

Searching for long-lived particles at the LHC and beyond: Twelfth workshop of the LLP Community



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New result from CMS: Trackless and delayed jets

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A search for long-lived particles decaying in the outer regions of the CMS silicon tracker or in the calorimeters is presented. A novel technique, using trackless and delayed jet information combined in a deep neural network discriminator, is employed to identify decays of long-lived particles. The results are interpreted in a simplified model of chargino-neutralino production, where the neutralino is the next-to-lightest supersymmetric particle, is long-lived, and decays to a gravitino and either a Higgs or Z boson. This search is most sensitive to neutralino proper decay lengths of ~ 1 m, for which neutralino masses from up to 1180 GeV are excluded at 95% confidence level.

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