Erratum: Conformal relativistic viscous hydrodynamics: Applications to RHIC results at $\sqrt{s_{NN}} = 200$ GeV [Phys. Rev. C 78, 034915 (2008)]

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An error was found in the numerical hydrodynamical calculation used to generate data for Ref. [1]. Specifically affected was the freeze-out routine. Matching to experimental data was redone with the corrected routine, and the following table and figures (Table I and Figs. 6, 7, 8, and 9) have been corrected and updated, while all others are unaffected. The only difference is a change in the hydrodynamic initialization parameter values, with a slightly better fit to experimental data. All conclusions are unchanged.

TABLE I. Summary of parameters used for the viscous hydrodynamics simulations.

Initial condition	η/s	T_i [GeV]	T_f [GeV]	τ_0 [fm/c]	a [GeV^{-1}]
Glauber	10^{-4}	0.340	0.14	1	2
Glauber	0.08	0.333	0.14	1	2
Glauber	0.16	0.327	0.14	1	2
CGC	10^{-4}	0.310	0.14	1	2
CGC	0.08	0.304	0.14	1	2
CGC	0.16	0.299	0.14	1	2
CGC	0.24	0.293	0.14	1	2

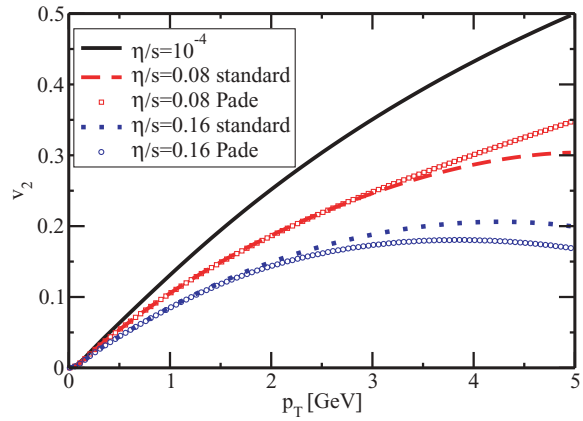

FIG. 6. (Color online) Charged hadron elliptic flow for the Glauber model at $b = 7$ fm with $T_i = 0.353$ GeV, $\tau_0 = 1$ fm/c and various viscosities.

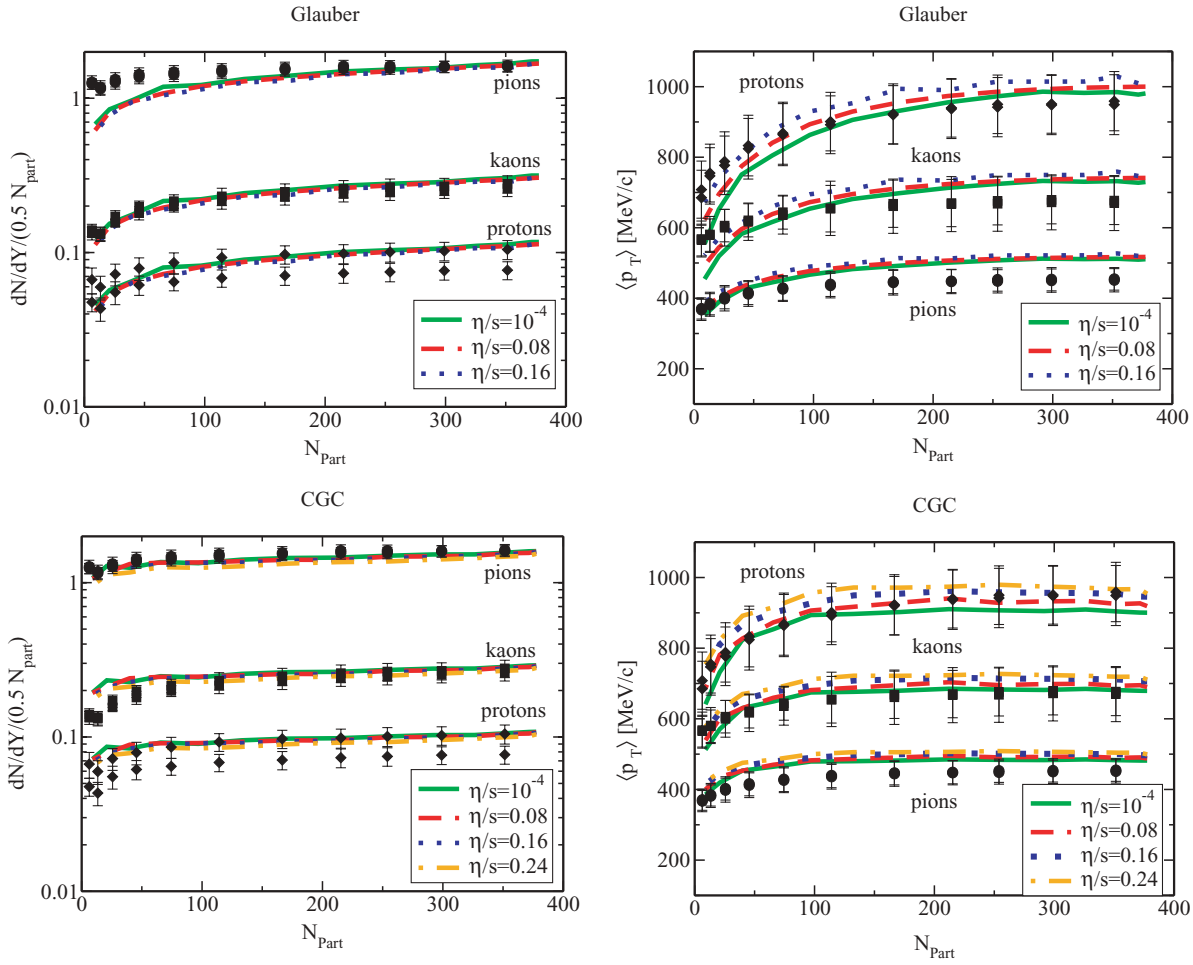

FIG. 7. (Color online) Centrality dependence of total multiplicity dN/dY and $\langle p_T \rangle$ for π^+, π^-, K^+, K^-, p and $\bar{p}$ from PHENIX [2] for Au+Au collisions at $\sqrt{s} = 200$ GeV, compared to the viscous hydrodynamic model and various η/s, for Glauber initial conditions and CGC initial conditions. The model parameters used here are $\tau_0 = 1$ fm/c, $\tau_\Pi = 6\eta/s$, $\lambda_1 = 0$, $T_f = 140$ MeV and adjusted T_i (see Table I).

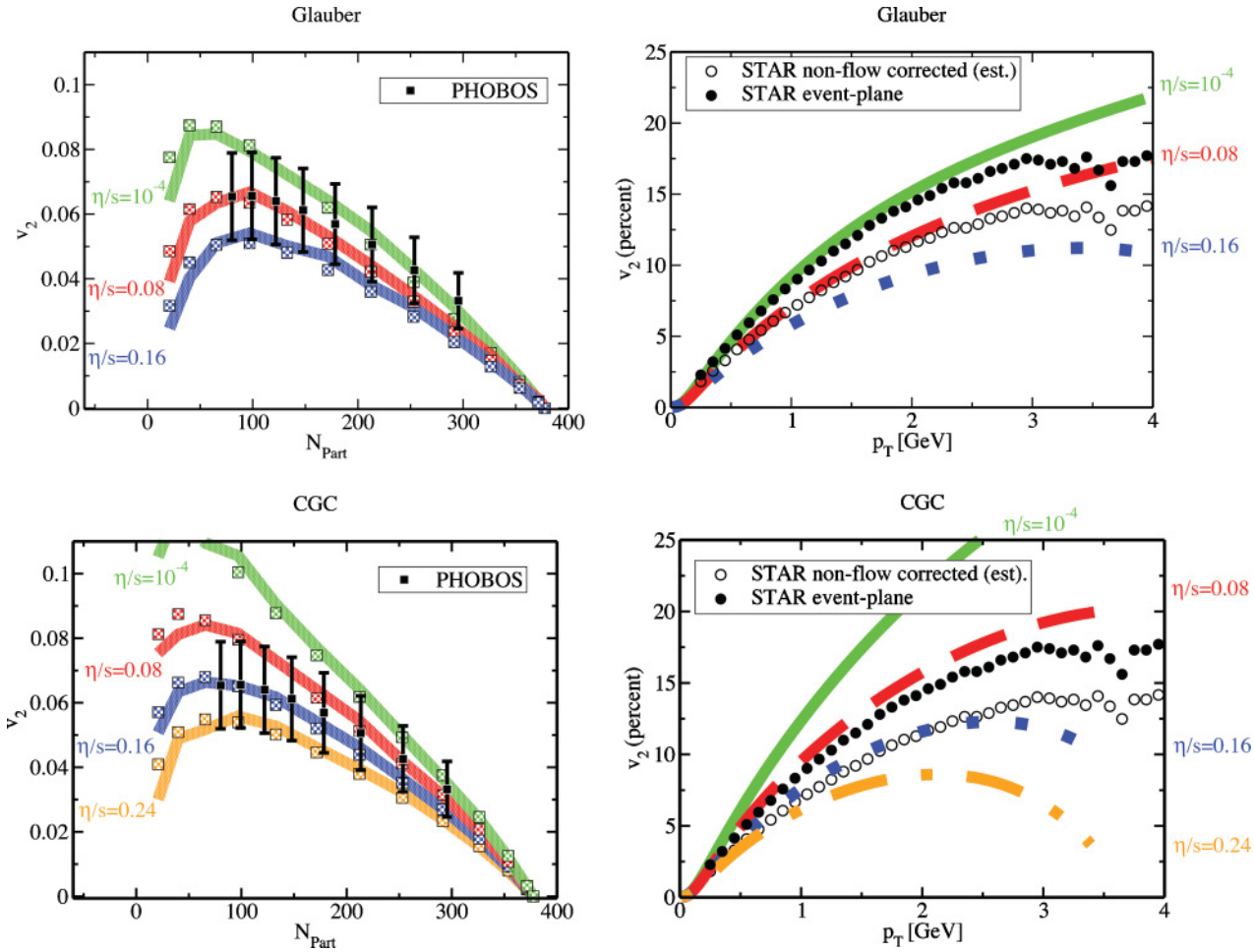

FIG. 8. (Color online) Comparison of hydrodynamic models to experimental data on charged hadron integrated (left) and minimum bias (right) elliptic flow by PHOBOS [4] and STAR [5], respectively. STAR event plane data has been reduced by 20 percent to estimate the removal of non-flow contributions [5,6]. The line thickness for the hydrodynamic model curves is an estimate of the accumulated numerical error (due to, e.g., finite grid spacing). The integrated v_2 coefficient from the hydrodynamic models (full lines) is well reproduced by $\frac{1}{2}e_p$ (dots); indeed, the difference between the full lines and dots gives an estimate of the systematic uncertainty of the freeze-out prescription.

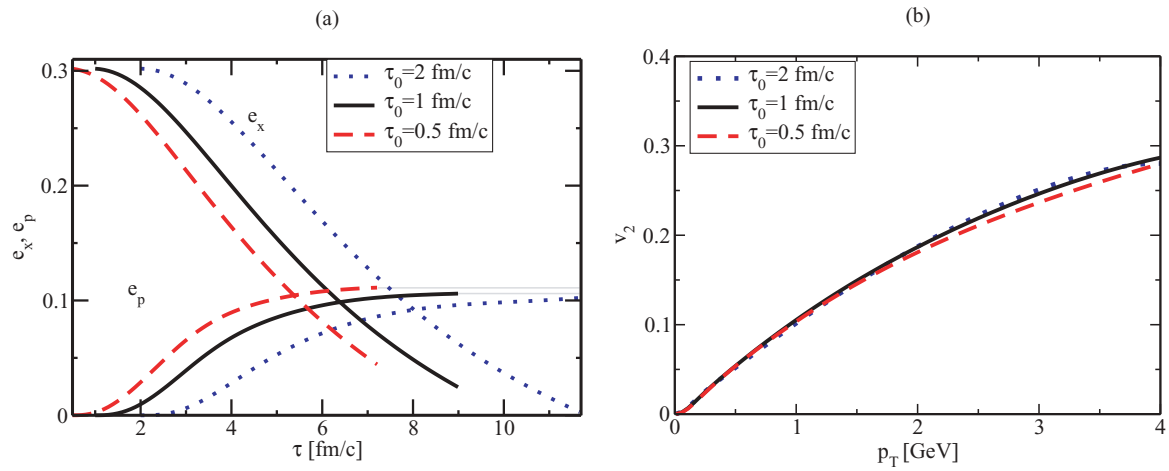

FIG. 9. (Color online) Momentum anisotropy (a) and elliptic flow for charged hadrons (b) for $b = 7$ fm, $\eta/s = 0.08$ and different hydrodynamic initialization times τ_0. Horizontal light gray lines in (a) are visual aids to compare the final value of e_p. As can be seen from these plots, neither the final e_p nor the charged hadron v_2 depend sensitively on the value of τ_0 if the same energy distribution is used as initial condition at the respective initialization times. Simulation parameters were $T_i = 0.29$ GeV, $T_f = 0.14$ GeV for $\tau_0 = 2$ fm/c, $T_i = 0.36$ GeV, $T_f = 0.15$ GeV for $\tau_0 = 1$ fm/c, and $T_i = 0.43$ GeV, $T_f = 0.16$ GeV for $\tau_0 = 0.5$ fm/c.

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