

Search for single and pair production of dijet resonances with the CMS Detector

Tuesday, 4 December 2012 15:00 (30 minutes)

We report on a search for single and pair-produced particles in leading two-jet and four-jet final states at CMS, using pp collision data at $\sqrt{s} = 7$ TeV and 8 TeV provided by the Large Hadron Collider. In the standard model, dijet masses based on leading jets in the central region of CMS should be smoothly distributed. We use this spectrum to search for narrow resonances and set lower limits on the masses of string resonances, excited quarks, axigluons, colorons, S8 resonances, E6 diquarks, W' and Z' bosons, and RS gravitons. In four-jet final states, we require closely matched pairs of dijets to search for pair-production of new colored particles decaying to dijets. This channel is also sensitive to pair-produced RPV stop decays.

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Session Classification: Parallel Session IV: BSM, SUSY, Exotics