

Math Constants

$$\begin{aligned}\pi &= 3.14159265358979323846 \\ e &= 2.71828182845904523536\end{aligned}$$

Physical Constants

Speed of Light	c	$= 2.99792458 \times 10^{10}$	cm s ⁻¹
Gravitational Constant	G	$= 6.6742(10) \times 10^{-8}$	cm ³ g ⁻¹ s ⁻²
Planck Constant	h	$= 6.6260755(40) \times 10^{-27}$ $= 4.13566743(35) \times 10^{-15}$	erg s eV s
Electron Charge	e	$= 4.8032068(14) \times 10^{-10}$	esu
Boltzmann Constant	k	$= 1.380658(12) \times 10^{-16}$ $= 8.617343(15) \times 10^{-5}$	erg K ⁻¹ eV K ⁻¹
Proton Mass	m_p	$= 1.67262171(29) \times 10^{-24}$	g
Neutron Mass	m_n	$= 1.67492728(29) \times 10^{-24}$	g
Electron Mass	m_e	$= 9.1093826(16) \times 10^{-28}$	g
Bohr Radius	a	$= 0.5291772108(18) \times 10^{-8}$	cm
Fine Structure	$1/\alpha$	$= 137.03599911(46)$	
H Ionization Potential	Φ	$= 13.605698140$	eV
Thompson Cross Section	σ_e	$= 0.665245873(13) \times 10^{-22}$	cm ²
Rydberg Constant	R_∞	$= 2.1798741(13) \times 10^{-11}$	erg

Astronomical Constants

Hubbles Constant	H_0	$= 100h$	km s ⁻¹ Mpc ⁻¹
Hubble Parameter	h	$= 0.70(3)$	
Hubble Time	t_H	$= 9.78h^{-1} \times 10^9$ $= 14.0 \times 10^9$	yr yr
Hubble Distance	D_H	$= 3000h^{-1}$ $= 4286$	Mpc Mpc
Age of Universe	t_0	$= 13.7 \times 10^9$	yr
Critical Density	ρ_0	$= 1.88h^2 \times 10^{-29}$	g cm ⁻³
Solar Mass	M_\odot	$= 1.9892 \times 10^{33}$	cm
Solar Luminosity	L_\odot	$= 3.8268 \times 10^{33}$	erg s ⁻¹

Conversions

1 year	$= 3.1558149984 \times 10^7$	s
1 eV	$= 1.6021772 \times 10^{-12}$	erg
1 light year	$= 9.460528 \times 10^{17}$	cm
1 parsec	$= 3.261633$	light year
1 parsec	$= 3.085677 \times 10^{18}$	cm
1 A.U.	$= 1.495978921 \times 10^{13}$	cm
1 arcsecond	$= 4.8481 \times 10^{-6}$	radians