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Searches for long lived SUSY particles ($10' + 2'$)

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Several supersymmetric models predict massive long-lived supersymmetric particles with lifetimes from fractions of a nanosecond to lifetimes that are effectively stable in the detector. Such particles may be detected through abnormal specific energy loss, disappearing tracks, displaced vertices, long time-of-flight or late calorimetric energy deposits. The talk presents recent results from searches for long-lived supersymmetric particles with the ATLAS detector. The increase in the center-of-mass energy of the proton-proton collisions gives a unique opportunity to extend the sensitivity to production of supersymmetric particles at the Large Hadron Collider. Results will be based on pp collisions at $\sqrt{s} = 13$ TeV.

Presenter: JEANTY, Laura (Lawrence Berkeley National Lab. (US))

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