

“LASER FUNDAMENTALS” by William T. Silfvast, Published by Cambridge University Press

**CORRECTIONS TO THE SECOND EDITION HARD COVER EDITION
(published 2004)**

**(NOTE: THESE CORRECTIONS HAVE ALREADY BEEN MADE IN
THE SECOND EDITION SOFT COVER (PAPER BACK) EDITION
published in 2008)**

Inside front cover

Equation (7.16): add η^2 in the denominator of second equality

Chapter 2

page 25

Third line above Equation (2.80) delete dash after “restoring”

page 30

Third line from bottom: Change (2.99) to (2.98).

Chapter 3

page 65

Equation (3.53) – Parenthesis should be around the (1/2) factor in the numerator.

page 88

Problem 11. Change $n=3$ to $n=2$

Chapter 4

page 91

Equation (4.1) Change N_n to N_u

page 109

Under **Amorphous Crystal Broadening** – On the 14th line, 1.2×10^{-1} Hz should read 1.2×10^{11} Hz.

page 111

13th line after (4.49) – Change the symbol ν to the letter v .

page 132

Delete last line of problem 6. Replace with “given in Table 4-1.”

Chapter 5

page 178

Equation (5.45) $e^{(\dots)kT}$ should be $e^{(\dots)/kT}$

page 184

9th line from bottom of page – change “current can flow” to “recombination radiation can occur”.

page 189

Figure 5-29 – in expression above $n=1$, delete squared factor around parenthesis and change \hbar to \hbar^2 in denominator.

Chapter 6

page 199

3rd and 4th lines from bottom of page - change “divided equally among all the atoms of” to “distributed throughout”.

Chapter 7

page 246

Figure 7-10 – Change $\sigma_{ul}(m^2)$ for Nd:YAG to $\sigma_{ul} = 2.8 \times 10^{-23}$.

page 249

7th line from bottom of example: 10.4 should be 10.5

page 253

Line 3 – delete the word “are”.

Chapter 8

page 257

2nd line – change $N_u^0 = R_u / R_l$ to $N_u^0 = R_u / A_{ul}$

page 258

On line immediately following Equation (8.10) - change $g_l B_{lu}(\nu) = g_l B_{lu}(\nu)$ to $g_l B_{lu}(\nu) = g_u B_{ul}(\nu)$.

page 262

First line: change “power” to “intensity”

page 272

Equation (8.58) Change T_c to t_c

- page 272 Second line from bottom – change (8.46) to (8.60).
- page 289 Problem 8 - Change E_0/E_{sat} to F_0/F_{sat}
- Chapter 9**
- page 296 Equation (9.10) – change minus sign after equals sign to plus sign
- page 301 Equation (9.24) – change the ratio (6/4) to (4/6). Two lines below that change 299 to 132 in two places.
- Chapter 12**
- Page 405 Equation (12.1) – second line: change $r_1 =$ to $\theta_2 =$
- page 418 Equation (12.44) change $\left(\frac{1+g}{4(1-g)}\right)$ to $\left(\frac{1+g}{4(1-g)}\right)^{1/2}$
- Page 418 Equation (12.45) change $\left(\frac{1}{1-g^2}\right)$ to $\left(\frac{1}{1-g^2}\right)^{1/2}$
- page 418 Second line under “HALF SYMMETRIC CAVITY” – Change R2 to R₂.
- page 431 First line – Change z_1 to (d- z_1).
- Second line – Change (d- z_1) to z_1 .
- Equation 12.95 – In the A coefficient of the right hand matrix, include the parenthesis after z_1 and delete it after the f.
- Chapter 14**
- page 495 Table 14-1 – For σ_{ul} for 632.8nm – change 3×10^{-7} to 3×10^{-17} .
- Inside back cover**
- Change electron rest mass symbol from M_e to m_e