



Contribution ID: 304

Type: **Oral**

Status of IceCube-Gen2

Friday 11 August 2017 14:30 (15 minutes)

The IceCube Neutrino Observatory has detected the first high-energy neutrinos of astrophysical origin, characterized its diffuse flux, and performed point-source searches throughout the sky. Now, a next-generation, in-ice Cherenkov telescope is being designed with increased sensitivities to high-energy neutrinos. IceCube-Gen2 will encompass about 8 cubic-kilometers of ice at the South Pole. Additional envisioned components such as a large surface array, dense infill array, and complementary radio array would improve sensitivities across a wide energy band. Further, several studies to upgrade and optimize the optical module are ongoing and show promise to cost-effectively increase the photosensitive area. We will summarize these developments and focus on the projected sensitivities for high-energy neutrinos with IceCube-Gen2.

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Session Classification: Neutrinos

Track Classification: Neutrinos (astrophysical, atmospheric)