Tracker Layout with tkLayout

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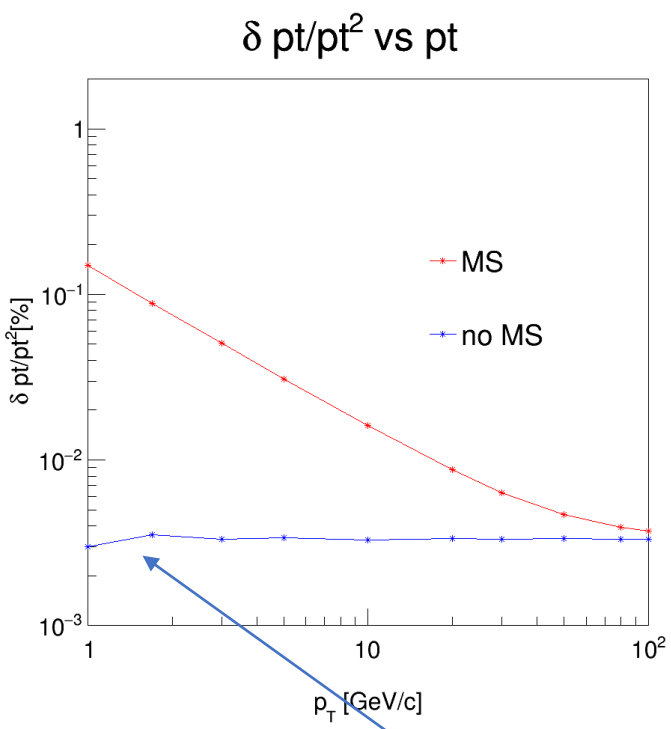
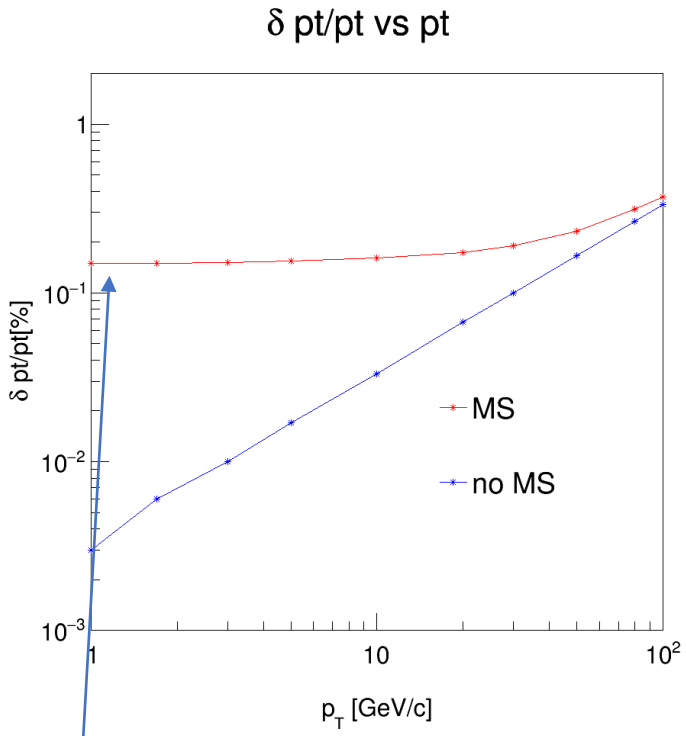
Momentum resolution





$a \sim 3 \times 10^{-5} GeV^{-1}$, $b \sim 1.5 \times 10^{-3}$

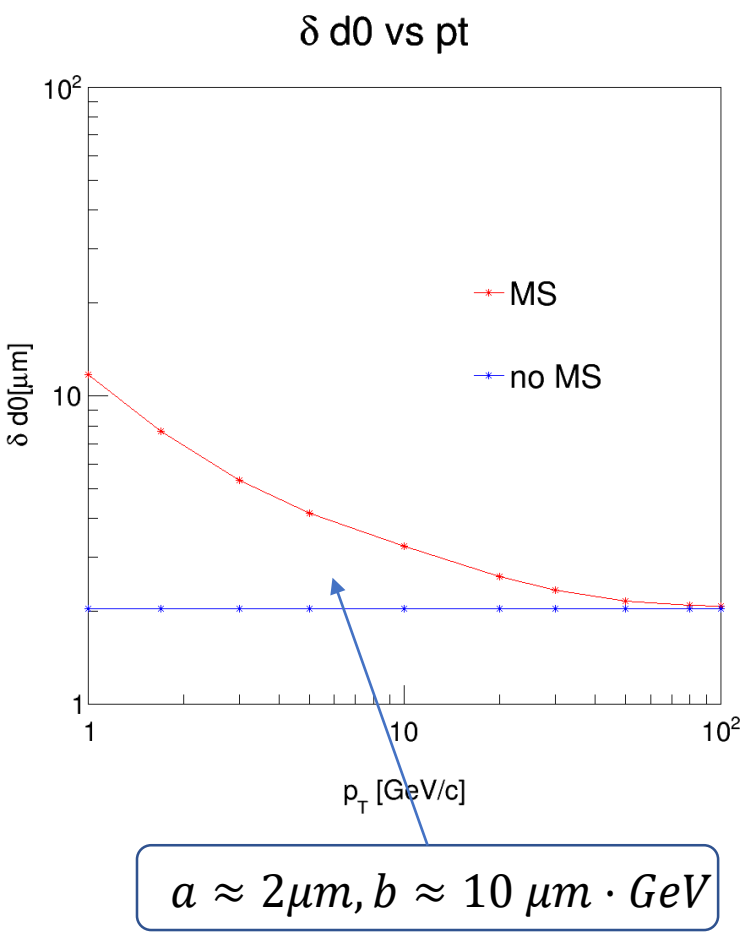
The CDR requirements:

$$\sigma_{1/p_T} = a \oplus \frac{b}{p \sin^{3/2}\theta} \quad [\mathrm{GeV}^{-1}]$$

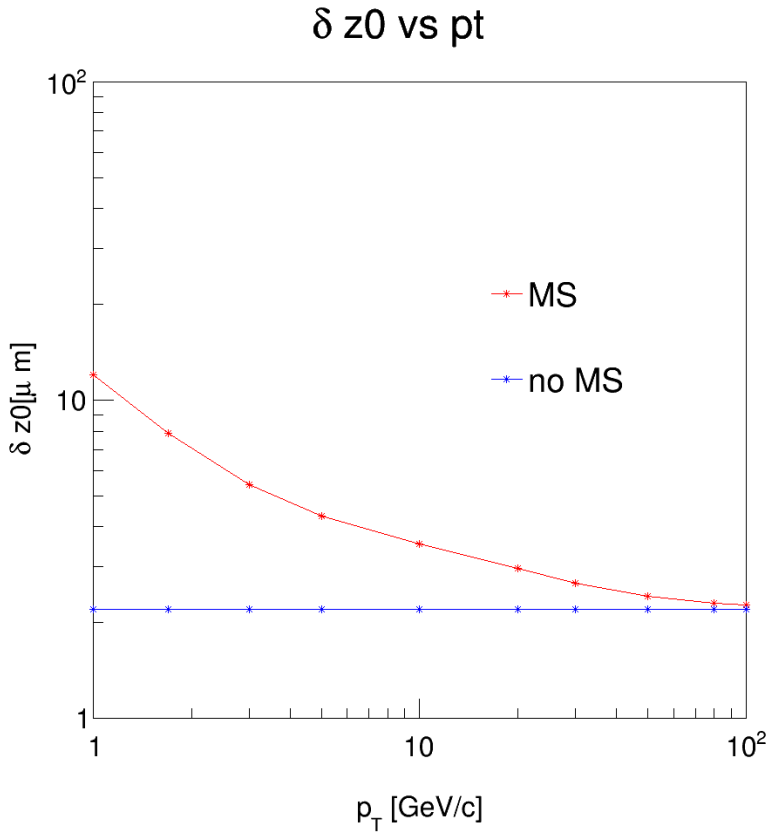
$a \sim 2 \times 10^{-5}\,\mathrm{GeV}^{-1}$ and $b \sim 1 \times 10^{-3}$.

About 50% worse than CDR requirements.

d_0 *and* z_0 resolution



$a \approx 2\mu m, b \approx 10\ \mu m \cdot GeV$



a is better than CDR requirement, and
b is the same as CDR requirement.

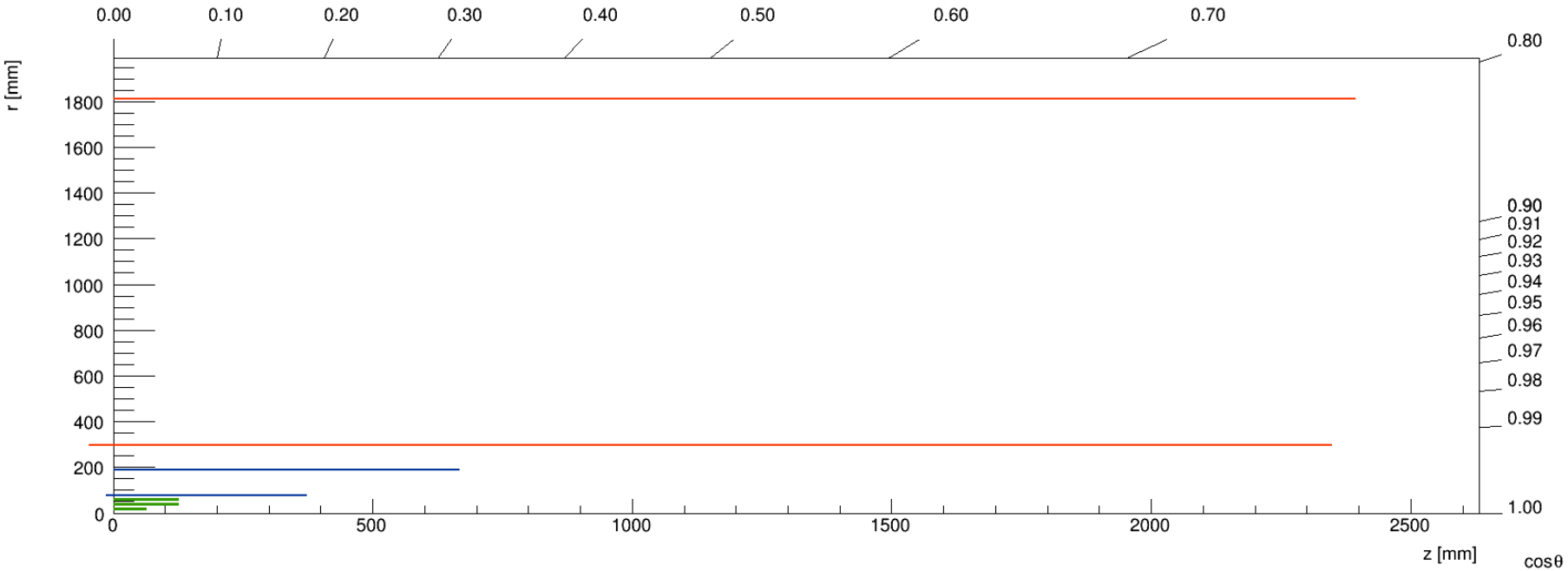
The CDR requirements:

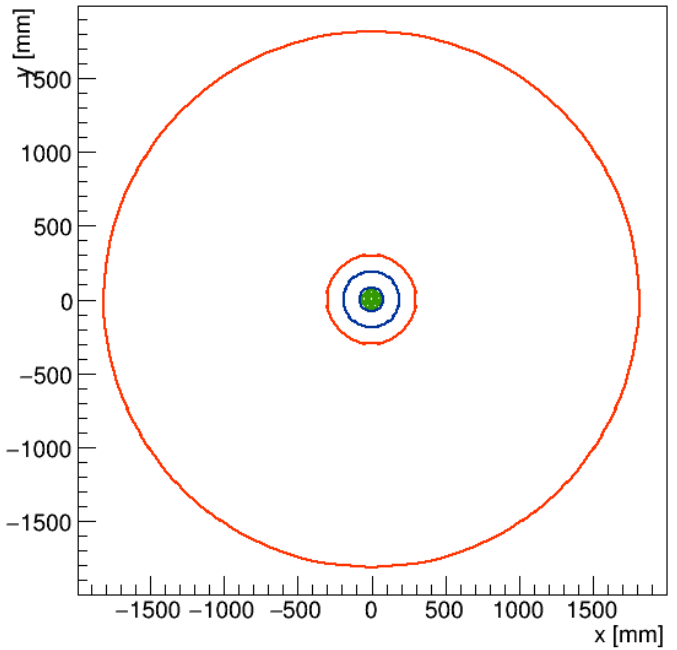
$$\sigma_{r\phi} = a \oplus \frac{b}{p(\text{GeV})\sin^{3/2}\theta}$$

$a \approx 5\ \mu m, b \approx 10\ \mu m \cdot GeV$

Backup

Tracker Layout Geometry





Material Budget