Fundamental Physical Constants

Quantity	Symbol	Value
Avogadro's number	N_A	$6.02214129(27) \times 10^{23}$ / mol
Boltzmann's constant	k_B	$1.3806488(13) \times 10^{-23}$ J/K
Coulomb constant	$k_e = 1/4\pi\varepsilon_0$	$8.987551787\cdots \times 10^9$ N$\cdot$m$^2\cdot$C^{-2}
Elementary charge	e	$1.602176565(35) \times 10^{-19}$ C
Electron mass	m_e	$9.10938215(45) \times 10^{-31}$ kg
Gravitational constant	G	$6.67384(80)\cdots \times 10^{-11}$ N$\cdot$m$^2\cdot$kg^{-2}
Neutron mass	m_n	$1.674927351(74) \times 10^{-27}$ kg
Permeability of free space	μ_0	$4\pi \times 10^{-7}$ T$\cdot$m/A
Permittivity of free space	$\varepsilon_0 = 1/\mu_0 c^2$	$8.854187817\cdots \times 10^{-12}$ C^2 / N$\cdot$m^2
Planck's constant	h	$6.62606957(29) \times 10^{-34}$ J$\cdot$s
Proton mass	m_p	$1.672621777(74) \times 10^{-27}$ kg
Speed of light	c	2.99792458×10^8 m$\cdot$s^{-1}

Astronomical Data

Earth	Value
Solar mass	$(1.98855 \pm 0.00025) \times 10^{30}$ kg
Earth mass	5.97219×10^{24} kg
Earth mean radius	6.371009×10^{6} m
Mean solar day	8.6400×10^{4} s

Earth-Sun Orbit	
Aphelion	$1.52098232 \times 10^{11}$ km
Perihelion	$1.470098290 \times 10^{11}$ km
Eccentricity	0.01671123
Orbital Period	3.15581495×10^{7} s

Moon	
Moon mass	7.3477×10^{22} kg
Moon mean radius	1.73710×10^{6} m
Moon orbital period (sidereal month)	2.3605847×10^{6} s
Moon synodic period	2.5514429×10^{6} s