The uNclear Nuclear Pairing

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Figure (left):
Comparison between calculated (Hartree-Fock-Bogoliubov theory with mixed pairing forces) and experimental the second difference of binding energies, \( \Delta_{o}^{(3)} \), 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: