

## Journées de Rencontre Jeunes Chercheurs 2023



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# Search for displaced top quark in the CMS tracker

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My thesis subject aims to search for long-lived decays of new massive particles in the Compact Muon Solenoid (CMS) experiment at the Large Hadron Collider (LHC). CMS is one of the four main experiments at the LHC, where high energy proton-proton collisions are produced. New long-lived particles are predicted in several extensions of the Standard Model (SM). In the model considered, R-parity violated Minimal SuperSymmetric Model (RPV-MSSM), the lightest SuperSymmetric particle (LSP) is long-lived and decays into SM particles. Therefore, the present goal of my thesis is to reconstruct the displaced vertex emerging from the decay of the LSP and set selections to reduce the main backgrounds

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