

Simulation of Stopping Gluinos at ATLAS

Several models of new physics (such as Supersymmetry) often contain new, colored, long-lived particles. A few percent of these can stop in the ATLAS calorimeters, where they will later decay, perhaps many days afterwards. This project will involve work on the simulation of these stopping particles and their decay, using ATLAS simulation software (Pythia/Geant4). One can also study what such a signal would look like at ATLAS, such as the distribution of where the decays occur, their energy spectrum, decay shapes in the calorimeter, etc.