

## Abstract

In theories with large extra dimension and with low quantum gravity scale near a TeV, it is expected that TeV-scale black holes to be produced in proton-proton collisions at the LHC with the center of mass energy of 14 TeV. Since the black holes temperature can be around 1 TeV, top quark production is expected from them via Hawking radiation. Within the Standard Model of particle physics top quarks are produced via strong interaction in  $t\bar{t}$  pairs or via electroweak interaction singly. Therefore, black holes can be the new source of top quark production. In this article we present the total cross sections and transverse momentum distributions of top quark production from black holes at the LHC. We find that the top quarks from black holes tend to reside at very high transverse momentum region so it can be a very useful signature for the black holes at the LHC. In continue a short notice is given about the reconstruction of the highly boosted top quarks.