Invisibles 2021 Workshop



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Supernova constraints on dark flavor sectors

Friday 4 June 2021 15:36 (6 minutes)

I will present recent application of the SN 1987A cooling bound to set a constraint on dark flavored sectors. This is possible thanks to the fact that the protoneutron stars are hot and dense environments where hyperons can be efficiently produced. Therefore a decay of the form $\Lambda \rightarrow nX0$, where X^0 is a new bosonic dark particle, will be severely constrained. I will explain the ingredients required and the application to flavored (massless) dark photons, axions and ALPs.

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