17March1966 PJs Jump on Gemini 8 Capsule

TIME Magazine U.S.

Gemini 8 (officially Gemini VIII) was the sixth manned spaceflight in NASA's Gemini program and was successfully launched from Cape Kennedy on March 16, 1966. The mission conducted the first docking of two spacecraft in orbit, but suffered the first critical in-space system failure of a U.S. spacecraft which threatened the lives of the astronauts and required immediate abort of the mission. The crew made an emergency return to Earth safely on March 17th. The only other time this happened was on the flight of Apollo 13. It was decided to let the spacecraft reenter one orbit later so that it could land in a place that could be reached by the secondary recovery forces. The original plan was for Gemini 8 to land in the Atlantic, but that was supposed to be three days later. So USS *Leonard F. Mason* started to steam towards the new landing site 800 kilometers east of Okinawa and 1,000 kilometers south of Yokosuka, Japan. Most of the reentry occurred over Asia, beyond the range of NASA tracking stations. Planes were also dispatched and the pilot of one (Captain Les Schneider, USAF), managed to see the spacecraft as it descended precisely on time and target. Three Pararescuers jumped from the plane and attached the flotation collar to the capsule. The three Pararescuers (Air Force PJs) were A/2C Glenn M. Moore; A/1C Eldridge M. Neal; and S/Sgt Larry D. Huyett. Three hours after splashdown, the *Mason* had the spacecraft on board.

Space: Gemini's Wild Ride

Friday, Mar. 25, 1966

"We've got serious problems here. We're tumbling end over end, and we've disengaged from the Agena."

That ominous message from the two-man spaceship Gemini 8 alarmed a nation grown accustomed to uninterrupted space success. Off Formosa, aboard the tracking ship Coastal Sentry tense NASA technicians followed the approaching capsule by radar and urgently queried Astronauts Neil Armstrong and David Scott for additional information. In the Mission Control Center near Houston, flight controllers huddled over their consoles and studied telemetered data in a desperate effort to track down the trouble. Millions of Americans listened in startled silence as NASA's Paul Haney, his usually calm voice urgent and shaken, announced over television and radio that Gemini 8 was in danger.

What made the pews even more difficult to believe was that the day had begun with almost letter-perfect precision. And now, after the flawless twin launch of the Agena target vehicle and the Gemini, after making space rendezvous seem almost routine, and after the first successful docking of two spaceships, something had gone wrong.

Gemini 8's ordeal began shortly after its docking triumph, when Armstrong and Scott began a program of planned maneuvers to test the stability of the Gemini-Agena system. As they passed within range of the tracking station at Tannanarive, in the Malagasy Republic, Command Pilot Armstrong reported that he had easily swung the Gemini-Agena combination around 90°. "It's gone quite well," he reported, just before he passed out of radio range.

Next, the astronauts sent an electronic signal that was supposed to start the Agena's tape recorder, already programmed to fire the Agena's attitude thrusters and begin a series of gentle maneuvers. Instead, the Gemini-

Agena began to gyrate violently through space, yawing and rolling at a rapidly increasing rate. Unable to stabilize the joined spacecraft, Armstrong resorted to a last-ditch maneuver: he undocked.

Once freed though, Gemini began to roll even more rapidly.

"Violent Oscillations." High over Southeast Asia, the tumbling spacecraft came into range of the Coastal Sentry. "It's in a roll, and we can't seem to turn anything off," Armstrong informed the shipboard controller, who reported to Houston that Gemini was now "showing' pretty violent oscillations." It seemed to Armstrong that Gemini's No. 8 thruster -one of the small rockets used to turn or yaw the craft-had stuck open and was pushing the craft into an uncontrollable spin, which at one point reached a critical rate of a complete revolution each second.

Fighting to regain stability, Armstrong took another emergency step. He began firing Gemini's re-entry attitude-control rockets, which are designed to be used only to position the capsule properly as it re-enters the atmosphere on its way back to earth. "We are regaining control of the spacecraft slowly," he reported. By the time Gemini was out over the Pacific, it was getting back on even keel, sailing serenely through space only a few miles away from the Agena, which had been re-stabilized by radioed commands from ground controllers. "O.K., relax," the Coastal Sentry controller advised the astronauts. "Everything is O.K."

By then, the mission itself was far from O.K. It had not achieved such scheduled goals as Astronaut Scott's two-hour walk in space, the first vise of a power tool in space and a host of other scientific experiments. In Houston the next move was obvious: Arm strong's decision to use his vital re-entry rockets prematurely meant that the spacecraft must be returned to earth before it ran out of the necessary fuel for controlling reentry.

A Steely Embrace. That dark news shadowed a day that had actually seen a considerable technical triumph. The most important part of the flight was the docking maneuver, and Armstrong and Scott were still in their first orbit when they began the complicated exercise in space navigation. By 4:21 p.m. E.S.T., during Gemini 8's third revolution over the Pacific, Armstrong reported: "Object in sight." There was the Agena, 76 miles ahead, its beacon flashing against the dark sky. After gradually closing the gap, Gemini 8 eased up and in front of the Agena, while swinging around so that it was flying backwards, 150 feet ahead of the target. "We are station keeping" (flying in formation), reported Armstrong at 5:40 p.m. America's second space rendezvous had been accomplished

For the next 25 minutes, Armstrong and Scott electronically checked the Agena's complex systems. Assured that all was in order, they nudged to within five feet of the Agena's nose, close enough for them to read a small, lighted instrument panel over the target craft's docking cone. Using his maneuvering stick, Armstrong fired a brief burst from two of Gemini's 100-lb. thrusters. The gap between Agena and the spacecraft closed at about six inches per second, until the craft gently bumped its nose into the docking cone.

Mooring latches clicked into place, hooking themselves into Gemini's nose. An electric motor aboard Agena spun into action, retracting the docking cone, pulling Gemini's nose about two feet into the Agena and connecting the electrical systems of the two craft. On Agena's exterior instrument panel, a green "rigid" sign flashed on, indicating that Gemini and Agena were now physically and electronically linked in a steely embrace. It was 6:15 p.m. For the first time, man had joined two craft in space.

"We are docked," Armstrong reported exultantly, "and he's really a smoothie." "Oh, Roger, and congratulations," replied a communicator aboard the tracking ship Rose Knot below in the South Atlantic. "This is real good."

Giant Parachute. Things were not "real good" again until after the decision was made to abort the mission.

Then Gemini returned to docile perfection. Advised by Houston that they were to bring the spacecraft back to earth in an area 500 miles southeast of Okinawa, Armstrong and Scott fired their four 2,500-lb. retrorockets over Central Africa at 9:45 p.m. E.S.T. and skillfully guided Gemini 8 toward its splashdown.

Half an hour later, a four-engine C-54 spotted Gemini descending under its giant orange and white parachute. It had scored a bull's-eye. For all its trouble, it had hit its predicted impact point as precisely as any previous U.S. spacecraft. Within minutes, the C-54 swooped low and dropped pararescue swimmers and an emergency raft beside the bobbing Gemini capsule. While other rescue planes circled overhead, the swimmers attached a flotation collar to the capsule, then waited with the astronauts to be picked up by the nearest rescue ship, the destroyer Leonard F. Mason.

Word of the remote rescue came to the U.S. through one of the most intricate communications networks ever used. After the swimmers confirmed that the astronauts were alive and well, they flashed a "thumbs up" signal to the low-flying C-54, which radioed the good news to another rescue plane at a higher altitude. From the second plane, the message was radioed to the destroyer Mason, 58 miles away. The Mason, in turn, sent the message to Hawaii, where it was transmitted by cable to NASA's Goddard Space Flight Center in Greenbelt, Md., which relayed it to the Mission Control Center in Houston-where Paul Haney announced the successful recovery to a waiting world.

Remarkable Calm. With Astronauts Armstrong and Scott safely on their way to a debriefing session at Naha, Okinawa, the press zeroed in on every available NASA official, anxious to check out every possible theory about what went wrong. And when NASA refused to release the tapes of Gemini's conversations with the ground until NASA scientists had a chance to study them, reporters leaped to the conclusion that some bitter truth was being hidden.

The truth, when NASA had time to confirm it, was bitter only because it pointed to one of those senseless snafus that sometimes seem to dog even the best planned and executed space efforts. The trouble, said NASA, was caused by a short circuit in the electrical system that controlled Gemini 8's maneuvering thrusters. The short started a 25-lb. thruster firing, sending the craft into its rapid spin. The astronauts did not at first realize that the trouble was in their own craft because Gemini's maneuvering system had been turned off, decided to unlock because they thought that the difficulty might be in the Agena. When they realized that their own thrusters must be at fault, they deactivated the entire maneuvering system and calmly resorted to their Reentry Control System to stop the roll.

In May, Gemini 9 is scheduled to fly a docking and spacewalk mission even more complicated than Gemini 8's. And NASA officials are confident that they will live up to the promise made by President Johnson last week, when he said that the U.S. would "land the first man on the surface of the moon, and we intend to do this in the decade of the 1960s."

Astronauts Neil A. Armstrong and David R. Scott sit with their spacecraft hatches open while awaiting the arrival of the recovery ship, the USS Leonard F. Mason after the completion of their Gemini VIII mission. They are assisted by U.S. Air Force pararescue specialists. The overhead view shows the Gemini 8 spacecraft with the yellow flotation collar attached to stabilize the spacecraft in choppy seas. The green marker dye is highly visible from the air and is used as a locating aid.

PJ's were SSgt Larry Huyett, A1C Eldridge Neal, and A2C Glenn Moore

Gemini 8 Recovery
March 16, 1966

Photo in front of 33rd Air Recovery Squadron PJ Section Naha AB, Japan 1966
A1C Eldridge M. Neal SSgt Larry D. Huyett A2C Glenn M. Moore

Pictured above inside the capsule are astronauts Neil Armstrong and David Scott. Standing outside the capsule are PJs SSgt Larry Huyett, A1C Eldridge Neal, and A2C Glenn Moore. The Gemini 8 capsule landed in the Pacific Ocean 400nm east of Okinawa. PJs parachuted from an ARS HC-54 and attached a flotation collar.

On March 16, 1966 Pararescuemen Eldridge "Butch" Neal, Larry Huyett, and Glenn "Teddy Bear" Moore deployed on the Gemini 8 and rescued astronauts Neil A. Armstrong and David R. Scott. Gemini 8 was supposed to have landed in the Atlantic Ocean three days after launch. Instead, the spacecraft made an emergency return to earth ten hours after launch and landed in the Pacific Ocean 800 kilometers east of Okinawa. An HC-54 Rescuemaster from Naha Air Base Okinawa piloted by Captain Les Schneider spotted the capsule during its parachute descent and deployed PJs after it splashed down. The team landed close to the capsule and had the flotation collar installed and astronauts egressed in less than 45-minutes.

The PJs are wearing AP28-S10 parachutes, twin 44 improvised SCUBA jump tanks, U.S. Diver Calypso regulators, ML-4 life raft kits, M-13 flares on dive knife on lower leg. The MK-13 cans hanging from their harnesses were used to keep radios and medications waterproofed.

Graphic designed by Nic Dezinski of Pioneer Technologies Corp