## 9th International Conference on New Frontiers in Physics (ICNFP 2020)



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# Search for identical bands on the basis of level spin in SD nuclei

Friday 2 October 2020 14:00 (25 minutes)

The Identical Bands (IB's) phenomenon is studied theoretically in normal deformed bands. With the Variable Moment of Inertia (VMI) model, the phenomenological analysis of the Superdeformed (SD) identical bands in A˜190 mass region are systematically explored. Also, the band head spin of these bands have been predicted using this approach. It was proposed that the truly identical bands, the band head moment of inertia, which depends intimately on the intrinsic structure of the rotational bands, should be similar. The gamma ray transition energies in the identical bands has found the difference of (1-3) keV only. The study indicates that each pair of conjugate nuclei has identical moment of inertia. The comparison between our theoretical results and available experimental data for the dynamical moment of inertia and gamma ray transition energies are obtained in good agreement.

## Is this abstract from experiment?

No

#### Internet talk

Yes

## Name of experiment and experimental site

NO

## Is the speaker for that presentation defined?

Yes

#### **Details**

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