

Abstract Submitted
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Top quark decay width measurement with 13 TeV data EVAN COLEMAN, Brown Univ, PEDRO SILVA, CERN, MEENAKSHI NARAIN, Brown Univ, THE CMS COLLABORATION — A direct bound on the top quark decay width is presented, obtained by analysing 12.9 fb^{-1} of proton-proton collision data collected at $\sqrt{s} = 13 \text{ TeV}$ by the CMS experiment at the LHC. The measurement is performed by partially reconstructing the kinematics of top quark candidates from final states containing at least two charged leptons (electrons or muons) and at least one jet identified as stemming from the fragmentation and hadronization of a b quark. The observable is compared to the simulated expectations for different top quark width scenarios using a likelihood technique. Under the hypothesis of a standard model-like top quark the measurement yields limits at the 95% CL of $0.80 \leq \Gamma_t \leq 2.4 \text{ GeV}$, with an expected limit at $0.82 \leq \Gamma_t \leq 2.0 \text{ GeV}$ for $m_t = 172.5 \text{ GeV}$.

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