ERRATA
(and UPDATES)

Statistical Orbit Determination
Tapley, Schutz, Born
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Preface

p. xiv, upper half of page
Replace TLE source under Goddard Space Flight Center with http://www.space-track.org/per/login.pl (registration required)

Chapter 2

p. 61, upper half of page:
The numerator in the equation for $D_\pi$ reads: $2\Pi$
Should read: $2\pi$

p. 61, upper half of page:
Sentence after $D_\pi$ uses the term: “siderial day”
Should read: “sidereal day”

p. 69, upper half of page:
Phrase reads: “. index[aut]Schutz, B. E.”
Delete entire phrase.

Page 70, upper half of page:
add following at end of paragraph that begins with “As noted previously, Eq. (2.3.46) ...”:
“Numerical integration methods are discussed by Dahlquist and Björck (1974), for example.”

p. 76, Table 2.4.1
add following line after the last line for January 1, 1999:
January 1, 2006 14

p. 88, upper half of page:
Phrase reads: “(a, e, i, $\Omega$, $\omega$, $M_0$). Express the angles in degrees.”
Should read: “(a, e, i, $\Omega$, $\omega$, $M_0$ or $t$). Express the angles in degrees. Assume $t=0$ for the position and velocity.”

p. 88, lower half of page, Exercise 7:
Phrase reads: “+ mean radius of Earth.)”
Should read: “+ mean equatorial radius of Earth.)”
p. 88, lower half of page, Exercise 9:
Add following: The semimajor axis of the Moon’s orbit is 384,000 km, and semimajor axis for the Sun is 149,599,000 km.

p. 89, lower half of page:
Phrase reads: “Selective Ability”
Should read: “Selective Availability”

Chapter 3

p. 118, upper half of page
Combine first two paragraphs.

Chapter 4

p. 160, upper half of page:
Phrase reads: “(Lutchke et al., 2003)”
Should read: (Luthcke et al., 2003)

p. 200, the line following Eq. (4.7.7):
Phrase reads: “is postmultiplied by the quantity $H_k^T R_k^{-1}$, ...”
Should read: “ is postmultiplied by the quantity $H_k^T R_k^{-1}$, ...”

p. 212, upper half of page:
Phrase reads: “Integrate reference trajectory and state transition matrix from $t_{i-1}$ to $t_i$.”
Should read: “Integrate reference trajectory and state transition matrix from $t_{i-1}$ to $t_i$.”

p. 212
Figure 4.8.1 should be labeled Figure 4.7.4

p. 262, lower half of page:
Phrase reads: “Lutchke, S. B., ...)
Should read: “Luthcke, S. B., ...)

2
p. 280, the matrix for $\bar{P}(t_1)$ in the middle of the page:
Matrix element, row 1, column 1 includes the term $t_1$

This term in the matrix element should read $t_1^2$, so the element should be $4 + 2t_1^2 + \frac{t_1^4}{4}$

p. 280, the matrix for $\bar{P}(t_1)$ in the middle of the page:
Matrix element, row 1, column 2 and also row 2, column 1 includes the term $\frac{t_1^3}{3}$

This term in the matrix element should read $\frac{t_1^3}{2}$

Chapter 5

p. 291, lower half of page
Last sentence of Section 5.3 reads: “...in Eq. (5.3.10).”
Should read: “...in Eq. (5.3.1).”

p. 381, lower half of page:
Phrase reads: Thornton, Thornton, C. L., ...
Should read: Thornton, C. L., ...

Appendix B

p. 477, upper half of page, third bullet on the page
Phrase reads: “If $A$ is singular if ...”
Should read: “$A$ is singular if ...”

Appendix F

p. 499, middle of page
Equation for $\eta(t)$ has units m/sec
Units should be m/sec$^2$

Appendix H

p. 518, lower half of page, first paragraph in H.2:
Phrase reads: “If is a function of the precession...”
Should read: “It is a function of the precession...”
Bibliography Abbreviations

p. 523
Add the following abbreviations:
AGU American Geophysical Union
AAS American Astronautical Society

Bibliography

p. 526, upper half of page:
Phrase reads: “[11] Born ... and G. Hegler, ...”
Should read: “[11] Born ... and G. Heyler, ...”

p. 526, upper half of page:

p. 526, lower half of page:
Phrase reads: “[19] Carlson, ..., pp. 1239-1265, ...”
Should read: “[19] Carlson, ..., pp. 1259-1265, ...”

p. 531, lower half of page:
Phrase reads: “[84] Lutchke, S. B., ...”
Should read: “[84] Luthcke, S. G., ...”

p. 538, lower half of page:
Phrase reads: “Hegler, G., 60”
Should read: “Heyler, G., 60”

p. 539, upper half of page:
Phrase reads: “Lutchke, S. B., ...”
Should read: “Luthcke, S. G., ...”

p. 543, upper half of page:
Phrase reads: “ICESat, 128, ...”
Should read: ICESat (Ice, Cloud and land Elevation Satellite), 128, ...”