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Scaling of Elliptic Flow, Recombination and Sequential Freeze-Out of Hadrons in Heavy-Ion Collisions MIN HE[1], RAINER FRIES[2], RALF RAPP, Cyclotron Institute, Texas A&M University — The scaling properties of elliptic flow of hadrons produced in ultrarelativistic heavy-ion collisions are investigated at low transverse momenta. We reconfirm that the previously proposed Resonance Recombination Model converts the equilibrium quark distribution into equilibrated hadron spectra through coalescence. This enables a controlled extraction of quark distributions of the bulk matter at hadronization from spectra of multi-strange hadrons which are believed to decouple close to the critical temperature. The resulting elliptic flows from empirical fits at RHIC exhibit transverse kinetic-energy and valence-quark-number scaling. Utilizing the concept of sequential freeze-out the scaling at low momenta is shown to carry over to bulk hadrons (π, K, p) at thermal freeze- out, and thus results in an overall description compatible with both equilibrium hydrodynamics and quark recombination.

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