

Abstract Submitted
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Search for new physics with same-sign di-leptons, jets, and missing transverse energy in pp-collisions at 7 TeV RONALD REMINGTON, U of Florida, CMS COLLABORATION — We present the results of a search for new physics involving events with 2 same-sign leptons, jets, and missing transverse energy. The search is performed using data collected in the 2010 LHC run at $\sqrt{s}=7$ TeV, corresponding to a total integrated luminosity 34.7 pb^{-1} . The leptons used in the analysis are muons ($p_T > 5 \text{ GeV}$, $|\eta| < 2.4$) and electrons ($p_T > 10 \text{ GeV}$, $|\eta| < 2.4$). The hadronic activity is characterized by the total transverse energy, H_T , of all jets with $E_T > 30 \text{ GeV}$ and $|\eta| < 2.5$. The H_T is required to be greater than 300 GeV and must be built from a minimum of two jets in an event. The missing transverse energy, \cancel{E}_T , is built by using the energy flow objects and is required to be greater than 30 GeV. We observe 1 event, which is statistically consistent with the total expected Standard Model background rate of 0.8 ± 0.31 events. Given this lack of an excess, we set limits on the parameter space of SUSY models with universal and non-universal gaugino masses scales. The general limit on cross section σ times the event acceptance, A , described above is $\sigma \times A^{\text{theory}} \times A^{\text{exp}} < 0.13 \text{ pb}$ at 95% C.L.. A parameterization of the experimental acceptance, A^{exp} , is also presented, which can be applied to any given model.

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