

STAR $p+p \rightarrow p' + \pi^+ \pi^- + p' \quad \sqrt{s} = 200 \text{ GeV}$ $\pi^+, \pi^-: p_T > 1.2 \text{ GeV} \quad |\eta| < 0.7$ $p': (p_x + 0.3 \text{ GeV})^2 + p_y^2 < 0.25 \text{ GeV}^2$ $0.2 \text{ GeV} < |p_y| < 0.4 \text{ GeV}$ $p_x > -0.2 \text{ GeV}$

Ratio to nominal

1

3

3.5

4

4.5

5

 $m(\pi^+ \pi^-) [\text{GeV}]$ $\Delta\epsilon_{\text{TPC}}$ (embed. stat.) $\Delta\epsilon_{\text{TPC}}$ (dead mat.) $\Delta\epsilon_{\text{RP}}$ $\Delta\epsilon_{\text{RP}}$ $\Delta\epsilon_{\text{veto}}$ $\Delta\sigma(z_{\text{vtx}})$ $\Delta\text{Luminosity}$ $\Delta\epsilon_{\text{TPC}}$ (pile-up) $\Delta\epsilon_{\text{TOF}}$ $\Delta\epsilon_{\text{DM veto}}$ $\Delta\epsilon_{\text{RP}}$ $\Delta\epsilon_{\text{vtx}}$ $\Delta\langle z_{\text{vtx}} \rangle$ $\Delta N_{\text{bkgd}}^{\text{non-excl}}$ Total (w/o lumi.)
Total (w/ lumi.)