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	authors	<ul style="list-style-type: none">Asher Yahalom	authors	<ul style="list-style-type: none">Asher Yahalom	NOT DUPLICATES	1218
	title	A Three-Function Variational Principle for Stationary Nonbarotropic Magnetohydrodynamics	title	A Three Function Variational Principle for Stationary Non-Barotropic Magnetohydrodynamics		
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	id	id960132205956185352	id	id-6780252201390901849		
	abstract	The current paper is devoted to the introduction of simpler Eulerian variational principles from which all the relevant equations of nonbarotropic stationary magnetohydrodynamics can be derived for magnetic fields that lie on surfaces. A variational principle is given in terms of three independent variables for stationary nonbarotropic magnetohydrodynamic flows. This is a smaller number of variables than the eight variables that appear in the standard equations of nonbarotropic magnetohydrodynamics, which are the magnetic field, the velocity field, the specific entropy, and the density. We further investigate the case in which the flow along magnetic lines is not ideal.	abstract	Variational principles for magnetohydrodynamics (MHD) were in\troduced by previous authors both in Lagrangian and Eulerian form. In this paper we introduce simpler Eulerian variational principles from which all the relevant equations of non-barotropic stationary magnetohydrodynamics can be derived for certain field topologies. The variational principle is given in terms of three independent functions for stationary non-barotropic flows. This is a smaller number of variables than the eight variables which appear in the standard equations of non-barotropic magnetohydrodynamics which are the magnetic field $\vec B$ the velocity field $\vec v$, the entropy s and the density ρ . We further investigate the case in the flow along magnetic lines is not ideal.		
	versions		versions			