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Black-Hole Decay and Detection at LHC

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<p>Models with extra spacial dimensions offer a new way to address outstanding problems in and beyond the standard model. In such models the Planck scale in the bulk can be of the order of the electro-weak symmetry breaking scale. This allows the coupling strength of gravity to increase to a size similar to the other interactions, opening the way to the unification of gravity and the gauge interactions. The increased strength of gravity in the bulk space-time means quantum gravity effects would be observable in the TeV energy range - an energy range now attainable in modern particle colliders. If the Planck scale is low enough, black-holes could form during collisions at particle colliders. These black-holes will emit radiation, losing mass, energy, momentum, etc. This radiation should be detectable making it, possible to ”see” black-holes in particle colliders.

Level (Hons, MSc,
   PhD, other)?

PhD

Consider for a student
   award (Yes / No)?

Yes

Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?

No

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