3D isotropic charged Noncommutative Harmonic Oscillator in a constant magnetic field

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In this presentation we will present the 3D isotropic charged Noncommutative Harmonic oscillator in a constant magnetic field. There are many studies on 2D noncommutative quantum mechanics, i.e. the x and y components of the position and momentum spaces are treated noncommutative, while leaving the z component in commutative space. The reason for that become self-evident when discussing the lengthy calculations. Therefore, the energy corrections can only be discussed in terms of perturbation theory. The corrections to the Energy levels for weak commutativity will be presented and discussed.

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