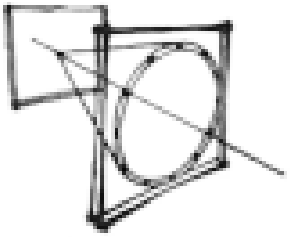

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Neutrino astronomy at the South Pole: latest results from the IceCube neutrino observatory and its future development.

Thursday, 8 September 2016 10:30 (25 minutes)

The IceCube Neutrino Observatory is a cubic-kilometer neutrino telescope located at the Geographic South Pole. Buried deep under the Antarctic glacial, an array of 5160 Digital Optical Modules (DOMs) is used to capture the Cherenkov light emitted by relativistic particles generated from neutrino interactions. The main goal of IceCube is the detection of astrophysical neutrinos, and the identification of their sources. In 2013 the IceCube neutrino telescope detected a high-energy diffuse flux of neutrinos of cosmic origin with energy ranging from tens of TeV up to few PeV. Many analysis have been performed to confirm the discovery and to search for possible correlations with astrophysical sources. However, the sources of these neutrinos remain a mystery, since no counterparts have been identified yet.
In this talk I will give an overview of the detection principle of IceCube, the most recent results, and the plans for a next-generation neutrino detector, IceCube-Gen2.

Registered

Yes

Primary author: TOSCANO, Simona (VUB)

Presenter: TOSCANO, Simona (VUB)

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