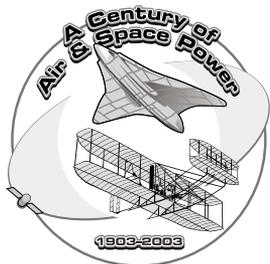


Gen Bernard A. Schriever

Father of the Ballistic Missile Program

ASPJ STAFF



Born in Bremen, Germany, on 14 September 1910, Bernard A. Schriever and his family immigrated to the United States in 1917, settling in New Braunfels, Texas. He entered the Army Air Corps Flying School at Kelly Field, Texas, in 1932 after graduating from Texas A&M University with a BS degree in architectural engineering.

In 1939 he was assigned as a test pilot at Wright Field, Ohio. After earning an MA degree in aeronautical engineering from Stanford University in 1942, he flew 63 combat missions in B-17s with the 19th Bombardment Group in the Pacific theater during World War II.

From 1946 to 1954, he served in several headquarters positions with responsibilities related to material and development planning. In March 1953, Schriever learned of the successful testing of a hydrogen bomb, brainchild of the physicist Dr. Edward Teller, which had occurred in November 1952. Dr. John von Neumann, head of the Institute for Advanced Study at Princeton University, corroborated the successful test and predicted that hydrogen warheads would be extremely light and possess tremendous explosive power. Formerly, delivering an atomic warhead 5,000 miles to Europe would have required a missile weighing 500 tons.

In 1954, after becoming commander of the Air Force Western Development Division, Schriever sought to win the race for missile supremacy by capitalizing on the technological breakthrough achieved by joining the lighter hydrogen warheads to long-range missiles. Pioneering the concept of "concurrency," his organization integrated each element of the total weapon system into a single plan, program, and budget, while executing each program element in parallel rather than sequentially. Under his direction, the Thor intermediate-range ballistic missile moved from program approval to initial operational capability in only three and one-half years; the Atlas missile program moved



through its research, development, and deployment phases in slightly more than five years; the Titan system took fewer than six years to reach operational status; and the Minuteman system activated in only four years and eight months. The first 10 Minuteman missiles were on combat alert in their underground silos by October 1962.

Schriever assumed command of Air Force Systems Command in 1961 and became a full general in July of that year. In addition to fulfilling his duties to develop all Air Force weapons, he partnered with the National Aeronautics and Space Administration to begin transforming missile technology into reliable launch systems for the manned space program. General Schriever retired on 1 August 1966.

To Learn More . . .

Air Force Space and Missile Pioneers. "General Bernard A. Schriever." On-line. Internet, 30 January 2003. Available from <http://www.spacecom.af.mil/hqafspc/history/schriever.htm>.

Encyclopedia Astronautica. "Bernard A. Schriever." On-line. Internet, 30 January 2003. Available from <http://www.astronautix.com/astros/schriever.htm>.

Frisbee, John L., ed. *Makers of the United States Air Force.* Washington, D.C.: Office of Air Force History, 1987.

Johnson, Stephen B. "Bernard Schriever and the Scientific Vision." *Air Power History* 49, no. 1 (spring 2002): 30-45.

Thomas, Shirley. *Men of Space: Profiles of the Leaders in Space Research, Development, and Exploration.* Vol. 1. Philadelphia: Chilton Co., Book Division, 1960.

United States Air Force Biography. "General Bernard A. Schriever." On-line. Internet, 30 January 2003. Available from http://www.af.mil/news/biographies/schriever_ba.html.