

Order g^2 susceptibilities in the symmetric phase of the Standard Model

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Abstract content

Susceptibilities of conserved charges such as baryon minus lepton number enter baryogenesis computations, since they provide the relationship between conserved charges and chemical potentials. Their next-to-leading order corrections are of order g , where g is a generic Standard Model coupling. They are due to soft Higgs boson exchange, and have been calculated recently, together with some order g^2 corrections. Here we compute the complete g^2 contributions. Close to the electroweak crossover the soft Higgs contribution is of order g^2 , and is determined by the non-perturbative physics at the magnetic screening scale.

Summary

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