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Determination of Partial Neutron Widths of p-Wave Resonance of ^{35}Cl Nuclei at the 397.8 eV Energy

Angular distributions of emitted gamma quanta during the neutron capture process, in the region of the p-wave resonance by ^{35}Cl nuclei were measured. Corresponding expressions, for the forward-backward asymmetry effect and anisotropy in the angular distribution of gamma quanta for a target nucleus with a spin of $3/2$, were obtained in the frame of the mixing states of compound nucleus with the same spin and opposite parities formalism. Using experimental data and theoretical evaluation of forward-backward asymmetry effect and anisotropy of gamma quanta, partial neutron widths $\Gamma_{np,1/2}$ and $\Gamma_{np,3/2}$ were obtained.

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