

Abstract Submitted
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Spectroscopy of Medium to Heavy Λ -Hypernuclei JEFF MCINTIRE, Indiana University — We develop a method for calculating the doublet splittings of select ground-state Λ -hypernuclei. This hypernuclear spectroscopy is conducted by supplementing the self-consistent single-particle equations with an effective interaction, which follows directly from the underlying lagrangian, to simulate the residual particle-hole interaction. Our previous investigation, performed using only the leading-order contributions to the particle-hole interaction, was inadequate. In the present work, this method is improved upon by increasing the level of truncation in the residual interaction to include gradient couplings to the neutral vector meson. As a result, we obtain a realistic description of the effect of these gradient couplings on the doublet orderings and splittings.

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