

Abstract Submitted
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High-pT pion and proton yields in p+p collisions at $\sqrt{s}=200\text{GeV}$ YICHUN XU, LIJUAN RUAN, STAR COLLABORATION — Identified hadrons (pions, protons, and anti-protons) in mid-rapidity at high transverse momentum ($p_T \sim 10\text{GeV}$) can be used to test the validity of pQCD in p+p collisions. They also provide a baseline for the study of color charge effect of parton energy loss in heavy ion collisions. However, with current event statistics from minimum-bias triggered p+p collisions the proton+anti-proton spectra are limited to $p_T < \sim 7\text{GeV}/c$. We report a study of charged hadron production in events triggered by high deposit energy in electromagnetic calorimeter positioned at mid-rapidity. Preliminary results on particle ratios and their p_T dependence up to $p_T \sim 12\text{GeV}/c$ will be presented. The effect of the above trigger can lead to relative enhancement/suppression of one of the sub-process (qq, qg, gg) of jet production, these aspects will also be discussed.

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