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A U(6) Boson Model for deformed nuclei

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Abstract

A U(6) Boson Model [1], similar in spirit with the Interacting Boson Model [2], has been introduced. While the Interacting Boson Model uses the Otsuka-Arima-Iachello mapping, in which a pair of nucleons (fermions) are mapped to a boson, in the U(6) Boson Model a pair of harmonic oscillator quanta (bosons) form an approximate boson. Therefore no “boson mapping” is treated and as a result the irreps of the SU(3) limit of the U(6) Boson Model are identical to those of the Elliott SU(3) symmetry [3].

References

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