

Maxwell's equations:

Gauss' law for electricity

$$\nabla \bullet E = \frac{\rho}{\epsilon_0} = 4\pi k \rho$$

Gauss' law for magnetism

$$\nabla \bullet B = 0$$

Faraday's law of induction

$$\nabla \times E = -\frac{\partial B}{\partial t}$$

Ampere's law

$$\nabla \times B = \frac{4\pi k}{c^2} J + \frac{1}{c^2} \frac{\partial E}{\partial t} B = \frac{J}{\epsilon_0 c^2} + \frac{1}{c^2} \frac{\partial E}{\partial t}$$