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## Study Of Muon Scattering Angle For Low to High - Z Material Via Geant4

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Muon scattering angle in various materials varies differently due to the multiple Coulomb scattering of incoming muons with materials. The scattering angle mainly depends on the atomic number, the density of the material, and the thickness of the medium at a given energy. Scattering angles at different initial energies also provide the opportunity to classify the scattering angle. In this study, we show that the deflection angle depends on the thickness of the material and it depends on the density of the material, and it exponentially decays as a function of the initial energy of muon. We took a different approach to simulate the scattering angle. We are using our setup geometry for this. The experimental setup is not ready yet but we are using the Geant4 simulation package for obtaining data.

### Session

Future Experiments and Detector Development

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