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April 17, 2010

# David Simons, Who Flew High on Eve of Space Age, Dies at 87

By **WILLIAM GRIMES**

David G. Simons, whose ascent more than 19 miles above the [Earth](#) in an aluminum capsule suspended from a helium balloon set an altitude record in 1957 and helped put the United States on the road to manned [space flight](#), died April 5 at his home in Covington, Ga. He was 87.

The cause was heart failure, his sister, Elizabeth Mason, said.

Dr. Simons, a physician turned [Air Force](#) officer, had sent animals aloft for several years before his record-breaking flight. At Wright-Patterson Air Force Base in Dayton, Ohio, he had launched monkeys in V2 rockets to test their reactions to weightlessness. At Holloman Air Force Base near Alamogordo, N.M., he had put mice and guinea pigs into balloon gondolas for a trip into the upper atmosphere to determine the hazards of primary cosmic radiation.

In August 1957, it was Dr. Simons's turn to be experimented on. As part of Man High, an Air Force program to explore the possibilities of manned space flight, he squeezed into an air-conditioned capsule about the size of a telephone booth and, on Aug. 19, lifted off from a deep open-pit iron mine in Crosby, Minn. On one wall of the capsule hung a warning sign: "Have all the fun you want, but don't jump up and down."

Just before takeoff, his commanding officer, Col. John Paul Stapp, shook his hand and said, "Major, you are about to reach the high point of your career."

As he left 99 percent of Earth's atmosphere behind him, Dr. Simons ascended to nearly 102,000 feet. This broke the record of 96,000 feet set two months earlier by Capt. Joseph W. Kittinger Jr. in a flight, supervised by Dr. Simons, to test the capsule.

After 32 hours and 10 minutes aloft, Dr. Simons descended into a flax field in South Dakota, pressed a button to flip open the dome of the capsule and staggered out, exhausted but

unharméd.

A few days later he was awarded the Distinguished Flying Cross. On Sept. 2, Life magazine put an in-flight photograph of his face, in space helmet, on its cover. It was an unfamiliar portrait style that Americans would come to know well as the [Mercury](#), Gemini and Apollo space programs evolved in the 1960s.

“Those flights, by Simons and his colleagues, set the stage for the space age,” said Tom Crouch, the senior curator of aeronautics at the [National Air and Space Museum](#) in Washington. “The Mercury capsules and the ones used by the Soviets were just one jump beyond the balloon capsules that these guys used when they tested the equipment and the suits and explored the environment. When you look at the big picture, they were the last step before you go to space.”

David Goodman Simons was born on June 7, 1922, in Lancaster, Pa., where his father was a doctor. After earning a bachelor’s degree in chemistry from Franklin and Marshall College in Lancaster in 1943, he enrolled in Jefferson Medical College in Philadelphia, where he received a medical degree in 1946.

A year later he joined the Army Air Force, which assigned him to the aero-medical laboratory at Wright-Patterson. There he helped developed flight monitoring and life-support systems to record the physiological responses of monkeys sent into weightlessness on rockets that rose 60 miles above the Earth.

After taking an advanced course in aviation medicine, Dr. Simons served as a flight surgeon in the Far East during the Korean War. In 1953, returning to the United States, he was put in charge of the space biology branch of the Aero-Medical Field Laboratory at [Holloman Air Force Base](#).

The laboratory was run by Colonel Stapp, a flight surgeon known as the fastest man on earth for his experiments riding a rocket-powered sled to test the effects of rapid acceleration and deceleration. Encouraged by Dr. Simons’s animal experiments, Colonel Stapp proposed sending men into the upper atmosphere and, with Dr. Simons and Otto C. Winzen of the design and construction company Winzen Research, developed the Man High project.

Dr. Simons ascended with instructions. Surrounded by instruments, controls, an altimeter, gauges, cameras, a five-inch telescope, a tape recorder and food and drugs, he was required to carry out 25 experiments. Astronomers wanted him to observe the moon and Venus. Meteorologists asked for data on the [aurora borealis](#) and pictures of cloud formations.

To measure cosmic ray bombardment, he wore photographic track plates taped to his arms and chest. Later, when researchers aligned the plates with marks tattooed on his body before the flight, they could locate precisely where cosmic particles had hit and study any lingering effects.

A microphone taped to his chest radioed his heartbeat and breathing to the control station — and also allowed mission control to track his position.

In an article for *Life*, “A Journey No Man Had Taken,” Dr. Simons reported that the sky, high above Earth, was purplish black. Above the Earth’s haze layer, he saw thin bands of blue etched against the night sky. These thin shells of dust, he wrote, “hovered over the Earth like a succession of halos.” The stars, he informed readers, did not twinkle.

His most important finding was that a human being could survive, with the proper equipment, at the edge of space. He described his main contribution, tersely, as “just being there.”

After making his historic flight, which he described in the book “Man High” (1960), written with Don A. Schanche, Dr. Simons conducted studies on the use of radio telemetry for in-flight medical monitoring at the Air Force’s School of Aerospace Medicine in San Antonio.

He retired from the Air Force in 1965 with the rank of lieutenant colonel. He began doing research on neuromuscular function at Veterans Administration hospitals and spent the later part of his career investigating the cause of myofascial trigger points — tiny knots that develop in a muscle when it is injured or overworked and that cause musculoskeletal pain.

With Janet G. Travell, who treated President [John F. Kennedy](#)’s back pain, he wrote “Myofascial Pain and Dysfunction: The Trigger Point Manual” (1983), which became a standard work on the subject.

In addition to his sister, Elizabeth Mason, of Kittery, Me., he is survived by two sons, Sam, of Redwood City, Calif., and Scott, of Livonia, Mich.; two daughters, Susan Ganstrom of Pocatello, Idaho, and Sally Witters of San Jose, Calif.; four grandchildren; and five great-grandchildren.

When Dr. Simons touched down after his historic flight, a farmer and his son raced across their field on horseback to greet him. “Hello, how are you today?” he said to the farmer, removing his space helmet. The boy, ignoring the aluminum space capsule at his feet, pointed to an approaching Air Force helicopter and said, “I’ve always wanted to see one of them.”

