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Neutrino theory (neutrino masses, mixing, and interactions)

Monday 25 August 2025 09:20 (30 minutes)

This talk presents selected aspects of neutrino theory and phenomenology. We take a low-energy perspective, considering neutrino mass as an EFT extension of the Standard Model, stressing the unique oportunity of neutrinoless double-beta decay to test this hypothesis. We give a brief overview of the present status of the three-flavour paradigm, high-lighting its success, as well as pointing out possible hints for deviations from it. We argue that current data does not suggest that sterile neutrinos participate in oscillations. We discuss the emerging tension between results from cosmology and terrestrial experiments regarding the neutrino mass, offering exiting prospect in the near future.

Collaboration you are representing

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