



Contribution ID: 259

Type: **not specified**

Inelasticity studies using TeV-scale starting track neutrino events in IceCube

Thursday, September 14, 2023 5:00 PM (15 minutes)

Starting track events in the IceCube Neutrino Observatory, a gigaton ice-Cherenkov detector at the South Pole, arise from muon neutrino and antineutrino charged-current interactions in the detector. By reconstructing the energies of the hadronic shower and secondary muon separately, one can obtain the inelasticity of the event. This observable enables various measurements, including the ratio of atmospheric neutrinos to antineutrinos, neutrino-induced charm production, and the fraction of astrophysical tau neutrinos. We report on progress towards these measurements using a 10-year TeV-scale sample.

Primary author: MOULAI, Marjon (University of Wisconsin, Madison)

Presenter: MOULAI, Marjon (University of Wisconsin, Madison)

Session Classification: NUS: Neutrinos

Track Classification: Neutrinos