# Errata — Boyd, Nonlinear Optics, Third Edition

(Complied July 5, 2014)

Page 25, Eq. (1.4.19): the argument of $x^{(2)}$ should be $2 \omega_1$, not $2 \omega_i$

Page 43, Caption to Table 1.5.1, first line. Please insert the number 1 in the blank space in the parentheses in $\chi^{( )}$.

Page 64, Problem 4, second to last line: replace h by k in the expression $\chi_{ijhl}$.

Page 78, Eq. (2.2.19). Please replace 8 in the numerator by 2 and $c^2$ in the denominator by $c^3$.

Page 90, Eq.(2.5.5): Place a minus sign in front of $i \Delta k z$ in the exponent.

Page 99, Eq. (2.7.19). The quantity $epsilon_0 c$ that appears in the denominator of the square root should actually appear in the numerator.

Page 126, Eq. (2.11.10), third expression: $\theta_s$ should be replaced by $\theta_T$.

Page 142, Eq. (3.2.25): second line of equation, second occurrence of E should read $E(\omega_p)$, not $E(\omega_q)$

Page 164, Eq. (3.5.16): Please add $\epsilon_0$ to the denominator of the second line of the equation, so that it has the same prefactor as in the first line.

Page 233, in the text above Eq. (4.4.25), the phrase "see also Eq (3.8.8a)" should be replaced by "see also Eq (3.9.8a)."

Page 326, half way down page, ac=Stark effect should be replaced by ac-Stark effect.

Page 347, Eq. (7.2.12), second line. Replace E by e in the exponential term.

Page 348, Eq. (7.2.19): Replace $k_1$ by $k_i$ on the left-hand side.

Page 352, the text above Eq. (7.2.33) reads "We take the derivative of Eq. (7.2.31) with respect to z and introduce Eq. (7.2.31) to obtain. . ." It should read "We take the derivative of Eq. (7.2.31b) with respect to z and introduce Eq. (7.2.31a) to obtain"

Page 356, immediately above Eq. (7.2.40): Replace the phrase "If we now introduce Eq. (7.2.38) into Eq. (7.2.40)" with the phrase "If we now introduce Eq. (7.2.38) into the equation given immediately above.

Page 365, in the line of text between Eqs. (7.3.19) and (7.3.20), replace "though" by "through."

Page 400, Eq. (8.2.13), omit the factor $16 \pi^2$.

Page 420, 4 lines below Eq.(8.4.26): the bulk modulus K of water is quoted given in units of $(m^2)/N$. The units are actually $N/m^2$.

Page 447, Eq. (9.3.39), first line. Please add a right parenthesis to the term in the exponent.

Page 480, Table 10.2.1: Third column, the units of this quantity are $m^{-1} sr^{-1}$, not $m^{-1} sec^{-1}$. Fourth column, the units of this quantity are m/TW and the first entry in this column should read $145 \pm 40$.

Page 483, the first (unnumbered) equation on the page: replace all occurrences of \omega with \Omega.

Page 486. Eq. (10.3.34): replace \omega_a in the denominator with \omega_S.

Page 494: In Eq. (10.4.29), the second equation should be $g_- = -\alpha_1$, not $g_- = -\alpha_1^*$. Also, in Eq. (10.4.31a), in the last form the exponential should read $e^{-\alpha_2^*z}$ and the expression (z) to the left of the comma should be omitted.

Page 576, Fig. 13.6.1. Part (b) the wave train below the graph of $E_{rad}$ versus t should be omitted. Figure caption, part (a): Please replace "following" by "preceding."

Page 577, Fig. 13.6.2: the label to the upper part of the energy-level diagram should read 3.17 times the jitter energy of the electron.

Page 589, two sentences before Eq. (A.1). This sentence, which now reads "It is defined such that the force between two charged point particles, each containing 1 coulomb of charge and separated by a distance of 1 meter, is 1 newton" should be replaced by the sentence "It is defined such that the force between two charged point particles, each containing 1 coulomb of charge and separated by a distance of 1 meter, is 9 giganewton, that is, the numerical value of $(4 \pi \epsilon_0)^{-1}$.