

Description of the Superdeformed Bands of Double Odd Nuclei in $A \sim 190$ Region

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(Received: 2002-9-3; Revised: 2002-10-9)

Abstract: With the supersymmetry scheme including many-body interactions and a perturbation possessing the $SO(5)$ (or $SU(5)$) symmetry on the rotational symmetry, the superdeformed bands and $\Delta I=4$ bifurcation of odd-odd nuclei in $A \sim 190$ mass region are investigated systematically. Good results for the γ -ray energies, the dynamical moments of inertia, and energy differences $\Delta E_\gamma - \Delta E_\gamma^{\text{ref}}$ are obtained. It shows that this approach is quite powerful in describing odd-odd nuclei in the region.

PACS: 21.10.Re, 21.60.Fw, 23.20.Lv, 27.80.+w

Key words: superdeformed bands, dynamical moments of inertia, $\Delta I=4$ bifurcation

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