



Samuel C. Phillips

Samuel Cochran Phillips

1921–1990

By George E. Mueller

General Samuel C. Phillips, truly a hero of our time, was a superlative leader, an unequaled manager, a true friend to all who knew him, and a quiet fighter who never lost a battle until his death, January 31, 1990.

The nation lost one of its most eminent engineering managers, the man who led the team to put men on the moon, the team that restored the prestige of our nation in the eyes of the world.

Sam was elected to the National Academy of Engineering (NAE) in 1971 in recognition of his continuing leadership of advanced technological programs. As a U.S. Air Force officer, his career began with the development of the B52 bomber, the deployment of the Thor missiles in England, the development of the Minuteman missile system (a driving force for the large-scale strategic integrated circuit breakthroughs in silicon technology), and the direction of the Apollo manned lunar landing program for the National Aeronautics and Space Administration (NASA); progressed to becoming the director of the National Security Agency for all the U.S. Armed Forces; and culminated as the commander of the U.S. Air Force Systems Command, responsible for all the development programs in the U.S. Air Force. As a civilian he managed the Energy Systems Group of TRW, led the "Phillips Committee" review of NASA management following the Challenger accident, and served as a councillor of NAE and panel member for committees of the National Research Council

and joint activities of the Academies (the NAE and the National Academy of Sciences).

Sam was a Westerner, with all the understated strength and integrity of that people. Born in Springerville, Arizona, he graduated from the University of Wyoming in 1942 to go into the U.S. Air Force and to serve with distinction in the Eighth Air Force in Europe. After returning to the States and completing an M.S. in electrical engineering at the University of Michigan, he began his career as a manager. Typical Sam, on finding his role as a manager in the U.S. Air Force system hamstrung by the division between the program manager and the contracting officer, he took the necessary steps to qualify as a contracting officer as well as a program manager. He always found a way to make the system work for him. As a U.S. Air Force program manager, he was responsible for the innovative and enduring B52 bomber, which led to his selection by General Schriever to manage first the deployment of the Thor missile in England and then the development of the Minuteman ballistic missile, the workhorse of our missile systems.

Not widely recognized, then or now, Sam's Minuteman electronic systems were a driving force that speeded development of the reliable, ubiquitous integrated circuits, which are the foundation of our electronics technology today.

Perhaps his greatest contribution to the future of mankind was his leadership of the Apollo program from 1964 until the first landing of men on the moon in July of 1969. Sam's contribution to this, the most outstanding achievement of this century, was neither understood nor adequately recognized by the public or the media, although fully appreciated by his many friends in government and industry.

In recognition of his many achievements, he was widely honored by his peers. In addition to his election to the National Academy of Engineering, he was elected a fellow of the American Institute of Aeronautics and Astronautics, the Institute of Electrical and Electronics Engineers (IEEE), and the American Astronautical Association. He was given an honorary doctor of law degree from the University of Wyoming.

He received the Simon Ramo Medal of the IEEE, the White

Space Trophy from the National Geographic Society, the Langley Gold Medal from the Smithsonian Institution, the Astronautics Engineer Award from the National Space Club, the Distinguished Service Medal: Air Force from the U.S. Department of Defense, and the Distinguished Service Medal twice from NASA.

Sam did not rest on his laurels. After the successful landing on the moon, he returned to active duty in the U.S. Air Force and took command of the space and missiles systems organization, where he led the studies that defined the follow on to the Minuteman program and began the implementation of the U.S. Air Force's shuttle program. His next assignment was as commander of the National Security Agency, where he was instrumental in invigorating the research program and in improving the management of their development programs. His final U.S. Air Force assignment was as commander of the U.S. Air Force Systems Command, with responsibility for all the development projects in the U.S. Air Force.

After retiring from the U.S. Air Force, he began a new career in an entirely different field, where his management skills were put to the test and he became vice-president and general manager of TRW's Energy Products Group. After successfully guiding that group to profitability, he returned to his original field of interest, where he ended his industrial career as vice-president of TRW's Defense Systems Group.

Over the years, Sam continued to serve the nation, including serving as chairman of the "Phillips Committee," advising NASA on management improvements following the Challenger accident.

General Samuel C. Phillips served his nation well and long. May his memory serve as an example for those who follow.