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Search for massive resonances decaying in to WW,WZ or ZZ bosons in proton-proton collisions at root s=13 TeV

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Abstract

A search is presented for new massive resonances decaying to WW, WZ or ZZ bosons in l upsilon q (q) over bar and q (q) over bar q (q) over bar final states. Results are based on data corresponding to an integrated luminosity of 2.3-2.7 fb(-1) recorded in proton-proton collisions at root s = 13TeV with the CMS detector at the LHC. Decays of spin-1 and spin-2 resonances into two vector bosons are sought in the mass range 0.6-4.0TeV. No significant excess over the standard model background is observed. Combining the results of the l upsilon q (q) over bar and q (q) over bar q (q) over bar final states, cross section and mass exclusion limits are set for models that predict heavy spin-1 and spin-2 resonances. This is the first search for a narrow-width spin-2 resonance at root s = 13TeV.

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