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Recent Results from IceCube

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The spectrum of cosmic rays includes the most energetic particles ever observed. The mechanism of their acceleration and their sources are, however, still mostly unknown. Observing astrophysical neutrinos can help solve this problem. Because neutrinos are produced in hadronic interactions and are neither absorbed nor deflected, they will point directly back to their source. Neutrinos may also be produced in other astrophysical processes, such as WIMP annihilation, and the detection of such particles would allow insight into these processes. This talk will cover searches for high-energy neutrinos (> 100 TeV) at the IceCube neutrino observatory, which have recently produced the first evidence for a flux beyond standard expectations from neutrinos generated in the Earth's atmosphere. This includes the detection of events with energies above 1 PeV – the highest energy neutrinos ever observed. The current status of these astrophysical neutrino searches will be discussed. Additional focus will be given to searches for dark matter with IceCube.

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Classification de Session: Astrophysical neutrinos - Dark Matter