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Thermalization in 3.0 GeV fixed target collisions from the RHIC Beam Energy Scan

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We report modifications to the traditional Blast wave fit to momentum spectra of particles at mid rapidity emitted from central Au+Au collisions at $\sqrt{s_N N} = 3.0$ GeV in STAR, and compare to HADES Collaboration results at $\sqrt{s_N N} = 2.4$ GeV. We explore a scenario of a Gaussian shape of emission source in rapidity, which modifies the boost invariance assumption of the traditional Blast wave model. Such a modification is to be expected when the produced fireball is fully hadronic and the ideal hydrodynamics breaks down. The modified Blast wave model seems to be able to unify the $\pi/K/p$ spectra to common temperature and transverse flow velocity, indicating that the thermal equilibrium is achieved in the hadronic system produced in 3.0 GeV Au+Au collisions.

Session

Heavy Ions and QCD

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