

MAXWELL'S EQUATIONS

Gauss' law for electricity

$$\oint \mathbf{E} \cdot d\mathbf{A} = q / \epsilon_0$$

Gauss' law for magnetism

$$\oint \mathbf{B} \cdot d\mathbf{A} = 0$$

Faraday's law

$$\oint \mathbf{E} \cdot d\mathbf{s} = -\frac{d\Phi_B}{dt}$$

Ampere-Maxwell law

$$\oint \mathbf{B} \cdot d\mathbf{s} = \mu_0 \epsilon_0 \frac{d\Phi_E}{dt} + \mu_0 i_{\text{enc}}$$