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Neutrino Oscillations and Dark Matter in IceCube

Tuesday, 2 December 2014 17:00 (30 minutes)

The IceCube detector is the world's largest neutrino observatory, a 1 km^3 array of photomultipliers buried in the ice at the geographic South Pole. With the addition of the DeepCore in-fill, IceCube is sensitive to physics down the the ˜10 GeV range. Current studies of neutrino oscillations and dark matter in DeepCore will be discussed. Also I will discuss the proposed in-fill extension, PINGU, with potential to probe low mass dark matter, further constrain neutrino oscillation parameters and determine the neutrino mass hierarchy.

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Session Classification: Parallel 2: Neutrino mass and mixing, implications for astroparticle physics, dark matter searches