An Introduction to Atmospheric Radiation, 2nd Edition

(Errata)

p. 4, Figure 1.3: the lines for dθ should be on the same meridian.

p. 11, 1st line below Eq. (1.2.5) and in Eq. (1.2.6): k should be capital K.

p. 21, 5th line: "Δν" should be "Δν′".

p. 23, 1st line below Eq. (1.3.14): "width" should be "half-width". Also, 3rd line below subsection 1.3.2.2, add ", v,' after "a velocity component".

p. 28, 2nd line below Eq. (1.4.6): "s" should be "s₁".

p. 35, Exercise 1.18: Delete ",where uₜ is the energy density" but add ". Note that in the derivation the energy density uₜ is".

p. 43, the figure caption in Figure 2.4: "1870 and 1860" should read "1976".

p. 46, 2nd line: the latitude "ϕ" should be "ϕ".

p. 47, 1st line: below Eq. (2.2.6): "Subsection 2.2.3" should read "Section 2.2.3".

p. 57, Figure 2.10: in the ordinate, "Solar Radiance" should read "Solar Irradiance". Also, 2nd line: Between “with” and "blackbody", add "the Planck curves for".

p. 74, 4th line: “Fig. 2.9” should be "Fig. 2.10".

p. 80, 1st line above Eq. (3.2.11a): insert “and neglecting the last reaction in Eq.(3.2.9a), which is small below 50-60 km” after “On adding Eq. (3.2.9a) and (3.2.9b)”. Also, 1st line below Eq. (3.2.11a): "K₁₂" should be "K₁₂".

p. 88, line 9: Replace “r. Thus, we have” by “r for the far field. In scalar form we may write”. Also, replace bold letters “E, p, p₀, and E₀” by plain letters “E, p, p₀, and E₀” in Eqs. (3.3.2)–(3.3.4).

P 103, Eq. (3.4.2): I (z, μ', ϑ') in the integral should be I (z; μ', ϑ').

p. 111, the figure caption in Figure 3.20: "p’" after “from point” should be capital "P’".

p 126, 1st line above Eq. (4.2.14): Between "the spectral transmittance" and "as", add "with a mean wavenumber subscript ν'".

p. 131, Eq. (4.3.8): "ν₀" should be "ν₀ subdivision.

p. 132, "second (4.3.10)" should read "(4.3.10a)". Also, in this equation and 2nd line from below, change all "i" to "j".

p. 133, 2nd line in the 2nd paragraph: Change "10 intervals" to "nine intervals". Also, in Eq.(4.3.13), "νj" should be “Δνj”.

p. 134, Figure 4.7 (a): two "x's" are missing in 4dk.
p. 138, the figure caption in Figure 4.9: “ΔΦ” should be “Δν”.

p. 147, Eq. (4.4.6): The term \( \exp \left[ -\left( \frac{\tilde{a} t + \tilde{a}_D^2 t^2}{4} \right) \right] \) should be \( \exp \left[ -\left( \tilde{a} t + \frac{\tilde{a}_D^2 t^2}{4} \right) \right] \).

p. 166, Ex. 4.1, line 5: "atm cm" should read "cm atm". Also, Exercise 4.2, 2nd line: \( x = su/2\pi\alpha \), "s" should be capital "S".

p. 167, Ex. 4.8: in 1st and 2nd equations, “\( \tilde{s} \) and \( c_\nu \)” should be “\( \bar{s} \) and \( c_\nu \)”.

p. 170, line 18: "grant nuclei" should read "giant nuclei".

p. 207, equation numbers: “Eqs. (5.3.38a) and (5.3.37b)” below Eq. (5.3.37a) should be “Eqs. (5.3.37b) and (5.3.37c)”, respectively. Also, 1st line below Eq. (5.3.38a), the equation number “(5.3.38a)” should be “(5.3.37b)”.

p. 211, Eq. (5.3.45): the first "\( \sigma_\delta \)" should be "\( \sigma_0 \)".

p. 217, Eq. (5.4.1c), the 1st line: a common "," is missing after \( e^\ell \).

p. 221, 2nd line below Eq. (5.4.13): “\( e_\alpha \)” should be “\( e^{\alpha} \)”.

p. 223, Eq. (5.4.20), the last term should be “-ln (RN)/(2kN)’’.

p. 227, line 12: "Eq. (5.4.23a)” should be "Eq. (5.4.22)".

p. 230, 1st line below Figure 5.20: Between "a plate with" and "attachments", add "two types of".

p. 235, 3rd line in the second paragraph: After "Figure 5.24", delete "using the same cirrus cloud model shown in Fig. 5.23’’.

p. 255, 4th line in Ex. 5.15: "Eq. (5.4.22a)’’ should be "Eq. (5.4.22)’’.

p. 258-p. 261, Eqs. (6.1.1), (6.1.5), (6.1.6), (6.1.12): "+ (1 – \( \varpi \))B[T(\tau)]” should read "– (1 – \( \varpi \))B[T(\tau)]”.

p. 268, the last term in Eq. (6.2.43): an exponent "\( e \)” is missing after ) and before -.  

p. 271, in Eq. (6.2.61), \( F(\tau_N) \) should be \( F(\tau_N) \).

p. 284, in Eq. (6.3.42), “\( P(\mu, -\mu_0) \)” in the second term of the right-hand side should be “\( P(-\mu, -\mu_0) \)”.

Also, in Eq. (6.3.43), “\( \tau \)” inside the exponential term in the first term of the right-hand side should be “\( \tau_1 \)”.

p. 290, Eq. (6.4.1b): a common "," is missing in \( I_{\mu,\tau_{\top}} \).

p. 296, Eq. (6.4.23): "\( T_{12}(\mu, \mu_0^\prime) \)” should read "\( T_{12}(\mu, \mu_0) \)”.

p. 306, Eq. (6.5.17b): The minus signs before (\( \varepsilon u \ldots \)) and the eigenvalue \( k\tau_1 \) in the numerator should be removed.

p. 310, Eq. (6.5.30c & d): The right-hand sides of these equations should be divided by \( (1 – \mu_0^2 k^2) \).
p. 314, line 6 after Eq. (6.5.46): add "and including thermal infrared emission" after "After a lengthy and laborious derivation".

p. 316, line 9 in the 2nd paragraph: "Eq. (6.4.46)" should read "Eq. (6.5.46)".

p. 318, Eq. (6.6.3e): "cos (ξ + δ₀)" should be "sin (ξ + δ₀)".

p. 320, Figure 6.15: "Eₐ" should be "Eₗ".

p. 337, Eq. (6.7.23a): The term \( \left( \frac{(\ell - |m|)!}{(\ell + |m|)!} \right) \) should be \( \left( \frac{(\ell - |m|)!}{(\ell + |m|)!} \right)^{1/2} \).

p. 338, line 3 after Eq. (6.7.26): "homogeneous" should read "nonhomogeneous".

p. 352, line 3 below Eq.(7.2.3a): “with NO₂ and” should be “with air, NO₂, and”.

p. 368, line 7 in the last paragraph: "Spectrometer" should read "Spectroradiometer".

p. 373, line 16 from below: "1.62 μm" should be "1.621 μm".

p. 378, Figure 7.11: The “0” at the bottom of the ordinate should be deleted.

p. 387, line 15 after Eq. (7.4.21): the period after "studies" should be removed.

p. 391, Eq. (7.4.27), in the first term on the right-hand side: "Tᵣ" should be "Tᵣ".

p. 395, Eq. (7.4.45a), the second term on the right-hand side: the transposed notation \( \mathbf{T} \) should be a regular letter (i.e., not bold).

p. 426, 2nd line from below: “90” and “157” should be updated to “89” and “150”, respectively.

p. 434, line 13 in Section 7.6.3: "smaller" should read "small".

p. 477, line 12 in Section 8.4.4: "Section 5.4" should be "Section 5.5".

p. 496, 1st line below Eq. (8.5.29): "s₂ = 0.482" should be "s₂ = −0.482".

p. 502, Figure 8.22 caption, 1st line: "m s⁻¹" should read "m sec⁻¹".

p. 516, Ex. 8.1: "(2Tᵣ)¹/₄" should be "(2)¹/₄ Tᵣ".

p. 525, 2nd line below Eq. (B.1): "\( \partial²x, \partial²y, \partial²z \)" should be "\( \partial x², \partial y², \partial z² \)".

p. 536, in the line of permittivity of vacuum: "C" should be "C²".

p. 541, Chapter 6, 6.7, 2nd line: "4" in the denominator should be "4π²". Also, "P(μ, φ; μ', φ')" should be "P(μ, φ; μ', φ') P(μ', φ'; μ₀, φ₀)".


p. 545, line 18 from below: "ClOX" should be "ClOX".

p. 548, the last reference should be updated as fellows: