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RADIAL VELOCITIES FROM OBJECTIVE PRISM PLATES

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RESUMEN

Se presenta un nuevo método basado en ajuste de bloque para la determinación de las velocidades radiales de placas de prisma objetivo y se aplica a dos campos del cielo del sur.

ABSTRACT

A new method based on block adjustment for the determination of radial velocities from objective prism plates is presented and is applied to two southern fields.

Key words: **ASTROMETRY – RADIAL VELOCITIES**

I. INTRODUCTION

Digitized objective prism plates can yield information on stellar surface gravities, chemical compositions, and radial velocities, as was shown by Rose (1989). To this, accurate positions may be added (Stock 1978, 1984). The accurate derivation of stellar parameters from digitized objective prism spectra requires several plates for a given area, usually six (Rose 1984, 1985a,b). Taking these plates in sets of two with opposite dispersion, radial velocities and positions can be derived from the same observational material.

In view of the new interest in the method presented by Stock and Osborn (1980) and revised by Stock (1984) it seemed appropriate to reexamine some of its procedures. Basically the method employed so far utilizes a coordinate comparison, line by line, of the spectra of a given object on two plates with opposite dispersion. This comparison then is carried out for as many pairs of spectra as can be found in common to the two plates. It was clear all along that a certain amount of information is lost, namely in those cases where a given line is measureable in one of the spectra but not in the other, due to a difference in resolution, a plate defect, or any other reason. Likewise the limiting magnitude may not be identical on the two plates. Furthermore, if the two plate centers do not coincide exactly, a number of spectra along the field edge may not find a counterpart on the other plate. In all these cases a suitable second spectrum, i.e., with opposite dispersion, may be present on a different second plate, even if the latter has a rather different center. Thus it appeared desirable to try to develop a method which makes it possible to combine the data from all plates with identical sense of the dispersion into one single system before comparing the systems of opposite dispersion. This obviously leads to the application of plate overlap methods.

The purpose of this paper is to propose a method for the derivation of positions and radial velocities from objective prism plates which incorporates block adjustment and which at the same time overcomes the problems mentioned above.

II. THEORETICAL CONCLUSIONS

In previous papers the field distortion caused by an objective prism was represented by a third-order polynomial generating in this form twenty unknowns [see equation (5)] in Stock 1984). However, the ample material already on hand did not yield consistent third-order terms for any of the telescope-prism combinations studied so far. For this reason numerical simulations based on a rigid prism theory were carried out in order to determine whether these terms could not be left out altogether. The simulations considered different prisms, different telescopes, different prism orientations and misalignments, and in all cases field sizes common for Schmidt telescopes. The results may be summarized as follows:

1. A longitudinal orientation error, i.e., the prism is not set at minimum deviation, does not generate errors in excess of 1.5 μm over the entire field if a second order polynomial is used.

2. A lateral tilt of 0.5° may generate a residual of 2 μm in one corner only.

3. Within a reasonable range of prism misalignments the second-order term can be taken as strictly a radial term whose numerical value does not depend on the alignment parameters, but does depend on the wavelength.

The application of a block adjustment method would be greatly simplified if all coordinates measured along a spectrum could be reduced to one single pair X, Y, representing one specific spectral line, even if this particular line is not present in the spectrum under consideration. This idea led to the following question: Can a spectrum anywhere in the field be considered to be a linear magnification or reduction of the same spectrum placed in the center of the plate? And in case this is true within acceptable limits, then: How does this magnification factor depend on the location of the spectrum in the field? Furthermore: Does this factor depend on the radial velocity of the object?

Answers to the above questions were derived from numerical simulations. The results for a specific case, namely the Curtis Schmidt Telescope on Cerro Tololo with its 6° prism and blue plates, can be summarized as follows:

1. Within an accuracy of 1.5 μm the assumption of a magnification factor is valid.

2. The magnification factor p can be described by a polynomial with two linear terms and a radial second-order term.

3. The radial velocity requires the introduction of a second factor which becomes important for velocities over 100 km s^{-1}.

Presently P. Guillén is working on objective prism simulations as part of his thesis. His intentions are not only to verify the above statements but also to investigate what alterations have to be introduced to the methods to be described in the following sections if a higher measuring accuracy is obtained, for instance when using a PDS plate scanner or a similar device. His conclusions will be presented in a separate paper.

III. THE STANDARD SPECTRUM

Measurements of lines in objective prism spectra have to be restricted to a previously selected list. Such a selection is based on two criteria, namely (1) the lines chosen must be present in many of the spectra to be measured, and (2) their rest wavelength must either be independent of the spectral type, or at least must be predictable with sufficient accuracy from the spectral type estimated from the same spectrum.

Measurements should be arranged such that the X-axis is perpendicular to the direction of the dispersion, and the Y-axis parallel to it. This then means that within a given spectrum X remains constant while Y advances or recedes with the wavelength. A standard line and hence standard wavelength is chosen as reference line for every spectrum. Naturally it is of advantage to choose this line about in the middle of the spectra. Let us consider for a moment that there is a spectrum exactly in the center of the plate, with the reference line exactly at the origin of the coordinates. Furthermore suppose that all lines of the above list are present in this spectrum. Naturally one also has to assume that this fictitious object has zero radial velocioty. The Y-coordinates of the lines measured in this spectrum form the standard spectrum. Its Y-coordinates we shall call $d_0(i)$, where i is the code number of the respective line. Obviously $d_0(I)$, I being the code number of the reference line, is zero.

In a spectrum anywhere in the field the $d(i)$-values can also be measured. According to what was explained in the previous chapter one should expect

$$d(i,X,Y) = d_0(i)\,p(X,Y) \ , \tag{1}$$

where the factor p should have the form

$$p(X,Y)=1+P_0+P_1\,X+P_2\,Y+P_3\,(X^2+Y^2) \ . \tag{2}$$

Once the $d_0(i)$-values are known for all lines involved, the coefficients of equation (2) can readily be determined for any plate.

The above described idealized spectrum in the center of the plate does not exist, even if one purposely centers the field such that a star rich in lines and of proper exposure will appear at the origin of the coordinates. No star will show in its spectrum all lines which may be suitable for radial velocity work, and even if it did the d_0-values thus obtained will still be affected by measuring errors, plate defects, etc. There is a method, though, which makes use of all spectra in the field which shall be described in the next section.

IV. THE SECOND-ORDER DISTORTION TERM

Let X, Y be undistorted coordinates, and X', Y' coordinates of the same object and spectral line distorted by the prism. According to the prism theory we have

$$X' = X \ , \tag{3}$$

$$Y' = Y + e_0 + e_1\,X + e_2\,Y + e_3\,(X^2 + Y^2) \tag{4}$$

for a given plate. If we now consider a plate taken with exactly the same center but with the sense of the dispersion reversed we expect to find again a relation similar to equation (4), with possibly different coefficients.

What is important here, though, is that according to the theoretical results presented in §II the e_3-coeficient should be the same again except for the sign which will be found to be inverted.

In both cases the distorted coordinates have been expressed as function of the undistorted coordinates which, naturally, are not known. This, however, is only a minor handicap. Since the distortion is reversed with respect to the field, most of it cancels out when the coordinates from both plates are averaged. Thus these averages can be used to substitute the undistorted coordinates.

If we now form the differences DY, line by line and star by star, between the Y'-values from both plates we expect a relation of the form

$$DY = g_0 + 2d_0(i) + + g_1(i)\bar{X} + g_2(i)\bar{Y} + 2e_3(i)\bar{R}^2 \ , \tag{5}$$

with

$$\bar{R} = \bar{X}^2 + \bar{Y}^2 \ . \tag{6}$$

Here the index i refers to the line code. The coordinates $\bar{X}$, $\bar{Y}$, and $\bar{R}$ are the averages mentioned above. The absolute term of this expression is composed of two parts of which one, namely g_0, does not depend on the wavelength. Thus, applying equation (5) line by line, and each time for all stars which show the respective line, one obtains the d_0-values for every line making use of the fact that $d_0(i) = 0$.

Theory as well as empirical data make it clear that all coefficients in the equations (4) and (5) depend on the wavelength. In fact, they should all be linear functions of the d_0-values, such that

$$e_3(i) = e_3(I) + f_3 \, d_0(i) \ , \tag{7}$$

and furthermore,

$$P_3 = f_3 \ . \tag{8}$$

It should be made clear at this point that the d_0-values thus derived refer to the average wavelengths for all stars in the field. Thus if the average radial velocity of a group of stars of a given type is different from zero, their contribution to the respective d_0-values will differ from that corresponding to the rest wavelengths.

Another important point is that stars with large radial velocities should be removed from the process of determining the above coefficients. Such stars can be recognized since the residuals found when applying equation (5) can be interpreted as due to radial velocity.

V. THE UNIFIED COORDINATES

Once a good knowledge is on hand concerning the d_0-values as well as of f_3 and $e_3(I)$ of the previous sections, the measurements along any spectrum anywhere in the field can be reduced to one single coordinate pair X_u, Y_u. The steps to be taken are

1. For every plate solve equation (2), using the already known value of p_3, the other coefficients remaining the unknowns. Any spectrum with two or more lines measured can serve this purpose. It is safer, though, to restrict the analysis to spectra with a minimum of four or five lines.

The value of Y' to be used should be that of the reference line. If not present, it can be predicted from the Y'-value of the nearest line by adding or subtracting its d_0-value, depending on the sense of the dispersion. The X'-value is used as measured for any line.

2. When the p-coefficients are known, the p-factor can be calculated for any spectrum. Then line by line one can calculate the predicted Y'-coordinate of the reference line $Y_0(i)'$ from

$$Y_0(i)' = Y'(i) - P(X', Y') \, d_0(i) \ . \tag{9}$$

Finally all $Y_0(i)'$-values are averaged to produce the unified coordinate Y_u.

3. A similar process can be used for the X'-coordinates in case one suspects that the spectra are not exactly parallel to the Y-axis. Otherwise one simply averages the measured $X' =$ values to produce the unified X'-coordinate X_u. At times it may be advantageous or even necessary to calculate the rms errors of the unified coordinates in the same process.

4. At this point the Y_u-coordinate can already be corrected for the known distortion term $e_3(I)$.

The X_u-coordinate thus obtained should be identical to what would be found on a direct plate with identical plate center. For stars with negligible radial velocity there will only be a linear distortion in the Y_u-coordinate. Thus these coordinates can be treated the same way as coordinates measured on a direct plate would. Only the interpretation of the plate constants will be different.

VI. THE PLATE OVERLAP TECHNIQUE

As was pointed out in the previous section, from this point on the coordinates can be treated the same way measurements of direct plates would. It is necessary, though, for the next steps to divide the plate material into two groups, one for each prism orientation. Within each group block adjustment methods may be applied, for instance those proposed by Stock (1981). Independent of the selection of the method the choice of a reference system has to be made. There are, in fact, two rather different options, the choice of which depends on the nature of the plate material. If the total area covered by the overlapping plates is not very large, compared with the field of a single plate, then at least for the purpose of radial velocities only no external reference system is needed. For each group one plate can constitute the reference system, and all other plates of the same group will be reduced to it. This may be appropriate when all plates reach very faint magnitudes, with the spectra of reference stars from an external source all being overexposed. Otherwise a suitable position catalogue can be used as reference system for the block adjustment.

Once each group has been fully reduced, with the positions of all stars in each group on a common system, the coordinates of the two groups can now be intercompared. Since with few exceptions objective prisms are mounted such that the dispersion points towards one of the celestial poles. the radial velocity will then become apparent as a difference in declination between the two positions resulting from the reduction of the two groups. The conversion factor from seconds of arc to km s^{-1} depends on the prism and on the telescope and can be calculated from a simple geometry.

If an internal rather than an external reference system has been used, it may be advisable to check whether there is a systematic difference between the coordinates of the groups. If this is the case, one group must be reduced to the other via a strict rotation matrix before the radial velocities can be calculated.

For the final positions naturally the coordinates resulting from the reduction of the two groups are averaged star by star. The difference in right ascension between the two positions serves to calculate the rms error of the final coordinate. The errors of the declinations have to be calculated within each group, and these then have to be combined to give the rms error of the final declination as well as of the radial velocity.

TABLE 1

THE PLATE MATERIAL

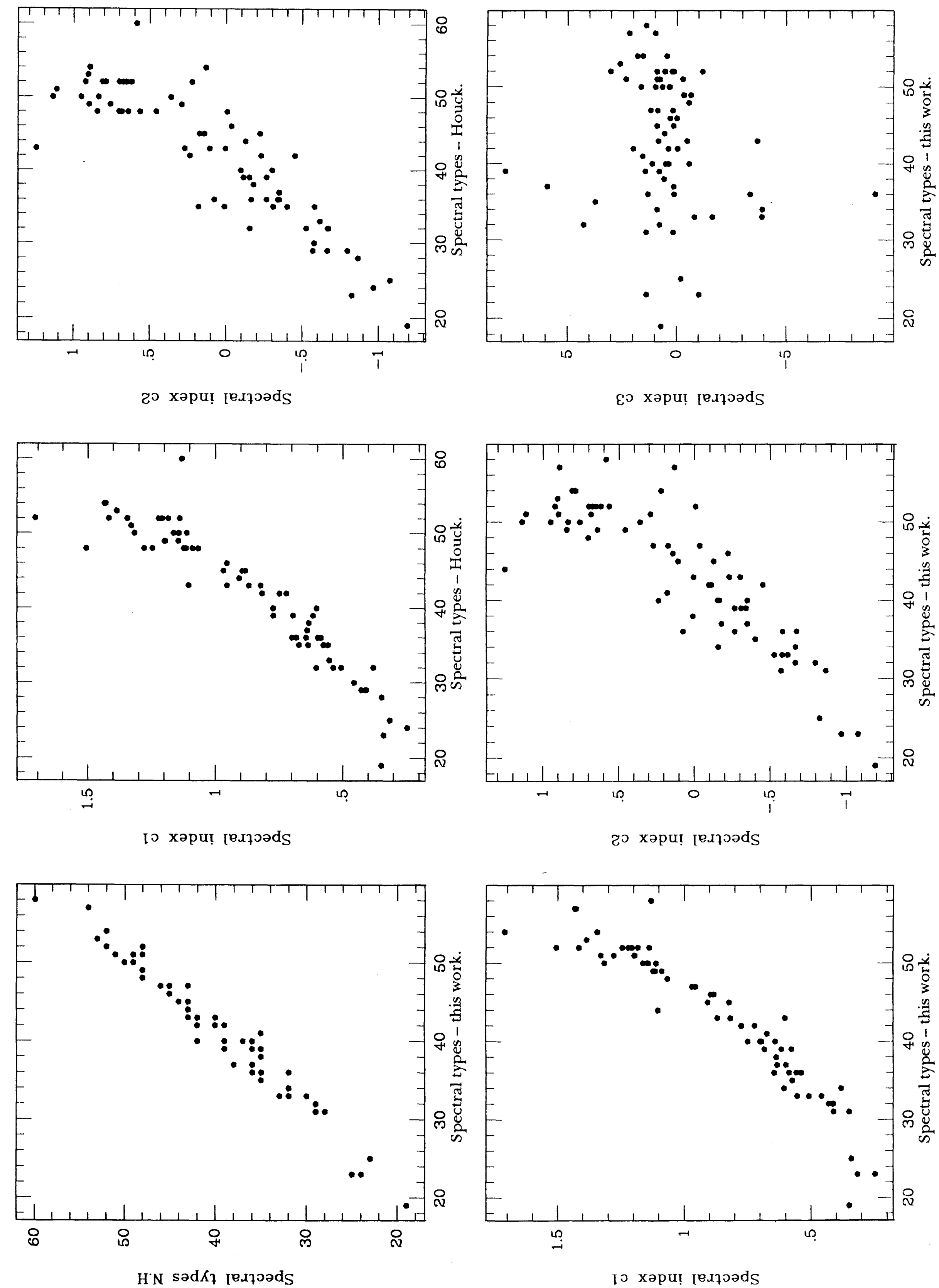
Plate Number	Date	R.A. 1950.0			Dec. 1950.0	Prism Apex
11478	1972 Sep. 9	0^h	45^m		$-23.5°$	N
11479	" 9	0	45		−23.5	N
11480	" 9	0	45		−28.0	N
11481	" 9	0	45		−28.0	N
11482	" 9	0	45		−32.5	N
11483	" 9	0	45		−32.5	N
11484	" 9	0	45		−23.5	S
11485	" 9	0	45		−23.5	S
11486	" 9	0	45		−28.0	S
11487	" 9	0	45		−28.0	S
11488	" 9	0	45		−32.5	S
11489	" 9	0	45		−32.5	S
11490	" 9	1	05		−23.5	S
11491	" 9	1	05		−23.5	S
11513	1972 Sep. 10	1	05		−28.0	S
11514	" 10	1	05		−28.0	S
11515	" 10	1	05		−32.5	S
11516	" 10	1	05		−32.5	S
11517	" 10	1	05		−23.5	N
11518	" 10	1	05		−23.5	N
11519	" 10	1	05		−28.0	N
11520	" 10	1	05		−28.0	N
11521	" 10	1	05		−32.5	N
11522	" 10	1	05		−32.5	N
10501	1972 Mar. 13	7	16		−60.0	N
10502	" 13	7	16		−60.0	N
10503	" 13	7	16		−60.0	S
10504	" 13	7	16		−60.0	S
10505	" 13	7	48		−60.0	S
10506	" 13	7	48		−60.0	S
10507	" 13	7	48		−60.0	N
10508	" 13	7	48		−60.0	N

VII. OBSERVATIONAL MATERIAL

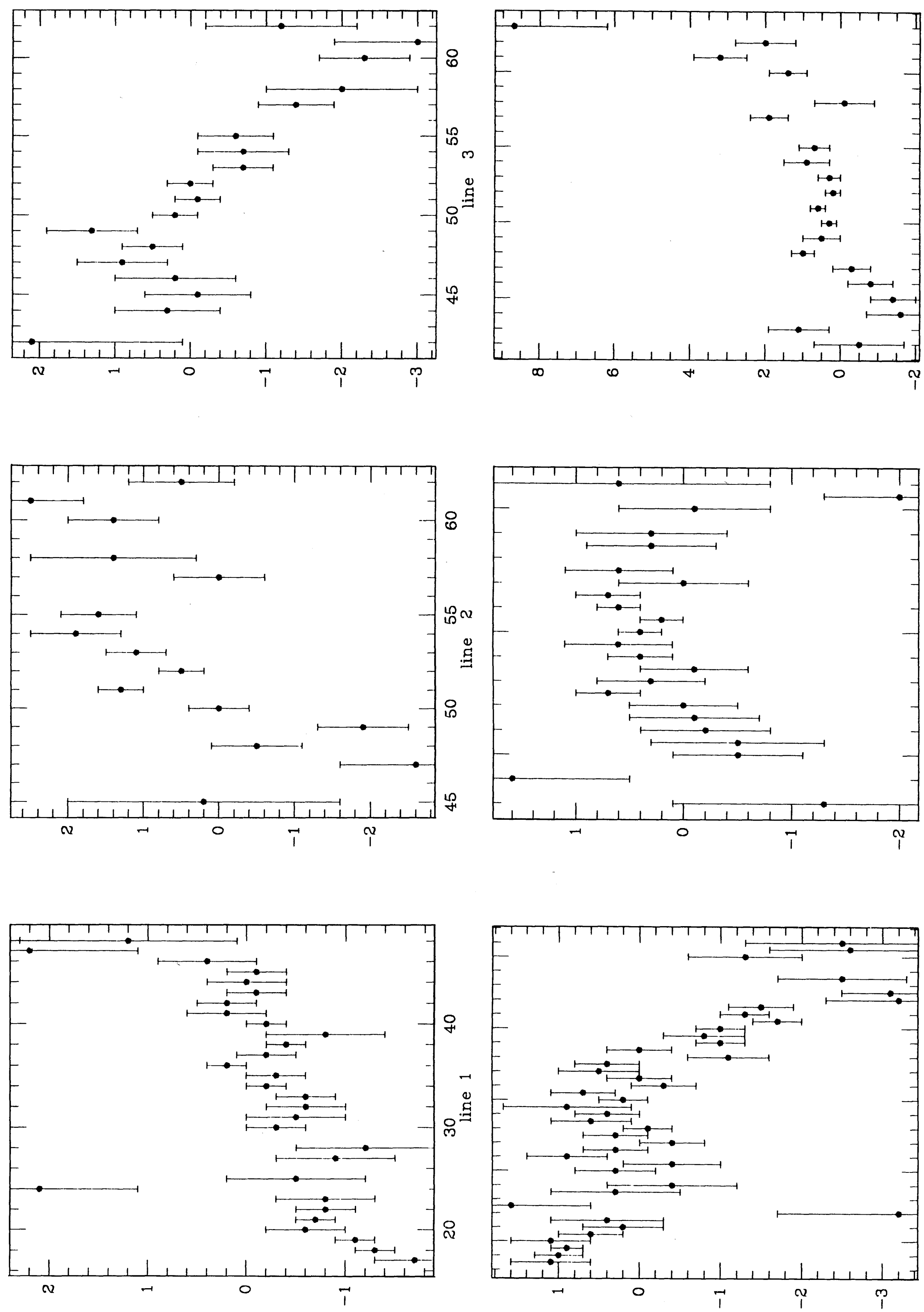
A total of 32 objective prism plates for two areas was obtained by J.D. MacConnell and G. Araya using the Curtis Schmidt telescope at Cerro Tololo, equipped with a six-degree prism. Area I is located near the South Galactic Pole, the other near the galatic plane. The plate material is Kodak IIaO, unsensitized and without filter. The exposure time was five minutes for each plate. Area I is composed of six overlapping fields, Area II of two overlapping fields. Each field was covered with two plate pairs of opposite dispersion. The spectra were widened to about 20″. The plates are listed in Table 1.

All plates were measured in pairs with a Zeiss PSK2 comparator which permits stereo vision and the simultaneous measurement of two plates. Spectral types and densities were estimated in the same process. The non-overlapping parts ofthe two plates were also measured, adding an indication to the record as to which of the two measurements is valid. The same was done for lines which were measured on one plate only.

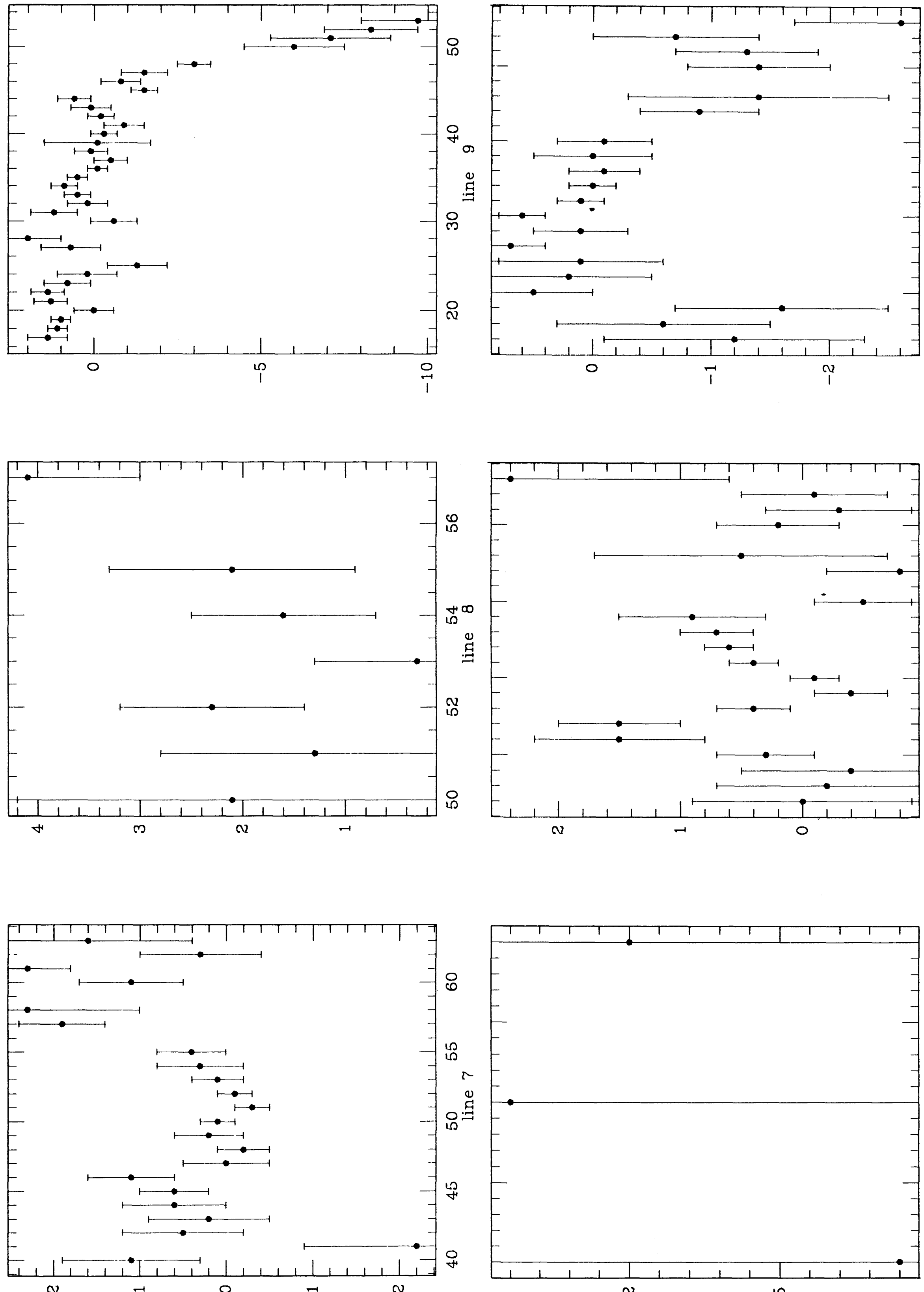
The list of lines selected for measurement is given in Table 2, together with some additional information. Originally more lines had been



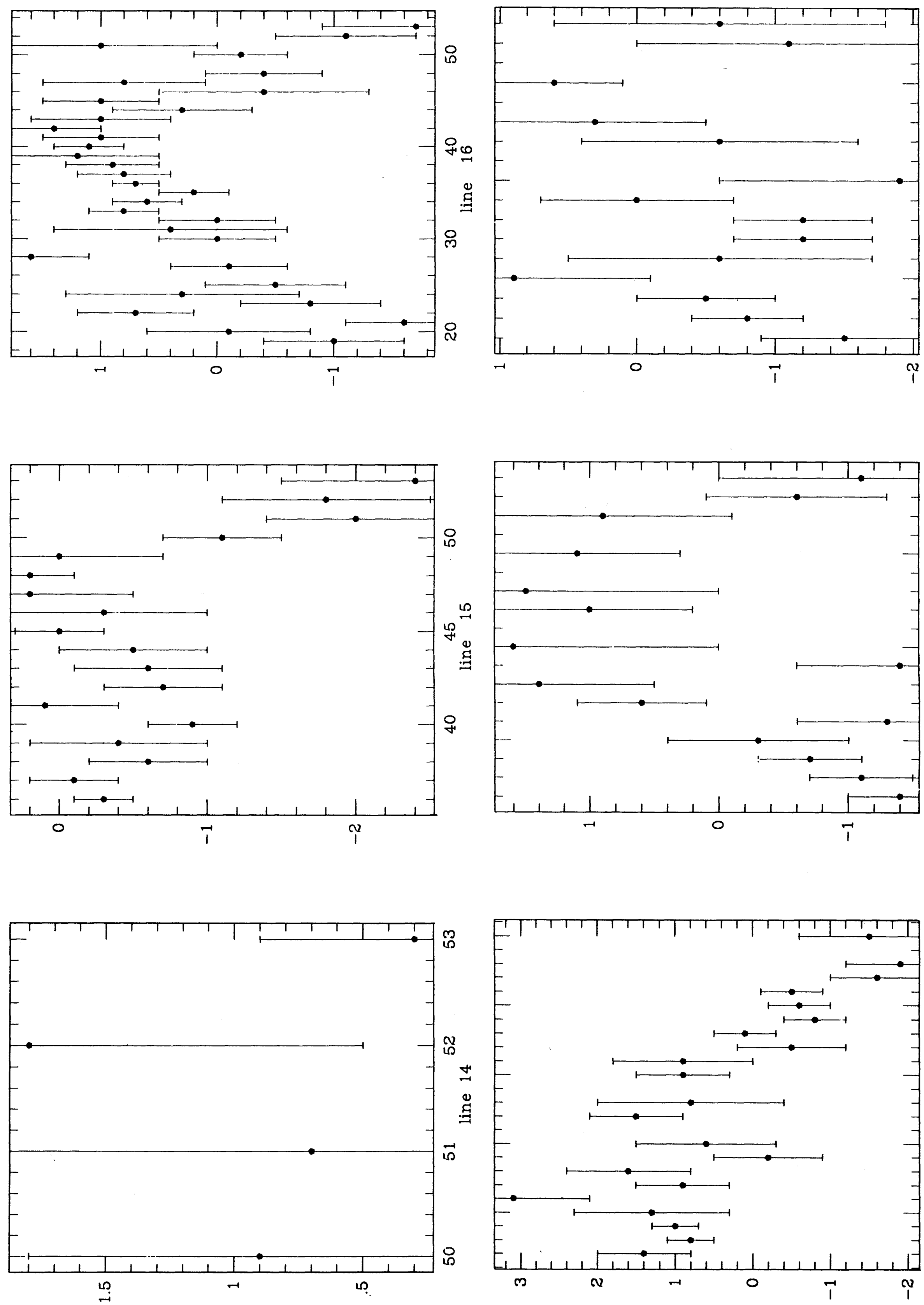
Figs. 1a-1f. The relation between spectral types by the author or by Houck (1975, 1982) and spectral indices by Rose (1991) and Rose and Agostinho (1991). The spectral type is coded such that A0 = 20, F0 = 30, etc.



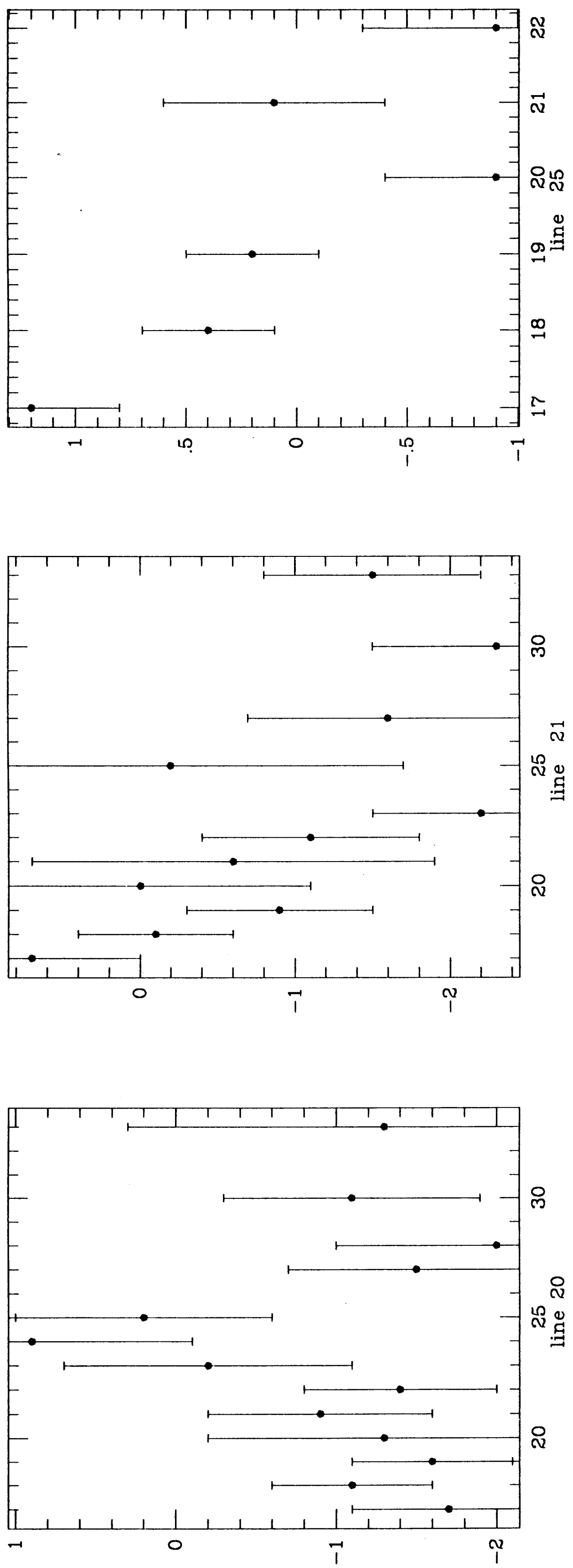
Figs. 2a-2u. Average deviation of the d_0-values from their mean, with their respective error bars, as function of the spectral type. The coding is the same as in Figure 1. The units of the ordinates are μm.



Figs. 2a-2u. Average deviation of the d_0-values from their mean, with their respective error bars, as function of the spectral type. The coding is the same as in Figure 1. The units of the ordinates are μm.



Figs. 2a-2u. Average deviation of the d_0-values from their mean, with their respective error bars, as function of the spectral type. The coding is the same as in Figure 1. The units of the ordinates are μm.



Figs. 2a-2u. Average deviation of the d_0-values from their mean, with their respective error bars, as function of the spectral type. The coding is the same as in Figure 1. The units of the ordinates are μm.

TABLE 2

LIST OF LINES[a]

i	$d(i)$	λ	Vel. Factor	N
1	3861.01	4861.31	8.2	1575
2	1835.72	4405.67	6.4	515
3	1725.81	4385.04	6.4	673
4	1484.19	4340.90	6.2	2348
5	1397.78	4325.51	6.1	1017
6	1093.63	4272.89	5.9	843
7	814.71	4226.68	5.8	953
9	0.00	4101.80	5.3	1750
12	− 398.64	4045.63	5.1	706
13	− 491.99	4032.91	5.0	626
15	− 979.58	3968.92	4.8	648
16	−1262.47	3933.60	4.7	1253
17	−1636.22	3888.82	4.5	470
18	−2105.23	3835.46	4.3	204
19	−2450.52	3798.06	4.2	170
20	−2710.96	3770.83	4.1	151
21	−2913.46	3750.21	4.0	133
25	− 972.09	3969.88	4.8	244

a. $L_0 = 1986.84$, $X_0 = 14612.43$, a: $= -30904639.5$.

included in the list, but it was found that some of them appeared only in very few spectra and hence were discarded later on.

VIII. THE RESULTS

The last column of Table 2 lists the total number of times the respective lines were measured. The final d_0-values in the second column were derived from these measurements. The d_0-values are related to the wavelengths by the expression

$$L(i) - L_0 = a/[d_0(i) - X_0] \ , \qquad (10)$$

where L_0, a, and X_0 are constants, while $L(i)$ is the wavelength in A. The values of the wavelengths calculated with the above equation are listed in column 3 of Table 2.

Combining the results from all plate pairs the following values were found for the coefficients of equation (7):

$$e\,(9) = 2.59283{\times}10^{-8} + 0.00014{\times}10^{-8}$$

$$f_3 = 1.274{\times}10^{-13} + 0.01{\times}10^{-13}$$

for coordinates measured in μm.

The spectral types, averaged in most cases from estimates on four different plates, have an internal consistency of about one subclass. In Figures 1a-1f the spectral types are compared with those by Houck (1975, 1982) and with various spectral indices by Rose (1991) and Rose and Agostinho (1991).

For each line the dependence of its d_0-value on the spectral type was analyzed. The results are shown in graphical form in Figures 2a-2u. In some cases, for example for line 9 (Hδ), the spectral type range for the use of the line had to be restricted.

The final data for the stars in Area I and Area II are listed in Table 3 and Table 4 respectively, arranged as follows: Col. 1, running number; cols. 2-4, right ascension (1950.0); col. 5, rms error of the right ascension; cols. 6-8, declination (1950.0); col. 9, rms error of the declination; col. 10, magnitude derived from the density estimates; col. 11, radial velocity; col. 12, rms error of the radial velocity; col. 13, spectral type col. 14, number of plate pairs measured.

The average mean errors of the positions for the two areas are

	Area I	Area II
Right ascension	0.0135^s	0.0315^s
Declination	$0.177''$	$0.144''$

The reference system used is the Heidelberg PPM-catalog by Bastian *et al.* (1991). From the average difference between our positions and those of the PPM-catalog, the latter naturally for the epoch of our plates, the mean error of the reference positions can be calculated. In the case of Area I these errors coincide exactly with those quoted by Bastian *et al.* while in the case of Area II the PPM-catalog seems to be better than its authors claim.

IX. CONCLUSIONS

As was explained in the previous sections, from the material on hand radial velocities can be determined in two ways. One may apply equation (5) for every plate pair and then average the results for the final catalog. If there is overlap between the fields one can also apply the plate overlap technique and find the radial velocity from the declination differences of the final position data derived from plate sets with opposite dispersion. Both methods were applied and the results intercompared. For Area I there is very little overlap between the fields, and both methods gave similar results. In Area II the overlap is more generous, and as a consequence the overlap technique gave a somewhat superior result.

R. Agostinho is presently working with similar plate material, but for a different field and taken with a different prism. His plate material is more suitable for a comparison of the methods proposed in this paper since it was taken with this purpose in mind while the plates dealt with in this paper were taken originally for the application of only one method. Agostinho has applied both methods and in a comparison he will also include the data from this paper. The evaluation of the data for Area I in a kinematic sense will be carried out together with data for the same area by Rose and Agostinho.

REFERENCES

Bastian, U., Röser, S., Nesterov, V.V., Polozhentsev, D.D., Potter, Kh.I., Wielen, R., Yagudin, L.I., & Yatskiv, Ya.S. 1991, A&AS, 87, 159

Houck, N. 1975, Michigan Spectral Catalog Vol. I (Michigan: U. of Michigan)

____. 1982, Michigan Spectral Catalog Vol. III (Michigan: U. of Michigan)

Rose, J.A. 1984, AJ, 89, 1238

____. 1985a, AJ, 90, 787

____. 1985b, AJ, 90, 803

____. 1989, in The Gravitational Force Perpendicular to the Galactic Plane, eds. A.G.D. Philip and P.K. Lu (L. Davis Press)

____. 1991, AJ, 101, 937

Rose, J.A., & Agostinho, R. 1991, AJ, 101, 950

Stock, J. 1978, in IAU Colloquium 48, Modern Astrometry, eds. F.V. Prochazka and R.H. Tucker (Vienna: Institute of Astronomy), p. 411

____. 1981, RevMexAA, 6, 115

____. 1984, RevMexAA, 9, 77

Stock, J., & Osborn, W. 1980, AJ, 85, 1366

TABLE 3

POSITIONS, RADIAL VELOCITIES AND SPECTRAL TYPES FOR STARS IN AREA I

No.	α h	m	s	$\Delta\alpha$ s	δ °	'	''	$\Delta\delta$ '	m_{pg}	V_{rad}	σ	Sp.	N
1	0	32	47.809	0.056	-29	29	4.78	0.12	9.1	24.4	16.2	G5	2
2	0	32	50.549	0.000	-32	50	43.07	0.02	11.0	4.5	0.9	K2	2
3	0	33	4.038	0.038	-25	40	30.26	0.04	9.8	15.8	7.2	A5	2
4	0	33	9.575	0.040	-27	7	53.90	0.03	9.1	-16.8	7.9	F3	2
5	0	33	20.966	0.028	-25	9	12.07	0.10	10.2	31.3	8.1	M2	2
6	0	33	21.734	0.034	-26	46	16.51	0.45	11.4	-22.2	26.8	A8	2
7	0	33	27.094	0.012	-24	4	36.88	0.28	10.8	49.9	7.1	F5	2
8	0	33	32.220	0.006	-28	32	35.79	0.03	10.5	-58.6	5.1	G0	2
9	0	33	32.374	0.013	-24	53	38.10	0.10	10.2	25.8	2.4	K0	2
10	0	33	33.546	0.004	-31	40	42.60	0.17	10.9	-38.0	22.2	F7	2
11	0	33	35.364	0.020	-31	54	31.59	0.16	9.5	3.3	9.2	G2	2
12	0	33	35.419	0.030	-28	41	1.36	0.11	11.2	3.0	25.6	G0	2
13	0	33	37.520	0.039	-23	7	1.93	0.11	7.3	-16.6	10.5	A7	2
14	0	33	40.120	0.055	-25	22	28.07	...	11.4	-21.1	22.6	G0	1
15	0	33	42.594	0.015	-21	40	25.59	0.08	10.5	-40.6	7.4	G9	2
16	0	33	43.539	0.024	-27	2	8.13	0.10	9.1	-13.2	10.7	F3	2
17	0	33	43.996	0.009	-33	0	57.72	...	11.3	34.3	24.4	K2	1
18	0	33	46.236	0.005	-34	10	17.46	0.15	10.2	23.2	12.1	K2	2
19	0	33	57.102	0.008	-26	51	2.37	0.20	10.1	-40.0	14.3	G5	2
20	0	33	59.226	0.002	-25	56	54.55	0.19	10.9	-69.3	28.3	F2 Asd?	3
21	0	34	1.181	0.011	-30	36	31.51	0.33	10.8	-1.9	21.7	M1	4
22	0	34	4.638	0.006	-29	15	49.26	...	11.2	44.8	29.2	G2	1
23	0	34	4.641	0.006	-29	7	42.10	0.06	9.4	13.7	8.4	K2	2
24	0	34	6.691	0.010	-25	28	36.53	0.01	10.9	48.6	9.2	K0	2
25	0	34	11.189	0.004	-23	16	38.61	0.13	11.2	-5.0	8.3	G9	2
26	0	34	12.283	0.026	-27	33	2.82	0.04	8.9	-32.0	4.2	G pec	2
27	0	34	12.909	0.024	-33	32	27.26	0.02	10.5	-1.9	0.9	F5	2
28	0	34	14.660	0.030	-27	41	40.47	0.03	8.8	0.4	0.9	F4	2
29	0	34	15.105	0.021	-30	20	46.51	...	11.5	21.3	12.9	K2	1
30	0	34	17.799	0.027	-24	46	32.32	0.11	8.5	28.4	13.0	G9	2
31	0	34	18.504	0.040	-34	23	0.32	...	11.5	45.8	15.6	G2	1
32	0	34	22.176	0.025	-24	46	12.09	0.08	8.5	31.2	0.9	G7	2

TABLE 3 (CONTINUED)

		α		Δα	δ			Δδ					
No.	h	m	s	s	°	′	″	″	m_{pg}	V_{rad}	σ	Sp.	N
33	0	34	22.406	0.029	-34	7	45.47	...	11.5	11.2	35.0	G0	1
34	0	34	25.559	0.024	-34	33	19.31	0.10	11.3	41.7	28.8	A7	2
35	0	34	32.013	0.004	-23	26	16.52	0.16	11.2	-40.8	28.7	F5	2
36	0	34	32.524	0.015	-29	59	12.18	0.11	9.9	53.3	16.3	K0	2
37	0	34	37.181	0.003	-26	25	11.87	0.21	11.1	-78.3	10.4	G4	2
38	0	34	37.228	0.014	-32	25	34.36	0.20	10.8	-27.1	24.2	F5	2
39	0	34	37.802	0.013	-31	58	19.12	0.10	10.1	-0.6	2.4	F2	2
40	0	34	41.767	0.010	-25	19	11.01	...	11.1	4.6	9.4	F5	1
41	0	34	43.445	0.040	-23	32	49.66	0.03	11.0	-32.1	1.8	G3	2
42	0	34	49.027	0.001	-25	2	32.38	0.10	7.3	47.2	13.0	G0	2
43	0	35	1.299	0.008	-26	1	34.94	0.22	8.8	6.9	15.7	G3	4
44	0	35	4.592	0.026	-24	13	46.68	0.11	10.9	-0.6	10.2	G5	3
45	0	35	10.501	0.011	-25	50	6.90	0.15	8.9	18.1	14.4	F5	4
46	0	35	16.009	0.001	-23	15	1.43	0.12	11.0	-8.3	15.1	K2	2
47	0	35	23.933	0.001	-33	46	55.34	0.04	11.2	24.5	1.7	K0	2
48	0	35	28.569	0.001	-22	36	46.04	0.05	9.3	-44.4	7.8	G8	2
49	0	35	32.597	0.006	-26	25	38.04	...	11.4	28.5	39.9	G2	1
50	0	35	33.163	0.003	-23	27	23.37	...	11.3	48.0	43.9	G5	1
51	0	35	34.239	0.005	-29	47	12.94	0.09	10.7	33.4	2.6	K4	2
52	0	35	35.590	0.003	-21	41	5.81	0.11	11.1	-29.2	0.6	M1	2
53	0	35	35.929	0.006	-29	2	12.94	0.04	11.1	6.8	5.2	K1	2
54	0	35	36.721	0.005	-25	35	52.80	0.11	11.1	41.1	12.0	F9	2
55	0	35	38.630	0.006	-27	53	45.48	0.24	8.9	-23.8	19.4	K0	2
56	0	35	42.385	0.012	-22	32	19.38	0.11	10.4	-44.6	10.4	G7	2
57	0	35	43.959	0.015	-23	29	42.71	...	10.8	11.3	15.0	G7	1
58	0	35	44.940	0.010	-21	28	8.36	0.13	10.6	-7.2	11.7	K4	2
59	0	35	51.943	0.000	-32	55	57.88	0.12	11.0	-27.6	0.4	G5	2
60	0	35	53.319	0.000	-32	18	34.38	0.12	10.1	-33.6	17.9	F7	2
61	0	35	56.061	0.037	-24	56	16.08	0.11	8.8	5.9	12.3	A7	2
62	0	35	59.963	0.030	-31	30	8.58	...	11.3	25.4	32.8	G5	1
63	0	36	2.037	0.003	-21	33	31.61	0.14	10.9	-24.5	9.7	G8	2
64	0	36	3.490	0.001	-33	44	54.97	0.12	9.4	-43.8	14.1	K0	2
65	0	36	7.272	0.033	-23	52	25.47	0.13	7.8	29.4	2.5	F5	2
66	0	36	7.314	0.005	-32	57	12.77	0.08	11.2	-44.4	16.1	K2	2
67	0	36	15.738	0.012	-21	18	53.50	0.09	9.2	-11.2	7.6	F7	2
68	0	36	16.907	0.006	-27	26	45.88	0.10	9.8	6.3	14.0	G6	2
69	0	36	20.059	0.013	-25	22	56.72	0.08	8.1	35.4	0.2	K5	2
70	0	36	21.482	0.000	-25	52	30.41	0.13	9.0	-10.4	6.4	F5	4
71	0	36	22.030	0.014	-23	47	36.90	0.26	10.9	24.8	14.4	G5	2
72	0	36	23.528	0.004	-25	23	0.57	0.05	10.9	53.8	1.5	K1	2
73	0	36	24.612	0.001	-25	52	13.05	0.12	8.5	7.6	6.6	A7	4
74	0	36	27.185	0.004	-22	50	40.48	0.17	11.2	-70.8	18.0	F9	2
75	0	36	28.198	0.015	-25	42	7.92	0.19	11.0	-1.8	20.1	G0	2
76	0	36	30.532	0.004	-33	28	26.09	0.18	10.3	21.8	34.5	G4	2
77	0	36	32.910	0.001	-21	33	7.78	0.18	9.9	22.5	18.5	G6	2
78	0	36	35.421	0.010	-25	19	1.55	0.04	9.8	34.9	8.5	F5	2
79	0	36	37.578	0.005	-24	57	59.66	0.01	10.8	27.2	5.5	F6	2
80	0	36	42.420	0.003	-28	23	30.18	0.02	10.3	12.0	4.3	G9	2
81	0	36	45.679	0.015	-27	28	13.20	0.08	11.0	10.9	1.1	G7	2
82	0	36	46.254	0.000	-26	41	48.53	0.03	10.8	-15.1	2.3	F6	2
83	0	36	49.168	0.001	-28	25	25.91	0.12	9.8	38.6	5.8	K1	2
84	0	36	52.790	0.011	-27	49	5.00	0.05	11.1	-25.8	6.6	K2	2
85	0	36	57.001	0.005	-26	15	42.80	0.04	9.2	-10.6	4.6	G4	2
86	0	36	58.006	0.001	-24	47	53.68	0.05	10.0	-2.8	1.7	G3	2

TABLE 3 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
87	0	37	1.185	0.013	-27	29	43.60	0.04	11.1	-46.7	5.2	G0	2
88	0	37	3.111	0.004	-29	21	35.18	0.11	10.5	34.0	12.3	K2	2
89	0	37	5.612	0.008	-30	5	40.24	0.08	9.1	26.5	8.8	K1	2
90	0	37	10.330	0.011	-21	51	13.32	0.04	9.9	-14.5	3.9	G7	2
91	0	37	11.061	0.014	-32	56	34.09	0.06	11.4	-10.5	6.9	K8	2
92	0	37	11.122	0.015	-29	51	56.93	0.09	10.5	14.0	17.7	G0	2
93	0	37	15.209	0.002	-24	27	33.48	0.05	10.8	41.2	10.3	K2	2
94	0	37	16.152	0.012	-24	12	3.44	...	11.5	-24.0	20.6	K0	1
95	0	37	18.424	0.007	-30	47	55.68	0.12	11.1	3.9	22.8	G7	2
96	0	37	22.638	0.013	-25	18	27.10	0.08	9.2	-21.6	9.5	G7	2
97	0	37	24.984	0.002	-33	19	37.39	0.25	11.5	66.8	13.9	F1	2
98	0	37	26.025	0.001	-26	15	57.44	0.05	10.9	-26.4	6.2	K0	2
99	0	37	27.919	0.000	-26	57	19.89	0.09	9.7	-37.5	14.1	F3	2
100	0	37	30.954	0.044	-34	14	6.08	0.13	8.0	-5.3	8.6	F7	2
101	0	37	40.623	0.008	-28	50	39.48	0.14	10.9	61.1	24.9	G2	2
102	0	37	40.729	0.005	-26	19	26.19	0.10	9.6	16.9	5.0	K3	2
103	0	37	48.767	0.017	-28	47	20.14	...	11.3	-2.1	26.7	K2	1
104	0	37	52.295	0.003	-31	36	44.98	0.14	11.2	12.0	9.7	F9	2
105	0	37	55.388	0.016	-23	42	14.17	0.10	9.7	-40.5	8.1	F5	2
106	0	37	58.351	0.019	-32	49	59.04	0.10	10.9	2.8	17.4	K2	2
107	0	37	59.483	0.012	-27	22	11.33	0.03	11.2	3.8	0.1	K2	2
108	0	38	2.765	0.011	-32	32	32.53	0.07	9.8	-4.4	5.2	F2	2
109	0	38	2.820	0.025	-24	4	35.65	0.04	7.4	-76.0	3.5	G0	2
110	0	38	3.023	0.008	-27	32	57.40	0.10	9.1	2.6	2.9	G7	2
111	0	38	3.820	0.008	-31	25	38.00	0.07	9.8	24.8	8.2	K0	2
112	0	38	4.789	0.011	-30	8	36.26	0.11	8.9	22.4	8.9	G7	2
113	0	38	6.055	0.015	-29	41	42.70	0.08	8.2	13.8	1.4	G	2
114	0	38	7.854	0.019	-22	48	24.15	0.16	11.4	9.2	26.9	F7	2
115	0	38	16.266	0.012	-34	34	23.09	0.05	10.7	-39.1	5.3	G1	2
116	0	38	20.159	0.023	-27	38	57.53	0.05	8.9	-15.9	9.4	F9	2
117	0	38	20.176	0.011	-31	8	1.45	0.03	9.1	19.1	6.3	G7	2
118	0	38	20.314	0.005	-33	2	27.43	0.08	10.6	-8.0	11.1	G0	2
119	0	38	24.044	0.007	-27	57	22.01	0.19	10.7	12.6	34.7	G5	2
120	0	38	29.511	0.009	-33	1	31.52	0.05	9.8	-24.7	3.1	F7	2
121	0	38	30.326	0.046	-26	20	17.83	...	11.4	6.9	27.9	G2	1
122	0	38	35.148	0.013	-23	25	22.05	0.24	9.2	0.8	19.9	F4	2
123	0	38	37.523	0.006	-29	47	41.47	0.07	10.6	36.9	9.8	K0	2
124	0	38	37.944	0.003	-23	48	0.59	0.14	10.4	-17.2	22.6	F2	2
125	0	38	40.682	0.004	-22	43	46.92	0.10	10.7	-23.6	7.9	F3	2
126	0	38	43.648	0.011	-27	6	39.45	0.07	10.7	13.2	6.8	G2	2
127	0	38	46.842	0.014	-34	48	30.30	0.16	10.7	23.0	13.3	G3	2
128	0	38	47.869	0.034	-25	16	3.73	0.03	11.0	-10.8	14.5	G0	2
129	0	38	56.268	0.003	-31	35	5.21	0.07	11.2	-7.7	11.5	K2	2
130	0	39	3.185	0.009	-34	0	31.33	0.12	10.8	46.6	8.6	K5	2
131	0	39	6.254	0.011	-25	28	13.55	0.15	8.1	44.0	20.8	K2	2
132	0	39	7.195	0.012	-32	41	34.77	...	11.3	14.8	58.5	F7	1
133	0	39	11.783	0.005	-27	31	2.22	0.04	10.3	1.1	2.0	F9	2
134	0	39	14.210	0.004	-25	2	1.33	0.07	8.8	3.8	5.6	G7	2
135	0	39	23.565	0.017	-25	55	52.98	0.19	11.2	-47.6	27.9	K1	2
136	0	39	31.651	0.029	-22	11	12.07	...	11.4	41.6	21.1	F2	1
137	0	39	33.947	0.005	-25	13	28.39	0.11	10.5	25.1	26.3	G3	2
138	0	39	37.444	0.012	-25	6	31.97	0.14	11.0	-14.0	17.0	F6	2
139	0	39	43.404	0.004	-23	15	56.96	0.06	9.9	-7.8	3.7	F3	2
140	0	39	45.597	0.020	-25	41	30.96	0.34	11.4	-28.9	54.5	F5	2

TABLE 3 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ″	m_{pg}	V_{rad}	σ	Sp.	N
141	0	39	53.751	0.007	-32	11	26.22	0.10	9.5	-12.8	15.8	A2	2
142	0	39	54.241	0.004	-23	33	29.07	0.16	10.8	4.6	14.6	K1	2
143	0	39	54.301	0.015	-31	4	50.28	0.16	9.4	-24.8	26.3	G0	2
144	0	39	57.386	0.010	-34	15	50.19	0.11	9.8	1.1	11.8	F2	2
145	0	40	3.536	0.003	-28	51	0.22	0.09	11.4	-26.9	15.6	A1	2
146	0	40	4.583	0.004	-26	27	43.47	0.10	10.2	8.4	13.9	F5	2
147	0	40	5.570	0.008	-28	10	34.23	0.05	10.9	-12.5	10.7	K0	2
148	0	40	16.130	0.008	-32	31	19.65	0.15	11.2	-15.6	3.1	A2	2
149	0	40	17.295	0.011	-24	31	42.91	0.14	10.2	-23.4	11.4	G0	2
150	0	40	21.408	0.024	-28	35	50.78	...	11.3	-53.9	20.9	F5	1
151	0	40	21.503	0.001	-21	55	56.48	0.09	9.8	-3.5	10.6	K0	2
152	0	40	24.738	0.013	-27	59	26.66	0.22	10.2	-5.8	7.9	G5	2
153	0	40	25.630	0.023	-27	24	13.04	0.20	11.1	37.9	41.6	F6	2
154	0	40	27.664	0.005	-22	53	40.47	0.16	11.0	-43.5	5.6	K2	2
155	0	40	29.598	0.010	-26	54	7.70	0.15	9.8	12.9	14.7	F3	2
156	0	40	37.973	0.010	-21	58	52.11	0.15	9.6	1.8	6.3	G5	2
157	0	40	42.567	0.003	-31	43	7.31	0.08	11.2	-34.7	6.3	F4	2
158	0	40	51.592	0.013	-33	13	18.16	0.23	9.4	-30.6	11.5	F7	2
159	0	40	52.713	0.027	-35	8	25.26	0.12	11.4	-52.1	5.6	K2	2
160	0	40	57.454	0.011	-26	11	46.71	0.13	9.1	13.9	15.8	F7	4
161	0	40	59.138	0.003	-33	27	41.67	0.10	11.2	47.9	16.3	G0	2
162	0	41	0.597	0.001	-22	54	38.17	0.03	9.9	2.1	1.2	K0	2
163	0	41	8.816	0.005	-25	0	11.34	0.05	10.4	35.0	4.6	G7	2
164	0	41	11.001	0.001	-28	32	23.92	0.21	11.4	-12.3	44.5	F6	2
165	0	41	15.692	0.012	-30	42	37.06	0.11	9.1	-17.3	10.4	F6	4
166	0	41	18.324	0.011	-21	20	38.10	0.13	9.4	36.6	7.8	G0	2
167	0	41	30.954	0.006	-25	8	45.35	0.15	8.8	-4.2	12.4	G3	2
168	0	41	34.651	0.012	-33	39	3.64	...	11.3	110.9	69.8	F6	1
169	0	41	35.481	0.010	-31	25	21.82	0.16	11.2	-15.3	9.6	K1	2
170	0	41	41.754	0.001	-30	41	24.59	0.11	9.2	-10.2	8.5	G0	4
171	0	41	47.587	0.002	-26	51	37.20	0.29	10.8	43.3	1.1	F7	2
172	0	41	48.121	0.001	-22	20	47.48	0.08	9.1	35.9	13.8	K0	2
173	0	41	48.927	0.037	-32	29	48.70	0.15	11.4	21.6	14.2	F7	2
174	0	41	52.396	0.032	-24	26	6.92	...	11.4	-33.4	27.0	M0	1
175	0	41	52.375	0.008	-25	1	24.14	0.08	10.9	16.6	2.3	K0	2
176	0	41	53.933	0.007	-34	8	42.95	0.10	9.4	17.1	15.3	F5	2
177	0	41	54.516	0.012	-30	23	6.28	0.17	9.6	-14.3	4.9	G4	4
178	0	41	58.588	0.017	-26	47	25.23	0.11	8.4	39.1	11.8	G4	2
179	0	42	0.000	0.002	-30	1	0.02	0.20	10.3	23.7	22.6	G5	2
180	0	42	0.635	0.003	-25	47	51.60	0.23	10.6	67.0	5.1	G0	3
181	0	42	4.781	0.006	-33	55	38.02	0.13	10.7	47.2	0.1	M0	2
182	0	42	10.815	0.005	-26	35	23.31	0.19	11.1	11.3	21.7	A6	2
183	0	42	12.453	0.004	-21	52	26.67	0.23	10.9	73.8	36.5	G0	2
184	0	42	19.661	0.007	-31	39	46.10	0.19	8.8	-6.4	24.8	K2	2
185	0	42	19.918	0.004	-23	57	1.86	0.03	10.8	57.0	3.0	A7	2
186	0	42	25.053	0.007	-32	32	32.13	0.12	10.5	15.7	21.4	F5	2
187	0	42	25.877	0.013	-21	40	43.96	0.07	9.1	22.6	6.7	F3	2
188	0	42	29.208	0.012	-23	8	16.24	0.18	10.8	-8.6	30.7	G2	2
189	0	42	33.753	0.017	-28	7	35.54	0.16	10.7	25.9	4.3	K1	2
190	0	42	39.082	0.005	-25	11	34.81	0.04	10.2	33.6	0.7	F4	2
191	0	42	39.162	0.017	-33	32	23.18	0.22	11.0	23.0	36.2	G7	2
192	0	42	43.192	0.001	-28	2	28.14	0.10	9.1	3.6	10.6	F5	2
193	0	42	44.449	0.009	-24	21	41.97	0.12	11.2	0.7	4.0	K0	2
194	0	42	46.243	0.004	-27	24	24.33	0.12	10.5	-21.9	16.3	G9	2

TABLE 3 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
195	0	42	55.472	0.006	-33	36	21.56	0.06	10.9	-17.9	9.7	F4	2
196	0	43	4.418	0.007	-34	17	24.94	...	11.3	11.0	16.7	G2	1
197	0	43	5.333	0.009	-28	57	29.57	0.07	10.4	-2.2	5.0	A2	2
198	0	43	7.339	0.008	-23	43	25.04	0.01	9.2	14.2	1.5	G9	2
199	0	43	7.638	0.011	-32	18	43.74	0.07	11.1	-15.4	10.5	G5	2
200	0	43	7.782	0.011	-28	9	13.52	0.19	9.4	61.4	14.3	K0	2
201	0	43	14.785	0.021	-21	29	23.69	0.08	10.1	28.5	0.3	F4	2
202	0	43	15.156	0.007	-21	46	8.17	0.14	11.6	-121.9	25.5	A1	2
203	0	43	16.406	0.005	-33	26	19.53	0.10	11.0	15.3	23.4	G4	2
204	0	43	21.450	0.003	-30	56	13.64	0.04	9.2	9.6	5.3	G0	2
205	0	43	25.665	0.024	-26	11	36.35	...	11.4	22.7	36.3	F7	1
206	0	43	27.861	0.000	-28	0	14.92	...	10.9	5.2	19.7	K0	1
207	0	43	29.449	0.007	-24	26	8.93	0.07	10.3	-37.5	1.4	G6	2
208	0	43	31.279	0.019	-30	58	56.90	0.07	8.7	9.3	6.1	G0	2
209	0	43	34.849	0.010	-25	39	10.91	0.16	9.4	-37.9	27.9	G7	2
210	0	43	37.973	0.011	-29	5	57.46	...	9.9	-10.5	32.9	A7	1
211	0	43	40.050	0.019	-27	18	23.58	...	11.4	-2.7	13.9	K0	1
212	0	43	40.126	0.006	-23	38	46.76	0.17	11.1	-48.8	35.2	F5	2
213	0	43	40.810	0.006	-33	51	1.66	0.09	10.9	4.6	15.6	G5	2
214	0	43	42.679	0.008	-22	30	52.57	0.03	9.1	12.8	6.1	G0	2
215	0	43	42.862	0.018	-33	33	27.22	0.18	10.8	15.5	27.4	G0	2
216	0	43	43.028	0.033	-22	47	42.31	0.07	7.7	1.3	1.7	G - K	2
217	0	43	43.994	0.000	-32	17	0.38	0.08	10.5	8.2	9.8	K0	2
218	0	43	47.042	0.020	-30	57	27.64	0.04	10.8	20.8	3.1	G9	2
219	0	43	48.208	0.004	-25	48	37.64	0.33	9.2	-20.6	9.7	A7	4
220	0	43	48.793	0.035	-33	50	22.35	...	11.7	18.0	26.7	A7	1
221	0	43	48.843	0.018	-31	56	50.59	0.12	10.8	-20.6	12.5	G6	2
222	0	43	51.351	0.013	-24	51	34.26	...	11.2	-22.5	16.6	G2	1
223	0	43	52.780	0.024	-23	44	6.80	0.08	10.9	5.1	24.0	G2	2
224	0	43	54.990	0.004	-23	46	7.29	0.04	9.8	6.3	2.7	F7	2
225	0	44	0.817	0.030	-31	53	18.54	0.10	11.2	33.7	9.0	K4	3
226	0	44	4.673	0.011	-28	49	35.35	0.09	9.6	6.3	0.8	G7	2
227	0	44	4.720	0.010	-32	42	28.22	0.17	10.6	12.8	17.5	G2	2
228	0	44	4.804	0.018	-28	40	29.16	0.05	10.5	0.9	9.8	G5	2
229	0	44	5.436	0.015	-33	25	1.22	0.13	9.1	-45.8	9.6	F6	2
230	0	44	9.459	0.009	-29	36	10.57	0.04	10.8	2.1	1.1	F8	2
231	0	44	10.545	0.013	-32	23	22.78	0.27	11.2	-16.1	4.2	F6	2
232	0	44	11.253	0.005	-30	27	50.01	0.19	8.4	12.7	9.3	K2	4
233	0	44	17.179	0.012	-33	41	33.76	0.08	10.7	-18.1	7.3	A0	2
234	0	44	21.277	0.019	-32	31	1.75	0.02	10.4	10.4	1.1	G9	2
235	0	44	23.011	0.015	-25	7	36.21	0.03	11.2	38.2	12.4	F3	2
236	0	44	26.859	0.002	-34	36	10.65	0.06	9.2	6.6	8.6	G1	2
237	0	44	31.992	0.024	-24	29	21.89	0.07	8.3	-6.6	9.8	A6	2
238	0	44	32.131	0.011	-30	27	13.85	0.25	11.0	-2.9	13.0	A9	4
239	0	44	32.162	0.012	-23	1	43.90	0.10	10.7	29.3	13.9	G8	2
240	0	44	37.690	0.013	-34	50	36.50	0.19	10.7	-4.9	19.1	G9	2
241	0	44	39.944	0.002	-21	56	16.50	0.08	10.8	-6.3	13.2	F7	2
242	0	44	41.065	0.014	-29	24	31.97	0.13	9.3	-38.7	19.8	F7	2
243	0	44	51.170	0.026	-24	45	28.26	0.17	10.9	38.8	3.9	G5	2
244	0	44	52.963	0.003	-25	39	14.28	0.19	9.4	-1.2	19.5	G5	2
245	0	44	54.091	0.014	-28	34	30.30	0.11	10.8	-15.0	18.2	F4	2
246	0	44	55.600	0.001	-29	46	19.83	0.06	10.8	-24.8	6.1	G5	2
247	0	44	58.536	0.041	-23	23	10.03	0.09	11.0	-29.1	9.7	F7	2
248	0	45	3.599	0.012	-31	23	46.75	0.10	9.6	9.4	1.5	K3	2
249	0	45	7.497	0.016	-25	40	3.53	0.35	8.9	13.4	9.9	G2	3

TABLE 3 (CONTINUED)

No.	h	m	α s	Δα s	δ °	δ ′	δ ″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
250	0	45	7.994	0.011	-23	47	56.67	0.01	9.9	29.4	1.5	G8	2
251	0	45	13.991	0.014	-27	14	54.39	0.08	9.1	6.6	15.1	F4	2
252	0	45	14.442	0.002	-32	43	48.75	0.09	9.3	-23.9	7.5	F5	2
253	0	45	15.727	0.001	-31	37	32.47	0.02	8.5	39.8	0.0	K3	2
254	0	45	30.036	0.002	-33	44	10.66	0.03	10.4	16.4	5.3	K2	2
255	0	45	30.490	0.016	-29	37	0.00	0.12	8.3	2.4	7.2	F0	2
256	0	45	32.656	0.026	-21	59	42.13	0.03	6.8	23.1	7.5	A0	2
257	0	45	32.930	0.010	-32	36	28.57	0.07	10.1	21.9	13.4	G9	2
258	0	45	35.947	0.003	-25	21	5.59	0.07	9.4	-8.2	10.5	G9	2
259	0	45	43.355	0.010	-31	2	13.38	0.20	9.7	-21.8	8.8	G1	2
260	0	45	45.771	0.009	-26	38	27.63	0.04	10.9	-2.7	8.1	K0	2
261	0	45	48.959	0.019	-27	10	31.86	0.18	11.1	-5.3	2.1	G0	2
262	0	45	50.615	0.006	-28	21	41.33	0.07	10.9	-41.7	6.4	F5	2
263	0	45	52.295	0.010	-31	51	44.15	0.27	11.2	2.2	20.8	G2	2
264	0	45	58.230	0.005	-31	53	24.87	0.11	9.8	88.8	2.8	G pec	2
265	0	45	58.428	0.054	-34	19	20.90	0.34	11.2	60.1	35.4	G0	2
266	0	46	4.478	0.011	-26	38	30.60	0.15	8.8	12.9	22.4	G7	2
267	0	46	14.684	0.007	-31	30	53.56	0.20	11.3	-12.4	22.9	K0	2
268	0	46	14.859	0.016	-28	46	3.11	0.15	8.0	2.8	13.9	F2	2
269	0	46	16.841	0.011	-24	24	56.36	0.09	9.1	-17.0	12.4	G7	2
270	0	46	20.758	0.016	-23	20	21.89	0.08	9.8	-5.0	13.8	F3	2
271	0	46	31.786	0.014	-24	50	30.71	0.08	10.3	-6.2	12.5	K1	2
272	0	46	34.900	0.002	-29	48	27.87	0.05	11.1	1.0	1.2	F0	2
273	0	46	36.427	0.015	-26	29	7.74	0.04	10.7	-7.3	9.3	G6	2
274	0	46	37.901	0.037	-21	25	23.10	0.20	7.9	-12.7	17.6	G0	2
275	0	46	41.188	0.009	-34	42	45.34	0.28	10.8	10.1	25.1	G7	2
276	0	46	42.078	0.006	-34	5	55.64	0.15	9.4	30.3	2.2	K0	2
277	0	46	46.275	0.041	-24	24	31.06	0.18	7.6	9.2	20.6	G5	2
278	0	46	47.890	0.005	-27	48	3.92	...	11.7	-31.2	43.8	A2	1
279	0	46	49.523	0.001	-30	54	2.07	0.11	11.2	-24.1	6.2	G7	2
280	0	46	49.981	0.019	-21	40	10.72	0.13	9.1	14.2	20.0	F5	2
281	0	46	53.819	0.002	-23	36	4.92	0.16	9.2	-26.9	21.9	K0	2
282	0	46	54.440	0.025	-25	42	44.29	0.19	10.9	-15.9	14.3	G9	2
283	0	46	55.034	0.061	-32	24	28.42	...	11.7	74.6	3.2	G0	1
284	0	46	56.531	0.003	-27	52	37.56	0.18	8.9	-49.3	25.5	F7	2
285	0	46	58.005	0.020	-23	29	8.53	0.10	8.2	-9.8	6.6	G5	2
286	0	47	5.756	0.022	-23	38	3.68	0.07	7.6	-22.0	0.7	A3	2
287	0	47	14.157	0.006	-32	7	19.88	0.08	9.7	-28.2	0.6	G0	2
288	0	47	14.409	0.014	-21	24	3.02	0.11	10.2	73.7	28.1	K0	2
289	0	47	28.199	0.007	-22	22	27.27	0.11	9.1	40.0	11.9	K2	2
290	0	47	29.786	0.014	-27	5	35.35	0.27	10.9	-5.1	40.9	G5	2
291	0	47	31.813	0.003	-26	14	34.34	...	11.3	8.4	57.0	F7	1
292	0	47	32.900	0.014	-24	23	30.02	0.19	9.1	-8.1	9.3	K0	2
293	0	47	33.033	0.007	-30	51	53.77	0.16	11.4	-10.5	43.0	F4	2
294	0	47	41.877	0.012	-32	47	21.64	0.06	11.2	-3.7	7.2	G0	3
295	0	47	42.508	0.021	-29	16	35.14	0.14	11.1	-11.9	25.9	K2	2
296	0	47	45.056	0.007	-24	38	12.77	...	11.2	24.9	26.1	K0	1
297	0	47	49.136	0.019	-31	36	15.09	0.04	11.6	12.2	6.1	K2	2
298	0	47	54.212	0.022	-27	42	33.39	0.10	10.8	21.2	6.4	G7	2
299	0	47	55.216	0.016	-34	45	43.11	0.07	11.0	-9.3	10.0	K1	3
300	0	48	8.727	0.037	-30	14	24.67	0.18	11.8	-1.8	19.5	A2	2
301	0	48	10.272	0.005	-27	42	25.15	0.11	9.8	-14.8	0.6	F0	2
302	0	48	17.295	0.001	-23	56	33.52	0.24	8.8	18.1	25.1	G4	2

TABLE 3 (CONTINUED)

No.	α h m s	Δα s	δ ° ′ ″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
303	0 48 22.787	0.026	-23 40 16.62	...	11.0	4.3	38.3	G4	1
304	0 48 30.140	0.036	-27 26 50.80	0.12	11.1	-14.6	19.7	G0	2
305	0 48 34.084	0.002	-30 38 14.58	0.19	11.2	-1.7	35.0	G5	2
306	0 48 49.303	0.010	-23 37 14.17	0.19	10.7	-35.9	34.6	F6	2
307	0 48 50.709	0.027	-29 57 41.52	0.19	10.9	-20.2	12.1	K0	2
308	0 48 50.887	0.002	-34 21 20.64	0.27	9.9	-17.5	40.9	K2	2
309	0 48 51.351	0.012	-21 43 45.48	0.19	11.2	61.9	6.1	K1	2
310	0 49 2.254	0.014	-35 3 15.69	0.14	9.7	14.0	5.9	F2	2
311	0 49 4.041	0.008	-23 51 4.47	0.09	8.7	36.6	13.0	G9	2
312	0 49 5.252	0.006	-23 10 46.90	0.24	10.7	-4.1	37.8	K8	2
313	0 49 9.830	0.006	-24 54 59.86	...	11.0	25.4	24.6	G2	1
314	0 49 10.878	0.004	-31 15 27.39	0.20	9.4	-20.6	10.1	G0	2
315	0 49 21.991	0.012	-28 55 20.90	0.15	9.1	4.4	10.6	K0	2
316	0 49 23.232	0.012	-26 47 3.40	0.24	10.1	10.5	6.9	F3	2
317	0 49 23.362	0.006	-25 27 50.73	0.02	10.8	32.5	0.2	K0	2
318	0 49 28.199	0.013	-34 26 59.67	...	11.7	77.7	63.1	A3	1
319	0 49 28.354	0.010	-21 40 35.69	0.06	10.8	-25.1	3.2	G7	2
320	0 49 29.570	0.002	-31 13 48.77	0.19	9.4	-18.2	23.1	F2	2
321	0 49 32.385	0.003	-32 51 45.53	0.08	11.3	16.1	9.6	K3	2
322	0 49 32.516	0.006	-27 53 46.51	0.11	9.8	10.5	16.8	G7	2
323	0 49 43.796	0.008	-32 26 8.97	0.13	10.0	-55.0	4.1	F9	2
324	0 49 45.231	0.035	-21 22 44.51	0.11	8.5	24.6	7.6	F7	2
325	0 49 45.421	0.046	-22 53 14.09	0.04	8.3	-21.1	5.2	G0	2
326	0 49 45.654	0.003	-24 56 38.69	0.09	10.9	39.9	14.9	G1	2
327	0 49 51.878	0.010	-26 40 11.07	0.25	9.1	-7.4	15.5	G9	2
328	0 49 55.917	0.003	-34 52 10.69	0.15	9.7	-12.8	3.4	K0	2
329	0 49 57.070	0.000	-23 45 22.15	0.05	10.9	-16.9	9.8	G5	2
330	0 50 3.794	0.024	-21 16 0.77	0.27	8.5	21.6	31.7	G2	2
331	0 50 6.805	0.006	-31 53 54.56	0.08	10.7	33.9	6.2	G9	2
332	0 50 12.700	0.003	-21 42 34.73	0.06	8.9	-24.6	3.4	K pec	2
333	0 50 12.787	0.036	-29 58 24.73	0.09	11.2	-23.3	12.1	F4	2
334	0 50 13.445	0.039	-24 16 38.92	0.12	7.5	26.0	13.8	G - K	2
335	0 50 13.624	0.003	-35 4 10.42	0.16	11.2	-14.8	16.1	F2	2
336	0 50 24.525	0.006	-27 42 3.18	0.11	10.7	-24.6	10.0	F4	2
337	0 50 34.895	0.008	-30 37 42.55	0.09	8.3	-42.5	8.9	K4	4
338	0 50 34.949	0.010	-32 55 49.14	0.07	9.3	-30.1	7.7	G3	2
339	0 50 38.187	0.022	-25 13 22.04	0.09	9.8	21.2	7.9	F4	2
340	0 50 40.025	0.011	-21 52 42.02	...	11.0	-9.0	37.2	G0	1
341	0 50 45.477	0.019	-25 2 54.10	0.11	7.8	3.5	7.5	F5	2
342	0 50 50.834	0.030	-22 37 30.85	...	11.6	15.7	21.2	F2	1
343	0 50 51.343	0.012	-23 13 5.82	0.08	11.0	-20.7	14.3	K1	2
344	0 50 53.004	0.019	-26 49 4.39	0.19	11.1	-32.8	5.2	G2	2
345	0 51 2.051	0.014	-35 7 25.46	0.05	11.1	29.8	0.9	K0	2
346	0 51 7.023	0.010	-22 28 26.25	0.04	9.4	-2.8	3.6	G8	2
347	0 51 8.179	0.008	-24 17 58.03	0.12	9.1	-4.4	11.9	G7	2
348	0 51 12.692	0.024	-29 13 54.96	0.10	10.0	-25.7	9.6	F7	2
349	0 51 14.084	0.019	-26 43 30.13	0.17	10.5	-22.8	7.3	K0	2
350	0 51 20.756	0.001	-22 40 13.61	...	11.7	-16.6	26.4	F0	1
351	0 51 23.352	0.006	-32 1 15.37	0.12	11.1	30.5	14.7	G9	2
352	0 51 23.746	0.016	-30 26 55.91	0.15	9.3	-1.3	4.4	F6	4
353	0 51 23.838	0.011	-28 48 56.73	0.07	10.0	-6.7	6.5	K2	2
354	0 51 27.105	0.005	-34 32 38.07	0.30	11.1	10.9	6.2	F7	2
355	0 51 27.494	0.018	-21 33 39.13	0.20	9.9	3.0	32.8	G9	2
356	0 51 29.516	0.010	-32 30 29.96	0.27	9.6	-42.6	32.2	G5	2

TABLE 3 (CONTINUED)

No.	α h	α m	α s	Δα s	δ °	δ '	δ "	Δδ '	m_{pg}	V_{rad}	σ	Sp.	N
357	0	51	30.129	0.010	-29	4	33.20	0.09	10.3	30.2	13.5	K8	2
358	0	51	32.673	0.005	-25	18	48.17	0.07	8.8	22.7	11.1	F5	2
359	0	51	33.407	0.030	-25	18	56.01	0.12	8.8	15.4	15.8	F5	2
360	0	51	35.288	0.006	-25	15	56.59	0.03	10.8	-19.9	8.8	G2	2
361	0	51	39.898	0.012	-32	36	21.09	0.12	8.8	-9.3	18.0	F4	2
362	0	51	40.403	0.004	-23	52	13.68	0.15	10.6	-9.0	29.3	F5	2
363	0	51	41.374	0.032	-29	1	20.51	0.10	11.4	17.6	15.7	A3	2
364	0	51	43.437	0.010	-24	53	55.40	0.12	11.0	-32.6	0.4	K0	2
365	0	51	46.184	0.024	-23	9	23.32	0.14	10.5	3.8	22.3	G4	2
366	0	51	46.308	0.003	-31	8	0.45	0.15	10.9	0.3	22.5	G0	2
367	0	51	52.342	0.001	-22	12	11.90	0.03	10.9	45.5	6.2	G2	2
368	0	52	2.837	0.003	-22	35	16.34	0.17	11.0	-3.8	4.6	F5	2
369	0	52	9.028	0.005	-31	54	53.66	0.11	9.9	20.7	18.0	G6	2
370	0	52	11.903	0.011	-21	44	38.06	0.10	9.8	-4.8	19.2	K2	2
371	0	52	12.846	0.005	-22	43	19.49	0.07	10.7	-30.9	11.3	G0	2
372	0	52	15.179	0.001	-34	13	41.59	0.05	9.0	36.5	2.2	F5	2
373	0	52	16.231	0.001	-24	11	27.75	0.09	9.8	-16.2	15.6	G9	2
374	0	52	17.227	0.010	-32	15	22.29	0.13	11.0	-56.0	4.3	G0	2
375	0	52	26.806	0.003	-32	53	23.08	0.09	9.5	23.9	5.5	G2	2
376	0	52	36.726	0.014	-23	15	21.34	0.27	11.4	-41.9	28.6	F7	2
377	0	52	38.737	0.030	-33	19	21.06	0.19	11.6	26.4	27.9	F7	2
378	0	52	48.522	0.018	-25	52	35.21	0.10	10.2	-17.0	24.5	G3	4
379	0	52	50.290	0.019	-22	18	17.80	...	11.2	42.9	20.8	K2	1
380	0	52	51.272	0.006	-22	12	11.84	0.04	9.2	4.8	6.2	K0	2
381	0	52	53.199	0.006	-30	47	46.29	0.03	11.5	-4.5	1.2	F2	2
382	0	52	56.149	0.046	-24	55	50.87	0.12	8.3	-19.7	6.1	G0	2
383	0	53	0.953	0.017	-26	51	59.82	...	11.1	11.8	13.6	K0	1
384	0	53	16.476	0.006	-26	15	6.73	0.03	10.2	22.4	9.8	K0	2
385	0	53	17.848	0.022	-34	1	23.82	0.07	10.4	17.0	14.0	G pec	4
386	0	53	23.737	0.024	-29	56	51.98	0.06	10.8	-31.1	1.1	K7	2
387	0	53	30.168	0.015	-28	2	47.18	0.10	8.1	12.5	17.1	M0	2
388	0	53	31.964	0.026	-22	44	51.76	...	11.0	33.1	29.8	F7	1
389	0	53	38.942	0.046	-29	45	50.72	0.10	10.9	-7.8	19.2	F6	4
390	0	53	40.439	0.013	-26	37	3.43	0.13	10.3	5.5	4.8	K0	2
391	0	53	41.739	0.010	-22	45	37.45	0.06	10.5	6.7	8.1	F5	2
392	0	53	43.181	0.026	-24	6	30.63	0.15	10.9	-11.8	24.1	G4	2
393	0	53	50.994	0.004	-33	59	11.04	0.06	11.0	-21.0	19.8	G5	4
394	0	53	52.626	0.026	-25	49	27.04	0.07	10.0	82.3	14.5	M1	6
395	0	53	58.511	0.005	-31	27	14.61	0.14	10.7	6.1	24.0	B9	4
396	0	54	1.343	0.001	-28	55	35.02	0.01	11.3	-10.9	4.0	G5	2
397	0	54	3.125	0.022	-28	42	2.77	0.12	11.5	56.8	20.3	G2	2
398	0	54	4.560	0.017	-27	29	52.31	0.03	10.8	-13.2	1.8	G2	2
399	0	54	4.725	0.010	-34	5	15.89	0.08	9.9	-8.5	14.4	F8	4
400	0	54	9.816	0.020	-24	18	28.09	0.10	11.2	28.7	24.8	K2	3
401	0	54	11.058	0.028	-23	55	38.68	0.12	8.9	-32.2	9.0	G1	4
402	0	54	16.943	0.008	-27	30	13.45	0.03	11.4	-72.0	2.8	K5	2
403	0	54	22.168	0.015	-34	56	8.32	0.09	9.2	-17.6	23.1	F5	4
404	0	54	22.920	0.013	-25	38	1.21	0.09	8.2	0.1	18.7	A3	6
405	0	54	29.984	0.003	-30	1	52.49	0.12	10.6	-33.4	7.2	A3	4
406	0	54	34.690	0.015	-32	8	47.06	0.12	10.6	-13.9	15.3	K0	3
407	0	54	38.461	0.002	-30	2	1.24	0.25	11.5	61.6	34.8	K2	2
408	0	54	43.034	0.024	-34	8	24.07	0.15	9.9	-10.6	36.9	G9	3
409	0	54	44.317	0.008	-29	37	53.43	0.12	10.5	-46.5	29.9	G8	4
410	0	54	45.988	0.011	-31	17	46.19	0.12	11.1	54.5	11.9	K3	4

TABLE 3 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
411	0	54	57.835	0.010	-26	12	24.90	...	11.5	-24.4	20.1	K5	1
412	0	54	59.085	0.002	-22	41	23.99	0.11	9.5	-3.9	22.3	F2	2
413	0	55	7.269	0.007	-30	41	2.78	0.10	10.9	-26.9	15.3	G1	2
414	0	55	8.540	0.004	-30	16	12.71	0.14	10.9	-0.4	18.2	G6	4
415	0	55	16.321	0.059	-29	28	32.17	...	11.5	18.3	71.0	G0	1
416	0	55	16.285	0.008	-30	45	28.47	0.03	9.8	-33.2	1.1	K4	2
417	0	55	18.096	0.019	-26	29	34.79	0.13	10.4	-111.1	11.0	F1	2
418	0	55	22.121	0.043	-28	25	1.79	...	11.5	54.4	13.5	F6	1
419	0	55	24.619	0.035	-28	29	18.52	0.07	9.9	-15.4	5.9	F5	2
420	0	55	26.750	0.033	-28	12	55.23	...	11.5	-17.7	10.0	K2	1
421	0	55	26.865	0.003	-28	19	53.85	0.04	10.7	40.2	5.0	K4	2
422	0	55	29.119	0.010	-34	42	49.69	0.21	10.3	-2.5	33.8	G9	3
423	0	55	29.235	0.015	-29	47	49.20	0.01	11.2	-2.9	6.0	K5	2
424	0	55	30.105	0.013	-21	41	23.75	...	11.3	-73.5	57.5	G2	1
425	0	55	33.522	0.008	-22	51	55.67	0.07	9.9	-3.1	3.2	K7	2
426	0	55	40.011	0.023	-28	16	55.89	0.13	11.4	-47.5	8.7	G2	2
427	0	55	40.436	0.017	-35	4	19.86	0.17	11.2	4.8	18.2	F3	2
428	0	55	41.461	0.003	-21	26	57.67	0.02	8.9	-55.2	8.0	F5	2
429	0	55	46.639	0.007	-26	8	47.32	0.22	9.1	70.2	28.2	K2	3
430	0	55	51.632	0.018	-27	21	44.06	0.13	9.7	-10.3	11.0	K2	2
431	0	56	0.660	0.024	-24	38	22.62	...	11.5	-12.6	0.0	M2	1
432	0	56	0.958	0.020	-29	11	1.87	...	11.5	4.4	5.2	K2	1
433	0	56	7.185	0.000	-32	6	44.36	0.09	11.2	20.5	9.7	F4	2
434	0	56	9.296	0.013	-25	57	51.06	...	11.5	-64.0	10.4	G0	1
435	0	56	11.847	0.030	-29	37	37.75	0.25	7.1	-1.5	40.8	A0	2
436	0	56	13.489	0.003	-32	35	29.63	0.09	10.8	5.5	13.4	F2	2
437	0	56	13.652	0.011	-23	48	22.86	0.03	10.8	30.6	5.4	G0	2
438	0	56	14.581	0.006	-27	5	3.31	0.05	10.7	-20.6	8.7	G2	2
439	0	56	14.971	0.013	-34	41	37.16	0.12	11.0	-26.8	17.7	K2	2
440	0	56	28.852	0.012	-34	45	19.71	0.16	11.2	7.4	3.0	A3	2
441	0	56	35.915	0.002	-26	47	50.02	0.10	10.7	-52.3	13.2	F5	2
442	0	56	36.835	0.023	-29	40	16.59	0.08	9.6	22.8	15.0	A3	2
443	0	56	37.895	0.005	-26	12	55.69	0.13	11.2	-12.8	19.4	G7	2
444	0	56	38.122	0.018	-23	57	37.55	0.19	9.8	87.3	12.1	G pec	2
445	0	56	42.152	0.021	-25	13	24.47	0.07	10.3	53.6	13.3	K2	2
446	0	56	48.178	0.004	-33	21	19.18	...	11.2	42.8	26.0	K0	1
447	0	56	56.250	0.009	-26	35	51.69	0.13	11.4	-25.9	17.7	G0	2
448	0	56	58.379	0.004	-26	53	1.36	...	11.5	-58.7	16.2	F6	1
449	0	57	0.356	0.003	-30	51	9.40	0.09	9.8	23.1	14.6	F3	2
450	0	57	3.311	0.007	-34	54	20.66	0.11	9.0	-17.2	9.1	G5	2
451	0	57	3.371	0.010	-32	14	5.16	0.21	9.8	-19.8	7.1	F1	2
452	0	57	5.292	0.021	-28	59	19.49	0.19	11.5	35.9	25.0	G2	2
453	0	57	6.184	0.003	-33	22	25.33	0.14	10.6	-34.5	17.1	G7	2
454	0	57	15.907	0.022	-23	58	7.35	0.07	10.9	-16.2	12.5	K0	2
455	0	57	15.900	0.008	-22	52	30.46	0.15	11.1	33.1	10.0	G3	2
456	0	57	16.095	0.022	-27	1	50.71	0.14	11.4	-58.6	9.1	A6	2
457	0	57	20.917	0.006	-31	36	20.37	0.10	9.4	-1.7	15.3	K7	2
458	0	57	24.366	0.005	-24	49	18.09	0.07	9.4	9.4	3.0	G9	2
459	0	57	24.750	0.009	-26	8	9.68	0.29	8.8	8.7	17.5	F7	4
460	0	57	26.094	0.014	-25	51	34.72	0.12	10.9	2.7	9.5	G3	4
461	0	57	27.809	0.008	-24	42	22.07	0.13	8.9	5.2	22.4	F6	2
462	0	57	28.633	0.002	-30	37	53.15	0.23	10.2	-14.7	9.5	F9	4
464	0	57	31.789	0.001	-31	32	25.18	0.12	9.7	-43.5	17.7	G7	2

TABLE 3 (CONTINUED)

No.	α h	α m	α s	Δα s	δ °	δ ′	δ ″	Δδ ″	m_{pg}	V_{rad}	σ	Sp.	N
465	0	57	33.137	0.013	-30	41	55.43	0.09	10.1	-18.4	1.8	G0	2
466	0	57	37.759	0.002	-21	19	48.11	0.12	10.4	-26.9	19.4	K1	2
467	0	57	38.328	0.001	-32	53	39.72	0.16	10.8	53.9	26.8	G3	2
468	0	57	43.140	0.019	-22	28	2.31	...	11.3	56.9	27.0	K4	1
469	0	57	47.441	0.003	-33	16	53.94	0.09	10.5	17.4	11.9	F3	2
470	0	57	52.083	0.008	-25	53	1.13	0.15	11.1	-1.2	11.5	K5	4
471	0	57	57.167	0.030	-25	22	13.81	0.23	9.7	-1.9	33.1	F7	2
472	0	58	0.931	0.013	-22	59	3.07	...	11.1	-15.6	43.3	G2	1
473	0	58	1.251	0.008	-27	10	38.53	0.03	10.8	-24.1	3.2	G2	2
474	0	58	7.837	0.003	-26	1	4.30	0.14	8.5	24.1	15.3	K0	4
475	0	58	11.926	0.001	-26	54	22.24	0.17	10.9	-6.2	10.4	K0	2
476	0	58	13.061	0.003	-26	33	9.15	0.09	9.2	-17.4	15.7	K0	2
477	0	58	14.604	0.000	-27	23	34.15	0.16	10.9	-2.0	2.8	G4	2
478	0	58	18.332	0.007	-24	32	26.08	0.09	8.7	13.1	7.8	F5	2
479	0	58	22.385	0.011	-27	29	2.00	0.04	11.0	-65.8	2.2	K5	2
480	0	58	24.327	0.005	-31	1	35.19	...	10.8	14.1	12.2	F6	1
481	0	58	25.254	0.024	-23	51	39.20	0.03	11.1	-36.7	4.6	G0	2
482	0	58	26.102	0.023	-24	41	34.33	0.09	9.9	9.3	6.6	G3	2
483	0	58	30.714	0.002	-22	16	12.20	0.09	11.2	-27.6	0.1	F4	2
484	0	58	30.761	0.016	-33	57	28.02	0.23	10.8	20.8	18.2	G2	2
485	0	58	31.717	0.014	-32	29	42.19	...	11.2	-62.5	16.7	F7	1
486	0	58	31.868	0.007	-25	43	22.40	...	11.5	-16.4	6.2	G2	1
487	0	58	39.235	0.001	-32	59	12.84	0.10	10.7	25.3	8.7	K2	2
488	0	58	40.293	0.000	-25	1	1.14	0.16	8.8	-18.5	7.0	F7	2
489	0	58	44.754	0.004	-26	1	48.96	0.12	10.9	-0.3	11.6	G0	4
490	0	58	45.805	0.011	-29	21	53.14	0.10	11.1	8.6	1.0	G7	2
491	0	58	50.149	0.016	-28	3	46.67	0.21	11.4	-26.6	14.7	G0	2
492	0	58	51.470	0.004	-29	9	11.77	0.03	10.0	-86.8	10.5	G pec	2
493	0	58	54.700	0.013	-25	53	1.95	0.23	11.4	-27.4	37.1	K0	2
494	0	58	56.781	0.009	-30	52	49.67	0.32	11.0	19.0	55.7	F6	2
495	0	58	57.909	0.014	-32	8	6.79	0.07	10.7	-14.4	10.1	G2	2
496	0	58	58.175	0.003	-23	22	13.98	0.10	10.9	-26.5	13.2	F2	2
497	0	58	59.787	0.015	-33	37	43.98	0.08	9.4	35.1	12.3	K5	2
498	0	59	2.770	0.007	-23	4	29.42	0.09	10.8	-13.7	19.9	G1	2
499	0	59	4.384	0.006	-21	43	16.24	0.11	10.7	-25.6	17.6	G4	2
500	0	59	5.150	0.010	-27	43	10.63	0.06	11.2	27.4	7.8	K7	2
501	0	59	12.278	0.002	-31	12	22.55	0.04	9.9	-45.1	1.6	F4	2
502	0	59	12.423	0.012	-33	27	16.37	0.06	11.0	56.1	6.8	K4	2
503	0	59	22.669	0.015	-23	39	21.60	0.12	9.1	-13.7	8.0	K2	2
504	0	59	23.132	0.007	-28	53	31.51	0.12	11.5	-26.4	12.7	F3	2
505	0	59	23.967	0.003	-26	9	20.00	0.12	10.1	26.1	9.1	F1	4
506	0	59	26.722	0.008	-35	0	31.79	...	11.2	-91.7	85.5	F3	1
507	0	59	35.938	0.008	-30	15	23.12	0.09	10.2	12.5	17.5	G9	4
508	0	59	38.927	0.006	-34	59	56.16	0.07	10.9	-19.6	8.2	G8	2
509	0	59	40.993	0.010	-28	5	11.26	...	11.5	30.3	24.7	G0	1
510	0	59	44.280	0.005	-21	52	39.94	0.12	8.8	-6.9	18.4	K0	2
511	0	59	49.699	0.005	-31	53	30.13	0.15	9.4	-10.8	14.9	F6	2
512	0	59	49.914	0.005	-31	4	2.66	0.06	10.7	-2.3	2.2	K1	2
513	0	59	53.811	0.003	-33	11	47.93	0.16	10.8	-5.8	9.8	F5	2
514	0	59	55.690	0.006	-31	31	41.69	0.13	11.2	-31.8	4.9	F3	2
515	0	59	56.614	0.005	-32	22	26.09	0.06	11.0	28.8	4.5	K2	2
516	0	59	56.752	0.003	-30	52	23.71	0.02	10.9	-10.3	3.0	K5	2
517	1	0	0.516	0.012	-21	52	44.05	0.10	8.4	-13.5	10.0	K2	2
518	1	0	0.814	0.002	-30	39	38.06	0.10	10.1	-33.5	10.2	K2	2

TABLE 3 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
519	1	0	3.334	0.030	-31	49	14.44	0.12	7.0	-59.8	12.7	A0	2
520	1	0	4.755	0.013	-31	29	29.18	0.19	10.8	-64.2	25.0	A9	2
521	1	0	7.414	0.021	-23	48	20.27	0.10	11.2	36.5	7.5	F4	2
522	1	0	13.170	0.010	-34	38	19.58	0.20	9.9	70.2	29.9	K0	2
523	1	0	13.868	0.015	-25	34	35.91	0.08	10.8	-4.8	12.2	K2	2
524	1	0	21.228	0.003	-27	15	30.94	0.07	10.8	-29.6	10.9	F9	2
525	1	0	21.376	0.007	-26	11	33.93	...	11.5	54.5	17.7	G2	1
526	1	0	25.196	0.001	-30	31	18.94	0.15	10.2	-11.3	10.5	G1	3
527	1	0	30.504	0.019	-24	21	59.03	0.13	11.1	-30.0	21.4	K0	2
528	1	0	30.560	0.018	-24	9	7.57	0.02	9.9	-40.5	3.4	G5	2
529	1	0	31.271	0.008	-27	53	10.62	0.16	10.7	14.9	26.0	K2	2
530	1	0	31.492	0.017	-33	55	51.18	...	11.2	-8.5	17.2	K2	1
531	1	0	42.205	0.016	-28	0	1.40	0.22	11.4	-7.9	17.9	K0	2
532	1	0	45.730	0.012	-34	53	10.74	0.10	10.8	-22.0	10.3	F7	2
533	1	0	46.243	0.016	-23	26	55.79	0.12	8.7	-15.2	5.9	F5	2
534	1	0	47.643	0.003	-27	22	35.21	0.18	11.0	-14.1	15.5	K5	2
535	1	0	48.622	0.007	-33	0	40.27	0.11	9.9	0.6	3.9	F3	2
536	1	0	50.633	0.033	-26	26	52.40	0.06	8.9	33.2	6.9	G9	2
537	1	0	50.691	0.013	-29	59	58.55	0.11	11.4	46.1	7.6	A0	2
538	1	0	52.806	0.001	-26	15	16.34	0.11	11.1	13.2	12.2	K4	2
539	1	0	53.950	0.025	-28	8	54.98	0.09	8.7	53.9	2.9	G pec	2
540	1	0	54.290	0.009	-29	47	37.98	0.21	8.0	63.2	23.3	G0	2
541	1	0	56.709	0.007	-28	13	36.25	0.27	11.2	48.9	31.6	F6	2
542	1	0	58.942	0.014	-22	33	32.31	0.16	11.1	-38.5	12.3	G0	2
543	1	1	1.604	0.015	-32	20	46.49	0.08	9.4	0.2	1.5	K3	2
544	1	1	7.458	0.022	-28	55	22.93	...	11.5	-39.2	28.0	G5	1
545	1	1	19.769	0.015	-31	27	16.49	...	11.2	12.4	37.5	F6	1
546	1	1	20.549	0.012	-30	39	59.91	0.23	8.9	-44.7	7.9	F6	3
547	1	1	21.120	0.035	-28	55	14.39	...	11.5	-18.9	23.7	K2	1
548	1	1	25.880	0.009	-34	16	35.43	0.17	10.4	-39.4	0.4	F7	2
549	1	1	27.879	0.005	-32	3	16.77	0.06	9.4	-17.6	2.5	G2	2
550	1	1	30.776	0.024	-33	29	33.19	0.03	11.2	46.5	3.1	G2	2
551	1	1	36.091	0.013	-28	12	38.94	0.07	11.2	28.0	9.2	K2	2
552	1	1	38.091	0.030	-22	30	8.18	0.06	10.9	-47.0	4.7	A9	2
553	1	1	38.634	0.006	-34	56	41.15	0.03	9.4	-13.3	6.0	A2	2
554	1	1	40.847	0.041	-29	50	28.03	...	11.5	44.8	55.5	G4	1
555	1	1	41.854	0.006	-29	39	57.84	0.11	10.6	24.6	7.9	F8	2
556	1	1	43.516	0.006	-34	56	26.16	...	11.2	-13.9	11.8	K2	1
557	1	1	47.607	0.003	-34	43	6.03	0.13	9.8	-5.4	2.0	F7	2
558	1	1	52.841	0.004	-22	46	1.20	0.19	10.8	-38.6	15.5	F9	2
559	1	1	53.401	0.012	-24	32	30.37	0.13	8.9	3.4	5.2	F5	2
560	1	1	53.518	0.003	-30	17	23.00	0.28	10.0	16.0	9.4	A5	3
561	1	1	53.840	0.006	-27	25	21.87	0.13	9.8	-11.6	1.4	A6	2
562	1	1	55.332	0.006	-33	47	18.88	0.10	10.7	-36.6	18.9	G0	2
563	1	1	56.235	0.028	-33	54	43.70	...	11.0	27.0	23.6	K2	1
564	1	1	59.121	0.015	-22	45	3.90	0.10	10.5	-29.4	2.8	F2	2
565	1	1	59.222	0.007	-25	52	13.67	0.22	11.1	-3.6	16.6	K7	4
566	1	2	6.587	0.013	-30	3	52.99	0.01	9.1	12.8	0.5	F7	2
567	1	2	11.031	0.015	-33	48	2.27	...	8.3	17.3	9.6	G - K	1
568	1	2	11.989	0.016	-24	5	1.76	0.16	11.1	-42.6	30.8	G4	2
569	1	2	12.805	0.006	-22	46	19.08	0.07	9.6	0.3	1.4	G9	2
570	1	2	14.176	0.002	-30	45	22.90	0.23	9.0	-11.0	28.9	F9	2
571	1	2	15.974	0.013	-21	15	19.16	0.05	10.0	21.9	9.2	G2	2
572	1	2	24.015	0.016	-24	7	33.79	0.11	10.1	-10.8	17.3	K1	2

TABLE 3 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
573	1	2	35.500	0.011	-32	10	0.02	0.19	10.8	-12.6	14.1	F3	2
574	1	2	38.433	0.018	-25	43	42.23	0.10	11.5	-40.0	6.8	G1	2
575	1	2	53.816	0.008	-28	28	10.08	0.18	11.2	-7.8	34.1	G9	2
576	1	3	2.273	0.003	-28	35	16.58	0.16	8.9	16.8	23.6	K4	2
577	1	3	2.276	0.005	-27	25	57.79	...	11.5	-30.4	9.7	K0	1
578	1	3	6.400	0.004	-31	57	40.66	0.00	10.8	45.1	0.1	M3 e	2
579	1	3	10.272	0.018	-27	13	20.34	0.01	8.7	1.0	0.2	F3	2
580	1	3	18.153	0.003	-34	2	35.00	0.10	11.1	14.7	16.9	K0	2
581	1	3	21.319	0.006	-32	13	5.95	0.09	9.3	15.6	12.7	G3	2
582	1	3	22.156	0.000	-23	51	38.43	0.14	8.6	-25.7	4.3	F8	2
583	1	3	24.565	0.020	-26	34	26.65	0.06	9.4	29.2	1.8	G4	2
584	1	3	24.771	0.002	-26	55	47.75	0.11	10.9	115.7	9.1	K0	2
585	1	3	24.780	0.009	-21	50	2.32	0.03	8.6	2.1	4.0	F4	2
586	1	3	27.549	0.009	-25	44	55.32	0.27	9.0	3.0	11.3	F2	4
587	1	3	31.416	0.019	-26	59	46.23	0.04	8.9	2.7	4.2	A2	2
588	1	3	33.125	0.005	-27	51	44.96	0.10	10.3	-13.7	16.4	F4	2
589	1	3	38.874	0.005	-32	7	18.93	0.19	9.2	18.6	34.0	K0	2
590	1	3	42.370	0.006	-24	15	34.24	0.06	7.8	-7.4	5.6	G - K	2
591	1	3	45.240	0.001	-23	45	1.85	...	10.8	-8.7	12.3	K0	1
592	1	3	45.687	0.028	-27	8	47.35	...	11.5	-23.4	21.3	G4	1
593	1	3	54.248	0.001	-21	56	32.15	0.03	10.4	-5.1	7.0	K0	2
594	1	3	56.804	0.026	-35	3	54.20	0.07	9.0	-6.3	2.0	G2	2
595	1	4	3.407	0.007	-29	17	45.96	0.06	11.2	19.4	7.7	F3	2
596	1	4	4.418	0.001	-22	19	53.03	0.02	10.8	-38.1	0.4	G3	2
597	1	4	4.648	0.013	-32	53	35.27	0.06	10.7	52.5	4.3	K3	2
598	1	4	4.769	0.007	-29	37	27.22	0.11	11.1	-5.6	13.2	F9	2
599	1	4	14.134	0.009	-31	32	45.47	0.10	10.8	3.7	19.8	K1	2
600	1	4	14.302	0.004	-25	24	9.90	0.04	10.5	-17.4	4.4	K2	2
601	1	4	15.765	0.001	-22	54	6.22	...	11.3	-0.7	25.2	G0	1
602	1	4	17.943	0.033	-24	34	59.65	...	11.3	48.9	19.1	F5	1
603	1	4	19.032	0.006	-22	17	10.11	...	11.1	7.5	25.0	G2	1
604	1	4	21.699	0.001	-28	40	10.41	...	11.5	12.6	12.3	G2	1
605	1	4	24.857	0.010	-33	35	43.43	...	11.2	-58.9	31.8	G2	1
606	1	4	25.051	0.009	-34	15	6.61	0.11	11.0	-4.0	20.1	K2	2
607	1	4	28.026	0.010	-22	33	4.51	0.05	8.5	-3.2	4.0	F9	2
608	1	4	33.974	0.012	-33	1	17.81	0.06	10.8	-16.1	11.5	G0	2
609	1	4	34.103	0.007	-33	16	4.33	0.09	11.2	15.8	13.1	F7	2
610	1	4	34.119	0.021	-23	30	48.48	...	11.1	12.3	4.6	K2	1
611	1	4	34.306	0.018	-23	44	26.95	0.14	10.8	-30.3	17.6	G1	2
612	1	4	34.744	0.002	-24	7	54.32	0.11	10.2	-21.4	17.1	G8	2
613	1	4	36.868	0.013	-23	42	53.23	0.14	11.1	-49.8	20.1	G2	2
614	1	4	37.195	0.006	-26	52	54.96	0.13	11.5	38.6	4.6	K5	2
615	1	4	38.045	0.012	-29	52	56.11	0.07	9.5	44.0	6.7	F2	2
616	1	4	38.828	0.009	-24	54	50.27	...	11.1	-13.9	7.7	G7	1
617	1	4	39.363	0.002	-32	44	36.33	...	11.2	-20.7	20.0	G0	1
618	1	4	46.297	0.013	-25	7	19.44	0.09	8.7	-21.8	13.7	K2	2
619	1	4	47.503	0.003	-24	15	46.98	0.17	7.3	-27.2	17.6	A6	2
620	1	5	4.154	0.006	-24	21	18.36	...	11.3	62.1	2.0	G0	1
621	1	5	11.334	0.012	-29	33	13.55	0.10	9.3	7.4	10.0	F3	2
622	1	5	12.555	0.005	-31	55	57.91	0.07	10.3	8.1	9.3	G7	2
623	1	5	12.591	0.010	-28	58	18.12	0.03	9.1	10.8	0.9	F1	2
624	1	5	13.755	0.003	-27	32	46.78	0.15	11.2	6.6	23.8	F3	2
625	1	5	14.258	0.013	-27	59	19.18	0.03	8.7	-1.8	3.5	K0	2
626	1	5	15.922	0.002	-24	13	53.36	0.03	10.7	-55.8	5.9	G7	2
627	1	5	17.987	0.017	-26	41	30.29	0.10	11.1	-2.5	2.5	F6	2

TABLE 3 (CONTINUED)

	α			Δα	δ			Δδ					
No.	h	m	s	s	°	'	"	'	m_{pg}	V_{rad}	σ	Sp.	N
628	1	5	19.357	0.005	-26	55	55.05	0.21	11.5	-30.6	24.6	F5	2
629	1	5	19.778	0.004	-33	4	50.76	0.02	9.6	48.5	0.7	K2	2
630	1	5	23.103	0.008	-27	15	13.92	0.04	9.6	20.4	6.8	K0	2
631	1	5	23.916	0.002	-28	49	38.74	0.07	11.2	25.6	8.4	K1	2
632	1	5	29.973	0.013	-24	52	20.22	0.10	10.6	-2.8	7.8	M0	2
633	1	5	31.056	0.015	-34	30	34.86	...	11.2	-30.1	30.3	G2	1
634	1	5	31.355	0.001	-33	29	58.70	0.03	10.8	22.4	7.0	K1	2
635	1	5	35.802	0.004	-27	4	54.28	0.09	11.0	-7.0	15.1	F5	2
636	1	5	36.712	0.032	-22	26	23.18	0.13	10.8	2.2	15.2	F9	2
637	1	5	38.422	0.003	-21	52	57.75	0.11	10.1	-12.3	13.9	K1	2
638	1	5	46.386	0.005	-22	41	45.10	0.10	11.1	-16.9	3.5	F4	2
639	1	5	49.133	0.005	-33	3	20.54	0.07	10.6	9.5	9.0	K4	3
640	1	5	51.046	0.015	-26	54	8.29	...	11.5	76.7	39.1	G7	1
641	1	5	56.079	0.003	-32	39	32.38	0.05	10.2	-69.7	9.4	F3	2
642	1	5	57.188	0.003	-34	16	31.48	0.06	10.4	11.4	7.3	K0	2
643	1	5	58.831	0.010	-21	47	19.36	...	11.1	16.7	16.5	K2	1
644	1	5	59.422	0.011	-24	37	56.96	0.06	11.1	-9.4	3.0	G2	2
645	1	6	2.674	0.006	-32	41	32.18	0.04	10.2	11.1	4.1	K2	2
646	1	6	3.225	0.003	-24	30	14.97	0.19	8.4	0.0	17.4	G1	2
647	1	6	4.862	0.001	-22	23	59.87	0.16	11.1	-78.8	3.0	F1	2
648	1	6	6.134	0.002	-26	29	36.66	0.04	11.3	37.0	6.7	K0	2
649	1	6	7.870	0.015	-30	17	7.07	...	11.5	31.6	99.2	G0	1
650	1	6	14.816	0.005	-24	44	9.16	0.15	11.2	50.5	34.6	F5	2
651	1	6	19.057	0.002	-30	42	22.71	0.09	10.9	53.2	1.5	G2	2
652	1	6	20.718	0.006	-34	34	48.78	0.17	9.6	55.2	23.0	F2	2
653	1	6	21.089	0.000	-32	25	39.93	0.21	9.4	16.3	33.0	K1	2
654	1	6	21.272	0.004	-26	7	40.25	0.21	9.2	-1.9	12.3	K1	4
655	1	6	22.255	0.018	-27	57	47.67	0.14	11.2	0.7	13.1	F3	2
656	1	6	22.365	0.008	-28	43	20.07	0.08	11.4	47.5	19.0	K4	2
657	1	6	29.085	0.017	-29	53	19.26	0.11	8.7	27.4	1.8	F9	2
658	1	6	34.846	0.004	-24	18	20.40	0.06	11.1	-13.1	0.8	G3	2
659	1	6	35.464	0.001	-31	11	41.61	0.04	10.1	-4.1	4.7	K1	2
660	1	6	37.385	0.002	-32	19	35.22	...	11.2	34.8	37.1	F6	1
661	1	6	38.109	0.005	-25	48	9.08	0.23	9.8	-18.6	11.5	K0	4
662	1	6	38.902	0.006	-33	55	26.55	0.10	11.0	5.8	0.8	F5	2
663	1	6	42.868	0.011	-22	16	47.05	0.06	11.1	5.5	8.2	K5	2
664	1	6	43.793	0.019	-23	40	7.27	0.10	10.0	-20.4	2.3	G0	2
665	1	6	44.942	0.001	-33	52	28.79	0.06	9.3	2.1	2.6	G3	2
666	1	6	50.872	0.008	-28	22	54.06	0.12	11.2	-27.9	3.5	K0	2
667	1	6	52.336	0.005	-33	28	48.23	0.05	10.2	-37.9	6.5	G3	2
668	1	6	58.932	0.059	-32	56	44.94	...	11.6	37.8	26.3	A0	1
669	1	7	1.534	0.013	-34	38	25.09	0.15	11.0	-23.5	5.9	F3	2
670	1	7	7.630	0.010	-24	12	31.13	0.04	11.1	-29.2	5.9	G4	2
671	1	7	15.106	0.005	-27	8	47.75	0.07	10.1	-12.6	7.0	F3	2
672	1	7	17.902	0.010	-22	36	57.91	0.13	9.8	-2.0	8.4	G0	2
673	1	7	27.390	0.003	-29	2	12.87	0.06	9.3	7.9	6.5	G2	2
674	1	7	31.891	0.002	-32	21	6.41	0.10	10.6	14.2	16.3	G5	2
675	1	7	35.321	0.004	-25	41	55.80	0.21	10.4	-3.1	15.4	F4	4
676	1	7	37.111	0.010	-32	55	22.97	0.17	11.0	-28.5	22.0	K1	2
677	1	7	39.341	0.003	-26	27	34.78	0.18	8.7	2.1	4.8	K2	2
678	1	7	47.040	0.009	-34	0	35.41	0.22	10.8	13.4	8.9	A8	2
679	1	7	55.356	0.008	-34	46	8.27	0.06	9.8	4.6	6.6	F2	2
680	1	7	58.625	0.002	-33	41	33.33	0.20	11.2	-5.2	26.4	K2	2

TABLE 3 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
681	1	7	58.732	0.002	-23	2	28.98	0.03	10.8	-14.9	6.9	G5	2
682	1	8	0.727	0.042	-33	48	59.91	0.08	10.6	0.7	14.2	F3	2
683	1	8	0.821	0.002	-27	36	55.94	0.04	10.2	-10.4	4.3	F8	2
684	1	8	1.112	0.013	-25	10	28.28	0.04	10.1	-23.9	7.3	G3	2
685	1	8	9.475	0.018	-28	2	40.24	0.14	9.1	-5.4	15.3	F2	2
686	1	8	12.675	0.012	-24	54	3.19	0.24	10.7	-10.1	26.8	G0	2
687	1	8	14.279	0.021	-30	21	57.30	0.10	11.5	-17.2	10.4	G1	3
688	1	8	24.408	0.007	-33	13	17.82	0.21	10.8	2.3	31.6	K2	2
689	1	8	25.927	0.017	-24	51	43.93	0.15	10.7	-28.6	3.4	F3	2
690	1	8	26.650	0.010	-31	36	8.74	0.05	10.8	-4.3	8.8	F7	2
691	1	8	27.692	0.008	-32	10	25.36	0.22	11.0	-23.1	9.8	G1	2
692	1	8	34.707	0.023	-28	37	56.47	...	11.5	60.3	39.4	F7	1
693	1	8	35.529	0.006	-22	15	40.61	0.07	10.7	-36.1	6.4	A7	2
694	1	8	41.476	0.001	-21	22	41.52	...	11.3	16.2	24.7	K0	1
695	1	8	44.159	0.009	-25	39	4.23	0.22	10.4	-16.6	13.4	F7	4
696	1	8	48.389	0.005	-32	30	48.32	0.09	9.0	11.8	11.1	G4	2
697	1	8	53.109	0.012	-31	10	53.70	0.10	11.0	-33.5	16.4	G3	2
698	1	9	0.756	0.028	-34	35	36.01	0.12	10.9	-14.3	18.1	G9	2
699	1	9	0.991	0.022	-34	29	0.39	0.11	11.1	46.1	0.9	G7	2
700	1	9	3.104	0.011	-29	22	24.57	0.15	11.5	-32.2	10.6	F7	2
701	1	9	3.671	0.000	-29	45	25.25	0.09	11.0	35.1	15.0	K1	2
702	1	9	3.953	0.010	-22	59	39.77	0.14	9.9	32.8	29.4	K7	2
703	1	9	5.166	0.007	-27	23	25.50	...	11.0	-48.6	9.9	K2	1
704	1	9	5.370	0.001	-28	57	45.06	0.10	11.3	-44.9	18.7	F7	2
705	1	9	11.629	0.004	-23	25	32.49	...	11.3	8.6	14.6	F5	1
706	1	9	12.287	0.013	-30	49	56.97	0.01	10.5	24.1	1.8	K2	2
707	1	9	16.404	0.004	-27	15	2.46	0.18	11.5	18.1	14.4	F7	2
708	1	9	19.181	0.005	-26	13	27.79	0.11	10.4	-17.4	0.0	G2	2
709	1	9	23.032	0.007	-30	11	59.33	0.12	10.6	1.4	9.0	K2	4
710	1	9	25.269	0.001	-22	10	6.63	0.22	10.9	35.2	25.7	K2	2
711	1	9	26.794	0.004	-26	37	19.56	0.26	10.0	26.1	22.5	A3	2
712	1	9	30.117	0.004	-35	3	42.90	0.21	9.1	-15.6	4.5	G2	2
713	1	9	32.243	0.002	-24	31	14.17	0.28	10.8	34.5	27.4	F5	2
714	1	9	34.736	0.025	-22	43	9.95	...	11.3	13.6	81.5	G2	1
715	1	9	42.894	0.014	-23	41	48.04	0.14	9.8	-5.0	20.4	F2	2
716	1	9	48.097	0.001	-22	55	51.27	0.07	10.4	30.2	8.2	K0	2
717	1	9	48.296	0.004	-26	34	21.13	0.04	9.3	-3.4	1.6	K2	2
718	1	9	53.796	0.012	-27	52	0.21	...	11.5	-50.2	64.7	F5	1
719	1	10	1.695	0.007	-31	4	0.36	0.09	8.2	34.8	5.0	F0	2
720	1	10	3.392	0.008	-22	48	26.46	0.05	10.1	1.3	7.1	F6	2
721	1	10	3.568	0.006	-24	16	5.73	0.17	10.7	-57.8	22.7	G5	2
722	1	10	5.901	0.009	-29	18	51.90	0.05	10.9	45.0	2.8	K1	2
723	1	10	12.995	0.021	-32	38	33.77	0.10	9.9	36.8	3.9	F6	2
724	1	10	18.004	0.007	-29	26	40.16	0.11	10.0	40.7	5.9	K0	2
725	1	10	21.840	0.010	-25	30	2.33	0.10	10.8	-23.0	17.4	K9	2
726	1	10	30.341	0.023	-34	42	1.88	0.04	11.0	-46.8	0.1	F6	2
727	1	10	32.578	0.006	-28	21	1.58	0.10	11.5	-2.2	22.4	G3	2
728	1	10	35.888	0.003	-29	57	32.34	0.06	10.0	5.8	0.5	G6	2
729	1	10	37.505	0.026	-31	8	11.25	0.14	10.8	33.2	7.6	G2	2
730	1	10	39.293	0.010	-30	42	56.85	0.09	10.5	52.8	5.4	G9	2
731	1	10	47.202	0.003	-26	42	26.55	0.16	10.6	-30.9	15.8	K4	2
732	1	10	50.375	0.019	-34	12	7.16	...	11.0	6.1	37.3	G4	1
733	1	10	52.920	0.034	-34	2	9.98	0.16	10.6	17.3	22.6	F2	2
734	1	11	1.544	0.050	-33	0	20.02	0.27	10.1	46.0	4.5	F5	2
735	1	11	1.589	0.011	-32	10	19.99	0.11	9.7	3.7	13.8	K2	2

TABLE 3 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ″	m_{pg}	V_{rad}	σ	Sp.	N
736	1	11	3.825	0.036	-33	5	7.67	0.13	10.1	-11.7	22.2	K2	2
737	1	11	6.838	0.010	-31	50	21.06	0.11	10.8	-4.3	13.7	G2	2
738	1	11	9.322	0.002	-24	45	41.88	0.07	10.8	-14.3	13.0	F5	2
739	1	11	9.978	0.006	-25	59	26.77	0.20	11.0	16.6	14.5	F2	4
740	1	11	21.208	0.005	-33	59	40.79	0.02	9.8	-19.3	4.7	F7	2
741	1	11	21.844	0.022	-22	12	29.40	...	10.8	27.8	14.6	K2	1
742	1	11	22.991	0.008	-30	34	29.00	0.05	10.0	-27.5	10.8	G5	4
743	1	11	23.241	0.002	-31	22	51.61	0.15	9.1	7.9	19.8	K1	2
744	1	11	24.296	0.021	-33	37	48.23	0.13	10.8	7.7	13.1	K5	2
745	1	11	26.772	0.005	-24	31	18.31	0.12	9.8	9.0	8.3	F2	2
746	1	11	32.780	0.006	-29	30	22.87	...	11.5	-71.2	26.0	F7	1
747	1	11	40.273	0.000	-29	20	17.99	...	11.5	-46.9	20.2	G2	1
748	1	11	43.994	0.003	-30	37	48.46	0.09	10.4	-39.9	13.4	G5 pec?	4
749	1	11	45.549	0.009	-22	57	12.68	0.26	11.1	-7.2	4.7	F2	2
750	1	11	48.886	0.006	-22	12	31.04	0.26	11.2	74.8	30.5	A5	2
751	1	11	53.370	0.019	-34	5	25.29	0.13	10.7	-31.9	8.4	G4	2
752	1	11	55.475	0.007	-24	33	57.43	0.07	9.3	-11.4	7.4	G4	2
753	1	11	57.240	0.001	-28	50	2.69	0.15	10.4	8.6	29.3	K0	2
754	1	11	57.275	0.013	-23	16	54.08	0.16	9.9	-42.3	9.8	G6	2
755	1	11	58.453	0.024	-30	43	14.31	...	11.0	-17.3	20.4	K0	1
756	1	12	0.188	0.007	-25	52	33.10	...	11.5	55.9	46.1	F0	1
757	1	12	3.159	0.002	-24	5	53.63	0.17	10.5	-27.4	31.1	G5	2
758	1	12	4.180	0.022	-31	18	8.80	...	11.2	8.0	17.7	G0	1
759	1	12	4.351	0.023	-28	4	23.17	...	11.5	0.0	21.8	M0	1
760	1	12	4.962	0.000	-22	42	41.22	0.01	9.6	33.9	7.3	K2	2
761	1	12	9.887	0.007	-31	36	23.30	0.01	9.2	-18.9	3.0	G0	2
762	1	12	11.182	0.006	-30	28	14.28	0.14	11.3	-15.0	5.0	G0	4
763	1	12	17.979	0.004	-22	47	27.01	0.04	9.2	-2.6	14.4	K4	2
764	1	12	25.245	0.004	-29	39	17.60	0.12	9.3	-49.1	18.8	G6	2
765	1	12	33.643	0.005	-27	41	31.21	0.32	11.5	6.2	22.9	F9	2
766	1	12	37.827	0.030	-31	25	1.59	...	11.2	31.3	46.6	F6	1
767	1	12	43.231	0.005	-23	9	48.73	0.06	8.8	57.9	2.8	G9	2
768	1	12	45.518	0.002	-30	17	56.79	...	11.5	63.5	43.0	F7	1
769	1	12	49.379	0.007	-22	33	39.05	0.16	8.6	45.5	23.0	G9	2
770	1	12	54.906	0.009	-29	50	18.03	0.02	9.9	-41.5	3.2	G2	2
771	1	12	56.442	0.006	-28	31	9.90	0.13	10.2	44.0	0.7	K2	2
772	1	12	56.509	0.008	-23	11	6.60	0.09	9.6	14.8	0.2	F2	2
773	1	12	56.548	0.015	-21	59	35.30	0.06	8.8	-9.5	8.4	K0	2
774	1	12	58.659	0.037	-29	10	45.55	0.18	11.4	0.7	33.0	F9	2
775	1	13	2.594	0.014	-33	34	0.61	...	11.2	-32.3	15.7	K0	1
776	1	13	3.035	0.003	-24	12	59.52	0.16	8.7	-23.8	10.2	G4	2
777	1	13	7.310	0.006	-28	31	43.47	0.09	11.2	-35.8	15.2	K2	2
778	1	13	12.706	0.008	-31	52	43.64	0.10	10.5	-6.8	14.9	G1	2
779	1	13	14.562	0.016	-34	17	41.57	0.10	9.9	-60.6	9.1	G1	2
780	1	13	15.005	0.011	-21	9	29.94	0.10	10.8	63.6	20.3	G0	2
781	1	13	22.639	0.010	-32	54	28.88	0.07	10.4	-2.1	3.6	F9	2
782	1	13	25.729	0.012	-30	45	20.70	0.11	10.3	21.8	18.0	G7	2
783	1	13	29.561	0.027	-24	14	12.93	0.15	7.8	-6.3	10.9	F0	2
784	1	13	31.289	0.014	-23	34	43.50	0.11	9.3	-9.8	1.8	K2	2
785	1	13	44.710	0.003	-24	10	32.02	0.18	10.3	-14.7	15.5	A2	2
786	1	13	45.758	0.008	-21	44	47.14	0.06	10.6	108.2	9.0	K2	2
787	1	13	47.636	0.026	-34	24	44.43	0.16	9.1	-6.0	5.4	A5	2
788	1	13	49.844	0.003	-31	39	21.89	0.15	9.9	19.1	24.0	K0	2

TABLE 3 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
789	1	14	0.228	0.015	-28	4	36.13	0.04	11.0	8.6	3.5	K4	2
790	1	14	1.042	0.003	-32	58	48.27	0.16	9.4	-2.4	19.6	G2	2
791	1	14	1.677	0.005	-33	18	20.71	0.21	10.2	-5.9	23.7	K0	2
792	1	14	3.687	0.012	-29	28	35.00	0.10	10.1	-31.1	4.2	G1	2
793	1	14	15.971	0.003	-25	56	15.05	0.14	10.1	1.7	30.6	K2	4
794	1	14	20.367	0.004	-30	13	19.43	0.06	11.1	28.4	19.6	M0	4
795	1	14	22.136	0.024	-22	4	29.42	0.11	8.9	61.9	7.6	F3	2
796	1	14	26.523	0.015	-31	40	17.16	0.20	9.9	24.6	8.8	K1	2
797	1	14	28.701	0.012	-24	6	27.55	0.52	11.1	88.5	90.6	M2	2
798	1	14	31.176	0.029	-22	43	26.22	0.11	10.9	36.9	30.1	F4	2
799	1	14	32.227	0.024	-22	42	27.80	0.06	10.9	46.8	0.5	F1	2
800	1	14	41.250	0.014	-23	30	6.11	0.26	9.6	-11.8	54.5	G0	2
801	1	14	42.497	0.005	-31	10	51.30	0.06	9.4	21.0	9.3	F7	2
802	1	14	48.139	0.008	-30	14	48.24	0.13	10.2	-36.9	28.1	G7	4
803	1	14	55.117	0.014	-32	22	25.82	0.13	11.4	50.4	23.8	A2	2
804	1	14	59.325	0.015	-34	55	36.29	0.05	9.1	-59.4	1.1	G2	2
805	1	15	14.398	0.024	-27	16	32.17	0.21	10.0	-11.8	26.9	G6	2
806	1	15	16.477	0.014	-33	28	1.42	0.13	9.8	-41.8	5.0	F7	2
807	1	15	21.066	0.007	-28	27	42.26	...	9.9	5.1	16.3	G2	1
808	1	15	28.105	0.022	-32	17	40.38	0.30	10.8	-19.6	5.2	F5	2
809	1	15	32.018	0.001	-32	16	13.72	0.07	10.4	35.7	4.3	G5	2
810	1	15	44.231	0.012	-34	24	1.16	0.07	8.8	-24.7	8.1	F0	2
811	1	15	49.603	0.005	-32	55	23.87	0.14	10.7	11.6	6.5	K0	2
812	1	15	55.785	0.009	-33	24	1.70	0.26	8.9	-33.9	5.1	G	2

TABLE 4

POSITIONS, RADIAL VELOCITIES AND SPECTRAL TYPES
FOR STARS IN AREA II

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
1	6	57	55.602	0.048	-61	1	44.58	0.02	8.7	39.3	2.2	K1	4
2	6	58	24.374	0.040	-60	30	5.61	0.05	10.4	0.5	5.4	K0	4
3	6	58	29.169	0.032	-60	46	16.84	0.02	8.6	32.8	2.4	K5	4
4	6	58	30.134	0.014	-59	58	16.64	0.17	9.4	39.9	19.0	F7	4
5	6	58	39.011	0.035	-60	29	32.14	...	10.6	25.1	...	G7	2
6	6	58	45.783	0.023	-62	5	10.12	...	10.6	-54.6	...	K0	2
7	6	59	24.264	0.041	-60	55	0.72	0.11	10.4	-12.6	11.8	F6	4
8	6	59	24.412	0.036	-61	15	59.47	0.09	7.3	49.2	9.4	K0	4
9	6	59	35.869	0.075	-59	53	21.44	0.01	10.2	13.1	0.5	K2	4
10	6	59	38.497	0.000	-60	47	27.11	0.05	7.6	16.9	4.9	B8	4
11	6	59	38.626	0.033	-57	50	28.69	...	10.9	-57.3	...	A3	2
12	6	59	41.266	0.033	-61	42	37.42	0.17	9.9	14.2	18.3	F3	4
13	6	59	45.558	0.052	-58	19	15.96	0.06	8.1	-9.8	6.6	A1	4
14	6	59	51.086	0.065	-60	47	25.35	0.05	9.8	-13.1	5.5	F7	4
15	7	0	0.178	0.073	-60	43	59.03	0.14	10.1	48.6	14.9	K1	4
16	7	0	6.308	0.006	-61	4	9.92	0.03	7.8	13.7	3.7	B8	4
17	7	0	14.296	0.075	-61	28	41.53	0.15	10.1	-15.8	16.1	G2	4

TABLE 4 (CONTINUED)

No.	α h	m	s	Δα s	δ °	'	"	Δδ '	m_{pg}	V_{rad}	σ	Sp.	N
18	7	0	18.402	0.103	-58	52	5.56	0.20	6.3	-63.9	21.7	F2	4
19	7	0	19.533	0.069	-61	47	6.44	0.31	10.6	10.9	33.8	A3	4
20	7	0	20.649	0.068	-60	33	22.76	0.19	10.2	-13.7	20.9	F0	4
21	7	0	25.962	0.030	-60	42	14.10	0.15	9.1	0.5	16.1	F4	4
22	7	0	46.556	0.047	-60	41	21.43	0.07	10.3	-3.8	7.3	G5	4
23	7	0	49.933	0.040	-60	37	2.86	0.10	10.2	0.0	10.4	F4	4
24	7	0	50.426	0.026	-59	21	27.65	0.06	9.2	-33.9	6.6	G9	4
25	7	1	9.380	0.051	-57	31	41.91	0.16	8.9	-25.7	17.8	G7	4
26	7	1	16.972	0.008	-59	23	11.38	0.12	8.8	12.0	13.2	K2	4
27	7	1	53.717	0.005	-59	48	56.30	0.09	10.1	13.6	9.3	A1	4
28	7	2	8.944	0.008	-60	59	15.70	0.07	8.9	18.6	7.8	F6	4
29	7	2	15.904	0.066	-57	39	13.35	0.11	10.2	26.8	12.4	G9	4
30	7	2	23.964	0.081	-57	25	39.50	0.28	9.7	-41.0	30.6	K2	4
31	7	2	28.978	0.085	-59	6	10.52	0.29	6.1	-37.7	31.8	A0	4
32	7	2	37.160	0.013	-58	28	49.12	0.02	10.2	-49.2	2.3	F5	4
33	7	2	59.837	0.020	-57	33	11.53	0.14	9.5	20.8	15.1	A3 II	4
34	7	3	12.969	0.051	-60	8	52.74	0.13	10.2	10.4	13.8	F4	4
35	7	3	26.472	0.010	-58	0	14.70	0.36	10.3	-36.6	38.8	F4	4
36	7	3	45.756	0.062	-58	45	10.75	0.03	7.9	-10.9	2.7	B9	4
37	7	4	3.159	0.011	-59	12	24.29	...	10.4	20.2	...	G7	2
38	7	4	4.563	0.024	-60	43	48.46	0.08	8.3	-8.7	8.2	F5	4
39	7	4	4.723	0.032	-61	46	0.46	0.20	9.9	-20.7	22.1	A2	4
40	7	4	21.333	0.017	-59	52	4.77	0.03	10.3	-48.6	2.7	A9	4
41	7	4	30.922	0.060	-61	8	55.70	0.03	9.3	-22.9	3.5	K0	4
42	7	4	36.094	0.001	-57	58	45.49	0.22	10.6	43.1	24.4	G0	4
43	7	4	36.529	0.017	-59	18	48.39	0.09	9.8	-49.7	9.7	G9	4
44	7	4	37.851	0.033	-60	4	41.89	0.13	7.9	39.3	13.9	B9	4
45	7	4	51.634	0.019	-61	19	29.01	0.08	8.8	-69.9	9.1	K0	4
46	7	5	4.806	0.039	-60	29	42.03	0.06	9.6	-17.5	6.6	A7	4
47	7	5	6.179	0.061	-57	55	24.20	0.24	9.5	26.2	26.2	A0	4
48	7	5	7.908	0.048	-59	44	49.65	0.09	10.2	-22.4	9.3	F7	4
49	7	5	24.758	0.019	-58	24	12.46	0.26	10.3	11.5	28.5	F1	4
50	7	5	26.760	0.012	-60	0	25.09	...	10.4	44.2	...	A2	2
51	7	5	38.439	0.077	-57	41	57.34	0.11	7.6	-18.6	11.5	A7	4
52	7	5	43.102	0.027	-59	1	28.43	0.14	10.4	-21.8	15.3	A2	4
53	7	5	49.837	0.080	-59	55	3.06	0.12	7.9	-35.0	12.7	A2	4
54	7	5	58.039	0.078	-58	18	5.61	0.10	10.3	70.5	10.6	M2	4
55	7	5	59.811	0.004	-61	22	48.04	0.13	9.2	-36.1	14.5	F7	4
56	7	6	31.901	0.073	-59	38	11.31	0.14	6.8	-37.1	15.3	B7	4
57	7	6	52.113	0.009	-59	27	57.00	0.06	10.2	-19.1	6.9	K0	4
58	7	7	14.866	0.019	-59	33	55.14	0.29	10.4	0.0	32.1	A1	4
59	7	7	36.640	0.019	-59	23	28.92	0.16	10.6	-18.6	17.4	F0	4
60	7	7	36.976	0.086	-58	17	28.02	0.11	7.9	-1.6	11.5	A1	4
61	7	7	40.533	0.032	-60	46	9.02	0.04	10.1	-10.4	4.7	F0	4
62	7	8	6.510	0.073	-59	24	36.56	0.06	10.8	20.2	6.4	F0	4
63	7	8	17.578	0.003	-59	0	25.86	0.23	10.2	-12.6	25.5	G7	4
64	7	8	22.147	0.022	-61	21	11.60	0.02	10.3	-20.2	2.0	K1	4
65	7	8	23.419	0.073	-59	56	5.31	0.16	10.1	-26.8	17.1	G0	4
66	7	8	26.601	0.012	-60	29	35.73	0.04	7.9	-3.3	4.4	F4	4
67	7	8	33.410	0.021	-61	2	38.35	0.19	10.3	-8.7	20.3	F0	4
68	7	8	38.960	0.018	-60	27	10.77	0.03	10.3	-28.9	3.2	K0	4
69	7	8	42.477	0.045	-57	30	19.11	0.13	9.3	-9.8	14.2	A2	4
70	7	8	43.166	0.080	-60	17	53.28	0.10	7.0	-24.0	11.0	G0	4
71	7	8	56.310	0.017	-61	27	40.47	0.14	10.2	-27.3	15.5	G5	4
72	7	9	5.077	0.008	-62	13	21.32	0.14	8.1	-29.5	15.5	F1	4

TABLE 4 (CONTINUED)

No.	α h	α m	α s	Δα s	δ °	δ '	δ "	Δδ "	m_{pg}	V_{rad}	σ	Sp.	N
73	7	9	14.251	0.029	-57	41	4.70	0.11	9.9	27.9	11.9	G6	4
74	7	9	19.301	0.038	-59	17	43.88	0.12	10.2	4.4	12.7	K2	4
75	7	9	21.267	0.010	-60	45	2.69	0.17	9.4	0.6	18.3	F3	4
76	7	9	21.995	0.001	-58	54	27.13	0.24	8.9	7.6	26.2	K0	4
77	7	9	44.886	0.013	-60	44	17.60	0.18	9.9	-38.8	20.1	G7	4
78	7	10	1.672	0.039	-58	46	20.74	0.19	9.2	45.3	20.3	K0	4
79	7	10	19.990	0.002	-60	39	7.65	0.41	10.2	12.6	45.0	F5	4
80	7	10	22.486	0.019	-58	18	59.30	0.18	10.3	54.6	20.1	A1	4
81	7	10	37.240	0.014	-60	57	37.83	0.09	10.4	6.0	9.5	K0	4
82	7	10	45.296	0.011	-61	44	38.30	0.17	9.4	15.3	19.0	F2	4
83	7	11	1.503	0.071	-58	45	55.41	...	7.8	3.8	...	B8	2
84	7	11	25.576	0.057	-59	45	13.26	0.06	7.6	-33.9	6.9	B7	4
85	7	11	27.808	0.057	-58	19	4.48	0.05	8.1	16.4	4.9	F2	4
86	7	11	28.843	0.075	-57	27	38.27	0.37	8.2	19.7	40.9	B8	4
87	7	11	34.247	0.019	-61	11	10.25	0.03	10.2	-0.6	3.5	F8	4
88	7	11	39.175	0.041	-59	26	53.40	0.17	10.6	63.4	18.8	A1	4
89	7	11	39.352	0.035	-61	57	40.13	0.05	10.4	5.5	5.9	F2	4
90	7	11	44.513	0.013	-58	8	57.99	0.15	9.8	-17.5	16.5	G0	4
91	7	11	49.113	0.001	-59	28	13.00	0.20	10.6	19.7	22.1	A4	4
92	7	11	51.374	0.002	-61	17	43.17	0.07	8.9	16.9	7.6	K4	4
93	7	12	4.150	0.001	-58	24	2.56	0.12	10.3	11.5	13.3	F1	4
94	7	12	4.775	0.007	-60	52	50.83	0.08	9.9	-40.4	8.8	G9	4
95	7	12	17.782	0.044	-60	33	36.35	0.14	10.4	19.1	15.5	F5	4
96	7	12	18.813	0.010	-60	22	10.37	0.11	9.8	8.7	12.5	A2	4
97	7	12	21.275	0.004	-61	31	33.75	0.13	9.5	7.6	14.7	G7	4
98	7	12	33.606	0.023	-61	59	48.75	0.21	10.2	-12.0	22.8	F2	4
99	7	12	35.619	0.013	-59	58	17.14	0.03	8.6	1.6	3.5	F2	4
100	7	12	45.915	0.008	-58	3	24.94	0.15	10.1	40.4	15.9	G2	4
101	7	12	47.081	0.001	-60	40	30.74	0.01	9.2	-14.7	0.5	F4	4
102	7	13	17.897	0.009	-60	1	2.67	0.08	9.8	-2.7	8.5	G7	4
103	7	13	43.540	0.049	-60	58	53.57	0.12	7.4	-28.4	12.7	F4	4
104	7	13	51.172	0.027	-59	3	44.49	0.15	10.1	-13.6	16.6	G9	4
105	7	14	3.078	0.017	-59	10	44.01	0.16	9.8	38.8	17.8	G0	4
106	7	14	8.590	0.024	-60	10	25.26	0.14	10.4	13.7	15.1	M0	4
107	7	14	33.354	0.001	-59	54	32.68	0.08	10.3	-22.4	9.3	F2	4
108	7	14	38.557	0.085	-58	27	10.88	0.06	7.0	21.3	6.7	A6	4
109	7	14	38.831	0.035	-59	27	23.56	...	10.2	-37.1	...	F0	2
110	7	14	50.110	0.008	-58	42	56.74	0.06	8.9	27.9	6.8	K5	4
111	7	15	5.779	0.039	-61	34	9.76	0.09	10.1	-23.5	9.4	A7	4
112	7	15	25.251	0.006	-60	57	46.14	0.11	10.3	-13.1	12.4	F6	4
113	7	15	26.661	0.032	-57	33	0.46	0.15	10.4	-33.3	16.6	K2	4
114	7	15	29.416	0.055	-60	26	5.52	0.10	8.2	-8.2	10.6	A3	4
115	7	15	38.692	0.013	-61	42	4.44	0.16	9.9	7.6	17.8	A1	4
116	7	16	1.506	0.028	-57	55	12.49	0.14	9.8	21.3	14.9	K2	4
117	7	16	23.567	0.021	-59	19	9.65	0.18	10.2	-11.5	19.3	F6	4
118	7	16	28.350	0.053	-59	32	31.51	0.15	9.3	26.2	15.9	B9	4
119	7	16	34.467	0.000	-57	48	6.34	0.16	8.6	42.1	17.9	G9	4
120	7	16	38.112	0.006	-58	6	34.42	0.07	9.2	20.2	8.1	B8	4
121	7	16	51.250	0.037	-59	10	12.96	0.07	7.6	-19.7	7.4	F0	4
122	7	17	0.885	0.016	-61	19	49.92	...	10.4	38.2	...	M0	2
123	7	17	4.920	0.017	-58	54	14.72	0.17	9.4	11.5	18.2	F6	4
124	7	17	12.178	0.030	-59	37	59.60	...	10.9	66.6	...	A2	2
125	7	17	26.974	0.015	-58	48	15.90	0.12	9.6	-55.2	12.6	A2	4
126	7	17	41.060	0.011	-61	27	17.28	0.06	10.2	-12.6	6.2	A9	4
127	7	17	44.141	0.032	-61	34	44.55	...	10.9	-18.0	...	F0	2

TABLE 4 (CONTINUED)

No.	α h	m	s	Δα s	δ °	'	"	Δδ "	m_{pg}	V_{rad}	σ	Sp.	N
128	7	17	44.800	0.033	-59	38	31.79	0.04	8.2	-26.2	4.7	F2	4
129	7	17	56.220	0.050	-59	42	8.00	0.07	10.8	-24.0	7.7	F0	4
130	7	18	0.771	0.025	-62	7	47.30	0.22	9.4	-30.0	24.5	A4 Ib	4
131	7	18	4.140	0.023	-60	30	33.42	0.01	8.6	-18.0	1.2	F3	4
132	7	18	14.763	0.054	-62	23	13.05	0.05	9.6	-31.1	5.0	F1	4
133	7	18	24.900	0.064	-57	57	31.49	0.04	6.9	8.2	4.2	A2	4
134	7	18	46.986	0.002	-61	34	57.75	0.12	10.2	1.1	13.0	A1	4
135	7	18	48.698	0.003	-57	41	4.01	0.17	8.2	23.5	18.2	A9	4
136	7	18	52.490	0.017	-61	3	2.57	0.04	7.7	-15.9	3.9	K0	4
137	7	19	7.480	0.005	-59	12	0.75	0.12	10.4	12.6	12.6	G8	4
138	7	19	14.771	0.026	-57	35	21.40	0.21	10.3	-5.5	23.0	F0	4
139	7	19	19.624	0.023	-60	56	24.46	...	10.4	42.1	...	K0	2
140	7	19	24.270	0.077	-57	35	11.11	0.04	10.2	-14.2	4.0	A2	4
141	7	19	27.657	0.030	-57	33	9.16	0.11	10.2	4.9	12.1	G8	4
142	7	19	30.543	0.001	-61	51	13.55	0.12	10.3	27.9	13.3	A3	4
143	7	19	31.798	0.008	-59	4	12.24	0.06	8.9	-31.7	6.7	F1	4
144	7	19	34.168	0.012	-57	47	7.69	0.20	10.3	78.1	21.3	A3	4
145	7	19	48.264	0.064	-58	34	40.16	0.07	7.5	-2.2	7.7	B7	4
146	7	19	59.714	0.026	-58	20	36.38	0.22	9.3	-1.6	23.9	F6	4
147	7	20	1.777	0.019	-57	33	55.52	0.13	10.4	14.2	14.3	A1	4
148	7	20	3.415	0.023	-57	38	32.34	...	10.4	-1.1	...	A2	2
149	7	20	18.005	0.015	-60	3	34.70	0.09	9.9	18.6	10.1	B9	4
150	7	20	38.385	0.042	-60	9	24.93	0.09	10.4	18.6	9.6	K0	4
151	7	20	52.833	0.058	-61	53	46.31	0.06	8.2	-6.5	6.8	A2	4
152	7	21	4.691	0.059	-61	51	17.53	0.13	7.2	6.5	14.7	B9	4
153	7	21	18.993	0.004	-58	55	19.32	0.16	10.3	-30.6	17.4	A2	4
154	7	21	21.709	0.013	-60	35	44.76	0.22	10.2	-0.6	24.3	F2	4
155	7	21	27.809	0.007	-58	38	16.73	...	10.4	-14.7	...	K0	2
156	7	21	31.628	0.012	-60	12	24.96	0.10	9.1	-19.7	10.6	F2	4
157	7	21	45.553	0.034	-60	9	6.23	0.12	10.4	14.2	13.1	K0	4
158	7	21	58.838	0.067	-58	48	58.72	0.15	8.4	2.7	16.1	A0	4
159	7	22	23.900	0.014	-58	0	7.53	...	10.9	-61.2	...	A0	2
160	7	22	29.847	0.033	-60	36	54.84	0.12	10.1	-15.8	12.7	G2	4
161	7	22	31.056	0.049	-62	10	24.97	0.03	7.5	-1.1	2.7	K0	4
162	7	22	37.356	0.035	-61	56	53.26	0.18	10.6	-20.2	19.6	F2 AI	4
163	7	22	43.712	0.030	-57	59	54.22	0.12	8.9	-8.8	13.1	F6	4
164	7	23	13.711	0.056	-60	44	19.94	0.11	7.9	-6.0	12.1	A2	4
165	7	23	17.540	0.055	-58	23	36.90	0.06	6.8	-13.7	6.0	G5	4
166	7	23	18.500	0.015	-60	55	35.40	0.13	10.6	15.3	13.9	A2	4
167	7	23	30.031	0.003	-60	24	0.69	0.05	9.6	-12.6	5.4	G5	4
168	7	23	53.286	0.068	-57	54	17.69	0.08	10.4	9.8	8.3	A2	4
169	7	24	9.624	0.042	-61	20	58.12	0.33	10.9	-6.0	35.9	A3	5
170	7	24	10.860	0.021	-59	49	54.22	0.04	10.1	32.2	4.9	A7	4
171	7	24	57.311	0.025	-58	56	24.84	0.29	10.1	36.0	31.7	A2	5
172	7	25	26.257	0.057	-58	7	28.80	0.35	10.6	56.8	37.9	A3	5
173	7	25	35.860	0.033	-59	20	1.01	...	10.6	38.8	...	F2	3
174	7	25	41.154	0.057	-57	25	13.99	0.64	10.3	10.9	69.5	B9	4
175	7	25	53.447	0.015	-60	53	31.82	0.08	10.1	69.9	8.8	K1	6
176	7	26	2.818	0.005	-59	48	0.33	0.27	10.1	13.6	29.4	A1	6
177	7	26	3.924	0.045	-62	7	26.95	0.45	10.6	318.5	49.5	A2p	5
178	7	26	4.565	0.069	-57	30	32.99	0.19	10.2	-11.5	20.9	F1	6
179	7	26	11.681	0.014	-59	28	34.19	0.06	8.9	30.0	7.0	K0	6
180	7	27	3.958	0.013	-61	35	58.35	0.05	10.9	77.0	5.8	B6	4

TABLE 4 (CONTINUED)

	α			Δα	δ			Δδ					
No.	h	m	s	s	°	′	″	′	m_{pg}	V_{rad}	σ	Sp.	N
181	7	27	16.887	0.028	-57	58	8.48	0.07	7.1	-20.2	7.3	G7	6
182	7	27	29.437	0.011	-58	25	54.93	0.03	9.1	14.2	3.5	G5	6
183	7	27	36.350	0.003	-57	52	19.25	...	10.2	17.5	...	G6	3
184	7	27	42.106	0.048	-61	39	2.55	0.17	10.1	6.0	19.0	A9	5
185	7	27	42.324	0.003	-58	18	19.32	0.07	8.9	3.8	7.3	A3	6
186	7	28	2.571	0.015	-60	54	55.61	...	10.6	3.3	...	K3	3
187	7	28	8.062	0.010	-61	30	1.43	0.12	10.4	54.6	13.4	K0	5
188	7	28	18.486	0.006	-61	56	39.06	0.21	10.4	1.6	22.7	F2	5
189	7	28	19.421	0.035	-60	35	54.90	0.32	10.4	5.5	34.4	A6	6
190	7	28	19.750	0.076	-59	33	23.44	...	10.7	38.2	...	M0	2
191	7	28	51.614	0.019	-59	29	23.33	0.08	9.1	2.7	8.5	B8	6
192	7	28	51.775	0.017	-58	38	31.33	0.16	10.1	1.6	17.8	B9	6
193	7	28	57.975	0.000	-58	7	10.53	0.05	9.2	43.1	5.4	F5	6
194	7	29	1.710	0.036	-60	0	13.61	0.16	8.0	-8.8	17.6	A7	6
195	7	29	15.273	0.015	-61	8	34.70	0.05	7.7	1.1	5.0	F8	6
196	7	29	39.261	0.006	-59	27	6.43	...	10.4	18.0	...	G7	3
197	7	29	47.949	0.011	-57	37	51.20	0.14	9.2	3.8	15.1	F2	6
198	7	29	49.438	0.028	-61	18	23.82	0.12	9.3	2.7	13.5	G4	7
199	7	29	55.767	0.029	-58	20	41.00	0.09	10.3	-4.4	9.9	K0	6
200	7	30	1.682	0.003	-60	23	3.87	0.13	10.2	39.3	13.7	G2	5
201	7	30	1.713	0.005	-57	53	3.71	0.06	9.1	11.5	6.6	F0p	6
202	7	30	26.758	0.010	-60	53	56.68	0.14	10.3	-21.8	15.0	F1	8
203	7	30	29.588	0.037	-59	23	31.26	0.28	10.2	-51.9	30.1	A9	5
204	7	30	29.709	0.009	-57	49	57.78	0.07	7.9	29.0	7.6	G8	6
205	7	30	31.053	0.002	-62	6	11.89	0.13	10.3	-28.4	14.7	G2	8
206	7	31	12.140	0.001	-61	35	2.36	0.08	9.2	7.6	9.2	G4	8
207	7	31	25.677	0.015	-59	10	44.64	0.14	9.2	-9.3	15.5	A0	8
208	7	31	47.874	0.012	-59	0	4.74	...	10.7	-53.0	...	A2p	2
209	7	32	11.548	0.044	-57	41	7.35	0.35	10.1	-46.4	37.7	A8	4
210	7	32	12.513	0.035	-57	49	44.54	0.09	9.9	-43.7	9.3	A1	5
211	7	32	26.330	0.003	-58	3	58.89	0.19	10.6	-26.8	20.5	A4	5
212	7	32	38.319	0.013	-59	5	18.59	0.07	9.0	8.2	7.8	K3	8
213	7	33	8.834	0.002	-61	47	56.31	0.12	10.3	-18.6	12.6	K2	8
214	7	33	20.445	0.012	-60	7	58.92	0.09	7.8	9.3	10.2	F6	8
215	7	33	31.069	0.015	-58	12	53.18	0.19	10.1	-8.7	20.8	A6	5
216	7	33	42.395	0.049	-62	18	15.96	0.10	9.4	-58.4	11.4	F2	4
217	7	33	49.567	0.002	-58	32	43.28	0.13	9.8	-5.4	14.4	G9	5
218	7	33	56.775	0.017	-57	26	30.44	0.17	9.1	14.7	18.7	B8	5
219	7	33	59.165	0.003	-60	58	17.46	0.13	8.2	8.8	13.8	B8	8
220	7	34	7.818	0.023	-62	3	52.83	0.18	10.4	8.7	19.5	A2	8
221	7	34	18.489	0.057	-57	28	8.03	...	10.2	8.2	...	K2	2
222	7	34	33.947	0.017	-61	28	11.50	...	10.4	8.2	...	F5	3
223	7	34	34.822	0.017	-59	25	29.79	0.02	9.9	-5.5	2.4	F3	5
224	7	34	35.693	0.006	-57	43	32.99	0.12	9.9	13.1	13.1	A0	5
225	7	34	56.292	0.042	-58	39	56.54	...	10.7	54.1	...	A2	2
226	7	35	12.850	0.010	-57	34	42.14	0.14	9.6	-31.1	15.5	F4	5
227	7	35	23.301	0.006	-59	30	9.34	0.05	8.9	3.3	5.7	F5	5
228	7	35	38.381	0.028	-58	15	51.05	0.06	8.4	-30.0	6.6	F3	5
229	7	35	45.385	0.007	-61	45	38.02	0.06	8.3	8.7	6.0	B6	5
230	7	35	48.634	0.022	-59	24	48.24	...	10.4	-16.9	...	A2	3
231	7	35	52.212	0.014	-57	56	34.88	0.11	9.6	-10.4	11.5	A2	5
232	7	35	57.450	0.023	-59	28	47.22	0.19	9.6	-38.2	20.2	A5 II	5
233	7	36	5.221	0.022	-60	11	47.25	0.08	10.2	-16.9	8.2	G1	5

TABLE 4 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
234	7	36	14.127	0.063	-57	26	12.28	...	10.3	-52.4	...	A2	2
235	7	36	45.490	0.028	-58	49	37.26	0.08	9.6	-15.8	8.9	A0	5
236	7	37	4.312	0.017	-59	13	53.88	...	10.2	-80.3	...	G7	2
237	7	37	5.948	0.016	-58	35	48.03	0.23	10.2	-18.6	25.2	A2	5
238	7	37	8.213	0.020	-61	35	45.52	...	10.4	-3.8	...	F2s	2
239	7	37	15.441	0.006	-62	11	24.23	0.26	9.1	-56.8	28.6	A2	4
240	7	37	26.294	0.009	-57	48	43.41	0.07	10.6	79.7	7.4	A2	4
241	7	37	39.150	0.051	-58	30	48.50	0.16	10.0	-42.6	17.5	G2	5
242	7	37	51.989	0.001	-60	30	50.33	0.03	8.1	15.3	3.5	B9	5
243	7	37	59.428	0.018	-60	7	1.06	0.25	9.9	-0.6	27.6	A1	5
244	7	38	17.612	0.004	-60	30	10.49	0.09	10.4	8.7	9.8	A5 II	4
245	7	38	20.715	0.006	-57	52	34.50	0.13	10.4	16.9	13.9	A2	4
246	7	38	21.269	0.013	-61	18	5.57	0.20	10.1	2.2	22.1	F3	5
247	7	38	40.969	0.012	-59	50	4.57	0.03	8.8	3.8	3.3	B9	5
248	7	39	12.696	0.001	-61	34	23.39	0.07	10.1	1.1	7.8	K0	5
249	7	39	14.188	0.012	-59	6	44.70	0.09	9.0	-28.4	9.5	G1	4
250	7	39	36.791	0.005	-58	13	17.40	0.09	9.9	31.7	9.4	A2	4
251	7	39	47.983	0.051	-60	1	6.04	0.28	10.6	0.6	30.4	A2	4
252	7	39	56.782	0.037	-58	45	9.79	0.06	8.1	6.5	6.2	B7	4
253	7	39	59.419	0.011	-60	31	22.29	0.16	10.6	-1.6	17.8	B9	4
254	7	40	14.745	0.039	-61	52	18.73	0.05	8.5	-12.0	5.6	F4	4
255	7	40	28.242	0.034	-59	53	0.58	0.07	8.2	26.2	7.3	B7	4
256	7	40	40.198	0.019	-58	33	18.86	0.06	10.1	-3.3	7.0	F5	4
257	7	40	52.188	0.066	-62	14	18.81	...	9.8	-78.1	...	K2	2
258	7	40	52.517	0.026	-58	37	27.44	...	10.5	48.6	...	F0	2
259	7	40	54.526	0.012	-60	9	46.95	0.04	8.9	-9.3	3.9	A2	4
260	7	41	1.664	0.015	-57	51	5.91	0.17	10.2	33.3	19.1	A2	4
261	7	41	15.194	0.065	-58	30	41.39	0.10	7.2	20.8	10.6	A0	4
262	7	41	20.491	0.025	-58	27	50.95	0.05	9.5	10.4	5.8	A0	4
263	7	41	25.958	0.024	-58	33	1.18	0.10	7.7	-2.2	10.4	A2	4
264	7	41	35.805	0.002	-59	19	17.79	0.07	9.2	-11.5	7.6	F3	4
265	7	41	43.763	0.032	-59	10	43.15	0.13	7.8	25.1	13.9	G0	4
266	7	41	49.761	0.026	-59	2	46.27	0.12	9.9	-24.0	13.0	A5p	4
267	7	41	52.273	0.003	-60	10	59.53	0.12	10.1	24.0	13.1	K0	4
268	7	41	56.749	0.019	-58	6	36.25	0.10	7.7	-1.1	10.4	K0	4
269	7	42	4.092	0.007	-60	37	14.77	0.09	10.1	12.0	9.3	F5	4
270	7	42	4.586	0.030	-61	46	47.40	0.07	10.1	3.8	8.1	G7	4
271	7	42	5.265	0.003	-58	31	53.61	0.10	9.2	25.7	10.4	B8	4
272	7	42	23.897	0.001	-59	42	10.51	0.12	9.5	20.2	13.0	B8	4
273	7	42	26.290	0.032	-58	23	10.73	0.11	9.9	36.6	11.7	F7	4
274	7	42	30.218	0.002	-61	46	50.11	0.09	8.4	-24.0	9.3	F5	4
275	7	42	54.237	0.010	-57	39	5.36	0.25	9.0	37.7	27.6	B9	4
276	7	42	55.290	0.017	-58	20	52.20	0.03	9.6	7.6	3.5	K0	4
277	7	42	59.435	0.011	-60	6	12.85	0.12	9.9	71.0	13.1	A5	4
278	7	43	13.127	0.017	-59	54	17.26	0.05	9.7	15.3	5.2	F1	4
279	7	43	15.300	0.023	-61	34	21.74	0.23	10.4	36.0	25.1	A2	4
280	7	43	18.764	0.001	-58	20	39.78	0.06	9.3	6.0	6.1	K0	4
281	7	43	21.105	0.043	-57	49	26.77	...	10.2	-11.5	...	K0	2
282	7	43	42.665	0.020	-59	23	0.97	0.01	9.9	9.3	0.8	K0	4
283	7	43	53.252	0.030	-58	9	51.40	0.13	10.1	-20.2	13.8	F4	4
284	7	44	1.893	0.015	-57	57	52.60	0.13	10.1	18.6	13.7	A3	4
285	7	44	4.940	0.037	-58	49	58.39	0.07	8.8	7.6	7.8	B7	4
286	7	44	22.806	0.024	-59	13	31.76	0.05	10.4	6.6	5.6	A2	4

TABLE 4 (CONTINUED)

	α			Δα	δ			Δδ					
No.	h	m	s	s	°	'	"	'	m_{pg}	V_{rad}	σ	Sp.	N
287	7	44	36.851	0.014	-58	49	54.20	0.02	8.8	-19.1	2.3	G7	4
288	7	44	52.370	0.027	-58	28	30.07	0.12	9.9	4.9	12.6	A2	4
289	7	44	52.560	0.022	-61	51	44.76	0.13	9.1	-11.5	14.3	K1	4
290	7	45	16.173	0.020	-61	33	3.44	0.32	10.4	25.1	34.5	A3	4
291	7	45	23.934	0.039	-59	41	28.64	0.06	9.0	10.9	7.0	G9	4
292	7	45	25.919	0.005	-59	41	11.96	0.04	9.0	4.9	4.5	G9	4
293	7	45	32.995	0.016	-58	57	55.02	0.02	8.2	10.9	2.3	F8	4
294	7	45	39.273	0.031	-61	18	29.40	0.04	8.0	7.6	4.9	G9	4
295	7	45	44.135	0.022	-61	16	34.47	0.08	9.4	-50.2	8.9	F7	4
296	7	45	50.237	0.013	-60	23	13.68	0.10	9.9	13.6	10.6	A2	4
297	7	45	55.490	0.010	-61	36	26.49	0.15	9.1	33.3	16.7	B7	4
298	7	45	59.524	0.010	-58	46	55.65	0.09	8.2	32.2	9.9	B9	4
299	7	46	15.124	0.009	-58	56	57.63	0.12	9.2	9.3	12.7	F1	4
300	7	46	16.595	0.012	-61	14	17.73	0.13	8.8	31.1	14.3	B9	4
301	7	46	18.723	0.011	-58	57	13.67	0.09	9.6	23.5	9.8	B9	4
302	7	46	23.777	0.000	-57	51	50.27	0.09	9.2	13.1	9.3	F4	4
303	7	46	42.671	0.051	-60	39	31.79	0.07	9.6	27.3	7.9	A1	4
304	7	46	49.189	0.022	-58	24	22.67	0.12	9.0	4.4	13.5	A2	4
305	7	46	50.822	0.048	-58	24	20.17	0.12	10.2	21.3	13.5	A9	4
306	7	46	53.038	0.024	-60	2	34.96	0.15	10.1	6.5	16.8	A1	4
307	7	47	11.332	0.003	-59	46	45.72	0.11	9.1	-8.2	11.9	F7	4
308	7	47	23.018	0.015	-58	35	32.27	0.14	10.4	-1.1	15.3	A2	4
309	7	47	32.884	0.025	-60	46	14.72	0.09	8.8	17.5	10.0	A7	4
310	7	47	43.995	0.004	-60	2	28.24	0.07	9.2	-16.9	7.9	F6	4
311	7	47	46.936	0.007	-59	54	27.71	0.23	9.8	-4.4	24.6	A2	4
312	7	48	1.738	0.006	-61	2	10.79	0.07	8.4	-1.1	7.6	F4	4
313	7	48	23.126	0.007	-60	9	27.57	0.08	7.2	-1.1	8.4	F3	4
314	7	48	31.856	0.011	-59	15	6.31	0.06	8.3	-23.5	6.4	G7	4
315	7	48	42.094	0.038	-61	42	30.33	0.06	10.1	19.7	6.6	A5	4
316	7	49	1.631	0.001	-58	27	13.15	0.02	8.8	27.9	2.0	B9	4
317	7	49	2.607	0.008	-60	33	14.82	0.08	10.1	-3.3	8.3	F4	4
318	7	49	3.696	0.004	-59	55	24.68	0.08	8.3	-6.5	8.8	K0	4
319	7	49	15.432	0.009	-60	32	20.42	0.09	8.8	13.1	9.3	B8	4
320	7	49	16.352	0.008	-61	5	40.69	0.05	9.2	-5.5	5.0	K2	4
321	7	49	17.383	0.012	-60	25	35.52	0.15	10.1	1.6	16.5	F4	6
322	7	49	25.988	0.034	-59	56	38.93	0.15	10.2	-4.4	15.9	A2	4
323	7	49	38.492	0.015	-59	53	48.65	0.08	9.8	-4.9	8.2	A2	4
324	7	49	55.858	0.102	-59	46	41.31	...	10.4	101.1	...	F6	2
325	7	49	56.162	0.028	-58	27	37.54	...	10.5	50.3	...	A1	2
326	7	50	3.881	0.017	-59	31	2.21	0.09	7.8	14.7	9.8	B7	4
327	7	50	4.459	0.002	-59	3	5.91	0.03	10.1	-1.1	3.3	K0	4
328	7	50	25.778	0.028	-61	7	31.13	0.18	8.9	16.9	19.4	B8	4
329	7	50	33.741	0.046	-61	24	26.25	0.25	10.6	20.7	27.4	A1	4
330	7	50	37.522	0.001	-59	31	44.23	0.15	9.1	12.0	16.2	B8	4
331	7	50	39.865	0.015	-57	44	15.93	0.07	10.1	-15.8	7.1	F5	4
332	7	50	47.768	0.014	-58	31	23.00	0.15	9.9	20.2	16.9	G7	4
333	7	51	0.533	0.013	-60	1	43.96	0.25	10.2	0.6	27.3	A2	4
334	7	51	5.140	0.029	-58	52	6.69	0.16	9.5	3.3	16.9	A1	4
335	7	51	5.923	0.001	-60	7	39.21	...	10.3	-84.1	...	A2	2
336	7	51	7.091	0.010	-60	15	15.28	0.01	9.0	17.5	0.5	B8	4
337	7	51	19.937	0.028	-59	28	59.72	0.05	7.8	-2.2	5.5	B8	4
338	7	51	25.823	0.016	-60	45	19.78	0.13	10.2	15.3	14.0	A1	4
339	7	51	28.405	0.015	-59	21	45.35	0.09	8.9	6.0	9.3	B8	4
340	7	51	34.613	0.013	-61	35	6.84	0.34	10.2	10.9	37.2	G2	4

TABLE 4 (CONTINUED)

No.	α h	m	s	Δα s	δ °	′	″	Δδ ′	m_{pg}	V_{rad}	σ	Sp.	N
341	7	51	35.313	0.014	-59	46	56.07	0.14	9.4	-14.2	15.1	A2	4
342	7	51	54.343	0.007	-58	30	21.19	0.23	10.1	-32.2	24.7	A9	4
343	7	51	59.378	0.003	-59	42	20.56	0.21	9.3	-18.6	22.9	A4p	4
344	7	52	0.743	0.032	-58	52	39.76	0.17	10.1	-57.9	18.3	F5	4
345	7	52	6.949	0.014	-59	55	19.31	0.17	10.2	20.2	18.4	A2	4
346	7	52	10.755	0.031	-59	16	59.85	0.20	9.2	6.5	22.0	B8	4
347	7	52	22.850	0.035	-61	31	10.78	0.05	9.2	24.0	5.0	F4	4
348	7	52	24.948	0.004	-60	48	15.26	0.09	8.8	2.7	9.6	B7	4
349	7	52	30.651	0.000	-60	34	55.31	0.05	9.9	-12.0	5.7	A1	4
350	7	52	31.032	0.028	-60	10	57.50	0.23	10.2	-8.2	24.7	A0	4
351	7	52	34.485	0.024	-62	13	37.79	0.51	9.2	-61.7	55.8	K2	4
352	7	52	35.254	0.055	-60	18	1.53	...	10.4	-17.5	...	A2	2
353	7	52	37.370	0.001	-62	11	4.03	0.19	9.2	-50.3	20.9	G0	4
354	7	52	41.572	0.002	-60	55	21.84	0.06	8.1	13.7	6.9	B8	4
355	7	52	42.066	0.023	-61	55	1.17	0.21	10.3	36.6	23.0	A2	4
356	7	52	48.384	0.015	-60	46	35.07	0.09	9.8	-8.8	9.8	A0	4
357	7	52	54.256	0.002	-61	50	26.95	0.15	8.8	6.5	16.6	F2	4
358	7	52	59.814	0.078	-57	26	34.86	0.31	9.0	-46.4	34.1	A2	4
359	7	53	4.720	0.008	-60	27	4.22	0.04	9.2	-15.3	4.4	K9	4
360	7	53	6.538	0.017	-62	14	52.99	...	9.0	-133.8	...	K0	2
361	7	53	15.382	0.054	-58	26	29.18	0.12	8.3	-32.2	13.5	G0	4
362	7	53	19.023	0.034	-59	30	3.99	0.35	10.4	-14.2	38.0	A2	4
363	7	53	19.700	0.008	-60	34	45.09	0.22	9.7	-1.6	24.0	A1	4
364	7	53	24.366	0.007	-61	54	3.55	0.16	9.7	31.7	17.7	F2	4
365	7	53	39.945	0.030	-58	35	57.08	0.07	8.8	-18.0	7.6	G4	4
366	7	53	41.506	0.012	-61	10	35.65	0.15	10.2	34.9	16.5	A1	4
367	7	53	44.692	0.010	-61	26	39.24	0.03	9.5	9.3	2.9	B1	4
368	7	53	45.032	0.019	-61	44	18.02	0.12	9.4	9.3	12.9	M2	4
369	7	53	49.473	0.013	-59	45	54.33	0.06	9.7	-11.5	6.6	B9	4
370	7	53	51.465	0.019	-59	51	6.72	0.13	10.4	-14.2	14.4	A7	4
371	7	54	8.414	0.012	-59	42	57.65	0.07	10.4	16.4	7.7	A1	4
372	7	54	10.918	0.075	-57	27	7.73	0.16	9.0	-47.0	17.6	A2	4
373	7	54	14.206	0.004	-58	28	31.92	0.18	10.4	33.3	20.1	A2	4
374	7	54	14.399	0.017	-60	30	23.30	0.13	10.4	-3.3	14.3	A2	4
375	7	54	16.982	0.022	-60	24	43.63	0.11	8.3	-4.9	12.0	A1	4
376	7	54	32.011	0.013	-60	10	47.94	0.01	9.3	24.0	1.6	A0	4
377	7	54	32.291	0.003	-60	42	38.33	0.18	9.1	1.1	19.2	A0	4
378	7	54	57.399	0.001	-58	39	54.90	0.09	10.1	-7.6	10.2	G9	4
379	7	55	0.798	0.003	-60	19	34.84	0.05	9.0	9.3	5.6	B9	4
380	7	55	2.877	0.014	-61	2	5.64	0.05	8.2	12.6	5.6	B7	4
381	7	55	9.726	0.017	-62	12	44.89	0.29	8.9	-20.2	31.5	B8	4
382	7	55	10.377	0.008	-60	7	22.96	0.12	9.4	1.1	13.7	B9	4
383	7	55	12.776	0.024	-60	23	23.19	0.09	10.1	-9.8	9.7	A1	4
384	7	55	13.046	0.036	-60	6	29.47	0.07	9.0	3.3	7.7	B8	4
385	7	55	27.465	0.010	-60	28	22.26	0.25	10.1	26.8	27.7	A2	4
386	7	55	27.602	0.002	-60	57	52.97	0.06	7.4	13.1	6.8	B8	4
387	7	55	28.005	0.017	-60	23	29.95	0.12	7.7	14.2	13.1	K4	4
388	7	55	30.564	0.012	-60	39	58.04	0.06	8.8	14.2	6.1	B7	4
389	7	55	33.933	0.039	-61	46	29.77	0.23	9.9	14.2	25.5	A3	4
390	7	55	35.346	0.012	-61	8	56.38	0.13	9.2	20.2	14.0	B8	4
391	7	55	44.605	0.017	-58	57	27.50	0.09	9.6	-8.2	10.0	B8	4
392	7	55	48.920	0.004	-60	38	27.36	0.17	9.7	8.8	18.5	A1	4
393	7	55	53.063	0.011	-60	40	44.60	0.27	9.7	4.9	29.8	A2	4
394	7	55	54.580	0.007	-58	59	25.89	0.05	9.2	18.6	4.9	K8	4

TABLE 4 (CONTINUED)

	α			Δα	δ			Δδ					
No.	h	m	s	s	°	'	"	'	m_{pg}	V_{rad}	σ	Sp.	N
395	7	55	55.483	0.022	-59	6	53.15	0.10	9.4	7.1	11.4	A0	4
396	7	56	1.170	0.019	-60	17	56.39	...	10.2	-8.2	...	A2	2
397	7	56	4.192	0.010	-60	27	46.95	0.12	8.1	20.2	12.7	B7	4
398	7	56	9.856	0.034	-60	38	54.10	0.04	9.6	12.6	4.4	B9	4
399	7	56	14.906	0.037	-61	50	51.31	0.05	10.4	56.3	4.9	B8	4
400	7	56	15.309	0.018	-60	9	9.96	0.22	10.1	19.1	23.5	A2	4
401	7	56	18.611	0.049	-57	56	24.85	0.21	10.4	11.5	23.5	A0	4
402	7	56	21.613	0.026	-60	45	11.54	0.04	9.3	24.1	4.9	B9	4
403	7	56	24.937	0.001	-60	17	29.25	0.16	10.1	11.5	17.4	A2	4
404	7	56	27.540	0.055	-60	26	40.61	...	10.4	5.5	...	A2	2
405	7	56	30.164	0.007	-60	40	37.25	0.02	9.3	8.2	2.3	B9	4
406	7	56	31.240	0.006	-60	37	54.00	0.03	8.1	27.3	2.7	B8	4
407	7	56	41.272	0.004	-60	29	41.54	0.04	9.2	12.6	4.4	A1	4
408	7	56	42.400	0.010	-60	4	14.29	0.13	10.2	-8.2	14.4	A2	4
409	7	56	44.125	0.002	-60	9	5.50	0.07	9.7	-17.5	7.9	A2	4
410	7	56	46.116	0.023	-60	55	20.59	0.01	8.6	4.4	0.8	B8	4
411	7	56	48.502	0.010	-60	46	21.84	0.03	8.9	13.6	3.5	B9	6
412	7	56	52.738	0.019	-60	29	40.05	0.06	9.1	12.0	6.1	B9	4
413	7	56	53.075	0.075	-60	10	3.37	0.09	7.2	-24.0	9.7	G0	4
414	7	56	55.853	0.027	-60	47	24.68	0.06	7.8	15.3	6.2	B7	4
415	7	56	56.289	0.009	-60	41	23.54	...	9.0	-6.0	...	A1 Iab	2
416	7	56	57.006	0.005	-60	28	24.18	0.07	8.2	8.8	7.3	B7	4
417	7	56	58.426	0.035	-60	40	45.68	...	9.2	-8.8	...	A0	2
418	7	57	8.685	0.027	-61	13	44.62	...	10.5	39.3	...	A2	2
419	7	57	11.282	0.046	-61	55	43.40	0.19	9.4	28.4	20.3	F4	4
420	7	57	12.238	0.032	-60	28	41.55	0.13	7.8	29.0	13.7	B7	4
421	7	57	24.391	0.010	-59	17	58.37	0.11	9.6	5.5	12.1	B9	4
422	7	57	27.469	0.037	-59	33	38.54	0.07	9.1	-25.1	7.4	G7	4
423	7	57	33.861	0.033	-61	56	25.52	0.04	10.1	29.5	4.4	B8	4
424	7	57	34.866	0.024	-59	49	28.19	0.11	8.9	13.6	12.3	B9	4
425	7	57	38.032	0.001	-60	7	39.94	0.08	10.1	8.2	8.5	F3	4
426	7	57	44.104	0.064	-60	25	52.33	...	9.6	-3.3	...	A2	2
427	7	57	46.884	0.005	-59	14	9.77	...	9.2	-15.3	...	B3	2
428	7	58	2.065	0.003	-60	27	55.50	0.05	9.6	-19.7	5.5	A1	4
429	7	58	15.954	0.032	-61	26	45.96	0.11	8.0	-12.6	11.7	F2	4
430	7	58	23.613	0.001	-60	26	57.37	0.07	8.2	8.8	7.1	B7	4
431	7	58	25.482	0.023	-60	43	49.16	0.29	9.9	3.8	31.9	A1	4
432	7	58	29.089	0.021	-60	17	12.32	0.17	9.9	7.6	18.5	A2	4
433	7	58	30.996	0.011	-60	3	41.12	0.10	9.3	27.8	10.5	B9	4
434	7	58	31.154	0.005	-60	40	39.50	0.09	9.1	6.6	10.2	B7p	4
435	7	58	37.182	0.030	-60	39	30.00	0.12	9.2	5.5	13.0	A2p!	4
436	7	58	46.380	0.047	-60	26	55.75	0.08	7.8	22.9	8.8	M0	4
437	7	58	47.303	0.079	-60	4	8.73	0.06	7.3	14.2	6.0	B8	4
438	7	58	50.959	0.001	-59	4	24.43	0.05	9.9	-3.8	5.6	K1	4
439	7	58	53.352	0.039	-60	32	1.01	...	9.6	10.4	...	A2	2
440	7	58	56.578	0.004	-59	49	43.16	0.04	9.2	8.8	4.9	A0	4
441	7	58	58.678	0.029	-61	17	24.92	0.03	10.1	-4.9	2.7	A2	4
442	7	59	7.202	0.022	-60	36	29.47	0.06	8.2	7.6	6.6	B8	4
443	7	59	9.007	0.048	-61	19	47.56	0.08	10.1	10.4	8.9	F6	4
444	7	59	13.278	0.022	-60	38	12.71	0.13	9.0	-10.9	14.3	A2p	4
445	7	59	16.813	0.006	-60	32	40.09	0.32	10.1	4.4	34.8	A1	4
446	7	59	34.529	0.003	-58	43	39.11	0.06	9.4	28.9	6.8	B8	4
447	7	59	43.571	0.046	-60	34	34.53	0.10	9.6	5.5	11.3	B9	4
448	7	59	51.570	0.015	-59	31	9.29	0.07	8.4	-6.5	7.7	F3	4

TABLE 4 (CONTINUED)

		α		Δα	δ			Δδ						
No.	h	m	s	s	°	′	″	′	m_{pg}	V_{rad}	σ	Sp.		N
449	7	59	51.811	0.026	-58	41	53.79	0.17	10.4	-1.1	18.9	A5	II	4
450	7	59	53.488	0.006	-60	22	7.80	0.11	9.7	3.8	12.0	A0		4
451	8	0	1.678	0.043	-60	52	46.86	0.19	10.1	13.1	20.5	A2		4
452	8	0	7.565	0.026	-61	27	1.39	0.14	9.1	6.6	14.9	B8		4
453	8	0	12.591	0.004	-60	47	36.00	0.07	8.4	-14.2	8.1	A0		4
454	8	0	12.955	0.046	-61	6	12.66	0.20	10.4	-9.3	22.2	A2		4
455	8	0	13.291	0.017	-61	23	3.98	0.05	8.2	24.6	5.4	B6		4
456	8	0	25.712	0.033	-61	13	40.01	0.12	9.5	3.3	12.9	A1		4
457	8	0	27.083	0.022	-57	58	43.54	0.06	8.5	-22.9	6.7	A0		4
458	8	0	32.363	0.028	-61	44	14.41	0.11	9.2	-27.3	12.1	G8		4
459	8	0	35.878	0.002	-59	57	0.44	0.15	10.4	37.1	16.8	A1		4
460	8	0	37.501	0.064	-62	7	2.07	0.12	9.6	-26.2	12.8	A0		4
461	8	0	38.691	0.078	-61	32	11.77	0.13	10.1	3.8	14.0	A2		4
462	8	0	40.118	0.052	-59	7	56.45	0.27	10.2	24.0	29.7	A4	Ib	4
463	8	0	47.260	0.010	-60	5	53.99	0.08	10.2	-34.4	8.3	A5		4
464	8	0	49.324	0.032	-61	16	52.63	0.11	9.3	-16.9	11.6	A5	II	4
465	8	0	49.725	0.003	-60	22	40.45	0.01	8.7	-6.0	1.2	B7		4
466	8	1	7.875	0.009	-60	56	27.88	0.09	9.1	-1.1	10.0	A0		4
467	8	1	11.642	0.034	-57	49	56.40	...	10.6	-0.6	...	A2		2
468	8	1	24.697	0.035	-57	41	45.29	0.17	9.9	3.3	18.3	A9		4
469	8	1	25.320	0.039	-59	45	29.82	0.04	9.2	-19.1	3.9	K0		4
470	8	1	26.707	0.023	-59	40	18.38	0.13	9.1	12.6	14.4	B9		4
471	8	1	47.913	0.037	-57	30	27.88	0.14	10.1	-44.2	14.9	F4		4
472	8	2	0.173	0.007	-60	48	13.19	...	10.1	-46.4	...	A2		2
473	8	2	4.503	0.007	-60	5	16.47	0.10	9.9	10.4	10.6	F5		4
474	8	2	8.442	0.013	-59	55	39.68	0.08	9.3	-4.9	9.2	A0		4
475	8	2	8.487	0.018	-59	54	9.20	0.13	9.8	-38.8	13.7	A5		4
476	8	2	9.550	0.088	-61	54	57.59	0.10	9.3	-6.0	11.3	F2		4
477	8	2	22.104	0.043	-61	59	26.83	0.02	8.1	-11.5	2.3	B6		4
478	8	2	24.824	0.014	-60	30	3.78	0.15	10.4	-12.6	16.4	A7		4
479	8	2	31.891	0.004	-60	0	39.04	0.05	9.2	-8.8	5.2	B9		4
480	8	2	37.305	0.025	-60	22	58.35	0.09	9.0	16.9	9.9	A1		4
481	8	2	50.694	0.003	-60	45	54.10	0.10	8.2	-11.5	11.4	B7		4
482	8	3	13.440	0.060	-61	39	17.14	0.09	10.1	-27.3	9.5	F7		4
483	8	3	25.433	0.004	-57	52	11.80	0.05	9.3	8.8	5.4	B9		4
484	8	3	36.282	0.071	-59	57	28.34	...	10.3	-18.0	...	A5		2
485	8	3	42.701	0.041	-60	20	33.43	0.11	9.7	-10.4	12.1	G4		4
486	8	3	52.656	0.009	-57	38	11.06	...	8.8	1.1	...	F0		2
487	8	3	57.873	0.003	-58	12	54.35	0.05	9.9	-5.5	4.9	K7		4
488	8	4	9.000	0.057	-60	14	38.00	0.04	8.0	-8.7	3.9	B9		4
489	8	4	15.143	0.013	-59	6	3.95	0.12	9.8	8.2	12.7	G5		4
490	8	4	33.466	0.069	-61	49	38.45	0.33	10.2	-31.2	35.6	B9		4
491	8	4	56.189	0.003	-60	48	21.17	0.08	10.1	-54.6	8.5	A2		4

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