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Public lecture: IceCube: Cosmic Neutrinos and Multimessenger Astronomy

Wednesday, 7 July 2021 19:30 (30 minutes)

IceCube detects more than 100,000 neutrinos per year in the GeV to 10 PeV energy range. Among those, we have isolated a flux of high-energy neutrinos of cosmic origin, with an energy density in the extreme universe similar to that of high-energy photons and cosmic rays. We identified their first source: on September 22, 2017, following an IceCube neutrino alert, observations by other astronomical telescopes pinpointed a flaring active galaxy, powered by a supermassive black hole, as the source of a cosmic neutrino with an energy of 290 TeV. We will review recent progress in measuring the cosmic neutrino spectrum and in identifying its origin.

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