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Search for single top quark production at CDF SARAH BUDD, University of Illinois, CDF COLLABORATION — In proton-antiproton collisions at the Fermilab Tevatron collider, individual top quarks are expected to be produced in association with bottom quarks mainly through the s-channel exchange of an off-shell W boson and also in the W-gluon fusion process, called the t-channel process. Three searches are conducted – one separately for an s-channel signal, one for a t-channel signal, and a combined search. No evidence for electroweak single top quark production is found. Upper limits are placed at the 95% confidence level at 13.6 pb for the s-channel process, 10.1 pb for the t-channel process, and 17.8 pb for the sum of the s- and t-channel processes. Efforts are underway to use more kinematic features of the events in order to separate the signal from background and improve the sensitivity of the searches.

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