

Erratum: Understanding Large-Scale Dynamos in Unstratified Rotating Shear Flows [Phys. Rev. Lett. 136, 075201 (2026)]

Tushar Mondal[✉], Pallavi Bhat, Fatima Ebrahimi[✉], and Eric G. Blackman

(Received 26 March 2026; published 29 April 2026)

DOI: 10.1103/yy7m-gft6

In this Letter, we have identified a graphical labeling error in Fig. 5(c). In the published version, the dashed lines were labeled as corresponding to different values of y . However, all dashed lines should be at the same y . The corrected Fig. 5 is provided below.

This correction does not affect the analysis, results, or conclusions of the Letter.

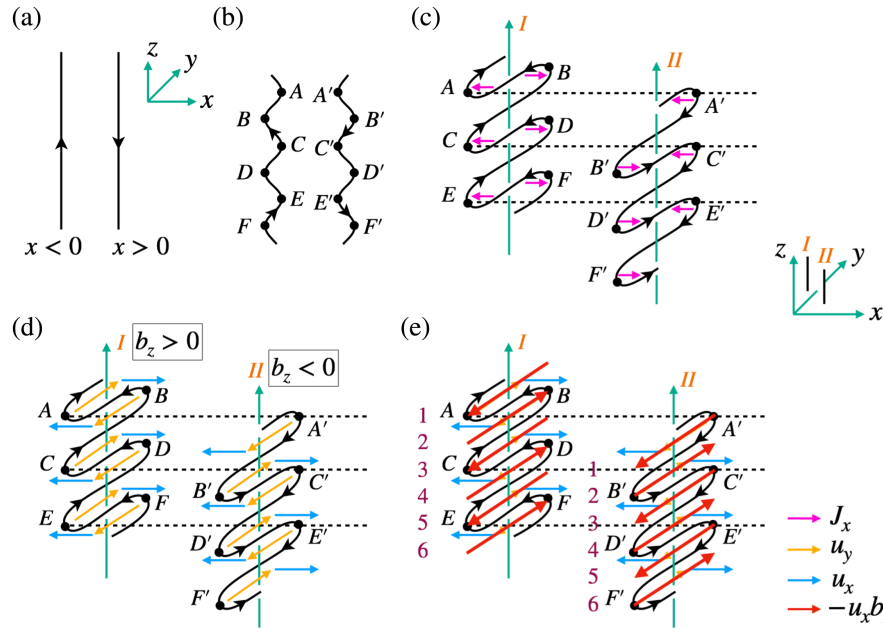


FIG. 5. Schematic illustration of the rotation-shear-current effect. (a) Two initially vertical magnetic field sectors with opposite polarity. (b) An x -dependent perturbation with a phase shift is introduced. (c) Background shear ($\partial U_y^0 / \partial x < 0$) stretches the field lines and shifts the sectors relative to each other. The resulting field line bending produces radial currents $J_x \sim -\partial_z B_y$. All dashed lines are at the same value of y . (d) Magnetic tension from field curvature induces u_y fluctuations, which are converted into u_x via the Coriolis force. (e) The resulting vectors of $-u_x b_z$ are shown, with z layers (1 to 6) indicating matched heights across stacks. The EMF component $\mathcal{E}_y \sim -u_x b_z$ aligns within each x - y plane at fixed z but reverses sign between adjacent z layers. After xy -averaging, $\bar{\mathcal{E}}_y(z)$ exhibits an alternating pattern: $\bar{\mathcal{E}}_y < 0$ at layer 1, $\bar{\mathcal{E}}_y > 0$ at layer 2, $\bar{\mathcal{E}}_y < 0$ at layer 3, and so on. The induced mean-field satisfies $\partial_t \bar{B}_x = -\partial_z \bar{\mathcal{E}}_y$, generating a coherent $\bar{B}_x(z)$ that reverses in z , consistent with the fastest-growing MRI mode.