

Lattice 2024



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On the spectrum of observable particles in BSM-like theories

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Analytical investigations and lattice simulations have previously suggested that the spectrum of observable particles in “BSM-like” theories may differ from that expected naively from perturbation theory. We consider a GUT-like toy theory, which already showed such qualitative discrepancies in exploratory lattice simulations, and perform a detailed quantitative investigation of its physical spectrum, covering different channels and lines of constant physics. We find indeed a substantial different spectrum than the elementary one. In particular, stable states with quantum numbers different from the elementary ones are observed.

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