Contribution ID: **610** Type: **Oral (Student, In Competition) / Orale (Étudiant(e), inscrit à la compétition)**

Atmospheric Neutrino Measurement with IceCube Neutrino Observatory

Wednesday 17 June 2015 15:00 (15 minutes)

IceCube, the world's largest neutrino detector, is designed to measure the highest energy neutrinos produced in astrophysical events. Augmented with a low-energy array, called DeepCore, IceCube has the ability to perform precision measurements of the high flux of atmospheric neutrinos for energies ranging from approximately 10 GeV to a few 100 TeV. When combined with the measurements by Super-Kamiokande, it is possible to create a measurement of the atmospheric neutrino flux over 7 orders of magnitude. Discussed will be the development of the DeepCore analysis for performing a forward-folding measurement of the atmospheric flux in the crucial overlap region of the detectors between 10 GeV and 100 GeV.

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Session Classification: W2-7 Cosmic Frontier: Astrophysics and Neutrinos (PPD) / Frontière cosmique : astrophysique et neutrinos (PPD)

Track Classification: Particle Physics / Physique des particules (PPD)