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**INFLUENCE OF TEMPERATURE OF RADIOACTIVE SAMPLE**

**ON THE SURFACE OF THE α- AND β-SPEED PROBLEM**

In physics teacher professional training effective method of learning is problematic method to combine the process of getting knowledge to the development of analytical and creative abilities. It is in preparation physicists, this method should be used during the laboratory work, especially in the study of complex phenomena and processes. In this case the problem method implemented in setting additional task of research nature.

An interesting example of the method of problem while studying, the phenomenon of radioactivity is the study of the effect of external factors on physical properties and characteristics of the process of radioactive decay. Reliably established that a variety of external factors (pressure, temperature, electrical or magnetic field) have no influence on the constant decay.

On the other hand, external physical factors can significantly affect the distribution of energy and momentum between the products of radioactive decay. An example of such influence is known Mössbauer effect.

A similar effect has to take place and when α- and β-decay. Under this seems relevant to determine the quantitative characteristics of the effects of temperature on the distribution of energy and momentum between the products of radioactive α- and β-decay.

*The purpose of the article:* solve the problem of the distribution of energy and momentum between the products of radioactive α- and β-decay and describe the effect of temperature on the sample of radioactive energy α- and β-particles.

Important results were obtained by scientists in the study of processes of interaction of radiation with matter. For the problem is particularly interesting is the process of energy dissipation particles formed by the collapse of the core in a gaseous environment (air). The ionization energy losses are determined by the formula Bethe-Bloch.