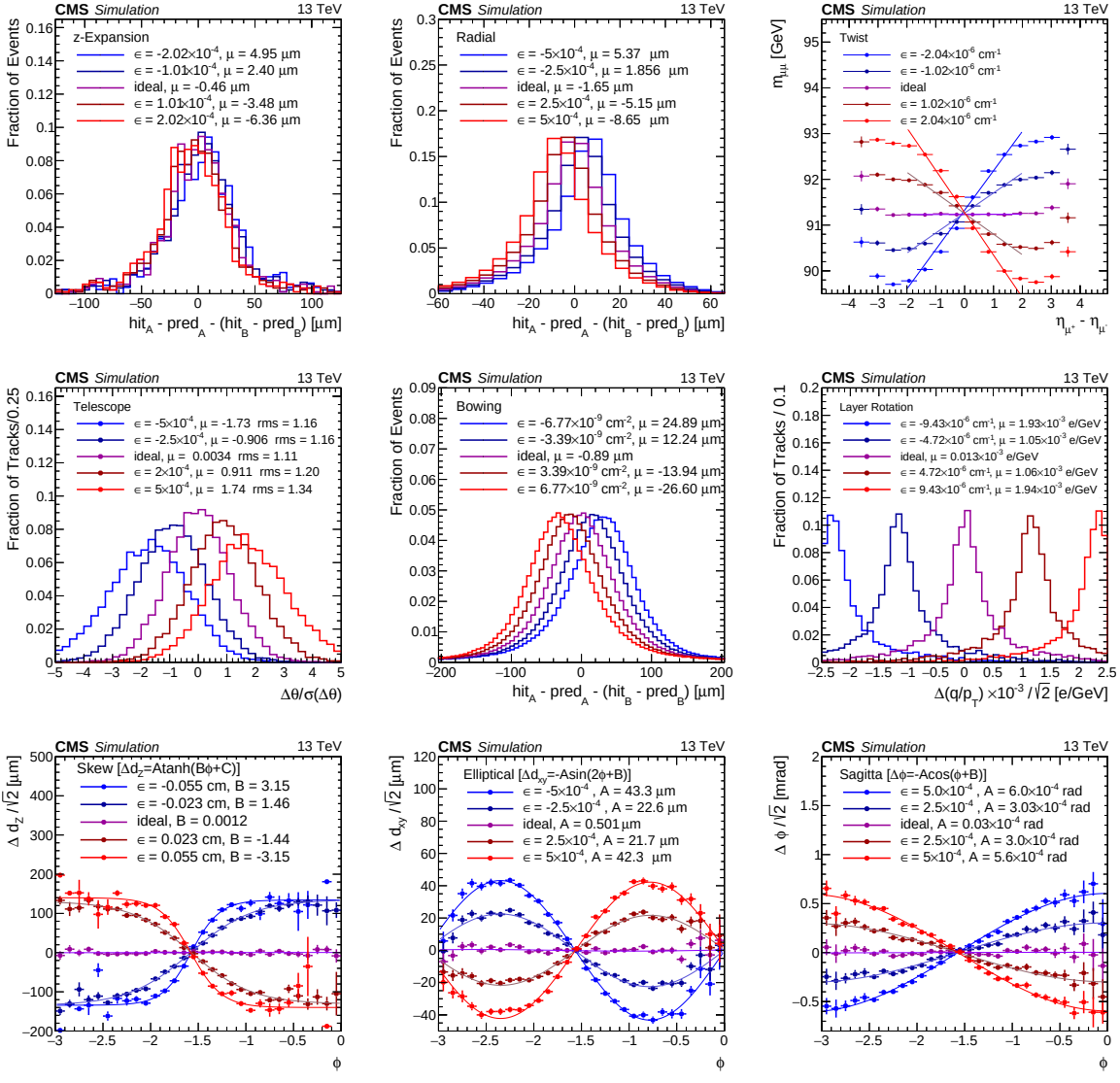
CMS Simulation 13 TeV
z-Expansion
ϵ = -2.02×10^-4, μ = 4.95 μm
ϵ = -1.01×10^-4, μ = 2.40 μm
ideal, μ = -0.46 μm
ϵ = 1.01×10^-4, μ = -3.48 μm
ϵ = 2.02×10^-4, μ = -6.36 μm
Fraction of Events
hit_A - pred_A - (hit_B - pred_B) [μm]
Radial
ϵ = -5×10^-4, μ = 5.37 μm
ϵ = -2.5×10^-4, μ = 1.856 μm
ideal, μ = -1.65 μm
ϵ = 2.5×10^-4, μ = -5.15 μm
ϵ = 5×10^-4, μ = -8.65 μm
Twist
ϵ = -2.04×10^-6 cm^-1
ϵ = -1.02×10^-6 cm^-1
ideal
ϵ = 1.02×10^-6 cm^-1
ϵ = 2.04×10^-6 cm^-1
m_μμ [GeV]
η_μ+ - η_μ-
Telescope
ϵ = -5×10^-4, μ = -1.73 rms = 1.16
ϵ = -2.5×10^-4, μ = -0.906 rms = 1.16
ideal, μ = 0.0034 rms = 1.11
ϵ = 2×10^-4, μ = 0.911 rms = 1.20
ϵ = 5×10^-4, μ = 1.74 rms = 1.34
Fraction of Tracks/0.25
Δθ/σ(Δθ)
Bowing
ϵ = -6.77×10^-9 cm^-2, μ = 24.89 μm
ϵ = -3.39×10^-9 cm^-2, μ = 12.24 μm
ideal, μ = -0.89 μm
ϵ = 3.39×10^-9 cm^-2, μ = -13.94 μm
ϵ = 6.77×10^-9 cm^-2, μ = -26.60 μm
Layer Rotation
ϵ = -9.43×10^-6 cm^-1, μ = 1.93×10^-3 e/GeV
ϵ = -4.72×10^-6 cm^-1, μ = 1.05×10^-3 e/GeV
ideal, μ = 0.013×10^-3 e/GeV
ϵ = 4.72×10^-6 cm^-1, μ = 1.06×10^-3 e/GeV
ϵ = 9.43×10^-6 cm^-1, μ = 1.94×10^-3 e/GeV
Fraction of Tracks / 0.1
Δ(q/p_T) ×10^-3 /√2 [e/GeV]
Skew [Δd_z=Atanh(Bϕ+C)]
ϵ = -0.055 cm, B = 3.15
ϵ = -0.023 cm, B = 1.46
ideal, B = 0.0012
ϵ = 0.023 cm, B = -1.44
ϵ = 0.055 cm, B = -3.15
Δ d_z /√2 [μm]
ϕ
Elliptical [Δd_xy=-Asin(2ϕ+B)]
ϵ = -5×10^-4 , A = 43.3 μm
ϵ = -2.5×10^-4 , A = 22.6 μm
ideal, A = 0.501μm
ϵ = 2.5×10^-4, A = 21.7 μm
ϵ = 5×10^-4, A = 42.3 μm
Δ d_xy /√2 [μm]
Sagitta [Δϕ=-Acos(ϕ+B)]
ϵ = 5.0×10^-4 , A = 6.0×10^-4 rad
ϵ = 2.5×10^-4 , A = 3.03×10^-4 rad
ideal, A = 0.03×10^-4 rad
ϵ = 2.5×10^-4, A = 3.0×10^-4 rad
ϵ = 5×10^-4, A = 5.6×10^-4 rad
Δ ϕ /√2 [mrad]