

An Introduction to Atmospheric Radiation, 2nd Edition

(Errata)

- Preface, xiv, line 12: "Charlie Zender" should be "Charles Zender".
- p. 4, Figure 1.3: the lines for $d\theta$ 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: " Δv " should be " Δv ".
- 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 " s_1 ".
- p. 35, Exercise 1.18: Delete ", where $u_{\bar{v}}$ is the energy density" but add ". Note that in the derivation the energy density $u_{\bar{v}}$ 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".
- p. 57, 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): " K_{12} " should be " K_{12} ".
- P 103, Eq. (3.4.2): " $I(z, \mu', \phi')$ " in the integral should be " $I(z; \mu', \phi')$ ".
- 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 $\bar{\nu}$ ".
- p. 131, Eq. (4.3.8): " v_0 " should be " v_{0j} ".
- 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".
- p. 134, Figure 4.7 (a): two "x's" are missing in $4dk$.
- p. 138, the figure caption in Figure 4.9: " $\Delta \bar{\nu}$ " should be " $\Delta \nu$ ".

- p. 147, Eq. (4.4.46): The term $\exp\left[-\left(\frac{\tilde{\alpha}t + \tilde{\alpha}_D^2 t^2}{4}\right)\right]$ should be $\exp\left[-\left(\tilde{\alpha}t + \frac{\tilde{\alpha}_D^2 t^2}{4}\right)\right]$.
- 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 $c_{\tilde{v}}$ " should be " \bar{s} and $c_{\bar{v}}$ ".
- 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 " σ_0 " should be " $\bar{\sigma}_0$ ".
- p. 217, Eq. (5.4.1c), the 1st line: a common "," is missing after e^i .
- p.221, 2nd line below Eq. (5.4.13): " e_α " should be " e^α ".
- 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, Eq. (6.1.1): " $+(1 - \varpi)B[T(\tau)]$ " 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. 290, Eq. (6.4.1b): a common "," is missing in $I_{in,top}$.
- p. 296, Eq. (6.4.23): " $T_{12}(\mu, \mu'_0)$ " should read " $T_{12}(\mu, \mu_0)$ ".
- p. 306, Eq. (6.5.17b): The minus signs before ($\varepsilon u...$) 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): " $\cos(\xi + \delta_0)$ " should be " $\sin(\xi + \delta_0)$ ".
- p. 320, Figure 6.15: " E_ℓ " should be " E_l ".

- 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. 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: " T^s " should be " T^* ".
- p. 395, Eq. (7.4.45a), the second term on the right-hand side: the transposed notation **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): " $s_2 = 0.482$ " should be " $s_2 = -0.482$ ".
- p. 502, Figure 8.22 caption, 1st line: " m s^{-1} " should read " m sec^{-1} ".
- p. 516, Ex. 8.1: " $(2T_a)^{1/4}$ " should be " $(2)^{1/4} T_a$ ".
- p. 525, 2nd line below Eq. (B.1): " $\delta^2x, \delta^2y, \delta^2z$ " should be " $\delta x^2, \delta y^2, \delta z^2$ ".
- p. 541, **Chapter 6**, 6.7, 2nd line: "4" in the denominator should be " $4\pi^2$ ". Also, " $P(\mu, \phi; \mu', \phi')$ "
 $P(\mu', \phi', -\mu_0, \phi_0)$ " should be " $P(\mu, \phi; \mu', \phi') P(\mu', \phi'; -\mu_0, \phi_0)$ ".
- p. 543, 5th line from below: "*Mon. Wea. Res.*" should be "*Mon. Wea. Rev.*".
- p. 545, line 18 from below: " ClO_x " should be " ClO_x ".
- p. 548, the last reference should be updated as follows:
 Li, Z., Cribb, M., and Trishchenko, A. (2002). Impact of surface inhomogeneity on solar radiative transfer under overcast conditions. *J. Geophys. Res.* **107**, D16, 10.1029/2001JD000976.

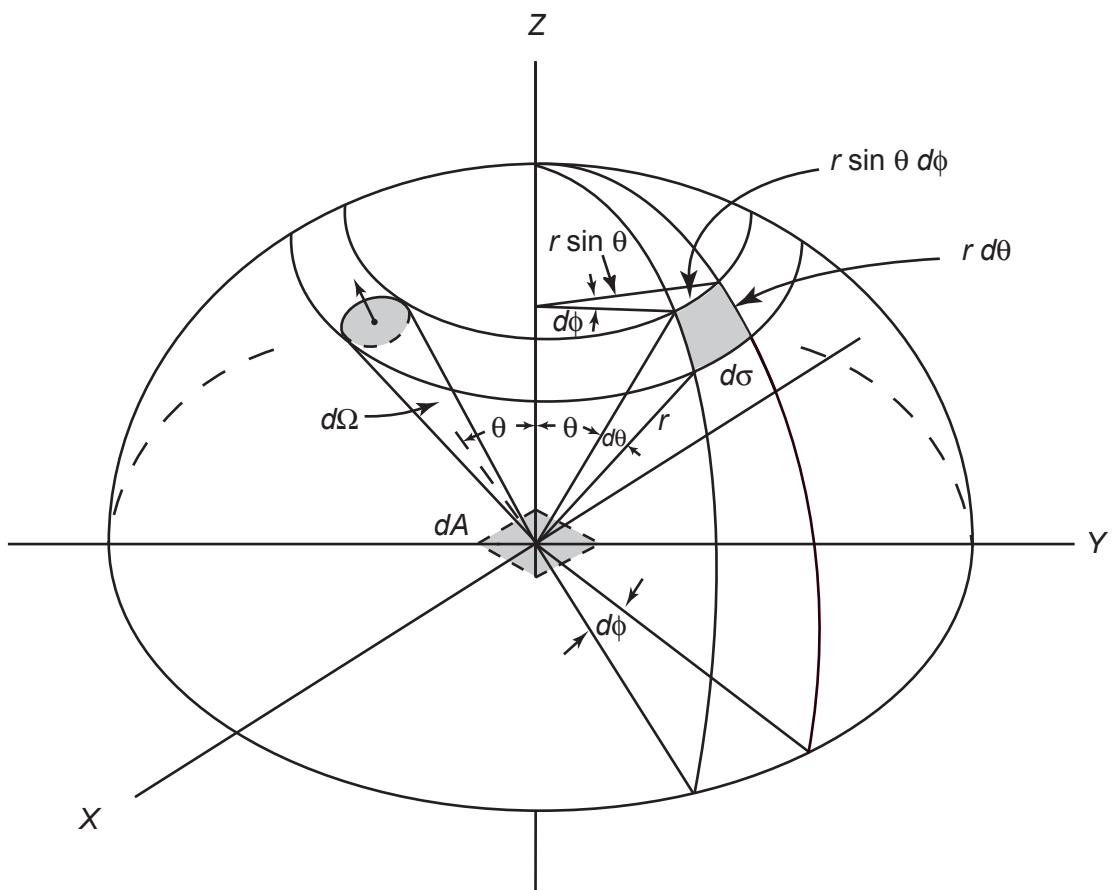


Fig. 1.3