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Signature Inversion in Odd-odd Nuclei

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摘要

Signature inversion in odd-odd nuclei is investigated by using a proton and a neutron coupling to the coherent state of the core. Two parameters are employed in the Hamiltonian to set the energy scales of rotation, neutron-proton coupling and their competition. Typical level staggering is extracted from the calculated level energies. The calculation can approximately reproduce experimental signature inversion. Signature inversion is attributed to the rotational motion and neutron-proton residual interaction having reversed signature splitting rules. It is found signature inversion can appear at axially symmetric shape and high-K band.

关键词 [signature](#) [odd-odd nuclei](#) [neutron-proton interaction](#)

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