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	authors	<ul style="list-style-type: none">Asher Yahalom			NOT DUPLICATES	1219
	title	A Three-Function Variational Principle for Stationary Nonbarotropic Magnetohydrodynamics	authors	<ul style="list-style-type: none">Asher Yahalom		
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	urls	<ul style="list-style-type: none">https://web.archive.org/web/20210911065956/https://mdpi-res.com/d_attachment/symmetry/symmetry-13-01632/article_deploy/symmetry-13-01632-v2.pdf	doi			
	id	id960132205956185352	urls	<ul style="list-style-type: none">https://web.archive.org/web/20210916040942/https://arxiv.org/pdf/2109.03817v1.pdf		
	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.	id	id-3137472305418769570		
	versions		abstract	Variational principles for magnetohydrodynamics (MHD) were introduced 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 B — the velocity field v —, the entropy s and the density ρ . We further investigate the case in the flow along magnetic lines is not ideal.		
			versions			