Abstract Submitted
for the SES12 Meeting of
The American Physical Society

Search for a Fourth Generation Top-Like Quark with Single Charged Lepton Final States in 7 TeV pp Collisions[1] CHARLES JENKINS, University of South Alabama, CMS COLLABORATION — The CMS Experiment at the LHC recorded 7 TeV center of mass energy pp collisions in the 2011 run. One search conducted in this data was for a fourth generation top-like quark decaying as: t' $\rightarrow$ W b. A fourth generation is disfavored by a 125 GeV Standard Model Higgs boson, which is consistent with the observation of a new Higgs-like boson at 125 GeV at the LHC. However, extended Higgs theories allow t' quarks and there are other models with non-chiral top-like quarks that have similar decay signatures used in this search. This analysis searches for strong top-like quark production which decay into Wb, where one of the W bosons decays leptonically (W$\rightarrow$lν), the other hadronically (W$\rightarrow$q qbar). This analysis studies two channels: μ+jets and electron+jets. Results from a sample of 4.9 fb^{-1} μ+jets and 5.0 fb^{-1} electrons+jets will be presented.

[1]This work supported in part by DoE Grant DE-FG-96ER4097.

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Date submitted: 19 Sep 2012 Electronic form version 1.4