

Shape Coexistence; A Portal to the Islands of Inversion

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Abstract. I shall discuss the meaning of the "nuclear shape" in the laboratory frame proper to the Spherical Shell Model, and the algebraic models that make its foundations. Shape coexistence, shape mixing and shape entanglement will be illustrated with relevant physics cases, In particular I shall show that shape coexistence acts as a portal to the Islands of Inversion at $N=20-28$ and $N=40-50$ for very neutron rich nuclei.