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Search for Stop Quark Production in GMSB SUSY Models via $p\bar{p} \rightarrow t\bar{t}$ where $\tilde{t} \rightarrow \tilde{\chi}^0 + c \rightarrow \tilde{G} + c + \gamma$ at CDF ANNE LISE MALKUS, University of Chicago, CDF COLLABORATION — Using about 400 pb^{-1} of CDF Run II data, we search for stop quarks, the supersymmetric counterpart to the top quark. Gauge Mediated Symmetry Breaking (GMSB) SUSY models predict the process, $p\bar{p} \rightarrow t\bar{t}$ where $\tilde{t} \rightarrow \tilde{\chi}^0 + c \rightarrow \tilde{G} + c + \gamma$, resulting in a final state of two jets, two photons and missing transverse energy. This is the first time this signature has been investigated. If we find no signal, we will set constraints on the stop quark mass in these models.

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