

Geant4 study for geometry of quartz fiber luminometer at CMS HL-LHC

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In particle physics experiments one of the most important parameter is the large center of mass energy available for the production of new effects. The higher energies achieved by accelerators is not the only parameters for new physics but also the number of useful interactions (events) is very important parameter to be measured and it is called luminosity which is proportional to events per second and the cross section of the interaction. The aim of this study is to perform Geant4 simulations for geometry of combination of tungsten quartz fiber luminometer to be used for the CMS experiment in HL-LHC era.

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