

## VISUALIZATION OF RADIATION FOR THE GENERAL PUBLIC: THE CLOUD CHAMBER

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A cloud chamber, “the most original and wonderful instrument in scientific history“, as described by the "Altmeister" of modern nuclear physics, Lord Rutherford [1].

Indeed, to see something by bare eyes that are sub-atomic in size and yet moving with velocities close to the ultimate speed of light, is something that cannot be easily forgotten. Originally build for studying the cloud formation, the inventor and Nobel laureate C.T.R. Wilson (1869–1959), discovered something else than normal clouds with his machine. Those traces in the cloud chamber are tiny droplets which form around the ions in the supersaturated, condensing vapor. Thus all ionizing radiation passing the chamber can be visualized. It is “the camp fire of the physicist” to be looked at.

To explain the nature and everyday presence of the “dangerous” ionizing radiation to the general public is not an easy task. With the help of cloud chamber, it however can be done. In this talk, we will describe the brief history of the cloud chamber, also for the different versions done at Jyväskylä, their working principles, challenges and the simple ways to make a smaller scale class room cloud chambers. The 3<sup>rd</sup> iteration of the Jyväskylä physics department’s presentation-class cloud chamber is also presented during the physics days and can be reserved to schools, events and general displays.



[1] [http://www.nobelprize.org/nobel\\_prizes/physics/laureates/1948/press.html](http://www.nobelprize.org/nobel_prizes/physics/laureates/1948/press.html) (20.1.2016)