SSNET 2024



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Type: Non spécifié

Nuclear Shapes and Shape Coexistence at the Iol's (with a Kumar twist)

lundi 4 novembre 2024 14:40 (20 minutes)

I will present several examples of shape coexistence in neutron rich doubly magic nuclei -always in the frame-work

of SM-CI calculations in the laboratory frame- that are the portals

to the Islands of Inversion at N=20, 40, and 50. I will pay particular attention to the case of ³²Mg where the semi-magic configuration and the deformed and superdeformed intruders mix in a very peculiar way. I will take advantage of the Kumar invariants to discuss the meaning and limitations of the concept of nuclear shape,

We have been able to compute recently, without any

approximation, the higher order invariants (up to Q⁶) that make it

possible to evaluate β and γ and their the variances. The conclusions

are that β is softer that usually assumed, and that the γ span at

 1σ is typically of 20-30o , at odds with the image of rigid triaxiallity.

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