

Re-investigation of the low-lying structure of ^{135}Pr (remote)

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The low-lying negative-parity bands of ^{135}Pr were previously interpreted as the first case of zero-, one- and two-phonon transverse wobbling bands. In the present work, we re-investigated its structure via a high statistics JUROGAM experiment. It is shown that the mixing ratios of all analyzed connecting transitions between low-lying bands in ^{135}Pr have absolute values smaller than one. This indicates predominant M1 magnetic character, which is incompatible with the proposed wobbling nature. All experimental observables are instead in good agreement with quasiparticle-plus-triaxial-rotor model calculations, which describe the bands as resulting from a rapid re-alignment of the total angular momentum from the short to the intermediate nuclear axis.

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