

NASA's Finest Hour Sy Liebergot recalls the race to save Apollo 13



Marking the 35th anniversary of the Apollo 13 mission, Flight Director Gene Kranz (left) and Command and Service Module Life Support Systems Flight Controller Sy Liebergot were honored guests at a Boeing-sponsored [ceremony](#) in June at the Museum of Flight in Seattle. (Jim Anderson photo)

By Bill Seil

It has been 35 years since Sy Liebergot sat in Mission Control in Houston and alerted his boss – lead Flight Director Gene Kranz – about a "problem" with Apollo 13.

He has vivid memories of that day in April 1970, when the spacecraft was speeding toward the moon and Oxygen Tank 2 inside the service module exploded. It wasn't immediately clear from the readings on Liebergot's console that the three astronauts on board – Jim Lovell, Fred Haise and Jack Swigert – were in grave danger.

He laughs when he recalls his report to Kranz, which he believes may be the biggest understatement of the space program:

"We may have had an instrumentation problem, Flight."

But the severity of the problem soon became clear, and Liebergot took action. He instructed Kranz to have the crew begin an emergency power down in order to lighten the load on the single remaining fuel cell, after two other cells had apparently gone offline.

Today the public knows the story of the dramatic rescue of Apollo 13 through director Ron Howard's 1995 motion picture. Liebergot's place in history is immortalized by the actor who portrayed him, the director's brother, Clint Howard. Since the movie was made, Liebergot and Clint Howard have become close friends.

Though retired from NASA, Liebergot is still in the space program. An employee of Bastion Technologies, he is assigned to Boeing in Houston, working as a flight operations engineer on the International Space Station program. Knowledge gained from the space station program will be valuable as the United States gets to work on the Vision for Space Exploration announced by President Bush in January 2004. The Vision's goals are to base astronauts on the moon and later send crews to the planet Mars. As with Apollo, Boeing expects to play a major role in designing and building the new space systems required to meet these goals.

The job with Boeing is somewhat nostalgic for Liebergot, who got his start in the aerospace industry working at North American Aviation, which is now part of The Boeing Company. North American built the Apollo command and service modules and the second stage of the Saturn V launch vehicle. Liebergot's job with North American in the early 1960s led to his position with NASA.

Liebergot has also written a book on his life and career titled "Apollo EECOM – Journey of a Lifetime." The term "EECOM" refers to his former position in Mission Control as Apollo command and service module life support systems flight controller.

Liebergot recently reunited with his old Apollo colleagues for a formal dinner at the Museum of Flight in Seattle. Boeing was the presenting sponsor of the fund-raising event, which honored the Apollo 13 flight controllers and mission operations people who brought the astronauts safely home to Earth. Among the dignitaries present were Liebergot's old boss, Gene Kranz, and astronauts Lovell and Haise. A prologue to the night's activities was delivered by another astronaut of some note: Neil Armstrong.

Liebergot describes Kranz as one of his heroes, "a genuine leader of people. His dedication to the job inspired us to put our all into being flight controllers and kept us buoyed up. He truly got out in front and led us Apollo-era flight controllers to the moon."

When Liebergot thinks of the heroes of the Apollo era, another name that comes to mind is Jim Hannigan, the branch chief of the lunar module flight controllers. In 1969, a year before the Apollo 13 mission, a simulation was presented to a flight control team in which an Apollo command and service module lost all three fuel cells about 51 hours into the mission. Liebergot recalls that Hannigan was bothered that the team couldn't find a way to save the simulated crew. Although the scenario was considered "unrealistic," Hannigan insisted on developing some procedures for using the lunar module as a "lifeboat" – just what was needed during the Apollo 13 emergency.

"Because of Jim Hannigan's leadership in planning for contingencies, and not taking 'no' for an answer, we had the tools that accelerated us in getting the Apollo 13 lunar module powered up," Liebergot said.

Liebergot added that the actual problems on Apollo 13 were mostly related to the way hardware was used during testing, and an "incredible set of circumstances" occurring over a period of eight years. Afterward, measures were taken in an effort to ensure that a similar incident could not endanger a future crew. Liebergot called the work a question of finding "failure scenarios" and methods to protect against them.

What does Liebergot think of the movie "Apollo 13"?

"This movie was as accurate as you could make it, without making a documentary," he said. "We were very pleased. In fact, Ron Howard gave our space program a real boost by telling the story as effectively as he did. It made people stand up and applaud."

Liebergot encourages people inspired by the movie to learn more about the true adventure of Apollo 13 and the epic race to the moon.

[Back to top](#)

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