Review of: "Approximate Relationships to Reproduce the Values of Shell Correction Energy for Fission Fragments"

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Potential competing interests: No potential competing interests to declare.

The author intends to find simple approximations for the shell correction energy, which was usually evaluated with the Strutinsky method or, less frequently, the Wigner–Kirkwood expansion method. Those calculations are rather easy to do nowadays, but, as the author pointed out, they require numerical efforts. In practice, for various applications like fission studies, it may be convenient to have empirical formulas for the shell correction energy instead. The topic could be interesting/useful from that perspective. But I'm not yet convinced since the proposed formulas are so complex and so much different for different fissions. This results in many more parameters than a standard nuclear structure model or a fission model, which could lead to large uncertainties. And it may not be enough to just consider the A dependence.

In addition, Ref. [20] is not about the Wigner–Kirkwood expansion, if I remember correctly. And there are several other recent publications in that direction.