NASA's last moonbound program for astronauts lifted off under the shadow of a fatal incident on the Apollo 1 spacecraft, 55 today (Jan. 27).

Apollo 1 was expected to fly to Earth orbit later in 1967 with astronauts Gus Grissom, Roger Chaffee and Ed White on board test on the launch pad, however, a fire erupted and rapidly asphyxiated all three astronauts.

Some of the contributing factors to their deaths included a pure oxygen atmosphere that accelerated a fire, and a hatch that impossible for the astronauts to open quickly, although the causes were complex.

The cause of the fire was never fully determined, although NASA and its contractors took numerous measures to fix the tech culture problems associated with the incident. Their efforts allowed Apollo to fly astronauts into space 18 months later and tc of the program's missions, achieve success. (The exception was the near-fatal Apollo 13 in 1970.)

As NASA prepares to send humans to the moon again with the Artemis program, the agency will need to bear the lessons in past space incidents, especially those involving fatalities.

On January 27, 1967 at 6:31 pm EST, tragedy struck the Apollo program when a flash fire occurred in command module 012 du launch pad test of the Apollo/Saturn space vehicle being prepared for the first piloted flight, the AS-204 mission. Three astronaut Virgil I. Grissom, a veteran of Mercury and Gemini missions; Lt. Col. Edward H. White, the astronaut who had performed the fi States extravehicular activity during the Gemini program; and Roger B. Chaffee, an astronaut preparing for his first space flight, tragic accident.

A seven-member board, under the direction of the NASA Langley Research Center Director, Dr. Floyd L. Thompson, conduct comprehensive investigation to pinpoint the cause of the fire. The final report, completed in April 1967 was subsequently submi NASA Administrator.
Apollo 1, initially designated AS-204, was the first crewed mission of the United States Apollo program, the undertaking to land man on the Moon. It was planned to launch on February 21, 1967, as the first low Earth orbital test of the Apollo command module. The mission never flew; a cabin fire during a launch rehearsal test at Cape Kennedy Air Force Station Complex 34 killed all three crew members—Command Pilot Gus Grissom, Senior Pilot Ed White, and Pilot Roger B. Chaffee—and destroyed the command module (CM). The name Apollo 1, chosen by the crew, was made official by NASA in their honor after the fire.

Immediately after the fire, NASA convened the Apollo 204 Accident Review Board to determine the cause of the fire, and both chambers of the U.S. Congress conducted their own committee inquiries to oversee NASA's investigation. The ignition source was determined to be electrical, and the fire spread rapidly due to combustible nylon material, and the high pressure, pure oxygen cabin atmosphere. Rescue was prevented by the plug door hatch, which could not be opened against the internal pressure. Because the rocket was unfueled, the test had not been considered hazardous, and emergency preparedness for it was poor.

During the Congressional investigation, Senator Walter Mondale publicly revealed a NASA internal document citing problem prime Apollo contractor North American Aviation, which became known as the Phillips Report. This disclosure embarrassed Administrator James E. Webb, who was unaware of the document's existence, and attracted controversy to the Apollo program. Despite congressional displeasure at NASA's lack of openness, both congressional committees ruled that the issues raised had no bearing on the accident.

Crewed Apollo flights were suspended for 20 months while the command module's hazards were addressed. However, the development and uncrewed testing of the lunar module (LM) and Saturn V rocket continued. The Saturn IB launch vehicle for SA-204, was used for the first LM test flight, Apollo 5. The first successful crewed Apollo mission was flown by Apollo 1's backup on Apollo 7 in October 1968.