Forward-Backward Asymmetry Effect in the Slow Neutrons Capture by Silver Nucleus

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Forward-backward asymmetry effect in the capture process of slow neutrons on Silver nucleus was investigated. Cross sections, angular distributions, and forward-backward effect were obtained in the frame of the mixing states of compound nucleus with the same spin and opposite parities formalism. Simulated gamma spectra, taking into account different type of target and gamma loss, were also evaluated. Using modeled gamma spectra, the influence of target properties (composition, target thickness) on the investigated effect were analyzed. Forward-backward effect together with other asymmetry and parity breaking effects allow to extract new information on neutrons and gamma reduced partial widths and matrix element of weak non-leptonic interaction.