

**Mr. James S. Coolbaugh**  
**Inducted 2002**



Mr. James S. Coolbaugh was a pioneer in the development of space photoreconnaissance systems and management of the Air Force's first satellite program. He was born in Stockton, Kansas, on 19 March 1924. Having enlisted in the Army Air Corps in February 1943, he won an Army competitive appointment to the United States Military Academy in 1944 and graduated from West Point in June 1947. After attending the Air Force's Guided Missile Course at the University of Michigan from 1950 to 1952, Coolbaugh took an assignment to the Wright Air Development Center (WADC) in September 1952. In the New Developments Project Office of the Bombardment Missile Division, he performed studies on the inaccuracies of the air-to-ground rockets used during the Korean War, the feasibility of a tactical ballistic missile, and the feasibility of using radar enhanced drones as decoys for bomber aircraft as well as of using drones for tactical reconnaissance.

On Christmas Eve 1953, he accepted an offer to become the first manager of the photoreconnaissance satellite program recommended for development by the Air Force in the RAND Corporation's Project FEED BACK report. An unfunded program when he assumed management responsibility, the satellite system as proposed by RAND would provide daily reconnaissance of a selected area in the Soviet Union. Placed into a high inclination retrograde orbit by an Atlas booster, the satellite would carry a scanning television system designed by RCA, which would transmit images over a microwave link to ground stations. Lacking funding, Coolbaugh nevertheless was able to convince various WADC labs, the Rome Air Development Center and the Air Force's Cambridge Group to undertake the initial studies that got the development program underway in advance of its official endorsement by the Air Force hierarchy. In May 1954, Coolbaugh became the program's Technical Director when Major Quenten Riepe joined the New Developments Project Office to assume the position of the

program's chief. He subsequently participated in the evaluation of proposals submitted by the various potential contractors while also working to build support in the operational Air Force community for what had been designated WS-117L, the Advanced Reconnaissance System.

Coolbaugh accompanied the move of the WS-117L program office from WADC to Major General Bernard A. Schriever's Western Development Division (WDD) in Inglewood, California, in March 1956. One of his first assignments at WDD was to survey sites along the west coast for the location of launch facilities for polar-orbiting satellites. His work with Navy Captain Robert Truax on this project resulted in the selection of the Army's Camp Cooke (later Vandenberg AFB) as the Air Force's base for west coast space and missile launch operations. Coolbaugh also prepared detailed plans for the development, engineering, and test of the Advanced Reconnaissance System's Vehicle Subsystem, including those steps necessary for its integration with the rest of the system.

In March 1957, Coolbaugh left WS-117L to join the WS-315A Thor program office. For the next two years, he was responsible for the system integration of the Thor's propulsion, airframe, and nosecone programs. Beginning in March 1958 he added duties as the Thor representative on the Vandenberg Air Force Base Integration Working Group which encompassed installing the Thor launch pads for the Strategic Air Command's training program, representing the Thor program office to WS-117L, modifying the Thor missile into a booster for Lockheed's Agena satellite stage, installing the launch facilities at Vandenberg to support Thor/Discoverer launches, and managing all Special Space Mission applications of the Thor booster. In late 1959 he worked on a reconfiguration of the Thor that involved attaching solid rocket motors around its exterior to increase its payload lifting capacity. The result, the Thrust Augmented Thor later evolved into the Delta II, perhaps the most successful satellite booster the United States has produced.

Major Coolbaugh left the Air Force in April 1960 to become manager for Itek's West Coast Systems Group at Palo Alto, California, which developed camera payloads for the CORONA program.