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COMMUNICATION FROM THE OBSERVATORY AT LEIDEN

A catalogue of 798 faint zodiacal stars, observed between 1931 and 1935, discussed by *C. H. Hins.*

1. *The programme.*

The following catalogue consists of a list of faint stars, not contained in the A. G. catalogues and lying within the moon's possible path, i.e. within 5° north and south of the ecliptic. No stars of declination less than minus 18° were observed; therefore the right ascension hours of $17^h - 19^h$ are lacking.

The plan of observing such faint stars with the meridian circle originated from the campaign launched by Prof. E. W. BROWN and Dr. D. BROUWER of stimulating the more systematical observation of star occultations by the moon; their later request to restrict these observations, at least for the time being, to brighter stars only, has obviously made our efforts somewhat superfluous for their original aim; the rather long interval between the epoch of the observations and the moment of their definitive reduction and publication is partly due to this cause. Nevertheless, I hope the work may still be of use either in a later phase of the occultation campaign or for other purposes.

The bulk of the observations has been made in the years 1932-'33 by Mr. P. P. BRUNA and Mr. D. GAYKEMA, the regular observers at the Leiden meridian circle then being on an expedition to East Africa; the remaining gaps have been filled out in the years 1934-'35 by Dr. G. VAN HERK after his return; their shares in the observations are nearly equal.

The total numbers of observations used in the compilation of the catalogue are 2696 in right ascension and 3042 in declination; the number of stars being 798, a catalogue position rests in the average on 3.4 and 3.8 observations respectively.

The routine reductions have been made by the staff of the computing department of the Leiden Observatory under Mr. GAYKEMA's direction and the writer's supervision; for the definitive formation of the catalogue, the checking of the resulting positions, the precessional reduction and the comparison with the few older authorities the writer takes the full responsibility.

2. *The observations and reductions.*

The meridian circle by PISTOR and MARTINS (aperture 162 mm, focal distance 2.60 m) with hand-driven travelling wire micrometer has been used throughout the work; a detailed description of the instrument and its accessories may be found in the consecutive volumes of *Annalen der Sterrewacht te Leiden*, f.i. Vol. XV, 1 and 2. The only alteration of the instrument consists of a siluminum ring firmly connecting the four microscopes of the western pillar to each other. The faintness of the stars observed does not allow a fair comparison of the accuracy reached now and that attained in the former state of the instrument, when the cross rods to whose ends the microscopes are attached were unconnected and extreme care was needed in handling the microscopes during the settings.

As in former series of Leiden observations it was the purpose to attain a close dependence on one of the existing fundamental systems, for which the P.G.C. system was chosen.

Although in the course of the reductions the data of the G.C. came at hand, I did not think it worth while to recompute the clock errors, the equator points and their rates. The policy adhered to in the Leiden observations to restrict the choice of the reference stars to the better half of the P.G.C. stars makes that, although some individual results might be improved by using the G.C. positions, our results have always been very satisfactory from the systematical point of view.

The width in declination of the zones to be observed was small enough to allow a straightforward differential method of reduction.

A close equality in brightness of the P.G.C. stars and the programme stars could not be reached even by using the most absorbing screen available, because of the extreme faintness of the latter; however, as may be concluded from the comparison with the catalogue KÜSTNER 1900 in section 4, no appreciable magnitude equation exists either in α or in δ .

The stars have been observed from two separate

working lists, the time interval between two consecutive stars being at least two and a half minute; during the supplementary observations both lists have been mixed.

Before, half-way, and after every zone a number of P.G.C. stars were observed; their transits as well as those of the programme stars were observed over three revolutions of the handdriven registering micrometer; 19 contacts were recorded on and read off the chronograph strip; with the exception of the supplementary observations, the same pre-transit revolutions were always used.

The inclination was measured by means of the hanging level at least twice a night. The instrumental azimuth was derived from readings of the two meridian marks; the azimuth of the marks was regularly determined from transits of Polaris in both culminations. The collimation constant was derived from observations at the mercury horizon, transits of Polaris and pointings on the meridian marks with reversal of the instrument, and was assumed to be constant (except for a small temperature coefficient) during longer time intervals.

The instrumental errors were applied individually to the reference stars as well as to the programme stars.

The declination observations consisted of one pointing on the fixed horizontal wire, near to the fixed vertical one, and of the reading of two diametrical microscopes at one division each.

The run corrections have been determined frequently; these and the division errors have been taken into account.

The refractions were computed from ALBRECHT's tables and have been applied individually to both reference and programme stars.

The clock errors and equator points as given by the P.G.C. stars have been solved for their nightly mean values and rates by least squares.

The instrument has been reversed many times in the course of the observations; therefore the catalogue positions are a fair mixture of clamp east and clamp west results and no corrections have been derived for their difference.

Since more than half of the programme stars had no former meridian positions but those of the *Bonner Durchmusterung* the reduction from apparent to mean place has been performed with the aid of provisional apparent values of the right ascension and declination as obtained from the observations themselves; by the unavoidable inaccuracy of the working lists it appeared only after the reduction to the common equinox 1932.0 that rather frequently a false star had been observed.

After a careful checking of the results, the precessional constants for the reduction to the catalogue

equinox 1950.0 have been computed from the Hamburg and Greenwich tables for the first and second term of the precession respectively. The first term of the precession as given in the catalogue has been recomputed for the equinox 1950.0 and checked against the originally adopted values of 1932.0 and the secular variation; small divergences in the last decimal place have been allowed, since a fully independent computation of the second term seemed a waste of labour in connection with the accuracy attained and the purpose we had in mind.

3. *The mean errors.*

As might be expected by the faintness of the stars observed, the mean error is rather high and surpasses considerably the values obtained in former Leiden series of observations. Moreover, there is a marked decrease in accuracy for the stars of southern declination, which have been observed at a very low altitude.

The m.e. of a single observation ranges from $\pm 0^{\circ}.042$ to $\pm 0^{\circ}.053$ in right ascension and from $\pm 0^{\circ}.64$ to $\pm 0^{\circ}.78$ in declination for the northern and extreme southern stars; these mean errors are computed from the residuals of the individual observations with respect to the average positions, without excluding more than a very few observations.

Taking account of the average number of observations on each star the mean errors of the catalogue positions in R.A. and Decl. range from $\pm 0^{\circ}.023$ to $\pm 0^{\circ}.029$ and from $\pm 0^{\circ}.33$ to $\pm 0^{\circ}.40$. The real range will be considerably larger by the divergence of the number of observations. The inner accuracy of the catalogue could certainly have been improved by deriving night errors from the residuals given by each night of observation; but the application of such corrections would only involve alterations in the catalogue positions lying within their mean errors and of an accidental character and therefore is of little significance. The smaller half of the stars allows a comparison with at least one other authority and in this way a check on the accuracy assumed and really reached may be obtained.

4. *Comparison with other catalogues.*

The first and principal aim of collecting as many older authorities as possible for the catalogue stars was the discovering of big errors (full seconds of time, minutes of arc etc.) in the Leiden observations; a derivation of individual proper motions was not contemplated for reason of the scantiness of old material, the short time interval between the old and new observations and the rather poor quality of the new positions.

Nevertheless, the differences as given in the column headed "Authorities" (always in the sense Leiden

minus old catalogue) may give an indication as to the existence of any appreciable proper motion for those who might want these data.

But apart from that, the comparison yields some information as to the average meridian proper motion of these faint stars, the existence of systematic errors e.g. magnitude equation and the weights that may be attached to the individual positions.

a). The catalogue most suited for this comparison is that of Bonn 1900 by Prof. F. KÜSTNER; its systematic behaviour has been thoroughly investigated and it is regarded to be of the highest standard and

free from magnitude equation. It is to be regretted that only the northern and better half of the Leiden positions can be checked in this way. Table 1 gives the average hourly differences Lei-Kü₀₀, this last catalogue having been corrected for its systematic difference with respect to the P.G.C. The successive columns give: the hour of right ascension, the number of stars, the average difference in epoch, the declination, the differences in R.A. and Decl. and the coefficients of parallactic motion. These latter ones have been computed with an assumed apex position of 277°·5 in R.A. and +46°·5 in Decl. 1).

TABLE 1, hourly differences Lei-Kü₀₀.

R.A.	No.	Int.	Decl.	α diff.	δ diff.	p_α	p_δ	C	O-C
^h		^y	[°]	^s	["]			["]	["]
0·5	7	37·3	+ 2·9	-0·015	-0·58	+0·68	-0·72	-0·46	-0·12
1·5	12	37·4	9·6	+ 51	-·59	+·66	-·74	-·48	-·11
2·5	11	36·1	14·8	+ 55	-·14	+·59	-·79	-·51	+·37
3·5	9	36·9	19·0	+ 64	-1·34	+·48	-·84	-·58	-·76
4·5	12	36·3	20·8	+ 51	-·85	+·34	-·88	-·61	-·24
5·5	7	36·1	20·9	+ 73	-1·01	+·18	-·90	-·63	-·38
6·5	5	35·6	25·2	- 2	-·88	0	-·94	-·66	-·22
7·5	6	35·2	20·3	+ 15	-·42	-·18	-·90	-·61	+·19
8·5	13	35·2	18·5	+ 8	-·64	-·34	-·87	-·58	-·06
9·5	10	36·1	15·1	- 69	-1·28	-·48	-·82	-·55	-·73
10·5	17	36·2	10·5	- 5	-1·01	-·59	-·77	-·50	-·51
11·5	14	36·5	+ 3·1	-0·022	-·63	-·66	-·73	-·46	-·17

-0·228 (unweighted)

Approximately, disregarding the dependence of parallactic motion on galactic latitude, the sum of the numbers of the 5th column has to be slightly positive; in reality this sum amounts to +0·204. A small constant correction of -0·015 to the Leiden positions suffices to bring them into good accordance with the Bonn positions; this correction represents then the combined effect of a deviation of our instrumental system from the P.G.C. system and of Leiden's magnitude equation.

Having applied this correction we may solve π_{sec} , the secular parallax, from the two sets of twelve equations

$$\pi_{\text{sec}} \times p_\alpha \times \text{time interval} = \alpha \text{ diff.} \quad \text{and}$$

$$\pi_{\text{sec}} \times p_\delta \times \text{time interval} = \delta \text{ diff.}$$

This solution yields for π_{sec} the values 0·0214 and 0·0262 for the α and δ co-ordinate respectively. The accordance between the two solutions is satisfactory; the larger value obtained from the declinations embodies the usual result that p.m.'s in the P.G.C. system always give too large a value for the Z component and therefore a D which is too high; or that the P.G.C. p.m.'s in declination need a positive correction.

Maintaining the π_{sec} value 0·0214 obtained from the R.A.'s and assuming an apex declination of

35°, the 8th column of Table 1 gives the computed values $\pi_{\text{sec}} \times p_\delta \times \text{time interval}$, the 9th column the differences O-C; their mean without weights is -0·228.

Taking account of the average time interval 36·2, this means a correction of +0·006 to the P.G.C. p.m.'s in declination, which is a very plausible value. Thus there is no reason to assume that the Leiden observations differ appreciably from the P.G.C. system or are affected by a magnitude equation of any considerable amount.

From the residuals of the individual differences Lei-Kü₀₀ with respect to their hourly means, the mean error of one difference amounts to $\pm 0·07$ and $\pm 0·08$ for α and δ respectively. This m.e. consists of the m.e. of the Kü₀₀ position, that of the Leiden one and of the spreading in the individual p.m.'s. Assuming the m.e. of Kü₀₀ to be $\pm 0·02$ in α (according to the data of the P.G.C.) and that of Leiden to be $\pm 0·025$ (according to section 3) there remains for the spreading in the yearly p.m.'s a m.e. of $\pm 0·0016$; for the declinations these

1) These co-ordinates for the apex are the result of an as yet unpublished discussion of the proper motions of faint stars in the Selected Areas of KAPTEYN; a somewhat superficial treatment of the numbers of the 5th and 6th columns themselves along AIRY's method gives an apex position $A = 285^\circ$, $D = +51^\circ 5$.

numbers are resp. $\pm 0''.3$, $\pm 0''.35$ and $\pm 0''.018$ ¹⁾.

b). As to the stars of a more southern declination the only catalogues suitable for a similar comparison are those of Abbadia ²⁾. Table 2 gives this comparison

for the hours in which there are common stars; the Abbadia catalogues are corrected for the difference P.G.C. — Abb.

TABLE 2, hourly differences Lei — Abb₁ and 2

R.A.	No.	Int.	Decl.	Lei-Abb ₁ in α	Lei-Abb ₂ in α	Lei-Abb ₁ in δ	Lei-Abb ₂ in δ
^h 0 ^h 5	10	^y 25 ^y 2	0°	^s — 0 ^s 025		^{''} — 0 ^{''} 13	
12 ^h 5	7, 7	23, 19	— 0°5, — 8°0	— 98	^s — 0 ^s 137	+ 6	— 0 ^{''} 19
13 ^h 5	7	20°0	— 7°5		— 100		+ 54
14 ^h 5	6	20°5	— 10°0		— 90		+ 12
22 ^h 5	11	19°5	— 6°5		— 68		+ 47
23 ^h 5	6, 11	25°0, 20°0	— 1°8, — 6°5	+ 0°014	— 0°100	— 0°66	— 0°29

Especially for the most southern stars an appreciable systematic difference in right ascension between the catalogues Lei and Abb₂ is manifest. It is difficult to explain this difference by assuming a magnitude equation to this amount for the Leiden observations. Firstly this would strongly contradict the results obtained from the Kü₀₀ comparison, secondly its sign would be the reverse of the usual one, the Lei right ascensions being too small. A more thorough investigation into the systematic behaviour of the different Abb catalogues would be very desirable since these catalogues play an important part in the derivation of the meridian proper motions of faint stars.

The m.e. of one difference Lei—Abb with respect to the hourly means is $\pm 0''.072$ in α and $\pm 0''.75$ in δ ; assuming the m.e. of an Abb position according to Rox's tables as being $\pm 0''.035$ and $\pm 0''.45$, that of a Lei position $\pm 0''.028$ and $\pm 0''.38$ (see section 3) there remains for the spreading in the yearly p.m.'s a m.e. of $\pm 0''.0025$ and $\pm 0''.024$. Both values, especially that in α , are too large, so that it may be possible that the accuracy reached is still a little worse.

c). There are fourteen stars in common with the Albany zone catalogue of -2° to $+1^\circ$; one group of 7 stars around 0^h gives the differences Lei—Alb $+0''.048$, $-0''.62$, 34^y , another one of 7 stars around 12^h those of $-0''.043$, $-0''.13$, 33^y . These numbers are again very satisfactory; in right ascension, the positive value around 0^h and the negative one around 12^h agree with the direction of parallactic motion. Their mean value without sign, $0''.046$, together with an assumed coefficient of parallactic motion 0.70 and an epoch difference 33.5 years yields for π_{sec} the value $0''.0294$.

A magnitude equation does not exist.

5. The catalogue.

Column 1 gives the rotating number.

Column 2 gives the zone and number of the star in

the *Bonner Durchmusterung*, from which also the star's magnitude as given in column 3 has been taken.

Columns 4 and 7 contain the star's right ascension and declination valid for the equinox 1950.0 and for the epoch of the observations.

Columns 5, 6, 8 and 9 give the precessional data for the 1950 position; they are based on NEWCOMB's constants and are to be applied in the form recently recommended by the I.A.U. ³⁾. Putting:

$$\alpha_{1950} + T = \alpha_{1950} + \frac{d\alpha}{dT} T + \frac{1}{2} \frac{d^2\alpha}{dT^2} T^2 \text{ etc.}$$

$$\delta_{1950} + T = \delta_{1950} + \frac{d\delta}{dT} T + \frac{1}{2} \frac{d^2\delta}{dT^2} T^2 \text{ etc.}$$

wherein T is expressed in centuries, the coefficients of the first and second powers of T are given in the catalogue.

Columns 10 and 11 give the epoch of the observations (to be added to 1930.0) and their number; in case of two values the first refers to the right ascensions, the second to the declinations.

The column headed "Authorities" contains all former meridian positions which could be traced without an undue loss of time. The abbreviations are the usual ones and will need no further explanation ⁴⁾. They are followed by the uncorrected differences Lei minus old catalogue in right ascension, declination and epoch.

An asterisk in this column refers to the additional data given after the catalogue for the stars with two or more old positions.

¹⁾ It must be well understood that I do not presume that this material is suitable for a derivation of mean proper motions; the resulting value for the spreading agreeing very nearly with that derived from more extensive investigations only serves to confirm the m.e. adopted for our observations.

²⁾ "Observatoire d'Abbadia; catalogue de 13532 étoiles comprises entre $+5^\circ45'$ et $-3^\circ15'$; eq. 1900, ep. 1906—1912". "Observatoire d'Abbadia; catalogue de 7443 étoiles comprises entre $-2^\circ45'$ et $-9^\circ15'$; eq. 1900, ep. 1912—1916".

³⁾ *Transactions of the International Astronomical Union*, Vol. VI, p. 336.

⁴⁾ Pu denotes the Pulkowa repetition of SJELLERUP stars; for this catalogue the comparison is incomplete.

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{dz}{dT}$	$\frac{d^2z}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
1	— 4 6007	9'2	^{h m s} 0 0 8'46	+ 307'32	+ 0'00	^s — 3 40 9'9	+ 2004'3	— 0'4	2'6/2'9	4/5	
2	— 4 6018	9'2	2 36'03	+ 307'21	— 0'01	— 4 18 47'1	+ 2004'2	— 0'7	5'7/5'3	2	
3	+ 1 4830	9'2	3 54'17	+ 307'39	+ 0'14	+ 1 38 45'5	+ 2003'9	— 0'8	2'9	3	Abb. —0'03, — 1'2, 25
4	— 5 10	9'2	6 55'84	+ 306'97	— 0'02	— 4 57 11'6	+ 2003'3	— 1'1	3'9/3'0	3	Abb. —0'19, + 0'0, 20
5	— 0 13	9'2	9 6'84	+ 307'31	+ 0'11	0 9 22'1	+ 2002'7	— 1'3	5'7/5'3	2	* Abb. +0'07, + 0'4, 28
6	+ 4 15	9'2	10 2'82	+ 307'88	+ 0'26	+ 5 28 26'1	+ 2002'3	— 1'4	3'0	3	Kü ₀₀ —0'01, — 0'6, 38
7	— 2 23	9'2	12 52'32	+ 307'07	+ 0'08	— 1 58 39'2	+ 2001'1	— 1'7	3'9	3	Abb. —0'15, — 1'4, 26
8	— 4 22	9'2	14 48'92	+ 306'72	+ 0'03	— 3 59 18'6	+ 2000'1	— 1'9	5'7/5'8	1	
9	— 0 40	9'2	16 17'91	+ 307'29	+ 0'13	0 12 24'9	+ 1999'2	— 2'0	2'8	6	* Abb. —0'09, + 0'5, 24
10	+ 4 37	9'2	18 2'97	+ 308'18	+ 0'26	+ 4 40 6'7	+ 1998'0	— 2'2	5'7/4'5	2/3	
11	— 3 46	9'2	20 54'54	+ 306'74	+ 0'08	— 2 45 53'7	+ 1996'0	— 2'5	2'8	5/6	Abb. —0'15, — 0'8, 17
12	— 1 42	9'2	21 20'07	+ 307'21	+ 0'14	0 32 12'9	+ 1995'6	— 2'5	4'8/4'4	3/4	* Abb. —0'10, + 0'1, 26
13	+ 6 48	9'2	24 14'61	+ 309'08	+ 0'35	+ 7 5 14'8	+ 1993'0	— 2'8	2'8	6	
14	+ 1 71	9'2	27 9'55	+ 307'99	+ 0'23	+ 2 24 44'5	+ 1990'2	— 3'1	3'0	3/2	
15	+ 6 60	9'2	27 51'83	+ 309'30	+ 0'36	+ 6 56 20'1	+ 1989'5	— 3'2	5'7/4'4	1/2	* Kü ₀₀ +0'15, — 2'4, 40
16	— 2 71	9'2	29 57'45	+ 306'75	+ 0'13	— 1 53 38'4	+ 1987'1	— 3'3	2'7/2'8	4	Gr. Alt. —0'03, — 1'6, 22
17	— 0 85	9'2	31 18'58	+ 307'18	+ 0'17	0 28 0'5	+ 1985'6	— 3'4	4'8/4'4	3/2	Abb. —0'09, — 0'3, 26
18	+ 1 96	9'2	33 31'31	+ 308'17	+ 0'25	+ 2 29 27'4	+ 1982'9	— 3'6	2'7	5/7	
19	— 0 89	9'2	34 6'12	+ 307'48	+ 0'20	+ 0 26 9'4	+ 1982'2	— 3'7	3'9/3'0	3/4	
20	— 0 94	9'1	36 6'25	+ 307'46	+ 0'20	+ 0 22 45'6	+ 1979'4	— 3'9	2'6/2'7	3/5	Abb. +0'01, 0'0, 23
21	+ 3 85	9'1	37 48'48	+ 308'70	+ 0'30	+ 3 35 58'2	+ 1977'0	— 4'1	3'0	3/4	Pu. +0'21, + 1'2, 34
22	+ 6 90	9'2	39 52'08	+ 310'31	+ 0'40	+ 7 21 12'2	+ 1974'0	— 4'3	2'7	5/6	
23	— 0 106	9'2	40 24'04	+ 307'15	+ 0'19	0 26 29'9	+ 1973'2	— 4'3	3'0	3/4	Abb. —0'13, — 1'4, 23
24	+ 2 100	9'2	43 32'81	+ 308'87	+ 0'30	+ 3 29 37'0	+ 1968'2	— 4'6	2'6/2'7	3/4	
25	+ 0 122	9'2	46 4'63	+ 307'06	+ 0'26	+ 1 21 35'3	+ 1963'9	— 4'9	3'0	3/4	Pu. —0'01, — 1'5, 35
26	+ 1 144	9'1	46 33'87	+ 308'10	+ 0'26	+ 1 38 43'8	+ 1963'0	— 4'9	2'7	4/6	Kü ₀₀ —0'03, — 0'4, 38
27	+ 3 119	9'1	50 39'70	+ 309'62	+ 0'34	+ 4 29 0'2	+ 1955'5	— 5'3	2'4/2'6	3/6	Abb. —0'06, — 0'2, 24
28	+ 2 128	9'2	51 14'32	+ 309'10	+ 0'32	+ 3 26 34'0	+ 1954'4	— 5'4	3'0	3/4	
29	+ 2 132	9'1	53 26'73	+ 309'16	+ 0'32	+ 3 24 5'6	+ 1950'0	— 5'6	2'5/2'6	5/7	* Kü ₀₀ +0'08, — 0'9, 38
30	+ 0 147	9'2	54 34'35	+ 307'79	+ 0'26	+ 0 50 47'6	+ 1947'7	— 5'7	3'0	3/4	
31	+ 0 156	9'2	56 24'79	+ 307'65	+ 0'26	+ 0 33 56'4	+ 1943'8	— 5'8	2'6	3/7	
32	+ 4 151	9'2	57 43'03	+ 310'11	+ 0'37	+ 4 46 43'0	+ 1941'0	— 6'1	3'4/3'0	4	
33	+ 3 144	9'2	59 39'09	+ 309'80	+ 0'36	+ 4 6 51'8	+ 1936'8	— 6'3	2'7/2'6	4/7	
34	+ 6 152	9'2	1 15'79	+ 311'64	+ 0'44	+ 6 58 44'8	+ 1933'1	— 6'4	3'4/3'0	4	Leipz. Heft I —0'17, + 0'2, 52
35	+ 4 183	9'2	4 43'99	+ 310'77	+ 0'40	+ 5 17 28'5	+ 1924'8	— 6'7	2'9/2'6	7/8	
36	+ 7 172	9'2	5 42'75	+ 312'94	+ 0'49	+ 8 27 6'1	+ 1922'5	— 6'9	3'4/3'0	5	
37	+ 5 152	9'2	8 18'32	+ 311'17	+ 0'42	+ 5 35 39'8	+ 1915'9	— 7'0	2'9/2'5	7	Kü ₀₀ +0'21, — 0'5, 38
38	+ 8 185	9'2	9 35'27	+ 313'43	+ 0'51	+ 8 41 1'2	+ 1912'6	— 7'2	3'0	3/5	W ₁ —0'40, + 0'2, 110
39	+ 6 176	9'2	11 9'73	+ 312'12	+ 0'46	+ 6 41 51'4	+ 1908'4	— 7'3	2'5	5	
40	+ 6 184	9'2	12 44'40	+ 312'70	+ 0'48	+ 7 20 33'2	+ 1904'1	— 7'5	3'3/3'0	4/5	
41	+ 4 217	9'2	14 24'18	+ 311'00	+ 0'41	+ 4 55 5'5	+ 1899'6	— 7'7	2'6/2'7	3	
42	+ 4 227	9'1	18 35'13	+ 311'54	+ 0'43	+ 5 21 35'9	+ 1887'6	— 8'0	3'1/2'6	6	A.G. Leipz. II —0'07, + 0'3, 48
43	+ 5 175	9'2	20 56'60	+ 312'08	+ 0'45	+ 5 52 18'0	+ 1880'5	— 8'2	3'0	3/5	Kü ₀₀ +0'12, — 1'0, 38
44	+ 12 172	9'2	21 36'23	+ 317'78	+ 0'64	+ 12 38 55'0	+ 1878'6	— 8'5	2'8/2'5	8/7	
45	+ 10 182	9'2	23 43'24	+ 317'00	+ 0'61	+ 11 27 30'1	+ 1872'0	— 8'6	3'4/3'0	5	* Kü ₀₀ +0'08, — 0'5, 37
46	+ 8 236	9'2	25 18'75	+ 314'82	+ 0'54	+ 8 46 21'2	+ 1867'0	— 8'7	2'9	3/4	Kü ₀₀ —0'06, — 0'7, 38
47	+ 4 255	9'1	26 34'55	+ 312'03	+ 0'45	+ 5 26 56'4	+ 1863'0	— 8'8	3'5/3'0	4	* Kü ₀₀ +0'06, + 0'3, 38
48	+ 8 240	9'2	28 49'30	+ 314'96	+ 0'54	+ 8 36 0'3	+ 1855'7	— 9'1	3'2/2'7	5	Kü ₀₀ +0'06, + 0'1, 38
49	+ 5 208	9'2	31 17'45	+ 312'38	+ 0'46	+ 5 34 18'1	+ 1847'3	— 9'2	2'7/2'8	3/5	Kü ₀₀ +0'10, — 1'5, 38
50	+ 5 209	9'2	31 38'10	+ 312'41	+						

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{d\alpha}{dT}$	$\frac{d^2\alpha}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities	
73	+ 13 355	9.2	2 10 55.21	+ 325.64	+ 0.74	+ 14 13 22.1	+ 1686.1	- 13.2	4.4/3.1	2/1	Bord ₂	-0.04, - 0.7, 33
74	+ 14 361	9.2	12 29.81	+ 326.90	+ 0.76	+ 15 0 12.1	+ 1678.5	- 13.4	3.0/2.8	3/5		
75	+ 14 367	9.2	13 27.88	+ 327.36	+ 0.77	+ 15 14 46.3	+ 1673.9	- 13.5	4.4	2	* Kü _{oo}	+0.12, + 0.1, 37
76	+ 9 298	9.2	14 58.74	+ 320.23	+ 0.63	+ 9 52 2.9	+ 1666.6	- 13.3	2.6	5/6		
77	+ 11 316	9.2	16 16.38	+ 322.96	+ 0.68	+ 11 48 6.5	+ 1660.3	- 13.5	4.4/3.0	2/3	* Kü _{oo}	-0.04, 0.0, 36
78	+ 12 319	9.2	17 51.77	+ 324.18	+ 0.70	+ 12 34 3.9	+ 1652.5	- 13.7	2.3/2.4	4/5		
79	+ 12 323	9.2	20 1.93	+ 325.62	+ 0.72	+ 13 25 8.0	+ 1641.7	- 14.0	4.0/3.0	3	* Kü _{oo}	+0.07, - 0.3, 34
80	+ 18 300	9.1	20 49.39	+ 333.46	+ 0.88	+ 18 44 19.0	+ 1637.7	- 14.4	2.4	3/5		
81	+ 19 356	9.1	23 2.44	+ 334.87	+ 0.90	+ 19 25 47.8	+ 1626.4	- 14.6	4.0/3.0	3	* Kü _{oo}	+0.07, - 1.0, 38
82	+ 17 364	9.1	23 15.82	+ 332.37	+ 0.85	+ 17 45 45.2	+ 1625.3	- 14.5	2.3/2.4	4/5		
83	+ 14 406	9.2	25 41.92	+ 327.91	+ 0.75	+ 14 32 37.8	+ 1612.7	- 14.5	4.0	3	Bord ₂	-0.04, + 0.2, 32
84	+ 15 342	9.2	26 14.23	+ 329.57	+ 0.79	+ 15 37 6.5	+ 1610.0	- 14.7	3.0	2/3		
85	+ 14 416	9.2	28 30.76	+ 329.37	+ 0.77	+ 15 17 10.0	+ 1598.0	- 14.8	2.7/2.5	3/6	Kü _{oo}	+0.02, + 1.0, 37
86	+ 9 333	9.2	30 0.77	+ 321.37	+ 0.63	+ 9 48 2.3	+ 1590.1	- 14.6	3.0	2/3		
87	+ 15 349	9.2	31 6.04	+ 331.25	+ 0.80	+ 16 17 26.5	+ 1584.2	- 15.1	2.6/2.5	5/7	Bord ₂	+0.09, - 1.8, 34
88	+ 10 347	9.1	32 55.91	+ 323.55	+ 0.66	+ 11 5 54.4	+ 1574.4	- 14.9	3.0	3	W ₁	-0.32, - 3.1, 110
89	+ 10 354	9.2	36 30.30	+ 323.91	+ 0.66	+ 11 7 23.0	+ 1554.8	- 15.2	2.9/2.7	4	Bord ₂	-0.02, - 0.2, 26
90	+ 12 367	9.2	37 1.19	+ 327.14	+ 0.71	+ 13 11 11.5	+ 1552.0	- 15.4	3.0	3/4	Bord ₂	+0.08, - 0.3, 32
91	+ 16 332	9.2	39 39.26	+ 333.92	+ 0.83	+ 17 13 47.6	+ 1537.3	- 16.0	2.7/2.9	4		
92	+ 17 423	9.2	40 17.23	+ 334.99	+ 0.84	+ 17 50 1.5	+ 1533.8	- 16.0	3.0	3	Bord ₂	-0.03, + 0.2, 33
93	+ 13 441	9.2	42 14.15	+ 328.31	+ 0.72	+ 13 34 30.6	+ 1522.7	- 15.9	2.5	6/7		
94	+ 15 381	9.2	42 52.78	+ 331.54	+ 0.78	+ 15 31 40.6	+ 1519.0	- 16.1	3.0	3/4	Bord ₂	+0.08, - 0.3, 32
95	+ 16 349	9.2	45 16.22	+ 333.50	+ 0.80	+ 16 31 28.3	+ 1505.4	- 16.3	2.9/2.7	3/5	Bord ₂	-0.03, + 0.2, 33
96	+ 20 466	9.1	45 58.71	+ 340.99	+ 0.93	+ 20 49 22.6	+ 1501.3	- 16.8	3.0	4/5	Kü _{oo}	+0.08, - 1.0, 35
97	+ 18 360	9.1	47 57.56	+ 338.58	+ 0.88	+ 19 16 8.0	+ 1489.7	- 16.8	2.5	4		
98	+ 20 474	9.1	51 35.39	+ 342.46	+ 0.93	+ 21 7 25.0	+ 1468.3	- 17.3	2.7	4	Abb.	-0.03, + 0.2, 30
99	+ 21 389	9.1	52 12.59	+ 343.34	+ 0.95	+ 21 32 33.5	+ 1464.6	- 17.4	3.0	3/4	Kü _{oo}	+0.18, - 0.9, 35
100	+ 19 436	9.1	54 42.81	+ 340.58	+ 0.89	+ 19 49 3.2	+ 1449.5	- 17.5	2.6	5	* Abb.	+0.02, + 0.2, 28
101	+ 20 483	9.2	55 53.80	+ 343.45	+ 0.93	+ 21 16 19.1	+ 1442.4	- 17.7	3.0	3/4		
102	+ 21 399	9.1	58 13.07	+ 344.19	+ 0.93	+ 21 28 14.0	+ 1428.2	- 17.9	2.6	3	Kü _{oo}	+0.03, - 0.2, 36
103	+ 17 475	9.2	58 50.68	+ 337.41	+ 0.82	+ 17 44 43.5	+ 1424.4	- 17.6	3.0	3/4		
104	+ 11 431	9.2	3 26.97	+ 327.96	+ 0.67	+ 12 11 37.1	+ 1402.0	- 17.4	3.0/2.9	3	Kü _{oo}	+0.02, - 1.1, 37
105	+ 20 504	9.1	3 34.15	+ 344.02	+ 0.90	+ 20 55 34.0	+ 1395.0	- 18.3	3.0	2/4		
106	+ 15 436	9.2	5 3.11	+ 334.79	+ 0.76	+ 15 52 55.9	+ 1385.7	- 17.9	2.5/2.6	4/6	Bru XIII	-0.11, + 0.6, 26
107	+ 17 500	9.1	5 57.53	+ 338.00	+ 0.80	+ 17 33 55.7	+ 1379.9	- 18.1	3.0	4/5		
108	+ 22 446	9.2	8 5.13	+ 347.76	+ 0.94	+ 22 28 11.1	+ 1366.3	- 18.8	2.9	3/4	Bg ₁	+0.12, + 0.4, 16
109	+ 20 523	9.1	10 14.11	+ 345.44	+ 0.89	+ 21 8 3.7	+ 1352.5	- 18.8	3.0	4/5		
110	+ 18 433	9.1	11 40.21	+ 340.64	+ 0.82	+ 18 33 58.6	+ 1343.3	- 18.7	2.9	3	Kü _{oo}	+0.15, - 6.3, 38
111	+ 17 520	9.2	12 28.34	+ 339.12	+ 0.79	+ 17 43 23.4	+ 1338.1	- 18.7	3.0	4/5		
112	+ 13 532	9.1	13 59.55	+ 332.93	+ 0.70	+ 14 21 32.6	+ 1328.1	- 18.4	3.7/3.4	3/5	* Kü _{oo}	+0.01, - 2.4, 36
113	+ 21 436	9.1	15 46.85	+ 347.12	+ 0.80	+ 21 32 55.8	+ 1316.4	- 19.3	3.0	4/5		
114	+ 12 463	9.2	16 29.15	+ 329.83	+ 0.66	+ 12 33 19.8	+ 1311.7	- 18.5	2.9	3/4	Kü _{oo}	+0.03, - 0.7, 35
115	+ 17 538	9.2	19 0.02	+ 341.14	+ 0.80	+ 18 20 29.3	+ 1295.0	- 19.2	3.0	2		
116	+ 19 516	9.1	19 42.61	+ 344.46	+ 0.84	+ 19 57 41.6	+ 1290.3	- 19.5	2.9	3/4	* Kü _{oo}	+0.13, - 0.2, 36
117	+ 23 453											

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{d\alpha}{dT}$	$\frac{d^2\alpha}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
145	+ 19 656	9'1	^{h m s} 4 22'08	^s + 349'76	^s + 0'70	^{° ' "} + 20 1 54'7	+ 984'2	- 22'4	3'0	1/2	
146	+ 17 679	9'2	2 46'59	+ 344'75	+ 0'66	+ 17 48 12'3	+ 981'1	- 22'1	5'1/4'4	2/3	Bord ₂ +0'39, - 1'8, 37
147	+ 22 636	9'1	5 1'68	+ 356'57	+ 0'75	+ 22 48 10'2	+ 963'9	- 23'0	2'8	4/5	* Kū _{oo} +0'03, - 1'2, 36
148	+ 15 586	9'2	5 17'37	+ 340'70	+ 0'61	+ 15 53 34'4	+ 961'9	- 22'0	5'1/4'4	1/3	* Kū _{oo} -0'03, - 1'0, 39
149	+ 16 564	9'2	7 20'07	+ 343'88	+ 0'63	+ 17 14 27'9	+ 946'1	- 22'3	3'0	2/3	W ₂ +2'93, -12'6, 110
150	+ 23 635	9'2	8 55'99	+ 358'75	+ 0'75	+ 23 30 32'8	+ 933'7	- 23'4	5'1/4'4	2/3	
151	+ 19 674	9'1	9 52'56	+ 349'91	+ 0'67	+ 19 46 14'4	+ 926'4	- 22'8	3'1/2'8	2/4	Kū _{oo} +0'59, - 1'7, 35
152	+ 21 608	9'1	11 51'33	+ 355'84	+ 0'71	+ 22 10 40'2	+ 911'0	- 23'3	4'4/4'1	3/4	
153	+ 15 602	9'2	12 19'60	+ 341'49	+ 0'59	+ 16 0 7'0	+ 907'4	- 22'4	2'5/2'7	2/3	* Kū _{oo} +0'03, - 1'1, 36
154	+ 23 662	9'1	14 8'63	+ 360'59	+ 0'74	+ 24 0 4'6	+ 893'2	- 23'7	4'4/4'1	3/4	Kū _{oo} -0'01, - 0'7, 37
155	+ 22 669	9'2	15 10'89	+ 358'62	+ 0'72	+ 23 9 49'7	+ 885'0	- 23'7	2'5/2'7	2/3	
156	+ 23 671	9'2	16 35'33	+ 360'82	+ 0'73	+ 23 59 2'2	+ 873'9	- 23'9	4'4/4'1	3/4	
157	+ 15 614	9'1	18 3'96	+ 341'50	+ 0'56	+ 15 48 57'6	+ 862'4	- 22'7	2'5/2'7	2/4	* Kū _{oo} 0'00, - 0'7, 36
158	+ 23 685	9'1	20 58'84	+ 361'68	+ 0'71	+ 24 7 29'0	+ 839'2	- 24'1	2'5/2'7	2/3	Bo VI -0'05, + 1'3, 73
159	+ 19 714	9'1	21 28'36	+ 351'16	+ 0'62	+ 19 50 48'3	+ 835'4	- 23'4	4'4	3	
160	+ 25 715	9'2	24 56'35	+ 365'94	+ 0'72	+ 25 36 29'3	+ 807'7	- 24'6	2'7	3/4	* Kū _{oo} +0'03, - 1'7, 36
161	+ 17 730	9'2	26 29'11	+ 346'96	+ 0'56	+ 17 54 39'5	+ 795'3	- 23'3	4'1/3'6	4	Bord ₂ -0'15, - 0'4, 35
162	+ 19 734	9'2	29 45'80	+ 352'31	+ 0'58	+ 20 1 51'9	+ 768'9	- 23'9	2'5/2'7	2/4	
163	+ 16 618	9'2	30 36'01	+ 343'73	+ 0'53	+ 16 24 41'5	+ 762'1	- 23'3	4'1/3'9	4/5	* Bg ₁ +0'02, + 0'2, 19
164	+ 17 753	9'2	32 26'19	+ 347'99	+ 0'55	+ 18 9 21'4	+ 747'3	- 23'7	2'7	3/4	
165	+ 21 675	9'1	34 6'79	+ 358'03	+ 0'60	+ 22 11 2'5	+ 733'6	- 24'4	3'8/3'6	3/4	Abb. +0'47, - 0'1, 31
166	+ 22 719	9'1	35 6'87	+ 358'99	+ 0'60	+ 22 31 30'1	+ 725'5	- 24'5	2'7	3/4	
167	+ 26 732	9'2	36 45'56	+ 371'23	+ 0'68	+ 27 5 30'5	+ 712'1	- 25'5	4'1/3'9	4/5	
168	+ 20 799	9'1	37 48'52	+ 354'80	+ 0'56	+ 20 46 36'1	+ 703'4	- 24'4	2'5/2'7	2/4	
169	+ 24 679	9'2	38 54'49	+ 365'05	+ 0'62	+ 24 43 41'4	+ 694'5	- 25'1	4'1/3'9	4/5	
170	+ 18 696	9'2	41 41'72	+ 350'49	+ 0'51	+ 18 55 6'5	+ 671'5	- 24'2	2'7	3/4	
171	+ 18 699	9'2	42 12'67	+ 350'83	+ 0'51	+ 19 2 42'1	+ 667'3	- 24'3	4'1	4	
172	+ 24 686	9'2	44 25'48	+ 364'31	+ 0'58	+ 24 15 57'9	+ 649'0	- 25'2	2'7	3	* Kū _{oo} +0'01, - 1'3, 36
173	+ 18 729	9'2	44 56'56	+ 349'24	+ 0'48	+ 18 19 35'2	+ 644'7	- 24'2	3'1	3/4	
174	+ 20 830	9'1	47 21'92	+ 356'07	+ 0'51	+ 20 59 57'0	+ 624'6	- 24'8	2'5/2'7	2/3	Kū _{oo} +0'08, - 0'8, 36
175	+ 23 748	9'1	47 58'48	+ 364'00	+ 0'55	+ 24 2 17'4	+ 619'6	- 25'3	4'1/3'8	4/6	Kū _{oo} -0'01, - 1'6, 37
176	+ 20 836	9'2	49 53'04	+ 356'36	+ 0'50	+ 21 2 58'1	+ 603'7	- 24'9	2'5/2'7	2/3	Kū _{oo} 0'00, - 0'4, 36
177	+ 20 839	9'1	51 10'30	+ 356'07	+ 0'49	+ 20 54 8'5	+ 593'0	- 24'9	3'1	3/4	
178	+ 19 812	9'1	52 25'69	+ 351'86	+ 0'46	+ 19 12 5'7	+ 582'4	- 24'7	2'5/2'7	2/3	Bo VI +0'17, - 1'5, 76
179	+ 27 711	9'1	54 34'77	+ 375'86	+ 0'58	+ 28 7 31'4	+ 564'4	- 26'4	3'1	3/4	
180	+ 18 763	9'1	55 9'02	+ 351'46	+ 0'45	+ 18 58 57'2	+ 559'6	- 24'7	2'5/2'7	2/3	Kū _{oo} +0'04, - 0'9, 36
181	+ 27 717	9'1	57 5'50	+ 374'21	+ 0'55	+ 27 28 30'4	+ 543'2	- 26'4	3'1	3/4	
182	+ 23 799	9'1	58 42'66	+ 363'71	+ 0'49	+ 23 37 38'2	+ 529'6	- 25'7	2'5/2'7	2/3	
183	+ 19 842	9'2	59 39'87	+ 352'54	+ 0'43	+ 19 18 52'7	+ 521'6	- 25'0	3'1	3/4	
184	+ 23 829	9'1	5 1 24'98	+ 365'17	+ 0'47	+ 24 6 16'9	+ 506'8	- 25'8	2'5/2'7	2/3	
185	+ 22 819	9'2	2 46'10	+ 361'88	+ 0'45	+ 22 50 59'5	+ 495'3	- 25'7	3'1	3/4	* Abb. -0'10, + 0'2, 29
186	+ 23 844	9'2	3 55'73	+ 364'97	+ 0'46	+ 23 58 12'1	+ 485'5	- 25'9	2'7	3	
187	+ 24 759	9'1	5 42'07	+ 367'75	+ 0'45	+ 24 56 55'3	+ 470'4	- 26'1	3'1	1/2	
188	+ 17 854	9'2	6 14'01	+ 348'21	+ 0'38	+ 17 27 39'3	+ 465'9	- 24'8	4'0	2	
189	+ 19 860	9'1	8 34'57	+ 352'81	+ 0'38	+ 19 14 54'3	+ 446'0	- 25'1	3'1	3/4	
190	+ 19 866	9'2	9 16'38	+ 354'95	+ 0'38	+ 20 4 10'4	+ 440'0	- 25'3	2'7	3	
191	+ 18 802	9'2	11 39'78	+ 351'83	+ 0'36	+ 18 48 37'2	+ 419'6	- 25'2	3'1	3/4	
192	+ 24 801	9'1	12 25'38	+ 365'87	+ 0'40	+ 24 7 10'8	+ 413'1	- 26'2	2'7	3	
193	+ 24 810	9'1	14 53'68	+ 368'47	+ 0'39	+ 25 0 45'8	+ 391'9	- 26'4	3'1	3/4	* Kū _{oo} +0'10, - 1'8, 36
194	+ 24 812	9'1	15 17'15	+ 367'35	+ 0'39	+ 24 36 16'8	+ 388'5	- 26'3	2'7	3	
195	+ 20 928	9'1	17 38'29								

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{d\alpha}{dT}$	$\frac{d^2\alpha}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
217	+ 19 1082	9.2	^{h m s} 5 46 10.41	^s + 355.35	^s + 0.16	^{° ' ''} + 19 48 1.0	^{''} + 120.9	^{''} - 25.9	4.1	2	Kü ₀₀ + 0.05, - 1.0, 37 ^y
218	+ 20 1136	9.2	48 23.97	+ 357.47	+ 0.15	+ 20 35 32.7	+ 101.4	- 26.0	2.1	4	
219	+ 20 1138	9.1	48 45.32	+ 357.08	+ 0.15	+ 20 26 44.5	+ 98.3	- 26.0	3.1	4	
220	+ 20 1159	9.1	51 15.54	+ 358.17	+ 0.13	+ 20 50 51.2	+ 76.4	- 26.1	2.1	3	
221	+ 20 1160	9.2	51 21.25	+ 358.05	+ 0.13	+ 20 48 6.3	+ 75.6	- 26.1	3.1	3	
222	+ 18 1024	9.1	53 42.67	+ 353.10	+ 0.12	+ 18 55 3.0	+ 54.9	- 25.7	2.1	4/3	
223	+ 24 1035	9.2	54 1.02	+ 369.32	+ 0.13	+ 24 53 31.5	+ 52.3	- 26.9	3.1	4	
224	+ 25 1064	9.1	56 43.70	+ 370.71	+ 0.11	+ 25 22 51.6	+ 28.6	- 27.0	2.1	4	W ₂ + 0.08, - 0.6, 109
225	+ 22 1133	9.2	57 17.85	+ 361.43	+ 0.10	+ 22 2 42.1	+ 23.6	- 26.3	3.1	3	
226	+ 28 989	9.1	59 25.71	+ 379.00	+ 0.09	+ 28 12 28.3	+ 4.9	- 27.6	2.1	4/3	* Gr ₁₀ + 0.06, - 0.9, 20
227	+ 25 1091	9.1	6 0 3.80	+ 371.65	+ 0.08	+ 25 42 27.9	- 6	- 27.1	3.1	4	
228	+ 21 1108	9.1	2 12.75	+ 360.91	+ 0.07	+ 21 51 8.4	- 19.4	- 26.3	2.2	3	* Bg ₁ - 0.03, - 0.2, 18
229	+ 20 1243	9.2	2 19.60	+ 357.17	+ 0.07	+ 20 27 17.6	- 20.4	- 26.0	3.1	3	Bo VI + 0.09, - 3.0, 75
230	+ 19 1218	9.1	4 43.16	+ 355.17	+ 0.06	+ 19 42 29.8	- 41.3	- 25.9	2.2	4/3	
231	+ 27 1000	9.1	5 22.35	+ 377.79	+ 0.04	+ 27 48 29.8	- 47.0	- 27.6	3.1	4	* Kü ₀₀ - 0.02, - 1.1, 35
232	+ 23 1231	9.2	7 29.44	+ 366.17	+ 0.03	+ 23 46 54.6	- 65.5	- 26.7	2.2	3	
233	+ 25 1145	9.1	7 54.82	+ 371.98	+ 0.03	+ 25 50 1.0	- 69.1	- 27.1	3.1	4	
234	+ 23 1250	9.2	10 4.77	+ 366.42	+ 0.01	+ 23 52 21.3	- 88.1	- 26.7	2.2	3	
235	+ 20 1314	9.1	10 10.62	+ 357.24	+ 0.02	+ 20 30 7.7	- 89.0	- 26.0	3.1	3/4	
236	+ 23 1269	9.2	12 37.28	+ 366.38	0.00	+ 23 52 22.8	- 110.3	- 26.6	2.2	3	
237	+ 28 1063	9.2	13 35.87	+ 380.23	- 0.03	+ 28 39 35.4	- 118.8	- 27.6	3.1	5	
238	+ 23 1295	9.2	15 55.05	+ 365.04	- 0.02	+ 23 24 44.1	- 139.1	- 26.5	2.8	3	
239	+ 24 1217	9.1	18 14.66	+ 367.86	- 0.05	+ 24 26 18.8	- 159.4	- 26.7	2.2	3	
240	+ 28 1092	9.2	19 6.16	+ 379.95	- 0.08	+ 28 36 32.6	- 166.8	- 27.6	2.8	3	
241	+ 21 1218	9.1	20 37.24	+ 358.59	- 0.05	+ 21 4 5.2	- 180.1	- 26.0	2.2	3	
242	+ 24 1250	9.2	21 25.63	+ 366.45	- 0.07	+ 23 57 39.3	- 187.2	- 26.6	3.1/2.8	3	Bo VI + 0.09, + 3.1, 75
243	+ 20 1416	9.2	23 17.40	+ 356.31	- 0.06	+ 20 13 37.8	- 203.3	- 25.8	2.2	2	Bo VI - 0.50, + 0.4, 74
244	+ 17 1248	9.2	24 5.62	+ 350.04	- 0.05	+ 17 49 14.3	- 210.3	- 25.3	2.8	3	
245	+ 18 1231	9.1	25 53.14	+ 352.33	- 0.06	+ 18 43 25.2	- 225.9	- 25.5	2.2	3	
246	+ 24 1285	9.1	26 56.88	+ 367.91	- 0.11	+ 24 32 27.7	- 235.2	- 26.6	2.8	3	
247	+ 21 1274	9.1	28 46.40	+ 359.39	- 0.10	+ 21 26 38.2	- 250.9	- 25.9	2.2	3	
248	+ 28 1153	9.1	29 59.01	+ 379.86	- 0.17	+ 28 42 2.3	- 261.5	- 27.4	2.7	2	A.G. Cbr. - 0.06, - 0.3, 46
249	+ 26 1276	9.2	31 38.32	+ 373.40	- 0.15	+ 26 31 43.5	- 275.8	- 26.9	2.1	4	
250	+ 18 1269	9.2	32 7.01	+ 351.99	- 0.10	+ 18 39 12.4	- 279.9	- 25.3	2.8	3	
251	+ 25 1341	9.2	34 14.59	+ 369.16	- 0.16	+ 25 4 52.6	- 298.4	- 26.5	2.1	4	
252	+ 20 1506	9.1	34 41.63	+ 356.96	- 0.12	+ 20 35 23.8	- 302.3	- 25.6	2.9	4	Kü ₀₀ - 0.03, - 1.2, 36
253	+ 23 1444	9.2	36 41.16	+ 365.18	- 0.17	+ 23 40 50.9	- 319.4	- 26.2	2.1	5	
254	+ 23 1454	9.2	37 30.96	+ 364.01	- 0.17	+ 23 16 0.2	- 326.6	- 26.1	2.9	4	
255	+ 25 1394	9.1	39 23.18	+ 370.85	- 0.21	+ 25 45 27.6	- 342.8	- 26.6	2.1	5	
256	+ 28 1216	9.1	40.15.96	+ 377.07	- 0.23	+ 27 55 41.8	- 350.3	- 27.0	2.9	4/3	Kü ₀₀ + 0.04, - 1.0, 35
257	+ 20 1551	9.2	41 47.34	+ 356.75	- 0.16	+ 20 36 43.6	- 363.4	- 25.5	2.1	4	
258	+ 23 1490	9.2	42 40.00	+ 365.13	- 0.20	+ 23 45 27.4	- 371.0	- 26.1	2.9/2.8	4/3	
259	+ 19 1478	9.2	44 28.78	+ 352.35	- 0.17	+ 18 57 14.5	- 386.6	- 25.1	2.2	3	
260	+ 25 1439	9.1	45 25.79	+ 369.20	- 0.24	+ 25 16 45.8	- 394.7	- 26.3	2.8	5	Kü ₀₀ - 0.02, - 1.5, 36
261	+ 18 1363	9.2	46 57.70	+ 349.70	- 0.17	+ 17 56 55.5	- 407.8	- 24.9	2.2	4	
262	+ 19 1501	9.2	47 51.22	+ 352.08	- 0.19	+ 18 53 45.0	- 415.4	- 25.1	2.8	5	
263	+ 27 1252	9.1	49 51.48	+ 375.39	- 0.30	+ 27 33 6.6	- 432.6	- 26.6	2.2	3	
264	+ 26 1383	9.2	50 44.46	+ 370.69	- 0.28	+ 25 55 23.2	- 440.2	- 26.3	2.6/2.7	4	
265	+ 24 1456	9.2	52 25.20	+ 366.83	- 0.28	+ 24 34 12.4	- 454.5	- 25.9	2.2	3	
266	+ 23 1546	9.1	53 9.96	+ 364.12	- 0.27	+ 23 35 48.9	- 460.8	- 25.7	2.8	5	Kü ₀₀ + 0.04, - 1.5, 36
267	+ 18 1420	9.1	54 39.72	+ 351.49	- 0.22	+ 18 46 59.0	- 473.5	- 24.8	2.2	4	
268	+ 17 1460	9.2	55 40.15	+ 349.09	- 0.21	+ 17 51 7.1	- 482.1	- 24.6	2.8	4/5	* Bord ₂ + 0.08, + 0.2, 34
269	+ 24 1496	9.2	58 27.92	+ 366.92	- 0.32	+ 24 44 40.6	- 505.8	- 25.8			

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{dz}{dT}$	$\frac{1}{2} \frac{d^2z}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{1}{2} \frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
289	+ 24 1666	9.2	^{h m s} 7 25 40.11	^s + 364.73	^s - 0.49	^{° ' "} + 24 46 5.3	["] - 731.9	["] - 24.6	2.8/2.9	3/4	Bo VI +0.54, +61.6, 75 ^y
290	+ 20 1820	9.2	27 19.26	+ 354.74	- 0.42	+ 20 45 38.2	- 745.3	- 23.8	2.2	3	
291	+ 21 1619	9.2	28 8.86	+ 354.67	- 0.42	+ 20 55 2.2	- 752.0	- 23.9	2.8/2.7	3/5	Bo VI +0.05, + 1.6 74
292	+ 24 1694	9.1	30 8.23	+ 362.65	- 0.49	+ 24 8 44.5	- 768.1	- 24.2	2.2	4	
293	+ 26 1592	9.1	30 53.81	+ 368.14	- 0.55	+ 26 15 31.1	- 774.3	- 24.6	2.7	4	
294	+ 17 1619	9.1	33 1.21	+ 345.47	- 0.38	+ 17 15 36.6	- 791.4	- 23.0	2.5/2.2	3	Kü ₀₀ +0.10, - 0.5, 35
295	+ 18 1680	9.1	33 29.93	+ 348.36	- 0.41	+ 18 29 56.0	- 795.2	- 23.2	2.7/2.8	4/5	
296	+ 21 1654	9.1	35 49.91	+ 355.14	- 0.47	+ 21 23 3.1	- 813.9	- 23.5	2.5	3	* Kü ₀₀ +0.02, - 0.7, 35
297	+ 26 1623	9.2	37 0.47	+ 367.74	- 0.59	+ 26 22 37.2	- 823.3	- 24.3	2.7/2.8	3/5	
298	+ 23 1781	9.1	38 23.57	+ 358.57	- 0.52	+ 22 51 55.3	- 834.3	- 23.6	2.5	3	
299	+ 24 1745	9.2	39 44.97	+ 362.40	- 0.56	+ 24 26 35.2	- 845.1	- 23.8	2.8	3/4	Bo VI +0.21, - 1.2, 75
300	+ 16 1545	9.2	40 35.62	+ 342.29	- 0.39	+ 16 7 21.2	- 851.8	- 22.4	2.4	4	
301	+ 17 1659	9.2	42 6.40	+ 344.91	- 0.41	+ 17 18 38.1	- 863.7	- 22.5	2.7/2.8	4/5	
302	+ 26 1642	9.2	43 32.79	+ 367.05	- 0.63	+ 26 24 56.4	- 875.0	- 23.9	2.2	3	
303	+ 20 1905	9.1	44 51.50	+ 352.51	- 0.50	+ 20 39 5.6	- 885.3	- 22.8	2.7	4/5	
304	+ 24 1781	9.1	46 51.63	+ 360.84	- 0.58	+ 24 8 50.0	- 901.0	- 23.3	2.2	4	
305	+ 20 1919	9.1	47 41.74	+ 351.01	- 0.49	+ 20 8 13.3	- 907.6	- 22.6	2.6/3.1	2	Kü ₀₀ -0.07, - 1.1, 36
306	+ 24 1794	9.2	49 52.38	+ 359.82	- 0.60	+ 23 52 43.0	- 924.5	- 23.1	2.2	4	Bo VI +0.02, - 0.8, 74
307	+ 16 1576	9.2	50 5.52	+ 341.73	- 0.42	+ 16 11 13.6	- 926.2	- 21.9	2.8/2.9	3/4	
308	+ 16 1583	9.2	52 6.58	+ 342.57	- 0.44	+ 16 38 4.3	- 941.8	- 21.9	2.5	3	
309	+ 23 1846	9.2	52 54.51	+ 358.45	- 0.60	+ 23 28 9.5	- 947.9	- 22.9	2.8/2.9	3/4	Kü ₀₀ +0.08, - 0.8, 36
310	+ 20 1954	9.2	54 47.84	+ 349.80	- 0.52	+ 19 55 16.2	- 962.5	- 22.2	2.2	4	
311	+ 18 1802	9.2	56 10.07	+ 346.32	- 0.49	+ 18 27 45.0	- 973.0	- 21.9	2.8/2.9	3/4	
312	+ 17 1734	9.1	58 38.22	+ 344.10	- 0.48	+ 17 34 5.3	- 991.8	- 21.6	4.5/4.3	6/9	Bord ₂ -0.05, + 0.1, 38
313	+ 26 1702	9.2	58 51.56	+ 363.63	- 0.69	+ 25 53 4.0	- 993.4	- 22.8	2.2	4/3	
314	+ 15 1738	9.2	8 0 51.26	+ 339.71	- 0.46	+ 15 40 3.3	- 1008.5	- 21.2	2.2	3/4	
315	+ 23 1881	9.1	1 22.90	+ 357.34	- 0.63	+ 23 26 58.5	- 1012.5	- 22.2	3.1/2.9	3/4	
316	+ 25 1848	9.2	3 56.93	+ 362.82	- 0.71	+ 25 50 51.3	- 1031.9	- 22.5	2.8	3	
317	+ 16 1643	9.1	5 35.95	+ 341.33	- 0.49	+ 16 35 52.4	- 1044.2	- 21.0	2.2	3	* W ₂ -0.14, + 2.0, 109
318	+ 24 1871	9.2	6 26.60	+ 357.67	- 0.67	+ 23 51 52.4	- 1050.5	- 22.0	4.1/3.8	1/3	
319	+ 23 1903	9.1	8 29.89	+ 355.92	- 0.66	+ 23 14 14.2	- 1065.7	- 21.7	2.2	3	
320	+ 23 1908	9.1	9 33.34	+ 355.91	- 0.67	+ 23 17 39.7	- 1073.6	- 21.7	2.8	3	
321	+ 21 1790	9.1	11 1.85	+ 351.64	- 0.62	+ 21 31 1.9	- 1084.5	- 21.3	2.2	4	
322	+ 17 1804	9.1	12 7.54	+ 341.59	- 0.52	+ 17 0 51.2	- 1092.6	- 20.6	2.8	3	* Kü ₀₀ +0.03, - 0.4, 36
323	+ 24 1897	9.1	13 36.36	+ 356.47	- 0.70	+ 23 46 35.3	- 1103.4	- 21.5	2.2	4	Kü ₀₀ -0.08, - 0.5, 35
324	+ 20 2038	9.5	14 21.72	+ 348.84	- 0.61	+ 20 27 4.9	- 1108.9	- 20.9	5.2	2	
325	+ 20 2039	9.2	14 56.22	+ 348.80	- 0.61	+ 20 27 51.7	- 1113.1	- 20.9	5.1	1	
326	+ 22 1906	9.2	16 28.78	+ 353.11	- 0.66	+ 22 29 3.0	- 1124.2	- 21.1	2.2	4/3	
327	+ 19 1986	9.2	17 56.95	+ 345.02	- 0.58	+ 18 53 52.7	- 1134.9	- 20.5	4.2	6	Kü ₀₀ -0.04, - 0.3, 37
328	+ 22 1917	9.1	19 7.98	+ 352.26	- 0.67	+ 22 16 1.3	- 1143.4	- 20.9	2.2	4	
329	+ 22 1923	9.1	20 44.32	+ 352.02	- 0.67	+ 22 15 15.5	- 1154.9	- 20.7	2.2	3	Kü ₀₀ +0.03, - 1.0, 35
330	+ 18 1934	9.1	21 34.09	+ 342.83	- 0.57	+ 18 3 26.6	- 1160.9	- 20.2	2.2	4	
331	+ 23 1955	9.2	23 22.38	+ 353.58	- 0.71	+ 23 7 30.5	- 1173.7	- 20.6	2.2	3	Bo VI -0.02, - 3.4, 73
332	+ 20 2088	9.2	24 32.39	+ 346.40	- 0.63	+ 19 54 6.9	- 1181.9	- 20.1	2.2	4/3	
333	+ 24 1935	9.1	26 43.32	+ 354.52	- 0.74	+ 23 46 18.7	- 1197.3	- 20.4	2.2	3	Kü ₀₀ -0.01, - 2.0, 35
334	+ 21 1859	9.2	28 12.89	+ 349.11	- 0.68	+ 21 23 38.2	- 1207.7	- 20.1	2.2	3	
335	+ 15 1839	9.2	29 21.51	+ 336.21	- 0.52	+ 15 12 38.8	- 1215.6	- 19.2	2.2	3	Cp ₀₀ +0.15, - 0.8, 28
336	+ 19 2034	9.2	31 8.48	+ 344.59	- 0.63	+ 19 26 9.7	- 1228.0	- 19.6	2.2	4	Kü ₀₀ -0.04, - 1.0, 33
337	+ 14 1921	9.2	31 52.41	+ 333.63	- 0.50	+ 14 1 27.1	- 1233.0	- 18.9	2.2	3	
338	+ 20 2130	9.1	34 35.92	+ 344.77	- 0.65	+ 19 44 15.9	- 1251.8	- 19.4	2.2	4	
339	+ 19 2050	9.2	34 36.57	+ 343.95	- 0.64	+ 19 20 15.8	- 1251.9	- 19.3	2.2	3	
340	+ 14 1943	9.1	37 1.30								

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{d\alpha}{dT}$	$\frac{d^2\alpha}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
361	+ 12 1980	9'2	^{h m s} 9 7 29'64	^s + 326'26	^s - 0'49	^{° ' "} + 11 43 4'4	["] - 1462'8	["] - 16'0	2'2	3	
362	+ 21 1993	9'1	11 6'51	+ 342'40	- 0'77	+ 21 20 12'7	- 1484'2	- 16'4	2'4/2'5	4/3	
363	+ 21 1994	9'1	11 20'67	+ 341'60	- 0'75	+ 20 54 40'9	- 1485'6	- 16'4	2'2	3	* Abb.
364	+ 14 2058	9'2	13 40'22	+ 329'65	- 0'56	+ 14 7 47'5	- 1499'2	- 15'6	2'2	3	* Abb.
365	+ 21 2003	9'1	14 7'56	+ 340'78	- 0'75	+ 20 42 35'7	- 1501'8	- 16'1	2'2	3	
366	+ 10 1970	9'1	16 30'84	+ 323'11	- 0'46	+ 10 14 10'3	- 1515'6	- 15'1	2'2	3	
367	+ 14 2071	9'2	16 54'37	+ 328'59	- 0'55	+ 13 41 43'3	- 1517'8	- 15'3	2'6/2'5	3/4	Pu.
368	+ 14 2081	9'1	19 4'70	+ 329'06	- 0'56	+ 14 8 24'5	- 1530'2	- 15'2	2'2	3	Kü _{oo}
369	+ 17 2073	9'1	20 5'00	+ 334'40	- 0'66	+ 17 30 19'5	- 1535'8	- 15'3	5'2	2	* Kü _{oo}
370	+ 21 2024	9'2	21 44'88	+ 339'63	- 0'76	+ 20 47 10'5	- 1545'1	- 15'5	2'2	3	Abb.
371	+ 17 2083	9'1	23 43'94	+ 332'68	- 0'64	+ 16 45 17'0	- 1556'1	- 15'0	2'9	3	Bg ₁
372	+ 12 2044	9'2	26 0'36	+ 324'55	- 0'50	+ 11 41 55'3	- 1568'6	- 14'4	2'2	3	
373	+ 16 1979	9'2	27 50'68	+ 330'32	- 0'61	+ 15 36 8'6	- 1578'6	- 14'5	2'7	2	
374	+ 19 2222	9'1	28 48'38	+ 335'23	- 0'70	+ 18 49 1'2	- 1583'7	- 14'6	2'2	3	Kü _{oo}
375	+ 10 2023	9'2	32 29'29	+ 322'16	- 0'46	+ 10 29 5'9	- 1603'3	- 13'8	2'2	3	
376	+ 20 2342	9'1	33 32'90	+ 335'81	- 0'73	+ 19 39 59'0	- 1608'8	- 14'2	4'4/4'2	5/7	Kü _{oo}
377	+ 17 2113	9'1	35 7'19	+ 331'79	- 0'66	+ 17 12 50'8	- 1616'9	- 14'0	2'2	2/3	* Kü _{oo}
378	+ 12 2073	9'1	36 7'95	+ 324'40	- 0'51	+ 12 16 40'7	- 1622'2	- 13'5	2'6/2'7	3/4	Kü _{oo}
379	+ 14 2128	9'1	37 55'96	+ 326'57	- 0'56	+ 13 55 20'8	- 1631'4	- 13'5	2'2	3	Bord ₂
380	+ 14 2138	9'2	41 4'18	+ 326'46	- 0'56	+ 14 6 14'1	- 1647'2	- 13'2	2'2	3	Bo VI
381	+ 18 2261	9'1	41 14'72	+ 332'33	- 0'68	+ 18 12 8'8	- 1648'0	- 13'5	2'6	3	
382	+ 9 2236	9'2	43 5'36	+ 318'83	- 0'42	+ 8 42 2'0	- 1657'1	- 12'7	2'9/2'8	3/4	
383	+ 13 2154	9'3	44 7'30	+ 325'03	- 0'54	+ 13 20 9'5	- 1662'2	- 12'9	2'2	3	
384	+ 17 2139	9'2	45 46'79	+ 330'29	- 0'66	+ 17 16 27'0	- 1670'2	- 13'2	2'6	3	Kü _{oo}
385	+ 9 2256	9'2	50 41'22	+ 318'29	- 0'42	+ 8 43 21'9	- 1693'6	- 12'1	2'6	3	
386	+ 12 2108	9'2	50 45'39	+ 322'36	- 0'50	+ 11 52 58'1	- 1693'9	- 12'2	2'2	3	Kü _{oo}
387	+ 13 2178	9'1	53 35'33	+ 323'57	- 0'53	+ 13 3 19'4	- 1707'1	- 12'0	2'5	3	* Kü _{oo}
388	+ 18 2296	9'1	55 12'17	+ 330'23	- 0'68	+ 18 18 17'4	- 1714'4	- 12'1	2'6	3	
389	+ 14 2180	9'5	57 7'74	+ 323'95	- 0'55	+ 13 41 30'2	- 1723'0	- 11'7	2'9	3	
390	+ 10 2087	9'1	57 25'53	+ 319'18	- 0'44	+ 9 52 49'2	- 1724'4	- 11'5	4'4/4'6	4/5	* Kü _{oo}
391	+ 7 2221	9'2	59 44'78	+ 316'18	- 0'37	+ 7 32 26'4	- 1734'6	- 11'2	2'6	3	
392	+ 17 2166	9'2	^{io} 1 14'49	+ 327'37	- 0'64	+ 16 51 4'0	- 1741'2	- 11'5	2'5/2'4	3/4	* Kü _{oo}
393	+ 10 2102	9'1	2 15'74	+ 319'01	- 0'44	+ 10 5 24'2	- 1745'5	- 11'1	2'2	3	Kü _{oo}
394	+ 9 2266	9'2	3 30'96	+ 318'16	- 0'42	+ 9 27 19'0	- 1750'9	- 11'0	2'2	4	Kü _{oo}
395	+ 9 2304	9'2	5 20'56	+ 317'20	- 0'40	+ 8 45 17'5	- 1758'6	- 10'7	2'2	3	Leipz. Heft I
396	+ 14 2210	9'2	7 7'86	+ 322'97	- 0'54	+ 13 53 55'3	- 1766'1	- 10'8	2'2	3/4	
397	+ 13 2217	9'1	7 53'77	+ 322'01	- 0'52	+ 13 10 3'0	- 1769'2	- 10'7	2'2	3	* Kü _{oo}
398	+ 11 2185	9'1	9 33'43	+ 319'14	- 0'45	+ 10 48 8'4	- 1776'0	- 10'4	2'2	4	* Kü _{oo}
399	+ 12 2168	9'2	10 46'19	+ 319'89	- 0'47	+ 11 35 11'0	- 1780'9	- 10'3	2'2	3	* Bord ₂
400	+ 10 2127	9'1	12 8'66	+ 317'86	- 0'42	+ 9 51 54'5	- 1786'4	- 10'1	2'2	4	Kü _{oo}
401	+ 12 2182	9'2	13 32'79	+ 319'71	- 0'47	+ 11 41 43'8	- 1791'9	- 10'0	2'6/2'5	3/4	
402	+ 6 2284	9'2	15 22'00	+ 313'34	- 0'31	+ 5 49 50'9	- 1799'0	- 9'7	2'2	4	Kü _{oo}
403	+ 9 2333	9'2	16 31'04	+ 316'10	- 0'38	+ 8 33 31'1	- 1803'4	- 9'7	2'2	3/2	
404	+ 16 2114	9'2	19 5'57	+ 323'43	- 0'59	+ 15 47 11'3	- 1813'1	- 9'7	2'2	3	
405	+ 11 2215	9'2	20 18'09	+ 318'78	- 0'46	+ 11 29 29'4	- 1817'6	- 9'4	2'2	3	Pu.
406	+ 13 2251	9'2	22 14'71	+ 320'61	- 0'51	+ 13 30 26'7	- 1824'7	- 9'3	2'2	3	Kü _{oo}
407	+ 16 2120	9'2	23 31'91	+ 322'64	- 0'57	+ 15 39 54'2	- 1829'3	- 9'2	2'6/2'5	3/4	* Kü _{oo}
408	+ 5 2337	9'2	25 6'88	+ 311'59	- 0'26	+ 4 31 37'0	- 1834'9	- 8'7	2'2	3	
409	+ 10 2161	9'2	26 34'56	+ 316'22	- 0'39	+ 9 31 43'9	- 1840'0	- 8'8	2'2	3	Kü _{oo}
410	+ 12 2218	9'2	27 41'26	+ 318'91	- 0'47	+ 12 28 0'7	- 1843'9	- 8'7	2'2	3	
411	+ 10 2164	9'1	29 1'24	+ 316'36	- 0'39	+ 9 54 45'0	- 1848'4	- 8'5	2'6	3	Bord ₂
412	+ 12 2222	9'2	30 26'23	+ 318'39	- 0'46	+ 12 15 49'5	- 1853'2	- 8'5	2'2	3	

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{dz}{dT}$	$\frac{d^2z}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
433	+ 2 2383	9.2	^{h m s} 11 2 47.28	+ 308.19	- 0.10	+ 1 30 31.6	- 1942.2	- 5.2	2.6	3	Sj + 0.11, - 2.3, 70 ^y
434	+ 3 2456	9.1	3 58.30	+ 308.74	- 0.12	+ 2 29 59.8	- 1944.7	- 5.1	2.6/2.8	3/4	
435	+ 6 2406	9.2	5 14.12	+ 310.85	- 0.22	+ 6 20 49.9	- 1947.3	- 5.0	2.6/2.7	3/2	
436	+ 11 2318	9.2	7 24.25	+ 313.33	- 0.35	+ 11 10 28.8	- 1951.7	- 4.8	3.6/4.1	5/9	Bo VI + 0.51, + 0.2, 78
437	+ 5 2453	9.2	7 44.63	+ 309.72	- 0.17	+ 4 31 56.0	- 1952.4	- 4.7	2.9	3	Kü _{oo} + 0.08, - 1.1, 37
438	+ 2 2400	9.1	10 13.90	+ 308.24	- 0.09	+ 1 48 30.5	- 1957.2	- 4.4	2.6	3	Kü _{oo} 0.00, - 1.0, 36
439	+ 9 2468	9.2	10 24.34	+ 311.77	- 0.28	+ 8 47 46.5	- 1957.5	- 4.5	2.6	3	
440	+ 2 2404	9.1	12 42.26	+ 308.50	- 0.10	+ 2 27 29.2	- 1961.7	- 4.2	2.2	3	
441	+ 3 2485	9.2	17 7.67	+ 308.72	- 0.11	+ 3 12 35.0	- 1969.3	- 3.8	2.2	4	Bo VI - 0.35, - 1.7, 68
442	+ 7 2437	9.2	17 8.02	+ 310.17	- 0.20	+ 6 32 13.1	- 1969.3	- 3.8	2.6/2.8	3/4	Bg ₁ - 0.02, - 3.4, 16
443	+ 1 2554	9.2	19 21.50	+ 307.56	- 0.04	+ 0 33 56.3	- 1972.8	- 3.6	2.9/3.0	3/4	
444	+ 0 2776	9.2	19 22.33	+ 307.29	- 0.02	+ 0 5 0.5	- 1972.9	- 3.6	2.2	3	* Alb. - 0.15, + 0.8, 32
445	+ 10 2282	9.1	21 54.35	+ 311.13	- 0.28	+ 9 45 55.0	- 1976.6	- 3.3	2.2	5	Bord ₂ - 0.12, - 0.8, 24
446	+ 2 2433	9.1	25 9.99	+ 308.16	- 0.07	+ 2 22 50.4	- 1981.2	- 3.0	2.2	4/5	Kü _{oo} - 0.03, - 2.2, 35
447	+ 2 2434	9.2	25 18.33	+ 308.07	- 0.06	+ 2 7 8.8	- 1981.3	- 3.0	2.6	3	
448	+ 1 2574	9.2	27 17.79	+ 307.69	- 0.03	+ 1 5 9.1	- 1983.9	- 2.8	2.3/2.7	2/4	
449	+ 0 2799	9.1	29 21.68	+ 307.42	- 0.00	+ 0 16 59.3	- 1986.4	- 2.6	2.2	3/5	* Alb. - 0.13, + 0.3, 32
450	+ 8 2519	9.2	30 43.29	+ 309.56	- 0.19	+ 7 29 31.0	- 1987.9	- 2.5	2.6/2.7	3/4	Kü _{oo} + 0.09, - 1.3, 37
451	+ 1 2583	9.2	32 17.50	+ 307.58	- 0.01	+ 0 53 8.3	- 1989.6	- 2.3	2.2	4/3	
452	- 2 3376	9.1	33 20.67	+ 306.56	+ 0.09	+ 2 50 11.3	- 1990.7	- 2.2	2.9	3	Abb. - 0.15, - 1.0, 23
453	+ 4 2504	9.1	35 10.60	+ 308.37	- 0.08	+ 4 7 17.4	- 1992.5	- 2.0	2.2	4	
454	+ 2 2460	9.2	37 38.45	+ 307.83	- 0.03	+ 2 13 58.0	- 1994.7	- 1.8	2.2	3	
455	+ 2 2462	9.2	38 10.66	+ 307.73	- 0.02	+ 1 49 19.7	- 1995.2	- 1.7	2.9/2.8	3	
456	+ 4 2517	9.1	40 57.12	+ 308.01	- 0.06	+ 3 30 27.1	- 1997.4	- 1.4	2.2	4	Kü _{oo} - 0.02, - 1.5, 37
457	- 0 2482	9.2	42 26.07	+ 307.23	+ 0.06	+ 0 32 21.5	- 1998.4	- 1.3	3.0	4	Alb. - 0.41, + 1.2, 33
458	+ 1 2610	9.2	43 58.29	+ 307.43	+ 0.03	+ 0 37 58.1	- 1999.4	- 1.1	2.2	4	Kü _{oo} + 0.05, + 0.2, 35
459	+ 2 2483	9.1	45 22.54	+ 307.67	- 0.01	+ 2 19 11.8	- 2000.2	- 1.0	2.9	3	
460	+ 3 2562	9.1	47 41.79	+ 307.71	- 0.02	+ 3 2 17.5	- 2001.4	- 0.8	2.2	4	Kü _{oo} - 0.02, - 0.3, 37
461	+ 2 2490	9.2	48 36.07	+ 307.56	+ 0.01	+ 2 3 50.2	- 2001.8	- 0.7	2.6/2.8	3/4	Abb. - 0.17, - 0.7, 23
462	+ 0 2850	9.2	50 1.20	+ 307.29	+ 0.07	+ 0 17 24.9	- 2002.3	- 0.6	2.2	4	* Kü _{oo} + 0.03, - 0.3, 35
463	+ 7 2493	9.2	51 57.29	+ 307.88	- 0.11	+ 6 47 4.8	- 2003.0	- 0.4	2.6	3	* Kü _{oo} - 0.01, - 0.8, 37
464	+ 1 2627	9.2	52 36.87	+ 307.40	+ 0.05	+ 0 52 47.7	- 2003.2	- 0.3	2.6	3	Kü _{oo} + 0.03, + 0.1, 35
465	+ 0 2864	9.2	54 50.27	+ 307.34	+ 0.07	+ 0 23 38.6	- 2003.8	- 0.1	2.6	3	Alb. + 0.08, - 2.5, 33
466	+ 5 2560	9.2	55 30.52	+ 307.56	- 0.05	+ 5 1 4.0	- 2003.9	- 0.1	2.2	4	
467	+ 4 2554	9.2	56 5.98	+ 307.50	- 0.03	+ 4 14 58.0	- 2004.0	- 0.0	3.3	4/5	Kü _{oo} - 0.01, - 1.0, 38
468	+ 3 2586	9.2	58 6.12	+ 307.38	+ 0.01	+ 2 41 33.7	- 2004.2	+ 0.2	2.2	4	Pu. + 0.02, - 1.2, 35
469	- 4 3187	9.1	59 48.17	+ 307.31	+ 0.24	+ 5 30 34.6	- 2004.3	+ 0.4	2.9/3.0	3/4	
470	+ 5 2582	9.2	¹² 1 51.86	+ 307.23	- 0.04	+ 4 59 49.4	- 2004.2	+ 0.6	2.2	4	
471	+ 1 2646	9.2	2 6.16	+ 307.31	+ 0.08	+ 0 39 55.5	- 2004.2	+ 0.6	3.0	4	
472	- 0 2537	9.2	4 17.90	+ 307.35	+ 0.10	+ 0 32 17.6	- 2003.9	+ 0.8	2.2	4	Alb. + 0.05, - 0.1, 32
473	+ 0 2899	9.2	5 54.32	+ 307.30	+ 0.10	+ 0 17 24.3	- 2003.6	+ 1.0	3.0	3/4	Kü _{oo} + 0.05, - 0.5, 38
474	+ 3 2612	9.2	9 13.22	+ 307.01	+ 0.03	+ 3 24 7.2	- 2002.7	+ 1.3	2.9	3	Abb. - 0.14, + 0.1, 23
475	+ 1 2669	9.2	11 19.56	+ 307.19	+ 0.10	+ 1 6 43.2	- 2001.8	+ 1.5	2.2	4	Kü _{oo} - 0.06, - 0.8, 37
476	- 4 3237	9.2	11 50.84	+ 307.94	+ 0.26	+ 5 6 42.5	- 2001.6	+ 1.6	2.9	3	Abb. - 0.19, 0.0, 19
477	- 6 3539	9.2	14 2.78	+ 308.27	+ 0.30	+ 6 33 37.2	- 2000.5	+ 1.8	2.2	3/4	
478	- 2 3496	9.1	16 8.48	+ 307.87	+ 0.22	+ 3 19 21.0	- 1999.3	+ 2.0	2.9	3	Abb. - 0.12, + 0.5, 23
479	+ 3 2628	9.2	16 34.77	+ 306.78	+ 0.05	+ 3 13 25.4	- 1999.0	+ 2.0	3.4/3.7	5/6	
480	+ 0 2930	9.2	18 42.37	+ 307.39	+ 0.16	+ 0 22 21.9	- 1997.6	+ 2.3	3.0	3	* Alb. - 0.01, + 0.2, 33
481	- 6 3552	9.1	19 2.36	+ 308.71	+ 0.33	+ 7 6 28.2	- 1997.4	+ 2.3	4.0/4.2	4/5	
482	- 3 3277	9.2	21 7.51	+ 308.29	+ 0.27	+ 4 26 37.4	- 1995.7	+ 2.5	2.6	3	

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{d\alpha}{dT}$	$\frac{1}{2} \frac{d^2\alpha}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{1}{2} \frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
505	— 4 3375	9.2	^{h m s} 12 51 44.65	+ 309.98	+ 0.36	^s — 5 3 53.0	— 1953.4	+ 5.5	3.3	3	
506	— 4 3376	9.2	52 1.28	+ 309.96	+ 0.37	— 5 0 17.8	— 1952.9	+ 5.5	2.6	3	
507	— 9 3590	9.1	54 29.70	+ 312.94	+ 0.51	— 10 7 2.7	— 1947.8	+ 5.8	3.3	3	Abb. —0.11, — 0.6, 20 ^y
508	— 10 3583	9.2	55 9.09	+ 313.51	+ 0.53	— 10 59 56.8	— 1946.5	+ 5.8	2.6	3	
509	— 4 3391	9.2	57 11.29	+ 310.48	+ 0.38	— 5 27 41.7	— 1942.2	+ 6.0	3.3	3	
510	— 9 3599	9.1	57 17.01	+ 313.19	+ 0.51	— 10 3 52.5	— 1942.0	+ 6.0	2.5	4	Abb. —0.10, — 0.3, 18
511	— 7 3528	9.2	59 49.00	+ 312.06	+ 0.46	— 7 49 21.5	— 1936.4	+ 6.3	3.3	3	
512	— 4 3404	9.1	^{h m s} 13 0 0.48	+ 310.19	+ 0.38	— 4 43 7.5	— 1936.0	+ 6.3	2.5	4	Abb. —0.11, — 0.4, 18
513	— 11 3435	9.2	2 52.07	+ 315.08	+ 0.59	— 12 5 43.5	— 1929.3	+ 6.6	4.0/4.3	3/4	
514	— 10 3605	9.2	3 0.50	+ 314.34	+ 0.56	— 10 56 6.4	— 1929.0	+ 6.6	4.2/4.3	3	
515	— 10 3621	9.1	6 49.57	+ 314.71	+ 0.56	— 10 53 1.8	— 1919.7	+ 7.0	3.8/4.2	2/3	Mü ₁ —0.05, + 2.6, 91
516	— 1 2780	9.2	7 26.75	+ 308.63	+ 0.32	— 1 55 38.9	— 1918.1	+ 6.9	4.3/4.5	4/5	
517	— 11 3456	9.2	9 30.18	+ 315.86	+ 0.60	— 12 4 34.8	— 1912.8	+ 7.3	5.3	4	
518	— 6 3766	9.2	10 51.61	+ 312.66	+ 0.47	— 7 28 6.4	— 1909.2	+ 7.3	4.3/4.5	4/5	
519	— 8 3515	9.2	12 14.37	+ 313.84	+ 0.52	— 8 56 39.8	— 1905.5	+ 7.5	5.3/5.2	5/2	Abb. —0.04, + 1.4, 22
520	— 11 3472	9.2	14 4.62	+ 316.49	+ 0.61	— 12 10 37.5	— 1900.4	+ 7.7	4.3/4.5	4/5	
521	— 8 3526	9.1	15 17.75	+ 313.79	+ 0.51	— 8 31 32.7	— 1897.1	+ 7.7	5.2	2	Abb. —0.19, + 0.9, 22
522	— 12 3794	9.2	16 57.21	+ 317.47	+ 0.64	— 12 58 31.8	— 1892.3	+ 8.0	4.7/4.4	3/2	
523	— 6 3793	9.2	18 43.05	+ 313.19	+ 0.48	— 7 26 28.1	— 1887.2	+ 8.0	4.2	3	
524	— 12 3799	9.1	19 40.45	+ 318.04	+ 0.65	— 13 15 16.9	— 1884.4	+ 8.3	4.8	4	
525	— 13 3698	9.2	21 31.14	+ 319.14	+ 0.69	— 14 14 47.6	— 1878.8	+ 8.5	3.8	2	
526	— 6 3810	9.1	22 27.46	+ 313.01	+ 0.49	— 6 53 53.1	— 1875.9	+ 8.4	4.7/4.4	3/4	Abb. —0.13, — 0.5, 20
527	— 11 3515	9.2	24 0.92	+ 317.32	+ 0.62	— 11 46 59.2	— 1871.1	+ 8.7	5.3/5.2	3	
528	— 4 3488	9.1	25 14.62	+ 312.00	+ 0.45	— 5 29 29.5	— 1867.2	+ 8.6	4.7/4.4	3/4	Abb. —0.05, + 1.1, 20
529	— 6 3825	9.1	27 14.67	+ 313.71	+ 0.50	— 7 19 48.0	— 1860.8	+ 8.9	4.2	3	
530	— 12 3831	9.2	28 55.42	+ 319.03	+ 0.67	— 13 2 2.5	— 1855.3	+ 9.2	4.8	4	
531	— 6 3836	9.1	29 59.77	+ 313.66	+ 0.50	— 7 3 23.6	— 1851.7	+ 9.2	4.2	3	Abb. —0.12, + 0.4, 21
532	— 8 3582	9.1	31 1.83	+ 315.74	+ 0.56	— 9 14 33.2	— 1848.2	+ 9.3	4.7/4.4	3/4	
533	— 11 3549	9.1	33 10.90	+ 318.86	+ 0.65	— 12 19 8.1	— 1840.9	+ 9.6	4.3	3	
534	— 7 3655	9.2	33 50.97	+ 315.26	+ 0.54	— 8 28 48.0	— 1838.6	+ 9.5	4.7	3	
535	— 14 3763	9.2	35 47.74	+ 321.44	+ 0.71	— 14 35 3.8	— 1831.7	+ 9.9	5.2/4.2	3	
536	— 11 3559	9.1	36 20.22	+ 318.60	+ 0.63	— 11 40 31.3	— 1829.8	+ 9.8	4.8	4	
537	— 9 3748	9.2	38 52.13	+ 316.87	+ 0.58	— 9 41 38.7	— 1820.6	+ 10.0	4.3	3	
538	— 12 3877	9.2	40 23.69	+ 320.37	+ 0.68	— 12 57 53.4	— 1815.0	+ 10.3	4.7/4.8	3/4	
539	— 12 3879	9.1	41 26.11	+ 320.67	+ 0.68	— 13 7 54.1	— 1811.1	+ 10.4	4.3	3	
540	— 13 3766	9.1	43 35.82	+ 322.06	+ 0.72	— 14 10 0.3	— 1803.0	+ 10.6	4.7/4.8	3/4	
541	— 6 3884	9.2	44 53.49	+ 315.01	+ 0.53	— 7 24 37.8	— 1798.0	+ 10.5	4.3	3	
542	— 12 3902	9.2	45 40.55	+ 321.37	+ 0.69	— 13 17 26.6	— 1794.9	+ 10.8	4.7	3	
543	— 8 3645	9.2	47 20.79	+ 316.73	+ 0.57	— 8 51 44.5	— 1788.4	+ 10.7	4.2	3	Abb. —0.06, — 0.6, 20
544	— 12 3909	9.2	48 9.65	+ 321.43	+ 0.69	— 13 3 49.8	— 1785.2	+ 11.0	4.7	3	
545	— 9 3794	9.2	50 25.14	+ 317.76	+ 0.60	— 9 34 13.7	— 1776.1	+ 11.0	4.8/5.3	4/3	Abb. —0.37, — 0.3, 21
546	— 15 3758	9.2	50 44.64	+ 325.26	+ 0.78	— 16 6 43.5	— 1774.8	+ 11.4	5.3	3	
547	— 8 3670	9.2	54 5.06	+ 317.52	+ 0.59	— 9 4 33.0	— 1761.0	+ 11.4	5.3	3	
548	— 11 3639	9.1	54 29.56	+ 321.45	+ 0.68	— 12 26 49.2	— 1759.3	+ 11.6	4.8	4	
549	— 9 3827	9.1	57 7.07	+ 319.08	+ 0.62	— 10 11 38.5	— 1748.3	+ 11.7	5.3	3	
550	— 12 3935	9.2	58 3.75	+ 322.92	+ 0.70	— 13 19 34.5	— 1744.1	+ 11.9	4.7/4.8	3/4	
551	— 15 3791	9.1	59 50.76	+ 326.64	+ 0.79	— 16 8 36.5	— 1736.4	+ 12.3	5.3	3	
552	— 17 3989	9.1	^{h m s} 14 0 52.34	+ 329.42	+ 0.85	— 18 11 50.1	— 1732.0	+ 12.4	4.4	2	
553	— 8 3690	9.2	2 1.37	+ 317.48	+ 0.58	— 8 30 48.6	— 1726.8	+ 12.1	5.3	3	
554	— 9 3853	9.1	4 16.75	+ 318.94	+ 0.60	— 9 33 32.0	— 1716.8	+ 12.3	4.7/4.0	3	Abb. —0.08, + 0.6, 21
555	— 6 3936	9.2	4 38.19	+ 316.28	+ 0.55	— 7 22 40.6	— 1715.1	+ 12.3	5.3	3	
556	— 17 4019	9.1	6 53.14	+ 330.28	+ 0.86	— 18 5 29.5					

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{d\alpha}{dT}$	$\frac{d^2\alpha}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities	
577	— 16 3925	9.2	^{h m s} 14 40 52.59	^s + 334.22	^s + 0.83	— 17 18 38.0	— 1530.4	+ 16.1	4.4/4.6	2/5	* B _{g1}	— 0.09, — 2.3, 20 ^y
578	— 14 4018	9.2	42 7.40	+ 330.04	+ 0.75	— 14 39 29.5	— 1523.3	+ 16.0	3.9/5.3	2		
579	— 15 3945	9.1	43 15.15	+ 331.59	+ 0.78	— 15 31 38.4	— 1516.9	+ 16.1	5.4	1		
580	— 11 3806	9.1	45 8.51	+ 326.63	+ 0.69	— 12 20 57.4	— 1506.1	+ 16.0	4.4/5.3	3		
581	— 16 3943	9.1	46 16.69	+ 333.95	+ 0.81	— 16 43 6.8	— 1499.5	+ 16.4	3.4	1		
582	— 17 4197	9.1	48 48.13	+ 337.03	+ 0.85	— 18 18 40.0	— 1484.8	+ 16.7	4.4/5.3	3		
583	— 10 3975	9.1	49 16.27	+ 325.02	+ 0.66	— 11 7 55.7	— 1482.0	+ 16.3	4.4	4		
584	— 14 4064	9.1	51 32.94	+ 332.06	+ 0.76	— 15 13 18.7	— 1468.5	+ 16.8	4.4/5.3	3		
585	— 16 3964	9.1	52 30.11	+ 335.67	+ 0.81	— 17 14 28.2	— 1462.8	+ 17.0	4.7/4.1	3		
586	— 13 4023	9.2	54 4.86	+ 330.76	+ 0.73	— 14 17 24.3	— 1453.4	+ 16.8	4.4/5.3	3		
587	— 15 3991	9.2	54 25.36	+ 333.29	+ 0.77	— 15 43 47.4	— 1451.3	+ 17.0	4.4	2	* B _{g1}	0.00, — 0.7, 20
588	— 14 4083	9.2	56 38.48	+ 332.81	+ 0.76	— 15 18 36.6	— 1437.8	+ 17.2	4.4/5.3	3		
589	— 16 3976	9.1	56 40.34	+ 335.14	+ 0.79	— 16 38 12.5	— 1437.7	+ 17.3	4.7/4.1	3		
590	— 14 4091	9.1	59 7.05	+ 331.82	+ 0.73	— 14 35 5.6	— 1422.7	+ 17.3	4.4	4/3		
591	— 16 3989	9.1	59 56.08	+ 336.02	+ 0.80	— 16 53 38.7	— 1417.6	+ 17.6	4.4/5.4	2/3		
592	— 11 3867	9.2	^{h m s} 15 1 13.10	+ 326.94	+ 0.66	— 11 39 57.6	— 1409.7	+ 17.3	4.1	3		
593	— 14 4115	9.2	3 5.97	+ 333.22	+ 0.74	— 15 8 0.9	— 1398.0	+ 17.7	3.1/4.4	4/2		
594	— 15 4027	9.1	3 55.40	+ 334.79	+ 0.76	— 15 57 1.9	— 1392.8	+ 17.8	4.4	7/5		
595	— 14 4129	9.1	6 41.13	+ 333.43	+ 0.73	— 15 2 6.1	— 1375.3	+ 17.9	3.1/4.4	4/2		
596	— 14 4130	9.2	6 44.20	+ 332.34	+ 0.72	— 14 25 40.3	— 1375.0	+ 17.9	4.2/4.7	5/3	Lick XV	— 0.02, 0.0, 12
597	— 13 4100	9.2	9 4.57	+ 331.80	+ 0.70	— 14 0 9.8	— 1360.0	+ 18.0	5.3	3		
598	— 13 4103	9.2	9 28.04	+ 331.83	+ 0.70	— 13 59 51.8	— 1357.4	+ 18.0	3.4/3.8	2/3		
599	— 16 4036	9.1	11 24.02	+ 337.06	+ 0.77	— 16 42 12.2	— 1345.0	+ 18.5	3.1/4.4	4/3		
600	— 16 4037	9.2	12 6.83	+ 336.88	+ 0.76	— 16 34 1.9	— 1340.4	+ 18.5	4.4/4.5	7/6		
601	— 17 4293	9.2	14 6.34	+ 339.13	+ 0.78	— 17 37 21.3	— 1327.3	+ 18.8	3.4/4.4	3		
602	— 17 4302	9.2	16 41.16	+ 339.54	+ 0.78	— 17 40 33.1	— 1310.4	+ 18.9	4.4	3		
603	— 12 4237	9.1	16 59.66	+ 330.96	+ 0.67	— 13 8 29.0	— 1308.4	+ 18.6	4.5/4.4	8/5		
604	— 12 4241	9.2	18 36.74	+ 330.31	+ 0.66	— 12 43 5.7	— 1297.6	+ 18.6	3.9/4.6	2/4		
605	— 15 4103	9.1	22 57.31	+ 336.11	+ 0.71	— 15 32 57.5	— 1268.4	+ 19.3	3.4/4.4	4/3	Lick XV	— 0.02, 0.0, 12
606	— 16 4090	9.2	25 28.46	+ 338.76	+ 0.74	— 16 45 31.5	— 1251.3	+ 19.5	2.4	2/3		
607	— 15 4119	9.2	25 57.13	+ 336.22	+ 0.71	— 15 26 45.8	— 1248.0	+ 19.4	5.3/4.7	2/3		
608	— 16 4103	9.1	28 49.02	+ 339.88	+ 0.74	— 17 8 1.3	— 1228.3	+ 19.8	2.4	3/4		
609	— 16 4105	9.2	29 18.43	+ 338.36	+ 0.72	— 16 21 15.5	— 1224.9	+ 19.8	4.6	5/4		
610	— 14 4234	9.2	31 30.23	+ 336.48	+ 0.69	— 15 18 22.1	— 1209.7	+ 19.8	2.8/2.4	5/3		
611	— 16 4121	9.1	34 12.39	+ 339.81	+ 0.72	— 16 48 51.6	— 1190.8	+ 20.1	3.9/3.4	2/3		
612	— 16 4125	9.2	35 39.78	+ 339.06	+ 0.71	— 16 22 32.6	— 1180.4	+ 20.2	4.5/5.3	2		
613	— 17 4395	9.2	37 27.44	+ 341.27	+ 0.73	— 17 21 40.9	— 1167.8	+ 20.5	2.4	4/5		
614	— 14 4256	9.2	37 29.60	+ 335.16	+ 0.66	— 14 22 0.5	— 1167.5	+ 20.1	5.0/5.3	3/2	Lick XV	— 0.02, 0.0, 12
615	— 17 4406	9.1	40 17.89	+ 343.33	+ 0.74	— 18 11 21.2	— 1147.4	+ 20.8	2.4	4		
616	— 15 4175	9.2	41 55.32	+ 337.79	+ 0.67	— 15 28 7.7	— 1135.8	+ 20.5	4.4/5.3	2/3		
617	— 14 4274	9.1	42 55.37	+ 335.99	+ 0.65	— 14 33 13.2	— 1128.6	+ 20.5	2.4	4/5		
618	— 16 4158	9.1	44 2.72	+ 340.01	+ 0.68	— 16 26 5.1	— 1120.4	+ 20.8	5.1/5.3	3		
619	— 17 4429	9.1	45 59.48	+ 343.26	+ 0.72	— 17 52 21.2	— 1106.3	+ 21.1	2.4/2.5	2/3		
620	— 17 4433	9.2	47 20.05	+ 343.82	+ 0.72	— 18 4 7.0	— 1096.5	+ 21.2	4.9/5.1	4		
621	— 15 4214	9.1	52 37.30	+ 338.66	+ 0.64	— 15 25 57.8	— 1057.5	+ 21.2	2.4	4		
622	— 15 4215	9.2	53 9.86	+ 340.29	+ 0.65	— 16 10 4.7	— 1053.4	+ 21.3	4.7/5.3	3		
623	— 1											

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{d\alpha}{dT}$	$\frac{1}{2} \frac{d^2\alpha}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{1}{2} \frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
649	— 17 5865	9'2	^{h m s} 20 5 9'15	+ 342'17	— 0'49	— 16 58 12'2	+ 1040'9	+ 21'1	3'7/3'8	7/8	
650	— 15 5573	9'1	8 14'54	+ 337'38	— 0'46	— 14 51 54'2	+ 1063'9	+ 20'6	3'8	4/6	
651	— 15 5588	9'1	11 13'60	+ 338'27	— 0'48	— 15 24 15'0	+ 1085'9	+ 20'5	3'9/3'8	6/8	
652	— 15 5609	9'1	14 29'55	+ 337'82	— 0'48	— 15 19 31'6	+ 1109'8	+ 20'3	4'1/4'2	4/6	
653	— 17 5933	9'1	16 7'47	+ 342'00	— 0'54	— 17 23 6'4	+ 1121'7	+ 20'4	4'6	5/3	
654	— 15 5624	9'1	17 43'31	+ 336'43	— 0'48	— 14 47 22'5	+ 1133'2	+ 20'0	3'8/2'9	5/4	
655	— 15 5633	9'2	18 45'94	+ 337'19	— 0'49	— 15 12 16'7	+ 1140'7	+ 20'0	4'6	4/5	
656	— 15 5644	9'2	20 31'29	+ 337'94	— 0'50	— 15 38 54'7	+ 1153'4	+ 19'9	4'1/3'6	4/3	
657	— 15 5650	9'1	21 34'89	+ 337'47	— 0'51	— 15 27 54'9	+ 1160'9	+ 19'8	4'7/4'6	5/4	
658	— 15 5659	9'2	23 1'68	+ 335'95	— 0'50	— 14 47 14'9	+ 1171'2	+ 19'6	3'9/3'1	7/3	
659	— 14 5749	9'1	24 44'85	+ 335'18	— 0'49	— 14 28 49'4	+ 1183'3	+ 19'5	4'6	7/5	
660	— 14 5756	9'2	25 47'54	+ 335'11	— 0'50	— 14 29 38'9	+ 1190'7	+ 19'4	4'2/3'4	7/4	
661	— 15 5693	9'1	27 29'45	+ 336'52	— 0'52	— 15 16 53'6	+ 1202'6	+ 19'4	4'6	4/5	
662	— 14 5778	9'1	30 28'70	+ 334'21	— 0'50	— 14 15 10'6	+ 1223'5	+ 19'0	3'7/2'4	4/3	
663	— 15 5711	9'1	30 48'15	+ 336'82	— 0'53	— 15 35 14'5	+ 1225'7	+ 19'2	4'4/4'3	5/6	
664	— 14 5795	9'1	33 20'39	+ 333'90	— 0'50	— 14 13 37'9	+ 1243'2	+ 18'8	3'9/2'4	8/4	
665	— 15 5733	9'1	34 54'14	+ 336'06	— 0'54	— 15 24 37'8	+ 1253'8	+ 18'9	4'2/4'1	6	
666	— 13 5729	9'1	37 51'03	+ 332'05	— 0'49	— 13 28 57'9	+ 1273'9	+ 18'4	3'7	2/4	
667	— 14 5816	9'1	38 32'56	+ 332'95	— 0'51	— 13 58 50'5	+ 1278'5	+ 18'4	4'6	4	
668	— 13 5743	9'1	40 50'16	+ 332'04	— 0'50	— 13 37 2'4	+ 1293'9	+ 18'2	2'7/3'4	2/3	
669	— 13 5746	9'1	41 29'49	+ 331'93	— 0'50	— 13 35 11'5	+ 1298'3	+ 18'2	4'5/4'6	3/4	
670	— 13 5754	9'1	43 40'11	+ 330'16	— 0'48	— 12 44 50'3	+ 1312'7	+ 17'9	2'7/2'4	3/4	
671	— 15 5789	9'1	44 6'60	+ 334'62	— 0'55	— 15 9 6'7	+ 1315'6	+ 18'1	4'1/4'2	6/7	
672	— 13 5768	9'1	46 57'80	+ 330'92	— 0'51	— 13 18 47'8	+ 1334'4	+ 17'7	3'6/2'4	6/4	
673	— 12 5850	9'2	48 0'49	+ 329'23	— 0'49	— 12 26 30'4	+ 1341'1	+ 17'6	4'3/4'0	6/8	
674	— 13 5781	9'1	50 0'74	+ 330'83	— 0'51	— 13 25 21'6	+ 1354'1	+ 17'5	3'6/2'4	6/4	
675	— 13 5787	9'1	51 19'75	+ 330'35	— 0'51	— 13 13 12'6	+ 1362'6	+ 17'4	4'2/4'3	6/8	
676	— 12 5864	9'2	52 45'45	+ 328'50	— 0'49	— 12 15 57'5	+ 1371'8	+ 17'2	2'7/2'9	3/5	
677	— 16 5733	9'1	53 39'41	+ 334'53	— 0'58	— 15 39 36'1	+ 1377'5	+ 17'4	4'4/4'5	4/7	
678	— 12 5878	9'1	55 23'60	+ 328'89	— 0'50	— 12 37 3'0	+ 1388'4	+ 17'0	3'3/2'7	6/3	
679	— 11 5494	9'1	57 56'73	+ 326'66	— 0'48	— 11 27 57'1	+ 1404'4	+ 16'7	4'7/4'6	3/5	
680	— 14 5909	9'1	58 37'24	+ 332'04	— 0'55	— 14 34 37'7	+ 1408'7	+ 16'9	3'1	3	
681	— 12 5897	9'2	^{h m s} 21 1 1'88	+ 327'60	— 0'49	— 12 10 9'3	+ 1423'6	+ 16'5	4'4/4'5	4/7	Bg ₁
682	— 12 5898	9'1	1 28'06	+ 327'55	— 0'49	— 12 9 32'4	+ 1426'3	+ 16'5	3'2/2'5	4/5	Bg ₁
683	— 14 5935	9'4	4 18'93	+ 331'44	— 0'56	— 14 35 0'3	+ 1443'6	+ 16'4	4'7/4'4	3/4	
684	— 15 5893	9'2	4 42'48	+ 331'87	— 0'57	— 14 51 42'2	+ 1446'0	+ 16'4	2'7/3'2	3/4	
685	— 12 5919	9'2	7 2'45	+ 327'01	— 0'50	— 12 8 23'0	+ 1460'1	+ 16'1	2'7	3	
686	— 11 5539	9'2	7 28'13	+ 325'52	— 0'48	— 11 15 37'9	+ 1462'7	+ 15'9	4'1/4'2	3/7	
687	— 13 5877	9'1	10 22'90	+ 328'11	— 0'52	— 12 59 44'0	+ 1479'9	+ 15'9	2'7/3'2	3/4	
688	— 14 5965	9'1	10 32'05	+ 330'73	— 0'56	— 14 34 17'2	+ 1480'9	+ 16'0	4'0/4'4	4	
689	— 13 5890	9'2	12 57'37	+ 328'36	— 0'54	— 13 17 55'4	+ 1495'0	+ 15'6	3'1	3	
690	— 14 5979	9'1	13 33'93	+ 329'85	— 0'56	— 14 14 28'7	+ 1498'6	+ 15'7	5'2/4'6	2/5	
691	— 13 5902	9'1	16 26'48	+ 327'50	— 0'53	— 12 59 30'6	+ 1515'1	+ 15'3	2'4/3'0	3/4	
692	— 11 5569	9'2	16 38'43	+ 324'60	— 0'48	— 11 10 44'1	+ 1516'3	+ 15'1	4'4/3'9	3	
693	— 10 5655	9'2	18 39'60	+ 322'63	— 0'45	— 10 2 0'9	+ 1527'8	+ 14'9	4'4/3'9	3	
694	— 15 5971	9'1	20 11'02	+ 329'69	— 0'57	— 14 36 30'3	+ 1536'4	+ 15'1	2'4/3'0	3/4	
695	— 13 5925	9'2	22 8'73	+ 326'90	— 0'53	— 12 58 50'2	+ 1547'4	+ 14'8	4'1	3/4	
696	— 13 5926	9'2	22 41'67	+ 326'50	— 0'52	— 12 45 48'4	+ 1550'4	+ 14'7	2'4/3'0	3/4	
697	— 13 5933	9'2	25 8'39	+ 326'39	— 0'53	— 12 50 48'2	+ 1563'9	+ 14'6	4'1/4'2	3/5	
698	— 13 5942	9'1	26 40'29	+ 326'77	— 0'54	— 13 11 55'1	+ 1572'2	+ 14'5	3'0	4	
699	— 13 5949	9'2	27 57'18	+ 326'98	— 0'54	— 13 26 12'4	+ 1579'2	+ 14'4	5'0/4'6	3	
700	— 12 6027	9'2	29 43'30	+ 324'59	— 0'51	— 11 57 57'4	+ 1588'6	+			

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{dz}{dT}$	$\frac{1}{2} \frac{d^2z}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{1}{2} \frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
721	— 10 5829	9.2	^{h m s} 22 2 50.89	^s + 318.61	— 0.43	^{° ' "} — 9 47 29.5	+ 1748.1	+ 11.0	4.1/4.7	3	* Bg ₁ — 0.08, — 1.1, 19
722	— 13 6096	9.1	3 42.17	+ 322.31	— 0.52	— 12 59 56.8	+ 1751.7	+ 11.1	2.6	5	
723	— 11 5759	9.2	5 18.25	+ 319.99	— 0.47	— 11 10 23.2	+ 1758.4	+ 10.8	4.7	2/3	
724	— 11 5760	9.1	5 29.14	+ 319.96	— 0.47	— 11 10 3.3	+ 1759.2	+ 10.8	2.9	1	
725	— 12 6100	9.2	6 33.00	+ 320.80	— 0.49	— 11 59 25.9	+ 1763.7	+ 10.7	2.9/3.0	6	
726	— 10 5854	9.1	8 17.14	+ 317.98	— 0.42	— 9 39 26.3	+ 1770.8	+ 10.5	4.7/4.2	4	
727	— 13 6129	9.2	9 50.21	+ 321.42	— 0.51	— 12 51 32.5	+ 1777.2	+ 10.5	2.9/2.8	6/7	
728	— 13 6135	9.2	11 7.93	+ 321.96	— 0.52	— 13 28 1.4	+ 1782.4	+ 10.4	4.1/4.2	3/4	
729	— 7 5734	9.1	12 39.49	+ 314.73	— 0.34	— 7 0 8.4	+ 1788.4	+ 10.0	3.2/2.5	5/6	
730	— 6 5954	9.1	14 0.89	+ 314.01	— 0.33	— 6 23 42.8	+ 1793.8	+ 9.9	4.1/4.2	3/4	Abb. — 0.15, — 0.2, 21
731	— 5 5752	9.1	15 40.81	+ 312.82	— 0.30	— 5 20 16.0	+ 1800.2	+ 9.7	3.5/2.8	4	
732	— 10 5888	9.2	17 52.66	+ 317.69	— 0.42	— 10 12 3.1	+ 1808.6	+ 9.6	3.8/4.2	2/3	
733	— 12 6252	9.2	18 45.12	+ 319.74	— 0.48	— 12 15 36.1	+ 1811.9	+ 9.6	4.4/1.8	3	
734	— 6 5983	9.1	21 30.53	+ 313.43	— 0.31	— 6 15 23.8	+ 1822.0	+ 9.1	4.7/4.2	4/3	
735	— 7 5768	9.1	21 37.74	+ 313.95	— 0.32	— 6 47 42.9	+ 1822.5	+ 9.2	3.1	3	Abb. — 0.06, + 0.4, 18
736	— 6 5993	9.2	24 5.87	+ 313.40	— 0.31	— 6 22 59.7	+ 1831.3	+ 8.9	4.7/4.2	4/3	
737	— 5 5794	9.2	24 19.20	+ 311.88	— 0.27	— 4 48 50.6	+ 1832.1	+ 8.8	3.1	3	
738	— 6 6002	9.1	26 49.35	+ 313.08	— 0.30	— 6 12 53.5	+ 1840.9	+ 8.7	4.1/3.9	3/2	Abb. — 0.10, — 0.4, 20
739	— 11 5847	9.1	27 44.98	+ 317.78	— 0.43	— 11 17 35.2	+ 1844.1	+ 8.7	3.3/3.1	4/3	
740	— 4 5692	9.2	29 31.84	+ 311.30	— 0.25	— 4 25 37.6	+ 1850.1	+ 8.4	4.1/4.3	3/4	Be ₁₂ + 0.07, + 0.1, 30
741	— 5 5812	9.2	30 40.01	+ 311.97	— 0.27	— 5 13 31.6	+ 1853.9	+ 8.3	3.8/3.1	3	
742	— 5 5818	9.2	32 42.53	+ 311.72	— 0.26	— 5 3 29.2	+ 1860.6	+ 8.0	5.4/4.8	3	
743	— 6 6026	9.1	33 35.82	+ 312.44	— 0.28	— 5 56 37.0	+ 1863.5	+ 8.0	2.8/3.1	3	Abb. — 0.14, + 0.2, 18
744	— 4 5718	9.1	35 59.57	+ 310.70	— 0.23	— 4 1 57.9	+ 1871.1	+ 7.7	5.4/4.8	3	
745	— 11 5889	9.1	36 24.52	+ 316.81	— 0.42	— 11 15 22.8	+ 1872.4	+ 7.8	2.2/3.5	3	
746	— 13 6243	9.2	38 54.02	+ 317.84	— 0.47	— 12 47 34.8	+ 1880.1	+ 7.6	5.2/4.7	4/3	
747	— 3 5488	9.1	39 22.61	+ 309.81	— 0.20	— 3 5 47.6	+ 1881.5	+ 7.4	2.2	3	Abb. — 0.08, 0.0, 19
748	— 14 6335	9.2	41 42.49	+ 318.25	— 0.49	— 13 42 10.8	+ 1888.5	+ 7.4	5.3/4.8	2/3	
749	— 4 5751	9.2	42 50.64	+ 310.48	— 0.22	— 4 5 51.6	+ 1891.8	+ 7.1	3.2/2.2	5/3	
750	— 10 5987	9.2	44 9.37	+ 314.94	— 0.37	— 9 57 0.8	+ 1895.5	+ 7.1	5.2/4.8	4/3	
751	— 6 6071	9.2	45 17.53	+ 311.57	— 0.25	— 5 40 3.9	+ 1898.7	+ 6.9	3.2/2.2	5/3	
752	— 5 5871	9.2	47 21.78	+ 311.09	— 0.23	— 5 9 47.0	+ 1904.4	+ 6.7	5.2/4.7	4/2	Abb. 0.00, + 0.7, 22
753	— 8 5966	9.2	48 44.54	+ 312.72	— 0.29	— 7 31 12.9	+ 1908.2	+ 6.6	3.5/2.2	4/3	A.G.W.O. + 0.03, — 0.9, 38
754	— 8 5969	9.2	50 18.94	+ 313.29	— 0.32	— 8 29 4.3	+ 1912.3	+ 6.5	4.1/4.3	3/4	
755	— 10 6015	9.2	51 28.39	+ 314.02	— 0.35	— 9 39 23.0	+ 1915.3	+ 6.4	3.2/2.4	5/4	
756	— 5 5887	9.2	53 29.34	+ 310.95	— 0.23	— 5 24 39.3	+ 1920.4	+ 6.1	4.1/4.3	3/4	Abb. — 0.02, + 0.3, 21
757	— 2 5856	9.1	54 30.68	+ 308.72	— 0.14	— 2 7 15.1	+ 1923.0	+ 6.0	3.2/2.4	5/4	* Abb. 0.00, — 1.1, 26
758	— 8 5993	9.1	56 41.25	+ 312.65	— 0.29	— 8 18 41.6	+ 1928.3	+ 5.8	4.1/4.3	3/4	
759	— 7 5993	9.2	57 10.06	+ 311.54	— 0.25	— 6 38 37.9	+ 1929.4	+ 5.8	2.2/2.4	3/4	
760	— 12 6400	9.2	59 32.92	+ 314.48	— 0.38	— 11 35 50.4	+ 1935.0	+ 5.6	4.1/3.8	3/2	
761	— 4 5813	9.1	²³ 1 38.48	+ 309.71	— 0.17	— 4 3 36.1	+ 1939.6	+ 5.3	2.2/2.3	5/6	
762	— 4 5817	9.1	2 16.91	+ 309.67	— 0.17	— 4 1 29.5	+ 1941.0	+ 5.2	4.1/4.2	3	
763	— 9 6124	9.2	4 52.95	+ 312.32	— 0.30	— 8 55 25.0	+ 1946.6	+ 5.0	2.2	5	
764	— 2 5887	9.2	5 18.04	+ 308.38	— 0.11	— 1 55 0.5	+ 1947.5	+ 4.9	5.7/3.8	1/2	
765	— 5 5940	9.1	8 3.54	+ 310.14	— 0.19	— 5 21 20.3	+ 1953.0	+ 4.7	2.2	5/6	Abb. — 0.10, — 0.6, 18
766	— 8 6042	9.2	8 13.88	+ 311.56	— 0.26	— 8 3 39.0	+ 1953.3	+ 4.7	4.1/4.3	3/4	
767	+ 0 4979	9.1	11 2.29	+ 307.03	— 0.03	+ 0 35 32.1	+ 1958.7	+ 4.3	2.2/2.4	5/7	
768	— 11 6029	9.1	11 21.35	+ 312.92	— 0.35	— 11 15 7.9	+ 1959.3	+ 4.4	4.1/4.3	3/4	
769	— 6 6183	9.2	14 47.79	+ 310.25	— 0.20	— 6 23 4.9	+ 1965.4	+ 4.0	2.3	6/8	
770	— 4 5862	9.1	15 29.59	+ 308.97	— 0.13	— 3 39 13.7	+ 1966.6	+ 4.0	4.1/4.3	3/4	Abb. — 0.23, + 0.4, 21
771	— 10 6096	9.2	18 0.62	+ 311.59	— 0.29</						

No.	B.D. No.	Mag.	R.A. 1950°0	$\frac{d\alpha}{dT}$	$\frac{1}{2} \frac{d^2\alpha}{dT^2}$	Decl. 1950°0	$\frac{d\delta}{dT}$	$\frac{1}{2} \frac{d^2\delta}{dT^2}$	Ep.	No.	Authorities
793	— 5 6074	9'2	^{h m s} 23 51 12'67	+ 307'76	— 0'06	— 4 49 56'5	+ 2002'8	+ 0'5	2'6/2'7	4/5	* Abb. Abb. Kü ₀₀
794	— 3 5731	9'1	53 1'90	+ 307'51	— 0'00	— 2 36 29'2	+ 2003'3	+ 0'3	5'7/5'1	2/3	
795	— 2 6064	9'2	54 21'12	+ 307'46	+ 0'01	— 2 24 13'8	+ 2003'7	+ 0'2	2'7	5	
796	— 6 6331	9'1	55 50'69	+ 307'59	— 0'08	— 6 15 46'3	+ 2003'9	0'0	5'7/5'1	2/3	
797	+ 0 5078	9'1	57 32'71	+ 307'30	+ 0'11	+ 1 3 12'6	+ 2004'2	— 0'2	2'7	5	
798	— 6 6344	9'1	59 15'48	+ 307'37	— 0'06	— 5 47 9'9	+ 2004'3	— 0'3	5'7/5'1	2/3	

Additional differences with other catalogues.

no.		^s	["]	^y	no.		^s	["]	^y
5	Rü	+ 0'34,	+ 1'1,	89	205	Bg ₁	+ 0'01,	— 1'3,	11
	Alb.	+ 0'11,	0'0,	36		Bru XIII	— 0'06,	— 0'8,	28
9	Bo VI	— 0'37,	— 1'9,	68	226	La	+ 0'44,	— 2'9,	135
	Bg ₁	— 0'08,	— 0'3,	18	228	Bru XIII	— 0'08,	— 0'3,	24
12	Alb.	0'00,	— 0'8,	35	231	Cp ₀₀	— 0'03,	— 0'9,	32
15	Leipz. Heft I	— 0'13,	— 1'8,	55	268	Bo VI	— 0'23,	+ 1'3,	75
17	Alb.	+ 0'02,	— 0'8,	35	286	Bord ₂	— 0'06,	— 0'8,	37
	Bg ₁	— 0'01,	— 0'4,	16	296	Bo VI	+ 0'05,	— 1'6,	74
20	Bo VI	+ 0'41,	— 5'0,	76	322	Bord ₂	+ 0'04,	+ 0'1,	37
	Alb.	+ 0'15,	— 0'4,	33	340	Bord ₂	+ 0'08,	— 0'5,	30
29	Abb.	— 0'01,	— 0'4,	24	342	W ₂	— 0'24,	— 2'7,	110
30	Lei XV, 4	+ 0'01,	— 0'8,	9, S.A. standard star	352	Bord ₂	+ 0'10,	— 1'1,	28
45	Bord ₂	— 0'06,	+ 0'3,	28	354	Bord ₂	— 0'06,	— 1'3,	36
47	A.G. Leipz. II	— 0'12,	— 0'5,	48	363	Bru XIII	— 0'09,	— 2'0,	26
57	Rü	+ 0'25,	+ 4'5,	86	364	Lei XV, 4	+ 0'01,	— 0'2,	9, S.A. standard star
	Bg ₁	0'00,	+ 0'7,	17	369	Bord ₂	— 0'21,	— 0'2,	38
58	Bord ₂	— 0'06,	— 1'4,	29	377	Bord ₂	— 0'09,	— 0'8,	36
59	Bord ₂	+ 0'11,	+ 0'9,	34	387	Bord ₂	— 0'03,	+ 0'4,	27
61	Bo VI	+ 0'04,	— 2'3,	76	390	Bord ₂	— 0'01,	— 1'4,	26
68	Bord ₂	+ 0'22,	— 0'2,	30	392	Bab V, 5	— 0'05,	— 0'5,	9
69	Bord ₂	+ 0'01,	+ 0'3,	24	397	Bo VI	— 0'07,	— 1'0,	75
76	Rü	+ 0'35,	+ 1'3,	81	397	Bord ₂	— 0'05,	— 0'8,	30
78	Bord ₂	— 0'08,	+ 0'2,	27	398	Bord ₂	0'00,	— 0'7,	28
82	Bo VI	+ 0'01,	— 2'8,	67	399	W ₁	— 0'29,	— 8'1,	109
	Bord ₂	+ 0'15,	— 0'8,	34	407	Bord ₂	0'00,	+ 0'2,	35
83	Bord ₂	0'00,	— 1'1,	31		Bg ₁	— 0'02,	+ 0'1,	18
103	W ₂	— 0'11,	+ 1'8,	110	431	Leipz. Heft I	— 0'17,	+ 0'9,	52
113	Abb.	— 0'09,	— 1'8,	31	444	Bo VI	— 0'26,	+ 2'1,	76
117	Bo VI	+ 0'32,	+ 1'1,	75	449	Bo VI	— 0'39,	+ 1'9,	76
118	Rü	+ 0'37,	— 7'0,	85	462	Lei XV, 4	+ 0'01,	— 0'9,	8, S.A. standard star
119	Rü	+ 0'19,	— 3'2,	85	463	Bo VI	— 0'02,	— 1'6,	70
141	W ₂	— 0'26,	— 3'9,	112	480	Bo VI	— 0'14,	+ 2'8,	71
	Abb.	+ 0'04,	0'0,	29	565	Rü	— 0'13,	+ 2'5,	87
147	Abb.	— 0'04,	— 0'9,	30	573	Rü	— 0'05,	+ 1'7,	86
148	Bord ₂	— 0'03,	— 1'1,	34	580	Rü	— 0'58,	— 4'8,	86
153	Bord ₂	+ 0'07,	— 0'6,	33	592	Rü	— 0'10,	— 2'1,	86
157	Bord ₂	+ 0'03,	— 0'6,	32	721	Rü	+ 0'28,	— 5'4,	82
160	Gr ₁₀	+ 0'04,	— 1'6,	19		Melb ₃	— 0'09,	— 3'6,	43
163	Bo VI	— 0'28,	— 2'2,	78	757	Mü	+ 0'39,	— 8'5,	92
172	Gr ₁₀	— 0'02,	— 1'6,	19		Cp ₀₀	+ 0'09,	— 1'8,	30
185	Bo VI	— 0'12,	+ 1'4,	74	781	Alb.	+ 0'01,	— 0'3,	32
193	Bo VI	+ 0'38,	— 2'0,	74		Abb.	— 0'08,	+ 0'7,	23
197	Bord ₂	+ 0'04,	— 1'0,	36	791	Abb.	— 0'07,	— 0'9,	24
					794	Abb.	— 0'06,	— 2'1,	22