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Gamma Vibrational Bands and Chiral Doublet Bands in $A \approx 100$ Neutron rich Nuclei

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摘要 The level structures of neutron rich 105Mo , 106Mo , 108Mo and 110Ru nuclei in $A \approx 100$ region have been carefully investigated by coincidence measurements of the prompt γ rays populated in the spontaneous fission of ^{252}Cf with the Gammasphere detector array. In 105Mo , one phonon $K=9/2$ and two phonon $K=13/2$ γ vibrational bands have been identified. In 108Mo , one phonon γ vibrational band is expanded and two phonon γ vibrational band has been identified. Two similar sets of bands in 106Mo and 110Ru are observed to high spins, which have been proposed as the soft chiral γ vibrational bands. The characteristics for these γ vibrational bands and chiral doublet bands have been discussed.

关键词 [high spin state](#) [neutron rich nucleus](#) [\$\gamma\$ vibrational band](#) [chiral doublet band](#)

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