

# Columbia Accident Investigation Board

## *RCC Forensic Evidence of Breach Location*



Panels 8 and 9



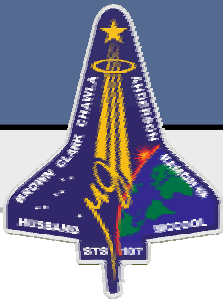
**Heaviest Slag Deposits**



**Void of Metal Components**



**Knife-Edge Erosion**



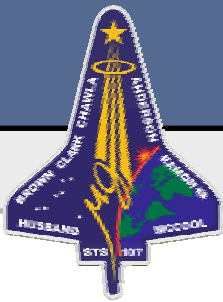
# Columbia Accident Investigation Board

## Deposits on RCC Panel 8

- Volume and composition of deposits indicate prolonged deposition of leading edge construction materials at RCC panels 8 and 9



<u>Material</u>	<u>Quantity (w)</u>	<u>Adjacent Sources</u>
Aluminum	20-60%	<u>2024 Spar, Cerrochrome</u>
Copper	3-10%	<u>2024 Spar/Structure</u>
Iron	2-6%	<u>Inc 601 Foil/A286</u>
Chrome	2-15%	<u>Inc 601 Foil/A286/Cerro.</u>
Nickel	4-15%	<u>Inc 601 Foil/A286</u>
Magnesium	3-8%	<u>2024 Spar/6061 C/P beam?</u>
Silicon	5-50%	<u>RCC, Cerrochrome, LI900</u>
Oxygen	10-50%	<u>Cerrochrome/atmosphere</u>



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## RCC Design

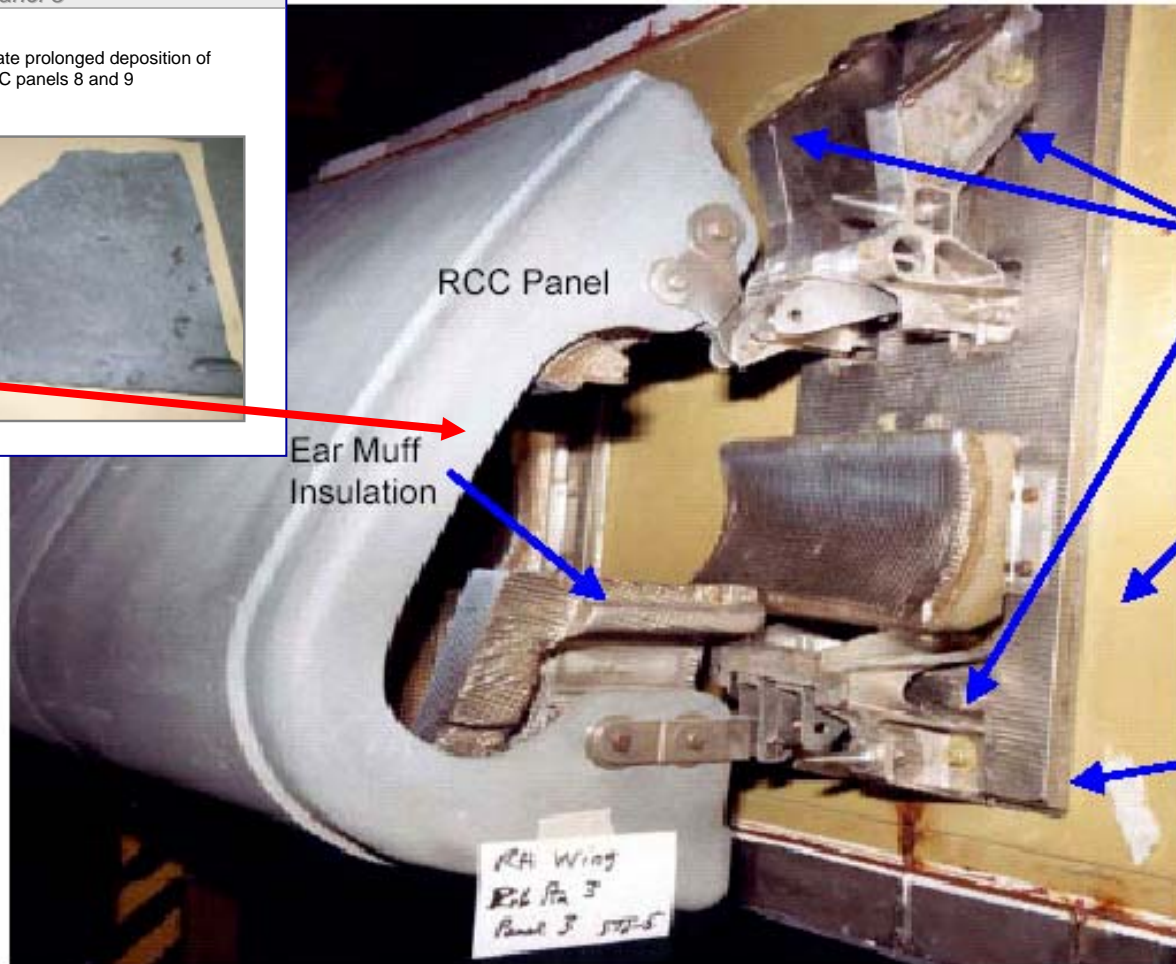
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Spar Attach Fittings (4)

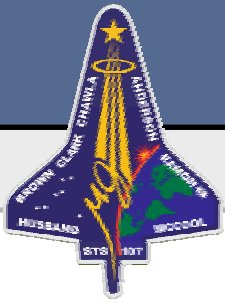
Wing Leading Edge Spar

Spar Insulator

RCC Panel

Ear Muff Insulation

RH Wing  
Rib Sta 3  
Panel 8 575-5

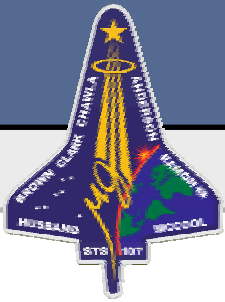


# Columbia Accident Investigation Board

## *Video Tracking*

**Photo / TV Analysis  
Team**

**Entry Debris Events  
Version 3**



# Columbia Accident Investigation Board

## Debris & Reconstruction Statistics

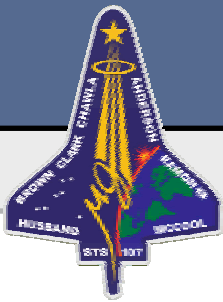
- **Search Statistics:**

- 3-month search involving **30,000+ people** from 130 federal, state, and local agencies
- Largest search ever in United States history with >700,000 acres searched by foot and 1,600,000 acres searched by air
- Search used more than 37 helicopters and 7 fixed wing aircraft

- **Final Reconstruction Statistics:**

- **~40%** of *Columbia* was recovered
- **84,900** pounds of material
- **84,000** parts processed at KSC





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## Debris Footprint

