High magnetic field limits for collisional plasmas Gyrokinetic Euler equations

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The subject matter of this talk concerns the derivation of the finite Larmor radius approximation, when collisions are taken into account. Several studies are performed, corresponding to different collision kernels. The main motivation consists in computing the gyro-average of the Fokker-Planck-Landau operator, which plays a major role in plasma physics. We determine its equilibria and derive the fluid approximation around them, leading to a new Euler type system of conservation laws.