

Abstract Submitted  
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**Band Terminations and Density Functional Theory: A Critical Analysis**<sup>1</sup> ANATOLI AFANASJEV, Mississippi State University — It was recently suggested in Refs. [1,2] that the set of terminating states in the  $N \sim Z$ ,  $A \sim 44$  mass region provides unique and reliable constraint on time-odd mean fields and the strength of the spin-orbit interaction in Skyrme and covariant (relativistic) density functionals. The authors of these references claim that their method based on the energies of terminating states is free from the drawbacks of standard approaches to define the strength of the spin-orbit interaction employing the single-particle energies of the spin-orbit partner orbitals in spherical nuclei. If that would be true the isoscalar and isovector channels of spin-orbit interaction could be defined very accurately. However, the detailed analysis performed shows that this is not a case. The results of this analysis will be presented in the talk.

[1] H.Zdunczuk et al, Phys. Rev. C71, 024305

[2] A.Bhagwat et al, reprint nucl-th/0605009

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