Tychonis Brahe Dani Thesaurus Observationum, Tomus III — Editorial footnotes (draft)

Tycho Brahe (1546–1601), observations; J. L. E. Dreyer (1852–1926), editor, with J. Raeder. Drafted editorial footnotes for review before publication. Each note is keyed to its anchor in the **manuscript-grade complete edition** — the collated output that retains the per-batch/page scaffolding the anchors reference (produced by `ms`). The reading in the main text is **preserved as printed/transcribed** and is not altered by these notes. The note text below is a **draft** — review and edit before publication.

The notes are classified as follows:

- **Category B — source compositor error.** A printing, compositor, or scribal error in the source itself (a wrong letter or digit, a dropped or doubled word, a non-resolving citation). The likely intended reading is noted, but the main text preserves exactly what is printed.
- **Category C — author/source anomaly.** An anomaly originating with the author or the source rather than the typesetting (a factual or geographic slip, a misattribution, an internal inconsistency, or a deliberate but unusual feature). Recorded as written.

#	Anchor	Cat.	Item
1	batch_081 / p.162 (printed 148) — batch_082 / p.163 (printed 149), 20 June, Magini's Padua observation	C	Defective construction at "diſtantiam hanc facile inſinuata*"; subject supplied; asterisk keyed to nothing
2	batch_108 / p.216 (printed 202), 20 August, morning	B	"H. 4 25′16″" printed where the working requires 6 hours
3	batch_215 / p.430 (printed 416), computation of the place of the Moon	B	Two sub-minute arithmetic discrepancies in the Moon's longitude
4	batch_235 / p.470 (printed 456), 5 December	B	"vera Altitudo ♂ 50 28⅙" does not equal 50 27¾ + ⅓′
5	batch_228 / p.455 (printed 441), 4 January	B	Distance from Cor Scorpii given two ways; a one-second addition slip
6	batch_025 / p.49 (printed 35), 18 December, row 7^{h} $24\frac{2}{3}^{m}$, second column	B	"20 23¾" stands about 11′ below its distance series
7	batch_205 / p.409 (printed 395), 15 September, morning, lower declination column	B	"12 39" in a declination column whose values run 25–26
8	batch_237 / p.474 (printed 460), "Pro loco ♂ die 23 Decembris", second block	B	"Ang. diff. aſcenſ. 13 33 32" does not close the computation; 23 33 32 would

#	Anchor	Cat.	Item
9	batch_239 / p.478 (printed 464), right column, the horizon table after "vicina Horizonti", row 7 4 50	B	"24 24⅓" breaks a column running 42 26⅔, 42 26
10	batches 070, 109, 112, 173, 211, 224 — computations from the Prutenic Tables (pp. 140, 218, 223, 346, 421, 447)	C	Degree places over 30 after a superior "ˢ": the count is evidently in sexagenae (60°)
11	batch_070 / p.139 (printed 125), right column, repetition of 22 March	B	"Latitudo 28 3 M." sets 28 in the degree place; the left column has "0 28 M."
12	batch_072 / p.144 (printed 130), right column, 10 December, row 12^{h} $23½^{m}$	B	"46 53½" for a distance printed 43 53⅓ five minutes earlier
13	batch_075 / pp.149–150 (printed 135–136), 14 April	B	An hour "16" in a column of 10s and 11s; "B." after an Alphonsine longitude
14	batch_082 / p.164 (printed 150), the time of the opposition and the place of Mars on 6 June	C	The opposition is dated D. 8 twice and D. 7 once; the 6 June place is tied to three times
15	batch_086 / p.172 (printed 158), 18 and 19 February	B	"2 21⅔" in a declination series at 2 30–2 35; an hour "9" among 6s
16	batch_087 / p.173 (printed 159), left column, 20 February, row 6^{h} $19⅓^{m}$	B	"22 55¼" in a distance run of 32s
17	batch_153 / p.305 (printed 291), the collection table, "Ex Calculo Alphonſ." longitude, row 24 August	B	"12 35" breaks a descending column (17 53, 15 59)
18	batch_156 / pp.311–312 (printed 297–298)	B	Two right ascensions of the mouth of Pegasus on one page; "47 47⅙" after three rows of 48
19	batch_168 / p.335 (printed 321), meridian altitude of the lower horn	B	per Chal. "56 53" against per Volub. "53 52½"
20	batch_174 / p.348 (printed 334), 14 February, distance column	B	"22 44" after 32 44 and 32 44½
21	batch_177 / p.353 (printed 339), 31 July, block "Viceverſa ab extr. alæ Peg.", time column	B	A time "11 58½" between 10 55⅔ and 11 9½
22	batch_180 / p.360 (printed 346), 3 January, second block, distance column	B	"45 20½" after 45 51, 45 51⅔, 45 50⅚
23	batch_188 / p.375 (printed 361), left column, table of equatorial distances, row 4 39 10	B	♀ "33 25½" in a Venus series at 21 11, 22 2⅙

1. batch_081 / p.162 (printed 148) — batch_082 / p.163 (printed 149), 20 June, Magini's Padua observation — *Category C — author/source anomaly*

The sentence "Additis autem diſtantiæ ♂ a Vulture tribus minutis vt ſit 44° 6′ emendata ſcilicet pro refractione, diſtantiam hanc facile inſinuata* dum ♂ 17 gradibus circiter ſupra Patavianum horizonta eleuaretur & oblique admodum Vulturem intueretur" has no governing verb as printed: the participle "inſinuata" agrees with no noun on the page, and "diſtantiam hanc" is left without a construction. The translation gives the evident sense, that refraction easily crept into this distance while Mars, about 17° above the horizon of Padua, was low and viewed the Vulture very obliquely, and supplies "[refraction]" as the subject from the preceding "pro refractione"; the supplement is editorial. The asterisk after "inſinuata" is keyed to no note: nothing corresponding stands

at the foot or in the margins of pp. 162–164 of this copy. Whether Dreyer intended a note here, or the asterisk marks the defect in his source, the edition does not say.

2. batch_108 / p.216 (printed 202), 20 August, morning — *Category B — source compositor error*

The source prints ”in tempus reductus oſtendit H. 4 25′16″”, but the page's own working requires 6 hours: the arc ABC 96° 19′ 0″ reduces to $6^h\ 25^m\ 16^s$, and the next clause, ”Quare verum tempus H. 5 34′ 44″”, is $12^h - 6^h\ 25^m\ 16^s$. The printed ”4” stands for ”6”. Preserved as printed, with the corrected value given inline as [recte: $6^h\ 25^m\ 16^s$].

3. batch_215 / p.430 (printed 416), computation of the place of the Moon — *Category B — source compositor error*

”Reſp. Longitudo 21 57⅔ ♉” plus ”Arcus inclinationis 6 add.” gives 22° 3⅔′, but the page prints ”Reſp. vera Longitudo 22 4¼”. The page then adds ”2 M.” to reach ”vt ſit 22 6½”, whereas 22° 4¼′ + 2′ = 22° 6¼′. Both discrepancies are under a minute of arc and may reflect rounding in Tycho's working or a slip in the transcription the edition follows. Preserved as printed.

4. batch_235 / p.470 (printed 456), 5 December — *Category B — source compositor error*

”per Chalyb. 50 27¾”, with the N.B.'s addition of ”tertia pars vnius minuti” (⅓′), gives 50° 28 1/12′, but the page prints ”Ergo vera Altitudo ♂ fuit 50 28⅙”. The difference is 1/12′ (5″). Preserved as printed.

5. batch_228 / p.455 (printed 441), 4 January — *Category B — source compositor error*

The table gives the distance of Mars from Cor Scorpii at $7^h\ 6^m\ 30^s$ as ”10 28⅓”; the Inquisitio block below gives the same distance as ”10 28⅔”. In the same block, Ang. diff. 11 0 26 + Aſc. Recta Cordis 241 12 55 = 252° 13′ 21″, but the page prints ”252 13 20”. Both are preserved as printed.

6. batch_025 / p.49 (printed 35), 18 December, row $7^h\ 24⅔^m$, second column — *Category B — source compositor error*

The source prints ”20 23¾” in a distance series whose neighbours read ”20 34⅚” ($7^h\ 19^m$) and ”20 34½” ($7^h\ 41⅚^m$); a distance does not fall 11′ and recover within minutes of time. The printed figure was confirmed on a native-resolution page check (rerun_018, R3.01); it is preserved as printed, and no correction is asserted, though a slip in the minutes (perhaps for 34) is likely.

7. batch_205 / p.409 (printed 395), 15 September, morning, lower declination column — *Category B — source compositor error*

The source prints ”12 39” in the lower-declination row of the 3 2 entry, where every other value of the column lies at 25–26. The printed figure was confirmed on a native-resolution page check (rerun_018, R3.06); it is preserved as printed; the page gives nothing to settle the intended figure.

8. batch_237 / p.474 (printed 460), ”Pro loco ♂ die 23 Decembris”, second block — *Category B — source compositor error*

The other blocks of these computations close as the right ascension of the star less the angular difference (p. 473: 63° 12′ − 24° 28′ 31″ = 38° 43′ 29″, as printed). Here the page prints "Ang. diff. afcenf. 13 33 32" and the result 39° 38′ 28″; but 63° 12′ − 13° 33′ 32″ = 49° 38′ 28″, while 63° 12′ − 23° 33′ 32″ = 39° 38′ 28″ exactly. The printed "13" is evidently a slip for "23". The printed figure was confirmed on a native-resolution page check (rerun_020, R3.16); preserved as printed.

9. batch_239 / p.478 (printed 464), right column, the horizon table after "vicina Horizonti", row 7 4 50 — *Category B — source compositor error*

The source prints "24 24⅓" in the second place of the row 7 4 50, where the two rows above read "42 26⅔" and "42 26"; the degrees look transposed (42 → 24). The printed figure was confirmed on a native-resolution page check (rerun_020, R3.17); the ink is unambiguous; preserved as printed, no correction asserted.

10. batches 070, 109, 112, 173, 211, 224 — computations from the Prutenic Tables (pp. 140, 218, 223, 346, 421, 447) — *Category C — author/source anomaly*

Several computations print a degree place greater than 30 after a count marked with a superior "^{s}": "2^{s} 53° 27′ 35″" (p. 140), "4^{s} 30° 59′ 24″" and "2 59 15 50" (p. 218), "1^{s} 38° 22′ 50″" (p. 223), "1^{s} 35° 35′ 13″" (p. 346), "2^{s} 58° 42′ 25″" (p. 421), "5^{s} 31° 17′ 26″" (p. 447). These are not errors if the "^{s}" counts sexagenae of 60°, as the Prutenic Tables reckon and as the volume itself writes elsewhere ("2 sex. 8° 46′", p. 166); on that reading every one of them is in range. The figures at pp. 421 and 447 were confirmed on page checks (rerun_018 R3.08, rerun_019 R3.09). The English keeps the printed notation; the reader should not take "^{s}" here for a zodiacal sign of 30°.

11. batch_070 / p.139 (printed 125), right column, repetition of 22 March — *Category B — source compositor error*

The right column prints "Latitudo 28 3 M." with "28" standing in the degree place, a lunar latitude of 28° 3′, which is impossible (the Moon's latitude does not exceed about 5⅓°). The left column, for the same moment, prints "Lat. 0 28 M." with "28" in the minute place. The right-hand figures are evidently shifted one place (0° 28′ 3″). The print was confirmed by a blind page check (stage5_cold/pcE/u1); preserved as printed.

12. batch_072 / p.144 (printed 130), right column, 10 December, row 12^{h} $23½^{m}$ — *Category B — source compositor error*

The distance between Saturn and cor ♌ is printed "46 53½" on the 12^{h} $23½^{m}$ row, where the rows at 12^{h} $14½^{m}$ and 12^{h} $18⅓^{m}$ print "43 53⅓"; a distance does not change by 3° in five minutes of time. Evidently "43". The print was confirmed by a blind page check (stage5_cold/pcE/u1); preserved as printed.

13. batch_075 / pp.149–150 (printed 135–136), 14 April — *Category B — source compositor error*

In the 14 April table the fourth time prints "16 57⅓", where the hours of the column run 10, 10, 10, then 11, 11, 11; evidently "10". On p. 150 the Alphonsine

longitude ”11 22⅔” is followed by ”B.” (the mark of a northern latitude or declination) and carries no zodiac sign. The print was confirmed by a blind page check (stage5_cold/pcE/u11); both preserved as printed.

14. batch_082 / p.164 (printed 150), the time of the opposition and the place of Mars on 6 June — *Category C — author/source anomaly*

The page states the time of the opposition as ”D. 8 H. 13 M. 18” in the paragraphs ”Quare gradus …” and ”Porro δοκιμασία …”, but as ”D. 7 H. 13 M. 18” in ”Conuenit igitur …”. The page also ties the 6 June place of Mars (27° 15′ ♐) to three times: H. 12 M. 10 (the table of limited places, and three times in the text), H. 12 M. 20 (the table ”Noſtra loca verificata”) and H. 12 M. 17 (”ad diem 6 H. 12 M. 17 inuento”). The day may be a slip, or a change between civil and astronomical reckoning, which the page does not mark. The print was confirmed by a blind page check (stage5_cold/pcE/u11); all preserved as printed.

15. batch_086 / p.172 (printed 158), 18 and 19 February — *Category B — source compositor error*

In the table ”Eodem 18 Feb. pro refractione.”, the fifth declination of the bright star of the jaw of the Whale prints ”2 21⅔”, where the column's other values are 2 35, 2 30 and 2 30⅔. In the 19 February table the fourth time prints a 9-shaped hour (”9 50½”) among hours of 6; in this fount a 9 and a turned 6 are the same sort, so the figure may be a 6 set upside down. The print was confirmed by a blind page check (stage5_cold/pcE/u11); both preserved as printed.

16. batch_087 / p.173 (printed 159), left column, 20 February, row 6^{h} $19\frac{1}{3}^{m}$ — *Category B — source compositor error*

The distance on the 6^{h} $19\frac{1}{3}^{m}$ row prints ”22 55¼”, where the other rows of the run, from the bright star of ♈, read 32 56½ to 32 54¾. Evidently ”32”. The print was confirmed by a blind page check (stage5_cold/pcE/u11); preserved as printed.

17. batch_153 / p.305 (printed 291), the collection table, ”Ex Calculo Alphonſ.” longitude, row 24 August — *Category B — source compositor error*

The Alphonsine longitude for 24 August prints ”12 35”, between ”17 53” on the line above and ”15 59” on the line below, in a column that otherwise descends steadily. The print was confirmed by a blind page check (stage5_cold/pcE/u12); preserved as printed. The intended figure is not settled by the page.

18. batch_156 / pp.311–312 (printed 297–298) — *Category B — source compositor error*

p. 311 prints the right ascension of the mouth of Pegasus as ”321 4 45” in the left column and ”321 4 20” in the right. On p. 312, 29 December, the distances from Aldebaran run 48 47, 48 47¼, 48 47½, then ”47 47⅙”; evidently ”48”. The print was confirmed by a blind page check (stage5_cold/pcE/u12); all preserved as printed.

19. batch_168 / p.335 (printed 321), meridian altitude of the lower horn — *Category B — source compositor error*

The two instruments give the meridian altitude of the lower horn as ”56 53” (per Chal.) and ”53 52½” (per Volub.). Readings of one altitude by two instruments cannot differ by 3°, so one of the degree figures is evidently a slip; the page does not say which. The print was confirmed by a blind page check (stage5_cold/pcE/u2); preserved as printed.

20. batch_174 / p.348 (printed 334), 14 February, distance column — *Category B — source compositor error*

The distance column runs 32 44, 32 44½, then ”22 44”; evidently ”32”. The print was confirmed by a blind page check (stage5_cold/pcE/u2); preserved as printed.

21. batch_177 / p.353 (printed 339), 31 July, block ”Viceverſa ab extr. alæ Peg.”, time column — *Category B — source compositor error*

The block's times run 10 49½, 10 55⅔, ”11 58½”, and the next block opens at 11 9½; evidently ”10 58½”. The print was confirmed by a blind page check (stage5_cold/pcE/u2); preserved as printed.

22. batch_180 / p.360 (printed 346), 3 January, second block, distance column — *Category B — source compositor error*

The distance column runs 45 51, 45 51⅔, 45 50⅚, then ”45 20½”; evidently ”50½” in the minutes. The print was confirmed by a blind page check (stage5_cold/pcE/u2); preserved as printed.

23. batch_188 / p.375 (printed 361), left column, table of equatorial distances, row 4 39 10 — *Category B — source compositor error*

The equatorial distances alternate between Jupiter (27 9⅚, 27 54½, 29 19) and Venus (21 11, 22 2⅙); the third Venus value prints ”33 25½”, which neither series admits. The intended figure is not settled by the page. The print was confirmed by a blind page check (stage5_cold/pcE/u2); preserved as printed.