Coulomb Effect on π^-/π^+ Ratios

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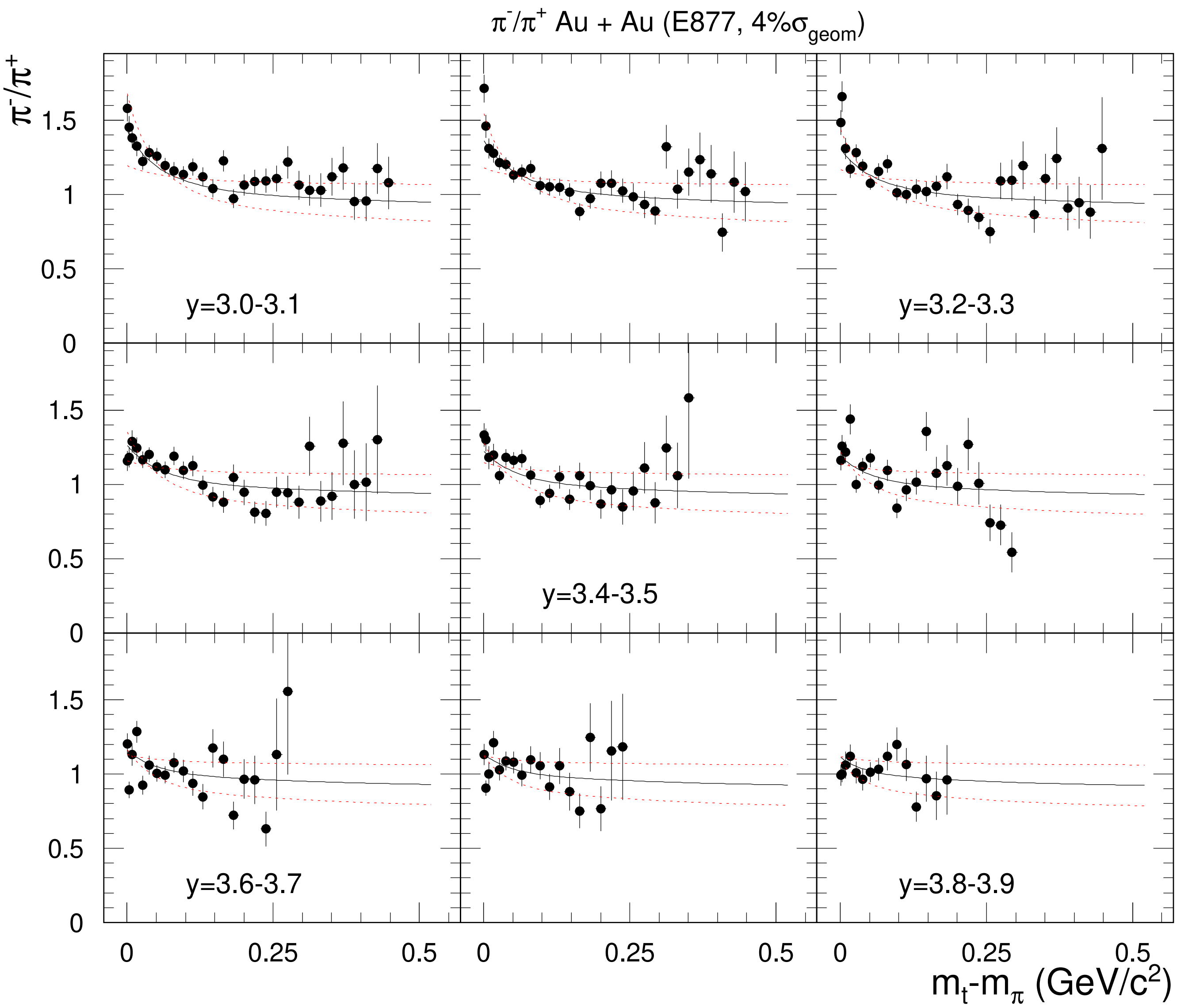
Coulomb Potential (V_C) will influence relative yield of π^-/π^+ at a given measured momentum (p).

⇒ G. Baym, P. Braun-Munzinger NPA 610(96)286c

$$\frac{\pi^-}{\pi^+}(p) = R \cdot \frac{\sqrt{p^2 + 2E(p)V_C + V_C{}^2}}{\sqrt{p^2 - 2E(p)V_C + V_C{}^2}} \cdot \frac{E(p) + V_C}{E(p) - V_C} \cdot \frac{n(p_i^-)}{n(p_i^+)}$$



$V_C = 31 \pm 22$ MeV $\qquad R = 0.92 \pm 0.14$

$Z_{eff} = 160 \qquad$ radius ~ 7.4 fm