Abstract Submission ISMD2018

Author(s) : Ng Wei Khim, James Asikin Cheung
Affiliation(s) : Department of Physics, NUS
Email of Presenter : e0030938@u.nus.edu
Session: Poster Sessions
Title : Constrining Nonlinear Dirac equations using Neutrino Oscillations

Abstract:

Considering the phenomenological studies of nonlinear quantum models, we use an axiomatic approach to modify the Dirac lagrangian. We apply the constraints like Hermiticity, locality, universality, etc to obtain various generic modified dispersion relations. Afterwhich, we use the parameters from the neutrino oscillations to obtain bounds on these new modified dispersion relations.