

Overlooked No More: Annie Easley, Who Helped Take Spaceflight to New Heights

She broke barriers at NASA and contributed to its earliest space missions as a rocket scientist, mathematician and computer programmer.

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Annie Easley in 1981 in a control room at NASA. She worked at the space agency for 34 years before retiring in 1989. NASA

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This article is part of Overlooked, a series of obituaries about remarkable people whose deaths, beginning in 1851, went unreported in The Times.

On May 8, 1962, a powerful rocket lifted off from Cape Canaveral in Florida. The liftoff was a test of NASA's readiness for space exploration and a potentially groundbreaking moment in the Cold War space race between the U.S. and the Soviet Union.

Scientists, engineers and spectators watched with anticipation — this test, they knew, could push the boundaries of technology in a way they'd never seen before.

But 54 seconds into the flight, the rocket exploded.

The rocket had two parts: An Atlas booster to thrust it off the ground and a Centaur upper stage intended to propel it beyond the earth's atmosphere.

An analysis determined that the insulation panels in the Centaur, which used a flammable combination of liquid hydrogen and liquid oxygen as a propellant, couldn't withstand the pressure and had ruptured, causing the explosion.

Annie Easley was a member of the team at NASA's Lewis Research Center in Cleveland (now the Glenn Research Center) given the critical task of fixing the Centaur's design. Unlike most people working on the project, she was not an engineer. She hadn't even finished college. But she was an excellent mathematician and computer programmer who was adept at solving problems.

The Department of Defense had concluded that the Centaur would not be ready for at least several more years, a critical setback for the country.

But 18 months later, on Nov. 27, 1963, the redesigned rocket system successfully blasted into space. It was the beginning of a new era in spaceflight, and Easley's calculations had been vital to the mission.

In her 34 years at NASA and beyond, she saw Centaur rockets carry other satellites and interplanetary space probes, including Voyager, Pioneer, Viking and Cassini. The technology used to design the Centaur was also incorporated into the Saturn rockets that sent men to the moon, and into the space shuttle program. Centaur

boosters are still used today.



Easley in 1976 at NASA's Lewis Research Center. She was hired there in 1955 as a human computer. NASA Glenn Research Center

Easley had been hired in 1955 to work at Lewis as a human computer — one of a group of gifted women who calculated and solved complex mathematical problems before there were mechanical computers powerful enough to do the work.

The 2016 book and film “Hidden Figures” memorialized the work of some of these pioneers. Like the women depicted in that history, Easley was Black and had to overcome obstacles to succeed, but she did not let that stop her.

“When people have their biases and prejudices, yes, I am aware. My head is not in the sand,” she said in a 2001 oral history interview for NASA. “But my thing is, if I can’t work with you, I will work around you.”

Indeed, despite the mistreatment she faced throughout her career, she did not let her struggles define her. When asked in the oral history how she felt about certain contributions she'd made at NASA, she replied, "I'm happy at the time when I see it, but my big thing now is trying to learn to snowboard."

Annie Jean McCrory was born on April 23, 1933, in Birmingham, Ala. Records show her parents' names as Bud and Willie (Sims) McCrory. She graduated from Holy Family High School as the valedictorian of her class.

She had thought of becoming a nurse because it was a reliable profession, but she switched her interest to pharmacy, perhaps inspired, she said, by seeing a pharmacist at the corner drugstore near where she grew up. She entered the College of Pharmacy at Xavier University of Louisiana in New Orleans but left after two years to marry Theodis Easley, who was in the military, and returned to Birmingham, where she briefly worked as a substitute teacher.

Though Annie Easley lived in the Jim Crow era, she tried not to allow the restrictions placed on Black people to control her life.



Easley in 1981 in her office. She faced discrimination throughout her career, but she said her philosophy was "If I can't work with you, I will work around you." NASA

"My mother always told me, 'You can be anything you want to be, but you have to work at it,'" she said in the oral history. It was a message she would carry for the rest of her life.

Still, there were times she could not escape disenfranchisement. When she registered to vote in Birmingham, she was told that she had to take a test and pay a poll tax. But, she later recalled, someone at the voter registration bureau saw on her application that she had been educated and waived the exam, saying: "You

went to Xavier University. Two dollars.” The incident motivated her to help Black people who did not have an education prepare for the test.

After Theodis Easley finished his military service in 1954, he and Annie moved to Cleveland to be near his family. Annie intended to resume her training to become a pharmacist, but the closest program was in Columbus, Ohio, 140 miles away, so she became a homemaker.

That decision did not last long.

One day in 1955, she read an article in a local newspaper about twin sisters who were working as human computers at the National Advisory Committee for Aeronautics (it became NASA in 1958). Easley, who had excelled in mathematics in school, was intrigued. NACA was in Cleveland, so the next day she drove out to the facility and applied; she was hired as the fourth Black employee of the Lewis Research Center’s 2,500-person work force.

Her responsibilities changed and grew over the decades. She became a computer programmer, working in languages like Symbolic Optimal Assembly Program, which is used to transmit data and instructions over networks, and Formula Translating System, or Fortran. She analyzed systems that handled energy conversion and aided in the design of alternative power technology, including the batteries used in early hybrid vehicles.

NASA was good at recognizing and promoting talented people, but it was not immune to the crosscurrents in society, and Easley encountered bigotry and roadblocks because of her gender and her race.



In the later stages of her career, Easley became a role model for others, recruiting for NASA and tutoring students. NASA Glenn Research Center

Some of the discrimination was symbolic: On one project, a photo of her six-person team was enlarged and displayed at an open house, but it had been cropped so that she was cut out of it.

At other times, the problems were more substantive: She was hired at a lower pay grade than others doing the same job, and when she asked why, she was told there were no more “available” positions at that grade level.

But she maintained a positive attitude. “You may control my purse strings,” she would say, “but you don’t control my life.”

During the 1970s, Easley went back to college for a degree, this time in mathematics, in part to be taken more seriously by colleagues who she said did not regard her as a “professional.” Though NASA typically reimbursed employees for their education, her request was denied, and she paid out of her own pocket.

Her supervisor also did not give her paid time off to complete her degree, even though others had been allowed to do so. So she took classes while working and then took three unpaid months off to finish her education, graduating with a Bachelor of Science degree from Cleveland State University.

Easley never let the resistance she encountered deter her. “There are people who have authority, and I think sometimes they abuse it. It makes them think, ‘I’m in charge if I say no,’” she said in 2001, and so “you live with that kind of thing, but you don’t let it stop you.”

In fact, she led a well-rounded life. After her marriage ended in divorce in the late 1960s, she dated, went to group dinners, golfed and played tennis. In 1979, at the age of 46, she took up skiing and started a ski club at work.



In 1979, at age 46, Easley took up skiing and started a ski club at work. It quickly grew to more than 200 members.

NASA Glenn Research Center

She retired from NASA in 1989.

In the later stages of her career, Easley became a role model for others, recruiting for NASA and tutoring students. She also became an on-site counselor for the Equal Employment Opportunity Commission to combat continuing issues of discrimination.

Easley died in Cleveland on June 25, 2011. She was 78.

She did not live long enough to see herself immortalized in the heavens, but on Feb. 1, 2021, the International Astronomical Union named a five-and-a-half-mile crater in the moon's southern hemisphere Easley.

A correction was made on Feb. 7, 2025: An earlier version of this obituary misidentified one of the computer languages Easley used while working at NASA. It is Symbolic Optimal Assembly Program, not Simple Object Access Protocol.

When we learn of a mistake, we acknowledge it with a correction. If you spot an error, please let us know at nytnews@nytimes.com. [Learn more](#)

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