

Abstract Submitted
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Band Terminations and Density Functional Theory: Critical Analysis¹ 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 constraints 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 the method which they suggest and that is based on the energies of terminating states is free from the drawbacks of standard methods of defining spin-orbit interaction based on the measuring the single-particle energies of the spin-orbit partner orbitals. Thus, they claim that it allows to define very accurately both isoscalar and isovector channels of spin-orbit interaction. 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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