

Primordial Black Holes and Gravitational Waves from the Tachyonic Instability in Higgs- R^2 Inflation

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The running of the Higgs self coupling may lead to numerous phenomena in early universe cosmology. In this talk I introduce a scenario where the Higgs running induces turns in the trajectory passing a region with tachyonic mass, leading to a temporal tachyonic growth in the curvature power spectrum. This effect induced by the Higgs leaves phenomena in the form of primordial black holes and stochastic gravitational waves, where proposed GW observatories will be able to probe in the near future.

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