

Chien Shiung Wu: The First Lady of Physics Who Changed Our Understanding of the Universe



Chien-Shiung, The Amazing Physicist: Chien-Shiung Wu (STEM STARS Book 4) by Imee Cuison

★★★★☆ 4.6 out of 5

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Chien Shiung Wu was a Chinese-American experimental physicist who made significant contributions to the field of nuclear physics. She is best known for her work on the non-conservation of parity, which earned her the nickname "the First Lady of Physics."

Early Life and Education

Chien Shiung Wu was born on May 31, 1912, in Liuhe, Jiangsu Province, China. Her father was a school principal and her mother was a teacher. Wu showed an early interest in science and mathematics, and she excelled in her studies. In 1930, she enrolled in the National Central University in Nanjing, where she studied physics. After graduating in 1934, she worked as a research assistant at the Institute of Physics at the Academia Sinica in Shanghai.

Career in the United States

In 1936, Wu traveled to the United States to pursue her graduate studies at the University of California, Berkeley. She studied under Ernest Lawrence, the inventor of the cyclotron, and earned her PhD in physics in 1940. After graduating, she joined the faculty at Smith College in Massachusetts, where she taught physics for two years.

In 1944, Wu joined the Manhattan Project, the top-secret research project that developed the atomic bomb. She worked on the gaseous diffusion process, which was used to separate uranium isotopes. After the war, she continued her research on nuclear physics at Columbia University in New York City.

The Non-Conservation of Parity

In 1956, Wu published a paper in the journal *Physical Review* that showed that the law of parity was not conserved in weak interactions. This was a major breakthrough in physics, as it challenged the long-held belief that the laws of physics were the same for all particles and their antiparticles. Wu's work earned her the nickname "the First Lady of Physics" and helped to pave the way for the development of the Standard Model of particle physics.

Later Career and Awards

After her groundbreaking work on parity, Wu continued to conduct research on nuclear physics. She also served as a professor at Columbia University and the Brookhaven National Laboratory. In 1975, she was awarded the National Medal of Science, the highest scientific honor bestowed by the

United States government. She was also a member of the National Academy of Sciences and the American Academy of Arts and Sciences.

Legacy

Chien Shiung Wu was a brilliant physicist who made significant contributions to our understanding of the universe. Her work on the non-conservation of parity was a major breakthrough in physics, and it helped to pave the way for the development of the Standard Model of particle physics. Wu was also a role model for women in science, and she inspired many young people to pursue careers in STEM fields.

Additional Resources

* The American Physical Society's profile of Chien Shiung Wu * The Lawrence Berkeley National Laboratory's profile of Chien Shiung Wu * The American Institute of Physics's biography of Chien Shiung Wu



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