

Phenomenology 2022 Symposium: From Virtual to Real



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Sterile neutrino dark matter, self-interactions, and supernovae

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In this talk, we explore the consequences of neutrino self-interactions for the production of sterile neutrino dark matter. We present how neutrino self-interactions allow keV sterile neutrinos to make up all the dark matter while safely evading all current experimental bounds. In addition, we revisit and update the constraints that supernova neutrino observations impose on the mass scale and coupling of the new interactions.

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