

Hadron Production from Quark Coalescence and Jet Fragmentation

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Based on a model that includes both quark coalescence from the dense partonic matter and fragmentation of the quenched perturbative minijet partons, we have studied the transverse momentum spectra of pions, protons and antiprotons in Au+Au collisions at intermediate RHIC energy of $s_{\text{NN}}^{1/2} = 62$ GeV [1]. The resulting baryon to meson ratio at intermediate transverse momenta is predicted to be larger than that seen in experiments at higher center of mass energies as shown in Fig.1.

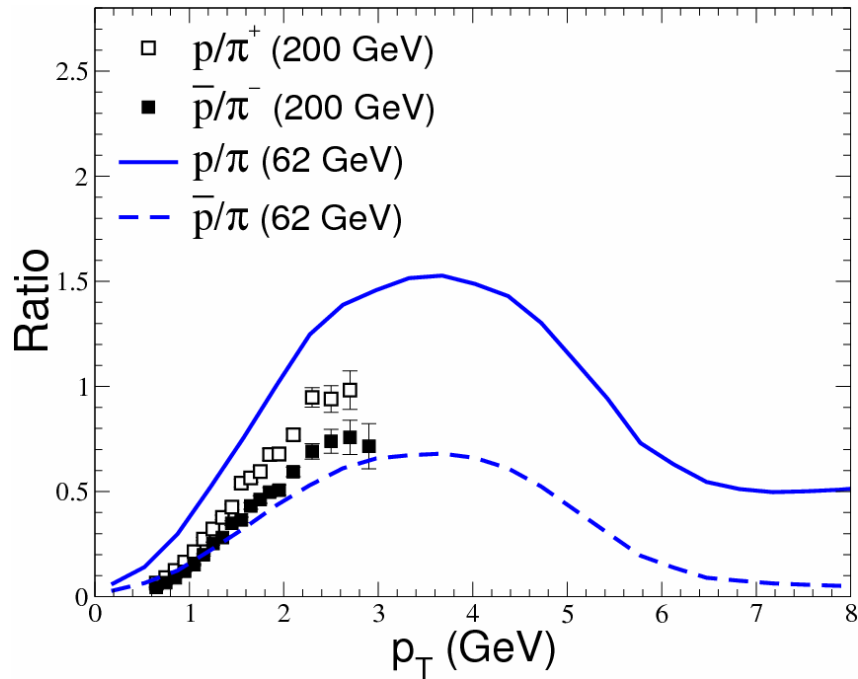


Figure 1. Ratios of proton (solid line) and antiproton (dashed line) to pion spectra from central Au+Au collisions at $s_{\text{NN}}^{1/2} = 62$ GeV. Experimental data given by open and filled squares at $s_{\text{NN}}^{1/2} = 200$ GeV are shown for reference.

[1] V. Greco, C.M. Ko, and I. Vitev, Phys. Rev. C **71**, 041901(R) (2005).