

Level dynamics of yrare states

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We present a systematic study of the dynamics of yrare states using a simple but physically relevant hamiltonian. The emphasis is put on the behavior around the spherical to deformed phase transition. When the transition takes place between spherical and gamma soft nuclei level bunching occurs which is related to the conserved seniority [1]. In between spherical and prolate nuclei a sharp increase in the level density of $0+$ states is found, which could be confirmed by recent (p,t) transfer reactions performed at the Q3D spectrometer in Garching.

[1] S. Heinze, P. Cejnar, J. Jolie, M. Macek, subm. to Phys. Rev. C

[2] D.A. Meyer et al., subm to Phys. Rev. Lett.