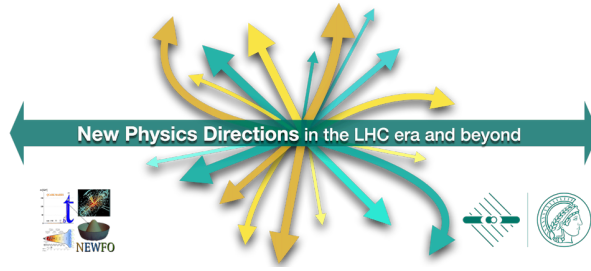


New Physics Directions in the LHC era and beyond



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Insights into the highest natural scale

Monday 22 April 2024 14:54 (3 minutes)

We apply the criterion of finite naturalness to the limiting case of a generic heavy sector decoupled from the standard model. The sole and inevitable exception is represented by gravitational interactions. We demonstrate how gravity can couple the Higgs to the heavy scale well before the three-loop diagrams mediated by the top quark discussed in previous literature. As an application, we illustrate how the criterion of finite naturalness disfavors large-field inflationary models with super-Planckian field excursions.

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