Johannis Hevelii Machinae coelestis pars prior; Organographiam, sive Instrumentorum astronomicorum omnium, quibus Auctor hactenus sidera rimatus, ac dimensus est, accuratam delineationem et descriptionem, plurimis iconibus, aeri incisis, illustratam & exornatam, exhibens — Editorial footnotes (draft)

Johannes Hevelius (1611–1687). 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.
- **Missing-source lacuna.** A point where source text is missing, damaged, or illegible. The note states what should stand at the gap and points to an alternate witness where one is known.

#	Anchor	Cat.	Item
1	batch_003 / p.9 (engraved frontispiece; no printed page)	lacuna	Frontispiece: the engraver's surname begins with F or P; unread on this copy
2	batch_007 / p.20 (list of plates; no printed page)	lacuna	List of plates: the first page number for plate Z is damaged (406 or 408)
3	batch_012 / p.34 (printed p. 14), line 21	B	The book's errata (row 1) correct *integra ac salva conservari* to *integram & salvam conservare*
4	batch_013 / p.37 (printed p. 17), right margin R8	B	Margin misprint *Europai* for *Europæi*
5	batch_016 / p.46 (printed p. 26), lines 1–3	C	Copernicus's hypothesis described with *Terrâque immobili*, 'and the Earth immobile'
6	batch_016 / p.47 (printed p. 27), line 11	C	Thales' ratio printed as *septuagesimam & vicesimam*; Diogenes Laertius gives the 720th part
7	batch_017 / p.51 (printed p. 31), lines 17–19	C	Sacrobosco and al-Kindī both dated to 1132
8	batch_018 / p.54 (printed p. 34), line 3	C	Tycho's death dated 24 November 1601
9	batch_019 / p.56 (printed p. 36), line 2	C	*ut nemo ferè non nesciat*: a pleonastic negation, rendered by the sense
10	batch_025 / p.73 (printed p. 53), line 25; p.74 (printed p. 54), line 1	C	Tycho's *Progymnasmata* cited as *Lib. II*; elsewhere the same passage is *Lib. II*
11	batch_031 / p.93 (printed p. 73), line 15	C	*nemo non nesciat*: a pleonastic negation, rendered by the sense
12	batch_032 / p.95 (printed p. 75), line 2	C	*nec non … adeò ingratam*: the negation the sense requires is not printed
13	batch_034 / p.101 (printed p. 81), lines 14–16	C	*nedum* with no negation: the armillae 'admit' a subdivision into minutes
14	batch_036 / p.106 (printed p. 86), lines 2–8	C	Lansberge's second quadrant: quoted as 'larger', judged by Hevelius 'not larger'
15	batch_038 / p.114 (running head read as 92), line 36	C	*ut vel quicquam magni iis tentarem*: a negative purpose is required but not printed
16	batch_038 / p.112 (printed p. 90)	B	Page number printed 99 for 90
17	batch_039 / p.115 (printed p. 93), right margin R18–R19	B	Margin misprint *rén-tasse* for *tentasse*
18	batch_039 / p.117 (printed p. 95), line 15	B	Misprint *monuinus* for *monuimus*
19	batch_040 / p.119 (printed p. 97), lines 30–37	lacuna	Binding fold: the first letters of eight lines lost; *benè* or *penè* at line 31
20	batch_042 / p.124 (printed p. 102), line 23	B	Misprint *lustrumenti* for *Instrumenti*
21	batch_042 / p.125, plate Fig. B (arc numerals)	C	Fig. B arc numerals: second figure probably 30 where the series wants 50
22	batch_046 / p.137 (printed p. 111), line 12	B	*ab oculos* for the idiom *ob oculos*
23	batch_050 / p.148 (printed p. 120), line 2	C	Tycho, 'Lib. II. pag. 256': the work cited
24	batch_056 / p.168 (printed p. 136), lines 4–5 and left margin M1–M5	C	Octant divisions: body says sixths 'of any degree', margin says sixths 'of any minute'
25	batch_068 / p.203 (printed p. 165), line 33	B	Misprint *Qzi-muthalem* for *Azimuthalem*
26	batch_071 / p.212 (printed p. 174), lines 11–13	C	'Ten or eleven cubits, or nearly seven feet': the two measures do not agree
27	batch_072 / p.214 (printed p. 176), left margin M8	B	Margin misprint *exadi-* for *exædi-*

#	Anchor	Cat.	Item
28	batch_077 / p.231 (printed p. 191), lines 5–11	C	'61/12 parts of one degree, *sive* 1/12 Grad.': no integer before 1/12
29	batch_082 / p.245 (printed p. 203), lines 2–9	C	Worked example: 8 lb against 64 lb, 'eight times', where the dimensions give four times
30	batch_085 / p.255 (printed p. 213), lines 31–35	C	*ut vel minimùm … cedat*: possibly a missing negation; English follows the print
31	batch_089 / p.265 (plate, Fig. M), limb figures	C	Fig. M: the engraver cut 50 where the scale requires 30
32	batch_089 / p.267, right margin R17–R18	B	Margin misprint *adin-tricẽ* for *adiutricem*
33	batch_099 / p.296	C	doubled words (*quoties quoties*, *mox mox*): a recurring feature of the print
34	batch_100 / p.300	C	octant divided to 45° or 46° but usable only to 40°
35	batch_112 / p.335 (plate R)	C	dial of piece 1 engraved with 40 twice and no 10
36	batch_121 / p.363 (printed p. 307)	C	"Cap. VIII pag. 276": chapter and page do not agree
37	batch_123 / p.367 (plate T)	C	the second divided strip numbers 1, 2 above and 3, 4, 5 below
38	batch_124 / p.372 (printed p. 312)	C	*quina Secunda* (five seconds) for a twelfth of a degree, which is five minutes
39	batch_125 / p.375 (printed p. 315)	C	the book's errata correct *illuc* to *illud*
40	batch_131 / p.391 (printed p. 331)	C	"36″ 30‴" printed twice where the page's own scale gives about 26″ 28‴
41	batch_133 / p.397 (printed p. 337)	C	prose "102⅓" parts per minute against Table A's 102½
42	batch_134 / p.401 (printed p. 341)	C	*ne non nescias*: Hevelius's double negative as a formula of positive purpose
43	batch_138 / p.413 (printed p. 353)	C	citation of Clavius on Sacrobosco, "pag. 165", not verified
44	batch_138 / p.414 (printed p. 354)	C	"6 7 vel 8" with no unit of length
45	batch_140 / p.419 (printed p. 359)	C	annual change "10′ 37″" does not follow from the declinations printed with it
46	batch_152 / p.456	C	*ligillum*: a non-classical diminutive, "a small strip of wood"
47	batch_154 / p.462 (printed p. 394)	C	the same cable lettered *h l i* and *h l k*
48	batch_161 / p.483 (printed p. 411)	C	margin names the carrying rope beside a body passage on the directing cable
49	batch_162 / p.486 (printed p. 414)	C	*incurvatâ* printed where the sense requires "unbent"
50	batch_163 / p.488 (printed p. 416)	C	the same upright lettered *k* and then *F*
51	batch_163 / p.488 (printed p. 416)	C	*cochleas* ("screws") for the pulleys *y* and *e*
52	batch_164 / p.492 (printed p. 418)	C	*præcedentia* counted from opposite ends of the tube on the same page
53	batch_172 / p.516 (printed p. 438)	C	no noun printed after *ad pleniorem*; "knowledge" supplied
54	batch_175 / p.524 (printed p. 444)	C	double negation *nisi … non* rendered by its sense
55	batch_176 / p.526 (printed p. 446)	C	cabin D referred to Chapter X here, to Chapter XI two pages earlier
56	batch_176 / p.527 (printed p. 447)	B	*Fistulæ* printed for the river Vistula
57	batch_178 / p.533	C	index entry *Computum annorum inter diluvium* incomplete as printed

#	Anchor	Cat.	Item
58	batch_182 / p.544 (errata)	B	the errata's own page number misprinted (137 for 187)

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1. batch_003 / p.9 (engraved frontispiece; no printed page) — *Missing-source lacuna*

The engraver's credit below the frame at the right reads *I. … ſculpſit*. On this copy the capital of the surname touches the frame rule. Magnified blind readings narrow it to F or P, followed by the letters *alck*, so the surname is either *Falck* or *Palck*. The ink of this copy does not decide between the two, and the English leaves the name unread. A second copy of the plate would settle it.

2. batch_007 / p.20 (list of plates; no printed page) — *Missing-source lacuna*

In the printed list of plates the row for plate Z reads *Z inter pag. 40[?] & 407*. On this copy the third figure of the first page number lies under paper damage over its upper half. Blind readings narrow it to 6 or 8, and the English leaves it unread. Read as 6, the instruction places the plate between pages 406 and 407. Read as 8, the two page numbers would stand out of order (408 and 407). Every other row of the list names two consecutive pages, but the figure itself cannot be read here.

3. batch_012 / p.34 (printed p. 14), line 21 — *Category B — source compositor error*

The errata printed at the end of the volume correct this line (p. 14, line 21) to *integram & ſalvam conſervare*. The text as printed reads *ad hæc uſque tempora integra ac ſalva conſervari*, a passive: the tower and Cheucungus's instrument 'have been preserved whole and intact' down to Hevelius's own day. The errata's active infinitive, with the adjectives agreeing with *turrim*, makes the Chinese themselves the subject: 'that these peoples had preserved the tower whole and intact'. The English follows the printed passive. The correction changes the construction, not the substance of the claim.

4. batch_013 / p.37 (printed p. 17), right margin R8 — *Category B — source compositor error*

The margin prints *Europai* for *Europæi*, 'Europeans'. At magnification the vowel after the p is a plain single-bowl a with no e-loop. This is a spelling slip in the print, and the English renders the sense.

5. batch_016 / p.46 (printed p. 26), lines 1–3 — *Category C — author/source anomaly*

Of the former of the two men (Copernicus) the print says that he attacked astronomy *inveniendâ novâ, ac longè faciliori hypotheſi, exiſtente ſcilicet Sole in centro Mundi, Terrâque immobili*, 'by devising a new and far easier hypothesis, with the Sun, namely, standing at the centre of the world, and the Earth immobile'. Taken in the natural way, the words make the Earth immobile in Copernicus's

hypothesis, which is the reverse of it. Either *immobili* is a slip (for *mobili*, or for a word applying to the Sun), or Hevelius's phrase is loosely put. The English renders the words as printed.

6. batch_016 / p.47 (printed p. 27), line 11 — *Category C — author/source anomaly*

Of Thales the print says that he declared the lunar orb, compared with the size of the Sun, to be *ſeptuageſimam & viceſimam illius partem*, 'its seventieth and twentieth part'. The numbers are set in words and are construed here; the English renders them as printed. As printed they do not make a single fraction. Diogenes Laertius, whose account of Thales Hevelius follows (he names Laertius a few lines below), gives the seven hundred and twentieth part, and states it of the Sun against the solar circle and of the Moon against the lunar circle. The printed *ſeptuageſimam* may stand for *ſeptingenteſimam*. The figure is Diogenes Laertius I.24.

7. batch_017 / p.51 (printed p. 31), lines 17–19 — *Category C — author/source anomaly*

The print dates Johannes de Sacrobosco and 'Jacobus Alkindus' to the same year, *anno milleſimo centeſimo trigeſimo ſecundo* (1132; set in words and construed). This does not agree with the dates now usually given for either man: al-Kindī flourished in the ninth century, Sacrobosco in the thirteenth. The chronology of this historical survey is Hevelius's own and is kept as printed, as is the placing of *Thebetius Arabs* and *Prophatius Judæus* about the year 1300 later on the same page.

8. batch_018 / p.54 (printed p. 34), line 3 — *Category C — author/source anomaly*

The print gives the date of Tycho Brahe's death as the year 1601, *die vigeſimâ quartâ Novembris*, 'on the twenty-fourth of November' (set in words and construed). Tycho is generally recorded to have died on 24 October 1601. The English renders the date as printed.

9. batch_019 / p.56 (printed p. 36), line 2 — *Category C — author/source anomaly*

The print reads *ut nemo ferè non neſciat*, literally 'so that almost no one is not unaware'. Taken word for word, the extra negation says the opposite of what the passage requires: that almost no one is unaware of what each of these men has undertaken. The English gives the required sense. Pleonastic negation of this kind recurs in Hevelius (compare *nemo non neſciat* on p. 73 and *nec non … adeò ingratam* on p. 75).

10. batch_025 / p.73 (printed p. 53), line 25; p.74 (printed p. 54), line 1 — *Category C — author/source anomaly*

The Preface twice cites Tycho's *Progymnasmata* as *Lib. II*: *ipſe Tycho Lib. II Progymnaſm. pag. 256 faſſus eſt* (p. 53, line 25) and *Lib. II Progymn.* (p. 54, line 1). The two sorts have the form of the figure 1 used in '1656' on the same page, and the English renders them as printed, 'Book II'. The sorts have not been examined on a magnified crop. The book's own later references to the

same passage set a roman numeral: *ex Tychonis Lib. II. pag. 256 Progymnaſm. Proëmio noſtro inſertis*, 'from Tycho's *Progymnasmata*, Book II, p. 256, inserted in our Proem' (p. 87), and *Tycho Lib. II. pag. 256* (p. 120). The passage cited is therefore Book II. Whether the compositor set the roman II with figure sorts or set ıı in error cannot be told from this copy.

11. batch_031 / p.93 (printed p. 73), line 15 — *Category C — author/source anomaly*

The print reads *cùm nemo non neſciat, quanta incrementa Studia Siderea cœperint*, literally 'since there is no one who is not unaware how great the growth of astronomy has been'. Taken word for word this says the opposite of what the sentence requires, that everyone knows it. The English gives the required sense. Compare *ut nemo ferè non neſciat* on p. 36.

12. batch_032 / p.95 (printed p. 75), line 2 — *Category C — author/source anomaly*

The print reads *haud inutilem fore operam, nec non penitiorum Rerum Cœleſtium Scrutatoribus adeò ingratam putavi*. Word for word, *nec non … adeò ingratam* ('and also so unwelcome') would make the work 'so unwelcome' to those who search out the deeper matters of the heavens, whereas the sense requires 'and not so unwelcome'. The English gives the required sense. The same habit of negation appears at p. 73 (*nemo non neſciat*).

13. batch_034 / p.101 (printed p. 81), lines 14–16 — *Category C — author/source anomaly*

The print reads *ſi ſunt minoris magnitudinis, minutorum, nedum eorum partium ſubdiviſionem admittunt*: 'if they [the armillae] are of smaller size, they admit a subdivision into minutes, let alone into the parts of these'. *Nedum* ('let alone') normally follows a negative clause, and the argument, which is about the errors these instruments produce, requires 'they scarcely admit a subdivision into minutes, let alone into parts of minutes'. No *non* or *vix* is printed, and the line is clean. The English follows the print. Either the author wrote it so or a negation was lost in setting.

14. batch_036 / p.106 (printed p. 86), lines 2–8 — *Category C — author/source anomaly*

Hevelius quotes Philips Lansberge (*Progymn. Lib. I. pag. 15*): his wooden quadrant had radii of nearly four feet, *eundemque laborem iteravimus, parato Quadrante æneo majore*, 'and we repeated the same labour with a larger bronze quadrant'. Hevelius comments that Lansberge does not say how large it was, and that *ſine dubio haud extitit priore amplior*, 'without doubt it was not larger than the first'. As printed, the comment contradicts the quotation. Either Hevelius means 'not much larger', or he is discounting Lansberge's claim because no size is given. The English renders the words as printed.

15. batch_038 / p.114 (running head read as 92), line 36 — *Category C — author/source anomaly*

Hevelius says that he turned his mind wholly away from parallactic rulers, torqueta, radii, rings, astrolabes and zodiacal and equatorial armillae, *ut vel*

quicquam magni iis tentarem, literally 'so that I would attempt anything of consequence with them'. The argument requires a negative purpose: 'so as not to attempt anything of consequence with them'. No negation is printed. The English follows the print. Compare p. 213, where a negation may likewise be wanting (*ut vel minimùm … cedat*).

16. batch_038 / p.112 (printed p. 90) — *Category B — source compositor error*

The running head prints the page number as 99. The pages that follow are numbered 91 and 92, so this page should be 90. A magnified crop confirms 99 as printed. The edition keeps the printed form.

17. batch_039 / p.115 (printed p. 93), right margin R18–R19 — *Category B — source compositor error*

The margin prints *rén=|taſſe* for *tentaſſe*, 'has attempted'. A blind re-reading of the leaf confirmed the first letter as r (no ink above the x-height, against the t of *taſſe* on the next line), with an acute over the e and a double hyphen at the line end. The English renders the sense ('the author has attempted astronomy …') and does not quote the Latin.

18. batch_039 / p.117 (printed p. 95), line 15 — *Category B — source compositor error*

The print sets *in Proëmio monuinus* for *monuimus*, 'as we pointed out in the Proem'. At magnification the letter after the i is an n with an arched head and an open foot. This is a spelling slip, and the English renders the sense.

19. batch_040 / p.119 (printed p. 97), lines 30–37 — *Missing-source lacuna*

On this copy the first sorts of lines 30–37 lie in the binding fold, and repeated magnified readings could not recover them. Most of the lost letters do not affect the sense. Two words do. In line 31 the word ending *-enè* has lost one sort, which the surviving ink narrows to b, p or o: *benè* would make Hevelius say that he could detect 'not only single minutes but their quarters well', *penè* 'but nearly their quarters'. The English 'nearly [?]' follows the second reading without committing to it. In line 34 the word ending *-ecem* has lost a sort narrowed to d or l; only *decem*, 'ten' (parallel circles), makes a word, and the English reads 'ten'. Another copy, or a flatter scan of this leaf, is needed to settle line 31.

20. batch_042 / p.124 (printed p. 102), line 23 — *Category B — source compositor error*

The print sets *magnitudo ejuſdem luſtrumenti* for *Inſtrumenti*, 'the size of the same instrument'. At magnification the first letter is a lower-case l (its top serif to the left only, where a capital I would be symmetrical) and the second a u. This is a wrong-sort misprint, and the English renders the sense.

21. batch_042 / p.125, plate Fig. B (arc numerals) — *Category C — author/source anomaly*

The degree numerals engraved along the sextant's arc read, from the lower left, 60, ?0, 40, 30, 20, and a last figure near the sight that is not legible on this copy. The leading digit of the second numeral is crossed by the engraved

shading. One magnified reading gives 3, matched against the certain 3 of the fourth numeral; earlier readings left it between 3 and 5. If it is 3, the arc runs 60, 30, 40, which where the series would give 50: an engraver's slip of the kind seen on the arc of Fig. M (p. 265). The reading is not settled on this copy, and the edition records both possibilities.

22. batch_046 / p.137 (printed p. 111), line 12 — *Category B — source compositor error*

The print sets *Tibi ab oculos ponere* where the idiom is *ob oculos ponere*, 'to set before your eyes'; the a is clear on this copy. The English renders the idiom. Whether this is a compositor's error or the author's slip cannot be told.

23. batch_050 / p.148 (printed p. 120), line 2 — *Category C — author/source anomaly*

Hevelius cites Tycho by book and page only (*ſicuti Tycho Lib. II. pag. 256*), for the point that instruments not made of solid metal suffer from the air. In the Preface (pp. 53–54) he quotes the same passage at length and names the work as the *Progymnasmata*, there printed *Lib. 11* (see the note at p. 53); at p. 87 he refers back to it as *Lib. II. pag. 256 Progymnaſm.*, 'inserted in our Proem'. The work meant is Tycho Brahe's *De mundi aetherei recentioribus phaenomenis, liber secundus* (1588; reissued 1603 and 1610). In the 1610 Frankfurt reissue, Tycho's critique of Maestlin's observations states that instruments not made of solid metal are *mutationi Aeris obnoxia*, 'liable to change from the air'. This passage stands on the leaves just before the page numbered 260, that is, at about pp. 256–259. Wood is not named there. The identification was made from an OCR text of the 1610 reissue, not from a clean scan, so its page numbers are approximate. On this copy the final figure of '256' stands against the gutter shadow, and a further sort after it cannot be excluded.

24. batch_056 / p.168 (printed p. 136), lines 4–5 and left margin M1–M5 — *Category C — author/source anomaly*

The body says that the octant's transversal divisions let one read *non ſolùm quartam cujusvis gradûs, ſed & ſextam partem*, 'not only the fourth but also the sixth part of any degree'. The margin beside it says the divisions show *ſextam cujuſvis minuti partem*, 'the sixth part of any minute'. A sixth of a degree is 10′, a sixth of a minute 10″. Both are set legibly, and the English renders each as printed. One of the two is presumably in error, but the page does not show which.

25. batch_068 / p.203 (printed p. 165), line 33 — *Category B — source compositor error*

The print sets *circulum Qzi-|muthalem* for *Azimuthalem*. The first letter is a capital-height closed bowl with a short separate tail at the lower right, read as Q (possibly O); it is certainly not an A, since it has no apex and no crossbar. Either way this is a wrong sort, and the English reads 'azimuthal circle'.

26. batch_071 / p.212 (printed p. 174), lines 11–13 — *Category C — author/source anomaly*

The print gives the comparison as *Quadranti ordinario … decem vel undecim cubit. ſive ſeptem ferè ped. æquivaleat*, 'is equivalent to an ordinary quadrant of ten or eleven cubits, or nearly seven feet'. The numbers are set in words and construed. Elsewhere the book equates four cubits with six feet (*quatuor … cubitorum, ſive ſex pedum*, p. 222). On that equivalence ten or eleven cubits would be about fifteen or sixteen feet, not seven. The two measures cannot both be right as printed, and the passage is kept as printed.

27. batch_072 / p.214 (printed p. 176), left margin M8 — *Category B — source compositor error*

The margin prints *Turris exadi-* for *exædi-* (*exædificata*, 'built'). At magnification the third letter is a single-bowl italic a with no e-loop. This is a spelling slip, and the English renders the sense.

28. batch_077 / p.231 (printed p. 191), lines 5–11 — *Category C — author/source anomaly*

Lines 5 and 11 say that the special arc fastened to the ruler takes in 61 twelfths of a degree (*61 partes duodecimas, unius ſcilicet Gradûs*; *omninò 61 partes*). Line 7 restates this as *61/12 ſcilicet partes unius gradûs, ſive 1/12 Grad.* 61/12 of a degree is 5 1/12° (5° 5′). Two crops at 8× find the print sets *1/12 Grad.* with no integer before it. Either a 5 has dropped out, so that *ſive* restates the arc's total, or *1/12 Grad.* names the unit, each part being a twelfth of a degree. The figure is kept as printed.

29. batch_082 / p.245 (printed p. 203), lines 2–9 — *Category C — author/source anomaly*

The worked example compares two flat iron bars, each a quarter of a digit thick and two digits high, weighing *octo tantùm librarum*, 'only eight pounds', with a square bar two digits on each side, which *non octo, ſed ſexaginta quatuor libras adæquabit; hoc eſt, octies hæc illâ erit gravior*, 'will come to not eight but sixty-four pounds, that is, will be eight times heavier'. The numbers are set in words and construed. By the dimensions given, the square bar has four times the cross-section of the two flat bars together and eight times that of one of them. So the printed 'eight times' fits a comparison with a single bar, while the sentence compares the square bar with the pair. The figures are kept as printed. The argument, that the lighter pair is the stiffer, is not affected.

30. batch_085 / p.255 (printed p. 213), lines 31–35 — *Category C — author/source anomaly*

The print reads *quanquam hicce Quadrans … ita eſt confirmatus & combinatus, ut vel minimùm incurvationi, vel potentiæ alicui mediocri cedat; attamen, præſtat …*, with no negation. The concessive *quanquam … attamen* ('although … nevertheless it is better to move and turn the quadrant with that handle') might lead one to expect 'that it does not yield even in the least' (*ne vel minimùm*). But the printed words also construe as 'that it yields only in the least degree to bending or to any moderate force', and the English follows the print. The inverse case, a negation printed twice (*niſi … non*), occurs at p. 524 of this volume.

31. batch_089 / p.265 (plate, Fig. M), limb figures — *Category C — author/source anomaly*

The figures along the limb of the plate read, from left to right: 60; a figure whose first digit is hidden by the drapery of the small standing figure engraved on the sight-carriage, so that only the final 0 is visible; 40; 50; 20; 10. The 50 at the centre, under the vertical, stands where the descending series requires 30. Blind readings at 5× and 9× find a plainly inked 5 (a flat top bar with a short stem from its left end and a bowl open to the left; a 3 would join at the right). The engraver appears to have cut 50 for 30. Kept as engraved.

32. batch_089 / p.267, right margin R17–R18 — *Category B — source compositor error*

The margin prints *cõjugem adin-|tricẽ* for *adiutricem*, '[his] wife as helper'. A blind re-reading confirmed the fourth letter as n: its two strokes are joined by an arch at the top, unlike the u of *jugem* on the same line, which joins low. The English renders the sense and does not quote the Latin.

33. batch_099 / p.296 — *Category C — author/source anomaly*

The print sets *quoties quoties* here (line 29) and *mox mox* on the next page; *mox mox* recurs at pp. 315, 343, 370, 383, 386 and 395, and *quorſum quorſum* at p. 465. Each was read by a different translator, so the doubling is unlikely to be a misreading of the scan, and it recurs too often to be a single compositor's dittography; it is more probably the author's emphatic or indefinite reduplication. The translation renders each doubled word once ("however often", "very soon", "wherever"). None of these loci has been checked on a magnified crop.

34. batch_100 / p.300 — *Category C — author/source anomaly*

Hevelius states that distances greater than forty degrees (*Diſtantiæ quadraginta Grad. ſuperantes*) cannot be measured with this octant, although its arc is divided to 45, indeed 46 degrees (*licet arcus ejus in 45 imò 46 Grad. ſit diſtributus*), and defers the reason to his later discussion of the pinnules. The figures are not in conflict: the limit is one of use, not of division. Kept as printed.

35. batch_112 / p.335 (plate R) — *Category C — author/source anomaly*

The numbered ring on the dial of piece 1 reads 90, 100 (at the top), 20, 30, 40, 40 (lower right, set inverted), 50, 60, 70, 80: there is no 10, and 40 appears twice. Three independent readings of the plate agree on the inverted 40. The engraving is reproduced as it stands; the expected value at that position is not supplied.

36. batch_121 / p.363 (printed p. 307) — *Category C — author/source anomaly*

The text refers back to what was set out *Cap. VIII pag. 276* (*Proindè iis, Cap. VIII pag. 276 prolatis, hâc vice ſufficiat*). Chapter VIII (*De Quadrantibus Orichalcicis Minoribus*) stands much earlier in the book: two pages before, p. 361 cites it at *pag. 145*. Printed page 276 falls in Chapter XIV (*De Instrumentorum Pinnacidiis*). The chapter number and the page number cannot both be right; which is wrong has not been settled. Kept as printed.

37. batch_123 / p.367 (plate T) — *Category C — author/source anomaly*

On the second divided strip of the plate (lettered *c* and *b*), the main divisions are numbered 1 and 2 in the upper row and 3, 4, 5 in the lower row, beneath a lower minute row that begins 0 40 50. The numbering of a single scale is thus split between the two edges of the strip. The engraving is reproduced as it stands.

38. batch_124 / p.372 (printed p. 312) — *Category C — author/source anomaly*

The print reads *quemlibet Gradum in duodecimas diſtribui, ſic ut unaquævis pars doduecima quina referat Secunda*, "each degree divided into twelfths, so that each twelfth part represents five seconds". A twelfth of a degree is five minutes, not five seconds, and line 30 of the same page speaks of the little lines *quina Minuta indicantibus*, "indicating every five minutes". The number is spelled out (*quina*), so the reading is not in doubt; the unit is very probably a slip for *Minuta*. Kept as printed. (The same line prints *doduecima* for *duodecima*.)

39. batch_125 / p.375 (printed p. 315) — *Category C — author/source anomaly*

The print reads *ubicunque Pinnacidium conſtituas, vel quocunque illuc deducas*. The book's own errata (p. 544, row 16: p. 315, line 22) correct *illuc* to *illud*: "or wherever you move it" (the sight). The translation follows the printed *illuc* ("to whatever point you bring it"); the correction changes the nuance only.

40. batch_131 / p.391 (printed p. 331) — *Category C — author/source anomaly*

The worked example prints, twice (lines 29 and 30: *nimirùm 36″ 30‴ reperies*; *Minutis illis integris 36 inſuper 36″ 30‴ adhæſiſſe*), that the remainder of 50 hundredth parts gives 36″ 30‴ from Table B. On the scale stated on the next page (one minute = 113⅓ hundredth parts), 50 parts come to about 26″ 28‴, and the companion example on p. 393 (70 parts giving 37″ 6‴) fits that scale. Either the print sets 36″ 30‴ for about 26″ 28‴, or the example rests on a different table entry. Kept as printed in both places.

41. batch_133 / p.397 (printed p. 337) — *Category C — author/source anomaly*

The prose states that a whole minute corresponds to only *102 1/3 partic. centeſ.* ("102⅓ hundredth parts"), while Table A on the preceding page gives one minute as 102½ parts. The fraction is small and stacked; its denominator was read as 3 at 5×, 6× and 9× magnification, against the 2 of "102" beside it. The same sentence gives one full revolution of the upper pointer as 58″ 31‴ 40⁗; if the revolution is of 100 parts, 102½ parts to the minute give about 58″ 32‴ and 102⅓ about 58″ 38‴, so the printed revolution sits nearer the table's value. Kept as printed; which figure is the author's intended value is not settled.

42. batch_134 / p.401 (printed p. 341) — *Category C — author/source anomaly*

Hevelius writes *ne non nescias* ("eſſe puto, ne non neſcias, quòd perpendiculum priùs ad …"), literally "lest you not be unaware". In this book *ne non* is his regular formula for a positive purpose, equivalent to *ut*, and here to *ne nescias*:

compare *ne non Quadrans dicto Suſtentaculo firmiter adſtringi* (p. 251, the earliest instance), *ne non solùm … sed* (p. 406), *ne non … cognoscas* and *ne non nesciat Posteritas* (pp. 416–417), and *ne non totum tegmen … procliviùs* (p. 496), where only the positive sense fits the argument. The translation renders the sense, "so that you are not unaware". The Latin is not emended: the construction is the author's habit, not a compositor's slip.

43. batch_138 / p.413 (printed p. 353) — *Category C — author/source anomaly*

Hevelius contrasts his own methods for the meridian line with *illam Clavii in Commentario ſuper Sphæram Joh. de Sacrobuſco pag. 165 deſcriptam*. This is a citation of Christoph Clavius's commentary on Sacrobosco's *Sphaera*, not a cross-reference within this book; its page number depends on the edition Hevelius used, which he does not name, and it has not been verified against any edition. The final figure is read as 5 (flat top) against the rounded 3 of the page's running head.

44. batch_138 / p.414 (printed p. 354) — *Category C — author/source anomaly*

The print reads *ligno cuidam longitudine 6 7 vel 8, latitudine verò unius digiti*: the length of the squared piece of wood is given as "6 7 or 8", with no comma between 6 and 7 and no unit of length, while the width is given in digits. The translation gives "6, 7 or 8 in length" and supplies no unit; the unit intended (digits, inches or feet) is not stated.

45. batch_140 / p.419 (printed p. 359) — *Category C — author/source anomaly*

Hevelius gives the magnetic declination at London as 11° 16′ east in 1580 and 5° 56′ 30″ east in 1622, and derives an annual change of 10′ 37″. The printed values give 5° 19′ 30″ over 42 years, about 7′ 36″ a year. The companion figure, 9′ 25″ a year for 1622–1634 (from 5° 56′ 30″ to 4° 3′ 30″), does follow from its printed values. The figures were read at strip resolution and are kept as printed; which of the values in the first computation is at fault is not settled.

46. batch_152 / p.456 — *Category C — author/source anomaly*

ligilla (first occurrence here: *ligilla explanata æquè craſſa unius pollicis*) is not a classical word. It is a diminutive of *lignum*, "a small piece of wood", formed like *sigillum* from *signum* and *tigillum* from *tignum*, and Hevelius glosses it himself on p. 485: *ligillum ſive tigillum dentatum*, "a *ligillum*, that is, a small toothed beam", called *ligillis ligneis* a few lines later. In every context the thing is a thin wooden strip: planed slats an inch thick set on the tube cover as sights, or a thin toothed strip of fir. The translation renders it "little slips of wood" here and "wooden strip(s)" elsewhere, and "block" on p. 477, where the piece is a small stop that keeps a joint from slipping.

47. batch_154 / p.462 (printed p. 394) — *Category C — author/source anomaly*

The cable is lettered *h l i* on the preceding page (*donec rudens h l i valenter ſit extenſus*), and its two ends are *h* and *i* on this page (*extremitates rudentis h & i*),

but at line 16 it is *rudente h l k*, while *k* elsewhere in this description names the nut or case. A magnified crop confirms *k* as printed, so the print sets *k* where *i* is meant. The translation keeps *h l k* as transcribed.

48. batch_161 / p.483 (printed p. 411) — *Category C — author/source anomaly*

The author's marginal note reads *Ope alicujus Ergatæ funis geſtatarius adſtringitur* ("The carrying rope is drawn tight by means of a capstan"), but the body beside it fastens the directing cable (*quem directarium appellare lubet*) by its end *h* to the capstan. The margin and the body disagree on which line is tightened. The margin is the author's and is kept as printed.

49. batch_162 / p.486 (printed p. 414) — *Category C — author/source anomaly*

The print reads *ſemper Machinâ planè incurvatâ & illæſâ*, literally "the machine always remaining quite bent and undamaged". The argument, that the far end of the long tube can be moved at will without harm, requires "not bent", and the translation renders "unbent", taking the word as if privative, parallel to *illæsâ*. Elsewhere in the book *incurvat-* always means "bent, curved" (*brachium incurvatum*, *incurvatum Tubospicillum*, and the noun *incurvatio*, "bending"), and classical Latin has no privative *incurvatus*. The slip is the author's or the compositor's, but the intended wording (*non incurvatâ*, *haud incurvatâ*, or another) is not certain, so the Latin is not emended.

50. batch_163 / p.488 (printed p. 416) — *Category C — author/source anomaly*

Within two lines the same upright is lettered *k* (*ut ſtatumen k ſuo fune directario g k h inter cochleas dictas γ & e … remaneat*) and then *F* (*ut ſtatumen F à nullo latere declinet*). Because *k* is also a point on the rope *g k h* in the same clause, *k* may mark the rope's attachment on the upright and *F* the upright itself; the plate would be needed to settle it. Both letters are kept as printed.

51. batch_163 / p.488 (printed p. 416) — *Category C — author/source anomaly*

The print says *inter cochleas dictas γ & e*, "between the said screws *γ* and *e*", and the translation follows it. Every other mention of *γ* and *e* on this page calls them *trochleæ*, pulleys (*trochlea γ ad alteram illam duplicem trochleam e*, line 6; *trochlearum*, line 13). *cochleas* is very probably *trochleas* misset, or a slip of the author's, who uses *cochlea* constantly for screws in this book; pulleys are meant. The word is kept as printed.

52. batch_164 / p.492 (printed p. 418) — *Category C — author/source anomaly*

On this page *præcedentia* is counted from two different ends of the tube. At line 15 (*præcedentia paullò minora, ſubſequentia verò ſucceſſivè aliquantò majora*) the "preceding" openings are those nearest the eye, the narrow ones; at lines 24 and 27 (*antecedentia ſint aliquantò cæteris vicinioribus ampliora*; *præcedentia ſint ampliora*) the "foremost" or "preceding" openings are counted from the object end, the wide openings farthest from the eye. The construction itself

is consistent throughout: the openings widen from the eyepiece toward the objective, because openings far from the eye (*maximè ab oculo diſſita*) would otherwise appear smaller. Only the starting point of the count changes. The translation keeps each word as printed.

53. batch_172 / p.516 (printed p. 438) — *Category C — author/source anomaly*

The print sets no noun after *ad pleniorem*: the line ends *ad pleniorem* and the next begins *Mirabilium Operum Suorum*, with nothing between. A feminine noun governing the genitive is required, most probably *cognitionem* (the stock formula *ad pleniorem cognitionem*), omitted by the author or the compositor. The translation supplies "knowledge" ("for the fuller knowledge of His wonderful works"); the sense of this pious close to the chapter is not in doubt, but the missing word is probable rather than certain, so the Latin is not emended.

54. batch_175 / p.524 (printed p. 444) — *Category C — author/source anomaly*

The print has both negatives: *Nam niſi tegmina non omninò æquè in altitudine convenissent* ("For unless the roofs had not been entirely level in height"). The sentence has just said that the three houses *pari altitudine gaudebant*, stood at equal height, and the conditional explains why that luck mattered; only one negation fits, and the translation renders "For if the roofs had not been entirely level in height". Pleonastic negation is a habit of this author: compare *non nequeat* (p. 416) and *non nequeas* (p. 486), both meaning "can", and *ne non* as a formula of purpose (see the note at p. 401). Either negative could be the superfluous one, so the Latin is not emended.

55. batch_176 / p.526 (printed p. 446) — *Category C — author/source anomaly*

The parenthesis here reads *cujus jam Capite X facta eſt mentio, etiam ſatis plenè ibidem deſcripta*, and the translation, following the Latin, attaches it to cabin D. Two pages earlier (p. 525) the same cabin D, in which the sextant and octant are kept, is referred to Chapter XI. The book's own chapters bear on the discrepancy: Chapter XI (*De Sextante*) describes the sextant's cabin in full, which agrees with p. 525; Chapter X (*De Quadrante Magno Horizontali*) describes the revolving cabin of the horizontal quadrant, which is cabin E, the subject of this sentence. If the parenthesis is meant of E, "Chapter X" is correct; if of D, it disagrees with p. 525. Both numerals are printed plainly and are kept as printed.

56. batch_176 / p.527 (printed p. 447) — *Category B — source compositor error*

The print reads *Fortalitio Mũndano, ad oram Fiſtulæ ſito*, with an initial F, where the river named two lines above is *Viſtulam*, the Vistula. *Fistulæ* ("of the pipe") makes no sense here and is almost certainly a misprint for *Vistulæ*; the fortress is then Weichselmünde at the river's mouth (an identification, not stated on the page). The translation keeps the printed form ("the Fistula"). A

magnified crop confirms the initial as F, against the F of *Fortalitio* on the same page.

57. batch_178 / p.533 — *Category C — author/source anomaly*

The index entry reads *Computum annorum inter diluvium* ("The reckoning of the years between the Flood"), with page 17, and names no second term: as printed the entry is incomplete. The passage indexed (p. 17) speaks, in the discussion of the earliest recorded observations, of a chronology *quæ annos pauciores etiam inter ipſum Diluvium ſtatuit*, so the index repeats the text's own elliptical phrase. Nothing is supplied in the translation.

58. batch_182 / p.544 (errata) — *Category B — source compositor error*

Row 9 of the book's errata corrects *constructa* to *constructum* at "page 137, line 3". Page 137, line 3 has no *constructa*; page 187, line 3 reads *ſit conſtructa*, and the row stands between corrections to pp. 186 and 191. The errata's own page number is therefore misprinted, 137 for 187. The correction itself does not change the sense of the English.