Erratum: "A simple, analytical model of collisionless magnetic reconnection in a pair plasma" [Phys. Plasmas 16, 102106 (2009)]

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The following describes a list of errata in our paper, "A simple, analytical model of collisionless magnetic reconnection in a pair plasma."[1] While the mathematical analysis presented in the paper is correct, we regret that the graphical depiction of these results suffers from a software error. Specifically, the factor "1/2" in Eq. (10) was inadvertently set to $1/\sqrt{2}$ leading to an overestimation of reconnection electric fields and other quantities in Figs. 1 and 6–11. Consequently, the proper peak reconnection electric field is now $E^* \approx 0.28$, which is closer to what is commonly seen in particle-in-cell simulations. The outflow speed is now properly limited to $v_o \leq 0.5$ as required by Eq. (10). All changes are quantitative rather than qualitative. The corrected figures are shown below.

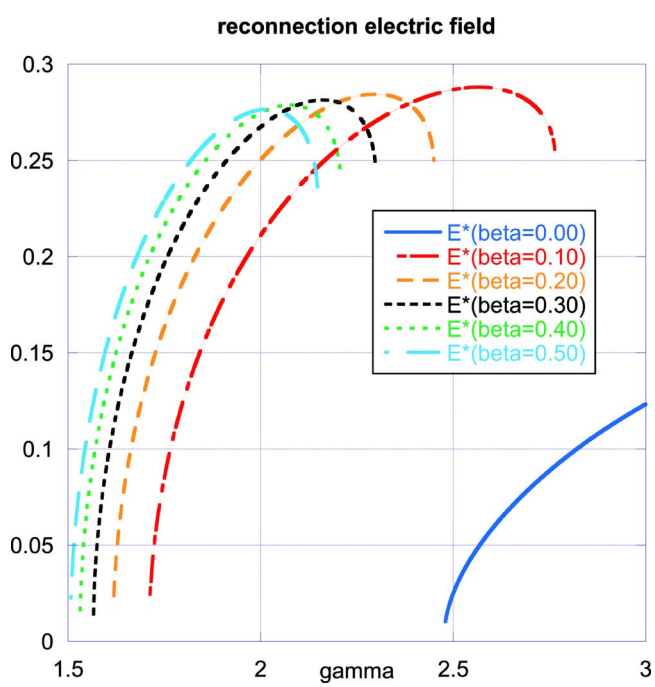

FIG. 1. (Color online) Reconnection electric field depending on inflow plasma β and polytropic index γ.

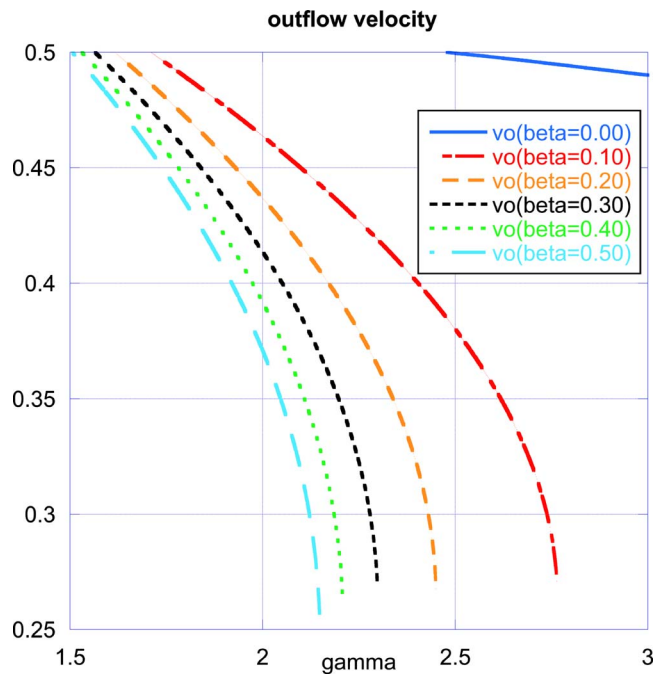

FIG. 6. (Color online) Outflow velocity depending on inflow plasma β and polytropic index γ.

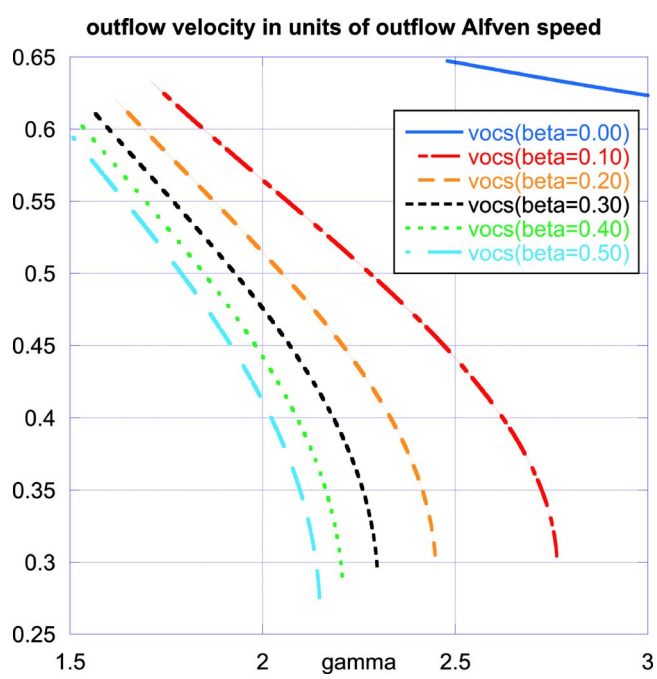

FIG. 7. (Color online) Outflow velocity based on outflow density depending on inflow plasma β and polytropic index γ.

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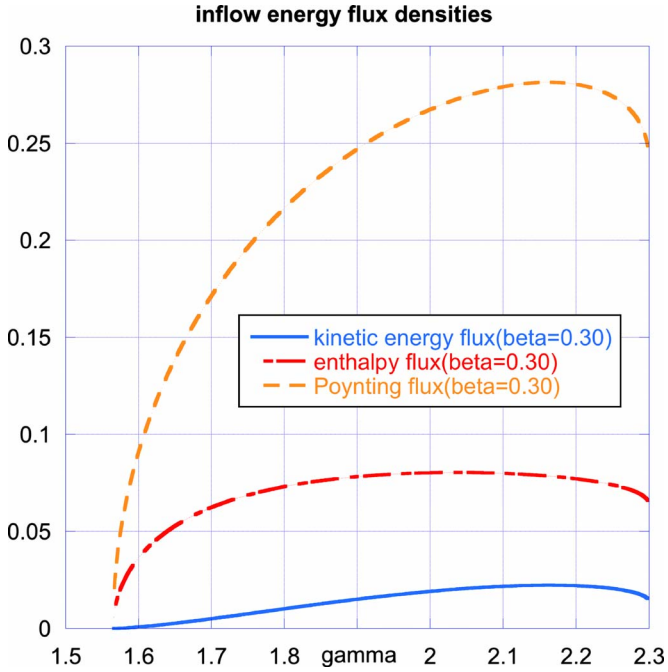

FIG. 8. (Color online) Inflow energy flux densities for upstream $\beta=0.3$.

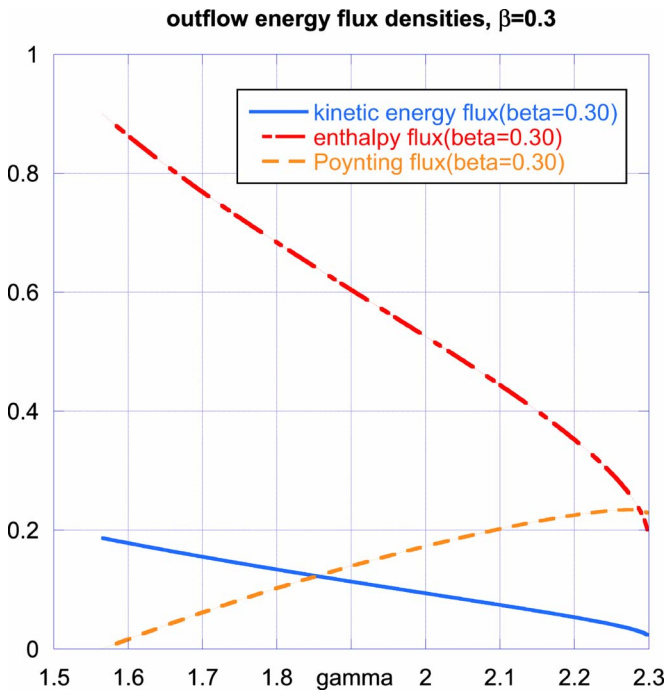

FIG. 9. (Color online) Outflow energy flux densities for upstream $\beta=0.3$.

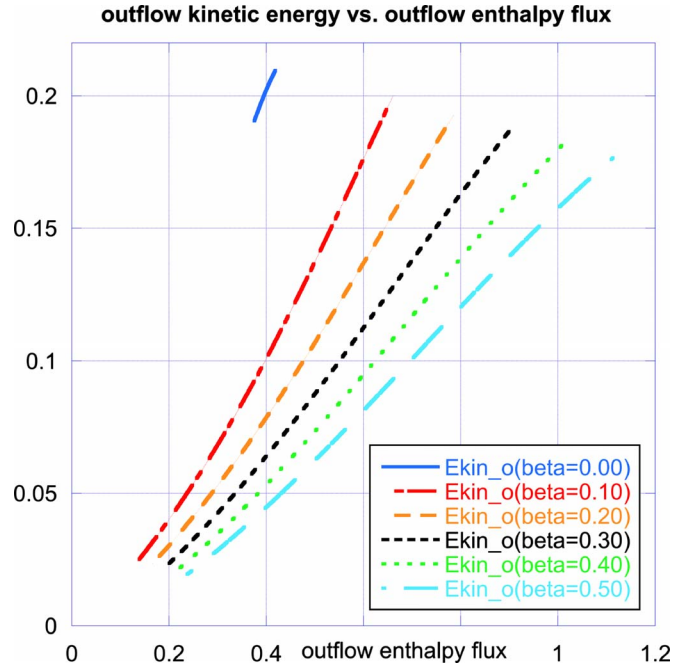

FIG. 10. (Color online) Outflow kinetic energy flux density plotted vs enthalpy flux density for all parameters. The lower fluxes are obtained for larger values of the polytropic index γ, with the exception of the $\beta=1$ calculation. Here, lower values of γ yield larger kinetic energy but lower enthalpy flux densities.

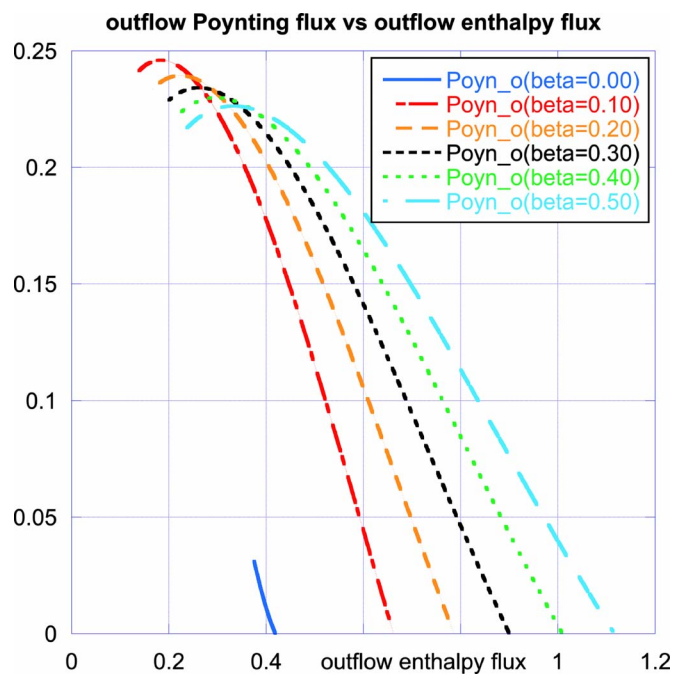

FIG. 11. (Color online) Outflow Poynting flux density plotted vs enthalpy flux density for all parameters. Here higher Poynting fluxes are obtained for smaller values of the polytropic index γ, again with the exception of the $\beta=1$ calculation. Here, lower values of γ yield larger kinetic energy but lower enthalpy flux densities.

[1]M. Hesse, S. Zenitani, M. Kuznetsova, and A. Klimas, Phys. Plasmas **16**, 102106 (2009).

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