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Search for supersymmetry in same-sign dilepton channel at $\sqrt{s}$ = 7 TeV with 35pb^{-1} BROKK TOGGERSON, University of California, Irvine, ATLAS COLLABORATION — We present a search for R-parity conserving supersymmetry in final states with exactly two same charge leptons (e,μ) and with $E_{\mathrm{T}}^{\mathrm{miss}} > 100$ GeV using 35pb^{-1} of pp collisions at $\sqrt{s} = 7$ TeV. We present the status of our analysis in the context of a simplified Lagrangian designed to reduce the number of search parameters by adding only gluino, squark, slepton, $\widetilde{W}^{\pm,0}$, and LSP to the Standard Model. The masses and branching ratios of these additional particles are free parameters. We present our results as limits on the topologies in this simplified Lagrangian produced from strong interactions yielding same-sign dilepton events. Such a framework includes more phenomenologically distinct mass hierarchies than other presentations such as mSUGRA, and can be extended to other SUSY-like searches such as UED.

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