

Flavourful Inert Doublet Dark Matter

Friday, 31 July 2020 12:14 (15 minutes)

In this talk I will elaborate on two of the most intriguing puzzles of the Universe, viz. the dark puzzle and the flavour anomaly puzzle, and try to correlate them by considering an extension of the Inert Higgs doublet model with $SU(2)_L$ singlet vector like fermions. This model is capable of addressing some interesting anomalous results in $b \rightarrow sll$ decays (like $R(K)$, $R(K^*)$) and in muon ($g - 2$) and also satisfies relevant constraints in the dark matter sector, while remaining within the reach of ongoing direct detection experiments. I will also show the discovery possibilities of such exotics in the future high luminosity (HL) runs of the LHC. The model also has the potential to explain the anomaly in $R(D)$, $R(D^*)$ and the recent KOTO anomaly.

I read the instructions

Secondary track (number)

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