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Observation of Single Top Quark Production at DØ using Bayesian Neural Networks.

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Please give a brief summary of your poster

We present the observation of the electroweak production of single top quarks in 2.3 fb^-1 of data using Bayesian Neural Networks (BNNs) at the Fermilab Tevatron proton-antiproton collider at 1.96 TeV center-of-mass energy. The cross section of single top quark production for the combined tb+tqb channels is 4.70 + 1.18 - 0.93 pb using the BNN method. The probability to measure a cross section at this value or higher in the absence of signal is 3.2 x 10^-8, corresponding to a 5.4 standard deviation significance for the observation.

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