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Transverse-momentum spectra of strange particles produced in Pb+Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV in the chemical non-equilibrium model

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We analyze the transverse-momentum spectra of strange hadrons produced in Pb + Pb collisions at the collision energy $\sqrt{s_{NN}}=2.76$ TeV for different centrality bins. Our approach combines the concept of chemical nonequilibrium with the single-freeze-out scenario. The two ideas are realized in the framework of the Cracow model, whose thermodynamic parameters have been established in earlier studies of the ratios of hadron multiplicities. The geometric parameters of the model are obtained from the fit to the spectra of pions and kaons, only. Using these parameters, we obtain an excellent description of the spectra of protons and the $K_S^0, K^{*0}(892)$, and $\phi(1020)$ mesons. A satisfactory description is obtained for the Λ, Ξ , and Ω hyperons.

Based on:

[1] V. Begun and W. Florkowski, Phys.Rev. C90 (2014) 014906

[2] V. Begun and W. Florkowski, Phys.Rev. C90 (2014) 054912

[3] V. Begun and W. Florkowski, Phys.Rev. C91 (2015) 054909

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