

ANGULAR MEASURE

$\pi = 3.14159\dots$
 $2 \pi \text{ radians} = 360^\circ$
 $1 \text{ radian} = 57^\circ.296$
 $1 \text{ degree} = 60' = 60 \text{ arc min}$
 $1 \text{ arc min} = 60'' = 60 \text{ arc sec}$
 $1 \text{ radian} = 206265'' .806$
 Number of square degrees on sky = 41,252.961

PHYSICAL CONSTANTS

Speed of light	c	$2.99792 \times 10^{10} \text{ cm s}^{-1}$
Constant of gravitation	G	$6.672 \times 10^{-8} \text{ dyne cm}^2 \text{ g}^{-2}$
Planck's constant	h	$6.626 \times 10^{-27} \text{ erg s}$
Boltzmann's constant	k	$1.381 \times 10^{-16} \text{ erg (deg K)}^{-1}$
Mass hydrogen atom	m_H	$1.673 \times 10^{-24} \text{ g}$
Avogadro's number	N_A	$6.022 \times 10^{23} \text{ g}^{-1}$
Mass electron	m_e	$9.1095 \times 10^{-28} \text{ g}$
Charge on the electron	e	$4.803 \times 10^{-10} \text{ electrostatic units}$
Stefan-Boltzmann radiation constant	σ	$5.670 \times 10^{-5} \text{ erg cm}^{-2} \text{ s}^{-1} \text{ (deg K)}^{-4}$
Radiation energy density constant	$a = 4\sigma/c$	$7.56 \times 10^{-15} \text{ erg cm}^{-3} \text{ (deg K)}^{-4}$
Constant in Wien's Law	$\lambda_{\max} T$	$0.28979 \text{ cm (deg K)}^{-1}$
Electron volt	eV	$1.6022 \times 10^{-12} \text{ erg}$
Million electron volts	MeV	10^6 eV
Angstrom	\AA	10^{-8} cm
1 Megaton of TNT	MT	$4.2 \times 10^{22} \text{ erg}$

ASTRONOMICAL CONSTANTS

Astronomical Unit	AU	1.495978707 × 10 ¹³ cm
Parsec	pc	206265 AU
		3.262 ly
		3.086 × 10 ¹⁸ cm
Light year	ly	9.4605 × 10 ¹⁷ cm
		6.324 × 10 ⁴ AU
(siderial) year	yr	3.155815 × 10 ⁷ s
Mass of Earth	M _E	5.977 × 10 ²⁷ g
(Equatorial) radius of Earth	R _E	6.378 × 10 ⁸ cm
Mass of sun	M _☉	1.989 × 10 ³³ g
Radius of sun	R _☉	6.960 × 10 ¹⁰ cm
Luminosity of sun	L _☉	3.83 × 10 ³³ erg s ⁻¹
Solar constant at Earth	S	1.37 × 10 ⁶ erg cm ⁻² s ⁻¹

MISCELLANEOUS

Area circle	A = πR ²
Area of a sphere	A = 4πR ²
Volume of a sphere	V = $\frac{4}{3}\pi R^3$
Latitude of Santa Cruz	36.9998 degrees N
Longitude of Santa Cruz	122.0624 degrees W
Temperature in K	Temperature in C + 273.15
Temperature in F	(Temperature in C)*9/5 + 32
5 magnitudes	factor of 100 in flux
For very small θ << 1 radian	sin θ ≈ tan θ ≈ θ