

## Cosmological perturbations of the Higgs vev

*Tuesday, 8 September 2015 10:45 (30 minutes)*

The standard Higgs mechanism for electroweak symmetry breaking predicts, apart from the existence of a scalar boson, the presence of a constant vacuum expectation value of the Higgs field. The Higgs vev, being determined by the effective potential, can however acquire space-time fluctuations from loop effects in inhomogeneous metric backgrounds. In this talk, we will present recent results on the determination of the finite part of the one-loop effective potential in perturbed Robertson-Walker backgrounds which has been obtained by means of dimensional regularization techniques. Potential astrophysical or cosmological signatures will be also discussed.

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