

Kaon physics within nuMSM

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An extension of the Standard Model by three singlet fermions with masses smaller than the electroweak scale allows to explain simultaneously neutrino oscillations, dark matter and baryon asymmetry of the Universe. We discuss here the properties of neutral leptons in this model and the ways they can be searched for in particle physics experiments. In particular, if sterile neutrinos are lighter than kaons, they can be produced in leptonic and semileptonic kaon decays with branching ratios only one-two orders of magnitude below the current experimental limits from direct searches. This gives a unique possibility to either prove or rule out nuMSM with light sterile neutrinos.

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