William Webster Hansen

Clan William

The Brilliant Scientist Advances Particle Energy Understanding

by Lori Hahn

William Webster Hansen was born to William George Hansen, son of a Danish immigrant. William George also was a hardware sales manager, and his wife, Laura Gillogly, was daughter of Rev. James Lee Gillogly and Lydia Lucelia Webster. William Webster was born May 27, 1909, in Fresno, California. He was followed by one sibling, James L. Hansen (1917-1993).



735 Forthcamp Ave.

William grew up at 735 Forthcamp Ave. in the Lower Fulton-Van Ness neighborhood of Fresno.

In the early 1900s, the neighborhood was full of beautiful homes and cottages which were nearby the new trolley line. William excelled in school and graduated from Fresno High School at the age of 15. Following high school, he attended Fresno Technical School for a year before winning the Dickey Scholarship and moving on to attend Stanford University. He was elected to both Phi Beta Kappa and Sigma XI, the two highest national honor fraterntieis.

Nearing graduation, he was then picked up as an instructor in the theory of electro magnetism and electrical measurements for the coming year. He received his Ph.D. from Stanford in 1932 in Physics. After three years as an instructor at Stanford, he was awarded a National Research Council fellowship to Massachusetts Institute of Technology (MIT) to continue his research. He received a second fellowship in 1934, and his work at MIT also extended to work at Princeton University.



He returned to Stanford after his fellowship as an associate professor. In 1938, he was finally able to focus on his personal life. He married a longtime friend, Miss Elisabeth "Betsy" Ross, of Palo Alto. She was the daughter of the late Dr. Perley Ason Ross, professor of physics at Stanford. Miss Ross had completed her junior year at Stanford when the couple eloped to Las Vegas, Nevada.

In 1942, he was appointed to a full professorship at Stanford. World War II was raging while the physics team was working full-throttle for the war effort. From 1943-1949, Hansen made significant contributions to multiple projects, one of which led to a Nobel Prize in 1952 for the lead scientist on the project.

In the late 1930s, research associates Russell and Sigurd Varian, working in collaboration with their mentor, Professor Bill Hansen, invented the klystron, a high-power microwave source and amplifier. The klystron was rapidly developed during World War II for use in radar, navigation, and blind-landing devices for aircraft.

But Hansen, whose own contribution to the klystron was the resonant cavity called a rhumbatron, was interested in using the klystron for the acceleration of particles. By 1947 he had built the first linear electron accelerator, the Mark I. High energy electrons can be used in various applications, such as in particle physics experiments, medical treatments like electron beam therapy, and in material testing.

Then, just four years later, Edward Ginzton and Marvin Chodorow completed the Mark III, a faster electron accelerator. It was the Mark III that allowed Robert Hofstadter to study the charge and magnetic structure of nuclei and nucleons, work that earned him the 1961 Nobel Prize in Physics.[1]

On 10 Aug 1947, the Hansens welcomed their only child, Peter Ross Hansen. Fate would not be kind as the infant died on 28 Sep 1947.



Just two years later, on 23 May 1949, Dr. Bill Hansen died at the age of 39. He died of a lung condition and pneumonia. Colleagues attributed his illness to overwork.

The sadness doesn't end quite yet with this story. His wife, Betsy, moved to a Greenwich Village apartment in New York in August of 1949, just three months after his death. She was attending New York University and was a student

in Bellevue Hospital's physio rehab program. After a neighbor had seen Betsy's car parked on the street for three days, she entered the apartment to find Betsy dead of an apparent pellet rifle shot.

The note she left said: "...I know this a cowardly thing to do. But the bottom's fallen out since the death of Peter and Bill..." She was 32 and left a mother and sister behind.

[1]Stanford.edu

Capt Thomas Munson > Samuel Munson > Samuel James Munson > **William Munson** > Martha Munson > Reuben Doolittle > Ormer Doolittle > Caroline Doolittle > Lydia Webster > Laura Gillogly > **William Webster Hansen m Elisabeth "Betsy" Ross**