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Single Top Quark Production at D0 in the Muon Decay Channel using Boosted Decision Trees JORGE BENITEZ, Michigan State University, D0 COLLABORATION — Protons and antiprotons are collided at the Fermilab Tevatron at a center of mass energy of 1.96 TeV. We have performed a search for single top quark production in these collisions using a dataset of 2.2 fb^{-1} collected with the DØ detector in the muon+jets channel. This analysis utilizes secondary-vertex tagging to identify jets originating from b quarks. It probes the muon+jets decay mode, where the W boson from the top quark decays into a muon and a neutrino. We present results from the application of boosted decision trees to separate the expected signals from backgrounds.

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