

DRHBc calculation result for odd- Z nuclei
with $Z=67$ and 69

The 7th workshop on nuclear mass table with
DRHBc theory

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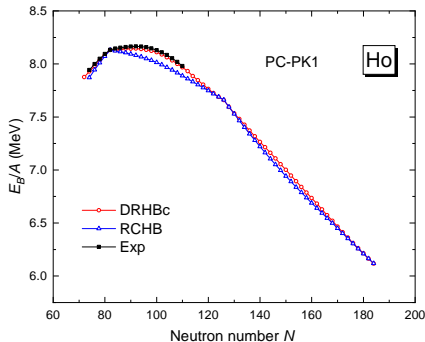
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Current progress (odd-Z nuclei)

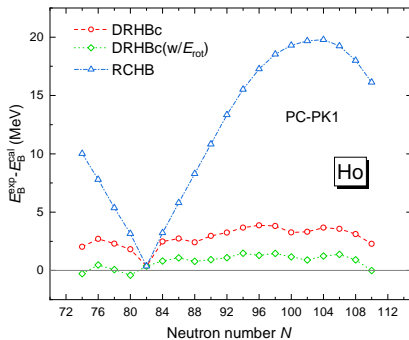
- Odd-even nuclei
 - Ho($Z=67$): All isotopes are done
 - Tm($Z=69$): All unconstrained calculations are done, constrained calculation not yet started
- Odd-odd nuclei
 - not yet started

Ground state energy: Ho ($Z = 67$)

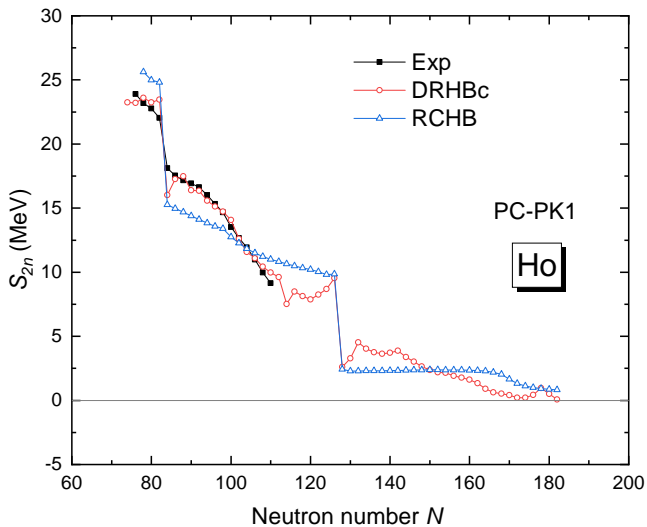
Binding energy per nucleon for Ho ($Z = 67$)



Difference between the experimental energy and DRHBc calculations for Ho ($Z = 67$)

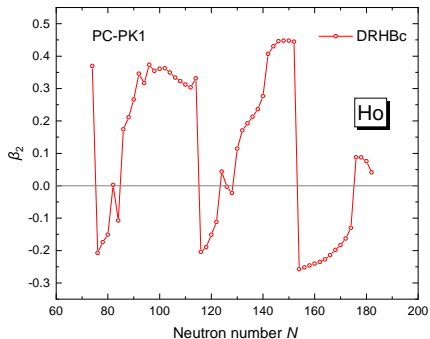


2-neutron Separation Energy: Ho ($Z = 67$)

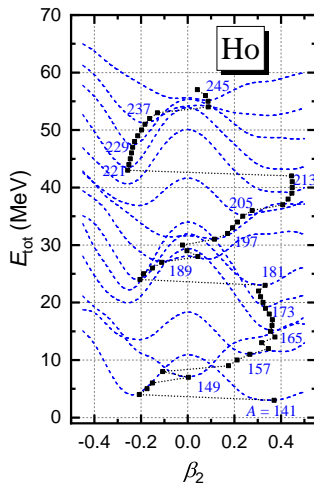


Deformation β_2 and potential energy curve: Ho

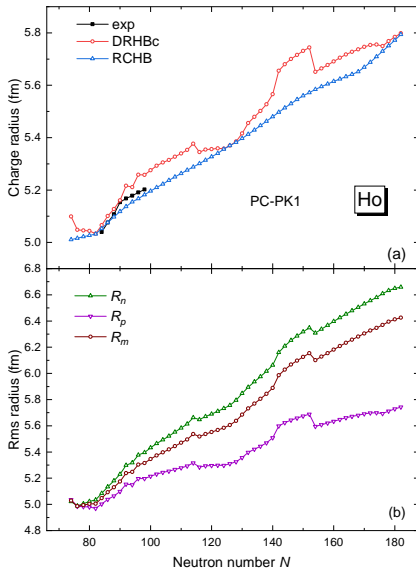
Deformation for Ho ($Z = 67$)



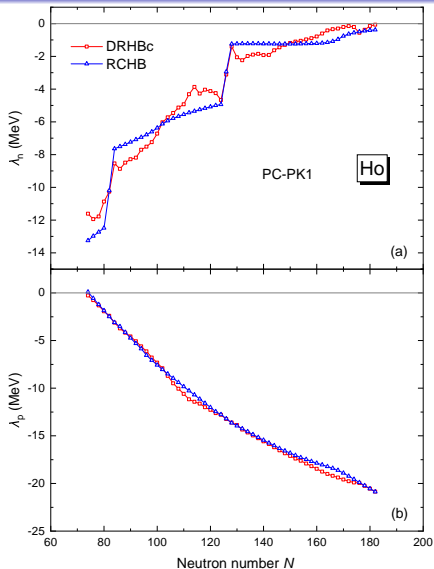
Evolution of potential energy



Radius: Ho ($Z = 67$)



Neutron and Proton Fermi Energy: Ho



Summary and Future plan

- Calculations completed
 - Ho(Z=67): All odd-even isotopes
 - Tm(Z=69): All odd-even isotopes (unconstrained calculation)
- Future calculations
 - Ho(Z=67): Odd-odd isotopes
 - Tm(Z=69): Odd-even isotopes (constrained calculation)
 - Tm(Z=69): All odd-odd isotopes