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$M1$ and $E2$ band structures in the Sn–Xe–Ba region

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Abstract. In the present talk I will discuss some 'rare' aspects of the $E2$ band structures and the novel features concerning the dipole bands in this mass region. Reliable and accurate lifetimes have been measured using coincidence recoil distance method. The results of ^{129,130}Ba will be discussed. In contrast to the predictions of the tilted axis cranking model, the dipole bands in Sb–Xe–Ba nuclei can be nicely described as high-K prolate bands. New data from multi-detector arrays has established extended bands structure, their decay to low lying states have been established and the angular correlation supports the predominant, $\Delta I = 1$ character. Finally the sensitive measures, i.e. $B(M1)$ rates of the tilted axis model are compared with the high-K formula based on 1-dim cranking model.

Keywords. Nuclear structure; recoil distance method; cranking model.

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