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The origin of high-energy astrophysical neutrinos

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IceCube, a high-energy neutrino observatory with a cubic kilometre active volume, has discovered astrophysical neutrinos with energies higher than a few tens of TeV. While the sources of these neutrinos are still unclear, their isotropic distribution supports that the majority of these neutrinos have an extragalactic origin. IceCube has conducted searches for the sources of this neutrino flux, which resulted in 3-sigma detections of neutrino emission from two extragalactic objects, TXS 0506+056 and NGC 1086, and a 4-sigma detection of neutrino emission from the Galactic plane. In this talk, I will review the high-energy neutrino measurements up to the present and discuss the potential counterparts for this emission.

Keyword-1

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Keyword-2

Neutrino sources

Keyword-3

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