

# Chien-Shiung Wu

(1912 - 1997)

## *Pioneer in experimental nuclear physics*

Chien Shiung Wu was born in China to parents who supported girls' education. She began her PhD in Physics at the prestigious Zhejiang University in Hangzhou and in 1936 left China to continue her studies in the US. She began working at Berkeley with Ernest Lawrence and Robert Oppenheimer who were creating a centre of atomic research. Wu quickly established herself as an expert in the newly emerging field of nuclear physics.

At the time when Wu was completing her PhD, the US was on the eve of the Pearl Harbour attacks, and she struggled with both sexism and anti-Asian racism. She moved to the East Coast, taking up a teaching job at Smith College and then at Princeton where she continued her work on the study of beta decay. As the Second World War progressed, Wu was recruited to work on the Manhattan Project where she helped develop the process for separating the isotopes of uranium by gaseous diffusion. She later developed improved Geiger counters for measuring radiation levels.

After the war, Wu began working at Columbia University and was approached by the theoretical physicists Tsung Dao Lee and Chen Ning Yang to devise a series of experiments to test the law known as "conservation of parity". This law held that there is fundamental symmetry in the behaviour of everything, including atomic particles. Wu's experiments with radioactive cobalt at near absolute zero temperatures showed that identical nuclear particles do not always act alike, overturning a long-held physical principle. Lee and Yang, but not Wu, were subsequently awarded the 1957 Nobel Prize in Physics.



Main image: Professor Chien-Shiung Wu, Dr. Y.K. Lee and L.W. Mo, her associates, conducting experiments [Public Domain]  
Background: WII: Atom Bomb, Nagasaki, August 1945 [National Archives, Released to Public Domain]

