



Laboratory for Elementary Particle
Physics (LEPP)

Theory Seminar

Flavoured Dark Matter in Dark Minimal Flavour Violation



We study simplified models of flavoured dark matter in the framework of Dark Minimal Flavour Violation. In this setup the coupling of the dark matter flavour triplet to SM quark triplets constitutes the only new source of flavour and CP violation. The parameter space of the model is restricted by LHC searches with missing energy final states, by neutral meson mixing data, by the observed dark matter relic abundance, and by the absence of signal in direct detection experiments. We consider all of these constraints in turn, studying their implications for the allowed parameter space. Especially interesting is the combination of all constraints, revealing a non-trivial interplay. Large parts of the parameter space are excluded, most significantly in light of future bounds from upcoming experiments.

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Wednesday, August 23rd, 2017

2:00pm

401 Physical Sciences Building