

Standard Model vacuum decay and non-minimal coupling.

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I will discuss the effect of including a non-minimal coupling between the Higgs field and gravity on vacuum decay in the Standard Model. High precision numerical results indicate that this suppresses vacuum decay relative to flat space calculations, with the minimal suppression near the conformal value of the coupling, $\xi = 1/6$, due to the near-conformal symmetry of the large field 3-loop effective potential. The effect with back-reaction alone, and no non-minimal coupling ($\xi = 0$), produces an almost negligible shift in the stability bounds for the Standard Model.

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