

Instability of Higgs Vacuum via String Cloud

Thursday, 5 December 2019 15:00 (3 hours)

We study the instability of the Higgs vacuum caused by a cloud of strings. By the catalysis, the decay rate of the vacuum is highly enhanced and when the energy density of the cloud is larger than the critical value, the semi-classical vacuum decay occurs. We also discuss the relation between the cloud of strings and observational constraints on cosmic strings in terms of the catalysis, providing constraints on the parameters of the Higgs potential.

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