

# All particle cosmic ray energy spectrum with IceCube

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We report on the measurement of the all-particle cosmic ray energy spectrum with the IceTop air shower array in the energy range from 1.58 PeV to 1.26 EeV. The IceTop air shower array is the surface component of the IceCube Neutrino Observatory at the geographical South Pole. The analysis was performed using only information from IceTop. The data used in this work were taken from June 1, 2010 to May 13, 2011. During that period the IceTop array consisted of 73 stations, compared to 81 in its final configuration. The measured spectrum exhibits a clear deviation from a single power law above the knee around 4 PeV and below 1 EeV. We observe spectral hardening around 18 PeV and steepening around 130 PeV.

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