

The uNclear Nuclear Pairing

Main contact for this slide:

Carlos Bertulani, Texas A&M - Commerce (carlos_bertulani@tamu-commerce.edu)
(903) 886-5882.

Figure (left):

Comparison between calculated (Hartree-Fock-Bogoliubov theory with mixed pairing forces) and experimental the second difference of binding energies, Δ_o^2 , plotting Z-averaged values for neutrons and N-averaged values for protons.

Histogram:

Root mean square (rms) deviations in MeV for Liquid-Drop-Model (LDM) parametrization and the microscopic calculations of even-odd nuclear mass differences using Skyrme forces and Hartree-Fock-BCS (HF-BCS), Hartree-Fock-Bogoliubov (HFB) and Hartree-Fock-Bogoliubov with the Lipkin-Nogami model (HFB-LN).

Related publications:

- G. Bertsch, C.A. Bertulani, W. Nazarewicz, M. Soitsov, and N. Schunck, Phys. Rev. C 79, 0343306 (2009).
- W. Friedman and G. Bertsch, EPJ A 41, 109 (2009).
- C.A. Bertulani, H.-F. Lu and H. Sagawa, Phys. Rev. C 80, 027303 (2009).