第一章 各式的国际单位制与高斯单位制形式：

国际单位制	高斯单位制
$\oint_s \mathbf{D}\cdot ds=\iiint_v \rho dv \quad (1-7)$ $\oint_s \mathbf{B}\cdot ds=0 \quad (1-8)$ $\oint_L \mathbf{E}\cdot dl=-\iint_s \frac{\partial \mathbf{B}}{\partial t}\cdot ds \quad (1-9)$ $\oint_L \mathbf{H}\cdot dl=\iint_S \left(\mathbf{J}+\frac{\partial \mathbf{D}}{\partial t}\right)\cdot ds \quad (1-10)$	$\oint_s \mathbf{D}\cdot ds=4\pi\iiint_v \rho dv \quad (1-7)$ $\oint_s \mathbf{B}\cdot ds=0 \quad (1-8)$ $\oint_L \mathbf{E}\cdot dl=-\frac{1}{c}\iint_s \frac{\partial \mathbf{B}}{\partial t}\cdot ds \quad (1-9)$ $\oint_L \mathbf{H}\cdot dl=\frac{4\pi}{c}\iint_S \left(\mathbf{J}+\frac{1}{4\pi}\frac{\partial \mathbf{D}}{\partial t}\right)\cdot ds \quad (1-10)$
$\nabla\cdot\mathbf{D}=\rho \quad (1-11)$ $\nabla\cdot\mathbf{B}=0 \quad (1-12)$ $\nabla\times\mathbf{E}=-\frac{\partial \mathbf{B}}{\partial \mathbf{t}} \quad (1-13)$ $\nabla\times\mathbf{H}=\mathbf{J}+\frac{\partial \mathbf{D}}{\partial t} \quad (1-14)$	$\nabla\cdot\mathbf{D}=4\pi\rho \quad (1-11)$ $\nabla\cdot\mathbf{B}=0 \quad (1-12)$ $\nabla\times\mathbf{E}=-\frac{1}{c}\frac{\partial \mathbf{B}}{\partial \mathbf{t}} \quad (1-13)$ $\nabla\times\mathbf{H}=\frac{4\pi}{c}(\mathbf{J}+\frac{1}{4\pi}\frac{\partial \mathbf{D}}{\partial t}) \quad (1-14)$
$\nabla\times\mathbf{E}=-\frac{\partial \mathbf{B}}{\partial \mathbf{t}} \quad (1-18)$ $\nabla\times\mathbf{H}=\frac{\partial \mathbf{D}}{\partial \mathbf{t}} \quad (1-19)$ $\nabla\cdot\mathbf{D}=0 \quad (1-20)$ $\nabla\cdot\mathbf{B}=0 \quad (1-21)$	$\nabla\times\mathbf{E}=-\frac{1}{c}\frac{\partial \mathbf{B}}{\partial \mathbf{t}} \quad (1-18)$ $\nabla\times\mathbf{H}=\frac{1}{c}\frac{\partial \mathbf{D}}{\partial \mathbf{t}} \quad (1-19)$ $\nabla\cdot\mathbf{D}=0 \quad (1-20)$ $\nabla\cdot\mathbf{B}=0 \quad (1-21)$
$\nabla\times(\nabla\times\mathbf{E})=-\frac{\partial}{\partial \mathbf{t}}\nabla\times\mathbf{B}=-\mu\frac{\partial}{\partial \mathbf{t}}\nabla\times\mathbf{H}$ $(1-22)$	$\nabla\times(\nabla\times\mathbf{E})=-\frac{1}{c}\frac{\partial}{\partial \mathbf{t}}\nabla\times\mathbf{B}=-\frac{\mu}{c}\frac{\partial}{\partial \mathbf{t}}\nabla\times\mathbf{H}$ $(1-22)$
$\nabla^2\mathbf{E}-\varepsilon\mu\frac{\partial^2\mathbf{E}}{\partial \mathbf{t}^2}=0 \quad (1-25)$	$\nabla^2\mathbf{E}-\frac{\varepsilon\mu}{c^2}\frac{\partial^2\mathbf{E}}{\partial \mathbf{t}^2}=0 \quad (1-25)$

$\varepsilon\mu\dfrac{\partial^2\mathbf{E}}{\partial t^2}+\sigma\mu\dfrac{\partial\mathbf{E}}{\partial t}=\nabla^2\mathbf{E}$ (1 − 30)	$\dfrac{\varepsilon\mu}{c^2}\dfrac{\partial^2\mathbf{E}}{\partial t^2}+\dfrac{4\pi\sigma\mu}{c^2}\dfrac{\partial\mathbf{E}}{\partial t}=\nabla^2\mathbf{E}$ (1 − 30)
$W=\dfrac{dW}{dv}=W_e+W_m=\dfrac{1}{2}\varepsilon\lvert\mathbf{E}\rvert^2+\dfrac{1}{2}\mu\lvert\mathbf{H}\rvert^2$ (1 − 53)	$W=\dfrac{dW}{dv}=W_e+W_m=\dfrac{1}{8\pi}\varepsilon\lvert\mathbf{E}\rvert^2+\dfrac{1}{8\pi}\mu\lvert\mathbf{H}\rvert^2$ (1 − 53)
$W=n^2\lvert\mathbf{E}\rvert^2$ (1 − 54)	$W=\dfrac{1}{4\pi}n^2\lvert\mathbf{E}\rvert^2$ (1 − 54)
$S=n\lvert\mathbf{E}\rvert^2$ (1 − 55)	$S=\dfrac{c}{4\pi}n\lvert\mathbf{E}\rvert^2$ (1 − 55)
$\mathbf{S}=\mathbf{E}\times\mathbf{H}$ (1 − 58)	$\mathbf{S}=\dfrac{c}{4\pi}\mathbf{E}\times\mathbf{H}$ (1 − 58)
$S_{av}=\dfrac{1}{T}\int_0^T\lvert\mathbf{E}\times\mathbf{H}\rvert\,dt=\dfrac{1}{2}E_0H_0=\dfrac{1}{2}Re\left(EH^*\right)$ (1 − 59)	$S_{av}=\dfrac{1}{T}\int_0^T\dfrac{c}{4\pi}\lvert\mathbf{E}\times\mathbf{H}\rvert dt=\dfrac{c}{8\pi}E_0H_0=\dfrac{c}{8\pi}Re(EH^*)$ (1 − 59)
$\mathbf{S}=\mathbf{E}\times\mathbf{H}=N[\mathbf{E}\times(\mathbf{k}\times\mathbf{E})]=N\lvert\mathbf{E}\rvert^2\mathbf{k}$ (1 − 60)	$\mathbf{S}=\dfrac{c}{4\pi}\mathbf{E}\times\mathbf{H}=\dfrac{c}{4\pi}N[\mathbf{E}\times(\mathbf{k}\times\mathbf{E})]=\dfrac{cN}{4\pi}\lvert\mathbf{E}\rvert^2\mathbf{k}$ (1 − 60)
$S_{av}=\dfrac{1}{T}\int_0^T\lvert\boldsymbol{S}\rvert\,dt=\dfrac{N}{T}\int_0^T\lvert E_0\rvert^2\cos^2(\omega t+a)dt=\dfrac{N}{2}\lvert E_0\rvert^2$ (1 − 61)	$S_{av}=\dfrac{1}{T}\int_0^T\mathrm{S}dt=\dfrac{cN}{4\pi T}\int_0^T\lvert\boldsymbol{E}_0\rvert^2\cos^2(\omega t+a)dt=\dfrac{cN}{8\pi}\lvert\boldsymbol{E}_0\rvert^2$ (1 − 61)