

Novel signatures for QPTs from mixed-symmetry states

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Mixed-symmetry states have proven their sensitivity to the shape evolution across quantum phase transitions. Especially the electromagnetic transitions between the 1^+ scissors mode and the 0_2^+ state are strongly affected by the amount of nuclear deformation. Also the elusive $E2$ properties of mixed-symmetry states can be established as novel signatures for phase-transitional behavior. First experimental information on such is discussed for the transitional nucleus ^{154}Gd and the quadrupole deformed nuclei ^{156}Gd and $^{162,164}\text{Dy}$ in connection with calculations in the IBM2.

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