NOTES TO THE CATALOGUE OF STARS.

The following notes to the stars include all those found in Dr. Peters' manuscripts. These consisted of brief notes and remarks all written in pencil on various papers. Some of his earlier notes, communicated to Harvard Annals, Vol. XIV, are superseded by later researches.

3. Long. Most authorities have 16° 0′, an error of $1 s = 16°$, for $1 s' = 10° 10′$.
   Lat. Most Greek manuscripts have 74° 20′, and the Arabs 74° 0′—either ΟΔΓ′ or ΟΔ; it is more likely that the Γ′ was omitted than that it was added.

6. Long. Paris 2389, Vat. 1594, and all the Arabs give 17° 10′. Manitius has 17° 30′.

12. Long. Baily gives 26° 30′.

13. Long. Baily and most Greek and Arab manuscripts have 26° 40′. Trapezuntius and Gerard of Cremona give 27° 40′, which has been adopted. Confusion in Arabic between 6 and 7 is very common, but it is not easy to explain an error in Greek of $s = 6$ for $Z = 7$.

18. Lat. Baily and all Greek manuscripts give 44° 0′. Sûfi, B. M. Reg. 16, and Bod. 369 have 45° 0′. All are clearly erroneous. Sûfi finds no fault with the position. The star is certainly Fl. 30 φ, which is described by Sûfi and was observed by Ulugh Beg. Peters conjectures that in the original uncial Greek ΛΖΔ′ = 37° 15′ was written as shown in the Facsimiles (page 23) and thus resembled ΜΔ = 44° 0′.

25. Long. Baily gives 22° 30′.
26. Long. Baily gives 3° 30′.
37. Lat. All authorities agree. Latitude is 1° too large; it should be ΜΓ′ = 40° 20′, not ΜΑΓ′ = 41° 20′.

41. Long. Baily gives 12° 10′. No star exists corresponding with the position in the Almagest. It was not identified by Baily or Schjellerup. Manitius considers it to be Fl. 8 Leo Minor. Peters conjectured that there was confusion in the Greek between ΙΒs′ = 12° 10′ and ΙΕs′ = 15° 10′, which he adopts, and so arrives at the same star observed by Ulugh Beg (see photograph of Venice Codex 313, where ε in the abbreviation for Μείζων might possibly be taken for β). Bod. 3374 has similar error of ε for β in the latitude, noted by Bernard about 1684. All the Arabs give latitude 22° 45′, Vat. 1594, 22° 30′.

FIG. 3.—*Venice Codex 313.*

42. Lat. Most authorities give 23° 0′, but Ven. 313, Vat. 1594 and the Arabs have 20° 20′, which is right. Baily and Schjellerup could not identify. Manitius considers it to be Fl. 10 Leo minor. Peters finds that the star is VIII 245.

57. The large proper motion of 61 σ, R. A. +0′.0973, Dec. −1″.766, makes the identification of this star right.

58. Lat. Baily and all Greek manuscripts have 81° 20′; all the Arabs 81° 40′, which is adopted.

66. Lat. All Greek manuscripts have the incorrect latitude; the Arabs are right. ΠΓ′ = 80° 20′ for ΠΓ = 83° 0′.

69. Long. All the Greek manuscripts have the erroneous longitude of 10° 20′; the Arabs are right. ΙΓ′ for ΙΓ.

75. Long. Baily adopts 5° 10′ from Gerard of Cremona. All the Greek manuscripts have the erroneous longitude of 9° 0′. The Arabs have 5° 0, which is correct. One of the numerous errors of Θ = 9° 0′ for ε = 5° 0′.

79. Proper motion makes the disagreement in longitude much worse.

90. Long. Nearly all Greek manuscripts have the erroneous longitude 9° 40′. The Arabs are correct with 5° 40′. A similar error to No. 75.

96. This is the same star as No. 147.

97. Peters, Peirce, and Schjellerup identify this star as η Coronæ, which accords with the description, but the position agrees better with χ Bootis, adopted by Bode, Halma, Delambre, and Manitius. Baily is undecided between η and o Coronæ.

Positions A. D. 100.

	η Coronæ.	χ Bootis.
	° ′ ° ′	° ′
Ptolemy Longitude....	187 40 190 20	188 35
Latitude....	46 30 47 1	45 1

98. Not identified by Bode and Manitius. Baily and Schjellerup consider it to be χ Bootis, and Halma η Coronæ. The description accords best with Fl. 1 o Coronæ.

99 to 102. There is much diversity of opinion as to the identification of these stars. Peters considered that they were in the following order: ω, b, ψ, and c; Schjellerup as b, ω, ψ, and c; Bode, Baily, and Manitius, c, ψ, b, and ω. The last accords best with the description and has been adopted. The comparisons for A. D. 100 are:

	Long.	Lat.		Long.	Lat.	Δl	Δb		Long.	Lat.	Δl	Δb
	° ′	° ′		° ′	° ′	′	′		° ′	° ′	′	′
Ptolemy 12	188 10	41 40	ω	187 10	40 21	−60	−79	c	188 33	40 39	+23	−61
13	186 40	41 40	b	188 19	42 1	+99	+21	ψ	186 59	42 30	+19	+50
14	187 0	42 30	ψ	186 59	42 30	−1	0	b	188 19	42 1	+79	−29
15	187 40	40 20	c	188 33	40 39	+55	+19	ω	187 10	40 21	−30	−1

112. Lat. Baily and all Greek manuscripts have 46° 30′; the Arabs have 46° 10′, which agrees best.

129. Baily has Long. 3° 40′, Lat. 53° 0′. He remarks that there is no authority for latitude 50° 40′ adopted by Halma, but reference to the Table of Collations shows that nearly all Greek manuscripts have that latitude. Peters adopts 53° 10′ as in Sûfi and B. M. Reg. 16.

131. Lat. Baily gives 56° 30′.

134. Lat.   All the Greek manuscripts give 63° 0′, which is wrong; the Arabs have the correct latitude, 60° 20′.   Error of ΞΓ for ΞΓ′.

135. Ptolemy's place is largely in error.

138, 139.   Ptolemy's errors here are very large, and it is singular that the errors of the positions of these stars in Ulugh Beg are about as large. The identification of the stars is probably correct, but differs from Baily and Manitius.

140. Lat.   Baily gives 72° 15′. The latitude 72° 0′ of the Arabs is adopted.

141. Lat.   All the Greeks give 64° 0′, and the Arabs 60° 15′, which is correct.   An error of ΞΔ for ΞΔ′.

146. Long.   The longitude agrees closely with the computed position, but considering the large errors in Ptolemy's longitudes of the stars in Hercules, it is probably 1° too large.

147. This is the same star as No. 96.

148. The identification of this star is probably correct, but the longitude and latitude are largely in error and no explanation of the discrepancy is available from the numerous manuscripts examined.   Ulugh Beg has the correct latitude.

154. Long.   There is no authority for the longitude 2° 40′ assigned by Peters to this star. All the manuscripts give 1° 40′. The very numerous errors in Greek of A = 1 for Δ = 4 would suggest that here the longitude should be 4° 40′, which agrees closely with the computed place; but seeing the large errors in longitude common to all the stars in Lyra, it is doubtful if this explanation is available.

156. Identified as Fl. 9 ν^2, which agrees a little better and also is brighter than 8 ν^1, which Baily has taken.

159. Lat.   Baily gives the latitude 49° 0′.

164. Long.   Baily gives 19° 20′.

175. Peters considers this star the combination of 43 ω^1 and 45 ω^2. All the Greek and Arabic manuscripts give the latitude as 63° 45′, though 64° 45′, adopted by Baily, agrees closer; Halley gives 64° 50′.

184. Baily, Bode, Peirce, and Peters agree that this is ι Cassiopeia. Sûfi remarks that it is in a straight line with the two preceding stars δ and ε, which proves the identification correct. The longitude is 4° in error. All Greek and Arab authorities agree in Long. 1° 40′. The only explanation is an error in the earliest manuscripts of A = 1° for Δ = 4°, of which there are numerous instances in the manuscripts under discussion. Upon this explanation the difference of the computed place would be +78′, harmonizing with the general errors of the longitudes in Cassiopeia. The latitude is 1° in error, which is less easy to explain.

206. Lat.   Baily and the Greek authorities give 28° 0′, and the Arabs 28° 15′, which is adopted.

221. Lat.   Vatican 1594, Laurentian 1, Venice 313, and Paris 2390 are alike in giving the latitude as λα ιΓ′. It is not clear what this means, but probably the iota has been written by mistake for the sign for ἥμισυ; thus it would be 31° 50′, as in Paris 2389 and Bod. 3374.

223. Lat.   All authorities, except B. M. Arabic 7475, have latitude 20° 0′; the latter has 22° 0′, which is more nearly correct. Ulugh Beg has 21° 30′.

230. This is the same star as No. 400.

231. Long. All authorities, except B. M. Arabic 7475, have 26° 0′, which is 1° too small. B. M. 7475 has 27° 0′, which is correct. See note to No. 13.

233. Long. Baily gives longitude 20° 40′, latitude 16° 20′. Most of the Greek manuscripts have 20° 40′, an error conjectured of ΚΞ for ΚΓ. Paris Cod. 2394, 23° 0′, which is adopted. Grynæus 20° 20′, error of ΚΓ′ for ΚΓ. For

latitude there are the readings 16° 20′ and 10° 20′; the latter is adopted. Sûfi remarks upon the erroneous position of Ptolemy, and Ulugh Beg did not find the star. The nearest star to the position is Fl. 5, but this is only 6.7 mag. The largest star in the neighbourhood is Fl. 2 of 5.0 mag., identified by Manitius, but this gives the large errors of Long. – 56′ and Lat. – 150′.

235. Lat.   All authorities have 27°, which is 1° too small.

236. Lat.   The Greek authorities have 26° 30′ and the Arabs 26° 45′.

239. There is great discordance in the manuscripts as to the coördinates of this star. The identification by Baily, Peirce, and Peters as Fl. 10 λ is probably correct. The Arabs have the correct longitude. The latitudes, as appear in the table, are very discordant. Peters considered the latitude as 23° 30′ or 23° 50′. Cod. Ven. Greek 311, B. M. Reg. 16, and the Laurentian Arabic 156 have 23° 45′. Bodleian Arabic 369 has 28° 45′, which by the common error in Arabic of ت = 8 for ت = 3 may well accord. Probably 23° 45′ is the best to adopt. Baily has latitude 33° 50′.

246. Long. Baily and the Greek manuscripts give 26° 40′, which is erroneous; the Arabs and one reading of Paris 2389 have 23° 40′, which is correct. Peters remarks that if the Greek longitude is right, the star might be the Nova 1604, but Ulugh Beg observed the star 40 ξ. This identification is confirmed by Peters, Baily, and Manitius.

247 to 250.   Peirce states that these stars present one of the greatest perplexities of the whole catalogue. On reference to the Table of Collations, it will be seen that the manuscript authorities are about equally divided as to the latitude being north or south. Paris Codex 2389 gives both, which indicates that it is a compilation from more than one manuscript. Grynæus gives 247 as north, and omits any designation to 248–250, and it is singular that these are the only omissions in his whole catalogue of designation of the latitude, probably from the conflicting evidence in the manuscripts he used. The only printed editions which give the latitude of all these stars as south are Copernicus and Clavius. Peirce has discussed these stars in H. A. Vol. IX, but he is in error in stating that Baily has altered the latitude of the 16th star, No. 249. Peters' investigation leaves little room for doubt of his correct identification of the stars, and of their latitudes being south. The longitude of 250 is largely in error.

250. Lat.   Baily has 0° 45′, which is found only in Liechtenstein and B. M. 7475.

251. There is some uncertainty as to the identification of this star. All manuscripts agree in longitude and latitude. Schjellerup and Manitius identify as Fl. 58, which would make the longitude erroneous by 2° and the latitude 1°. Bode and Halma give Fl. 2 ε (Sagittarius). The nearest star to the position is Fl. 52 (adopted by Baily), which is 6.6 mag. It has been conjectured that the star may have been Nova 1604, the position of which for A. D. 100 is longitude 236° 44′, latitude +2° 2′, a difference of 1° in each coördinate. Peters does not decide between 52 Ophiuchi and 2 Sagittarii.

255. The Arabs have the correct latitude 1° 40′; Baily has 1° 50′.

262. Sûfi calls this a double star, which is Fl. 71 and 72 together.

268. Long. Most authorities and Baily give 23° 10′, which is 1° too small. Paris 2389 gives 26° 10′, which is nearer the computed place but is discordant with the other longitudes as being too large.

274. Lat.   All authorities, Greek and Arabic, have latitude 16° 15′. But there is no suitable star in latitude 16°. Baily states that Bode and Delambre give it as 13° 15′, but without authority. Bode, however, gives it as 13° 0′.

There is no doubt that 13° 15′ is taken from Halley's edition of the Catalogue (*Geographiæ Veteris Scriptores Græci Minores, 1712*) which is a copy in which the positions of the stars have been corrected by computation.* It is probable that the identification of the star as Fl. 3 υ Ophiuchi is correct, and Ulugh Beg certainly observed this star. The latitude should be 13° 15′, and so it has been adopted by Peters. No explanation of the error in Greek is available.

285. Lat.　Baily has 37° 40′, but the Arabs have 38° 40′, which is adopted.

289. Bode, Halma, Delambre, Baily, and Manitius make this star Fl. 54 o. Peters remarks that Fl. 59 ξ is Ulugh Beg's star and probably that of Ptolemy, but the latitude is 1° too large; besides ξ is 1 magnitude brighter than o.

296. Long.　Bod. 3374 and Ven. 302 have 50° 50′, error of ν for η.

299. Longitude is 2° too large and latitude 1° too large.

300. Long.　All authorities give 21° 10′, which is 1° too large. The position of this and the preceding star in Ulugh Beg are quite erroneous. Peters has adopted 20° 10′.

304 and 309. Long.　In these stars longitude is 1° too small.

305. Lat.　Adopted from Grynæus and Paris 2394. Most authorities give 33° 50′, which Baily adopts.

308. Lat.　Several Greek and Arab authorities have 34° 0′. Error of ΛΔ for ΛΔ′.

329. Long.　Baily gives 9° 10′.

332. Long.　Comparison with Ulugh Beg seems to indicate an error of 1° too large in Ptolemy's longitude.

346. Lat.　Vat. 1594, Ven. 310 and 313, and all the Arabs have the correct latitude.

356. Lat.　All authorities have 32° 30′, which is 1° too large, which is confirmed by comparison with Ulugh Beg.

357. Peters confirms Peirce in identifying this star as Fl. 1 o.

360. Long.　There appears to be no authority for 16° 40′ adopted by Baily.

368. Latitude appears to be 1° too large; Ulugh Beg has 3° 12′; all authorities give 4° 30′ or 4° 50′.

371. The position of 63 τ² Arietis agrees much better than 61 τ¹, and was certainly the star observed by Ulugh Beg.

372. Lat.　Baily has 1° 30′.

374. The position agrees well with Fl. 87 μ Ceti (see note to 716 and 717, Ptolemy's 5 and 6 Ceti). Schjellerup, following Bode, identifies both 374 and 717 as μ Ceti. The agreement of Ulugh Beg with Ptolemy is so good that there can be no doubt that they observed here μ Ceti, while 717 does not agree at all. Manitius identifies 374 as Fl. 38, but the position for A. D. 100 is discordant. Δ long. = +70′; Δ lat. = +107′.

375. Lat.　Baily has 10° 30′.

382. Long.　Baily has 24° 20′, but the Arabs have probably the more correct longitude, 24° 40′.

383. Long.　All Greek manuscripts, except Ven. 311, have erroneously 21° 20′. An error of ΚΑ = 21° for ΚΔ = 24°.

389. Both longitude and latitude about 1° too large. Vat. Reg. 90 and Manitius give longitude as 10° 20′, an error of ΙΓ′ = 10° 20′ for ΙΓ = 13°.

392. Ptolemy probably observed θ¹ and θ² as one mass.

394. Longitude 11° 50′ is adopted from all the Arabs, one reading of Paris 2389 and Ven. 312. Baily has 12° 50′, also from a variant in Paris 2389.

395. Long.　The Arabs give 17° 10′ and the Greeks 17° 30′, as adopted by Baily; the first is preferable. Latitude in Paris 2389 is erroneously 0° 15′; error of Δ′ = 0° 15′ for Δ = 4° 0′.

399. Lat.　All authorities have 4° 0′, which is wrong; error of Δ = 4° 0′ for Δ′ = 0° 15′. B. M. 7475 makes the latitude *north*, all the others *south*. Latitude +0° 15′ would give the best accordance.

400. This is the same star as No. 230.

402. Lat.　The Arabic Bod. 369 and B. M. Reg. 16 are the only authorities which have the correct latitude 0° 15′; all others, including Sûfi, have 4° 0′. Sûfi remarks that "Ptolemy's latitude is false, as the latitude places the star *north* of the preceding star, whereas the description states that it is *south*." This shows that the manuscript of Ptolemy used by Sûfi had the same error as in No. 399 above, viz., Δ = 4° 0′ for Δ′ = 0° 15′.

404. Paris 2390, and the two Venice codices, 310 and 313, give the latitude correctly *south*.

405. Long.　All manuscripts agree in giving 8° 0′; Manitius has 8° 30′.

406. The identification of this star is not free from doubt. Baily and Halma considered it to be 42 ψ Tauri and this star was finally adopted by Peters, but he remarks that Ulugh Beg's position of Ptolemy's 27th star in Taurus agrees fairly with 41 Tauri, but badly with 42 ψ. Ptolemy's star is in better harmony with 41 Tauri if we could assume an error of 1° in the latitude. The errors for A. D. 100 are:

	ΔLong.	ΔLat.	Mag.
41 Tauri....	+2	−57	5.3
42 ψ........	+25	+32	5.3

Baily adopts latitude 7° 20′.

410. Long.　Baily has 2° 20′.

412. Peters considered that there was no doubt that this star is III 170 and not Fl. 18 as Baily has, which gives errors for A. D. 100 of Long. −27′, Lat. −19′, mag. 5.6. III 170 gives errors of Long. +51′, Lat. +9′, mag. 5.4. The star can not be Alcyone. Ptolemy describes it distinctly as μικρὸς (small). Gerard of Cremona gives mag. 5; all other authorities mag. 4.

415. The longitude 24° 0′ is adopted from one reading in Paris 2389, Venice 303, 311, 312, and the Arabs. The difference with other manuscripts is the common confusion of the alpha and delta. Baily has 21° 0′.

418. Peters, Peirce, and Manitius identify as Fl. 129 observed by Ulugh Beg, but the star is rather small and the longitude is too small. Peirce suggests that it might be better to make 418 as Fl. 126, and to suppose that 417 had disappeared. The position of Fl. 126 for A. D. 100 would accord very well with Ptolemy's star No. 418, but the identifications adopted accord best with the description.

419 to 423. Sûfi remarks that the longitudes and latitudes of these stars are grossly in error. There seems little doubt that Peters' identification is correct. Ulugh Beg's positions agree fairly well with them. They are all small stars.

424. Lat.　Baily and all the Greeks have 9° 30′, and the Arabs 9° 40′, which is more correct.

426. Long.　All authorities agree, but the longitude is 2° too large. The latitude is too small. Bod. Arabic 369 gives 11° 0′, which is more nearly correct.

432. Baily adopts longitude 26° 10′, latitude 3° 0′. The Greek manuscripts give longitude 26° 10′, and the Arabs 23° 10′; the latter is certainly the better to

adopt. The latitudes are either $\Gamma=3°\ 0'$ or $\Gamma'=0°\ 20'$. Adopting the latter, the position agrees with Fl. 58. Baily identifies as 76 c. Peirce as 52 Tauri, Schjellerup as b, and Manitius as 63.

434. Lat. Baily adopts 18° 15′ from all authorities. Peters gives the longitude as 18° 10′ for the reasons given on page 12 for believing that the instrument used for measuring longitudes was not graduated to 15′.

436. Long. Baily has 21° 20′. There is great uncertainty in the latitude of this star in all Greek manuscripts and in the printed Greek of Grynæus and Halma. In all cases it is represented by the character for ½ followed by that for ⅙, or in Paris 2389 and Laurentian 1, by 6. There is a slight indication in Paris 2389 (though not in Laurentian 1) of a separation of 6 from ½, in which case it may be possibly ½ with 6° as a variant. Peters considered the majority of cases he examined to be 0° 30′ with variant 0° 10′, not 0° 40′. All the Arabs agree in latitude 6° 0′, which is adopted.

438. Long. The better reading is that given by the Arabs and Vienna 14.

445 and 446. Baily, who took the Greek descriptions of the stars from Grynæus, did not perceive the error in the descriptions of these two stars, which are equally erroneous in Paris 2389. He gives:

445. τῶν ἑπομένων τῇ δεξιᾷ χειρὶ τοῦ ἑπομένους (?ἑπομένου) διδύμου ὁ μέσος τῶν γ. (τριῶν).

446. ἐπ᾽ εὐθείας ὁ βόρειος. It is obvious that these descriptions should be as in Vatican 1594 thus:

445. τῶν ἑπομένων τῇ δεξιᾷ χειρὶ τοῦ ἑπομένου διδύμου τριῶν ἐπ᾽ εὐθείας ὁ βόρειος.

446. ὁ μέσος τῶν τριῶν. Baily also states that the latitude of 445 in Paris 2389 is −2° 40′, but in that manuscript it is clearly −1° 20′.

445 to 448. The longitudes of these stars are all in error. The authorities give longitude of 448 as 0° 40′, except Laurentian 39, Vienna 14, and Vatican Reg. 90, which give 3° 0′, and Gerard of Cremona, B. M. Sloane 2795, which gives 5° 40′, the same as Liechtenstein; the last has been adopted. Peters remarks, "There is no other star than ζ Cancri that suits the position," hence the longitude is 1° too large.

449. Lat. Baily has 0° 20′. The value 0° 40′ given by the Arabs has been adopted as agreeing better with the computed position, and also by comparison with Ulugh Beg.

455. Ptolemy's position is erroneous. Ulugh Beg is right.

457. Lat. Baily and all authorities give 7° 30′. The error in latitude is remarked on by Sûfi and must be very old. Peters has adopted 10° 30′ without authority.

458. Long. All authorities have 19° 10′ (adopted by Baily) or 19° 40′, except Bodleian Arabic 369, and B. M. Reg. 16, which have 15° 10′. Sûfi remarked the error in longitude. There is little doubt the Arabs are correct, and we have another instance of error in the Greek of Θ=9 for Є=5. Peters identifies the star as the combination of 62 o¹ and 63 o². Sûfi and Ulugh Beg both observed o Cancri. Baily, Schjellerup, and Manitius consider the star to be π Cancri.

459. Sûfi speaks of the error in longitude, which is 2° too large.

460 and 461. The latitudes of these two stars are wrongly transposed in all the authorities.

472. Long. All authorities agree, still the longitude is 1° too large. Ulugh Beg also has the longitude too large.

479. Long. Baily gives 12° 10′.

482. The identification of this star is one of the most difficult in the catalogue. Ptolemy states that it is the northern of two stars, the southern, No. 483, being well identified as θ Leonis. Fl. 81 is possibly the star, in which case Ptolemy's

latitude would agree, but the longitude would be 4° in error. Peters remarks, "if we will not assume that a star disappeared near X 251, mag. 6.8, then the correction of longitude $I H \Gamma'=18°\ 20'$ for $I \Delta \Gamma'=14°\ 20'$ is the most plausible conjecture that can be made." There is, however, no evidence in the uncial Greek of papyri or of vellum manuscripts, nor in cursive Greek, of a confusion between $H=8$ and $\Delta=4$. "Sûfi speaks of the error in latitude of Ptolemy, but this can not be Ptolemy's star, and Sûfi had another star in view, while Ulugh Beg in his observations was guided by Sûfi." "Baily's identification with 71 Leonis is entirely to be rejected, since Baily himself has shown that the R. A. of 71 Leonis in Flamsteed by mistake is 2° too small."

486. Long. The authorities have either 24° 40′ or 21° 40′. The former is adopted, the latter is an error of $A=1$ for $\Delta=4$. The star is identified as 84 τ. Ulugh Beg observed 69 p³. Sûfi's description points to 74 φ.

487. Lat. All the Greek manuscripts, with the exception of Vat. Reg. 90, give the latitude as 3° 12′, which is clearly erroneous. There is no other instance in the whole catalogue of the fraction ⅕. The error is doubtless of very ancient date. The magnitude of the star is $Є'=5$, and the latitude and magnitude are written thus: $\Gamma Є' Є'$. It is probable that in an early manuscript the magnitude was written by mistake within the latitude column, whence the mistake arose. Manitius has latitude 3° 10′ as Vat. Reg. 90. The Arabs have either 3° 0′ or 0° 20′, a confusion of Γ and Γ′. Latitude 3° 0′ is correct and so no doubt it was given in the original Greek.

494 to 496. The identification of these stars seems correct, and these were the stars observed by Ulugh Beg. The large error they have in common makes it look as if they were determined either differentially or by some other observer. Thus may be explained also why they are called ἀμαυρός, while not smaller than many others.

C — Pt.

	Δl	Δb
	° ′	° ′
494.	+2 29	−1 35
495.	+2 45	−1 34
496.	+3 25	−1 24

The following are the several identifications of the stars:

	Peters.	Baily.	Bode.	Halma.	Schjellerup.	Manitius.
494.	15 c	....	c	c	15 c	15 c
495.	7 h	4 Comœ.	h	h	12	7
496.	23 k	21 Comœ.	g	g	21	23

494 is given of magnitude 5, and is described by Ptolemy as λαμπρὸς. In Paris 2389 and Vat. 1594 it is λαμπρὸς ἀμαυρὸς; in the Trapezuntius edition "splendida," and in Liechtenstein, "luminosa." Ptolemy designates as λαμπρὸς, six stars mag. 1, thirteen mag. 2, seven mag. 3, and eleven mag. 4. He does not apply the word to any other star so faint as 494. It seems probable that here is a variable star.*

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*These three stars of the *informatæ* of Leo, and described by Ptolemy as in the figure πλόκαμος, are three of the 12 stars which he designates as ἀμαυρός, the others being Nos. 40 to 43, among the *informatæ* of Ursa major, 219, the last of the *informatæ* of Perseus, and 311 to 314, the four stars in Equuleus. It is difficult to conjecture why these stars should have been designated ἀμαυρός (obscure). The magnitudes range from 4.1 to 5.1, the mean magnitude being 4.7. The constellations Equuleus and πλόκαμος are not mentioned by Aratus, Eratosthenes, Manilius, or Hipparchus in his commentary on Aratus. But Geminus (circa B. C. 77), in his work Γεμίνου εἰσάγωγη εἰς τα Φαίνομενα, in his enumeration of the constellations, includes the constellation προτομὴ ἵππου, sectio equi, "according to *Hipparchus*"; and he also includes βερενίκης πλόκαμος, Coma Berenices. (Petavius, Uranologion, p. 12.)

497, 498. The longitudes of these stars are interchanged in all the manuscripts. Baily has not corrected them. The longitude 25° 20' he gives to 497 should be that of 498. All the Greeks have 25° 20', and the Arabs 26° 20', which is adopted.

504. Peters remarks that the stars Fl. 44, 46, and 48, Virginis, mags. 5.9, 6.1, and 6.5, are near together, which may explain the greater brightness, mag. 5, estimated by both Ptolemy and Sûfi. Combined mag. 5.0.

509. Lat. Greek authorities give 20° 10', the Arabs 15° 10'. Ulugh Beg's latitude is 16° 15'. Peters has adopted 16° 0' from Halma, who is copied by Baily, and he remarks that Halma gives no authority. It is clear that Halma took 16° 0' from Halley. It is of course correct, but is not supported by any manuscript.

513. Long. This is 1° too small; all authorities agree.

515. Peters and Baily agree that Ptolemy's position indicates 68 i, and both remark that it is clear that this position can not form the south following corner of the quadrilateral Ptolemy speaks of. But it is evident that the position of Ptolemy's 20th star in Virgo (correctly identified as 86) is exactly in the south following corner of the quadrilateral formed by 74, 76, and 82. The descriptions of Nos. 515 and 516 should be therefore interchanged.

517. Ptolemy's longitude is 2° too small, and the latitude error is similar in Ulugh Beg. This casts much doubt upon the identification of the star as 90 p, which, however, is not discordant with the description "in dextro crure posteriori." Peters questions whether there is here a variable or a star lost.

526. The identification as 53 is right, but Ptolemy's longitude is 2° too large. Ulugh Beg is also 1° too large. Baily gives latitude 7° 10'.

527. Ptolemy calls this star διπλοῦς; Sûfi likewise. The proper motion of Fl. 61 is so great, its distance from Fl. 63 (73' in 1800) is reduced to 35'.4 in Ptolemy's time. But could these two together appear double?

528. Peters agrees with Peirce in identifying this as 89, but the latitude is 1° too far south; Ulugh Beg likewise. Paris 2389, Vat. 1594, and the Arabs have the correct longitude, 5° 0'. Baily has 0° 0'.

529. The star is probably $\frac{a^1+a^2}{2}$ Libræ.

532. Long. Baily has 19° 40', probably a misprint.

541. Ulugh Beg, misled by Sûfi, here probably observed 44 η, but Ptolemy's description does not admit this star. Greek authorities give latitude 3° 0', which is probably an error of Γ = 3° 0' for Γ' = 0° 20'. Bod. Arabic 369 and B. M. Reg. 16 have the latitude which has been adopted.

542. Peters identifies the position of this star as Oeltzen's Argelander, 14782, which has been found to be variable. Pickering remarks that it has not been observed brighter than mag. 9.

544. Lat. The Greek manuscripts have 8° 30' and the Arabs 8° 10', which latter is adopted. Baily has 8° 30'.

551. The star is $\frac{\omega^1+\omega^2}{2}$

553. This star, α Scorpii, is one of the six stars designated by Ptolemy as ὑπόκιρρος; the others being α Bootis, α Tauri, β Geminorum, α Orionis, and α Canis Majoris. Questions relating to the color of these stars have been fully discussed by Nallino,* Schiaparelli,† Schjellerup,‡ and Knobel,§ including particular reference to the words used in Arabic texts as translation of the Greek. The word ὑπόκιρρος has been erroneously considered as

*Al Battâni. Pars II.   †Rubra canicula.   ‡Al Sûfi. Description des Etoiles Fixes.
§Monthly Notices, Vol. XLV; and Eleventh Oriental Congress, 1897.

signifying *red*, its true meaning being "yellow, fire or wax-colored, cereus." and in that sense it has been correctly translated in the British Museum Arabic Almagest 7475, where the Greek word is expressed by the word شمعي shemai, "wax-like;" but not so in Sûfi and all other Arabic texts. In these the Greek word is rendered by the sentence يضرب الي الحوصي or الحوصي, meaning "inclines towards" some color expressed by الحوصي. It is clear that this particular word is quite unknown to Arabs generally, and is not in any Arabic dictionary. All efforts to obtain a solution from scholars, and from the authorities at the Al Azhar Mosque at Cairo, have failed. Causin de Perceval,* speaking of another word used in Arabian Astronomy, says, "On chercherait en vain dans les dictionaires Arabes et Latins l'explication de ce mot, et *en général de presque tous les termes d'astronomie Arabe*."† Ptolemy's designation of Sirius as ὑπόκιρρος has been exhaustively investigated by Schiaparelli and Schjellerup, who have shown the strong improbability of the term "Rubra Canicula" having been correctly applied to that star, or of there being any sound evidence of change in color. Though Sûfi omits all reference to the color of Sirius, yet in Bod. 369 and B. M. Reg. 16 the star is described by the same words indicating color as in the other five stars.

555. Lat. The Arabs 6° 10' agrees a little better than the Greek 6° 30' adopted by Baily.

560. Lat. All authorities, except Sûfi and Ulugh Beg, have 18° 0'; Sûfi 19° 30'. The star, according to Ptolemy's description, should be *south* of the preceding star and 18° does not agree at all; 19° 0' has therefore been adopted.

567. Identified correctly by Peters as γ Telescopii. Ulugh Beg also observed this star. Ptolemy calls it nebulous. Peters says, "I can not see any nebulosity around it and Sûfi seems to doubt the same." There is, however, close to this star, the cluster N. G. C. 6441, described by Dreyer as "a globular cluster, very bright and pretty large." This seems to be the explanation of Ptolemy designating the object as nebulous.

569. The Greek authorities give the longitude as 25° 30', which Baily has, and the Arabs 29° 30', an error in the Greek of Є = 5 for Θ = 9. The Greek latitude is 1° 10', and the Arabs 4° 10', a common error in Greek of Λ = 1 for Δ = 4. In both elements the Arabs are right.

570. Long. All the Greek manuscripts give 9° 30', except Ven. 312, 5° 30' (same error as in the preceding note). The Arabs have 4° 30', which is right. The confusion of Θ or Є for Δ = 4 is not easily explicable.

577. The star is $\frac{\nu^1+\nu^2}{2}$. Ptolemy describes it as νεφελοειδὴς καὶ διπλοῦς. There are several small stars close.

578. Fl. 37 ξ² agrees better for position and is brighter than ξ¹.

584 and 585. Ptolemy's large errors in longitude appear also in Ulugh Beg. Baily gives longitude of 584 as 25° 20'. There are no other stars corresponding.

587. Long. The Greek give longitude 22° 40' and the Arabs 22° 20', which latter is to be preferred. It is probable that 47 χ¹ and 49 χ² were observed as one mass.

592. Lat. The latitude is 1° too far south.

593. Long. Ptolemy's longitude is 2° too small. Sûfi remarks the error; Ulugh Beg is right.

596. Long. All the Greek authorities have 23° 50' and the Arabs 26° 50'—the latter is

*Notices et Extraits. Tome VII.
†M. D'Abbadie informed the writer that Fresnel told him that he learned in the Red Sea many current expressions not found in any native dictionaries.

adopted. Peters had 24° 50′ from Halley. The latitude in all the
Greeks and some Arabs is 26° 0′. The only manuscript that gives the
right latitude is B. M. Arabic 7475, 20° 10′. In the Greek there is an
error of Κς for Κς′.

597. Long. Baily has 27° 20′.

604. Long. All authorities give the longitude either 9° 0′ or 5° 0′; similar error in the
Greek, of which several examples have been given. Peters' adopted
longitude of 6° 0′ is mere conjecture. It is more probable that the
original was 5° 0′ and this was the opinion of Halley. Peters remarks
that the proper motion of 2 ξ² would bring the stars ξ¹ and ξ² quite close
together in Ptolemy's time, only 5′.5 apart, and that it was the combina-
tion of these stars that was observed.

609. As τ² is a little larger it was more likely to be the star observed, but perhaps $\frac{\tau^1+\tau^2}{2}$
was observed as one mass.

610. Lat. Baily has 0° 10′ from Trapezuntius. The Arabs have 0° 50′, which is
adopted.

611, 612, 613. See Baily's note on the confusion of these stars in different manuscripts. The
description adopted agrees with Baily and Gerard of Cremona. Mani-
tius adopts a different order.

613. Ptolemy's longitude is 1° too large.

615. Baily identifies as 35 Capricorni, mag. 6.0. Peters adopts 36 b, mag. 4.5, as being
larger and more probable.

624. Liechtenstein and Sûfi erroneously designate the latitude north.

625. Ptolemy's longitude is too large.

626. Table of Collations shows that four Greek authorities (as well as Grynæus and Halma)
have the erroneous longitude 20° 40′.

634. 13 ν was the star observed by Ptolemy, whose longitude, however, needs a correc-
tion of +2°.

635. The latitude appears to be 1° too small, though it agrees with Ulugh Beg.

642. Baily adopts latitude 2° 10′, which is erroneous.

645. Most of the authorities have latitude 4° 0′. Paris 2389 is correct; error of Δ = 4° 0′
for Δ′ = 0° 15′. Peters identifies as 38 c, Baily as 37 e¹. Sûfi, misled
by the erroneous latitude 4° 0′, observed Fl. 30. Manitius makes the
latitude south.

649. Sûfi's observations point to 68 g² as the star which was observed by Ulugh Beg.
Baily's identification as 59 v supposes an error of 3° in Ptolemy's longitude.

651 and 652. Peters identifies 651 as Fl. 63 κ, but longitude and latitude are largely in error.
The description of 651 is "Antecedens duarum quæ sunt in ipso aquæ
fluxu a manu"; and the description of the following star, 652, is "Quæ
istam adhuc sequitur." The latter star is correctly identified as Fl. 73 λ.
The star which precedes it and forms the pair referred to by Ptolemy is
perhaps Fl. 67, though very uncertain, and it is smaller than 63 κ. In
the case of 63 κ we have errors, longitude −115′, latitude +136′, and for
Fl. 67 the errors are longitude −106′, latitude −51′. Baily identifies
651 as 67 and adds that a correction of +2° should be made to the longi-
tude. Schjellerup identifies as Fl. 67. Sûfi omits 651 altogether.

657. The position is equally good for either 93 ψ² or 95 ψ³. The first is the larger star.

658. The star is probably Fl. 94. Sûfi seems to have observed Fl. 97, which gives errors
of longitude −113′, and latitude −106′, and is smaller than 94. Ulugh
Beg observed 94. All authorities give longitude 20° 50′, which is 3° too
large. Upon this assumption Peters adopts 17° 50′.

659, 660. Baily gives the longitude of 659 as 22° 20′. There is no doubt that Ptolemy
and Ulugh Beg observed ω¹ and ω². It is curious that Sûfi remarks that

near one of these stars there is a star of mag. 6, which makes it double.
Peters says it can hardly be the variable R Aquarii, which is 1° distant.
It is probable that Sûfi really observed R at its maximum. The posi-
tions of ω² and R for 1875 are:

	R. A.	Decl.
	h m s	° ′
ω² Aquarii....	23 36 14	−15 14.1
R Aquarii....	23 37 21	−15 58.6 var. mag. 6-11.

661. It is probable that the two stars A¹ and A² were observed as one mass $\frac{A^1+A^2}{2}$.

663. Baily identifies as 106 i¹, but 108 i³ agrees better; it is also described by Sûfi. Ulugh
Beg seems to have observed 107.

665 and 666. The longitudes and latitudes are transposed in nearly all the manuscripts.

667. Lat. Peters' latitude, 16° 15′, is a conjecture; there is no authority for it, and there
is no ready explanation of confusion in the Greek letters for 14° 45′ or
14° 50′ and 16° 15′.

668. Long. Baily has 12° 20′.

670. This is the same star as No. 1011.

685. Long. Baily has 20° 10′.

687. Longitude 1° too large, latitude 1° too far south.

688. Longitude adopted from Paris 2389, one reading, and Arabs. Baily has 23° 20′.
Latitude 1° too far south.

689. Here Ulugh Beg has the south latitude too small.

690. Longitude of the Arabs adopted as more correct. Baily has 28° 20′.

694. Lat. Baily has 1° 45′, which is found only in Trapezuntius, Schreckenfuchs, and
the Crawford manuscript of Gerard of Cremona.

695. Longitude of Arabs 0° 20′ is better than the Greek 0° 40′, which Baily adopts.

696. Peters identifies as the combination of 93, mag. 5.3, and 94, mag. 5.6, and adds
that these two stars viewed as one mass would appear about mag. 4.7,
so that the mean differences should be taken.

702 to 704. These are the stars observed by Ptolemy and described by Sûfi, but the posi-
tions are in error, as was noted by Sûfi. Manitius identifies 704 as χ, but
though the position would suit, it is discordant with the description.
Peters considered there was no doubt that No. 707 is correctly identified
as χ, though the longitude is 2° too large.

716, 717. Baily gives the longitude of 716 as 10° 20′. These two stars present much
difficulty. It is suggested that 716 may be either 78 ν, or 73 ξ², but both
give large errors in both elements. No star harmonizes with Ptolemy's
position of 717. Schjellerup and Manitius identify as μ Ceti, but this
star is more probably 374, Ptolemy's 13th star in Aries. The question
of these two stars remains undecided.

	Ptolemy.			Position A. D. 100.	
	Long.	Lat.		Long.	Lat.
	° ′	° ′		° ′	° ′
716.	10 10	−8 10	78 ν	11 58	−9 21
			73 ξ²	11 2	−6 1
717.	12 40	−6 20	87 μ	15 21	−5 40

726. The latitude 15° 20′ of the Arabs has been adopted in preference to 15° 40′ of the
Greek, which Baily has.

728 to 731. The identification of these 4 stars seems correct; they accord with the
description. Longitude and latitude of 729 are largely in error. Ulugh
Beg's latitude also in error.

734. Lat.   The Greek manuscripts all have 16° 30′, with the exception of one reading of Paris 2389, and Cod. Ven. 303, which are 13° 30′. Sûfi and the Arabs have 13° 50′, or 18° 50′, which are equivalent by the common error of $\tau = 8$ and $\bar{\tau} = 3$. Baily remarks upon the error of 3° in the Greek authorities. Ptolemy describes this star as νεφελοειδής, probably from it making with φ¹ and φ² Orionis a small cluster.

738. Ptolemy's longitude seems 1° too large.

739. Ptolemy's longitude is too small, also when compared with Ulugh Beg.

740. Peters' identification is right. Ptolemy calls it διπλούς, probably from LL 11748 and LL 11884 being near and south of ξ.

741. Ptolemy's longitude 1° too large.

742 and 743. As Gore has correctly pointed out, the description of these stars should be reversed.

748. Lat.   Baily has 20° 10′.

752. Baily denotes this as 6 g. Peters identifies as 9 o². The same deviations in longitude and latitude are found here as in Ulugh Beg. Baily's star 6 g. does not agree at all.

763. Lat.   The Greek 28° 20′, which Baily has; the Arabs 28° 40′, which is adopted.

767. Long.   The Greek 26° 30′, except Vienna 14, the Arabs 26° 10′, adopted, but longitude still too large.

774. Long.   All the authorities have 48° 0′, which is 1° too large, also in comparison with Ulugh Beg.

775. Long.   Paris 2394 has ιδ υ′ in which the "υ" is an old cursive form of β, and in this manuscript it would signify 14° 40′. Grynæus has ιδ ε′ = 14° 12′.

777. Long.   Several Greek manuscripts give 16° 0′ for 10° 10′; error of ιϛ for ιϛ′. Baily has 18° 30′, for which there is no authority.

778. Lat.   Halma has 25° 20′, which he has taken from Halley.

779. Baily has longitude 3° 30′, and latitude 28° 30′. Peirce considers the star to be 98 Heis. Peters agrees with Baily and Schjellerup in identifying as 40 o².

781. Lat.   All authorities give 32° 50′. Halma gives 33° 10′, which he has taken from Halley.

786. It is not possible to decide whether the star is ρ² or ρ³. Ptolemy observed them as one mass.

787. Lat.   The Greek authorities give 23° 30′, while the Arabs have 23° 50′. Halma alone has 24° 30′, taken from Halley, and Baily adopts it. Peters did not notice the extracts from Halley made by Halma and Baily, and which he had adopted. In the present case the reading of the Arabs is taken.

788. Flamsteed remarks that a star noted by Ptolemy as of the 4th magnitude, and which is the 17th of the constellation Eridanus in his catalogue, could not be found now. About the position of the star all editions agree; it is the same in all existing manuscripts, both Greek and Arabic, and was the same also in the manuscript used by Sûfi. Sûfi says of this star: "The 17th, which precedes the 16th, is the last of the four, and at the western extremity of the series, near the four stars situated on the breast of Cetus. It is of the smaller ones of the 5th mag., almost of the 6th, and there is between it and the nearest star of the four situated on the breast of Cetus, that is, the 10th of Cetus, less than one 'coudée.'" Bode takes the star to be σ Eridani (Bayer and Ideler likewise), but says that since Flamsteed it is wanting upon all star charts and in the sky. Manitius takes it to be η, and the preceding star ρ³. According to Ptolemy's difference with η Eridani, the star could be Heis 10, 6.7 mag. = W. B. 2ʰ 788. According to Sûfi's description, the star seems to be nearer to ε Ceti (moins d'une coudée) than to η Eridani. He puts the distance between ρ and η Eridani as one coudée.

The following table shows the comparison between Ptolemy, Ulugh Beg, and computed positions, for A. D. 100, assuming the star to be W. B. 2ʰ 788:

Ptolemy's star.	Ptolemy.			Ulugh Beg reduced.		Name.	Computed.	
	Mag.	Long.	Lat.	Long.	Lat.		Long.	Lat.
		° ′	° ′	° ′	° ′		° ′	° ′
16 Eridani..	3	12 10	−23 30	12 37	−24 35	η Eridani....	12 14	−24 41
17 Eridani..	4	10 30	−23 15	11 35	−24 17	W. B. 2ʰ 788.	11 7	−24 56
10 Ceti.....	4	6 40	−25 10	7 46	−26 20	ε Ceti......	6 48	−26 7

We get the differences:

	17 − η Eridani.		17 − ε Ceti.	
	Long.	Lat.	Long.	Lat.
	° ′	′	° ′	° ′
Ptolemy....	−1 40	+15	+3 50	+1 55
Ulugh Beg...	−1 2	+18	+3 49	+2 3
Computed...	−1 7	−15	+4 19	+1 11

The star W. B. 2ʰ 788 is therefore the nearest. Ptolemy calls 17 Eridani of the 4th magnitude, but Sûfi of the 5th magnitude, small, almost the 6th. In Harvard R. Photometry η Eridani is 4.0 mag. and ε Ceti 5.0 mag. The Uranometria Argentina gives the magnitude of W. B. 2ʰ 788 as 6.4. In the following chart the position of W. B. 2ʰ 788 is marked by a +.
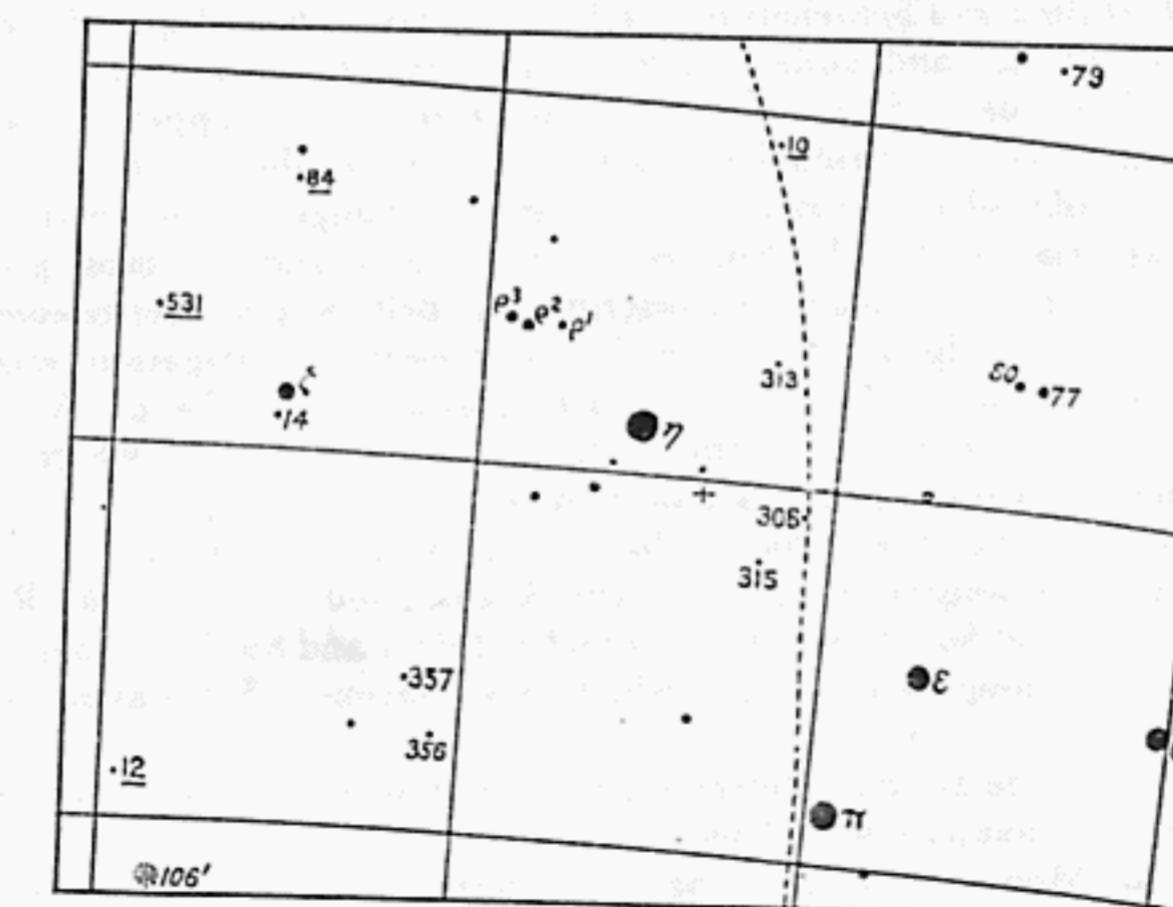
FIG. 4.—Chart of the Position of Ptolemy's Star 17 Eridani.

798. All the Greek manuscripts have the latitude erroneously 53° 20′; the Arabs are right. The longitudes of this and the following star are 1° too large, also by comparison with Ulugh Beg.

798 to 804. There is some confusion in the nomenclature of these stars, which are named v^1 to v^7, but in different order. The designations given by Peters are those of Taylor's Madras Catalogue, the maps of the S. D. U. K. and Proctor's Atlas. The reverse order is adopted in the Uranometria Argentina, Cape Catalogues, by Peirce, Houzeau, Schjellerup, and Manitius.

802. The position agrees better with III 202, though Ulugh Beg observed III 189.

803. Ptolemy's position agrees better with Lac. g, though Ulugh Beg observed Lac. f.

804. Ptolemy's latitude is 2° or 3° too small. Sûfi's description of Ptolemy's 31–33 identifies them as Lacaille g, f, and h.

805. Several Greek authorities give the longitude 7° 30′; one reading of Paris 2389 and all the Arabs have 0° 10′. Halma gives as a variant 27° 30′, which he has clearly taken from Halley. In Paris 2394 the degrees of longitude are represented by an old cursive form of the letter ξ and so the longitude is 60° 40′; Grynæus has the longitude 60° 40′, precisely the same. Baily gives Grynæus erroneously as 7° 40′. All authorities, even Sûfi, designate the star as of the first magnitude. The nearest star of the first magnitude is α Eridani, which could not have been seen by Ptolemy and Sûfi. The position is near the place of θ Eridani. Peters suggests that Ptolemy's place may be a compilation from inaccurate sources; he remarks that Sûfi clearly considered θ, and not α Eridani. The computed positions of the two stars for A. D. 100 are:

	Long.		Lat.	
	°	′	°	′
θ Eridani...	356	47	−53	50
α Eridani...	318	27	−59	16

It is surmised that there is a large error in Ptolemy's position or that the magnitude has changed. Peters, Baily, Peirce, and Manitius identify the star as θ, Halma and Schjellerup as α Eridani; Delambre adopts Halley's longitude, 27° 30′, and adds in a note "La dernière brillante du Fleuve ne peut être que la dernière de l'eau du Verseau, qui s'appelle aussi le Fleuve ou le Nil." θ Eridani shows no signs of variability; it is therefore highly improbable that its magnitude has changed from a first to a third magnitude star. All Almagests give mag. 1, and it is most probable that in a very ancient manuscript the delta = 4 was erroneously taken to be an alpha = 1, of which the present investigation shows numerous examples. Thus Ptolemy's magnitude should be 4. A corresponding error is found in the Bodleian Greek Almagest, where the magnitude of Sirius is given as 4 instead of 1.

806. Long. Baily adopts 19° 0′, but the authority for 19° 40′ is much stronger.

813. All Greek authorities give longitude 24° 50′; the Arabs (Bod. 369, B. M. Reg. 16, Laur. 156, and Sûfi) have 24° 20′, which is better and has been adopted.

822. All the manuscripts have longitude 25° 20′, which is erroneous. Sûfi has 20° 20′, which is right.

833. All authorities give longitude 23° 0′. Peters suggests that it should be 21° 0′ and it would then compare with Ulugh Beg.

836. Peters identifies as 22 Monocerotis (4.1 mag.) in preference to 19 Monocerotis (4.9 mag.); adopted by Baily and followed by Manitius, though the position of the former is more largely in error than the latter.

837. All authorities give longitude 10° 0′, which is 3° too large. Ulugh Beg is right. Peters has adopted 7° 0′.

843. Lat.   The Greek manuscripts have 59° 50′, and the Arabs 59° 30′, which is better.

848. Long.   The Arabs have 29° 10′, which is better than 29° 30′, as in the Greek and Baily.

849. The nomenclature of the stars in Argo is very confusing. The Index in Harvard Annals, vol. 50, has been followed as far as possible.

855. Latitude is variously given as 49° 15′, 49° 30′, 49° 45′, and 49° 50′; 49° 30′ seems to have the most authority. Baily adopts 49° 15′.

856. Latitude 49° 30′ of the Arabs is preferable to 49° 50′ of the Greeks, which Baily takes.

859. Sûfi's description leads upon Lacaille 2834. Mag. 5.3, U. A., the computed position of which is longitude 96° 7′, latitude −52° 6′, giving errors of longitude +127′ and latitude +54′.

861. Lat.   Baily gives 56° 30′, for which the only authority found is the Crawford Codex.

865. Lat.   Greek 58° 40′, Arabs 58° 20′, the latter adopted; but this is not Ptolemy's star, whose position accords better with the group VII 102, 108, and 113.

867. Peters remarks that there is no star in the position described by Sûfi.

868. Long.   Baily adopts 23° 10′.

869. Lat.   Greek 57° 40′, and Arabs 57° 0′.

870. Peters identifies this star as Lacaille 3580, mag. 5.8, but questions whether it is not too small. There is no star in the place described by Sûfi.

875. Lat.   Baily adopts 51° 40′.

879. Long.   14° 10′ has much better authority than 15° 10′ given by Baily.

880. Lat.   All authorities agree, but it is 1° too far south.

882. Long.   This is 2° too small, also by comparison with Ulugh Beg. Sûfi's description leads to Lac. 3022, which does not agree at all; longitude 113° 2′, latitude −65° 24′.

884. Ptolemy's longitude wrong. There is no other star here larger than mag. 4.

885. The identification of this star is probably correct, but longitude is 3° in error.

886. The identification right, longitude too small.

887. Identified as f Carinæ, with which the position agrees, but the magnitude is 4.6, which is entirely discordant with Ptolemy's mag. 2. Baily adopts ι Argûs, but this involves an error of 12° in longitude and 3° in latitude. Schjellerup also adopts ι Argûs, the magnitude of which is 2.2 (H. R.). Is f Carinæ variable?

Sûfi's description of the latter half of the constellation Argo is accurate and agrees with the sky (except Nos. 19 and 22, where there are no stars to be seen now). But the positions of Ptolemy and of Ulugh Beg do not agree with Sûfi in many places.

889. Lat.   Baily has 65° 15′, for which there is far less authority than 62° 15′.

895. Lat.   Baily has 13° 40′.

897. Lat.   Paris 2389 confirms the Arabs' 14° 45′, which agrees better than 14° 15′.

898. The latitude 12° 0′ of the Arabs agrees better than 12° 15′ of the Greek.

899. Sûfi has latitude 14° 40′, an error in the degrees of Δ for Α.

900. Sûfi has the erroneous latitude of 19° 20′.

904. The identification of this star as Ll. 18657 = W. B. 9^h 439 agrees better than Baily's star Fl. 28 A. Manitius gives it as Fl. 29.

905. All authorities have latitude 20° 30′, which should be 23° 0′. Probably it was 20° 20′, with the common mistake of ΚΓ′ for ΚΓ.

908. All Greeks have latitude 26° 15′, which is erroneous. The Arabs have it correctly, 23° 15′. Baily adopts 23° 35′ from Liechtenstein, which is an obvious mistake of Gerard of Cremona.

909. Lat.   The correct latitude of 24° 40′ is found in the Greek manuscripts Paris 2389, 2390, Ven. 312, Vat. Reg. 90, and the Arabs. All the others, including variants in Paris 2389, 2390, and Ven. 312, have 45° 30′, or 49° 30′ (Θ for Є). It is possible that in a very ancient manuscript the latitude of a star in Argo was copied inadvertently into Hydra.

910. Ptolemy's longitude is 1° too small, also in comparison with Ulugh Beg.

914. Longitude 1° too large, also by comparison with Ulugh Beg.

918. Ptolemy's longitude and latitude quite erroneous. B. M. Sloane 2795 gives latitude 13° 40′, but probably copied from the previous star. Ulugh Beg is right.

920. All authorities give latitude 16° 0′, probably an error of $1s = 16° 0′$ for $1y′ = 10° 10′$, which is adopted. Ulugh Beg's errors are similar. The position accords best with 24 Sextantis, longitude 131° 36′, latitude −10° 18′, but that star is only mag. 6.7 (U. A.). Sûfi certainly describes 15 α Sextantis (mag. 4.5), and this star is adopted by Schjellerup and Peirce, but it assumes an error of 3° in the longitude. To all appearance there was here a star seen by Ptolemy, Sûfi, and Ulugh Beg that now is not visible or shining prominently. Manitius identifies as δ Sextantis.

927. The longitude of the Arabs has been adopted. Baily gives 1° 20′.

940. The large proper motion of θ Centauri, amounting in 1700 years to 28′ in latitude, increases the discordance with Ptolemy's latitude, which is 1° too far south.

956. Peters identifies as Lac. 5390 f as Baily; Schjellerup as ξ. Sûfi calls the star double, which clearly refers to ξ¹ and ξ², but the position of ξ¹ (longitude 190° 28′, latitude 38° 42′) deviates more than 5390 f.

962 to 971. There are very large errors in the longitude and latitude of these stars common to all the manuscripts. Some of the errors may be accidental, or due to the scribe, but the general inference is that the observations were made by different observers. (See note to 494–496.)

964. Sûfi finds no star visible near Ptolemy's place. It should be, as Sûfi remarks, of mag. 3, following upon the 29th star (No. 963). The nearest star would be Lacaille 5632 ϱ, but the magnitude is 5.4.

969. Long. Peters considered that there was here the not uncommon error in the Arabic of 8 for 3, which would make the longitude 213° 20′, but the resulting error is equally large, though of a different sign.

971. Cod. Vienna 14 and Cod. Vat. Reg. 90 give the longitude as 11° 40′; all other Greek sources, as well as the Arabs, give 14° 40′, an error of Λ for Δ. The adoption of 11° 40′ would give a more consistent error in Ptolemy's longitude = +2° 43′.

979 to 981. The errors in longitudes of these three stars differ from all others in the constellation Lupus in that they have a *minus* sign. From this Peters inferred that they may have been derived from a different observer.

982. Long. The Greeks 22° 0′ and the Arabs 20° 20′. Peters corrects it to 26° 0′. The identification of this star presents considerable difficulty. The description states "Australis de tribus quæ sunt in extrema cauda." The following star, 983, correctly identified as ι Lupi, is "Media ipsarum," and the next, 984, also correctly identified as τ¹ and τ², is "Borealis ipsarum." Peters first suggested that the star was Lac. 5209, but this is in Crux and a long way from the described position. Sûfi could not find the star and of course it is omitted by Ulugh Beg. Peters finally adopted Lac. 6003 ϱ, which, assuming an error of 4° in longitude, would agree well; but the position is quite discordant with the description. Manitius identifies 982–984 as σ, ϱ, and α Lupi, the positions of which would accord with the description, but involve very large errors in longitude; moreover, α Lupi

seems well identified as Ptolemy's second star in Lupus. Baily's identification for the three stars is Lac. 1201 τ, 1215 ι, and 1209 κ (1201 = ι and 1209 = τ¹). It must remain a question whether there is here a variable or a lost star.

983. Long. Baily has 24° 50′.

989. Peters' identification agrees with Baily and Manitius. The longitude and latitude of the Arabs has been adopted. Baily gives longitude 27° 10′, latitude 11° 50′.

990. All authorities give longitude 26° 30′, except B. M. Arabic 7475, which has 27° 30′. Halma has 27° 30′, which would be much better. Peters questions his authority. There is no doubt that Halma took it from Halley's edition. Ulugh Beg's longitude is also 1° too small. The latitudes of the last three stars in Lupus are 1° too far north.

992. Several Greek authorities have longitude 3° 0′; the Arabs 0° 20′; the former is adopted—an error of Γ′ = 0° 20′ for Γ = 3° 0′. Baily adopts 3° 10′.

993. Long. Baily adopts 26° 20′.

994. Lat. With the exception of Ven. 311, Laur. 1, and Laur. 6, all Greek codices, as well as Grynæus and Halma, have latitude 1° 30′ instead of 30° 30′. An error of Λ = 1° for Λ = 30°.

997. Latitude 34° 0′ adopted from the Arabs. Baily has 34° 15′. Peters agrees with Schjellerup in the identification of the stars in Ara. Baily identifies in this order: γ, ε, δ, α, β, η, θ. There is a large error in all the longitudes, averaging 2° 18′ too small. These errors resemble those already referred to under 494–496, and 962–971.

998. Peters identifies as $\frac{\delta^1 + \delta^2}{2}$ Telescopii, as it agrees better in longitude, but remarks that it is not probable that α Telescopii should have been omitted.

1000. Baily identifies as 1566 ζ, which star Peters identifies in No. 1001.

1001. Baily identifies as β. Peters considers β to be 1003.

1004. Longitude 16° 50′ adopted from Cod. Vat. 1594, and the Arabs. Baily has 16° 20′.

1008. Baily has latitude 15° 50′, for which there is no authority; it is probably a misprint.

1009. Identified as Lac. 7748, which agrees better with Ulugh Beg's observations than Lac. 7758 = 1528 κ, identified by Baily, Schjellerup, and Manitius. Sûfi's description refers clearly to Lac. 7748.

1011. This is the same star as No. 670. Baily gives latitude 23° 0′, though for No. 670 he has 20° 20′.

1013 and 1015. Vatican Reg. 90 gives the longitudes as 30° 10′ and 30° 20′, respectively. Probably the original degrees were Δ = 4, then erroneously Λ = 1, then erroneously Λ = 30.

1017. Peters remarks that longitude 2° 10′, adopted by Halma, would be much better, but there is no authority. Here again Halma has taken the longitude from Halley, which, as already pointed out, is not a collation of any manuscripts, but an edition in which many errors are corrected by computation.

1023. Baily has taken the Greek description of this star from Grynæus, which is identical with Paris 2389; both are erroneous, as they omit the word τριῶν. Vatican 1594 is correct.

1023 to 1028. Peters identifies these six stars, forming the *informatæ* of Piscis Austrinus, as Lacaille 8579, 8639, 8761, 8685, 8731, and 8689. The identifications are not open to much doubt, but there are large errors in the coördinates of the six stars, averaging in longitude +1° 21′, and in latitude +6° 36′. Upon this identification 1028 is the same star as 613.

TABLE VI.

Differences of Identification.

Baily's No.	Ptolemy's No.	Peters.	Baily.	Schjellerup.	Peirce.	Manitius.
URSA MAJOR.						
18	10	30 φ....	44 Lyncis....	φ.	63 Heis....	φ
40	Inf. 5	10 Leo minor....	?10 Leo minor....	10 Leo minor....		11 Leo minor.
41	Inf. 6	IX 115....	—	—		8 Leo minor.
42	Inf. 7	36 Lyncis....	—	—		10 Leo minor.
CEPHEUS.						
86	Inf. 1	μ Cephei....	?XXI 248....	ν Cephei....	μ	μ
BOOTES.						
97	10	2 η Cor. Bor..	?1 or 2 Cor. Bor..	η Cor. Bor....	η Cor. Bor.	χ
98	11	1 o Cor. Bor..	48 χ....	χ.		—
99	12	41 ω....	45 c....	b.		c
100	13	46 b....	43 ψ....	ω.		ψ
101	14	43 ψ....	46 b....	ψ.		b
102	15	45 c....	41 ω....	c.		ω
HERCULES.						
138	20	74....	77 x....	x.		x
139	21	77 x....	82 y....	y.		y
140	22	82 y....	88 z....	z. ..ν		z
LYRA.						
156	8	9 ν²....	8 ν¹....	ν.	8.	ν
CASSIOPEIA.						
184	7	35 (Hev.) ι....	?II 72....	ι.	ι.	ι
185	8	33 θ....	33 θ....	μ.		μ
186	9	34 φ....	34 φ....	θ.	φ.	θ
PERSEUS.						
196	6	18 (Hev.) ι....	II 253 ι....	ι.	ι.	ι
218	Inf. 2	14 (Hev.) Camel.	IV 7....	12 Hev. Camel.		34 Hev. Camel.
AURIGA.						
227	8	10 η....	10 η....	ζ.	η.	η
228	9	8 ζ....	8 ζ....	η.		ζ
233	14	14....	4....		4.	2
OPHIUCHUS.						
246	13	40 ξ....	—	40....	40....	ξ
247	14	36 λ....	—	36....		λ
248	15	42 θ....	—	θ....	θ.	θ
249	16	44 b....	—	44....	7 Behr.	b
250	17	51 c....	—	51....		51
251	18	{52/2} Sagittarii	52....	58....		58
AQUILA.						
289	4	59 ξ....	54 o....	ξ.	o.	o
290	5	50 γ....	50 γ....	ν.	γ.	γ

Differences of Identification—continued.

Baily's No.	Ptolemy's No.	Peters.	Baily.	Schjellerup.	Peirce.	Manitius.
DELPHINUS.						
308	8	3 η....	3 η....	ζ.		η
309	9	4 ζ....	4 ζ....	η.		ζ
EQUULEUS.						
311	1	8 α....	8 α....	»		α
312	2	10 β....	10 β....		—	β
313	3	5 γ....	5 γ....			γ
314	4	7 δ....	7 δ....			δ
PEGASUS.						
327	13	50 ρ....	50 ρ....	σ.		ρ
328	14	49 σ....	49 σ....	ρ.		σ
ANDROMEDA.						
355	21	49 Λ....	49 Λ....	Λ.		ξ
356	22	52 χ....	52 χ....	χ.		ω
357	23	I o....	2....	o.	o.	o
TAURUS.						
401	22	69 υ¹....	69 υ¹....	υ.		υ²
403	24	37 Λ¹....	—	Λ.	43	Λ
404	25	50 ω²....	—	ω.	ω.	ω
409	30	19 e....	19....	—		16
410	31	23 d....	23....	—		17
411	32	{25 η / 27 f}	}27....			η
412	33	III 170....	18....			38 H.
415	Inf. 3	109 n....	105....	n.		n
417	Inf. 5	126....	126....	119.		130
418	Inf. 6	129....	128....	Σ730....	129.	129
419	Inf. 7	121....	121....	121.		118
GEMINI.						
432	9	58....	76 c....	b.		63
445	Inf. 4	85....	85....	85.	52 Tauri....	ξ
446	Inf. 5	81 g....	81 g....	g.		f
447	Inf. 6	74 f....	74 f....	f.		68
448	Inf. 7	16 ζ Cancri....	16 ζ Canc.	—		ζ Canc.
CANCER.						
458	Inf. 1	{62 o¹ / 63 o²}	}81 π¹....	π.	π¹.	π
460	Inf. 3	69 v....	69 v....	ξ.		ν
461	Inf. 4	77 ξ....	77 ξ....	ν.		ξ
LEO.						
482	21	—	71....	72.		θ
483	22	70 θ....	70 θ....	θ.		n
486	25	84 τ....	84 τ....	p³.		τ
494	Inf. 6	15 c Comæ....	—	15 Comæ.		15 Comæ.
495	Inf. 7	7 h Comæ....	4 Comæ.	12 Comæ.		7 Comæ.
496	Inf. 8	23 k Comæ....	21 Comæ.	21 Comæ.		23 Comæ.
VIRGO.						
504	8	46....	46....	k.	46.	k
512	16	74 l....	74 l³.	l.		l³
514	18	82 m....	82 m....	LL. 25396.	82 m.	m
515	19	68 i....	68 i....	LL. 25086.		i
528	Inf. 6	89....	73....	89.	89.	89

Differences of Identification—continued.

Baily's No.	Ptolemy's No.	Peters.	Baily.	Schjellerup.	Peirce.	Manitius.
LIBRA.						
541	Inf. 5	43 κ	41	η		41
542	Inf. 6	O. Arg. 14782	43 κ	κ		κ
544	Inf. 8	39	39	3 Hev. Scorp.		2 H. Scorp.
545	Inf. 9	40	40	o Scorp.		o Scorp.
SCORPIUS.						
560	15	XVI 206 ζ²	ζ²	—		ζ¹
567	Inf. 1	γ Telescopii	—		65 Behr.	G
569	Inf. 3	3 Sagittarii	44 Oph. or 3 Sag.	3 Sagittarii	44 Oph.	43 Oph.
SAGITTARIUS.						
586	17	56 f	56 f	f		57
594	25	XVIII 17	η	β Telescopii		η
595	26	XIX {330 k¹ / 333 k²} θ		m Lac.		θ¹
596	27	XIX 297 ι	ι	e Lac.		ι
CAPRICORNUS.						
615	15	36 b	35	b		b
AQUARIUS.						
634	6	13 ν	13 ν	Fl. 7		ν
645	17	38 e²	37 e¹	e.		e
649	21	68 g²	59 υ	68		g²
651	23	63 κ ?	67 ?	67		κ
655	27	92 χ	92 χ	—		χ
656	28	91 ψ¹	91 ψ¹	—		ψ¹
658	30	94	94 ?	97		131 H
659	31	102 ω¹	102 ω¹	—		ω¹
662	34	106 i¹	104 A²	i¹		i¹
663	35	108 i²	106 i¹	i²		i²
666	38	101 b¹	101 b¹	b³		b²
PISCES.						
704	31	81 ψ³	81 ψ³	ψ³		χ
707	34	84 χ	84 χ	χ		99 H
CETUS.						
716	5	—	78 ν	ξ²		ν
717	6	—	73 ξ²	μ		μ
728	17	19 φ²	21	19	21	φ¹
729	18	O. 198	19 φ²	23		φ²
730	19	17 φ¹	—	17	28 Heis Ceti	φ²
731	20	O. 161	17 φ¹	18		φ¹
ORION.						
742	9	72 f²	72 f²	f¹		f²
743	10	69 f¹	69 f¹	f²		f¹
744	11	54 x¹	57 x²	x¹		x¹
745	12	62 x²	64 x³	x²		x²
748	15	33 n¹	33 n¹	ψ		n¹
749	16	30 ψ²	30 ψ²	25		ψ
752	19	9 o²	6 g	o²		o²
753	20	7 π¹	7 π⁴	π¹		π¹
755	23	1 π³	1 π¹	π⁴		π³
756	24	3 π⁴	3 π³	π⁵		π⁵
763	30	{42 / 45} c	42 c	υ	e	c

Differences of Identification—continued.

Baily's No.	Ptolemy's No.	Peters.	Baily.	Schjellerup.	Peirce.	Manitius.
ERIDANUS.						
779	8	40 o²	40 d	o²	98 Heis.	o²
787	16	3 η	3 η	η		ρ³
788	17	—	σ.	LL. 4969		η
798	27	50 υ⁶¹¹	50 υ⁸	υ¹		υ¹
800	29	43 υ⁸¹³	43 υ⁸	υ²		υ²
802	31	III 202 υ³	υ³	i		υ⁸
803	32	III 189 υ²	υ²	g.		υ⁶
804	33	III 149 υ¹	υ¹	h.	58 Behr.	υ⁷
805	34	{II 238 / II 239} θ	θ	a.	θ	θ
CANIS MAJOR.						
825	8	7 ν²	6 ν¹	ν²		ν²
836	Inf. 1	22 Monocerotis	19 Monoc.	22 Monoc.		19 Monoc.
837	Inf. 2	VI 9 θ Columb.	485 Lac.	θ Columb.		θ Columb.
838	Inf. 3	VI 65 κ Columb.	497 Lac.	κ Columb.		κ Columb.
839	Inf. 4	VI 95 δ Columb.	510 Lac.	δ Columb.		δ Columb.
840	Inf. 5	VI 136 λ Can.maj.	521 Lac.	λ Can. maj.	λ.	λ Can. maj.
841	Inf. 6	V 238 μ Columb.	444 Lac.	μ Columb.	μ Columb.	μ Columb.
842	Inf. 7	V 276 λ Columb.	453 Lac.	—	λ Columb	λ Columb.
843	Inf. 8	V 297 γ Columb.	465 Lac.	γ Columb.	γ Columb.	γ Columb.
844	Inf. 9	V 267 β Columb.	452 Lac.	β Columb.	β Columb.	β Columb.
845	Inf. 10	V 196 α Columb.	434 Lac.	α Columb.		α Columb.
846	Inf. 11	V 140 ε Columb.	419 Lac.	ε Columb.		ε Columb.
ARGO NAVIS.						
857	9	VII 200 1 Pup.	σ.	σ.		17 H. Arg.
859	11	{VII 99 / VII 108} υ		VII 137		3 H. Arg.
860	12	VII 68 π Pup.	λ.	π.		π Pup.
861	13	VII 172 f Pup.	f.	—	f Pup.	f Pup.
862	14	VII 186 {d¹/d²/d³} Pup.	φ¹	—	d Pup.	d¹ Pup.
863	15	VII 214 c Pup.	φ²	—	c Pup.	c Pup.
864	16	VII 254 b Pup.	ψ ? b	—	b Pup.	b Pup.
865	17	VII 306 ζ Pup.	δ.	ζ.		ζ Pup.
866	18	VII 253 a Pup.	ω¹	a.		—
867	19	Lac. 3128	ω²	—		—
868	20	VIII 21 h¹ Pup.	A¹	r.		h¹ Pup.
869	21	VIII 35 h² Pup.	A²	q.		h² Pup.
870	22	Lac. 3580	p¹	—	p¹ 52 Behr.	d Vel.
871	23	VIII 168 d Vel.	p²	—	p² d Vel.	a Vel..
872	24	VIII 139 e Vel.	p³	—	p³ e Vel.	b Vel.
873	25	VIII 176 a Vel.	a.	—	a Vel.	D Vel.
874	26	VIII 155 b Vel.	b.	—	b Vel.	C Vel.
875	27	VIII 145 o¹ {β Pyx. / b Mal.}	o¹	—	b Mali.	β Pyx.
879	31	IX 1 λ Vel.	ε.	λ.		λ Vel.
881	33	VII 135 σ Pup.	i.	σ.		—
882	34	VII 235 P Pup.	r.	P.		—
883	35	γ Vel.	ζ.	γ.		γ Vel.
884	36	χ Car.	η.	χ.		ε Car.
885	37	o Pup.	q.	δ.	δ Arg.	—
886	38	δ Vel.	θ.	κ.		κ Vel.
887	39	f Car.	υ.	ι.		φ Vel.

Differences of Identification—continued.

Baily's No.	Ptolemy's No.	Peters.	Baily.	Schjellerup.	Peirce.	Manitius.
ARGO NAVIS—cont.						
888	40	κ Vel.	b	N	b κ	υ Car.
889	41	N. Vel.	c	φ	φ Arg	θ Car.
890	42	V 315 η Columb.	471 Lac.	η Columb		τ Pup.
891	43	VI 205 ν Pup.	g	ν Arg	g ν	σ Pup.
893	45	τ Pup.	h	τ Pup	h τ	τ Pup.
HYDRA.						
904	11	{LL. 18657 W 9h / 439}	}28 A	—		29
906	13	38 κ	38 κ	υ¹		κ
907	14	39 υ¹	39 υ¹	υ²		υ¹
908	15	40 υ²	40 υ²	λ		λ²
919	Inf. 1	30 Monocerotis	1	30 Monoc		30 Monoc.
920	Inf. 2	{24 Sextantis / 15 a Sextantis}	—	15 Sextantis	15 Sextantis	δ Sextantis.
CRATER.						
924	4	27 ζ	27 ζ	η	ζ	ζ
925	5	14 ε	14 ε	θ	ζ	ε
926	6	30 η	30 η	ζ	η	η
927	7	21 θ	21 θ	ε		θ
CENTAURUS.						
941	7	XIII 99 d	1150 Lac. ψ	d		d
942	8	XIV 40 ψ	1205 Lac. l	ψ		ψ
943	9	XIV 55 a	1207 Lac. o	a		a
944	10	XIV 150 c¹	1234 Lac. π	c		c¹
945	11	XIV 141 b	1232 Lac. ρ	b		c⁹
946	12	XIII 197 ν	1165 Lac. τ	ν	τ (ν)	ν
947	13	XIII 198 μ	1166 Lac. υ	μ	υ (μ)	μ
948	14	XIII 246 φ	1182 Lac. φ	φ	φ (φ)	φ
949	15	XIII 288 χ	1191 Lac. m	χ	m (χ)	χ
950	16	XIV 109 η	1219 Lac. κ	η		η
951	17	XIV 216 κ	1255 Lac. σ	κ		κ
952	18	XIII 231 ζ	1177 Lac. λ	ζ	λ (ζ)	ζ
953	19	XIII 267 υ²	1184 Lac. n	o		υ¹
954	20	XIII 249 υ¹	1183 Lac. χ	—		υ²
955	21	ω	1148 Lac. ω			ω
956	22	f	1123 Lac. o	ξ	ξ	f
957	23	γ	1098 Lac. μ	γ		γ
958	24	τ	1093 Lac. c	τ		ρ
959	25	σ	1086 Lac. p	σ		δ
960	26	δ	1064 Lac. β	δ		—
961	27	ρ	1068 Lac. e	ρ		—
962	28	M	1155 Lac. δ	—		ε
963	29	ε	—	ε		γ Crucis.
964	30	Q	—			δ Crucis.
965	31	γ Crucis	1070 Lac. ν	γ Crucis		β Crucis.
966	32	β Crucis	1107 Lac. ξ	β Crucis		a Crucis.
967	33	δ Crucis	1025 Lac. f	δ Crucis	δ Crucis	λ
968	34	a Crucis	1082 Lac. ζ	a Crucis	a Crucis	—
970	36	β Cent	1185 Lac. γ	β Cent		β Cent.
971	37	μ Crucis	1107 Lac. ε	θ Cent	θ	

Differences of Identification—continued.

Baily's No.	Ptolemy's No.	Peters.	Baily.	Schjellerup.	Peirce.	Manitius.
LUPUS.						
972	1	XIV 211 β	1254 Lac. o	β		β
973	2	a	1231 Lac. a	a		o
974	3	XV 31 δ	1283 Lac. ζ	δ		γ
975	4	XV 98 γ	1293 Lac. η	γ		δ
976	5	XV 35 ε	1285 Lac. θ	ε		ε
977	6	λ	1263 Lac. π	λ		π
978	7	XV 242 π	1258 Lac. β	π		κ
979	8	μ	1274 Lac. ξ	μ		μ
980	9	κ	1266 Lac. ρ	κ		ν
981	10	ζ	1265 Lac. σ	ζ		ζ
982	11	ρ ?	1201 Lac. τ	—		σ
983	12		1215 Lac. ι	ι		ρ
984	13	XIV {66 τ¹ / 67 τ²}	}1209 Lac. τ	τ	κ (τ)	a
985	14	XV 217 η	1325 Lac. ν	η		η
986	15	XV 248 θ	1335 Lac. μ	θ	μ (ξ)	θ
987	16	XV 174 Fl. 5 χ	3 γ	λ		ψ.
988	17	XV 204 ξ	5 λ			χ
989	18	XV 10 Fl. 1 i	1 ε	δ	ε 30 Behr.	i
990	19	XV 22 Fl. 2 f	2 δ	—	δ 33 Behr.	f
ARA.						
991	1	XVII 125 σ	γ	σ		σ
992	2	θ	ε	θ		θ
993	3	a	δ	a	δ (a)	a
994	4	ε¹	a	ε		ε
995	5	γ	β	γ	a (ε¹)	γ
996	6	β	η	β		β
997	7	ζ	θ	ζ		ζ
CORONA AUSTRALIS.						
998	1	XVIII {73 δ¹ / 76 δ²} Tel.	a	θ		a Teles.
999	2	XVIII {166 η¹ / 169 η²}	ε	η		η
1000	3	Lac. 7909	ζ	o		—
1001	4	XVIII 250 ζ	β	ζ		ζ
1002	5	XVIII 291 δ	η	δ		δ
1003	6	XVIII 305 β	θ	β		β.
1004	7	XVIII 300 a	γ	κ	γ	a
1005	8	XVIII 280 γ	δ	γ		γ
1006	9	XVIII 230 ε	μ			ε
1007	10	XVIII 222 ν	ν	—		—
1008	11	XVIII 142 λ	ι	λ		λ
1009	12	Lac. 7748 ξ Bode	κ	κ Bode		κ
1010	13	XVIII 85 θ	λ	ξ Bode		θ
PISCIS AUSTRINUS.						
1022	12	XXI 308 γ Gruis	κ	γ		γ Gruis.
1023	Inf. 1	XX 307 a Mic	1694 Lac.	λ Gruis		a Mic.
1024	Inf. 2	XX 403 γ Mic	1717 Lac.	μ Gruis		γ Mic.
1025	Inf. 3	XXI 46 ε Mic	—	δ Gruis		ε Mic.
1026	Inf. 4	XX 445	1704 Lac.	β Gruis		δ Mic.
1027	Inf. 5	XXI 12	—	a Gruis		
1028	Inf. 6	24 A Capric	4	ι Gruis	4	—

THE STAR MAGNITUDES.

The magnitudes of the stars in the catalogue are those deduced as most probable from consideration of the Table of Star Magnitudes (pp. 122–143), besides many other authorities mentioned in the notes.

The magnitudes in the Greek codices generally agree very well. Comparing the two oldest Greek codices, Paris 2389 and Vatican 1594, twelve differences are found, of which Paris 2389 is correct in ten and Vatican 1594 in two cases. Comparing Vatican 1594 with Venice 313, only 4 differences are noted. Comparing Paris 2389 with the Arabic codex, British Museum Reg. 16, there are 35 differences, of which Paris 2389 is correct in 21 and B. M. Reg. 16 correct in 13 cases, with one case in which both are probably wrong. The Arabic codex, B. M. Reg. 16, is particularly valuable from the great care with which it has been written. In all series of stars of the same magnitude, the magnitudes of the first and last only are written—a method which avoids many mistakes.

The magnitudes adopted in the catalogue differ from those in Paris 2389 in the following 14 stars: Baily, Nos. 128, 129, 130, 154, 211, 352, 480, 509, 576, 736, 764, 765, 824, and 885.

It will be seen in Table VIII that Dr. Peters has adopted magnitudes for some stars which differ from all manuscripts of the Almagest yet examined, and for which no authority can be found. In a note on one of his collations, he says that he has "inserted the *revised* magnitudes of the Paris Codex 2389, besides several notes on the stars in my copy of Baily's Ptolemy" (Mems. R. A. S., Vol. XIII), but unfortunately this volume can not be found.

The magnitudes in Ptolemy's catalogue have been fully discussed by Prof. E. C. Pickering in H. A., Vol. XIV, Part II. In this memoir he has reduced Ptolemy's magnitudes to the photometric scale of the Harvard Photometry, and arrives at the accompanying photometric values:

Ptolemy magnitude.	Photometric magnitude.	Ptolemy magnitude.	Photometric magnitude.
1	0.5	3–4	3.8
1–2	1.2	4–3	3.8
2–1	1.2	4	4.4
2	2.1	4–5	4.6
2–3	2.6	5–4	4.7
3–2	2.7	5	5.0
3	3.3	6	5.4

In the following table of whole magnitudes 2 to 6 (Table VII), a rather larger number of stars is employed and the magnitudes are based on the Harvard Revised Photometry. The corresponding figures from H. A., Vol. XIV, are appended in italics. It will be seen that the results do not suggest any material difference from those obtained by Professor Pickering in the above investigation.

TABLE VII.

Ptolemy magnitude.	No. of stars.				Mean magnitudes.			
	North.	Zodiac.	South.	All.	North.	Zodiac.	South.	All.
2	11	6	12	29	2.20	2.10	2.14	2.14
	12	*6*	*7*	*25*	*2.04*	*1.95*	*2.23*	*2.07*
3	63	52	46	161	3.22	3.24	3.35	3.27
	58	*44*	*34*	*136*	*3.28*	*3.31*	*3.36*	*3.31*
4	121	100	111	332	4.32	4.45	4.30	4.36
	119	*105*	*75*	*299*	*4.33*	*4.48*	*4.32*	*4.38*
5	48	95	38	181	4.84	5.08	4.64	4.85
	40	*82*	*16*	*138*	*4.81*	*5.04*	*4.82*	*4.95*
6	13	24	8	45	5.27	5.36	5.22	5.28
	9	*25*	*4*	*38*	*5.46*	*5.38*	*5.18*	*5.38*

In Table VIII the first column gives the number of the star in Baily's Ptolemy; the second column the name of the star; the third gives the magnitudes assigned by Dr. Peters, an asterisk (*) indicating those which differ from the magnitudes adopted in the catalogue; the next three columns give the magnitudes in the Greek codices, Paris 2389, Vatican 1594, and Venice 313; the following column gives the magnitudes adopted by Manitius from the several Greek manuscripts he examined; then follow the magnitudes in three Arabic codices, British Museum Reg. 16, British Museum 7475, and Bodleian 369; and in the last column is given the magnitudes in the Harvard Revised Photometry; for double stars the combined magnitude is given.

The Notes on pp. 144–150 give the variants from the adopted magnitudes, in the Greek codices, Paris 2389, Vatican 1594, Vatican 1038, Venice manuscripts 302, 310, 312, and 313, and Laurentian 48; the Latin codex Laurentian 6, and the three Arabic codices, British Museum Reg. 16 and 7475, and Bodleian 369. The magnitudes in the Latin manuscripts of Gerard of Cremona (Laurentian 45 and British Museum, Sloane 2795) show so many discordances that they are passed over, except in a few instances. Baily has omitted the qualifying words μείζων and ἐλάσσων, consequently the variants in his edition refer only to magnitudes not so qualified in the catalogue.

TABLE VIII.

Star Magnitudes.

Baily's No.	Name.	Peters.	Greek.				Arabic.			Harv. R.P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B.M. Reg. 16.	B.M. 7475.	Bod. 369.	
	URSA MINOR.									
1	1 α		3	3	3	3	3	3	3	2.1
2	23 δ	4	4	4	4	4	4	4	4	4.4
3	22 ε	4	4	4	4	4	4	4	4	4.4
4	16 ζ	4	4	4	4	4	4	4	4	4.3
5	21 η	4	4	4	4	4	4	4	4	5.0
6	7 β	2	2	2	2	2	2	2	2	2.2
7	13 γ	3*	2	2	2	2	2	2	2	3.1
8	5 A	4	4	4	4	4	4	4	4	4.4
	URSA MAJOR.									
9	1 o	4	4	4	4	4	4	4	4	3.5
10	2 A	5	5	5	5	5	5	5	5	5.4
11	4 π^2	5	5	5	5	5	5	5	5	4.8
12	8 ρ	5	5	5	5	5	5	5	5	5.0
13	13 σ^2	5	5	5	5	5	5	5	5	4.9
14	24 d	5	5	5	5	5	5	5	5	4.6
15	14 τ	4-5*	4	4	4	4	4	4	4	4.7
16	23 h	4	4	4	4	4	4	4	4	3.7
17	29 v	4	4	4	4	4	4	4	4	3.9
18	30 φ	4-5	4-5	4	4	4-5	4-5	4-5	4-5	4.5
19	25 θ	3	3	3	3	3	3	3	3	3.3
20	9 ι	3-4*	3	3	3	3	3	3	3	3.1
21	12 κ	3-4*	3	3	3	3	3	3	3	3.7
22	18 e	4	4	4	4	4	4	4	4	4.9
23	15 f	4	4	4	4	4	4	4	4	4.5
24	50 a	2	2	2	2	2	2	2	2	1.9
25	48 β	2	2	2	2	2	2	2	2	2.4
26	69 δ	3	3	3	3	3	3	3	3	3.4
27	64 γ	2	2	2	2	2	2	2	2	2.5
28	33 λ	3-4*	3	3	3	3	3	3	3	3.5
29	34 μ	3-4*	3	3	3	3	3	3	3	3.2
30	52 ψ	4-3	4-3	4-3	4-3	4-3	4-3	3	4-3	3.1
31	54 ν	3-4*	3	3	3	3	3	3	3	3.7
32	53 ξ	3-4*	3	3	3	3	3	3	3	4.6
33	77 ε	2	2	2	2	2	2	2	2	1.7
34	79 ζ	2	2	2	2	2	2	2	2	2.4
35	85 η	2	2	2	2	2	2	3	2	1.9
36	12 Can. Ven.	3	3	3	3	3	3	3	3	3.0
37	8 Can. Ven.	5	5	5	5	5	5	5	5	4.3
38	40 Lyncis	4	4	4	4	4	4	4	4	3.3
39	38 Lyncis	4	4	4	4	4	4	4	4	3.8
40	10 Leo min	aμ	aμ	aμ	aμ	aμ	aμ	aμ	aμ	4.6
41	IX 115	aμ	aμ	aμ	aμ	aμ	aμ	aμ	aμ	5.0
42	VIII 245	aμ	aμ	aμ	aμ	aμ	aμ	aμ	aμ	4.7
43	31 Lyncis	aμ	aμ	aμ	aμ	aμ	aμ	aμ	aμ	4.4
	DRACO.									
44	21 μ	4	4	4	4	4	4	4	4	5.8
45	{24}{25} ν	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.2

Star Magnitudes—continued.

Baily's No.	Name.	Peters.	Greek.				Arabic.			Harv. R.P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B.M. Reg. 16.	B.M. 7475.	Bod. 369.	
	DRACO—continued.									
46	23 β	3-4*	3	3	3	3	3	3	3	3.0
47	32 ξ	4	4	4	4	4	4	4	4	3.9
48	33 γ	3	3	3	3	3	3	3	3	2.4
49	39 b	4	4	4	4	4	4	4	4	4.8
50	46 c	4	4	4	4	4	4	4	4	5.1
51	45 d	4	4	4	4	4	4	4	4	4.9
52	47 o	4	4	4	4	4	4	4	4	4.8
53	58 π	4	4	4	4	4	4	4	4	4.6
54	57 δ	4	4	4	4	4	4	4	4	3.2
55	63 ε	4-5*	4	4	4	4	4	4	4	4.0
56	67 ρ	4	4	4	4	4	4	4	4	4.7
57	61 σ	5-6*	5	5	5	5	5	4	5	4.8
58	52 υ	5-6*	5	5	5	5	5	5	5	4.9
59	60 τ	5-6*	5	5	5	5	5	5	5	4.6
60	31 ψ	4	4	4	4	4	4	5	4	4.9
61	44 χ	4	4	4	4	4	4	4	4	3.7
62	43 φ	4-5*	4	4	4	4	4	4	4	4.2
63	27 f	6	6	6	6	6	6	4	6	5.2
64	28 ω	6	6	6	6	6	6	4	6	4.9
65	18 g	5	5	5	5	5	5	6	5	5.0
66	19 h	5	5	5	5	5	5	6	5	4.8
67	22 ζ	3	3	3	3	3	3	3	3	3.2
68	14 η	3	3	3	3	3	3	3	3	2.9
69	13 θ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.1
70	12 ι	3-2*	3	3	3	3	4-3	3-2?	3	3.5
71	10 i	4	4	4	4	4	3	3	3	4.8
72	11 α	3-4*	3	3	3	3	3	4,3?	3	3.6
73	5 κ	3-4*	3	3	3	3	3	3	3	3.9
74	1 λ	3-4*	3	3	3	3	3	3	3	4.1
	CEPHEUS.									
75	1 κ	4	4	4	4	4	4	3	4	4.4
76	35 γ	4	4	4	4	4	4	4	4	3.4
77	8 β	4	4	4	4	4	4	4	4	3.3
78	5 α	3	3	3	3	3	3	3	3	2.6
79	3 η	4	4	4	4	4	4	4	4	3.6
80	2 θ	4	4	4	4	4	4	4	4	4.3
81	17 ξ	5	5	5	5	5	5	3	4	4.4
82	32 ι	4-3	4-3	4-3	4-3	4-3	4-3	(?)	4-3	3.7
83	23 ε	5	5	5	5	5	5	(?)	4-3	4.2
84	21 ζ	4	5	4	5	4	4	(?)	5	3.6
85	22 λ	5	5	5	5	5	5	5	5	5.2
86	μ	5	5	5	5	5	5	5	5	4-5 v
87	27 δ	4-5*	4	4	4	4	4	5	5	3.7-4.6 v
	BOOTES.									
88	17 κ	5	5	5	5	5	5	5	5	4.6
89	21 ι	5	5	5	5	5	5	5	5	4.8
90	23 θ	5	5	5	5	5	5	5	5	4.1
91	19 λ	5	5	5	5	5	5	5	5	4.3
92	27 γ	3	3	3	3	3	3	3	3	3.0
93	42 β	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.6
94	49 δ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.5
95	51 μ	4	4	4	4	4	4	6	4	4.5

Star Magnitudes—continued.

Baily's No.	Name.	Peters.	Greek.				Arabic.			Harv. R. P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B. M. Reg. 16.	B. M. 7475.	Bod. 369.	
	BOOTES—continued.									
96	{52 ν¹ / 53 ν²}	4	4	4	4	4	4	4	4	4·3
97	2 η Coronæ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	5.6
98	1 o Coronæ	5	5	5	5	5	5	5	5	5.6
99	45 c	5	5	5	5	5	5	5	5	5.0
100	43 ψ	5	5	5	5	5	5	5	5	4.7
101	46 b	5	5	5	5	5	5	5	5	5.7
102	41 ω	5	5	5	5	5	5	5	5	4.9
103	36 e	3	3	3	3	3	3	3	3	2.7
104	28 σ	4	4	4	4	4	4	4	4	4.5
105	25 ρ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.8
106	30 ζ	3	3	3	3	3	3	3	3	4.4
107	8 η	3	3	3	3	3	3	3	3	2.8
108	4 τ	4	4	4	4	4	4	3	4	4.5
109	5 υ	4	4	4	4	4	4	4	4	4.3
110	16 α	I	I	I	I	I	I	om.	I	0.2
	CORONA BOREALIS.									
111	5 α	2-I	2-I	2-I	2-I	2-I	2-I	5-4	2-I	2.3
112	3 β	4-5*	4-3	4-3	4-3	4-3	4-3	5-4	4-3	3.7
113	4 θ	5	5	5	5	5	5	5	5	4.2
114	9 π	6	6	6	5	6	6	6	6	5.6
115	8 γ	4	4	4	4	4	4	4	4	3.9
116	10 δ	4	4	4	4	4	4	4	4	4.7
117	13 ε	4	4	4	4	4	4	4	4	4.2
118	14 ι	4	4	4	4	4	4	4	4	4.9
	HERCULES.									
119	64 α	3	3	3	3	3	3	3	3	3.5
120	27 β	3	3	3	3	3	3	3	3	2.8
121	20 γ	3	3	3	3	3	3	3	3	3.8
122	7 κ	4-5*	4	4	4	4	4	3	4	5.3
123	65 δ	3	3	3	4	4	3	3	3	3.2
124	76 λ	4-3	4-3	4-3	4-3	4-3	4-3	3	4-3	4.5
125	86 μ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.5
126	103 o	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.8
127	94 ν	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.5
128	92 ξ	4*	4	4	4	4	4-3	4-3	4-3	3.8
129	40 ζ	4*	4	4	4	4	3	4-3	3	3.0
130	58 ε	5-6*	5	5	5	5	4-3	4-3	4-3	3.9
131	59 d	5	5	5	5	5	5	5	5	5.3
132	61 c	5	3	3	3	3	5	5	5	5.4
133	67 π	4	4	4	4	4	3	3	3	3.4
134	69 e	4	4	4	4	4	4	4	4	4.8
135	75 ρ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.5
136	91 θ	4	4	4	4	4	4	4	4	4.0
137	85 ι	4	4	4	4	4	4	4	4	3.8
138	74	6	6	6	6	6	6	6	6	5.8
139	77 x	6	6	6	6	6	6	6	6	5.8
140	82 y	6	6	6	6	6	6-5	6	6-5	5.5
141	44 η	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.6
142	35 σ	4	4	4	4	4	4	4-3	4-3	4.2
143	22 τ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.9
144	11 φ	4	4	4	4	4	4	6	4	4.3

Baily's No.	Name.	Peters.	Greek.				Arabic.			Harv. R. P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B. M. Reg. 16.	B. M. 7475.	Bod. 369.	
	HERCULES—cont.									
145	6 v	4	4*	4	4	4	4	6	4	4.6
146	1 χ	4	4	4	4	4	4	6	4	4.6
147	{52 ν¹ / 53 ν²} Bootis	4	om.	om.	om.	om.	om.	om.	om.	4.3
148	24 ω	5	5	5	5	5	5	om.	om.	4.5
	LYRA.									
149	3 α	I	I	I	I	I	I	I	I	0.14
150	{4 ε¹ / 5 ε²}	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	4.7
151	{6 ζ¹ / 7 ζ²}	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	4.1
152	12 δ²	4	4	4	4	4	4	4	4	4.5
153	20 η	4	4	4	4	4	4	4	4	4.5
154	21 θ	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4.5
155	10 β	3	3	3	3	3	3	3	3	3.4-4.1 V
156	9 ν²	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	5.1
157	14 γ	3	3	3	3	3	3	3-4	4	3.3
158	15 λ	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	5.1
	CYGNUS.									
159	6 β	3	3	3	3	3	3	3	3	3.2
160	12 φ	5	5	5	5	5	5	5	5	4.8
161	21 η	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.0
162	37 γ	3	3	3	3	3	3	3	3	2.3
163	50 α	2	2	2	2	2	2	2	2	1.3
164	18 δ	3	3	3	3	3	3	3	3	3.0
165	13 θ	4	4	4	4	4	4	4	4	4.6
166	10 ι	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.9
167	1 κ	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	4.0
168	53 ε	3	3	3	3	3	3	3	3	2.6
169	54 λ	4-3	4-3	4-3	4	4-3	4-3	4	4-3	4.5
170	64 ζ	3	3	3	3	3	3	2	3	3.4
171	58 ν	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.0
172	62 ξ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.9
173	{30 / 31} o¹	4-5*	4	4	4	4	4	4	4	3.6
174	32 o²	4-5*	4	4	4	4	4	4*	4	4.2
175	{45 ω¹ / 46 ω²}	5	5	5	5	5	5	5	5	4.4
176	{65 τ / 66 υ}	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	{3.8 / 4.4}
177	67 σ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.3
	CASSIOPEIA.									
178	17 ζ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.7
179	18 α	3	3	3	3	3	3	3	3	2.5
180	24 η	4	4	4	4	4	4	3	4	3.6
181	27 γ	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	2.2
182	37 δ	3	3	3	3	3	3	3	3	2.8
183	45 ε	4	4	4	4	4	4	4	4	3.4
184	35 (Hev.) ι	4	4	4	4	4	4	4	4	4.6
185	33 θ	4	4	4	4	4	4	3	4	4.5
186	34 φ	5	5	5	5	5	5	5	5	5.2

Star Magnitudes—continued.

Baily's No.	Name	Peters.	Greek.				Arabic.			Harv. R.P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B.M. Reg. 16.	B.M. 7475.	Bod. 369.	
	CASSIOPEIA—cont.									
187	8 σ	6	6	6	6	6	6	6	6	4.9
188	15 κ	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	4.2
189	11 β	3	3	3	3	3	3	3	3	2.4
190	7 ρ	6	6	6	6	6	6	6	6	4.8
	PERSEUS.									
191	7 χ	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	
192	15 η	4	4	4	4	4	4	4	4	3.9
193	23 γ	3-4	3-4	3-4	3-4	3-4	3-4	4	3-4	3.1
194	13 θ	4	4	4	4	4	4	4	4	4.2
195	18 τ	4	4	4	4	4	4	4	4	4.1
196	18 (Hev.) ι	4-3*	4	4	4	4	4	4	4	4.2
197	33 α	2	2	2	2	2	2	2	2	1.9
198	35 σ	4	4	4	4	4	4	3	4	4.5
199	37 ψ	4	4	4	4	4	4	4	4	4.3
200	39 δ	3	3	3	3	3	3	3-2	3	3.1
201	27 κ	4	4	4	4	4	3	3-2	3	2.1 v
202	26 β	2	2	2	2	2	2	2	2	4.0
203	28 ω	4	4	4	4	4	4	2	2	2.1 v
204	25 ρ	4	4	4	4	4	4	4	4	4.8
205	22 π	4	4	4	4	4	4	4	4	3.4 v
206	21 (Hev.) 72 b	4	4	4	4	4	4	4	4	4.6
207	47 λ	4	4	4	4	4	4	4	4	4.6
208	48 c	4	4	4	4	4	4	4	4	4.3
209	51 μ	4	4	4	4	4	4	4	4	4.0
210	53 d	5	5	5	5	5	5	4	5	4.3
211	58 e	5*	5	5	5	5	5	5	5	4.9
212	41 ν	4-3	4-3	4-3	4-3	4-3	5-4	5	5-4	4.5
213	45 ε	3	3	3	3	3	4-3	4-3	4-3	3.9
214	46 ξ	4	4	4	4	4	3	3	3	3.0
215	38 o	3-4	3-4	3-4	3-4	3-4	4	4	4	4.0
216	44 ζ	3-2	3-2	3-2	3-2	3-2	3-4	3-2	3	3.9
217	52 f	5	5	5	5	5	5	5	3-4	2.9
218	14 (Hev.) Camel	5	5	5	5	5	5	5	5	4.9
219	16 p¹	aμ	aμ	aμ	aμ	aμ	aμ	aμ	aμ	5.1 / 4.3
	AURIGA.									
220	33 δ	4	4	4	4	4	4	4	4	3.9
221	30 ξ	4	4	4	4	4	4	4	4	4.9
222	13 a	1	1	1	1	1	1	1	1	0.2
223	34 β	2	2	2	2	2	2	2	2	2.1
224	32 ν	4	4	4	4	4	4	4	4	4.2
225	37 θ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	2.7
226	7 ε	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	v
227	10 η	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.3
228	8 ζ	4	4	4	4	4	4	4-5	4	3.9
229	3 ι	3-4	3-4	3-4	3-4	3-4	4-5	4		3.9
230	23 γ = β Tauri	3-2	3-2	3-2	3-2	3-2	3-4	3-4	3-4	2.9
231	25 χ	5	5	5	5	5	5	5	5	1.8
232	24 φ	5	5	5	5	5	5	5	5	4.9
233	14	6	6	6	6	6	6	6	6	5.3 / 5.1

Star Magnitudes—continued.

Baily's No.	Name	Peters.	Greek.				Arabic.			Harv. R.P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B.M. Reg. 16.	B.M. 7475.	Bod. 369.	
	OPHIUCHUS.									
234	55 α	3-2	3-2	3-2	3-2	3-2	3-2	3	3-2	2.1
235	60 β	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	2.9
236	62 γ	4	4	4	4	4	4	4		3.7
237	25 ι	4	4	4	4	4	4	4	4	4.3
238	27 κ	4	4	4	4	4	4	4	4	3.4
239	10 λ	4	4	4	4	4	4	3	4	3.8
240	1 δ	3-4*	3	3	3	3	4-5	4	4-5	3.0
241	2 ε	3	3	3	3	3	3	4-5	3	3.3
242	57 μ	4	4	4	4	4	4	4	4	4.6
243	64 ν	4-5	4-5	4-5	4-5	4-5	4-5	4	4-5	3.5
244	69 τ	4	4	4	4		4	4	4	5.3
245	35 η	3	3	3		3	3	4-3	4	2.6
246	40 ξ	4-5*	4-3		4-3	4-3	4-3	4	3	4.5
247	36 λ	4	4		4-3	4	4	4	4	5.3
248	42 θ	4-5*	4-3	4-3	4-3	4-3	4-3	4-3	4	3.4
249	44 b	4	4	4	4	4	4	4-3	4	4.3
250	51 c	5	5	5	5	5	5	5	5	4.9
251	52, 2 } Sagittarii	5	5	5	5	5	5	5	5	6.6 / 6.0
252	13 ζ	3	3	3	3	3	3	3	3	2.7
253	8 φ	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	4.4
254	7 χ	5	5	5	5	5	5-4	5	5-4	4.8
255	4 ψ	5-4	5-4	5-4	5-4	5-4	5-4	5	5-4	4.6
256	9 ω	5	5	5	5	5	5	5-4	5	4.6
257	5 ρ	4	4	4	4	4	4	5	4	5.2
258	66	4	4	4	4	4	4	4	4	4.8
259	67	4	4	4	4	4	4	4	4	3.9
260	68	4	4	4	4	4	4	4	4	4.4
261	70	4	4	4	4	4	4	4	4	4.1
262	72	4	4	4	4	4	4	4	4	3.7
	SERPENS.									
263	21 ι	4	4	4	4	4	4	4	4	4.5
264	38 ρ	4	4	4	4	4	4	4	4	4.9
265	41 γ	3	3	3	3	3	3	3	3	3.9
266	28 β	3	3	3	3	3	3	3	3	3.7
267	35 κ	4	4	4	4	4	4	4	4	4.3
268	44 π	4	4	4	4	4	4	4	4	4.8
269	13 δ	3	3	3	3	3	3	3	3	4.2
270	27 λ	4	4	4	4	4	4	4	4	4.4
271	24 α	3	3	3	3	3	3	3	3	2.7
272	27 ε	3	3	3	3	3	3	3	3	3.7
273	32 μ λ	4	4	4	4	4	4	3	3	3.6
274	3 υ Oph	5	5	5	5	5	5	4	5	4.7
275	53 ν	4	4	4	4	4	4	4	4	4.3
276	55 ξ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.6
277	56 o	4	4	4	4	4	4	4	4	4.4
278	57 ζ	4	4	4	4	4	4	4	4	4.6
279	58 η	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.4
280	63 θ	4	4	4	4	4	4	4	4	4.5

Star Magnitudes—continued.

Baily's No.	Name	Peters	Greek				Arabic			Harv. R.P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B.M. Reg. 16.	B.M. 7475.	Bod. 369.	
	SAGITTA.									
281	12 γ	4	4	4	4	4	4	4	4	3.7
282	8 ζ	6	6	6	6	6	6	6	6	4.9
283	7 δ	5	5	5	5	5	5	5	5	3.8
284	5 α	5	5	5	5	5	5	5	5	4.4
285	6 β	5	5	5	5	5	5	5	5	4.4
	AQUILA.									
286	63 τ	4	4	4	4	4	4	4	4	5.6
287	60 β	3	3	3	3	3	3	3	3	3.9
288	53 α	2-1	2-1	2	2	2-1	2-1	2-1	2-1	0.9
289	59 ξ	3-4	3-4	3-4	3-4	3-4	3-2	3-4	3-2	4.9
290	50 γ	3	3	3	3	3	3	3	3	2.8
291	61 φ	5	5	5	5	5	5	5	5	5.3
292	38 μ	5	5	5	5	5	5	5	5	4.6
293	44 σ	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5.2
294	17 ζ	3	3	3	3	3	3	3	3	3.0
295	55 η	3	3	3	3	3	3	3	3	3.7 v
296	65 θ	3	3	3	3	3	4	3	3	3.4
297	30 δ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.4
298	41 ι	3	3	3	3	3	3	3	3	4.3
299	39 κ	5	5	5	5	5	5	5	5	5.0
300	16 λ	3	3	3	3	3	3	3	3	3.5
	DELPHINUS.									
301	2 ε	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	4.0
302	5 ι	4-3*	4-5	4-5	4-5	4-5	4	4	4	5.4
303	7 κ	4	4	4	4	4	4	4	4	5.2
304	6 β	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3.7
305	9 α	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3.9
306	11 δ	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	4.5
307	12 γ	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	4.5
308	3 η	6	6	6	6	6	6	6	6-7	5.2
309	4 ζ	6	6	6	6	6	6	6	6	4.7
310	8 θ	6	6	6	6	6	6	6	6	6.1
	EQUULEUS.									
311	8 α	αμ	αμ	αμ	αμ	αμ	αμ	αμ	αμ	4.1
312	10 β	αμ	αμ	αμ	αμ	αμ	αμ	αμ	αμ	5.1
313	5 γ	αμ	αμ	αμ	αμ	αμ	αμ	αμ	αμ	4.8
314	7 δ	αμ	αμ	αμ	αμ	αμ	αμ	αμ	αμ	4.6
	PEGASUS.									
315	δ=21 α And	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2.1
316	88 γ	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2.9
317	53 β	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2.6
318	54 α	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2.6
319	62 τ	4	4	4	4	4	4	3	4	4.6
320	68 υ	4	4	4	4	4	4	4	4	4.6
321	44 η	3	3	3	3	3	4	4	3	3.1
322	43 ο	5	5	5	5	5	5	5	5	4.8
323	47 λ	4	4	4	4	4	4	4	4	4.1
324	48 μ	4	4	4	4	4	4	4	4	3.7
325	42 ζ	3	3	3	3	3	3	3	4	3.6
326	46 ξ	4	4	4	4	4	4	4	4	4.3

Star Magnitudes—continued.

Baily's No.	Name	Peters	Greek				Arabic			Harv. R.P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B.M. Reg. 16.	B.M. 7475.	Bod. 369.	
	PEGASUS—continued.									
327	50 ρ	5	5	5	5	5	5	5	5	4.9
328	49 σ	5	5	5	5	5	5	5	5	5.3
329	26 θ	3	3	3	3	3	3	3	3	3.7
330	22 ν	4	4	4	4	4	4	4	4	4.9
331	8 ε	3-2	3-2	3-2	3-2	3-2	4	4	4	2.5
332	29 π	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3-2	4.4
333	24 ι	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.0
334	10 κ	4-3	4-3	4	4	4-3	4-3	3-4	4-3	4.3
	ANDROMEDA.									
335	31 δ	3	3	3	3	3	3	3	3	3.5
336	29 π	4	4	4	4	4	4	4	4	4.4
337	30 ε	4	4	4	4	4	4	4	4	4.5
338	25 σ	4	4	4	4	4	4	4	4	4.5
339	24 θ	4	4	4	4	4	4	4	4	4.4
340	27 ρ	5	5	5	5	5	5	5	5	5.2
341	17 ι	4	4	4	4	4	4	4	4	4.3
342	19 κ	4	4	4	4	4	4	4	4	4.3
343	16 λ	4	4	4	4	4	4	4	4	4.0
344	34 ζ	4	4	4	4	4	4	4	4	4.3
345	38 η	4	4	4	4	4	4	4	4	4.6
346	43 β	3	3	3	3	3	3	3	3	2.4
347	37 μ	4	4	4	4	4	4	3	3	3.9
348	35 ν	4	4	4	4	4	4	3	4	4.4
349	57 γ	3	3	3	3	3	4	3	3	2.3
350	54 = φ Persei	4-5*	4-5	4-5	4-5	4-5	4-3	4-3	4-3	4.2
351	51 = υ Persei	4-3	4-3	4-3	4-3	4-3	4	4-3	4	3.8
352	50 υ	4-5*	4	4	4	4	4-3	4-3	4-3	4.2
353	53 τ	4	4	4	4	4	4-3	4	4-3	4.9
354	42 φ	5	5	5	5	5	5	4	4	4.3
355	49 λ	5	5	5	5	5	5	5	5	5.3
356	52 χ	5	5	5	5	5	5	5	5	5.2
357	1 ο	3	3	3	3	3	3	5	3	3.6
	TRIANGULUM.									
358	2 α	3	3	3	3	3	3	4	3	3.6
359	4 β	3	3	3	3	3	3	3	3	3.1
360	8 δ	4	4	4	4	4	4	4	3	5.1
361	9 γ	3	3	3	3	3	3	3	3	4.1
	ARIES.									
362	5 γ	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	4.7
363	6 β	3	3	3	3	3	3	3	3	2.7
364	17 η	5	5	5	5	5	5	5	5	5.3
365	22 θ¹	5	5	5	5	5	5	5	5	5.7
366	8 ι	5	5	5	5	5	5	5	5	5.2
367	32 ν	6	6	6	6	6	6	6	6	5.4
368	48 ε	5	5	5	5	5	5	5	5	5.2
369	57 δ	4	4	4	4	4	4	5	5	4.5
370	58 ζ	4	4	4	4	4	4	4	4	4.9
371	63 τ²	4	4	4	4	4	4	4	4	5.2
372	{ 45 ρ² / 46 ρ³ }	5	5	5	5	5	5		5	5.0
373	43 σ	5	5	5	5	5	5	5	5	5.5

Star Magnitudes—continued.

Baily's No.	Name	Peters	Greek — Paris 2389	Vatican 1594	Venice 313	Manitius printed	Arabic — B.M. Reg. 16	B.M. 7475	Bod. 369	Harv. R.P.
	ARIES—continued.									
374	87 μ Ceti	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.4
375	13 a	3-2	3-2	3-2	3-2	3-2	3-2	3	3-2	2.2
376	41 c	4	4	4	4	4	4	4	4	3.7
377	39	5	5	5	5	5	4	4	5	4.6
378	35	5	5	5	5	5	5	5	5	4.6
379	33	5	5	5	5	5	5	5	5	5.4
	TAURUS.									
380	5 f		4	4	4	4	4	4	4	4.3
381	4 s		4	4	4	4	4	4	4	5.1
382	2 ξ		4	4	4	4	4	4	4	3.7
383	1 o		4	4	4	4	4	4	4	3.8
384	30 e		5	5	5	4	4	4	4	5.0
385	35 λ		3	3	3	3	3	3	5	3.3-4.2 v
386	49 μ		4	4	4	4	3	3	4	4.3
387	38 ν		4	4	4	4	4	4	4	3.9
388	90 c¹		4	4	4	4	4	4	4	4.3
389	88 d		4	4	4	4	4	4	4	4.4
390	54 γ	3-4	3-4	3-4	3-4	4	4	4	4	3.9
391	61 δ¹	3-4	3-4	3-4	3-4	3-4	3-4	4-5	3-4	3.9
392	{77 θ¹ / 78 θ²}	3-4	3-4	3-4	3-4	3-4	3-4	3-4	(?)	3.1
393	87 a	I	I	I	I	I	I	I	I	1.1
394	74 ε	3-4	3-4	3-4	3-4	3-4	3-4	(?)	I	3.6
395	97 i	4	4	4	4	4	4	(?)	3	5.1
396	104 m	4	4	4	4	4	4	4	3	5.0
397	106 l¹	5	5	4	4	5	5	5	5	5.3
398	123 ζ	3	3	3	3	3	3	3	3	3.0
399	94 τ	3	3	4	4	4	4	4	4	4.3
400	112 β	3	3	3	3	4	4	4	4	1.8
401	69 υ¹	5	5	5	5	3		3	5	4.4
402	65 κ	5	5	5	5	5	5	5	5	4.4
403	37 A	5	5	5	5	5	5	5	5	4.5
404	50 ω²	6	6	6	6	5	6	6	5	4.8
405	44 p	5	5	5	5	5	5	6	5	5.5
406	42 ψ	5	5	5	5	5	5	5	5	5.3
407	59 χ	5	5	5	5	5	5	5	5	5.4
408	52 φ	5	5	5	5	5	5	5	5	5.1
409	19 (Taygeta) e	5	5	5	5	5	5	5	5	4.4
410	23 (Merope) d	5	5	5	5	5	5	5	5	4.4
411	{25 (Alcyone) η / 27 (Atlas) f}	5	5	5	5	5	5	5	5	3.0
412	III 170		4	4	4	4	4	4	4	3.8
413	10	4	4	4	4	4	4	4	4	5.4
414	102 ι	5	5	5	5	5	5	5	5	4.4
415	109 n	5	5	5	5	5	5	5	5	4.7
416	114 o	5	5	5	5	5	5	5	5	5.1
417	126	5	5	5	5	5	5	5	5	4.8
418	129	5	5	5	5	5	5	5	5	4.9
419	121	5	5	5	5	5	5	5	5	5.9
420	125	5	5	5	5	5	5	5	5	5.3
421	132	5	5	5	5	5	5	5	5	5.0
422	136	5	5	5	5	5	5	5	5	5.0
423	139	5	5	5	5	5	5	5	5	4.9

Star Magnitudes—continued.

Baily's No.	Name	Peters	Greek — Paris 2389	Vatican 1594	Venice 313	Manitius printed	Arabic — B.M. Reg. 16	B.M. 7475	Bod. 369	Harv. R.P.
	GEMINI.									
424	66 α	2	2	2	2	2	2	2	2	2.0
425	78 β	2	2	2	2	2	2	2	2	1.2
426	34 θ	4	4	4	4	4	4	2	2	3.6
427	46 τ	4	4	4	4	4	4	4	4	4.5
428	60 ι	4	4	4	4	4	4	4		3.9
429	69 υ	4	4	4	4	4	4	4	4	4.2
430	77 κ	4	4	4	4	4	4	4		3.7
431	57 λ	5	5	5	5	5	4	4	4	5.1
432	58	5	5	5	5	5	5	5	5	6.0
433	27 ε	3	3	3	3	3	3	3	3	3.2
434	43 ζ	3	3	3	3	3	3	3	3	3.7-4.3 v
435	55 δ	3	3	3	3	3	3	3	3	3.5
436	54 λ	3	3	3	3	3	3	3	3	3.6
437	7 η	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	1.9
438	13 μ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.5 v
439	18 ν	4-3	4-3	4-3	4-3	4-3	4-3	3	4-3	3.2
440	24 γ	3	3	3	3	3	3	3	4-3	4.1
441	31 ξ	4	4	4	4	4	4	3	3	1.9
442	1 H	4	4	4	4	4	4	4-3	4	3.4
443	44 κ Aurigæ	4-3	4-3	4-3	4-3	4-3	5	4	4-3	4.3
444	36 d	5-6*	5	5	5	5	5	4	4-3	4.4
445	85	5	5	5	5	5	5	3-4	5	5.2
446	81 g	5	5	5	5	5	5	5	5	5.4
447	74 f	5	5	5	5	5	5	5	5	5.0
448	16 ς Cancri	4	4	4	4	4	4	4	4	6.3
	CANCER.									
449	41 ε	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Cum.
450	33 η	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	5.5
451	31 θ	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	5.6
452	43 γ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.7
453	47 δ	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	4.2
454	65 α	4	4	4	4	4	4	4	4	4.3
455	48 ι	4	4	4	4	4	4	4	4	4.2
456	10 μ	5	5	5	5	5	5	5	5	5.4
457	17 β	4*	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.8
458	{62 o¹ / 63 o²}	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4.6
459	76 κ	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	5.1
460	69 ν	5	5	5	5	5	5	5	5	5.4
461	77 ξ	5	5	5	5	5	5	5	5	5.2
	LEO.									
462	1 κ	4	4	4	4	4	4	4	4	4.6
463	4 λ	4	4	4	4	4	4	4	4	4.5
464	24 μ	4	4	4	4	4	4	4	4	4.1
465	17 ε	3-2	3-2	3-2	3-2	3	3	3	3	3.1
466	36 ζ	3	3	3	3	3	3	3	3-2	3.1
467	41 γ	2	2	2	2	2	3	3	2	3.6
468	30 η	3	3	3	3	3	3	3	3	2.6
469	32 α	I	I	I	I	I	I	I	I	3.6
470	31 A	4	4	4	4	4	4	4	4	1.3
471	27 ν	5	5	5	5	5	5	5	5	4.6
472	16 ψ	5	5	5	5	5	5	5	5	5.2

Star Magnitudes—continued.

Baily's No.	Name.	Peters.	Greek					Arabic		Harv. R.P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B.M. Reg. 16.	B.M. 7475.	Bod. 369.	
	LEO—continued.									
473	5 ξ	6	6	6	6		6	6	6	
474	14 o	4	4	4	4	5	4	4	4	5.1
475	29 π	4	4	4	4	4	4	4	4	3.8
476	47 ρ	4	4	4	4	4	4	4	4	4.9
477	46 i	6	4	4	4	4	4	4	4	3.8
478	52 k	6	6	6	6	6	6	6	6	5.7
479	53 l	6	6	6	6	6	6	6	6	5.6
480	60 b	6*				6				5.3
481	68 δ	2-3	2-3	2-3	2-3	2-3	5	5	5	4.4
482	—	5	5	5	5	2-3	2-3	2	2-3	2.6
483	70 θ	3	3	3	3	3	3	5	5	
484	78 ι	3	3	3	3	3	3	5	5	3.4
485	77 σ	4	4	4	4	4	4	3	3	4.0
486	84 τ	4	4	4	4	4	4	4	4	4.1
487	91 υ	5	5	5	5	4	4	4	4.	5.2
488	94 β	1-2	1-2	1-2	1-2	1-2	1-2	1-2	5	4.5
489	41 Leo min.	5	5	5	5	1-2	1-2	1-2	1-2	2.2
490	54	5	5	5	5	5	5	5	5	5.0
491	63 χ	4-5	4-5	4-5	4-5	5	5	5	5	4.5
492	59 c	5	4-5	5	5	4-5	4-5	4-5	4-5	4.7
493	58 d	5	5	5	5	5	5	5	5	5.1
494	15 c Comæ	aμ	aμ	aμ	aμ	aμ	5	5	5	5.0
495	7 h Comæ	aμ	aμ	aμ	aμ	aμ	aμ	aμ	aμ	4.6
496	23 k Comæ	aμ	aμ	aμ	aμ	aμ	aμ	aμ	aμ	5.1
										4.8
	VIRGO.									
497	3 ν		5	5	5	5	5	5	5	4.2
498	2 ξ	5	5	5	5	5	5	5	5	5.1
499	9 o	5	5	5	5	5	5	5	5	4.2
500	8 π	5	5	5	5	5	5	5	5	4.6
501	5 β	3	3	3	3	3	3	3	3	3.8
502	15 η	3	3	3	3	3	3	3	3	4.0
503	29 γ	3	3	3	3	3	3	3	3	3.6
504	46	5	5	5	5	5	5	3	3	6.1
505	51 θ	4	4	4	4	4	4	5	5	4.4
506	43 δ	3	3	3	3	3	3	4	4	3.7
507	30 ρ	5	5	5	5	5	5	5	3	4.9
508	32 d²	6	6	6	6	5	5	5	5	5.2
509	47 ε	5-4*	5-4	5-4	5-4	3-2	3-2	5	3-2	2.9
510	67 a	1-2*	1	1	1	1	1	1	1	1.2
511	79 ζ	3	3	3	3	3	3	3	3	3.4
512	74 l	5	5	5	5	5	5	5	3-2	4.8
513	76 h	6	6	6	6	5	5	5	5	5.4
514	82 m	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	5.2
515	68 i	5	5	5	5	5	5	5	5	5.6
516	86.	5	5	5	5	5	5	5	5	5.8
517	90 p	5	5	5	5	5	5	5	5	5.3
518	99 ι	4	4	4	4	5	5	5	4	4.2
519	98 κ	4	4	4	4	4	4	4	4	4.3
520	105 φ	4-5*	4	4	4	4	4	4	4	5.0
521	100 λ	4	4	4	4	4	4	4	4	4.6
522	107 μ	3-4*	3	3	3	4	4	4	4	3.9
523	26 χ	5	5	5	5	5	5	5	5	4.8
524	40 ψ	5	5	5	5	5	5	5	5	4.9

Star Magnitudes—continued.

Baily's No.	Name.	Peters.	Greek					Arabic		Harv. R.P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B.M. Reg. 16.	B.M. 7475.	Bod. 369.	
	VIRGO—continued.									
525	49.	5/6	*5/6	5/6	5/6	5/6	5	5	5	5.3
526	53.	6	6	6	6	6	5	5	6	5.1
527	61.	5/6	5/6	5/6	5/6	5/6	5	5	5/6	4.3
528	89.	6	6	6	6	6	5	6	5/6	5.1
	LIBRA.									
529	9 a	2	2	2	2	2	2	2	2	2.9
530	7 μ	5	5	5	5	5	5	5	5	5.4
531	27 β	2	2	2	2	5	5	2	5	2.7
532	19 δ	5	5	5	2	2	2	2	2	4.8
533	24 ι	4	4	4	4	4	5	5	5	4.7
534	21 ν	4	4	4	4	4	4	4	4	5.3
535	38 γ	4	4	4	4	4	4	4	4	4.0
536	46 θ	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4.3
537	37	5	5	5	5	5	5	5	5	4.8
538	48 ψ	4-5	4-5	4-5	4-5	4-5	5	5	5	4.7
539	51 = ξ Scorp	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4.8
540	45 λ	6	6	6	6	6	6	6	6	5.1
541	43 κ	5	5	5	5	5	5	6	5	
542	O. Arg. 14782	4	4	4	4	5	5	6	5	Var.
543	20 = γ Scorp	3	3	3	3	3	3	4	3	3.4
544	39	4	4	4	4	4	4	3	3	3.8
545	40	4	4	4	4	4	4	4	4	3.8
	SCORPIUS.									
546	8 β	3	3	3	3	3	3	3		
547	7 δ	3	3	3	3	3	3	3	3	2.9
548	6 π	3	3	3	3	3	3	3	3	2.5
549	5 ρ	3	3	3	3	3	3	3	3	3.0
550	14 ν	4	4	4	4	4	4	4	4	4.3
551	{9 ω¹ / 10 ω²}	4	4	4	4	4	4	4	4	3.6
552	20 σ	3	3	3	3	3	3	3	3	3.1
553	21 a	2	2	2	2	2	2	3	3	1.2
554	23 τ	3	3	3	3	3	3	2	2	2.9
555	13 c²	5	5	5	5	5	5	3	3	4.7
556	XVI 31 d	5	5	5	5	5	5	5	5	4.9
557	26 ε	3	3	3	3	3	3	3	3	2.4
558	{XVI 189 μ¹ / XVI 193 μ²}	3	3	3	3	3	4	3		2.6
559	XVI 198 ζ¹	4	4	4	4	4	4	4	4	4.9
560	XVI 206 ζ²	4	4	4	4	4	4	4	4	3.7
561	XVI 302 η	3	3	3	3	3	3	3	3	3.4
562	XVII 138 θ	3	3	3	3	3	3	3	3	2.0
563	XVII 210 ι¹	3	3	3	3	3	3	3	3	3.1
564	XVII 174 κ	3	3	3	3	3	3	3	3	2.5
565	35 λ	3	3	3	3	3	3	3	3	1.7
566	34 υ	4	4	4	4	4	4	4	4	2.8
567	XVII 229 γ Teles	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	—
568	45 d Oph	5-4	5-4	5-4	5-4	5	5-4	5-4	5-4	4.4
569	3 Sagittarii	5	5	5-4	5	5	5-4	5-4 (?)	5-4	4.3

Star Magnitudes—continued.

Baily's No.	Name.	Peters.	Greek.				Arabic.			Harv. R. P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B. M. Reg. 16.	B. M. 7475.	Bod. 369.	
	SAGITTARIUS.									
570	10 γ	3	3	3	3	3	3	3	3	3.1
571	19 δ	3	3	3	3	3	3	3	3	2.8
572	20 ε	3	3	3	3	3	3	3	3	1.9
573	22 λ	3	3	3	3	3	3	3	3	2.9
574	{13 μ¹ / 15 μ²}	4	4	4	4	4	4	3	4	3.8
575	34 σ	3	3	3	3	3	3	3	3	2.1
576	27 φ	4-5*	4	4	4	4	3	3	3	3.3
577	{32 ν¹ / 35 ν²} Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.		4.3
578	37 ξ	4	4	4	4	4	4	4	4	3.6
579	39 o	4	4	4	4	4	4	4	4	3.9
580	41 π	4	4	4	4	4	4	4	4.	3.0
581	43 d	5	5	5	5	5	5	5	5	5.0
582	44 ρ	4	4	4	4	4	4	4	4	3.9
583	46 υ	4	4	4	4	4	4	4	4	4.6
584	{54 e¹ / 55 e²}	6	6	6	6	6	6	6	6	4.5
585	61 g	5	5	5	5	5	5	5	5	5.0
586	56 f	6	6	6	6	6	6	6	6	5.1
587	{47 χ¹ / 49 χ³}	5	5	5	5	5	5	5	5	4.5
588	{51 h¹ / 52 h²}	4	4	4	4	4	4	5	4	4.3
589	42 ψ	5	5	5	5	5	5	5	5	4.9
590	40 τ	4-3	4-3	4-3	4-3	4-3	5	5	5	3.4
591	38 ζ	3	3	3	3	3	3	3	3	2.7
592	{XIX 54 β¹ / XIX 62 β²}	2	2	2	2	2	2	2	2	3.7
593	XIX 68 a	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	4.1
594	XVIII 17 η	3	3	3	3	3	3	3	3	3.1
595	{XIX 330 κ¹ / XIX 333 κ²}	3	3	3	3	3	3	3	3	4.9
596	XIX 297 ι	3	3	3	3	3	3	3	3	4.2
597	58 ω	5	5	5	5	5	5	5	5	4.8
598	60 A	5	5	5	5	5	5	5	5	4.9
599	59 b	5	5	5	5	5	5	5	5	4.6
600	62 c	5	5	5	5	5	5	5	5	4.6
	CAPRICORNUS.									
601	{5 a¹ / 6 a²}	3	3	3	3	3	4	3	3	3.4
602	8 ν	6	6	6	6	6	6	6	5	4.8
603	9 β	3	3	3	3	3	3	3	3	3.2
604	{1 ξ¹ / 2 ξ²}	6	6	6	6	6	6	6	6	5.4
605	12 o	6	6	6	6	6	6	6	6	6.1
606	10 π	6	6	6	6	6	6	6	6	5.2
607	11 ρ	6	6	6	6	6	6	6	6	5.0
608	7 σ	5	5	5	5	5	5	5	5	5.5
609	{13 τ¹ / 14 τ²}	6	6	6	6	6	6	6	6	5.3
610	15 υ	5	5	5	5	5	5	5	5	5.3
611	16 ψ	4	4	4	4	4	4	4	4	4.3

Star Magnitudes—continued.

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			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B. M. Reg. 16.	B. M. 7475.	Bod. 369.	
	CAPRICORNUS—cont.									
612	18 ω	4	4	4	4	4	4	4	4	4.2
613	24 A	4	4	4	4	4	4	4	4	4.6
614	34 ζ	4	4	4	4	4	4	4	4	3.9
615	36 b	5	5	5	5	5	5	5	5	4.6
616	28 φ	5	5	5	5	5	5	5	5	5.3
617	25 χ	5	5	5	5	5	5	5	5	5.3
618	22 η	5	5	5	5	5	5	5	5	4.9
619	23 θ	4	4	4	4	4	4	4	4	4.2
620	32 ι	4	4	4	4	4	4	4	4	4.3
621	39 ε	4	4	4	4	4	4	4	4	4.7
622	43 κ	4	4	4	4	4	4	4	4	4.8
623	40 γ	3	3	3	3	3	3	3	3	3.8
624	49 δ	3	3	3	3	3	3	3	3	3.0
625	42 d	4	4	4	4	4	4	4	4	5.3
626	51 μ	5	5	5	5	5	5	5	5	5.2
627	48 λ	5	5	5	5	5	5	5	5	5.4
628	46 c¹	5	5	5	5	5	5	5	5	5.3
	AQUARIUS.									
629	25 d	5	5	5	5	5	5	5	5	5.3
630	34 a	3	3	3	3	3	3	3	3	3.2
631	31 o	5	5	5	5	5	5	5	5	4.7
632	22 β	3	3	3	3	3	3	3	3	3.1
633	23 ξ	5	5	5	5	5	5	5	5	4.8
634	13 ν	3	3	3	3	3	3	3	3	4.5
635	6 μ	4	4	4	4	4	4	4	4	4.8
636	2 ε	3	3	3	3	3	3	3	3	3.8
637	48 γ	3	3	3	3	3	3	3	3	4.0
638	52 π	3	3	3	3	3	3	3	3	4.6
639	55 ζ	3	3	3	3	3	3	3	3	3.7
640	62 η	3	3	3	3	3	3	3	3	4.1
641	43 θ	4	4	4	4	4	4	4	4	4.3
642	46 ρ	5	5	5	5	5	4	5	4	5.4
643	57 σ	4	4	4	4	4	4	4	4	4.9
644	33 ι	4	4	4	4	4	4	4	4	4.3
645	38 e	6	6	6	6	6	6	6	6	5.4
646	76 δ	3	3	3	3	3	4	3	3	3.5
647	71 τ	4	4	4	4	4	4	3	4	4.2
648	53 f	5	5	5	5	5	5	5	5	6.3
649	68 g²	5	5	5	5	5	5	5	5	5.4
650	66 g¹	5	5	5	5	5	5	5	5	4.9
651	63 κ	4	4	4	4	4	4	4	4	5.3
652	73 λ	4	4	4	4	4	4	4	4	3.8
653	83 h	4	4	4	4	4	4	4	4	5.6
654	90 φ	4	4	4	4	4	4	4	4	4.4
655	92 χ	4	4	4	4	4	4	4	4	5.1
656	91 ψ¹	4	4	4	4	4	4	4	4	4.5
657	{93 ψ² / 95 ψ³}	4	4	4	4	4	4	4	4	4.1
658	94									
659	102 ω¹	5	5	5	5	5	5	5	5	5.3
660	105 ω²	5	5	5	5	5	5	5	5	5.2
661	{103 A¹ / 104 A²}	5	5	5	5	5	5	5	5	4.4

Star Magnitudes—continued.

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	AQUARIUS—cont.									
662	106 i¹	5	5	5	5	5	5	5	5	5.3
663	108 i³	5	5	5	5	5	5	5	5	5.3
664	98 b¹	4	4	4	4	4	4	5	4	4.2
665	99 b²	4	4	4	4	4	4	5	4	4.5
666	101 b³	4	4	4	4	4	4	4	4	4.8
667	86 c¹	4	4	4	4	4	4	4	4	4.8
668	89 c³	4	4	4	4	4	4	4	4	4.9
669	88 c²	4	4	4	4	4	4	4	4	3.8
670	79 = α Pis. Aust.	1	1	1	1	1	1	1	1	1.3
671	2 Ceti	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.6
672	6 Ceti	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	5.0
673	7 Ceti	4-3	4-3	4-3	4	4-3	4-3	4-3	4-3	4.7
	PISCES.									
674	4 β	4-3	4-3	4	4	4	4-3	4-3	4-3	4.6
675	6 γ	4	4	4	4	4	4	4	4	3.8
676	7 b	4	4	4	4	4	4	4	4	5.2
677	10 θ	4	4	4	4	4	4	4	4	4.4
678	17 ι	4	4	4	4	4	4	4	4	4.3
679	8 κ	4	4	4	4	4	4	4	4	4.9
680	18 λ	4	4	4	4	4	4	4	4	4.6
681	28 ω	4	4	4	4	4	4	4	4	4.0
682	41 d	6	6	6	6	6	6	6	6	5.6
683	51	6	6	6	6	6	6	6	6	5.7
684	63 δ	4	4	4	4	4	4	4	4	4.5
685	71 ε	4	4	4	4	4	4	4	4	4.4
686	86 ζ	4	4	4	4	4	4	4	4	5.2
687	80 e	6	6	6	6	6	6	6	6	5.7
688	89 f	6	6	6	6	6	6	6	6	5.3
689	98 μ	4	4	4	4	4	4	4	4	5.1
690	106 ν	4	4	4	4	4	4	4	4	4.7
691	111 ξ	4	4	4	4	4	4	4	4	4.8
692	113 a	3	3	3	3	3	4	3	3	3.9
693	110 o	4	4	4	4	4	4	4	4	4.5
694	102 π	5	5	5	5	5	5	5	5	5.6
695	99 η	3	3	3	3	3	3	3	3	3.7
696	93 ρ / 94 ρ	4	4	4	4		4	4	4	4.7
697	82 g	5	5	5	5	5	5	5	5	5.0
698	83 τ	5	5	5	5	5	5	5	5	4.7
699	68 h	6	6	6	6	6	6	6	6	5.6
700	67 k	6	6	6	6	6	6	6	6	5.9
701	65 i	6	6	6	5	6	6	6	6	5.5
702	74 ψ¹	4	4	4	4	4	4	4	4	4.9
703	79 ψ²	4	4	4	4	4	4	4	4	5.6
704	81 ψ³	4	4	4	4	4	4	4	4	5.6
705	90 υ	4	4	4	4	4	4	4	4	4.7
706	85 φ	4	4	4	4	4	4	4	4	4.6
707	84 χ	4	4	4	4	4	4	4	4	4.9
708	27	4	4	4	4	4	4	4	4	5.1
709	29	4	4	4	4	4	4	4	4	5.1
710	30	4	4	4	4	4	4	4	4	4.7
711	33	4	4	4	4	4	4	4	4	4.7

Star Magnitudes—continued.

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			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B.M. Reg. 16.	B.M. 7475.	Bod. 369.	
	CETUS.									
712	91 λ	4	4	4	4	4				
713	92 α	3	3	3	3	4	4	4	4	4.7
714	86 γ	3	3	3	3	3	3	3	3	2.8
715	82 δ	3	3	3	3	3	3	3	3	3.6
716	—	4	4	4	4	4	4	3	4	4.0
717	—	4	4	4	4	4	4	3	4	—
718	65 ξ¹	4	4	4	4	4	4	4	4	4.5
719	72 ρ	4	4	4	4	4	4	4	4	4.9
720	76 σ	4	4	4	4	4	4	4	4	4.8
721	83 ε	4	4	4	4	4	4	4	4	5.0
722	89 π	4	4	4	4	4	4	4	3	4.4
723	52 τ	3	3	3	3	3	3	3	3	3.6
724	59 υ	4	4	4	4	4	3	3	3	4.2
725	55 ζ	3	3	3	3	3	3	3	3	3.9
726	45 θ	3	3	3	3	3	3	3	3	3.8
727	31 η	3	3	3	3	3	3	3	3	3.6
728	19 φ²	5	5	5	5	5	5	5	5	5.2
729	Oʰ. 198	5	5	5	5	5	5	5	5	5.8
730	17 φ¹	5-4	5-4	5	5	5-4	5-4	5	5-4	4.9
731	Oʰ. 161	5-4	5-4	5	5	5-4	5-4	5	5-4	6.4
732	8 ι	3-4	3-4	3	3	3-4	3-4	4	3-4	3.7
733	16 β	3-2*	3	3	3	3	3-4	3-2	3-4	2.2
	ORION.									
734	39 λ	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	Neb.	3.5
735	58 α	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	0.9
736	24 γ	2-1	2	2	2	2	2-1	2-1	2-1	1.7
737	32 A	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4.3
738	61 μ	4	4	4	4	4	4	4	4	4.2
739	74 k	6	6	6	6	6	6	6	6	5.1
740	70 ξ	4	4	4	4	4	4	(?)	4	4.3
741	67 ν	4	4	4	4	4	4	(?)	4	4.4
742	72 f²	6	6	6	6	6	6	4	6	5.3
743	69 f¹	6	6	6	6	6	6	4	6	4.9
744	54 χ¹	5	5	5	5	5	5	5	5	4.6
745	62 χ²	5	5	5	5	5	5	5	5	4.7
746	47 ω	4	4	4	4	4	4	4	4	4.5
747	38 n²	6	6	6	6	6	6	6	6	5.3
748	33 n¹	6	6	6	6	6	6	6	6	5.5
749	30 ψ²	5	5	5	5	5	5	5	5	4.7
750	15 y²	4	4	4	4	4	4	5	4	4.9
751	11 y¹	4	4	4	4	4	4	4	4	4.6
752	9 o²	4	4	4	4	4	4	4	4	4.3
753	7 π¹	4	4	4	4	4	4	4	4	4.7
754	2 π²	4	4	4	4	4	4	4	4	4.3
755	1 π³	3	3	3	3	3	3	3	3	3.3
756	3 π⁴	3	3	3	3	3	3	3	3	3.8
757	8 π⁵	3	3	3	3	3	3	3	3	3.9
758	10 π⁶	3	3	3	3	3	3	3	3	4.7
759	34 δ	2	2	2	2	2	2	2	2	2.5
760	46 ε	2	2	2	2	2	2	2	2	1.7
761	50 ζ	2	2	2	2	2	2	2	2	1.9
762	28 η	3	3	3	3	3	3	3	3	3.4

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	ORION—continued.									
763	{42 c / 45 c}	4	4	4	4	4	4	4	4	4.2
764	{41 θ^1 / 43 θ^2}	3-4	3	3-4	3	3-4	3-4	3	3-4	4.5
765	44 ι	3	3-4	3	3	3	3	3	3	2.9
766	49 d	4	4	4	4	4	4	4	4	4.9
767	36 υ	4	4	4	4	4	4	4	4	4.6
768	19 β	1	1	1	1	1	1	1	4	0.3
769	20 τ	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	3.7
770	29 e	4	4	4	4	4	4	4	4	4.2
771	53 κ	3-2	3-2	3-2	3-2	3-2	3-2	3	3-2	2.2
	ERIDANUS.									
772	69 λ	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	4.3
773	67 β	4	4	4	4	4	4	4	4	2.9
774	65 ψ	4	4	4	4	4	4	4	4	4.8
775	61 ω	4	4	4	4	4	4	4	4	4.4
776	57 μ	4	4	4	4	4	4	4	4	4.2
777	48 ν	4	4	4	4	4	4	4	4	4.1
778	42 ξ	5	5	5	5	5	5	4	5	5.2
779	40 o^2	4	4	4	4	4	4	4	4	4.5
780	38 o^1	4	4	4	4	4	4	4	4	4.1
781	34 γ	3	3	3	3	3	3	3	3	3.2
782	26 π	4	4	4	4	4	4	3	4	4.6
783	23 δ	3	3	3	3	3	3	3	3	3.7
784	18 ϵ	3	3	3	3	3	3	3	3	4.9
785	13 ζ	3	3	3	3	3	3	3	3	3.8
786	{9 ρ^2 / 10 ρ^3}	4	4	4	4	4	4	4	4	4.7
787	3 η	3	3	3	3	3	3	3	3	4.0
788	—	4	4	4	4	4	4	4	4	—
789	1 τ^1	4	4	4	4	4	4	4	4	4.6
790	2 τ^2	4	4	4	4	4	4	4	4	4.8
791	11 τ^3	4	4	4	4	4	4	4	4	4.2
792	16 τ^4	4	4	4	4	4	4	4	4	3.9
793	19 τ^5	4	4	4	4	4	4	4	4	4.3
794	27 τ^6	4	4	4	4	4	4	4	4	4.3
795	28 τ^7	5	5	5	5	5	5	5	5	5.0
796	33 τ^8	4	4	4	4	4	4	4	4	4.8
797	36 τ^9	4	4	4	4	4	4	4	4	4.7
798	50 υ^6	4	4	4	4	4	4	4	4	4.6
799	52 υ^7	4	4	4	4	4	4	4	4	3.9
800	43 υ^5	4	4	4	4	4	4	4	4	4.1
801	41 υ^4	4	4	4	4	4	4	4	4	3.6
802	III 202 υ^3	4	4	4	4	4	4	(?)	4	—
803	III 189 υ^2	4	4	4	4	4	4	(?)	4	—
804	III 149 υ^1	4	4	4	4	4	4	(?)	4	—
805	{II 238 θ / 239 θ}	1	1	1	1	1	1	1	1	3.1
	LEPUS.									
806	3 ι	5	5	5	5	5	5	5	5	4.5
807	4 κ	5	5	5	5	5	5	5	5	4.5
808	7 ν	5	5	5	5	5	5	5	5	5.3

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	LEPUS—continued.									
809	6 λ	5	*5	5	5	5	5	5	5	4.3
810	5 μ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	5	3.3
811	2 ϵ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.3
812	11 α	3	3	3	3	3	3	3	3	2.7
813	9 β	3	3	3	3	3	3	3	3	3.0
814	15 δ	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	3.9
815	13 γ	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	3.8
816	14 ζ	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	3.7
817	16 η	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	3.8
	CANIS MAJOR.									
818	9 α	1	1	1	1	1	1	1	1	-1.6
819	14 θ	4	4	4	4	4	4	3	4	4.2
820	18 μ	5	5	5	5	5	5	5	5	5.2
821	23 γ	4	4	4	4	4	4	4	4	4.1
822	20 ι	4	4	4	4	4	4	4	4	4.4
823	15 (π^1)	5	5	5	5	5	5	5	5	4.7
824	8 ν^3	6*	6	6	6	5	5	5	5	4.6
825	7 ν^2	5	5	5	5	5	5	5	5	4.1
826	2 β	3	3	3	3	3	3	3	3	2.0
827	4 ξ^1	5	5	5	5	5	5	5	5	4.3
828	5 ξ^2	5	5	5	5	5	5	5	5	4.5
829	24 o^2	4	4	4	4	4	5	5	5	3.1
830	16 o^1	5	5	5	5	5	5	5	5	4.1
831	25 δ	3-4	3-4	3-4	3-4	3-4	3-4	3	3-4	2.0
832	21 ϵ	3	3	3	3	3	3	3	3	1.6
833	13 κ	4	4	4	4	4	3	3	4	3.8
834	1 ζ	3	3	3	3	3	3	3	3	3.1
835	31 η	3-4	3-4	3-4	3-4	3-4	3-4	4-5	3-4	2.4
836	22 Monoc.	4	4	4	4	4	4	4	4	4.1
837	VI 9 θ Columb.	4	4	4	4	4	4	4	4	5.1
838	VI 65 κ Columb.	4	4	4	4	4	4	4	4	4.5
839	VI 95 δ Columb.	4	4	4	4	4	4	4	4	4.0
840	VI 136 λ Can. maj.	4	4	4	4	4	4	4	4	4.5
841	V 238 μ Columb.	4	4	4	4	4	4	4	4	5.2
842	V 276 λ Columb.	4	4	4	4	4	4	4	4	4.9
843	V 297 γ Columb.	4	4	4	4	4	4	4	4	4.4
844	V 267 β Columb.	2	2	2	2	2	2	2	2	3.2
845	V 196 α Columb.	2	2	2	2	2	2	2	2	2.7
846	V 140 ϵ Columb.	4	4	4	4	4	4	4	4	3.9
	CANIS MINOR.									
847	3 β	4	4	4	4	4	4	4	4	3.1
848	10 α	1	1	1	1	1	1	1	1	0.5
	ARGO NAVIS.									
849	11 e	5	5	5	5	5	5	5	5	4.3
850	15 ρ Pup	3	3	3	3	3	3	3	3	2.9
851	7 ξ Pup	4	4	4	4	4	4	4	4	3.5
852	VII 220	4	4	4	4	4	4	4	4	4.6
853	VII 173 dup.	4	4	4	4	4	4	4	4	4.6
854	VII 175	3	3	3	3	3	3	4	3	3.8
855	VII 163	4	4	4	4	4	4	4	4	4.1
856	3 Pup	4	4	4	4	4	4	4	4	4.1

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	ARGO NAVIS—cont.									
857	VII 200 = 1 Pup	4	4	4	4	4	4	4	4	4.8
858	VII 277	4	4	4	4	4	4	4	4	6.5
859	{VII 99 ..... / VII 108 ....}	4	4	4	4	4	4	4	4	5.0
860	VII 68 π Pup	3	3	3	3	3	3	3	3	2.7
861	VII 172 f Pup..	5	5	5	5	5	5	5	5	4.6
862	VII 186 {d¹ Pup.../d² Pup.../d³ Pup...}	5	5	5	5	5	5	5	5	4.2
863	VII 214 c Pup...	4-5*	4	4	4	4	4	4	4	3.7
864	VII 254 b Pup..	4	4	4	4	4	4	4	4	4.5
865	VII 306 ζ Pup..	2	2	2	2	2	2	2	2	2.3
866	VII 253 a Pup..	5	5	5	5	5	5	5	5	3.8
867	Lac. 3128...	5	5	5	5	5	5	5	5	5.5
868	VIII 21 h¹ Pup..	5	5	5	5	5	5	5	5	4.4
869	VIII 35 h² Pup..	5	5	5	5	5	5	5	5	4.4
870	Lac. 3580...	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	5.8
871	VIII 168 d Vel..	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.1
872	VIII 139 e Vel..	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.1
873	VIII 176 a Vel..	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.1
874	VIII 155 b Vel..	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	4.1
875	VIII 145 β Pyx..	3	3	3	3	3	3	3	3	4.0
876	VIII 162 a Pyx..	3-4*	3	3	3	3	3	3	3	3.7
877	VIII 193 γ Pyx..	4	4	4	4	4	4	4	4	4.2
878	VIII 220 δ Pyx..	4	4	4	4	4	4	4	4	4.9
879	IX 1 λ Vel..	2	2	2	2	2	2	2	2	2.2
880	IX 116 ψ Vel..	2-3	2-3	2-3	2-3	2-3	2-3	2	2-3	3.6
881	VII 135 σ Pup..	4	4	4	4	4	4	4	4	3.3
882	VII 235 P Pup..	6	6	6	6	6	6	6	6	4.2
883	γ Vel	2	2	2	2	2	2	2	2	2.2
884	χ Car.	2	2	2	2	2	2	2	2	3.6
885	o Pup........	2*	2	2	2	2	3	3	3	4.6
886	δ Vel........	3	3	3	3	3	3	3	3	2.0
887	f Car........	2	2	2	2	2	2	2	2	4.6
888	κ Vel........	3-4*	3	3	3	3	3	3	3	2.6
889	N Vel........	3	3	3	3	3	3	3	3	3.0
890	V 315 η Columb.....	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.0
891	VI 205 ν Pup..	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3.2
892	α Arg. Canopus...	1	1	1	1	1	1	1	1	-0.8
893	τ Pup........	3-2	3-2	3-2	3-2	3-2	3-2	2	3-2	2.8
	HYDRA.									
894	5 σ	4	4	4	4	4	4		4	4.5
895	4 δ	4	4	4	4	4	4		4	4.2
896	11 ε	4	4	4	4	4	4	......	4	3.5
897	7 η	4	4	4	4	4	4		4	4.3
898	16 ζ	4	4	4	4	4	4		4	3.3
899	18 ω	5	5	5	5	5	5		5	5.4
900	22 θ	4	4	4	4	4	4	3	4	3.8
901	32 τ²	4	4	4	4	4	4		4	4.5
902	35 ι	4	4	4	4	4	4		4	4.1
903	31 τ¹	4	4	4	4	4	4		4	4.8
904	LL. 18657...	6	6	6	6	6	6	6	6	5.4
905	30 a	2	2	2	2	2	2		2	2.2

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	HYDRA—continued.									
906	38 κ	4	4	4	4	4	4	3	4	5.0
907	39 υ¹	4	4	4	4	4	4	4	4	4.3
908	40 υ²	4	4	4	4	4	4	4	4	4.7
909	42 μ..........	3-4*	3	3	3	3	3	3	3	4.1
910	φ (2 Crat.)...	4	4	4	4	4	4	4	4	5.1
911	ν (4 Crat.)...	3	3	3	3	3	3	3	3	3.3
912	(11 β Crat.)...	4-3	4-3	4-3	4-3	4-3	4	4	4	4.5
913	χ¹ (9 Crat.)...	4	4	4	4	4	4	4	4	5.1
914	ξ (19 Crat.)...	4	4	4	4	4	4	4	4	3.7
915	o (25 Crat.)...	4	4	4	4	4	4	4	4	4.9
916	β (28 Crat.)...	3	3	3	3	3	3	3	3	4.4
917	46 γ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.3
918	49 π	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.5
919	30 Monoc.......	3	3	3	3	3	3	3	3	3.9
920	{24 Sextantis.../15 a Sextantis...}	3	3	3	3	3	3	3	3	6.7 / 4.5
	CRATER.									
921	7 a	4	4	4	4	4	4		4	4.2
922	15 γ	4	4	4	4	4		6	4	4.1
923	12 δ	4-5*	4	4	4	4	4		4	3.8
924	27 ζ	4-3	4-3	4-3	4-3	4-3	4-3		4-3	4.9
925	14 ε	4	4	4	4	4	4	4-3	4	5.1
926	30 η	4-5	4-5	4-5	4-5	4-5	4-3		4-3	5.2
927	21 θ	4	4	4	4	4	4		4	4.8
	CORVUS.									
928	1 a	3	3	3	3	3	3	3	3	4.2
929	2 ε	3	3	3	3	3	3	3	3	3.2
930	5 ζ	5	5	5	5	5	5	5	5	5.3
931	4 γ	3	3	3	3	3	3	3	3	2.8
932	7 δ	3	3	3	3	3	3	3	3	3.1
933	8 η	4	4	4	4	4	4	4	4	4.4
934	9 β	3	3	3	3	3	3	3	3	2.8
	CENTAURUS.									
935	2 g	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	4.4
936	4 h	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	4.8
937	1 i	4-5*	4-3	4-3	4-3	4-3	4-3	5-4	4-3	4.4
938	3 k	5-4	5-4	5-4	5-4	5-4	5-4	5-4	4-3	4.7
939	XIII 53 ι	3	3	3	3	3	3		3	2.9
940	5 θ	3	3	3	3	3	3	3	3	2.3
941	XIII 99 d	4	4	4	4	4	4		4	4.0
942	XIV 40 ψ	4	4	4	4	4	4		4	4.2
943	XIV 55 a	4	4	4	4	4	4		4	4.5
944	XIV 150 c¹	4	4	4	4	4	4		4	4.1
945	XIV 141 b	4	4	4	4-5	4	4		4	4.1
946	XIII 197 ν	4-3	4-3	4-3	4-3	4-3	4-3		4-3	3.5
947	XIII 198 μ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3.3
948	XIII 246 φ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.0
949	XIII 288 χ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4.5
950	XIV 109 η	3	3	3	3	3	3	3	4-3	2.6
951	XIV 216 κ	4	4	4-3	4	4	4		4	3.3
952	XIII 231 ζ	3-2	3-2	3	3-2	3-2	3-2	4	4	3.1

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	CENTAURUS—cont.									
953	XIII 267 v^2	5	5	5	5	5	5	5	5	4·4
954	XIII 249 v^1	5	5	5	5	5	5	5	5	4·2
955	Cum. ω	5	5	5	5	5	5	5	5	(?)
956	f	5	5	5	5	5	5	5	5	5·0
957	γ	3	5	3	3	3	3	3	3	2·4
958	τ.	4	4	4	4	4	3	4	3	4·0
959	σ.	5	5	5	5	5	5	4	5	4·2
960	δ.	3	3	3	3	3	3	3	3	2·9
961	ρ.	4	4	4	4	4	4	4	4	4·2
962	M.	4	4	4	4	4	4	4	4	4·7
963	ε.	2	2	2	2	2	2	2	2	2·6
964	Q.	2	3	3	3	3	3	2	2	5·4
965	γ Crucis	2	2	2	2	2	2	3	3	1·6
966	β Crucis	2	2	2	2	2	2	2	2	1·5
967	δ Crucis	2	2	2	2	2	2	2	2	3·1
968	α Crucis	4	4	4	4	4	4	4	4	1·6
969	α Centauri	2	2	2	2	2	2	2	2	0·3
970	β Centauri	1	1	1	1	1	1	1	1	0·9
971	μ Crucis	4	4	4	4	4	4	4	4	· 4·3
	LUPUS.									
972	XIV 211 β	3	3	3	3	3	3	3	3	2·8
973	α	3	3	3	3	3	3	3	3	2·9
974	XV 31 δ	4	4	4	4	4	4	4	4	2·9
975	XV 98 γ	4	4	4	4	4	4	4	4	3·4
976	XV 35 ε	4	4	4	4	4	4	4	4	2·9
977	λ	5	5	5	5	5	5	5	4	3·7
978	XV 242 π	5	5	5	5	5	5	5	5	4·4
979	μ	5	5	5	5	5	5	5	5	4·7
980	κ	5	5	5	5	5	5	5	5	4·4
981	ζ	5	5	5	5	5	5	5	5	4·1
982	ρ	5	5	5	5	5	5	5	5	3·5
983	ι	4	4	4	4	4	4	4	4	4·1
984	XIV {66 τ^1 / 67 τ^2}	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3·8
985	XV 217 η	4	4	4	4	4	4-3	4-3	4-3	3·6
986	XV 248 θ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4·3
987	XV 174 5 λ	4	4	4	4	4	4	4	4	4·4
988	XV 204 ξ	4	4	4	4	4	4	4	4	5·4
989	XV 10 1 i	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4·9
990	XV 22 2 f	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4·4
	ARA.									
991	XVII 125 σ	5	5	5	5	5	5	5	5	4·6
992	θ	4	4	4	4	4	4	4	4	3·9
993	α	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3·0
994	ϵ^1	5	5	5	5	5	5	5	5	4·1
995	γ	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	3·5
996	β	4	4	4	4	4	4	4	4	2·8
997	ζ	4	4	4	4	4	4	4	4	3·1

Star Magnitudes—continued.

Baily's No.	Name.	Peters.	Greek.				Arabic.			Harv. R. P.
			Paris 2389.	Vatican 1594.	Venice 313.	Manitius printed.	B. M. Reg. 16.	B. M. 7475.	Bod. 369.	
	CORONA AUSTRALIS.									
998	XVIII {73 δ^1 / 76 δ^2} Tel....	4	4*	4	4	4	4	4	4	
999	XVIII {166 η^1 / 169 η^2}	5	5	5	5	5	5	5	5	4·4
1000	Lac. 7909	5	5	5	5	5	5	5	5	4·9
1001	XVIII 250 ζ	4	4	4	4	5	5	5	5	5·4
1002	XVIII 291 δ	5	5	5	5	5	4	4	4	4·8
1003	XVIII 305 β	4	4	4	4	4	4	5	5	4·7
1004	XVIII 300 α	4	4	4	4	4	4	4	4	4·2
1005	XVIII 280 γ	4	4	4	4	4	4	4	4	4·1
1006	XVIII 230 ε	6	6	6	6	6	6	4	6	5·0
1007	XVIII 222 ν	6	6	6	6	6	6	6	6	4·9
1008	XVIII 142 λ	5	5	5	5	5	5	6	6	5·4
1009	Lac. 7748 ξ Bode....	5	5	5	5	5	5	5	5	5·1
1010	XVIII 85 θ	5	5	5	5	5	5	5	5	5·2
	PISCIS AUSTRINUS.									
1011	24 α	1	1	1	1	1	......	......	......	1·3
1012	17 β	4	4	4	4	4	4	4	4	4·4
1013	22 γ	4	4	4	4	4	4	4	4	4·5
1014	23 δ	4	4	4	4	4	4	4	4	4·3
1015	18 ε	4	4	4	4	4	4	4	4	4·2
1016	14 μ	4-3	4-3	4-3	4-3	4-3	4-3	4	4-3	4·6
1017	ζ	5	5	5	5	5	5	5	5	6·5
1018	16 λ	4	4	4	4	4	4	5	5	5·4
1019	12 η	4	4	4	4	4	4	4	4	5·4
1020	10 θ	4	4	4	4	4	4	4	4	5·1
1021	9 ι	4	4	4	4	4	4	4	4	4·3
1022	XXI 308 (γ Gruis) ...	4	4	4	4	4	4	4	4	3·2
1023	XX 307 (α Micr.) ...	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	5·0
1024	XX 403 (γ Micr.) ...	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	4·7
1025	XXI 46 (ε Micr.) ...	3-4	3-4	3-4	3-4	3-4	3	3-4	3	4·8
1026	XX 445	5	5	5	5	5	5	5	5	5·3
1027	XXI 12	4	4	4	4	4	4	4	4	5·5
1028	24 A Capric.	4	4	4	4	4	4	4	4	4·6

Baily's No.	Star.	Notes.
	URSA MINOR.	
7	7.　13 γ	All manuscripts give mag. 2.　Peters adopts mag. 3, found only in Sûfi.
	URSA MAJOR.	
15	7.　14 τ	All manuscripts have mag. 4.　No authority for Peters' mag. 4–5.
18	10.　30 φ	Vat. 1594, Vat. 1038, Ven. 310, Ven. 313, and Laur. 48 have mag. 4.　The adopted mag. 4–5 is from Paris 2389, Ven. 302, Ven. 312, Vat. Reg. 90, Laur. 6, and all the Arabs.
20	12.　9 ι	All manuscripts have mag. 3.　No authority for Peters' mag. 3–4.
21	13.　12 κ	All manuscripts have mag. 3.　No authority for mag. 3–4.
28	20.　33 λ	All manuscripts have mag. 3.　No authority for mag. 3–4.
29	21.　34 μ	B. M. 7475, mag. 2; all others mag. 3.　No authority for mag. 3–4.
30	22.　52 ψ	B. M. 7475, mag. 3.
31	23.　54 ν	
32	24.　53 ξ	}All manuscripts have mag. 3.　No authority for mag. 3–4.
35	27.　85 η	B. M. 7475, mag. 3.
	DRACO.	
46	3.　23 β	All manuscripts have mag. 3.　No authority for mag. 3–4.
55	12.　63 ε	All manuscripts have mag. 4.　No authority for mag. 4–5.　Sûfi has 4–3.　Schjellerup gives Ptolemy's mag. 4–3, but the authority is unknown.
57	14.　61 σ	
58	15.　52 υ	]All manuscripts have mag. 5.　Peters assigns mag. 5–6 to these
59	16.　60 τ	} stars the authority for which is unknown.　Sûfi gives mag. 5–4.
62	19.　43 φ	All manuscripts have mag. 4.　No authority for mag. 4–5.
63	20.　27 f	B. M. 7475, mag. 4.
65	22.　18 g	B. M. 7475, mag. 6.
69	26.　13 θ	B. M. 7475, mag. 3–2.
70	27.　12 ι	Most manuscripts have mag. 3.　Magnitude 3–2 adopted by Peters is found in Laur. 45 (Gerard of Cremona).　Magnitude in B. M. 7475 is doubtful; the scribe gives both 3–2 and 4–3.
71	28.　10 i	Bod. 369 and B. M. Reg. 16, mag. 3.
72	29.　11 a	
73	30.　5 κ	]All manuscripts give mag. 3.　B. M. 7475 gives both 3 and 4.
74	31.　1 λ	} Peters adopted mag. 3–4, which is found only in Sûfi.
	CEPHEUS.	
80	6.　2 θ	B. M. 7475, mag. 3.
87	Inf. 2.　27 δ	All manuscripts have mag. 4.　No authority for mag. 4–5.
	BOOTES.	
95	8.　51 μ	B. M. 7475, mag. 6.
108	21.　4 τ	B. M. 7475, mag. 3.
	COR. BOR.	
111	1.　5 α	
112	2.　3 β	}B. M. 7475 has the singular error of mag. 5–4 for both stars.
114	4.　9 π	Ven. 313 and Laur. 48, mag. 5.

Baily's No.	Star.	Notes.
	HERCULES.	
122	4.　7 κ	B. M. 7475, mag. 3; all other manuscripts mag. 4.　No authority for mag. 4–5.
123	5.　65 δ	Vat. 1594, Vat. 1038, Venice manuscripts 313, 312, and 310, and Laur. 48, mag. 4.
124	6.　76 λ	B. M. 7475, mag. 3.
128	10.　92 ξ	All the Greek manuscripts have mag. 4, and the Arabs, B. M. 7475, Bod. 369, B. M. Reg. 16, Laur. 45, and Sloane 2795, mag. 4–3, which is adopted.
129	11.　40 ζ	All the Greeks and Baily, mag. 4; B. M. 7475, mag. 4–3; Bod. 369 and B. M. Reg. 16, mag. 3.
130	12.　58 ε	All Greek manuscripts and Baily have mag. 5; B. M. 7475, Bod. 369, B. M. Reg. 16, and Laur. 45, mag. 4–3, which is better than mag. 5–6 adopted by Peters, for which no authority is known.
132	14.　61 c	All the Greeks and Baily have mag. 3; the Arabs mag. 5, which is adopted by Peters and accords with the star.
133	15.　67 π	All the Greeks have mag. 4, which is adopted; the Arabs mag. 3.
140	22.　82 y	Bod. 369 and B. M. Reg. 16, mag. 6–5.
142	24.　35 σ	Bod. 369 and B. M. Reg. 16, mag. 4–3.
144	26.　11 φ	
145	27.　6 υ	}B. M. 7475 makes these stars mag. 6.
146	28.　1 χ	
147	29.　{ν¹ ν²}	}All manuscripts omit magnitude of this star.
	LYRA.	
150	2.　{4 ε¹ 5 ε²}	
151	3.　{6 ζ¹ 7 ζ²}	}B. M. 7475, mag. 4.
154	6.　21 θ	The Greeks and B. M. 7475 have mag. 4; Bod. 369 and B. M. Reg. 16 are the only authorities for mag. 4–5, adopted.
156	8.　9 ν²	B. M. 7475, mag. 4; Ven. 302, mag. 4–3.
157	9.　14 γ	B. M. 7475, mag. 3–4.
158	10.　15 λ	B. M. 7475, mag. 4.
	CYGNUS.	
167	9.　1 κ	B. M. 7475, mag. 4.
169	11.　54 λ	Ven. 313 and B. M. 7475, mag. 4.
170	12.　64 ζ	B. M. 7475, mag. 2.
172	14.　62 ξ	B. M. 7475, Laur. 45 (Gerard of Cremona), mag. 4.
173	15.　{30 o¹ 31 o¹}	
174	16.　32 o²	}All manuscripts give mag. 4 to these stars.　Peters assigns 4–5 to both, but the authority is not known.
	CASSIOPEIA.	
180	3.　24 η	B. M. 7475, mag. 3.
185	8.　33 θ	B. M. 7475, mag. 3.
188	11.　15 κ	B. M. 7475, mag. 4.
	PERSEUS.	
192	2.　15 η	Vat. 1038, mag. 3.
196	6.　18 H ι	All manuscripts give mag. 4.　Authority unknown for Peters' mag. 4–3.
198	8.　35 σ	B. M. 7475, mag. 3.

Notes on the Star Magnitudes—continued.

Baily's No.	Star.			Notes.
	PERSEUS—cont.			
211	21.	58	*e*	Bod. 369 and B. M. Reg. 16, mag. 5-4.
215	25.	38	*o*	B. M. 7475, mag. 3-2; Bod. 369, mag. 3.
216	26.	44	ζ	Bod. 369, mag. 3-4.
	AURIGA.			
228	9.	8	ζ	B. M. 7475, Laur. 45, Sloane 2795, mag. 4-5.
230	11.	23	γ	B. M. 7475, Bod. 369, B. M. Reg. 16, mag. 3-4. This is the same star as No. 400, but the magnitudes given in most cases to the latter do not accord with No. 230.
	OPHIUCHUS.			
234	1.	55	*a*	B. M. 7475 and all manuscripts of Gerard of Cremona, mag. 3.
238	5.	27	κ	} B. M. 7475, mag. 3.
239	6.	10	λ	
240	7.	1	δ	All Greek manuscripts give mag. 3; B. M. 7475, mag 4; Bod. 369 and B. M. Reg. 16, mag. 4-5. No authority is found for 3-4 assigned by Peters.
241	8.	2	ε	B. M. 7475, mag. 4-5.
243	10.	64	ν	B. M. 7475, mag. 4.
244	11.	69	τ	B. M. 7475, mag. 4-3.
245	12.	35	η	B. M. 7475, mag. 4.
246	13.	40	ξ	All authorities, Greek and Arabic, agree mag. 4-3. Peters gives 4-5, which is the same as Sûfi. In his rough draft of catalogue Peters gives 4-3.
247	14.	36	A	Ven. 313, Vat. 1038, mag. 4-3; Bod. 369, mag. 4-5; Laur. 6, mag. 4.
248	15.	42	θ	All authorities give mag. 4-3. No authority known for Peters' mag. 4-5; in rough draft, 4-3.
249	16.	44	*b*	B. M. 7475, mag. 4-3.
	SERPENS.			
271	9.	24	*a*	B. M. 7475, mag. 4.
273	11.	32	μ	B. M. 7475, mag. 3.
274	12.	3	*v* Oph.	B. M. 7475, mag. 4.
	AQUILA.			
288	3.	53	*a*	Ven. 313, Laur. 48, Vat. 1594, Vat. 1038, Ven. 310, mag. 2.
289	4.	59	ξ	Vat. 1038, mag. 3; Bod. 369 and B. M. Reg. 16, mag. 3-2.
290	5.	50	γ	Vat. 1038, mag. 3-4.
	DELPHINUS.			
302	2.	5	ι	All Greek authorities, mag. 4-5; the Arabs have mag. 4; Peters gives mag. 4-3.
303	3.	7	κ	Vat. 1038, mag. 4-5.
304	4.	6	β	Vat. 1038, mag. 3.
308	8.	3	η	Bod. 369, mag. 6-7.
	PEGASUS.			
319	5.	62	τ	B. M. 7475, mag. 3.
325	11.	42	ζ	Bod. 369, mag. 4.
326	12.	46	ξ	Vat. 1038, mag. 3.
331	17.	8	ε	B. M. 7475, mag. 4-3.
334	20.	10	κ	Vat. 1594, Vat. 1038, Ven. 313, Ven. 310, Laur. 48, mag. 4; B. M. 7475, mag. 3-2.

Notes on the Star Magnitudes—continued.

Baily's No.	Star.			Notes.
	ANDROMEDA.			
345	11.	38	η	Bod. 369, B. M. Reg. 16, Laur. 45, Sloane 2795, mag. 3.
347	13.	37	μ	B. M. 7475, Laur. 45, Sloane 2795, mag. 3.
350	16.	φ	Pers.	B. M. 7475, Bod. 369, B. M. Reg. 16, Laur. 45, mag. 4-3.
351	17.	*v*	Pers.	Bod. 369, B. M. Reg. 16, mag. 4.
352	18.	50	*v*	The Greek manuscripts and B. M. 7475 have mag. 4; Bod. 369 and B. M. Reg. 16, mag. 4-3. No authority found for Peters' mag. 4-5.
	TRIANGULUM.			
358	1.	2	*a*	B. M. 7475, mag. 4.
	ARIES.			
375	Inf. 1.	13	*a*	B. M. 7475, mag. 3.
	TAURUS.			
390	11.	54	γ	B. M. 7475, Laur. 45, mag. 4-5.
394	15.	74	ε	Bod. 369, Laur. 48, mag. 3.
396	17.	104	*m*	Vat. 1594, Vat. 1038, Ven. 313, Ven. 310, Laur. 48, Laur. 54, mag. 4.
400	21.	112	β	Laur. 48, Ven. 310, mag. 3-2; Bod. 369, mag. 5; Laur. 45, mag. 4.
404	25.	50	ω²	Bod. 369, mag. 5.
	GEMINI.			
440	17.	24	γ	Baily gives mag. 3.
441	18.	31	ξ	B. M. 7475, Laur. 45, mag. 4-3.
443	Inf. 2.	κ	Aur.	B. M. 7475, mag. 4.
444	Inf. 3.	36	*d*	All Greek and Arabic manuscripts have mag. 5. No authority for Peters' mag. 5-6.
445	Inf. 4.	85		B. M. 7475, mag. 3-4.
	CANCER.			
453	5.	47	δ	B. M. 7475, mag. 4.
	LEO.			
465	4.	17	ε	B. M. 7475, Laur. 45, mag. 3.
466	5.	36	ζ	Bod. 369, mag. 2.
480	19.	60	*b*	All Arabs and Laur. 6 have mag. 5; the Greeks and Baily, mag. 6.
481	20.	68	δ	B. M. 7475, Laur. 45, mag. 2.
483	22.	70	θ	Bod. 369, mag. 5.
487	26.	91	*v*	B. M. 7475, mag. 4.
494	....			See Notes on the Catalogue of Stars.
	VIRGO.			
506	10.	43	δ	B. M. 7475, mag. 4.
509	13.	47	ε	Paris 2389, Vat. 1594, Vat. 1038, Ven. 313, Ven. 312, Ven. 302 Ven. 310, and Laur. 48, have mag. 5-4, and this has been adopted by Peters. B. M. 7475 and Sloane 2795, and Laur. 45, mag. 3; Bod. 369 and B. M. Reg. 16, mag. 3-2. Sûfi describes the star as of mag. 3 and adds: "Ptolémée la dit des moindres; that means mag. 3-4. Manitius has adopted mag. 3-2, which is more correct for ε Virginis than 5-4. Baily gives mag. 5.
510	14.	67	*a*	All authorities give mag. 1. Peters has adopted mag. 1-2 as given by Sûfi.
511	15.	79	ζ	Bod. 369, mag. 3-2.
514	18.	82	*m*	Laur. 6, mag. 4-3.
520	24.	105	φ	All authorities have mag. 4. Peters adopts mag. 4-5 as in Sûfi.

Notes on the Star Magnitudes—continued.

Baily's No.	Star.	Notes.
	VIRGO—continued.	
522	26. 107 μ	All the Greeks have mag. 3; B. M. 7475, Bod. 369, Laur. 45 have mag. 4; Manitius gives mag. 4; Peters adopts mag. 3–4; Sûfi has mag. 4–3.
526	Inf. 4. 53	B. M. 7475, mag. 5.
	SCORPIUS.	
558	13. {μ¹ / μ²}	}B. M. 7475, Laur. 45, Sloane 2795, mag. 4.
568	Inf. 2. 45 d Oph.	All authorities agree. Manitius has mag. 5.
	SAGITTARIUS.	
574	5. {μ¹ / μ²}	}B. M. 7475, mag. 3.
576	7. 27 φ	Paris 2389, Vat. 1594, Ven. 313, and Manitius have mag. 4; B. M. 7475, mag. 3–2; Bod. 369, and B. M. Reg. 16, mag. 4–3. No authority for Peters' mag. 4–5.
588	19. {51 h¹ / 52 h²}	}B. M. 7475, Laur. 45, and Sloane 2795, mag. 5.
594	25. XVIII. 17	Laur. 48, mag. 3–4.
	CAPRICORNUS.	
602	2. 8 ν	Bod. 369, mag. 5.
607	7. 11 ρ	Bod. 369, mag. 5.
608	8. 7 σ	Ven. 312, mag. 6.
611	11. 16 ψ	B. M. 7475, Laur. 45, Sloane 2795, mag. 6.
	AQUARIUS.	
632	4. 22 β	Gerard of Cremona in three manuscripts, mag. 2.
673	Inf. 3. 7 Ceti.	Ven. 313, Ven. 312, Vat. 1038, Laur. 45, Sloane 2795, mag. 4.
	PISCES.	
674	1. 4 β	Vat. 1594, Vat. 1038, Ven. 313, Ven. 312, Ven. 310, Laur. 48, and Manitius, mag. 4. The mag. 4–3, adopted, is from Paris 2389, Ven. 302, Laur. 6, Laur. 45, B. M. 7475, and Bod. 369.
700	27. 67 k	Ven. 313, mag. 5.
	CETUS.	
726	15. 45 θ	Laur. 45, Sloane 2795, mag. 2.
727	16. 31 η	Baily gives mag. 5 for which Grynæus is the only authority.
730	19. 17 φ¹	Vat. 1594, Vat. 1038, Ven. 313, Ven. 310, Laur. 48, Laur. 45, and B. M. 7475, mag. 5.
731	20. O. 161	All manuscripts have mag. 5, except Paris 2389, Ven. 302, Ven. 312, B. M. Reg. 16, and Bod. 369, mag. 5–4.
732	21. 8 ι	Vat. 1594, Vat. 1038, Ven. 313, Ven. 310, Laur. 48, Laur. 45, have mag. 3; Laur. 6, 5–6; B. M. 7475, mag. 4.
733	22. 16 β	All Greek and Latin authorities have mag. 3. Bod. 369 and B. M. Reg. 16 have mag. 3–4; and B. M. 7475, mag. 3–2, which is the only authority found for the magnitude adopted by Peters.

Notes on the Star Magnitudes—continued.

Baily's No.	Star.	Notes.
	ORION.	
736	3. 24 γ	All authorities have mag. 2, except the Arabs, Laur. 45, B. M. 7475, Bod. 369, and B. M. Reg. 16, which have 2–1.
742	9. 72 f²	B. M. 7475, mag. 4.
763	30. {42 c / 45 c}	}Ven. 312 and Laur. 45, mag. 4–5.
764	31. {41 θ¹ / 43 θ²}	}Paris 2389, Ven. 313, Ven. 312, Vat. 1038, Laur. 6, and B. M. 7475, mag. 3.
765	32. 44 ι	Paris 2389, Ven. 312, Vat. 1038, and Laur. 6, mag. 3–4.
769	36. 20 τ	B. M. 7475, mag. 4.
771	38. 53 κ	B. M. 7475 and Laur. 45, mag. 3.
	ERIDANUS.	
772	1. 69 λ	Vat. 1038, Laur. 45, and B. M. 7475, mag. 4.
790	19. 2 τ²	B. M. 7475, mag. 3.
802	31. III 202	In B. M. 7475 the magnitudes of these stars are omitted, but in the place of each magnitude is written the Arabic letter Kaf.
803	32. III 189	This might be taken for the initial of the word Kabir, which
804	33. III 149	is the Arabic for μείζων, but in this manuscript the μείζων and ἐλάσσων are invariably represented by the letters Mim and Lam. See description of B. M. 7475.
805	34. θ	See Notes to the Catalogue of Stars.
	CANIS MAJOR.	
818	1. 9 α	Bod. 3374, mag. 4.
819	2. 14 θ	B. M. 7475, mag. 3.
824	7. 8 ν³	The Greeks and Baily give mag. 6; all the Arabs and Manitius have mag. 5.
828	11. 5 ξ²	B. M. 7475, mag. 4.
830	13. 16 o¹	Vat. 1038, mag. 5–6.
831	14. 25 δ	Vat. 1038 and B. M. 7475, mag. 3.
835	18. 31 η	B. M. 7475, mag. 4–5.
	ARGO NAVIS.	
854	6. VII 175	B. M. 7475 and manuscripts of Gerard of Cremona, mag. 4.
860	12. π Pup.	}Laur. 48, mag. 4.
861	13. f Pup.	
863	15. c Pup.	All authorities, mag. 4. No authority found for Peters' mag. 4–5.
874	26. b Vel.	Vat. 1038, Laur. 45, and B. M. 7475, mag. 4.
876	28. a Pyx.	All authorities (except Gerard of Cremona, mag. 4) agree in mag. 3. No authority is found for Peters' mag. 3–4.
885	37. o Pup.	Mag. 2 adopted by Peters and Baily, is confirmed by Paris 2389, Vat. 1594 and Ven. 313, and the printed editions of Grynæus and Trapezuntius; all others, including Manitius, mag. 3.
888	40. κ Vel.	All authorities have mag. 3. No authority found for Peters' mag. 3–4. Aboul Hhassan, who derived his magnitudes from Sûfi, gives 4–3.
893	45. τ Pup.	B. M. 7475, mag. 2.
	HYDRA.	
909	16. 42 μ	All authorities have mag. 3. Peters' mag. 3–4 is the same as Sûfi.
912	19. 11 β Crat.	The Arabs have mag. 4; Sûfi also.

Notes on the Star Magnitudes—continued.

Baily's No.	Star.		Notes.
	CRATER.		
923	3.	12 δ	All authorities, mag. 4. No authority found for Peters' mag. 4–5.
925	5.	14 ε	B. M. 7475, mag. 4–3.
926	6.	30 η	Vat. 1038, Laur. 48, Laur. 45, and B. M. 7475, mag. 4; Bod. 369 and B. M. Reg. 16, mag. 4–3.
	CENTAURUS.		
937	3.	1 i	Paris 2389, Vat. 1594, Ven. 313, Bod. 369, B. M. Reg. 16, and Manitius, mag. 4–3; B. M. 7475, mag. 5–4. No authority found for Peters' mag. 4–5. In rough draft of catalogue he gives mag. 4–3.
945	11.	b	Ven. 313, mag. 4–5.
950	16.	η	Bod. 369, mag. 4–3.
951	17.	κ	Vat. 1594, Vat. 1038, Ven. 310, Laur. 48, mag. 4–3.
952	18.	ζ	Vat. 1594, Ven. 302, Vat. 1038, Ven. 310, and Laur. 48, mag. 3.
967	33.	δ Crucis	⎫ Grynæus transposes the magnitudes of these stars which Baily
968	34.	α Crucis	⎭ has erroneously copied.
	LUPUS.		
985	14.	η	Laur. 45 and B. M. 7475, mag. 4–3.
	COR. AUST.		
1006	9.	ε	B. M. 7475, mag. 4.
	PIS. AUST.		
1015	5.	18 ε	Laur. 45 and B. M. 7475, mag. 4.
1025	Inf. 3.	ε Mic.	Laur. 45, Bod. 369 and B. M. Reg. 16, mag. 3.
1028	Inf. 6.	24 A Cap.	Baily gives mag. 3 from Grynæus; no other authority known.

TABLE IX.

Collations of Manuscripts.

The Table of Collations gives the variants in longitude and latitude from Baily's Ptolemy in the following 26 manuscripts of the Almagest:

Greek: Paris 2389, 2390, 2391, and 2394; Venice 302, 303, 310, 311, 312, and 313; Vatican 1594, 1038, and Reg. 90; Laurentian 1, 47, and 48; Bodleian 3374, and Vienna 14.

Latin: Laurentian 6 and 45; Vienna 24, and British Museum Sloane 2795.

Arabic: British Museum 7475 and Reg. 16; Bodleian 369, and Laurentian 156.

For the purpose of comparison, readings agreeing with Baily are given in doubtful cases, and in those which instance peculiar mistakes of the copyist.

All Baily's readings which differ from the Catalogue are given in the Notes to the Catalogue.