

General Astronomical Constants

Name	Symbol	Value	Units
Speed of light in vacuum	c	299 792 458	m s ⁻¹
Astronomical Unit	AU	$1.495\,978\,706\,6 \times 10^{11}$	m
Light Year (Julian)	ly	$9.460\,730\,472 \times 10^{15}$	m
Parsec	pc	$3.085\,677\,6 \times 10^{16}$	m
		206 264.806	AU
		3.261 563 8	ly
Solar mass	$M_{\odot}$	1.9891×10^{30}	kg
Solar radius	$R_{\odot}$	$6.955\,08 \times 10^8$	m
Solar luminosity	$L_{\odot}$	3.845×10^{26}	W
Earth mass	$M_{\oplus}$	$5.974\,2 \times 10^{24}$	kg
Earth equatorial radius	$R_{\oplus}$	6378.136	km
Moon mass	M_{J}	$7.347\,7 \times 10^{22}$	kg
Moon equatorial radius	R_{J}	1737.10	km
Julian Year		365.25	d
Tropical Year (Equinox to Equinox)		365.242 189 7	d
Sidereal Year		365.256 36	d
Synodic Month (new Moon to new Moon)		29.530 59	d
Sidereal Month		27.321 66	d
Anomalistic Month (perigee to perigee)		27.554 55	d

SI Derived Units

Quantity	Name	Symbol	Units
Force	newton	N	m kg s^{-2}
Frequency	hertz	Hz	s^{-1}
Energy (work)	joule	J	$\text{kg m}^2 \text{s}^{-2}$
Radiant Power	watt	W	J s^{-1}
Pressure (stress)	pascal	Pa	N m^{-2}
Plane Angle	radian	rad	...
Solid Angle	steradian	sr	...
Celsius Temperature	Celsius	$^{\circ}\text{C}$	K
Electric Charge	coulomb	C	A s
Electrical Potential	volt	V	W A^{-1}
Capacitance	farad	F	C V^{-1}
Electric Resistance	ohm	Ω	V A^{-1}
Magnetic Flux	weber	Wb	V s
Magnetic Flux Density	tesla	T	Wb m^{-2}
Inductance	henry	H	Wb A^{-1}
Luminous Flux	lumen	lm	cd sr
Illuminance	lux	lx	lm m^{-2}

radians and steradians are dimensionless

Full circle = 2π rad; solid angle of a sphere = 4π sr