



James C. Peter

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By Dale D. Myers

JAMES C. FLETCHER—scientist, engineer, corporate executive, educator, and administrator—died on December 22, 1991, at the age of seventy-two. He made important contributions in all of these fields. For the National Aeronautics and Space Administration (NASA), he was the right man in the right place twice. Twice he was administrator of NASA at times of crisis, and twice he calmly led NASA to focus, balance, and advances in science, space transportation, aeronautics, and long-range plans for exploration.

Jim was born on June 5, 1919, in Millburn, New Jersey. He received an undergraduate degree in physics from Columbia University in 1940. He did research at Harvard's Cruft Laboratory, taught at Princeton, and then received his Ph.D. in physics from the California Institute of Technology.

He started his industrial career at Hughes Aircraft Company in 1948. In 1954 he joined the Ramo-Wooldridge Corporation, where he helped develop the broad systems analysis and oversight practices then being initiated for management of the intercontinental ballistic missile programs. In 1958 his entrepreneurial interests led him to form, with an associate, the Space Electronics Corporation in Glendale, California. Sputnik had led to the expansion of space programs, and with Jim's talent for picking good people and good programs, the company prospered. In 1960 Space Electronics merged with a portion of

Aerojet to form Space General Corporation, and Jim became president, and later chairman.

In 1964 Jim was asked to become president of the University of Utah, and with his enthusiasm for new challenges, he accepted. In the seven years that he was at the university, the enrollment doubled and he brought new emphasis to the science and mathematics curriculum.

While at the university, Jim was elected a member of the National Academy of Engineering (NAE). Over the years, he served as a member of the NAE's Council and Finance Committee; the Governing Board of the National Research Council (NRC); and NRC's Commission on Physical Sciences, Mathematics, and Resources. In 1991 he became a member of the NAE Development Advisory Committee.

His first opportunity to be the right man at the right place with NASA happened in 1971. President Nixon asked him to be the fourth administrator. By that time, NASA had met President Kennedy's challenge to land a man on the moon and bring him home safely. Budgets were tumbling down, but NASA's long-range plans called for such ambitious expansion that budgets would have had to increase unrealistically.

With his usual calm, analytic approach to a difficult problem, he developed an approach that the President, the manned-flight supporters, and the growing science group accepted. Under pressure from the administration to reduce budgets, he chose to fall back from the fully recoverable shuttle design to the partially recoverable configuration we have today. That proposal reduced the development cost by more than 50 percent and was accepted by President Nixon.

He still was a scientist by training and inclination, and he played a key role in developing and implementing the strategy of first flying by the planets, then orbiting them, and finally landing on them. During that period as administrator of NASA, he also encouraged early NASA experiments in communication satellites and studies of the Earth from space. He initiated the multispectral viewing space telescopes, including the Hubble Space Telescope.

After leaving NASA in May 1977, Jim moved to a more flexible

position as a consultant and member of several boards. He was appointed to the Whiteford Chair of Technology and Energy Resources at the University of Pittsburgh, and a member of several government committees. During this time, he was particularly active with the National Academy of Engineering. He was on (or led) several classified studies that made substantial contributions to the nation's defense.

In 1986 after the shuttle *Challenger* disaster, President Reagan asked Jim to return to NASA to lead the recovery of the nation's space program from the devastating effect of the accident. He reluctantly agreed to come back for the duration of the Reagan administration. He was confirmed by the Senate in May 1986, four months after the accident. Morale was at its lowest. Jim again took on the challenge. He looked for and found new, good people by his usual thorough technique of calling many, many people that he trusted for recommendations. He traveled to all the centers, talking to large groups. He spoke of the exciting things to come and inspired confidence in the future. This was a case where leadership was rewarded. His strong reputation of "leveling" with people caused them to believe him, and to believe in him. Later, he said in confidence that he had made promises in those early trips that he had to fulfill. He did.

Under his leadership, morale recovered, and steady progress was made in rebuilding the shuttle and in reorganization, communications, and safety. When the organization was functioning again, he initiated forward planning and led NASA in defining a "vision" and a long-range plan. That work led to the major Presidential Directive on Space signed by President Reagan in February 1988. It called for continuing strong science programs, leadership in aeronautics, support of commercial space programs, and the expansion of human presence in the solar system.

Concerned with the ongoing space station definition, Jim felt that it was vital to the future direction of space, but directed a reduction in its size. That action left room in the projected budgets for an ambitious growing space-science and Earth-observation program and a vigorous aeronautics program.

With the shuttle program recovered, and with organizational

changes accomplished to improve safety and communications, Jim retired from NASA for the second time in April 1989. He returned to the University of Pittsburgh as Distinguished Public Service Professor and to his continuing service as adviser, board member, and committee member.

Jim would never admit to being a politician, but throughout his career his careful articulation of his views and his ability to argue logically his position resulted in reaching many important conclusions in the committees, businesses, and government activities in which he was constantly involved. Most of those activities were on the cutting edge of technology and made important contributions to defense or to the civil space program.

In the 1950s, for example, he contributed to the von Neumann committee that addressed the feasibility of intercontinental ballistic missiles. He made expert contributions concerning guidance. More recently, in early 1983 he led a committee doing the original architectural studies for technical evaluations, development planning, and the Space Defense Initiative (SDI) program. That study, initiated at the time President Reagan suggested the SDI, scoped and outlined the system configuration options and the research and development work that was required to move from concept to working system.

Jim Fletcher was a fellow of the Institute of Electrical and Electronics Engineers, the American Society of Arts and Sciences, the American Astronautical Society, and the American Institute of Aeronautics and Astronautics. He was in the first group to receive the Distinguished Alumni Award of the California Institute of Technology, and he held honorary degrees from several colleges and universities. He was awarded the United States Air Force Exceptional Civilian Service Medal, the NASA Distinguished Service Medal, and the American Defense Preparedness Association's Strategic Defense Award. In 1989 he was presented the prestigious Arthur M. Bueche Award for demonstrated statesmanship in the field of technology from the National Academy of Engineering. He was granted patents concerning sonar and missile guidance.

Jim Fletcher distinguished himself in every activity he undertook. He was always a leader, always the cool analyst, always

seeking the best advice available, and at all times an aggressive, enthusiastic producer of results. His many contributions to the nation in defense and education, and to the world in civil space, will be permanent reminders of his dedication, intelligence, vision, and patriotism.