

ATOMIC CONSTANTS

Quantity	Symbol	Value	Units	Rel.Uncertainty (ppm)
fine-structure constant, $\mu_0 c e^2 / 2h$	α	7.29735308(33)	10^{-3}	0.045
inverse fine-structure constant	α^{-1}	137.0359895(61)		0.045
Rydberg constant, $m_e c \alpha^2 / 2h$	R_∞	1093731.534(13)	m^{-1}	0.0012
in hertz, $R_\infty c$		3.2898419499(39)	10^{15}Hz	0.0012
in joules, $R_\infty h c$		2.1798741(13)	10^{-18}J	0.60
in electron volts, $R_\infty h c / \{e\}$		13.6056981(40)	eV	0.30
Bohr radius, $\alpha / 4\pi R_\infty$	a_0	0.529177249(24)	10^{-10}m	0.045
Hartree energy, $e^2 / 4\pi\epsilon_0 a_0 = 2R_\infty h c$	E_h	4.3597482(26)	10^{-18}J	0.60
in eV, $E_h / \{e\}$		27.2113961(81)	eV	0.30
quantum circulation	$h / 2m_e$	3.63694807(33)	$10^{-4} \text{m}^2 \text{s}^{-1}$	0.089
	h / m_e	7.27389614(65)	$10^{-4} \text{m}^2 \text{s}^{-1}$	0.089