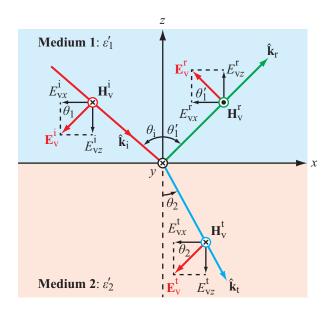
## Microwave Radar and Radiometric Remote Sensing Fawwaz T. Ulaby and David G. Long

## **ERRATA**

Page	Item	Correction
56	Fig. 2-16(b)	See correct field directions below
58	Table 2-4	Change "normal incidence" to "oblique incidence"
58	Table 2-4, R col.	Change $\mathbf{E}_{v}^{r} = (\hat{\mathbf{x}}\cos\theta_{1} - \hat{\mathbf{z}}\sin\theta_{1})$ to $\mathbf{E}_{v}^{r} = (-\hat{\mathbf{x}}\cos\theta_{1} + \hat{\mathbf{z}}\sin\theta_{1})$
58	Table 2-4, R col.	
58	Table 2-4, R col.	Change $\mathbf{H}_{v}^{r} = \hat{\mathbf{y}} \rho_{v}$ to $\mathbf{H}_{v}^{r} = -\hat{\mathbf{y}} \rho_{v}$ Change $\mathbf{H}_{v}^{t} = \hat{\mathbf{y}} \tau_{v} \frac{E_{v0}^{i}}{\eta_{1}}$ to $\mathbf{H}_{v}^{t} = \hat{\mathbf{y}} \tau_{v} \frac{E_{v0}^{i}}{\eta_{2}}$
62	Table 2-6, R col.	Change $\mathbf{E}_v^r = (\hat{\mathbf{x}}\cos\theta_1 - \hat{\mathbf{z}}\sin\theta_1)$ to $\mathbf{E}_v^r = (-\hat{\mathbf{x}}\cos\theta_1 + \hat{\mathbf{z}}\sin\theta_1)$
62	Table 2-6, R col.	Change $\mathbf{H}_{\mathrm{v}}^{\mathrm{r}}=\hat{\mathbf{y}} ho_{\mathrm{v}}$ to $\mathbf{H}_{\mathrm{v}}^{\mathrm{r}}=-\hat{\mathbf{y}} ho_{\mathrm{v}}$
62	Table 2-6, R col.	Change $\mathbf{H}_{v}^{r} = \hat{\mathbf{y}} \rho_{v}$ to $\mathbf{H}_{v}^{r} = -\hat{\mathbf{y}} \rho_{v}$ Change $\mathbf{H}_{v}^{t} = \hat{\mathbf{y}} \tau_{v} \frac{E_{v0}^{i}}{\eta_{1}}$ to $\mathbf{H}_{v}^{t} = \hat{\mathbf{y}} \tau_{v} \frac{E_{v0}^{i}}{\eta_{2}}$
65	Eqs. (2.129) and (2.131)	Replace $\gamma_3 z$ with $\gamma_3(z+d)$
66	Eqs. (2.135) and (2.136)	Replace $A_3 e^{-\gamma_3 d \cos \theta_3}$ with $A_3$
125	Eq. (4.19a)	Change $\varepsilon_{w0}$ in last term to $\varepsilon_{w1}$
126	Eq. (4.19b)	Change $\varepsilon_{\mathrm{w}0}$ in second term to $\varepsilon_{\mathrm{w}1}$
161	Problem 4.6	Change $a_1$ , $b_1$ , and $c_1$ to $a_2$ , $b_2$ , and $c_2$ , respectively
168	Eq. (5.15)	Change $e^{-jkR_{\rm r}}$ to $e^{jkR_{\rm r}}$
171	Line 19, L col.	Change $ E_q^{ m s} ^2$ to $ E_q^{ m i} ^2$
390	Line after Eq. (9.89)	Change $K \cdot (g/m^3)/km$ to $K/(g/m^3) \cdot km$
400	Eq. (9.119)	Change $10^3$ to $10^2$
433	Fig. 10-10	Change kl from 2.1 to 6.3 and ks from 0.21 to 0.63
433	Fig. 10-11	Change kl from 2.1 to 6.3
442	Eq. (10.26c)	Change $\frac{dZ}{dx}$ to $\frac{dZ}{dy}$
443	Eq. (10.28b)	$\hat{\mathbf{v}}' = -\hat{\mathbf{x}}'\cos\theta' - \hat{\mathbf{z}}'\sin\theta'$
575	Line 1, R col.	Change $1 (g/cm^3)^{-1}$ to $0.3 (g/cm^3)^{-1}$
575	Line 2, R col.	Change 0.35 (g/cm <sup>3</sup> ) to 0.1 (g/cm <sup>3</sup> )
609	Eq. (13.23)	Remove "-" in two places
618	Eq. (13.43)	Change $4/T_R$ to $2/T_R$
740	Problem 14.3	Change "0.01 mrad (two-way)" to "0.01 rad (two-way)"
741	Problem 14.11	Add "Antenna height = 3 m"
780	Problem 15.4	Change the units of the listed numbers from "m" to "pixels"
797	Eq. (16.21)	Add ")" after the end of the expression
844	Fig. 16-61	Change unit of vertical axis from GHz to %



(b) Vertical polarization Figure 2-16(b)