"We Knew That Someday . . ."

Death of three astronauts fulfills grim prophesy; Apollo program set back by tragedy at the Cape.

For years everyone connected with the space program has been glibly saying that "someday we're going to lose an astronaut; the public must be prepared."

When it happened, last Friday, we lost three astronauts and no one was braced against the shock.

The three—Gus Grissom, Ed White, Roger Chaffee—were the prime crew for the first flight of the Apollo moonship. They lay in contour couches an ironic 218 feet above the ground when, apparently, an electric spark flashed in the 100 percent oxygen atmosphere inside their capsule. They died instantly.

The capsule sat atop an unfueled Saturn rocket, cradled in its gantry at Cape Kennedy, carefully monitored in all its parameters by telemetry. In the adjacent blockhouse, television screens showed the three men, spacesuited, helmets on, working doggedly after five hours of a simulated launch.

At 6:31 p.m., three hours and ten minutes before the end of the test, "there was a big white flash and that was that," a watcher reported. "Fire in the spacecraft," were the last words heard from the capsule, before closed circuit television monitors and all communications went dead. Flames, originating inside the sealed cabin, burst out and engulfed the sealed capsule as well.

The United States space program was eight years old when it claimed its first direct victims. Three astronauts had died earlier in airplane accidents; no one has died in the obviously dangerous phases of the program, the fiery launch, the bizarre space walk, the searing reentry into the atmosphere.

Apollo's elaborate safety precautions were of no use. Designed to whisk the capsule away from the explosive rockets beneath it, the escape tower, caged in by the gantry which would have been removed for an actual launch, couldn't affect happenings inside the capsule. The only hope would have been for the astronauts to open the ship's hatch by hand and clamber out. Reports said there was no indication that any of the three had had time to try to get off his couch.

Workers at the launch pad made heroic attempts to rescue the astronauts; 27 men suffered from smoke inhalation during the effort—even though they wore gas masks.

A grief-stricken National Aeronautics and Space Administration and security-conscious Air Force immediately "impounded" all detailed information from the launch pad, closed the area to reporters and began the painstaking search for the flaw that must be discovered and corrected before another astronaut enters another Apollo capsule under test conditions.

Experts examined the gutted craft for seven hours before the bodies were removed at 1:55 Saturday morning. Within another six hours the membership of a board of inquiry into the tragedy was announced in Washington.

Ironically, the astronauts during their simulated launch were in greater peril of fire than they would have been in space. Their atmosphere in the capsule was 100 percent oxygen, under 16 pounds per square inch pressure, above that of sea level. In orbit, the pressure and oxygen concentration would be a third of that. And in spacewalk conditions, with hatches open to space, spacesuit pressure would be only 3½ pounds.

Any increase of oxygen or pressure in the atmosphere means that things that wouldn't ordinarily burn will ignite. Follow-on Apollo missions will reduce the flash point of the interior of the capsule by adding about 40 percent of inert nitrogen to the atmosphere. Ordinary air contains 79 percent nitrogen.

Also, fire researchers believe, in the weightless state in orbit "fires just don't happen." Without convection currents (which require gravity) in the gas, a fire would smother itself in its own carbon dioxide.

None of the shocked space officials could give a reliable estimate of how far back the tragedy pushes the man-to-the-moon program. The most widely heard figure was "at least three months beyond the Feb. 21 date originally scheduled. But until NASA's sorrowing sleuths can pinpoint the cause of the fire there can be no firm estimate. A backup crew and a backup capsule are available, but simply mating the "command module" to the apparently undamaged service module beneath it would involve months of testing, before it can be man-rated for safety, as this one was.

The command pilot for Apollo 1 was Lt. Col. Virgil Grissom, the first man in history to make two space flights. One of the original seven Mercury astronauts, Grissom had brushed disaster before, when his Liberty Bell 7 craft sank in the Atlantic after his suborbital flight, the second in the program.

Grissom, 40 years old, was a native of Mitchell, Ind. who flew 100 missions in the Korean war, winning the Distinguished Flying Cross and the Air Medal with cluster. After Korea, he served as a test pilot and instructor. Married in 1945 to his high school sweetheart, Betty L. Moore, Grissom was the father of two sons, Scott, 16, and Mark, 12.

At a press conference he was asked what he would consider a successful flight for the first Apollo mission. "As far as we're concerned it's a success if all three of us get back."

Beside Grissom in the burned out Apollo capsule lay Lt. Col. Edward H. White, Jr., America's first man to leave a capsule and "walk" in space.

Born in San Antonio, Tex. on November 14, 1930, White was married to the former Pat Finnegan who, like the astronaut, was a graduate of Western High School in Washington, D.C. Their children are Edward H. III, 14 and Bonnie Lynn, 11.

The Apollo team's rookie member, Lt. Cmdr. Roger B. Chaffee, was looking forward to his first flight into space. A test pilot and the son of a test pilot, he was, at 31, growing prematurely gray. He was working toward a master of science degree in reliability engineering when named an astronaut.

The backup team for the mission, now suddenly the number one team, is led by 43-year-old Walter M. Schirra, Jr., who flew a six orbit Mercury mission and a two day Gemini flight during which he helped achieve man's first rendezvous in space, between Gemini 6 and 7.

Walter Cunningham and Donn F. Eisele, two astronauts named in 1963, complete the team. The deaths leave a total of 47 astronauts active in the program.

In Washington, the news found the leaders of the Apollo program at a once-festive occasion. The Apollo-Gemini contractors were host at a dinner party in the select International Club.

After the grim news came, NASA Administrator James E. Webb said, "We all knew that someday space pilots would die, but who would have thought the first tragedy would be on the ground?"

President Johnson mourned publicly. "Three valiant young men have given their lives in the nation's service," he said.