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Hadronization: does the chemical freeze-out curve meet the lattice QCD parton-hadron phase boundary ?

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We analyze hadrochemical freeze-out in central Pb+Pb collisions at CERN SPS energies, employing the hybrid version of the Ultrarelativistic Quantum Molecular Dynamics model, which describes the transition from a hydrodynamic stage to hadrons by the Cooper-Frye mechanism, and matches to a final hadron-resonance cascade. We fit the results both before and after the cascade stage using the Statistical Model, to assess the effect of the cascade phase. We observe an upward shift of the statistical model freeze-out curve over the entire range of SPS energies if we omit the significantly absorbed antibaryon species from the fit. The freeze-out curve shifts closer to the lattice parton-hadron phase transition line. The corresponding effects are studied at RHIC and LHC energies where the final state annihilation affects both the baryon, and antibaryon yields.

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