

Dark Matter at the LHC

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References

- [1] R. K. Ellis, W. J. Stirling, and B. R. Webber “QCD and Collider Physics,” Cambridge Monogr. Part. Phys., Nucl. Phys., Cosmol. 8, 1 (1996).
- [2] Vernon D. Barger, and Roger J.N. Phillips “Collider Physics,” updated 1996 edition, REDWOOD CITY, USA: ADDISON-WESLEY (1987) 592 P. (FRONTIERS IN PHYSICS, 71).
- [3] Jay Hubisz, Joseph Lykken, Maurizio Pierini, and Maria Spiropulu “Missing Energy look-alikes with 100 pb^{-1} at the CERN LHC,” Phys.Rev.D78:075008,2008 (arXiv:0805.2398 [hep-ph]).
- [4] Gordon Kane, and Aaron Pierce (Editors) “Perspectives on LHC Physics,” World Scientific, 2008.
- [5] V. Niro “Lecture Note: SUSY Phenomenology @ LHC,” Group Seminar on LHC in September 2008.