

Cheshbon Mahalechot ha-Kochavim (חשבון מהלכות הכוכבים) — Editorial footnotes (draft)

R. Avraham bar Hiyya ha-Nasi (אברהם בן חייא הנשיא, "Savasorda"), c. 1070–1145.

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_002	B	TOC gate ordinal השער ה' (5th) printed for השער הח' (8th)
2	batch_003	C	Gate 16 printed (16) שער י"ו rather than the usual ט"ז
3	batch_003	C	Gate 20 heading שער הכ' carries a definite article, breaking the bare-ordinal pattern
4	batch_005	C	Denomination-label lag in the worked $50' \div 7'$ division (p. 14)
5	batch_012	B	Folio numeral on p. 36 printed הל instead of לה (35)
6	batch_014	B	Running-header folio on p. 42 repeats (39) לט instead of the expected (41) מא
7	batch_017	B	Running header on p. 49 misspells the author's name as הייא for חייא

#	Anchor	Cat.	Item
8	batch_018	C	792 vs. 793 parts in the molad — deliberate Ishmaelite/Hebrew calendar contrast
9	batch_019	C	3450 AM vs. 3448 AM epoch discrepancy — author's own reconciliation
10	batch_019	B	Chalakim value on p. 56 printed (1100) תתר"ק for (1080) תתר"פ
11	batch_020	B	Running header on p. 57 prints מהנכות for מהלכות (courses)
12	batch_023	B	Divisor printed ל"ל on p. 69, a non-resolving form for (360) ש"ס
13	batch_030	B	Folio on p. 90 printed פס for (89) פט
14	batch_032	C	"Lunar eclipse" (לבונה) where the Gate-15 subject is the solar eclipse (p. 94)
15	batch_032	C	"the two diameters" where the threshold is the half-sum of the two diameters (p. 95)
16	batch_033	B	Concealment threshold printed (340°) ש"מ on p. 99
17	batch_040	B	Errata list prints חלקם (left) vs. חלקם (right) — internal typesetting inconsistency

1. batch_002 — Category B — source compositor error

In the table of contents (p. 6) the eighth gate is listed as השער הה' ("the fifth") rather than השער הח' ("the eighth"), a ח/ה compositor confusion. The body sequence fixes the intended value as the eighth gate.

2. batch_003 — Category C — author/source anomaly

The sixteenth gate is headed שער י"ו (yod-vav = 16) instead of the conventional ט"ז, consistent with the scribal/typographic avoidance of the form ט"ז, whose letters spell a divine name. A genuine orthographic feature of the source, not a misreading; the value is 16.

3. batch_003 — Category C — author/source anomaly

Gate 20 is headed שער הכ' (he-kaf, "the twentieth") with a definite article, departing from the bare-ordinal pattern of the surrounding gate headings. A source-internal stylistic inconsistency in the gate numbering, recorded as printed.

4. batch_005 — *Category C — author/source anomaly*

In the worked long-division of $50' \div 7'$ (p. 14, lines 4–6) several intermediate quotients are labeled one sexagesimal rank too high — e.g. ח' שברים (8 "fractions") is properly 8 seconds, (34) ד"ל thirds, (17) י"ז fourths. The author uses שברים loosely for "sexagesimal places" and does not restate the descending rank at each $\times 60$ step; an authorial terminological looseness, not an arithmetic error, since the values close the division correctly.

5. batch_012 — *Category B — source compositor error*

The folio mark and running header on p. 36 print הל rather than (35) לה, a letter transposition of the printed folio numeral. The page sequence $33 \rightarrow 34 \rightarrow 35$ fixes the intended value at 35; a compositor transposition, confirmed genuine on the native-resolution tile.

6. batch_014 — *Category B — source compositor error*

The running-header folio numeral on p. 42 reads (39) לט, duplicating p. 40's folio mark, whereas the sequence p. 40 = (39) לט, p. 41 = (40) מ would lead one to expect (41) מא. A running-folio composition quirk of this edition (a header numeral, not a body chapter number), recorded as printed.

7. batch_017 — *Category B — source compositor error*

The p. 49 running header prints ח"א for the author's patronymic חייא (Ḥiyya), a he/chet compositor typo; the p. 51 header spells it correctly. A printing error in the running head, not a content matter.

8. batch_018 — *Category C — author/source anomaly*

The differing molad values of 792 and 793 parts reflect the author's intentional contrast between the Ishmaelite and Hebrew calendrical reckonings, not a textual error.

9. batch_019 — *Category C — author/source anomaly*

The epoch values 3450 AM and 3448 AM on p. 55 are part of bar Ḥiyya's own deliberate reconciliation of chronological reckonings, not a source corruption.

10. batch_019 — *Category B — source compositor error*

On p. 56 the chalakim/hour value is printed תתר"ק (literally 1100), a genuine פ/ק compositor error for 1080 = תתר"פ (the qof was tile-confirmed at re-audit). Transcribed as printed with [recte: 1080].

11. batch_020 — *Category B — source compositor error*

The p. 57 running header prints מהנכות הכוכבים where the work's title phrase is מהלכות הכוכבים ("the courses of the stars"), a ל-for-נכ compositor variant. Recorded verbatim; the intended sense is "courses."

12. batch_023 — *Category B — source compositor error*

On p. 69 the divisor for reducing the moon's degrees to signs is printed ל"ל in חלק מעלותיו על ל"ל ותן לכל ל' מהם מזל אחד. The context requires 360 (12 signs × 30°), whose standard form is ל"ש; ל"ל does not yield 360 by gematria and is non-standard. A genuine printed compositor error (tile-confirmed as actually printed), transcribed as is.

13. batch_030 — *Category B — source compositor error*

The p. 90 running-header folio numeral prints פס rather than פט (89), a ס-for-ט substitution. A compositor error in the folio mark, recorded as printed.

14. batch_032 — *Category C — author/source anomaly*

Within the Gate-15 (solar-eclipse) procedure, p. 94 reads ללקות הלבנה ("to reckon for a lunar eclipse") although the surrounding clauses are unambiguously about the sun. An authorial slip (חמה for לבנה), annotated [recte: solar eclipse]; reported, not silently emended.

15. batch_032 — *Category C — author/source anomaly*

On p. 95 the text reads "less than the two diameters" although the comparison threshold throughout the passage is half the sum of the two diameters (חצי שני (קטרי הלבנה וחמה). A likely authorial ellipsis (מחצית elided), annotated [recte: less than the half-sum of the two diameters].

16. batch_033 — *Category B — source compositor error*

The planetary-concealment threshold is printed (340°) ש"מ מעלה on p. 99, a genuine angular value confirmed at native resolution (medial mem, controlled against a ש"ס printed four lines above). It sits correctly within the surrounding 180°–360° range and is the single real 340 in the work — explicitly not an instance of the (otherwise spurious) ש"ס/ס"ש confusion.

17. batch_040 — *Category B* — *source compositor error*

Within the errata list itself the left sub-table prints $\eta\zeta\lambda\eta$ against the right sub-table's $\eta\zeta\lambda\eta$, a genuine he/chet contrast confirmed distinct at 600 DPI. A typesetting inconsistency inside the errata apparatus, transcribed as printed.