Appendix A: Physical constants

Symbol	Definition	Numerical quantity
c	speed of light in vacuum	2.9979×10^{10} cm/sec
$\hbar = h/2\pi$	Planck constant	6.5822×10^{-22} MeV-s
$\hbar c$		1.9733×10^{-11} MeV-cm
e	electron charge	1.6022×10^{-19} coulombs
$\alpha = e^2/\hbar c$	fine structure constant	1/137.04
N_A	Avogadro number	6.0220×10^{23} mole^{-1}
K_B	Boltzmann constant	1.3807×10^{-16} erg/K
m_e	electron mass	0.51100 MeV/c^2
m_p	proton mass	938.28 MeV/c^2
$r_e = e^2/m_e c^2$	classical electron radius	2.8179×10^{-13} cm
$\lambda_e = h/m_e c$	Compton wavelength	2.4263×10^{-10} cm
$a_0 = \hbar^2/m_e e^2$	Bohr radius	0.52918×10^{-8} cm
$\mu_B = e\hbar/2m_e c$	Bohr magneton	5.7884×10^{-15} MeV/gauss
$\mu_N = e\hbar/2m_p c$	nuclear magneton	3.1525×10^{-18} MeV/gauss
C_E	Euler constant	0.5772
$D_e = 4\pi r_e^2 m_e c^2$		5.0989×10^{-25} MeV-cm^2
ϵ_0	permittivity	8.8543×10^{-12} F/m

Source: Particle Data Group, Rev. Mod. Phys. 56: S1, 1984.

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