

Colonel Bradford W. Parkinson
Inducted 2009



Colonel Bradford W. Parkinson was born on 16 February 1935 in Madison, Wisconsin, and grew up in Minneapolis, Minnesota, where he graduated from Breck School in 1952. He entered the US Air Force (USAF) in 1957 after earning a B.S. in General Engineering from the US Naval Academy. In 1961, he received an M.S. in Aeronautics and Astronautics from the Massachusetts Institute of Technology (MIT) and, in 1966, a Ph.D. from Stanford University. After logging more than 150 hours of combat missions in Southeast Asia and serving as an academic instructor at the USAF Test Pilot School, he chaired the Department of Astronautics and Computer Science at the USAF Academy.

In 1972, Colonel Parkinson joined the Space and Missile Systems Organization (SAMSO). For a brief time, he served as chief engineer on the Advanced Ballistic Re-Entry Systems (ABRES) program. Shortly after being reassigned to the 621B navigation satellite program, in November 1972, he became its manager and oversaw the program's evolution over the next year into the Navstar Global Positioning System (GPS). As manager of the first multi-service program office, he played a primary role in synthesizing elements of competing Air Force, Navy, and Army space-based systems for precise positioning, navigation, and timing (PNT). During this period he was the chief Advocate for the GPS system within the Department of Defense. He continued to manage the GPS program until his retirement from active duty in 1978, the year in which he was the Launch Commander for the first Block 1 GPS prototype satellite. His management responsibilities included development of the satellites, ground system, and user equipment plus an extensive testing regime to validate the system's accuracy and other performance parameters. For these efforts, Colonel Parkinson received the Defense Department Superior Performance Award as best program director in the USAF for 1977. Over the next three decades, GPS would become almost universally acknowledged as a critical global utility with wide-ranging military, civil, and commercial applications.

Following his military retirement, Dr. Parkinson entered the worlds of academia and corporate leadership. At Colorado State University in 1978, he conducted research and taught courses on automatic controls, including Kalman filtering. After working as a Rockwell International vice president during 1979-1980, he became vice president and general manager of Intermetrics, a software and engineering company, from 1980 to 1984. In addition to overseeing Intermetrics' five divisions, he was president and CEO of PlantStar, a wholly owned subsidiary that specialized in monitoring industrial productivity. Having returned to academia in 1984 as a professor at Stanford University, Dr. Parkinson became the Edward C. Wells Professor of Aeronautics & Astronautics, an endowed chair, in 1995. His research teams conducted the first, totally blind aircraft landing with GPS, prototyped (for the Federal Aviation Administration) the Wide Area Augmentation System (WAAS), and demonstrated the first precision control of a farm tractor using GPS. He also played leading roles at Stanford as manager, associate manager, and co-principal investigator for NASA's Gravity Probe-B program, which used orbiting gyroscopes to test Einstein's general theory of relativity.

After taking a leave of absence in 1999 to serve as acting CEO and President of Trimble Navigation, he returned to Stanford and achieved the status of "emeritus professor" in 2001. Almost immediately after achieving that rank, Stanford University recalled Dr. Parkinson to continue his work as principal investigator on various GPS-related research projects. Meanwhile, Dr. Parkinson chaired the NASA Advisory Council for six and a half years beginning in 1994, was a member of the Presidential Commission on Air Safety and Security during 1996-1997, served Aerospace Corporation as chairman of the board of trustees from 2000-2005, chaired the JPL Advisory Council, held various positions for the National Academy of Engineering, and was a member of the National Research Council's Precision Time and Interval S&T Study Committee. In 2009, he continued to serve on the Global Positioning System (GPS) Independent Review Team (IRT), whose charter called for in-depth study of GPS-related issues and recommendation of solutions to the Air Force Space Command commander and other appropriate military officials. He also has authored more than 100 technical papers on GPS and Gravity Probe-B, and is co-editor of the American Institute of Aeronautics and Astronautics (AIAA) widely distributed, two-volume set titled Global Positioning System: Theory and Applications (1996).

Honored internationally with more than two-dozen noteworthy awards-including the AIAA Goddard Astronautics Award, the American Astronautical Society's Lloyd V. Berkner Award, the Royal Institute of Navigation's Gold Medal, the NASA Distinguished Public Service Medal, and the American Society of Mechanical Engineers (ASME) Gold Medal. Dr. Parkinson also shared with Dr. Ivan Getting the prestigious 2003 Charles Stark Draper Prize. He is a member of the NASA Hall of Fame and the National Inventors Hall of Fame.