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Search for single top quark production at CDF using a matrix element method PETER DONG, University of California, Los Angeles, CDF COLLABORATION — We present recent results from searches for single-top-quark production using 2 fb⁻¹ of data accumulated with the CDF detector at the Fermilab Tevatron. We select events with one charged lepton, large missing transverse energy, and two jets, where one jet is identified as a b-quark jet using displaced secondary-vertex information from the CDF silicon detector. We employ a matrix-element analysis technique and a neural-network jet-flavor separator to improve separation of signal and background and greatly improve the sensitivity of our search.

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