

Costanti Astronomiche e Fisiche

(da: B.W. Carroll, D.A. Ostlie, *An Introduction to Modern Astrophysics*, Pearson 2007)

Quantity	Value	Units
Solar mass	1.9891E30	kg
Solar irradiance	1.365E03	W m ⁻²
Solar luminosity	3.839E26	W
Solar radius	6.95508E08	m
Solar effective temperature	5777	K
Solar absolute bolometric magnitude	4.74	
Solar apparent bolometric magnitude	-26.83	
Solar apparent ultraviolet magnitude (U)	-25.91	
Solar apparent blue magnitude (B)	-26.10	
Solar apparent visual magnitude (V)	-26.75	
Solar bolometric correction (BC)	-0.08	
Earth mass	5.9736E24	kg
Earth radius (equatorial)	6.378136E06	m
Astronomical unit (AU)	1.4959787066E11	m
Light year (ly, Julian)	9.460730472E15	m
Parsec (pc)	2.06264806E05	AU
	3.0856776E16	m
	3.2615638	ly (Julian)
Sidereal day	8.61640905309E04	s
Solar day	8.6400E04	s
Sidereal year	3.15581450E07	s
	3.65256308E02	d
Tropical year	3.155692519E07	s
	3.652421897E02	d
Julian year	3.1557600E07	s
	3.6525E02	d
Gregorian year	3.1556952E07	s
	3.652425E02	d

Gravitational constant (G)	6.673E-11	N m ² kg ⁻²
Speed of light (c)	2.99792458E08	m s ⁻¹
Permeability of free space (μ_0)	1.25663706144E-06	N A ⁻²
Permittivity of free space (ϵ_0)	8.854187817E-12	F m ⁻¹
Electric charge (e)	1.602176462E-19	C
Electron volt (eV)	1.602176462E-19	J
Planck's constant (h)	6.62606876E-34	J s
($\hbar$)	1.054571596E-34	J s
Boltzmann's constant (k)	1.3806503E-23	J K ⁻¹
Stefan-Boltzmann constant (σ)	5.670400E-08	W m ⁻² K ⁻⁴
Radiation constant (a)	7.565767E-16	J m ⁻³ K ⁻⁴
Atomic mass unit (u)	1.66053873E-27	kg
Electron mass (m_e)	9.10938188E-31	kg
Proton mass (m_p)	1.67262158E-27	kg
Neutron mass (m_n)	1.67492716E-27	kg
Hydrogen mass (m_H)	1.673532499E-27	kg
Avogadro's number (N_A)	6.02214199E23	mol ⁻¹
Gas constant (R)	8.314472	J mol ⁻¹ K ⁻¹
Bohr radius (a_0)	5.291772083E-11	m
Rydberg constant (R_∞)	1.0973731568549E07	m ⁻¹