QUADRUPOLE MOMENTS OF EXCITED COLLECTIVE STATES OF EVEN-EVEN HEAVY NUCLEI

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The different models are used for describe nuclear properties such as spins, energies of the levels, probabilities of electromagnetic transition and their multipole moments. Known, that nuclei in many cases have large quadrupole moments and they don't behave like a point charge, rather a spherical or elliptical shape with an axis of simmetry is considered for this nuclei. Note, that the quadrupole moment is an excellent tool to study the deformation of nuclei. In this work within the approximation with free triaxiality the quadrupole moments of even-even heavy nuclei: ^{154}Sm, ^{156,158}Dy, ^{156}Gd, ^{162,164}Er, ^{230,232}Th, ^{232,234,236,238}U and ^{240}Pu has been considered. The comparison of calculated values of average values of quadrupole moments in ground state, β- and γ-bands with experimental data for above mentioned nuclei gives satisfactory agreement.