



Contribution ID: 588

Type: **not specified**

Lepton Flavor Violation by Two Units

Tuesday 14 May 2024 14:45 (15 minutes)

Charged lepton flavor violation arises in the Standard Model Effective Field Theory at mass dimension six. The operators that induce neutrinoless muon and tauon decays are among the best constrained and are sensitive to new-physics scales up to 10^7 GeV. An entirely different class of lepton-flavor-violating operators violates lepton flavors by two units rather than one and does not lead to such clean signatures. Even the well-known case of muonium–anti-muonium conversion that falls into this category is only sensitive to two out of the three $\Delta L_\mu = -\Delta L_e = 2$ dimension-six operators. We derive constraints on many of these operators from lepton flavor universality and show how to make further progress with future searches at Belle II and future experiments such as Z factories or muon colliders.

Plenary (Invited talks only)

Mini Symposia (Invited Talks Only)

Primary author: SOKHASHVILI, Mikheil

Co-author: HEECK, Julian

Presenter: SOKHASHVILI, Mikheil

Session Classification: Quark and Lepton Flavor Physics

Track Classification: Quark and Lepton Flavor Physics