MEDALIST FOR 1997

For technical contributions and visionary leadership in advancing the technology of aircraft and propulsion performance, and for the foresight in establishing the Mercury and Gemini manned space flight activities.

ABE SILVERSTEIN

Abe Silverstein began his career at the NACA Langley Research Center in 1929. He was in charge of the full-scale wind tunnel and directed significant aerodynamic research that prompted higher-speed performance for most of the World War II combat aircraft, including engine flameouts. In 1943, he transferred to the NACA Propulsion Lab in Cleveland, where he served as the chief of the Wind Tunnel and Flight Division. He also directed research in the historic Icing Wind Tunnel. The supersonic 10x10 Wind Tunnel was named for him. The tunnel activities contributed to the outstanding performance in both reciprocating and early turbojet engines such as the development of supersonic-jet afterburners. Silverstein also pioneered research on large-scale ramjet engines.

After World War II, Silverstein conceived, designed, and constructed the first supersonic propulsion wind tunnels that supported work on developing supersonic aircraft. In 1958, he moved to NACA Headquarters in Washington where he helped to create and then direct the efforts leading to the Mercury space flights and established the technical basis for the Apollo program to send U.S. astronauts to the Moon.

He returned to Cleveland as the Director of NASA Lewis Research Center in 1961. He oversaw the expansion of Lewis and was the driving force behind the creation of the Centaur launch vehicle, particularly the hydrogen-oxygen upper stage propulsion system which was widely considered to be impossible. Silverstein proved otherwise and demonstrated the first successful flight of a jet aircraft with hydrogen fuel.

His approach to the selection of worthwhile R&D programs reflected his good judgment and exceptional courage in engaging in difficult problems that blocked progress. His efforts on hydrogen fuel made the success of our space program possible.

Silverstein retired from NASA in 1970 to take a position with Republic Steel Corporation. He died on June 1, 2001.