



Contribution ID: 346

Type: **Oral Presentation**

Results from the Search for eV-Sterile Neutrinos with IceCube (15' + 5')

Thursday 4 August 2016 17:00 (20 minutes)

The IceCube neutrino telescope at the South Pole has measured the atmospheric muon neutrino spectrum as a function of zenith angle and energy. We have performed a search for eV-scale sterile neutrinos by looking at distortion in those distributions. Such a sterile neutrino, motivated by the anomalies in short-baseline experiments, is expected to have a significant signature in the $\bar{\nu}_\mu$ survival probability due to matter induced resonant effects for energies of order 1 TeV. This effect makes this search unique and sensitive to small sterile mixings. In this talk, I will present the results of the IceCube sterile neutrino search.

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Session Classification: Neutrino Physics

Track Classification: Neutrino Physics