

Radiation damping of a Yang–Mills particle revisited

Autores

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Abstract

The problem of a colour-charged point particle interacting with a four-dimensional Yang–Mills gauge theory is revisited. The radiation damping is obtained inspired in Dirac's computation. The difficulties in the non-abelian case were solved by using an ansatz for the Liénard–Wiechert potentials already used in the literature (Ö. Sarioglu. Phys. Rev. D, **66**, 085005 (2002). doi:[10.1103/PhysRevD.66.085005](https://doi.org/10.1103/PhysRevD.66.085005)) for finding solutions to the Yang–Mills equations. Three non-trivial examples of radiation damping for a non-abelian particle are discussed in detail.