Appendix C Useful Information

This appendix is broken into several tables.

- Table C1, Important Constants
- Table C2, Submicroscopic Masses
- Table C3, Solar System Data
- Table C4, Metric Prefixes for Powers of Ten and Their Symbols
- Table C5, The Greek Alphabet
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Table C1 Important Constants [1]

1

Stated values are according to the National Institute of Standards and Technology Reference on Constants, Units, and Uncertainty, www.physics.nist.gov/cuu (accessed May 18, 2012). Values in parentheses are the uncertainties in the last digits. Numbers without uncertainties are exact as defined.

Symbol	Meaning	Best Value	Approximate Value
m_e	Electron mass	$9.10938291(40) \times 10^{-31}$kg	9.11×10^{-31}kg
m_p	Proton mass	$1.672621777(74) \times 10^{-27}$kg	1.6726×10^{-27}kg
m_n	Neutron mass	$1.674927351(74) \times 10^{-27}$kg	1.6749×10^{-27}kg
u	Atomic mass unit	$1.660538921(73) \times 10^{-27}$kg	1.6605×10^{-27}kg

Table C2 Submicroscopic Masses [2]

2

Stated values are according to the National Institute of Standards and Technology Reference on Constants, Units, and Uncertainty, www.physics.nist.gov/cuu (accessed May 18, 2012). Values in parentheses are the uncertainties in the last digits. Numbers without uncertainties are exact as defined.

Sun	mass	1.99×10^{30}kg
	average radius	6.96×10^{8}m
	Earth-sun distance (average)	1.496×10^{11}m
Earth	mass	5.9736×10^{24}kg
	average radius	6.376×10^{6}m
	orbital period	3.16×10^{7}s
Moon	mass	7.35×10^{22}kg
	average radius	1.74×10^{6}m
	orbital period (average)	2.36×10^{6}s
	Earth-moon distance (average)	3.84×10^{8}m

Table C3 Solar System Data

Prefix	Symbol	Value	Prefix	Symbol	Value
tera	T	10^{12}	deci	d	10^{-1}
giga	G	10^{9}	centi	c	10^{-2}
mega	M	10^{6}	milli	m	10^{-3}
kilo	k	10^{3}	micro	μ	10^{-6}
hecto	h	10^{2}	nano	n	10^{-9}
deka	da	10^{1}	pico	p	10^{-12}
—	—	$10^{0}(=1)$	femto	f	10^{-15}

Table C4 Metric Prefixes for Powers of Ten and Their Symbols

Table C5 The Greek Alphabet

	Entity	Abbreviation	Name
Fundamental units	Length	m	meter
	Mass	kg	kilogram
	Time	s	second
	Current	A	ampere
Supplementary unit	Angle	rad	radian
Derived units	Force	$N = kg \cdot m/s^2$	newton
	Energy	$J = kg \cdot m^2/s^2$	joule
	Power	$W = J/s$	watt
	Pressure	$Pa = N/m^2$	pascal
	Frequency	$Hz = 1/s$	hertz
	Electronic potential	$V = J/C$	volt
	Capacitance	$F = C/V$	farad
	Charge	$C = s \cdot A$	coulomb
	Resistance	$\Omega = V/A$	ohm
	Magnetic field	$T = N/(A \cdot m)$	tesla
	Nuclear decay rate	$Bq = 1/s$	becquerel

Table C6 SI Units

Table C7 Selected British Units

Table C8 Other Units

Table C9 Useful Formulae