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Numerical simulation of the coupled Kelvin- Helmholtz and tearing mode instability in the magnetopause layer.

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We report further development of the earlier proposed numerical scheme for simulating a coupled Kelvin- Helmholtz and tearing mode instabilities in a simplified model of magnetopause layer. Time-dependent two-dimensional MHD approach is utilized for incompressible viscous and conductive flow. An attempt is made for more realistic simulation of the magnetopause mixing layer: the axes of the sharp changes of gas-dynamic and electromagnetic parameters are supposed to be shifted. It seems that this approach permits more realistic interpretation of the transient events, registered by ground-based magnetometers. This concerns especially the velocity of the observed phenomena.