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Microscopic Study of Some Very Neutron Deficient Barium Isotopes

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Abstract: *The observed excited states of neutron-deficient ^{118,120}Ba have been studied in the frame-work of projected shell model (PSM). The yrast bands of these isotopes have been studied up to spin 30 $\hbar$. The experimentally observed yrast bands in ^{118,120}Ba are reproduced well by the present calculation. The first band crossing in ^{118,120}Ba is due to the crossing of ground state band by2-qp proton and neutron bands, arising from $1h_{11/2}$orbital.The crossing of ground state band by multi-quasiparticle bands leads to the structural change in the yrast bands of these isotopes.*

Keywords: Projected shell model, band diagram, yrast energies

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