

**DETERMINATION OF CROSS SECTIONS FOR NUCLEAR REACTIONS (n,x)  
AT GERMANIUM ISOTOPES**

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The cross section values for nuclear reactions  $^{74}\text{Ge}(n, \alpha)^{71\text{m}}\text{Zn}$ ,  $^{70}\text{Ge}(n, p)^{70}\text{Ga}$ ,  $^{76}\text{Ge}(n, 2n)^{75\text{m}}\text{Ge}$ ,  $^{70}\text{Ge}(n, 2n)^{69}\text{Ge}$  have been measured for neutron energy 14,53 MeV, and of reaction  $^{72}\text{Ge}(n, 2n)^{71}\text{Ge}$  for energies 13,32, 13,69, 14,35, 14,74 MeV as well. Measurements have been carried out with neutron activation method. The samples in the form of disks of natural germanium have been irradiated with DT-neutrons. Instrumental gamma-spectra of activation products have been measured with two HPGe spectrometers. The corrections for neutron flux instability, real geometry of the experiment, the effect of gamma-ray true coincidence summing during activation product spectra measurements, and the effect of self-absorption of gamma-rays in the sample were calculated. Average neutron energy in the samples has been determined experimentally with Zr/Nb method.