

MAXWELL'S EQUATIONS

Name or Description	SI	Gaussian
Faraday's law	$\nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t}$	$\nabla \times \mathbf{E} = -\frac{1}{c} \frac{\partial \mathbf{B}}{\partial t}$
Ampere's law	$\nabla \times \mathbf{H} = \frac{\partial \mathbf{D}}{\partial t} + \mathbf{J}$	$\nabla \times \mathbf{H} = \frac{1}{c} \frac{\partial \mathbf{D}}{\partial t} + \frac{4\pi}{c} \mathbf{J}$
Poisson equation [Absence of magnetic monopoles]	$\nabla \cdot \mathbf{D} = \rho$ $\nabla \cdot \mathbf{B} = 0$	$\nabla \cdot \mathbf{D} = 4\pi\rho$ $\nabla \cdot \mathbf{B} = 0$
Lorentz force on charge q	$q(\mathbf{E} + \mathbf{v} \times \mathbf{B})$	$q\left(\mathbf{E} + \frac{1}{c}\mathbf{v} \times \mathbf{B}\right)$
Constitutive relations	$\mathbf{D} = \epsilon\mathbf{E}$ $\mathbf{B} = \mu\mathbf{H}$	$\mathbf{D} = \epsilon\mathbf{E}$ $\mathbf{B} = \mu\mathbf{H}$