



Columbia, crew perish

39 miles up, flight dissolves in flames

DEMOCRAT-GAZETTE PRESS SERVICES

Space shuttle Columbia disintegrated 39 miles over Texas on Saturday in a meteoric streak that rained smoking debris over hundreds of miles of countryside, killing all seven astronauts. Suspicion immediately turned to possible damage to the left wing during liftoff.

The catastrophe occurred in the last 16 minutes of the 16-day mission as the spaceship glided in for a landing in Florida. In its horror and in its backdrop of a crystal blue sky, the day echoed one 17 years and four days before, when the Challenger exploded.

The members of the Columbia crew were shuttle commander Rick Husband, Michael Anderson, David Brown, Kalpana Chawla, Laurel Clark, William McCool and Ilan Ramon. "The Columbia is lost," President Bush said after he telephoned the families of the astronauts to console them.

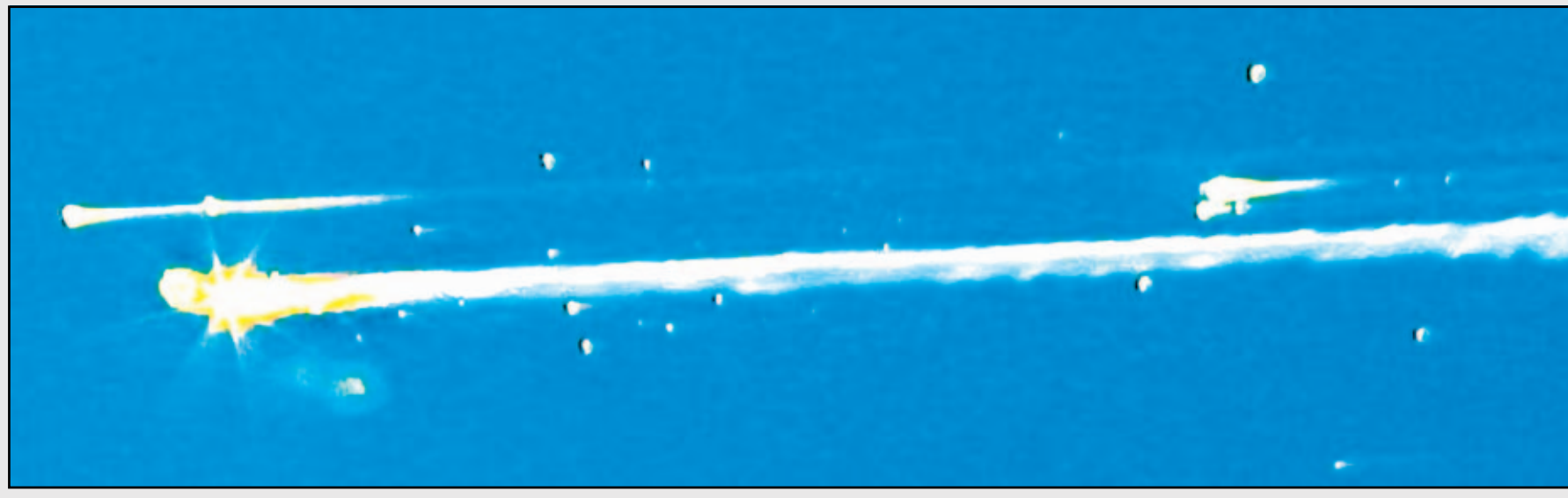
The National Aeronautics and Space Administration began the painstaking process of finding the cause, appointing an independent commission to investigate. The agency said the first indication of trouble Saturday was the loss of temperature sensors in the left wing's hydraulic system.

The spacecraft had just reentered the atmosphere and had reached the point at which it was subjected to the highest temperatures.

On takeoff Jan. 16, a flying piece of debris hit Columbia's protective thermal tiles on the left wing; NASA officials said they suspected it was damaged, but believed there was no reason for concern. They cautioned that it may have had nothing to do with the accident.

Authorities said there was no indication of terrorism in the disaster; at 207,135 feet, Columbia was out of range of any surface-to-air missile, one senior government official said. Security was extraordinarily tight on this mission because Ramon, Israel's first astronaut, was among the crew.

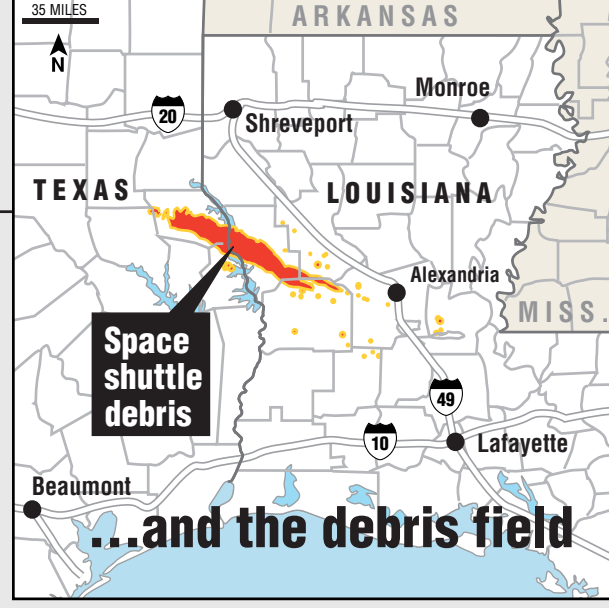
Television footage showed a bright light followed by white smoke plumes streaking diagonally across the brilliant sky. Debris appeared to break



Associated Press/Tyler Morning Telegraph, Dr. Scott Lieberman



Arkansas Democrat-Gazette



SOURCE: National Weather Service base reflectivity radar images

The final moments

At 8 a.m. CST, NASA lost contact with the space shuttle Columbia. The craft was flying about 207,000 feet above north-central Texas at a speed of 12,500 mph.



Associated Press/ABC TV



Associated Press/NASA

Arkansas Democrat-Gazette/MATT HANEY & KIRK MONTGOMERY

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Experts with state ties offer insight on shuttle

BY PHILLIP REESE AND ANDREW DEMILLO ARKANSAS DEMOCRAT-GAZETTE

Crew error or structural failure probably did not cause the disintegration of the Columbia space shuttle Saturday, according to four-time spaceflight crew member Richard Covey.

The process of bringing a shuttle back into the atmosphere is largely automated, with crew members monitoring commands issued by shuttle computers, said Covey, a Fayetteville native who piloted the first space shuttle flight after the 1986 Challenger explosion. "I can't imagine that there was anything wrong that involved the crew," Covey said Saturday afternoon.

Columbia was the oldest and heaviest of NASA's four shuttles, but it was built to last, so a structural failure — such as the rudder coming off or a wing

breaking — also is highly unlikely, Covey said.

"The orbiters are inspected to a much greater degree than an airplane," Covey said. "I would be very surprised if it was a structural issue."

What does that leave as a possible cause? A failure of one of dozens of automated processes that must work perfectly to ensure a safe re-entry into the atmosphere.

"It's not complex from the standpoint of the crew," Covey said Saturday from his home in Colorado Springs, Colo. "But as far as what the system must do, it's one of the most unforgiving. Everything has to go perfect."

Covey is one of several Arkansans with a history of working with the National Aeronautics and Space Administration who awoke to news of the second shuttle tragedy in two

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Associated Press

Shimon Levy, an Israeli television crew member at the Kennedy Space Center in Cape Canaveral, Fla., watches NASA television reports Saturday after space shuttle Columbia disintegrated over Texas. Israel Prime Minister Ariel Sharon said, "The state of Israel and its citizens are as one at this difficult time," referring to the death of Israel's first astronaut, Ilan Ramon.

Article, 16A

Fuel-tank debris hit left wing at launch

Intact thermal tiles crucial to re-entry

BY MARCIA DUNN THE ASSOCIATED PRESS

CAPE CANAVERAL, Fla. — Investigators trying to figure out what destroyed space shuttle Columbia immediately focused on the left wing and the possibility that its thermal tiles were damaged far more seriously than NASA realized by a piece of debris during liftoff.

Just a little more than a minute into Columbia's launch Jan. 16, a chunk of insulating foam peeled away from the external fuel tank and smacked into the ship's left wing.

On Saturday, that same wing started exhibiting sensor failures and other problems 23 minutes before Columbia was scheduled to touch down. With just 16 minutes remaining before

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WEATHER
ARKANSAS Today Mostly sunny skies. High From the upper 60s to low 70s. Tonight Increasing clouds. Low In the upper 40s to 50s.

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