

Neutrino 2018 - XXVIII International Conference on Neutrino Physics and Astrophysics

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Type: **Poster high energy neutrinos & cosmic rays**

New physics searches with TeV neutrinos in IceCube

The IceCube neutrino observatory has measured the TeV-scale atmospheric neutrino flux with increasing accuracy. As statistics accumulate, corresponding improvements in treatments of systematic uncertainty enable highly sensitive searches for beyond Standard Model physics. In this poster, I will highlight our recent searches for Lorentz Violation and sterile neutrinos using high-energy muon neutrinos. The first is uniquely enhanced by the high neutrino energies in the IceCube sample, and the second by possible enhancements in the active-to-sterile oscillation probabilities due to matter effects.

Authorship annotation

for the IceCube collaboration

Session and Location

Wednesday Session, Poster Wall #177 (Ballroom)

Poster included in proceedings:

yes

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Track Classification: Poster (participating in poster prize competition)