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Constraining Large Extra Dimensions with MINOS/MINOS+

We present the sensitivity of MINOS/MINOS+ to large extra dimensions using muon neutrino disappearance in the NuMI beam. Employing a model in which sterile neutrinos can propagate in a large compactified extra dimension while standard model left-handed neutrinos are confined to a 4-dimensional brane (e.g., Machado et al., Phys.Rev.D84:013003, 2011), we constrain the size of large extra dimensions as a function of the lightest neutrino mass. Mixing between active and sterile neutrinos occurring in the MINOS/MINOS+ baseline is treated as a perturbation to the standard oscillation scenario.

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