

Ratio to nominal

1.3

**STAR**

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

1.2

$\pi^+, \pi^-:$   
 $p_T > 0.2$  GeV  
 $|\eta| < 0.7$   
 $1.0 \text{ GeV} < m(\pi^+ \pi^-) < 1.5 \text{ GeV}$

$p': (p_x + 0.3 \text{ GeV})^2 + p_y^2 < 0.25 \text{ GeV}^2$   
 $0.2 \text{ GeV} < |p_y| < 0.4 \text{ GeV}$   
 $p_x > -0.2 \text{ GeV}$

1.1

1

0.9

-1

-0.5

0

0.5

1

$\cos \theta^{GJ}(\pi^+)$

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