Contribution ID: **34** Type: **not specified**

Charged Lepton Flavor Violation in IceCube

Tuesday, 9 December 2025 17:00 (15 minutes)

Lepton flavor violation in neutrinos aka neutrino-oscillation is a telltale signature of Beyond the Standard Model (BSM) physics. If a similar phenomenon is found in the charged leptons as well, that will further consolidate the existence of BSM physics. In this work, we look for signature of charged lepton flavor violation, muon to tau conversion, in the IceCube. Moreover, we set a constraint on the parameter space of Z', the BSM mediator of such charged lepton flavor violating interaction, from the analysis of the existing IceCube data. We compare our obtained constraint to that from collider experiments and find an allowed parameter space for charged lepton flavor violation to occur in IceCube.

Presenter: MAITRA, Writasree (U. Washington, St. Louis)

Session Classification: Contributed Talks