

Dark matter production of scalar and vector kind

Thursday 29 November 2018 14:30 (15 minutes)

The dark matter problem is one of the major subjects of physics these days. The search for hints in the high and low mass range are intense. A quite popular candidate is the axion, a very light hypothetical particle that can only account for the whole dark matter in a window of mass around the μeV . Recently has been found that one way to open up this window is if the axion is coupled to a massless dark photon. In this talk, we would like to review the mechanisms in which axions and dark photons can be independently very good cold dark matter candidates, and also show a model where they can both be produced in the early universe, and therefore have them both as the dark matter.

arXiv

1201.5902

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Session Classification: Parallel Talks A

Track Classification: Dark Matter and Astroparticles