

Correlation of Spin-Orbit Potential and Effective Mass

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The correlation between the spin-orbit strength and effective mass is demonstrated for various Skyrme EDF. This correlation can be used to reduce the number of parameters in the Skyrme EDF. The role of spin-orbit interaction is considered together with tensor force which has similar action on the observable nuclear characteristics. The use of relation obtained between the spin-orbit strength and effective mass in the calculations of binding energies, spin-orbit splitting, and charge radii does not spoil the description of experimental data.