



Contribution ID: 33

Type: **parallel talk**

A new method to constrain flavor ratio of astrophysical neutrinos

Monday 9 May 2016 17:15 (15 minutes)

We are entering a new era of neutrino astronomy with the recent IceCube discovery of high-energy astrophysical neutrinos. Important questions, such as what their sources are, arise with these events. The flavor composition of these neutrinos has been identified as a rich observable, containing information about the production processes and neutrino properties. So far, only ν_μ charged current interactions can be uniquely identified in IceCube. We propose new methods that can help identify ν_τ events. Our method could significantly enhance the IceCube flavor measurement sensitivity, making it possible to tell if new physics is required to explain the flavor composition.

Summary

Author: LI, Shirley (The Ohio State University)

Co-authors: BEACOM, John (Ohio State University); BUSTAMANTE, Mauricio

Presenter: LI, Shirley (The Ohio State University)

Session Classification: Neutrinos