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Search for new resonances coupling to third generation quarks at CMS

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We present an overview of searches for new physics with top and bottom quarks and top-pair in the final state, using proton-proton collision data collected with the CMS detector at the CERN LHC at a center-of-mass energy of 13 TeV. The results cover non-SUSY based extensions of the SM, including new heavy gauge bosons, like a W' boson replicating the features of its standard model counterpart, or excited third generation quarks. We considered both semileptonic and fully-hadronic scenarios. We explore the use of jet substructure techniques to reconstruct highly boosted objects in events, enhancing the sensitivity of these searches.

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