

Abstract Submitted
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Search for heavy top quark partners with charge $5e/3$ in the single lepton final state SINAN SAGIR, Brown Univ, CMS COLLABORATION
— A search is presented for a very heavy fermionic partner of the top quark with charge $5e/3$ ($X_{5/3}$), which is expected to decay into a top quark and a W boson. Events consistent with pair production of $X_{5/3}$, where one of the four W bosons from the decays of $X_{5/3}$ and top quarks decays leptonically, and all the other W bosons decay hadronically, are analyzed. The results from this semi-leptonic final state are then combined with same-sign dileptons signature to enhance the sensitivity. No excess of data above SM expectations is observed and 95% CL upper limits on the $X_{5/3}$ production cross section are set using the data corresponding to an integrated luminosity of 2.2 fb^{-1} collected by the CMS detector at center-of-mass energy of 13 TeV.

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