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Search for $\mathbf{W' \to tb}$ in the hadronic final state in proton-proton collisions at 8 TeV with the ATLAS detector HO LING LI, The University of Chicago, ATLAS COLLABORATION — We present a model independent search for a W' boson in the $W' \to t\bar{b} \to q\bar{q}'b\bar{b}$ final state using $20.3fb^{-1}$ of 8 TeV data collected by the ATLAS detector from the Large Hadron Collider (LHC) in 2012. This analysis searches for both left- and right-handed chiral W' bosons in the mass range of 1.5 to 3.5 TeV. Reconstructing the hadronically decaying top-quark is done using jet substructure tagging techniques. Limits are set on the ratios of coupling strength g' to the Sequential Standard Model coupling g_{SM}.

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