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Observations of High-Energy Astrophysical Neutrino Fluxes with IceCube

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In 2013, IceCube detected a diffuse flux of astrophysical neutrinos between a few TeV up to multiple PeV. Meanwhile, this flux has been established in multiple detection channels with high significance, and with added data the accuracy of these observations have been improved in the recent years. The observed flux is a combination of extragalactic and galactic origin and indications are found that the energy spectrum is more complex than a simple power-law. Interpreting the observations across the detection channels is difficult because of differing energy range, flavor sensitivity, sky coverage, and experimental uncertainties. Therefore, the goal for a global analysis is improving the overall understanding of the observed fluxes by combining the results of the different channels within one consistent analysis. This talk will summarize recent results of the different detection channels as well as initial results from the global analysis.

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