

# *Explosion of the Challenger Space Shuttle*

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“Three engines running normally. Three good cells. Three good ABU’s. Velocity 2257 feet per second. Altitude 4.3 nautical miles, downrange distance 3 nautical miles . . . three engines now at 104 percent. Challenger, go with throttle up.” Commander Dick Scobee: “Roger, go with throttle up.”

That was the last word from Challenger’s commander, and would be the last word from any of them. There came a moment that, to a normal ignoramus like me, was at the same time most beautiful and most baffling. A colossal, never-before-seen fireworks display. The puzzle was the tone of NASA’s public relations officer, the man calling off the technical progress of the flight. He went on intoning, in the same professional, emotionless way: “One minute, fifteen seconds. Velocity 2900 feet per second, altitude 9 nautical miles, down-range distance 7 nautical miles.” The longest pause. Was he not seeing what we saw? This huge spray of color against the very blue sky? He was not. It was not his job to look at the monitor. He was watching a maze of ticking numbers, the lightning calculations done from the thousand sensors, as they’re called, that the shuttle feeds into the telemetry. So, while the enormous horror of the fireball was sinking into our numbed minds, he was saying his last words: “Obviously a major malfunction. We have no down-link.” Surely the most leaden understatement of the year, for “the shuttle has totally disintegrated in an instant, and we have no word from the crew.”

I doubt that many of us would have been watching this launch if the schoolteacher, Christa McAuliffe, had not been aboard. There have been fifty-six planned missions, and in the past few years, only the manned flights have been televised, and then not always live: the lift-off is taped at the launching and then

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replayed briefly on the evening news. For several years now, the work of NASA—the National Aeronautics and Space Administration—has been no big deal to the ordinary citizen. It's become a familiar subject of special articles in magazines by such famous popularizers as Isaac Asimov and Ray Bradbury; and gets into the newspapers mainly when the space-related subcommittees of Congress are arguing over the budget. But the missions have become so routine that I suspect only space buffs could call off many names, or any names, of the astronauts of the past few years. To most people, John Glenn, who has long been Senator John Glenn, is the one unforgettable name: the first American to orbit the earth, and that's coming up twenty-four years ago in February. And I suppose a lot of Americans know, by now, the name and face of Frank Borman, a later astronaut, but only because he is the president of and does the television commercials for Eastern Airlines, which incidentally is in dire financial trouble.

But, it was the President's idea of putting a schoolteacher in space that galvanized anew the popular interest. When the invitation went out over a year ago, there were more than eleven thousand applicants. Obviously, when you consider the rudimentary science skills required and the length of the special training, and the physical and mental stamina that's called for, I imagine they could easily knock out ten thousand of those first eager applicants. In fact, the selection committee, which combined a national council of school officers with a half dozen experts from NASA, went quickly through those eleven thousand letters and chose only one hundred fourteen teachers to interview. All of them first submitted to thorough physical examinations and psychiatric screening and were reduced to ten finalists.

Christa McAuliffe was twelve years old when Alan Shepherd launched America's manned space program in May 1961, with a fifteen-minute sub-orbital flight. That was inspiring stuff at the time, but was dimmed nine months later by Glenn's complete orbit of the earth. Christa McAuliffe watched the Shepherd liftoff, and in her letter of application she wrote to NASA: "I watched the Space Age being born, and I would like to participate."

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She was not, by a long shot, the most brilliant intellectually of the applicants or even of her high school class in a small Roman Catholic school in suburban Boston. She graduated seventy-fifth out of a class of one hundred eighty-one. But her teacher added a note to her graduation report. “Tops,” it said, “in emotional stability and seriousness of purpose.” That would outweigh the claims of many a high-strung applicant who was, say, a whiz at mathematics or physics. In school, she had been a long-distance runner, played tennis and volleyball, and was a star softball player. She went on to a Massachusetts state college, not particularly science-minded, though her father worked with an electronics firm, and I imagine the shoptalk would come in handy later on. She took a bachelor’s degree in American history and secondary education, and having married a college friend, a lawyer from Maryland, moved there and taught high-school English and American history. She then took a master’s degree in education and moved back with her husband to New England when he set up a law firm in the small town of Concord, New Hampshire. She settled into teaching and had a daughter. Last Monday, all the pupils of her school and the teachers would gather in the auditorium with whistles and blowers and little flags and bubbling high spirits to watch the launch and the triumph of their Christa. She was gone from Concord on a proudly granted leave of absence for six months of training with the crew of Challenger. And when she went off there, she said, “Just as the pioneer travelers of the Conestoga wagon days kept personal journals, I, as a pioneer space traveler, will do the same.”

She had, of course, to bone up on the basic mathematics, physics, and electronics involved in any space flight, while picking up, from the rest of the crew, the residue of their considerable experience of the theory and practice of flying. The only black man was a veteran test pilot. The Hawaiian was an Air Force flight-test engineer, with one space flight behind him. Three of them—a physicist who was going to launch a science platform to observe Halley’s Comet, an Air Force aerospace engineer, and the other woman, Judy Resnik, who was on a space mission in 1984 and an electrical engineer—had been astronauts since 1978. This left the pilot of this mission, Michael Smith, a Navy man who had never been in space but had logged well over four thousand hours of flight time, in jets mostly, and flown in twen-

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ty-eight different kinds of civilian and military aircraft. Living and working with this crew for six months, Christa would obviously absorb a lot of practical expertise. But, of course, she had to go through the one hundred eighty hours of training manuals, of learning to maneuver through weightlessness in training jets, and the way the daily habits of a human being are adjusted to life in orbit, and many, many rehearsals of procedures for dealing, on the hop, with space accidents and emergency landings. She'd come through all this so well that she was going to give—from space—two science lessons over the Public Television System to schoolchildren, and meant to stay with the space agency till September as a lecturer, around the country, to schoolchildren and civic groups, and the like.

Most all of this we had learned about in the weeks before Challenger was to take off, and if not the space star of the crew, she became the vivid human link with all of us. For while the senator who had completed a space mission was a veteran fighter-pilot in Vietnam, Christa McAuliffe was the first ordinary citizen to go into space. No wonder President Reagan, when he heard the appalling news, was dazed for a time and said, "I can't get that school teacher out of my mind."

The broadcast, the telecast, began with the crew's jolly breakfast together, and went on with their being rigged up in space suits, to boarding the shuttle, the liftoff, the cataclysmic explosion, and after that on and on through the whole sad day.

Frank Borman, the ex-astronaut, the Eastern Airlines president, said, "A thousand experts will come out of the woodwork who don't have the faintest idea what they're talking about." Well, it didn't happen. The anchormen of the networks, and of many independent stations, were anchored to their microphones for something like eight hours, but they are not the chosen half-dozen for nothing. In this country, anchormen and women are not handsome faces with charming voices. If they are, that's incidental. They are not, and are not known as, newsreaders. They are all, even the youngest of them (in their early forties), veteran reporters. The first generation that went from radio to television, men like Walter Cronkite and Ed Murrow, were war correspondents in the Second World War. The next generation, and I'm

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thinking of the half dozen familiars every night on NBC, CBS, ABC and the Public (non-commercial) network, among them can log up many years as war correspondents in Korea or Vietnam, and have been newspaper and/or television correspondents in Moscow, Paris, London, Budapest, Tokyo. All of them have covered many space flights and learned the elements of the game. And of course they were backed up by a flock of network science correspondents, and the staff correspondents each network assigns to the three space headquarters in Houston, in Pasadena, and at the launch pad itself, Cape Canaveral.

Naturally, the first thing and the second thing all of us onlookers wanted to know was what went wrong? And since NASA itself quite rightly wasn't saying, it was up to the anchormen and their back-up specialists to speculate. They didn't. They tapped experts, from former astronauts to space scientists, and John Glenn, the flying Senator, and research scientists, and nobody had a dogmatic theory. They knew too much. They all stressed that the astronauts know at the start that the perfect shuttle has not been invented; they all know (and don't talk about) the fairly certain prospect that one day what had never happened—a crew killed in space—would happen. And if there was a consensus among the old astronauts and the new, and the space experts in Congress, it was that safety first, second, and third is NASA's obsession. And that while the manned flights are frozen for the time being—no early take-off for the sun or Jupiter—the space program will recover and push on.

To me, when the nightmare sharpness of the horror has blessedly blurred with time, there will be, I'm afraid, one picture that will retain its piercing clarity. It is the picture of an inquisitive, innocent, middle-aged woman and her affable, granity husband—Christa McAuliffe's parents—craning their necks and squinting into the Florida sky, and watching the sudden fireball and looking a little puzzled as first-time spectators might, as if this were part of the show, part of the unexpected magic.

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