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**RESULTS OF OBSERVATIONS MADE WITH THE  
OTTAWA REVERSIBLE MERIDIAN CIRCLE**

**1954-1962**

**CATALOGUE OF 2665 STARS**

**E. G. Woolsey**

*Price \$1.25*

# Results of Observations Made with the Ottawa Reversible Meridian Circle 1954-1962

## Catalogue of 2665 Stars

E. G. Woolsey

**ABSTRACT:** This catalogue contains the results of observations made at Ottawa with the Reversible Meridian Circle during the period January 1954 to December 1962. The program consists of 1142 FK3 (Supp.) stars, 160 Ottawa zenith stars and 255 additional stars. The additional stars include the FK3 stars omitted from the Apparent Places of Fundamental Stars, Kopff's replacement stars and stars from the Galactic Research list of Blaauw and Parenago. The published positions were determined differentially using the 1108 FK3 stars whose declinations are greater than  $-27^{\circ}30'$  and whose positions are published in the APFS.

The catalogue also gives the relative corrections to the fundamental stars in the form observed minus FK3 position. The program stars were observed at least six times: the probable error of a single observation is  $\pm 28$  in right ascension and  $\pm 34$  in declination.

**Résumé:** Le présent catalogue renferme les résultats des observations faites à Ottawa, à l'aide du cercle méridien réversible, de janvier 1954 à décembre 1962. L'étude a porté sur 1,142 étoiles FK3 (Supp.), 160 zénithales à Ottawa et 255 autres étoiles. Ces dernières comprennent les étoiles FK3 omises de l'*Apparent Places of Fundamental Stars*, les étoiles de remplacement de Kopff et celles qui sont énumérées dans la liste du *Galactic Research* de Blaauw et Parenago. Les positions indiquées ont été déterminées de façon différentielle et on a utilisé les 1,108 étoiles FK3 dont les déclinaisons sont supérieures à  $-27^{\circ}30'$  et dont les positions ont été publiées dans l'APFS. Le catalogue donne aussi les corrections relatives aux étoiles fondamentales comme elles ont été observées, moins les positions données au FK3. Les étoiles à l'étude ont été observées au moins six fois: l'erreur probable d'une observation est de  $\pm 28$  en ascension droite et de  $\pm 34$  en déclinaison.

### INTRODUCTION

This is the final catalogue of observations with the Ottawa Reversible Meridian Circle. Observations on this instrument ceased in December 1962 and the instrument has been dismantled to make way for a new time-laboratory. The work on star positions at Ottawa will continue but will be done using the new Mirror Transit which is being brought into operation.

The principal program undertaken was the observation of the FK3 (Supp.) stars for the northern sky. Modern observation on these stars had been requested so that their positions and proper motions could be determined with sufficient accuracy to permit them to be included in the Fundamental Catalogue. Along with these stars, the re-observation of the Ottawa PZT stars was undertaken to check their relation to the Fundamental Catalogue and to determine any periodic errors in the meridian circle results.

In order to produce this catalogue in an easily usable form, each group of stars has been published as

a unit. The first part deals with the fundamental or FK3 stars, the second with the FK3 (Supp.) stars, the third with our own PZT stars, and finally the remainder of the stars observed. The positions are not given for the FK3 stars but are given in the form observed minus FK3 along with the number and epoch of the observations.

The observers were:

E.G. Woolsey . . . . . Jan. 1954 to Dec. 1962  
R.W. Tanner . . . . . Jan. 1954 to Dec. 1962  
I. Halliday . . . . . Jan. 1954 to Nov. 1954  
G.A. Brealey . . . . . June 1954 to Sept. 1961  
M.O. Wheeler . . . . . July 1955 to Dec. 1962  
R.A. Constanzo . . . . . Apr. 1959 to Sept. 1959

Assisting in the reductions were Miss O. Boshko, Mrs. B. Crawford, Mrs. B. Dell and a number of summer assistants.

Thanks are expressed to F.P. Scott and the U.S. Naval Observatory for providing the reduction to apparent place for the period 1956 to 1961.

### OBSERVING PLAN

From examining the differences "Observed minus N30" against the number of observations in our previously observed programs, we found the accuracy gained by adding more observations started to decrease noticeably after six observations, and the overall accuracy increased very slightly after ten observations. For this reason it was planned to observe each program star at least six times, three with each clamp position, and the reference stars ten times, five with each clamp position. On our previous programs many of the reference stars had received too few observations, and an effort was made to observe these stars more uniformly.

The reference stars were to be all the stars published in "Apparent Places of Fundamental Stars" that lie north of  $-27^{\circ}30'$ . These were divided in the following manner:

- 12<sup>h</sup>30' to 12<sup>h</sup>30' ..... Time stars
- over 80° ..... High azimuth stars
- 75 to 80° ..... 75° azimuth stars
- 60 to 75° ..... Refraction stars
- remainder ..... Comparison stars

The method observing and calculating is the same as that described in our publication Vol. XXV No. 8, except that the positions of the reference stars are all taken from the FK3 rather than the FK3R.

### FUNDAMENTAL STARS

(Catalogue Part I)

In forming this catalogue, each night's work was corrected using night constants derived from the fundamental stars in the manner described in Pub. D.O. Vol. XXV No. 8.

Briefly, the night corrections in right ascension were derived using all the FK3 stars observed on that night; and in declination the night correction for refraction was based on all FK3 stars, but that for latitude on those FK3 stars that lie between the equator and the pole.

The observed positions for the fundamental stars were retained only in the form observed minus computed.

Tables I to III give the comparison of the positions with the FK3: the star positions are averaged for each three hours in right ascension and ten degrees in declination.

Tables IV and V show the error of a single observation. They give the average standard deviation derived for each star. The weights given are the number of stars.

A least square solution of the residuals (O-FK3) for the 311 time stars yields:

$$(O-FK3)\alpha \cos \delta = \begin{matrix} \S 0012 \cos \alpha - \S 0006 \sin \alpha - \S 0011 \cos 2\alpha \\ - \S 0017 \sin 2\alpha \end{matrix}$$

The average difference, observed minus FK3, is tabulated for each star along with the number of observations in each co-ordinate, and the average epoch.

Since none of the program stars has been observed below the pole, the observed values for the fundamental stars obtained above and below the pole have not been combined. The values for lower culmination are given at the end of the table.

### FK3 SUPP. STARS

(Catalogue Part II)

The FK3 (Supp.) stars are the 1142 stars given by Kopff in the *Supplement - Katalog des FK3 (FK3 Supp.)*, Supplement to the *Astronomische-Geodatischen Jahrbuch 1954*, Astronomischen Rechen-Institut, Heidelberg.

The star observations were reduced in the same manner and with the same corrections that were applied to the FK3 stars. The reduction for each individual observation to mean place 1950.0 was done using GC proper motions.

The observations on each star were examined for consistency. Although six observations were considered adequate for any star, additional observations were taken if the mean error of a single observation exceeded  $\S 033$

sec  $\delta$  in right ascension or  $\S 56$  in declination. On completion of the observing, these observations were re-examined and in any case where the difference, observation - average position, exceeded  $\S 100$  sec  $\delta$  in right ascension or  $1^{\text{h}}50$  in declination, or the range exceeded  $\S 175$  sec  $\delta$  in right ascension or  $2^{\text{h}}50$  in declination, the observation was considered a mistake and was omitted. After applying this criterion there was no star with less than six observations, three in each clamp.

In order to eliminate mistakes as much as possible, the average observed position for each star was compared with that given in the FK3 (Supp.), the GC and the AGK2. Each star was examined individually and the reductions re-checked where necessary.

The positions given have been reduced from apparent place to mean place 1950.0, using GC proper motions which are also published here for convenience. The precessional tables have been omitted since they are available elsewhere. This has made it possible to have all information pertaining to one star on one line in the catalogue and to retain the results on one punched card.

Anyone requiring precessional tables may take the values from the AGK2 or use the formulae given on page 10 of *Fourth Fundamental Catalogue (FK4)*, Veröffentlichungen des Astronomischen Rechen-Institut, Heidelberg, Nr 10.

In the calculations of apparent place no corrections have been made for parallax.

For the 108 stars of the FK3 (Supp.) whose parallax

is given by A. Kopff, a calculation for parallax has been made using the formula:

$$\Delta\alpha = \pi(Yc - Xd)$$

$$\Delta\delta = \pi(Yc' - Xd')$$

as given on page 64 in the *Explanatory Supplement to the Ephemeris*, H.M. Nautical Almanac Office, 1961.

The values given in Table VI were calculated using the  $\pi$  as published in FK3 (Supp.), the average value of X and Y for the day taken from the *Astronomical Ephemeris 1960*, and 1960 values of c; d, c' and d' for each star.

These corrections are of the order of the rounding off errors. However, anyone wishing to apply them may do so by subtracting them from the tabulated positions of the individual stars.

## PZT STARS

(*Catalogue Part III*)

The Ottawa zenith stars observed are the 160 stars of the Ottawa PZT program being used in 1954.

The reductions of these observations were done in the same manner as described for the FK3 (Supp.) except that the proper motions used in the reductions were the Ottawa proper motions.

For each star the difference, observed minus catalogue, has been given. These PZT star positions, used for comparison purposes, were supplied by the Time Service. They are considered as preliminary and may require minor corrections when they are eventually published.

Five of the PZT stars, numbers 64, 69, 100, 117 and 83, are listed elsewhere in the catalogue. However, in this listing the PZT proper motions have been used.

The first four appear in the FK3 (Supp.) as numbers 479, 504, 723 and 850 respectively. The last star, PZT number 83, is FK3 number 1338.

The observations on this group of stars were checked for consistency by comparing individual observations with the mean; and for mistakes by comparing the results with the PZT positions.

A comparison of observed minus catalogue for the PZT stars and the FK3 stars that lie between 40 and 50°, is given in Table VII. These are given for three-hour zones in right ascension. On the whole it indicates good agreement between the PZT positions and the FK3 stars, but there does appear to be a seasonal variation in declination for the Ottawa Meridian Circle.

## ADDITIONAL STARS

(*Catalogue Part IV*)

The additional stars consist of two lists which have been combined because of their small number.

The first list contains the FK3 stars that were dropped from the fundamental catalogue, and A. Kopff's Ersatz or replacement stars that are listed in AN 231, No. 5537, page 310. These stars were included at the suggestion of F.P. Scott of the U.S. Naval Observatory.

The second list contains the stars marked P (stars to be given priority) in a list of Galactic Research Stars dated November 1953. This latter list was proposed at the Conference on Co-ordination of Galactic Research, held at Vosbergen, Holland, June 22 to 27, 1953 and was provided by A. Blaauw of Yerkes Observatory. A number of stars from both groups are already included in other

sections of this publication and are not repeated here.

All the stars of this list were reduced to epoch 1950.0 without proper motion, except the FK3 stars which were reduced using FK3 proper motions. For these stars the apparent places for the years 1954 and 1955 were obtained from the American and Russian Ephemerides and for the remaining years the positions were calculated at the U.S. Naval Observatory. In order to bring these to the same basis as the other stars (position 1950.0 without proper motion), the star positions were adjusted by adding the product of the proper motion and difference in epoch.

A special case arises in connection with No. 129 (FK3 No. 477). The position given is for the preceding star rather than the centre of gravity of the pair.



TABLE I. Catalogue Comparison in Right Ascension (O-FK3)  
Unit #001, Weight-Number of Stars

R.A. Declination	0 <sup>h</sup> to 3 <sup>h</sup>		3 <sup>h</sup> to 6 <sup>h</sup>		6 <sup>h</sup> to 9 <sup>h</sup>		9 <sup>h</sup> to 12 <sup>h</sup>		12 <sup>h</sup> to 15 <sup>h</sup>		15 <sup>h</sup> to 18 <sup>h</sup>		18 <sup>h</sup> to 21 <sup>h</sup>		21 <sup>h</sup> to 24 <sup>h</sup>		Mean	
	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.
60 <sup>o</sup> L to 70 <sup>o</sup> L	37	9	-11	6	5	9	6	10	-3	7	4	7	4	5	5	7	7	60
70 <sup>o</sup> L to 80 <sup>o</sup> L	31	7	-27	5	58	5	16	4	-19	8	7	7	-24	9	-9	10	0	55
80 <sup>o</sup> L to 90 <sup>o</sup> L	-203	3	-249	4	-349	2	-9	4	-201	3	-140	3	-56	4	-81	3	-147	26
80 <sup>o</sup> to 90 <sup>o</sup>	-297	3	-276	4	-348	2	-51	4	-214	3	-66	3	46	4	-108	3	-149	26
70 <sup>o</sup> to 80 <sup>o</sup>	27	7	-9	5	47	5	28	4	-16	8	-22	7	-36	9	0	10	-2	55
60 <sup>o</sup> to 70 <sup>o</sup>	40	8	4	6	22	9	19	10	14	7	4	7	-5	5	-6	7	13	59
50 <sup>o</sup> to 60 <sup>o</sup>	4	11	-10	9	10	5	8	8	1	8	-2	11	-9	9	-10	8	-1	69
40 <sup>o</sup> to 50 <sup>o</sup>	-13	11	-19	17	-10	14	-1	12	-15	12	-18	15	-12	9	-16	12	-13	102
30 <sup>o</sup> to 40 <sup>o</sup>	-9	12	-5	12	0	11	-4	15	0	14	-2	13	-5	13	-6	14	-4	104
20 <sup>o</sup> to 30 <sup>o</sup>	4	16	-8	16	-2	19	-6	10	-1	12	-9	15	8	14	0	14	-2	116
10 <sup>o</sup> to 20 <sup>o</sup>	2	14	-5	15	-1	14	1	14	2	13	-7	14	9	16	-4	12	0	112
0 <sup>o</sup> to 10 <sup>o</sup>	4	20	0	16	-4	14	-2	16	-4	13	4	16	8	14	0	17	1	126
-10 <sup>o</sup> to -0 <sup>o</sup>	-3	12	0	23	3	14	0	16	-4	16	-6	13	3	20	-3	18	-1	132
-20 <sup>o</sup> to -10 <sup>o</sup>	-13	16	-19	10	-6	13	-11	15	-4	18	-10	17	0	16	-5	17	-8	122
-30 <sup>o</sup> to -20 <sup>o</sup>	-7	10	-22	11	-10	9	-13	8	-7	13	-14	12	-4	12	-7	10	-10	85
Mean	-5	159	-22	159	-7	145	-1	150	-12	155	-10	160	-3	159	-8	162	-8	1249

TABLE II. Catalogue Comparison in Right Ascension (O-FK3) cos  $\delta$   
Unit #001, Weight - Number of Stars

R.A. Declination	0 <sup>h</sup> to 3 <sup>h</sup>		3 <sup>h</sup> to 6 <sup>h</sup>		6 <sup>h</sup> to 9 <sup>h</sup>		9 <sup>h</sup> to 12 <sup>h</sup>		12 <sup>h</sup> to 15 <sup>h</sup>		15 <sup>h</sup> to 18 <sup>h</sup>		18 <sup>h</sup> to 21 <sup>h</sup>		21 <sup>h</sup> to 24 <sup>h</sup>		Mean	
	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.
60 <sup>o</sup> L to 70 <sup>o</sup> L	-15	9	4	6	-2	9	-2	10	2	7	-2	7	-1	5	-2	7	-3	60
70 <sup>o</sup> L to 80 <sup>o</sup> L	-7	7	6	5	-14	5	-3	4	4	8	-1	7	5	9	3	10	0	55
80 <sup>o</sup> L to 90 <sup>o</sup> L	21	3	21	4	21	2	4	4	20	3	9	3	5	4	7	3	13	26
80 <sup>o</sup> to 90 <sup>o</sup>	-19	3	-22	4	-19	2	-6	4	-21	3	-4	3	-2	4	-8	3	-12	26
70 <sup>o</sup> to 80 <sup>o</sup>	6	7	-2	5	12	5	7	4	-4	8	-6	7	-10	9	-1	10	-1	55
60 <sup>o</sup> to 70 <sup>o</sup>	17	8	1	6	9	9	7	10	5	7	1	7	-2	5	-3	7	5	59
50 <sup>o</sup> to 60 <sup>o</sup>	2	11	-5	9	5	5	4	8	-0	8	-1	11	-5	9	-5	8	-1	69
40 <sup>o</sup> to 50 <sup>o</sup>	-8	11	-13	17	-7	14	-0	12	-10	12	-12	15	-8	9	-11	12	-9	102
30 <sup>o</sup> to 40 <sup>o</sup>	-7	12	-3	12	-0	11	-3	15	0	14	-1	13	-3	13	-4	14	-3	104
20 <sup>o</sup> to 30 <sup>o</sup>	3	16	-6	16	-2	19	-4	10	-1	12	-7	15	6	14	0	14	-1	116
10 <sup>o</sup> to 20 <sup>o</sup>	2	14	-4	15	-0	14	1	14	2	13	-7	14	8	16	-4	12	-0	112
0 <sup>o</sup> to 10 <sup>o</sup>	3	20	0	16	-4	14	-1	16	-3	13	3	16	8	14	-0	17	0	126
-10 <sup>o</sup> to -0 <sup>o</sup>	-3	12	-0	23	2	14	-0	16	-3	16	-6	13	3	20	-2	18	-1	132
-20 <sup>o</sup> to -10 <sup>o</sup>	-12	16	-18	10	-5	13	-9	15	-4	18	-9	17	-0	16	-5	17	-7	122
-30 <sup>o</sup> to -20 <sup>o</sup>	-6	10	-19	11	-9	9	-11	8	-6	13	-12	12	-3	12	-6	10	-9	85
Mean	-1	159	-5	159	-1	145	-1	150	-2	155	-5	160	0	159	-3	162	-2	1249

TABLE III. Catalogue Comparison in Declination (O-FK3)

Unit  $\times 01$ , Weight - Number of Stars

Declination	R.A. 0 <sup>h</sup> to 3 <sup>h</sup>		3 <sup>h</sup> to 6 <sup>h</sup>		6 <sup>h</sup> to 9 <sup>h</sup>		9 <sup>h</sup> to 12 <sup>h</sup>		12 <sup>h</sup> to 15 <sup>h</sup>		15 <sup>h</sup> to 18 <sup>h</sup>		18 <sup>h</sup> to 21 <sup>h</sup>		21 <sup>h</sup> to 24 <sup>h</sup>		Mean	
	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.
60 <sup>l</sup> to 70 <sup>l</sup>	17	9	27	6	7	9	11	10	19	7	4	7	1	5	19	7	13	60
70 <sup>l</sup> to 80 <sup>l</sup>	-5	7	-2	5	-14	5	-5	4	-20	8	-9	7	-28	9	-10	10	-13	55
80 <sup>l</sup> to 90 <sup>l</sup>	-3	3	-16	4	-32	2	-8	4	-3	3	-40	3	-13	4	-44	3	-18	26
80 <sup>o</sup> to 90 <sup>o</sup>	26	3	14	4	7	2	11	4	18	3	5	3	19	4	-5	3	12	26
70 <sup>o</sup> to 80 <sup>o</sup>	2	7	13	5	5	5	12	4	12	8	17	7	-2	9	-1	10	6	55
60 <sup>o</sup> to 70 <sup>o</sup>	10	8	-4	6	-9	9	3	10	11	7	15	7	1	5	5	7	4	59
50 <sup>o</sup> to 60 <sup>o</sup>	12	11	11	9	11	5	-2	8	-3	8	9	11	28	9	19	8	11	69
40 <sup>o</sup> to 50 <sup>o</sup>	6	11	12	17	4	14	4	12	-4	12	1	15	5	9	2	12	4	102
30 <sup>o</sup> to 40 <sup>o</sup>	-6	12	5	12	-2	11	2	15	-7	14	-2	13	0	13	1	14	-1	104
20 <sup>o</sup> to 30 <sup>o</sup>	-8	16	-2	16	6	19	-5	10	-8	12	-7	15	-13	14	-9	14	-5	116
10 <sup>o</sup> to 20 <sup>o</sup>	1	14	-5	15	-4	14	-6	14	-3	13	-9	14	-1	16	-21	12	-6	112
0 <sup>o</sup> to 10 <sup>o</sup>	6	20	-2	16	1	14	-4	16	-5	13	-4	16	-2	14	-2	17	-1	126
-10 <sup>o</sup> to -0 <sup>o</sup>	-2	12	-9	23	-7	14	-6	16	-9	16	2	13	-4	20	-3	18	-5	132
-20 <sup>o</sup> to -10 <sup>o</sup>	0	16	15	10	2	13	19	15	12	18	11	17	16	16	16	17	12	122
-30 <sup>o</sup> to -20 <sup>o</sup>	27	10	20	11	4	9	17	8	27	13	30	12	25	12	35	10	24	85
Mean	4	159	4	159	0	145	2	150	2	155	3	160	2	159	1	162	2	1249

TABLE IV. Mean Error of a Single Observation in Right Ascension, FK3 Stars

Unit  $\times 001$ , Weight - Number of Stars

Declination	R.A. 0 <sup>h</sup> to 3 <sup>h</sup>		3 <sup>h</sup> to 6 <sup>h</sup>		6 <sup>h</sup> to 9 <sup>h</sup>		9 <sup>h</sup> to 12 <sup>h</sup>		12 <sup>h</sup> to 15 <sup>h</sup>		15 <sup>h</sup> to 18 <sup>h</sup>		18 <sup>h</sup> to 21 <sup>h</sup>		21 <sup>h</sup> to 24 <sup>h</sup>		Mean	
	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.
60 <sup>l</sup> to 70 <sup>l</sup>	32	9	40	6	37	9	35	10	32	7	37	7	40	5	35	7	36	60
70 <sup>l</sup> to 80 <sup>l</sup>	30	7	32	5	36	5	28	4	31	8	31	7	29	9	31	10	31	55
80 <sup>l</sup> to 90 <sup>l</sup>	24	3	26	4	22	2	24	4	21	3	31	3	27	4	28	3	26	26
80 <sup>o</sup> to 90 <sup>o</sup>	26	3	24	4	25	2	25	4	25	3	23	3	24	4	23	3	24	26
70 <sup>o</sup> to 80 <sup>o</sup>	25	7	23	5	23	5	25	4	25	8	24	7	25	9	28	10	25	55
60 <sup>o</sup> to 70 <sup>o</sup>	25	8	28	6	27	9	26	10	27	7	24	7	29	5	25	7	26	59
50 <sup>o</sup> to 60 <sup>o</sup>	26	11	27	9	27	5	26	8	23	8	26	11	27	9	26	8	26	69
40 <sup>o</sup> to 50 <sup>o</sup>	25	11	27	17	23	14	24	12	21	12	29	15	31	9	25	12	25	102
30 <sup>o</sup> to 40 <sup>o</sup>	27	12	28	12	27	11	25	15	23	14	25	13	23	13	23	14	25	104
20 <sup>o</sup> to 30 <sup>o</sup>	30	16	26	16	25	19	26	10	26	12	27	15	25	14	24	14	26	116
10 <sup>o</sup> to 20 <sup>o</sup>	29	14	27	15	24	14	25	14	25	13	26	14	27	16	25	12	26	112
0 <sup>o</sup> to 10 <sup>o</sup>	25	20	27	16	25	14	24	16	24	13	27	16	28	14	25	17	26	126
-10 <sup>o</sup> to -0 <sup>o</sup>	28	12	28	23	27	14	25	16	28	16	32	13	30	20	28	18	28	132
-20 <sup>o</sup> to -10 <sup>o</sup>	30	16	35	10	32	13	29	15	34	18	32	17	34	16	33	17	32	122
-30 <sup>o</sup> to -20 <sup>o</sup>	30	10	35	11	31	9	31	8	31	13	34	12	35	12	31	10	32	85
Mean	28	159	29	159	27	145	26	150	27	155	29	160	29	159	27	162	28	1249

TABLE V. Mean Error of a Single Observation in Declination, FK3 Stars  
Unit '01, Weight - Number of Stars

R.A. Declination	0 <sup>h</sup> to 3 <sup>h</sup>		3 <sup>h</sup> to 6 <sup>h</sup>		6 <sup>h</sup> to 9 <sup>h</sup>		9 <sup>h</sup> to 12 <sup>h</sup>		12 <sup>h</sup> to 15 <sup>h</sup>		15 <sup>h</sup> to 18 <sup>h</sup>		18 <sup>h</sup> to 21 <sup>h</sup>		21 <sup>h</sup> to 24 <sup>h</sup>		Mean	
	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.
60°L to 70°L	51	9	47	6	46	9	56	10	54	7	53	7	57	5	54	7	52	60
70°L to 80°L	60	7	51	5	56	5	57	4	49	8	49	7	48	9	48	10	52	55
80°L to 90°L	54	3	59	4	42	2	49	4	50	3	52	3	49	4	52	3	51	26
80° to 90°	47	3	48	4	52	2	51	4	44	3	50	3	53	4	51	3	50	26
70° to 80°	49	7	43	5	45	5	43	4	51	8	47	7	49	9	50	10	48	55
60° to 70°	50	8	46	6	42	9	51	10	46	7	41	7	49	5	50	7	47	59
50° to 60°	42	11	40	9	44	5	47	8	44	8	45	11	44	9	42	8	44	69
40° to 50°	44	11	41	17	44	14	40	12	39	12	42	15	41	9	45	12	42	102
30° to 40°	43	12	37	12	41	11	43	15	41	14	46	13	40	13	47	14	42	104
20° to 30°	44	16	42	16	41	19	50	10	45	12	42	15	44	14	49	14	44	116
10° to 20°	41	14	44	15	41	14	45	14	45	13	45	14	44	16	45	12	44	112
0° to 10°	45	20	45	16	44	14	47	16	43	13	49	16	45	14	49	17	46	126
-10° to -0°	47	12	51	23	51	14	49	16	53	16	52	13	55	20	53	18	52	132
-20° to -10°	56	16	52	10	53	13	56	15	57	18	54	17	58	16	57	17	56	122
-30° to -20°	59	10	51	11	58	9	55	8	57	13	59	12	58	12	57	10	57	85
Mean	48	159	46	159	46	145	49	150	48	155	48	160	49	159	50	162	48	1249

TABLE VI. Parallax Corrections for FK3 (Supp.) Stars

FK4 Supp. No.	$\pi$	$\Delta\alpha$	$\Delta\delta$	FK4 Supp. No.	$\pi$	$\Delta\alpha$	$\Delta\delta$	FK4 Supp. No.	$\pi$	$\Delta\alpha$	$\Delta\delta$	FK4 Supp. No.	$\pi$	$\Delta\alpha$	$\Delta\delta$	FK4 Supp. No.	$\pi$	$\Delta\alpha$	$\Delta\delta$				
2002	34	000	02	2249	28	001	01	2660	46	-002	02	2994	36	-001	03	3243	30	-001	02	3536	46	-005	03
2010	24	000	01	2283	29	000	00	2724	42	-001	01	3009	25	000	00	3248	46	-001	02	3544	27	-001	01
2028	33	000	01	2297	46	000	01	2730	43	-004	03	3020	21	-001	02	3254	35	000	02	3571	36	-001	03
2031	21	000	02	2326	33	000	00	2739	20	-001	00	3021	33	-001	02	3257	34	000	02	3609	31	-001	02
3941	25	000	02	2338	20	001	00	2756	20	-001	01	3025	36	-001	01	3259	43	-001	03	3613	21	000	02
2071	28	000	01	2348	23	000	01	2826	20	-001	01	3047	42	000	01	3293	40	-001	03	3654	20	000	02
2073	33	000	00	2384	21	-001	01	2844	27	-001	02	3083	30	000	02	3305	28	-003	02	3656	31	001	03
2084	25	000	00	2387	21	002	01	2846	27	-001	00	3090	31	-002	02	3324	30	000	01	3666	32	-001	02
2089	21	000	00	2457	22	-001	-01	2852	38	-002	02	3102	27	-001	02	3328	35	-001	03	3693	30	-002	02
2115	20	000	00	2477	34	000	-01	2855	29	-002	03	3103	23	-001	02	3393	31	-001	02	3711	50	-001	01
2120	36	000	01	2491	23	000	01	2866	24	-002	02	3107	24	000	00	3394	26	000	01	3716	22	000	01
2173	34	-001	-01	2558	34	-003	02	2879	25	-001	00	3124	22	000	02	3420	40	-001	01	3965	31	-005	02
2179	33	001	01	2568	21	-001	00	2918	23	-001	00	3146	32	000	03	3433	23	-001	02	3775	22	-001	02
2187	40	000	01	2604	53	-009	03	2924	38	-001	01	3160	35	000	02	3447	20	-001	02	3796	21	000	01
2194	20	000	00	2630	33	-001	00	2938	28	-001	01	3177	40	000	01	3460	23	-001	01	3828	39	-001	00
2204	35	000	00	2633	29	-002	01	2963	27	-001	02	3179	26	-001	02	3513	20	000	02	3857	25	000	01
2222	29	000	02	2649	27	-002	01	2981	23	-001	01	3185	26	-001	01	3529	39	-001	01	3863	36	-001	02
2236	21	001	01	2658	26	-001	00	2983	23	-001	01	3221	26	-001	01	3530	29	-001	01	3919	38	-001	03

TABLE VII. Comparison of PZT Stars with FK3 Stars of the Zenith Zone

Declination	R.A. 0 <sup>h</sup> to 3 <sup>h</sup>		3 <sup>h</sup> to 6 <sup>h</sup>		6 <sup>h</sup> to 9 <sup>h</sup>		9 <sup>h</sup> to 12 <sup>h</sup>		12 <sup>h</sup> to 15 <sup>h</sup>		15 <sup>h</sup> to 18 <sup>h</sup>		18 <sup>h</sup> to 21 <sup>h</sup>		21 <sup>h</sup> to 24 <sup>h</sup>		Mean	
	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.	Val.	Wt.
	Right Ascension Unit !001, Weight - Number of Stars																	
PZT	-4	18	-8	20	-15	20	-8	20	-5	19	-5	21	-8	21	-2	21	-7	160
FK3	-8	11	-13	17	-7	14	-0	12	-10	12	-12	15	-8	9	-11	12	-9	102
	Declination Unit !01, Weight - Number of Stars																	
PZT	12	18	7	20	-11	20	-7	20	-10	19	12	21	7	21	9	21	2	160
FK3	6	11	12	17	4	14	4	12	-4	12	1	15	5	9	2	12	4	102

The differences are in the form observed minus FK3. The mean epoch and the number of observations in each co-ordinate are given.

The observations at low or zero weight are listed separately at the end.





RESERVED PAGES

No.	Hour	Min.	Sec.	No. Obs.	Mean Epoch	Co-Ord.	Co-Ord.	Co-Ord.	Co-Ord.	Co-Ord.	Co-Ord.	Co-Ord.
10	02.00	00	00	10	1910	10	10	10	10	10	10	10
11	02.00	01	00	10	1910	10	10	10	10	10	10	10
12	02.00	02	00	10	1910	10	10	10	10	10	10	10
13	02.00	03	00	10	1910	10	10	10	10	10	10	10
14	02.00	04	00	10	1910	10	10	10	10	10	10	10
15	02.00	05	00	10	1910	10	10	10	10	10	10	10
16	02.00	06	00	10	1910	10	10	10	10	10	10	10
17	02.00	07	00	10	1910	10	10	10	10	10	10	10
18	02.00	08	00	10	1910	10	10	10	10	10	10	10
19	02.00	09	00	10	1910	10	10	10	10	10	10	10
20	02.00	10	00	10	1910	10	10	10	10	10	10	10

Part I

CORRECTIONS TO THE 1108 FK3 STARS

21	02.00	11	00	10	1910	10	10	10	10	10	10	10
22	02.00	12	00	10	1910	10	10	10	10	10	10	10
23	02.00	13	00	10	1910	10	10	10	10	10	10	10
24	02.00	14	00	10	1910	10	10	10	10	10	10	10
25	02.00	15	00	10	1910	10	10	10	10	10	10	10
26	02.00	16	00	10	1910	10	10	10	10	10	10	10
27	02.00	17	00	10	1910	10	10	10	10	10	10	10
28	02.00	18	00	10	1910	10	10	10	10	10	10	10
29	02.00	19	00	10	1910	10	10	10	10	10	10	10
30	02.00	20	00	10	1910	10	10	10	10	10	10	10
31	02.00	21	00	10	1910	10	10	10	10	10	10	10
32	02.00	22	00	10	1910	10	10	10	10	10	10	10
33	02.00	23	00	10	1910	10	10	10	10	10	10	10
34	02.00	24	00	10	1910	10	10	10	10	10	10	10
35	02.00	25	00	10	1910	10	10	10	10	10	10	10
36	02.00	26	00	10	1910	10	10	10	10	10	10	10
37	02.00	27	00	10	1910	10	10	10	10	10	10	10
38	02.00	28	00	10	1910	10	10	10	10	10	10	10
39	02.00	29	00	10	1910	10	10	10	10	10	10	10
40	02.00	30	00	10	1910	10	10	10	10	10	10	10

The differences are in the form observed minus FK3. The mean epoch and the number of observations in each co-ordinate are given.

The observations at lower culmination are listed separately at the end.

41	02.00	31	00	10	1910	10	10	10	10	10	10	10
42	02.00	32	00	10	1910	10	10	10	10	10	10	10
43	02.00	33	00	10	1910	10	10	10	10	10	10	10
44	02.00	34	00	10	1910	10	10	10	10	10	10	10
45	02.00	35	00	10	1910	10	10	10	10	10	10	10
46	02.00	36	00	10	1910	10	10	10	10	10	10	10
47	02.00	37	00	10	1910	10	10	10	10	10	10	10
48	02.00	38	00	10	1910	10	10	10	10	10	10	10
49	02.00	39	00	10	1910	10	10	10	10	10	10	10
50	02.00	40	00	10	1910	10	10	10	10	10	10	10

OBSERVED - FK 3						OBSERVED - FK 3							
FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
905	.008	61.69	11	.01	62.38	10	41	.048	58.45	36	.00	58.55	35
1002	.000	59.66	10	-.10	60.16	12	1032	-.004	60.16	11	.14	60.37	12
1003	-.003	60.99	10	.09	60.99	10	43	.003	60.73	14	-.04	61.29	14
1	-.010	58.26	14	-.04	58.45	13	1033	.009	59.44	40	.14	59.62	39
2	.009	58.50	25	.23	58.37	24	1034	.014	58.33	59	.09	58.61	54
4	-.009	57.34	16	.28	57.18	17	45	-.012	58.92	18	-.11	58.95	15
7	-.004	58.01	15	-.02	58.01	15	1035	-.019	58.33	25	-.02	58.27	26
1004	-.009	59.57	12	-.12	59.81	13	47	-.009	60.69	17	.03	60.86	17
1005	.000	57.84	19	-.23	58.03	17	1037	-.013	57.12	28	.10	57.21	26
1006	-.028	57.56	17	-.18	57.66	15	46	-.018	57.36	16	.19	57.61	16
9	.017	59.92	13	-.51	60.27	12	48	.024	59.81	14	.16	59.98	12
1007	-.065	59.12	8	-.28	59.39	12	1039	.010	60.68	13	-.18	60.68	13
1008	-.003	57.70	38	.00	57.83	36	1041	-.035	59.49	15	.46	60.01	15
1009	-.024	58.43	14	-.06	58.56	13	1040	.051	57.79	13	-.06	57.93	14
1010	-.007	58.28	47	.06	58.60	46	1043	-.025	59.81	15	.45	59.93	15
1011	-.010	57.58	35	.40	57.77	30	1042	-.018	59.34	22	.06	59.74	21
1012	.001	59.13	14	.26	59.13	14	50	.008	58.63	13	.07	58.86	14
13	-.007	58.11	54	-.23	58.46	47	1045	-.019	58.40	15	-.02	58.40	15
14	.026	59.77	12	-.01	59.66	10	1046	-.009	58.28	31	-.04	58.56	29
16	.045	58.36	31	.13	58.57	30	51	.057	59.22	11	-.09	59.22	11
17	.016	58.34	21	.35	58.45	19	52	-.015	60.75	14	.28	61.02	11
18	-.013	58.58	16	-.13	58.75	13	55	.034	57.50	16	.11	57.41	15
19	.004	58.35	13	-.04	58.65	14	56	.000	59.21	39	.14	59.46	35
20	-.034	57.26	18	.04	57.17	17	1047	.000	58.86	13	.37	59.42	11
21	.014	58.44	14	.31	58.48	13	1049	-.021	58.54	15	.04	58.81	14
22	.011	59.43	12	.19	59.34	12	57	-.010	58.97	15	.20	59.91	14
25	-.018	57.76	21	-.03	57.76	21	59	.002	59.85	11	.14	60.09	12
24	-.003	57.93	34	.22	57.98	30	60	.000	57.44	24	.08	58.05	21
27	-.007	59.10	14	-.19	58.90	13	61	.008	62.17	9	.52	61.55	11
1018	.015	60.50	12	.58	60.89	12	1050	.025	58.99	12	-.20	59.20	13
1019	.005	57.50	33	.31	57.55	28	1051	.006	59.06	37	-.01	59.26	36
28	.015	58.25	18	-.03	58.25	16	907	-.358	57.90	15	.26	58.07	13
1020	-.005	58.97	13	.16	59.23	12	1052	.029	58.14	13	-.15	58.14	13
1021	-.019	59.03	11	.18	60.03	10	62	.002	60.46	19	-.06	60.58	20
30	.004	58.41	32	-.29	58.54	26	64	.012	59.66	11	-.17	60.29	11
29	.004	60.07	11	-.03	60.42	11	63	.074	58.75	10	.25	59.11	11
1022	.000	57.95	56	-.08	58.02	55	65	-.004	58.33	22	.10	58.17	24
32	.037	60.38	12	.09	60.18	13	66	-.007	59.53	12	-.10	59.53	12
33	-.022	58.62	14	-.08	59.42	15	71	-.009	58.51	16	.20	58.88	12
1023	.009	59.40	10	.27	59.40	10	1054	-.003	58.69	18	-.01	58.69	18
1024	.001	58.41	26	-.10	58.74	24	70	.024	58.64	21	-.09	58.51	20
1025	-.036	59.08	11	-.21	59.64	13	73	-.049	59.16	12	-.03	59.16	12
36	-.006	58.25	25	.01	58.93	22	74	.014	58.25	17	-.11	58.44	17
37	.001	58.00	19	-.11	58.02	17	75	.004	59.66	13	.01	59.66	13
906	-.207	58.55	37	.13	58.75	38	1056	.014	60.29	11	-.16	60.65	13
1028	-.002	58.81	14	.03	58.46	14	1635	-.327	58.08	29	.38	58.08	29
1029	-.032	59.96	10	.45	60.91	11	77	-.027	61.28	10	.40	61.41	11
1030	.039	59.30	11	-.30	59.35	10	1057	.001	61.37	10	.28	61.64	11
40	.007	60.78	13	-.21	61.38	13	1058	.021	59.50	12	.12	59.50	12
42	-.017	59.22	11	.24	59.51	12	76	.083	61.80	10	-.05	61.64	11

OBSERVED - FK 3							OBSERVED - FK 3						
FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
1059	.010	59.34	13	-.36	59.34	13	1091	.007	59.57	27	-.30	59.72	26
79	.019	58.76	11	-.19	58.76	11	115	-.069	60.12	43	-.01	60.14	44
80	.005	59.30	22	.21	59.30	22	1093	.004	60.07	30	-.06	60.18	29
81	.012	61.13	13	-.14	61.13	13	1094	.006	59.59	14	.29	59.59	14
1061	.004	58.84	17	-.32	58.85	16	1636	-.401	58.19	42	.01	58.29	39
1063	-.007	58.15	14	-.33	58.15	14	1096	.035	60.14	14	-.01	60.33	15
1064	-.012	60.64	10	.02	60.06	10	120	-.027	60.58	11	.05	60.52	12
83	-.030	59.68	12	-.06	59.68	12	121	-.003	61.12	16	-.12	61.12	16
1066	-.002	61.49	33	-.10	61.50	32	123	-.007	60.93	24	-.16	60.93	24
1068	.021	58.57	19	-.12	58.57	18	122	-.022	58.99	20	.30	59.32	18
85	.006	58.68	40	.10	58.92	40	124	-.001	58.64	14	.00	58.64	14
1069	.009	58.85	11	.03	58.85	11	125	-.011	60.73	14	-.30	60.65	13
1070	.005	59.92	9	-.32	59.92	9	1097	-.006	59.48	52	-.28	59.60	51
1071	-.015	59.45	10	.26	59.75	11	1098	.001	59.52	11	-.04	59.52	11
87	.051	60.20	18	.03	60.55	15	127	.001	60.87	25	-.06	61.02	24
1072	.015	59.17	28	.36	59.45	25	1099	.009	59.05	15	.33	58.84	11
1073	-.003	60.66	24	.12	60.66	24	1100	.012	60.63	15	-.03	60.63	15
1074	.008	59.64	20	.36	59.62	18	1101	-.007	58.83	53	-.06	58.94	53
89	.022	58.60	18	.06	58.59	17	1103	-.023	58.97	13	-.25	58.97	13
91	0.000	59.78	67	-.18	59.84	69	129	-.004	58.93	25	.30	59.16	24
92	.063	59.22	13	.10	59.22	13	131	-.017	59.31	13	.19	59.60	12
94	.017	59.72	8	-.42	59.72	8	135	-.013	58.92	13	0.00	59.16	12
93	-.012	60.92	11	.18	61.30	12	134	-.041	61.52	12	.25	61.49	10
1077	-.022	60.94	11	.21	60.94	11	136	.003	60.89	10	.04	60.89	10
97	-.022	61.19	10	.17	61.00	9	137	-.003	57.77	19	-.12	58.00	17
1078	-.023	61.43	11	.13	61.99	10	1104	.007	58.49	16	-.33	58.65	15
98	.000	58.23	24	.09	58.38	23	139	-.004	59.68	11	.08	59.63	13
99	-.022	58.64	19	-.07	58.93	16	140	-.023	60.51	11	.24	60.28	10
100	-.006	58.41	14	-.15	58.35	12	138	-.036	59.32	10	.15	59.32	10
1079	-.018	60.80	11	.17	60.80	11	142	.003	61.76	10	.09	61.78	11
102	-.001	61.27	11	.34	61.82	10	1105	-.003	60.54	14	.39	60.44	15
103	-.022	59.07	14	.20	59.07	14	1106	-.010	60.37	12	-.04	60.56	13
104	-.010	58.40	14	.04	58.50	12	1107	.011	59.16	23	.05	59.62	22
1080	-.012	59.66	14	.05	59.66	14	144	-.004	61.60	11	.11	61.60	11
1081	-.002	60.84	11	.05	60.84	11	147	-.014	58.11	17	.42	58.67	16
1082	.003	60.55	11	-.27	60.43	10	149	-.019	59.99	10	-.29	60.15	11
1083	.009	59.06	47	.12	59.13	46	148	-.027	59.47	13	.06	59.50	14
105	.029	59.86	53	.03	60.12	50	150	-.020	60.89	27	.05	60.85	27
107	-.001	59.38	17	-.10	59.61	16	1111	.007	58.23	33	-.04	58.30	34
1084	-.054	60.37	9	-.43	60.54	11	151	.010	61.07	25	-.06	61.07	25
1085	-.023	58.25	10	.13	58.67	11	1112	-.012	59.69	13	-.35	59.69	13
108	-.007	59.94	13	.17	60.98	11	1113	-.020	59.48	16	.14	59.68	17
109	-.010	59.79	13	.02	59.58	14	152	-.010	59.56	16	.08	59.56	16
111	-.021	59.46	18	.16	59.54	17	1115	-.011	58.79	21	-.27	58.93	20
1087	-.052	61.21	11	-.21	61.15	10	1116	-.017	58.98	14	-.21	58.77	13
112	-.010	59.66	16	-.26	59.71	14	154	-.004	58.73	33	.02	58.99	30
1088	.003	58.28	18	-.15	58.46	18	1117	-.009	60.37	11	.31	60.37	11
114	.003	58.91	15	-.24	59.13	14	1118	-.003	58.92	31	-.11	59.15	30
116	-.014	59.68	56	-.20	59.73	54	159	-.015	59.93	10	-.03	59.93	10
1089	-.001	59.03	15	.14	59.49	12	158	-.006	59.78	10	.03	59.60	11



OBSERVED - FK3						OBSERVED - FK3							
FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
1119	-.034	62.83	10	-.16	62.81	8	198	-.047	62.11	12	.24	62.52	12
161	-.018	61.92	7	.18	61.76	6	1147	-.008	59.62	28	.31	59.58	27
908	-.332	59.16	32	.08	59.38	32	201	.003	61.06	25	.48	61.34	25
162	-.017	59.34	14	.01	59.40	12	202	-.022	59.39	13	-.07	59.39	13
1120	.015	59.73	28	-.07	59.66	27	1148	-.007	58.36	14	.05	58.36	14
1122	.050	60.75	16	-.18	60.68	15	203	-.003	59.68	29	-.11	59.78	30
164	.018	59.51	11	.22	59.80	12	204	-.013	58.62	14	.43	59.21	12
1123	.013	58.52	32	.13	58.62	28	1150	-.006	58.00	20	-.13	58.10	21
165	-.003	59.68	18	-.10	60.08	16	206	.003	59.68	23	-.31	59.92	21
1124	-.020	59.14	14	.32	58.99	13	1151	-.003	60.48	13	.07	60.48	13
1125	.005	61.06	13	-.13	60.90	12	207	.006	61.39	9	-.09	61.46	10
168	-.015	61.16	12	.07	61.16	12	208	.004	56.67	27	-.05	56.67	25
169	-.016	58.04	26	.01	58.31	25	209	-.008	61.36	10	-.15	61.36	10
172	-.028	60.55	11	.46	61.80	11	205	.067	58.84	13	.30	58.76	13
1127	-.040	60.12	11	.19	61.14	9	210	.013	61.17	10	-.37	61.17	10
1126	-.014	58.30	12	-.26	58.44	11	211	.003	58.31	13	-.03	58.80	11
174	-.005	60.11	11	.12	60.11	11	1153	-.035	60.70	9	.39	60.81	10
1128	-.031	59.61	11	.30	59.61	11	216	-.017	58.36	24	.23	58.45	24
1131	.028	59.30	29	.02	59.31	28	217	-.026	59.20	15	-.08	59.83	13
173	-.003	60.14	41	.24	60.56	35	218	-.002	58.92	12	-.02	58.92	11
176	.001	59.55	12	-.04	59.55	12	219	-.036	62.12	11	.53	62.13	9
175	.005	59.95	11	.08	59.95	11	220	-.006	61.00	16	.07	61.07	17
1133	-.008	58.71	13	.19	58.71	13	1638	-.075	59.24	20	.01	59.40	22
1134	-.001	60.43	15	.00	60.33	14	1155	.007	58.16	26	-.59	58.81	16
1135	.010	59.47	12	-.12	59.77	11	221	.006	58.64	16	-.06	59.00	12
179	-.006	60.84	14	-.04	60.84	14	222	-.018	61.62	12	.17	61.58	11
178	-.041	59.20	19	-.20	59.33	16	1158	-.012	60.17	14	.02	61.00	11
1136	.011	61.33	12	-.22	61.33	12	1157	.000	60.67	12	.02	60.67	12
180	.005	61.02	24	.01	61.02	24	224	-.018	60.39	18	.01	61.05	17
181	-.001	59.00	16	-.01	59.20	15	226	-.021	61.32	11	.63	61.24	10
183	-.035	60.03	16	.33	59.83	13	225	-.030	60.26	10	.13	60.26	10
182	-.011	58.78	27	-.02	59.24	25	227	-.011	60.48	10	-.10	60.63	11
1137	-.016	59.92	14	-.13	60.00	13	1161	-.004	58.22	50	.17	58.58	48
184	-.008	58.47	19	-.04	58.95	14	1162	-.008	60.88	10	-.40	60.88	10
1140	-.012	58.85	17	.24	59.02	16	1163	-.011	59.77	13	.20	59.94	14
185	-.019	60.04	19	-.05	60.21	17	230	.006	59.10	69	.21	59.27	65
186	-.005	61.18	15	-.07	61.07	13	232	.000	58.42	20	-.01	58.56	18
188	-.004	60.99	28	-.12	60.96	27	1165	-.030	58.36	13	-.03	58.98	13
1142	.005	58.89	27	-.11	59.15	25	233	-.014	59.27	49	-.30	59.25	49
1141	-.024	59.91	13	.30	59.91	13	1168	-.002	59.44	12	-.08	59.46	11
190	.000	59.16	21	.10	59.12	18	1167	-.023	60.98	11	-.27	60.95	11
192	.016	58.60	18	.18	58.60	18	234	.027	61.15	10	-.12	61.24	11
1144	-.015	60.69	13	.33	60.60	12	1169	-.002	57.73	25	.09	57.93	24
194	-.015	61.08	25	-.20	61.08	26	237	-.003	60.19	14	.26	60.19	14
193	-.034	59.38	14	.08	59.38	14	1170	-.009	58.74	63	.07	58.97	60
1637	-.295	58.16	20	.44	58.36	20	241	-.004	57.89	15	.15	58.17	13
191	-.002	59.61	27	-.02	59.73	25	243	-.015	60.60	11	.13	61.14	10
195	-.003	61.04	21	.12	61.04	21	242	-.026	61.26	12	.14	61.38	13
1145	-.011	60.57	12	.29	60.91	12	244	-.025	58.07	25	-.13	58.15	24
1146	-.005	61.83	11	.37	61.73	10	1171	-.040	58.37	15	.05	59.10	14

## OBSERVED - FK3

## OBSERVED - FK3

FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
1172	-.020	60.09	12	.11	59.72	13	1197	-.001	60.58	10	-.05	60.77	10
246	-.002	59.15	64	-.35	59.44	58	289	.008	58.05	47	-.03	58.12	46
1173	-.015	60.13	12	.27	60.28	13	291	-.022	60.31	13	.36	60.34	15
1174	-.002	58.66	21	.05	58.79	20	292	.035	58.87	14	-.03	58.62	13
1175	.022	59.12	18	.13	59.24	18	293	-.003	57.67	28	.08	57.74	26
249	.007	62.19	10	.23	62.20	10	294	-.006	56.58	12	-.27	56.58	12
247	.006	57.51	12	.01	57.51	12	295	.001	60.30	12	-.10	60.44	13
251	-.006	58.92	12	.18	59.17	11	1200	-.018	58.98	10	-.26	58.98	10
250	.005	58.27	12	.18	58.51	10	1199	.012	59.51	11	.07	59.52	11
248	-.019	58.91	49	.06	59.06	49	1201	-.001	58.08	32	-.27	58.04	31
254	-.002	57.84	18	.20	58.12	15	1202	-.008	61.64	11	-.47	61.77	13
256	-.004	58.44	13	.31	58.44	13	296	-.036	58.73	13	-.18	58.53	13
257	-.039	61.51	12	.01	62.15	10	1204	-.010	58.50	11	-.02	58.83	10
255	-.036	59.41	15	.04	59.82	15	1205	.002	58.41	47	-.15	58.34	49
1177	.004	58.62	48	-.07	58.86	45	1207	-.011	59.72	13	-.12	59.76	12
1176	-.002	60.07	12	-.07	60.07	12	299	.017	57.91	20	-.03	57.80	19
258	.003	58.14	24	.04	58.18	24	1208	.012	57.88	15	.04	57.90	16
1179	.008	58.73	29	-.53	58.93	27	300	.046	59.05	24	-.20	59.04	23
259	.022	58.74	14	.13	59.10	14	1209	-.009	57.73	14	-.18	57.73	14
261	-.010	58.43	16	.13	58.98	13	304	.019	57.45	34	-.27	57.49	33
266	-.010	58.66	41	-.01	58.80	36	302	.107	58.18	13	-.08	58.52	14
260	.020	59.20	34	.05	59.29	32	1212	.036	61.85	10	.17	61.85	10
1181	.022	58.97	58	.39	59.15	57	1211	.015	60.50	11	.05	60.50	11
1182	-.014	58.22	13	.17	58.22	13	1213	-.024	57.84	36	.33	58.06	36
270	-.003	60.18	12	.29	60.58	10	305	.009	57.61	13	.08	57.61	13
269	.004	58.01	18	.11	57.97	15	307	.008	59.27	13	.03	59.27	13
271	-.023	59.43	10	.05	58.87	12	1639	-.079	57.35	27	.03	57.28	26
1185	.022	58.64	44	-.13	58.71	41	308	-.007	62.17	10	-.10	62.24	9
273	.007	62.23	13	-.01	62.24	12	1214	.049	60.89	11	-.77	61.00	12
1186	-.015	57.46	34	-.03	57.59	31	1215	.034	60.48	13	-.37	60.50	12
274	-.002	60.43	13	.03	60.56	14	311	.000	61.71	9	-.06	61.75	10
1187	-.003	58.13	32	-.15	58.14	29	310	.094	58.95	46	-.09	58.82	44
1188	.008	58.23	18	-.17	58.36	17	312	.005	60.56	17	-.11	60.51	17
1190	-.026	58.70	16	-.21	58.82	16	1216	-.045	56.79	26	.10	56.82	25
276	.017	58.13	19	-.03	58.25	17	1218	.055	57.71	31	.23	57.78	36
277	.003	58.67	13	-.32	58.64	12	1217	.007	59.66	13	.20	60.11	13
279	-.006	57.87	15	.03	57.99	14	314	-.023	57.80	22	.21	57.80	22
909	-.616	58.25	25	.10	58.51	29	1220	.008	58.18	16	.08	57.94	17
280	.008	58.33	19	.23	58.19	16	1221	-.007	57.58	12	-.15	57.58	12
1191	-.007	57.64	16	-.07	57.74	15	316	-.002	59.87	25	-.04	59.87	25
282	.001	58.53	11	.36	58.55	10	1222	.015	58.42	14	.12	58.12	14
1192	-.005	60.69	10	-.11	61.47	10	317	.011	58.36	22	-.12	58.13	21
285	.002	59.95	14	-.15	60.09	15	320	-.004	59.34	13	.00	59.34	13
284	-.009	58.20	16	.05	58.51	14	321	-.004	59.80	10	-.05	60.01	11
286	.016	58.49	13	.13	58.49	13	322	.095	58.83	11	.24	59.11	12
1193	-.014	58.46	39	-.25	58.44	39	1223	-.004	57.18	44	.19	57.18	42
287	-.018	58.01	14	.44	58.85	10	323	.002	60.11	13	.05	60.28	11
288	.036	59.17	14	.67	59.43	9	1224	.000	60.20	17	-.02	59.85	18
1196	.005	58.26	12	-.08	57.93	11	1225	.004	59.01	12	.10	58.88	13
1195	-.008	59.33	12	.01	59.33	12	325	.007	57.35	32	.03	57.40	34

OBSERVED - FK 3							OBSERVED - FK 3						
FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
1228	-.011	57.78	18	.07	57.78	18	373	-.030	60.50	14	.18	60.81	13
326	.000	58.52	14	-.09	58.68	12	1257	.014	57.73	40	.14	57.88	36
1229	-.084	60.74	11	-.56	60.69	8	372	.007	59.08	20	.17	59.23	19
328	.000	59.11	13	-.12	59.35	12	374	.012	58.53	13	.16	58.53	13
1230	.007	58.78	31	-.14	58.90	30	376	.015	58.06	38	-.05	58.08	37
334	-.008	59.98	27	-.01	60.37	25	378	.002	57.94	37	-.05	58.07	35
1231	-.029	58.91	10	.28	60.11	10	1258	-.023	58.78	12	-.24	59.03	13
337	-.014	58.11	39	-.04	57.96	36	1259	.004	57.54	30	.11	57.65	28
335	-.027	59.85	12	.34	59.90	11	1260	-.067	59.09	14	-.11	58.84	10
1232	.010	59.01	12	-.01	59.01	12	1261	-.005	60.35	11	.23	61.08	12
339	.000	58.43	16	.16	58.44	16	379	.011	59.22	12	.14	59.22	12
338	.016	58.66	20	.00	59.15	17	380	-.015	59.74	22	-.02	59.76	21
1235	.012	58.03	44	-.50	57.87	39	381	-.010	58.37	19	-.21	58.31	18
341	.008	60.57	13	.01	60.59	14	384	.009	58.61	12	.01	58.61	12
340	.038	59.66	14	-.11	59.93	13	383	-.019	59.22	11	.18	59.14	13
1236	-.025	57.94	35	-.21	58.07	32	1262	.016	59.37	14	.02	59.39	13
1237	-.008	57.59	13	.24	57.56	14	1263	.007	56.63	20	-.16	56.64	17
1238	.011	57.07	15	-.22	57.21	15	1266	.001	57.25	28	-.19	57.47	23
1640	-.103	56.87	19	.30	57.01	18	386	-.008	60.46	13	-.07	60.53	10
1239	.001	60.32	10	-.01	60.32	10	1267	-.022	59.00	14	.09	59.31	13
1240	.004	58.19	17	.67	58.85	12	387	.043	57.90	15	-.18	58.31	15
1242	-.025	56.74	15	.39	56.99	13	388	.005	58.04	33	-.03	58.06	31
346	-.004	58.11	25	-.09	58.14	22	389	-.030	60.82	12	-.33	61.33	11
347	-.011	60.22	32	.15	60.22	32	390	-.012	59.58	12	.17	59.60	11
350	-.005	58.00	24	.12	58.08	23	911	-.056	57.55	53	.08	57.54	54
352	-.007	58.74	17	-.35	58.71	16	1270	.004	57.14	15	-.26	57.28	14
1243	.001	60.10	10	.08	60.10	10	1271	-.019	60.43	10	.07	59.95	11
1244	-.011	58.95	16	-.27	58.93	15	394	.013	61.15	11	.18	61.15	11
1245	-.002	58.36	56	-.07	58.51	52	1272	-.004	59.96	12	.16	59.96	12
354	-.006	58.85	36	.10	58.98	35	396	-.010	59.82	11	-.12	59.77	10
355	.037	57.58	19	-.14	57.58	19	395	.027	57.42	17	.09	57.65	15
1246	.017	55.83	13	-.05	55.75	13	399	-.010	60.05	9	.14	59.76	8
358	-.007	59.86	10	-.15	59.86	10	398	.004	58.25	11	-.16	58.05	10
357	.035	60.07	12	.02	60.07	12	1274	.026	57.62	48	.07	57.69	47
910	-.061	58.84	44	-.27	59.14	36	1275	-.009	58.57	16	-.14	58.53	15
1247	.025	60.62	10	.29	60.75	11	404	.006	58.08	58	-.13	58.05	57
360	.008	57.40	15	-.01	57.26	14	403	-.002	58.48	17	-.01	58.48	17
1249	-.013	58.18	49	.04	58.28	49	1276	.006	58.64	12	.09	58.57	11
1250	-.010	57.42	35	-.17	57.60	32	405	-.013	57.23	20	-.21	57.43	20
364	.007	60.30	10	.29	60.30	10	407	.011	57.68	14	-.26	57.68	14
363	.052	58.57	15	.08	58.47	13	1278	.003	57.92	50	.04	58.06	42
365	.004	58.40	13	-.24	58.08	12	1279	.023	59.13	12	.06	59.39	11
1251	.025	57.39	13	.43	56.79	14	1280	-.028	61.48	11	.43	61.53	12
1252	.028	58.21	13	-.36	58.12	12	409	-.002	57.44	44	-.29	57.56	40
367	.003	58.10	16	-.05	58.55	13	410	-.030	61.54	12	.11	61.48	11
1253	-.010	58.21	13	-.13	58.60	12	1281	.001	58.53	15	-.08	58.61	14
1255	-.006	57.40	31	.09	57.39	28	412	-.012	58.29	20	.07	58.23	16
368	.006	57.77	15	-.15	57.77	15	413	.042	57.39	19	.20	57.65	17
370	.006	58.42	44	.02	58.33	41	1282	-.013	59.46	12	.12	59.21	13
371	.003	57.58	16	-.09	57.67	15	1283	-.015	62.15	11	.32	62.15	11



## OBSERVED - FK3

## OBSERVED - FK3

FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
1284	.011	57.06	24	-.24	57.09	21	454	.060	58.43	29	.02	58.65	25
416	-.004	58.03	13	.25	58.19	12	1314	.000	57.00	19	-.18	56.73	19
1285	-.009	57.54	35	.31	57.72	31	456	.019	58.33	12	-.01	58.69	11
417	.002	57.68	12	.28	57.76	12	457	-.028	60.82	9	.28	60.57	10
418	.001	57.83	29	-.05	57.94	26	458	-.024	58.68	11	.19	59.11	10
419	.005	61.06	11	.05	60.94	10	1315	.004	58.41	23	-.20	58.28	22
1286	-.014	57.02	15	.84	56.92	14	460	-.008	58.63	24	-.18	58.82	23
1287	-.008	56.97	24	-.08	57.09	23	1316	-.045	59.15	13	-.18	59.15	13
420	-.012	57.94	14	-.21	57.94	14	1317	-.002	57.92	21	.10	58.24	17
1641	.015	57.87	47	.31	57.82	46	1318	-.010	57.88	32	-.23	57.86	30
421	-.020	56.54	15	.05	56.70	14	1319	-.002	56.51	15	.61	56.32	10
422	.005	58.89	13	.35	58.89	13	461	-.008	58.35	31	.31	58.32	30
423	-.003	59.51	12	.11	59.51	12	466	.008	56.72	24	-.16	56.78	23
424	.014	57.16	10	-.10	57.16	10	465	-.013	57.96	14	.19	57.86	13
1292	.009	57.66	32	.01	57.58	31	467	.018	57.50	21	-.07	57.49	22
425	.003	57.92	20	-.02	57.76	18	1321	.010	59.81	9	-.15	59.62	11
1293	-.011	57.84	25	.32	57.84	25	1322	-.005	57.71	12	-.04	57.71	12
426	-.009	58.83	11	.18	58.78	10	472	-.054	57.68	19	.17	57.89	19
427	.007	57.42	49	-.15	57.63	42	470	-.020	58.39	12	-.16	58.39	12
429	.023	58.15	19	.06	58.01	19	471	-.027	59.97	12	.30	61.04	8
431	-.007	58.01	12	.14	57.89	11	1323	.028	58.45	16	.42	58.32	14
1295	-.035	58.82	11	-.33	58.82	11	473	.000	59.30	13	-.12	59.30	12
1296	-.014	57.15	29	.04	57.29	27	1324	.007	57.68	66	-.17	57.70	64
1297	-.014	57.90	36	.09	57.80	35	475	-.005	58.06	41	.17	58.05	39
432	.010	58.75	17	.14	59.01	15	1326	-.012	58.55	58	-.17	58.50	57
433	-.016	58.35	32	-.07	58.39	30	478	.025	58.38	21	.16	58.39	20
1299	.005	57.45	33	-.25	57.36	30	1327	-.030	57.25	16	-.02	57.18	15
437	.005	56.74	16	-.24	56.74	16	1328	.003	58.36	51	-.13	58.50	48
1300	.002	57.53	23	.04	57.50	22	1329	.005	59.89	10	.45	59.89	10
440	.036	57.66	25	.04	57.66	25	1330	.002	58.41	42	-.04	58.41	42
1301	-.025	58.41	15	.13	58.04	13	1332	.004	57.09	23	.11	57.09	23
1302	-.005	57.93	51	-.08	57.88	47	1333	.034	58.14	17	.12	58.14	17
441	.000	58.34	14	.21	58.19	13	1334	.024	60.04	11	.17	60.04	11
1303	-.002	58.66	16	.17	58.66	16	1335	-.010	57.66	34	-.20	57.92	31
1304	.002	57.48	15	.08	57.73	16	483	-.018	59.38	12	-.09	59.38	12
1305	-.011	59.82	11	.42	59.47	11	484	-.006	59.81	15	-.10	59.81	15
444	-.021	58.30	11	-.17	58.30	11	486	.026	58.24	17	.09	58.24	17
445	.008	59.75	24	-.04	59.93	22	485	-.003	57.86	12	-.03	57.86	12
1306	-.014	57.11	49	-.01	57.11	49	1336	-.001	58.37	54	-.31	58.30	51
1307	.015	58.11	16	-.15	58.03	15	488	.001	58.96	22	-.27	58.94	21
447	.010	57.67	12	-.13	57.67	12	1337	-.014	57.03	15	-.06	57.37	16
1308	-.019	60.27	12	.03	60.27	12	1338	.002	58.78	13	.03	58.78	13
1309	.005	62.27	11	-.11	62.27	10	1339	.022	58.85	11	-.17	59.00	10
1310	-.016	58.68	19	.15	58.38	16	490	.000	57.29	28	-.37	57.22	27
1311	.001	57.57	38	.01	57.52	37	491	-.016	60.48	11	-.17	60.48	11
1642	-.284	57.17	34	.03	57.10	33	1341	-.043	58.18	10	.59	58.51	8
450	-.002	57.61	20	-.32	57.70	18	492	-.010	57.25	15	-.03	57.25	15
451	-.045	59.46	41	.26	59.66	36	1344	-.007	57.50	51	-.19	57.53	49
453	-.002	59.88	14	-.03	59.92	13	494	-.029	57.85	15	-.12	57.85	15
1313	.014	57.29	14	-.07	57.54	12	1345	.009	60.21	11	.35	60.42	9



OBSERVED - FK3							OBSERVED - FK3						
FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
495	-.037	60.62	9	.00	60.70	10	1375	.007	57.98	31	.04	58.05	28
1346	-.004	57.31	45	.11	57.31	43	1376	.028	61.23	9	.40	61.25	10
497	-.011	57.82	23	.10	57.82	21	531	-.029	57.28	20	.04	57.28	20
498	-.009	59.10	12	-.23	59.08	11	1378	.008	58.39	11	-.06	58.39	11
1348	.010	57.54	25	.02	57.67	24	533	-.016	57.44	34	-.06	57.63	32
499	.012	57.29	16	.13	57.24	16	1379	-.005	57.98	38	.20	58.15	36
1349	.006	57.79	11	.08	57.79	11	534	-.012	59.73	11	-.19	59.73	11
1350	.002	57.62	13	-.12	57.62	13	535	-.022	59.08	13	-.05	59.08	13
500	-.013	57.70	21	-.16	57.94	21	536	.012	58.07	16	.18	58.32	17
1351	-.004	57.10	51	.02	57.34	49	1380	-.025	56.52	15	-.19	56.45	14
501	-.020	59.10	12	-.02	59.10	12	1381	-.015	57.07	26	.11	56.98	24
502	.010	58.65	10	-.08	58.65	10	540	-.008	57.89	28	-.05	57.83	27
1352	.001	57.71	16	.23	57.61	15	1382	.003	56.98	33	.11	56.98	33
1353	.019	59.32	9	-.06	59.61	10	545	-.019	59.82	14	.22	59.94	13
505	-.016	57.68	32	-.35	57.84	30	1383	-.022	57.06	21	-.25	57.06	21
1354	.005	60.31	10	-.06	60.31	10	1384	-.003	57.52	17	.11	57.52	17
1355	.012	57.56	29	-.05	57.60	29	547	-.022	59.34	22	.12	59.67	21
1357	-.008	60.75	11	.41	60.60	10	1385	-.009	56.11	15	-.03	56.16	13
1643	-.242	57.23	59	.26	57.25	58	1386	.012	57.57	20	-.20	57.51	22
1358	-.002	57.78	16	.01	58.01	15	1387	-.015	59.49	13	.45	59.31	10
507	.008	59.80	11	.00	59.80	11	548	-.022	58.45	13	.29	58.56	11
509	-.023	60.95	10	.07	60.95	10	549	.044	58.28	14	.20	58.28	13
510	-.019	61.48	10	.26	61.39	9	550	-.074	57.88	18	.32	58.40	17
1359	-.024	57.15	30	.26	57.41	30	1388	.016	57.78	26	-.24	57.67	25
511	.020	57.77	14	.25	57.64	14	1644	-.115	56.87	37	.26	57.07	36
513	-.009	58.36	12	0.00	58.36	12	551	.002	59.08	10	-.14	59.08	10
1360	.048	57.10	20	-.08	57.10	20	1390	.009	57.40	14	-.22	57.40	14
515	-.018	58.11	14	.24	58.40	13	1391	-.009	62.22	10	.42	62.21	9
1361	.021	60.24	10	.42	60.01	9	1392	-.034	60.95	10	-.15	60.95	10
1362	0.000	57.59	43	.30	57.43	43	1393	-.008	58.39	13	-.17	59.14	11
517	.007	59.76	11	-.06	59.76	11	554	.022	57.27	17	.13	57.26	15
516	-.001	57.36	38	-.03	57.41	37	1394	.001	58.02	26	-.01	58.08	25
1365	-.004	56.82	11	.20	56.82	11	555	-.008	58.57	11	.24	58.99	10
521	.005	57.97	13	.15	57.71	14	556	-.011	60.18	13	.18	60.25	9
519	-.008	59.63	13	.19	59.91	12	557	-.009	57.11	17	.06	57.28	15
1366	-.019	57.26	52	-.21	57.31	52	1395	-.027	57.70	27	.03	57.74	26
1367	-.003	58.10	12	-.17	58.10	12	1397	.000	58.49	23	.01	58.49	23
1368	-.006	56.88	16	-.28	56.88	16	1396	-.011	57.38	22	.43	57.29	18
522	.017	57.75	11	-.26	57.75	11	559	-.020	55.80	16	.19	55.93	16
524	-.002	58.25	30	.18	58.36	29	562	.007	57.34	35	.06	57.25	33
523	-.005	56.66	20	-.07	56.79	19	563	.006	57.45	12	.02	57.45	12
526	-.027	58.04	13	-.21	58.19	11	565	.022	59.45	13	.01	59.80	12
525	.012	56.95	38	-.59	56.79	37	564	-.021	58.04	11	-.05	57.75	12
528	-.014	57.68	15	-.22	57.68	15	1400	-.016	58.54	13	-.18	58.39	11
527	-.011	58.12	13	.01	58.10	12	1401	.010	57.16	35	-.11	57.35	35
1369	.013	58.92	11	-.05	58.92	11	1404	-.020	60.44	10	.83	60.36	6
1370	.015	57.48	19	-.21	57.49	18	1405	.005	61.26	8	.67	61.26	8
1371	-.008	59.19	11	.24	59.19	11	569	-.039	58.59	10	.17	58.59	10
1372	.001	58.39	15	.29	58.39	15	1406	-.009	57.34	16	-.31	57.86	13
1374	-.003	57.19	37	-.03	57.24	35	568	-.016	58.68	11	.09	58.68	11

## OBSERVED - FK3

## OBSERVED - FK3

FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
570	.003	59.04	12	.04	59.04	12	614	-.035	60.22	11	.46	60.00	10
571	-.004	57.50	15	.00	57.13	12	616	-.028	58.58	12	.19	59.09	9
1407	.001	57.44	11	.17	57.84	12	1430	.008	59.46	11	-.36	59.97	10
572	-.014	57.29	19	.05	57.45	18	618	-.005	58.55	13	-.16	58.12	11
1408	-.012	57.95	66	-.11	57.94	64	619	-.002	57.36	29	.29	57.92	24
573	-.019	58.42	14	-.22	58.42	14	1432	.003	58.03	24	.23	58.35	21
576	.002	57.99	14	.10	57.99	14	621	-.030	57.75	18	.03	57.85	19
1409	.001	57.24	51	.04	57.45	49	623	.016	58.91	22	.28	59.38	20
578	-.015	58.41	12	.03	58.41	12	1433	-.002	57.36	48	.08	57.60	43
577	-.001	60.07	11	.32	60.07	11	622	-.006	60.50	19	-.35	60.40	19
580	-.014	56.44	24	-.13	56.31	22	1434	-.039	56.94	27	-.26	57.06	23
1412	-.002	57.22	21	-.34	57.51	19	624	-.014	59.41	16	.00	59.85	13
1413	-.029	56.99	13	.17	57.37	11	626	-.017	57.96	13	-.22	58.18	13
582	-.007	57.45	22	-.10	57.60	21	627	-.011	58.90	11	-.20	58.78	12
583	-.019	56.90	16	-.02	57.06	15	1436	.032	56.84	27	-.23	56.88	24
590	-.039	57.49	41	.11	57.90	35	1437	-.008	60.76	13	.58	60.02	9
587	.034	56.88	15	.42	56.72	13	1438	-.015	57.22	50	.01	57.54	43
584	-.001	59.32	12	.17	59.49	11	1440	-.013	58.99	11	-.68	58.44	11
585	-.015	60.63	10	-.19	60.53	11	629	-.003	60.03	11	-.06	60.66	11
588	.003	58.79	22	.04	58.95	23	912	.034	56.61	25	.07	57.21	22
1645	-.060	57.44	22	.13	57.76	22	1441	.011	60.16	13	.03	60.31	12
1414	-.014	57.04	19	.04	57.02	18	1442	-.016	57.75	39	.08	57.97	36
1415	-.011	59.42	11	.39	59.91	10	633	-.012	58.94	36	-.24	59.44	29
1416	.007	57.73	21	-.04	57.82	19	634	.011	59.33	15	-.27	59.62	13
591	-.034	56.92	22	.03	57.06	22	1445	.018	57.32	62	.19	57.80	50
1417	-.001	56.98	12	.32	57.39	11	1446	.009	58.67	14	.11	59.00	13
593	-.001	57.61	18	-.11	57.71	16	635	-.013	56.84	20	-.30	57.37	17
592	.000	58.83	10	.02	58.83	10	1448	-.010	58.72	18	-.03	59.25	16
595	.036	57.03	19	.06	57.16	17	1447	-.010	60.66	12	.45	61.77	7
594	-.012	60.87	11	.20	60.86	11	1449	-.031	56.75	16	.08	57.11	13
1419	-.013	61.15	11	.15	60.98	9	636	-.023	58.31	14	-.12	58.46	18
1420	-.010	56.95	49	.08	57.06	46	1450	-.019	57.44	55	-.52	57.88	44
598	.008	58.18	21	.14	58.31	19	639	-.050	58.53	17	.09	58.94	15
597	-.048	56.63	17	.00	56.85	15	1451	.011	57.46	66	.01	57.77	59
1421	.008	57.59	11	.17	57.59	11	641	-.001	59.32	11	-.01	59.32	11
1422	-.025	57.92	61	-.57	58.31	53	643	-.027	59.50	13	-.10	59.91	12
1423	.002	59.05	12	.40	59.00	11	1453	.001	58.07	29	.11	58.33	27
601	-.019	58.01	11	.24	58.18	11	1454	-.013	59.45	17	-.34	59.51	14
603	.001	58.54	23	.17	58.49	22	1456	.003	58.15	20	-.19	58.61	17
606	-.004	58.97	60	-.03	59.06	59	644	-.001	60.34	11	-.23	60.08	11
1425	-.007	56.78	26	-.17	56.99	23	1457	-.023	60.37	12	.18	60.76	10
605	.014	59.36	27	.03	59.74	26	1458	-.037	57.10	36	.06	57.27	32
607	-.019	60.03	10	.34	59.94	10	647	-.005	57.29	18	-.26	57.64	17
608	-.051	59.21	12	.12	59.21	12	1459	.006	58.23	19	.13	58.51	15
612	-.005	58.55	24	.30	58.79	22	650	-.005	58.35	13	.23	58.58	12
1427	.004	57.43	25	.08	57.71	23	1460	-.005	56.58	25	-.21	56.73	21
609	-.001	58.72	11	-.54	58.95	10	653	-.012	57.41	24	.05	57.41	24
1428	.031	60.09	11	-.19	60.09	11	655	.000	58.78	15	.32	59.20	13
1429	.001	57.34	41	-.28	57.47	40	657	-.015	60.14	12	.11	60.14	12
613	.001	58.30	12	-.06	58.30	12	1462	-.001	60.84	11	.32	60.84	11

OBSERVED - FK 3							OBSERVED - FK 3						
FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
1461	.034	57.40	21	.16	57.56	17	699	.002	60.03	15	.40	60.60	12
659	.028	57.35	16	-.05	57.47	14	701	.034	58.23	15	.02	58.36	14
656	-.005	60.00	12	-.22	60.49	12	1486	-.007	57.91	37	.11	58.32	33
658	-.023	59.97	13	.49	60.25	11	702	-.005	57.06	38	.11	57.48	30
664	-.006	58.13	42	.04	58.28	40	1487	.001	57.01	16	.13	57.24	13
663	-.025	56.94	25	.03	57.45	20	703	.007	57.36	18	-.11	57.45	17
1463	-.020	56.90	15	.52	57.44	11	1488	-.015	58.70	17	-.31	58.69	15
665	.002	59.94	40	.06	60.07	40	1489	.005	56.88	54	.03	57.04	41
670	-.084	57.85	24	.03	58.11	22	1491	-.001	60.93	13	.08	60.82	14
667	-.035	58.97	12	-.61	58.98	12	1492	-.038	59.83	12	.24	60.29	11
668	-.009	60.61	24	-.13	60.71	22	1493	.007	60.02	12	.11	60.69	12
1465	.021	58.61	14	.45	58.92	13	1494	.007	57.48	52	-.06	57.71	42
1466	.042	57.29	31	.26	58.06	26	705	-.003	57.72	15	-.17	58.10	12
913	-.171	57.48	24	-.06	58.00	27	707	-.001	57.68	19	.18	57.85	19
675	-.002	58.43	40	.33	58.76	34	706	-.005	60.11	12	.19	60.54	9
1467	-.001	57.32	43	.24	57.77	38	1495	.017	61.42	12	.44	61.42	12
671	.025	58.98	11	.07	58.98	11	709	.007	57.23	21	-.26	57.73	18
1468	.003	59.19	11	.00	58.95	10	711	-.020	60.45	12	.21	60.63	11
672	-.031	56.94	20	-.14	57.20	18	710	.010	58.52	16	.03	58.85	11
676	-.016	58.12	21	-.08	58.31	20	714	-.070	58.61	14	.04	58.41	12
674	-.023	58.23	16	.06	58.84	13	713	-.011	57.34	24	.09	57.75	19
673	-.017	58.83	38	.12	59.14	35	712	.007	57.85	24	.24	57.95	22
1469	-.020	56.81	16	-.10	56.97	14	716	.001	57.29	19	.05	57.83	14
677	.014	59.24	34	.22	59.58	30	717	.009	59.74	28	-.19	59.92	27
1470	.004	60.33	14	.41	60.72	12	1497	-.045	57.24	49	-.07	57.43	51
680	-.006	58.94	48	-.12	58.98	46	1498	.007	59.63	12	-.27	59.56	10
681	-.006	57.87	19	-.12	58.37	16	719	.022	57.51	18	-.24	57.67	18
1472	.037	59.75	15	.01	60.19	14	720	-.004	56.04	13	.01	56.31	11
682	-.012	58.19	16	.36	58.02	15	1500	.002	58.19	66	.13	58.44	61
685	-.003	57.89	22	-.10	58.57	18	723	-.029	57.37	29	-.12	57.24	25
684	-.023	59.51	10	.36	59.51	10	724	-.006	57.97	20	.17	57.94	19
1475	.011	56.72	39	.16	56.88	33	722	-.011	59.36	11	.32	58.74	11
1477	.003	58.35	12	-.16	58.35	12	725	.009	58.39	39	-.34	58.65	35
1476	.006	57.31	69	.03	57.81	57	726	-.011	59.54	13	-.08	59.30	12
688	-.004	60.21	23	-.22	60.37	22	729	-.038	58.79	14	-.17	58.79	14
914	.334	57.66	15	.38	57.52	14	727	-.012	59.52	12	.35	59.32	11
690	-.012	57.67	14	-.13	57.79	15	1503	.006	57.07	27	.02	57.33	21
695	-.027	58.64	22	.10	58.49	19	730	.016	58.65	13	-.09	58.65	13
1478	.004	57.29	57	-.05	57.79	45	1505	.029	59.80	12	.28	59.80	12
1479	.065	58.76	15	-.03	59.25	14	1506	.015	59.58	13	-.11	60.01	12
692	-.006	58.55	10	.06	59.15	10	734	-.031	60.57	22	-.04	60.73	18
696	.007	58.87	13	.10	58.89	13	1507	.033	57.81	12	.39	57.73	11
1480	.007	57.31	49	-.02	57.78	35	1508	.019	57.00	18	.06	57.00	18
1481	.027	58.17	15	.17	58.73	13	1509	.011	58.31	66	-.22	58.63	58
1646	-.066	57.37	40	.30	57.46	38	733	-.018	58.00	17	.27	58.08	16
700	-.051	58.34	23	.09	58.86	20	732	.006	57.59	19	.41	57.96	16
1483	-.028	60.00	11	.06	60.05	10	1510	.012	57.80	13	-.22	57.73	12
1482	.011	58.30	21	.09	58.10	18	1511	.002	57.86	86	.04	58.24	75
1484	.014	57.14	51	.11	57.25	45	736	.007	58.88	14	.15	58.79	10
1485	-.022	60.24	10	.59	60.44	10	737	-.003	57.81	53	.26	58.10	44



## OBSERVED - FK 3

## OBSERVED - FK 3

FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
738	.005	57.80	13	.43	57.80	13	780	-.009	60.85	10	-.15	60.85	10
1512	-.006	60.02	13	-.03	60.49	12	783	-.026	57.81	15	.08	57.77	12
1513	.010	57.48	22	.31	57.53	21	1541	.016	60.21	11	-.19	60.37	10
1514	.001	56.82	15	.07	57.18	9	1544	-.005	60.16	11	.57	60.61	10
1515	-.004	56.99	31	-.16	57.27	25	781	-.006	59.82	11	-.11	60.13	10
740	-.003	57.49	28	.05	57.99	24	1543	.018	56.56	16	-.26	56.62	15
1517	-.004	59.76	14	.26	59.70	11	915	-.056	57.63	47	.04	57.84	40
741	-.004	58.75	25	-.38	58.75	25	1545	.020	59.39	15	-.35	59.48	13
743	.006	57.57	26	-.29	57.65	25	1546	-.011	60.08	13	.58	59.82	10
744	-.020	56.70	41	.10	56.98	34	1547	.004	58.91	53	.01	58.89	49
745	.007	59.14	15	-.09	58.84	14	786	.016	57.11	21	-.17	57.62	17
746	.012	60.48	13	.02	60.00	14	1548	.021	60.21	16	.36	60.63	10
1519	-.001	56.57	30	.18	56.94	26	788	.008	59.03	14	-.27	59.03	14
749	.015	59.49	22	.01	59.74	20	1549	.008	57.86	19	-.27	57.99	18
1521	-.017	59.66	12	-.06	59.66	12	789	.024	58.32	53	-.06	58.62	48
1522	-.006	61.73	12	.18	61.18	13	1551	-.022	59.20	11	.02	59.20	11
752	.008	58.28	19	-.24	58.36	15	792	-.017	58.47	19	-.09	58.80	16
1523	.000	58.12	23	-.40	58.30	20	1552	-.006	60.69	10	-.30	60.98	10
1524	.013	58.28	52	-.04	58.97	41	1553	.008	58.08	17	-.49	58.30	16
1647	-.029	57.87	28	.03	57.78	25	791	.011	61.00	11	.54	61.00	11
1525	.001	59.68	12	-.06	59.27	12	793	.087	60.76	8	.09	60.63	11
756	.008	59.44	12	-.20	59.80	11	795	-.082	57.82	18	.00	58.00	17
759	.022	56.98	31	.03	56.96	27	794	-.002	58.63	20	-.01	58.92	20
1526	.007	58.67	11	.35	59.58	9	1555	-.016	58.54	33	.01	58.80	28
757	-.010	59.87	11	-.10	60.34	11	797	.008	57.91	25	.01	57.97	23
758	-.034	59.98	12	.36	60.43	10	800	-.001	59.14	67	.03	59.23	62
760	.007	58.26	17	-.32	58.43	16	1558	-.005	57.68	17	.16	57.97	17
1527	.017	59.91	14	.12	59.72	13	1559	-.009	59.02	13	.01	58.71	14
1529	.011	60.21	14	.68	60.42	8	803	-.024	58.84	31	-.01	59.11	29
761	-.020	62.18	10	-.23	62.15	9	1560	-.011	59.44	18	.29	59.40	19
762	-.012	59.40	13	.21	59.71	12	1561	-.010	58.54	12	.34	58.61	11
765	-.020	58.39	13	.20	58.04	12	804	-.003	57.08	17	-.05	57.08	17
1531	.013	58.47	70	-.03	58.78	59	1562	-.009	57.53	17	.21	57.48	13
1533	.005	57.80	37	-.13	57.96	33	806	-.022	58.51	15	.11	60.01	10
1534	-.011	59.35	11	.29	59.35	11	1564	.003	58.31	37	.48	58.58	31
1535	-.039	59.38	11	.01	59.38	11	807	-.038	58.46	10	.10	58.46	10
767	-.003	58.35	15	.16	58.90	13	1565	.020	59.66	10	-.16	59.66	10
1536	.002	57.54	29	.03	57.60	24	809	-.080	58.97	12	-.17	58.68	11
1538	-.061	58.51	17	-.17	59.33	13	808	-.001	59.77	11	.05	59.77	11
768	.005	60.41	18	-.25	60.57	17	1568	-.003	57.63	17	.08	57.63	17
1537	-.013	57.78	39	-.06	58.09	34	811	.003	58.64	16	-.20	58.64	15
770	-.077	58.61	17	.02	59.02	14	1569	.004	58.71	61	.06	58.84	55
1539	.010	58.34	16	-.01	58.59	13	1570	-.017	59.37	12	.08	59.71	11
772	.028	58.29	49	.28	58.48	46	812	-.024	60.50	12	-.05	59.76	11
773	-.015	59.32	12	.27	59.66	11	813	-.016	58.27	14	-.19	58.78	12
774	.010	59.70	10	.01	59.70	10	817	-.055	58.63	25	.00	59.02	22
777	-.010	58.20	25	.05	58.15	24	815	-.003	59.58	21	-.13	59.58	21
778	.006	57.91	27	-.01	58.08	25	1571	-.026	58.40	13	-.23	58.40	13
779	-.020	57.44	15	.12	58.12	10	818	.005	57.52	19	.08	57.55	17
782	-.014	58.56	15	.14	58.83	14	1572	-.053	59.59	13	.33	60.09	12



OBSERVED - FK 3							OBSERVED - FK 3						
FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
819	-.021	61.11	13	.20	61.24	10	1597	-.009	61.34	11	.48	60.79	10
1574	-.004	57.35	34	-.12	57.60	28	1598	-.014	57.82	59	-.37	58.07	57
821	-.044	59.97	11	-.13	59.97	11	861	-.012	58.62	11	.18	58.62	12
1575	-.003	58.43	22	-.04	59.15	16	862	-.022	58.36	15	.01	58.62	13
1576	-.032	58.79	13	.31	58.79	12	863	.012	57.64	32	-.10	57.53	30
1577	-.005	57.65	16	.10	58.73	10	864	.003	60.29	24	.38	60.53	23
823	.004	57.96	19	-.15	57.91	18	866	-.006	57.45	12	.17	57.78	11
1578	-.022	58.25	23	.00	58.31	22	1600	-.043	58.60	11	-.17	58.68	12
1579	.009	58.82	14	.20	58.82	14	1649	.071	58.24	43	-.08	58.62	41
1580	.009	58.37	61	.15	58.54	60	869	-.032	58.70	15	-.14	59.01	13
826	.009	57.13	31	-.43	57.22	30	1602	.000	57.76	52	-.11	58.15	43
827	-.004	59.42	39	-.17	59.82	37	870	-.019	58.94	11	-.31	59.36	10
830	-.003	58.11	19	.02	58.04	17	871	-.025	60.98	10	.17	60.98	10
828	-.004	58.86	14	.38	59.65	11	1603	-.004	56.61	46	.09	56.81	42
831	.016	57.75	17	-.09	57.75	16	1604	-.021	59.69	10	.06	59.69	10
833	.004	56.40	22	-.32	56.56	19	873	.006	57.53	14	.35	57.74	12
834	.010	60.00	31	-.34	60.16	31	1606	-.006	58.22	42	.09	58.62	35
835	-.030	56.98	14	-.17	56.98	14	875	-.007	59.08	13	-.04	59.02	13
837	-.025	58.91	17	-.04	58.07	13	1607	.003	57.17	26	-.01	57.33	24
836	.004	59.05	14	.32	59.48	14	1608	-.016	56.93	21	.09	57.38	20
1583	-.020	57.77	22	.54	58.00	22	878	.007	60.65	23	-.10	60.74	24
1582	.024	58.19	13	.39	57.92	11	1609	-.012	57.59	49	.00	57.52	45
840	.005	58.08	32	.28	58.19	30	880	.002	59.71	12	-.22	59.71	12
1648	-.302	58.73	67	.09	58.78	65	1610	.014	58.09	18	.31	58.12	17
1584	-.034	60.55	11	.62	59.90	6	1611	.013	59.71	10	.68	59.57	7
843	.004	57.43	28	-.52	57.37	26	1612	.015	58.50	13	-.30	58.83	11
842	-.005	59.60	10	.05	59.60	10	1613	-.004	58.83	16	-.03	59.04	15
844	.011	58.86	20	.47	58.93	18	882	-.010	58.06	32	.06	58.02	32
1585	.006	57.74	43	.20	57.84	39	881	.001	57.63	15	-.06	58.05	11
1586	.028	60.09	12	-.38	60.09	12	884	.003	58.10	38	-.13	58.27	35
1588	-.010	57.10	17	-.11	57.30	15	1614	.007	58.13	27	.19	58.41	26
1589	-.011	61.52	10	-.04	61.52	10	1615	-.011	60.43	14	-.40	60.96	12
847	-.017	59.05	12	.53	59.45	11	885	-.003	58.27	34	-.54	58.68	32
1590	-.026	60.48	9	.01	60.69	10	1616	-.017	59.13	12	-.25	59.13	12
1591	-.009	58.94	14	.17	59.55	11	888	.015	58.63	37	-.25	59.00	35
848	-.030	59.46	11	.09	59.41	12	890	-.009	58.30	14	.01	58.30	14
1593	.113	58.43	23	-.12	58.72	20	891	.017	60.18	11	.23	60.31	12
1594	-.005	57.06	22	-.05	57.05	20	893	.073	58.88	53	.32	59.37	48
849	-.005	61.89	12	.40	61.85	10	892	.005	57.61	24	.04	57.65	23
850	-.006	56.98	24	.10	57.47	22	1619	-.017	59.92	12	.39	60.12	11
851	.010	58.30	11	-.21	58.30	11	1620	.005	57.24	35	-.37	57.16	32
1595	.000	57.08	36	-.20	57.52	31	894	.013	60.49	15	.25	61.00	12
853	.000	59.34	19	-.02	59.33	18	1621	-.010	58.15	15	.08	58.40	14
852	-.016	57.34	14	.17	57.56	13	1622	-.017	57.47	18	.06	57.73	15
854	.003	57.92	16	.46	58.30	12	1623	-.001	57.74	30	.08	57.78	24
855	-.010	59.41	27	-.07	59.67	26	895	.038	57.72	24	.05	57.98	22
857	.000	59.80	13	.26	60.19	11	1624	-.024	60.54	14	.36	61.31	13
858	-.015	58.05	19	-.14	58.01	18	897	-.004	58.44	30	-.01	58.40	27
1596	.017	57.35	19	-.09	57.40	19	898	-.007	58.31	14	-.26	58.50	10
859	.003	58.88	15	-.04	58.82	13	1625	-.030	58.12	28	-.05	58.28	29

## OBSERVED - FK3

## OBSERVED - FK3

FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
899	-.011	59.98	12	.02	60.19	13	1629	.004	60.47	12	-.19	60.63	13
1627	.074	58.26	16	.14	58.32	14	900	-.027	59.10	15	-.11	59.60	12
1650	-.094	57.59	48	-.17	57.96	45	902	-.004	59.01	20	-.09	59.04	21
1628	.000	58.30	12	-.45	58.30	12	1630	-.007	58.88	26	-.20	59.02	27
1642	-.296	57.22	32	-.11	57.76	32	701	.038	61.13	14	.15	61.34	13
451	-.081	58.86	15	-.11	59.08	14	1494	.010	59.69	21	-.45	60.04	19
454	-.018	58.43	59	-.17	58.74	55	714	-.057	58.48	18	-.17	58.74	17
472	-.009	58.60	20	-.16	59.04	16	723	.014	58.23	15	-.20	58.17	14
478	.029	57.74	18	.17	58.07	14	729	.022	59.69	14	-.17	59.98	14
486	-.015	57.76	25	.12	58.16	17	734	-.102	58.06	24	-.25	58.75	21
499	-.014	59.31	19	-.03	59.72	17	1647	-.046	58.29	38	-.11	58.27	36
500	-.037	57.65	12	.13	57.82	11	759	-.030	57.62	30	-.12	57.75	30
505	-.009	58.68	12	-.30	59.25	12	767	-.033	57.18	26	.08	57.22	22
1643	-.169	59.02	51	.06	59.03	48	1538	-.042	58.70	17	-.47	58.80	14
511	-.002	58.96	14	.17	58.88	12	770	-.030	57.87	15	-.06	57.62	14
521	-.040	58.97	21	-.10	59.45	16	783	-.003	57.39	10	.00	57.64	9
524	.000	56.49	19	-.22	56.42	18	915	-.102	58.29	34	-.33	58.35	33
1379	.040	59.14	29	-.36	59.39	26	795	-.102	58.19	17	-.04	58.75	12
536	-.023	58.58	16	.41	58.51	13	803	-.010	57.11	25	.15	57.40	18
550	-.064	58.50	16	-.23	58.92	13	809	-.071	58.74	12	.34	58.93	10
1644	-.138	60.40	57	-.03	60.53	53	817	.000	59.50	20	-.11	59.89	16
554	.065	60.84	17	.40	61.00	17	1572	.008	58.87	14	.38	58.95	14
565	.024	59.51	11	-.25	59.51	11	1578	-.026	58.20	14	-.18	58.11	13
569	.057	61.42	13	-.12	61.16	14	830	.011	57.82	18	.19	58.20	16
590	.005	59.99	23	-.06	60.46	20	837	-.042	59.20	17	-.44	59.25	14
587	.055	60.91	12	.76	61.07	12	1648	-.170	58.81	32	-.29	58.83	32
1645	-.127	57.41	18	-.56	57.83	14	1593	.070	56.72	19	-.13	56.93	16
606	-.014	60.71	48	-.27	61.08	39	1594	-.004	58.24	20	-.23	58.37	16
612	-.005	59.21	16	.12	59.17	14	851	-.042	59.78	13	.09	59.78	11
619	-.020	59.73	19	-.01	60.29	16	853	-.008	57.42	14	.15	57.28	13
1432	-.002	60.28	14	.02	60.31	12	863	.002	60.24	11	.19	60.51	11
623	.054	59.08	21	-.25	59.04	19	1649	.028	57.62	37	-.52	57.74	31
912	.026	58.53	25	-.34	58.66	27	882	.030	58.26	24	.10	58.08	18
639	-.018	58.68	21	.00	58.59	20	893	.063	58.83	54	-.09	59.14	50
659	-.030	58.99	12	-.12	59.34	11	895	.005	57.42	21	.18	57.49	15
664	.019	59.34	18	-.12	59.27	19	1627	.066	58.61	13	-.21	58.73	9
670	-.046	59.53	16	-.01	60.01	13	1650	-.102	57.01	42	-.51	57.03	38
913	-.319	58.55	14	-.31	58.96	16	16	.036	58.11	27	.03	57.67	21
675	-.005	58.45	27	-.04	58.68	25	24	.033	57.96	21	-.18	58.33	17
685	.003	59.43	12	.00	59.73	11	29	.040	57.83	14	.26	58.03	13
914	-.040	61.74	12	-.13	62.15	12	32	.030	58.46	7	.66	58.75	9
695	.018	60.81	10	-.60	60.81	10	906	-.291	57.81	58	-.09	57.94	59
1646	-.037	58.47	42	.07	58.67	40	41	.087	58.87	29	.06	59.20	25
700	-.004	60.11	16	-.22	60.19	13	46	.051	57.39	13	-.08	57.57	11

OBSERVED - FK3						OBSERVED - FK3							
FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.	FK4 No.	$\Delta\alpha$	Epoch	No.	$\Delta\delta$	Epoch	No.
48	-.005	56.49	13	.24	57.10	13	259	.021	58.34	16	.15	58.59	14
1042	.028	58.27	12	-.14	58.48	10	260	.055	58.05	45	-.29	57.99	32
51	-.007	57.50	14	.03	57.27	14	909	-.552	57.45	32	-.38	57.43	29
55	.041	56.78	13	.03	56.78	13	284	.036	57.59	22	.01	57.92	17
907	.095	56.38	26	.00	56.34	22	300	.026	57.60	30	-.07	58.44	18
63	.052	59.66	13	.42	60.37	9	302	.077	58.26	22	.50	58.56	20
70	-.013	59.94	11	.00	60.31	9	1639	-.145	57.71	36	-.25	57.76	29
1635	-.414	57.96	30	.00	58.09	26	1215	-.021	59.71	11	.03	59.72	10
76	.043	59.46	11	.25	60.23	6	310	.063	58.20	37	-.17	58.44	30
87	.047	57.08	16	-.14	56.80	12	317	.009	57.69	20	.36	58.42	15
92	.044	59.55	11	-.30	59.78	12	322	.106	57.79	20	-.03	57.90	19
105	.039	56.87	31	.03	56.54	25	338	-.019	58.35	13	-.03	58.30	14
115	-.006	59.82	29	-.09	59.61	24	1640	.024	57.37	37	.17	57.61	33
1636	-.434	56.99	31	-.10	57.05	29	355	-.005	59.87	13	.28	60.75	8
1096	.003	60.42	14	-.04	59.92	10	910	-.142	59.17	55	-.34	59.41	48
129	.000	57.22	22	.52	57.39	17	357	.021	56.99	15	-.21	56.89	13
138	-.065	59.44	11	-.01	59.44	11	363	.046	58.75	23	.07	58.57	20
908	-.293	57.21	42	-.33	57.57	39	372	-.048	59.52	18	.09	59.88	16
1122	-.026	56.88	22	.13	57.15	19	1262	.023	60.48	14	-.09	60.52	10
173	-.006	58.48	48	-.10	59.25	38	387	.047	59.93	13	.14	59.69	15
178	-.059	59.49	13	.20	59.41	11	911	-.055	57.68	41	-.21	57.90	34
182	.019	59.20	12	.51	59.17	11	395	.024	58.81	26	-.22	58.53	25
1637	-.147	57.61	37	.09	57.96	33	403	-.002	57.29	26	-.19	57.70	22
191	-.044	58.07	37	.01	58.44	32	413	.067	58.02	26	.13	58.35	23
203	-.004	57.19	23	.29	57.47	16	417	-.015	58.94	17	.20	59.82	15
205	-.012	58.75	20	.07	58.64	20	1641	.138	58.56	39	.07	59.02	42
1638	-.122	57.54	25	-.30	57.68	23	429	-.026	58.31	29	.40	58.68	24
233	-.030	57.92	34	-.22	58.18	27	433	-.033	57.21	20	.07	57.56	16
234	-.016	57.63	22	-.10	58.16	16	440	.025	58.84	16	-.06	59.42	14
247	-.012	58.90	11	-.03	59.20	12	1303	-.003	58.76	15	.24	59.08	13
248	.040	58.36	61	-.15	58.69	54							

## EXPLANATION OF CATALOGUE FOR PARTS II, III AND IV

The various columns give:

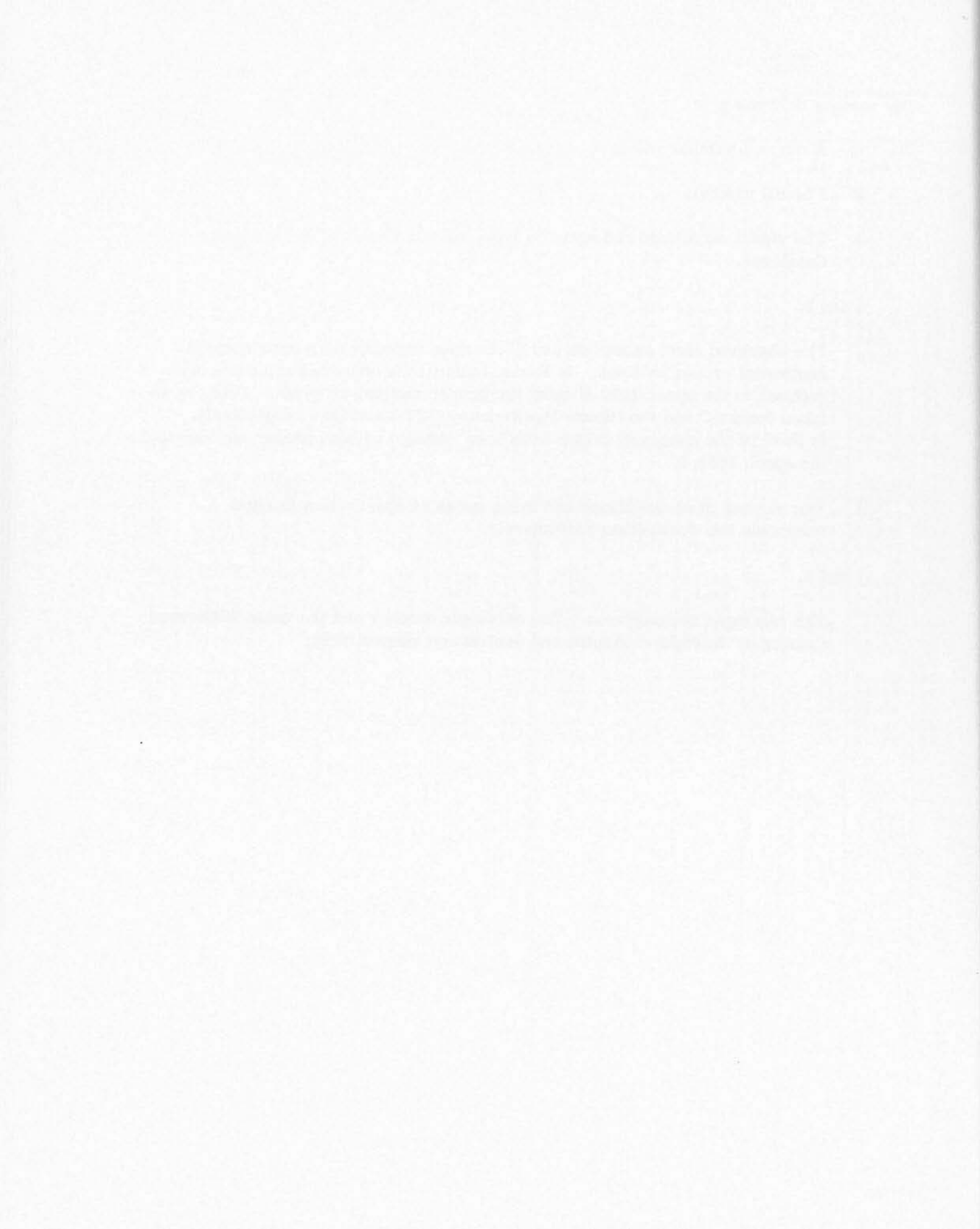
1. A current number within the group in order of right ascension.
2. The BD number.
3. The visual magnitude and spectral type, mostly from the Henry Draper Catalogue.
- 4 and 5.

The observed right ascension and declination together with their adopted centennial proper motions. In Parts II and III the observed value has been reduced to the epoch 1950.0 using the proper motions as given. These were taken from GC and the Ottawa Preliminary PZT Catalogue respectively. In Part IV the observed values have been reduced without proper motions to the epoch 1950.0.

6. The number of observations and mean epoch of observation in right ascension and declination respectively.
- 7 and 8.

The catalogue comparisons. The catalogue number and the value "Observed-Catalogue" in right ascension and declination respectively.







No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		No. Epoch		O - G.C.			O - FK3 (Supp.)		
			100 $\mu$	100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	Mo.	$\Delta\alpha$	$\Delta\delta$
1	33 4828	6.23 G0	0 2 16.145	6.10	34 22 48.26	10.0	8 6 56.88	56.58	44	.051	-.57	2002	-.065	-.40
2	26 4744	6.57 G5	0 2 26.545	.50	27 23 47.85	-.5	7 6 58.02	58.40	48	.037	.30	2003	-.024	-.18
3	12 5063	5.66 K0	0 3 7.752	.28	13 7 4.89	.2	8 8 59.66	60.52	75	.000	-.33	2004	.012	-.15
4	63 2107	5.49 B8	0 3 49.598	.13	63 55 4.51	.4	7 8 59.98	60.32	94	-.069	-.08	2005	.037	-.32
5	3 3	6.32 K0	0 5 38.393	.02	-2 43 32.99	-.4	8 7 57.74	57.87	124	.000	.60	2006	.003	.56
6	40 29	5.73 A5	0 10 54.523	-1.07	40 45 34.28	-14.4	11 11 58.05	58.05	244	-.021	.23	2010	.015	.52
7	32 21	6.06 A0	0 11 26.127	-.12	32 55 41.80	-2.1	8 6 56.53	56.95	256	.014	.15	2012	.005	-.70
8	7 27	6.19 G5	0 13 59.738	-.20	7 57 45.31	-1.0	8 6 56.39	56.57	315	.026	-.28	2015	.016	.11
9	47 50	5.82 B9	0 14 30.142	.08	47 40 11.16	1.7	9 7 56.44	56.63	335	-.067	-.84	2016	.003	.30
10	0 28	6.43 G5	0 15 13.510	.55	1 24 39.28	1.0	6 6 55.51	55.51	346	.043	.36	2017	.019	-.22
11	12 25	6.40 K0	0 19 50.052	.39	13 12 18.07	2.9	10 7 55.96	56.32	446	.017	-.21	2020	-.007	.35
12	3 49	6.28 K0	0 21 56.310	-.26	-2 29 43.72	-3.2	8 7 55.81	55.95	480	.054	-.37	2021	.023	-.08
13	52 61	5.72 B9	0 22 23.365	.23	52 46 11.89	-.4	8 7 57.25	57.47	488	-.011	.04	2022	.021	-.25
14	79 10	6.53 B9	0 23 51.462	.80	79 46 31.84	.5	11 11 60.01	60.10	521	-.078	-.35	2023	.062	-.37
15	24 52	6.72 F5	0 24 26.963	.90	24 45 56.36	-1.6	8 7 58.64	58.20	527	-.065	.09	2024	-.016	.07
16	43 92	5.16 A2	0 25 31.854	.86	44 7 5.48	-1.0	10 9 58.20	58.48	546	-.066	.01	2027	.014	.15
17	9 47	6.02 F2	0 25 44.785	.19	9 54 58.79	-20.5	8 9 58.97	59.28	550	.057	.58	2028	.031	-.49
18	76 10	6.35 G5	0 27 39.749	9.84	76 44 38.04	-2.2	9 6 57.09	56.60	588	-.021	-.31	2031	.103	.02
19	6 64	5.66 A0	0 29 48.840	.21	6 40 46.78	1.1	8 7 57.39	57.46	636	.024	.12	2032	.025	.46
20	19 79	5.53 G5	0 29 57.908	.91	20 1 8.92	-4.5	6 6 57.27	57.27	641	.029	-.03	2033	.001	-.24
21	70 24	6.36 A0	0 30 18.552	.76	70 42 22.41	.4	7 6 56.34	56.43	648	-.146	-.12	2034	.043	-.09
22	1 68	5.93 F8	0 32 58.705	.89	-0 46 48.05	-5.7	7 7 56.77	56.77	701	.041	.09	2036	.011	-.06
23	14 76	5.86 B3	0 34 10.754	.01	14 57 24.54	-1.6	8 6 56.27	56.62	728	-.009	.20	2039	-.016	-.07
24	2 80	6.58 K0	0 34 55.867	.60	2 51 40.76	-5.5	7 7 56.73	56.73	744	.001	.35	2040	-.001	.01
25	81 13	6.40 F8	0 35 54.405	-5.46	82 13 5.70	9.1	8 6 59.13	59.94	760	-.106	-.01	3941	-.057	.11
26	59 92	6.74 A0	0 35 56.818	.43	59 33 5.62	-.1	7 8 58.90	59.88	762	-.121	.02	2041	.039	.65
27	38 90	5.42 G5	0 38 24.015	-.12	39 11 4.67	-.4	9 6 57.49	57.17	812	-.030	.40	2043	-.022	.38
28	23 94	5.98 A5	0 38 56.543	.73	24 21 18.68	-2.1	8 8 57.36	57.11	822	.013	.41	2044	-.007	-.29
29	65 83	5.92 G5	0 39 3.240	-.08	65 52 25.89	-.4	10 9 57.73	58.83	825	-.188	.35	2045	-.007	.03
30	49 164	4.85 B3	0 39 15.821	.11	50 14 19.60	-.5	6 6 57.77	57.77	828	.007	.61	2046	.000	.18
31	11 96	5.68 G5	0 44 24.741	.35	11 42 5.49	-2.9	8 6 57.10	57.38	935	.012	.13	2050	.004	.32
32	18 101	6.06 A5	0 44 34.794	.68	19 18 21.03	.8	7 6 56.70	56.70	938	.028	.50	2051	-.014	-.00
33	44 176	6.12 A0	0 47 30.102	.64	44 43 48.58	.5	7 7 56.62	56.62	999	-.035	.31	2055	-.002	-.06
34	82 20	5.55 A2	0 50 2.723	3.52	83 26 11.98	-1.4	9 8 57.11	57.27	1045	-.151	-.02	3942	-.087	.08
35	26 151	5.94 A2	0 53 16.767	-.15	26 56 19.44	1.0	6 6 55.80	55.80	1105	.007	.24	2059	.007	.14
36	22 153	4.62 G5	0 54 31.829	-.27	23 8 53.38	-4.0	7 7 57.47	57.47	1136	-.052	.03	2060	-.020	.02
37	33 140	6.22 K0	0 55 29.304	.37	33 40 55.20	-5.8	7 7 59.09	59.51	1159	-.093	-1.13	2061	-.005	.36
38	79 24	6.63 F2	0 56 14.632	3.55	80 16 33.52	2.6	8 7 58.07	58.24	1175	-.139	-.01	2062	-.099	.59
39	70 65	6.46 A0	0 57 7.617	1.75	70 42 50.50	.3	7 7 56.07	56.22	1190	-.127	.52	2063	.042	.51
40	51 220	6.27 K2	1 1 5.240	.10	52 14 6.06	-5.6	7 6 56.47	56.75	1275	-.049	.06	2066	-.038	.44
41	12 135	6.22 G5	1 3 55.560	.08	12 41 18.72	3.6	9 7 57.22	57.05	1336	.017	-.26	2068	.029	.27
42	56 196	6.58 K0	1 3 57.016	1.34	56 40 10.42	-12.8	8 8 58.14	58.14	1339	-.125	1.36	2069	.033	.01
43	43 234	5.16 A2	1 5 7.994	1.51	43 40 34.51	-5.7	7 8 58.08	58.54	1364	-.015	-.28	2071	-.009	.49
44	31 185	6.29 F2	1 5 14.858	1.56	31 44 45.31	-3.4	9 9 60.53	60.53	1368	-.004	.54	2072	-.003	.19
45	4 190	5.67 F0	1 5 47.450	-1.79	5 23 8.50	-17.6	9 7 58.65	58.47	1383	-.006	-.10	2073	.007	-.29
46	68 77	5.34 A0	1 7 14.600	.68	68 30 47.44	-1.8	8 7 57.93	57.80	1406	-.038	-.44	2074	.077	-.36
47	41 219	5.74 G0	1 7 27.779	-1.24	41 48 57.99	-4.0	6 6 59.11	59.11	1410	-.007	-.28	2075	-.053	.07
48	64 127	5.49 B8	1 8 24.519	.38	64 45 13.82	-1.1	9 6 58.56	58.93	1434	-.070	.87	2078	.024	.79
49	9 138	6.65 G5	1 8 51.577	.06	10 1 35.50	.9	9 8 59.10	59.64	1440	.035	-.76	2079	-.028	.08
50	23 158	4.64 K0	1 11 1.670	.09	24 19 10.18	-3.0	7 7 56.50	56.50	1474	.019	.64	2082	-.038	.01

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch		O - G.C.			O - FK5 (Supp.)		
				100 $\mu$		100 $\mu'$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
51	15 177	5.85 B8	1 11 27.991	-.18	15 52 9.68	-2.4	8 7 56.91	57.08	1482	-.010	.00	2083	.017	-.22
52	1 162	5.82 F5	1 12 15.858	-.11	-1 14 27.25	21.0	10 8 59.15	60.12	1501	.005	-.36	2084	-.032	-.08
53	47 357	6.50 B8	1 13 26.876	.15	47 49 7.37	-.2	11 10 56.71	56.90	1519	-.068	.27	2085	-.031	.42
54	75 59	6.45 A3	1 17 51.942	2.00	75 58 40.06	-2.4	7 56.51	57.11	1616	-.304	-.04	2087	-.145	.25
55	27 215	5.60 K0	1 18 21.081	.20	28 28 38.91	-6.9	9 7 55.34	55.37	1630	.007	-.58	2089	.006	-.66
56	0 223	6.48 K2	1 20 2.310	.35	1 27 57.32	-4.4	11 7 56.11	56.81	1657	.026	.34	2091	-.034	-.10
57	36 237	5.53 A0	1 20 48.444	.64	37 27 16.78	-1.6	10 8 58.37	58.88	1681	.012	.11	2093	.005	.54
58	22 226	6.07 F5	1 22 51.410	.12	23 15 7.65	-3.7	7 6 56.36	56.28	1722	.029	1.54	2096	-.014	.09
59	5 194	5.12 K2	1 27 33.730	1.95	5 53 11.96	-4.3	8 6 56.40	56.62	1819	.016	-.17	2099	.022	-.44
60	34 265	6.28 B8	1 29 16.022	-.10	34 32 35.57	-.1	11 7 56.19	56.84	1850	.001	.15	2100	.018	-.13
61	52 382	6.80 B8	1 32 14.786	.04	53 5 25.00	-.3	9 6 56.72	57.37	1910	.007	.22	2102	.031	-.15
62	1 219	7.03 G0	1 34 42.617	-.05	-0 36 13.84	-6.9	8 8 59.00	59.00	1960	-.025	-.25	2106	-.048	-.79
63	61 304	6.61 B8	1 34 47.063	-.08	62 5 52.36	1.7	8 7 57.66	57.93	1962	-.027	-.56	2107	.036	.84
64	57 349	5.74 K0	1 34 50.329	-.14	57 43 25.72	-.5	6 6 58.61	58.61	1965	.066	.34	2108	-.014	.48
65	20 264	6.86 K2	1 35 52.652	.36	21 8 40.75	-.3	7 7 59.63	59.63	1980	-.056	.37	2110	.002	-.22
66	43 343	5.17 G5	1 36 20.374	-.20	44 7 57.84	1.4	12 11 58.57	59.00	1991	-.014	.46	2112	-.030	.39
67	25 276	6.26 F5	1 38 30.655	.85	25 29 37.92	-4.5	7 6 55.54	55.66	2042	.025	-.02	2115	.006	-.65
68	45 447	6.32 F5	1 44 43.115	.09	45 58 54.12	-5.5	8 7 56.22	56.42	2176	-.015	.68	2119	.005	.64
69	31 316	5.82 F5	1 45 49.237	-1.36	32 26 15.54	30.1	8 8 58.03	58.03	2195	.018	-1.10	2120	.051	-.32
70	2 270	6.00 G5	1 45 50.416	-.02	3 26 11.98	2.3	8 8 59.41	59.41	2196	-.020	.11	2121	.021	-.01
71	54 396	5.49 B3	1 48 41.278	.24	54 54 3.25	-.5	9 8 57.33	57.53	2241	-.060	.29	2122	.008	.43
72	40 394	5.63 K0	1 50 16.762	-.05	40 29 2.45	-.1	7 7 58.53	58.39	2274	-.062	.24	2124	-.002	.35
73	8 292	7.05 M0	1 51 43.542	.08	8 32 9.16	.4	9 8 58.42	58.50	2308	-.015	.55	2128	.010	.35
74	67 169	5.03 B8	1 52 4.896	.22	68 26 27.04	-.8	9 8 58.38	58.33	2313	-.019	.15	2129	.037	.00
75	22 284	5.95 K0	1 53 3.382	.06	23 19 58.87	-.6	13 11 57.59	58.63	2323	.036	-.23	2130	.018	.08
76	17 289	5.16 G5	1 54 36.834	.24	17 34 27.39	-1.9	8 8 56.10	56.10	2347	.008	.04	2132	.000	-.11
77	58 341	6.58 A0	1 54 49.318	.29	59 22 59.39	-2.0	6 6 55.55	55.55	2353	.104	.02	2133	-.002	.03
78	11 261	6.14 A2	1 56 44.997	.02	12 3 11.78	-3.4	9 7 55.94	56.26	2395	.014	.29	2136	-.005	.39
79	76 63	5.36 F0	2 0 2.304	3.73	77 2 33.91	-5.2	7 7 57.01	57.01	2459	.014	.42	2139	.044	.45
80	0 307	5.56 A5	2 0 37.623	.51	-0 6 42.21	2.2	9 9 60.17	60.03	2474	-.010	.02	2142	-.002	-.09
81	4 324	5.92 K0	2 1 9.204	.13	-4 20 31.88	-5.8	7 6 57.71	58.20	2485	-.063	.30	2143	-.016	.22
82	80 64	5.99 A0	2 3 6.834	-1.41	81 3 31.98	.8	8 7 56.81	57.10	2517	-.232	.57	3943	-.135	.24
83	37 486	4.77 A2	2 5 27.651	1.33	37 37 22.58	-3.8	10 9 58.90	59.13	2552	-.008	-1.18	2145	.014	-.36
84	53 460	6.40 G5	2 6 45.437	.34	53 36 28.68	-4.7	7 7 58.29	58.45	2580	-.073	.34	2146	.020	-.07
85	30 347	6.20 A0	2 8 29.201	.30	31 17 30.53	-.9	7 7 59.99	59.99	2613	-.039	.26	2148	-.105	.71
86	73 121	6.19 G5	2 8 41.395	1.30	73 47 39.34	-3.0	8 9 61.92	61.90	2618	-.270	.02	2149	.045	.09
87	2 375	6.04 K0	2 9 3.339	-.05	-2 3 34.06	-2.9	12 8 60.57	60.56	2624	-.008	.54	2151	.013	.25
88	43 447	5.08 K0	2 10 4.441	-.21	43 59 53.33	-1.0	6 6 59.47	59.47	2645	-.026	-.34	2153	-.025	-.28
89	28 374	6.57 G5	2 11 43.677	1.23	28 27 35.78	-10.2	8 7 56.49	56.71	2689	.013	.61	2155	-.007	-.33
90	23 307	6.50 G5	2 14 20.470	-.34	23 32 14.96	-3.3	11 11 59.08	59.10	2743	.065	.02	2156	.002	.43
91	57 535	6.09 K0	2 14 26.351	.76	57 40 9.02	1.2	6 8 60.01	60.22	2746	-.049	-.26	2157	-.015	.11
92	55 598	5.22 A2	2 18 51.226	.00	55 37 4.94	.3	8 8 55.47	55.47	2836	-.010	-.41	2159	.004	-.02
93	1 322	5.62 A5	2 19 39.365	-.16	-1 6 41.54	-4.9	9 9 58.72	58.72	2850	.006	.43	2160	-.043	.46
94	40 500	5.87 F0	2 19 42.968	-.78	41 10 13.77	-10.2	7 6 58.00	58.51	2851	.057	-.03	2161	-.038	-.07
95	9 316	5.53 B5	2 22 7.971	.13	10 23 6.75	-1.0	7 7 56.17	56.17	2901	-.009	-.05	2164	-.011	-.21
96	49 656	4.86 K5	2 22 16.462	.24	50 3 13.27	-1.3	11 10 56.63	57.09	2902	-.012	.35	2165	-.015	.32
97	5 338	6.67 F2	2 23 37.919	.62	6 4 7.63	-5.0	9 8 58.61	58.73	2934	-.033	.65	2166	.016	-.19
98	45 614	6.77 G5	2 26 30.625	.32	45 48 38.57	-8.9	8 8 58.06	58.06	2978	.031	.82	2169	.015	.81
99	24 358	5.86 F5	2 27 39.399	.46	25 0 52.47	-7.8	9 9 56.85	57.06	3001	.008	.22	2171	.025	.02
100	19 365	6.14 F0	2 27 49.835	.57	19 38 4.05	-3.6	8 8 57.03	57.03	3003	-.019	.56	2172	.013	.42



No.	B.D. No.	M+Sp.	R.A. 1950		100 $\mu$	Decl. 1950		100 $\mu'$	No. Epoch			O - G.C.			O - FK3 (Supp.)		
			$\alpha$	$\delta$		$\alpha$	$\delta$		$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$	
101	83	56	6.82	K0	2 28 38.679	-2.16	83 36 57.37	3.1	8 9 61.71	61.83	3019	-.096	-.78	3944	-.257	.11	
102	1	438	5.44	K0	2 28 54.739	.15	2 2 47.58	-.3	7 7 60.31	60.48	3029	-.001	-.17	2173	.024	.09	
103	76	81	6.86	M0	2 29 3.297	2.24	76 29 58.21	-4.7	6 7 61.65	61.08	3033	-.299	.69	2174	.090	.19	
104	70	183	6.73	K0	2 29 23.543	1.41	71 4 32.29	-6.0	7 7 58.82	58.95	3041	-.129	-.08	2175	.016	.27	
105	14	419	6.07	F5	2 30 9.524	-.13	14 48 51.91	4.3	9 9 57.01	57.01	3055	-.035	.35	2176	.012	-.21	
106	65	280	6.07	K0	2 33 29.299	.80	65 31 44.08	-.7	10 10 58.79	58.89	3125	-.108	.27	2178	.019	.28	
107	11	360	5.68	F5	2 33 54.035	1.90	12 13 54.79	-8.2	8 8 60.23	60.23	3133	-.002	-.16	2179	-.002	-.22	
108	4	436	5.84	K0	2 35 10.481	.27	-3 36 41.32	-3.8	9 7 57.08	57.45	3158	-.026	.25	2180	-.005	.46	
109	60	548	6.99	F0	2 38 42.593	.04	61 22 53.88	2.6	10 7 57.19	57.37	3238	-.011	-3.83	2186	.007	.31	
110	39	610	4.99	G0	2 39 4.956	-.12	39 59 1.75	-18.6	9 9 57.50	57.50	3245	-.043	.33	2187	-.005	.14	
111	54	598	5.66	B8	2 39 27.174	.46	54 53 38.95	-2.1	8 8 57.15	57.27	3253	-.029	.43	2188	.039	.35	
112	80	86	5.92	K0	2 40 25.390	.70	81 14 22.65	-6.8	8 7 60.58	60.41	3270	-.242	.09	3945	-.228	.15	
113	17	426	6.47	K0	2 41 31.354	.28	17 33 12.48	-3.3	10 9 57.98	58.23	3294	-.019	-.06	2190	.002	.07	
114	0	469	7.08	G5	2 47 3.417	.22	0 42 52.90	-3.3	9 8 57.87	57.60	3392	-.059	.37	2193	-.003	-.30	
115	37	646	4.27	F0	2 47 25.094	1.61	38 6 50.63	-10.6	7 7 58.44	58.44	3401	.010	-.25	2194	-.026	.33	
116	68	200	6.0-	F5	2 47 28.799	.12	68 40 59.49	-.7	7 7 59.21	59.21	3403	-.097	.24	2195	.018	-.17	
117	46	648	5.97	G5	2 48 20.145	-.28	46 38 13.68	-2.4	7 7 60.47	60.47	3418	.014	.07	2197	.017	.31	
118	34	527	4.67	K5	2 48 25.464	.14	34 51 19.34	-6.4	8 7 61.57	61.54	3419	-.092	.22	2198	-.019	-.36	
119	60	591	5.63	F5	2 51 57.726	2.06	61 19 7.41	3.7	7 8 59.08	59.28	3487	-.082	-.31	2201	.013	-.18	
120	17	458	5.57	F5	2 53 36.465	1.94	17 49 29.90	-20.9	8 8 57.84	57.84	3532	-.024	.01	2204	-.008	-.23	
121	31	509	5.18	A0	2 54 14.733	.01	31 44 3.23	-3.2	7 7 58.96	58.68	3544	-.001	.28	2205	-.010	.23	
122	3	410	6.31	M0	2 54 27.196	.05	4 18 0.67	2.5	6 6 59.77	59.77	3547	.013	-.10	2206	.007	-.37	
123	39	681	4.62	A2	2 55 33.232	.27	39 27 50.66	-3.9	9 9 58.78	58.78	3567	-.062	.03	2207	-.046	-.08	
124	3	475	5.48	B9	2 57 9.516	-.08	-2 39 46.16	-2.0	8 9 58.32	58.82	3597	.008	.10	2209	-.011	.07	
125	10	401	6.20	K5	2 58 1.160	.54	10 40 24.04	-2.9	9 8 58.59	58.56	3616	-.009	-.39	2213	.041	-.91	
126	25	477	5.91	A2	2 58 56.973	-.10	26 15 56.96	.7	6 7 58.38	58.15	3629	-.030	.04	2214	.007	-.21	
127	56	767	5.08	K0	3 1 45.937	-.17	56 30 40.24	7.6	7 7 57.26	57.26	3674	-.057	-.10	2217	.049	.34	
128	1	534	6.05	K0	3 2 2.754	.20	1 40 10.49	.8	6 7 57.44	57.67	3683	-.019	-.35	2218	.012	-.32	
129	63	390	5.82	B9	3 3 6.493	-.22	63 51 55.55	1.3	8 7 58.02	58.19	3705	.011	.13	2219	.072	.92	
130	12	436	5.84	G5	3 3 38.709	.00	12 59 44.14	-5.8	9 8 60.40	60.23	3712	-.022	-.16	2220	-.026	-.32	
131	80	97	5.95	A2	3 3 47.894	-2.16	81 16 50.86	-.3	9 8 59.26	59.70	3715	-.122	.29	3946	-.190	.42	
132	6	606	5.56	M0	3 4 4.953	.03	-6 16 50.54	-.4	10 8 57.23	57.57	3718	-.002	.12	2221	-.025	-.18	
133	73	168	4.89	A2	3 6 27.603	.52	74 12 22.19	-8.6	6 6 56.71	56.71	3759	-.160	.11	2222	-.048	.07	
134	4	540	6.34	M0	3 8 48.412	-.08	-3 59 57.88	-3.3	9 8 58.51	58.85	3806	-.009	1.11	2224	.010	-.42	
135	47	779	6.42	K0	3 8 58.127	.73	47 32 22.86	-7.7	10 9 60.63	60.50	3812	-.027	.06	2225	-.048	.27	
136	6	496	5.84	G5	3 9 46.961	-.05	6 28 25.76	.0	6 6 59.66	60.49	3827	-.008	.06	2226	.031	.03	
137	59	609	7.09	B5	3 10 7.366	.03	59 22 38.61	.4	6 6 58.20	58.20	3836	-.064	.17	2227	.027	.27	
138	38	690	5.97	A0	3 14 30.759	.23	39 6 4.65	-1.4	8 8 57.93	57.92	3927	-.041	.51	2230	-.012	.51	
139	69	205	6.68	A0	3 15 16.203	.42	69 33 1.68	.0	7 7 59.14	59.14	3938	-.200	.08	2231	-.060	.21	
140	33	619	4.92	K0	3 15 35.739	.03	34 2 28.40	-1.2	9 7 58.19	58.86	3948	.000	.17	2232	.006	-.31	
141	28	516	4.72	K5	3 17 18.430	.01	28 52 6.89	-1.4	7 8 57.45	57.37	3981	-.050	-.23	2234	-.026	-.56	
142	42	750	4.98	A2	3 18 4.971	-.52	43 9 2.13	-.1	9 9 59.23	59.23	4004	-.054	.23	2236	-.071	.15	
143	0	581	6.64	K0	3 21 1.834	-.04	0 44 4.78	-10.8	7 7 56.73	56.73	4046	.010	1.14	2239	.041	.76	
144	24	481	5.66	K0	3 21 20.958	.10	24 32 54.41	-4.5	8 8 60.07	60.07	4051	-.009	-.03	2240	-.020	-.04	
145	12	473	6.22	G5	3 21 24.807	.10	12 27 12.59	-2.1	8 8 60.80	60.80	4056	.027	-.02	2241	.002	-.28	
146	18	484	6.45	A2	3 24 11.673	.34	18 34 58.15	.2	8 8 56.26	56.26	4103	-.028	-.48	2242	.005	-.47	
147	5	502	6.12	G5	3 28 5.881	.20	6 1 8.28	-1.2	7 7 56.86	56.86	4183	.069	-.02	2247	.002	.27	
148	45	778	5.35	F0	3 28 57.800	-.50	45 53 21.01	-6.8	8 6 59.07	59.64	4210	-.011	-.20	2249	-.015	.02	
149	72	178	6.41	A0	3 29 40.730	.34	73 10 49.01	-2.0	6 6 60.68	60.68	4225	-.111	-.04	2251	-.004	.02	
150	57	730	6.41	F5	3 29 42.891	-.17	57 42 2.21	-.1	6 6 58.88	58.88	4226	.138	2.55	2252	.044	.32	

No.	B.D. No.		M+Sp.	R.A. 1950		Decl. 1950		Epoch				O - G.C.			O - FK3 (Supp.)			
					100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$	
151	39	811	5.80 A0	3 30	16.743	.08	39 43	57.21	-3.9	7 7	56.72	56.71	4236	.014	-.07	2254	.004	-.45
152	31	616	6.62 F0	3 31	53.828	.44	31 51	4.90	-4.5	7 6	55.83	55.84	4264	-.030	.89	2255	-.009	.75
153	16	484	6.33 G5	3 36	35.789	.29	16 22	31.49	-3.3	8 7	56.62	56.73	4348	-.014	-.14	2257	-.005	-.23
154	2	581	5.76 G5	3 37	14.664	-.23	2 53	43.89	1.1	9 7	56.79	56.75	4365	-.026	-.28	2258	-.001	-.14
155	5	715	5.52 B8	3 38	9.639	-.01	-5 22	15.16	-.4	11 9	58.70	59.41	4395	-.025	.27	2260	-.002	.09
156	74	168	6.82 G5	3 39	15.045	.62	74 23	5.87	-3.8	10 7	59.57	60.46	4423	-.234	-1.19	2262	-.044	.40
157	19	578	5.50 B8	3 39	25.627	.03	19 32	29.68	-1.2	6 6	58.25	58.25	4430	-.013	-.21	2263	-.009	-.25
158	45	804	6.09 A5	3 41	9.931	-.04	45 56	36.43	-3.7	10 11	58.54	58.38	4459	-.040	.82	2266	-.042	-.11
159	66	284	5.84 F2	3 41	15.312	1.68	67 2	49.94	-10.9	7 7	61.27	61.27	4463	-.193	-.07	2267	.033	.28
160	36	742	5.57 A2	3 41	16.806	.40	36 18	13.86	-3.5	8 7	59.10	59.42	4464	-.020	-.25	2268	-.008	-.11
161	9	494	6.95 G5	3 45	47.384	.49	9 29	35.68	1.3	8 6	58.92	59.74	4574	.012	-.22	2270	.043	-.05
162	0	602	6.10 K0	3 46	4.812	.39	0 4	32.20	-.4	6 7	60.72	60.29	4584	-.036	-.03	2273	-.046	-.14
163	52	715	6.87 B2	3 46	38.457	.07	52 19	51.11	-.6	6 6	57.22	57.22	4598	-.040	.46	2274	-.000	-.01
164	6	594	5.62 B9	3 49	20.058	.07	6 23	9.34	-.4	7 6	58.86	59.37	4662	-.017	-.33	2275	.012	-.14
165	71	222	6.39 F0	3 51	4.330	-1.02	71 40	34.00	1.0	9 9	60.51	60.51	4691	-.092	-1.07	2277	-.098	.20
166	86	51	5.84 F5	3 51	16.143	16.77	86 29	19.82	-7.5	7 7	60.69	60.55	4693	-.398	.33	3947	-.478	.38
167	47	912	5.34 B5	3 52	21.475	.19	47 43	35.26	-2.8	10 8	58.22	58.75	4721	-.011	.60	2279	-.045	.12
168	62	628	4.87 B9	3 52	59.478	.07	62 55	41.10	.6	7 6	57.49	57.56	4730	.009	.31	2281	-.023	.21
169	22	605	5.76 F0	3 53	54.496	.51	22 20	8.07	-10.8	8 6	57.10	57.68	4744	-.021	-.04	2283	-.010	-.11
170	77	138	7.04 K0	3 56	2.331	.15	78 3	48.86	-2.7	9 8	57.64	57.71	4781	-.435	.92	2285	-.142	.17
171	17	666	5.76 F0	3 57	55.668	.94	18 3	16.28	-3.3	8 7	57.20	57.52	4807	-.012	.30	2288	.030	-.04
172	58	690	5.07 F0	4 0	16.217	.01	59 1	7.93	.2	9 7	57.71	58.19	4858	-.052	.04	2290	.024	.34
173	68	303	6.14 K2	4 1	0.338	.24	68 32	40.13	1.2	7 7	59.05	59.05	4874	-.091	-.37	2291	.081	-.11
174	2	645	5.39 F5	4 1	32.835	1.00	2 41	32.80	-12.4	10 8	58.92	59.62	4892	-.005	-.01	2292	.016	.00
175	28	619	5.29 F0	4 3	54.654	-.64	28 52	4.14	.6	8 8	55.92	55.92	4944	-.024	.15	2295	.004	.01
176	42	897	6.67 B8	4 4	44.277	.07	43 3	32.66	-2.0	8 7	59.39	60.02	4958	-.003	-.11	2296	.012	-.38
177	37	882	5.59 F8	4 5	16.209	1.42	37 54	38.50	-20.0	7 8	57.34	57.27	4973	-.041	-.12	2297	-.006	.04
178	13	648	6.02 B9	4 6	13.802	.10	13 16	2.35	-.9	10 9	57.59	57.76	4994	-.010	-.09	2298	-.024	-.32
179	33	807	5.91 K0	4 7	46.068	.02	33 27	27.96	-1.6	9 9	57.57	57.57	5018	-.060	.32	2300	-.022	.33
180	5	601	5.71 F0	4 8	40.366	1.00	5 23	39.74	1.1	9 6	57.52	58.10	5042	-.035	-.19	2301	.004	-.66
181	57	785	6.09 A2	4 10	54.785	.03	57 20	6.20	-1.0	7 6	57.42	57.64	5091	-.057	.47	2304	.008	.34
182	1	600	6.34 B5	4 11	5.647	.05	-1 16	32.68	.2	7 8	58.43	58.34	5097	-.041	-.51	2305	.002	-.22
183	40	912	4.89 G0	4 11	28.683	.15	40 21	32.21	-2.5	7 7	58.51	59.09	5103	-.056	-.14	2306	-.005	.38
184	53	750	5.12 A2	4 12	48.332	-.10	53 29	18.63	-.1	10 9	58.73	58.39	5132	-.077	.28	2310	-.016	.25
185	75	173	6.63 B5	4 14	43.002	.60	75 59	11.82	-2.2	7 6	57.94	57.91	5180	-.190	.64	2312	-.047	.23
186	21	618	5.56 A5	4 15	25.400	.70	21 27	31.33	-3.5	8 6	57.33	57.75	5189	-.010	-.11	2313	.006	-.43
187	64	433	5.40 G0	4 15	56.912	-.42	65 1	16.11	-.2	11 10	57.85	57.93	5199	-.031	.12	2315	.007	.27
188	50	973	5.54 B3	4 16	23.606	.09	50 48	5.59	-.4	9 8	59.92	59.69	5207	-.062	.04	2316	-.052	.13
189	60	800	5.67 K0	4 17	25.791	.79	60 37	8.97	-10.6	7 6	58.80	59.26	5244	-.033	-.34	2317	.012	-.13
190	46	872	4.89 B3	4 17	55.691	.21	46 22	53.60	-3.9	6 6	61.91	61.91	5256	.010	.68	2319	-.017	1.02
191	5	631	5.90 G5	4 18	1.110	-.11	6 0	47.03	-4.8	7 7	60.20	60.20	5259	-.011	.23	2320	-.005	.19
192	80	133	5.58 K0	4 18	14.432	.40	80 42	35.47	-2.0	9 7	59.66	59.47	5265	.017	.46	2321	-.097	.37
193	7	798	5.72 B8	4 18	17.195	.02	-7 42	38.16	-.4	8 8	61.31	61.31	5267	-.033	.34	2322	-.007	.45
194	57	800	6.23 A0	4 22	50.993	.18	57 28	24.05	-1.8	12 10	59.74	59.89	5358	-.036	.39	2324	.062	.40
195	31	776	5.33 K0	4 22	54.969	.60	31 19	40.72	-11.8	8 7	60.70	60.98	5359	-.060	.49	2325	-.018	.73
196	22	696	4.40 A5	4 23	18.683	.78	22 42	6.80	-4.7	10 10	59.13	59.13	5370	-.018	.13	2326	-.021	-.12
197	8	687	5.99 B5	4 23	38.162	.02	8 28	41.88	-1.4	8 8	57.97	57.97	5378	-.039	.64	2327	-.013	-.17
198	12	598	5.12 A5	4 26	1.877	.76	12 56	18.46	-1.3	6 6	58.37	58.37	5443	-.064	.21	2330	-.006	.30
199	27	661	6.61 A0	4 26	14.247	.14	27 17	44.04	-2.2	6 6	58.11	58.11	5447	-.051	-.27	2331	-.003	.45
200	72	227	5.97 A5	4 27	40.853	.77	72 25	26.57	-7.9	6 6	57.30	57.30	5478	-.097	-.45	2333	.009	-.22

No.	B.D. No.		M+Sp.	R.A. 1950		100 $\mu$		Decl. 1950		100 $\mu'$		No. Epoch		O - G.C.			O - FK3 (Supp.)		
												$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.
201	5	679	5.78 A0	4 31 28.550	-.13	5 27 55.38	-1.0	9 7 58.27	58.32	5570	-.027	.57	2335	-.024	.46				
202	63	515	5.91 A0	4 31 41.975	-.32	64 9 35.59	-1.4	7 6 60.18	59.92	5574	-.025	.82	2336	.020	.10				
203	8	887	5.45 M0	4 31 47.019	-.18	-8 20 4.74	.7	8 8 60.48	60.48	5576	.016	-.21	2337	-.031	-.22				
204	40	1000	4.46 K0	4 33 13.173	-.10	41 9 51.05	-1.8	7 7 58.30	58.30	5609	.019	.56	2338	-.017	.61				
205	0	798	5.32 B5	4 34 38.905	-.03	0 53 54.66	-.3	7 7 59.07	59.07	5627	-.017	.02	2339	.010	.18				
206	20	785	5.73 B9	4 35 18.594	-.10	20 35 9.43	-.7	6 6 58.65	58.65	5644	-.036	.10	2341	-.010	-.28				
207	12	618	4.30 A3	4 35 21.524	.69	12 24 43.63	-1.2	8 8 60.75	60.98	5645	-.061	-.06	2342	-.043	.10				
208	24	674	6.27 A3	4 36 19.934	.16	25 7 14.69	-.4	9 7 56.85	56.92	5663	-.044	-.45	2343	.020	-.04				
209	7	681	5.55 F0	4 36 23.516	.60	7 46 23.38	.2	8 7 58.93	58.90	5665	.016	-.20	2344	.008	-.45				
210	15	666	4.85 A3	4 36 24.689	.58	15 49 13.99	-1.8	7 7 61.34	61.34	5666	-.021	-.12	2345	-.004	.22				
211	79	150	6.57 A0	4 36 57.891	-.45	79 33 46.22	1.5	8 7 61.09	60.55	5677	-.019	-.17	2346	-.153	-.05				
212	48	1128	5.70 A0	4 37 39.838	.46	48 12 20.96	-4.4	6 6 57.34	57.34	5687	-.056	.08	2347	-.065	.09				
213	37	954	5.82 F5	4 38 25.995	2.04	38 11 11.41	-9.8	12 10 58.83	59.27	5701	-.042	.27	2348	-.082	.20				
214	43	1043	5.25 A0	4 39 21.068	.39	43 16 19.45	-5.1	7 6 58.81	58.80	5719	-.068	.51	2349	-.048	.43				
215	11	646	5.43 A0	4 43 14.711	.49	11 36 56.91	-.5	7 7 60.72	60.72	5802	-.033	.01	2353	-.024	.07				
216	70	322	6.39 B9	4 44 59.167	.32	70 51 20.55	-1.5	8 7 58.10	57.97	5835	-.188	.12	2358	.050	1.56				
217	31	816	5.76 K0	4 46 0.293	.16	31 21 8.30	-10.3	9 7 56.90	57.13	5853	-.002	-.10	2359	-.007	-.53				
218	48	1162	5.79 G5	4 47 23.357	-.35	48 39 24.24	-4.2	7 7 58.14	58.14	5880	-.002	.76	2361	-.010	.57				
219	63	543	5.81 M0	4 47 23.564	.67	63 25 21.86	-9.6	8 9 60.08	60.17	5881	-.096	.04	2362	-.093	-.12				
220	27	701	5.91 F2	4 49 39.485	.39	27 48 56.93	-3.2	7 7 57.95	57.95	5940	-.026	.60	2365	.001	1.02				
221	5	1068	4.45 F0	4 50 26.134	-.12	-5 32 5.79	2.4	7 6 58.63	59.06	5954	-.028	-.39	2366	.015	-.48				
222	80	155	5.32 K0	4 50 54.314	.00	81 6 59.73	2.9	10 8 61.94	61.97	5962	-.151	.16	3948	-.210	-.36				
223	55	941	5.58 A0	4 50 57.320	-.10	55 10 45.01	-.8	6 6 60.50	60.50	5964	-.061	.48	2367	-.038	.38				
224	11	675	5.15 A3	4 52 0.310	-.09	11 20 45.54	2.0	9 8 57.73	57.94	5983	-.022	.26	2368	-.006	.58				
225	7	755	5.54 K0	4 52 5.411	-.13	7 41 59.09	-3.2	9 9 60.25	60.25	5986	-.019	.20	2369	.012	-.02				
226	1	762	6.23 F2	4 54 44.808	-.27	-1 8 36.78	-3.6	8 7 56.58	56.65	6043	-.027	1.00	2373	.010	-.47				
227	24	717	5.65 B9	4 55 5.577	.24	24 58 30.03	-5.1	9 7 56.90	57.44	6048	-.039	-.01	2374	.015	-.30				
228	0	923	6.18 K0	4 59 15.807	.11	0 39 4.00	-3.1	7 7 58.48	58.48	6143	-.088	.76	2376	-.008	.93				
229	3	998	5.98 B5	5 2 24.290	.00	-3 6 26.55	.2	8 7 56.65	56.73	6206	-.007	.06	2378	.032	.20				
230	35	973	6.37 A3	5 2 40.258	-.07	35 52 10.90	.0	9 6 57.06	57.04	6216	-.035	-.25	2379	-.090	.65				
231	69	302	6.58 K0	5 4 7.395	1.33	69 34 35.25	-6.5	6 7 58.13	57.55	6245	-.203	.61	2382	-.069	.32				
232	20	885	5.29 A3	5 4 50.661	-.32	20 21 15.25	-3.6	7 7 56.98	56.96	6259	-.045	.29	2383	.006	.18				
233	64	500	6.40 F2	5 4 52.033	.39	64 51 31.24	-16.8	6 6 58.15	58.67	6260	-.328	-.31	2384	.021	.72				
234	48	1226	6.63 A3	5 5 15.673	-.22	49 3 29.80	-.5	6 6 59.71	59.71	6272	.026	.56	2386	-.055	-1.50				
235	73	274	5.38 A0	5 6 2.596	.21	73 53 9.86	-3.3	9 9 61.10	61.10	6288	-.140	.76	2387	.012	.51				
236	2	1165	5.93 F2	5 8 48.039	.48	-2 33 3.95	1.0	9 9 58.32	58.63	6348	-.006	-.71	2390	.000	-.44				
237	15	759	5.36 K0	5 8 49.075	.08	15 59 8.13	.6	6 6 57.95	57.95	6350	-.055	.10	2391	.008	.15				
238	53	872	6.16 A0	5 10 43.166	.19	53 9 25.28	.0	7 7 56.77	56.77	6383	-.130	.27	2393	.023	-.06				
239	4	877	5.82 K0	5 12 4.440	-.04	5 5 59.16	.9	9 8 58.87	59.09	6407	-.032	-.29	2394	-.005	.07				
240	11	756	5.50 A0	5 13 17.321	-.02	11 17 12.13	-1.0	8 9 59.98	59.74	6436	-.033	-.07	2395	.022	.03				
241	71	299	6.76 G5	5 14 46.318	-.39	71 39 49.58	-1.8	8 7 58.32	58.50	6471	-.133	.30	2396	.037	-.10				
242	62	742	5.88 K2	5 15 41.997	.05	62 36 11.17	.3	6 7 58.61	58.49	6496	-.054	-.07	2397	.005	.29				
243	21	816	5.14 K0	5 16 16.152	.10	22 2 47.69	-8.3	6 6 58.90	58.90	6506	-.048	-.05	2398	-.039	.03				
244	33	1013	5.16 A5	5 16 42.984	.01	33 54 28.14	-1.3	6 6 61.43	61.43	6515	-.001	.34	2399	.034	.23				
245	41	1162	5.12 B3	5 18 15.785	.18	41 45 24.56	-3.5	9 10 59.99	59.77	6556	-.072	-1.10	2400	-.057	.17				
246	8	933	5.71 B2	5 19 0.103	.01	8 22 50.12	.2	8 8 58.97	58.97	6574	-.019	-.50	2401	.016	-.55				
247	57	879	5.25 A0	5 19 10.567	.33	57 29 54.23	-5.7	9 9 59.73	59.73	6578	-.080	.14	2402	.085	-.03				
248	77	195	6.54 A5	5 21 42.082	.36	77 56 9.98	-1.3	10 7 60.82	61.46	6647	-.089	.06	2404	.034	.65				
249	1	1005	4.73 B3	5 22 8.982	.00	1 48 8.11	.0	6 7 56.86	56.89	6660	-.026	.28	2406	.008	.06				
250	35	1102	6.30 K2	5 23 33.646	-.13	35 24 55.15	-1.1	11 9 59.31	60.04	6691	-.003	-.02	2408	.046	-.66				



No.	B.D. No.	M+Sp.	R.A. 1950	100 $\mu$	Decl. 1950	100 $\mu$ '	No.		Epoch		O - G.C.			O - FK3 (Supp.)		
							$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
251	41 1206	6.09 K0	5 27 16.435	-.14	41 25 30.08	-4.2	7 7	57.01	57.16	6797	.043	.30	2412	-.041	.24	
252	14 947	5.58 B3	5 31 3.642	-.04	14 16 20.28	-.6	6 7	57.20	57.28	6886	-.021	-.15	2414	-.000	-.11	
253	23 954	5.28 B3	5 32 23.751	.08	24 0 29.53	-1.6	8 8	60.39	60.39	6916	-.022	-.28	2415	.007	-.31	
254	54 914	5.96 K5	5 32 28.700	.01	54 23 52.17	.2	8 8	61.97	61.99	6921	-.083	-1.09	2416	-.053	-.33	
255	47 1178	6.05 F0	5 32 29.162	.12	47 41 4.43	-1.7	6 6	61.58	61.58	6922	-.030	-.19	2417	-.070	.78	
256	10 828	6.10 K0	5 34 17.522	.32	11 0 20.77	-1.3	7 6	56.22	56.07	6975	-.016	.06	2420	-.005	.03	
257	4 1002	4.54 B3	5 36 32.620	-.02	4 5 40.68	.1	12 11	58.58	58.72	7042	-.022	.09	2423	.016	.13	
258	25 902	5.00 B3	5 36 38.111	.17	25 52 15.38	-2.3	6 6	59.11	59.11	7047	-.092	.02	2424	-.026	.13	
259	31 1048	5.96 B8	5 37 21.641	.13	31 19 57.93	-.8	8 8	57.37	57.37	7066	-.121	-.49	2425	-.024	.16	
260	65 485	5.78 K0	5 37 25.409	.02	65 40 25.25	-2.1	12 10	59.02	59.82	7068	-.043	.31	2426	.080	.07	
261	1 1105	5.24 G5	5 39 53.376	-.36	1 27 7.13	-1.4	11 8	56.91	57.35	7136	-.029	-.04	2427	.009	.18	
262	42 1396	6.41 K0	5 43 39.741	.17	42 30 37.17	-8.6	9 8	58.63	59.10	7221	-.098	.08	2431	-.049	-2.78	
263	9 954	5.89 G5	5 44 7.324	-.23	9 30 20.58	-6.5	8 6	57.01	57.48	7228	-.039	.42	2432	.008	.00	
264	13 979	5.20 B5	5 44 52.619	.11	13 52 59.28	-1.6	9 9	60.58	60.58	7249	-.110	.21	2433	-.035	.15	
265	24 970	5.02 K0	5 45 56.718	.03	24 33 9.30	-2.8	6 6	59.56	59.56	7283	-.061	.09	2435	-.021	-.43	
266	71 324	7.17 A3	5 46 26.502	.36	71 16 35.43	.4	8 8	60.65	60.65	7297	-.289	.37	2436	.062	.05	
267	51 1117	6.40 G5	5 46 57.823	1.81	51 30 6.52	-4.0	6 7	59.41	59.23	7308	-.004	.72	2437	.025	.33	
268	68 412	6.40 K0	5 47 32.496	.32	68 27 37.03	-4.0	8 8	61.65	61.65	7319	-.183	-.44	2438	.035	-.29	
269	4 1052	6.12 K0	5 47 34.114	.12	4 24 37.92	-4.3	6 6	58.87	58.87	7320	-.123	.83	2439	-.010	.41	
270	37 1336	4.99 M0	5 47 37.664	.36	37 17 35.60	-4.4	9 8	60.89	60.88	7322	-.096	-.18	2440	-.011	.12	
271	7 1187	5.32 B3	5 48 57.055	.01	-7 31 47.71	.0	7 7	59.04	59.59	7354	-.027	.20	2442	-.018	.13	
272	33 1179	6.38 M0	5 49 21.401	.09	33 54 23.27	.3	8 9	61.60	61.22	7369	.027	.63	2443	-.043	-.33	
273	1 1151	5.01 K0	5 49 50.556	-.04	1 50 40.20	-.7	7 6	60.07	60.92	7380	-.044	-.02	2444	.002	-.13	
274	59 920	5.26 A0	5 50 28.949	.05	59 52 47.29	-2.0	8 8	61.05	61.05	7402	-.057	.15	2446	-.000	.06	
275	19 1126	5.89 B2	5 51 58.979	.01	19 44 30.23	-1.0	10 9	58.21	58.79	7436	-.037	.18	2447	.005	.38	
276	66 413	6.59 K0	5 52 30.193	.73	66 5 25.45	-2.3	9 7	58.24	58.85	7452	-.008	.92	2448	.047	.53	
277	11 975	6.08 G5	5 54 1.734	.68	11 30 58.40	-5.4	6 7	58.22	58.22	7488	-.014	-.23	2453	-.027	-.36	
278	9 1285	5.10 A5	5 56 41.783	.11	-9 33 37.20	-5.2	7 7	60.66	60.66	7565	-.048	-.27	2455	.017	-.71	
279	16 957	6.75 K2	5 57 31.013	-.02	16 17 52.60	-5.3	6 6	61.26	61.26	7586	.027	2.67	2456	-.001	-.12	
280	3 1256	4.68 K0	5 57 33.158	.06	-3 4 28.95	-7.0	6 7	59.37	59.30	7587	-.035	-.22	2457	.005	-.38	
281	48 1333	6.24 K0	5 57 52.548	-.07	48 57 33.57	-.8	8 8	58.64	58.69	7598	.028	-.22	2458	-.017	-.02	
282	75 247	6.52 K5	5 58 15.491	.55	75 35 17.76	-1.6	6 6	59.01	59.01	7606	-.152	.73	2459	.001	.02	
283	42 1473	6.13 G5	5 59 41.589	1.08	42 54 55.25	-14.6	12 8	55.82	55.93	7641	-.058	.12	2461	-.033	.05	
284	51 1146	6.30 A5	6 0 31.130	.06	51 34 37.49	-4.6	6 7	57.54	57.63	7663	-.010	.21	2463	-.000	.41	
285	38 1377	5.31 A3	6 3 8.208	.12	38 29 21.31	-5.3	8 8	57.80	57.80	7723	-.031	.00	2465	-.039	.46	
286	4 1362	5.37 B3	6 4 9.900	-.06	-4 11 13.56	-.2	8 8	57.22	57.48	7750	-.034	.41	2467	-.007	.54	
287	19 1253	5.70 B9	6 9 3.568	.04	19 48 12.86	-1.2	9 6	56.46	57.28	7887	-.040	.24	2471	.004	.56	
288	32 1217	5.96 K2	6 9 3.560	.06	32 42 22.99	-.3	7 7	55.77	55.77	7888	-.114	-.02	2470	.038	-.09	
289	13 1173	5.81 B2	6 12 18.178	.23	13 52 3.09	.7	8 7	57.90	58.17	7984	-.074	-.44	2474	-.007	-.13	
290	6 1469	4.09 K0	6 12 24.933	-.03	-6 15 28.22	-1.8	7 8	58.95	58.95	7986	-.036	.39	2475	-.000	.43	
291	0 1234	5.68 F5	6 13 1.610	-1.08	-0 29 30.53	-22.2	6 6	61.01	61.01	8001	-.028	-.03	2477	-.034	-.24	
292	4 1181	6.44 B3	6 13 8.278	-.12	4 18 4.23	-.2	6 6	61.17	61.17	8010	.031	-.31	2478	.012	.36	
293	61 869	5.30 M0	6 13 18.212	.01	61 32 3.02	-.4	7 7	61.07	61.07	8016	-.135	-.45	2479	-.022	-.28	
294	9 1173	5.29 A2	6 14 21.161	.02	9 57 44.70	-6.4	10 9	58.03	58.25	8051	-.011	.44	2480	-.009	.24	
295	14 1235	5.98 A0	6 15 14.788	-.12	14 24 10.60	-.1	8 8	57.84	57.84	8073	.013	-.02	2481	.009	-.20	
296	53 1008	5.41 F5	6 17 42.437	.36	53 28 38.72	-9.6	8 7	58.27	58.74	8151	-.073	.45	2484	.036	.41	
297	44 1426	7.04 G5	6 18 23.107	.16	44 5 0.32	-3.7	7 7	58.88	59.19	8169	-.070	.95	2485	-.087	.27	
298	35 1397	6.88 K0	6 21 18.157	.03	35 16 59.49	-2.3	9 8	60.50	60.57	8247	.017	-.43	2487	-.182	-.65	
299	25 1255	6.56 K0	6 21 38.910	.06	25 4 36.79	-.9	7 7	60.83	60.83	8261	-.055	.50	2488	.004	-.14	
300	56 1125	5.8- A3	6 22 12.625	-.23	56 18 51.80	1.9	8 8	61.83	61.83	8281	-.093	.41	2491	.012	.54	



No.	B.D. No.	M+Sp.	R.A. 1950			Decl. 1950			No. Epoch				O - G.C.			O - FK3 (Supp.)		
			100 $\mu$			100 $\mu$ '			$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
301	1	1242	5.73	A0	6 24 7.574	-0.02	-1 28 34.57	-3.5	9 8 57.24	57.39	8335	-0.060	.05	2493	-0.038	-.28		
302	16	1159	6.33	G5	6 25 35.311	-.68	16 16 18.33	-5.3	7 8 58.96	58.87	8382	.029	.15	2494	.013	-.20		
303	46	1149	6.01	K0	6 26 18.867	-.02	46 43 10.98	.4	8 7 59.37	59.84	8411	-0.087	.45	2496	-0.047	.18		
304	32	1324	5.6-	A0	6 29 11.405	-.17	32 29 32.65	-2.1	9 8 57.97	58.46	8474	-0.064	-.02	2500	-0.024	.12		
305	86	79	6.57	G5	6 30 9.039	1.57	86 44 7.54	-10.6	6 7 59.34	59.70	8505	-0.512	.27	3949	-0.607	.26		
306	73	340	6.22	F2	6 31 36.886	-3.45	73 44 16.62	-2.6	7 7 59.10	59.10	8540	-0.020	.24	2503	.119	-.20		
307	28	1168	5.05	A0	6 32 3.118	.05	28 3 47.38	-1.9	7 7 59.65	59.65	8557	-0.043	.10	2504	-0.002	-.13		
308	10	1186	6.06	K5	6 32 32.185	-.09	10 1 45.79	.1	7 7 60.38	60.38	8567	-0.008	-.83	2505	-0.005	.11		
309	78	227	5.88	K0	6 32 44.110	.55	78 2 24.27	-.1	6 7 61.04	60.63	8574	-0.076	-.57	2507	.094	-.61		
310	82	177	6.39	A2	6 33 59.399	.33	82 9 49.39	-5.4	10 7 60.02	59.76	8605	.154	.61	3950	-0.128	.33		
311	5	1710	5.48	B9	6 34 7.590	.00	-5 10 5.75	-1.4	7 7 57.80	58.06	8609	-0.013	-.58	2509	.014	-.12		
312	71	359	6.07	G5	6 34 38.253	.43	71 47 39.09	.5	9 8 60.02	60.66	8630	-.301	.79	2511	.020	.11		
313	2	1315	6.42	K0	6 35 3.568	-.21	2 44 55.93	-4.8	6 6 60.93	60.93	8642	-0.051	.11	2512	.020	.70		
314	22	1416	6.28	K0	6 36 4.805	.06	22 4 35.78	-2.9	7 6 60.34	60.87	8672	-0.008	-.06	2513	-0.001	-.43		
315	36	1482	6.33	F5	6 38 16.377	-.32	35 58 49.80	-2.5	9 6 58.16	58.55	8724	.091	-.28	2516	-0.013	-.47		
316	44	1518	5.17	K5	6 39 26.725	-.38	44 34 29.16	-3.2	6 6 60.06	60.06	8751	-0.052	.12	2517	-0.024	.34		
317	29	1327	5.54	K0	6 41 35.332	-.04	29 1 24.28	-2.8	7 7 57.10	57.54	8799	-0.059	.20	2518	-0.026	.12		
318	57	1004	5.47	G5	6 42 33.959	.28	57 13 25.20	-4.1	6 6 57.56	57.56	8826	-0.103	.18	2520	-0.031	.00		
319	67	454	5.04	B3	6 45 44.807	.11	67 37 48.83	.3	7 7 58.38	58.38	8902	-0.073	.24	2523	-0.001	.17		
320	32	1414	5.76	K0	6 46 25.875	-.31	32 39 55.34	-4.3	6 7 59.07	58.95	8915	-0.010	-.44	2525	-0.002	.15		
321	16	1298	5.69	B8	6 46 57.107	-.11	16 15 41.22	-1.4	6 7 60.95	60.99	8927	-0.055	.36	2526	-0.013	.10		
322	41	1536	5.04	K0	6 47 13.907	-.18	41 50 31.69	-13.4	7 8 59.13	60.26	8931	-0.045	-.51	2527	.001	.03		
323	21	1405	5.22	A0	6 48 33.248	-.05	21 49 19.41	-3.5	10 9 56.28	56.77	8965	-0.026	.31	2530	.016	.35		
324	0	1487	5.33	A2	6 51 52.136	.06	-1 3 47.00	-1.1	7 6 56.10	56.10	9052	-0.032	-.36	2533	-0.009	-.73		
325	10	1335	5.88	B8	6 53 40.728	-.18	10 1 22.51	-2.1	7 6 57.32	57.53	9100	.025	.21	2535	.009	.21		
326	45	1367	4.80	A2	6 53 58.325	-.19	45 9 40.48	-.4	7 6 57.69	57.79	9113	-0.035	-.14	2537	-0.013	-.03		
327	38	1656	6.15	K2	6 55 38.547	-.32	38 7 22.19	-12.5	6 6 57.26	57.26	9151	-0.028	-.30	2538	-0.015	-.52		
328	52	1152	6.74	K0	6 55 46.122	-.21	52 38 31.66	-4.4	10 9 58.59	58.87	9156	.045	1.46	2539	.038	-.02		
329	3	1488	6.02	K0	6 56 19.169	-.08	3 40 18.20	-.7	7 7 57.96	58.52	9175	-0.018	.34	2540	.015	.32		
330	63	678	6.71	K5	6 57 12.502	.19	63 44 55.80	-1.7	7 6 58.92	58.91	9198	-0.122	.31	2542	.066	-.01		
331	17	1479	6.20	M0	6 59 31.026	.13	17 49 41.79	4.0	8 6 58.01	58.52	9270	-0.042	-.76	2543	-0.007	.15		
332	4	1788	4.89	B3	7 0 25.776	-.09	-4 9 54.80	.1	7 6 57.29	57.49	9293	.001	.05	2547	-0.007	.21		
333	44	1584	6.95	G5	7 4 30.493	.06	44 7 9.64	-1.4	10 6 57.00	57.81	9397	-0.046	-.14	2548	-0.047	-.11		
334	34	1533	6.47	K0	7 4 56.567	-.10	33 54 45.08	-3.8	6 6 58.43	58.43	9405	-0.043	.33	2549	-0.007	.02		
335	78	240	6.91	A5	7 5 59.497	.39	78 50 8.93	-.1	9 10 59.72	59.96	9434	-0.060	1.89	2550	-0.016	.72		
336	72	352	6.45	KU	7 8 9.831	.42	71 54 4.67	2.0	7 7 59.61	59.20	9489	-0.027	.03	2552	.034	.07		
337	27	1327	5.60	A2	7 8 17.061	-.14	26 56 26.31	-4.1	6 6 61.32	61.32	9493	-0.042	.53	2553	.020	.28		
338	51	1295	5.69	M0	7 9 29.764	.08	51 30 50.26	.9	7 6 57.58	58.02	9526	-0.031	.30	2555	.028	.21		
339	59	1065	5.33	K0	7 11 33.390	-1.21	59 43 44.48	-26.0	7 6 58.42	58.64	9581	-0.108	-.29	2558	.003	-.06		
340	12	1469	5.84	K0	7 11 45.388	-.37	12 12 12.04	-2.0	7 6 57.53	57.96	9592	-0.006	-.31	2559	.015	-.25		
341	31	1529	5.98	B9	7 14 52.434	-.18	31 2 50.62	-2.0	10 8 57.69	57.52	9688	.038	-.36	2563	.079	-.41		
342	2	1640	6.06	G5	7 16 45.544	-.03	2 50 1.94	-1.8	8 6 57.30	57.53	9739	-0.043	.32	2564	-0.009	.23		
343	7	1684	5.95	F8	7 17 5.743	.55	7 14 14.17	-5.4	10 9 58.18	58.52	9752	-0.120	-.09	2565	.035	.50		
344	45	1422	5.64	F0	7 17 40.537	-.40	45 19 21.78	.9	6 6 57.94	57.94	9769	-0.059	-.23	2567	-0.027	.01		
345	37	1707	5.21	K0	7 18 42.318	-.72	36 51 23.64	-2.8	9 8 58.64	59.07	9796	-0.070	.24	2568	-0.021	.37		
346	82	201	5.11	M3	7 20 40.776	-.02	82 30 50.47	-4.1	6 6 58.15	58.15	9851	-0.224	.09	3951	-0.162	.23		
347	66	502	6.29	B9	7 22 29.693	.09	66 25 58.09	-2.4	7 6 57.80	57.92	9894	-0.179	-.34	2571	.106	.47		
348	49	1623	4.45	A0	7 22 56.823	-.10	49 18 46.22	-5.0	6 6 57.33	57.33	9909	-0.050	-.30	2572	.013	-.00		
349	19	1743	6.79	K0	7 26 34.770	.17	19 44 14.91	.2	8 7 59.71	59.64	10008	-0.078	-.60	2577	-0.014	.13		
350	1	1738	5.80	K2	7 26 46.998	-.12	-1 48 3.46	-1.0	7 8 59.92	60.20	10017	.035	-.18	2578	.000	-.47		

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch		O - G.C.			O - FKS (Supp.)		
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
351	62 934	6.75 G5	7 27 33.369	-.01	61 51 56.98	-10.9	6 6 58.86	58.86	10036	-.078	-.36	2581	.076	.72
352	4 1979	6.38 K0	7 28 22.998	-.07	-5 7 13.23	-.8	9 7 57.03	57.29	10053	-.021	.16	2582	-.000	.03
353	17 1596	5.64 K0	7 28 55.464	.34	17 11 38.39	-8.4	7 7 58.86	59.00	10073	-.045	.14	2585	-.017	-.28
354	2 1691	5.26 A5	7 29 30.096	-.09	2 1 18.77	-.3	7 8 56.58	56.29	10085	.011	-.19	2587	.000	-.03
355	40 1903	6.57 M0	7 33 52.663	-.03	40 8 19.62	-4.1	6 6 57.82	57.50	10193	-.113	-.71	2589	-.036	.15
356	54 1167	6.59 B9	7 35 15.078	-.14	54 0 58.61	-7.6	8 8 58.58	58.58	10234	-.019	-.19	2590	-.031	.17
357	34 1649	4.92 F0	7 35 54.276	-.23	34 42 2.67	-11.6	6 6 56.99	56.99	10257	-.057	-.39	2592	.008	-.37
358	57 1093	6.20 K0	7 36 41.917	-.17	57 11 57.02	-1.4	6 7 59.29	59.13	10279	-.059	.12	2593	-.004	-.24
359	48 1561	5.77 G5	7 37 31.144	-.44	48 15 1.08	-13.6	6 6 58.01	58.01	10305	-.062	.23	2594	.069	.37
360	23 1780	6.18 K5	7 37 58.981	-.08	23 8 8.58	-.4	7 7 57.01	57.01	10318	-.008	-.57	2595	.006	-.11
361	14 1729	5.81 M3	7 39 14.103	-.03	14 19 36.76	-1.2	6 6 59.52	59.52	10351	-.033	-.37	2597	.013	-.49
362	44 1666	7.19 G5	7 40 15.970	-.73	43 54 53.01	-2.2	6 6 57.20	57.20	10376	-.061	-.02	2598	-.051	.42
363	50 1460	5.28 A0	7 40 17.366	-.09	50 33 15.10	-3.5	8 8 58.70	58.70	10377	-.020	.41	2599	.015	.09
364	65 593	6.00 K0	7 41 54.315	.56	65 34 39.93	1.9	8 6 58.39	59.50	10420	-.099	-.16	2602	.041	-.03
365	70 474	7.14 G0	7 42 10.591	-1.86	70 19 54.28	-14.5	6 7 57.52	57.04	10433	.011	.11	2604	.070	.19
366	5 1790	6.95 K0	7 45 23.946	-.07	5 32 6.26	-3.6	9 8 56.49	56.56	10509	-.013	.12	2606	-.021	-.19
367	5 2280	5.75 F2	7 50 19.723	-.15	-5 17 52.04	-2.9	7 7 56.73	56.73	10649	-.007	-.58	2611	.003	-.59
368	77 303	6.78 A3	7 50 38.063	.29	77 42 35.19	-1.4	9 9 59.63	59.63	10657	-.151	-.20	2612	.195	.55
369	35 1705	6.11 A0	7 52 25.472	-.51	35 32 44.79	-1.6	10 9 57.73	58.90	10701	-.019	-1.08	2613	-.164	.13
370	20 1946	5.36 A0	7 52 44.929	-.12	20 1 2.96	-4.5	7 7 55.73	55.73	10707	-.007	-.19	2614	.047	-.40
371	79 265	5.33 A0	7 57 0.948	-.99	79 37 13.91	-5.2	7 7 57.27	57.27	10808	-.029	.07	2617	.201	-.11
372	17 1731	5.79 K0	7 57 55.466	-.06	17 26 50.24	-1.0	8 9 59.21	59.53	10845	-.035	.42	2618	.018	.34
373	63 749	6.04 F8	7 58 2.873	-.16	63 13 48.07	-2.2	6 6 60.95	60.95	10851	-.044	.57	2619	.042	.15
374	0 1882	4.88 K0	7 58 40.701	.39	-1 15 8.46	-7.5	8 7 59.34	58.97	10870	-.001	.26	2620	.001	.24
375	9 1843	6.11 F5	7 59 7.850	-.04	9 3 11.63	2.5	6 7 58.89	58.79	10880	-.025	-.58	2621	.002	-.31
376	2 1854	4.52 K0	7 59 39.835	-.21	2 28 23.65	10.2	6 6 59.97	59.97	10891	-.047	-.06	2623	-.028	-.01
377	13 1831	5.11 A0	8 2 17.419	-.23	13 15 43.83	-7.1	7 6 56.09	56.23	10959	-.050	.40	2625	-.008	.20
378	43 1770	6.24 A0	8 3 42.420	-.04	43 24 20.26	-3.4	7 7 57.46	57.46	10995	-.065	-.47	2627	-.032	-.21
379	22 1862	5.38 G0	8 4 49.413	.16	21 43 42.17	-7.6	7 6 57.03	57.18	11021	-.036	-.11	2630	-.001	-.70
380	25 1865	5.83 G5	8 7 26.635	-.48	25 39 38.17	-35.2	7 6 58.33	58.69	11091	-.058	-.08	2633	-.015	-.42
381	39 2065	6.47 G0	8 8 2.987	-.84	38 52 53.54	-6.6	8 9 58.52	58.92	11107	-.105	-1.04	2635	.001	.06
382	48 1621	6.75 B9	8 9 51.076	-.17	48 25 56.28	-2.4	6 6 57.72	57.72	11157	-.117	.59	2639	.036	.91
383	56 1278	5.90 K0	8 9 51.789	-.20	56 36 15.15	-3.6	8 8 59.27	59.27	11158	-.050	.23	2640	.010	.63
384	30 1664	5.59 A0	8 10 3.103	-.03	29 48 28.50	-2.4	8 7 58.93	59.87	11163	-.076	-.18	2641	-.002	.17
385	0 1938	6.51 K0	8 10 49.199	-.21	-1 0 50.89	.5	6 6 57.97	57.97	11179	-.018	.31	2643	.005	.47
386	60 1124	5.52 A5	8 13 42.026	.01	59 43 35.36	.0	7 7 57.86	57.86	11252	-.091	.02	2645	.022	-.04
387	82 235	6.17 A0	8 15 3.157	-.67	82 35 26.19	-2.9	8 8 59.45	59.45	11296	-.189	.18	3952	-.098	-.02
388	21 1817	5.93 G5	8 17 26.097	.47	20 54 25.23	-5.6	7 8 57.76	57.57	11358	-.054	.83	2646	-.002	.53
389	53 1246	5.58 A2	8 20 1.920	-.25	53 22 57.66	-10.7	8 7 55.30	55.31	11424	-.076	.51	2649	.024	.29
390	5 2512	6.07 A3	8 20 2.425	-.35	-6 1 5.48	.2	7 8 56.89	57.05	11425	-.083	-.05	2650	-.034	.30
391	35 1819	6.21 K0	8 21 53.137	-.01	35 10 28.76	-1.9	6 7 56.32	57.04	11473	-.077	.12	2652	-.032	.16
392	2 1965	5.91 K0	8 22 59.809	-.13	2 15 58.88	-2.3	8 7 55.78	55.85	11493	-.038	.77	2654	.014	.61
393	8 2053	5.23 K0	8 23 13.885	-.23	7 43 43.73	-.8	7 7 58.47	58.47	11505	-.039	-.13	2655	.000	.17
394	28 1602	5.83 K2	8 23 25.463	-.22	28 3 34.86	-12.5	8 9 59.49	59.97	11509	-.030	.25	2656	-.005	-.16
395	13 1912	5.75 M0	8 23 58.088	-.17	12 49 15.41	-10.5	7 8 58.88	58.80	11525	-.016	-.18	2658	-.004	-.05
396	78 287	7.14 G5	8 23 59.838	-.04	78 23 44.61	-3.4	7 7 57.64	57.64	11526	-.217	.07	2659	.063	-.06
397	46 1398	6.33 G0	8 24 8.018	-.23	45 49 23.99	-35.7	7 7 60.29	60.29	11534	.013	.19	2660	.015	.89
398	67 545	6.01 G5	8 25 4.689	-1.01	67 27 51.16	.9	6 6 57.02	57.02	11561	-.121	.01	2662	.090	-.38
399	33 1703	6.60 A0	8 26 4.607	.22	32 51 33.92	-.5	7 6 56.57	56.80	11591	-.144	-.54	2663	-.095	.17
400	24 1940	5.73 F0	8 28 33.270	-.60	24 15 4.18	-5.1	6 7 58.02	58.05	11655	-.035	.03	2666	-.010	-.23

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch		O - G.C.			O - FK3 (Supp.)		
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
401	18 1963	5.57 M0	8 28 44.800	-.39	18 15 53.53	-6.2	7 6 55.90	56.01	11659	-.035	.35	2667	-.002	.09
402	59 1176	6.77 A0	8 29 54.788	-.07	58 46 44.48	-4.2	6 6 59.02	59.02	11688	-.160	.83	2668	.057	.41
403	1 2074	5.61 A0	8 31 29.863	-.26	-1 58 47.36	2.2	8 8 56.04	56.42	11743	-.017	-.56	2669	-.015	-.08
404	70 523	5.10 K0	8 32 14.878	-.33	69 52 23.53	-4.7	7 7 57.20	57.20	11756	.024	1.47	2670	.149	-.16
405	43 1834	6.98 A2	8 32 53.695	.18	42 45 13.15	-1.9	6 6 58.03	58.03	11772	-.058	.37	2671	.069	-.48
406	7 2540	5.61 A2	8 33 1.754	-.18	-7 48 32.42	1.7	7 7 59.39	59.39	11775	-.023	-.30	2672	-.024	.11
407	24 1955	6.84 A0	8 33 5.323	.02	24 13 29.62	-1.4	6 7 61.17	60.74	11778	-.073	.54	2673	-.021	-.22
408	10 1837	5.98 A0	8 34 23.196	-.22	9 49 50.02	-1.2	7 7 60.11	60.11	11807	-.017	.24	2675	-.006	-.29
409	64 698	4.76 K0	8 35 51.859	-.80	64 30 16.78	2.3	8 7 60.73	61.10	11850	-.121	.02	2677	.055	.16
410	82 253	6.69 A0	8 37 31.895	-.44	82 25 13.35	-2.0	7 6 59.96	60.59	11900	-.056	.17	3953	.044	.34
411	8 2452	6.48 A0	8 38 36.066	-.19	-8 52 23.82	-.3	8 7 57.51	57.72	11938	-.047	-.04	2682	.003	.31
412	13 1972	5.67 A3	8 40 27.086	-.01	12 51 41.18	-.2	7 6 56.45	56.65	11983	-.066	-.04	2686	-.015	-.03
413	3 2039	4.32 B3	8 40 36.695	-.12	3 34 46.05	-.5	8 7 56.92	57.32	11987	-.023	.42	2687	.021	.12
414	10 1864	5.58 A0	8 42 2.272	-.10	10 15 50.28	-2.2	9 9 59.20	60.07	12029	-.033	-.05	2688	.005	-.17
415	31 1876	6.14 K0	8 42 17.616	.00	30 52 48.81	-.8	6 6 57.89	57.89	12037	-.033	-.06	2690	.052	-.24
416	78 293	7.30 M3	8 44 13.470	.23	78 21 3.67	-2.4	7 7 58.18	58.18	12105	-.278	-.25	2692	.046	-.13
417	1 2130	5.22 A0	8 44 42.930	-.22	-1 42 45.75	-.2	8 8 59.13	59.02	12122	-.027	.18	2693	-.002	-.15
418	89 13	7.01 A0	8 45 53.867	-2.79	88 46 14.65	.7	6 6 57.19	57.19	12154	.159	-.13	3954	-.889	-.10
419	15 1917	6.29 G0	8 48 14.492	-.78	15 32 14.06	7.2	8 8 57.97	57.97	12211	-.006	-.32	2699	-.002	-.20
420	44 1794	5.24 G5	8 48 35.926	-.10	43 54 51.38	4.1	7 7 57.83	57.83	12221	-.058	.35	2700	-.020	-.04
421	62 1027	5.72 F0	8 49 16.494	-.11	62 9 3.90	2.0	6 6 57.32	57.32	12235	-.053	-.41	2701	.001	-.16
422	52 1343	6.99 F5	8 49 28.724	-.38	52 34 43.89	2.4	8 7 56.63	56.96	12241	-.043	.45	2702	.034	-.28
423	36 1883	6.02 A2	8 50 47.063	-.18	35 43 42.97	-2.8	6 6 56.71	56.71	12272	-.039	.21	2704	-.064	-.99
424	28 1666	5.25 G5	8 52 40.195	-.08	28 7 10.64	-3.8	9 8 56.21	56.46	12326	-.036	.01	2705	-.009	-.29
425	40 2125	5.88 F2	8 53 16.188	-.72	40 23 39.92	-5.4	6 6 56.91	56.91	12341	-.022	.90	2706	-.055	.51
426	22 2029	7.01 G5	8 54 12.026	.02	22 3 12.90	-.9	6 6 58.86	58.86	12362	-.021	.30	2708	.041	-.11
427	9 2093	6.32 K0	8 55 0.278	-.12	9 34 53.16	-.4	7 8 57.35	57.34	12389	.009	-.54	2710	.014	-.65
428	18 2090	6.56 A0	8 55 28.704	-.17	18 30 9.73	-3.3	6 6 59.18	59.18	12396	-.013	.33	2711	.021	.40
429	2 2112	6.50 A0	8 55 33.185	-.22	1 44 8.87	-1.2	8 8 60.52	61.00	12398	-.051	.34	2712	-.048	.17
430	25 2029	5.45 A0	8 59 49.067	-.01	24 39 3.20	-.9	8 10 58.27	58.65	12496	-.032	-.17	2714	.002	-.24
431	59 1217	6.19 A0	9 2 51.149	-.25	59 32 44.24	-2.5	7 7 57.37	57.37	12551	.000	.68	2716	.039	-.01
432	5 2116	5.41 K0	9 3 20.467	-.11	5 17 35.58	-1.0	8 7 56.94	56.61	12564	-.040	-.08	2717	-.014	-.01
433	2 2145	6.41 M0	9 4 24.942	-.05	1 39 52.36	-2.8	6 7 58.52	59.03	12581	-.066	.31	2718	-.013	.03
434	30 1817	5.38 G5	9 5 0.186	-.22	29 51 23.38	-.5	7 7 58.62	58.62	12593	-.043	.15	2719	.003	-.24
435	52 1365	4.54 A3	9 5 21.305	-1.44	51 48 28.91	-4.2	6 6 61.37	61.37	12604	-.039	.75	2721	.027	.51
436	34 1949	5.95 F8	9 5 47.249	-1.48	34 5 12.23	-12.6	6 6 60.00	60.00	12613	-.077	-.05	2723	-.051	-.04
437	27 1715	5.96 G5	9 5 51.084	-.92	26 50 13.88	-37.4	7 8 60.26	60.50	12615	-.040	-.17	2724	.019	.07
438	8 2588	5.50 R8	9 6 15.337	-.16	-8 23 10.70	-1.2	7 7 60.15	60.15	12626	.015	.29	2725	.006	.13
439	64 723	4.74 F5	9 6 49.055	1.50	63 43 7.57	-6.6	6 6 59.90	59.90	12646	-.092	.42	2727	-.021	-.18
440	72 444	6.46 K0	9 9 13.779	.21	71 51 46.38	-5.2	7 7 56.65	56.65	12687	-.497	.25	2729	-.015	.27
441	62 1058	5.23 F8	9 10 24.596	.03	61 37 51.34	-3.5	6 7 55.89	56.07	12713	-.063	.22	2730	.032	.01
442	0 2158	6.99 A2	9 12 19.394	-.03	-1 22 43.99	-1.3	10 10 58.48	58.48	12755	.002	.12	2732	.004	.00
443	15 2009	5.57 K0	9 12 28.339	-.27	15 8 59.93	-1.5	8 7 56.56	56.63	12758	-.031	-.07	2733	-.003	.03
444	54 1285	4.89 A5	9 12 36.218	.64	54 13 47.46	5.5	8 6 56.48	56.89	12761	-.044	.38	2734	.023	.26
445	47 1658	5.70 A0	9 14 10.426	.21	47 1 36.93	.8	8 8 57.33	57.33	12799	-.059	-.15	2738	-.012	-.02
446	5 2762	5.40 K0	9 14 12.729	-.13	-6 8 37.35	.3	9 9 56.00	56.36	12800	-.015	-.64	2739	.007	-.45
447	5 2158	6.51 A5	9 17 13.521	-.24	5 25 41.89	-2.1	6 6 57.58	57.58	12863	-.072	.03	2740	.012	-.23
448	57 1214	5.98 M3	9 18 3.936	-.10	56 54 44.87	-1.3	7 7 57.10	57.10	12883	-.041	.01	2743	.015	-.16
449	37 1978	6.45 A5	9 21 17.517	-.68	36 48 10.26	-3.4	8 8 56.45	56.82	12957	.047	.40	2748	.036	.04
450	75 377	6.29 A2	9 22 39.872	-.65	75 18 55.22	2.7	7 7 57.68	57.52	12988	.113	-.82	2749	.088	.51



No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		No. Epoch				O - G.C.			O - FK3 (Supp.)		
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
451	17 2078	6.27 K0	9 22 46.429	-.60	16 48 8.21	-2.2	6 6 58.76	58.76	12990	-.036	-.53	2750	-.004	.01		
452	46 1509	5.56 G5	9 25 23.859	-.09	45 49 18.50	-13.1	9 7 56.09	56.24	13051	-.016	-.20	2751	-.050	-.10		
453	8 2226	5.88 K0	9 25 49.503	-.22	8 24 26.74	-3.7	9 9 56.22	56.22	13063	.005	.20	2752	.005	-.26		
454	34 1999	5.98 K0	9 27 42.236	-.12	33 52 35.54	-5.1	8 8 56.48	56.48	13112	-.035	-.26	2755	.015	-.26		
455	23 2107	4.48 K5	9 28 52.245	-.17	23 11 22.27	-4.4	8 9 56.59	56.89	13143	-.029	.16	2756	.011	-.12		
456	2 2217	6.15 F5	9 30 6.335	-.11	2 5 11.12	-3.9	8 7 59.28	59.28	13172	-.025	-.35	2758	-.006	.00		
457	29 1913	6.35 A2	9 30 22.853	-.35	28 35 25.92	-4.1	6 6 60.20	60.20	13182	.004	.16	2760	-.003	.10		
458	40 2224	4.99 K0	9 31 57.067	-.20	39 50 40.37	1.0	7 8 56.37	56.60	13221	-.070	.23	2762	-.053	.48		
459	5 2840	5.70 K0	9 32 2.931	.04	-5 41 27.30	-5.7	6 6 55.04	55.04	13226	-.003	-.33	2763	.020	-.07		
460	31 2011	5.74 M0	9 33 45.125	.06	31 23 12.72	-4.2	8 7 56.24	56.52	13265	-.040	-.21	2765	.003	-.03		
461	17 2109	5.92 K0	9 34 17.196	-.08	16 39 46.42	-1.0	9 8 57.21	57.48	13277	-.027	-.08	2766	-.001	-.06		
462	7 2160	5.14 K0	9 34 34.339	-.40	7 3 39.12	-.3	7 8 57.36	57.46	13283	-.032	.04	2767	.006	.01		
463	67 602	6.28 K5	9 35 20.847	-.13	67 29 56.24	-4.5	7 6 57.70	57.44	13304	-.204	.33	2769	.059	.09		
464	43 1943	6.63 K0	9 36 0.576	-.38	43 22 16.94	-7.0	6 6 58.85	58.85	13318	-.017	.20	2770	-.007	.41		
465	72 466	5.39 K0	9 38 23.667	-.58	72 28 52.90	-3.2	8 7 57.11	56.80	13364	-.029	-.15	2772	.083	-.23		
466	40 2241	5.50 K0	9 38 54.847	-.45	39 59 12.52	-4.6	7 7 59.74	60.74	13372	-.059	-.21	2773	-.036	-.07		
467	49 1868	6.34 A0	9 39 26.389	-.26	48 39 35.86	-1.9	7 7 57.50	57.95	13379	-.070	-.28	2774	-.037	-.27		
468	55 1345	6.34 A2	9 39 40.227	-.47	54 35 34.93	-3.6	7 7 57.95	57.95	13386	.005	-.37	2775	.018	-.00		
469	35 2042	6.03 F2	9 39 42.220	-.12	35 19 22.39	-5.5	6 6 58.42	58.42	13388	-.065	-.15	2776	.003	-.14		
470	79 319	6.13 F0	9 41 28.416	-.85	79 22 5.00	-3.3	8 6 58.10	58.21	13419	-.188	.36	2780	.026	.59		
471	7 2181	5.99 M0	9 43 31.827	.03	6 56 24.88	-3.4	7 8 57.38	57.48	13452	-.034	.38	2781	-.021	.10		
472	2 2246	5.69 F2	9 43 48.820	-.38	2 1 3.67	-4.8	8 7 58.21	58.52	13459	-.023	.16	2782	.010	.29		
473	21 2113	6.01 F0	9 47 2.359	-.32	21 24 47.71	-1.7	11 9 56.06	56.17	13528	-.025	-.24	2785	.006	-.30		
474	38 2076	6.74 F0	9 49 20.184	-.45	38 8 59.72	-2.4	8 8 58.11	58.11	13573	-.019	-.38	2787	-.038	.20		
475	0 2573	6.29 K0	9 49 38.204	-.26	0 18 40.83	-2.8	8 9 56.88	57.02	13583	.024	.16	2788	.001	-.17		
476	61 1151	6.42 K0	9 51 25.635	.09	61 21 10.58	-.4	10 7 56.41	56.95	13613	-.022	-.14	2790	.093	-.63		
477	50 1698	5.34 A2	9 52 27.768	-.06	50 3 24.70	1.6	6 6 56.44	56.44	13643	-.036	-.18	2793	-.011	-.18		
478	9 2262	5.93 K0	9 53 47.014	-.60	9 10 14.94	1.1	8 8 59.36	59.36	13679	.005	-.02	2794	.012	-.50		
479	46 1566	6.50 K0	9 54 48.098	.04	45 39 12.68	-3.8	6 6 57.28	57.28	13704	-.020	.02	2798	.013	.47		
480	13 2183	5.18 A0	9 55 32.108	-.17	12 41 3.15	-2.2	10 7 56.81	57.40	13724	.000	.37	2800	.010	.12		
481	57 1242	5.71 K5	9 56 26.093	-.37	57 3 7.51	-3.5	8 8 58.00	58.00	13735	-.043	.18	2802	-.030	.04		
482	30 1946	5.86 K0	9 56 43.452	-.67	29 53 8.38	-4.3	7 6 57.13	57.61	13742	-.048	-.10	2803	-.022	-.17		
483	75 399	7.09 G5	9 57 22.309	-1.42	75 0 1.66	-4.3	8 7 61.03	61.28	13749	.011	.16	2805	.069	.04		
484	22 2164	5.59 R3	10 0 1.855	-.14	22 11 28.37	-1.3	10 8 56.00	56.48	13796	-.010	.26	2807	-.018	-.32		
485	84 225	6.48 K0	10 0 52.011	-.30	84 9 43.73	.4	9 8 57.44	57.86	13814	-.218	.00	3955	-.224	.24		
486	6 2259	6.29 G5	10 4 10.577	-.23	5 51 21.81	-2.1	9 7 56.59	56.56	13888	-.023	.18	2811	.014	.35		
487	35 2110	4.47 A5	10 4 29.165	.43	35 29 20.91	-.2	8 7 58.88	58.81	13896	-.023	-.35	2812	-.020	-.54		
488	0 2615	4.50 A0	10 5 22.696	-.11	-0 7 35.38	-1.3	6 8 58.25	58.47	13916	-.044	.00	2814	-.014	-.09		
489	64 770	6.75 K5	10 5 28.900	.21	64 11 51.70	-.3	6 6 60.02	60.02	13920	-.138	-.27	2815	.070	-.29		
490	38 2110	6.14 K0	10 8 15.367	-.24	37 38 56.17	-3.3	8 6 55.57	55.55	13985	-.004	-.51	2817	.029	-.03		
491	6 3096	6.06 A0	10 8 47.861	.06	-7 4 10.33	-.8	8 7 57.08	57.51	13995	-.024	-.41	2818	-.004	.07		
492	79 328	6.72 A0	10 11 8.444	.55	79 11 44.58	-.5	8 7 56.65	56.27	14041	-.037	.27	2820	.019	.18		
493	60 1246	6.1- M0	10 11 41.722	.20	60 14 3.08	-.5	7 6 55.76	56.02	14054	.006	.52	2821	.060	-.41		
494	30 1981	5.35 A0	10 13 24.257	-.56	29 33 37.12	-3.0	6 7 57.25	57.25	14086	-.015	-.05	2823	.006	.01		
495	14 2228	5.74 M0	10 13 59.807	-.15	13 58 42.18	-2.2	7 6 57.70	58.10	14110	-.020	.18	2824	.011	-.07		
496	44 1973	6.69 G5	10 15 49.796	.55	44 18 12.07	-30.1	6 6 58.28	58.28	14143	-.011	-.15	2826	-.013	.29		
497	49 1940	6.15 K0	10 16 20.980	-.97	48 38 58.07	-12.8	6 6 57.73	57.73	14154	-.078	.77	2827	-.052	.19		
498	69 568	5.84 F0	10 17 16.437	-.94	68 59 59.74	-4.2	6 6 57.24	58.09	14180	-.060	.25	2828	.192	.56		
499	54 1367	6.22 K0	10 17 17.840	-.43	54 28 6.77	-1.0	9 7 56.79	57.11	14181	-.005	-.23	2829	.009	-.27		
500	6 2301	6.50 F2	10 20 38.863	-1.61	5 56 54.90	-7.6	10 9 56.74	57.59	14263	.009	.54	2833	.015	.25		



No.	B.D. No.	M+Sp.	R.A. 1950			Decl. 1950			Epoch		O - G.C.			O - FK3 (Supp.)		
			100 $\mu$	100 $\mu$ '		$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$	
501	9 2351	5.92 M0	10 22 37.140	.07	9 2 22.44	-4.2	7 8 56.66	56.60	14301	-.020	-.26	2835	.010	-.23		
502	6 3146	5.85 K5	10 23 14.240	-.96	-6 48 25.21	11.8	7 6 56.94	57.42	14321	-.009	.82	2836	-.037	.20		
503	20 2487	6.29 K0	10 24 17.474	-.41	19 37 10.68	-1.5	6 6 56.43	56.43	14340	-.039	-.15	2837	-.018	-.06		
504	45 1832	6.49 K0	10 25 36.207	-.24	45 28 5.49	-3.0	8 7 59.56	59.89	14377	-.015	.04	2838	-.053	.20		
505	64 789	6.00 A3	10 26 59.189	-.86	64 30 53.80	-5.6	7 6 57.28	57.46	14404	.024	-.24	2839	.074	.12		
506	51 1605	6.70 F2	10 27 9.856	-.06	50 49 34.32	-4.7	6 6 59.09	59.09	14414	-.029	.67	2840	.056	.33		
507	0 2663	4.95 B5	10 27 44.086	-.27	-0 22 47.92	-2.5	9 9 59.44	59.75	14431	-.033	-.04	2841	.012	.03		
508	25 2260	7.16 F0	10 29 32.159	-.37	24 41 59.22	.9	7 8 56.97	57.50	14469	-.063	-.77	2843	.064	-.15		
509	41 2101	4.84 A5	10 30 19.272	-1.20	40 41 0.35	-.8	6 6 57.07	57.07	14491	-.028	.27	2844	-.002	-.03		
510	81 343	6.56 G5	10 30 59.402	-.82	80 45 12.37	-.9	6 6 59.54	59.54	14509	-.124	.23	2845	.091	.31		
511	7 2330	5.17 K0	10 32 11.536	-.71	7 12 41.78	5.6	6 6 56.05	56.05	14533	-.023	-.49	2846	-.009	-.51		
512	54 1387	5.72 K0	10 36 0.295	-1.09	53 55 47.62	-8.4	9 9 57.38	57.50	14625	.022	.13	2849	.035	.14		
513	16 2144	6.62 F2	10 36 13.733	.39	16 23 17.72	-2.6	8 7 56.26	56.41	14633	-.026	.01	2851	.019	.05		
514	38 2166	5.83 G5	10 36 16.412	-1.86	38 10 16.60	-4.6	9 9 57.80	58.15	14634	-.061	-.05	2852	-.042	.22		
515	66 678	5.12 K0	10 38 33.334	-2.69	65 58 44.09	-7.5	7 6 55.91	55.86	14688	-.051	-.07	2855	.053	-.16		
516	14 2294	5.64 K0	10 43 46.477	-.87	14 27 32.91	-7.1	8 8 56.87	57.11	14814	-.018	.08	2860	-.007	-.15		
517	28 1931	6.12 F5	10 47 9.069	-.04	28 14 18.15	2.7	9 7 56.13	56.38	14897	-.033	-.19	2863	.019	-.59		
518	76 402	7.14 A3	10 47 28.186	-2.16	76 15 37.80	-3.2	6 8 56.89	57.22	14903	-.106	-.34	2864	.105	.30		
519	60 1296	5.66 K0	10 48 16.052	-.40	59 35 10.55	-5.7	7 7 58.73	58.73	14912	-.049	.77	2865	.099	.33		
520	70 634	6.08 G5	10 50 7.032	-7.72	70 7 15.61	-7.7	10 6 56.64	56.74	14954	-.069	.65	2866	.066	.69		
521	55 1418	5.36 K0	10 50 33.507	-.79	54 51 5.08	-1.5	7 7 55.95	55.95	14962	-.004	.10	2869	.030	-.13		
522	43 2058	4.84 A0	10 51 6.476	.42	43 27 23.98	-3.0	7 8 57.41	57.51	14974	-.050	.18	2870	-.048	.09		
523	23 2279	6.24 K2	10 53 35.473	-.19	22 37 7.48	.3	9 7 56.35	56.54	15035	-.069	-.13	2873	-.042	.02		
524	52 1528	6.34 K0	10 56 21.244	-.11	52 9 1.75	-.4	8 7 56.63	56.85	15082	-.111	-.37	2876	-.010	-.18		
525	12 2284	6.36 F5	10 57 4.391	-1.58	11 58 24.57	3.5	6 6 59.27	59.12	15102	-.013	-.15	2877	.005	-.59		
526	46 1680	5.67 K2	10 57 22.855	.06	45 47 40.73	.0	8 9 59.88	60.13	15109	-.017	-.10	2878	.003	-.04		
527	1 2471	4.97 M0	10 59 16.589	.10	-2 12 54.15	-3.7	7 7 56.52	56.52	15151	-.028	-.14	2879	-.013	-.19		
528	20 2547	4.42 A0	10 59 39.764	-.07	20 26 54.60	3.0	8 8 57.48	57.48	15162	-.013	.61	2880	-.010	.16		
529	39 2414	6.08 A2	11 1 44.782	-.63	38 30 40.17	-.3	7 8 56.21	56.34	15215	.010	.05	2882	.016	-.32		
530	50 1793	7.07 F5	11 2 53.490	-1.12	50 26 33.93	-1.8	11 9 57.79	58.36	15246	.098	-.11	2886	.001	-.52		
531	18 2452	6.59 K5	11 4 5.120	.16	18 0 29.36	-3.7	8 8 56.62	56.62	15273	.007	.10	2887	.026	-.08		
532	72 515	6.87 F0	11 5 0.662	-.78	72 13 48.11	-1.3	9 9 58.40	58.40	15304	.040	-.36	2888	.036	.14		
533	25 2344	5.63 A2	11 6 8.318	.04	24 55 46.14	-.1	8 7 56.87	56.96	15319	-.004	.09	2889	-.007	-.28		
534	30 2111	7.18 G5	11 6 20.100	-.27	30 18 42.11	-2.2	7 7 57.40	57.40	15326	.044	.24	2890	.068	.12		
535	37 2162	5.99 M3	11 6 34.410	-.38	36 34 50.98	-3.0	6 6 57.10	57.10	15334	-.007	-.05	2892	.035	-.43		
536	8 2476	5.90 K0	11 11 25.953	.29	8 20 4.68	-11.0	7 7 55.63	55.63	15437	-.012	-.05	2895	.016	-.27		
537	79 356	7.08 K0	11 12 31.583	-1.95	78 34 55.04	-2.0	7 6 56.84	57.27	15459	-.261	.39	2896	.136	.40		
538	23 2322	4.87 M0	11 12 32.815	-.15	23 22 5.83	-1.2	9 8 58.76	58.69	15460	-.044	.02	2897	-.031	-.40		
539	60 1318	6.66 A3	11 13 22.681	-.53	60 12 58.09	-1.9	7 7 57.38	57.38	15492	.072	1.38	2899	.020	-.04		
540	2 2409	5.44 K5	11 14 42.983	.36	2 17 8.54	-14.8	9 9 57.01	57.14	15520	-.017	.00	2902	-.000	-.32		
541	67 692	6.31 K0	11 17 51.472	.91	67 22 30.99	-4.9	6 6 55.38	55.38	15586	-.088	-.65	2905	.002	-.08		
542	52 1558	7.18 F0	11 18 8.934	-1.92	52 2 11.81	-11.1	7 8 56.24	56.22	15594	.029	.12	2906	-.010	-.25		
543	57 1316	6.32 A2	11 18 58.050	-.61	57 20 56.21	1.6	6 6 56.93	56.93	15607	-.085	-.36	2907	-.005	.33		
544	44 2083	5.06 G5	11 20 5.297	-.32	43 45 26.47	-1.6	8 6 56.39	56.62	15625	-.074	.32	2908	-.054	.23		
545	12 2335	5.96 K0	11 22 23.381	-.72	11 42 18.98	-1.4	9 8 55.88	55.96	15670	.014	.33	2912	.009	.23		
546	17 2356	5.63 F2	11 23 0.029	-1.01	16 43 53.67	-1.4	9 8 56.30	56.55	15677	-.001	.09	2913	-.005	.24		
547	62 1183	5.86 F0	11 26 13.997	-1.68	62 3 2.43	23.6	9 8 57.62	57.91	15745	-.018	.28	2915	.057	.11		
548	30 2163	6.78 F0	11 27 25.607	-.77	30 14 35.26	-20.5	8 7 56.36	56.52	15772	.018	.24	2916	-.016	-.57		
549	2 3360	5.07 K2	11 27 45.511	.12	-2 43 39.01	-1.9	9 10 57.94	57.59	15779	-.026	-.25	2917	-.007	-.25		
550	19 2459	5.74 K0	11 27 52.578	-.59	18 41 7.23	1.0	6 6 56.63	56.63	15784	-.011	.45	2918	.002	.20		

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		No. Epoch		O - G.C.			O - FK3 (Supp.)		
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
551	81 373	6.13 A0	11 28 23.393	-6.49	81 24 9.87	3.1	7 8 57.16	57.42	15795	-.092	.04	3956	-.004	.21
552	37 2195	6.33 K0	11 31 17.050	-1.07	37 5 33.52	-6.3	8 7 55.98	55.94	15857	-.031	.47	2923	-.045	.05
553	3 2521	5.81 F5	11 31 48.368	-1.22	3 20 17.08	-10.8	6 6 55.44	55.44	15867	-.016	.27	2924	.010	.45
554	55 1473	5.76 G5	11 32 20.225	.09	55 3 42.56	-2	8 8 56.41	56.41	15875	-.028	.52	2925	.027	.21
555	11 2377	6.45 A2	11 33 8.116	.20	11 11 17.48	-2.6	9 9 57.50	57.50	15892	-.002	.40	2927	.034	-.26
556	78 392	6.71 K5	11 34 36.517	.20	77 52 21.23	.9	9 9 58.75	58.75	15932	-.170	-.04	2928	-.056	.83
557	51 1679	5.99 K0	11 35 11.146	-.56	50 53 43.69	-4.2	7 7 56.85	56.85	15947	-.016	1.01	2929	.019	.18
558	47 1894	6.25 F2	11 35 52.837	-.40	47 6 42.18	-3.4	8 8 58.15	58.15	15970	-.007	.35	2931	.009	.11
559	8 2532	5.47 M3	11 35 52.900	-.06	8 24 40.35	.0	8 8 59.06	59.06	15971	-.013	.17	2932	-.004	.06
560	22 2391	5.43 G5	11 38 11.175	-.44	21 37 50.38	-4.8	7 7 56.53	56.53	16030	-.028	.12	2936	-.007	.22
561	32 2179	5.74 F5	11 38 58.315	-2.74	32 1 22.65	1.7	8 8 57.02	57.02	16051	-.039	.46	2938	.006	.03
562	26 2250	6.19 K5	11 41 37.988	-.13	25 29 44.73	1.3	9 7 55.70	55.83	16105	-.008	-.29	2940	.006	.09
563	56 1544	5.41 K0	11 44 15.598	.15	55 54 23.02	-3.8	9 8 56.49	56.53	16153	-.043	.20	2941	-.017	-.15
564	29 2214	7.21 F2	11 45 49.800	-.72	28 41 41.95	-1.8	7 7 56.40	56.40	16177	.002	-.15	2943	-.027	-.56
565	13 2465	6.22 A3	11 48 21.376	-.86	12 33 24.26	.7	8 7 56.13	56.25	16219	-.086	1.26	2946	.002	-.38
566	9 2560	5.62 K0	11 52 29.210	-.20	8 43 19.05	1.1	9 8 57.71	57.76	16294	-.029	-.03	2951	.010	-.18
567	26 2270	7.04 K0	11 52 50.149	-.47	25 48 1.69	-.6	8 7 58.19	58.47	16302	-.014	-.83	2952	-.044	-.62
568	57 1343	5.93 K0	11 53 22.230	.08	56 52 36.61	-.5	7 7 58.84	58.39	16315	-.039	.21	2953	.003	.14
569	41 2253	6.54 F5	11 54 40.496	-1.47	40 37 22.59	-7.1	7 7 58.31	58.31	16347	-.006	.61	2954	-.028	.47
570	18 2546	6.91 F2	11 55 8.592	-.66	17 44 45.86	-.8	8 6 56.39	56.61	16358	.019	.27	2955	.002	.02
571	4 2556	5.24 A0	11 57 23.218	-.13	3 56 1.24	-1.5	6 6 56.40	56.40	16406	.009	.39	2960	.033	.29
572	81 389	6.44 M0	11 57 44.408	-2.96	81 7 55.04	-3.8	9 8 57.87	57.82	16414	-.056	-.43	3957	-.046	-.05
573	71 598	6.69 A0	11 58 18.671	-.25	70 30 57.48	1.0	9 9 57.95	57.83	16424	.041	.08	2962	.113	.13
574	36 2230	5.62 K0	11 59 6.137	-.75	36 19 17.36	-9.1	9 8 58.72	58.66	16439	-.047	.32	2963	-.019	-.11
575	43 2179	5.07 A3	11 59 34.723	-2.95	43 19 22.55	6.7	7 7 58.00	58.00	16445	-.083	-.08	2965	-.061	-.30
576	2 3460	6.47 K0	12 3 26.072	-.22	-2 51 10.98	-2.3	8 6 56.14	56.45	16530	-.003	-.09	2967	-.012	-.16
577	2 2517	6.13 K0	12 7 7.497	.29	2 10 42.96	-18.4	6 6 55.92	55.92	16608	-.021	.21	2972	-.004	.25
578	6 2559	5.74 F0	12 7 30.446	-1.07	6 5 5.50	1.5	8 6 55.56	55.98	16616	-.031	-.15	2973	-.013	-.04
579	26 2316	5.81 K0	12 9 19.064	-.34	26 8 55.37	-3.3	6 6 56.15	56.15	16659	.005	-.05	2976	.002	-.35
580	21 2398	5.67 G5	12 9 36.782	-.13	20 49 13.28	-2.9	9 6 56.87	56.46	16667	-.013	.54	2977	.003	.14
581	11 2440	5.81 A2	12 10 53.150	-.65	10 32 25.36	-2.1	9 8 57.38	57.54	16693	.000	.35	2978	-.008	-.35
582	66 751	6.78 K0	12 11 40.692	-.61	66 23 13.44	-1.0	8 7 56.56	56.32	16711	.035	.92	2979	.070	.12
583	71 610	5.89 K0	12 12 46.304	-.50	70 28 41.48	-2.4	9 8 57.51	57.28	16733	-.077	-.27	2980	-.064	.18
584	15 2436	5.08 A2	12 13 27.855	-.58	15 10 38.20	-3.5	9 8 59.43	59.44	16747	-.015	.06	2981	-.006	.09
585	24 2443	5.06 K0	12 13 48.845	-.21	24 13 23.67	-1.4	7 6 58.43	58.83	16752	-.012	.27	2982	.018	.26
586	33 2213	5.08 K0	12 13 59.488	-.39	33 20 26.94	-12.2	7 7 58.30	58.30	16754	-.050	.54	2983	.002	-.03
587	88 71	6.28 F0	12 14 45.040	-5.96	87 58 37.75	5.2	7 6 59.13	59.10	16763	.285	.28	3958	-.155	.52
588	31 2350	6.14 F5	12 16 0.498	.70	30 31 41.50	-13.0	7 7 56.16	56.16	16789	-.077	.25	2984	-.020	-.25
589	75 470	5.41 A2	12 16 36.328	-.86	75 26 16.79	.1	9 8 57.06	57.29	16797	-.138	.27	2986	-.047	.19
590	18 2592	4.91 K0	12 18 11.484	-.79	18 4 8.01	8.1	7 7 56.59	56.59	16835	-.012	-.01	2987	.017	-.12
591	47 1955	6.52 K0	12 19 29.337	-.77	47 27 35.08	-4.1	8 7 56.24	56.27	16862	.097	1.21	2991	-.037	-.56
592	43 2218	5.98 F0	12 21 19.630	-.70	42 49 10.43	.6	6 6 55.48	55.48	16899	-.079	.61	2993	-.083	-.56
593	52 1626	4.97 K0	12 21 36.073	.12	51 50 20.53	.7	10 10 56.71	56.71	16906	-.011	.16	2994	.006	-.06
594	64 896	6.37 G5	12 22 46.995	-.29	64 4 46.33	-.2	7 6 56.97	56.58	16941	.004	.20	2996	.070	.03
595	28 2115	5.15 A5	12 23 54.127	-.11	27 32 42.11	-1.4	8 8 56.06	56.06	16955	-.043	.23	2997	-.018	-.15
596	72 565	6.44 K0	12 24 14.810	-3.37	72 12 24.30	-2.1	6 6 56.45	56.45	16960	.402	-.10	2998	-.078	.13
597	29 2288	4.56 K0	12 24 26.844	-.64	28 32 46.13	-8.8	8 7 57.52	57.73	16964	-.042	.24	2999	-.005	-.14
598	56 1598	5.84 M0	12 25 12.800	-.30	55 59 21.76	-1.6	8 8 56.21	56.21	16985	-.016	.20	3000	.027	-.06
599	3 3298	6.03 F2	12 25 17.471	-.59	-4 20 19.74	-.6	10 10 57.90	57.90	16989	-.029	.35	3001	-.003	.37
600	8 2609	6.16 K5	12 28 48.918	-.20	7 52 48.46	.3	7 7 56.10	56.10	17063	.017	.18	3002	.007	-.32

No.	B.D. No.	M+Sp.	R.A. 1950			Decl. 1950			Epoch				O - G.C.			O - FK3 (Supp.)		
			100 $\mu$			100 $\mu$ '			$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
601	11 2473	6.46 K0	12 30 30.996	-0.38	10 34 16.41	-0.3	7 7 56.13	56.13	17103	-0.07	-0.01	3004	.008	-0.27				
602	17 2504	5.78 K2	12 34 27.918	-0.26	17 21 53.07	-2.4	9 9 57.62	57.62	17183	-0.10	.17	3007	.001	.09				
603	2 2560	6.02 M0	12 35 49.268	-0.52	2 7 46.70	-2.6	8 7 58.78	58.70	17209	-0.048	.45	3009	-0.019	-0.39				
604	21 2439	5.51 K0	12 36 38.097	-0.60	21 20 13.97	-1.7	9 9 56.28	56.28	17225	.001	.09	3012	.000	-0.05				
605	36 2295	6.32 A0	12 36 51.084	.20	36 13 35.11	-1.3	6 6 57.01	57.01	17231	-0.030	.06	3013	-0.003	-0.43				
606	34 2344	6.62 K0	12 39 52.847	-1.79	33 57 49.84	-11.6	8 8 56.38	56.38	17285	-0.006	.05	3014	.029	-0.76				
607	81 402	6.26 A0	12 43 9.618	1.14	80 53 41.26	-4.6	8 8 56.37	56.37	17347	-0.016	-0.18	3017	.076	.15				
608	50 1948	6.77 F0	12 45 31.313	-1.08	50 25 46.74	-2.2	7 7 57.89	57.89	17385	-0.029	1.14	3019	-0.025	.38				
609	67 764	5.67 K5	12 45 32.174	.06	67 3 46.83	-0.8	7 6 58.30	57.96	17387	-0.044	.14	3020	.018	.48				
610	25 2568	6.39 G5	12 46 20.937	-2.49	25 6 50.89	-11.6	8 8 58.67	58.67	17400	-0.001	.67	3021	.042	-0.10				
611	14 2549	5.64 A0	12 46 23.860	.22	14 23 42.78	-3.2	9 8 58.63	58.95	17401	-0.027	.46	3022	.002	.15				
612	2 3593	6.15 F5	12 50 37.355	-1.73	-3 16 54.74	-0.7	7 7 56.47	56.47	17487	-0.047	-0.34	3025	-0.025	.02				
613	20 2772	6.56 G5	12 51 4.293	-1.16	19 45 16.87	-19.6	9 7 57.63	57.43	17499	.047	.85	3026	.021	.63				
614	34 2369	6.26 A2	12 51 49.884	-0.77	33 48 17.38	2.2	6 6 57.49	57.49	17517	-0.009	.01	3027	-0.020	-0.44				
615	47 2003	6.02 M3	12 52 39.682	-0.17	47 28 2.83	-1.2	7 7 57.36	57.36	17533	-0.068	-0.05	3030	-0.002	-0.44				
616	0 3002	6.88 K0	12 53 4.811	-0.14	0 19 33.43	-0.8	7 8 56.71	56.65	17542	-0.028	.20	3032	-0.004	.11				
617	44 2234	6.95 A0	12 54 20.314	.03	43 49 19.78	-0.3	9 9 57.42	57.42	17572	-0.025	.22	3034	-0.020	-0.32				
618	9 2696	6.77 F5	12 54 42.512	-0.54	8 33 49.19	2.4	6 6 56.31	56.31	17579	-0.058	-1.43	3035	-0.025	.13				
619	18 2682	4.96 M0	12 56 27.065	-0.24	17 40 42.43	2.2	7 7 55.86	55.86	17616	-0.050	.30	3036	-0.008	-0.48				
620	76 473	6.19 K0	12 57 18.601	.15	75 44 30.63	.6	12 12 58.30	58.30	17637	-0.085	.17	3037	-0.018	.32				
621	31 2434	5.08 K0	12 57 53.000	-0.16	31 3 15.03	-1.4	7 7 56.78	56.78	17647	-0.009	-0.28	3039	.002	-0.31				
622	60 1439	6.33 A0	13 0 37.423	-0.32	59 59 5.01	-1.5	7 7 55.97	55.97	17702	-0.045	.01	3041	.004	.13				
623	28 2185	4.90 K5	13 4 46.836	.23	27 53 33.41	-7.8	6 6 56.65	56.65	17787	.006	.28	3045	.006	.17				
624	6 2697	6.91 G0	13 6 18.801	.56	5 28 58.24	-68.8	7 7 56.39	56.39	17811	-0.013	.65	3047	-0.009	.23				
625	17 2595	6.18 K0	13 7 20.325	-0.47	17 6 53.30	-1.9	8 8 57.31	57.31	17825	-0.020	.30	3049	.000	.02				
626	63 1056	6.49 A0	13 7 54.347	-0.42	62 29 42.54	-1.4	8 8 57.72	57.72	17837	-0.086	.51	3050	-0.005	.56				
627	25 2610	6.46 K0	13 9 43.920	-0.13	24 31 25.56	-3.6	7 6 56.15	56.14	17877	-0.028	-0.22	3052	-0.037	-0.16				
628	12 2565	5.82 K5	13 10 3.572	-0.36	11 49 17.04	-3.0	7 7 56.66	56.66	17884	-0.006	-0.59	3053	-0.004	-0.69				
629	81 416	6.32 G5	13 11 56.890	-0.36	80 44 8.79	.8	10 10 57.63	57.63	17932	-0.016	.18	3056	.021	.20				
630	73 587	6.43 A0	13 12 6.019	.49	73 3 49.12	-3.1	6 6 55.50	55.50	17934	-0.083	.48	3057	.039	.42				
631	0 2674	6.49 F0	13 13 51.367	-0.36	-1 7 36.04	-1.8	7 7 56.22	56.22	17960	.076	-0.87	3058	-0.009	-0.48				
632	20 2814	6.29 A3	13 14 6.705	-0.84	20 2 53.79	1.7	9 8 57.55	57.33	17970	.024	-0.04	3059	-0.001	-0.39				
633	69 694	6.11 B9	13 14 49.980	-0.27	68 40 16.02	1.1	7 6 57.40	57.63	17991	-0.157	.25	3060	-0.040	.60				
634	50 1994	5.13 A0	13 16 7.026	-0.31	49 56 40.17	1.1	7 7 57.46	57.46	18009	-0.091	.03	3063	-0.043	-0.25				
635	35 2435	5.96 A5	13 16 46.358	-0.24	35 23 24.25	.5	6 6 57.15	57.15	18023	-0.020	.45	3064	.019	-0.08				
636	44 2265	6.58 F2	13 18 40.012	-1.35	44 15 5.31	1.5	9 9 56.64	56.64	18063	-0.029	.59	3066	.003	-0.30				
637	2 2664	5.68 A0	13 19 8.964	-0.42	2 20 57.82	-6.0	7 7 56.19	56.08	18079	-0.014	.26	3067	.025	.11				
638	4 3469	5.94 K0	13 20 43.226	-0.13	-4 39 48.63	-2.1	7 7 55.71	55.71	18109	-0.019	-0.17	3069	-0.020	.06				
639	24 2578	5.75 A2	13 22 43.619	-0.06	24 6 51.85	-1.5	7 6 56.42	56.48	18147	-0.002	.18	3072	.008	-0.28				
640	0 2686	6.01 A3	13 23 37.559	-0.75	-0 55 59.02	-0.1	6 6 56.77	56.77	18163	-0.030	.13	3074	-0.018	-0.06				
641	79 422	5.94 G5	13 26 29.710	-0.70	78 54 7.47	2.6	10 7 57.21	57.90	18223	-0.319	.57	3075	.014	.18				
642	11 2575	5.78 K0	13 26 44.285	-0.42	11 4 36.62	-4.6	7 7 57.49	57.22	18234	-0.019	.21	3076	-0.004	-0.28				
643	7 2655	6.29 K5	13 27 29.536	.05	7 26 11.83	-0.4	7 8 55.93	56.36	18249	-0.028	.56	3077	-0.019	.30				
644	5 3714	4.83 M0	13 29 21.697	-0.68	-5 59 53.80	-4.8	7 8 55.91	55.72	18288	-0.037	.15	3079	-0.014	.22				
645	49 2227	4.63 A3	13 32 24.748	-1.28	49 16 15.83	1.9	6 6 56.30	56.30	18356	-0.063	.28	3083	-0.018	-0.17				
646	25 2652	5.90 M0	13 34 37.899	-0.20	24 52 3.81	-1.0	6 6 54.99	54.99	18399	-0.029	.27	3085	-0.011	.06				
647	55 1625	4.75 M0	13 38 50.572	-0.26	54 56 2.82	-1.4	6 6 56.66	56.66	18504	-0.029	.04	3087	.012	-0.04				
648	65 953	5.70 A0	13 39 56.500	.83	65 4 28.48	-1.9	8 8 57.97	57.98	18527	-0.021	.91	3088	.018	.65				
649	35 2474	5.98 K0	13 40 29.734	.15	35 14 24.83	.4	10 10 59.26	59.26	18539	-0.078	.17	3089	.008	-0.45				
650	78 466	6.11 K0	13 42 24.665	-2.25	78 18 52.95	4.0	8 9 58.83	58.66	18583	-0.050	.51	3090	.011	-0.04				



No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		No. Epoch				O - G.C.			O - FK3 (Supp.)			
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$	
651	39 2680	5.57 K0	13 44	50.418	-1.17	38 47	31.67	-2.5	6 6	58.84	58.84	18636	-.024	.15	3094	.016	-.03
652	42 2440	6.78 K2	13 45	58.473	.25	42 17	48.36	-6.6	7 7	58.34	58.34	18651	-.063	.34	3095	.078	-.54
653	31 2547	5.81 K0	13 46	23.367	-.13	31 26	16.36	3.4	7 7	58.83	58.83	18662	.015	-.09	3096	-.019	-.44
654	21 2578	5.06 K0	13 47	20.907	.12	21 30	41.61	1.0	7 7	57.35	57.35	18683	-.002	.14	3098	-.007	-.01
655	6 2800	6.25 K0	13 47	53.886	.15	5 44	40.46	-1.6	6 6	59.18	59.18	18698	-.074	.53	3100	.020	-1.16
656	62 1318	6.05 K0	13 48	7.839	.95	61 44	17.39	-10.4	6 6	59.72	59.72	18704	-.068	.52	3101	.014	.64
657	35 2496	4.96 M0	13 49	35.164	-.18	34 41	28.28	-3.8	6 6	56.21	56.21	18741	-.018	.12	3102	.008	.01
658	69 724	6.44 K0	13 49	45.249	-3.45	68 33	45.97	-7.0	7 7	56.93	56.93	18744	.030	1.00	3103	.032	-.20
659	12 2635	5.99 A2	13 49	51.321	.16	12 24	41.69	-1.4	6 6	56.29	56.29	18746	-.014	.45	3104	-.002	.05
660	79 431	6.63 G5	13 50	9.142	-1.67	79 14	32.88	.2	8 7	59.72	59.15	18752	-.273	-.16	3105	.091	.02
661	29 2464	5.84 A5	13 50	54.201	-.93	28 53	36.43	2.1	7 7	57.93	57.93	18769	-.039	.19	3106	-.020	.22
662	0 2758	5.30 K0	13 52	7.901	-.55	-1 15	28.33	-3.1	6 6	56.30	56.30	18800	-.036	.36	3107	-.006	.11
663	14 2680	6.15 F5	13 53	25.334	-2.01	14 18	2.37	-.5	9 9	56.46	56.46	18830	-.008	.65	3109	.020	-.22
664	22 2650	5.42 A0	13 56	18.293	-.08	21 56	21.62	-5.2	9 8	56.62	56.69	18900	-.018	.12	3113	-.011	-.36
665	9 2835	5.88 A2	13 58	51.850	.23	9 8	9.02	.4	6 6	56.16	56.16	18941	-.019	-.84	3114	.017	-.65
666	46 1922	6.46 K5	14 0	13.022	.15	45 59	41.06	-7.9	9 7	58.25	58.36	18969	.023	-.43	3115	-.033	-.51
667	5 2836	6.28 F2	14 1	25.028	-.12	5 8	25.35	-.7	7 6	56.08	56.04	18993	.020	-.09	3118	.015	-.39
668	50 2047	5.44 M0	14 6	25.210	-.66	49 41	37.65	5.5	7 6	56.72	56.83	19095	-.017	.26	3124	-.009	-.00
669	75 529	6.34 A3	14 6	31.644	-1.51	74 49	49.53	1.1	8 8	58.12	58.12	19097	.004	.22	3125	-.003	.30
670	60 1516	6.50 K0	14 7	13.031	-1.59	59 34	26.34	-2.8	7 7	57.96	57.96	19109	-.115	.45	3126	-.039	.38
671	3 2867	4.90 A0	14 9	43.777	-.34	2 38	38.22	-3.4	7 6	56.55	56.64	19157	.016	.45	3127	.010	-.03
672	70 778	5.36 M0	14 11	7.724	-.48	69 40	1.15	-5.0	7 7	58.38	58.38	19189	-.160	.32	3128	-.053	.59
673	22 2678	6.40 A2	14 12	21.884	.28	22 6	21.34	-1.0	6 6	56.39	56.39	19224	-.025	.21	3130	-.016	.16
674	10 2654	5.36 G5	14 12	23.795	-.19	10 20	6.72	-16.0	9 8	57.85	58.08	19226	-.041	-.13	3131	.011	-.53
675	1 2938	5.24 K0	14 16	57.686	-.80	-2 2	7.21	-7.4	7 7	56.86	56.86	19323	-.012	-.13	3134	.004	-.41
676	16 2637	4.97 K0	14 17	23.148	-1.01	16 32	6.50	5.2	8 8	56.39	56.39	19334	-.009	.61	3135	-.007	.20
677	31 2605	6.34 A2	14 17	57.420	-.12	30 39	27.93	-.7	7 7	55.41	55.54	19345	.006	-.32	3136	.014	-.40
678	25 2770	6.15 F2	14 20	52.100	-1.22	25 33	49.83	6.4	7 7	56.74	56.74	19400	.031	.07	3139	.012	-.74
679	39 2764	6.32 K0	14 23	26.674	-.07	38 37	5.05	-2.2	7 7	55.79	55.79	19464	.021	-.33	3142	-.016	-.27
680	6 4009	5.74 K5	14 26	3.262	-.14	-6 40	37.00	-6.1	9 8	57.00	57.13	19516	.015	.44	3143	.008	.26
681	36 2495	6.19 K0	14 26	12.147	-.24	36 25	10.88	-1.0	6 6	57.00	57.00	19519	-.037	.08	3144	.005	-.28
682	1 2941	5.80 A3	14 27	17.372	.00	1 3	2.75	.1	8 8	57.63	57.63	19542	.031	.42	3145	.042	-.50
683	42 2508	6.45 G0	14 27	38.527	1.38	42 1	15.16	-22.5	8 8	57.49	57.49	19550	-.009	.48	3146	.001	.34
684	5 2886	6.13 K2	14 28	15.091	-.01	4 59	37.03	-2.1	6 6	56.37	56.37	19572	.026	.45	3149	.015	-1.35
685	63 1136	6.04 F5	14 29	34.524	-2.67	63 24	22.95	.3	10 9	57.96	58.23	19595	-.046	.73	3150	.065	.24
686	22 2715	5.96 F0	14 30	16.097	-.93	22 28	45.53	2.9	7 7	56.53	56.53	19611	-.023	.58	3151	.006	-.05
687	33 2474	6.28 F2	14 32	4.022	.91	32 45	9.98	-.3	7 6	56.41	56.57	19650	-.081	.01	3153	.049	-.55
688	57 1519	6.25 F5	14 32	45.096	2.64	57 17	12.21	-24.0	7 7	56.93	56.93	19666	-.060	.51	3154	-.016	.48
689	50 2095	5.90 K5	14 32	54.687	-.48	49 35	7.88	4.4	9 9	59.28	59.28	19668	-.018	.01	3155	.009	-.13
690	23 2710	6.48 K0	14 33	51.192	-.11	23 28	1.22	1.5	7 7	58.40	58.40	19687	-.017	.32	3157	-.019	-.48
691	80 448	6.35 K0	14 34	57.100	-3.64	79 52	36.91	8.3	8 9	58.23	58.35	19705	-.246	.39	3159	-.062	.13
692	18 2906	5.98 K0	14 35	54.405	-.23	18 30	53.26	-8.1	9 9	57.70	57.70	19726	-.002	.68	3160	.030	-.02
693	54 1693	5.52 A0	14 36	39.969	.15	54 14	18.91	-2.4	8 8	56.01	56.01	19742	-.003	-.36	3161	.019	-.51
694	8 2903	5.03 G5	14 39	11.258	-.04	8 22	28.68	-.4	7 7	57.10	57.10	19789	-.037	.30	3163	-.014	-.00
695	41 2523	5.79 K0	14 41	48.005	-.10	40 40	11.76	2.1	8 7	56.75	56.93	19841	-.040	-.23	3166	.013	-.06
696	15 2758	6.10 M3	14 43	44.465	-.58	15 20	27.58	.9	7 7	55.81	55.81	19885	-.016	.96	3168	-.011	.05
697	0 2886	6.06 A0	14 46	19.779	-.06	-0 38	27.09	1.3	7 6	55.50	55.50	19932	-.012	-.39	3169	.001	-.82
698	10 2748	6.77 K0	14 47	0.604	-.34	10 15	7.24	-8.8	8 9	56.64	56.94	19946	-.012	.11	3170	.021	-.28
699	29 2581	5.66 A2	14 47	49.175	.16	28 49	18.99	-.5	7 6	55.70	55.91	19966	-.021	.28	3171	.011	-.39
700	24 2786	5.81 G0	14 48	1.526	1.09	24 7	2.06	2.3	10 11	57.44	57.36	19974	-.048	.17	3172	-.047	-.16



No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch		O - G.C.			O - FK5 (Supp.)		
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
701	3 3696	4.59 F0	14 54 34.131	-0.69	-4 8 37.94	-16.1	9 10 59.26	59.48	20115	.033	.71	3177	.004	.39
702	50 2126	5.68 F5	14 54 43.357	1.12	49 49 55.73	-23.1	10 10 58.89	58.89	20119	-.025	.10	3179	.048	-.02
703	39 2820	5.58 F2	14 57 41.820	-.28	39 27 46.01	3.1	6 6 55.87	55.87	20183	-.054	.76	3182	-.005	.26
704	2 3928	5.68 K5	14 58 43.778	.20	-2 33 28.32	-2.6	10 10 57.92	57.92	20202	.004	-.02	3183	-.001	-.44
705	25 2861	4.93 K5	14 59 54.951	-.05	25 12 17.12	-5.4	7 6 56.26	56.39	20224	-.055	.24	3185	-.078	-.06
706	16 2725	6.99 G0	15 0 13.806	-1.53	16 14 57.45	7.9	7 8 60.70	60.18	20231	-.027	1.05	3187	.065	-.19
707	60 1582	5.89 A2	15 0 16.562	-.31	60 24 0.77	1.2	8 7 61.05	60.86	20233	-.011	-.48	3188	.048	-.58
708	72 664	6.66 G0	15 0 21.938	-8.63	71 57 38.58	8.9	7 8 59.99	60.30	20236	-.120	-.32	3189	.013	.04
709	2 2905	4.62 K0	15 0 22.256	-.38	2 17 11.57	.5	7 7 59.52	59.52	20237	-.030	.61	3190	.008	-.03
710	35 2642	5.66 K0	15 1 6.192	-.36	35 24 2.44	.3	7 7 56.57	56.57	20252	-.028	.32	3191	-.007	-.04
711	45 2251	6.43 F5	15 1 20.450	-.87	44 50 20.55	.5	10 10 60.48	60.48	20258	-.082	.67	3192	-.022	-.17
712	6 3001	6.22 G5	15 5 11.310	-.06	5 41 22.34	-2.5	7 6 56.11	56.24	20346	-.007	.36	3196	.007	-.12
713	50 2146	6.27 K0	15 6 44.197	-.06	50 14 43.80	-2.8	9 6 55.50	55.72	20380	-.034	.59	3197	-.001	.13
714	19 2935	5.98 M3	15 9 47.628	-.09	19 9 47.05	.2	9 8 55.86	55.91	20442	-.038	.24	3199	-.019	-.10
715	23 2789	6.25 A0	15 11 19.095	.36	23 10 4.83	8.9	6 7 55.93	56.01	20474	-.053	.82	3201	.016	-.11
716	38 2629	6.42 K0	15 11 41.229	-.09	38 27 3.72	-4.8	11 9 58.68	58.41	20483	-.014	.76	3202	-.032	-.20
717	29 2640	5.26 A0	15 12 23.631	-.54	29 20 55.76	2.2	8 8 57.89	57.89	20495	-.004	.21	3204	-.019	.19
718	74 609	6.66 K0	15 17 47.451	-.28	74 13 32.89	3.8	8 7 57.92	58.27	20613	-.213	.02	3208	.092	.08
719	5 4057	5.60 K2	15 18 28.891	-.36	-5 38 43.76	-2.2	8 8 57.43	57.43	20636	-.002	.88	3209	.049	1.21
720	52 1869	5.52 A3	15 18 36.781	.11	52 8 16.41	.5	7 7 57.39	57.39	20641	-.027	.53	3210	.008	.20
721	13 2928	6.20 A0	15 20 1.015	-.03	12 44 43.26	-1.6	7 6 56.96	56.57	20681	-.033	.61	3213	-.013	.12
722	63 1192	5.78 K2	15 21 47.914	-.30	63 31 10.37	-9.8	9 9 59.07	59.07	20706	.002	.58	3215	.019	.11
723	45 2284	6.24 K2	15 22 23.831	-.23	45 26 48.78	-.8	6 6 58.74	58.74	20720	-.002	.55	3216	-.024	.46
724	34 2645	5.87 K0	15 24 19.797	-.87	34 30 32.33	4.8	6 6 55.25	55.25	20761	-.071	.10	3218	-.008	-.62
725	25 2916	6.26 K5	15 25 29.702	-.04	25 16 28.30	-2.9	7 6 56.13	56.24	20786	.000	.59	3219	-.018	.06
726	2 2965	5.12 A5	15 26 6.499	-.59	2 0 52.26	-4.5	6 6 55.48	55.48	20805	-.016	.60	3221	-.025	-.09
727	55 1756	6.30 A2	15 27 39.139	-.13	55 21 56.21	2.5	11 9 57.36	57.35	20833	-.033	.95	3222	.005	.70
728	64 1074	5.88 G5	15 30 13.140	-1.75	64 22 35.67	7.4	9 7 57.26	57.07	20894	-.057	.64	3225	.031	.52
729	0 2982	5.76 K0	15 30 23.168	-.09	-1 1 4.78	-4.2	6 6 56.26	56.26	20896	-.056	-.09	3226	-.023	-.11
730	77 592	5.33 K5	15 32 51.296	-1.49	77 30 59.92	.7	7 6 56.40	56.39	20952	-.072	.49	3229	-.012	.25
731	18 3044	6.06 K0	15 33 16.947	-.56	17 49 15.24	-2.2	7 6 56.83	57.23	20962	.004	.35	3230	-.006	.00
732	11 2826	6.11 G5	15 33 30.513	-.29	11 25 50.68	-1.9	7 7 55.16	55.16	20968	.115	.48	3231	-.104	-.13
733	85 263	6.98 K0	15 34 32.660	.12	84 59 40.58	-5.6	6 8 59.76	59.04	20994	-.268	.14	3959	-.262	-.22
734	35 2711	6.19 K0	15 36 52.813	.00	34 50 12.73	-2.4	10 9 56.71	56.96	21048	-.051	-.17	3238	-.012	-1.44
735	69 806	5.86 K0	15 37 29.985	-.96	69 26 40.86	4.7	9 9 57.43	57.43	21065	-.117	.55	3240	.026	-.07
736	13 2982	5.26 A0	15 39 26.095	.26	13 0 23.86	-2.0	8 6 55.34	55.63	21105	-.016	.50	3243	-.023	.10
737	81 523	6.97 G5	15 39 47.680	-1.67	80 46 30.49	4.6	7 7 56.13	56.31	21114	-.187	-.03	3244	.176	-.15
738	52 1898	5.48 A0	15 41 28.979	-.70	52 31 4.60	2.5	7 7 55.86	55.86	21154	-.046	.19	3247	-.008	-.06
739	2 2989	5.80 G5	15 41 30.713	-.56	2 40 27.24	-15.7	7 6 56.01	56.27	21155	.062	.68	3248	-.006	.18
740	32 2621	5.60 K0	15 42 0.946	-.28	32 40 21.44	-1.9	8 7 57.14	56.83	21161	-.028	.45	3249	-.019	.11
741	26 2737	4.73 G5	15 47 29.713	-.59	26 13 13.20	-7.5	7 6 57.57	57.28	21276	-.013	.70	3252	.000	.02
742	13 3024	6.16 G0	15 50 52.209	-1.05	13 21 6.87	-56.4	9 10 57.28	57.20	21337	-.014	.10	3254	-.021	-.04
743	56 1838	5.92 K0	15 51 6.546	-.25	55 58 25.34	5.1	10 9 57.21	56.98	21345	-.044	.08	3255	.010	-.15
744	9 3116	6.20 A2	15 52 15.150	-.02	8 43 34.48	-.6	7 6 55.71	55.77	21367	-.006	.25	3256	.000	-.60
745	20 3166	5.76 K5	15 52 22.276	-.58	20 27 22.41	3.9	11 10 57.69	57.91	21368	-.007	-.13	3257	.008	-.31
746	38 2712	5.47 F2	15 53 58.298	.30	38 5 25.34	7.4	7 7 55.31	55.59	21402	-.097	.38	3259	-.017	.01
747	50 2239	5.90 F0	15 57 39.077	.06	50 1 21.91	-6.1	6 6 57.05	57.04	21499	.063	.79	3260	.012	-.04
748	4 3096	5.90 K0	15 58 22.058	-.31	4 33 57.75	7.0	8 8 58.90	58.90	21508	.018	.64	3262	.015	.26
749	18 3101	5.28 G5	15 58 59.395	-.37	17 57 19.03	14.5	7 6 58.82	58.74	21525	.014	.54	3263	.010	-.12
750	30 2738	4.91 A0	15 59 26.279	-.24	29 59 23.10	-1.5	7 7 56.30	56.30	21534	-.046	.06	3264	-.008	-.38

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		No. Epoch				O - G.C.			O - FK3 (Supp.)		
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
751	23 2886	4.82 A2	16 0 8.350	.08	22 56 30.94	1.5	8 7 57.56	58.04	21552	-.068	.35	3268	-.047	-.22		
752	65 1095	7.10 A2	16 0 28.373	-.07	65 5 18.79	-1.1	8 6 56.34	56.62	21560	.071	.80	3270	.059	.28		
753	46 2142	4.64 B9	16 1 14.270	.52	46 10 28.88	-6.7	9 9 56.74	56.74	21580	-.057	.54	3271	-.018	.37		
754	70 863	6.74 A0	16 4 58.919	.49	70 23 43.31	3.0	6 7 55.05	54.95	21669	-.234	-.16	3272	.085	.42		
755	10 2958	5.63 A5	16 5 14.133	-.14	10 1 27.53	-1.5	6 6 55.78	55.95	21682	-.039	.73	3274	-.009	.45		
756	68 864	5.40 A0	16 6 10.691	-.67	67 56 30.77	6.0	7 6 57.54	57.25	21705	-.048	.65	3276	.029	.39		
757	17 2982	5.90 A0	16 9 12.785	.02	16 47 37.55	-.4	8 6 54.53	54.53	21777	-.009	.28	3279	-.001	.42		
758	42 2683	6.01 K5	16 10 8.149	-.09	42 30 5.81	2.1	7 7 55.45	55.75	21802	-.018	.09	3281	-.080	-.78		
759	13 3089	6.96 A3	16 10 37.553	.32	12 55 37.11	1.1	9 8 56.44	56.68	21808	-.201	.79	3282	.032	-.06		
760	5 3165	5.64 K0	16 10 46.845	.27	5 8 51.22	-1.3	7 6 56.75	56.79	21815	-.011	.66	3283	.031	.26		
761	21 2886	6.58 A2	16 10 57.905	-.16	21 41 32.98	.9	7 6 57.57	57.29	21820	-.132	.93	3284	-.024	1.19		
762	29 2803	5.73 A0	16 14 44.448	.12	29 16 22.12	-2.5	11 10 57.29	56.90	21900	-.032	.64	3287	-.019	.37		
763	73 713	5.98 A0	16 15 21.345	-.38	73 31 3.66	2.8	7 6 55.87	55.76	21916	-.120	1.03	3289	-.111	.79		
764	26 2817	6.63 G5	16 16 19.188	-.07	26 1 1.86	-.4	8 8 56.43	56.43	21937	.008	.10	3290	-.001	-.16		
765	60 1665	5.64 M3	16 16 24.937	.10	59 52 33.00	2.0	10 9 57.86	58.12	21943	-.053	.73	3291	-.004	.24		
766	49 2491	6.19 K0	16 17 47.203	-.22	49 9 24.98	2.7	8 9 56.39	56.41	21974	-.074	-.01	3292	.003	.09		
767	40 3005	5.54 F2	16 18 12.213	-1.09	39 49 38.33	-.6	9 9 58.00	58.00	21984	-.064	.68	3293	.023	.19		
768	31 2845	4.72 K0	16 20 8.807	-.77	31 0 25.25	10.6	7 7 56.70	56.70	22020	-.022	.66	3294	-.021	.41		
769	37 2750	5.53 A3	16 23 37.170	-.01	37 30 24.70	-1.7	6 7 56.24	56.28	22108	.015	.39	3296	-.006	.12		
770	0 3529	5.47 K2	16 26 0.971	-.04	0 46 31.92	-7.0	8 6 55.69	55.79	22148	.037	.31	3300	.018	-.08		
771	42 2714	5.02 M3	16 26 59.861	.22	41 59 26.37	-.8	9 9 57.66	57.66	22172	-.001	.00	3303	-.006	-.12		
772	51 2106	6.37 K0	16 27 26.689	.26	51 30 58.69	-.4	9 7 57.70	58.20	22185	-.020	.79	3304	-.015	-.52		
773	79 498	5.54 A3	16 28 27.667	-3.98	79 4 19.96	10.9	6 7 58.13	58.62	22205	-.076	.31	3305	.080	.49		
774	35 2828	6.47 K5	16 29 12.684	.05	35 19 54.17	-3.2	9 8 56.82	56.37	22224	-.106	.85	3308	.011	-.03		
775	5 3223	5.56 B8	16 30 7.897	.10	5 37 34.59	-.5	10 8 57.18	57.73	22244	-.015	.44	3309	.005	.19		
776	11 3008	4.92 K5	16 30 15.762	-1.22	11 35 38.58	-8.4	7 7 56.72	56.72	22250	-.008	.44	3310	.008	-.09		
777	17 3053	6.27 A0	16 33 11.686	-.04	17 9 32.60	-.7	8 9 57.85	58.12	22314	-.018	.48	3313	.007	-.13		
778	46 2194	5.95 G5	16 34 43.515	-.15	46 42 49.04	.4	8 7 56.61	56.92	22344	-.020	-.11	3314	-.029	.16		
779	13 3177	6.20 F2	16 35 29.613	-.26	13 47 13.34	-6.3	7 6 56.62	56.81	22361	-.008	.54	3316	-.006	.31		
780	27 2661	7.08 M0	16 35 47.194	-.04	27 8 35.44	-4.0	9 7 56.14	56.31	22369	.014	.64	3318	.080	.03		
781	56 1907	5.44 G5	16 36 59.588	.00	56 6 45.46	6.5	10 9 56.85	56.99	22398	-.051	.05	3320	.014	-.00		
782	25 3115	6.22 K2	16 38 56.091	-.22	24 57 13.89	.0	7 7 56.73	56.73	22452	-.013	-.24	3323	.007	-.01		
783	1 3290	5.86 F0	16 39 10.387	-.72	1 16 30.40	4.8	7 7 57.21	57.21	22460	.021	-.07	3324	.012	-.29		
784	64 1145	5.00 K0	16 40 33.892	.02	64 41 1.33	-1.9	9 7 56.78	57.31	22489	-.103	.65	3326	.043	.54		
785	50 2319	6.64 F5	16 41 8.295	1.27	50 1 51.88	-11.8	8 7 56.95	57.04	22501	-.018	.52	3328	-.067	-.11		
786	34 2830	5.90 F2	16 42 0.868	-.59	34 7 46.98	4.8	6 8 56.79	57.08	22522	-.025	.16	3330	-.012	-.60		
787	8 3271	5.38 K2	16 43 25.706	-.02	8 40 20.10	1.0	9 8 57.57	57.83	22560	-.012	.06	3332	-.002	-.48		
788	5 3272	5.28 A0	16 45 18.558	-.15	5 20 5.96	-4.2	7 6 56.62	57.01	22605	-.014	.30	3333	-.019	-.15		
789	42 2749	6.15 M3	16 45 43.602	-.02	42 19 37.12	-2.9	9 7 57.93	58.47	22611	-.020	.29	3336	-.076	-.15		
790	53 1897	7.13 K0	16 48 13.982	-.28	53 0 7.32	-.3	8 8 58.22	58.22	22672	-.030	.23	3338	-.013	.05		
791	30 2884	5.86 K5	16 48 41.748	-.06	29 53 26.13	-.6	7 7 57.62	57.76	22682	-.008	.11	3339	.005	-.32		
792	18 3261	6.87 F5	16 50 28.157	.08	18 8 39.73	-4.0	9 10 57.90	58.37	22732	.048	1.02	3340	.030	-.12		
793	5 4374	5.35 K0	16 51 55.165	-.26	-6 4 25.39	-2.3	7 8 59.91	59.86	22783	.002	.21	3342	.019	.25		
794	21 3002	5.48 K0	16 52 45.761	.38	21 2 15.73	-.2	8 7 57.75	58.20	22802	-.018	.35	3343	-.008	.24		
795	60 1713	7.16 K0	16 53 20.672	.26	60 26 30.40	-1.5	9 7 57.71	58.37	22817	-.063	-.16	3344	-.014	.07		
796	70 906	6.95 A2	16 54 55.859	-.27	70 32 34.28	-5.6	8 6 56.12	56.14	22855	.006	1.63	3345	.051	.40		
797	14 3155	6.51 G5	16 55 14.460	-.61	13 57 33.56	6.5	8 8 56.21	56.47	22861	.012	-.01	3346	.004	-.44		
798	24 3095	6.36 K0	16 55 37.701	.03	24 27 26.52	-3.1	8 6 56.51	56.69	22870	.000	.33	3347	.020	-.81		
799	42 2774	6.38 K2	16 56 15.452	-.11	42 35 18.76	-5.9	9 9 58.82	58.83	22882	-.027	.86	3349	-.043	-.59		
800	73 751	6.24 A5	16 57 15.354	-.07	73 12 14.35	-2.5	8 6 58.10	57.80	22910	-.148	.15	3351	-.059	.48		

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch		O - G.C.			O - FK3 (Supp.)					
			100 $\mu$	100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$			
801	6 3332	6.38 A5	16 58	2.960	.24	6 39	26.15	-4.5	11 11	60.00	60.00	22927	.023	.30	3352	.050	-.13
802	56 1934	6.11 K0	16 58	26.258	-.60	56 45	41.23	3.1	7 7	59.82	59.82	22938	-.063	.74	3353	.007	.14
803	25 3183	5.95 K0	17 0	15.579	.38	25 34	29.27	8.4	8 6	55.10	55.29	22985	-.010	.46	3356	-.021	.32
804	0 3224	5.62 B3	17 2	57.494	.00	-0 49	30.05	-.5	11 8	56.57	56.98	23058	-.008	.48	3357	.000	.05
805	49 2583	6.32 K0	17 3	29.978	.30	48 52	19.53	-7.7	11 9	57.07	57.51	23071	-.075	.37	3359	-.025	-.17
806	22 3073	5.72 K2	17 4	10.997	-.73	22 9	2.28	-4.7	11 11	58.12	58.12	23089	-.008	.97	3360	-.009	.15
807	40 3109	5.12 K0	17 7	55.918	-.48	40 50	19.28	.4	10 8	58.18	58.84	23172	.051	.51	3365	-.031	.09
808	52 2032	6.13 B9	17 9	21.728	-.14	52 28	9.06	-1.3	9 9	59.29	59.29	23200	-.070	.21	3367	.009	-.23
809	10 3165	5.56 K5	17 10	6.256	.04	10 38	39.16	-3.0	8 8	58.38	58.38	23220	-.028	-.01	3369	-.011	-.21
810	63 1336	5.47 A3	17 12	6.390	.20	62 55	52.13	4.8	8 7	56.40	56.37	23266	-.076	.18	3370	-.018	.22
811	11 3156	5.28 K5	17 16	15.814	.01	10 55	2.06	-9.6	7 7	56.22	56.22	23382	.005	.17	3372	.001	.08
812	38 2910	5.98 K0	17 16	42.420	-.16	38 51	41.87	7.1	11 9	58.05	58.71	23390	.006	.37	3373	.003	-.06
813	28 2719	5.78 K0	17 16	50.733	.32	28 52	26.04	-.9	9 9	59.43	59.43	23393	-.005	-.15	3375	-.009	-.37
814	46 2293	5.77 K2	17 18	56.212	-.32	46 17	20.22	4.0	8 8	55.87	56.10	23452	-.054	.04	3377	-.015	-.18
815	70 925	7.00 A0	17 19	32.713	-.45	70 50	12.61	1.4	8 6	56.17	56.54	23472	.072	.94	3380	.028	.28
816	53 1937	5.95 K5	17 20	40.295	.21	53 28	2.11	-.7	13 9	55.98	56.54	23505	-.051	.44	3381	.021	.07
817	23 3100	5.70 A3	17 22	0.913	-.32	23 0	19.87	-4.5	9 9	57.92	57.92	23546	-.031	.71	3383	-.032	.22
818	80 544	5.91 K2	17 23	22.490	.64	80 10	58.73	.0	7 6	56.81	57.01	23599	-.227	.36	3384	-.233	.37
819	7 3368	5.98 A0	17 23	54.053	-.01	7 38	16.47	-.9	6 6	59.07	59.56	23614	-.024	.22	3385	.010	-.72
820	27 2809	6.36 A5	17 24	0.560	.02	26 55	14.89	1.6	9 9	59.82	59.82	23619	.002	.44	3387	-.004	.33
821	20 3481	5.42 B5	17 24	39.532	-.02	20 7	20.02	1.3	10 10	61.19	61.19	23641	.013	.38	3388	-.004	.00
822	34 2971	5.91 B9	17 24	58.256	-.31	34 44	11.25	3.7	6 6	59.81	59.81	23647	.035	.23	3389	-.011	-.32
823	58 1731	6.52 A2	17 25	19.640	-.11	58 41	35.10	1.2	7 7	56.97	56.97	23654	-.052	-.08	3390	-.036	-.01
824	0 3697	5.16 A5	17 26	16.486	-.42	0 22	10.62	1.1	7 8	55.40	55.54	23677	-.020	.72	3391	.024	-.21
825	5 4461	5.69 A2	17 30	49.528	-.32	-5 42	35.08	-10.2	11 8	57.25	58.13	23788	-.005	.61	3392	-.033	-.15
826	19 3354	5.59 F5	17 31	12.347	-.24	19 17	29.12	-9.7	8 7	56.54	56.53	23798	.010	-.02	3393	.008	-.31
827	16 3218	5.66 K0	17 31	25.095	-.15	16 21	5.59	-6.1	8 7	57.78	57.96	23803	.069	.31	3394	.032	.01
828	37 2908	6.15 K0	17 33	59.140	.10	37 19	55.69	-1.6	11 8	56.79	57.37	23863	-.033	1.36	3395	-.129	-.55
829	74 717	7.06 K2	17 34	3.384	-1.78	74 15	33.42	3.6	9 8	57.64	57.91	23865	.027	.56	3396	.048	.45
830	30 3033	5.76 A2	17 34	42.462	.21	30 48	52.97	-1.1	8 8	56.67	56.66	23879	-.006	.23	3397	.067	-.31
831	62 1559	7.14 K2	17 34	44.449	-.45	62 29	30.78	-.6	8 7	58.64	58.23	23883	-.097	-.26	3398	-.067	-.59
832	24 3218	5.67 A0	17 35	27.378	-.11	24 20	18.12	-.1	11 9	57.06	57.53	23901	-.023	.30	3400	.010	-.26
833	57 1791	6.84 K0	17 39	46.178	-.19	57 20	2.69	3.1	14 9	56.07	56.32	24010	.014	.17	3406	.096	.38
834	14 3321	6.21 F5	17 41	5.201	-.07	14 18	58.70	2.7	8 8	55.92	56.04	24052	.029	.03	3407	-.052	.05
835	44 2757	6.57 K2	17 41	36.511	-.38	44 6	18.88	3.8	10 8	56.93	57.28	24067	-.006	.01	3408	-.022	-.13
836	31 3090	6.25 B9	17 43	47.310	-.05	31 31	23.67	-.4	10 9	55.31	55.61	24116	.033	.18	3410	.048	-.17
837	38 2997	6.51 K0	17 44	13.712	.03	38 53	59.93	-3.8	11 9	57.71	57.74	24128	-.044	.57	3411	.033	.12
838	36 2937	6.63 K5	17 45	7.983	.05	36 6	17.09	-2.9	8 8	57.17	57.17	24155	-.009	-.26	3414	.008	-.15
839	25 3353	5.34 K0	17 46	47.376	-.06	25 38	17.19	-4.3	6 7	57.86	57.67	24199	-.016	.02	3415	-.006	-.45
840	50 2468	5.19 A2	17 47	52.510	-.55	50 47	31.86	20.4	11 11	58.72	58.72	24221	-.025	.62	3416	-.034	.01
841	48 2581	6.43 B8	17 48	44.687	-.02	48 24	24.66	.9	6 7	56.47	56.47	24253	-.043	.56	3417	-.003	-.12
842	1 3412	6.45 K0	17 49	24.251	-.12	-1 13	31.94	-.4	8 7	58.13	58.63	24271	.034	.38	3418	.011	-.18
843	40 3228	6.06 K0	17 50	26.956	-.15	39 59	30.83	4.7	7 7	56.86	56.86	24309	-.028	.12	3419	-.033	-.18
844	6 3566	5.82 F5	17 50	47.970	-.85	6 6	36.28	6.9	9 8	57.23	57.84	24320	.004	-.01	3420	-.006	-.52
845	11 3283	6.26 F5	17 51	53.762	-.52	11 8	28.78	-17.6	7 6	57.23	57.34	24349	.068	.76	3422	.014	-.17
846	22 3237	5.69 K2	17 53	44.651	-.04	22 28	13.51	-.3	10 9	57.95	58.20	24392	-.019	-.11	3427	-.002	-.58
847	55 1995	6.10 F0	17 54	28.557	.37	55 58	33.05	11.6	7 6	55.79	56.01	24410	-.028	.65	3428	-.035	.11
848	72 818	5.54 F2	17 56	2.851	.07	72 0	38.67	.0	8 6	56.16	56.19	24459	-.102	.96	3429	-.034	1.05
849	6 3597	6.18 B3	17 58	26.402	.00	6 16	7.71	-.6	7 7	56.86	56.86	24515	-.035	.29	3432	-.001	-.05
850	45 2638	5.92 K2	17 58	30.383	-.09	45 30	10.14	-3.8	7 7	57.70	57.70	24518	.014	.53	3433	.009	-.09



No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch		O - G.C.			O - FK3 (Supp.)		
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
851	33 3009	6.27 K5	17 59 45.919	.16	33 18 36.40	2.4	7 6 55.35	55.50	24554	-.013	-.16	3434	-.043	-.05
852	66 1077	6.87 F5	18 5 14.169	.30	66 56 20.77	1.4	8 7 55.82	55.98	24704	-.070	.37	3440	.091	.15
853	50 2525	6.35 K0	18 5 41.613	-.03	50 48 50.31	9.9	9 9 57.39	57.39	24714	-.021	.26	3441	.014	.07
854	14 3427	6.30 A2	18 6 16.989	-.11	14 16 32.38	-1.8	9 9 57.99	57.99	24734	.031	1.24	3442	.019	-.11
855	20 3674	4.32 B3	18 6 37.101	.00	20 48 18.92	-1.2	7 6 57.58	58.23	24740	-.010	.33	3443	.005	.04
856	3 3620	5.70 K0	18 8 10.326	.14	3 18 46.19	-.1	10 8 56.13	56.54	24783	-.011	-.07	3445	.013	-.17
857	54 1950	5.94 K0	18 9 30.040	1.29	54 16 15.70	24.8	12 9 56.87	57.53	24820	-.059	.30	3447	.009	.13
858	31 3199	5.02 M0	18 10 1.155	-.10	31 23 30.04	1.9	8 7 56.21	56.15	24831	-.023	.60	3448	-.005	-.17
859	60 1813	6.32 A0	18 10 30.925	-.18	60 23 46.33	.5	8 8 57.58	57.80	24848	.019	-.36	3449	.050	-1.06
860	38 3113	5.88 A0	18 11 24.620	-.13	38 45 30.67	.7	12 9 56.28	56.86	24874	.012	.26	3451	-.088	.17
861	68 984	6.11 K0	18 15 34.454	.27	68 44 17.02	-6.1	8 7 58.60	58.89	24975	-.036	.63	3455	-.009	.26
862	13 3593	6.18 B5	18 15 45.483	-.07	13 45 24.30	-2.6	6 6 57.24	57.24	24977	-.002	1.48	3456	-.005	.23
863	24 3381	5.49 K5	18 17 7.132	.06	24 25 26.14	-.3	10 10 58.43	59.03	25003	-.005	.42	3457	.036	-.35
864	49 2782	5.09 M0	18 20 15.788	-.30	49 5 43.97	4.9	8 7 56.55	56.70	25085	-.042	.40	3458	-.032	.05
865	17 3555	5.48 K0	18 20 36.388	.46	17 48 0.07	1.8	12 8 56.55	57.31	25093	.017	-.02	3460	.007	-.12
866	39 3410	5.04 A2	18 22 34.846	-.19	39 28 44.16	-1.1	8 7 57.44	57.71	25137	-.037	.59	3463	-.014	-.13
867	65 1271	4.99 K0	18 25 50.449	1.61	65 31 57.07	-2.8	8 7 56.27	56.53	25212	-.011	.42	3465	.015	.35
868	79 587	6.61 K0	18 27 23.128	-1.04	79 11 25.93	7.5	9 8 57.18	57.38	25244	.238	-.53	3467	.012	-.03
869	3 3727	6.50 B5	18 27 36.044	-.07	4 1 49.99	-2.0	8 7 58.81	58.82	25256	.047	1.24	3469	.008	.21
870	23 3363	5.99 K5	18 30 41.232	.04	23 34 41.79	1.0	6 6 59.38	59.38	25328	.018	.26	3472	.034	.16
871	52 2232	6.43 B9	18 31 2.603	-.16	52 4 38.04	.5	6 6 59.86	59.86	25343	-.014	.21	3474	.009	-.14
872	56 2113	4.95 F8	18 31 42.669	-.11	57 J 24.55	-.7	8 7 58.49	59.04	25362	-.017	.22	3475	-.015	.28
873	86 282	6.82 M0	18 31 47.968	-.69	86 37 43.45	2.9	10 9 60.79	61.02	25364	-.334	.43	3960	.151	.33
874	20 3847	6.44 A2	18 32 10.393	-.01	20 25 34.85	-.6	7 6 58.40	58.89	25371	-.004	.52	3476	-.014	-.03
875	0 3521	5.80 A0	18 35 1.751	.05	-0 21 11.10	-2.4	9 9 59.13	59.13	25456	.022	.35	3480	.012	.28
876	43 3027	6.26 A5	18 35 13.600	.21	43 10 42.59	-1.4	11 8 58.92	59.67	25464	-.055	.73	3481	-.062	-.08
877	14 3603	6.86 A0	18 36 18.343	.06	15 2 17.56	3.3	10 7 57.89	58.15	25497	.002	-1.21	3483	-.031	.50
878	62 1637	5.60 A0	18 37 6.339	-.14	62 28 50.49	4.2	6 6 56.94	56.94	25519	-.079	.34	3484	.010	-.19
879	5 3891	6.30 G0	18 37 9.137	.06	5 13 4.45	-1.5	13 10 58.68	59.43	25520	-.014	1.43	3485	.018	-.34
880	31 3332	6.47 A0	18 39 47.934	.01	31 34 5.51	.4	9 9 57.32	57.32	25583	-.003	.08	3487	.016	-.68
881	55 2107	5.08 A0	18 41 39.776	-.06	55 29 17.52	2.0	7 7 55.73	55.73	25635	-.029	.19	3491	-.001	.18
882	41 3137	5.88 B9	18 44 36.972	-.06	41 23 12.91	-.9	10 8 57.53	58.04	25732	-.010	.52	3493	-.081	-.52
883	4 3884	6.34 K5	18 45 33.710	.01	4 11 5.10	-.3	8 8 59.30	59.30	25756	-.033	1.08	3494	.036	-.12
884	48 2770	6.02 A3	18 46 56.889	-.20	48 42 34.12	4.2	10 8 56.25	56.56	25799	-.029	.61	3497	-.040	-.08
885	3 4392	6.04 A3	18 48 44.548	-.03	-3 22 40.63	-2.7	8 8 58.06	58.06	25862	.003	.29	3500	-.009	-.37
886	79 604	6.33 A5	18 49 11.478	.78	79 53 4.71	7.5	10 10 58.17	58.17	25868	-.109	-.24	3501	-.117	.47
887	13 3787	6.09 B9	18 49 44.338	-.07	13 54 16.37	-1.9	11 7 57.00	57.49	25886	.013	1.34	3503	.022	.76
888	36 3307	5.51 B3	18 51 58.674	-.02	36 54 29.13	-.6	10 6 56.79	57.30	25934	-.007	.19	3506	.016	-.38
889	10 3720	6.83 K2	18 52 0.478	.08	10 44 38.82	2.4	6 6 56.77	56.77	25937	-.014	-.69	3507	.022	-.70
890	22 3524	4.56 G0	18 52 38.152	.02	22 34 49.52	.1	9 8 57.57	57.70	25954	.000	-.06	3508	.010	.21
891	6 3978	5.66 G5	18 53 1.113	.10	6 33 4.45	-9.0	7 6 59.17	59.25	25964	.016	.21	3509	.014	.34
892	57 1922	5.71 K0	18 55 54.231	-.46	57 44 52.94	-6.9	9 9 56.64	56.64	26049	-.042	.56	3513	-.048	.07
893	65 1309	5.78 K0	18 56 12.432	-.43	65 11 26.66	-1.8	9 8 56.05	56.23	26055	-.017	-.29	3514	.019	-.04
894	50 2708	5.24 B3	18 58 58.143	.19	50 27 42.79	-.1	10 7 56.14	56.68	26138	-.115	.64	3515	-.005	.07
895	69 1018	6.40 B9	18 59 11.481	.36	69 27 37.12	-4.2	9 6 56.05	56.27	26146	-.240	2.27	3517	-.023	.18
896	26 3429	5.50 B3	18 59 15.383	-.08	26 13 8.97	-1.2	7 7 55.94	56.48	26151	.008	.22	3518	.001	-.16
897	82 572	6.83 A0	18 59 20.993	.53	82 18 5.65	2.2	9 7 56.61	56.46	26155	.059	-.16	3961	.092	-.07
898	19 3888	6.25 K0	19 0 41.767	-.03	19 35 12.56	-.8	8 6 54.91	55.04	26198	.006	.31	3521	.024	-.25
899	10 3787	5.10 B8	19 4 37.316	-.04	10 59 34.02	-3.1	7 8 56.92	56.88	26315	.005	.01	3525	.037	.02
900	41 3232	6.15 B3	19 4 39.701	-.03	41 20 7.25	-.9	9 7 58.89	58.82	26318	.008	.46	3526	-.047	-.32



No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch		O - G.C.			O - FK3 (Supp.)		
			100 $\mu$	100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
901	16 3758	6.46 F5	19 6 25.852	-.22	16 46 18.82	-9.9	9 7 57.30	58.06	26374	-.010	.21	3529	-.040	.69
902	5 4040	5.37 F2	19 6 32.908	-.10	5 59 35.63	-7.8	10 6 56.28	56.41	26379	.003	.55	3530	-.001	.17
903	65 1326	6.19 A2	19 9 34.725	-.01	65 53 41.30	3.3	12 8 58.17	58.69	26449	-.027	.04	3531	.018	.13
904	31 3497	5.77 A0	19 9 50.862	-.10	31 11 55.60	-3	10 8 56.39	55.63	26459	.029	-.04	3532	.023	-.30
905	56 2209	5.24 K0	19 10 43.801	.44	56 46 23.95	4.4	6 7 57.29	56.91	26475	-.022	-.07	3535	.018	-.31
906	76 717	5.06 F0	19 11 1.113	1.34	76 28 41.98	-12.1	7 7 57.18	57.59	26484	-.060	.08	3536	.102	.08
907	2 3824	5.10 R8	19 11 11.394	.04	2 12 25.34	.0	10 8 59.64	60.28	26490	.012	-.36	3537	.023	-.52
908	21 3713	4.60 R5	19 14 3.978	-.07	21 18 3.03	-.5	8 6 56.25	56.80	26569	.009	-.18	3540	.033	.02
909	46 2658	6.04 F5	19 15 25.257	-.16	46 54 15.69	28.8	10 7 56.70	57.17	26604	.028	.83	3541	-.024	.33
910	40 3665	6.70 A0	19 17 17.724	.02	40 16 1.90	1.0	10 10 57.36	57.76	26653	.010	.10	3543	.018	-.56
911	5 4936	5.10 G5	19 17 52.725	.74	-5 30 38.92	4.7	11 7 57.59	57.54	26669	.010	-.09	3544	.008	-.19
912	34 3503	6.29 R8	19 18 43.437	.05	35 5 28.10	.8	7 7 56.00	56.00	26690	-.020	-.20	3545	-.036	-.57
913	0 3725	5.95 K0	19 19 47.230	.32	-0 20 54.74	-2.8	8 6 56.72	57.10	26723	.022	.12	3546	.009	-.40
914	65 1345	4.63 A2	19 20 24.837	.21	65 37 5.63	4.1	9 9 58.17	57.91	26735	-.095	.63	3547	.001	.36
915	9 4081	6.25 F8	19 20 25.393	.06	9 48 52.54	9.4	7 7 56.16	56.16	26736	-.060	.84	3548	.002	-.16
916	83 552	6.34 A2	19 21 39.137	.44	83 22 9.99	1.0	9 9 59.11	59.11	26773	-.005	.65	3962	.155	.85
917	49 2994	6.31 R9	19 22 5.049	-.02	50 10 22.07	1.6	7 6 56.42	56.73	26782	-.025	.47	3549	-.023	.10
918	29 3584	4.86 R3	19 22 9.191	.09	29 31 20.32	1.0	7 6 57.88	58.28	26785	-.009	.09	3550	.010	-.21
919	36 3557	5.15 A0	19 24 20.977	.00	36 12 59.50	.7	9 9 57.67	57.67	26846	-.016	.38	3554	.002	-.03
920	13 4020	6.26 R5	19 25 15.871	-.12	14 10 47.93	-1.3	8 6 57.10	57.62	26875	.107	.52	3555	-.001	-.26
921	62 1716	6.46 K5	19 25 51.874	.23	62 27 16.03	5.0	8 7 56.61	56.32	26888	.046	.20	3556	.020	.38
922	70 1073	6.25 K2	19 31 24.739	-.21	70 52 51.50	5.7	8 8 55.63	55.63	27023	-.120	-.75	3561	-.044	.02
923	59 2060	6.43 K5	19 32 23.080	.12	60 2 56.52	-.3	8 9 56.92	56.67	27048	-.055	.75	3563	.047	-.04
924	22 3741	6.12 R9	19 33 59.924	.00	22 28 25.49	-2.7	8 8 56.62	56.62	27097	-.010	1.36	3564	.016	-.32
925	74 831	7.13 K0	19 36 13.817	.28	74 15 52.32	1.8	7 8 55.74	55.61	27174	-.137	.39	3568	-.019	.49
926	3 4097	6.37 R3	19 36 18.759	-.06	3 15 59.85	.4	11 9 57.23	57.26	27176	.043	.11	3569	.014	.41
927	29 3684	4.79 K0	19 37 24.028	-.02	30 2 12.85	3.9	7 6 56.07	56.28	27203	.014	-.05	3570	.016	-.22
928	54 2193	5.86 F5	19 37 33.698	.43	54 51 21.57	16.6	10 7 56.47	56.86	27206	-.053	.16	3571	-.030	.19
929	42 3413	5.39 R8	19 37 48.744	.15	42 42 6.35	2.7	9 7 57.07	57.18	27213	.013	.36	3572	-.002	-.06
930	0 3813	5.52 A0	19 38 8.743	.09	-0 44 18.89	1.5	7 7 57.71	57.71	27222	-.025	-.10	3573	-.002	-.22
931	13 4098	5.84 R3	19 38 46.555	-.05	13 41 53.90	-1.8	7 7 57.71	57.71	27235	-.016	.61	3574	-.017	.39
932	45 2949	5.05 F2	19 39 17.508	.83	45 24 20.44	11.1	8 7 57.89	58.06	27249	-.065	1.07	3575	.005	.23
933	32 3531	5.89 A2	19 40 49.072	-.09	32 18 25.58	-.9	9 9 55.60	55.49	27292	.061	.62	3577	-.047	-.85
934	3 4701	6.50 R3	19 43 15.361	.00	-3 0 22.06	-.2	7 6 56.32	56.45	27344	-.009	.15	3579	.009	-.25
935	40 3902	5.62 R2	19 48 54.256	-.06	40 28 17.80	-.9	7 6 57.32	57.61	27492	.003	.53	3584	-.034	-.17
936	22 3833	4.91 R3	19 48 54.846	.12	22 28 54.16	-2.1	9 7 58.81	59.87	27493	.012	.39	3585	.007	.24
937	52 2547	5.17 K2	19 49 22.404	-.15	52 51 37.73	-6.9	9 9 60.63	60.63	27506	-.021	.35	3586	-.008	.19
938	24 3914	5.67 F5	19 49 55.268	-.07	24 51 45.31	1.1	9 9 60.57	60.57	27516	.012	-.62	3587	-.013	-.38
939	46 2793	5.51 B0	19 50 28.593	-.08	46 53 51.25	-.4	9 8 58.61	58.86	27529	.011	.47	3588	-.017	-.33
940	11 4055	5.29 A2	19 53 52.128	.19	11 17 22.61	.6	9 7 56.50	56.33	27604	.020	-.01	3590	.002	-.31
941	58 2013	5.13 K2	19 54 58.168	-.15	58 42 42.80	-2.1	10 8 58.02	58.23	27635	-.034	.18	3591	.017	.14
942	16 4081	5.38 R9	19 55 29.163	.04	16 39 11.14	1.4	8 8 58.60	58.60	27648	.025	-.15	3592	.028	-.39
943	39 3968	5.43 R3	19 55 29.559	.01	40 13 56.85	-.3	6 6 56.97	56.97	27649	-.015	.50	3593	.001	-.17
944	30 3837	5.44 R8	19 56 38.919	.21	30 50 48.86	-.2	8 6 56.85	56.94	27677	.016	.01	3594	.002	.37
945	0 4375	6.35 G5	19 56 50.103	.12	1 14 22.90	5.3	8 6 56.16	56.66	27681	-.002	1.13	3596	.004	.57
946	36 3806	5.15 R3	19 58 5.062	-.02	36 54 16.54	.3	8 6 56.14	56.31	27724	-.012	-.51	3599	-.010	-.28
947	4 4325	6.80 K5	20 0 43.441	.12	4 35 20.27	-1.6	8 8 58.14	58.14	27796	-.039	1.53	3603	-.017	-.14
948	64 1405	5.43 M0	20 0 56.996	.08	64 40 50.70	-1.2	8 6 58.98	58.93	27806	-.007	.34	3604	.043	.07
949	76 771	6.43 M0	20 1 2.424	-.78	76 20 33.75	-5.7	10 7 57.84	57.80	27809	-.081	.30	3605	.067	.09
950	67 1222	4.66 K0	20 2 35.937	.22	67 43 51.55	4.9	6 7 56.96	56.63	27856	-.020	.47	3608	-.001	.15

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch				O - G.C.			O - FK3 (Supp.)		
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
951	19 4277	5.26 K0	20 2 56.358	.17	19 50 47.50	7.9	8 8 59.35	59.35	27868	.015	.20	3609	.006	-.03		
952	47 3004	5.98 A0	20 2 58.943	.06	48 5 11.56	.1	6 6 59.64	59.64	27869	-.019	.15	3610	-.012	-.06		
953	23 3896	5.08 R3	20 4 44.389	.07	23 28 9.23	.1	8 6 57.73	58.44	27910	-.003	.50	3611	-.012	.57		
954	61 1970	5.57 K0	20 4 45.248	1.69	61 50 59.97	7.3	8 6 59.11	58.44	27911	-.001	.44	3612	.051	.41		
955	52 2623	5.72 F5	20 4 54.744	2.38	53 1 1.83	25.7	9 8 61.33	61.56	27912	-.095	.04	3613	-.031	.16		
956	73 897	6.86 K0	20 5 9.911	.35	73 45 54.36	2.6	9 9 60.67	61.43	27920	-.158	.28	3614	.088	.29		
957	34 3881	6.07 R8	20 5 46.520	-.10	34 16 36.52	-1.7	7 6 58.84	59.57	27938	.073	.85	3615	-.113	.19		
958	10 4189	6.23 B5	20 6 15.148	-.06	10 34 43.96	-.7	6 6 57.52	57.52	27951	.008	.66	3616	.014	-.32		
959	42 3642	6.25 K2	20 12 1.725	-.14	43 13 35.19	.5	10 9 57.41	57.62	28098	.045	.15	3620	-.082	-.89		
960	4 4395	6.57 G5	20 13 36.751	-.33	4 25 37.23	-5.5	9 7 56.62	56.78	28148	.036	.38	3623	.030	-.14		
961	0 4475	6.92 A3	20 16 4.000	.48	0 29 2.90	1.5	10 7 57.13	57.31	28220	-.027	-.28	3624	.018	.77		
962	34 3967	5.18 F5	20 16 43.728	.01	34 49 31.85	-.9	8 6 55.75	55.83	28242	-.038	.49	3627	-.007	.36		
963	14 4263	6.34 G5	20 18 0.943	-.08	14 24 36.66	.7	10 6 57.06	57.34	28288	.023	-.35	3629	.049	-.75		
964	68 1121	5.99 M3	20 19 53.092	.31	68 43 13.42	3.8	8 8 57.02	57.02	28324	-.089	-.01	3631	-.010	.21		
965	31 4062	4.60 K2	20 21 51.737	.29	32 1 39.55	-.2	8 6 57.14	57.32	28378	.053	-.07	3633	.027	.05		
966	20 4559	5.80 K0	20 23 27.758	.03	21 14 44.15	-.9	10 7 55.91	55.72	28418	-.041	.34	3634	.002	.21		
967	16 4259	6.17 K0	20 24 6.045	.06	17 9 2.85	-1.6	7 6 55.96	56.03	28435	-.016	.74	3635	.009	.05		
968	7 4477	6.26 K0	20 25 41.478	.24	8 16 14.35	1.5	8 6 56.39	56.65	28466	.003	-.02	3638	.016	-.60		
969	55 2411	5.87 B9	20 28 12.118	.02	55 53 59.19	1.1	7 6 58.09	57.99	28531	-.033	-.30	3640	-.017	.08		
970	48 3142	4.89 R3	20 28 30.528	.08	48 46 57.80	.7	6 6 59.57	59.57	28537	-.016	.11	3641	-.006	.00		
971	42 3778	6.41 B3	20 31 7.789	.04	43 1 12.84	.7	8 7 57.80	57.53	28604	-.039	.16	3644	-.045	-.61		
972	80 659	5.62 K0	20 31 28.037	1.22	81 15 11.85	1.7	11 8 58.64	58.88	28611	-.060	.44	3963	-.049	.35		
973	51 2895	6.26 F0	20 33 22.971	-.04	51 40 51.29	-.3	9 9 58.41	58.41	28667	-.021	.10	3646	.005	.04		
974	3 4961	5.22 K5	20 34 7.408	.02	-2 43 28.35	-.2	10 6 57.77	58.35	28684	.010	-1.07	3648	.003	-.32		
975	25 4302	5.52 R9	20 34 56.552	.07	26 17 12.75	-.7	9 7 57.32	57.50	28702	-.011	-.03	3649	-.029	-.20		
976	0 4064	5.39 K0	20 36 51.132	.64	0 18 33.83	-1.4	10 6 58.48	58.33	28761	.005	.01	3651	.028	-.24		
977	38 4187	6.44 R9	20 39 7.959	-.01	38 54 12.39	.8	13 7 56.75	57.11	28830	.010	.14	3653	-.027	.65		
978	59 2272	5.95 F5	20 39 14.210	.10	60 19 26.45	18.6	10 6 56.51	56.93	28832	-.020	.40	3654	.022	-.29		
979	41 3856	5.60 R8	20 40 7.991	.09	41 32 13.25	.5	10 6 57.17	57.50	28854	-.051	.13	3655	-.025	-.19		
980	66 1318	5.57 A5	20 42 33.790	.38	66 28 31.47	3.8	11 7 56.27	56.64	28919	-.080	.06	3656	.019	-.06		
981	24 4229	5.13 K2	20 42 42.566	-.26	25 5 26.48	-17.8	7 7 56.83	56.83	28920	.005	.07	3657	-.009	.24		
982	47 3188	5.65 K0	20 46 10.370	.07	47 38 48.71	-2.8	12 9 59.29	59.82	29012	-.131	1.13	3662	-.012	.14		
983	7 4556	6.23 A0	20 47 21.158	.13	7 40 37.69	1.4	9 8 58.62	59.11	29039	.037	-.05	3664	.021	-.26		
984	43 3739	5.07 A5	20 48 18.224	1.13	43 52 12.50	13.4	9 10 58.33	58.27	29066	-.019	.11	3666	-.009	.09		
985	63 1663	6.38 R0	20 48 24.826	-.17	63 51 18.95	-.6	11 7 58.10	58.10	29069	-.035	.03	3667	.028	-.16		
986	32 3980	5.68 K2	20 51 52.229	-.14	33 14 48.02	2.9	7 7 55.85	55.85	29159	-.015	-.03	3668	.002	-.16		
987	13 4572	5.39 K0	20 53 14.589	.07	13 31 46.80	-1.2	11 8 57.58	58.17	29201	.027	.16	3669	.038	-.24		
988	50 3233	5.80 F0	20 54 50.128	.34	50 32 9.00	-2.0	12 9 57.35	57.77	29243	-.024	.38	3670	-.004	-.16		
989	56 2515	6.14 R3	20 54 56.717	.02	56 41 39.99	1.0	12 7 59.05	58.78	29246	-.018	-.15	3671	-.013	.21		
990	75 764	6.21 G5	20 55 21.200	.97	75 43 57.32	4.5	8 8 59.11	59.11	29254	-.110	.67	3672	-.010	.42		
991	18 4675	5.96 M0	20 58 10.495	-.16	19 8 3.12	-5.4	7 8 59.18	58.98	29329	.020	.10	3675	-.003	.35		
992	58 2201	5.75 K2	20 58 11.409	.52	59 14 33.53	1.0	10 7 59.43	59.20	29330	-.008	.47	3676	-.025	-.07		
993	35 4357	6.08 K0	20 59 13.290	-.14	35 49 44.71	.9	9 9 59.85	59.43	29350	.033	-.36	3677	-.142	-.78		
994	2 5434	6.78 F5	21 0 54.274	.22	-1 46 41.94	-1.3	13 8 56.44	57.18	29400	-.041	.32	3678	-.014	-.20		
995	1 4418	6.42 G5	21 2 13.034	.59	2 4 14.79	-6.2	8 7 56.18	56.26	29435	.016	-.34	3681	.008	.06		
996	52 2859	6.08 K0	21 2 15.866	.59	53 5 9.99	1.6	7 6 57.27	57.36	29438	-.092	1.13	3682	-.037	-.07		
997	26 4073	6.23 K2	21 4 12.862	.25	26 43 23.89	-1.7	8 6 58.04	58.15	29491	.022	.24	3686	.019	-.41		
998	30 4318	5.7- F5	21 4 24.241	-.04	30 58 59.90	-.3	8 8 59.65	59.65	29502	.021	.34	3687	.026	-.09		
999	47 3292	4.88 K5	21 4 52.575	.05	47 26 48.34	-.1	6 6 59.55	59.55	29519	-.052	.35	3688	-.044	-.03		
1000	15 4340	6.52 K0	21 5 12.479	.28	15 27 25.68	-5.8	6 6 59.82	59.82	29530	.019	.00	3689	.004	-.15		

No.	B.D. No.	M+Sp.	R.A. 1950	100 $\mu$	Decl. 1950	100 $\mu'$	Epoch		O - G.C.			O - FK3 (Supp.)		
							$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
1001	6 4754	6.38 K5	21 5 59.925	-.11	6 47 10.90	.0	11 7 57.48	58.21	29548	.024	.48	3692	.014	-.02
1002	70 1164	5.96 F2	21 6 5.934	-1.14	71 13 52.63	-10.8	10 7 60.25	60.07	29550	-.054	-.23	3693	-.042	-.49
1003	67 1288	6.80 A2	21 7 0.912	.52	68 3 3.81	1.1	9 8 60.31	60.15	29575	-.290	-.03	3694	.077	.34
1004	80 690	6.02 A2	21 15 30.691	-.14	81 1 19.86	.2	7 7 56.97	56.97	29792	-.150	.53	3964	-.171	.14
1005	55 2549	6.18 K2	21 15 44.442	.17	55 35 14.35	1.5	8 6 56.30	56.67	29798	-.020	.09	3699	.008	-.07
1006	10 4516	6.32 K5	21 16 26.690	.21	10 59 30.30	1.5	8 7 57.06	57.38	29821	-.023	.45	3700	-.002	-.00
1007	43 3877	5.06 O+	21 16 35.138	-.01	43 44 5.02	-.9	8 7 58.10	58.59	29823	.001	-.01	3701	-.006	-.13
1008	48 3345	5.65 R5	21 17 45.344	.12	49 17 53.59	.9	7 7 56.44	56.44	29856	-.007	.33	3702	-.050	.11
1009	64 1527	5.18 R3	21 18 20.069	.06	64 39 34.06	.5	7 6 56.08	56.30	29875	-.005	.27	3703	.084	-.13
1010	23 4294	5.82 K0	21 18 48.620	1.71	23 38 39.90	-12.6	10 8 56.28	56.57	29884	-.004	.45	3704	.009	.16
1011	13 4692	6.71 R5	21 21 12.151	-.09	13 50 6.66	-.7	12 6 56.06	56.89	29947	.089	.11	3706	.030	.51
1012	4 5446	5.69 K0	21 22 40.519	-.12	-3 46 19.67	-7.1	6 6 56.57	56.57	29993	.014	.49	3708	-.012	-.22
1013	76 836	6.68 A0	21 22 50.878	-.29	76 52 31.59	-2.8	7 7 57.86	57.86	29998	-.168	.46	3709	-.014	-.35
1014	0 4726	6.40 F5	21 23 54.622	.66	0 53 18.07	-15.3	10 9 58.26	58.65	30022	.015	-.06	3711	.014	-.14
1015	15 4416	6.78 F8	21 24 45.063	-.51	15 54 27.32	-7.2	7 7 56.33	56.05	30035	-.009	-1.36	3713	.044	-.18
1016	36 4568	5.20 R3	21 25 18.866	.00	36 53 55.31	.3	8 7 57.56	57.84	30044	-.006	.15	3714	-.000	.48
1017	26 4164	5.38 A0	21 25 27.705	.30	27 23 24.60	2.1	7 6 59.82	60.00	30048	.000	.76	3715	.013	.47
1018	31 4462	5.74 F0	21 25 59.886	.96	32 0 20.03	7.6	7 7 57.81	57.81	30063	.013	.31	3716	.011	.15
1019	59 2383	6.44 M0	21 26 2.350	-.16	59 31 55.01	-1.4	7 7 57.97	57.97	30065	-.095	-.21	3717	.006	.04
1020	66 1405	5.42 R5	21 26 48.253	-.28	66 35 26.38	-1.6	8 6 58.47	59.56	30081	-.078	.10	3718	-.051	.17
1021	37 4359	4.98 K0	21 32 43.815	1.02	38 18 32.82	9.8	8 8 57.33	57.33	30219	-.034	.15	3722	-.015	.21
1022	61 2169	4.87 R2	21 36 34.688	-.05	61 51 21.74	-.1	7 7 57.12	57.12	30302	.001	.54	3725	.041	.43
1023	1 4517	5.33 K0	21 37 1.044	-.21	2 1 4.60	-8.2	12 8 57.74	58.26	30315	.013	.52	3729	.046	.49
1024	42 4177	5.35 K5	21 38 13.159	.50	43 2 46.43	1.8	9 7 57.59	58.13	30338	.007	.41	3730	-.013	.23
1025	54 2595	6.16 K0	21 39 3.750	.06	54 38 39.14	-.2	7 7 56.52	56.52	30362	-.037	.55	3731	.011	-.01
1026	5 4850	5.63 M0	21 39 45.344	.07	5 27 5.14	-.4	8 7 55.96	56.13	30378	.000	-.01	3732	.009	-.03
1027	50 3410	4.78 R3	21 40 18.938	.02	50 57 39.30	.1	8 6 57.43	58.02	30391	-.024	.39	3733	.013	.18
1028	14 4668	6.10 G0	21 42 6.541	1.80	14 32 35.61	-9.2	10 6 55.99	56.52	30443	-.162	-1.10	3737	.021	.09
1029	22 4472	5.45 K0	21 43 46.184	.02	22 43 2.99	-.2	6 6 57.65	58.49	30479	.007	.11	3739	-.011	-.27
1030	19 4793	6.16 R3	21 47 6.567	-.10	20 13 43.73	.0	7 6 55.73	55.90	30555	.074	.24	3744	.030	.74
1031	83 618	7.02 A5	21 47 32.649	4.96	83 48 21.85	2.7	7 7 57.25	57.25	30564	-.176	.69	3965	.234	.23
1032	40 4648	6.49 A0	21 47 37.847	-.07	40 54 53.85	-.5	6 6 56.21	56.21	30566	.006	.01	3745	-.050	.30
1033	31 4577	7.10 K5	21 52 42.663	-.11	32 6 5.43	.4	8 6 56.86	56.72	30677	.025	-.30	3747	-.003	-.39
1034	55 2644	6.01 R9	21 53 12.092	-.10	56 22 26.25	-.2	12 8 58.10	58.45	30691	-.010	.30	3749	-.008	.06
1035	67 1375	7.02 F0	21 53 33.591	.95	67 30 57.95	1.2	7 7 56.00	56.00	30699	-.236	-.07	3750	.042	-.29
1036	11 4696	5.59 A2	21 54 30.027	-.23	11 50 17.76	-1.0	8 7 57.16	57.24	30719	.055	.24	3751	.040	.23
1037	47 3618	6.35 A0	21 55 7.359	.07	48 25 47.39	-2.2	8 6 57.41	57.29	30729	-.046	1.01	3754	-.000	-1.03
1038	79 721	6.60 M3	21 55 13.295	.13	80 4 15.48	.0	11 10 58.53	58.51	30730	-.169	-.02	3755	-.085	.12
1039	62 2007	4.9- M2	21 55 14.392	-.04	63 23 13.43	.4	8 6 58.07	58.37	30731	-.075	.04	3756	-.032	-.20
1040	74 946	6.64 K5	21 57 23.138	-.15	74 45 26.59	-.6	8 8 56.24	56.24	30772	-.040	.47	3758	.072	.39
1041	6 4940	5.99 R3	21 57 38.013	.04	6 28 37.43	-.2	10 8 57.09	57.19	30779	.031	.80	3759	.027	.41
1042	52 3083	5.66 R5	22 0 0.367	.03	52 38 26.35	.4	8 7 55.59	55.58	30828	-.008	.34	3763	-.032	.11
1043	15 4548	6.72 A0	22 0 14.074	-.04	15 44 41.79	-2.7	9 8 57.55	57.41	30835	.042	1.06	3764	.031	.43
1044	2 5681	4.66 R5	22 0 43.687	.09	-2 23 51.25	-1.1	9 7 56.83	57.27	30844	.041	.02	3765	.004	-.37
1045	28 4284	5.58 A0	22 3 18.565	.16	28 43 13.03	-1.0	7 7 56.26	56.26	30899	.031	-.21	3768	.006	-.41
1046	44 4043	5.32 K5	22 4 0.239	-.06	44 46 14.28	-1.4	7 6 56.41	56.52	30919	-.006	.49	3769	-.004	.35
1047	58 2393	6.31 G5	22 5 28.281	-.26	58 35 46.54	-2.1	9 6 56.06	56.07	30955	-.015	.25	3770	-.004	-.01
1048	20 5093	6.40 A2	22 8 8.248	-.16	20 43 53.94	-1.1	12 7 56.77	57.24	31025	.069	.58	3772	.028	.31
1049	10 4701	5.92 K5	22 8 10.107	-.22	11 22 42.79	-5.2	11 9 59.65	59.65	31026	-.083	-.45	3773	.006	-.42
1050	50 3602	5.44 A2	22 9 13.003	1.43	50 34 33.27	4.0	6 7 57.12	57.19	31046	-.050	.64	3774	-.006	-.10



No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		No. Epoch				O - G.C.			O - FK3 (Supp.)			
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$	
1051	56 2727	5.42 F8	22 10	0.170	2.79	56 35	24.62	12.5	9 8	58.02	58.20	31070	-.020	.26	3775	.021	-.00
1052	33 4456	5.42 K0	22 10	34.845	.17	34 21	26.97	-4.8	9 6	55.45	55.83	31081	-.031	.22	3776	-.030	.14
1053	42 4333	5.70 A0	22 12	38.079	.46	42 42	19.19	-2.0	7 6	55.85	56.05	31127	-.028	.17	3778	-.016	.06
1054	7 4834	6.03 A0	22 13	30.363	.02	8 18	0.76	.7	10 7	57.38	57.95	31139	.107	-.58	3780	.036	.29
1055	6 5960	5.80 G5	22 14	29.923	.00	-5 38	14.94	2.5	9 8	58.50	58.47	31163	.004	.20	3782	.025	.57
1056	26 4399	6.80 K5	22 15	28.326	-.33	26 41	10.17	.0	6 6	58.35	58.35	31191	.064	.01	3783	.012	.18
1057	75 820	6.56 A0	22 17	44.876	.26	76 14	12.07	1.4	12 8	57.36	57.94	31227	-.135	-.43	3784	-.017	.02
1058	35 4785	6.60 K0	22 20	37.069	.02	36 24	18.19	6.0	8 6	56.25	56.07	31287	-.008	-.59	3787	-.006	-.38
1059	14 4790	6.73 A0	22 21	34.101	.25	15 1	40.37	-.8	12 11	57.98	58.27	31309	-.074	-.23	3790	-.003	-.15
1060	70 1240	5.69 K0	22 24	43.118	.15	70 30	57.46	1.9	8 7	58.33	58.28	31365	.048	-.33	3794	.059	.18
1061	55 2750	6.42 B8	22 25	5.224	.26	56 10	41.80	.7	9 7	56.83	57.45	31372	-.079	.25	3795	.032	.52
1062	3 4710	4.93 K0	22 25	19.620	.52	4 26	40.02	-30.8	6 6	58.31	58.31	31377	.013	.79	3796	.042	.44
1063	64 1664	5.66 B0	22 25	28.478	.02	64 52	37.18	.1	6 6	59.21	59.21	31380	-.102	.13	3797	.054	.16
1064	46 3719	4.61 K0	22 27	26.477	.03	47 27	2.01	-.4	11 10	58.15	58.01	31426	-.063	.56	3799	.021	.42
1065	42 4420	4.54 B3	22 28	19.472	-.07	42 51	59.70	-.2	8 8	59.23	59.23	31449	-.012	.01	3800	.021	-.04
1066	3 5460	6.29 K0	22 28	43.386	-.15	-3 10	4.47	-3.1	7 7	57.00	57.00	31462	.108	.29	3802	.055	-.03
1067	19 4949	6.31 F0	22 30	10.348	1.10	19 58	18.50	3.0	9 6	57.58	58.04	31486	.031	.37	3804	.022	.28
1068	39 4871	5.80 A3	22 30	13.466	.03	39 31	19.63	-.3	9 9	58.87	58.87	31488	-.017	.07	3805	-.040	.23
1069	15 4670	6.36 K0	22 30	20.161	.06	15 36	18.34	.9	6 6	58.72	58.72	31490	.060	1.07	3806	.001	-.07
1070	61 2314	6.51 A2	22 32	5.085	.23	61 31	9.98	2.2	8 9	58.94	58.91	31519	-.059	.06	3808	.050	.20
1071	34 4729	6.50 K5	22 34	32.113	-.02	35 23	33.62	.0	8 8	58.17	58.17	31568	-.008	.13	3812	.026	-.44
1072	23 4576	6.93 A3	22 35	10.231	-.24	23 44	29.47	-.9	10 8	60.09	60.68	31582	.028	.12	3813	.007	-.00
1073	3 4745	6.90 A3	22 36	17.957	.32	4 16	11.08	.0	6 6	58.35	58.35	31605	-.081	-.12	3815	-.000	.70
1074	80 731	6.90 F8	22 39	20.340	.56	81 7	50.93	.9	9 8	56.39	56.35	31671	.087	.71	3966	-.047	.54
1075	53 2960	6.26 K2	22 40	17.725	-.02	53 38	48.71	.1	8 6	57.00	57.73	31690	-.059	.29	3817	-.008	.25
1076	57 2595	6.51 F5	22 43	5.042	-.85	57 53	9.05	-13.7	8 7	56.31	56.25	31755	-.017	.63	3822	.025	.26
1077	32 4529	7.11 A2	22 49	12.980	.27	32 33	0.68	-1.2	7 6	55.75	55.58	31879	-.020	.62	3827	-.030	-.10
1078	9 5122	5.30 F5	22 49	51.921	3.50	9 34	8.90	4.7	10 11	58.33	58.19	31899	.011	.07	3828	.006	.10
1079	16 4831	5.72 K0	22 50	34.448	-.17	16 34	31.45	-2.6	10 8	58.61	59.47	31908	.017	.14	3829	-.005	.13
1080	59 2595	6.32 K2	22 51	3.669	.23	59 50	5.44	1.0	11 8	57.77	58.89	31922	-.060	.14	3830	.032	.08
1081	47 3985	5.20 B3	22 54	51.518	.13	48 24	59.70	-.4	7 6	58.14	58.56	31998	-.046	.03	3833	-.020	-.10
1082	3 4799	6.43 K2	22 54	59.979	.42	3 32	31.17	4.3	10 9	59.52	59.94	32002	.015	-.55	3834	-.009	-.46
1083	38 4904	6.07 B3	22 55	21.868	-.07	39 2	28.12	.2	7 7	57.30	57.03	32010	.047	-.05	3835	.022	.31
1084	3 5539	6.21 G5	22 55	41.009	-.14	-2 39	47.60	-.1	6 6	60.22	60.22	32015	.066	-.76	3836	.014	-.84
1085	72 1079	6.64 K0	22 56	13.808	-.50	72 51	57.78	-3.1	9 7	56.93	57.56	32025	-.195	.52	3837	.002	-.30
1086	51 3514	6.41 K2	22 56	59.954	-.37	52 23	9.08	2.8	8 6	56.97	57.89	32039	.012	.45	3838	-.026	.10
1087	56 2923	5.48 G0	22 57	58.209	-.06	56 40	36.96	.8	6 6	58.04	58.04	32063	-.005	-.03	3839	.058	.44
1088	0 4443	6.40 K0	22 58	4.030	.24	-0 4	58.62	1.9	6 6	58.23	58.23	32065	.034	.29	3840	.008	.06
1089	79 759	7.26 K2	22 58	17.318	1.52	80 4	30.49	4.4	8 8	59.85	59.85	32070	-.297	-.24	3841	.116	.03
1090	66 1575	5.50 K0	23 1	38.002	.39	66 56	22.44	1.6	7 7	56.41	56.41	32142	-.093	.34	3844	-.006	.21
1091	24 4716	4.98 K0	23 4	40.352	-.06	25 11	52.71	-3.0	8 7	56.88	56.88	32201	.014	-.11	3848	-.024	-.46
1092	34 4847	6.54 K0	23 4	42.162	.42	35 21	56.67	.0	7 6	57.12	57.37	32202	-.004	.68	3849	.005	-.09
1093	20 5278	5.93 A5	23 5	0.507	.79	20 51	51.51	-5.2	8 8	60.72	60.72	32209	-.039	.95	3850	-.015	.28
1094	29 4862	7.25 B9	23 5	15.380	-.21	29 47	1.18	-.4	7 6	60.58	60.56	32215	.052	-.49	3851	.003	.06
1095	45 4149	5.56 K5	23 5	21.691	-.16	46 7	1.23	-3.0	7 7	61.68	61.68	32216	-.006	.73	3852	.013	.45
1096	63 1931	6.41 K0	23 5	54.936	.11	63 57	6.32	.3	7 8	60.33	60.50	32232	-.002	.47	3853	.080	-.25
1097	1 4686	5.56 G5	23 6	7.189	.93	1 51	19.42	11.0	10 7	58.65	58.89	32233	.010	.54	3854	-.018	.42
1098	42 4592	5.85 F5	23 8	8.169	-1.80	43 16	31.55	-18.8	9 6	57.58	57.85	32288	-.011	.20	3857	-.043	.14
1099	10 4902	5.94 K0	23 10	55.435	-.11	10 47	34.36	.6	11 7	58.80	58.85	32331	.045	.45	3858	.002	.21
1100	4 5852	5.55 A2	23 12	59.693	-.12	-3 46	9.72	.2	10 7	58.62	58.43	32369	.031	-.43	3860	-.011	-.31



No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		No. Epoch		O - G.C.			O - FK3 (Supp.)		
			100 $\mu$	100 $\mu$ '	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$		
1101	27 4521	6.50 G5	23 13 19.487	.09	27 58 30.10	-.3	9 9 60.04 60.04	32375	.008	.11	3861	-.025	-.34	
1102	70 1311	5.62 A3	23 13 41.370	.32	70 36 55.13	.8	8 8 58.85 59.60	32388	-.037	.15	3862	.068	.17	
1103	52 3410	5.65 F8	23 14 25.025	1.23	52 56 37.29	-23.7	8 7 56.52 56.79	32409	-.039	.43	3863	.013	-.02	
1104	74 1016	6.44 A2	23 15 32.491	.56	75 1 33.48	.6	12 8 57.94 58.29	32436	-.147	.48	3865	.031	.07	
1105	41 4752	5.98 K2	23 17 29.224	.33	41 48 14.92	1.1	8 6 56.12 56.58	32485	.070	.33	3870	.016	.05	
1106	4 4997	5.18 K0	23 17 47.646	.51	5 6 29.47	-5.8	7 6 57.98 58.19	32491	.020	.36	3871	.024	-.41	
1107	16 4912	6.55 F0	23 18 27.149	.69	16 58 41.55	2.4	9 7 56.11 56.34	32509	-.056	.87	3872	.003	.17	
1108	20 5317	6.22 A0	23 20 10.903	.11	20 33 16.01	-1.6	11 9 57.56 57.97	32535	.014	.48	3873	.012	-.25	
1109	59 2710	5.93 K5	23 20 18.044	.05	59 51 32.89	-.2	7 6 57.29 57.05	32538	-.062	.35	3874	-.010	.03	
1110	64 1810	7.00 K0	23 25 4.968	-.12	65 20 47.85	-6.9	10 8 57.64 58.24	32636	-.042	.02	3877	.019	-.80	
1111	86 344	5.62 F0	23 27 33.601	10.19	87 1 54.54	2.0	9 6 58.64 59.43	32680	-.608	.16	3967	-.450	.08	
1112	48 4070	6.38 K2	23 27 43.884	.31	48 51 26.37	-.3	10 9 57.77 57.88	32684	-.022	.63	3882	-.037	.92	
1113	27 4566	6.68 K0	23 29 0.989	.10	28 23 25.29	-1.5	8 6 56.35 56.73	32710	.022	.51	3884	.010	-.27	
1114	52 3469	7.02 K0	23 30 12.448	.04	53 24 37.06	.4	8 7 56.63 56.61	32743	-.018	.02	3888	.019	-.32	
1115	21 4952	5.51 M3	23 30 57.605	.05	22 13 21.77	-1.8	7 6 55.62 55.75	32759	-.004	.42	3889	.008	-.23	
1116	2 5986	5.98 A2	23 31 34.676	.68	-1 31 26.37	-.7	7 7 57.21 57.21	32774	-.009	-.57	3890	-.029	-.60	
1117	32 4667	5.74 K0	23 32 9.530	-.04	33 13 14.47	2.2	8 6 57.85 58.38	32779	-.019	.67	3891	.004	.33	
1118	70 1327	6.13 K0	23 32 47.933	.13	71 21 56.26	.5	9 8 58.60 58.58	32793	-.052	.12	3893	.115	.00	
1119	23 4769	6.60 M0	23 33 25.488	.13	24 17 3.04	1.4	6 6 56.41 56.41	32814	-.085	-.05	3894	-.053	-.01	
1120	1 4744	5.65 F5	23 33 50.111	-.73	1 49 28.50	6.2	10 9 57.47 57.79	32818	.011	.11	3895	.012	-.19	
1121	17 4952	5.42 A0	23 35 25.099	.31	18 7 25.06	2.0	9 7 58.52 58.87	32842	.013	.57	3896	-.006	.68	
1122	49 4180	5.32 B9	23 36 42.407	-.21	50 11 40.87	-.4	7 7 56.54 56.68	32864	-.001	.17	3897	.010	-.12	
1123	73 1047	6.08 G5	23 37 9.288	-.17	73 43 32.38	1.1	7 7 59.02 59.18	32872	-.164	.38	3898	-.020	.10	
1124	35 5074	6.30 F5	23 38 10.343	1.91	36 26 35.52	2.6	7 6 57.44 57.73	32892	.010	-.10	3899	.036	-.34	
1125	60 2609	6.54 K2	23 40 7.387	.72	61 24 8.21	-.6	9 8 58.20 58.36	32930	-.146	-.14	3900	.041	.32	
1126	15 4872	6.51 K0	23 40 11.371	.60	16 3 29.27	1.4	8 7 57.61 57.46	32932	.032	.17	3901	.014	.16	
1127	9 5268	5.39 M0	23 40 49.514	.01	10 3 14.16	1.5	10 8 58.01 58.57	32945	.008	.45	3902	-.006	.28	
1128	68 1393	7.03 R8	23 42 35.596	-.16	69 28 38.52	-1.1	10 9 57.25 57.52	32974	-.050	.45	3907	.054	-.40	
1129	2 4709	5.30 N0	23 43 50.119	-.26	3 12 33.44	-1.6	8 7 56.13 56.34	32995	.029	-.23	3908	.017	-.23	
1130	57 2804	5.09 K0	23 44 36.049	.78	58 22 24.30	5.7	7 6 56.58 56.73	33010	-.017	.23	3909	.051	.11	
1131	28 4649	5.91 A3	23 47 7.233	.47	28 33 50.54	2.7	7 6 56.19 56.25	33062	-.008	.14	3913	.002	-.07	
1132	35 5110	5.91 G5	23 47 9.667	-.07	36 8 52.68	-5.0	9 9 57.74 57.74	33063	.030	.45	3914	-.059	.08	
1133	39 5174	6.68 F8	23 48 46.466	1.86	39 55 17.26	-5.4	7 6 56.49 56.77	33093	-.082	-.47	3916	.049	-.87	
1134	2 4725	5.85 K2	23 49 24.139	.06	2 39 8.09	-1.1	10 9 58.66 58.42	33112	.012	-.42	3918	-.020	-.57	
1135	76 934	6.49 F5	23 49 31.839	8.05	77 19 21.35	-8.8	10 8 57.94 57.99	33113	-.099	.02	3919	.108	-.23	
1136	0 4585	5.98 M3	23 52 12.973	-.33	-0 10 7.67	-.7	10 7 58.25 59.03	33165	.014	-.19	3920	-.024	-.21	
1137	41 4902	6.04 F5	23 54 30.950	.02	42 22 47.72	-.4	7 6 56.46 56.58	33211	-.005	.15	3923	-.081	.25	
1138	31 5012	6.36 B5	23 56 15.906	.07	32 6 12.12	.3	9 7 59.07 59.17	33253	-.031	-.36	3927	-.094	-.17	
1139	58 2685	6.37 K0	23 57 58.014	-.98	59 16 54.32	-2.1	8 8 57.40 57.40	33294	-.069	.31	3928	.070	.02	
1140	49 4309	6.36 K0	23 58 45.403	.09	49 42 12.12	-1.0	8 7 56.78 57.48	33311	-.007	.41	3929	.047	-.07	
1141	72 1135	6.52 A0	23 59 4.400	1.65	73 20 1.74	.6	10 8 58.31 58.58	33322	-.052	-.47	3930	.055	.62	
1142	7 5121	5.78 F0	23 59 56.200	-.68	8 12 28.12	-4.6	8 8 57.63 57.63	33341	.021	.40	3933	.009	.02	

Section	Area	Acres	Value	Improvements	Notes
101	100.00	1.00	100.00		
102	100.00	1.00	100.00		
103	100.00	1.00	100.00		
104	100.00	1.00	100.00		
105	100.00	1.00	100.00		
106	100.00	1.00	100.00		
107	100.00	1.00	100.00		
108	100.00	1.00	100.00		
109	100.00	1.00	100.00		
110	100.00	1.00	100.00		
111	100.00	1.00	100.00		
112	100.00	1.00	100.00		
113	100.00	1.00	100.00		
114	100.00	1.00	100.00		
115	100.00	1.00	100.00		
116	100.00	1.00	100.00		
117	100.00	1.00	100.00		
118	100.00	1.00	100.00		
119	100.00	1.00	100.00		
120	100.00	1.00	100.00		
121	100.00	1.00	100.00		
122	100.00	1.00	100.00		
123	100.00	1.00	100.00		
124	100.00	1.00	100.00		
125	100.00	1.00	100.00		
126	100.00	1.00	100.00		
127	100.00	1.00	100.00		
128	100.00	1.00	100.00		
129	100.00	1.00	100.00		
130	100.00	1.00	100.00		
131	100.00	1.00	100.00		
132	100.00	1.00	100.00		
133	100.00	1.00	100.00		
134	100.00	1.00	100.00		
135	100.00	1.00	100.00		
136	100.00	1.00	100.00		
137	100.00	1.00	100.00		
138	100.00	1.00	100.00		
139	100.00	1.00	100.00		
140	100.00	1.00	100.00		
141	100.00	1.00	100.00		
142	100.00	1.00	100.00		
143	100.00	1.00	100.00		
144	100.00	1.00	100.00		
145	100.00	1.00	100.00		
146	100.00	1.00	100.00		
147	100.00	1.00	100.00		
148	100.00	1.00	100.00		
149	100.00	1.00	100.00		
150	100.00	1.00	100.00		
151	100.00	1.00	100.00		
152	100.00	1.00	100.00		
153	100.00	1.00	100.00		
154	100.00	1.00	100.00		
155	100.00	1.00	100.00		
156	100.00	1.00	100.00		
157	100.00	1.00	100.00		
158	100.00	1.00	100.00		
159	100.00	1.00	100.00		
160	100.00	1.00	100.00		
161	100.00	1.00	100.00		
162	100.00	1.00	100.00		
163	100.00	1.00	100.00		
164	100.00	1.00	100.00		
165	100.00	1.00	100.00		
166	100.00	1.00	100.00		
167	100.00	1.00	100.00		
168	100.00	1.00	100.00		
169	100.00	1.00	100.00		
170	100.00	1.00	100.00		
171	100.00	1.00	100.00		
172	100.00	1.00	100.00		
173	100.00	1.00	100.00		
174	100.00	1.00	100.00		
175	100.00	1.00	100.00		
176	100.00	1.00	100.00		
177	100.00	1.00	100.00		
178	100.00	1.00	100.00		
179	100.00	1.00	100.00		
180	100.00	1.00	100.00		
181	100.00	1.00	100.00		
182	100.00	1.00	100.00		
183	100.00	1.00	100.00		
184	100.00	1.00	100.00		
185	100.00	1.00	100.00		
186	100.00	1.00	100.00		
187	100.00	1.00	100.00		
188	100.00	1.00	100.00		
189	100.00	1.00	100.00		
190	100.00	1.00	100.00		
191	100.00	1.00	100.00		
192	100.00	1.00	100.00		
193	100.00	1.00	100.00		
194	100.00	1.00	100.00		
195	100.00	1.00	100.00		
196	100.00	1.00	100.00		
197	100.00	1.00	100.00		
198	100.00	1.00	100.00		
199	100.00	1.00	100.00		
200	100.00	1.00	100.00		

Part III

No.	B.D. No.		M+Sp.	R.A. 1950			Decl. 1950			No. Epoch		O - G.C.			O - PZT		
				100 $\mu$	100 $\mu$ '				$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$	
1	44	50	8.0	F0	0 13 6.814	.15	45 15 58.83	-1.1	6 6 57.76	57.76	.	.	.	.	50	-.005	.08
2	44	62	7.0	F5	0 17 53.219	.59	45 13 54.77	-.6	9 8 58.50	58.72	411	-.074	-1.73	.	62	-.045	.29
3	44	128	8.5	MA	0 34 53.225	.12	45 19 46.07	1.5	8 7 58.35	58.15	.	.	.	.	128	-.007	.54
4	44	162	7.8	A3	0 43 40.212	-.21	45 9 12.93	.5	6 6 56.15	56.15	.	.	.	.	162	-.019	-.01
5	44	186	8.8	A5	0 49 56.687	-.35	45 10 13.19	-1.7	8 7 58.91	58.79	.	.	.	.	186	-.013	.01
6	45	237	6.2	K0	0 54 49.186	.07	45 34 10.12	-.5	8 8 59.86	59.86	1142	-.019	-.71	.	237	-.015	.07
7	44	215	7.0	F5	0 58 27.329	.96	45 11 0.81	-1.5	10 9 57.57	57.88	1220	-.052	.22	.	215	-.011	.21
8	44	252	8.7	F8	1 7 3.205	.54	45 28 53.72	-1.5	7 6 60.75	60.76	.	.	.	.	252	.029	.09
9	44	279	7.5	K2	1 16 6.724	-.02	45 26 35.91	1.8	6 7 58.43	58.91	.	.	.	.	279	-.021	.28
10	44	312	8.1	K0	1 25 43.179	.58	45 22 31.34	.3	8 7 58.30	58.51	.	.	.	.	312	.046	.13
11	44	341	6.3	A0	1 35 30.407	-.16	45 8 45.30	.8	6 6 60.10	60.10	1977	.053	-.83	.	341	-.030	-.10
12	44	392	8.1	A5	1 54 49.049	-.14	45 21 22.66	.7	9 9 58.38	58.38	.	.	.	.	392	.004	.07
13	45	523	8.1	A3	2 0 0.274	.04	45 32 14.34	-.5	7 8 59.86	59.87	.	.	.	.	523	.017	-.35
14	44	473	8.8	A0	2 19 32.509	-.07	45 16 56.94	.4	7 6 60.09	59.82	.	.	.	.	473	-.002	.17
15	44	483	7.6	G5	2 21 50.211	-.23	45 25 22.41	-7.8	7 7 57.32	57.32	.	.	.	.	483	-.007	.02
16	44	512	7.3	G5	2 27 10.357	.05	45 12 36.57	-.8	9 8 60.00	60.65	.	.	.	.	512	.004	.26
17	44	558	8.4	F8	2 38 28.570	.86	45 16 54.40	-3.0	8 7 58.44	58.67	.	.	.	.	558	.003	.07
18	44	569	8.1	F8	2 41 28.781	-.18	45 23 21.61	-4.4	8 7 58.15	58.63	.	.	.	.	569	-.041	.38
19	45	721	8.6	K2	3 8 17.948	-.19	45 33 1.95	-1.7	7 6 58.54	58.82	.	.	.	.	721	-.015	.12
20	44	648	6.4	MA	3 12 40.005	.28	45 9 45.27	-3.0	8 9 57.89	57.77	3884	-.143	.84	.	648	-.012	.25
21	44	677	7.5	R8	3 18 4.401	-.06	45 12 28.93	1.0	9 8 60.18	60.36	.	.	.	.	677	-.007	.32
22	44	695	7.6	R8	3 22 11.223	-.01	45 20 25.63	.2	6 6 60.80	60.80	.	.	.	.	695	-.034	.24
23	44	744	8.1	K2	3 31 35.559	-.13	45 16 59.93	-.1	7 7 58.86	58.86	.	.	.	.	744	-.008	.15
24	45	828	8.1	K0	3 48 7.121	-.10	45 18 15.38	.3	7 7 58.72	58.72	.	.	.	.	828	-.009	.24
25	45	836	7.9	K0	3 50 29.510	.03	45 21 53.78	-2.9	7 7 57.64	57.64	.	.	.	.	836	.006	-.08
26	45	858	8.6	A0	3 56 23.118	.14	45 33 25.49	-1.2	8 6 57.78	58.34	.	.	.	.	858	-.004	.23
27	45	887	7.8	G5	4 7 24.433	.16	45 16 24.43	-4.0	8 8 58.42	58.77	.	.	.	.	887	-.009	-.11
28	45	921	7.6	A0	4 17 17.963	.22	45 20 46.10	-2.8	8 8 61.21	61.21	5241	-.041	-1.05	.	921	-.022	.09
29	45	955	7.7	R9	4 30 27.484	.00	45 31 54.93	-1.0	6 7 57.55	57.58	5546	.026	1.76	.	955	.016	.06
30	45	987	7.7	A0	4 44 15.229	.07	45 24 5.62	-3.3	8 8 59.16	59.16	5822	-.043	-.02	.	987	.030	.04
31	45	1023	7.8	R9	4 57 39.214	-.09	45 22 25.35	-.8	8 6 56.70	56.90	.	.	.	.	1023	-.018	.12
32	45	1115	8.5	A0	5 21 38.155	.04	45 11 3.92	.2	10 9 57.98	58.32	.	.	.	.	1115	-.023	-.15
33	45	1131	7.8	F8	5 28 57.594	-.06	45 30 7.13	-3.5	12 10 59.15	59.95	.	.	.	.	1131	-.017	.10
34	45	1132	7.9	G5	5 29 3.028	.11	45 27 22.37	-1.9	8 8 61.06	61.67	.	.	.	.	1132	-.020	-.06
35	45	1150	8.1	G5	5 35 20.198	.70	45 25 18.06	-10.8	8 8 58.38	58.38	.	.	.	.	1150	-.005	-.18
36	45	1178	8.0	F3	5 45 2.891	-.02	45 13 17.67	-2.2	8 8 61.48	61.48	.	.	.	.	1178	-.033	.02
37	45	1216	6.6	A0	5 55 42.869	-.01	45 37 0.35	-1.6	7 7 60.90	61.04	7534	-.231	.81	.	1216	-.025	-.15
38	45	1225	7.6	A0	5 57 36.651	-.02	45 9 36.03	-1.1	5 5 61.42	61.42	.	.	.	.	1225	-.021	.22
39	45	1235	7.2	A2	6 0 51.717	.04	45 35 24.90	-5.5	7 6 59.96	59.96	7672	-.011	.24	.	1235	-.013	.11
40	45	1248	7.3	A0	6 4 37.146	-.07	45 33 44.46	-2.0	12 9 59.16	60.18	7768	-.037	-.51	.	1248	-.017	.00
41	45	1289	7.4	K0	6 18 3.539	.05	45 38 7.72	-1.5	6 6 59.66	59.66	8157	-.131	-.95	.	1289	-.003	.13
42	45	1296	8.0	K5	6 20 52.420	.13	45 11 41.68	.3	8 9 60.61	60.34	.	.	.	.	1296	-.028	.18
43	45	1346	8.7	G5	6 40 22.187	.09	45 24 50.52	-3.2	8 8 61.25	61.25	.	.	.	.	1346	.013	.47
44	45	1363	9.0	A2	6 50 50.657	-.12	45 14 50.89	-4.1	7 7 60.34	60.34	.	.	.	.	1363	-.053	-.27
45	45	1380	8.9	A0	6 59 55.064	-.02	45 30 1.06	-.7	8 11 60.84	61.39	.	.	.	.	1380	-.056	-.41
46	45	1394	7.8	K0	7 7 13.694	-.12	45 19 47.90	-.8	7 6 59.42	60.16	.	.	.	.	1394	-.033	-.10
47	45	1408	6.7	K0	7 11 59.668	-.08	45 29 52.30	-2.9	6 6 58.50	58.50	9602	-.078	-.62	.	1408	-.013	-.15
48	45	1415	7.6	F2	7 14 24.095	-.08	45 13 12.66	-6.9	6 6 58.86	58.86	.	.	.	.	1415	-.020	-.43
49	45	1441	8.1	G5	7 27 57.568	-.08	45 13 6.42	-2.3	8 8 61.69	61.69	.	.	.	.	1441	.010	-.33
50	45	1476	7.6	K0	7 40 45.672	.00	45 29 20.47	-2.9	8 8 58.55	58.55	.	.	.	.	1476	.006	-.38

No.	B.D. No.	M+Sp.	R.A. 1950			Decl. 1950			Epoch		O - G.C.			O - PZT		
					100 $\mu$			100 $\mu$ '	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
51	45 1496	8.0 K2	7 46 58.963	.09	45 28 4.50	-1.0	6 6 58.18	58.18	. . .	. . .	1496	-.038	-.13			
52	45 1509	8.1 A3	7 53 21.659	-.19	45 35 3.33	-1.1	7 7 60.03	60.03	. . .	. . .	1509	-.032	-.07			
53	45 1550	7.8 K0	8 8 24.259	.31	45 21 32.67	-.4	7 7 61.29	61.29	. . .	. . .	1550	-.010	.19			
54	45 1568	8.1 K0	8 19 5.873	-.37	45 30 44.88	-7.3	6 6 56.00	56.02	. . .	. . .	1568	-.014	-.21			
55	45 1601	7.8 F0	8 30 49.157	-.28	45 22 7.49	-2.3	6 8 58.55	57.96	11719	-.076	1.28	1601	-.051	-.28		
56	45 1613	8.1 G5	8 37 33.098	.00	45 19 40.04	1.5	7 8 60.17	59.43	. . .	. . .	1613	-.024	-.18			
57	45 1624	8.1 F5	8 40 29.361	-.23	45 38 6.62	-5.2	7 8 60.01	60.28	. . .	. . .	1624	-.034	-.40			
58	45 1649	6.1 K0	8 48 48.203	-.11	45 30 6.24	-3.4	6 6 58.03	58.03	12226	.035	.68	1649	-.020	-.05		
59	45 1680	8.4 G5	9 3 59.564	-.58	45 22 42.02	-4.9	7 7 60.58	60.58	. . .	. . .	1680	.003	.12			
60	45 1708	6.6 K0	9 18 6.170	-.07	45 34 59.96	-3.0	7 7 57.22	57.53	12885	-.050	.09	1708	-.007	-.30		
61	45 1762	6.8 K0	9 43 31.084	.48	45 20 51.43	-13.0	6 7 59.42	58.81	13451	-.040	.04	1762	-.014	-.33		
62	45 1769	8.0 F2	9 47 19.964	-.78	45 19 8.23	-9.1	8 9 58.97	58.89	. . .	. . .	1769	-.021	-.22			
63	45 1778	8.7 G5	9 52 36.891	.16	45 25 7.99	-.9	6 7 57.93	57.97	. . .	. . .	1778	.007	-.07			
64	46 1566	6.5 K0	9 54 48.099	.05	45 39 12.66	-3.4	6 6 57.28	57.28	13704	-.018	.03	1566	-.011	-.05		
65	45 1798	7.5 F2	10 4 2.076	-.07	45 18 15.83	-.6	6 6 56.60	56.60	. . .	. . .	1798	.003	-.08			
66	45 1811	7.8 K2	10 11 8.528	-.09	45 20 7.77	.4	9 9 56.57	56.57	. . .	. . .	1811	.010	.05			
67	45 1814	7.4 F5	10 13 27.825	-.13	45 17 34.36	2.3	9 9 58.44	58.44	. . .	. . .	1814	-.015	.12			
68	45 1819	7.8 G5	10 14 27.375	-.63	45 16 9.02	-2.0	7 6 61.20	61.51	. . .	. . .	1819	-.026	-.21			
69	45 1832	6.5 K0	10 25 36.207	-.19	45 28 5.43	-2.3	8 7 59.56	59.89	14377	-.010	.05	1832	-.009	-.31		
70	46 1643	8.4 K5	10 32 46.108	-.22	45 30 56.27	1.6	6 6 59.25	59.25	. . .	. . .	1643	-.002	.14			
71	46 1671	8.0 K0	10 49 38.774	-.71	45 33 11.35	-3.6	10 9 57.66	57.28	. . .	. . .	1671	-.017	-.19			
72	45 1879	7.0 K0	10 56 8.846	-.48	45 27 58.58	-3.7	7 7 58.41	58.41	15079	-.038	.13	1879	-.031	-.20		
73	45 1890	9.0 G5	11 1 40.631	.09	45 25 37.45	-2.6	7 7 58.28	58.28	. . .	. . .	1890	-.019	-.31			
74	45 1903	7.5 G0	11 12 20.090	-.48	45 20 5.30	-6.1	6 6 57.11	57.11	. . .	. . .	1903	-.021	-.24			
75	46 1717	7.9 A2	11 19 5.598	-.56	45 36 24.22	-1.5	9 8 58.84	58.78	. . .	. . .	1717	-.024	.46			
76	45 1924	V.R MB	11 25 6.802	-.07	45 27 38.83	-2.3	6 6 57.12	57.12	15723	-.104	1.53	1924	-.021	-.02		
77	45 1947	6.3 G0	11 36 7.325	-.562	45 23 6.52	1.4	6 6 56.98	56.98	15976	-.026	-.30	1947	-.011	-.11		
78	45 1952	7.9 F2	11 37 9.705	.15	45 26 1.82	-1.4	6 6 56.97	56.97	16003	-.061	.04	1952	-.015	.16		
79	45 2001	8.8 F8	12 8 12.910	.30	45 27 13.76	-6.5	8 8 57.20	57.20	. . .	. . .	2001	-.025	-.15			
80	46 1791	7.7 A3	12 29 13.736	-.26	45 30 5.50	-1.4	7 7 56.30	56.30	. . .	. . .	1791	-.008	-.18			
81	46 1802	8.0 F0	12 35 10.333	.15	45 31 41.96	1.2	6 6 59.82	59.82	. . .	. . .	1802	-.027	.00			
82	46 1805	7.1 F2	12 36 10.648	-1.35	45 29 31.94	-3.8	6 6 57.10	57.10	17219	.010	-.13	1805	.003	.01		
83	46 1847	5.7 K0	13 3 37.450	-.18	45 32 7.88	2.5	13 13 57.78	58.78	17758	-.026	.13	1847	-.017	.29		
84	45 2096	8.6 F5	13 12 12.563	-.02	45 26 41.22	-1.0	8 9 57.32	57.32	. . .	. . .	2096	.003	-.24			
85	45 2104	8.7 F5	13 17 5.529	-1.38	45 21 45.07	-3.4	6 6 57.48	57.48	. . .	. . .	2104	-.024	-.28			
86	45 2120	8.3 F5	13 33 51.745	-.44	45 16 12.71	-1.8	6 6 56.71	56.71	. . .	. . .	2120	-.017	-.15			
87	45 2124	8.0 K2	13 38 14.772	.03	45 14 23.84	-1.1	8 9 56.58	56.32	. . .	. . .	2124	-.038	-.21			
88	46 1894	8.9 F5	13 41 17.143	.06	45 35 46.84	-1.8	6 8 59.35	59.37	. . .	. . .	1894	.006	.01			
89	45 2131	8.6 F5	13 46 33.414	-.35	45 25 6.64	1.0	6 6 61.67	61.67	. . .	. . .	2131	-.028	.16			
90	45 2140	8.6 F8	13 55 33.197	-.08	45 23 55.83	.1	7 6 56.34	56.69	. . .	. . .	2140	.000	.10			
91	45 2148	8.1 K0	13 59 10.972	.17	45 31 36.41	-.8	6 6 57.53	57.53	. . .	. . .	2148	.007	-.13			
92	45 2178	9.1 G5	14 22 45.823	-1.45	45 22 22.13	3.4	7 6 59.09	59.05	. . .	. . .	2178	-.012	-.29			
93	45 2203	8.4 F8	14 36 54.214	-.07	45 32 45.51	-1.7	7 7 57.98	57.98	. . .	. . .	2203	.011	.11			
94	46 1981	7.7 G5	14 39 16.620	-1.10	45 37 44.32	-19.2	7 7 57.82	57.82	. . .	. . .	1981	.014	-.18			
95	45 2214	6.8 F0	14 42 38.341	.52	45 23 47.60	-2.0	7 6 56.93	57.37	19853	-.058	-.34	2214	.003	-.14		
96	45 2230	8.5 F8	14 49 57.384	-.68	45 22 33.18	6.8	6 6 57.06	57.06	. . .	. . .	2230	-.003	-.32			
97	45 2233	7.9 F5	14 52 37.598	-.62	45 30 0.35	5.4	6 6 57.38	57.38	. . .	. . .	2233	.008	-.43			
98	45 2266	8.7 G5	15 10 23.060	-.86	45 20 56.86	15.4	6 7 58.22	58.25	. . .	. . .	2266	-.039	.35			
99	45 2277	7.9 K0	15 16 56.993	-.39	45 11 52.96	.9	7 6 58.24	58.38	. . .	. . .	2277	.005	.14			
100	45 2284	6.2 K2	15 22 23.825	-.16	45 26 48.70	-.3	6 6 58.74	58.74	20720	-.002	.51	2284	-.011	.04		



No.	B.D. No.	M+Sp.	R.A. 1950		100 $\mu$	Decl. 1950		100 $\mu'$	No. Epoch		O - G.C.			O - PZT			
			$\alpha$	$\delta$		$\alpha$	$\delta$		$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$	
101	45 2307	8.8 K2	15 34	0.411	.15	45 36	45.95	-2.1	8 8	58.17	58.17	.	.	2307	-.007	.05	
102	45 2317	7.9 F0	15 37	32.745	.27	45 16	42.30	1.4	6 6	58.42	58.42	.	.	2317	.001	-.09	
103	45 2325	8.0 G5	15 42	27.956	-.41	45 28	19.01	3.1	6 6	58.63	58.63	.	.	2325	.003	.02	
104	45 2355	8.7 F2	15 58	7.369	-.27	45 35	35.49	-.5	9 9	60.58	60.58	.	.	2355	.017	.00	
105	45 2374	7.4 K0	16 6	25.426	-.03	45 30	41.85	.9	9 8	58.98	59.30	21715	-.016	.63	2374	.001	.07
106	45 2404	7.4 G5	16 23	47.729	-.64	45 29	26.99	1.7	10 9	58.57	59.03	.	.	2404	.014	-.17	
107	45 2446	8.4 G5	16 43	41.726	-.28	45 11	37.95	-.5	7 6	59.23	58.85	.	.	2446	-.004	.12	
108	45 2453	8.4 G0	16 47	27.440	-.33	45 17	13.06	-.7	9 10	60.38	60.08	.	.	2453	-.028	.21	
109	45 2504	6.9 K2	17 10	12.150	-.01	45 23	1.02	-1.2	10 10	61.42	61.42	23223	.014	1.12	2504	.005	-.19
110	45 2509	7.4 B3	17 12	0.261	-.12	45 25	45.63	-1.1	7 6	56.39	56.36	23262	.006	.63	2509	-.008	.14
111	45 2521	6.6 F0	17 18	23.785	-.36	45 21	24.64	8.6	9 9	58.22	58.22	23433	-.084	.43	2521	-.010	.28
112	45 2531	8.3 K0	17 23	11.716	-.06	45 23	44.55	1.3	9 9	57.85	57.85	.	.	2531	-.035	.41	
113	45 2573	7.3 G0	17 36	37.716	.02	45 35	3.35	4.7	8 6	56.24	56.80	.	.	2573	-.017	.60	
114	45 2620	8.2 G5	17 53	14.154	.41	45 33	40.04	2.2	8 9	59.05	58.76	.	.	2620	-.010	.14	
115	45 2621	8.0 A0	17 53	17.773	-.07	45 13	27.32	.4	7 7	60.57	60.57	.	.	2621	.002	.04	
116	45 2635	6.2 B9	17 57	26.441	-.07	45 28	41.02	2.5	10 8	57.82	58.63	24495	-.049	.41	2635	-.006	.07
117	45 2638	5.9 K2	17 58	30.380	-.05	45 30	10.11	-3.0	7 7	57.70	57.70	24518	.014	.56	2638	-.013	.24
118	45 2643	7.4 B9	17 59	40.981	-.11	45 21	0.48	1.4	9 8	55.76	55.90	24549	-.072	.52	2643	-.037	.08
119	45 2667	8.5 F0	18 8	22.117	.02	45 36	21.48	-1.8	9 7	57.67	58.00	.	.	2667	.018	.00	
120	45 2684	6.3 G0	18 14	6.177	-.81	45 11	34.62	-11.2	11 11	59.55	59.55	24937	-.093	.26	2684	-.007	.13
121	45 2690	7.9 A0	18 16	45.231	-.01	45 8	7.59	.8	13 10	58.57	58.75	.	.	2690	-.020	.35	
122	45 2704	8.1 A0	18 21	37.319	.00	45 11	34.87	3.0	7 7	57.69	57.69	.	.	2704	-.039	.31	
123	45 2731	8.5 K0	18 29	41.197	.33	45 25	10.45	.2	8 6	57.52	57.80	.	.	2731	-.028	.03	
124	45 2747	8.0 F0	18 35	47.799	-.10	45 37	38.80	1.1	7 7	58.68	58.68	.	.	2747	-.006	.19	
125	45 2777	6.8 F0	18 47	8.232	.26	45 12	10.63	8.5	13 10	57.99	58.40	25807	-.005	1.14	2777	-.011	.29
126	45 2824	8.9 F5	19 2	16.791	.18	45 31	58.15	-.9	7 7	57.03	57.03	.	.	2824	-.035	-.13	
127	45 2865	7.3 A0	19 13	56.276	.10	45 14	47.90	-1.0	9 9	57.12	57.34	26561	.037	-.41	2865	-.006	-.19
128	45 2877	8.6 K	19 18	55.964	-.07	45 29	59.04	.6	6 6	57.79	57.79	.	.	2877	-.006	.14	
129	45 2971	7.5 K0	19 44	44.947	-.04	45 36	44.82	-.8	12 10	57.42	57.59	.	.	2971	-.015	-.42	
130	45 3001	7.8 K0	19 52	12.060	-.09	45 20	19.36	.1	9 9	58.82	58.72	.	.	3001	-.009	.15	
131	45 3038	7.5 A2	20 0	11.287	.28	45 20	10.60	2.3	7 6	57.08	57.16	.	.	3038	-.013	.41	
132	45 3066	8.1 G5	20 6	32.260	-.12	45 23	48.88	-3.3	11 7	59.52	60.87	.	.	3066	-.023	.63	
133	44 3414	7.5 K2	20 14	58.135	.03	45 11	0.64	1.6	6 6	58.47	58.47	.	.	3414	.011	-.15	
134	44 3429	7.0 F5	20 18	11.253	.18	45 12	19.90	-2.0	6 6	59.63	59.63	.	.	3429	-.005	.06	
135	45 3191	7.3 B9	20 27	9.419	.00	45 33	4.79	-.5	8 7	58.41	58.21	.	.	3191	-.027	-.07	
136	45 3233	6.5 B3	20 37	41.800	-.03	45 29	21.19	.2	9 6	56.79	57.86	28793	-.042	-.08	3233	-.027	-.29
137	45 3275	6.7 K5	20 45	37.752	-.02	45 23	43.44	-1.8	9 8	60.14	60.83	28997	-.026	.76	3275	-.019	.26
138	44 3590	7.5 A0	20 46	42.879	.04	45 15	58.32	.1	8 6	59.63	60.13	.	.	3590	-.002	.00	
139	44 3622	8.9 K	20 51	47.539	.14	45 11	36.68	.1	7 7	56.97	56.97	.	.	3622	.000	-.18	
140	45 3410	7.3 G0	21 5	5.611	-.08	45 28	25.45	-1.0	6 7	61.31	61.36	29526	-.017	-.24	3410	-.029	-.12
141	45 3438	6.7 A0	21 9	27.769	-.08	45 28	7.33	-.6	8 8	56.63	56.63	29628	.090	-.32	3438	.019	-.16
142	45 3476	7.6 B9	21 14	9.152	-.03	45 31	20.27	-.7	10 8	56.67	57.16	.	.	3476	.027	.00	
143	44 3825	8.5 G0	21 26	15.459	-.01	45 21	34.47	-3.7	8 8	61.85	61.85	.	.	3825	-.040	.03	
144	44 3840	7.0 B5	21 28	8.501	-.02	45 16	27.04	-.5	9 9	58.51	58.51	30119	-.143	.05	3840	-.030	.31
145	44 3877	V.R MC	21 34	8.268	.59	45 9	0.61	.9	8 7	58.05	58.26	.	.	3877	.009	.52	
146	45 3637	6.5 MB	21 40	13.488	-.07	45 32	13.65	-1.7	9 8	58.47	58.44	30390	-.041	-.12	3637	.004	.05
147	45 3813	6.5 G5	22 6	39.436	-.56	45 29	45.74	5.1	10 8	57.88	58.44	30985	-.116	1.07	3813	.014	.15
148	45 3941	7.3 A2	22 24	54.895	-.25	45 32	3.81	-1.5	8 8	57.69	57.69	31370	-.167	1.25	3941	.020	-.01
149	45 3958	8.2 K2	22 27	45.260	-.05	45 29	17.25	.5	8 7	59.21	59.29	.	.	3958	-.013	.01	
150	44 4183	7.9 K0	22 35	36.962	-.19	45 8	52.88	.5	9 7	60.57	60.82	.	.	4183	-.029	-.10	

No.	B.D. No.	M+Sp.	R.A. 1950			Decl. 1950			No. Epoch				O - G.C.			O - P.Z.T.		
					100 $\mu$			100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
151	45 4002	7.1 F8	22 36	2.565	-1.05	45 34	11.67	-16.9	7 6	57.34	57.76	31599	.115	.86	4002	.008	.17	
152	44 4209	8.3 K2	22 41	1.647	.06	45 15	57.99	1.7	9 9	58.36	57.71	.	.	.	4209	-.024	.23	
153	44 4263	8.1 K0	22 50	58.138	-.02	45 25	37.34	.1	7 7	60.32	60.32	.	.	.	4263	-.013	.16	
154	45 4094	8.4 F8	22 53	55.346	-.16	45 31	29.04	-3.7	7 6	58.69	59.36	.	.	.	4094	-.020	-.31	
155	44 4307	7.9 K0	22 59	17.431	.26	45 14	27.62	2.1	8 6	56.54	57.11	32090	.053	.24	4307	-.007	-.10	
156	44 4320	8.8 F5	23 1	58.636	.17	45 12	42.53	.8	6 8	59.56	59.08	.	.	.	4320	.016	.11	
157	44 4347	7.1 K0	23 8	31.436	-.75	45 14	40.62	-27.5	7 7	59.14	59.14	.	.	.	4347	-.016	.15	
158	44 4373	6.3 B9	23 15	34.815	.24	45 12	56.60	-.9	6 6	57.26	57.26	32437	-.056	.44	4373	.008	.14	
159	44 4424	7.9 K0	23 26	3.175	.02	45 25	4.34	-.4	6 6	58.76	58.76	.	.	.	4424	-.014	.48	
160	44 4464	7.8 A2	23 36	53.598	-.06	45 26	34.99	-.9	6 6	60.25	60.25	.	.	.	4464	.048	.23	

Part IV







No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch		O - G.C.			O - FK3		
			100 $\mu$	100 $\mu'$	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
1	62 2356	6.26 B1	0 0 50.742	.	63 21 44.19	.	9 8 59.78 59.88	.	.	.	.	.	.	.
2	62 2363	7.36 B	0 3 26.872	-.21	63 24 5.10	1.8	6 6 59.75 59.75	.	85	.027	-1.17	.	.	.
3	58 11	6.70 R3	0 7 56.261	.11	59 23 43.73	-.2	6 6 57.58 57.58	.	177	-.039	.87	.	.	.
4	76 5	6.23 R9	0 13 21.546	.43	76 40 23.62	.5	13 13 59.61 59.61	.	303	.120	.44	8	-.028	.18
5	50 72	8.3 K	0 23 36.660	.	51 0 13.58	.	9 9 57.87 57.87	.	.	.	.	.	.	.
6	63 81	7.40 B5	0 39 51.531	.	64 1 3.73	.	7 7 59.04 59.04	.	.	.	.	.	.	.
7	62 160	7.06 B3	0 48 23.038	-.45	63 30 34.40	-.3	8 8 58.29 58.29	.	1017	.149	.63	.	.	.
8	62 175	7.7 R2	0 55 20.029	.	63 26 37.92	.	7 7 59.91 59.91	.	.	.	.	.	.	.
9	60 188	7.26 R3	1 10 52.755	-.50	60 37 7.24	3.0	8 6 57.29 57.12	.	1472	.169	-1.03	.	.	.
10	59 260	7.26 B5	1 26 33.891	.	59 59 36.44	.	6 6 58.57 58.57	.	.	.	.	.	.	.
11	62 259	7.46 B0	1 27 53.760	.25	63 5 25.26	.9	8 8 60.02 60.02	.	1825	-.241	-.20	.	.	.
12	59 271	7.26 R3	1 29 54.198	-.12	60 25 48.68	-3.2	7 8 57.67 57.45	.	1865	.015	1.90	.	.	.
13	63 274	5.62 B5	1 59 16.495	.09	64 8 59.39	.1	8 8 58.55 58.55	.	2451	-.110	.41	.	.	.
14	57 494	5.90 A2	2 5 9.924	-.13	58 11 13.02	.7	7 7 58.79 58.79	.	2549	.041	-.08	.	.	.
15	56 438	6.36 R3	2 7 59.125	-.15	57 24 38.30	.9	6 6 58.96 58.96	.	2604	.072	-.45	.	.	.
16	57 519	6.50 A0	2 10 8.640	-.14	58 19 37.83	2.4	7 8 59.96 59.96	.	2648	.035	-1.18	.	.	.
17	57 526	7.8 A0	2 12 25.423	.	58 3 42.50	.	9 10 59.60 59.41	.	.	.	.	.	.	.
18	56 471	6.42 R1	2 13 20.901	.02	56 49 26.27	.1	9 9 59.34 59.55	.	2721	-.044	.24	.	.	.
19	63 315	7.05 B5	2 14 52.867	.08	64 11 41.51	.0	10 9 61.22 61.16	.	2760	-.082	.54	.	.	.
20	56 222	6.66 B0	2 15 32.610	-.01	56 54 20.88	-.4	6 7 61.07 60.59	.	2772	-.056	.67	.	.	.
21	56 530	6.66 B0	2 15 41.998	.05	56 56 22.03	.7	6 6 59.76 59.76	.	2774	-.047	-.42	.	.	.
22	55 588	6.84 B9	2 17 13.155	-.17	55 40 49.60	-.3	9 10 58.11 58.29	.	2800	.057	.25	.	.	.
23	56 568	6.54 A2	2 18 22.314	-.05	57 0 54.35	-.7	6 7 57.98 57.94	.	2822	-.009	.73	.	.	.
24	56 591	7.46 A0	2 19 20.034	.	57 1 4.91	.	9 8 59.09 59.12	.	.	.	.	.	.	.
25	56 593	6.95 B8	2 19 26.586	.03	57 9 35.98	.1	8 10 60.48 60.74	.	2848	-.063	.22	.	.	.
26	55 612	6.24 B2	2 21 43.137	-.02	56 23 3.58	1.1	6 6 57.18 57.18	.	2885	.010	-.58	.	.	.
27	57 568	7.32 R1	2 23 9.783	-.40	57 27 17.06	-1.0	10 9 59.89 60.21	.	2925	.184	.56	.	.	.
28	57 576	7.30 A2	2 26 21.082	.33	57 35 54.96	1.0	9 8 60.26 60.44	.	2973	-.230	-.39	.	.	.
29	57 582	7.20 R3	2 28 15.518	-.53	57 28 37.28	-.4	8 8 59.77 59.77	.	3014	.202	1.01	.	.	.
30	60 502	7.8 R	2 28 54.062	.	61 14 8.57	.	8 8 61.57 61.57	.	.	.	.	.	.	.
31	60 504	8.0 R	2 29 1.136	.	61 9 29.69	.	9 8 61.04 60.95	.	.	.	.	.	.	.
32	59 535	7.3 B9	2 40 5.636	.	59 36 39.79	.	8 8 61.06 60.55	.	.	.	.	.	.	.
33	2 44	3.58 A2	2 40 42.283	-.95	3 1 32.63	-14.7	13 13 61.60 62.06	.	3276	-.019	.33	96	-.006	.28
34	57 632	7.2 B2	2 43 8.216	.	57 31 28.58	.	7 7 57.96 57.96	.	.	.	.	.	.	.
35	57 634	8.1 B2	2 43 40.987	.	57 28 5.79	.	6 6 58.75 58.75	.	.	.	.	.	.	.
36	59 552	7.11 B0	2 47 15.362	.25	60 12 43.03	-2.7	8 7 58.82 58.82	.	3398	-.118	1.54	.	.	.
37	63 367	7.78 R	2 51 13.002	.05	63 57 18.03	2.1	6 6 57.81 57.48	.	3477	-.029	-1.14	.	.	.
38	61 525	6.54 B0	3 4 47.818	-.26	62 11 38.07	-2.3	8 8 60.17 60.17	.	3731	.091	1.90	.	.	.
39	29 566	7.06 R3	3 25 42.237	-.13	30 12 12.19	-.5	10 9 60.62 60.58	.	4131	.055	-.08	.	.	.
40	58 607	4.76 A0	3 25 54.146	.11	58 42 26.64	.2	9 8 59.90 60.28	.	4140	-.089	.25	.	.	.
41	56 824	6.79 B0	3 33 48.330	-.22	56 34 32.22	.6	7 7 57.54 57.53	.	4300	.074	-.04	.	.	.
42	33 698	5.04 B2	3 39 12.048	-.01	33 48 22.37	-1.0	10 9 59.44 59.73	.	4420	.043	.22	.	.	.
43	33 704	7.9 B3	3 40 13.084	.	33 57 30.23	.	7 7 57.84 57.84	.	.	.	.	.	.	.
44	31 66	3.94 B1	3 41 10.581	.07	32 7 53.41	-.9	11 12 61.78 61.86	.	4461	-.054	.34	132	-.028	.08
45	31 643	8.4 A5	3 41 25.799	.02	32 0 22.90	-.9	6 6 60.39 60.39	.	4465	-.008	.24	.	.	.
46	31 649	6.51 B3	3 43 32.090	-.05	32 8 8.91	-2.5	6 7 57.79 57.79	.	4516	.029	1.03	.	.	.
47	33 717	6.36 B3	3 44 41.950	-.02	33 26 47.77	-.3	8 7 60.05 59.81	.	4548	-.023	-.11	.	.	.
48	52 714	6.76 B0	3 45 40.707	-.03	52 30 12.25	.5	8 8 60.26 60.26	.	4571	.045	-.37	.	.	.
49	33 728	5.73 B3	3 48 41.497	.06	34 12 35.57	-.7	8 6 57.23 57.32	.	4649	-.059	.13	.	.	.
50	33 730	7.49 R3	3 49 6.877	.	34 4 23.94	.	7 7 60.18 60.18	.	.	.	.	.	.	.

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch		O - G.C.			O - FK3		
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
51	48 1019	7.02 R3	3 51 45.694	.25	48 53 41.14	1.4	7 7 59.41	59.41	4704	-.133	-1.28	.	.	.
52	52 726	6.70 O5	3 51 50.306	.14	52 29 44.17	-.9	6 6 60.67	60.67	4708	-.108	.51	.	.	.
53	30 591	6.2 R0	3 52 15.157	-.07	30 54 0.82	-.7	6 7 58.59	58.78	4720	.004	.20	.	.	.
54	60 84	5.22 *	3 52 51.357	-.06	62 11 49.35	-1.2	13 13 61.36	61.36	4727	-.049	-1.16	145	.008	-.06
55	34 768	5.48 R3	3 53 14.917	.08	34 56 11.34	-.1	7 7 61.00	61.00	4734	-.056	.13	.	.	.
56	32 714	6.70 R3	4 1 32.142	.16	32 26 7.29	-1.7	9 9 60.43	60.43	4891	-.080	.43	.	.	.
57	61 669	6.75 R2	4 1 44.297	-.06	61 58 0.41	.2	7 7 59.25	59.25	4898	.000	-.42	.	.	.
58	61 676	7.04 R0	4 3 26.097	-.26	62 11 49.35	-.8	9 8 61.35	61.30	4932	.182	.85	.	.	.
59	31 703	6.87 R3	4 3 28.249	-.03	32 15 4.93	-.2	9 7 57.52	57.92	4933	.053	.20	.	.	.
60	33 785	6.61 R3	4 3 43.445	.13	33 18 46.45	-.6	6 6 59.87	59.87	4943	-.061	.11	.	.	.
61	-13 893	5.50 R3	4 26 47.474	.02	-13 9 25.87	-.4	8 8 60.75	60.75	5458	-.044	.39	.	.	.
62	18 661	7.2 G0	4 34 20.177	-.10	18 26 34.64	-.7	7 7 59.56	59.56	5621	.007	-.36	.	.	.
63	36 937	7.95 F0	4 44 25.360	.	36 38 4.18	.	6 7 61.00	60.71	.	.	.	.	.	.
64	35 930	6.18 R2	4 52 59.521	-.12	36 5 25.28	1.1	6 6 58.48	58.48	6011	.035	-.56	.	.	.
65	-14 1003	5.87 R3	4 55 27.315	.06	-14 18 28.34	1.3	6 6 58.50	58.50	6055	-.046	-1.38	.	.	.
66	34 980	5.81 R0	5 12 59.772	.10	34 15 25.68	2.7	9 9 60.03	60.03	6429	-.083	.92	.	.	.
67	37 1146	6.71 O5	5 17 19.029	-.06	37 23 21.32	-1.2	7 7 60.25	60.25	6532	-.028	.81	.	.	.
68	37 1160	7.39 R0	5 19 10.665	.	37 37 43.31	.	7 6 60.94	60.80	.	.	.	.	.	.
69	3 871	4.99 R3	5 20 12.228	-.02	3 29 52.67	-.1	7 7 60.21	60.21	6607	.025	.28	.	.	.
70	-2 1235	3.44 R1	5 21 57.673	.00	-2 26 29.78	.2	11 12 60.62	60.42	6655	-.063	-.37	200	-.007	-.28
71	20 948	6.83 R2	5 22 11.875	.00	20 32 23.32	-.1	7 7 59.51	59.51	6664	-.050	-.13	.	.	.
72	30 898	5.72 R9	5 23 56.097	.10	30 10 1.02	-1.2	7 8 58.64	58.32	6703	-.091	.15	.	.	.
73	33 1049	7.50 R1	5 24 27.703	.	33 54 17.44	.	7 7 60.13	60.13	.	.	.	.	.	.
74	35 1137	6.71 R5	5 26 21.948	.01	35 20 10.80	-.7	8 8 59.36	59.36	6767	-.029	.11	.	.	.
75	-7 1106	4.64 R3	5 29 30.624	-.01	-7 20 13.22	-.4	7 8 59.85	59.64	6850	-.013	-.37	.	.	.
76	-1 935	5.30 R2	5 30 9.465	-.01	-1 37 35.27	-.8	6 7 60.39	60.50	6863	-.019	.40	.	.	.
77	-1 943	5.4 R2	5 30 59.082	-.03	-1 11 22.46	.2	9 8 61.34	61.29	6884	.003	.47	.	.	.
78	9 879	3.66 O5	5 32 22.922	.01	9 54 8.53	-.6	8 8 61.30	61.30	6915	-.022	.32	.	.	.
79	-6 1234	4.67 R1	5 32 35.944	.03	-6 2 1.67	.4	9 9 61.94	61.94	6926	-.027	-.23	.	.	.
80	-5 1315	5.36 O5	5 32 48.982	.02	-5 25 16.07	.3	6 6 61.62	61.62	6931	-.046	.04	.	.	.
81	-4 1183	6.54 R0	5 32 53.366	-.08	-4 31 32.13	3.1	7 6 61.91	61.94	6932	.039	-1.65	.	.	.
82	-4 1185	4.65 R3	5 32 55.053	.02	-4 52 10.73	.1	7 9 62.29	62.22	6934	-.034	-.06	.	.	.
83	-5 1319	5.17 R1	5 32 55.470	.00	-5 26 51.03	.6	10 11 60.59	60.64	6935	-.010	-.44	.	.	.
84	-6 1262	5.75 R1	5 35 0.530	.09	-5 58 2.09	.4	7 7 58.65	58.65	6994	-.062	-.52	.	.	.
85	-2 1326	3.78 R0	5 36 14.046	-.01	-2 37 38.34	.2	12 11 61.29	61.25	7031	-.031	-.08	213	-.006	.08
86	-2 1338	2.05 R0	5 38 14.058	.00	-1 58 2.76	-.1	14 13 60.42	60.01	7089	-.023	.24	1631	.010	.18
87	25 941	6.86 R2	5 40 33.644	-.12	25 25 4.15	.8	9 11 58.88	58.56	7152	.018	-.81	.	.	.
88	24 1033	6.03 R3	5 53 52.299	.05	24 14 38.87	-.2	6 6 60.28	60.28	7483	-.035	-.11	.	.	.
89	25 1052	4.90 R2	5 54 53.373	.03	25 56 58.47	-.3	6 6 60.02	60.02	7507	-.087	-.06	.	.	.
90	37 138	2.71 A0	5 56 18.635	.40	37 12 39.31	-8.3	11 10 62.25	62.19	7557	-.076	.28	228	-.038	.32
91	20 1233	4.71 R2	6 0 56.908	.04	20 8 29.11	-.8	8 8 59.63	60.02	7675	-.085	.28	.	.	.
92	21 1120	8.0 R2	6 4 38.343	-.09	21 52 50.20	-.9	9 9 60.88	60.88	7769	.040	.36	.	.	.
93	23 1226	5.76 R1	6 6 41.763	.08	23 7 24.76	-.4	7 6 57.67	57.93	7827	-.050	.42	.	.	.
94	22 125	V.R M0	6 11 51.453	-.48	22 31 23.15	-1.3	14 13 59.47	59.98	7969	-.040	.07	236	-.010	-.04
95	23 1275	6.26 R2	6 13 55.629	.04	23 45 34.51	-.4	7 7 60.93	60.93	8039	-.045	-.25	.	.	.
96	23 1300	7.03 R0	6 16 16.630	.04	23 29 27.55	-.9	8 7 60.78	60.76	8104	-.041	.34	.	.	.
97	-11 1460	5.49 R2	6 19 4.836	-.07	-11 44 55.63	-.5	6 6 59.30	59.30	8186	.006	-.05	.	.	.
98	7 1273	5.8 G5	6 22 30.970	.12	7 6 52.82	.3	8 8 62.15	62.15	8291	-.102	-.39	.	.	.
99	30 1238	5.0 G0	6 25 21.221	.04	30 31 32.62	-1.6	7 7 59.54	59.54	8371	-.069	-.30	.	.	.
100	5 1283	6.80 R2	6 29 16.038	.04	4 58 47.29	.4	7 7 59.09	59.09	8477	-.067	-.76	.	.	.

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		Epoch				O - G.C.			O - FK3		
			100 $\mu$	100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$		
101	4 1302	7.14 B2	6 29 29.957	-.13	4 51 39.25	-1.7	8 9 61.71	61.40	8489	.031	1.13	.	.	.		
102	15 1246	6.7 G5	6 32 5.555	.08	15 22 15.46	-1	8 9 61.47	61.54	8560	-.042	-.84	.	.	.		
103	10 1193	8.1 B2	6 33 23.972	.	10 19 36.91	.	6 7 60.59	60.77	.	.	.	.	.	.		
104	6 1309	6.06 R0	6 34 43.202	.04	6 10 44.19	-.3	7 7 59.70	59.70	8631	-.041	.14	.	.	.		
105	5 1334	6.16 R1	6 35 13.204	-.03	5 0 2.97	1.8	6 6 61.51	61.50	8651	-.047	-1.41	.	.	.		
106	1 1443	6.13 B0	6 36 2.578	-.05	1 39 31.21	-.5	6 6 59.69	59.69	8671	.012	-.09	.	.	.		
107	10 122	4.68 O5	6 38 13.415	-.01	9 56 36.65	-.7	11 11 61.22	61.22	8720	-.047	-.41	253	-.011	-.29		
108	6 1351	6.20 B2	6 39 18.147	.07	6 23 39.96	-.8	6 6 58.18	58.18	8747	-.061	.55	.	.	.		
109	17 1357	5.14 A0	6 39 29.627	.06	17 41 44.48	-9.1	7 9 60.69	60.75	8755	-.032	.16	.	.	.		
110	4 1414	5.78 B0	6 41 0.355	.04	3 59 0.60	-.6	9 7 59.97	59.83	8790	-.072	-.02	.	.	.		
111	1 1531	6.06 R3	6 46 28.752	.04	1 3 34.82	-.4	6 6 60.40	60.40	8916	-.056	.05	.	.	.		
112	58 100	4.54 G0	6 52 57.124	-.08	58 29 25.52	-13.7	11 12 61.78	62.07	9082	-.086	.15	265	.012	.28		
113	-10 1848	7.32 B0	7 2 3.601	.	-10 22 43.21	.	9 8 59.31	59.33	.	.	.	.	.	.		
114	-11 1790	5.28 R3	7 4 19.804	-.09	-11 12 55.99	-.6	9 8 59.30	59.34	9389	.014	.50	.	.	.		
115	61 938	6.73 K0	7 5 9.537	-.09	60 52 23.71	-5.1	8 9 60.15	60.37	9411	-.001	-.04	.	.	.		
116	-10 1892	6.20 O5	7 6 58.136	.02	-10 15 54.03	-2.1	8 6 59.19	59.57	9459	-.043	1.91	.	.	.		
117	-10 1933	5.99 R1	7 12 5.997	-.04	-10 13 43.67	-1.2	8 8 61.17	61.17	9605	-.037	.59	.	.	.		
118	-8 1872	6.17 B5	7 19 38.117	.03	-8 53 0.66	2.0	6 6 60.01	60.01	9823	-.022	-.92	.	.	.		
119	-14 1966	6.24 R5	7 31 4.075	-.08	-14 13 45.10	-.6	7 8 57.92	57.95	10113	.012	.64	.	.	.		
120	-13 2267	5.34 G0	7 49 27.276	-.45	-13 45 54.89	-34.4	11 10 60.95	61.64	10629	-.047	-.31	298	-.003	-.09		
121	6 209	3.48 F8	8 44 7.578	-1.30	6 36 11.95	-5.4	10 10 60.76	60.76	12102	-.064	.15	329	-.035	.12		
122	28 1660	6.06 K0	8 49 37.019	-3.65	28 31 20.99	-24.0	9 8 58.91	59.51	12244	-.053	.19	.	.	.		
123	31 197	5.60 K0	8 51 11.932	.28	30 46 11.56	-2.4	10 10 59.25	59.24	12289	-.031	-.48	333	.017	-.55		
124	67 64	4.87 F8	9 6 1.210	-.44	67 20 19.52	-7.8	9 7 62.23	62.26	12619	-.299	-.51	344	.187	-1.15		
125	37 201	3.82 A2	9 15 44.293	-.26	37 0 54.22	-12.9	16 15 59.38	59.86	12830	-.049	-.02	349	-.017	.02		
126	20 253	2.61 K0	10 17 13.327	2.17	20 5 41.06	-15.4	11 12 60.85	60.95	14177	-.053	.00	1632	-.025	.15		
127	14 2367	5.48 K0	11 13 15.007	-.05	13 34 49.95	-1.5	7 7 57.29	57.29	15487	-.015	-.01	.	.	.		
128	11 242	4.03 F5	11 21 19.260	1.13	10 48 17.77	-7.9	15 13 57.79	57.46	15652	.018	1.01	430	.044	.81		
129	-0 2601	3.65 F0	12 39 6.961	-3.78	-1 10 30.17	.8	9 10 58.64	59.70	17270	-.175	1.72	477	-.167	1.34		
130	-17 3918	7.5 B0	13 41 48.237	.	-17 41 10.96	.	8 6 58.82	59.66	.	.	.	.	.	.		
131	14 277	3.86 A2	14 38 45.576	.36	13 56 30.83	-2.0	12 11 58.36	58.72	19777	-.014	1.01	543	.004	.55		
132	27 248	2.70 K0	14 42 48.090	-.38	27 17 3.02	1.7	12 11 60.11	60.62	19856	-.030	.46	1633	-.010	.20		
133	17 2780	4.69 K0	14 42 54.316	-.42	17 10 29.71	-5.8	10 10 58.17	58.17	19858	-.033	.36	.	.	.		
134	26 274	3.93 A0	15 40 38.399	-.80	26 27 10.88	4.2	14 12 58.38	58.45	21130	-.017	.54	581	.003	.20		
135	61 160	2.89 G5	16 23 18.446	-.30	61 37 37.56	5.8	11 11 61.54	61.54	22101	-.020	-.02	615	.000	-.19		
136	2 319	3.85 A0	16 28 23.322	-.21	2 5 30.28	-7.4	12 11 59.63	59.38	22203	-.051	.47	617	.002	-.09		
137	4 3235	5.73 A0	16 38 9.587	-.03	4 18 56.89	-1.8	9 7 57.04	57.63	22430	.003	.50	.	.	.		
138	31 292	3.00 G0	16 39 23.595	-3.72	31 41 35.43	39.3	9 10 59.79	59.97	22464	-.052	-.04	1634	-.024	-.61		
139	-15 4467	2.63 A2	17 7 30.456	.25	-15 39 51.86	9.4	11 8 60.66	60.98	23158	-.030	.44	637	-.028	.11		
140	14 327	3.48 M3	17 12 21.916	-.08	14 26 45.54	3.7	13 12 60.65	60.50	23277	-.032	.23	640	-.017	-.24		
141	-19 4800	7.28 B3	17 58 55.335	.06	-19 6 23.77	-.2	9 9 59.01	59.01	24529	-.055	.73	.	.	.		
142	1 3578	6.09 B3	18 2 5.798	-.04	1 54 54.08	-.6	7 7 56.07	56.07	24617	-.002	.40	.	.	.		
143	-19 4895	7.14 B2	18 9 17.322	.04	-19 26 44.70	-1.0	9 9 59.86	59.86	24812	-.061	1.09	.	.	.		
144	-18 4886	6.37 O5	18 14 32.459	-.03	-18 28 58.14	-.3	9 9 60.76	60.76	24950	-.027	.40	.	.	.		
145	-15 4911	6.64 B0	18 14 45.472	-.02	-15 27 0.86	1.6	10 10 60.82	60.82	24955	-.041	-.03	.	.	.		
146	-12 4980	7.34 B0	18 15 17.635	-.10	-12 15 46.16	1.0	8 7 61.33	61.17	24969	.045	-.37	.	.	.		
147	-18 4896	6.38 B0	18 15 46.998	.08	-18 38 26.15	.2	8 8 59.41	58.91	24978	-.046	-.17	.	.	.		
148	-12 4988	8.5 R0	18 15 52.746	.	-12 7 38.23	.	8 7 60.46	60.89	.	.	.	.	.	.		
149	71 97	4.24 A0	18 21 28.413	-.18	71 18 42.84	4.1	14 10 59.49	60.53	25114	-.111	.51	693	-.079	.12		
150	-14 5039	6.84 B0	18 22 24.810	.14	-14 0 25.72	1.4	7 7 58.00	58.00	25133	-.091	-.13	.	.	.		

No.	B.D. No.	M+Sp.	R.A. 1950	100 $\mu$	Decl. 1950	100 $\mu$ '	No.		Epoch		O - G.C.			O - FK3		
							$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$
151	58 189	4.85 A2	18 23 10.650	-.55	58 46 17.50	6.0	10	11	60.17	60.29	25151	-.048	.51	694	-.003	.40
152	-9 4736	7.8 R2	18 23 48.934	.	-9 13 55.85	.	6	6	58.07	58.07	.	.	.	.	.	.
153	-15 5004	8.1 B0	18 29 45.347	.	-15 44 21.38	.	8	11	59.53	59.52	.	.	.	.	.	.
154	-18 4994	6.98 B0	18 30 14.262	.00	-18 24 24.40	-1.3	5	5	60.33	60.33	25320	-.049	.24	.	.	.
155	22 3648	5.40 B0	19 15 36.601	-.03	22 56 3.01	-.8	6	6	58.95	58.95	26613	.027	.16	.	.	.
156	20 4218	6.44 B0	19 38 17.110	-.05	20 21 36.65	-2.5	9	7	58.04	58.76	27226	.019	1.31	.	.	.
157	44 327	2.97 A0	19 43 24.640	.44	45 0 28.90	4.8	13	13	58.53	58.53	27347	-.025	.74	742	-.072	.27
158	33 3602	6.35 B0	19 46 56.022	.01	33 18 39.84	-.5	8	6	56.97	57.42	27433	-.039	.25	.	.	.
159	69 107	3.99 K0	19 48 21.216	1.53	70 8 27.24	4.0	13	13	60.16	60.16	27471	-.019	.53	747	-.006	.21
160	18 4276	6.29 O	19 50 7.878	-.05	18 32 31.19	-.6	6	6	58.43	58.43	27523	.009	-.37	.	.	.
161	47 2939	5.70 R2	19 50 38.685	-.10	47 48 6.71	-1.0	9	7	59.47	60.00	27531	-.039	.24	.	.	.
162	47 2945	6.15 R2	19 51 32.377	-.14	47 40 36.81	-1.2	8	6	57.99	58.77	27549	.016	.92	.	.	.
163	52 259	4.80 A3	19 54 20.121	-.47	52 18 19.47	-2.9	14	12	59.95	59.68	27618	-.017	.18	750	-.007	.02
164	31 3925	5.69 B0	20 2 38.403	-.13	32 4 33.03	-1.4	6	6	59.77	59.77	27858	.007	.68	.	.	.
165	35 3952	7.30 B	20 4 3.268	.	35 31 39.86	.	9	9	60.04	60.04	.	.	.	.	.	.
166	-9 5382	6.45 R3	20 8 27.432	.02	-8 59 30.23	.0	9	9	60.39	60.39	27998	-.011	.16	.	.	.
167	21 4088	6.11 B0	20 9 9.757	-.04	21 43 30.70	.5	11	9	60.22	60.78	28024	-.035	-1.23	.	.	.
168	39 4082	7.47 R3	20 10 46.739	.	40 7 1.11	.	8	8	59.11	59.11	.	.	.	.	.	.
169	38 3956	7.10 B2	20 11 33.524	-.16	38 36 48.36	-.7	10	8	57.84	58.01	28086	.080	.21	.	.	.
170	36 3958	7.02 O5	20 12 39.095	.	37 12 2.37	.	6	6	60.93	60.93	.	.	.	.	.	.
171	37 3867	7.12 B2	20 15 32.454	-.13	38 4 46.90	-.3	7	6	58.80	58.98	28210	.064	.03	.	.	.
172	40 4103	5.82 B2	20 16 20.615	-.03	40 34 30.67	-.4	8	6	58.98	59.27	28228	-.003	-.08	.	.	.
173	37 3879	7.74 B1	20 17 1.258	.	38 7 19.34	.	7	6	59.05	59.10	.	.	.	.	.	.
174	38 4006	7.29 B2	20 17 19.596	.	39 6 56.05	.	7	7	58.58	58.58	.	.	.	.	.	.
175	37 3892	7.6 B8	20 17 58.695	.	38 11 3.35	.	7	7	59.20	59.20	.	.	.	.	.	.
176	40 4150	7.05 B0	20 21 31.046	.	40 35 49.04	.	7	6	59.31	59.27	.	.	.	.	.	.
177	40 4165	7.45 B	20 24 35.011	.	41 12 51.50	.	9	8	60.04	60.48	.	.	.	.	.	.
178	-18 5689	4.96 F0	20 26 0.572	-.12	-17 58 49.57	-2.0	17	14	60.22	60.27	28481	-.010	.23	766	-.008	-.06
179	-15 5696	6.19 G0	20 28 16.291	-.31	-15 13 28.61	-5.5	8	7	58.97	59.31	28533	.024	1.46	.	.	.
180	43 3630	7.15 B	20 28 52.818	.	44 8 45.66	.	6	7	59.16	59.37	.	.	.	.	.	.
181	14 4353	4.69 A2	20 32 58.215	.29	14 30 2.10	1.2	8	7	57.51	57.91	28659	.001	.00	.	.	.
182	14 445	3.72 F5	20 35 12.257	.74	14 25 11.59	-3.0	13	11	59.02	59.35	28709	-.004	-.20	771	-.008	-.48
183	35 433	4.47 B5	20 45 27.543	.03	36 18 21.91	-.3	12	11	62.01	61.97	28994	.001	.51	784	.005	-.01
184	45 3291	4.89 R2	20 47 13.945	.01	45 55 40.34	-1	7	6	57.58	57.73	29036	-.045	.14	.	.	.
185	54 2429	8.2 B	20 49 47.461	.	55 18 1.22	.	6	7	57.66	57.65	.	.	.	.	.	.
186	32 3974	6.35 B5	20 49 58.174	-.11	32 39 36.16	.5	7	7	58.92	58.92	29111	.043	-.32	.	.	.
187	48 3242	7.13 B2	20 52 15.467	-.04	49 20 33.74	.2	10	8	58.12	58.49	29172	-.031	-.17	.	.	.
188	46 3111	5.76 B8	20 54 8.358	-.06	47 13 31.15	-.3	8	8	58.54	58.54	29219	-.025	.43	.	.	.
189	44 3639	6.01 O5	20 54 48.827	-.08	44 43 54.16	.7	6	6	57.52	57.52	29241	.018	-.03	.	.	.
190	45 3364	5.24 B3	20 59 26.076	.03	45 57 31.12	.7	6	6	59.03	59.03	29354	.002	-.06	.	.	.
191	54 2470	7.16 B2	21 2 25.934	-.10	55 1 51.18	.2	8	7	57.92	57.95	29440	.010	.04	.	.	.
192	35 4426	6.40 B1	21 9 3.020	.14	36 5 39.37	-1.5	6	6	58.00	58.00	29616	-.079	1.05	.	.	.
193	59 237	5.62 B2	21 10 31.800	-.06	59 46 49.57	-.2	14	14	57.58	58.09	29655	-.054	.27	798	-.040	.22
194	37 424	3.82 F0	21 12 47.666	1.32	37 49 55.96	43.7	13	12	58.43	58.67	29723	-.029	-.06	799	-.009	-.12
195	57 2309	6.41 B3	21 15 56.345	-.03	58 24 3.34	.4	6	6	57.89	57.89	29804	-.037	-.07	.	.	.
196	61 2112	6.64 B0	21 17 54.111	-.29	61 38 47.25	-1.4	7	6	59.11	59.34	29861	.051	.93	.	.	.
197	46 3294	7.10 B2	21 22 1.859	.	46 56 57.07	.	6	6	57.18	57.18	.	.	.	.	.	.
198	54 2533	7.6 B0	21 22 57.263	.	55 9 2.27	.	12	9	61.09	62.00	.	.	.	.	.	.
199	36 4557	5.84 B0	21 23 44.254	.02	36 27 1.89	-.5	8	9	58.82	58.69	30016	-.012	-.31	.	.	.
200	58 2272	7.4 B2	21 27 31.345	.	58 31 12.86	.	7	6	58.41	58.36	.	.	.	.	.	.



No.	B.D. No.	M+Sp.	R.A. 1950		100 $\mu$	Decl. 1950		100 $\mu$ '	Epoch		O - G.C.			O - FK3		
			$\alpha$	$\delta$		$\alpha$	$\delta$		No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$	$\Delta\delta$		
201	59	2395	5.52	B3	21 29 36.797	-.05	60 14 18.59	.1	8 8	59.27 59.27	30150	-.023	.38	.	.	.
202	56	2589	7.36	B0	21 30 7.889	-.12	57 16 52.44	-.1	8 8	59.37 59.37	30162	.006	.32	.	.	.
203	57	2374	6.98	B0	21 40 50.237	.15	57 30 24.68	-.2	7 6	59.30 59.39	30408	-.108	-.30	.	.	.
204	24	449	4.27	F5	21 42 22.733	.23	25 24 52.17	1.5	12 11	59.76 59.86	30450	-.007	.42	816	-.002	.05
205	61	2193	5.97	B4	21 43 30.670	-.13	62 13 47.53	.1	6 6	59.07 59.07	30473	-.067	.61	.	.	.
206	59	2420	7.03	B3	21 46 8.441	-.11	59 28 3.78	1.4	8 8	58.21 58.21	30530	.014	-.77	.	.	.
207	52	3043	6.56	B2	21 48 15.876	-.07	52 27 47.45	-.9	8 8	57.96 57.96	30579	-.037	1.03	.	.	.
208	28	4215	5.62	F5	21 50 15.765	-.48	28 33 30.65	-6.5	8 8	56.59 56.59	30625	-.008	.04	.	.	.
209	62	1994	6.76	B1	21 51 9.714	.00	62 28 34.56	2.0	10 8	58.10 58.46	30645	-.098	-.74	.	.	.
210	61	2216	7.10	B3	21 52 21.848	-.10	62 22 40.00	1.5	8 8	58.32 58.32	30671	-.004	-.44	.	.	.
211	60	2320	6.90	B3	21 55 46.214	-.19	61 3 23.34	.1	7 7	58.86 58.86	30744	.060	.48	.	.	.
212	61	2233	6.48	B0	21 59 9.339	-.05	62 14 48.71	1.0	7 7	57.15 57.15	30812	-.022	-.41	.	.	.
213	57	2441	5.50	B0	22 0 23.522	-.06	57 45 31.29	.1	12 10	58.76 59.17	30837	-.015	.31	.	.	.
214	59	2456	6.74	B5	22 2 15.942	.02	59 34 18.21	.1	7 7	57.44 57.44	30874	-.024	.20	.	.	.
215	61	2246	5.17	O5	22 3 36.142	.01	62 2 10.82	.3	9 8	58.81 58.94	30907	-.108	.48	.	.	.
216	47	3692	6.16	B3	22 3 53.310	-.08	47 59 15.90	.4	6 6	59.37 59.37	30917	.023	.10	.	.	.
217	58	2402	5.19	O	22 9 48.477	.01	59 10 2.53	-.9	7 7	57.46 57.46	31066	-.102	.10	.	.	.
218	45	3879	8.3	B	22 16 55.923	.	45 33 4.46	.	6 6	60.34 60.34	.	.	.	.	.	.
219	36	4835	6.39	B3	22 24 32.171	.09	37 11 19.09	-.2	8 8	58.47 58.47	31360	-.051	-.34	.	.	.
220	39	4841	6.07	B3	22 25 14.711	-.01	39 33 16.89	-1.0	8 8	61.07 61.17	31375	-.039	.71	.	.	.
221	40	4854	7.00	B5	22 32 17.553	-.19	40 30 58.41	-.6	9 8	58.47 58.44	31522	.069	.51	.	.	.
222	38	4808	6.55	B5	22 33 38.317	-.10	39 22 7.94	-.2	8 8	61.64 61.53	31550	-.002	.21	.	.	.
223	38	4808	5.83	B3	22 33 38.546	.00	39 22 30.62	-.5	7 6	60.99 61.36	31551	-.013	.61	.	.	.
224	49	3903	6.20	B3	22 33 48.428	.03	49 48 41.36	.8	6 6	58.79 58.79	31556	-.009	.01	.	.	.
225	37	4631	6.75	B3	22 34 7.230	-.04	37 34 58.17	.0	9 8	58.94 59.08	31564	.009	-.06	.	.	.
226	38	4817	8.1	B3	22 35 14.440	.	39 10 43.98	.	8 8	61.05 61.05	.	.	.	.	.	.
227	36	4898	6.67	B3	22 36 48.597	-.12	37 6 53.48	-.3	8 8	58.68 58.68	31617	.028	.39	.	.	.
228	39	4912	5.18	A2	22 39 14.054	-.08	39 57 50.16	-.1	8 8	58.20 58.20	31670	.052	.53	.	.	.
229	37	4670	6.22	B3	22 40 38.920	.06	37 32 25.80	-.8	9 8	59.12 59.18	31704	-.052	.26	.	.	.
230	64	1717	6.83	B3	22 46 3.894	.02	64 47 52.48	.5	8 8	57.13 57.02	31826	-.113	-.06	.	.	.
231	47	3931	7.8	B5	22 47 6.629	.	47 39 54.82	.	9 8	57.85 57.99	.	.	.	.	.	.
232	41	4623	5.84	B5	22 48 6.148	.06	41 41 17.76	.0	9 9	58.41 58.41	31861	-.001	.07	.	.	.
233	61	2356	8.4	B3	22 50 34.238	.	62 10 28.59	.	7 6	58.02 58.06	.	.	.	.	.	.
234	49	3965	8.5	B5	22 50 47.909	.	49 35 55.77	.	8 8	59.80 59.80	.	.	.	.	.	.
235	42	4529	7.4	B5	22 52 5.572	.	43 15 43.12	.	7 6	59.02 59.42	.	.	.	.	.	.
236	42	4538	7.68	B5	22 53 31.061	.	43 17 32.25	.	7 9	58.57 58.82	.	.	.	.	.	.
237	40	4949	5.54	B3	22 54 6.307	-.06	41 20 11.89	.0	10 7	59.14 59.59	31987	.007	.09	.	.	.
238	62	2136	7.76	B5	22 54 33.131	-.01	62 36 4.44	.4	8 7	61.20 61.14	31994	-.015	-.14	.	.	.
239	43	4355	7.02	B3	22 56 29.096	.10	43 34 14.51	.9	7 6	59.56 59.69	32029	-.098	-.49	.	.	.
240	62	2146	7.36	B5	22 56 35.637	.19	63 26 19.15	.4	6 6	59.95 59.95	32032	-.118	-.16	.	.	.
241	37	4744	6.39	B3	22 58 34.821	-.03	38 26 20.92	-.4	7 7	57.89 57.89	32073	.014	-.35	.	.	.
242	43	4378	6.32	B3	23 0 27.602	-.02	43 47 22.28	-.1	6 6	58.20 58.38	32114	.002	.02	.	.	.
243	62	2170	7.46	B5	23 4 6.399	.15	62 56 33.26	1.1	10 6	59.50 60.19	32185	-.175	-.19	.	.	.
244	58	2545	4.91	B1	23 4 29.452	.10	59 8 57.43	.3	8 8	58.58 58.58	32197	-.068	-.06	.	.	.
245	45	4147	6.56	B5	23 5 0.275	.01	45 47 51.36	.0	7 7	61.69 61.68	32208	-.055	.68	.	.	.
246	74	106	4.56	G5	23 6 17.943	.22	75 7 0.93	-2.1	9 10	61.89 61.95	32237	-.089	-.17	874	-.047	-.45
247	48	3950	6.53	B3	23 7 0.536	.10	49 22 45.77	.0	9 8	58.20 58.37	32253	-.054	.24	.	.	.
248	73	1023	5.74	A0	23 12 49.888	1.16	73 57 30.74	1.0	12 9	58.16 58.52	32366	-.192	.19	.	.	.
249	30	505	5.21	K2	23 31 28.057	.38	31 2 56.62	-1.2	13 12	59.74 60.16	32772	-.008	-.34	887	-.010	-.45
250	60	2636	6.98	B0	23 51 20.071	.02	60 34 30.86	1.0	10 9	59.42 59.51	33149	-.073	-.88	.	.	.

No.	B.D. No.	M+Sp.	R.A. 1950		Decl. 1950		No. Epoch		O - G.C.			O - FK3			
				100 $\mu$		100 $\mu$ '	$\alpha$	$\delta$	$\alpha$	$\delta$	No.	$\Delta\alpha$	$\Delta\delta$	No.	$\Delta\alpha$
251	60 2637	7.6 R0	23 51 43.166	.	61 19 40.53	.	8 7 59.88	59.90	.	.	.	.	.	.	.
252	61 2562	7.16 R0	23 52 11.889	-.42	61 33 38.91	-1.9	6 7 60.03	60.28	33163	.094	1.39	.	.	.	.
253	56 3115	6.05 R0	23 53 2.641	-.11	57 8 2.57	.0	6 6 58.93	58.93	33184	.001	.68	.	.	.	.
254	58 2676	8.4 R0	23 55 15.661	.	59 26 30.63	.	7 6 57.61	57.43	.	.	.	.	.	.	.
255	54 3082	4.93 R2	23 56 27.669	.09	55 28 36.02	-.2	7 8 59.58	59.85	33257	-.047	.18	.	.	.	.

PUBLICATIONS  
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 DOMINION OBSERVATORY  
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 Volume XXV No. 10  
 A LARGE 10 METER ARRAY  
 FOR RADIO ASTRONOMY

J. A. G. C. H. Furton  
 and  
 G. S. S. Hughes