

IceCube and the Development of Neutrino Astronomy

Tuesday, September 13, 2016 11:00 AM (30 minutes)

Abstract: IceCube's discovery of a diffuse flux of astrophysical neutrinos started a new era of neutrino astronomy. I will review the multiple diffuse analyses in IceCube that observe the astrophysical flux, and what each can tell us. Then I will focus on spatial analyses that aim to identify the sources of such astrophysical neutrinos. This will be followed by an attempt to reconcile all results to draw a coherent picture that is the state of neutrino astronomy. Current plans for a streamlined real-time alert system to promote multi-messenger observations, and future plans of new detectors at the South Pole will be discussed to map out a path for discovering the first high-energy neutrino source in the sky.

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