

**ELIZABETH
LEONARD
SCOTT**
1917-1988



**ASTRONOMER,
MATHEMATICIAN,
STATISTICIAN,
AND MORE**

Can a woman be raised during times of austere discrimination and still make a great impact in the world of astronomy and statistics? Elizabeth Scott knew from an early age what she wanted to grow up to be and, despite all odds, she achieved it.

Elizabeth Leonard Scott was born in November 1917 in Fort Sill where her father was stationed during World War I. When she was four, her family moved to Berkeley so her father could attend law school. Even at a young age, she was already considering a career in astronomy. As the only girl in the advanced mathematics courses, Elizabeth quickly stood out as exceptional.

The University of Berkeley was the logical choice for Betty as the tuition fees were low and she could save money living at home. She earned a B.A. in 1939 and a Ph.D. in 1949 in astronomy. This was an unusual choice since, at the time, women were forbidden to use the main telescopes.

In 1939, Scott published her first paper at age 22. The strength of her attraction to astronomy is revealed in the 42 scientific papers she published in that field despite her restricted access. These were mostly on orbits of various comets. Although Scott's contributions to astronomy continued throughout her life, she soon became an important contributor to statistics as well.

Her statistics career began during World War II when she was employed at the Statistical Laboratory that Jerzy Neyman had started at Berkeley. This was for war work, mostly concerned with improving the precision of air bombing. By 1950 she had become interested in the distribution of galaxies. Her collaboration with Neyman lasted throughout their lives. As Neyman drew Scott to statistics, she brought him to astronomy.

Scott joined the mathematics faculty at Berkeley in 1951, although her degrees were in astronomy. In 1962, she became the first female professor in the statistics department. During the 1960s, Scott also addressed social issues, by fundraising for Martin Luther King, Jr.'s civil rights movement and raising bail for students arrested during the Free Speech Movement.

In the early 1970s, Scott conducted statistical studies to analyze the discrimination affecting the advancement of women graduate students and faculty. The 78-page comprehensive study examined not only salary and benefits but also hiring, promotion and tenure, research opportunities and committee appointments. It was widely used as a model for study of possible discriminatory patterns based on sex and ethnicity. The Higher Education Salary Evaluation Kit that Betty helped develop was widely used to identify and eliminate salary inequities at other universities.

In addition to her excellence in research, Scott was a superb teacher who cared deeply about her students. She single-handedly ran the statistics master's program for about fifteen years. She also co-chaired the biostatistics program for over sixteen years.

Scott was a Fellow of the Institute of Mathematical Statistics. In 1981, Betty was elected an Honorary Fellow of the Royal Statistical Society. Elizabeth Scott died in Berkeley in December 1988 at age 71. In 1992, the Committee of Statistical Societies established the Elizabeth Scott Award for "fostering opportunities in statistics for women". Scott was a great mathematician, but not because of a formula or a theorem. She was great because of her knowledge and love for astronomy and statistics.