

Two freeze-out analysis of hadron yields and spectra at RHIC

With the two freeze-out model for the hadron production in the relativistic heavy-ion collisions, hadron ratios and their momentum spectra measured at RHIC are fitted. In this model the chemical freeze-out occurs earlier at higher temperature. In analyzing the hadron ratios, resonance contribution has been carefully taken into account. After the chemical freeze-out the number of the thermal hadrons of each type is kept fixed as in-elastic collisions becomes less frequent, while the elastic collisions among the hadrons of the same species maintain the thermal equilibrium until the thermal freeze-out. At the thermal freeze-out the chemical potentials for each hadron species are calculated from the fixed number of thermal hadrons and the transverse momentum spectra of measured hadrons are fitted with blast wave-type equation together with the resonance contribution.

Primary author: LEE, Kang Seog (Chonnam National University)

Co-author: Ms CHOI, Suk (Chonnam National University)

Presenter: LEE, Kang Seog (Chonnam National University)

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