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Future DUNE constraints on EFT

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In the near future, fundamental interactions at high-energy scales may be most efficiently studied via precision measurements at low energies. In this talk I will discuss the possible impact of the DUNE neutrino experiment on constraining the Standard Model Effective Field Theory. The unprecedented neutrino flux offers an opportunity to greatly improve the current limits via precision measurements of the trident production and neutrino scattering off electrons and nuclei in the DUNE near detector. I will quantify the DUNE sensitivity to dimension-6 operators in the SMEFT Lagrangian and I will compare the DUNE reach to that of future experiments involving atomic parity violation and polarization asymmetry in electron scattering, which are sensitive to an overlapping set of SMEFT parameters.

Parallel Session

BSM aspects of Flavour and Neutrino Physics

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