

Electromagnetic tail and when it is negligible

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We show that for the motion of elementary particles in vacuum metrics the DeWitt-Brehme equation can be reduced to the covariant form of the Landau-Lifshitz equation. Further we discuss the implications of this approach in the Schwarzschild and Kerr black hole metrics immersed into external uniform magnetic field. In the latter case one can observe energy gain of a radiating charged particle inside the black hole ergosphere, which comes at the expense of rotational energy of the black hole.

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