## PANIC2021 Conference



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## New Ideas of Probing Sterile Neutrino Dark Matter

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Sterile neutrino is a simple and elegant dark matter candidate. In its minimal incarnation, the original Dodelson-Widrow mechanism that explains the relic abundance has been in strong tension with the indirect detection limits. I present the self interacting neutrino scenario, mediated by a Majoron-like scalar or vector boson, as a novel solution to the above tension. It can accommodate new production mechanisms for sterile neutrino dark matter, open up a wide parameter space, and result in a number of testable signatures from the laboratorie s to the cosmos.

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