Manual of Photogrammetry, Fifth Edition

Errata

September 26, 2006

This Errata Sheet will be updated periodically as we become aware of additional corrections. Please send any corrections you may notice to Dr. Chris McGlone at mcglonej@saic.com.

Chapter 2:

p. 64, next-to-last line in Section 2.2.1.4.9: '(z, ~N(0,1)' should be '(z, ~N(0,1))'

p.67, third line of text: delete "rho fij" at end of line, fourth line "f_{ij}" should be "ρ_{ij}"

p. 78:
Second line of text in Section 2.2.3.2: 'known mean my' should read 'known mean μ_y'
Third line of text in Section 2.2.3.2: 'unknown variance s' should read 'unknown variance σ^2', 'mean my' should read 'mean μ_y'
The first un-numbered formula in Section 2.2.3.2 should read $H_0 : \mu_x = \mu_y$
Fifth line of text in Section 2.2.3.2: 'mean mx' should read 'mean μ_x'

Equation 2.267: $\underline{t} = \dfrac{\underline{x} - \mu_y}{\underline{\hat{\sigma}}_y} \sim t_I$

Un-numbered formula after Equation 2.267: $\hat{\sigma}_y^2 = \dfrac{1}{I}\sum_{i=1}^{I}\left(y_i - \mu_y\right)^2$

Equation 2.268: $E(\underline{t}) = E\left(\dfrac{\underline{x} - \mu_y}{\underline{\hat{\sigma}}_y}\right) = 0$

Last paragraph: Three instances of '$\dfrac{1}{100}$' should be 'τ'

Third line of last paragraph: 'The t_I statistic' should read 'The τ_I statistic'

p. 90, equation before "Then we can solve…" should be numbered (2.328).

p. 113, line before 2.397: Remove "^{2}" at end of line.

Chapter 3:
p. 241, Figure 3.27: 'Above' and 'Below' in caption should be 'Left' and 'Right', respectively.

Chapter 4:

p. 301, equation 3.166: Term in parentheses in first equation should be $(2x^2 + r^2)$ instead of $(2x^2 + y^2)$, in second equation should be $(r^2 + 2y^2)$ instead of $(y^2 + 2y^2)$.

p. 331, equation 4.37: left side of equation is "1/f"

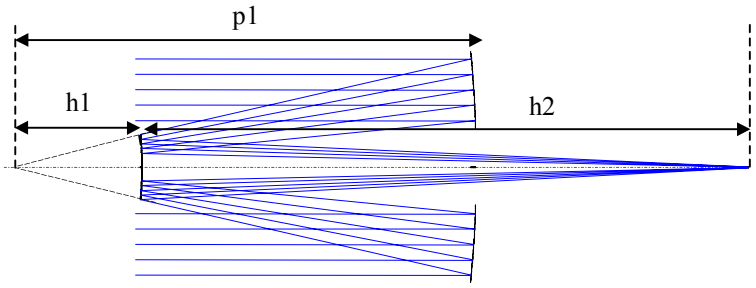
p. 347, Figure 4.16: G^1 should be G'

p. 351: 'tan' should be 'tan α' in Equations 4.82 and 4.83.

p. 352: Figure 4.20: The tangential distortion is incorrectly labeled δr instead of δt.

p. 363, first paragraph: insert φ_n in line 4 before "are constants", line 5 before "gives its phase", lines 6 and 10 within braces after "the set".

p. 381: Figure 4.27 should be:



Chapter 5:

p. 417, penultimate paragraph, last line: "Figure 5.2" should be "Figure 5.25".

p. 436: Penultimate paragraph should be followed by formula at top of p. 437.

p. 442,
Section 5.8, first paragraph, 5th line: "grid mesh of lines is cut" should be "grid mesh of lines cuts"
Section 5.8.1, first point: 'output (x,y) coordinates' should be 'output $(\hat{x}, \hat{y})$ coordinates'

p. 450, penultimate paragraph: "Section 5.5.5" should be "Section 5.5.2".

Chapter 7:

Section 7.2.2.1, second paragraph, p. 514: Should read “support (d)” and “substrate layers (c)”, where referring to Figure 7.8.

Figure 7.46, p. 546:

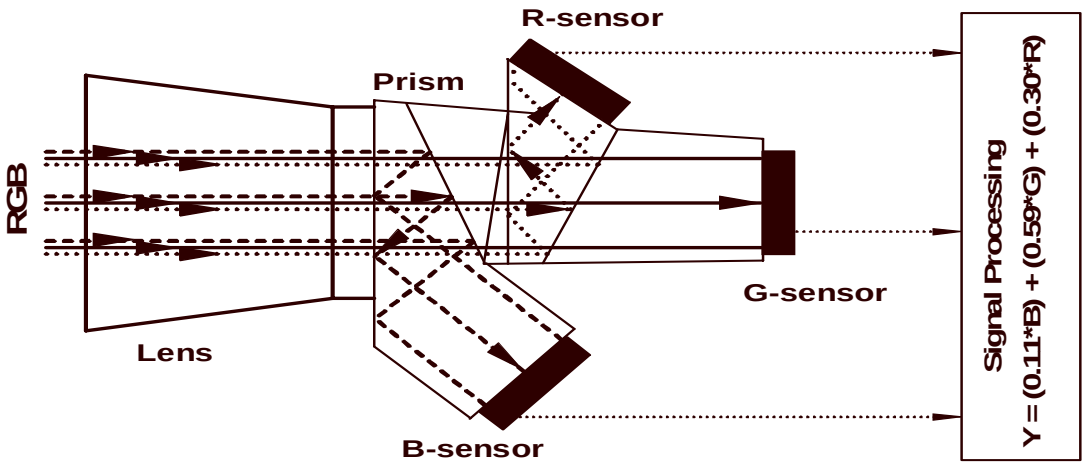


Figure 7.47, p. 547:

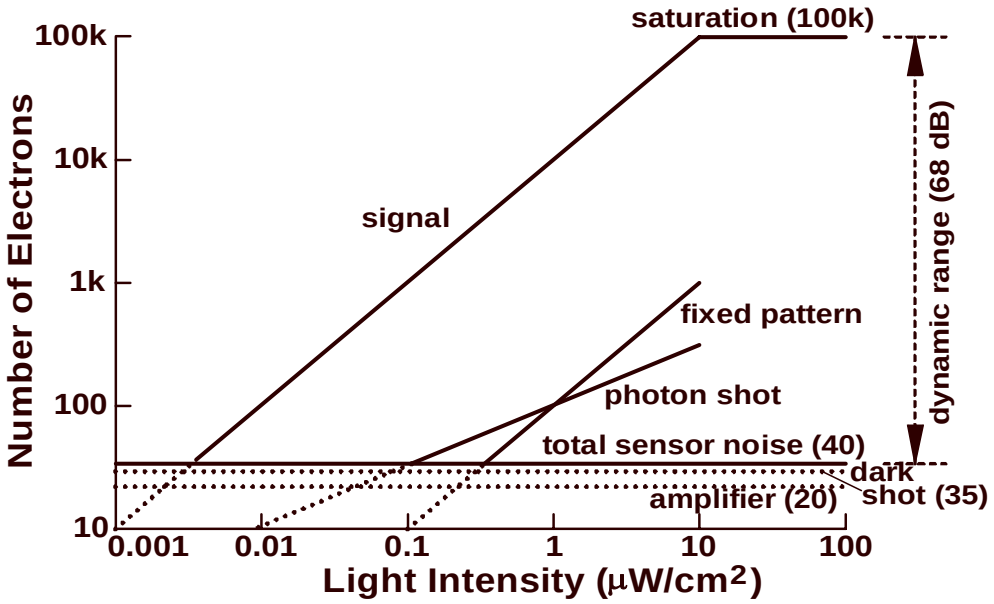
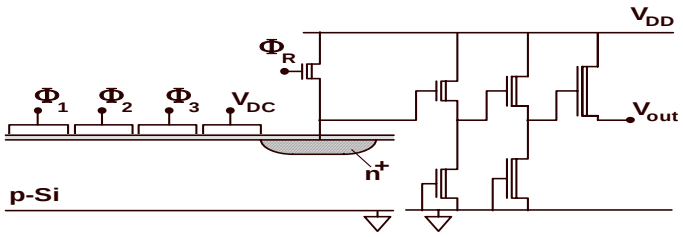


Figure 7.48, p. 548:



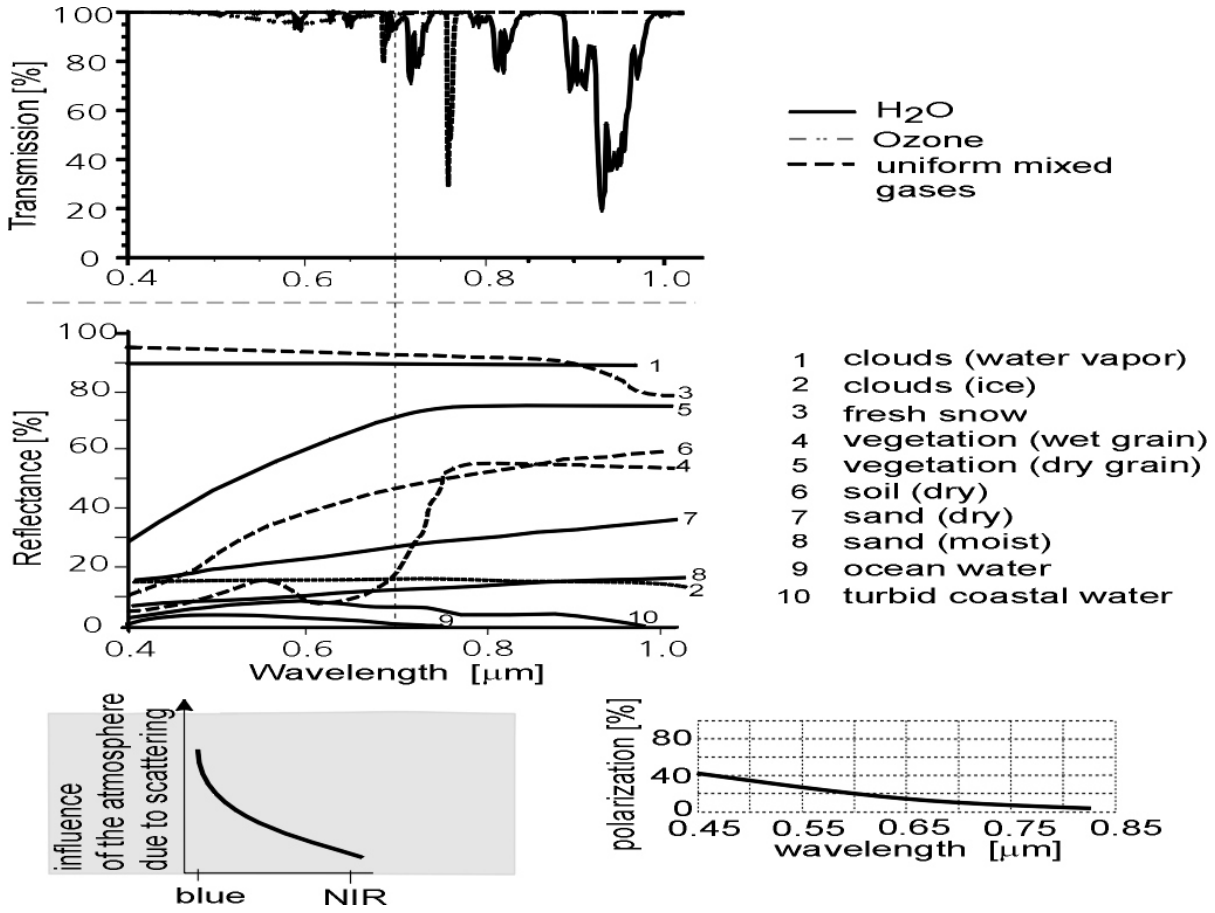
Section 7.4.2.1, p. 550, first paragraph: “Ie” should be “I_e”, two places.

Line before equation 7.65: “deviation (s)” should be “deviation (σ)”

Section 7.4.2.2, p. 551, first paragraph: “Id” should be “I_d”.

Figure 7.51, p. 553: “DR_x” and “DR_y” should be “ΔR_x” and “ΔR_y”

Figure 7.53, p. 555:


Transmission [%]
100
80
60
40
20
0
0.4
0.6
0.8
1.0
H2O
Ozone
uniform mixed gases
Reflectance [%]
Wavelength [μm]
1 clouds (water vapor)
2 clouds (ice)
3 fresh snow
4 vegetation (wet grain)
5 vegetation (dry grain)
6 soil (dry)
7 sand (dry)
8 sand (moist)
9 ocean water
10 turbid coastal water

influence of the atmosphere due to scattering
blue
NIR

polarization [%]
80
40
0
0.45
0.55
0.65
0.75
0.85
wavelength [μm]

Figure 7.57, p. 559:

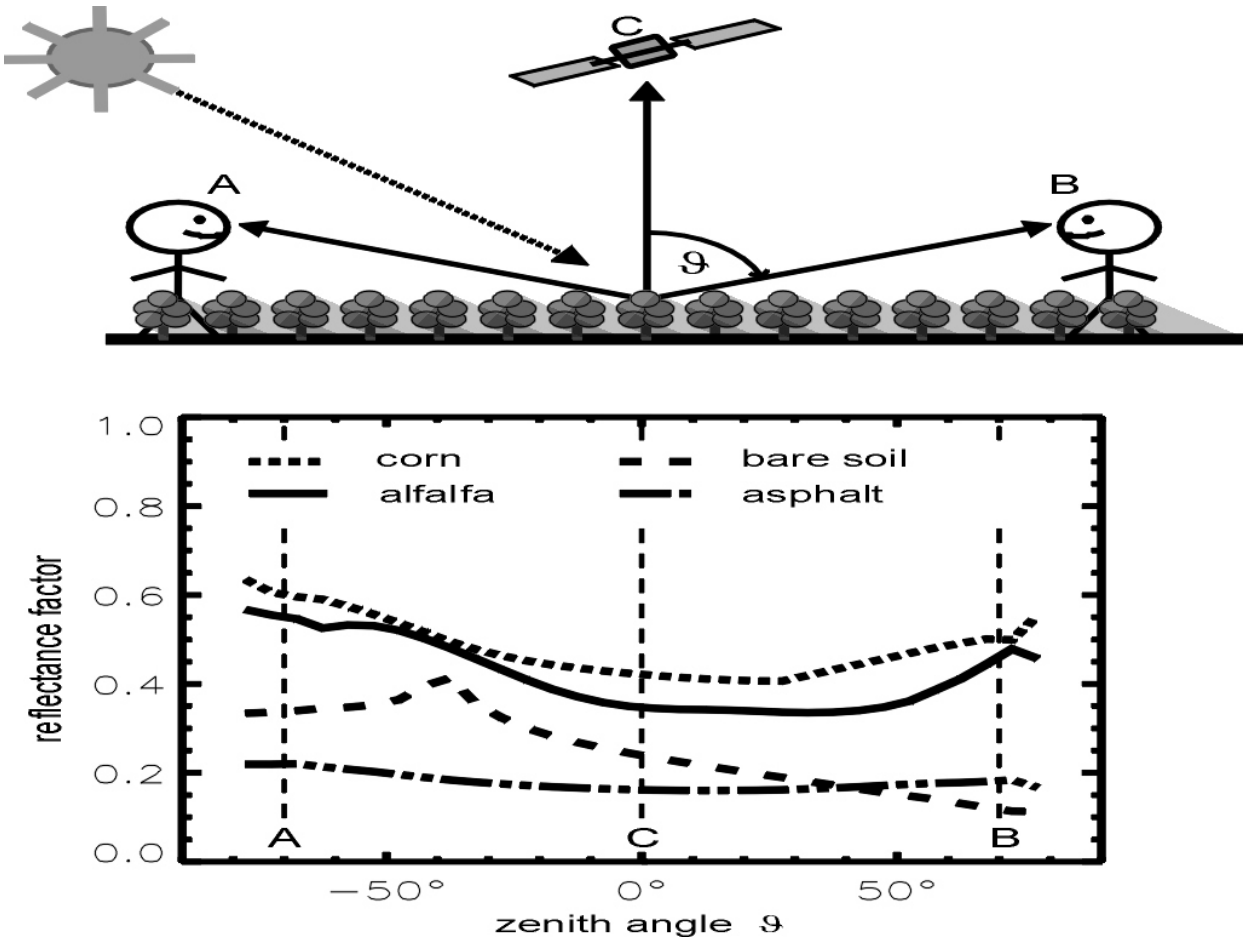


Table 7.5, Part 1, p. 563:
Third row, first column, 'Pixel size (m)' should be 'Pixel size (μm)'.
Fourth row, fourth column: 'm base' should be 'μm base'
Seventh row, first column: 'Scan pixel size (m)' should be 'Scan pixel size (μm)'
Seventh row, third column: '21 m' should be '21 μm'
Twelfth row, first column: 'Geometric accuracy (m)' should be 'Geometric accuracy (μm)'
Fourteenth row, second column: '(12.5/20 m)' should be '(12.5/20 μm)'
Fourteenth row, third column: '(14 m)' should be '(14 μm)' (two instances)
Fourteenth row, fourth column: '(10/20 m)' should be '(10/20 μm)' (two instances)
Fourteenth row, fifth column: '(8/16 m)' should be '(8/16 μm)' (two instances)

Table 7.5, Part 2, p. 564:
Third row, first column, 'Pixel size (m)' should be 'Pixel size (μm)'.

Seventh row, first column: ‘Scan pixel size (m)’ should be ‘Scan pixel size (μm)’
Twelfth row, first column: ‘Geometric accuracy (m)’ should be ‘Geometric accuracy (μm)’
Fourteenth row, second column: ‘(12 m)’ should be ‘(12 μm)’
Fourteenth row, third column: ‘(12.5 m)’ should be ‘(12.5 μm)’
Fourteenth row, fourth column: ‘(30/15 m)’ should be ‘(30/15 μm)’

Table 7.6, p. 566, footnote 1: “?m” should be “μm”

Section 7.6.3.4, p. 572, first paragraph, line 4: “?m” should be “μm”

Chapter 8:
p. 639, equation after “detector function”, remove “(1/p) S $_{\text{over n}}$ d(x – nP)”

Chapter 11:

On page 773 equation 11.15 has been partially obscured by Figure 11.2. It should read

$$\boldsymbol{a} = \begin{bmatrix} \boldsymbol{a}_h \\ \boldsymbol{a}_h \boldsymbol{x} \end{bmatrix}$$

Section 11.1.3.4.2, page 789, next-to-last line of text: "$\angle(OAB) = \angle(AC)$" should read "$\angle(OAB) = \angle(OAC)$"

Section 11.2.1.4, page 851: The equation $\Delta = \begin{bmatrix} \dot{\Delta} \\ \ddot{\Delta} \\ \dddot{\Delta} \end{bmatrix}$ should be $\Delta = \begin{bmatrix} \dot{\Delta} \\ \dddot{\Delta} \\ \ddot{\Delta} \end{bmatrix}$.

Section 11.2.3.1, page 853

> The sentence “The potentially very large matrix $\ddot{\Sigma}$ has traditionally been treated as a 3x3 block diagonal matrix, and production triangulations have only recently been enhanced to treat this matrix as a full matrix.”
>
> should be
>
> “The potentially very large matrix $\ddot{\Sigma}$ is 3x3 block diagonal, and it can be stored in compacted form. Apriori-correlated ground points’ joint error covariance matrix should be placed in matrix $\dddot{\Sigma}_{\text{corr grnd}}$.”

Section 11.2.5.2, page 858

Near the middle of the page, the sentence “This approach is efficient because matrix $\ddot{\Sigma}$ often has 3x3 block diagonal form.”

should delete the word “often”.

p. 871: Third line of text should reference Equation 11.121 instead of Equation 1.

Section 11.3, p. 898: Second to last paragraph, first sentence
"and one for as" should be "and one for ν as"

Second to last paragraph, second sentence
"to ν use" should be "to use"

p. 899: Second paragraph, second sentence
"surrounding." should be "surrounding $\mathbf{x}$."

p. 907: Second paragraph, fourth sentence
"are replaced with combinations of" should be "are replaced with appropriate combinations (not detailed here) of"

Third paragraph, second sentence
"these ???????? further sub-divided" should be "these n errors are further sub-divided"

p. 922: Second to last paragraph, second sentence
"the subscrip τ "should be "the subscript T "

p. 958, penultimate paragraph: “mm” should be “μm” (two places)

p. 1087, equation at top of page: quantity in brackets should be to ½ power