spin-orbit coupling

Spin-orbit interaction. In **quantum physics**, the spin-orbit interaction (also called spin-orbit effect or **spin-orbit coupling**) is any interaction of a particle's spin with its motion. The first and best known example of this is that spin-orbit interaction causes shifts in an electron's atomic energy levels due to electromagnetic interaction between the electron's spin and the nucleus's magnetic field. This is detectable as a splitting of spectral lines. A similar effect, due to the relationship between angular momentum and the strong nuclear force, occurs for protons and neutrons moving inside the nucleus, leading to a shift in their energy levels in the nucleus shell model. In the field of spintronics, spin-orbit effects for electrons in semiconductors and other materials are explored and put to useful work. (wikipedia)

See Also

Angular Momentum coupling
Compound Spin
Connecting Link
coupling
Figure 13.01a - Countless Spinning Stars about their common Neutral Center
Figure 9.11 - Compression Wave with expanded and contracted Orbits
Fraunhofer Lines
half integer spin
Oscillation
Quantum coupling
Rotational-vibrational coupling
Rovibrational coupling
rovibronic coupling
Sympathetic Oscillation
Sympathetic Vibration
Sympathy
spin
Vibration
Vibronic coupling
8.2 - Oscillation versus Vibration
9.23 - Circular Harmonic Orbit
9.24 - Elliptical Enharmonic Orbit
9.26 - Orbital Phases
12.38 - Orbital revolution