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	abstract	We present a fully nonlinear and exact perturbation formulation of Einstein's gravity with a general fluid and the ideal magnetohydrodynamics (MHD) without imposing the slicing (temporal gauge) condition. Using this formulation, we derive equations of special relativistic (SR) MHD in the presence of weak gravitation. The equations are consistently derived in the limit of weak gravity and action-at-a-distance in the maximal slicing. We show that in this approximation the relativistic nature of gravity does not affect the SR MHD dynamics, but SR effects manifest themselves in the metric, and thus gravitational lensing. Neglecting these SR effects may lead to an overestimation of lensing masses.	**abstract**	We present a fully nonlinear and exact perturbation formulation of Einsteinâ€™s gravity with a general fluid and ideal magnetohydrodynamics (MHD) without imposing the slicing (temporal gauge) condition. Using this formulation, we derive equations of special relativistic (SR) MHD in the presence of weak gravitation. The equations are consistently derived in the limits of weak gravity and action-at-a-distance in the maximal slicing. We show that in this approximation the relativistic nature of gravity does not affect the SR MHD dynamics, but SR effects manifest themselves in the metric, and thus in gravitational lensing. Our formulation can account for strong SR effects, which might dominate over the Newtonian lensing potentials. Neglecting these SR effects may lead to an overestimation of lensing masses.		
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