Errata for B. Cameron Reed, *The Physics of the Manhattan Project* (Springer, 2011)

Last update 27 November 2011

Page	Correction
10	Second line after equation (1.31) should read: " … set $E_\gamma << E_m$, in which case …"
13	Two lines above equation (1.34) should read " … kinetic energy K_μ, then …"
17	Line 3: "… water or paraffin …"
30	In the second paragraph on this page, incorrect time units are given for some of the plutonium decays. The correct version should read: " … synthesizing them in the first place (2.87-year alpha-decay, 45-day electron capture, 88-year alpha-decay and 14-year beta-decay, respectively)."
44	Immediately above equation (2.9) should read " … respectively, is given by …"
52	Second line from bottom should read: Superscripts and subscripts *tamp* and *core* will be used …"
57	Tic marks along x-axis of Figure 2.6 are not wrong but are inconveniently spaced.
80	Equation (3.12) is based on conservation of both momentum and kinetic energy – an elastic collision.
112	Immediately before Eq. (4.29) should read " … and taking $R_n = 10^4$ s^{-1} …"
146	Line following Eq. (6.64) should read: "The integrals over ϕ, θ', and ϕ' can be …"
155	Problem 1.5(e): $K_O = 60$ MeV.
158	Answers to Problem 2.9 are 3.90 mm and $\rho_{compress}/\rho_o = 21.42$.
159	Problem 2.12. An exponent of 1/3 got dropped from the first bracketed term on the right side. The inequality should read

$$E > \frac{3}{2}\left(\frac{45\times10^{6}}{8\pi^{5}}\right)^{1/3}\left(\frac{ch}{e}\right)\left(\frac{\rho N_A}{A}\right)^{1/3} \sim \left(4.908\times10^{-5}\right)\left(\frac{\rho N_A}{A}\right)^{1/3} \quad \text{eV}\,.$$

162 Answers listed for problems 1.7, 1.8, 1.9, and 1.10 are respectively the answers to problems 1.9, 1.10, 1.11, and 1.12. Answer indicated for problem 2.10 (60 kg Pu bomb core) is actually the answer for problem 2.11.

169 Index. Definition of delta-value appears on page 3, not page 4.