

# SIMPLE TOOL TO SEARCH QUASI-MAGIC STRUCTURES IN DEFORMED NUCLEI

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Evaluation of the shell effects in nuclei plays an important role in studying the nuclear structure. In Strutinsky method the smooth energy of nucleus is obtained by folding of the single-particle (s.p.) energy density in the s.p. energy space [1-3]. An alternative way of energy smoothing is folding of the s.p. energy sum in the particle number space [4]. For non degenerated s.p. spectra the both types of the folding give the smooth energies which are close to each other. In the case of strongly degenerated spectra which appear at spherical shapes or in the regions of the shape-isomers the smooth energy obtained by the  $N^{1/3}$ -folding is a couple MeV smaller than the traditional Strutinsky average energy. This smooth energies difference can serve as a simple tool for searching the magic or quasi-magic structures in the s.p. spectra. It can be used to predict the shape-isomers in the multidimensional deformation space.

## References:

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