



Contribution ID: 62

Type: Electroweak and Higgs Physics

Leptonic Tensor Approach to Calculate Scattering Cross Sections for Distinguishable Target Particles

Thursday, 17 February 2022 10:24 (12 minutes)

We perform Next-to-the Leading Order (NLO) and quadratic level (NNLO) covariant approach to get the leptonic tensor for a general QED scattering process with a distinguishable target particle. The Feynman diagram of the scattering process in question is divided into upper (leptonic) and lower (either leptonic or hadronic) parts. The QED quadratic leptonic tensor is of the order of α^3 which is usually obtained by multiplying two loop level photon self energy with tree level diagram. However, in this work it is obtained by squaring one loop level photon self energy and vertex correction diagrams. Hence this approach is more suitable if one wants to calculate NNLO corrections without using two loop level diagrams.

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Please select: Experiment or Theory

Theory

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Session Classification: Scattering and Electrons