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	authors	• Jai-chan Hwang • Hyerim Noh	**authors**	• Elham Nazari • Mahmood Roshan	DUPLICATES	992
	title	Post-Newtonian Magnetohydrodynamics	**title**	Post-Newtonian Magnetohydrodynamics		
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	abstract	Using the fully nonlinear and exact perturbation formulation with magnetohydrodynamics (MHD) in Minkowski background we derive first-order post-Newtonian (1PN) equations without imposing the slicing (temporal gauge) condition. The 1PN MHD formulation is complementary to our recently presented fully relativistic MHD combined with 0PN gravity available only in the maximal slicing. We present the 1PN MHD equations in two gauge conditions previously used in the literature and provide gauge transformation relations between different gauges. We derive the PN effects on MHD waves in a static homogeneous medium.	**abstract**			
	versions		**versions**			