

ERIK SKYR

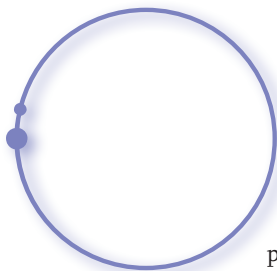
ALUMNI PROFILE
BY MARY BROLLEY
⌚ 5 MIN.



PAT LAYKY '67 REFLECTS ON FOUR
DECADES AS A NASA SCIENTIST AND
LIFE IN A RUGGED APPALACHIAN COUNTY.

“They still call me a Yankee,” **Pat Layky '67** said of longtime friends and neighbors in tiny Estillfork, Ala., an unincorporated community in the northeastern part of the state. “And I’ve lived (in Alabama) two-thirds of my life.”

Her tone conveyed an understated affection for these neighbors, most of whom go back at least five generations in this remote and beautiful area. Layky felt drawn immediately to the 80-acre plot just south of the Tennessee border and its views of the Little Cumberland Mountain — “but only in the winter; too many trees in the summer,” she noted with a scientist’s precision.



ver the next several years, while living in a mobile home park to save money, Layky designed and supervised the construction of her home. After she moved in, Layky drove 45 miles each way to work at NASA's Marshall Space Flight Center near Huntsville, Ala., until she retired in 2010 after a 42-year career.

She never seriously considered leaving the area. Instead, she's crafted a life of hard, rewarding work, time for reading, contemplation and outdoor activities, and a variety of volunteer work in the community.

ALWAYS LOOKING FORWARD

In the late 1960s, NASA offered a charged, exciting atmosphere. Layky worked as a space optics physicist on a number of well-known projects: the Skylab Space Station, the Space Shuttle Challenger and the Hubble Space Telescope, to name a few. The field involves the creation and use of cameras and telescopes — any type of light-collecting mirror — to explore objects or areas thousands of miles away. She tested and prepared the scientific experiments astronauts would conduct during their missions.

"I was involved during the design phase, so you're always looking forward," Layky said. "I was doing engineering of film and video cameras that would be used in experiments onboard. By the time the craft actually flew, I hadn't worked on it for a while.

"NASA was one of the leaders in bringing women in. Still, there were very few women in space optics physics. Some of the men I worked with were supportive, some were very dismissive. But some helped you learn, taught you."



Layky spent the last part of her career in Marshall's well-regarded Earth Sciences program. "We conducted weather and climate experiments and did earth resources experiments with cameras, radiometers and microwaves," she said.

MICROWAVES?

"Not everything that contains useful information is in the visible spectrum," she replied. "We monitored the health of crops in forests and measured warming patterns in rivers. We did all kinds of weather experiments. We worked with the Tennessee Valley Authority."

Designing equipment to operate in zero gravity presented unique challenges. There were failures with sounding rockets, which provided short periods of zero-g by flying higher than balloons but below orbiting satellites.

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"Though the camera had undergone several high-level 'shake' tests to demonstrate its ability to operate after launch vibration, when it got into the nice calm zero-g phase, the film floated up and jammed into the top piece, ruining the experiment."

After any type of failure, Layky said there would be an independent investigation led by a group of engineers from several disciplines.



ADVICE to those starting CAREERS in SCIENCE:

DON'T GET LAZY

A good portion of your projects, especially if you work somewhere like NASA, will be canceled. You're dealing with scientists who give you a first set of requirements, but then costs can spiral and you have to redo things. You often have to redo things. Just keep working hard on your projects.

DON'T LET A FAILURE OR MISTAKE SPIRAL YOU DOWN

Because you're going to make some (mistakes). I sure did.

WOMEN SCIENTISTS: THE SKY'S THE LIMIT

Stand up for yourself. You've got so many opportunities.

FIELD OF DREAMS

At Bradley, she had been one of just a handful of physics grads in 1967 — and the only woman. Layky felt the department's size was an advantage. "I needed individual attention. I get lost in a crowd," she said.

Science was an early passion. "I had a couple of great physics teachers in high school in Niles (Ill.). I won an Illinois state scholarship. Bradley had a good technical engineering program and a good physics department."

On a visit to the university, she noted the seriousness of the student guides. "You toured some schools, and the school work wasn't what they talked about. But at Bradley, (student tour guides) expressed an interest in what they were learning."

NASA offered her a job in its space optics program straight from the university. "They were recruiting like mad," she

recalled. "It was close to (the lead-up to) the first moon landing. And it was just what I wanted. This was right after Sputnik. Space was really a field to dream for."

Layky never regretted joining NASA. "Sometimes I wish I'd achieved more. Maybe gone on for a Ph.D. But it boils down to, 'Are you doing something you like at a level you're content with?' I knew I was never going to be a Nobel Prize winner. But I liked it. I did good work."

Her greatest joy? "When a project worked. When we heard that scientists were getting really good data. When we got copies of the scientific articles they published."

A LIFE IN THE FOREST

On her land, there's just enough cleared space to build two homes. There's no light pollution, so it's perfect for stargazing. She chops wood for her backup heater

and dabbles in woodworking, making outdoor furniture.

In the community, Layky serves as a volunteer firefighter and helps out at a nearby hospital as well as the library. She even prepares income taxes for those in need.

"We're sort of advanced first aid-ers," Layky said of her work with the local fire crew. "We try to keep you alive until the ambulance arrives."

Life in the woods is perfect for her.

"I was never a party animal. Not big into night life. I've always had a small-town attitude. I like hiking, scenery. I've slowed down a bit, but I still hike in Tennessee state parks, and I kayak." **B**