

## PHYSICAL CONSTANTS

Speed of light (exact)	$c = 2.99792458 \times 10^8 \text{ m s}^{-1}$
Gravitation constant	$G = 6.673 \times 10^{-11} \text{ m}^3 \text{ kg}^{-1} \text{ s}^{-2}$
Standard acceleration of gravity (exact)	$g = 9.80665 \text{ m s}^{-2}$
Planck constant	$h = 6.62606876 \times 10^{-34} \text{ J s}$
Stefan-Boltzmann constant	$\sigma = 5.6705119 \times 10^{-5} \text{ erg cm}^{-2} \text{ K}^{-4} \text{ s}^{-1}$
Boltzmann constant	$k = 1.38065812 \times 10^{-23} \text{ J K}$
Mass of electron	$m_e = 9.10938188 \times 10^{-31} \text{ kg}$
Mass of proton	$m_p = 1.67262158 \times 10^{-27} \text{ kg}$
Mass of neutron	$m_n = 1.67492716 \times 10^{-27} \text{ kg}$

## GENERAL ASTRONOMICAL CONSTANTS

Astronomical unit = mean Sun-Earth distance = semimajor axis of Earth orbit	$AU = 1.4959787066 \times 10^{11} \text{ m}$
Parsec (= 206 264.806 AU)	$pc = 3.0856776 \times 10^{16} \text{ m}$ $= 3.2615638 \text{ ly}$
Lightyear (Julian)	$= 9.460730472 \times 10^{15} \text{ m}$
Solar mass	$M_{\odot} = 1.9891 \times 10^{30} \text{ kg}$
Solar radius	$R_{\odot} = 6.99508 \times 10^8 \text{ m}$
Solar luminosity	$L_{\odot} = 3.845 \times 10^{33} \text{ erg s}^{-1}$
Earth mass	$M_{\oplus} = 5.9742 \times 10^{24} \text{ kg}$
Earth mean density	$\bar{\rho}_{\oplus} = 5.515 \text{ g cm}^{-3}$
Earth equatorial radius	$R_{\oplus} = 6378.136 \text{ km}$

## THE GREEK ALPHABET

A	$\alpha$	alpha	Z	$\zeta$	zeta	$\Lambda$	$\lambda$	lambda	$\Pi$	$\pi$	pi	$\Phi$	$\phi$	phi
B	$\beta$	beta	H	$\eta$	eta	M	$\mu$	mu	P	$\rho$	rho	X	$\chi$	chi
$\Gamma$	$\gamma$	gamma	$\Theta$	$\theta$	theta	N	$\nu$	nu	$\Sigma$	$\sigma$	sigma	$\Psi$	$\psi$	psi
$\Delta$	$\delta$	delta	I	$\iota$	iota	$\Xi$	$\xi$	xi	T	$\tau$	tau	$\Omega$	$\omega$	omega
E	$\varepsilon$	epsilon	K	$\kappa$	kappa	O	$\omicron$	omicron	Y	$\upsilon$	upsilon			

## PREFIXES FOR MULTIPLES OF SI UNITS

Factor	Prefix	Symbol
$10^{12}$	tera	T
$10^9$	giga	G
$10^6$	mega	M
$10^3$	kilo	k
$10^2$	hecto	h
10	deka	da
$10^{-1}$	deci	d
$10^{-2}$	centi	c
$10^{-3}$	milli	m
$10^{-6}$	micro	$\mu$
$10^{-9}$	nano	n
$10^{-12}$	pico	p
$10^{-15}$	femto	f
$10^{-18}$	atta	a