

cases	doc_1		doc_2		decision	id
	authors	<ul style="list-style-type: none">Chae, D.	authors	<ul style="list-style-type: none">Dongho Chae	NOT DUPLICATES	1100
	title	Nonexistence of Self-similar Singularities in the Ideal Magnetohydrodynamics	title	Nonexistence of self-similar singularities in the ideal magnetohydrodynamics		
	publication_date	2008-12-05 00:00:00	publication_date	2007-03-12 02:05:51+00:00		
	source	SupportedSources.CROSSREF	source	SupportedSources.ARXIV		
	journal		journal	None		
	volume		volume			
	doi	10.1007/s00205-008-0182-9	doi			
	urls	<ul style="list-style-type: none">http://link.springer.com/content/pdf/10.1007/s00205-008-0182-9.pdfhttp://link.springer.com/article/10.1007/s00205-008-0182-9/fulltext.htmlhttp://link.springer.com/content/pdf/10.1007/s00205-008-0182-9http://link.springer.com/content/pdf/10.1007/s00205-008-0182-9.pdfhttp://dx.doi.org/10.1007/s00205-008-0182-9	urls	<ul style="list-style-type: none">http://arxiv.org/pdf/math/0703317v3http://arxiv.org/abs/math/0703317v3http://arxiv.org/pdf/math/0703317v3		
	id	id-3042637537284991608	id	id2277394725180752857		
	abstract		abstract	In this paper we exclude the scenario of apparition of finite time singularity in the form of self-similar singularities in the ideal magnetohydrodynamic equations, assuming suitable integrability conditions on the vorticity and the magnetic field. We also consider more sophisticated possibility of asymptotically self-similar singularities, which means that the local classical solution converges to the self-similar profile as we approaches to the possible time of singularity. The scenario of asymptotically self-similar singularity is also excluded under suitable conditions on the profile. In the 2D magnetohydrodynamics the magnetic field evolution equations reduce to a divergence free transport equation for a scalar stream function. This helps us to improve the above nonexistence theorems on the self-similar singularities, in the sense that we only need weaker integrability conditions on the profile to prove the results.		
	versions		versions			