August 7, 2009

ERRATA FOR
RADIATION SHIELDING

J. Kenneth Shultis and Richard E. Faw

American Nuclear Society, La Grange Park, IL, 2000.
ISBN 0-89448-456-7

Location (Discoverer)	**As Is**	**Change to**
p. 41, Eq. (3.50)	$(1-\cos\vartheta_s)$	$q(1-\cos\vartheta_s)$
p. 45, 6 lines below Eq. (3.57)	"direction of the electron..."	"direction of the photon"
p. 84, Table 4.3 (Solomon)	table labels "T_w E_w"	switch to "E_w T_w"
p. 91, 10 line above Sec. 4.1.4	^{238}Pu/Be	^{239}Pu/Be
p. 97, 2 lines after Eq. (4.11) (Nixon)	date	data
p. 120, Problem 4-13 (Whittaker)	MeV^{-1} s^{-1}	MeV s^{-1}
p. 153, Problem 3 (Knight)	Table D.6	Table D.8
p. 154, Table in Problem 6 (Knight)	μ_{ppa}/ρ for 100 MeV should be 0.0143	
p. 162, line before Eq. (6.24) (Garland)	Eq. (6.12)	Eq. (6.11)
p. 169, Eq. (4.26) (Bently)	13/16	5/8
p. 172, Fig. 6.7 caption (Garland)	...radius a and height b...	... height a and radius b
p. 174, footnote (Garland)	Section 5.9.2	Section 5.8.2
p. 176, line above Eq. (6.83) (Garland)	If the medium is uniform in composition, but of variable density, the point kernel can be approximated as	If the medium is heterogeneous, the point kernel can be written as
p. 188, line after Eq. (6.112) (Garland)	$\mathcal{G}^o(r) = e^{-\mu r}/(4\pi r^2)$	$\mathcal{G}^o(r) = \mathcal{R}e^{-\mu r}/(4\pi r^2)$
p. 188, line after Eq. (6.114) (Garland)	Eq. (6.32)	Eq. (6.31)
p. 189, Eq. (6.116) (Knight)	first integral should be $\int_t^{t+H}$ and second integral should be $\int_{t+H}^{\infty}$	
p. 220, Table 7.1, last entry 4th column (Kohman)	7.98	8.98
p. 221 (Garland)	Add to the end of Eq. (7.4) the condition $\sum_{i=1}^{I} A_i = 1$	
p. 231, line after Eq. (7.27) (Garland)	Tables E.1	Tables E.10
p. 232, Eq. (7.29)	$D(P) =$	$\dot{D}(P) =$

cont.

Location (Discoverer)	**As Is**	**Change to**
p. 254, nmerator of Eq. (7.87)	$(\mu' - \mu)v\delta$	$-(\mu' - \mu)v\delta$
p. 255, Fig. 7.24	reverse curve labels from $\mathbf{v} = \mathbf{1.0}, \mathbf{0.8}, ..., \mathbf{0.0}$ to $\mathbf{v} = \mathbf{0.0}, \mathbf{0.2}, ..., \mathbf{1.0}$	
p. 259, Eq. (7.98) (Nixon)	$B(E', \lambda)$	$B(E, \lambda)$
p. 264, Problem 1	point source	point source emitting a 1-MeV photon per decay
p. 267, Problem 17(a) and 17(c) (Nixon)	0.667-	0.662-
p. 276, Fig. 8.3 caption (Garland)	Eqs. (8.4) and (8.7)	Eqs. (8.6) and (8.9)
p. 279, Table 8.2, entry for 90 cm (Knight)	9.89×10^{-15}	9.89×10^{-16}
p. 282, Eq. (8.23) (Garland)	$A^{1.3}$	$A^{1/3}$
p 283, Eq. (8.24) (Garland)	$1 = 1$	$i = 1$
p. 283, last sentence (Garland)	...hydrogen dose $D(r)$...	...hydrogen dose $D_{\mathrm{H}}(r)$...
p. 292, Eq. (8.10)	$k_f^i(0)\exp[-k_f^i x]$	$k_f^i \Phi_f^i(0)\exp[-k_f^i x]$
p. 293, Table 8.7, heading	μ_a (cm)	μ_a (cm^{-1})
p. 309, Fig. 8.13 caption (Garland)	NBS Type O3	NBS Type 04
p. 311, Fig. 8.15 caption (Garland)	NBS Type O3	NBS Type 04
p. 319, Eq. (8.102)	$J_n^+ \mathcal{R}\left(\frac{a}{Z}\right)...$	$J_n^+ \mathcal{R}\left(\frac{a}{Z}\right)^2...$
p. 323, Eq. (8.109)	$(\rho/\rho_o)^2$	$\kappa(\rho/\rho_o)^2$
p. 331, Prob. 18	^{252}U	^{252}Cf
p. 338, Fig. 9.3, x-axis caption (Hagler)	Dimensional distance	Dimensionless distance
p. 406, Eq. (10.160)	$(a_i + 1)^2$	$(A_i + 1)^2$
p. 406, line after Eq. (10.160); (Carron)	$(a_i E_m')$	$(A_i E_m')$
p. 419, Eq. (11.22)	$+\sin\vartheta_s \sin\vartheta \cos\Delta\psi'$	$-\sin\vartheta_s \sin\vartheta \cos\Delta\psi'$
p. 419, Eq. (11.23)	$\left[\frac{\cos\vartheta_s - \cos\vartheta\cos\vartheta'}{\sin\vartheta\sin\vartheta'}\right]$	$\left[\frac{\cos\vartheta\cos\vartheta_s - \cos\vartheta'}{\sin\vartheta_s\sin\vartheta}\right]$
p. 433, Eq. (B.8) (Hagler)	$e^{b\sec x}$	$e^{-b\sec x}$
p. 448, Table C.1, col. 2	abundances: ^{6}Li 92.5, ^{7}Li 7.5	abundances: ^{6}Li 7.5, ^{7}Li 92.5
p. 476, Table D.7, 1st col. heading (Knight)	Photon	Neutron
p. 510, Table G.3, col. 2, row 9; (Jenquin)	1.573(+01)	1.573(−01)

Minor Typos

Location	As Is	Change to
Line 2 after Eq. (4.11)	date	data
p. 119 Problem 8	The first sentence reads better as "Estimate the rate at which neutrons are produced by the decay of the activation product ^{17}N in a water cooled ..."	
p. 188 Eq. (6.112)	$\int_o^\infty$	$\int_0^\infty$
p. 223, line after Eq. (7.9)	a, b, c,...	a, b, c,...
p. 250 Eq. (7.73)	$\int_o^Z$	$\int_0^Z$
p. 277, first paragraph (Garland)	...fluence falls of...	...fluence falls off...
p. 318, 4 lines from bottom (Garland)	...must be correct...	... must be corrected...