

Self-consistent solitons for tunneling transitions

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In many models of electroweak symmetry breaking, the vacuum structure depends crucially on radiative effects. In order to compute the decay rate of metastable states, the loop corrections must therefore be accounted for in the tunneling solitons. In turn, the loops depend on the solitonic background, such that self-consistent solutions must be found. We will discuss the relevance of this problem for the finding lifetime of the Standard Model vacuum as well as the development of methods of resolving this problem. (based on 1509.08480, 1509.07847, 1501.07466)

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