

Search for heavy resonances in two-particle final states with leptons, jets and photons at CMS

Thursday 28 August 2014 14:00 (20 minutes)

At the LHC, the production of heavy resonances decaying into a pair of particles can be probed at unprecedented centre-of-mass energies. Two-particle resonances are predicted in a variety of BSM models and can be searched for in a largely model-independent fashion. Results from searches for resonances in final states with leptons, jets and photons based on the full dataset of 20 fb⁻¹ taken by the CMS detector in 2012 in proton-proton collisions at a centre-of-mass energy of 8 TeV are presented. They are interpreted in terms of various theories of BSM physics ranging from generic heavy resonances such as the Z' to excited quarks or Randall-Sundrum gravitons. In absence of a significant deviation from the expected SM background 95% CL limits are set on model parameters of the theories under study. The talk will put special emphasis on the most recent results.

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Session Classification: Beyond Standard Model

Track Classification: 7) Energy frontier physics beyond the standard model