

# Ernest Rutherford.



# Biography.

Rutherford was born in New Zealand in the small village of Spring Grove, located in the north of the South Island near the town of Nelson, in a farmer's family, to grow flax.

Father - James Rutherford, he immigrated from Perth (Scotland). The mother - Martha Thompson, originally from Hornchercha, Essex, England. At this time other Scots emigrated to Quebec (Canada), but the family Rutherford had no luck and a free ticket for the steamer government granted to New Zealand rather than to Canada.



# Discoveries.

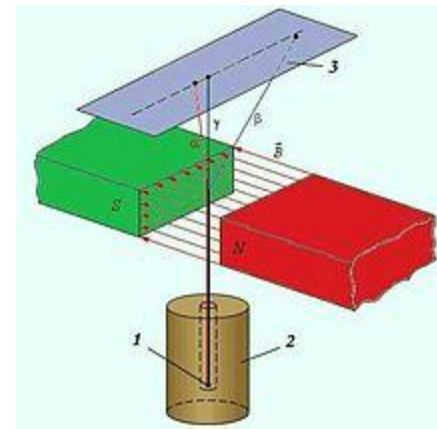
One of the first discoveries of Rutherford were the components of radiation in 1898. The scientist called them alpha and beta rays. Later, he demonstrated the nature of each component (they consist of fast moving particles), and also showed that there is a third component that is called the gamma-rays. Before him, the Curies and many other scientists believed energy external source. However, Rutherford found that powerful energy comes from within the individual uranium atoms! By this discovery he laid the foundation for the important concept of atomic energy.

# Studying the phenomenon of radioactivity

After the discovery of radioactive elements began intensive study of the physical nature of their radiation. Rutherford was able to detect the complex composition of the radiation.

The experiment consisted of the following. The radioactive drug was placed on the bottom of a narrow channel of the lead cylinder was placed in front of the photographic plate. At the exit of the channel operated magnetic field radiation. The entire installation was in a vacuum.

In a magnetic field of beam breaks up into three parts. Two components of the primary radiation deflected in opposite directions, indicating that they have charges of opposite sign. The third component of retained rectilinear propagation. Radiation having a positive charge, was called alpha rays, negative - beta rays, neutral - gamma rays.



# Memory.

Rutherford is one of the most respected scientists in the world . In 1914, George V knighted dedicated Rutherford, as a Knight Bachelor. In 1925 he took his as a member of the Order of Merit, and in 1931 appointed Rutherford Baron.

In honor of Ernest Rutherford named:

- a chemical element number 104 in the periodic table - Rutherford, first synthesized in 1964 and won this title in 1997 (before that was called "Kurchatov").
- Rutherford Laboratory - Appleton, one of the national laboratories of the UK, opened in 1957.
- Asteroid (1249) Rutherford.
- crater on the back side of the moon.
- Rutherford Medal and Prize of the Institute of Physics (Great Britain).
- Rutherford Medal .