



**NTSB** National Transportation Safety Board

*Office of Aviation Safety*



## Runway Overrun

Learjet 60, N999LJ  
Global Exec Aviation  
Columbia, South Carolina  
September 19, 2008



# History of Flight

- Departure before midnight
- Back-taxied length of runway
- Captain misstated rejected takeoff (RTO) criteria
- Initial takeoff roll normal
- First officer made airspeed call
- Loud rumbling sound

# History of Flight

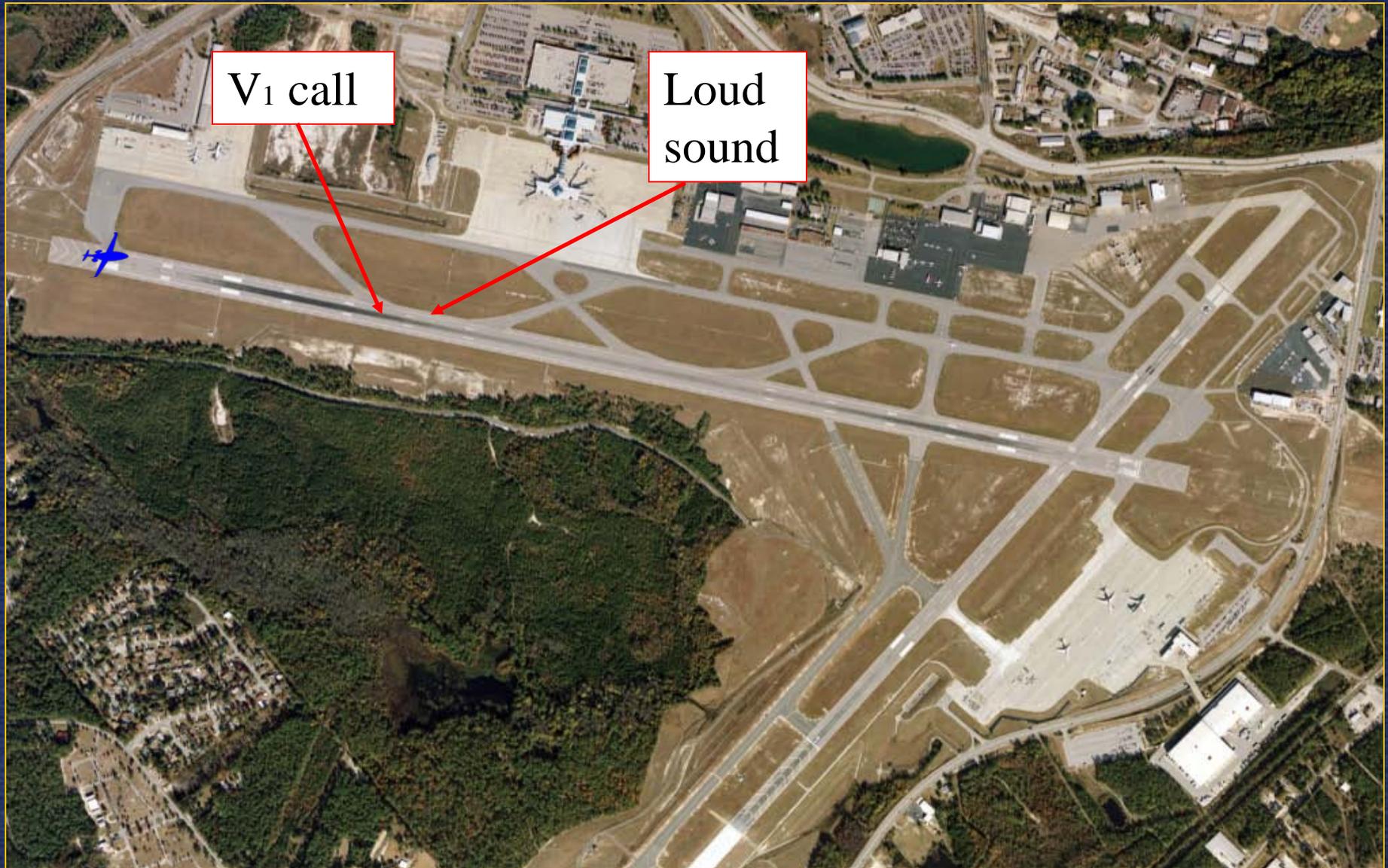
- First officer called to continue
- Captain reduced power, wavered
- Committed to high-speed RTO
- Fragments of all main landing gear tires found on runway
- All main landing gear tires underinflated

# History of Flight

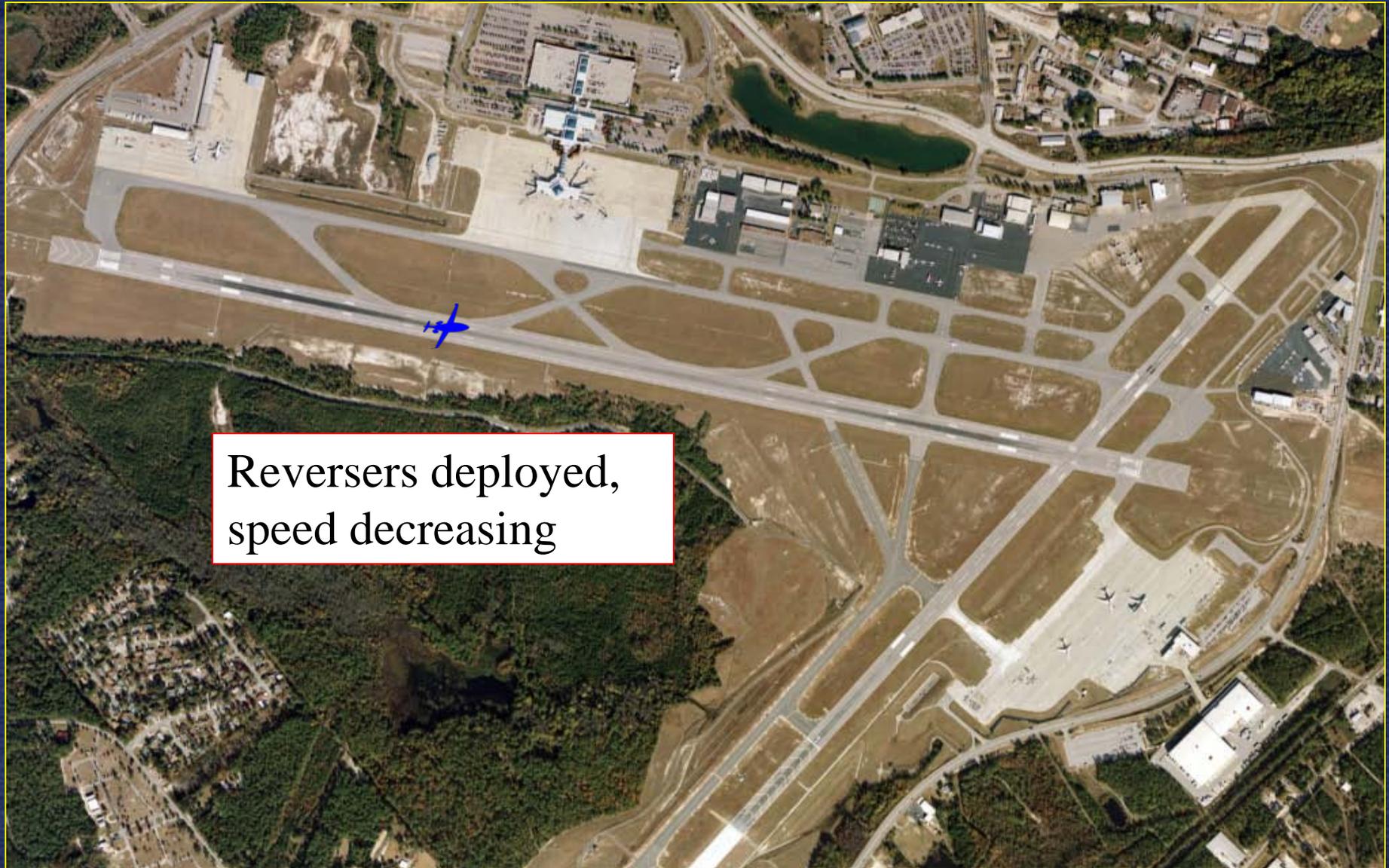
- Stopping capability compromised
- Damage caused logic to switch to “air” mode
- Reversers automatically stowed
  - High forward thrust
  - Captain commanding reverse thrust
  - Recommendations A-09-55 through -60



# Simplified Event Overview

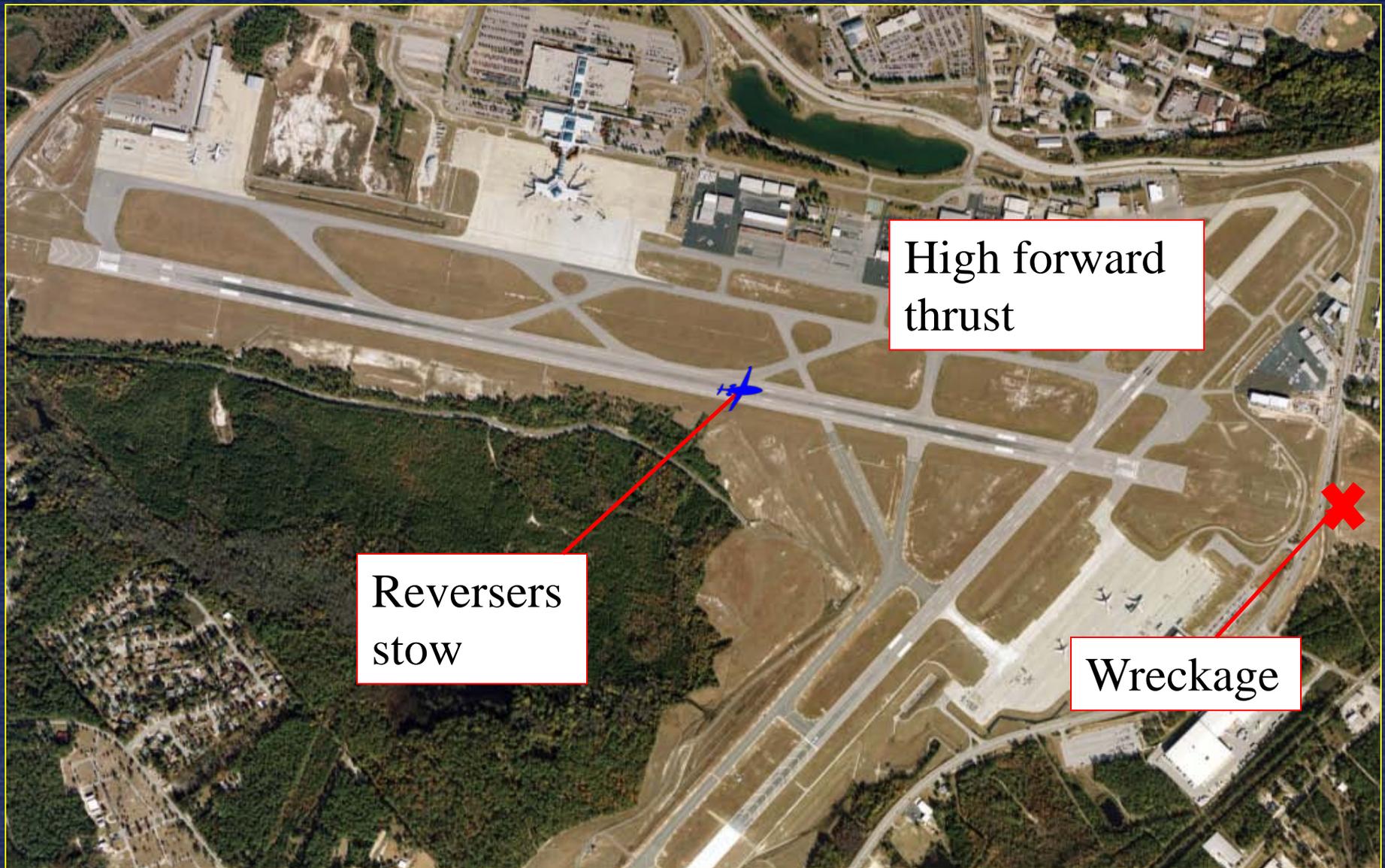


# Simplified Event Overview



Reversers deployed,  
speed decreasing

# Simplified Event Overview



High forward thrust

Reversers stow

Wreckage

# Safety Issues

- Aircraft tire maintenance, inflation
- Flight crew performance
  - High-speed RTO
  - Captain's experience
  - Flight crew training for tire failures
  - Crew resource management (CRM)
- Thrust reverser design deficiencies
- Inadequate system safety analyses
- Certification of changed aeronautical products
- Tire certification criteria



# Parties to the Investigation

- Federal Aviation Administration
- Global Exec Aviation
- Learjet
- Goodyear Tire & Rubber
- Columbia Metropolitan Airport

# Other Participants

- Transportation Safety Board of Canada
  - Pratt & Whitney Canada
- South Carolina Highway Patrol
- Federal Bureau of Investigation
- National Highway Traffic Safety Administration





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