

Errata for the First Printing of *Pedrottis' Introduction to Optics, 4th ed.*

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13th November 2025

The first and second printings may be distinguished from each other based on the **top line of the table on page xxvi**:

In the **first printing** this reads:

Physical Optics (=Wave Optics)

Laser Optics

In the **second printing** this reads:

Traditional Course: A Survey of Optics

Traditional Course: Emphasis on Ray Optics

Corrections given below are listed by chapter. Line numbers refer to lines of text omitting equations, headings, figures, and figure captions. “IT” stands for *integrated testlet*.

Preface

p. xxvi, top line: Change to: “Traditional Course: A Survey of Optics” and “Traditional Course: Emphasis on Ray Optics”.

p. xxvii, top line: Change to: “Physical Optics (=Wave Optics), cont’d” and “Laser Optics, cont’d”.

Chapter 1: The Optical Landscape

p. 11, footnote 11: Change “*Commission Internationale de l’éclairage*” to “*Commission Internationale de l’Eclairage*”.

p. 12, line 5: Change to: “This region is often subdivided into categories, such as UV-C in the range 100–280 nm, UV-B...”.

Chapter 2: Ray Optics

p. 28, Table 2.1: Change both occurrences of “see Chapter 3” to “see Chapter 11”.

p. 32, line 33: Change to: “We now know that some degree of bending (which we attribute to diffraction) does occur, and requires an extension of Huygens’ original theory through both an **obliquity factor** and consideration of wavelet amplitudes and phases, introduced by Fresnel, and discussed in Chapter 21.”

p. 82, Figure 2.41: Change ω to w .

p. 98, Qu. 2.28: Change “Abbé’s method” to “Abbe’s method”.

Chapter 3: Understanding Optical Instruments

p. 135, line 22: Change the text to read “If instead the specimen is illuminated by a collimated beam then the diffracted field forms at the back focal plane of the objective which propagates to the image plane of the objective.”.

p. 135, footnote 19: Change “Abbé” to “Abbe”.

p. 158, Qu. 3.11: Change the text to read, “...the average of the focal lengths, measured in cm, is, for an image...”.

Chapter 4: Waves

p. 166, footnote 2: Change $\cos(\theta)$ to $\sin(\theta)$.

p. 178, line 18: Change the text to read, “...far-field beam divergence, θ_{FF} , given here in radians, is larger...”.

p. 179, line 19 & p. 180, Figure 4.9 caption & p. 183, line 13: Change $\vec{k} = (\vec{E} \times \vec{B}) / \omega$ to $\vec{B} = (\vec{k} \times \vec{E}) / \omega$.

p. 184, line 27: Change “along the +x-direction” to “along the +z-direction”.

p. 189, Qu. 4.17: Change “a harmonic wave equation for...” to “an expression for the...”.

Chapter 5: Light Sources, Displays, and Detectors

p. 211, line 15, change “Comic Microwave Explorer (COBE)” to “Cosmic Background Explorer (COBE)”

p. 233, Qu. 5.14: Change the text to read, “(spins aligned; triply degenerate)” and “(spins opposed; singly degenerate)”.

Chapter 6: Superposition of Waves

p. 246, line 2: Change $180^\circ - \alpha_2 - \alpha_1$ to $180^\circ - (\alpha_2 - \alpha_1)$.

p. 247, line 24: Change the text to read, “...phased overlapping beams is (on average) simply the sum...”.

p. 250, footnote 4: Change the text to read, “...a negative sign in the equation analogous to Eq. (6.35), although ...”.

p. 254, Figure 6.7(c): Change E_0^2 to $4E_0^2$.

p. 259, Qu. 6.3: Change “phase constants” to “initial phases”.

p. 260, Qu 6.11: Change “given by Eq. (6.35)” to “given by Eq. (6.34)”.

p. 260, Qu. 6.16: In (a) change to: $v_g = \frac{c}{\sqrt{\epsilon_r}} \left(1 + \frac{\omega}{2\epsilon_r} \frac{d\epsilon_r}{d\omega} \right)^{-1}$; In (b) change to: $v_g \cong c \left(1 + \frac{\omega^2 A}{(\omega_0^2 - \omega^2)^2} \right)^{-1}$

p. 260, Qu. 6.17: Change equation to: $n = A + B\lambda_0$

p. 260, Qu. 6.18: Change the last sentence to begin “Derive the equation analogous to Eq. (6.49) for the group velocity as a function of the wavelength *inside* the medium, λ , and from this show that...”

p. 261, IT, line 6: Change the text to read, “...where $\epsilon_j = \epsilon_0 + j\delta$, and j runs from 1 to N , which of the following...”.

Chapter 8: Interferometry and Multilayer Films

p. 308, Eq. (8.15): Add a tilde to E_0 .

p. 317, last sentence: Change to “This depends on the width of the transmittance peaks and to determine this we adopt the somewhat arbitrary criterion that the *minimum separation between two peaks that allows them to be resolved is the FWHM of the peaks.*”

Chapter 9: Coherence

p. 356, line 1: Change “... the periodic top hat function of Figure 9.6 is plotted ...” to “... a periodic top hat function with a duty cycle of around 25% is plotted ...”.

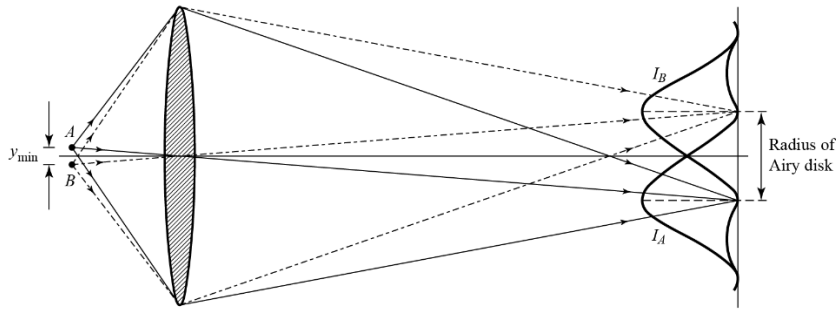
Chapter 10: Fraunhofer Diffraction

p. 378, line 4 change “introduced in Section 9.5” to “introduced in Section 9.5.2”

p. 389, line 35: Change to: “...of their Airy disks, as shown for the analogous case of two thin slits in Figure 10.9.”.

p. 390, Figure 10.9 caption: Change to: “...images from two thin slits, with sinc^2 intensity behavior, that just...”.

p. 391, Figure 10.10: replace with the better-scaled figure shown below:



p. 391, line 5: Change to: “...the numerical aperture of this lens measured from the object side. See Section 3.7 for more details.”.

Chapter 11: Prisms, Diffraction Gratings, and Spectrometers

p. 408, line 6, as it is a first definition, change “*interstellar medium*” to “**interstellar medium**”

p. 412, line 17, change “Cauchy’s equation (” to “Cauchy’s equation (” - that is unbold the opening bracket

Chapter 12: Reflection and Transmission at Surfaces

p. 450, equation preceding Eq. (12.11): Change to: $E_1^{\perp, \text{away}} A - E_2^{\perp, \text{towards}} A = \sigma A / \epsilon_0$.

p. 450, Eq. (12.11): Change to: $E_1^{\perp, \text{away}} - E_2^{\perp, \text{towards}} = \sigma / \epsilon_0$.

p. 450, line 10: Change “is discontinuous by” to “is discontinuous due to”.

p. 454, Eq. (12.30): Change middle equation to $\tilde{\mathbf{E}}_r = (\tilde{E}_r \cos \theta_r \hat{\mathbf{x}} + \tilde{E}_r \sin \theta_r \hat{\mathbf{z}}) e^{i(\tilde{\mathbf{k}}_r \cdot \tilde{\mathbf{r}} - \omega t)}$.

Chapter 13: Optical Fibers and Communications Technology

p. 474, line 5: Change “Imaging can be achieved...” to “Image transmission can be achieved...”.

p. 485, line 16: Change second m_x to m_y .

Chapter 14: Mathematical Treatment of Polarization

p. 517, line 17: Interchange $\alpha = 0^\circ$ and $\alpha = 90^\circ$.

p. 520, line 1: Change the text to read “...with negative angular frequency term, is...”.

p. 522, line 8: Remove the tildes from $\tilde{E}_{0x}$ and $\tilde{E}_{0y}$.

p. 522, line 9: Change the text to read “...the major axis (if $E_{0x} > E_{0y}$) or minor axis (if $E_{0y} > E_{0x}$) inclined at...”.

p. 523, equation preceding Eq. (14.14): Change Ψ to ψ .

p. 530, footnote 8: Change equation to $\mathbf{M}' = \mathbf{R}(\theta)\mathbf{M}\mathbf{R}^T(\theta)$.

p. 531, Eq. (14.24): Change $\mathbf{M}_{\text{LP},\theta}$ to $\mathbf{M}_{\text{Rot},\theta}$.

p. 533, line 16: Change “be seen to be positive” to “be seen to be negative”.

p. 537, line 19 & line 20 & footnote 11: Change “passes only” to “passes without loss” and “the polarization of interest” to “this polarization”.

p. 537, footnote 11: Change “ $+45^\circ$ to the slow (and also the fast)” to “ -45° to the slow (and $+45^\circ$ to the fast)”.

p. 537, Eq. (14.28) & p. 538, Eq. (14.31): Remove minus signs from $S_3 = -2\text{Im}(\tilde{E}_{0x}\tilde{E}_{0y}^*)$ and $S_3 = -2\langle\text{Im}(\tilde{E}_{0x}\tilde{E}_{0y}^*)\rangle$ respectively.

Chapter 15: Polarization in Practice

p. 553, line 16: Change the text to read “...which then contains four CaCO_3 molecules...”.

p. 556, line 13: Change the text to read “...with $\Delta\varphi = (4m+1)\pi/2$ for an m th-order $\lambda/4$ -plate”.

p. 561, line 7: Change “1 dm (= 10 mm)” to “1 dm (= 10 cm)”.

p. 563, Fig. 15.20, caption, move 2nd paragraph: “Note that... for quartz.” to immediately after Eq. (15.10).

p. 564, line 4: Change “Using Eq. (13.10)” to “Using Eq. (15.10)”.

p. 567, Qu. 15.5: Change the penultimate question to “Polarization state of outgoing ray(s)?”.

p. 568, Qu. 15.10: Change the text to read “...see Figure 15.25; note this figure applies to a positive uniaxial crystal.”

p. 568, Qu. 15.13: Add “linear” in front of “polarizer”.

p. 569, Qu. 15.15: Change “ 20.5° ” to “ $20.5\text{ (deg/dm)(cm}^3/\text{g)}$ ”.

p. 569, Qu. 15.20: Change the text to read “...vary between different regions...”.

p. 569, Qu. 15.21: Change the text to read “...light at 589 nm strikes the plate...”.

Chapter 16: Light-Matter Interactions

p. 578, line 9: Change “...are of a similar size to the wavelength...” to “...are larger than the wavelength...”.

p. 578, footnote 7: Change “wavefunctions” to “wave functions”

p. 586, line 8: Change the text to read, “...and spontaneous emission rates per unit volume were given...”.

p. 592, first paragraph: change “rate” to “rate per unit volume”, and change to: “... N_1 may be $4/\text{m}^3$ and N_2 may be $9/\text{m}^3$...”.

p. 592, line 5: Change expression to $(g_2/g_1 \times 0.03) \times g_1 \times (N_1/g_1)$.

p. 595, Eq. (16.41): Add brackets to the integrand so this is $E_0 \exp((i(\omega - \omega_{l2}) - 1/2\tau_2)t)$.

p. 595, Eq. (16.42): Change the denominator to $(-i(\omega - \omega_{l2}) + 1/2\tau_2)$.

p. 597, Eq. (16.46) & p. 599, part (a): Change to $\Delta\nu_D = \frac{2\nu_{l2}}{c} \sqrt{\frac{2k_B T \ln(2)}{M}}$.

p. 602, IT, line 6: Change $\sigma_{21}(\nu_{l2})$ for the Ar^+ laser to $2.8 \times 10^{-12} \text{ cm}^2$.

Chapter 17: Lasers and Laser Operation

p. 612, line 24: Change “is thousands of kilometers” to “is several kilometers”.

p. 645, IT, part (iv): Change answer C to $1.2 \mu\text{J}$.

Chapter 18: Laser Beams and Laser Cavities

- p. 651, footnote 2nd line, equation has been omitted – should read “deduced that $\tilde{q}(0) = z + iz_0$, with ”
- p. 670, line 8: Change the expression to $(\pi w_{01}^2 / \lambda)^2 \gg (Z_1 - f)^2$.
- p. 670, line 19: Change to “These modes are commonly encountered as they have the lowest loss for fixed-size mirrors, which is why we examined them so thoroughly.”
- p. 671, footnote 14: Change “wavefunctions” to “wave functions”
- p. 677, Qu. 18.7(c): Change the equation to $w_0^2 = \frac{\lambda d}{\pi} \left[\frac{g_1 g_2 (1 - g_1 g_2)}{(g_1 + g_2 - 2g_1 g_2)^2} \right]^{1/2}$.
- p. 678, Qu. 18.13: Change the last sentence to read “...be formed from the matrices?”.
- p. 680, Qu. 18.31(b): Change text to read “...coincide with the 0, 0, $q + 1$ mode”

Chapter 20: Fourier Optics: Imaging and Spectroscopy

- p. 737, footnote 9, publisher was omitted from reference, to be consistent, change “Concepts of Classical Optics, ” to “Concepts of Classical Optics, Dover Publications,”.
- p. 740, first equation in box, change denominator from “soise” to “noise”, change subscript “FTS” to “FT” to be consistent with the rest of this section.
- p. 745, IT, part (ii): Change expression for the resolving power to $\mathcal{R}_{\text{Mich}} = 8f_{\text{Mich}}^2 / a^2$. Change “ $\mathcal{R}_{\text{Mich}}$ ” on the right hand side of all answers to “ $\mathcal{R}_{\text{Mich}}^{-1}$ ”.
- p. 745, IT, part (iii): Change the last sentence to, “By writing the general grating equation, Eq. (11.26), in terms of the semi-sum and semi-difference of θ_i and θ_m (so $\theta = (\theta_i + \theta_m) / 2$ and $\phi = (\theta_i - \theta_m) / 2$), then which of the following is the resolving power of the instrument? [Note that when θ_m changes by $d\alpha$ then θ changes by $d\alpha / 2$].” Change answer A to $\mathcal{R}_{\text{grat}} = 2f_{\text{grat}} \tan^2 \theta / W$.
- p. 746, IT, part (iv): Change h/f to h/f_{grat} .

Chapter 21: Fresnel Diffraction

- p. 748: footnote 1: Change first sentence to: “We shall see that the Fresnel–Kirchhoff formula that we arrive at is not, in some sense, based on a “real” model, as evidenced in part by the phase of each secondary wavelet being $\pi / 2$ rad *ahead* of the primary wave.”
- p. 748: footnote 1: In last sentence change “Fresnel–Kirchhoff principle” to “Fresnel–Kirchhoff formula”.
- p. 750, line 8: Change to: “These two corrections and a value for b were initially introduced in an ad hoc manner...”
- p. 750, footnote 2: Change “...Green’s integral theorem...” ...to “Green’s second identity...”.
- p. 755, line 7: Add the sentence “When $r' \rightarrow \infty$, $S_n \rightarrow \pi r_0 \lambda$ and an aperture of radius a contains $N = a^2 / r_0 \lambda$ (the **Fresnel number**) of zones.”.

Chapter 22: Holography

- p. 797, Qu. 22.1: Change “Eq. (7.13)” to “Eq. (7.14)”.

Chapter 23: Optical Properties of Materials

- p. 813, line 11: Change to “The **static conductivity**, σ , is defined through Ohm’s law applied to the DC case,”
- p. 816, line 3: Change the text to read, “...whose value generally determines...”.
- p. 816, line 19: Change the text to read, “...so they are typically opaque to visible light (and longer wavelengths) and transparent to ultraviolet light (and shorter wavelengths)”.
- p. 817, Figure 23.3 caption: Change “...with opacity predicted...” to “with opacity and high reflectance predicted...”.
- p. 817, line 1: Change “...reflective in the visible region...” to “...reflective across the visible region...”.
- p. 819, Qu. 23.6: Change the text to read, “...dispersion equation far from any resonances:”.
- p. 819, Qu. 23.7(b): Change the text to read, “Given a number density of atomic dipoles of 10^{28} m^{-3} , what is the...”.

Chapter 24: Nonlinear Optics and the Modulation of Light

- p. 827, line 2: Change the text to read, "... $P_2 = 0$ and thus $\chi_2 = 0$ ".
- p. 828, line 19: Change the text to read, "...give rise to different values here, with: $k_{2\omega} = 2n_{2\omega}\omega/c$ and $2k_\omega = 2n_\omega\omega/c$ ".
- p. 831, line 13: Change the two equations to $\omega_s = \omega_2$ and $\omega_p = \omega_1$.
- p. 831, line 20: Change the text to read, "...pumped by a highly coherent fixed-wavelength light source...".
- p. 845, line 6: Change the text to read, "The acoustic wave (see the left of Figure 24.14)...".
- p. 845, line 9: Change the text to read, "...from the regions of higher refractive index change..".
- p. 845, line 12: Change "...transmission phase grating (see Section 11.5)" to "...volume phase grating (see Section 11.6)".
- p. 845, line 16: Change the text to read, "...then regions of a particular refractive index represent extended planes...".
- p. 845, Figure 24.14 caption: Change the text to read, "...“planes” of particular refractive index within the Bragg regime..".

Chapter 25: Laser Technology and Applications

- p. 875, line 7: Change the text to read: "...and pumped by a fixed-wavelength pump laser..".
- p. 882, Qu. 25.10: Remove "was 25.7".
- p. 883, Qu. 25.18: Change "Eq. (4.52)" to "Eq. (4.53)".

Chapter 26: Optics of the Eye

- p. 892, Table 26.1; second column from the right: Change " W_v " to " w_v ".
- p. 892, Table 26.1; Note a: Change "caandela" to "candela".
- p. 892, Table 26.1; Note b: Change "Section 1.4" to "Section 1.5".

Appendix C: Bibliography and References

- p. 924, penultimate line: "Theme VI" should read "Theme V".

Appendix D: Answers to Selected Questions

- p. 928, Ans. 4.9: should read $y(x, t = 0) = 15 \cos(2\pi x / \lambda - 0.523)$
- p. 929, Ans. 6.2: (b) should read $E_R = 8.19 \cos(0.834 - \omega t)$
- p. 929, Ans. 6.15: second equation should read $v_g = c / 1.7$
- p. 929, Ans. 6.17: should read $v_g = c / A = \text{constant}$
- p. 933, Ans. 11.3: should read (a) crown: $A = 1.505$, $B = 3665 \text{ nm}^2$, $n_d = 1.516$; flint: $A = 1.686$, $B = 14140 \text{ nm}^2$, $n_d = 1.727$ (b) crown: $-3.614 \times 10^{-5} \text{ nm}^{-1}$; flint: $-1.394 \times 10^{-4} \text{ nm}^{-1}$ (c) crown 2780, 2.1 Å; flint: 10730, 0.55 Å.
- p. 933, Ans. 11.7: should read 3.89° , 4.89°
- p. 934, Ans. 13.7: should read 129.
- p. 935, Ans. 14.6: should read (a) $\tilde{\mathbf{E}} = E_0/2(\sqrt{3}\hat{\mathbf{y}} + \hat{\mathbf{z}})e^{i(kx - \omega t)}$; (b) $\tilde{\mathbf{E}} = E_0/\sqrt{3}(2\hat{\mathbf{z}} - i\hat{\mathbf{x}})e^{i(ky - \omega t)}$; (c) $\tilde{\mathbf{E}} = \hat{\mathbf{z}}E_0e^{i(k(x+y)/\sqrt{2} - \omega t)}$
- p. 936, Ans. 14.20: (a) and (b) should read "inclination angle μ' ".
- p. 936, Ans. 15.5: (a) should read "any polarization state possible", (b) should read "same polarization out as in".
- p. 936, Ans 15.6: (b) should read "1, 3, 5, or 7 multiples of 0.015 mm".
- p. 936, Ans. 15.12: (a) should read 53.06° .
- p. 936, Ans. 15.16: (b) should read 50 deg/mm.
- p. 937, Ans. 15.23: (b) should read "2.03% of I_0 ".
- p. 940, Ans. 23.1: Change K_I to ε_I .
- p. 940, Ans. 24.8: Change V_{HW} to $V_{\lambda/2}$.
- p. 941, Ans. 25.5: should read " $1.0 \times 10^{17} \text{ W/m}^2$; larger as the beam widths are different and here the peak intensity is found."
- p. 941, Ans. 26.10: (a) $A = 0.75947$, $B = 5.1089$, $C = -0.05045$, $D = 0.65063$, (b) 12.9 mm in front; 22.3 behind; 1.97 mm behind; 2.43 mm behind.

Figure Attributions

Change "Maurice Franco" to "Maurice Françon" in the following: p. 288, Fig 7.18 & p. 320, Fig. 8.14 & p. 372, Fig 10.0 & p. 375, Fig 10.1 & p. 384, Fig 10.6 & p. 393, Fig 10.12 & p. 399, Fig 10.15 & p. 566, Fig. 15.22 & p. 706, Fig 19.13 & p. 710, Fig 19.16 & p. 748, Fig 21.1 & p. 757, Fig. 21.7 & p. 771, Fig 21.14 & p. 775, Fig 21.17.

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June 30, 2026

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Corrections given below are listed by chapter. **Significant errors are highlighted in turquoise**, with the remainder being minor typos or clarifications. Line numbers refer to lines of text omitting equations, headings, figures, and figure captions.

Chapter 2: Ray Optics

p. 45, Box 2.4: Before the “Lens attributes” title add a new title “Refractive surface attributes” with one bullet point below it: “Concave surfaces have negative radii of curvature, convex surfaces have positive radii of curvature”.

p. 66, line 16: Change to: “Thus within the image formation equations for refraction, a real object located on the left of a vertex (and a virtual image on the left) adopts a negative distance; a real image on the right (and a virtual object on the right) adopts a positive distance.”

p. 69, Figure 2.33 caption: Add at the end “... and here $R_1 > 0$ and $R_2 < 0$ ”.

p. 86, line 15: Change “ F_2, F_2 , and N_1 , respectively” to “ F_2, F_1 , and N_1 , respectively”.

Chapter 3: Understanding Optical Instruments

p. 127, Figure 3.15 caption: Change second sentence to read “As shown both eyepieces can be adjusted by a fine screw thread at the eye lens to optimally focus an image for a particular observer.”

p. 127, line 7: Change “...which includes correction...” to “...which improves correction...”.

p. 128, line 27: Change $M \approx 25 / f_{\text{eff}}$ to $M = 25 / f_{\text{eff}}$.

p. 128, line 29: Change text to read “...that is, the distance from the eye lens to the exit pupil. Typical eyepieces...”.

p. 128, line 31: Change “...while in unmodified form the Ramsden eyepiece has zero eye relief...” to “...while a high power Ramsden eyepiece also has small eye relief...”.

p. 130, line 12: Change sentence to read “This is given by Eq. (2.71), and here is negative, giving an inverted image.”.

p. 132, line 24: Change text to read “The range of angles over which an optical component can collect or emit light is indicated by its **numerical aperture**, NA. For a microscope objective this is defined as the product of the refractive index of the space in contact with the lens and the sine of the maximum half-angle of rays from an on-axis object point intercepted by the lens.”.

p. 133, line 6: Change text to read “...at an angle greater than α_0 would miss the open area of the lens in the microscope.”

p. 133, Figure 3.18 caption: Add at the end “The open area of the lens is implied.”

p. 133, footnote 16: Change “f number” to “f-number”

p. 134, line 7: Change “...throughout a given space.” to “...throughout a space with only flat interfaces.”

p. 135, footnote 19: Change $y_{\min} = \lambda / (NA + NA_{\text{cond}})$ to $y_{\min} = \lambda / NA$.

p. 136, line 12: Change text to read “...in a vacuum so living cells cannot be imaged.”

p. 152, Eq. (3.27): Change equation to:

$$\text{depth of field} = \frac{2dDs_0f(s_0 - f)}{D^2f^2 - d^2s_0^2 + 2d^2s_0f - f^2d^2}$$

p. 154, line 14: Change “...and the form of each lens.” to “...and the power of each thin lens.”

Chapter 4: Waves

p. 178, line 9: Change the text to read “...from spherical end mirrors with some additional square prism symmetry.”

p. 184, line 27: Change “along the +y-direction” to “along the +z-direction.”

Chapter 9: Coherence

p. 356, Figure 9.8: Add a butterfly icon to the caption indicating that an interactive animation exists.

Chapter 10: Fraunhofer Diffraction

p. 391, Figure 10.10 caption: Change to “The separation of two self-luminous point sources that just satisfies Rayleigh’s resolution criterion...”.

Chapter 11: Prisms, Diffraction Gratings, and Spectrometers

p. 412, line 16: Change the text to read “...region of normal dispersion an approximate empirical relationship...”.

Chapter 15: Polarization in Practice

p. 562, line 5: Add to the end of the sentence “...for sodium light.”

p. 562, line 7: Change the text to read “...to the sample type of interest.”

Chapter 17: Lasers and Laser Operation

p. 643, Qu. 17.37: Change both instances of κ to κ_2 .

Chapter 18: Laser Beams and Laser Cavities

p. 647, line 4: Change “...with square prism symmetry.” to “...with substantial square prism symmetry.”

p. 647, Fig. 18.1 caption: Before the parentheses, add “Clear Hermite-Gaussian modes are seen in (b).”

p. 648, line 5: Change text to “We start by considering the fundamental Gaussian mode, with its cylindrical symmetry, and then generalize this for cavities with substantial square symmetry.”

Chapter 23: Optical Properties of Materials

p. 811, Table 24.4, top line: Change both instances of λ to λ_0 .

Chapter 24: Nonlinear Optics and the Modulation of Light

p. 839, line 14: Change the text to read, “...magneto-optic effect, giving rise to a circular birefringence proportional to the...”.

p. 840, line 6: Change “Tm” to “Tb”.

p. 840, line 21: Change the text to read “...rotation β in the direction of the current generating the magnetic field predicts...”.

p. 840, Eq. (24.15): Change equation to:

$$\beta = - \left(\frac{e}{2m} \frac{\lambda_0}{c} \frac{dn}{d\lambda_0} \right) Bd.$$

p. 840, line 24: Change the text to read “...and $dn/d\lambda_0$ is the *dispersion* (the change in the refractive index with wavelength).”

p. 840, both equations after Eq. (24.16): add a minus sign on the right hand side of both equations for V .

p. 840, line 27: remove “rotatory” from “...and the rotatory dispersion...”.

p. 841, Table 24.4, top line: Change both instances of λ to λ_0 .

p. 841, Figure 24.9: In the top right of the figure $\vec{E}$ should be rotated *counterclockwise* from the vertical dashed line by β .

Chapter 26: Optics of the Eye

p. 894, line 1: Change the text to read “...17 mm in the relaxed state (distant vision) and, for young eyes at least, 14 mm in the tensed state (near vision). For a more precise model a variety of schematic eyes have been designed. Although parameters such as lengths and...”.