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**Advanced Workshop on
"Anderson Localization, Nonlinearity and
Turbulence: A Cross-Fertilization"**

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TITLE:

"Kinematic magnetic dynamo in a random flow with and without regular component"

ABSTRACT:

After brief review of the kinematic dynamo for statistically isotropic random flow of a conducting fluid this problem is analysed for the case when the stationary shear flow is accompanied by relatively weak random velocity fluctuations. It is shown that this flow can be considered as effectively two-dimensional one. The diffusionless and diffusion regimes are described. The growth rates of the magnetic field moments are related to the statistical characteristics of the flow describing the divergence of Lagrangian trajectories. A degree of anisotropy of the magnetic field is estimated.

We demonstrate that Zeldovich's 'antidynamo theorem' is wrong for statistically homogeneous in space field and velocity distributions.