

Observations of the diffuse astrophysical neutrino flux with IceCube

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IceCube is a cubic-kilometer neutrino observatory buried deep in the ice sheet at the geographic South Pole. The data from its first few years of operation have revealed an excess of high-energy neutrino events in multiple detection channels that is incompatible with purely atmospheric origins, which we interpret as evidence for a flux of neutrinos from unresolved astrophysical sources. At the same time, no point sources of neutrinos have been detected. This talk will provide an overview of IceCube's constraints on the energy spectrum and neutrino flavor composition of the diffuse astrophysical neutrino flux.

Primary author: Dr VAN SANTEN, Jakob (DESY Zeuthen)

Presenter: Dr VAN SANTEN, Jakob (DESY Zeuthen)

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