cases	doc_1	doc_2	decision	id
			DUPLICATES	1032

doc_1

authors	• Andrew Christlieb • Xiao Feng • Yuxin Jiang • Sharon L. Edelstein
title	A High-Order Finite Difference WENO Scheme for Ideal Magnetohydrodynamics on Curvilinear Meshes
publication_date	2018-08-23 00:00:00
source	SupportedSources.OPENALEX
journal	SIAM Journal on Scientific Computing
volume	40
doi	10.1137/17m115757x
urls	• https://openalex.org/W2888474350 • https://doi.org/10.1137/17m115757x • http://arxiv.org/pdf/1711.07415
id	id4233619452620513112
abstract	
versions	

doc_2

authors	• Andrew J. Christlieb • Xiao Feng • Yan Jiang • Qi Tang
title	A high-order finite difference WENO scheme for ideal magnetohydrodynamics on curvilinear meshes
publication_date	2017-11-20 17:08:49+00:00
source	SupportedSources.ARXIV
journal	None
volume	
doi	
urls	• http://arxiv.org/pdf/1711.07415v2 • http://arxiv.org/abs/1711.07415v2 • http://arxiv.org/pdf/1711.07415v2
id	id-5523034848141366321
abstract	A high-order finite difference numerical scheme is developed for the ideal magnetohydrodynamic equations based on an alternative flux formulation of the weighted essentially non-oscillatory (WENO) scheme. It computes a high-order numerical flux by a Taylor expansion in space, with the lowest-order term solved from a Riemann solver and the higher-order terms constructed from physical fluxes by limited central differences. The scheme coupled with several Riemann solvers, including a Lax-Friedrichs solver and HLL-type solvers, is developed on general curvilinear meshes in two dimensions and verified on a number of benchmark problems. In particular, a HLLD solver on Cartesian meshes is extended to curvilinear meshes with proper modifications. A numerical boundary condition for the perfect electrical conductor (PEC) boundary is derived for general geometry and verified through a bow shock flow. Numerical results also confirm the advantages of using low dissipative Riemann solvers in the current framework.
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