

cases	doc_1		doc_2		decision	id
	authors	<ul style="list-style-type: none">S. RosswogD. J. Price			DUPLICATES	1102
	title	3D meshfree magnetohydrodynamics	authors	<ul style="list-style-type: none">Rosswog, S.Price, D.		
	publication_date	2008-02-04 14:16:46+00:00	title	3D Meshfree Magnetohydrodynamics		
	source	SupportedSources.ARXIV	publication_date	None		
	journal	None	source	SupportedSources.CROSSREF		
	volume		journal			
	doi		volume			
	urls	<ul style="list-style-type: none">http://arxiv.org/pdf/0802.0418v1http://arxiv.org/abs/0802.0418v1http://arxiv.org/pdf/0802.0418v1	doi	10.1007/978-3-540-79994-8_15		
	id	id6463327441517221557	urls	<ul style="list-style-type: none">http://link.springer.com/content/pdf/10.1007/978-3-540-79994-8_15.pdfhttp://dx.doi.org/10.1007/978-3-540-79994-8_15		
	abstract	We describe a new method to include magnetic fields into smooth particle hydrodynamics. The derivation of the self-gravitating hydrodynamics equations from a variational principle is discussed in some detail. The non-dissipative magnetic field evolution is instantiated by advecting so-called Euler potentials. This approach enforces the crucial $\nabla\cdot\vec{B}=0$ -constraint by construction. These recent developments are implemented in our three-dimensional, self-gravitating magnetohydrodynamics code MAGMA. A suite of tests is presented that demonstrates the superiority of this new approach in comparison to previous implementations.	id	id5702349013578576744		
			abstract			
	versions		versions			