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Searches for fourth generation top quark in dilepton channel at ATLAS MICHAEL WERTH, DANIEL WHITESON, University of California Irvine, ATLAS COLLABORATION — A fourth generation of quarks is a natural and powerful extension to the Standard Model. It supports heavier Higgs models, provides additional CP Violation for B_s decays, and addresses numerous other theoretical and experimental questions. We present a search for pair-produced heavy up-type fourth generation quarks, $t'\bar{t}' \to W^+W^-b\bar{b}$, with the ATLAS detector at the LHC. We examine events where both W bosons decay leptonically, and we reconstruct the t' invariant mass using a collinear approximation to deduce the missing neutrino information from the lepton directions and $E_{\mathrm{T}}^{\mathrm{miss}}$ of each event. Our search encompasses a total recorded luminosity of 38 pb^{-1} of pp collisions at center-of-mass energy of $\sqrt{s} = 7$ TeV.

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