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The Coannihilation Codex

Tuesday, September 13, 2016 5:30 PM (20 minutes)

We present a classification of simplified models of coannihilating dark matter. Assuming tree-level and renormalizable interactions we construct all possible simplified models (containing dark matter, its coannihilation partner and a mediator) which respect gauge and Lorentz invariance. We go on to identify the possible LHC signatures associated with these models and identify new search strategies. Finally we demonstrate how to use the classification to quickly identify searches relevant for a given model.

Summary

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