

Abstract Submitted
for the APR07 Meeting of
The American Physical Society

Strangeness Chemical Equilibration in QGP at RHIC and LHC¹

JEAN LETESSIER², LPTHE, Paris, France, JOHANN RAFELSKI³, University of Arizona, Tucson — We study, in the dynamically evolving QGP fireball formed in relativistic heavy ion collisions at RHIC and LHC, the growth of strangeness yield toward and beyond the chemical equilibrium. We account for the contribution of the direct strangeness production and evaluate the thermal-QCD strangeness production mechanisms. The specific yield of strangeness per entropy, s/S , is the primary target variable. We explore the effect of collision impact parameter, *i.e.*, fireball size, on kinetic strangeness chemical equilibration in QGP. Insights gained in study the RHIC data with regard to the dynamics of the fireball are applied to the study strangeness production at the LHC. We use these results and consider the strange hadron relative particle yields at RHIC and LHC in a systematic fashion. We consider both the dependence on s/S , and participant number dependence.

¹Phys. Rev. C in press (2007)

²LPTHE, Univ. Paris 6 et 7 is: Unité mixte de Recherche du CNRS, UMR7589

³Supported by a grant from: the U.S. Department of Energy DE-FG02-04ER4131

Johann Rafelski
University of Arizona

Date submitted: 09 Jan 2007

Electronic form version 1.4