Known Corrections for the Second Edition The 3-D Global Spatial Data Model - CRC Press #K25616

(Current Correction Date – March 1, 2022)

Compiled by author, Earl F. Burkholder

1. Page 410 – October 4, 2017

Local frame standard deviations for station FINIAL are misstated. Correct values are to be derived from the following printout.

 Finial - as in book
 covariances - X
 Y
 Z and
 E
 N
 U

 LAT (N)
 32 16 56.219077 X:
 -1556406.8140 X
 0.257E-03
 E
 0.293E-03
 E
 0.293E-03

 LON (E)
 -106 45 24.099451 Y:
 -5169185.0960 Y
 -0.720E-04 0.207E-03
 N
 -0.812E-04 0.263E-03
 0.263E-03

 EL HGT
 1193.4880 M Z:
 3387573.6400 Z
 -0.463E-04 0.778E-04 0.222E-03
 U
 0.345E-05 -0.334E-05 0.131E-03

From these data, the geodetic coordinates and local frame standard deviations are:

$\phi = 32^{\circ} 16' 56."21908 \text{ N}$	+/- 0.016 m
λ = 106° 45' 24."09945 W	+/- 0.017 m
h = 1,193.488 m	+/- 0.011 m

2. Page 468 – November 22, 2017:

At two places on this page, the reference Leick (E.5) should be Leick (E.6).

- 3. January 17, 2018, the following two corrections were found on the RPLS web page under comments by John Nolton dated September 6, 2017.
 - A. Page 160 the ellipsoid height for station REILLY should be 1,166.57 m.
 - B. Page 161 The east value of longitude is correct. The correct value for west longitude is 121° 47' 09."353904 W.
- 4. January 20, 2018, the following corrections were also provided by John Nolton.
 - A. Page 161 the value of phi sub 1 should be 16.993923.
 - B. Page 161 the PID for station "K 785" is NY0676
 - C. Page 176 John noted that the accuracy statement for the Puissant method is misleading. For information on the limitations of the Puissant method, see Geometric Geodesy Part I by Richard H. Rapp (1991) pages 104 and 119-120.
 - D. Page 189 the value of Z for New Orleans should be 3,174,026.4177 m.

- 5. John Nolton also offered following:
 - A. Page 55 The statement about the square root of negative number being undefined is not mathematically correct. It would be better to say "requires the use of imaginary numbers" in place of "undefined."
 - B. The term Conventional Terrestrial Pole (CTP) as appearing on pages xxvii, 4, 31, 95, 199, 210, 226, 414, and 475 is somewhat dated. A newer designation is "Celestial Intermediate Pole" (CIP) as described by Nichole Capitaine in IERS Technical Note 29, "Comparison of "Old" and "New" Concepts: The Celestial Intermediate Pole and Earth Orientation Parameters" which can be found with a web search.
- 6. October 1, 2018

Page 416 – middle of the page. The statement is that equation 15.6 is probably the easiest for finding an approximate horizontal distance. The equation to be suggested in that case is equation 15.7.

7. September 19, 2019

Page 325 – Line 4, elements 4 and 5 of Covariance Matrix. . . (Figure 12.3) should be:

6.6501E-06 and 1.4303E-05

8. October 30, 2019

Page 414 – Table 15.7. . . The longitude for the Initial Point has an extra negative sign in it. The correct longitude value is:

106° 53' 14."96154 W

9. May 8, 2020

Page 432 two inches from bottom of page, computations were performed using an HP-41 calculator, not an HP-45.

10. March 1, 2022

Index page 485, 486, and 487: The discrepancies are that NAD 27, NAD 83, NGVD 29, and NAVD 88 are printed as NAD27, NAD83, NGVD29, and NAVD88 (a space between the letters and numbers is preferred).

11. March 1, 2022

Index page 492: The preferred names for the World Geodetic System are WGS 60, WGS 72, and WGS 84. They are printed as WGS60, WGS72, and WGS84.

12. March 1, 2022

Index page 474 and 492: The word BURKORDTM is listed correctly several times, but it is printed incorrectly at least once on each page as BURKORDT.

13. Stay tuned for additional corrections.