



Lise Meitner

1878 - 1968

Lise Meitner was born in Vienna, in 1878, the third child of Hedwig and Philipp Meitner. Philipp practised law and was a 'freethinker' and humanist. He and Hedwig made their home a gathering place for interesting people: legislators, writers, chess players, lawyers etc. Their children therefore grew up in an intellectual atmosphere. There were eight children in the family. Lise played the piano from an early age, but she was especially curious about mathematics and science; she received her certificates in 1892, after learning bookkeeping, arithmetic, history, geography, a little French and gymnastics. Later she entered the public school.

Lise took the Matura in 1901 at the Akademisches Gymnasium, a distinguished boys' school and she entered the University of Vienna in 1901, where, in the summer of 1905 she began her doctorate. In 1907 she went to Berlin and stayed there more than thirty years. In Berlin Lise attended Max Planck's lectures. **This famous physicist did not have a high opinion of women students, but when Lise appeared in his office, he made an exception !**

There Lise joined Otto Hahn in his research on radioactivity. They worked under the same roof for thirty years, together, at first, and then independently, the closest of colleagues, the best of friends.

Meitner and Hahn were among the first to isolate the isotope protactinium 231, and they studied nuclear isomerism and beta decay. In the 1930's they (along with Strassmann) investigated the products of neutron bombardment of uranium. After Hahn and Strassmann had demonstrated that barium appears in neutron-bombarded uranium, Meitner, with her nephew, Frish, elucidated the physical characteristics of the division and in January 1939 proposed the term ***fission*** for the process. She suggested that slower neutrons are more readily captured. Meitner was accepted as a perfect experimentalist; for her own scattering experiments, she built a Wilson cloud chamber, the first in Berlin.



*She worked
in Berlin for
30 years*

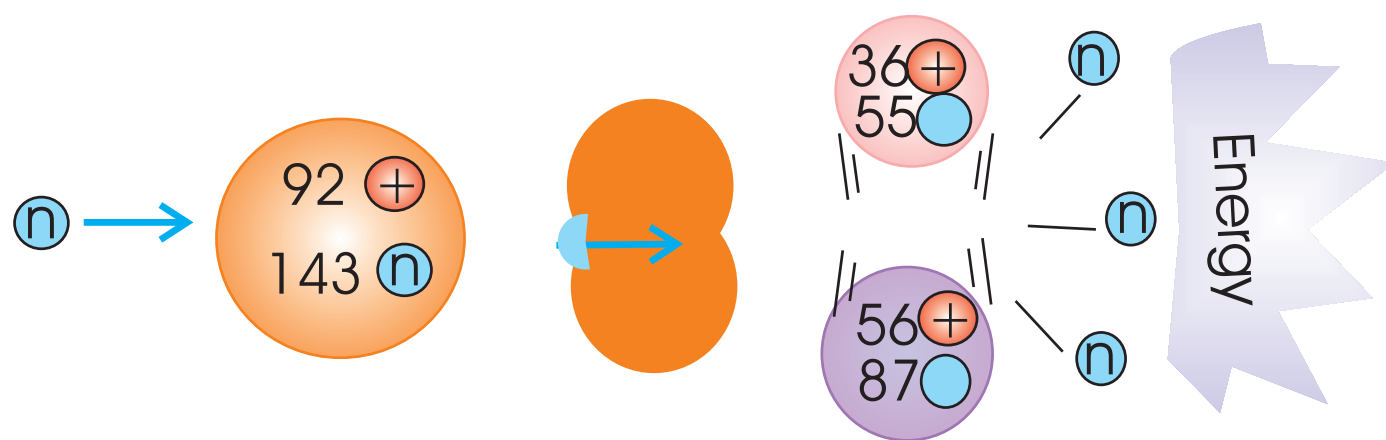


As Lise Meitner was Jewish, she was forced to leave Nazi Germany in the summer of 1938. Friends helped her to settle in Sweden, where she arrived in Stockholm without money (her bank account was frozen in Berlin) and unable to speak the language. There was, in fact, no general sympathy for refugees from Nazi Germany. Her colleagues saw Meitner as an outsider, withdrawn and depressed. Nevertheless, Lise lived and worked in Sweden for another twenty years until, in 1960, she moved to Cambridge in Britain.

She was a very confident and increasingly assertive person, who knew exactly what and where she wanted to be: a physicist, among friends. Her capacity for friendship was very strong. She was far from shy. She never married, although she was attractive, and there were so many young men around. According to her own words: *'...I just never had time for it'*.

It happened that only Hahn and Strassmann received the 1944 Nobel Prize in Physics for the discovery of fission (*seen by many as another example of discrimination against women*). In 1966 all of them: Hahn, Meitner and Strassman were jointly awarded the U.S. Atomic Energy Commission Enrico Fermi Prize for the same discovery. Unfortunately, Meitner could not attend the ceremony because of weak health. She died in her sleep, just after midnight on the 27th of October, 1968, a few days before her ninetieth birthday.

There is an inscription on the headstone of her tomb: ***'Lise Meitner: A physicist who never lost her humanity'***.



*Lise Meitner studied nuclear fission
(the break up of atomic nuclei)*