Semiclassical bounds on Magnetic Laplacian

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We derive spectral estimates into several classes of magnetic systems. They include three-dimensional regions with Dirichlet boundary as well as a particle in $\mathbb{R}^3$ confined by a local change of the magnetic field. We establish two-dimensional Berezin-Li-Yau and Lieb-Thirring-type bounds in the presence of magnetic fields and, using them, get three-dimensional estimates for the eigenvalue moments of the corresponding magnetic Laplacians.