

Ratio to nominal

STAR

$p+p \rightarrow p' + \pi^+ \pi^- + p' \quad \sqrt{s} = 200 \text{ GeV}$

$\pi^+, \pi^-:$

$p_T > 0.2 \text{ GeV}$

$|\eta| < 0.7$

$p': (p_x + 0.3 \text{ GeV})^2 + p_y^2 < 0.25 \text{ GeV}^2$

$0.2 \text{ GeV} < |p_y| < 0.4 \text{ GeV}$

$p_x > -0.2 \text{ GeV}$

-1

-0.5

0

0.5

1

$\cos\theta^{\text{CS}}(\pi^+)$

$\Delta\epsilon_{\text{TPC}}$ (embed. stat.)

$\Delta\epsilon_{\text{TPC}}$ (dead mat.)

$\Delta\epsilon_{\text{TOF}}$

$\Delta\epsilon_{\text{DM veto}}$

$\Delta\epsilon_{\text{RP}}$

$\Delta\epsilon_{\text{vtx}}$

$\Delta\langle z_{\text{vtx}} \rangle$

$\Delta N_{\text{non-excl}}$

ΔN_{bkgd}

$\Delta\epsilon_{\text{TPC}}$ (pile-up)

$N^{\text{hits}}, d_0/\text{DCA}(R)$

$\Delta\epsilon_{\text{RP}}$

$\Delta\epsilon_{\text{RP}}$

$\Delta\epsilon_{\text{veto}}$

$\Delta\sigma(z_{\text{vtx}})$

$\Delta\text{Luminosity}$

Total (w/o lumi.)

Total (w/ lumi.)