ПРИЛОЖЕНИЯ

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ВАЖНЕЙШИЕ ФОРМУЛЫ ЭЛЕКТРОДИНАМИКИ В СИСТЕМЕ СИ

Для удобства читателя номер формулы совпадает с номером соответствующей формулы основного текста книги в гауссовой системе СГС.

$$\boldsymbol{F}=q\boldsymbol{E}. \tag{2.2}$$

$$F=\frac{1}{4\pi\varepsilon_0}\frac{q_1q_2}{r_{12}^2}. \tag{3.2}$$

$$\boldsymbol{E}=\frac{1}{4\pi\varepsilon_0}\frac{q}{r^3}\boldsymbol{r}. \tag{3.4}$$

$$E=\frac{\sigma}{2\varepsilon_0}. \tag{3.7}$$

$$\boldsymbol{E}=\frac{1}{4\pi\varepsilon_0}\left[\frac{3(\boldsymbol{pr})}{r^5}\boldsymbol{r}-\frac{\boldsymbol{p}}{r^3}\right]. \tag{4.3}$$

$$\boldsymbol{M}=[\boldsymbol{pE}]. \tag{4.4}$$

$$\boldsymbol{F}=(\boldsymbol{p}\nabla)\boldsymbol{E}. \tag{4.7}$$

$$\Phi=\oint(\boldsymbol{E}\,d\boldsymbol{S})=\frac{1}{\varepsilon_0}q. \tag{5.5}$$

$$E=\begin{cases}\dfrac{1}{\varepsilon_0}\rho x & \text{внутри пластинки,}\\ \dfrac{1}{\varepsilon_0}\rho a & \text{вне пластинки.}\end{cases} \tag{6.2}$$

$$\boldsymbol{E}=\frac{1}{4\pi\varepsilon_0}\frac{q\boldsymbol{r}}{a^3}=\frac{1}{3\varepsilon_0}\rho\boldsymbol{r}. \tag{6.5}$$

$$E=\frac{\varkappa}{2\pi\varepsilon_0}\frac{1}{r}. \tag{6.6}$$

$$\boldsymbol{E}=\frac{1}{2\varepsilon_0}\rho\boldsymbol{r}. \tag{6.7}$$

$$E_{2n}-E_{1n}=\frac{\sigma}{\varepsilon_0}. \tag{6.9}$$

$$\boldsymbol{f}=\frac{\varepsilon_0}{2}(E_2^2-E_1^2)\,\boldsymbol{n}. \tag{6.15}$$

$$E=\frac{\sigma}{\varepsilon_0}. \tag{6.16}$$

$$\operatorname{div}\boldsymbol{E}=\frac{1}{\varepsilon_0}\rho. \tag{7.3}$$

$$\sigma_{\text{пол}}=(\boldsymbol{Pn})=P_n. \tag{12.2}$$

$$q_{\text{пол}}=-\oint P_n\,dS=-\oint(\boldsymbol{P}\,d\boldsymbol{S}). \tag{12.3}$$

$$\boldsymbol{D}=\varepsilon_0\boldsymbol{E}+\boldsymbol{P}. \tag{13.3}$$

$$\oint D_n\,dS = q. \qquad (13.4)$$

$$\rho_{\text{пол}} = -\operatorname{div}\mathbf{P}. \qquad (13.6)$$

$$\mathbf{D} = \frac{1}{4\pi}\frac{q}{r^3}\mathbf{r}. \qquad (13.10)$$

$$\mathbf{D} = \sigma\mathbf{n}. \qquad (14.3)$$

$$\mathbf{P} = \varepsilon_0\alpha\mathbf{E}. \qquad (15.1)$$

$$\mathbf{D} = \varepsilon_0\varepsilon\mathbf{E}. \qquad (15.2)$$

$$\varepsilon = 1 + \alpha. \qquad (15.3)$$

$$\mathbf{E}^{(i)} = -\frac{1}{3\varepsilon_0}\mathbf{P}. \qquad (16.1)$$

$$\mathbf{E}' = \mathbf{E} + \frac{1}{3\varepsilon_0}\mathbf{P}. \qquad (16.7)$$

$$\mathbf{E} = -\operatorname{grad}\varphi = -\nabla\varphi. \qquad (18.5)$$

$$\varphi = \frac{1}{4\pi\varepsilon_0\varepsilon}\frac{q}{r}. \qquad (19.1)$$

$$\operatorname{div}\operatorname{grad}\varphi = -\frac{1}{\varepsilon_0\varepsilon}\rho. \qquad (22.2)$$

$$\mathbf{p} = 4\pi\varepsilon_0 a^3\mathbf{E}. \qquad (23.5)$$

$$C = 4\pi\varepsilon_0\varepsilon a. \qquad (26.2)$$

$$C = 4\pi\varepsilon_0\varepsilon\frac{R_1R_2}{R_2-R_1}. \qquad (26.5)$$

$$C = \frac{\varepsilon_0\varepsilon S}{d}. \qquad (26.6)$$

$$C = \frac{2\pi\varepsilon_0\varepsilon l}{\ln(b/a)}. \qquad (26.7)$$

$$C = \frac{2\pi\varepsilon_0\varepsilon l}{\ln\dfrac{4h^2}{ab}}. \qquad (26.8)$$

$$W = \frac{q^2}{2C} = \frac{1}{2}q\varphi = \frac{1}{2}C\varphi^2. \qquad (28.3)$$

$$w = \frac{1}{2}\mathbf{E}\mathbf{D} = \frac{\varepsilon_0\varepsilon E^2}{2} = \frac{D^2}{2\varepsilon_0\varepsilon}. \qquad (29.7)$$

$$w = \int \mathbf{E}\,d\mathbf{D}. \qquad (29.8)$$

$$U = \frac{1}{4\pi\varepsilon_0}\frac{q_1q_2}{r_{12}}. \qquad (30.1)$$

$$dU = T\,dS + E\,d\mathbf{D}. \qquad (31.6)$$

$$d\Psi = -S\,dT + E\,d\mathbf{D}. \qquad (31.7)$$

$$d\Phi = -S\,dT - \mathbf{D}\,dE. \qquad (31.8)$$

$$dI = T\,dS - \mathbf{D}\,dE. \qquad (31.9)$$

$$\Psi = \frac{\varepsilon_0\varepsilon E^2}{2} + \Psi_0 = \frac{D^2}{2\varepsilon_0\varepsilon} + \Psi_0. \qquad (31.12)$$

$$U = \left(1 + \frac{T}{\varepsilon}\frac{\partial\varepsilon}{\partial T}\right)\frac{\varepsilon_0\varepsilon E^2}{2} + U_0(T,\tau). \qquad (31.14)$$

$$\mathfrak{f} = -w = -\frac{D^2}{2\varepsilon_0\varepsilon} = -\frac{\varepsilon_0\varepsilon E^2}{2}. \qquad (32.8)$$

$$f=(\mathscr{P}-\mathscr{P}_0)-\left(\varepsilon+\tau\frac{\partial\varepsilon}{\partial\tau}\right)\frac{\varepsilon_0E^2}{2}. \qquad (32.9)$$

$$f=\frac{\varepsilon_0}{2}(\varepsilon_1-\varepsilon_2)E^2. \qquad (33.4)$$

$$f=\frac{D^2}{2\varepsilon_0\varepsilon}\left(\frac{1}{\varepsilon_2}-\frac{1}{\varepsilon_1}\right). \qquad (33.5)$$

$$\mathscr{T}=-\mathscr{P}+\frac{\varepsilon_0E^2}{2}\left(\varepsilon+\tau\frac{\partial\varepsilon}{\partial\tau}\right). \qquad (33.8)$$

$$\Pi=\mathscr{P}+\frac{\varepsilon_0E^2}{2}\left(\varepsilon-\tau\frac{\partial\varepsilon}{\partial\tau}\right). \qquad (33.9)$$

$$\boldsymbol{f}=-\operatorname{grad}\mathscr{P}+\rho\boldsymbol{E}-\frac{\varepsilon_0E^2}{2}\operatorname{grad}\varepsilon+\frac{\varepsilon_0}{2}\operatorname{grad}\left(\tau\frac{\partial\varepsilon}{\partial\tau}E^2\right). \qquad (34.5)$$

$$\boldsymbol{p}=\varepsilon_0\beta\boldsymbol{E}. \qquad (35.1)$$

$$\beta=4\pi a^3. \qquad (35.2)$$

$$\frac{\varepsilon-1}{\varepsilon+2}=\frac{1}{3}n\beta. \qquad (35.15)$$

$$\boldsymbol{P}=\frac{np_0^2}{3kT}\boldsymbol{E}. \qquad (36.5)$$

$$\alpha=\frac{np_0^2}{3kT\varepsilon_0}. \qquad (36.6)$$

$$\varepsilon=1+\frac{np_0^2}{3kT\varepsilon_0}. \qquad (36.7)$$

$$\boldsymbol{j}=ne\boldsymbol{u}. \qquad (40.1)$$

$$\boldsymbol{j}=\lambda\boldsymbol{E}. \qquad (41.1)$$

$$\lambda=\frac{ne^2}{m}\bar{\tau}. \qquad (42.12)$$

$$Q=(\boldsymbol{jE})=\lambda E^2=\frac{1}{\lambda}j^2. \qquad (42.22)$$

$$\varphi_1-\varphi_2+\mathscr{E}=\mathscr{I}R. \qquad (44.5)$$

$$R=\frac{\varepsilon\varepsilon_0}{C\lambda}. \qquad (46.1)$$

$$\tau=RC=\frac{\varepsilon_0\varepsilon}{\lambda}. \qquad (48.3)$$

$$\boldsymbol{F}=q(\boldsymbol{E}+[\boldsymbol{vB}]). \qquad (49.3)$$

$$d\boldsymbol{F}=[\boldsymbol{jB}]\,dV. \qquad (49.4)$$

$$d\boldsymbol{F}=\mathscr{I}[d\boldsymbol{l}\,\boldsymbol{B}]. \qquad (49.6)$$

$$\boldsymbol{B}=\frac{\mu_0q}{r^3}[\boldsymbol{vr}]. \qquad (50.2)$$

$$\boldsymbol{F}_{12}=\frac{\mu_0q_1q_2}{r_{12}^3}[\boldsymbol{v}_2[\boldsymbol{v}_1\boldsymbol{r}_{12}]]. \qquad (50.4)$$

$$\boldsymbol{B}=\frac{\mu_0}{4\pi}\int\frac{[\boldsymbol{jr}]}{r^3}dV. \qquad (50.10)$$

$$\boldsymbol{B}=\oint\frac{\mu_0}{4\pi}\frac{\mathscr{I}[d\boldsymbol{l}\,\boldsymbol{r}]}{r^3}. \qquad (50.11)$$

$$B=\frac{\mu_0\mathscr{I}}{2\pi R}. \qquad (51.1)$$

$$F = \frac{\mu_0}{2\pi R} \mathcal{J}_1 \mathcal{J}_2 l. \quad (51.2)$$

$$B = \frac{\mu_0 a^2 \mathcal{J}}{2r^3}. \quad (51.5)$$

$$B = \frac{\mu_0}{4\pi} i\Omega. \quad (51.7)$$

$$B = \mu_0 \boldsymbol{i}. \quad (51.8)$$

$$\boldsymbol{M} = [\mathfrak{M} \boldsymbol{B}]. \quad (52.1)$$

$$\mathfrak{M} = \mathcal{J} S. \quad (52.2)$$

$$\oint B\, ds = \mu_0 \mathcal{J}. \quad (55.4)$$

$$B = \frac{N \mathcal{J}}{2\pi R}. \quad (55.10)$$

$$\operatorname{rot} \boldsymbol{B} = \mu_0 \boldsymbol{j}. \quad (56.1)$$

$$\mathfrak{m} = \mathcal{J} \boldsymbol{n}. \quad (57.2)$$

$$\boldsymbol{F} = (\mathfrak{M} \nabla) \boldsymbol{B}. \quad (57.3)$$

$$\boldsymbol{\omega} = -\frac{e}{m} \boldsymbol{B}. \quad (57.4)$$

$$r = \frac{v}{|\omega|} = \frac{mv}{|e| B} \quad (57.5)$$

$$i_m = I. \quad (58.6)$$

$$\boldsymbol{j}_m = \operatorname{rot} \boldsymbol{I}. \quad (59.4)$$

$$\boldsymbol{H} = \frac{\boldsymbol{B}}{\mu_0} - \boldsymbol{I}. \quad (59.5)$$

$$\oint \boldsymbol{H}\, d\boldsymbol{l} = \mathcal{J}. \quad (59.6)$$

$$\operatorname{rot} \boldsymbol{H} = \boldsymbol{j}. \quad (59.7)$$

$$[\boldsymbol{n} \boldsymbol{H}_2] - [\boldsymbol{n} \boldsymbol{H}_1] = \boldsymbol{i}. \quad (60.3)$$

$$\boldsymbol{I} = \varkappa \boldsymbol{H}. \quad (61.1)$$

$$\boldsymbol{B} = \mu_0 \mu \boldsymbol{H}. \quad (61.2)$$

$$\mu = 1 + \varkappa. \quad (61.3)$$

$$A_{12} = \mathcal{J} (\Phi_2 - \Phi_1). \quad (62.2)$$

$$\mathcal{E}^{\text{инд}} = -\frac{d\Phi}{dt}. \quad (64.1)$$

$$\boldsymbol{E}' = \boldsymbol{E} + [\boldsymbol{V} \boldsymbol{B}]. \quad (66.6)$$

$$\boldsymbol{B}' = \boldsymbol{B} - \varepsilon_0 \mu_0 [\boldsymbol{V} \boldsymbol{E}]. \quad (66.7)$$

$$\Phi = L \mathcal{J}. \quad (68.1)$$

$$L = \frac{\mu_0 \mu N^2 S}{l}. \quad (68.2)$$

$$\tau = \frac{L}{R}. \qquad (68.10)$$

$$W_m = \frac{1}{2}\sum \mathscr{I}_i \Phi_i. \qquad (69.5)$$

$$w_m = \frac{1}{2}\mu_0\mu H^2 = \frac{1}{2}HB = \frac{B^2}{2\mu_0\mu}. \qquad (70.3)$$

$$F = \frac{SB^2}{2\mu_0}\left(\frac{1}{\mu_2} - \frac{1}{\mu_1}\right) = \frac{\mu_0 S}{2}\left(\mu_2 H_2^2 - \mu_1 H_1^2\right). \qquad (72.5)$$

$$F = \frac{\mu_0 S H^2}{2}(\mu_1 - \mu_2) = \frac{S}{2\mu_0}\left(\frac{B_1^2}{\mu_1} - \frac{B_2^2}{\mu_2}\right). \qquad (72.7)$$

$$T = \mathscr{P} = \frac{\mu_0\mu H^2}{2} = \frac{HB}{2} = \frac{B^2}{2\mu_0\mu}. \qquad (72.8)$$

$$\delta Q = dU - \boldsymbol{H}\,d\boldsymbol{B}. \qquad (73.1)$$

$$dU = T\,dS + \boldsymbol{H}\,d\boldsymbol{B}. \qquad (73.2)$$

$$d\Psi = -S\,dT + \boldsymbol{H}\,d\boldsymbol{B}. \qquad (73.3)$$

$$d\Phi = -S\,dT - \boldsymbol{B}\,d\boldsymbol{H}. \qquad (73.4)$$

$$dI = T\,dS - \boldsymbol{B}\,d\boldsymbol{H}. \qquad (73.5)$$

$$\Psi = \frac{\mu\mu_0}{2}H^2 + \Psi_0 = \frac{B^2}{2\mu\mu_0} + \Psi_0. \qquad (73.7)$$

$$U = \left(\mu + T\frac{\partial\mu}{\partial T}\right)\frac{\mu_0 H^2}{2} + U_0(T,\ \tau). \qquad (73.8)$$

$$dT = -\frac{TB}{\mu_0\mu^2 c_B}\frac{d\varkappa}{dT}dB. \qquad (73.10)$$

$$dT = -\frac{\mu_0 T H}{c_H}\frac{d\varkappa}{dT}dH. \qquad (73.11)$$

$$\Gamma = \frac{\mathfrak{M}}{L} = -\frac{e}{2m}. \qquad (75.1)$$

$$\mathfrak{M} = -\frac{e\hbar}{2m}\boldsymbol{n}. \qquad (75.2)$$

$$\boldsymbol{I} = -\frac{\mu_0 N Z e^2}{6m}\overline{R^2}\boldsymbol{H}. \qquad (76.3)$$

$$\varkappa = -\frac{\mu_0 Z N e^2}{6m}\overline{R^2}. \qquad (76.4)$$

$$\mu = 1 - \frac{\mu_0 N Z e^2}{6m}\overline{R^2}. \qquad (76.5)$$

$$\varkappa = \frac{\mu_0 n \mathfrak{M}^2}{3kT}. \qquad (77.5)$$

$$\frac{dj}{dt} = -\frac{1}{\mu_0 \Lambda^2} E. \qquad (80.2)$$

$$\Lambda = \left(\frac{m}{\mu_0 n_s e^2}\right)^{1/2}. \qquad (80.3)$$

$$\psi_s + \frac{1}{2\mu_0} B_k^2 = \psi_n. \qquad (80.6)$$

$$B = B_0 + \frac{3\mu_0}{4\pi} \frac{(\mathfrak{M} r)}{r^5} r - \frac{\mu_0}{4\pi} \frac{\mathfrak{M}}{r^3}. \qquad (80.8)$$

$$\mathfrak{M} = -\frac{2\pi a^3}{\mu_0} B. \qquad (80.9)$$

$$j_{\text{см}} = \dot{D}. \qquad (81.6)$$

$$j_{\text{см}} = \varepsilon_0 \dot{E} + \dot{P}. \qquad (81.9)$$

$$\oint_L H\, dl = \int_S \left(j + \frac{\partial D}{\partial t}\right) dS. \qquad (82.1)$$

$$\oint_L E\, dl = -\int \frac{\partial B}{\partial t}\, dS. \qquad (82.2)$$

$$\oint (D\, dS) = \int \rho\, dV. \qquad (82.3)$$

$$\oint (B\, dS) = 0. \qquad (82.4)$$

$$\operatorname{rot} H = j + \frac{\partial D}{\partial t}. \qquad (82.1\text{a})$$

$$\operatorname{rot} E = -\frac{\partial B}{\partial t}. \qquad (82.2\text{a})$$

$$\operatorname{div} D = \rho. \qquad (82.3\text{a})$$

$$\operatorname{div} B = 0. \qquad (82.4\text{a})$$

$$D_{2n} - D_{1n} = \sigma. \qquad (82.5)$$

$$[n\, H_2] - [n\, H_1] = i. \qquad (82.8)$$

$$D = \varepsilon_0 \varepsilon E. \qquad (82.10)$$

$$B = \mu_0 \mu H. \qquad (82.11)$$

$$j = \lambda E. \qquad (82.12)$$

$$v=\frac{1}{\sqrt{\varepsilon_0\varepsilon\mu_0\mu}}. \quad (83.2)$$

$$\boldsymbol{E}=-[\boldsymbol{vB}], \qquad \boldsymbol{H}=[\boldsymbol{vD}]. \quad (83.3)$$

$$\varepsilon_0\varepsilon E^2=\mu_0\mu H^2. \quad (83.4)$$

$$\boldsymbol{S}=[\boldsymbol{EH}]. \quad (84.3)$$

$$w=\int(\boldsymbol{E}\,d\boldsymbol{D}+\boldsymbol{H}\,d\boldsymbol{B}). \quad (84.7)$$

$$w=\frac{1}{2}(\boldsymbol{ED}+\boldsymbol{HB}). \quad (84.9)$$

$$m\dot{\boldsymbol{v}}=e(\boldsymbol{E}+[\boldsymbol{vB}]). \quad (86.2)$$

$$\boldsymbol{v}_{д}=\frac{[\boldsymbol{EB}]}{B^2}. \quad (86.3)$$

$$\boldsymbol{v}_{д}=\frac{1}{B^2e}[\boldsymbol{FB}]. \quad (86.4)$$

$$\boldsymbol{v}_{д}=\frac{mv_{\perp}^2}{2eB^2}\frac{\partial B}{\partial N}\boldsymbol{b}. \quad (87.2)$$

$$\boldsymbol{v}_{д}=\frac{mv_{\perp}^2}{2eBR}\boldsymbol{b}. \quad (87.3)$$

$$\boldsymbol{v}_{д}=\frac{mv_{\parallel}^2}{eBR}\boldsymbol{b}. \quad (87.4)$$

$$\boldsymbol{V}=v_{\parallel}\boldsymbol{h}+\frac{1}{B^2}[\boldsymbol{EB}]+\frac{m}{eBR}\left(v_{\parallel}^2+\frac{1}{2}v_{\perp}^2\right)\boldsymbol{b}. \quad (87.5)$$

$$\mathfrak{M}=-\frac{mv_{\perp}^2}{2B}\boldsymbol{h}. \quad (88.2)$$

$$\Phi=\frac{m^2v_{\perp}^2}{e^2B}. \quad (88.3)$$

$$\boldsymbol{g}=\frac{[\boldsymbol{EH}]}{c}. \quad (91.1)$$

$$m_{эл}=\frac{e^2}{6\pi\varepsilon_0ac^2}. \quad (91.4)$$

$$R=\frac{1}{ne}. \quad (98.4)$$

$$R=\frac{3\pi}{8ne}. \quad (98.5)$$

$$C=\frac{4\varepsilon_0}{9l^2}\sqrt{\frac{2e}{m}}. \quad (101.17)$$

$$D=\sqrt{\frac{2\varepsilon_0 kT}{ne^2}}. \tag{121.1}$$

$$\lambda=\frac{(4\pi\varepsilon_0)^2\,(3kT)^{3/2}}{\pi Ze^2L\sqrt{m}}. \tag{121.3}$$

$$D=\sqrt{\frac{\varepsilon_0 kT}{2ne^2}}. \tag{121.8}$$

$$\omega_0=\sqrt{\frac{ne^2}{m\varepsilon_0}}. \tag{123.9}$$

$$v=\frac{B}{\sqrt{\mu_0\rho}}. \tag{138.6}$$

$$\left.\begin{aligned}
\boldsymbol{D}&=\frac{1}{4\pi}\left[\frac{3\,(\boldsymbol{pr})}{r^5}\,\boldsymbol{r}-\frac{\boldsymbol{p}}{r^3}\right]_{t-\frac{r}{v}}+\frac{1}{4\pi}\left[\frac{3\,(\dot{\boldsymbol{p}}\boldsymbol{r})}{vr^4}\,\boldsymbol{r}-\frac{\dot{\boldsymbol{p}}}{vr^2}\right]_{t-\frac{r}{v}}+\\
&+\frac{1}{4\pi}\left[\frac{(\ddot{\boldsymbol{p}}\boldsymbol{r})}{v^2r^3}\,\boldsymbol{r}-\frac{\ddot{\boldsymbol{p}}}{v^2r}\right]_{t-\frac{r}{v}},\\
\boldsymbol{H}&=\frac{1}{4\pi r^3}\,[\dot{\boldsymbol{p}}\boldsymbol{r}]_{t-\frac{r}{v}}+\frac{1}{4\pi vr^2}\,[\ddot{\boldsymbol{p}}\boldsymbol{r}]_{t-\frac{r}{v}}.
\end{aligned}\right\} \tag{141.10}$$

$$\left.\begin{aligned}
\boldsymbol{D}&=\frac{1}{4\pi}\left[\frac{(\ddot{\boldsymbol{p}}\boldsymbol{r})}{v^2r^3}\,\boldsymbol{r}-\frac{\ddot{\boldsymbol{p}}}{v^2r}\right]_{t-\frac{r}{v}}=\frac{1}{4\pi v^2r^3}\,[[\ddot{\boldsymbol{p}}\boldsymbol{r}]\,\boldsymbol{r}]_{t-\frac{r}{v}},\\
\boldsymbol{H}&=\frac{1}{4\pi vr^2}\,[\ddot{\boldsymbol{p}}\boldsymbol{r}]_{t-\frac{r}{v}}.
\end{aligned}\right. \tag{141.11}$$

$$\boldsymbol{S}=\frac{\sin^2\vartheta}{16\pi^2\varepsilon_0\varepsilon v^3r^2}\,\ddot{p}^2_{t-\frac{r}{v}}\boldsymbol{N}. \tag{141.13}$$

$$-\frac{d\mathscr{E}}{dt}=\frac{1}{6\pi\varepsilon_0\varepsilon v^3}\,\ddot{p}^2_{\ t-\frac{r}{v}}. \tag{141.14}$$

$$-\frac{d\mathscr{E}}{dt}=\frac{\omega^4}{12\pi\varepsilon_0\varepsilon v^3}\,p_0^2. \tag{141.16}$$

$$-\frac{d\mathscr{E}}{dt}=\frac{e^2}{6\pi\varepsilon_0\varepsilon v^3}\,\dot{v}^2. \tag{141.17}$$

$$D=\frac{1}{\mu_0\mu\lambda}. \tag{144.4}$$

$$l\sim\frac{1}{\sqrt{2\mu_0\mu\lambda\nu}}. \tag{144.5}$$

НЕКОТОРЫЕ ФИЗИЧЕСКИЕ ПОСТОЯННЫЕ

Скорость света	$2{,}997924562 \cdot 10^8$ м/с = $= 2{,}997924562 \cdot 10^{10}$ см/с
Заряд электрона	$1{,}602 \cdot 10^{-19}$ Кл = $4{,}80 \cdot 10^{-10}$ СГСЭ
Постоянная Планка	$6{,}626 \cdot 10^{-34}$ Дж·с = $6{,}626 \cdot 10^{-27}$ эрг·с
Число Авогадро	$6{,}022 \cdot 10^{26}$ кмоль$^{-1}$ = $6{,}022 \cdot 10^{23}$ моль$^{-1}$
Постоянная Больцмана	$1{,}38 \cdot 10^{-23}$ Дж/К = $1{,}38 \cdot 10^{-16}$ эрг/К
Газовая постоянная	$8{,}31 \cdot 10^3$ Дж/(кмоль·К) = $= 8{,}31 \cdot 10^7$ эрг/(моль·К)
Гравитационная постоянная	$6{,}67 \cdot 10^{-11}$ Н·м^2/кг^2 = $= 6{,}67 \cdot 10^{-8}$ дин·см^2/г^2
Число Фарадея	$9{,}648 \cdot 10^7$ Кл/кмоль = $= 9{,}648 \cdot 10^3$ СГСМ/моль
Масса покоя электрона	$9{,}11 \cdot 10^{-31}$ кг = $9{,}11 \cdot 10^{-28}$ г
Масса покоя протона	$1{,}6727 \cdot 10^{-27}$ кг = $1{,}6727 \cdot 10^{-24}$ г
Масса покоя нейтрона	$1{,}6750 \cdot 10^{-27}$ кг = $1{,}6750 \cdot 10^{-24}$ г
Средний радиус Земли	6371 км
Масса Земли	$5{,}98 \cdot 10^{24}$ кг
Средняя плотность Земли	5,52 г/см^3
Момент количества движения Земли, связанный с осевым вращением	$5{,}91 \cdot 10^{33}$ кг·м^2/с
Средняя скорость движения Земли по орбите	29,77 км/с
Радиус Солнца	$6{,}96 \cdot 10^5$ км
Масса Солнца	$1{,}99 \cdot 10^{30}$ кг
Средняя плотность Солнца	1,41 г/см^3
Среднее расстояние Земли от Солнца	$1{,}496 \cdot 10^8$ км
Среднее расстояние Луны от Земли	$3{,}84 \cdot 10^5$ км
Средний радиус Луны	1738 км
Масса Луны	$7{,}34 \cdot 10^{22}$ кг