A "Frozen-in" Theorem for Nonideal Relativistic Plasmas

$$\mathcal{M}^{\mu\nu} = F^{\mu\nu} - \frac{\mu}{\Delta\mu} W^{\mu\nu}$$

$$\mathcal{E}^i = \mathcal{M}^{0i} \qquad \mathcal{B}^k = (1/2)\epsilon^{ijk}\mathcal{M}_{ij}$$

$$\frac{d}{d\tau}(dl_\lambda \mathcal{M}^{\lambda\phi}) = -(dl_\lambda \mathcal{M}^{\lambda\nu})\partial^\phi \left(\mathcal{U}_\nu + \frac{\mu}{\Delta\mu}\mathcal{D}_\nu\right)$$

Asenjo & Comisso, PRL (2015)