

Quantum flavor kinetics and chemical freeze-out

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We present current status of a quantum kinetic formulation of the chemical equilibration process in dense hadronic matter at the hadronization transition. Delocalization of hadron wave functions at the Mott-Anderson transition (where their binding energies vanish) lead to a divergence of scattering lengths and critical enhancement of rearrangement collisions between hadrons. We exemplify this for different meson-meson scattering processes from light (π - π scattering) to heavy flavors (charmonium dissociation). On this basis we suggest that chemical freeze-out has to be correlated with (partial) chiral symmetry restoration.

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