Evaluation of a Mistaken Asymmetry in the Projected Experimental Search of Spatial Anisotropy of Gammas from ^{109}Ag(n,γ) Reaction at Neutron Energies near 32-eV p-Wave Resonance

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An experiment is going to be carried out for a detection of forward-backward anisotropy of γ-quanta emission at the radiative decay of ^{110}Ag nucleus after capture of neutrons with energies in the region of 30.6-eV s-wave and 32.7-eV p-wave resonances of ^{109}Ag isotope. At preparatory stage for the experiment, which is planned to run by the time-of-flight method at 10-m flight-path of the IREN facility, Monte-Carlo simulations were made in order to calculate contributions of multiple scattering of neutrons before capture in natural-silver targets of different thicknesses, as well as to obtain a value the distorting kinematic asymmetry of γ-quanta emission in real geometry under condition of γ-emission isotropy.