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LHC sensitivity for non-thermalised hidden sectors

Thursday 5 April 2018 17:45 (15 minutes)

I will discuss how event rates at the LHC can be compared to reaction rates in the early Universe in a model-independent way. This approach makes it possible to demonstrate that hidden sectors that never reach thermal equilibrium in the early Universe are also inaccessible for the LHC. The conclusion is that any particle that can be produced at the LHC must either have been in thermal equilibrium with the Standard Model at some point or must be produced via the decays of another hidden sector particle that has been in thermal equilibrium.

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