

Ratio to nominal

**STAR**

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

$\pi^+, \pi^-$ :  $p_T > 0.2$  GeV  
 $|\eta| < 0.7$

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

$|\vec{\Delta p}_T| > 0.12 \text{ GeV}$

$\Delta\phi > 90^\circ$

0.5

1

1.5

2

2.5

3

3.5

$m(\pi^+ \pi^-)$  [GeV]

$\Delta\epsilon_{\text{TPC}}$  (embed. stat.)  
 $\Delta\epsilon_{\text{TPC}}$  (dead mat.)  
 $\Delta\epsilon_{\text{TOF}}$   
 $\Delta\epsilon_{\text{DM veto}}$   
 $\Delta\epsilon_{\text{RP}}$   
 $\Delta\epsilon_{\Delta z_0}$   
 $\Delta\epsilon_{\text{veto}}$   
 $\Delta\sigma(z_{\text{vtx}})$   
 $\Delta\epsilon_{N_{\text{cltrs}}^{\text{TOF}}}$

$\Delta\epsilon_{\text{TPC}}$  (pile-up)  
 $N^{\text{hits}}, d_0/\text{DCA}(R)$   
 $\Delta\epsilon_{\text{RP}}$   
 $\Delta\epsilon_{\text{RP}}$   
 $\Delta\epsilon_{\text{vtx}}$   
 $\Delta\langle z_{\text{vtx}} \rangle$   
 $\Delta N_{\text{bkgd}}^{\text{non-excl}}$   
 $\Delta\text{Luminosity}$

Total (w/o lumi.)  
Total (w/ lumi.)