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## Neutrino Physics and Astrophysics with IceCube

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In this contribution we summarize the selected highlights of IceCube in the domain of high-energy astrophysics and particle physics. We discuss the highest-energy neutrino detection and its interpretation after 4 years of data. The high energy non-atmospheric component is seen also in other analyses with smaller significance, for instance when using muon neutrinos coming from the Northern hemisphere. Flavor mixing is probed along cosmic distances in an analysis using also cascade neutrino events. The results on the search for neutrino sources will be presented including the results of a joint analysis with Pierre Auger and Telescope Array which is sensitive to correlations between highest energy neutrinos and UHECRs measured by the three experiments. Moreover, recent results on dark matter searches from the Sun will be discussed. Finally, the results on standard neutrino oscillations will be presented.

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