cases	doc_1	doc_2	decision	id

doc_1

authors	• V. P. Ruban • S. L. Senchenko
title	Local approximation for contour dynamics in effectively two-dimensional ideal electron-magnetohydrodynamic flows
publication_date	2002-09-13 00:00:00
source	SupportedSources.INTERNET_ARCHIVE
journal	
volume	
doi	
urls	• https://archive.org/download/arxiv-physics0204087/physics0204087.pdf
id	id7333882610913231964
abstract	The evolution of piecewise constant distributions of a conserved quantity related to the frozen-in canonical vorticity in effectively two-dimensional incompressible ideal EMHD flows is analytically investigated by the Hamiltonian method. The study includes the case of axisymmetric flows with zero azimuthal velocity component and also the case of flows with the helical symmetry of vortex lines. For sufficiently large size of such a patch of the conserved quantity, a local approximation in the dynamics of the patch boundary is suggested, based on the possibility to represent the total energy as the sum of area and boundary terms. Only the boundary energy produces deformation of the shape with time. Stationary moving configurations are described.
versions	

doc_2

authors	• V. P. Ruban • S. L. Senchenko
title	Local approximation for contour dynamics in effectively two-dimensional ideal electron-magnetohydrodynamic flows
publication_date	2002-04-30 11:09:20+00:00
source	SupportedSources.ARXIV
journal	None
volume	
doi	
urls	• http://arxiv.org/pdf/physics/0204087v2 • http://arxiv.org/abs/physics/0204087v2 • http://arxiv.org/pdf/physics/0204087v2
id	id777785392016999061
abstract	The evolution of piecewise constant distributions of a conserved quantity related to the frozen-in canonical vorticity in effectively two-dimensional incompressible ideal EMHD flows is analytically investigated by the Hamiltonian method. The study includes the case of axisymmetric flows with zero azimuthal velocity component and also the case of flows with the helical symmetry of vortex lines. For sufficiently large size of such a patch of the conserved quantity, a local approximation in the dynamics of the patch boundary is suggested, based on the possibility to represent the total energy as the sum of area and boundary terms. Only the boundary energy produces deformation of the shape with time. Stationary moving configurations are described.
versions	

decision	id
DUPLICATES	559