

General Astronomical Constants

Name	Symbol	Value	Units
Speed of light in vacuum ¹	c	299 792 458	m s ⁻¹
Astronomical Unit ²	AU	$1.495\,978\,70700 \times 10^{11}$	m
Light Year (Julian)	ly	$9.460\,730\,473 \times 10^{15}$	m
Parsec	pc	$3.085\,677\,6 \times 10^{16}$	m
		206 264.806	AU
		3.261 563 8	ly
Solar luminosity ³	L _☉	3.828×10^{26}	W
Solar radius ³	R _☉	6.95700×10^8	m
Solar mass ⁴	M _☉	1.98848×10^{30}	kg
Earth equatorial radius ³	R _{Ee}	6378.1	km
Earth mass ⁴	M _E	5.97346×10^{24}	kg
Jupiter equatorial radius ³	R _{Je}	71492	km
Jupiter mass ⁴	M _J	1.89819×10^{27}	kg
Julian Year ⁵	yr	365.25	d
Julian Day	d	86400	s

Notes:

[1] – exact value from NIST 2014 CODATA

[2] – exact value adopted by IAU 2012 Resolution B2

[3] – exact nominal value adopted by IAU 2015 Resolution B3 (Prša et al. 2016, AJ, 152, 41)

[4] – derived from the nominal IAU 2015 GM values using $G=(6.67408 \pm 0.00031) \times 10^{-11} \text{ kg}^{-1} \text{ m}^3 \text{ s}^{-2}$

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

A full circle = 2π rad

The solid angle of a sphere = 4π sr