Rapidity and centrality dependence of charged particle transverse mass spectra and transverse flow in Au + Au collisions at $\sqrt{s_{nn}} = 200$ GeV

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The BRAHMS collaboration has measured transverse mass distributions of pions, kaons, protons and their antiparticles over a broad range of rapidities ($y = 0$ to $y \approx 3$) and as a function of centrality. These measurements provide a complete picture of the reaction dynamics over a large region of the phase space that has not been explored before. The systematics of the measured yields, slopes and transverse flow characteristics are discussed and compared to current model predictions, and to energy systematics.