

Phenomenology with Massive Neutrinos in 2024

Neutrino oscillation experiments have provided us with our only direct proof of physics beyond the standard model (BSM) in the form of lepton flavour violation in neutrino propagation due to neutrino masses and flavour mixing in the leptonic sector. In this talk I will first review the present status of neutrino masses and mixing in the minimal framework with three massive neutrinos. I will then discuss other new physics effects that can also be probed with neutrino oscillations such as non standard neutrino interactions, models with new ultralight mediators or additional sterile neutrino states.

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