



Contribution ID : 1018

Type : Oral

Atmospheric muon neutrino analysis with IceCube

Saturday, 7 July 2007 12:29 (0:12)

Abstract content

The IceCube Neutrino Detector is a cubic kilometer ice-Cherenkov detector being constructed in the deep ice under the geographic South Pole. IceCube is sensitive to high-energy muon neutrinos and muon anti-neutrinos by detecting the secondary muon produced when the neutrino interacts in or near the instrumented volume. The principal source of muon neutrinos are atmospheric neutrinos which come from the decay of hadrons in cosmic-ray air showers. IceCube operated during 2006 with 9 out of 80 anticipated strings in the ice. I will briefly describe the design and current status of the detector and the major physics goals. I discuss the initial performance of the detector and describe the first evidence that IceCube can find and reconstruct atmospheric neutrinos with high efficiency.

If this papers is presented for a collaboration, please specify the collaboration

The IceCube Collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 5 (HE part 2), pages 1315-1318

Primary author(s) : Dr. PRETZ, John (University of Maryland)

Presenter(s) : Dr. PRETZ, John (University of Maryland)

Session Classification : HE 2.2

Track Classification : HE.2.2