

## Fundamental Constants

Speed of light in vacuum	$c$	=	$2.998 \times 10^8 \text{ m s}^{-1}$
Planck Constant	$h$	=	$6.626 \times 10^{-34} \text{ Js}$
Boltzmann Constant	$k_B$	=	$1.381 \times 10^{-23} \text{ J K}^{-1}$
Stefan-Boltzmann Constant	$\sigma$	=	$5.670 \times 10^{-8} \text{ W m}^{-2} \text{ K}^{-4}$
Charge of electron	$e$	=	$1.602 \times 10^{-19} \text{ C}$
Universal Gravitational Constant	$G$	=	$6.674 \times 10^{-11} \text{ N m}^2 \text{ kg}^{-2}$
Universal Gas Constant	$R$	=	$8.315 \text{ J mol}^{-1} \text{ K}^{-1}$
Avogadro Constant	$N_A$	=	$6.022 \times 10^{23} \text{ mol}^{-1}$
Wien's displacement law	$\lambda_m T$	=	$2.898 \times 10^{-3} \text{ m K}$
Mass of electron	$m_e$	=	$9.109 \times 10^{-31} \text{ kg}$
Mass of proton	$m_p$	=	$1.673 \times 10^{-27} \text{ kg}$
Mass of neutron	$m_n$	=	$1.675 \times 10^{-27} \text{ kg}$
Atomic Mass Unit (a.m.u.)	$u$	=	$1.661 \times 10^{-27} \text{ kg}$

## Astronomical Data

1 parsec (pc)	=	$3.086 \times 10^{16} \text{ m}$	
1 astronomical unit (AU)	=	$1.496 \times 10^{11} \text{ m}$	
Solar Mass	$M_\odot$	=	$1.989 \times 10^{30} \text{ kg}$
Solar Radius	$R_\odot$	=	$6.955 \times 10^8 \text{ m}$
Solar Luminosity	$L_\odot$	=	$3.826 \times 10^{26} \text{ W}$
Apparent magnitude of the Sun at mid-day	$m_\odot$	=	-26.72 mag
Solar Constant (at Earth)		=	$1366 \text{ W m}^{-2}$
Apparent angular diameter of Sun	$\theta_\odot$	=	$30'$
Earth Mass	$M_\oplus$	=	$5.972 \times 10^{24} \text{ kg}$
Earth Radius	$R_\oplus$	=	$6.371 \times 10^6 \text{ m}$
1 tropical year		=	365.242 solar days
		=	$3.156 \times 10^7 \text{ s}$