Errata to
Hyperspectral Remote Sensing
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p. viii, Contents line for Section 4.1.7, change "Kirchoff" to "Kirchhoff."

Chapter 2

p. 42, Eq. (2.30), change to:

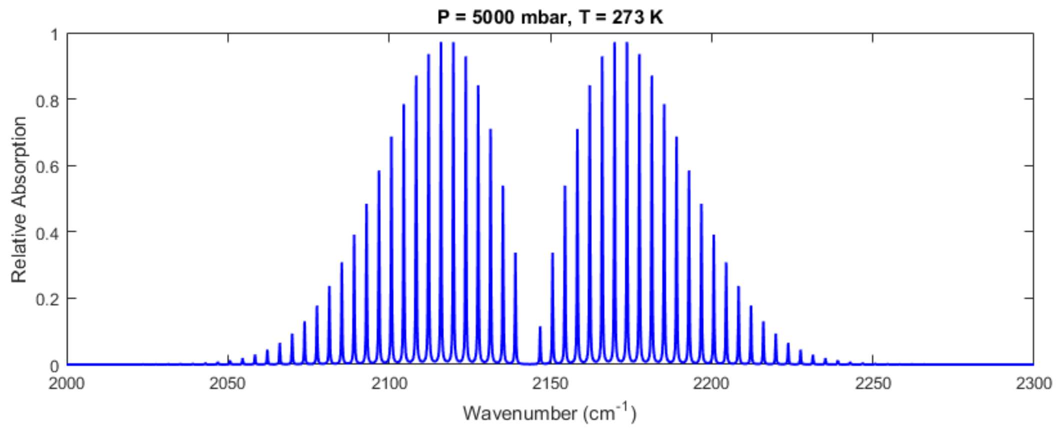
$$\nabla^2 \mathbf{E} = -\omega^2 \mu\varepsilon \mathbf{E} - i\omega\mu\sigma \mathbf{E}. \ .$$

Chapter 3

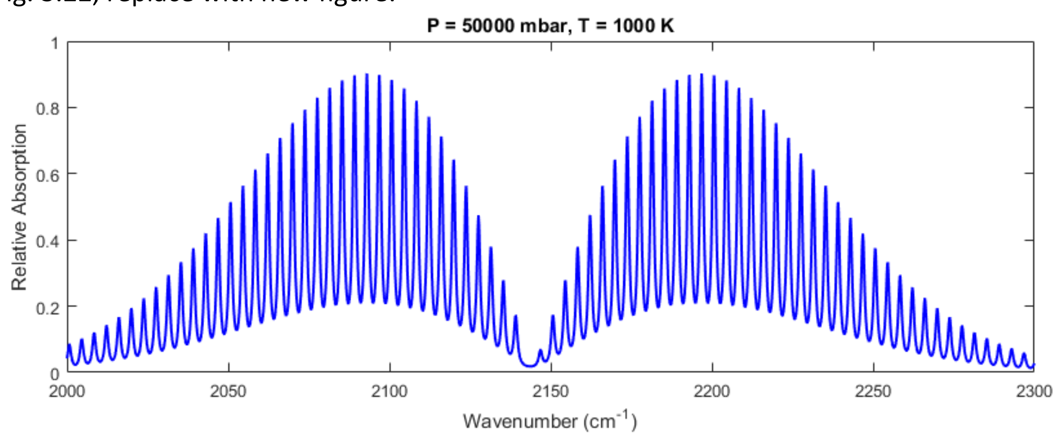
p. 109, Eq. (3.58), change to:

$$E = BJ(J+1) - DJ^2(J+1)^2 \ ,$$

p. 120, Fig. 3.21, replace with new figure:



p. 120, Fig. 3.22, replace with new figure:



Chapter 4

p. 141, second sentence following Eq. (4.39), change "volume reflectance in Eq. (4.37) can again" to "volume reflectance in Eq. (4.38) can again"

p. 150, Section 4.1.7 heading, change “Kirchoff” to “Kirchhoff.”

p. 153, Eq. (4.65), change to:

$$M = \sigma T^4 \ .$$

p. 153, sentence following Eq. (4.65), change “where σ = 5.67 × 10^{-8} W/m^2K^4” to: “where *M* is the total emitted irradiance, or exitance, and σ = 5.67 × 10^{-8} W/m^2K^4 is the Stefan–Boltzmann constant.”

p. 154, sentence preceding Eq. (4.68), change “Kirchoff” to “Kirchhoff” in two places.

p. 154, sentence preceding Eq. (4.69), change “Kirchoff” to “Kirchhoff.”

p. 196, in reference list change first author “Kirchoff” to “Kirchhoff.”

Chapter 5

p. 205, second sentence preceding Eq. (5.4), change “exoatmospheric solar spectral radiance $E_{s,exo}(\lambda)$ as the originating source “ to “exoatmospheric solar spectral irradiance $E_{s,exo}(\lambda)$ as the originating source”

p. 229, Eq. (5.13), change to:

$$L_u(\theta_r, \phi_r, \lambda) = L_e(\theta_r, \phi_r, \lambda) + L_r(\theta_r, \phi_r, \lambda) \ ,$$

p. 229, Eq. (5.14), change to:

$$L_e(\theta_r, \phi_r, \lambda) = B(\lambda, T)\left[1 - \int_0^{2\pi}\int_0^{\pi/2} \rho_{BRDF}(\theta_r, \phi_r, \theta, \phi, \lambda)\cos\theta \sin\theta d\theta d\varphi\right] \ ,$$

p. 229, Eq. (5.15), change to:

$$\begin{aligned} L_r(\theta_r, \phi_r, \lambda) &= \rho_{BRDF}(\theta_r, \phi_r, \theta_s, \phi_s, \lambda) E_s(\theta_s, \phi_s, \lambda) \\ &+ \int_0^{2\pi}\int_0^{\pi/2} \rho_{BRDF}(\theta_r, \phi_r, \theta, \phi, \lambda) L_d(\theta, \phi, \lambda)\cos\theta \sin\theta d\theta d\varphi \ , \end{aligned}$$

p. 230, Eq. (5.16), change to:

$$L_p(\lambda) = \tau_a(\lambda) L_u(\theta_r, \phi_r, \lambda) + L_a(\lambda) \ ,$$

p. 230, Eq. (5.17), change to:

$$\rho_{BRDF}(\theta_r, \phi_r, \theta, \phi, \lambda) = \rho_s(\theta_r, \phi_r, \theta, \phi, \lambda) + \rho_d(\lambda) + \frac{2\rho_v(\lambda)}{\cos\theta + \cos\theta_r} \ .$$

p. 230, Eq. (5.18), change to:

$$L_e(\theta_r,\phi_r,\lambda)=B(\lambda,T)\left[1-\int_0^{2\pi}\int_0^{\pi/2}\rho_s(\theta_r,\phi_r,\theta,\phi,\lambda)\cos\theta\sin\theta d\theta d\varphi\right]$$
$$+B(\lambda,T)\left[1-\pi\,\rho_d(\lambda)\right]$$
$$+B(\lambda,T)\left[1-\rho_v(\lambda)\int_0^{2\pi}\int_0^{\pi/2}\frac{2\cos\theta\sin\theta}{\cos\theta+\cos\theta_r}d\theta d\varphi\right]$$

p. 230, Eq. (5.19), change to:

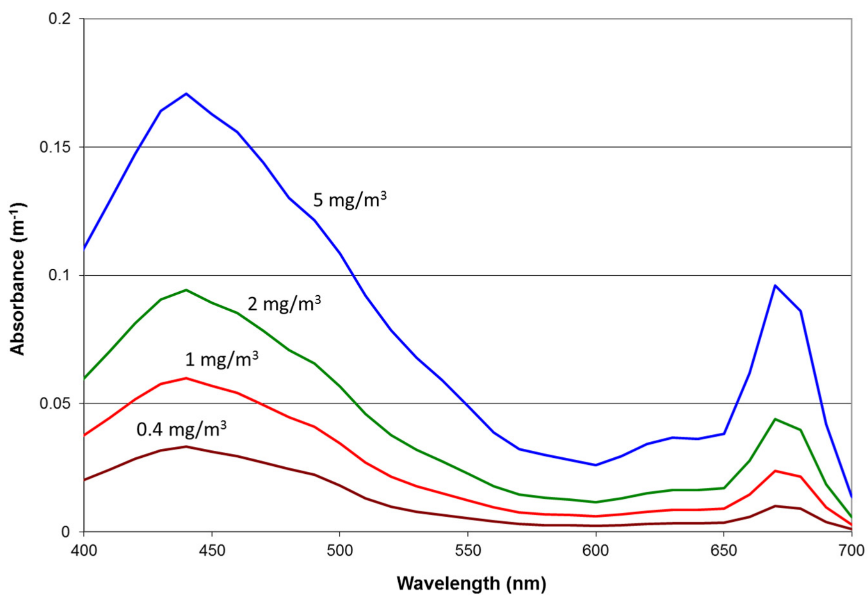
$$L_r(\theta_r,\phi_r,\lambda)=\rho_s(\theta_r,\phi_r,\theta_s,\phi_s,\lambda)E_s(\theta_s,\phi_s,\lambda)$$
$$+\int_0^{2\pi}\int_0^{\pi/2}\rho_s(\theta_r,\phi_r,\theta,\phi,\lambda)L_d(\theta,\phi,\lambda)\cos\theta\sin\theta d\theta d\varphi$$
$$+\rho_d(\lambda)\left[E_s(\theta_s,\phi_s,\lambda)+\int_0^{2\pi}\int_0^{\pi/2}L_d(\theta,\phi,\lambda)\cos\theta\sin\theta d\theta d\varphi\right]$$
$$+\rho_v(\lambda)\left[\frac{2E_s(\theta_s,\phi_s,\lambda)}{\cos\theta_s+\cos\theta_r}+\int_0^{2\pi}\int_0^{\pi/2}L_d(\theta,\phi,\lambda)\frac{2\cos\theta\sin\theta}{\cos\theta+\cos\theta_r}d\theta d\varphi\right]$$

p. 232, Eq. (5.28) change to:

$$A(\lambda)=\frac{\tau_a(\lambda)}{\pi}\left[F_s\,E_{s,exo}(\lambda)\,\tau_s(\lambda)\cos\theta_s+F_d\,E_d(\lambda)\right]+L_a(\lambda)\ ,$$

p. 234, sentence following Eq. (5.31) change "$\tau_b(\lambda)$=0" to "$\tau_b(\lambda)$=1":

p. 239, Fig. 5.37, replace with new figure:



Chapter 6

p. 291, Eq. (6.60), change to:

$$E_0(\lambda) = \frac{4\pi (f/\#)^2}{4(f/\#)^2+1} B(\lambda, T_c) + [1-\tau_c(\lambda)] \frac{\pi}{4(f/\#)^2+1} B(\lambda, T_c) + [1-\tau_o(\lambda)]\tau_c(\lambda) \frac{\pi}{4(f/\#)^2+1} B(\lambda, T_o) .$$

p. 306, Eq. (6.94), change to:

$$r_0 = 2.1 \left[\frac{5.84\pi^2}{\lambda^2 \cos\theta} \int_{h_1}^{h_2} C_n^2(h) \left(\frac{h-h_1}{h_2-h_1} \right)^{5/3} dh \right]^{-3/5} ,$$

Chapter 7

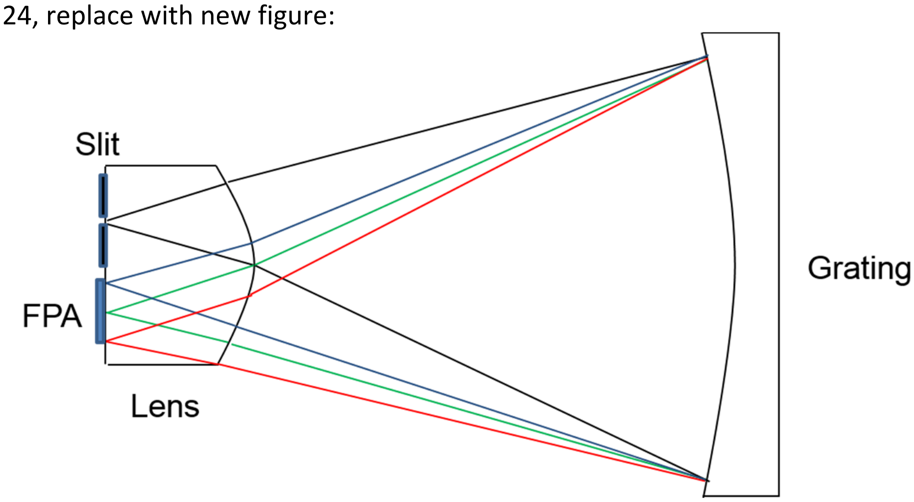
p. 320, Eq. (7.18), change to:

$$\frac{dy}{d\lambda} = f_2 \frac{d\varphi}{d\lambda} = 1.22 R(f/\#) .$$

p. 332, Eq. (7.55), change to:

$$f_2 = \frac{W_y}{2 \tan\left[\frac{m}{\Lambda \cos\theta_d(\lambda_0)} \left(\frac{\lambda_{\max} - \lambda_{\min}}{2} \right) \right]} .$$

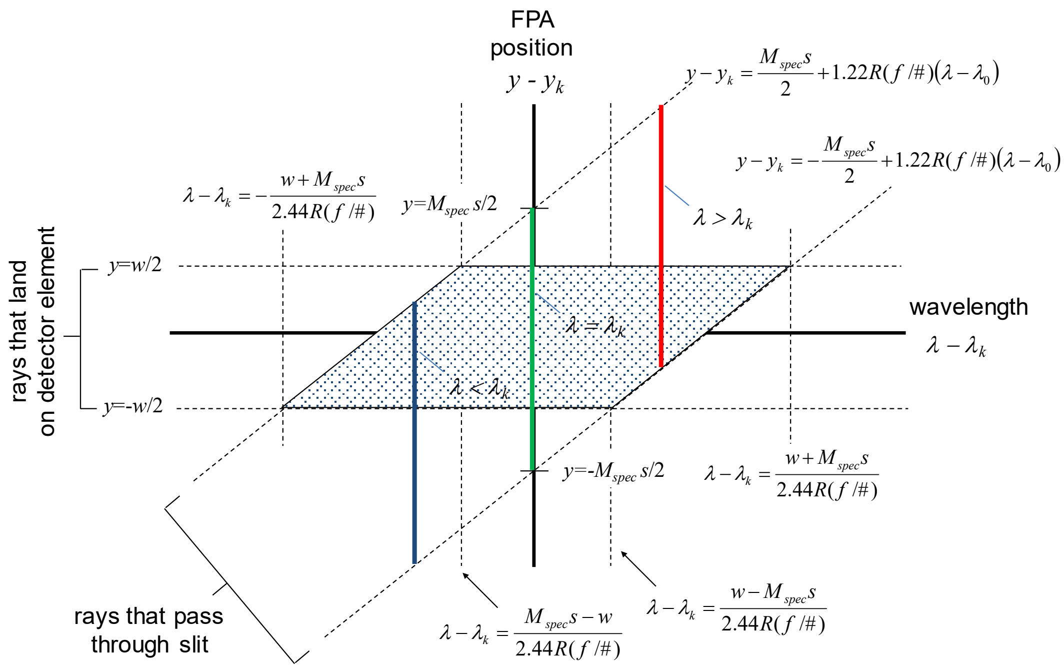
p. 338, Fig. 7.24, replace with new figure:



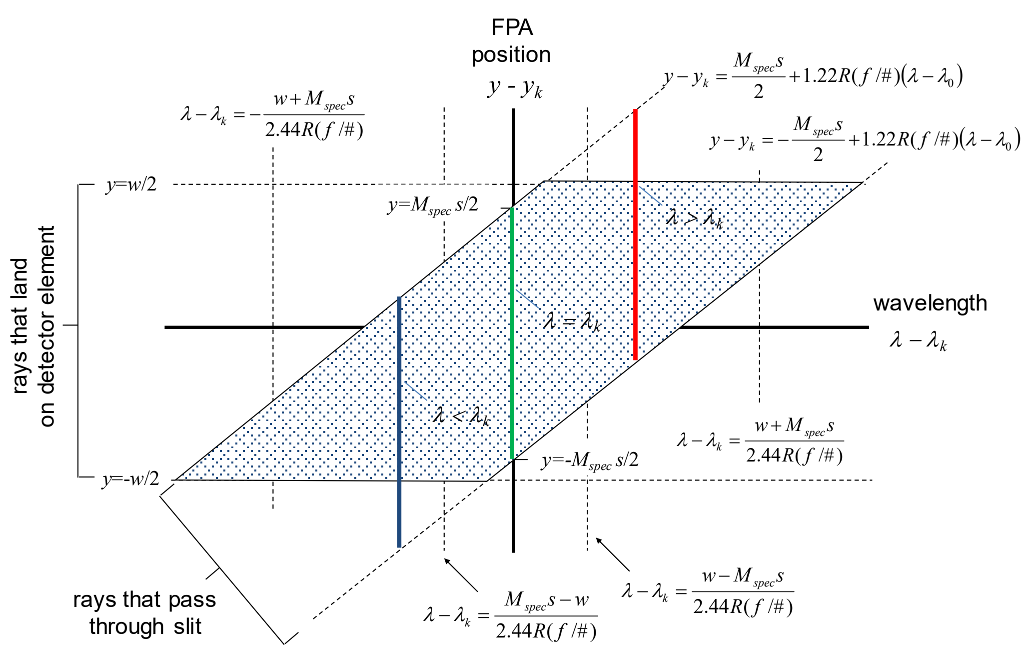
p. 341, Eq. (7.63), change to:

$$y - y_k = 1.22\, R(f/\#)(\lambda - \lambda_k) .$$

p. 343, Fig. 7.29, replace with new figure:



p. 344, Fig. 7.30, replace with new figure:



p. 344, Eq. (7.66), change to:

$$g_g(\lambda)=\frac{\int f(\lambda,y)\,dy}{\int f(\lambda_0,y)\,dy}=rect\left[\frac{1.22R(f/\#)(\lambda-\lambda_k)}{M_{spec}s}\right]*rect\left[\frac{1.22R(f/\#)(\lambda-\lambda_k)}{w}\right].$$

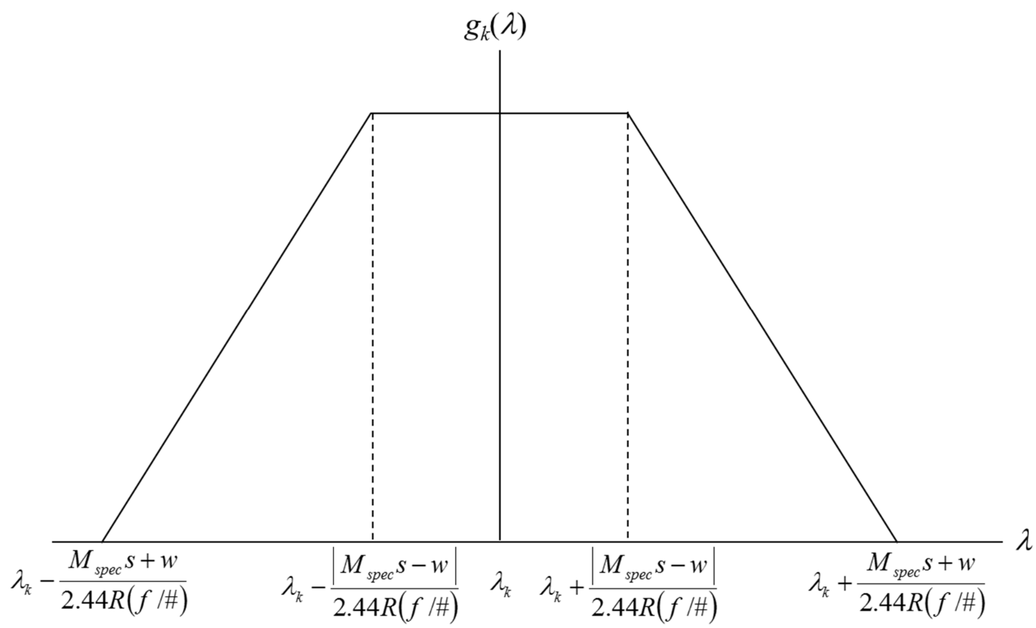
p. 345, Eq. (7.67), change to:

$$g_k(\lambda)=\mathrm{rect}\left[\frac{1.22R(f/\#)(\lambda-\lambda_k)}{M_{spec}s}\right]*\mathrm{rect}\left[\frac{1.22R(f/\#)(\lambda-\lambda_k)}{w}\right]*h_0\left[0,1.22R(f/\#)\lambda\right]\ .$$

p. 345, Eq. (7.68), change to:

$$\delta\lambda=\frac{\max\left(M_{spec}s,w\right)}{1.22R(f/\#)}\ .$$

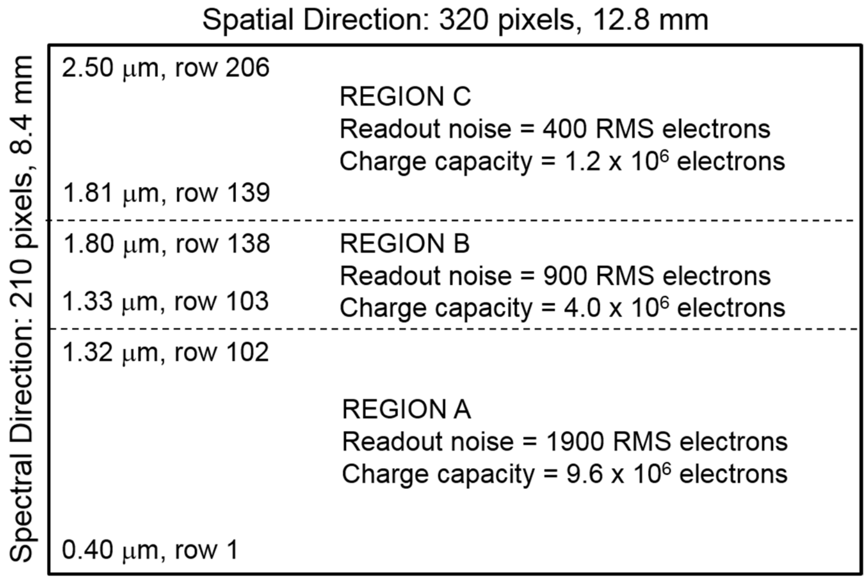
p. 345, Fig. 7.31, replace with new figure:



p. 347, Eq. (7.73), change to:

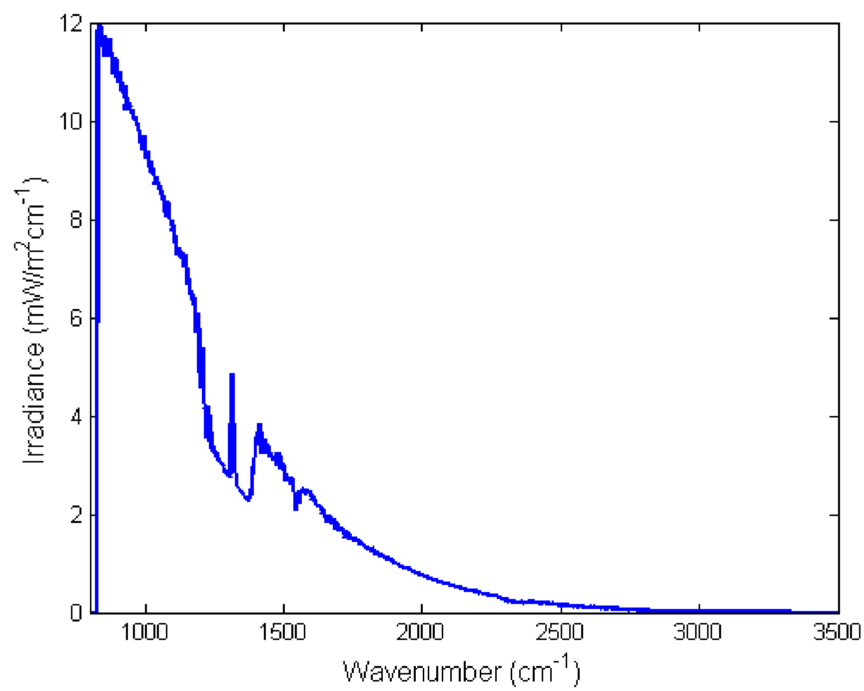
$$\begin{aligned}N_s&=A_d t_d\frac{\min\left(M_{spec}s,w\right)}{w}\frac{\lambda_k}{hc}\eta(\lambda_k)E_s(\lambda_k)\delta\lambda_k\\N_b&=A_d t_d\frac{\min\left(M_{spec}s,w\right)}{w}\frac{\lambda_k}{hc}\eta(\lambda_k)E_b(\lambda_k)\delta\lambda_k\end{aligned}\ .$$

p. 353, Fig. 7.35, replace with new figure:



Chapter 8

p. 367, Fig. 8.3(b), replace with new figure. The units in the *y*-axis label should be changed from (μW/m^{2}cm^{-1}) to (mW/m^{2}cm^{-1}):



p. 372, Eq. (8.23), change to:

$$g(\sigma)=w(\sigma)*\frac{\sin(4\pi\sigma d)}{4\pi\sigma d} ,$$

Chapter 14

p. 660, sentence preceding Eq. 14.104, change “model, the ACE detection” to “model, the cotangent form of the ACE detection“

p. 660, Eq. (14.104), change to:

$$\frac{r_{ACE}(\mathbf{x})}{1-r_{ACE}(\mathbf{x})} \mid H_0 \sim F_{n,p}(r) \ ,$$

p. 661, Eq. (14.106), change to:

$$\frac{r_{ACE}(\mathbf{x})}{1-r_{ACE}(\mathbf{x})} \mid H_1 \sim F_{n,p}(r;\lambda^2) \ ,$$