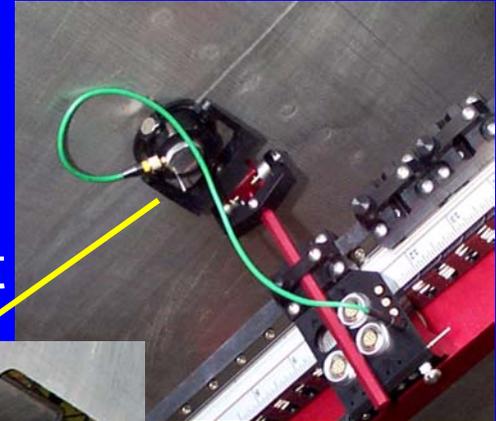
PCA Analysis of thermal data



Ultrasonic Scanning Systems

MAUS System

- Resonance
- MIA
- Pulse-echo
- Pitch-catch
- Eddy current



Interchangeable tracks allow for continuous scanning

Eddy Current Inspection of RCC

- Resolution will likely be driven by presence of shallow flaws in areas of relatively large SiC thickness variations
- Sensitivity should allow us to detect 0.1" diameter and 0.005" depth material loss flaws due to oxidation in carbon-carbon at SiC carbon-carbon interface along outer surface of RCC laminate
- Integration of Eddy Current probes with MAUS scanning system has been demonstrated to produce scan rates of 36 sqft/hour.
- System will be designed to simultaneously measure SiC coating thickness and detect areas of mass loss due to carbon oxidation.



MAUS IV Flexible Track