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Measurement of cosmic ray energy spectrum with IceCube

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We report on the measurement of the all-particle cosmic ray energy spectrum with IceCube. Results of two different techniques will be presented. The first result is a measurement of the all-particle cosmic ray energy spectrum in the energy range from 1.58 PeV to 1.26 EeV using the IceTop air shower array, which is the surface component of the IceCube Neutrino Observatory at the South Pole. The second result is a measurement of cosmic ray energy spectrum using neural network techniques and the full IceCube as a 3-dimensional cosmic ray detector. The measured energy spectrum exhibits clear deviations from a single power law above the knee around 4 PeV and below 1 EeV.

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