

Known errata in the 1st Edition of R. Noé, „Essentials of Modern Optical Fiber Communication“, Springer, 2010, ISBN: 978-3-642-04871-5:

In the two lines following (2.157) on p. 33, the words „smaller“ and „larger“ must be exchanged.

In (2.236), the leading factor 2 must be replaced against 1/2.

Two lines above the Problem on p. 83, $-2\Delta nL/\lambda$ must be replaced by $-2\Delta nL\omega/c$.

Two lines above (2.330), in (2.331), and one line below (2.331) the term L must always be replaced by $\frac{\omega}{c}L$.

The voltage trajectories in the top row of Fig. 2.19 must be flipped horizontally and then be rotated clockwise by 90° .

The second equation in (2.410) is corrected as $\xi = -Ml - (2/3)\arccos(-4/5) + \pi - \arctan 2$.

In the line after (2.485), $\beta_i = (d\beta/d\omega)_{\omega=\omega_0}$ must be replaced against $\beta_i = (d^i \beta/d\omega^i)_{\omega=\omega_0}$.

After (2.500) insert:

“Note that with this definition of P , a factor of 1/2 has to be inserted at all right-hand sides of (2.166)!”
As a consequence, subsequent equations are corrected by factors of 2 as follows:

$$\frac{d}{dz} \left(\frac{1}{2} |E_{i1}|^2 \pm \frac{1}{2} |E_{i2}|^2 \right) = \operatorname{Re} \left(\frac{dE_{i1}}{dz} E_{i1}^* \pm \frac{dE_{i2}}{dz} E_{i2}^* \right) = \frac{\bar{\gamma}}{2} \operatorname{Im} \left(E_{k2}^* E_{i2} E_{k1} E_{i1}^* \pm E_{k1}^* E_{i1} E_{k2} E_{i2}^* \right). \quad (2.503)$$

$$\frac{dS_{i1}}{dz} = \bar{\gamma} (S_{i2} S_{k3} - S_{i3} S_{k2}) \quad (2.504)$$

$$\frac{dS_{i2}}{dz} + j \frac{dS_{i3}}{dz} = \frac{d}{dz} (E_{i1} E_{i2}^*) = \frac{dE_{i1}}{dz} E_{i2}^* + \frac{dE_{i2}}{dz} E_{i1} = \bar{\gamma} (S_{i3} S_{k1} - S_{i1} S_{k3}) + j \bar{\gamma} (S_{i1} S_{k2} - S_{k1} S_{i2}) \quad (2.505)$$

$$\frac{d\mathbf{S}_i}{dz} = -\frac{d\mathbf{S}_k}{dz} = \bar{\gamma} (\mathbf{S}_i \times \mathbf{S}_k) \quad (2.506)''$$

In the second line of (3.4), the lower index of the summation over i must be $-N$, not N .

After (3.117), $\sigma^2/2$ must be replaced against $2\sigma^2$. The correct sentence is: “This means the term $\tilde{\mu}$ which equals $2\sigma^2$ of each Gaussian RV must be replaced by $\tilde{\mu}/2$.”

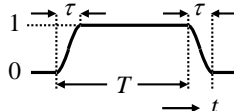
$$\text{Equation (3.14) is corrected as } \underline{L}(f) = \frac{2T}{\pi^2} \left(\frac{\cos \pi f T}{1 - 4f^2 T^2} \right)^2 + \frac{1}{8} (\delta(f - 1/2/T) + \delta(f + 1/2/T)).$$

The sentence after (3.128) on p. 208 must be replaced by the following:

Behind the Mach-Zehnder modulator the data signal itself is $\underline{a}(t) = \sin\left(\frac{\pi}{2} \sum_{i=-\infty}^{\infty} c_i k(t - iT)\right)$ with bipolar transmission symbols $c_i = \pm 1$. This nonlinear function can be expressed by the linear superposition

$\underline{a}(t) = \sum_{i=-\infty}^{\infty} c_i s(t - iT)$ with $c_i = \pm 1$ and

$$s(t) = \frac{1}{2} + \frac{1}{2} \sin\left(\frac{\pi}{2} (2k(t) - 1)\right).$$



On p. 257, one line behind (3.214), the words “The mean squared field” must be followed by the words “in one quadrature”.

On p. 328, 5 lines above (3.228), the enumeration $H = 1, 3, 6, 9$ must be changed into $H = 1, 3, 9, 32$.