

Fly Me To the Moon and Mars: Oklahomans in Space
By Amy Dee Stephens

Forty years ago, on July 20th, 1969, Neil Armstrong took his first historic step on the moon. From the beginning of the Space Race, Oklahomans have been there for every Earth...

Moon...

Mars...

“step” of the way

It's surprising that the television show *Leave it to Beaver* survived, because it debuted the same night the Space Age began. While freckle-faced Beaver worried about expulsion from school, Americans faced a much larger threat.

That night, Oct. 4, 1957, the Soviets launched the world's first satellite into space. Radios across the globe picked up the transmitted *beep...beep...beep* of Sputnik 1; a pulsing proclamation that Russia, “the enemy,” was more technologically advanced than the United States.

Half a century later, humans still aren't zipping off to Jupiter in personal space rockets or fighting off green Martians. But! Thousands of satellites are orbiting Earth, we've seen the red surface of Mars, and both Russians and Americans are co-existing on the International Space Station.

America's launch into space might have played out differently if not for several key Oklahomans. Some of them are well known, as their names are displayed prominently on schools and street signs across the state. Others are less known—but each one brings us a historic “step” closer to understanding the mysteries of space.

Although the United States was gearing up for satellite research in the late 1950s, the Soviets had spent the decade quietly doing serious experimentation. In response to Sputnik 1, the National Aeronautics and Space Administration (NASA) was quickly formed, and progressed from zero to blastoff!

America's first seven astronauts were soon introduced to the world. These Project Mercury men would experiment with the possibility of manned space flight. One was an Oklahoman from Shawnee, named Gordon Cooper.

A few months earlier, Cooper had been a test pilot. He didn't know that his name was on a list with 500 others who met the age, height and flight-time requirements NASA was seeking. When Cooper was summoned to Washington DC as one of 69 finalists, he still didn't know.

The mysterious meeting began, “Gentlemen, you have an opportunity few men have ever dreamed of...”

In his book, *Leap of Faith*, Cooper shared how the speaker started to talk of launching chimpanzees into space, then humans. Thirty-seven of the finalists instantly dropped out.

“I saw what a logical, step-by-step program NASA had in mind,” Cooper said. “I was pretty sure I wanted in.”

Cooper began a series of health and endurance tests. Good ol' Oklahoma hay-fever nearly disqualified him, but he reassured doctors, "I can't imagine I'll run into many mixed grasses and sycamore trees in space."

Once Cooper and the other astronauts were revealed to the public, they became instant celebrities.

"All we had done was have our names on a list and take some tests," Cooper said.

However, not all Oklahoman's were thrilled with the choice of astronauts. A high school student from Bethany was outraged. Shannon Lucid sent a letter to *Time* magazine complaining that women weren't allowed to apply for the space program.

What she didn't know was that the independent researcher who had conducted the qualifying tests for Project Mercury speculated that because women had smaller frames and used less oxygen, they might make better astronauts than men. He ran the same tests for female volunteers, and thirteen women endured and passed the same qualifying rounds as their male counterparts. Some also did extra testing, including psychological and isolation tank tests held in Oklahoma City.

The first woman to pass was Jerrie Cobb of Norman, Oklahoma. She'd been flying planes over the Great Plains since she was twelve. Her job was to circle over small towns and drop flyers to advertise a visiting circus.

Cobb had set world records in speed, distance and altitude. Her goal was to become the first woman in space. She was shocked when NASA withdrew its promise to put her in space--but politics got involved. Even Congress and President Lyndon Johnson, turned a blind eye to her qualifications. At a time when the women's rights movement was just gearing up, Washington made it clear that females didn't belong in space!

Meanwhile, Project Mercury was underway. Each astronaut was taking a turn being launched into orbit to conduct various tests—mainly to determine whether man could survive in space.

Gordon Cooper was the last to go up in a Mercury capsule, and the last American to fly alone in space. However, several of his accomplishments on that mission were "firsts." Cooper was scheduled to orbit for 34 hours, which meant he would need to sleep. Could it be done in space?

As his pulse decreased lower and lower, doctors feared he was dying. They woke him up over the intercom. Cooper was just sleeping, but when he was startled awake, he realized that his hands were floating dangerously close to important switches on the control panel. So, he secured his hands and fell back to sleep.

When he returned to Earth (flying autopilot because of electrical failure), New York City threw him the largest ticker-tape parade to date. Cooper was proud that his two grandmothers, who had once lived in Indian Territory, had lived to see the day he returned from outer space.

Project Mercury ended and Project Gemini started gearing up. NASA wasn't ready to put a man on the moon yet—that wouldn't come until Project Apollo. More needed to be learned about weightlessness and equipment docking.

From among the second round of astronauts, Gordon Cooper and Thomas P. Stafford of Weatherford, Oklahoma were selected. Stafford had been a child during the worst of the Dust Bowl. His fondest childhood memory was a visit to a windmill in May, Oklahoma, when he was four. The windmill was one of the tallest in the world, and

before his parents knew it, he'd climbed to the top of the eighty-five foot platform. He felt like he was on top of the world.

Thirty-five years later, he would be above it.

The year was 1965. While *The Sound of Music* played and the Vietnam War raged, Cooper and Stafford began to space walk and rendezvous (join a space craft with a space station). Stafford helped develop the technology and sequencing, which would become a crucial part of the equipment docking for the moon landing.

The Apollo Project was preparing to move into its manned-mission stage when another Oklahoman was added to the itinerary, William Pogue of Okemah. Pogue served as ground support for three Apollo missions, including the famous moon landing in 1969.

Stafford was commander of the Apollo 10 mission, which was the “dress rehearsal” for the moon landing. Hovering above the surface of the moon, Stafford tilted the spacecraft to get a good view, and transmitted the moon’s first color pictures back to Earth. Getting closer, his crew was able to confirm the landscape that geologists had charted. One low mountain range to the left of the future moon landing site was named “Oklahoma Hills.”

Two-months later, with Apollo 11, America arrived...and landed! Newscaster Walter Cronkite moderated for the world as Neil Armstrong took his first step on the moon. In just twelve years, the United States space program went from non-existent to the finish line. A giant leap for mankind.

The goal was attained. What was next?

In the 1970s, NASA moved into another experimental phase, looking to the future of long-term living in space. Skylab was America’s first stab at creating an inhabitable space station. Owen Garriott of Enid, Oklahoma, was selected as one of six Skylab scientists. He lived on Skylab 3 for 60 days—which was a record.

William Pogue also got his chance for space travel as a Skylab pilot. While in space, he conducted more than fifty experiments. Part of the project was to document how to do general repair work in a weightless environment. In his book *How Do You Go To The Bathroom In Space?*, Pogue shared his frustration with simple activities.

“Loosening or tightening a screw in zero gravity was particularly difficult,” Pogue said.

He figured out ways to cope, and shared his adaptations with future astronauts. In some cases, new tools were invented. In others, simple changes were made—such as elastic eyeglass bands, because Pogue’s glasses floated away and reappeared on the ceiling three days later.

Although Skylab netted valuable information, the project was abandoned in the mid-1970s. No American entered space again until 1981, when reusable shuttle launching began and an experimental laboratory was under construction. By the early 1990s, the cost of space exploration called for an international partnership, and now, 14 nations have cooperatively lived on the International Space Station.

The shuttle era ushered in a long-awaited moment in women’s history. In 1978, NASA’s first six female astronauts were announced. Despite Jerrie Cobb’s previous efforts to gain equality for women, it had taken nearly 20 years.

Women no longer wore cotton housedresses and swooned over Elvis; they were now wearing jogging suits and discoing along with John Travolta. But it finally happened. Bethany’s Shannon Lucid, the same girl who’d decided at the beginning of

the space race that she was going to be a rocket scientist, even if a woman couldn't be, was on the first female roster!

Lucid, a biochemist, was thirty-five years old and had three children when her dream finally came true. In 1985, she was the seventh woman to enter space. In 1996, ten years and four flights later, she spent an unprecedented 188 days in space aboard the Russian space station.

It's possible she felt comfortable in such a small space because of her early childhood experiences. Lucid spent her first year of life with forty-seven other prisoners in a two-bedroom house in a Chinese concentration camp. According to the book *Astronauts, Athletes, & Ambassadors*, as a child she pretended to be a pioneer on the wide-open spaces of the Western frontier.

In adulthood, Lucid said, "Space is perhaps the last frontier, and I have been privileged to explore it."

Orbiting the earth wasn't the only space frontier, however. Donna Shirley, of Wynnewood, Oklahoma, set her sights on solid ground—the red ground of planet Mars.

"I was a smart, mouthy tomboy in a town where the idea of womanhood carried with it a lot of chignon and mascara," Shirley said. She preferred airplanes.

So, Shirley became a daredevil pilot and went into aeronautic engineering. Then, she became the first female manager of a mostly-male team that spent ten years designing a roving robot to land on Mars. Sojourner successfully landed on July 4th, 1997, transmitting photos of the mysterious planet, and giving Oklahomans a chance to see a new kind of red dirt.

In her book, *Managing Martians*, Shirley said, "The generation that had grown up watching *Star Trek* and *Star Wars* hadn't seen a planetary landing in its lifetime. Even if my feet weren't going to make their mark on Martian soil, Sojourner's tracks would be the next best thing."

Mars exploration continues, with the next rover scheduled to launch in 2011. NASA hopes to someday send humans to the planet. As the International Space Station reaches its final stages of completion, the space shuttles are scheduled to retire next year. In just a few months, testing for the new Constellation Program will begin. An experimental rocket will be test-launched soon and will eventually send humans back to the moon—the first time in nearly half a century.

And what of the seven Oklahomans who forged the way?

Although Gordon Cooper passed away in 2004, the others are still active as educators and speakers. Nearly all of them have published books about their extraterrestrial experiences. In 2008, Owen Garriot co-authored *Homesteading Space*, the history of the Skylab program.

Tom Stafford opened a museum in Weatherford that showcases the history of space travel and features numerous items that actually flew in space. Shirley has now retired from her NASA career and lives in Tulsa. She is a consultant and speaker on the topic of managing high-performing teams in high-stress situations.

Lucid has continued her involvement with NASA from the ground. As recently as 2008, she served as Capsule Communicator for manned space crews. She talks directly with the astronauts in space and passes along their issues and information to ground crews.

Jerrie Cobb, in her late 70s, is still flying airplanes to an area almost as remote as the moon—the Amazon jungle. She offers humanitarian aid to primitive villagers, for which she was nominated for a Nobel Peace Prize. Cobb is still awaiting the opportunity to travel to space, as soon as NASA extends the offer.

Much has changed since that first “step for mankind.” We aren’t living in the world of *The Jetsons* yet. Or are we? Modern space technology has ushered in the information age, in which satellites instantly transmit to our home computers, and even the cell phones in our pockets.

The sky is no longer the limit, and Oklahomans have at least seven people to thank for that.

Bibliography:

Astronauts, Athletes and Ambassadors by Carlile

The Race for Space by Kuhn

Women Astronauts by Woodmansee

Into Outer Space by Owen

We Have Capture by Stafford

Solo Pilot by Cobb

Managing Martians by Shirley

How Do You Go To the Bathroom In Space by Pogue

Homesteading Space by Garriott

Leap of Faith by Cooper

American Chronicle; 1920-1989 by Gordon

Email correspondence with Donna Shirley, June 8-10, 2008