

Search for Light- and Heavy-flavor Three-jet Resonances in Multijet Final States

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A search for three-jet hadronic resonance production in pp collisions at a center-of-mass energy of 8 TeV using 19.5/fb of data collected by the CMS experiment in 2012 is presented. The search method is model-independent for events with high jet multiplicity and large sum jet pT; however, event selection is optimized using an R-parity-violating supersymmetric model with gluino pair production in a six-jet final state. The search includes a model where the gluino decays only to light-flavor jets and one that allows decays to a b jet and two light-flavor jets. The analysis technique is validated by a known hadronic resonance, the top quark.

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