

Observation of single top at CDF

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We present observation of electroweak single top quark production using 3.2 fb⁻¹ of data collected by the CDF experiment. Candidate events are selected for further classification by five parallel analysis techniques: one using a likelihood discriminant, one using a matrix-element discriminant, one using decision trees, one using a neural network, and one using a complementary dataset. The results of these analyses are combined in order to improve the expected sensitivity. The significance of the observed data is 5.0 standard deviations, and the expected sensitivity is in excess of 5.9 standard deviations. We also present the most current value of the CKM matrix element V_{tb} . Finally we present the most precise results on a separate search for s-channel and t-channel single top quark production at CDF.

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