

Phenomenology 2021 Symposium



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Model-independent considerations of dark sectors

Tuesday, 25 May 2021 17:45 (15 minutes)

In this talk, I will present the theoretical framework to probe dark sectors that have portal interactions with the standard model, mediated by irrelevant operators. The focus is to develop a model-independent approach, without any specific model biases. I will focus on dark sectors with approximate conformal dynamics, and elucidate how this allows model-independent bounds to be derived. I will present the constraints from the various class of experiments and explain the procedures and assumptions involved.

The general picture that emerges is that these sectors are poorly constrained at the moment and points to the kind of future experimental facilities that will improve the reach on such dark sectors.

(based on 2012.08537)

Summary

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