

CONDITIONS FOR HADRONIZATION AND FREEZE-OUT

V.K. Magas¹, H. Satz^{1,2}

¹CFIF, Physics Department, Instituto Superior Tecnico
(*Av. Rovisco Pais, 1049-001 Lisbon, Portugal*),

²Fakultät für Physik, Universität Bielefeld
(*Postfach 100 131, D-33501 Bielefeld, Germany*)

S u m m a r y

The interacting hadronic matter implies the existence of a large-scale connected cluster of a uniform nature – the size of such clusters as a function of hadron density is specified by percolation theory. In this way, we can formulate the freeze-out and deconfinement conditions in terms of the percolation of hadronic clusters or vacuum, correspondingly. The resulting freeze-out condition as a function of temperature and baryochemical potential interpolates between the resonance gas behaviour at low baryon density and the repulsive nucleonic matter at low temperature. The results of our model are in a good agreement with data and lattice QCD calculations.