Phenomenology 2020 Symposium



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Neutrino-dark matter connections in gauge theories

Tuesday 5 May 2020 17:15 (15 minutes)

We discuss the connection between the origin of neutrino masses and the properties of dark matter candidates in the context of gauge extensions of the Standard Model. We investigate minimal gauge theories for neutrino masses where the neutrinos are predicted to be Dirac or Majorana fermions. We find that the upper bound on the effective number of relativistic species provides the strongest constraint in the scenarios with Dirac neutrinos. Our results imply that we could test simple gauge theories for neutrino masses at current or future experiments.

Summary

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