Modern Antenna Design, 2005 Errors

p. 93, Section 2-7.7

$$\mathbf{n}\times(\mathbf{S_2}-\mathbf{S_1})=0 \qquad \mathbf{n}\cdot\left(\mathbf{S_1}+\mathbf{S}_2\right)=0 \qquad (2\text{-}66)$$

p. 163, Section 4-8

$$E(x)=\sum_{i=-N}^{N}E_i e^{-j2\pi(i/a)x} \qquad (4\text{-}45)$$

$$0.5+e^{-j2\pi x/a}+e^{-j2\pi(2x/a)}+e^{-j2\pi(3x/a)}+e^{-j2\pi(4x/a)}+0.5e^{-j2\pi(5x/a)}$$

p. 164, Section 4-8

$$E(x)=\sum_{i=1}^{9}E_i e^{-j2\pi(i/a)x}$$

p. 209, Section 4-23

$$\text{Blockage Efficiency } =\left(\frac{e^{-\rho b^2}-e^{-\rho}}{1-e^{-\rho}}\right)^2$$

p. 407, Section 8-12

$$\rho_1=\frac{a(e^2-1)}{e\cos\theta-1}=\frac{b\sqrt{e^2-1}}{e\cos\theta-1}=\frac{c(e^2-1)}{e\left(e\cos\theta-1\right)}$$

$$\text{and } \rho_2=\frac{a(e^2-1)}{e\cos\psi+1}=\frac{b\sqrt{e^2-1}}{e\cos\psi+1}=\frac{c(e^2-1)}{e(e\cos\psi+1)} \qquad (8\text{-}55)$$

p. 408, Section 8-12

$$\rho_L=\frac{a(e^2-1)}{e\cos(\theta_0-\theta_e)-1}=\frac{b\sqrt{e^2-1}}{e\cos(\theta_0-\theta_e)-1} \text{ and } \rho_U=\frac{a(e^2-1)}{e\cos(\theta_0+\theta_e)-1}=\frac{b\sqrt{e^2-1}}{e\cos(\theta_0+\theta_e)-1} \qquad ((8\text{-}58+))$$

$$\rho_1 = \frac{a(1-e^2)}{1-e\cos\theta} = \frac{b\sqrt{1-e^2}}{1-e\cos\theta} = \frac{c(1-e^2)}{e(1-e\cos\theta)}$$

$$\text{and } \rho_2 = \frac{a(1-e^2)}{1+e\cos\psi} = \frac{b\sqrt{1-e^2}}{1+e\cos\psi} = \frac{c(1-e^2)}{e(1+e\cos\psi)} \tag{8-62}$$

p. 432 (top)

$$f\,/\,D = \left(\frac{16(50)}{2048}\right)^{1/3} = 0.73$$

The radius of the sphere using the optimum position of the focal point *f* (Eq. (8-93)) for a given reflector diameter *D* is

$$R = \frac{(D/2)^2}{8f} + 2f$$

p. 544, Section 11-9

$$L = (\rho - \rho_0)\sqrt{1+\frac{\sin^2\theta_0}{b^2}} = (\rho-\rho_0)\sqrt{1+\tan^2\alpha} \tag{11-21}$$