

The inflaton portal to PeV-EeV Dark Matter

Thursday 24 May 2018 17:10 (20 minutes)

In this talk I will present a new paradigm for dark matter production in which the dark constituent of our Universe is in contact with the visible bath exclusively through the inflationary sector. I will show that experimental constraints on the inflationary energy scale and the dark matter relic density can be balanced by the use of a very minimal set up and that such a construction allows to constrain both inflation physics and dark matter phenomenology by various cosmological considerations. I will show that such a model can be therefore very predictive and lead to a dark matter mass range of order $O(10-1000)$ PeV which could be probed by various experimental collaborations, depending on the interactions considered.

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