

# Distinguishing Flavors of Astrophysical Neutrinos

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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  $\nu_\mu$  charged current interactions can be uniquely identified in IceCube. We propose new methods that can help identify  $\nu_\tau$  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.

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