DETERMINATION OF MIXING AMPLITUDE FOR STATES $5/2^+$ IN NUCLEUS ^{27}Al

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The method was elaborated for calculation of the mixing amplitude of nuclei states where among multiplet components of excited states the states with the same quantum numbers as for the ground state of odd nucleus were observed. For nucleus ^{27}Al for the first time we received formula for the state mixing amplitude which is defined by distance between levels with $J^\pi = 5/2^+$ (2.73 MeV) and energy of a quadruple phonon (1.779 MeV). Our value of state mixing amplitude $A = 0.417$ is in a good agreement with the value $A = 0.435$ obtained from the analysis of experimental cross sections of inelastic scattering of protons.

Keywords: mixing of nuclei states, cross-sections, neutrons.