

COVER STORY

Private Property

Ask Sally Ride About Her Research. Or Her Program to Revolutionize Science Education in America. But Skip the Queries on the Glory of Space Travel, and Don't Even Think About Anything Personal.

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Sally Ride doesn't look like a woman outrageous enough to sit on top of a stack of enormous flaming rockets. There's absolutely nothing about her refined appearance or manner to suggest she has the grit to travel into the great, dark, airless abyss strapped to the seat of a hurtling piece of machinery. She's small, reserved, a reluctant heroine uneasy with eminence, a self-possessed but distant star who navigates her rarefied universe with quiet control.

Ask her about propulsion or the effect of clouds on radiative energy, and she's forthright, focused, even friendly. Ask about the psychological and spiritual impact of space travel, and she shuts down. There are astronauts who've returned to Earth with epiphanies about universal connectedness and the meaning of existence. Sally Ride is not one of them. "The experience of being in space didn't change my perspective of myself or of the planet or of life," she declares. "I had no spiritual experience."

Ride was the first American woman in space, a kickoff to a series of firsts for women, including last month's flight of Air Force Col. Eileen Collins, the first woman to command an American space flight, the shuttle Columbia.

But Dr. Sally Kristen Ride does not relish the first-woman-in space mantle. On June 18, 1983, when she climbed into the flight engineer's seat of Challenger, she was a sensation: brilliant, pretty, girlish and brave. "Ride, Sally Ride!" a global fan club wildly cheered. Six days later she returned to glory on Earth. She endured a media sentence, allowing her NASA handlers to plant her on lecterns like a potted palm. Still she managed to orbit the national consciousness relatively unknown. She was pleasant, yet guarded. She made it clear that she wore the ID of scientist/astronaut, not the badge of a feminist space jockette or symbol of women's progress.

Sixteen years later she still wears the same ID. And she continues to collect achievements. She is a professor at UC San Diego, a scientist, a two-time National Spaceflight Medal winner. Her most recent accomplishment is the creation of a national program designed to attract millions of young students to science. Her greatest hope is that EarthKAM will do nothing short of revolutionizing science education in America. But please don't expect her to gush about the thrill of reaching for the stars.

"Talking is contrary to her personality," says her ex-husband, friend and e-mail pal, veteran astronaut Steven Hawley, a crew member on the latest Columbia mission. "She's more from Mars than from Venus."

Last fall, the California public school system listed Ride in elementary school history textbooks as an official hero, placing her in the company of Abraham Lincoln, Albert Einstein and Jackie Robinson. (Indira Gandhi didn't make the cut.) In a society that worships superstars and manufactures heroes, what is astonishing is that Sally Ride is the real thing, a bona fide American hero. Yet her photo has never been plastered on a bus or a Wheaties box. No one recognizes her at the supermarket. She's the antithesis of the gregarious, grinning John Glenn. She's peered down from the heavens and said no to celebrity, though she does accept fees as a corporate and university lecturer on the national circuit. She rarely grants interviews, and when she does, her answers are often cursory. She wouldn't be photographed for this story; the photos had to be purchased elsewhere.

Years ago she told a reporter, "I've spent my whole life not talking to people, and I don't see why I should start now."

So, yes, Sally Ride is a bona fide hero. But don't look for the Sally Ride Barbie any time soon.

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Ride is a reclusive theoretical physicist who works 12-and 16-hour days, devotes weekends to writing in the study of her La Jolla townhouse and has slipped almost unnoticed from a galactic media spotlight to the cloistered halls of academe. "My priority is my work and the work of others," she says simply.

These days that work is propelling her once again into uncharted orbits. Four years ago she developed EarthKAM, a cooperative classroom experiment involving students from middle school through college. The program allows kids to research a natural phenomenon on Earth and then take pictures of it with digital cameras mounted in the crew cabins of NASA space shuttles. The pictures are then viewed in the classroom by computer via the Internet.

Currently 10,000 children from 85 schools from La Crescenta to Langley, Va., are participating in EarthKAM. The number could multiply by tens of thousands by next year. Every week Ride receives scores of letters from schoolchildren and their parents seeking reference material on space and on her as an astronaut. She receives dozens of requests for autographs a week, and she answers them.

At a time when the country faces an alarming shortage of scientists and engineers, and student math and science test scores are a national disgrace, Ride's new quest has been described as a simple act of genius. "She's a spectacular teacher," says UC President Richard Atkinson, who was chancellor at UCSD when Ride was hired in 1989. "We live in a knowledge-based society. People have to know science. We have got to improve science education. Sally is not only a wonderful, wonderful teacher, she's interested in broader educational issues."

In the past, her research has concentrated on space physics and the study of highly complex lasers. In recent years, her academic reputation has been more tied to science education and to service as national policy adviser on space and disarmament issues, says Thomas O'Neil, chairman of physics at UCSD. "Her strength is in her breadth. Her principle value is way beyond research. She is a role model."

Lately her energies have been devoted to EarthKAM, to teaching undergrads and to writing children's books on space. While her colleagues immerse themselves in esoteric specialties involving a handful of gifted students, she pours energy into teaching science to kids of all ages, albeit from a lofty university light years from junior high classrooms. Command central is an office at UCSD's Science Engineering Research Facility, a no-nonsense monolith adjoining a building called the Structural Components Laboratory.

"Sally's a hero at bringing the excitement of science into the classroom," says UCSD Chancellor Robert Dynes. "Many children today never experience a full-blast, damn-the-torpedoes spirit of discovery. I grew up thinking I could do anything. A lot of kids today don't have that attitude, and if it's beaten out of them at 10, that's a problem. Sally teaches kids to go for it. Flat out. That's the magic."

True to form, Ride lets others praise her teaching. She does not care to explain her methods, nor is she interested in having a reporter sit in on a college class. Let the results speak for themselves. Dave Reynolds, an eighth-grade EarthKAM teacher at Olive Peirce Middle School in Ramona, is a big fan of the program and has met with Ride during feedback meetings. "She's informal," he says. "She's very willing to listen. She makes me feel that what I have to say is important."

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A fire sprinkler could go off in the corridors at the Science Engineering Research Facility and nobody would get wet, the place is so deserted. It's a formidable structure with long, deserted hallways broken only by an occasional sighting of a scientist or student ducking in or out of an office. But as the door to SERF157 opens, it's clear something warmblooded is going on. Laughter spills out of a dimly lighted room that looks like a "Star Wars" set. Beethoven's Ninth erupts from the chamber. A handful of animated students talk among themselves and gaze into computers.

This is headquarters of EarthKAM, Mission Control, a high-tech cocoon Ride helped design to look like the Lyndon B. Johnson Space Center in Houston. From a swivel chair, Brian Degenhardt, a senior majoring in computer science, studies an image of a hurricane swirling above the Gulf of Mexico that's projected on a 9-by-9-foot wall monitor. He likes what he sees. "Look at this!" he marvels. He and 30 other undergraduates are responsible for monitoring the shuttles and processing the photo requests of EarthKAM middle- school students.

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The \$800,000 program is a bargain because it is paid for by NASA, Ride says, pooling the resources of NASA's Jet Propulsion Laboratory, the San Diego Supercomputer Center, UCSD, Mission Control Houston and space shuttle astronauts. The curriculum begins in classrooms, where students and teachers study the logistics of an upcoming shuttle flight, then select a region or landmark to photograph to support their research. They might elect to learn about deforestation in the Amazon or, perhaps, dust storms in Africa or volcanoes in Hawaii. After calculating latitude, longitude and other variables, the youngsters send their data to EarthKAM Mission Control, where high school and college students program the information.

Many participants have become so absorbed in the project, they hang out at Mission Control in their spare time. "Dr. Ride is the smartest person you'll ever meet," Degenhardt says. "She's amazing. She's really driven. She gets free computers just by calling people at places like Sun and Intel. They all go, 'Oh, sure!' Everyone bows to her, but in a good way. Not because she dictates to them. Everyone just admires her so much. She gets everyone all stoked."

Other than the less-than-stratospheric grades she gets for "instructor availability," Ride receives exceptional student evaluations. "The heaven-sent Professor Ride knew the cosmos forward and backward," wrote a student in Ride's Physics of Space Science & Exploration course. "She undressed extraterrestrial physics until it stood there buck naked for everyone to comprehend," said another. "Yet, Professor Ride acted as if she herself had nothing to do with space . . . so little did she draw from personal experience."

On the one hand, Ride's detachment from the personal seems to reflect genuine humility. On the other, she separates herself from the human realm in a way that suggests she dwells on a level a little above the rest of us. She's asked about the pressures facing professional women and whether they were factors in her divorce. "No," she responds tersely. The reasons for the breakup were "just life."

Hawley is more loquacious. The two went their separate ways after five years of marriage, he says, because "she wanted to leave NASA, and I didn't."

Ride is consumed by the study of science. "Science is fun," she says brightly. "Science is curiosity. We all have natural curiosity. Science is a process of investigating. It's posing questions and coming up with a method. It's delving in. It's a lot more important than memorizing things like file. Memorizing file is not science. Science is solving puzzles."

Though described as a born scholar and teacher, she's never been drawn to kids. For that reason, those who know her best are amazed at her enthusiasm for EarthKAM. Her mother, Joyce Ride, says her older daughter announced when she was a teen that she never wanted to have children. "And she never varied from that position. I've always honored it."

Even Ride, who earned a PhD in physics at Stanford, admits she's surprised at how swiftly EarthKAM has gathered momentum, and how much time she's devoted to it. "I love this program," she says. "I choose to spend time on it. The students' excitement is contagious."

Ride was a high school junior and tennis champion at the Westlake School for Girls in Bel-Air when she was introduced to science. She names her beloved mentor in the dedication in one of her three children's books. Dr. Elizabeth Mommaerts was, as Ride has described her, "logic personified."

Ride is most comfortable in a world of logic and precision. She wants things to make sense. She's a master of the New York Times crossword puzzle, a disciplined runner, a fit 48-year-old athlete who once ranked among the Top 20 junior tennis stars in the country. "To my sorrow, she hasn't played since college," her mother says. "When she couldn't tell the ball precisely where to go, she didn't do it anymore."

Ride is a no-frills woman who dressed for our interview in a conventional navy and forest green argyle-patterned sweater, navy slacks and matching flats. She's a Trekkie, a down-to-earth football and baseball fan more comfortable ordering a beer at a bar than chardonnay at a bistro. She tends toward a healthy diet, but isn't above pizza and Eskimo Pies. "I know myself very well," she says. "I have a lot of common sense. I know what needs to be done and how to approach it. I have an ability to work with people on large enterprises."

Her sister, the Rev. Karen "Bear" Ride, director of the Peace Center of the United University Church at USC, describes her as "a scientist in the truest sense. Sally is much more interested in science than in personal relationships."

Bear, a widely respected minister, is a divorced mother of two who is openly gay. She's delivered sermons about sexuality, but doesn't discuss such intimacies with her sister, who is two years older. "Sally knows Susan and I have lived together for quite a while and that we share a house. But she prefers not to talk about it." The Ride sisters rarely get together. In fact, Sally has never seen her sister in the pulpit. Bear says it isn't a personal slight as much as a statement of Sally's profound dislike of church. Even as a girl, Bear says, her sister hated going so much that her parents, both Presbyterian elders, finally relented and let her stay home. Other than a few official occasions, "Sally hasn't darkened the door of a church since."

"I believe there are two types of people," Bear adds with affection. "Those who would do anything to go on the space shuttle, and those, like me, who would do anything not to have to go on the space shuttle, and can't imagine doing it. I only fly in big planes, and I have to have an aisle seat. Our dad was afraid of heights. No one knows where Sally came from."

"She's always been very amazing. I learned early on not to compete, as a survival technique."

Bear recounts the time Sally attended a dinner party at Al and Tipper Gore's with Prince Charles, Bill and Hillary Clinton and a few U.S. Cabinet members. She didn't tell anybody. Bear caught wind of it and asked why she'd never mentioned it. The response was predictable. "You never asked."

"It just doesn't occur to her to talk about herself," Bear says. "I attribute it to our ethnicity. We're tight-lipped Norwegians. We don't divulge much. We were raised to be independent thinkers."

A year before Ride was lofted into space, she was so adamant about privacy, she snuck out of the Johnson Space Center in Houston, where she then lived, climbed aboard a small Grumman Tiger airplane she owned with friends and flew solo to her own wedding. Only a few family members were invited to the ceremony, which was held in Salina, Kan., her groom's hometown. She and Hawley, resplendent in white jeans and simple cotton shirts, were married in informal backyard nuptials officiated by her sister and his dad, also a Presbyterian minister. The newlyweds slipped back to Mission Control without telling a soul.

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Sally Ride was born May 26, 1951, to Dale and Joyce ride in Santa Monica and raised from age 10 in a three-bedroom ranch in Encino. Her dad, who died in 1989, was a political science professor at Santa Monica College; her mother is a founding board member of the Mary Magdalene Project in Los Angeles, which helps prostitutes who want to get off the streets, and a longtime activist for the rights of women in prison.

The Rides encouraged their daughters to think their own thoughts and develop their own interests. They exposed them to travel and to people from many cultures and economic backgrounds. Joyce Ride says her husband was extremely outgoing, a genuinely nice guy. Joyce says, like Sally, she is "an 'I' {introvert} on the Myers-Briggs" personality test.

Joyce says she raised children in the days before "parenting" became a verb--and a subject of discussion. She just did it, but she knew this: "We wanted our daughters to excel, not conform. We never patronized them or treated them like they were inferior to us. We never talked baby talk to them. We gave birth to persons, not possessions."

The Rides weren't entirely surprised in 1977 when Sally announced that she'd been chosen as one of the first six women in the astronaut corps. She was in the final lap of completing her PhD when she responded to a NASA ad in the student paper for candidates with science backgrounds. She applied and was selected out of a field of more than 8,000 candidates. On the day she showed up in Houston, she was a jeans-clad college kid with a backpack and boundless curiosity. "She was very youthful, clever and funny," recalls Dr. Rhea Seddon, one of Ride's classmates and now the assistant chief medical officer at the Vanderbilt University Medical Center in Nashville. "She was more athletic than most of us. She's very bright and that's why she was assigned to some of the best jobs."

Referring to the relationships among the first group of women to prove they had the Right Stuff, Seddon says, "We stood by each other, but we weren't close." She credits Ride with setting a precedent of excellence that opened the door for the women astronauts who've followed, 31 of whom have been on shuttle crews. "She's significant historically and sociologically. She really did do the trailblazing. She was careful not to make decisions for all of us, but she involved all of us. She never cried on our shoulders. She's a tough lady."

Ride's first year at NASA was intense. She learned how to fly jets, and how to parachute out of them. She was dunked in pools, acclimatized to weightlessness and to G-forces. She was grilled in radio communication and navigation. She developed a flair for solving confounding engineering tasks, and a special expertise in the design of a remote mechanical manipulator arm capable of releasing satellites in space or plucking them out of the void and hauling them back into the mother ship.

Ever resourceful and dependable to the core, her NASA star soared. In the early '80s she served as "capcom"--capsule communicator--the astronaut in Mission Control who relays information from the flight director to the shuttle crew. Then she was named to the historic flight, a hard-won honor within the wildly competitive elite corps. She didn't disappoint. She was smart, strong, unflappable. Above all, she was a team player, a straight arrow, NASA perfection. She was rewarded for excellence again in 1984, when she blasted into space a second time.

Fifteen months later, her world exploded.

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Last autumn, on the day John Glenn returned to space as an old man, Joyce Ride wept. She stood alone in front of the TV set and sobbed. Only a few weeks before, she'd been awakened by a terrifying nightmare. She had dreamed Sally was lost in space. "I've been to five liftoffs," she says. "But I've never been frightened until recently. It's a fear of the power."

The power of flaming rockets. The profundity of love and the fragility of life. The horrific image of the Challenger explosion, a moment etched in the American psyche, a ghastly, haunting horror for astronauts and their families.

Sally Ride isn't given to public displays of emotion. But at the mention of Challenger, her face flushes. She recalls the day of the disaster, Jan. 28, 1986: She was traveling from the East Coast back to Houston on a commercial flight. The pilot announced that something had gone wrong seconds after the Challenger lifted off. Details sketchy.

Ride went numb. She reached for her driver's license, walked to the cockpit, showed the captain her identification and asked if she could listen in on news of Challenger on the radio. Once the plane landed, she took a cab to Mission Control.

"I walked into the astronaut office, and I knew. You could see the devastation."

Despite her best efforts at emotional detachment, a wave of sadness travels over her face. The six astronauts killed in the explosion were more than friends. (The other crew member killed was teacher Christa McAuliffe.) They were members of an intimate fraternity, tethered to one another for their very survival. She was immediately swept up in attending the acute needs of their relatives, including the overwhelming task of helping to arrange several funerals. Days later, she was appointed to a presidential commission to investigate the accident. Referring to the enormity of the grief and its aftermath, she says, "It was all so confusing. I'm not sure I dealt with it for months."

Morale at NASA sank. Shuttle flights were canceled for nearly three years, including Ride's third scheduled space trip. Rather than go into teaching and research after the final mission, as she had intended, she completed the government investigation and resigned. The difficulty of leaving the astronaut corps for academia was compounded by the fact that she would, once again, be on a solo flight out of Houston. "She had a real yearning to return to simpler times at the university," ex-husband Hawley says. "Challenger was tough for all of us, and Sally had to play a very public role. She was forced into the public eye because of the hearings. It was hard on her. The way she handles problems is to quietly go off and live in a cave."

After the televised hearings, Ride served as a special NASA investigator in Washington, D.C., to study the agency's long-term goals. At the time, she decried its lack of leadership and direction. "It was enmeshed in bureaucracy," she now says. "I've been away for a long time, but I think the agency has been streamlining. The mood at JPL is very enthusiastic. There are new missions, a focus on new technology, a new look at science programs. Astrobiology has energized people. It's a forum for understanding the basis of living things, for finding out if life exists in or outside the solar system."

Ride is fascinated by the force of photons, rocket technology, the exploration of the solar system, the vastness of the universe. She could plaster the corridors of the cavernous Science Engineering Research Facility with the awards and honors she's received over the years: the Lindbergh Award, the Jefferson Award for Public Service, the Lawrence Sperry Award, a fellowship in the American Physical Society . . . But she doesn't even display them in her office, a tidy, unlivable space lacking in personal touches save for a miniature pumpkin abandoned near a patch of neatly stacked papers.

"I have no idea how many trophies and awards she has," her mother says. "As a kid, she kept them in the closet. She's just not one to beat her own chest. It runs in the family. One does not do what one does in life for the award."

When all the tests are graded and the work is done, Joyce Ride says, her daughter's epitaph won't read, "Sally Ride, America's First Woman in Space." A more fitting tribute would have to do with a quality that sets the reluctant heroine apart and propels her forward. It would only say, "Sally Ride: She Rose to the Occasion."

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Ride was a high school junior and tennis champion at the Westlake School for Girls in Bel-Air when she was introduced to science. She names her beloved mentor in the dedication in one of her three children's books. Dr. Elizabeth Mommaerts was, as Ride has described her, "logic personified."

Ride is most comfortable in a world of logic and precision. She wants things to make sense. She's a master of the New York Times crossword puzzle, a disciplined runner, a fit 48-year-old athlete who once ranked among the Top 20 junior tennis stars in the country. "To my sorrow, she hasn't played since college," her mother says. "When she couldn't tell the ball precisely where to go, she didn't do it anymore."

Ride is a no-frills woman who dressed for our interview in a conventional navy and forest green argyle-patterned sweater, navy slacks and matching flats. She's a Trekkie, a down-to-earth football and baseball fan more comfortable ordering a beer at a bar than chardonnay at a bistro. She tends toward a healthy diet, but isn't above pizza and Eskimo Pies. "I know myself very well," she says. "I have a lot of common sense. I know what needs to be done and how to approach it. I have an ability to work with people on large enterprises."

Her sister, the Rev. Karen "Bear" Ride, director of the Peace Center of the United University Church at USC, describes her as "a scientist in the truest sense. Sally is much more interested in science than in personal relationships."

Bear, a widely respected minister, is a divorced mother of two who is openly gay. She's delivered sermons about sexuality, but doesn't discuss such intimacies with her sister, who is two years older. "Sally knows Susan and I have lived together for quite a while and that we share a house. But she prefers not to talk about it." The Ride sisters rarely get together. In fact, Sally has never seen her sister in the pulpit. Bear says it isn't a personal slight as much as a statement of Sally's profound dislike of church. Even as a girl, Bear says, her sister hated going so much that her parents, both Presbyterian elders, finally relented and let her stay home. Other than a few official occasions, "Sally hasn't darkened the door of a church since."

"I believe there are two types of people," Bear adds with affection. "Those who would do anything to go on the space shuttle, and those, like me, who would do anything not to have to go on the space shuttle, and can't imagine doing it. I only fly in big planes, and I have to have an aisle seat. Our dad was afraid of heights. No one knows where Sally came from."

"She's always been very amazing. I learned early on not to compete, as a survival technique."

Bear recounts the time Sally attended a dinner party at Al and Tipper Gore's with Prince Charles, Bill and Hillary Clinton and a few U.S. Cabinet members. She didn't tell anybody. Bear caught wind of it and asked why she'd never mentioned it. The response was predictable. "You never asked."

"It just doesn't occur to her to talk about herself," Bear says. "I attribute it to our ethnicity. We're tight-lipped Norwegians. We don't divulge much. We were raised to be independent thinkers."

A year before Ride was lofted into space, she was so adamant about privacy, she snuck out of the Johnson Space Center in Houston, where she then lived, climbed aboard a small Grumman Tiger airplane she owned with friends and flew solo to her own wedding. Only a few family members were invited to the ceremony, which was held in Salina, Kan., her groom's hometown. She and Hawley, resplendent in white jeans and simple cotton shirts, were married in informal backyard nuptials officiated by her sister and his dad, also a Presbyterian minister. The newlyweds slipped back to Mission Control without telling a soul.

*

Sally Ride was born May 26, 1951, to Dale and Joyce ride in Santa Monica and raised from age 10 in a three-bedroom ranch in Encino. Her dad, who died in 1989, was a political science professor at Santa Monica College; her mother is a founding board member of the Mary Magdalene Project in Los Angeles, which helps prostitutes who want to get off the streets, and a longtime activist for the rights of women in prison.

The Rides encouraged their daughters to think their own thoughts and develop their own interests. They exposed them to travel and to people from many cultures and economic backgrounds. Joyce Ride says her husband was extremely outgoing, a genuinely nice guy. Joyce says, like Sally, she is "an 'I' {introvert} on the Myers-Briggs" personality test.

Joyce says she raised children in the days before "parenting" became a verb--and a subject of discussion. She just did it, but she knew this: "We wanted our daughters to excel, not conform. We never patronized them or treated them like they were inferior to us. We never talked baby talk to them. We gave birth to persons, not possessions."

The Rides weren't entirely surprised in 1977 when Sally announced that she'd been chosen as one of the first six women in the astronaut corps. She was in the final lap of completing her PhD when she responded to a NASA ad in the student paper for candidates with science backgrounds. She applied and was selected out of a field of more than 8,000 candidates. On the day she showed up in Houston, she was a jeans-clad college kid with a backpack and boundless curiosity. "She was very youthful, clever and funny," recalls Dr. Rhea Seddon, one of Ride's classmates and now the assistant chief medical officer at the Vanderbilt University Medical Center in Nashville. "She was more athletic than most of us. She's very bright and that's why she was assigned to some of the best jobs."

Referring to the relationships among the first group of women to prove they had the Right Stuff, Seddon says, "We stood by each other, but we weren't close." She credits Ride with setting a precedent of excellence that opened the door for the women astronauts who've followed, 31 of whom have been on shuttle crews. "She's significant historically and sociologically. She really did do the trailblazing. She was careful not to make decisions for all of us, but she involved all of us. She never cried on our shoulders. She's a tough lady."

Ride's first year at NASA was intense. She learned how to fly jets, and how to parachute out of them. She was dunked in pools, acclimatized to weightlessness and to G-forces. She was grilled in radio communication and navigation. She developed a flair for solving confounding engineering tasks, and a special expertise in the design of a remote mechanical manipulator arm capable of releasing satellites in space or plucking them out of the void and hauling them back into the mother ship.

Ever resourceful and dependable to the core, her NASA star soared. In the early '80s she served as "capcom"--capsule communicator--the astronaut in Mission Control who relays information from the flight director to the shuttle crew. Then she was named to the historic flight, a hard-won honor within the wildly competitive elite corps. She didn't disappoint. She was smart, strong, unflappable. Above all, she was a team player, a straight arrow, NASA perfection. She was rewarded for excellence again in 1984, when she blasted into space a second time.

Fifteen months later, her world exploded.

*

Last autumn, on the day John Glenn returned to space as an old man, Joyce Ride wept. She stood alone in front of the TV set and sobbed. Only a few weeks before, she'd been awakened by a terrifying nightmare. She had dreamed Sally was lost in space. "I've been to five liftoffs," she says. "But I've never been frightened until recently. It's a fear of the power."

The power of flaming rockets. The profundity of love and the fragility of life. The horrific image of the Challenger explosion, a moment etched in the American psyche, a ghastly, haunting horror for astronauts and their families.

Sally Ride isn't given to public displays of emotion. But at the mention of Challenger, her face flushes. She recalls the day of the disaster, Jan. 28, 1986: She was traveling from the East Coast back to Houston on a commercial flight. The pilot announced that something had gone wrong seconds after the Challenger lifted off. Details sketchy.

Ride went numb. She reached for her driver's license, walked to the cockpit, showed the captain her identification and asked if she could listen in on news of Challenger on the radio. Once the plane landed, she took a cab to Mission Control.

"I walked into the astronaut office, and I knew. You could see the devastation."

Despite her best efforts at emotional detachment, a wave of sadness travels over her face. The six astronauts killed in the explosion were more than friends. (The other crew member killed was teacher Christa McAuliffe.) They were members of an intimate fraternity, tethered to one another for their very survival. She was immediately swept up in attending the acute needs of their relatives, including the overwhelming task of helping to arrange several funerals. Days later, she was appointed to a presidential commission to investigate the accident. Referring to the enormity of the grief and its aftermath, she says, "It was all so confusing. I'm not sure I dealt with it for months."

Morale at NASA sank. Shuttle flights were canceled for nearly three years, including Ride's third scheduled space trip. Rather than go into teaching and research after the final mission, as she had intended, she completed the government investigation and resigned. The difficulty of leaving the astronaut corps for academia was compounded by the fact that she would, once again, be on a solo flight out of Houston. "She had a real yearning to return to simpler times at the university," ex-husband Hawley says. "Challenger was tough for all of us, and Sally had to play a very public role. She was forced into the public eye because of the hearings. It was hard on her. The way she handles problems is to quietly go off and live in a cave."

After the televised hearings, Ride served as a special NASA investigator in Washington, D.C., to study the agency's long-term goals. At the time, she decried its lack of leadership and direction. "It was enmeshed in bureaucracy," she now says. "I've been away for a long time, but I think the agency has been streamlining. The mood at JPL is very enthusiastic. There are new missions, a focus on new technology, a new look at science programs. Astrobiology has energized people. It's a forum for understanding the basis of living things, for finding out if life exists in or outside the solar system."

Ride is fascinated by the force of photons, rocket technology, the exploration of the solar system, the vastness of the universe. She could plaster the corridors of the cavernous Science Engineering Research Facility with the awards and honors she's received over the years: the Lindbergh Award, the Jefferson Award for Public Service, the Lawrence Sperry Award, a fellowship in the American Physical Society . . . But she doesn't even display them in her office, a tidy, unlived-in space lacking in personal touches save for a miniature pumpkin abandoned near a patch of neatly stacked papers.

"I have no idea how many trophies and awards she has," her mother says. "As a kid, she kept them in the closet. She's just not one to beat her own chest. It runs in the family. One does not do what one does in life for the award."

When all the tests are graded and the work is done, Joyce Ride says, her daughter's epitaph won't read, "Sally Ride, America's First Woman in Space." A more fitting tribute would have to do with a quality that sets the reluctant heroine apart and propels her forward. It would only say, "Sally Ride: She Rose to the Occasion."