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Title: **Terminating rotational bands in nuclei - detailed configuration assignment at very high spin**

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The description of nuclear high spin bands in terms of the configuration constrained cranked Nilsson-Strutinsky (CNS) approach will be discussed. Pairing is neglected in these calculations, making it possible to get a simple understanding of the different configurations. Examples from different mass regions show very good agreement between calculations and experiment in many cases, making it possible to assign detailed configurations. In this assignment, the fact that the configurations have well-defined maximum spin values is very important, independently of if the bands really terminate or not [1].

Special emphasis will be put on the $Z = 66$ Dy isotopes where the rotational bands show very different properties depending on the number of proton holes in the $(g_{7/2}d_{5/2})$ subshells of the $Z = 64$ proton core. Thus, bands terminating smoothly at $I \approx 60$ have been identified in ^{156}Dy [2, 3] while a teminating 'magnetic band' has been observed in ^{154}Dy [4].

References

[1] A. V. Afanasjev, D. B. Fossan, G. J. Lane and I. Ragnarsson, Phys. Rep. 322 (1999) 1.

[2] F. G. Kondev *et al.*, Phys. Lett. B 437 (1998) 35.

[3] I. Ragnarsson and F. Saric, to be publ.

[4] Wenchao Ma *et al.*, to be publ.

Invited talk.