APR12-2012-001076

Abstract for an Invited Paper for the APR12 Meeting of the American Physical Society

Experience with the President's Science Advisory Committee, Its Panels, and Other Modes of Advice RICHARD GARWIN, IBM T.J. Watson Research Center, Yorktown Hts, NY 10598

When Dwight Eisenhower became President in January 1953, the United States had just tested November 1, 1952 its 11 megaton prototype of a hydrogen bomb, and Eisenhower sought enduring peace and economy by basing the U.S. military strategy on nuclear weaponry and a downsizing of the military forces. The detonation by the Soviet Union of a 400-kt fusioncontaining device in August 1953 enhanced concern about U.S. vulnerability, and in early 1954 the unexpectedly large yield of the BRAVO test elevated fears for the actual survival of societies against the nuclear threat. Eisenhower initially sought a world moratorium on nuclear tests, but was unable to win over his Administration and met with an obscure Scientific Advisory Committee of the Office of Defense Mobilization (SAC-ODM) on March 27, 1954 for a mutual exploration of what science and technology might bring to national security. The resulting 42-man (!) Technological Capabilities Panel (TCP) had a remarkable impact on the President himself and the direction of the country's strategic missile and intelligence activities and structure, as well as a new emphasis on federal support of university research. Rooted in MIT Summer Studies, the TCP reported on March 17, 1955 on the problems of surprise attack, the overall U.S. offensive capability, and, especially, on its Part V, "Intelligence: Our First Defense Against Surprise." That panel, chaired by Edwin Land, inventor of polarizing sheet and instant photography, originated the U-2 and OXCART (SR-71) strategic reconnaissance aircraft and the CORONA film-return imaging satellites. The President's Science Advisory Committee (PSAC) was created in the White House in 1957 from the SAC-ODM and had major impact throughout the 1960s until its termination by President Richard Nixon in 1973. The presentation traces its story and that of some of its panels from personal experience of the author and his colleagues.