

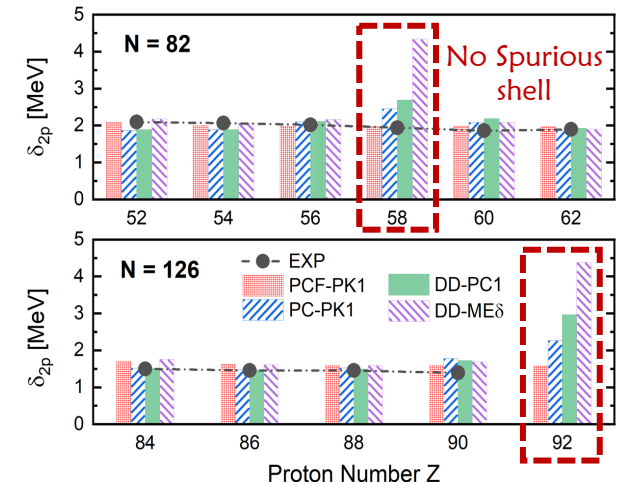
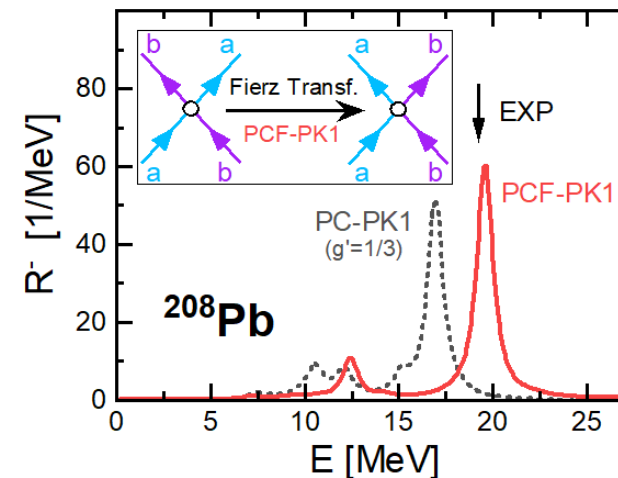
# Accurate relativistic exchange energy functional for atomic nuclei

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□ The inclusion of nucleonic exchange energy has been a long-standing challenge for the relativistic density functional theory (RDFT) in nuclear physics.

□ Strategy 1:

- New density functional PCF-PK1 with point-coupling interaction
- Improvements on Gamow-Teller resonance and shell structure



□ Strategy 2:

- Orbital-dependent density functional
- Local Koh-Sham potentials obtained with relativistic optimized effective potential method
- Extension to 3D coordinate space

