

EFFECTIVE LAGRANGIANS FOR LIGHT-LIGHT INTERACTION

J. Mondejar*,
University of Alberta

Vacuum polarization processes provide non-linear corrections to the Maxwell theory. In a recent paper, A. Penin showed how vacuum polarization leads to a correction to the quantum mechanical result for the Hall conductivity; also, C. A. Dominguez et al. computed the electromagnetic field induced by a charged spherical shell in the presence of an external constant magnetic field. We consider an effective lagrangian approach that unifies the different treatments of the QED corrections used in these two papers.

*E-mail: jmonde@phys.ualberta.ca