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Scattering, Absorption, and Emission of Light by Small Particles
Cambridge University Press, Cambridge, 2002

ERRATA

(updated 7.12.2005)

Page 13, Fig. 1.1. **k** should be replaced by **K**. The figure caption should read as follows:

"Plane surface normal to a real vector **K**."

Page 13, 4th line after Eq. (1.35). The sentence in parentheses should begin as follows:

"A plane surface normal to a real vector **K** is defined as $\mathbf{r} \cdot \mathbf{K} = \text{constant, where…}$"

Page 39. Equation (2.47) should read as follows:

$$r^2 \int_{4\pi} \mathrm{d}\hat{\mathbf{r}}\hat{\mathbf{r}} \cdot \{...\}\underset{\mathbf{r}\to\infty}{=} 0.$$

Page 58. Equation (2.163) should read as follows:

$$W_{\Delta S}(\hat{\mathbf{n}}^{\mathrm{inc}}) = \frac{1}{2}\sqrt{\frac{\varepsilon_1}{\mu_0}}\,|\mathbf{E}_0^{\mathrm{inc}}|^2(\Delta S - C_{\mathrm{ext}}) + O(r^{-2}).$$

Page 64. The unit vector $\hat{\mathbf{n}}$ in Fig. 2.4 should be replaced by the unit vector $\hat{\mathbf{r}}$.

Page 67. Equation (2.192) should read as follows:

$$\Delta = k_1\,\mathbf{r}_{12}\cdot(\hat{\mathbf{n}}^{\mathrm{inc}} - \hat{\mathbf{n}}^{\mathrm{sca}}),$$

Page 69. Equation (3.4) should read as follows:

$$\Delta_n = k_1\mathbf{r}_{On}\cdot(\hat{\mathbf{n}}^{\mathrm{inc}} - \hat{\mathbf{r}}),$$

Page 78. 3rd line from top. "$\Delta S r^{-2}\mathbf{Z}(\hat{\mathbf{n}}^{\mathrm{sca}}, \hat{\mathbf{n}}^{\mathrm{inc})}\mathbf{I}^{\mathrm{inc}}$" should read "$\Delta S r^{-2}\mathbf{Z}(\hat{\mathbf{n}}^{\mathrm{sca}}, \hat{\mathbf{n}}^{\mathrm{inc}})\mathbf{I}^{\mathrm{inc}}$".

Page 79. Equation (3.34) should read as follows:

$$\Delta = k_1(\mathbf{r}_N - \mathbf{r}_1)\cdot(\hat{\mathbf{n}}_{\mathrm{ill}} + \hat{\mathbf{n}}_{\mathrm{obs}}),$$

Page 80. 4th line from top. "Kuga and Ishimaru (1994)" should read "Kuga and Ishimaru (1984)"

Page 105. 4th line after Eq. (4.90). "Sobolev 1974" should read "Sobolev 1975"

Page 109. 2nd line from bottom. "Sobolev (1974)" should read "Sobolev (1975)"

Page 128. Equation (5.78) should read as follows:

$$\langle T_{mnm'n'}^{kl}(L)\rangle = \delta_{mm'}T_{mnn'}^{kl}, \qquad k,l = 1, 2,$$

Page 129. Equation (5.87) should read as follows:

$$T_{-mnn'}^{kl} = (-1)^{k+l}T_{mnn'}^{kl},$$

Page 140. The second line should read as follows: "frame and $\varphi^{\text{sca}} = \varphi^{\text{inc.}}$"

Page 144. Equations (5.173) and (5.175) should read as follows:

$$\begin{aligned}
\begin{matrix} a_{mn} \\ b_{mn} \end{matrix} = k_1(-1)^m \int_S \mathrm{d}S \Bigg\{ & \omega\mu_0[\hat{\mathbf{n}} \times \mathbf{H}_+(\mathbf{r})] \cdot \begin{matrix} \mathbf{M}_{-mn}(k_1 r, \vartheta, \varphi) \\ \mathbf{N}_{-mn}(k_1 r, \vartheta, \varphi) \end{matrix} \\
& - \mathrm{i}k_1[\hat{\mathbf{n}} \times \mathbf{E}_+(\mathbf{r})] \cdot \begin{matrix} \mathbf{N}_{-mn}(k_1 r, \vartheta, \varphi) \\ \mathbf{M}_{-mn}(k_1 r, \vartheta, \varphi) \end{matrix} \Bigg\}.
\end{aligned} \tag{5.173}$$

$$\begin{aligned}
\begin{matrix} p_{mn} \\ q_{mn} \end{matrix} = -k_1(-1)^m \int_S \mathrm{d}S \Bigg\{ & \omega\mu_0[\hat{\mathbf{n}} \times \mathbf{H}_+(\mathbf{r})] \cdot \begin{matrix} \mathrm{Rg}\mathbf{M}_{-mn}(k_1 r, \vartheta, \varphi) \\ \mathrm{Rg}\mathbf{N}_{-mn}(k_1 r, \vartheta, \varphi) \end{matrix} \\
& - \mathrm{i}k_1[\hat{\mathbf{n}} \times \mathbf{E}_+(\mathbf{r})] \cdot \begin{matrix} \mathrm{Rg}\mathbf{N}_{-mn}(k_1 r, \vartheta, \varphi) \\ \mathrm{Rg}\mathbf{M}_{-mn}(k_1 r, \vartheta, \varphi) \end{matrix} \Bigg\}.
\end{aligned} \tag{5.175}$$

Page 148. The third line of Eq. (5.199) should read as follows:

$$\times [\pi_{mn}(\vartheta)\tau_{mn'}(\vartheta) + \tau_{mn}(\vartheta)\pi_{mn'}(\vartheta)]$$

Page 163. The DO operator in the middle of the page should begin with "DO" rather than "D0".

Page 173. 11th line from bottom. "$BB = \ln^2 \sigma_g$" should read "$B = \ln^2 \sigma_g$".

Page 180. Table 5.7, bottom line. "3/2" should read "1" and ">150" should read ">180".

Page 209. In Eq. (7.6), "λ" should read "λ_1".

Page 214. The URL http://www.ifm.uni-kiel.de/fb/fb1/me/research/Projekte/RemSens/SourceCodes/source.html in the second paragraph should read as follows:

http://www.ifm.uni-kiel.de/fb/fb1/me/research/Projekte/RemSens/SourceCodes/codes.html

Page 228. 8th line from bottom. "cloud-integrating" should read "cloud integrating."

Page 311, Table 10.3. The entry "1.9247" should read "1.9274".

Page 345. The second sentence of the figure caption should read as follows:

"…with aspect ratio 2 and effective volume-equivalent-sphere size parameter…"

Page 362. The first line of the second paragraph should read as follows:

"Wigner *d*-functions for $0 \le \vartheta \le \pi$ are defined as"

Page 369 should begin as follows:

"The product of two *D*-functions can be expanded in the so-called Clebsch-Gordan series…"

Page 394. 3rd line from bottom. The dimension of the gradient operator should be [m^{-1}].

Page 405. Volume number in Fuller (1991) should be **30** rather than **33**.

Page 408. The correct volume and page numbers for Hansen and Hovenier (1974) are as follows: **31**, 1137–1160.

Page 410. "Hovenier, J. W., van der Mee, C. V. M., and Domke, H. (2001)" should read "Hovenier, J. W., van der Mee, C., and Domke, H. (2004)"

Page 430. "Sobolev, V. V. (1974)" should read "Sobolev, V. V. (1975)

Page 436. The URL for Wriedt (2000) should read "www.iwt-bremen.de/vt/laser/wriedt/index_ns.html"

Page 445, left column. The entry "spherical particles" should appear before the entry "spherical wave."

Plate 9.3. The third line of the caption should read as follows:

"…with $m_I = 10^{-6}$, 10^{-5}, and 10^{-4}. Bottom…"

An updated list of corrections can be found at
http://www.giss.nasa.gov/~crmim/books.html

If you have noticed a typo or a factual error, please communicate it to Michael Mishchenko at
crmim@giss.nasa.gov. Your help will be greatly appreciated!

The book is now available in the .pdf format at
http://www.giss.nasa.gov/~crmim/books.html