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Searches for boosted top quarks at LHC

Many beyond-Standard-Model (BSM) theories predict massive new particles. The detection of such massive particles at the Large Hadron Collider (LHC) is very challenging. Heavy mass of these particles ensures their dominant decay to top quarks. The top quarks coming from such massive particles are heavily boosted. Thus, the search for boosted tops allows the detection for these particles.

We have studied the phenomenology of massive first Kaluza Klein (KK) mode for the Higgs boson and the gluon decaying to top quarks in two classes of bulk Randall Sundrum model. We show that such resonances are within the present reach of LHC.

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