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Search for Scalar and Vector Third Generation Leptoquarks with one τ Decaying to a Muon STAN FORRESTER, University of California, Davis — At Run II of the Fermilab Tevatron, the CDF experiment provides good sensitivity for either discovery or setting limits on 3rd generation scalar and vector leptoquark (LQ_3) pair-production, where each leptoquark decays $LQ_3 \to \tau b$. The estimated cross section at the Tevatron for this process is 1 pb for scalar (vector) LQ_3 masses of 135 (~200, depending on coupling) GeV/c². We perform a search for such production in the $(\tau \to \mu) + \tau_h$ channel using about 400 pb⁻¹ of data taken at $\sqrt{s} = 1.96$ TeV.

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