Effect of neutrino decay on sterile neutrino searches in IceCube

Monday, 8 May 2017 15:15 (15 minutes)

IceCube, a neutrino detector located at the South Pole, is an ideal testing ground for the hypothetical 1 eV sterile neutrino, which is motivated by the short-baseline neutrino anomalies. In a normal ordering 3+1 sterile neutrino scheme, the decay of the heaviest neutrino mass eigenstate to lighter eigenstates is unconstrained. In this talk, we will show how such a decay could modify the results of a sterile neutrino search in IceCube.

Primary authors: MOSS, Alexander (MIT); Dr ARGUELLES, Carlos (o=mit,ou=Institutions,dc=icecube,dc=wisc,dc=edu); CON-RAD, Janet (MIT); MOULAI, Marjon (MIT)

Presenter: Dr ARGUELLES, Carlos (o=mit,ou=Institutions,dc=icecube,dc=wisc,dc=edu)

Session Classification: Neutrino Properties

Track Classification: Non-Accelerator-Based Neutrino