

Errata for *A First Course in Atmospheric Radiation*

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This page documents significant errors in the textbook that were discovered after the book went to press. These errors will be corrected in the next printing. To reduce the potential for confusion, instructors assigning this book are encouraged to distribute this page to their students. An up-to-date copy can be found at www.sundogpublishing.com/AtmosRadErrata.pdf

If you find errors not listed here, please send a message describing the error to feedback@sundogpublishing.com.

p. 39, Problem 2.14 : This problem cannot be solved for the most general case without invoking the cosine weighting first introduced on p. 44. Therefore, if it is assigned prior to the discussion of p. 44, it should be solved for the case that $D \gg R_s$, so that Eq. (2.47) may be used.

p. 61, Fig. 3.2 : Temperature labels for the two dashed blackbody curves are reversed.

p. 104: In both Eqs. (5.16) and (5.17), a $\cos \theta_r$ is missing from inside the integrals on the right hand side.

p. 142: The numerical result in (6.44) should be 75 W m^{-2} . The corresponding result in (6.45) should therefore be -4.2 K/day .

p. 156, line before (7.11): The referenced equation should be (7.8).

p. 162, problem 7.4: The information in column (b) is insufficient to find a unique solution. The problem can be solved by assuming (for example) $A = 7.07 \times 10^{-14} \text{ m}^2$.

p. 240, three locations: The term “spherical symmetric top” should be simply “spherical top.”

p. 243–244, and Fig. 9.2 Methane (CH_4) has no permanent electric dipole moment.

p. 282, lines above Eq. (10.21): Should read “... $\exp(x) \approx 1 + x$...”.

p. 327, two lines above Eq. (11.27): Should read “... $\int_{-\infty}^{\infty} \delta(x') dx' = 1$, and $\int_{-\infty}^{\infty} f(x') \delta(x' - x) dx' = f(x)$.” [Note that the relationship was given correctly in Eq. (8.23) on p. 202.]

Appendix C, p. 432: The units for the *average solar flux at TOA* (S_0) should be W m^{-2} .

Order form, p. 446: The title should read *A First Course in Atmospheric Radiation*.