Description of Non-Yrast Split Parity-Doublet Bands in Odd-*A* Nuclei

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The model of coherent quadrupole and octupole motion (CQOM) [1,2] is applied to describe non-yrast split parity-doublet spectra in odd-mass nuclei. The yrast levels are described as low-energy rotation-vibration modes built on the ground state, while the non-yrast parity-doublet structures are obtained as higher-energy rotation-vibration modes. It is shown that the extended model scheme describes both the yrast and non-yrast quadrupole-octupole spectra in different regions of heavy odd-A nuclei. The involvement of the reflection-asymmetric deformed shell model to describe the single-particle motion and the Coriolis interaction on a deeper level is considered.

References

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