

George J. Brucker, PhD

Dr. George J. Brucker, a nuclear and radiation physicist and authority on atomic bomb radiation effects on electronic systems and devices, either on the ground or in space, as well as natural radiation effects, died at the Monmouth Medical Center, Long Branch, NJ, on Friday, August 1, 2003. Born on September 15, 1921, in Jersey City, NJ, Dr. Brucker received the B.S. in physics and mathematics from St. Peters College, Jersey City, in December 1943. He enlisted in the Navy and eventually was commissioned an ensign. He was assigned to a Landing Ship Tank (LST) in the Pacific Fleet, Amphibious Forces where he participated in the landings on Iwo Jima and Okinawa.

After an honorable discharge as a Lieut. (jg), he completed his education and received the Masters degree in physics from Columbia University, NY, in 1948, and the Ph.D. in physics in 1955 from New York University. Dr. Brucker worked at Fort Monmouth as a Nuclear Scientist from 1950 to 1962, where he did research in radiation effects in organic and inorganic scintillating materials. He designed and developed experimental instruments for characterizing nuclear environments created in the Pacific Weapons Tests. He then served as a research physicist in the physics department of the Stevens Institute of Technology, Hoboken, NJ.

He left Fort Monmouth in 1962 and joined the staff at the RCA David Sarnoff Laboratories, Princeton, NJ, and then the Astro-Space Division where he was a Senior Staff Scientist from 1962-1992. Among other tasks, he investigated and characterized the Silicon Intensifier Tube for use in the television system of the Apollo spacecraft and the Moon Rover Vehicle. He assisted in the development of radiation hardened processing of CMOS/Bulk and CMOS/SOS technologies for the fabrication of memories, microprocessors, and logic devices. He designed and carried out experiments to characterize the above state-of-the-art semiconductor integrated circuits in nuclear and space environments.

After retiring from RCA/GE he became a consultant to the Army, Fort Monmouth, NJ, in June 1992, where he designed experiments and investigated the characteristics of PMOSFET devices and the properties of gamma ray and X-ray directional sensors for detecting and locating radionuclides. During this time, he also served as a consultant to NASA's Goddard Space Flight Center, Greenbelt, MD, on experiments to characterize semiconductor devices to determine their sensitivity to Single Event Effects in space, and analyzed ground test and spacecraft data relative to the effects of Cosmic Ray and Trapped Electron and Proton environments. In addition, at the Monmouth Medical Center, he was involved in research to determine collateral damage to surrounding tissues from radiation treatment of prostate cancer.

During his career, he published 94 papers in the field of radiation effects. Six patents were awarded to him and his colleague, Dr. Stanley Kronenberg, for discoveries resulting from research at the Fort Monmouth, NJ, Nuclear Research Facility in the last ten years of his career. Dr. Brucker is survived by his wife Gloria, West Long Branch, NJ, daughters Dr. Michelle Collier, Monmouth Beach, NJ, Debbie Kelly, Chicago, IL,

Jacqueline Stuckey, Raleigh, NC, son Craig Brucker, Houston, TX, and five grandchildren.