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Phase Transitions in a Yukawa-QCD Model

Tuesday, 29 March 2022 16:00 (30 minutes)

Despite the standard model's great success at describing
particle physics phenomenology at currently accessible energies it is not considered to provide a fundamental
description of nature. One problem of the SM is the so-called hierarchy problem.

In our study we employ the functional renormalization group to gain insights on the phase transition in a
Yukawa-QCD toy model. We study the parameter-dependence of the second order phase transition, with
particular emphasis on the dependence of the separation of Fermi scale
and QCD scale.

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