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Search for heavy 4th-generation down-type quarks in the same-charge dilepton signature at CDF

Using data collected at the CDF detector in Run II at the Tevatron we present a search for pair production of heavy down-type quarks, each of which decay to a top quark and a W boson yielding a b+bbar+W+W+W+W final state. The mode in which two same-charge leptons are produced is very sensitive because while the signal branching ratio is reasonable, same-charge dilepton events are rare in the Standard Model. We also impose missing transverse energy and b-tag requirements. We present our preliminary results as well as future prospects for the analysis.

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