

Title: Plasma advection due to noise

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Appearance of plasma advection due to noise is explored numerically in slab geometry. Noise is introduced as a simplification of turbulence that may be electromagnetic. Specifically, numerical simulations are performed of two homogeneous plasma models, Hasegawa-Mima model and reduced MHD equation. It is shown that, if noise autocorrelation function is not invariant under space reflection, plasma advection arises due to the convection and the Lorentz force. Such a noise is numerically generated if time-ordering in the noise correlation function is distinct. In a way, the result confirms the important role of the phase delay of turbulence in yielding advection.