

PHOTOMETRIC, POLARIZATION, AND SPECTROGRAPHIC OBSERVATIONS OF O AND B STARS*

W. A. HILTNER

Yerkes and McDonald Observatories

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ABSTRACT

This paper consists primarily of a catalogue of O and B stars for which observations for polarization, magnitude, color, and spectral types are available. The magnitudes and colors are on the U, B, V system, and the spectral types on the two-dimensional MK system. In addition to the direct observations for magnitude, colors, spectral types, and polarization, the interstellar absorption, the distance modulus, and the ratio of interstellar polarization to absorption are also recorded in the catalogue. The maximum polarization, 0.22 mag., has been found in Cygnus, where the absorption is in excess of 10 mag. An inclination for the Orion-Perseus spiral arms is derived from the alignment of the planes of vibration. The longitude of the radius vector perpendicular to the spiral arm is 102° , in contrast to approximately 135° from 21-cm observations but is in fair agreement with the O association data. A maximum value for the ratio of polarization absorption, p/A_v , is determined. A value near 0.06 is indicated from the analysis of the data.

INTRODUCTION

This is the third catalogue of early-type stars for which interstellar polarization measurements have been made (Hiltner 1951 and 1954). This catalogue differs from the previous two. In addition to the polarization data, the stars were also observed for magnitude and color on the U, B, V system, and slit spectrograms were obtained for spectral classification on the MK system. These additional data, of course, greatly enhance the value of the catalogue not only for investigations on interstellar polarization but also for other galactic-structure studies. For example, a reliable maximum value for the ratio of interstellar polarization to total absorption can be determined. Distance moduli can now be computed. However, the accuracy for an individual star is not sufficiently great to assist materially in polarization studies, but these data should prove useful in other galactic-structure studies, where the average of a number of stars can give significant information—for example, the distances of associations. Many stars in this catalogue also appear in one or the other of the earlier ones. This is the case where the observed polarization was published previous to this catalogue and in the meantime spectroscopic and photometric observations were completed.

OBSERVATIONS

Polarization Measurements

The polarization observations in this paper consist of data previously published as well as new data. All interstellar polarization data published earlier (Hiltner 1951, 1954) and the new data published here were obtained with a photoelectric photometer attached to the 82-inch reflector of the McDonald Observatory. The polarization analyzer consisted of a Polaroid sheet mounted between glass plates. Relative to the photosensitive surface, this Polaroid occupied either of two positions differing by 90° in position angle. In addition to this rotation of 90° , the Cassegrain focus of the telescope is provided with a head that can be rotated to any position angle. Consequently, the Polaroid in either of the two positions separated by 90° could occupy any position angle. A series of observations, where the difference in intensity at the two positions of the Polaroid is measured at different settings of the Cassegrain head, yielded a sine-curve when the differ-

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ences in intensities were plotted against position angle. In the normal observing program an observation was made with the Cassegrain head set at some arbitrary position angle. An observation at this angle consisted of a deflection with the Polaroid in one of its two positions, a deflection in the other position 90° from the first and then a second deflection at the original position. The Cassegrain head was then rotated in position angle by 30° , and the same procedure was followed. That is, one deflection at position A of the Polaroid, a deflection at position B, 90° from A, and then a second deflection at A. From these two sets of observations the position angle was estimated at which the maximum polarization effect could be observed. An observation at this estimated position angle was then made. In this case the observation consisted of three deflections at position A of the Polaroid separated by two at position B. This observation near maximum polarization was then followed by two sets of observations with the position angle of the Cassegrain head set at 45° on either side. These two series of observations taken to determine the position angle of the plane of vibration consisted of three deflections each, two at position A, separated by one at B. All deflections had a duration of about 30 seconds.

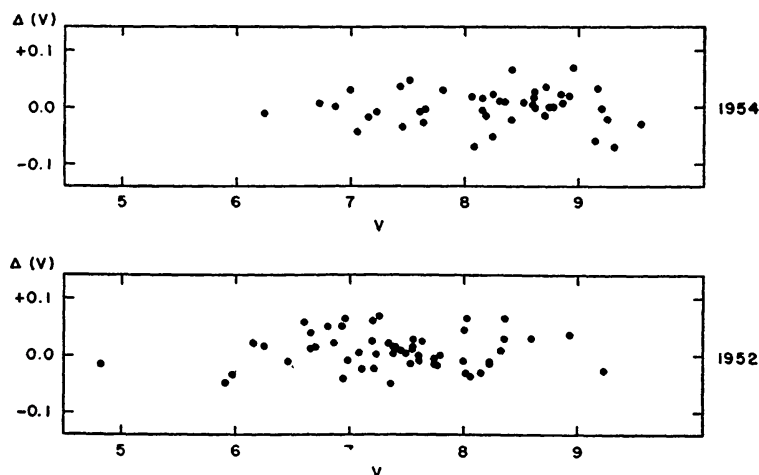


FIG. 1.—Comparison of magnitudes obtained with the 13-inch and the 82-inch reflectors of the McDonald Observatory.

The first two preliminary series of observations as well as the last three were entered into a least-squares solution for the amount of polarization and the plane of vibration. At some galactic longitudes the plane of vibration could be estimated (plane of the Galaxy) in advance with sufficient accuracy. Under such circumstances only the last three series of observations were necessary.

In the earlier observations an RCA 1P21 photomultiplier was employed. Later this was replaced by an EMI 5659 photomultiplier, since the latter has a photocathode normal to the optical axis of the telescope and hence should be insensitive to the plane of vibration of the exciting radiation. However, this photomultiplier was also sensitive to the plane of vibration of the exciting radiation. The radiation transmitted by the photocathode was free to be absorbed by the Venetian blind of the multiplier structure (Sommer and Turk 1950). Since the Venetian blinds are inclined to the optical axis and have photoelectric sensitivity, a residual polarization of about 0.01 mag. was present. This residual polarization, detected by observing nearby stars, was removed by a quartz depolarizer.

Magnitude and Color Measurements

The photometric observations in three colors were obtained over a period of 4 years. Two telescopes were employed—the 13-inch and the 82-inch reflectors of the McDonald

Observatory. Three amplifiers of three different designs were used during the four observing seasons. In all cases the amplifiers were checked for linearity and calibrated against standard laboratory potentiometers. The same RCA 1P21 photomultiplier and filters were employed with the 82-inch reflector throughout the series, and this same combination was used with the 13-inch reflector in 1954. However, a different set, but of the same type, of photomultiplier and filters was used on the 13-inch reflector in 1952.

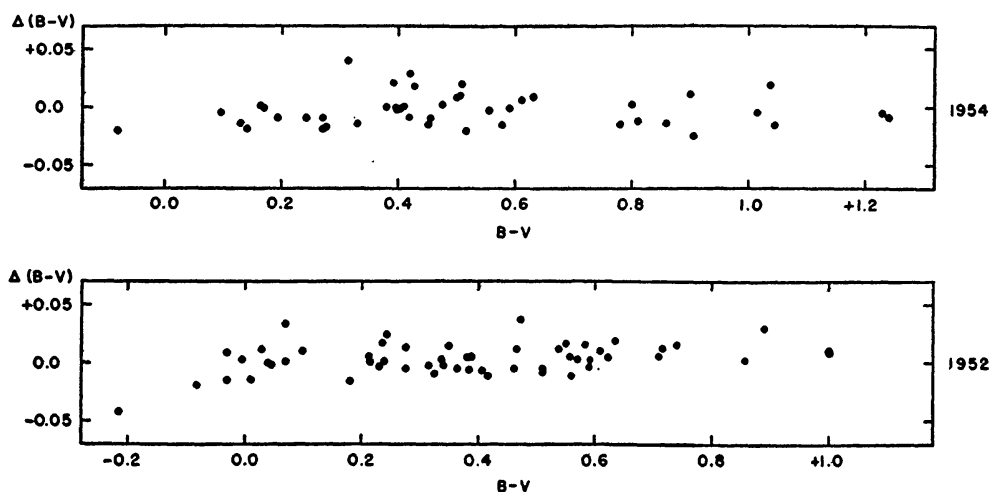


FIG. 2.—Comparison of $B-V$ colors obtained with the 13-inch and 82-inch reflectors of the McDonald Observatory.

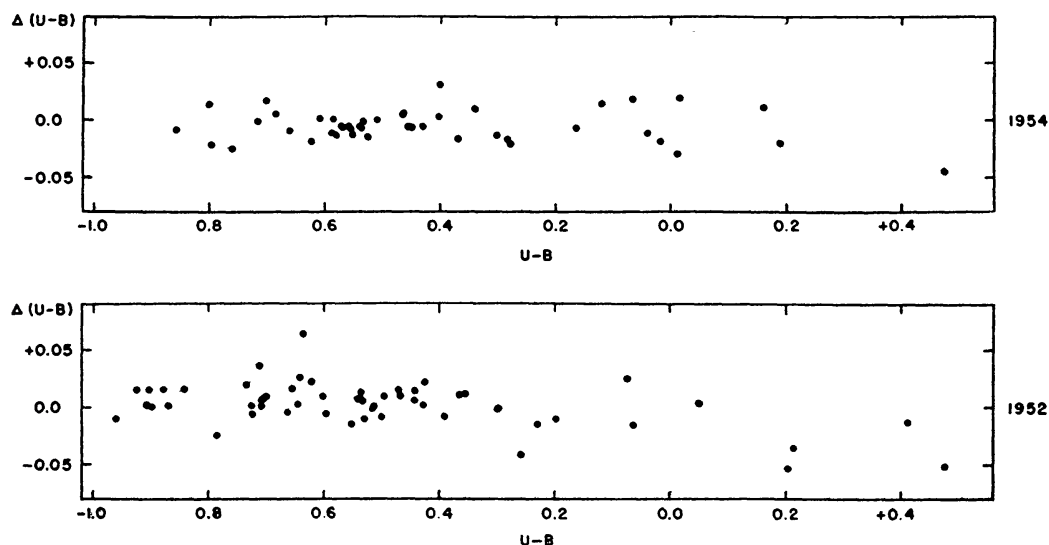


FIG. 3.—Comparison of $U-B$ colors obtained with the 13-inch and the 82-inch reflectors of the McDonald Observatory.

In all cases the same filter-photomultiplier combinations were used as were originally employed in defining the U , B , V color system (Johnson and Morgan 1953), to which all natural colors and magnitudes were transferred. No difficulty was encountered in transferring color systems, for all transformations were linear. A comparison of the 1952 and 1954 13-inch observations and the 82-inch observations for all seasons is shown in Figures 1, 2, and 3. For the 1952 13-inch reflector data no piece of equipment was in common with the 82-inch reflector data. Any systematic difference that may be present is less

than 0.01 mag., in magnitude as well as in color. The 1954 13-inch observations employed the same equipment as that used on the 82-inch reflector. Again any systematic error is less than 0.01 mag. The individual points in the figures are often represented by only one observation by either or both telescopes.

The extinction was determined on all nights when the run was long enough to permit such determination. However, a mean value was used, for the evidence supports the conclusion that, in general, if only photometric nights are used for photometry, the extinction is less variable than the accuracy with which it can be determined during a night when the extinction observations are interspersed with a significant number of observations on program stars. Nightly corrections were then added to the observations. These corrections are evaluated by observing standard stars at frequent intervals—about 1 hour. At the beginning of the photometric observations the extinction was given careful consideration. In August and September, 1952, the extinction was measured with great care. The results of these observations are recorded in Table 1. These data support the

TABLE 1
EXTINCTION MEASUREMENTS

Date 1952	k_y	k_{cy}	k_{cu}	Date 1952	k_y	k_{cy}	k_{cu}
August 19.	0.151	0.090	0.307	September 6.	0.145	0.086	0.303
20.	.159	.087	.310	7.	.163	.086	.312
21.	.157	.089	.307	8.	0.168	0.088	0.315
22.	0.151	0.090	0.314				

TABLE 2
STANDARD STARS

Star	V	$B-V$	$U-B$	Star	V	$B-V$	$U-B$
HD 14633.	7.44	-0.210	-1.067	δ Tri.	4.87	+0.61	+0.02
10 Lac.	4.87	- .200	-1.045	α Ori.	1.99	+1.153	+1.12
η Hga.	4.31	- .196	-0.74	HR 8832.	5.56	+1.013	+0.892
γ Her.	3.89	- .155	-0.558	ϵ CrB.	4.15	+1.227	+1.282
HR 875.	5.17	+0.085	+0.05				

conclusion that, when only photometric nights are used for photometry, the extinction is indeed quite uniform from night to night. In the table, k_y represents the extinction for the yellow filter, k_{cy} the extinction for blue minus yellow color, and k_{cu} the extinction for ultraviolet minus blue color—all for zero natural color. The color extinctions were computed with the condition in the least-squares solution that the no-atmosphere colors of the extinction stars were constant from night to night.

Only nights of good quality were used for photometric observations. On nights of doubtful or non-photometric quality, the Cassegrain spectrograph was placed on the telescope to obtain classification spectrograms of program stars.

To transfer from the natural colors to the U , B , V system, the standard stars listed in Table 2 were employed. In addition to these stars, others with published U , B , V magnitudes and colors were observed to check the linearity of the transformation. The values given in Table 2 do not differ significantly from the more recent values published by Johnson (1956).

Spectroscopic Observations

In order to secure spectrograms for two-dimensional classification, a new camera was installed on the Cassegrain spectrograph of the McDonald Observatory. The lens, designed by Dr. F. E. Ross, consists of three elements, two of which are cemented. It has an aperture of 90 mm and a focal length of 118 mm. The dispersion is 86 Å/mm at H δ when used in conjunction with the two glass prisms. The exposure time for a twelfth-magnitude star is 1 hour for a spectrogram 0.7 mm wide on Eastman 103a-O emulsion. As mentioned earlier, the spectrographic observations were, in general, reserved for those nights when the sky was not of photometric quality. All spectrograms were developed under the same physical conditions.

Nearly sixteen hundred spectrograms of O and B stars have been obtained to date by the author with this spectrograph. The stars are distributed approximately as follows: 600 stars with *Henry Draper* numbers, 175 with *Henry Draper Extension* numbers, and 600 with *Bonner Durchmusterung* numbers only, and 200 stars not in these catalogues. Of the 1600, over 600 of the fainter stars in the Nassau and Morgan (1951) published list of OB stars were observed. These spectrograms were classified by Morgan and the classifications published (Morgan, Code, and Whitford 1955). The remaining spectrograms are of stars found in the various lists of early-type stars.

TABLE 3
O AND B STARS

STAR	1855		MAGNITUDE	STAR	1855		MAGNITUDE
	α	δ			α	δ	
1.....	0 ^h 19 ^m 8	+63° 18'	10.87	13.....	0 ^h 46 ^m 0	+62° 42'	11.21
2.....	20.0	+63 20	11.11	14.....	0 47.0	+63 13	11.06
3.....	21.6	+62 16	10.49	15.....	0 48.3	+62 29	11.67
4.....	24.1	+62 29	11.09				
5.....	34.5	+64 08	11.29	16.....	0 50.7	+63 51	11.00
				17.....	0 50.9	+63 02	11.73
6.....	35.6	+63 41	11.38	18.....	0 52.1	+63 09	11.10
7.....	36.5	+63 36	10.69	19.....	0 52.1	+63 10	10.92
8*	36.6	+63 36	9.50	20.....	0 52.2	+63 09	11.18
9.....	36.7	+63 11	11.22				
10.....	40.5	+63 25	11.15	21.....	0 53.7	+63 13	11.03
				22.....	2 12.9	+57 30	10.56
11.....	40.7	+63 06	10.71	23.....	2 44.9	+58 38	10.66
12.....	0 43.4	+63 46	11.31	24*	2 47.0	+57 18	10.24

* No. 8 = BD +63°89; star No. 24 can be found on chart for star 13, reference 2. It is 12 mm from the left edge and 3 mm from the top edge of the chart.

New Early-Type Stars

Earlier work (Hiltner 1951) had shown that high polarization was present in the region $\alpha = 0^h40^m$ and $\delta = +63^\circ$. In order to investigate this region further, objective-prism plates of long exposure were obtained with the 26-inch Schmidt at the Tonantzintla Observatory, centered on this position. A large number of faint early-type stars were found. Those which have been observed for color, spectral classification, and polarization are recorded in Table 3. In addition, this table contains three early-type stars found by the Misses González at the Observatorio Tonantzintla. These three stars were in tentative lists of O and B stars kindly sent to the author by the Misses González but as yet do not appear in any of the published lists from Tonantzintla. For ease of identification Figures 4 and 5 give identification charts for all the stars in Table 3 except No. 24. This

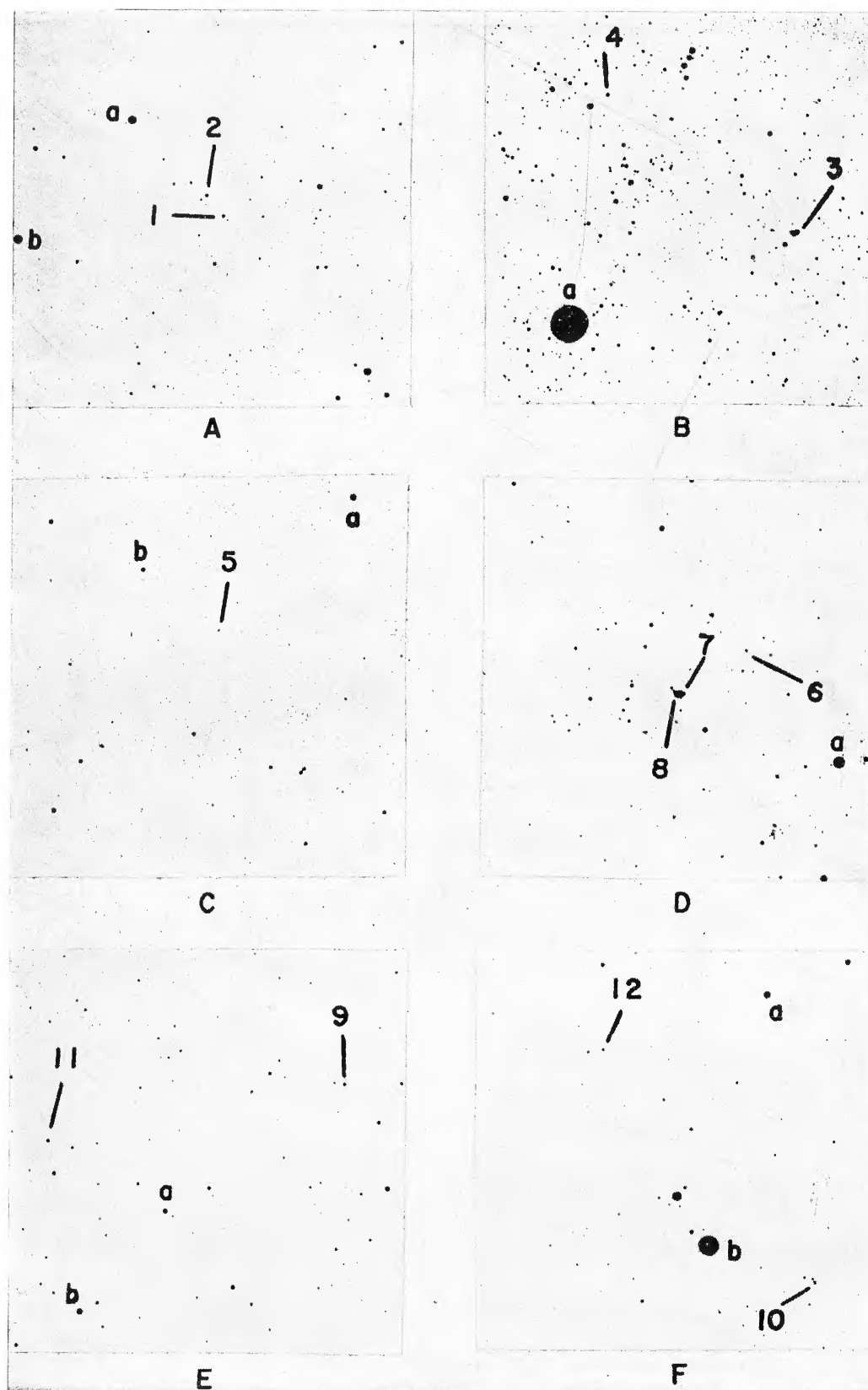


FIG. 4.—Finding charts for new OB stars

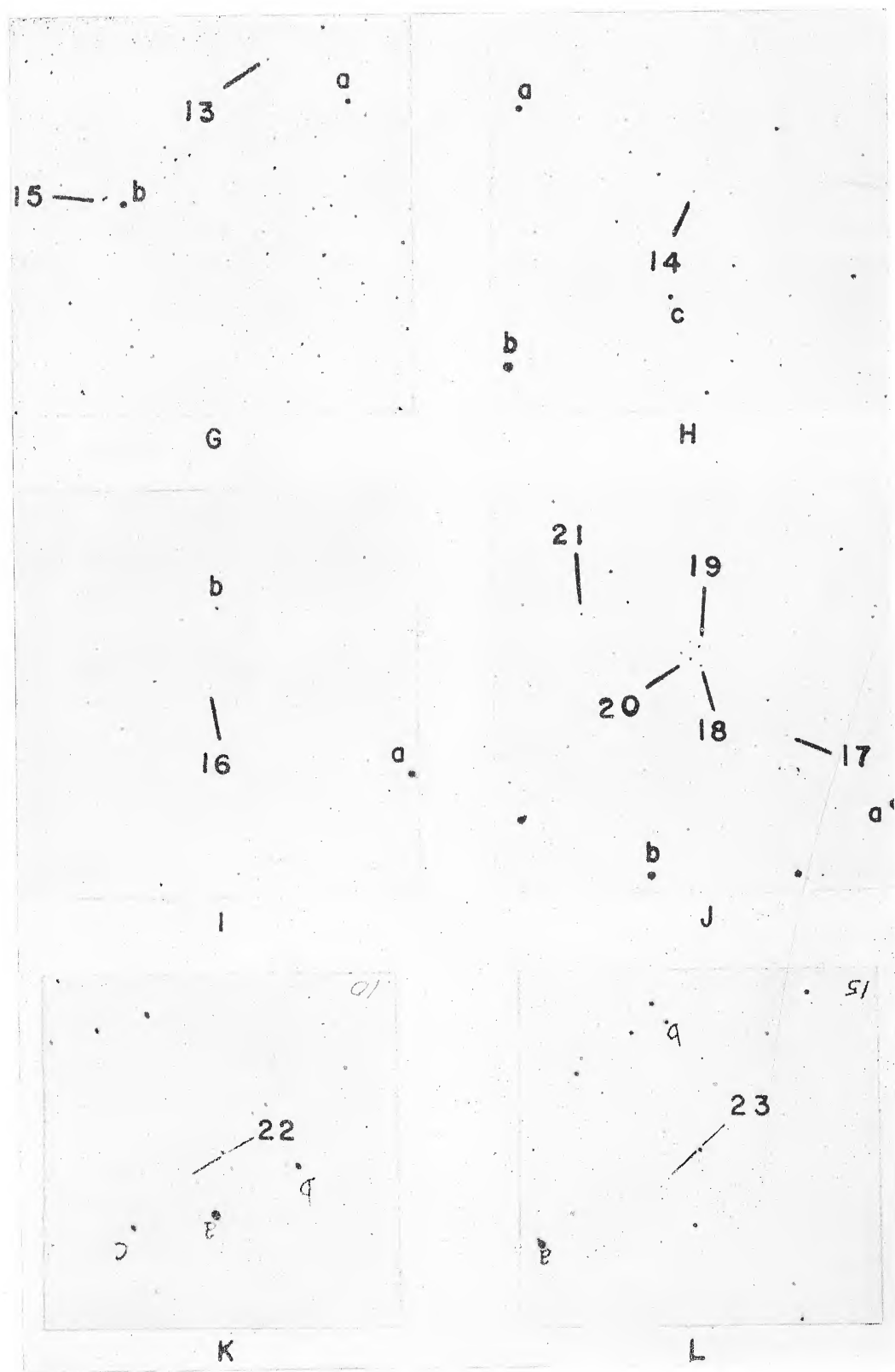


FIG. 5.—Finding charts for new OB stars

star can be identified on the chart for star 13 in the *Boletín de los Observatorios Tonantzintla y Tacubaya* (González and González 1953). It is 12 mm from the left edge and 3 mm from the top edge of the chart. For further ease in identification a few *BD* stars are identified on each chart. These stars are listed in Table 4.

TABLE 4
IDENTIFICATION OF REFERENCE STARS IN FIGURES 4 AND 5

Chart A a) $+63^{\circ}52$ b) $+63^{\circ}55$	Chart B a) $+62^{\circ}102$	Chart G a) $+62^{\circ}164$ b) $+62^{\circ}172$	Chart H a) $+63^{\circ}118$ b) $+62^{\circ}175$ c) $+63^{\circ}114$
Chart C a) $+64^{\circ}68$ b) $+64^{\circ}74$	Chart D a) $+63^{\circ}81$	Chart I a) $+63^{\circ}117$ b) $+63^{\circ}122$	Chart J a) $+62^{\circ}175$ b) $+62^{\circ}185$
Chart E a) $+62^{\circ}147$ b) $+62^{\circ}152$	Chart F a) $+63^{\circ}97$ b) $+63^{\circ}99$	Chart K a) $+57^{\circ}553$ b) $+57^{\circ}551$ c) $+57^{\circ}555$	Chart L a) $+58^{\circ}532$ b) $+58^{\circ}529$

THE CATALOGUE

This catalogue (Table 5) of O and B stars has 1259 entries. There is appreciable overlap with two previous catalogues on interstellar polarization published by the author. However, this catalogue gives not only polarization measurements but also the two-dimensional spectral types and the magnitudes and colors in the *U*, *B*, *V* system. Details of the catalogue follow.

Column 1.—This column gives running numbers to the stars observed in this program for which we have complete data. An asterisk after a number in this column and following columns refers to a footnote at the end of the table.

Column 2.—The *Henry Draper Catalogue* number is given whenever available. Stars in the *Henry Draper Extension* are prefixed with an *E*.

Column 3.—The *Bonner Durchmusterung* number is given also whenever available. For a few other stars the *Córdoba Durchmusterung* number is recorded.

Columns 4 and 5.—These columns give the position of the stars for the 1900 epoch.

Columns 6 and 7.—The galactic co-ordinates, referred to the pole at $\alpha = 12^{\text{h}}40^{\text{m}}$, $\delta = +28^{\circ}$ (1900), are recorded in these columns. The co-ordinates were first computed with the help of the Lund tables (Ohlsson 1932) from the 1900 co-ordinates. The computations were checked graphically with charts constructed from the Lund tables.

Column 8.—The galactic parallactic angle is given in this column. It is the angle between the galactic-latitude circle and the declination circle. Again the Lund tables were employed.

Column 9.—This column gives the observed amount of polarization in magnitudes.

Column 10.—The position angle of the electric-vector maximum is given here in equatorial co-ordinates.

Column 11.—The position angle of the electric vector is given here in galactic co-ordinates. It is obtained by adding the observed position angle in equatorial co-ordinates to the parallactic angle.

Column 12.—This column gives the spectral-luminosity type. The spectral types were obtained from the literature when available (for example, Morgan, Code, and Whitford 1955). Many previously unclassified stars were kindly classified by W. W. Morgan from spectrograms obtained by the author. Also some spectral classifications were made by the author.

Columns 13, 14, and 15.—These columns give the photometric observations on the *U*, *B*, *V* system. All entries are represented by two or more observations per star obtained on different nights and, in many cases, different seasons.

TABLE 5

PHOTOMETRIC AND SPECTROGRAPHIC OBSERVATIONS OF O AND B STARS

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
1		+60°2668	0 00.78	+60°19'	85.2	- 1.3	8.6	0.054	82	91	B1 III	8.95	+0.47	-0.48	2.19	6.76	-4.4	11.2	0.035
2	108	+62°2363	0 00.9	+63°07'	85.6	+ 1.4	8.6	0.035	81	90	O8 fp	7.40	+0.18	-0.79	1.47	5.93	-5.1	11.0	0.024
3*			0 01.1	+61°58'	85.4	+ 0.3	8.6	0.053	59	67	B1.5 e III-V	10.47	+0.26	-0.87	1.53	8.94	-3.4	12.3	0.035
4*			0 01.3	+59°45'	85.1	- 1.9	8.5	0.015	129	137	B8 II:	10.88	+0.55	+0.11	1.92	8.96	-4.4	13.4	0.008
5		+59°2829	0 01.6	+60°04'	85.2	- 1.6	8.5	0.030	74	82	B0: IV: pne	9.84	+0.40	-0.65	2.10	7.74	-4.6	12.3	0.014
6		+62°1	0 02.4	+62°31'	85.7	+ 0.8	8.3	0.076	71	80	B2 pe (IV-V)*	10.34	+0.34	-0.63	1.74	8.60	-2.4	11.0	0.044
7	593	+58°11	0 05.3	+59°06'	85.6	- 2.6	7.7	0.023	60	68	B1 V	6.69	+0.03	-0.75	0.87	5.82	-3.1	8.9	0.026
8	698	+57°28	0 06.3	+57°39'	85.5	- 4.1	7.5	0.034	63	70	B5 II:	7.07	+0.18	-0.40	1.02	6.05	-4.6	10.6	0.033
9	1070	+58°18	0 09.9	+59°15'	86.2	- 2.5	6.6	0.026	71	78	A5 II:	7.98	+0.59	+0.51	1.32	6.66			0.020
10	1383	+60°25	0 12.9	+61°10'	86.7	- 0.7	6.0	0.029	81	87	B1 II	7.63	+0.26	-0.68	1.56	6.07	-4.9	11.0	0.018
11		+62°49	0 13.4	+63°01'	87.0	+ 1.2	5.9	0.067	81	87	B0.5 III	8.94	+0.41	-0.52	2.07	6.87	-4.7	11.6	0.032
12	1544	+61°38	0 14.6	+61°31'	87.0	- 0.3	5.6	0.040	89	95	B0 III:	8.11	+0.17	-0.76	1.41	6.70	-5.0	11.7	0.028
13*		+61°39	0 14.8	+61°54'	87.0	0.0	5.6	0.059	91	97	B0.5 IV	8.52	+0.30	-0.75	1.74	6.78	-4.2	11.0	0.034
14		+61°40	0 15.0	+61°50'	87.0	0.0	5.5	0.068	58	63	B2 p (e?)*	9.55	+0.47	-0.51	2.13	7.42			0.032
15		+63°33	0 16.2	+64°03'	87.4	+ 2.2	5.3	0.084	103	108	B1 V	9.44	+0.57	-0.34	2.49	6.95	-3.1	10.1	0.034
16		+60°39	0 16.2	+61°10'	87.1	- 0.7	5.3	0.030	85	90	O9 V	9.46	+0.24	-0.70	1.65	7.81	-4.6	12.4	0.018
17		+62°68	0 18.1	+62°49'	87.5	+ 0.9	4.8	0.076	96	101	B1 II	9.61	+0.58	-0.38	2.52	7.09	-4.9	12.0	0.030
18	1976	+51°62	0 18.9	+51°28'	86.7	-10.4	4.7	0.018	72	77	B5 IV	5.56	-0.11	-0.61	0.15	5.41	-1.8	7.2	0.120
19		+63°41	0 19.6	+64°07'	87.8	+ 2.2	4.5	0.119	104	109	B0 III	10.46	+0.81	-0.27	3.33	7.13	-5.0	12.1	0.036
20	2083	+71°16	0 20.0	+71°15'	88.4	+ 9.3	4.5	0.032	92	96	B1 V	6.89	+0.03	-0.83	0.87	6.02	-3.1	9.1	0.037
21		+63°43	0 20.0	+64°11'	87.8	+ 2.3	4.4	0.088	103	107	B0.5 n (V)	10.73	+0.76	-0.30	3.12	7.61	-3.6	11.2	0.028
22		+61°74	0 20.4	+62°00'	87.7	+ 0.1	4.3	0.040	92	96	O9 V nm	9.55	+0.32	-0.66	1.89	7.66	-4.6	12.3	0.021
23		+61°77	0 20.8	+62°13'	87.8	+ 0.3	4.2	0.039	90	94	B1 IV \	9.59	+0.19	-0.66	1.35	8.24	-3.8	12.0	0.029
24		+62°79	0 20.9	+62°53'	87.8	+ 1.0	4.2	0.062	73	77	O9.5 IV	9.22	+0.41	-0.56	2.13	7.09	-4.4	11.5	0.029
25		+63°48	0 21.0	+63°52'	87.9	+ 1.9	4.2	0.119	109	113	B1 (III:) nne	9.12	+0.88	-0.19	3.42	5.70	-4.4	10.1	0.035
26		+60°51	0 21.0	+60°52'	87.7	- 1.0	4.2	0.063	63	67	A2 Ib	9.23	+0.62	+0.23	1.68	7.55	-5.6	13.2	0.038
27		+62°81	0 21.8	+62°30'	87.9	+ 0.6	4.0	0.037	83	87	B2 III	11.05	+0.37	-0.51	1.83	9.22	-3.6	12.8	0.020
28	2329	+57°85	0 22.1	+58°00'	87.6	- 3.9	4.0	0.026	70	74	B3 V	7.43	+0.07	-0.52	0.81	6.62	-1.5	8.1	0.032
29*			0 22.3	+63°33'	88.0	+ 1.6	3.9	0.127	89	92	B7 (III):	10.87	+0.85	+0.23	2.91	7.96			0.044
30	E 236419	+59°61	0 22.3	+60°04'	87.8	- 1.9	3.9	0.047	81	85	B2 III	9.14	+0.31	-0.51	1.65	7.49	-3.6	11.1	0.028
31*			0 22.6	+63°35'	88.1	+ 1.7	3.8	0.112	89	92	B1 V	11.11	+0.99	-0.20	3.75	7.36	-3.1	10.5	0.030
32		+55°81	0 22.7	+55°51'	87.6	- 6.1	3.8	0.037	68	72	B1.5: V: nn (e)	10.07	+0.07	-0.64	0.96	9.11	-2.6	11.7	0.038
33*			0 23.2	+62°31'	88.1	+ 0.6	3.7	0.051	96	100	B0 (V) p (e)	10.49	+0.39	-0.60	2.07	8.42	-4.1	12.5	0.025
34	2451	+61°92	0 23.2	+61°57'	88.0	0.0	3.7	0.041	84	88	B0.5 IV	8.73	+0.19	-0.72	1.41	7.32	-4.2	11.5	0.029
35	2619	+64°52	0 24.7	+64°43'	88.4	+ 2.8	3.4	0.100	99	102	B0.5 III	8.31	+0.57	-0.44	2.55	5.76	-4.7	10.5	0.039

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
36		+61°105	0°25'6"	+61°53'	88.3	-0.1	3.2	0.074	81	84	O9 V	9.29	+0.27	-0.69	1.74	7.55	-4.6	12.2	0.042
37*			0 26.8	+62°44'	88.5	+0.8	2.9	0.063	72	75	B2 V	11.09	+0.52	-0.23	2.28	8.81	-2.0	10.8	0.028
38	2905	+62°102	0 27.3	+62°23'	88.5	+0.4	2.8	0.032	83	86	B1 Ia	4.16	+0.14	-0.79	1.20	2.96	-6.9	9.9	0.027
39	2928	+61°113	0 27.5	+61°59'	88.5	0.0	2.8	0.070	67	70	A0 Iab	8.61	+0.62	+0.07	1.86	6.75	-6.5	13.3	0.038
40		+63°61	0 27.6	+63°27'	88.6	+1.5	2.7	0.150	94	97	B1 Iab	9.65	+0.91	-0.17	3.51	6.14	-6.5	12.6	0.043
41		+61°122	0 29.2	+61°53'	88.7	-0.1	2.4	0.060	85	87	B2 pe (V)	10.39	+0.32	-0.59	1.68	8.71	-2.0	10.7	0.036
42	3191	+60°71	0 30.1	+60°55'	88.8	-1.1	2.2	0.055	53	55	B1 IV; mn	8.57	+0.44	-0.44	2.10	6.47	-3.8	10.3	0.026
43		+60°73	0 31.3	+60°49'	88.9	-1.2	1.9	0.086	60	62	B1 Ib	9.64	+0.57	-0.42	2.49	7.15	-5.8	13.0	0.034
44*			0 34.0	+60°25'	89.3	-1.6	1.3	0.054	72	73	O9 IV	9.99	+0.37	-0.61	2.04	7.95	-5.4	13.4	0.026
45		+63°70	0 34.9	+63°22'	89.4	+1.4	1.1	0.105	105	106	B0 Ib	9.17	+0.72	-0.37	3.06	6.11	-6.2	12.3	0.034
46*			0 36.6	+63°30'	89.7	+1.5	0.8	0.135	106	107	B0 pe (III)? *	10.75	+0.87	-0.26	3.51	7.24	-5.0	12.2	0.038
47	3940	+63°81	0 36.9	+63°45'	89.7	+1.8	0.7	0.108	100	101	A1 Ia	7.28	+0.73	-0.05	2.10	5.16	-6.9	12.1	0.051
48*			0 37.1	+64°22'	89.7	+2.4	0.6	0.154	93	94	B0.5 IV	11.29	+0.63	-0.38	2.73	8.56	-4.2	12.8	0.056
49		+61°153	0 37.1	+61°41'	89.7	-0.3	0.6	0.010	105	106	A0 Ib	9.33	+0.84	+0.33	2.52	6.81	-5.6	12.4	0.004
50	4004*	+63°83	0 37.5	+64°14'	89.7	+2.2	0.5	0.138	96	97	W R	10.18	+0.37	-0.27					
51*			0 38.3	+63°55'	89.8	+1.9	0.4	0.147	99	99	B1 p (e) (V)	11.38	+0.59	-0.34	2.55	8.83	-3.1	11.9	0.058
52		+63°87	0 38.8	+63°47'	89.9	+1.8	0.3	0.126	96	96	B0.5 IV	9.87	+0.52	-0.47	2.40	7.47	-4.2	11.7	0.052
53*			0 38.8	+63°22'	89.9	+1.4	0.3	0.104	105	105	B1 pe (IV-V)	10.60	+0.72	-0.43	2.94	7.66	-3.4	11.1	0.035
54		+64°76	0 38.9	+64°43'	89.9	+2.7	0.2	0.148	94	94	B1 Ib	9.10	+0.59	-0.39	2.55	6.55	-5.8	12.4	0.058
55*			0 39.2	+63°51'	89.9	+1.9	0.2	0.124	92	92	B1 IV p?	10.69	+0.49	-0.46	2.25	8.44	-3.8	12.2	0.055
56*		+63°89	0 39.2	+63°51'	89.9	+1.9	0.2	0.117	89	89	B1 Ib	9.50	+0.60	-0.41	2.58	6.92	-5.8	12.7	0.045
57*			0 39.3	+63°25'	89.9	+1.4	0.1	0.115	98	98	B2 III	11.22	+0.65	-0.31	2.67	8.55	-3.6	12.2	0.043
58*			0 39.3	+63°10'	89.9	+1.1	0.2	0.126	104	104	B1 III	11.05	+0.70	-0.28	2.88	8.17	-4.4	12.6	0.044
59*			0 39.5	+62°48'	89.9	+0.8	0.1	0.084	106	106	B0.5 V	10.50	+0.66	-0.31	2.82	7.68	-3.6	11.3	0.030
60		+63°92	0 39.9	+63°51'	90.0	+1.9	0.0	0.129	91	91	B2 n (III)	10.68	+0.57	-0.35	2.43	8.25	-3.6	11.8	0.053
61*			0 40.5	+63°50'	90.1	+1.8	359.9	0.095	91	91	B2 III	10.50	+0.53	-0.36	2.31	8.19	-3.6	11.8	0.041
62*			0 40.7	+63°55'	90.1	+1.9	359.8	0.100	96	96	B3 III	11.04	+0.56	-0.26	2.28	8.76	-3.3	12.1	0.044
63*			0 42.2	+62°27'	90.2	+0.5	359.5	0.086	89	89	O7	11.40	+0.48	-0.53	2.40	9.00	-5.1	14.1	0.036
64	4613	+64°83	0 43.0	+65°02'	90.3	+3.0	359.3	0.110	96	95	B1 II	8.79	+0.58	-0.35	2.52	6.27	-4.9	11.2	0.044
65*			0 43.1	+63°39'	90.3	+1.7	359.3	0.111	98	97	B3 IV	11.15	+0.51	-0.26	2.13	9.02	-2.5	11.5	0.052
66*			0 43.4	+63°19'	90.4	+1.3	359.3	0.134	97	96	B2 V; pe	10.71	+0.66	-0.27	2.70	8.01	-2.0	10.0	0.050
67*			0 43.8	+60°27'	90.5	-1.6	359.2	0.048	74	73	B2 V; pmne	9.89	+0.40	-0.51	1.92	7.97	-2.0	10.0	0.025
68	4694	+63°97	0 43.9	+64°05'	90.4	+2.1	359.1	0.148	98	97	B3 Ia	8.50	+0.72	-0.16	2.76	5.74	-6.9	12.6	0.054
69		+60°114*	0 44.3	+60°22'	90.5	-1.6	359.0	0.035	78	77	B2 III; pe	9.87	+0.50	-0.49	2.22	7.65	-3.6	11.2	0.016
70		+61°175	0 44.5	+61°50'	90.5	-0.2	359.0	0.063	76	75	B3 II	9.59	+0.76	-0.10	2.88	6.71	-4.6	11.3	0.022

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
71	4768	+58°119	0 44.6	+59°07'	90.6	- 2.9	359.0	0.049	82	81	B5 Ib	7.57	+0.38	-0.34	1.62	5.95	-5.8	11.8	0.030
72	4841	+62°160	0 45.4	+63°14'	90.6	+ 1.2	358.8	0.097	98	97	B5 Ia	6.86	+0.57	-0.30	2.19	4.67	-6.9	11.6	0.044
73		+63°102	0 46.1	+64°08'	90.7	+ 2.1	358.6	0.155	102	101	B1 II	10.00	+0.57	-0.41	2.49	7.51	-4.9	12.4	0.062
74*			0 46.2	+64°00'	90.7	+ 2.0	358.6	0.118	102	101	B2 V	11.31	+0.45	-0.39	2.07	9.24	-2.0	11.2	0.057
75		+63°108	0 47.6	+64°13'	90.8	+ 2.2	358.3	0.151	103	102	B3 III?	10.67	+0.68	-0.21	2.64	8.03	-3.3	11.3	0.057
76*			0 48.8	+62°57'	91.0	+ 1.0	358.1	0.075	97	95	B2 V	11.21	+0.36	-0.42	1.80	9.41	-2.0	11.4	0.042
77		+64°93	0 49.0	+64°42'	91.0	+ 2.7	358.0	0.090	99	97	B2 III	10.18	+0.45	-0.33	2.07	8.11	-3.6	11.7	0.043
78*			0 49.8	+63°27'	91.1	+ 1.5	357.8	0.112	98	96	B2 IV	11.06	+0.64	-0.25	2.64	8.42	-2.9	11.3	0.042
79*			0 51.1	+62°44'	91.2	+ 0.8	357.6	0.097	97	95	B1 V	11.67	+0.30	-0.47	1.68	9.99	-3.1	13.1	0.058
80		+64°106*	0 51.4	+64°20'	91.2	+ 2.3	357.5	0.115	99	96	B1 V	10.34	+0.69	-0.21	2.85	7.49	-3.1	10.6	0.040
81*			0 51.5	+61°22'	91.4	- 0.6	357.5	0.089	100	98	B1 pe	10.60	+0.72	-0.37	2.94	7.66			0.030
82	E 236589	+55°215	0 52.1	+55°54'	91.7	- 6.0	357.3	0.033	82	79	B1 II	9.32	+0.15	-0.69	1.23	8.09	-4.9	13.0	0.027
83	5551	+62°175	0 52.2	+63°11'	91.4	+ 1.2	357.3	0.085	93	90	B1.5 Ib	7.71	+0.62	-0.36	2.61	5.10	-5.8	10.9	0.032
84	5552	+61°187	0 52.2	+61°24'	91.5	- 0.6	357.3	0.068	101	98	B1 Ia	9.08	+0.71	-0.29	2.91	6.17	-6.9	13.1	0.023
85*			0 53.2	+62°30'	91.5	+ 0.5	357.1	0.108	95	92	B2 III	10.49	+0.49	-0.37	2.19	8.30	-3.6	11.9	0.049
86*			0 53.4	+64°08'	91.5	+ 2.2	357.0	0.132	110	107	B2 III	10.99	+0.72	-0.20	2.88	8.11	-3.6	11.7	0.046
87	5689	+62°178	0 53.5	+63°05'	91.5	+ 1.1	357.0	0.087	96	93	O6	9.13	+0.34	-0.68	1.98	7.15	-5.1	12.2	0.044
88*			0 53.6	+64°07'	91.5	+ 2.2	357.0	0.125	99	96	B1 V	10.99	+0.72	-0.21	2.94	8.05	-3.1	11.2	0.042
89*			0 53.7	+63°17'	91.6	+ 1.3	357.0	0.133	99	97	B1 V	11.72	+0.53	-0.34	2.37	9.35	-3.1	12.4	0.056
90	5776	+62°181	0 54.3	+62°30'	91.7	+ 0.6	356.8	0.113	93	90	A0 Ib	8.05	+0.52	+0.11	1.56	6.49	-5.6	12.1	0.072
91*			0 54.9	+63°23'	91.7	+ 1.4	356.7	0.109	100	97	B9 (III):	11.10	+0.55	-0.00	1.83	9.27			0.060
92		+62°183	0 54.9	+62°54'	91.7	+ 1.0	356.7	0.119	92	89	B1 V: p	8.96	+0.69	-0.24	2.85	6.11	-3.1	9.2	0.042
93*			0 55.0	+63°25'	91.7	+ 1.5	356.7	0.134	98	95	B1 V	10.92	+0.61	-0.29	2.61	8.31	-3.1	11.4	0.051
94*			0 55.1	+63°24'	91.7	+ 1.5	356.7	0.149	93	90	B2 V	11.18	+0.66	-0.22	2.70	8.48	-2.0	10.5	0.055
95		+62°186	0 56.2	+62°27'	91.9	+ 0.5	356.4	0.105	93	89	B1 V	9.89	+0.36	-0.50	1.86	8.03	-3.1	11.1	0.056
96*			0 56.6	+63°28'	91.9	+ 1.5	356.3	0.121	98	94	B3 III	11.03	+0.57	-0.19	2.31	8.72	-3.3	12.0	0.052
97*			0 57.6	+63°13'	92.0	+ 1.3	356.1	0.096	98	94	B1 IV	10.04	+0.65	-0.27	2.73	7.31	-3.8	11.1	0.035
98	6182	+61°200	0 57.8	+61°18'	92.1	- 0.6	356.1	0.084	100	96	B1 Ib p	8.23	+0.47	-0.46	2.19	6.04	-5.8	11.8	0.038
99	6675	+68°74	1 02.4	+69°10'	92.0	+ 7.3	355.0	0.036	123	118	B0.5 III	6.90	+0.31	-0.64	1.77	5.13	-4.7	9.8	0.020
100		+60°169	1 02.7	+60°56'	92.8	- 1.0	355.0	0.082	86	81	B1 V	9.98	+0.26	-0.53	1.56	8.42	-3.1	11.5	0.052
101		+62°212	1 02.8	+63°09'	92.6	+ 1.3	355.0	0.100	96	91	B0.5 V	9.62	+0.79	-0.17	3.21	6.41	-3.6	10.0	0.031
102*			1 02.8	+62°18'	92.6	+ 0.4	355.0	0.108	75	70	B0 III	10.42	+0.77	-0.31	3.21	7.21	-5.0	12.2	0.034
103	E 236633	+59°191	1 02.9	+60°06'	92.9	- 1.8	355.0	0.123	86	81	B0.5 III	9.16	+0.39	-0.59	2.01	7.15	-4.7	11.8	0.061
104		+61°220	1 05.1	+62°12'	92.9	+ 0.3	354.5	0.098	100	95	B7 Ib	9.68	+0.92	+0.13	3.12	6.56	-5.7	12.3	0.031
105		+60°180	1 05.8	+60°47'	93.2	- 1.1	354.3	0.092	89	83	B0: : pe	9.32	+0.25	-0.68	1.65	7.67			0.056

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
106	7103	+61°223	1 06.2	+61°21'	93.1	-0.5	354.2	0.071	84	78	B3 Ib	8.35	+0.53	-0.28	2.19	6.16	-6.5	12.7	0.032
107	E 236664	+58°195	1 07.5	+58°33'	93.6	-3.3	353.9	0.053	98	92	B0.5 V	10.02	+0.21	-0.69	1.47	8.55	-3.6	12.2	0.036
108	7252	+60°188	1 07.7	+60°21'	93.4	-1.5	353.9	0.078	99	93	B1 V	7.12	+0.09	-0.74	1.05	6.07	-3.1	9.2	0.074
109		+60°191	1 08.1	+60°48'	93.4	-1.0	353.8	0.076	89	83	B2 IV	9.94	+0.61	-0.14	2.55	7.39	-2.9	10.3	0.030
110		+63°167	1 11.6	+63°47'	93.5	+2.0	353.0	0.106	85	78	B2 III	10.35	+0.53	-0.36	2.31	8.04	-3.6	11.6	0.046
111	7720	+61°240	1 11.9	+61°22'	93.8	-0.4	353.0	0.071	107	100	B5 II	8.87	+0.58	-0.16	2.22	6.65	-4.6	11.2	0.032
112	E 236689	+57°240	1 12.3	+57°51'	94.3	-3.9	352.9	0.059	91	84	B1.5 (V) pe*	9.46	+0.28	-0.50	1.59	7.87	-2.6	10.5	0.037
113		+57°243	1 12.5	+57°41'	94.4	-4.0	352.8	0.096	94	87	B0: IV: e	9.49	+0.26	-0.55	1.68	7.81	-4.6	12.4	0.057
114		+57°252	1 13.2	+57°44'	94.4	-4.0	352.7	0.057	98	91	B1 IV	9.50	+0.26	-0.56	1.56	7.94	-3.8	11.7	0.036
115	7902	+57°257	1 13.6	+57°40'	94.5	-4.0	352.6	0.065	95	88	B6 Ib	6.93	+0.40	-0.39	1.62	5.31	-5.7	11.0	0.040
116*			1 14.1	+61°58'	94.0	+0.2	352.5	0.086	105	98	B0 V:	10.22	+0.50	-0.47	2.40	7.82	-4.1	11.9	0.036
117*			1 14.4	+62°01'	94.0	+0.3	352.4	0.090	104	96	B1 V	10.85	+0.52	-0.45	2.34	8.51	-3.1	11.6	0.038
118*			1 15.5	+64°04'	93.9	+2.3	352.2	0.101	101	93	B1: II:	11.08	+0.68	-0.35	2.82	8.26	-4.9	13.2	0.036
119*			1 16.3	+60°59'	94.4	-0.7	352.0	0.105	148	140	B pe	10.76	+0.85	-0.28					
120		+64°156	1 16.9	+65°06'	93.9	+3.3	351.8	0.116	103	95	B0.5 III	9.54	+0.61	-0.36	2.67	6.87	-4.7	11.6	0.043
121		+63°180	1 17.6	+63°26'	94.2	+1.7	351.7	0.118	95	87	A0: Ia	10.01	+1.04	+0.30	3.12	6.87	-6.9	13.8	0.038
122		+62°245	1 17.7	+62°18'	94.4	+0.6	351.7	0.076	107	99	B1: pe (V)	10.15	+0.90	-0.14	3.48	6.67	-3.1	9.8	0.022
123*			1 17.8	+62°27'	94.4	+0.8	351.7	0.131	101	93	B1: V:	10.78	+0.72	-0.22	2.94	7.84	-3.1	10.9	0.044
124		+62°246	1 18.0	+62°16'	94.4	+0.6	351.6	0.118	115	107	B5 Ia	8.74	+0.91	+0.01	3.21	5.53	-6.9	12.4	0.037
125		+60°232	1 18.6	+60°17'	94.8	-1.4	351.5	0.050	101	93	B2 III	9.97	+0.27	-0.49	1.53	8.44	-3.6	12.0	0.033
126		+62°249	1 19.5	+62°31'	94.5	+0.9	351.3	0.120	104	96	O9.5 V	10.04	+0.70	-0.34	3.00	7.04	-4.4	11.4	0.040
127	E 236740	+59°251	1 20.1	+59°46'	95.0	-1.9	351.2	0.071	104	95	B3 Ia	7.90	+0.46	-0.36	1.98	5.92	-6.9	12.8	0.036
128	8768	+62°254	1 21.4	+62°45'	94.7	+1.1	350.9	0.085	100	91	O9.5 IV	8.69	+0.40	-0.60	2.10	6.59	-5.0	11.6	0.040
129		+58°241	1 21.4	+58°43'	95.4	-2.9	350.9	0.081	101	92	B1 V	9.97	+0.26	-0.57	1.56	8.41	-3.1	11.5	0.052
130		+62°258	1 23.3	+63°04'	94.9	+1.5	350.5	0.111	103	93	B1 IV	9.87	+0.67	-0.25	2.79	7.08	-3.8	10.9	0.040
131		+59°260	1 23.3	+59°44'	95.4	-1.8	350.4	0.062	103	93	B0.5 V	7.28	+0.02	-0.82	0.90	6.38	-3.6	10.0	0.069
132		+61°277	1 23.7	+62°13'	95.1	+0.6	350.4	0.116	112	102	B0 IV: mn	9.63	+0.58	-0.39	2.64	6.99	-4.6	11.6	0.044
133	E 236762	+58°252	1 24.5	+59°13'	95.7	-2.3	350.2	0.075	101	91	B1.5 III	9.57	+0.21	-0.56	1.38	8.19	-4.0	12.2	0.054
134	9105	+62°259	1 24.6	+62°51'	95.1	+1.3	350.2	0.072	104	94	B5 Iab	7.47	+0.55	-0.25	2.13	5.34	-6.5	11.8	0.034
135	E 236768	+58°256	1 25.2	+58°52'	95.9	-2.6	350.0	0.073	104	94	B1: V: mnp	9.49	+0.29	-0.53	1.65	7.84	-3.1	10.9	0.044
136		+61°285	1 25.9	+61°27'	95.5	-0.1	349.9	0.091	111	101	B0.5 III	9.42	+0.42	-0.48	2.10	7.32	-4.7	12.0	0.043
137		+60°261	1 25.9	+60°37'	95.6	-0.9	349.9	0.080	111	101	O7	8.63	+0.31	-0.67	1.89	6.74	-5.1	11.8	0.042
138		+59°273	1 26.7	+60°07'	95.8	-1.4	349.7	0.080	105	95	B2 III	9.08	+0.22	-0.56	1.38	7.70	-3.6	11.3	0.058
139		+60°274	1 28.9	+60°46'	96.0	-0.7	349.2	0.083	106	95	B3 III	10.66	+0.33	-0.41	1.59	9.07	-3.3	12.4	0.052
140		+62°275	1 29.1	+63°08'	95.5	+1.7	349.2	0.091	102	91	B3 ? III	9.82	+0.84	-0.12	3.12	6.70	-3.3	10.0	0.029

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	$3E(B-V)$	m	M	m-M	p/A _v
			α	δ															
141		+60°279	1°29'7"	+60°28'	96.1	- 1.0	349.0	0.070	104	93	B2 II	9.08	+0.19	-0.62	1.29	7.79	-4.7	12.5	0.054
142*			1 29.9	+61°48'	95.9	+ 0.4	349.0	0.076	111	100	B1 V	9.77	+0.52	-0.37	2.34	7.43	-3.1	10.5	0.032
143		+62°278	1 30.0	+63°15'	95.6	+ 1.7	349.0	0.068	96	85	B0.5 III	9.85	+0.65	-0.29	2.79	7.06	-4.7	11.8	0.024
144		+59°286	1 30.2	+59°26'	96.4	- 2.0	348.9	0.083	102	91	B1 III: n	9.56	+0.30	-0.55	1.68	7.88	-4.4	12.3	0.049
145		+60°289	1 31.5	+60°51'	96.2	- 0.5	348.7	0.119	102	91	B2 II-III	10.17	+0.52	-0.36	2.28	7.89	-4.2	12.1	0.052
146*			1 32.3	+61°13'	96.3	- 0.2	348.5	0.067	104	92	B2 V	10.37	+0.55	-0.27	2.37	8.00	-2.0	10.0	0.028
147	E 236810	+59°296	1 31.8	+60°04'	96.4	- 1.3	348.6	0.081	97	86	B2 III	8.67	+0.25	-0.54	1.47	7.20	-3.6	10.8	0.055
148*	9974		1 32.4	+57°39'	97.0	- 3.6	348.4	0.059	95	83	W R	10.69	+0.02	-0.86					
149	E 236815	+59°297	1 32.8	+59°54'	96.6	- 1.4	348.4	0.062	98	86	B0.5 III	8.52	+0.22	-0.69	1.50	7.02	-4.7	11.7	0.041
150		+57°359	1 33.0	+57°20'	97.1	- 3.9	348.3	0.067	92	80	B1: V:	9.91	+0.26	-0.54	1.56	8.35	-3.1	11.4	0.043
151	10063	+55°375	1 33.3	+55°17'	97.6	- 5.9	348.2	0.048	92	80	B8 Iab	7.39	+0.25	-0.33	1.02	6.37	-6.5	12.9	0.047
152	10125	+63°218	1 33.9	+63°40'	95.9	+ 2.3	348.1	0.078	101	89	O9.5 Ib	8.22	+0.31	-0.65	1.83	6.39	-6.6	13.0	0.043
153*			1 33.9	+62°04'	96.3	+ 0.7	348.1	0.093	102	90	B3: II:	10.58	+0.62	-0.27	2.46	8.12	-4.6	12.7	0.038
154		+62°292	1 35.0	+63°06'	96.2	+ 1.8	347.9	0.096	102	90	B1: pe	10.40	+0.55	-0.41	2.43	7.97			0.040
155		+60°311	1 35.9	+60°20'	96.9	- 0.9	347.7	0.064	102	90	B2 III: mn	9.96	+0.28	-0.48	1.56	8.40	-3.6	12.0	0.041
156		+62°296	1 36.1	+63°06'	96.3	+ 1.8	347.6	0.103	101	89	B1 IV	9.84	+0.54	-0.33	2.40	7.44	-3.8	11.2	0.043
157		+61°312	1 36.3	+61°57'	96.6	+ 0.7	347.6	0.112	110	98	B1 III	9.22	+0.53	-0.41	2.37	6.85	-4.4	11.2	0.047
158		+62°297	1 36.4	+63°05'	96.3	+ 1.8	347.6	0.103	100	88	B1 Ib	9.14	+0.63	-0.36	2.67	6.47	-5.8	12.3	0.038
159		+55°393	1 37.6	+55°40'	98.1	- 5.4	347.3	0.050	106	93	B1 V	10.50	+0.03	-0.70	0.87	9.63	-3.1	12.7	0.057
160		+62°300	1 38.1	+62°21'	96.7	+ 1.1	347.2	0.077	108	95	B1 V: pne	9.96	+0.33	-0.54	1.77	8.19	-3.1	11.3	0.044
161		+60°322	1 38.2	+60°18'	97.2	- 0.9	347.2	0.066	108	95	B2 III	9.73	+0.54	-0.33	2.34	7.39	-3.6	11.0	0.028
162		+60°331	1 39.0	+60°44'	97.2	- 0.4	347.0	0.115	98	85	B8 Iab	8.95	+0.85	+0.08	2.82	6.13	-6.5	12.6	0.041
163		+60°336	1 39.2	+60°56'	97.1	- 0.3	347.0	0.110	106	93	B9 Iab	9.09	+0.78	+0.20	2.52	6.57	-6.5	13.1	0.044
164*			1 39.2	+61°31'	97.0	+ 0.3	347.0	0.115	101	88	B1 II	10.55	+0.66	-0.27	2.76	7.79	-4.9	12.7	0.042
165		+60°333	1 39.2	+60°44'	97.2	- 0.4	347.0	0.110	100	87	B5 Iab	8.91	+0.77	-0.09	2.79	6.12	-6.5	12.6	0.039
166		+60°339	1 39.5	+60°45'	97.2	- 0.4	346.9	0.105	99	86	B6 Iab	8.50	+0.66	-0.18	2.40	6.10	-6.5	12.6	0.044
167		+60°343	1 39.6	+60°45'	97.2	- 0.4	346.9	0.130	103	90	B2 II	9.27	+0.59	-0.28	2.49	6.78	-4.7	11.5	0.052
168	E 232522	+54°372	1 39.6	+54°51'	98.6	- 6.2	346.8	0.035	103	90	B1 II	8.67	-0.01	-0.84	0.75	7.92	-4.9	12.8	0.047
169		+62°304	1 39.8	+62°35'	96.8	+ 1.4	346.8	0.082	104	91	B3 III: n	10.25	+0.47	-0.32	2.01	8.24	-3.3	11.5	0.041
170		+60°345	1 39.8	+61°00'	97.2	- 0.2	346.8	0.104	103	90	B0 II:	9.74	+0.59	-0.45	2.67	7.07	-5.4	12.5	0.039
171	10756	+59°318	1 40.1	+60°10'	97.4	- 1.0	346.8	0.070	100	87	B8 Ia	7.54	+0.44	-0.27	1.59	5.95	-6.9	12.8	0.044
172	10898	+57°399	1 41.9	+57°58'	98.2	- 3.1	346.4	0.085	95	81	B2 Ib	7.40	+0.35	-0.52	1.77	5.63	-5.8	11.4	0.048
173		+63°247	1 42.3	+63°50'	98.8	+ 2.7	346.3	0.102	103	89	B0 III	9.73	+0.33	-0.63	1.89	7.84	-5.0	12.8	0.054
174		+58°310	1 43.7	+58°45'	98.2	- 2.2	346.0	0.092	99	85	B1 V	10.17	+0.25	-0.53	1.53	8.64	-3.1	11.7	0.060
175		+60°362	1 44.0	+60°51'	97.7	- 0.2	345.9	0.109	106	92	B2 II-III	9.58	+0.64	-0.29	2.64	6.94	-4.2	11.1	0.041

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	$3E_{(B-V)}$	m	M	m-M	p/A_V
			α	δ															
176		+54°395	1 45.2	+54°58'	99.3	-5.8	345.6	0.045	102	88	B0 IV: p	9.91	+0.10	-0.79	1.20	8.71	-4.6	13.3	0.038
177		+60°368	1 45.4	+60°20'	98.0	-0.7	345.6	0.073	109	94	B1: III:	10.62	+0.61	-0.35	2.61	8.01	-4.4	12.4	0.028
178	E 236894	+57°409	1 45.4	+57°57'	98.6	-3.0	345.6	0.085	96	82	O8 V	9.37	+0.19	-0.76	1.50	7.87	-5.1	13.0	0.057
179	E 232552	+54°398	1 45.8	+54°51'	99.4	-6.0	345.4	0.047	115	100	B0 p e	8.03	+0.37	-0.74	2.01	6.02			0.023
180		+63°253	1 46.1	+63°42'	97.2	+2.6	345.4	0.091	106	91	B0 III	9.32	+0.45	-0.49	2.25	7.07	-5.0	12.1	0.040
181		+61°342	1 46.1	+62°03'	97.7	+1.0	345.5	0.074	104	89	B0.5 II	9.56	+0.44	-0.53	2.16	7.40	-5.2	12.6	0.034
182		+54°404	1 46.5	+54°38'	99.6	-6.1	345.2	0.046	119	104	B1 III	9.77	+0.21	-0.62	1.41	8.36	-4.4	12.8	0.033
183	11554	+57°425	1 48.4	+57°24'	99.1	-3.4	344.9	0.092	96	81	B1 V p e	9.55	+0.27	-0.58	1.59	7.98	-3.1	11.1	0.058
184		+59°357	1 49.4	+60°05'	98.6	-0.8	344.7	0.084	99	84	B0.5 IV	9.97	+0.47	-0.53	2.25	7.72	-4.2	11.9	0.037
185		+55°441	1 49.4	+56°04'	99.6	-4.6	344.7	0.060	100	85	B1 (V) p e	9.68	+0.18	-0.75	1.32	8.36	-3.1	11.5	0.045
186		+63°261	1 50.0	+63°33'	97.7	+2.6	344.6	0.089	103	88	B p n e *	9.62	+0.51	-0.63					
187		+60°389	1 50.3	+60°38'	98.5	-0.2	344.5	0.084	103	88	B3 Ib	9.28	+0.59	-0.29	2.37	6.91	-5.8	12.7	0.035
188*			1 50.8	+59°30'	98.9	-1.3	344.4	0.116	95	80	B1 V	9.96	+0.43	-0.40	2.07	7.89	-3.1	11.0	0.056
189		+60°393	1 50.9	+61°05'	98.5	+0.2	344.4	0.084	107	92	B2 p e	10.66	+0.44	-0.43	2.04	8.62			0.041
190*			1 51.1	+61°27'	98.3	+0.6	344.4	0.168	102	86	B1 V: *	11.17	+0.79	-0.26	3.15	8.02	-3.1	11.1	0.053
191	11831	+59°364	1 51.1	+59°54'	98.8	-0.9	344.4	0.113	97	81	A2 Ia	8.04	+0.88	+0.37	2.46	5.58	-6.9	12.5	0.046
192		+59°367	1 51.6	+60°02'	98.8	-0.7	344.3	0.108	99	83	O9.5 Ib	9.77	+0.53	-0.52	2.49	7.28	-6.6	13.9	0.043
193*			1 51.7	+60°08'	98.8	-0.6	344.2	0.092	99	83	B1 p e (V)	10.16	+0.75	-0.36	3.03	7.13	-3.1	10.2	0.030
194		+58°343	1 52.1	+58°27'	99.3	-2.3	344.1	0.070	94	78	B2 III	9.64	+0.36	-0.41	1.80	7.84	-3.6	11.4	0.039
195		+61°362	1 52.9	+61°51'	98.5	+1.1	344.0	0.108	101	85	B2 III	10.29	+0.44	-0.46	2.04	8.25	-3.6	11.8	0.053
196		+59°374	1 53.0	+59°14'	99.2	-1.5	343.9	0.102	97	80	B1 V	9.68	+0.40	-0.45	1.98	7.70	-3.1	10.8	0.052
197*			1 53.4	+62°25'	98.4	+1.6	343.9	0.085	97	81	B2 V	10.64	+0.41	-0.39	1.95	8.69	-2.0	10.7	0.044
198*			1 53.5	+62°32'	98.4	+1.7	343.8	0.105	106	89	B1 V	10.57	+0.50	-0.35	2.28	8.29	-3.1	11.4	0.046
199		+58°351	1 53.7	+58°29'	99.4	-2.2	343.8	0.093	98	81	B1 III	10.00	+0.46	-0.42	2.16	7.84	-4.4	12.2	0.043
200*			1 54.0	+61°54'	98.6	+1.2	343.7	0.131	98	82	B2: V:	11.16	+0.52	-0.36	2.28	8.88	-2.0	10.9	0.057
201*			1 54.5	+61°23'	98.8	+0.7	343.6	0.103	109	93	B1 V:	10.49	+0.51	-0.45	2.31	8.18	-3.1	11.3	0.044
202		+60°416	1 54.6	+60°34'	99.1	-0.1	343.6	0.115	99	82	B0.5 III	9.56	+0.67	-0.33	2.85	6.71	-4.7	11.4	0.040
203		+59°387	1 55.5	+59°36'	99.4	-1.0	343.4	0.096	104	87	B3 II	9.59	+0.63	-0.30	2.49	7.10	-4.6	11.7	0.038
204	12301	+63°274	1 55.6	+63°54'	98.2	+3.1	343.4	0.051	110	93	B8 Ib	5.58	+0.38	-0.27	1.41	4.17	-5.6	9.8	0.036
205		+59°388	1 55.6	+59°30'	99.5	-1.1	343.4	0.096	101	85	B3 II	9.62	+0.60	-0.23	2.40	7.22	-4.7	11.9	0.040
206	12302	+58°356	1 55.6	+59°12'	99.6	-1.4	343.4	0.044	88	71	B1: V: p e *	8.06	+0.25	-0.46	1.53	6.53	-3.1	9.6	0.029
207	12323	+54°441	1 55.8	+55°08'	100.7	-5.3	343.3	0.033	102	85	O9 V *	8.90	-0.02	-0.93	0.87	8.03	-4.6	12.6	0.038
208		+61°370	1 56.4	+61°24'	99.0	+0.9	343.2	0.165	103	87	O9 V	10.06	+0.70	-0.37	3.03	7.03	-4.6	11.6	0.054
209		+63°371	1 56.9	+61°58'	98.9	+1.3	343.1	0.100	109	92	B3: II: p e	11.09	+0.46	-0.25	1.98	9.11	-4.6	13.7	0.050
210	E 232588	+54°448	1 57.1	+54°38'	101.1	-5.7	343.0	0.058	109	92	B1.5 III	8.63	+0.07	-0.71	0.96	7.67	-4.0	11.7	0.060

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	$3E_{(B-V)}$	m	M	m-M	p/A_V
			α	δ															
211	E 236935	+57°469	1 57°2	+58°00	100.1	- 2.5	343.0	0.093	91	74	B1: V;ne	9.33	+0.40	-0.45	1.98	7.35	-3.1	10.4	0.047
212	12509	+63°281	1 57.6	+63°54'	98.4	+ 3.2	342.9	0.074	113	96	B1 III	7.09	+0.35	-0.54	1.83	5.26	-4.4	9.7	0.040
213		+61°375	1 57.8	+61°36'	98.1	+ 1.0	342.6	0.062	105	88	B0.5 IV	9.55	+0.57	-0.44	2.55	7.00	-4.2	11.2	0.024
214	12567	+63°287	1 58.1	+63°49'	98.5	+ 3.0	342.9	0.094	107	90	B0.5 III	8.30	+0.38	-0.56	1.98	6.32	-4.7	11.0	0.047
215*			1 58.6	+62°53'	98.8	+ 2.2	342.7	0.129	108	90	B0.5: pe	10.24	+0.46	-0.60	2.22	8.02			0.058
216*			1 59.0	+62°52'	98.9	+ 2.2	342.6	0.135	107	90	B pe	10.28	+0.45	-0.61					
217		+58°372	1 59.4	+58°48'	100.2	- 1.6	342.6	0.087	111	93	B3 III	10.39	+0.35	-0.40	1.65	8.74	-3.3	12.0	0.053
218	12727	+56°425	1 59.6	+56°34'	100.8	- 3.8	342.5	0.075	105	87	B2 III	9.03	+0.08	-0.72	0.96	8.07	-3.6	11.7	0.078
219		+60°435	2 00.9	+60°55'	99.7	+ 0.4	342.2	0.084	113	96	B2 III	9.68	+0.47	-0.38	2.13	7.55	-3.6	11.2	0.039
220	12856	+56°429	2 00.9	+56°38'	101.0	- 3.6	342.2	0.029	107	89	B0 pe	8.53	+0.23	-0.77	1.59	6.94			0.018
221	12867	+57°492	2 01.0	+57°14'	100.8	- 3.1	342.2	0.076	101	83	B1 V	9.41	+0.15	-0.67	1.23	8.18	-3.1	11.3	0.062
222	12882	+64°295	2 01.1	+64°33'	98.6	+ 3.9	342.1	0.064	109	91	B6 Ia	7.50	+0.38	-0.53	1.56	5.94	-6.9	12.8	0.041
223		+61°382	2 01.2	+61°18'	98.6	+ 0.8	342.2	0.166	107	89	B1: V:	10.70	+0.83	-0.14	3.27	7.43	-3.1	10.5	0.051
224	12953	+57°494	2 01.7	+57°57'	100.7	- 2.4	342.0	0.074	108	90	A1 Ia	5.65	+0.60	+0.00	1.71	3.94	-6.9	10.8	0.043
225	12993	+57°498	2 02.1	+57°27'	100.9	- 2.8	341.9	0.089	91	73	O5	8.95	+0.21	-0.79	1.59	7.36	-5.1	12.5	0.056
226	13036	+58°384	2 02.5	+59°09'	100.4	- 1.2	341.9	0.078	114	96	B0.5: III:	8.55	+0.53	-0.41	2.43	6.12	-4.7	10.8	0.032
227	13051	+56°432	2 02.6	+56°31'	101.2	- 3.7	341.8	0.048	100	82	B1 IV::	8.66	+0.13	-0.73	1.17	7.49	-3.8	11.3	0.041
228		+63°300	2 02.9	+63°36'	98.1	+ 3.1	341.8	0.108	108	90	B pe	9.69	+0.55	-0.55					
229	13256	+60°447	2 04.5	+60°14'	100.3	- 0.1	341.4	0.138	100	82	B1 Ia	8.61	+1.20	-0.01	4.38	4.23	-6.9	11.1	0.032
230	13267	+56°438	2 04.6	+57°11'	101.3	- 3.0	341.4	0.088	107	88	B5 Ia	6.33	+0.33	-0.43	1.47	4.86	-6.9	11.8	0.060
231	13268	+55°534	2 04.6	+55°41'	101.8	- 4.4	341.4	0.080	110	91	O8 V nm	8.18	+0.13	-0.83	1.32	6.86	-5.1	12.0	0.045
232	13338	+57°512	2 05.3	+57°28'	101.3	- 2.7	341.2	0.085	111	92	B1 V	9.03	+0.25	-0.55	1.53	7.50	-3.1	10.6	0.056
233*			2 05.4	+59°26'	100.7	- 0.8	341.3	0.105	94	75	O9 V	11.03	+0.97	-0.13	3.84	7.19	-4.6	11.8	0.027
234		+57°513	2 05.5	+57°38'	101.2	- 2.5	341.2	0.085	110	91	B1 III	9.50	+0.29	-0.56	1.65	7.85	-4.4	12.2	0.052
235		+57°515	2 05.7	+57°18'	101.4	- 2.9	341.2	0.093	111	92	B1: pe	9.69	+0.37	-0.63	1.89	7.80			0.049
236	13402	+58°396	2 05.9	+59°04'	100.8	- 1.1	341.1	0.116	104	85	B0.5 I	8.07	+0.61	-0.42	2.67	6.03	-6.5	12.5	0.043
237		+58°400	2 06.4	+58°42'	101.0	- 1.5	341.0	0.140	110	91	B3 Ib-II	9.40	+0.65	-0.23	2.55	6.85	-5.2	12.0	0.055
238	13476	+57°519	2 06.6	+58°06'	101.2	- 2.0	341.0	0.090	109	90	A3 tab	6.41	+0.61	+0.26	1.56	4.85	-6.5	11.4	0.058
239		+57°520	2 06.7	+57°58'	101.3	- 2.1	341.0	0.102	105	86	B1 II	9.62	+0.39	-0.51	1.95	7.67	-4.9	12.6	0.052
240	13494	+55°543	2 06.7	+56°06'	101.9	- 3.9	340.9	0.055	109	90	B1 III	9.30	+0.18	-0.65	1.32	7.98	-4.4	12.4	0.042
241	13544	+53°480	2 07.1	+53°27'	102.8	- 6.4	340.8	0.049	106	87	B0.5 IV	8.88	-0.01	-0.82	0.81	8.07	-4.2	12.3	0.060
242	13561	+55°547	2 07.3	+56°02'	102.0	- 3.9	340.8	0.086	110	91	B0.5 V: p?*	8.83	+0.09	-0.77	1.11	7.72	-3.6	11.3	0.059
243		+54°490	2 07.4	+54°35'	102.5	- 5.3	340.7	0.089	110	91	B1 V	9.52	+0.11	-0.67	1.11	8.41	-3.1	11.5	0.062
244	13590	+63°310	2 07.6	+63°34'	99.6	+ 3.2	340.7	0.096	118	99	B2 III	7.90	+0.35	-0.41	1.77	6.13	-3.6	9.7	0.054
245	13621	+54°494	2 07.8	+54°51'	102.5	- 5.0	340.6	0.050	107	88	B1 V	8.08	+0.06	-0.79	0.96	7.12	-3.1	10.2	0.052

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	$3E_{(B-V)}$	m	M	m-M	p/A_V
			α	δ															
246	13659	+56°462	2 08 ^m 1	+56°28'	102.0	- 3.5	340.6	0.080	104	85	B1 Ib	8.65	+0.56	-0.41	2.46	6.19	-6.5	12.7	0.032
247	13716	+57°525	2 08.6	+57°18'	101.8	- 2.7	340.5	0.088	112	93	B0.5 III	8.27	+0.32	-0.59	1.80	6.47	-4.7	11.2	0.049
248	13744	+57°526	2 08.9	+57°50'	101.6	- 2.2	340.5	0.092	109	90	A0 Iab	7.58	+0.75	+0.18	2.25	6.33	-6.5	11.8	0.041
249	13745	+55°554	2 08.9	+55°32'	102.4	- 4.3	340.4	0.063	110	90	B0 III	7.83	+0.16	-0.77	1.38	6.45	-5.0	11.4	0.046
250		+59°451	2 09.0	+59°13'	101.2	- 0.9	340.5	0.097	101	82	B1 II	9.30	+0.69	-0.29	2.85	6.45	-4.9	11.4	0.034
251	13758	+57°527	2 09.0	+57°17'	101.8	- 2.7	340.4	0.100	108	88	B1 V	9.05	+0.33	-0.53	1.77	7.28	-3.1	10.4	0.056
252*			2 09.7	+57°50'	101.7	- 2.1	340.3	0.084	117	98	B0.5 V	10.22	+0.55	-0.37	2.49	7.73	-3.6	11.3	0.034
253	13831	+56°469	2 09.7	+56°17'	102.2	- 3.6	340.3	0.066	105	85	B0 III p?	8.26	+0.10	-0.81	1.20	7.06	-5.0	12.1	0.055
254	13841	+56°470	2 09.8	+56°34'	102.2	- 3.3	340.3	0.073	111	91	B2 Ib	7.37	+0.23	-0.65	1.41	5.96	-5.8	11.8	0.052
255		+65°473	2 09.9	+56°40'	102.1	- 3.2	340.2	0.095	111	91	B1 II:	9.07	+0.24	-0.63	1.50	7.57	-4.9	12.5	0.063
256	13854	+56°471	2 09.9	+56°36'	102.2	- 3.3	340.2	0.083	112	92	B1 Iab	6.47	+0.28	-0.67	1.62	4.85	-6.5	11.4	0.051
257	13866	+56°475	2 10.0	+56°15'	102.3	- 3.6	340.2	0.073	115	95	B2 Ib	7.48	+0.19	-0.65	1.29	6.19	-5.8	12.0	0.056
258	13890	+56°478	2 10.2	+56°26'	102.3	- 3.5	340.2	0.075	107	87	B1 III: pe	8.47	+0.19	-0.63	1.35	7.12	-4.4	11.5	0.056
259*			2 10.2	+59°07'	101.4	- 0.9	340.2	0.102	104	84	B1 Ib	10.59	+0.94	-0.29	2.70	7.89	-5.8	13.7	0.038
260	13900	+56°479	2 10.3	+56°26'	102.3	- 3.4	340.2	0.075	116	96	B1 IV	9.17	+0.16	-0.66	1.26	7.91	-3.8	11.7	0.060
261*			2 10.4	+58°32'	101.6	- 1.4	340.2	0.127	102	82	B pe	10.15	+0.84	-0.30					
262		+56°482	2 10.6	+56°44'	102.2	- 3.1	340.1	0.104	116	96	B1 III? p	9.36	+0.30	-0.60	1.68	7.68	-4.4	12.1	0.062
263		+56°484	2 10.7	+56°26'	102.3	- 3.4	340.1	0.075	124	104	B0: V: ne	9.62	+0.32	-0.70	1.86	7.76	-4.1	11.9	0.040
264	13969	+56°485	2 10.8	+56°38'	102.3	- 3.2	340.0	0.096	114	94	B1 IV:	8.86	+0.29	-0.59	1.65	7.21	-3.8	11.0	0.058
265		+59°456	2 11.0	+59°20'	101.4	- 0.7	340.0	0.107	107	87	B0.5 V	9.88	+0.55	-0.41	2.49	7.39	-3.6	11.0	0.043
266	14010	+63°315	2 11.1	+63°58'	99.8	+ 3.7	340.0	0.092	112	92	B9 Ia	7.11	+0.60	-0.10	1.98	5.13	-6.9	12.0	0.046
267	14014	+55°567	2 11.1	+55°46'	102.6	- 4.0	340.0	0.056	114	94	B0.5 V	8.75	+0.14	-0.66	1.26	7.49	-3.6	11.1	0.044
268		+56°493	2 11.3	+56°24'	102.4	- 3.4	339.9	0.079	126	106	B1 V: pe:	9.62	+0.19	-0.66	1.35	8.27	-3.1	11.4	0.058
269	14052	+56°500	2 11.4	+56°45'	102.3	- 3.1	339.9	0.088	116	96	B1 Ib	8.18	+0.30	-0.58	1.68	6.50	-5.8	12.3	0.052
270	14053	+56°498	2 11.4	+56°33'	102.4	- 3.3	339.9	0.065	115	95	B0.5 III	8.43	+0.24	-0.62	1.56	6.87	-4.7	11.6	0.042
271	14092	+56°507	2 11.7	+56°18'	102.5	- 3.5	339.8	0.091	120	100	B1 V	9.23	+0.23	-0.59	1.47	7.76	-3.1	10.9	0.062
272		+59°461	2 12.1	+59°16'	101.5	- 0.7	339.8	0.110	104	84	B1 II	10.09	+0.51	-0.39	2.31	7.78	-4.9	12.7	0.048
273	14134	+56°522	2 12.1	+56°40'	102.4	- 3.1	339.8	0.084	114	94	B3 Ia	6.55	+0.47	-0.38	2.01	4.54	-6.9	11.4	0.042
274	14143	+56°530	2 12.2	+56°43'	102.4	- 3.1	339.7	0.086	117	97	B2 Ia	6.65	+0.52	-0.45	2.28	4.37	-6.9	11.3	0.038
275	14162	+56°535	2 12.4	+56°41'	102.5	- 3.1	339.7	0.091	115	95	B0.5 V	9.37	+0.38	-0.49	1.98	7.39	-3.6	11.0	0.046
276	14250	+56°545	2 13.2	+56°39'	102.6	- 3.1	339.5	0.079	109	89	B0.5 V: n	8.96	+0.32	-0.54	1.80	7.16	-3.6	10.8	0.044
277	14302	+55°587	2 13.6	+55°52'	102.9	- 3.8	339.4	0.068	115	94	B1 II-III	8.57	+0.26	-0.56	1.56	7.01	-4.6	11.6	0.044
278		+56°549	2 13.7	+57°00'	102.5	- 2.7	339.4	0.078	117	97	B1 V	9.82	+0.33	-0.50	1.77	8.05	-3.1	11.2	0.044
279	14322	+55°588	2 13.8	+55°27'	103.1	- 4.2	339.4	0.066	113	92	B8 Ib	6.74	+0.35	-0.33	1.32	5.42	-5.6	11.0	0.050
280	14331	+55°590	2 13.9	+55°22'	103.1	- 4.2	339.3	0.060	108	87	B0 III	8.41	+0.16	-0.75	1.38	7.03	-5.0	12.0	0.043

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
281		+58°451	2 14.1 ^m	+59°00'	101.9	-0.8	339.4	0.101	110	89	B1 III:	10.07	+0.52	-0.36	2.34	7.73	-4.4	12.1	0.043
282	14357	+56°555	2 14.1	+56°25'	102.8	-3.3	339.3	0.096	113	92	B2 II	8.52	+0.31	-0.52	1.65	6.87	-4.7	11.6	0.058
283*			2 14.1	+59°00'	101.9	-0.8	339.4	0.049	109	88	A	10.36	+0.35	+0.22					
284		+58°453	2 14.7	+58°51'	102.0	-0.9	339.2	0.083	110	89	B1 V	10.53	+0.45	-0.45	2.13	8.40	-3.1	11.5	0.039
285	14422	+56°565	2 14.7	+56°56'	102.7	-2.7	339.2	0.067	117	96	B1 V: pe	8.99	+0.51	-0.64	2.31	6.68	-3.1	9.8	0.029
286	14433	+56°568	2 14.8	+56°47'	102.7	-2.9	339.2	0.086	112	91	A1 Ia	6.42	+0.57	+0.07	1.62	4.80	-6.9	11.7	0.053
287	14434	+56°567	2 14.8	+56°27'	102.8	-3.2	339.2	0.084	116	95	O6	8.48	+0.16	-0.78	1.44	7.04	-5.1	12.1	0.058
288	14442	+58°455	2 14.9	+59°06'	101.9	-0.7	339.2	0.090	113	92	O5.5	9.21	+0.41	-0.61	2.19	7.02	-5.1	12.1	0.041
289	14443	+56°570	2 14.9	+56°42'	102.8	-3.0	339.1	0.082	117	96	B2 Ib	8.04	+0.35	-0.54	1.77	6.27	-5.8	12.1	0.046
290	14489	+55°598	2 15.3	+55°23'	103.3	-4.2	339.0	0.049	114	93	A2 Ia	5.17	+0.37	-0.11	0.93	4.24	-6.9	11.1	0.053
291	14501	+57°551	2 15.4	+57°42'	102.5	-2.0	339.1	0.080	111	90	B3 V: n	9.42	+0.40	-0.32	1.80	7.62	-1.5	9.1	0.044
292		+56°586	2 15.5	+56°37'	102.9	-3.0	339.0	0.066	115	94	B1 V	9.94	+0.25	-0.59	1.53	8.41	-3.1	11.5	0.043
293		+56°589	2 15.6	+57°03'	102.7	-2.6	339.0	0.080	117	96	B1 III	9.46	+0.41	-0.48	2.01	7.45	-4.4	11.8	0.040
294	14520	+56°588	2 15.6	+56°38'	102.9	-3.0	339.0	0.087	115	94	B2 II	9.25	+0.32	-0.53	1.68	7.57	-4.7	12.3	0.052
295		+60°470	2 15.8	+60°22'	101.6	+0.5	339.0	0.068	116	95	O8 V	9.88	+0.70	-0.36	3.03	6.85	-5.1	12.0	0.022
296	14535	+56°591	2 15.8	+56°47'	102.9	-2.8	339.0	0.077	111	90	A1 Ia p?	7.45	+0.71	+0.12	2.04	5.41	-6.9	12.3	0.038
297	14542	+56°593	2 15.9	+56°56'	102.8	-2.7	339.0	0.067	116	95	B8 Ia	6.95	+0.61	-0.13	2.10	4.85	-6.9	11.8	0.032
298*			2 16.0	+57°43'	102.6	-1.9	338.9	0.086	114	93	B1 V	10.56	+0.41	-0.44	2.01	8.55	-3.1	11.6	0.043
299		+58°458	2 16.3	+58°30'	102.3	-1.2	338.9	0.102	115	94	B1 pe	9.80	+0.54	-0.59	2.40	7.40			0.042
300	14605	+55°605	2 16.5	+56°08'	103.2	-3.4	338.8	0.089	116	95	B0.5 (V) pe*	9.34	+0.27	-0.75	1.65	7.69	-3.6	11.3	0.054
301*			2 16.7	+57°53'	102.6	-1.7	338.8	0.085	109	88	B0 IV: mn	9.44	+0.43	-0.57	2.19	7.25	-4.6	11.8	0.039
302		+58°461	2 17.1	+58°46'	102.3	-0.9	338.7	0.070	115	94	B0.5 III	9.76	+0.45	-0.51	2.19	7.57	-4.7	12.3	0.032
303		+57°558	2 17.3	+57°52'	102.7	-1.7	338.7	0.076	115	94	B0.5 III	9.89	+0.55	-0.42	2.49	7.40	-4.7	12.1	0.030
304	14818	+55°612	2 18.2	+56°10'	103.4	-3.3	338.4	0.081	114	92	B2 Ia	6.21	+0.31	-0.61	1.65	4.56	-6.9	11.5	0.049
305*			2 18.6	+59°32'	102.2	-0.1	338.4	0.097	115	93	B0 IV:	10.66	+0.77	-0.26	3.21	7.45	-4.6	12.0	0.030
306		+61°411	2 19.0	+61°33'	101.5	+1.8	338.3	0.107	120	99	O8:	10.19	+0.99	-0.09	3.90	6.29	-5.1	11.4	0.027
307	14899	+56°621	2 19.2	+56°47'	103.3	-2.6	338.2	0.070	116	94	B8 Ib	7.38	+0.44	-0.10	1.59	5.79	-5.6	11.4	0.044
308	14947	+58°467	2 19.5	+58°25'	102.7	-1.1	338.2	0.100	122	100	O6 f	7.98	+0.46	-0.61	2.34	5.64			0.043
309*			2 19.6	+57°24'	103.1	-2.1	338.2	0.073	118	96	B2 IV	10.49	+0.43	-0.41	2.01	8.48	-2.9	11.4	0.036
310	14956	+57°568	2 19.6	+57°14'	103.2	-2.2	338.2	0.078	117	95	B2 Ia	7.17	+0.72	-0.28	2.88	4.29	-6.9	11.2	0.027
311*			2 22.2	+57°46'	103.3	-1.6	337.6	0.089	113	91	B1 III	9.86	+0.48	-0.44	2.22	7.64	-4.4	12.0	0.040
312		+59°497	2 22.3	+61°24'	101.9	+1.8	337.6	0.126	116	94	B0 V:	10.47	+0.74	-0.32	3.12	7.35	-4.1	11.4	0.040
313	15316	+57°576	2 22.8	+57°22'	103.5	-1.9	337.4	0.100	110	87	A3 Iab	7.21	+0.77	+0.45	2.04	5.17	-6.5	11.7	0.049
314	15325	+56°635	2 22.9	+56°48'	103.8	-2.4	337.4	0.115	113	90	B1 IV	8.51	+0.42	-0.47	2.04	6.47	-3.8	10.3	0.056
315		+57°579	2 23.0	+57°13'	103.6	-2.1	337.4	0.083	108	85	B1 V	10.09	+0.49	-0.40	2.25	7.84	-3.1	10.9	0.037

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	R-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
316		+60°493	2 23.3	+60°44'	102.3	+ 1.2	337.4	0.091	111	88	B0.5 Ia	8.44	+0.79	-0.30	3.21	5.23	-6.9	12.1	0.028
317		+62°411	2 23.9	+62°58'	101.5	+ 3.3	337.2	0.083	113	90	B1 Ib-II	8.46	+0.32	-0.60	1.74	6.72	-5.4	12.1	0.048
318		+60°497	2 24.2	+61°11'	102.2	+ 1.7	337.2	0.125	116	93	O7	8.80	+0.57	-0.48	2.67	6.13	-5.1	11.2	0.047
319	15450	+56°642	2 24.2	+56°27'	104.1	- 2.7	337.2	0.084	122	99	B2: pe	8.84	+0.34	-0.94	1.74	7.10			0.048
320		+60°498	2 24.5	+61°07'	102.3	+ 1.6	337.1	0.134	123	100	O9 V	9.93	+0.54	-0.46	2.55	7.38	-4.6	12.0	0.052
321	15497	+57°582	2 24.6	+57°15'	103.8	- 2.0	337.1	0.096	109	86	B6 Ia	6.98	+0.79	-0.05	2.79	4.19	-6.9	11.1	0.034
322*			2 24.8	+59°36'	102.9	+ 0.2	337.1	0.104	107	84	B0.5 V	10.52	+1.08	+0.06	4.08	6.44	-3.6	10.0	0.025
323		+60°501	2 25.0	+61°02'	102.4	+ 1.6	337.0	0.120	122	99	O8.5	9.60	+0.46	-0.58	2.34	7.26	-5.1	12.4	0.051
324	15548	+56°647	2 25.0	+56°13'	104.2	- 2.9	337.0	0.108	125	102	B1 V	9.27	+0.28	-0.58	1.62	7.65	-3.1	10.8	0.067
325	15558	+60°502	2 25.1	+61°01'	102.4	+ 1.6	337.0	0.110	120	97	O6	7.81	+0.52	-0.56	2.52	5.29	-5.1	10.4	0.044
326		+60°503	2 25.1	+60°31'	102.6	+ 1.1	337.0	0.151	119	96	B1.5 V	9.95	+0.66	-0.31	2.73	7.22	-2.6	9.8	0.055
327	15570	+60°504	2 25.2	+60°56'	102.4	+ 1.5	337.0	0.131	117	94	O5 f	8.10	+0.70	-0.40	3.06	5.04			0.043
328	15571	+56°848	2 25.2	+56°59'	104.0	- 2.2	337.0	0.093	124	101	B1 II:	8.33	+0.57	-0.43	2.49	5.84	-4.9	10.7	0.037
329	15620	+57°584	2 25.6	+57°31'	103.8	- 1.6	336.9	0.111	111	88	B8 Iab	8.35	+0.92	+0.17	3.03	5.32	-6.5	11.8	0.037
330	15629	+60°507	2 25.7	+61°05'	102.4	+ 1.6	336.9	0.105	120	97	O5	8.42	+0.43	-0.62	2.25	6.17	-5.1	11.3	0.047
331	15642	+54°569	2 25.8	+54°54'	104.9	- 4.0	336.8	0.065	115	92	B0 III:	8.51	+0.07	-0.94	1.11	7.40	-5.0	12.4	0.058
332		+57°586	2 26.1	+58°09'	103.6	- 1.0	336.8	0.110	122	99	B1 II	10.11	+0.61	-0.33	2.61	7.50	-4.9	12.4	0.042
333	15690	+56°856	2 26.3	+57°05'	104.1	- 2.0	336.7	0.115	113	89	B1.5 Ib	9.02	+0.65	-0.25	2.70	5.32	-5.8	11.1	0.042
334		+60°512	2 26.4	+60°57'	102.6	+ 1.6	336.7	0.028	107	84	O6	9.41	+0.50	-0.53	2.46	6.95	-5.1	12.0	0.011
335*			2 26.4	+60°57'	102.6	+ 1.6	336.7	0.094	117	94		10.26	+0.68	+0.12					
336		+59°510	2 26.7	+59°34'	103.1	+ 0.3	336.7	0.097	117	94	B1 III	10.28	+0.56	-0.40	2.46	7.82	-4.4	12.2	0.039
337	15752	+57°589	2 26.8	+57°58'	103.8	- 1.2	336.6	0.112	121	98	B0 III	8.74	+0.49	-0.52	2.57	6.37	-5.0	11.4	0.047
338		+62°419	2 27.2	+63°09'	101.8	+ 3.6	336.5	0.100	114	91	B0: V?	9.72	+0.36	-0.59	1.98	7.74	-4.1	11.8	0.050
339	15785	+59°513	2 27.2	+60°06'	103.0	+ 0.8	336.5	0.104	121	98	B1 Iab	8.34	+0.57	-0.50	2.49	5.85	-6.5	12.4	0.042
340		+58°488	2 27.2	+59°06'	103.4	- 0.1	336.5	0.131	107	83	B0.5 V	9.85	+0.68	-0.26	2.88	6.97	-3.6	10.6	0.045
341	E 236971	+56°860	2 28.3	+57°03'	104.3	- 1.9	336.3	0.096	119	95	B1 IV	9.55	+0.50	-0.40	2.28	7.27	-3.8	11.1	0.042
342		+62°424	2 28.4	+62°31'	102.2	+ 3.1	336.2	0.080	112	88	O8	8.83	+0.45	-0.57	2.28	6.55	-5.1	11.6	0.035
343		+57°593	2 28.6	+57°22'	104.3	- 1.6	336.2	0.093	118	94	B1 III	9.92	+0.61	-0.31	2.61	7.31	-4.4	11.7	0.036
344	16243	+57°602	2 31.3	+57°23'	104.6	- 1.5	335.7	0.079	117	93	B2 II:	8.26	+0.56	-0.27	2.40	5.86	-4.7	10.6	0.033
345	16264	+56°676	2 31.5	+57°10'	104.7	- 1.7	335.6	0.063	121	97	B1: V:	9.25	+0.44	-0.44	2.10	7.15	-3.1	10.2	0.030
346	16310	+58°498	2 32.0	+58°38'	104.2	- 0.3	335.5	0.108	122	97	B1 II:	8.12	+0.65	-0.36	2.73	5.39	-4.9	10.3	0.040
347	16429	+60°541	2 33.1	+60°51'	103.3	+ 1.8	335.3	0.049	128	103	O8.5 III	7.67	+0.62	-0.38	2.76	4.91	-5.7	10.6	0.018
348	16691	+56°693	2 35.5	+56°28'	105.5	- 2.0	334.8	0.078	118	93	O5 f	8.71	+0.48	-0.55	2.40	6.31			0.032
349	16778	+59°535	2 36.3	+59°24'	104.3	+ 0.6	334.6	0.114	121	96	A2 Ia	7.68	+0.89	+0.36	2.49	5.19	-6.9	12.1	0.046
350	16779	+57°620	2 36.3	+57°24'	105.2	- 1.2	334.6	0.102	115	90	B2 Ib	8.85	+0.74	-0.26	2.94	5.91	-5.8	11.7	0.035

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
351	16808	+57°622	2 36.7	+57°53'	105.0	- 0.7	334.5	0.104	123	98	B0.5 Ib	8.60	+0.56	-0.47	2.52	6.08	-5.8	11.9	0.041
352	16832	+56°703	2 36.9	+56°14'	105.7	- 2.2	334.4	0.102	119	93	B0 p*	8.85	+0.40	-0.58	2.10	6.75	-5.8	13.0	0.048
353		+57°626	2 37.6	+57°13'	105.4	- 1.2	334.3	0.072	120	94	B1 Ib	9.95	+0.65	-0.29	2.73	7.22	-5.8	13.0	0.026
354	17088	+57°632	2 39.5	+57°19'	105.6	- 1.0	333.9	0.085	116	90	B9 Ia	7.50	+0.82	+0.05	2.64	4.86	-6.9	11.8	0.032
355	17114	+58°518	2 39.7	+58°55'	104.9	+ 0.4	333.9	0.110	113	87	B1 V	9.17	+0.50	-0.45	2.28	6.89	-3.1	10.0	0.048
356	17145	+57°634	2 40.0	+57°15'	105.7	- 1.1	333.8	0.096	116	90	B8 Ia	8.12	+0.84	+0.00	2.79	5.33	-6.9	12.2	0.034
357	17378	+56°718	2 42.2	+56°40'	106.2	- 1.5	333.3	0.101	121	94	A5 Ia	6.25	+0.89	+0.50	2.49	3.76	-6.9	10.7	0.040
358	E 237007	+59°549	2 42.7	+59°59'	104.8	+ 1.5	333.2	0.075	113	86	B0 V	9.45	+0.33	-0.60	1.89	7.56	-4.1	11.7	0.040
359	17505	+59°552	2 43.4	+60°01'	104.8	+ 1.6	333.1	0.075	109	82	O7	7.06	+0.40	-0.64	2.16	4.90	-5.1	10.0	0.035
360	17520	+59°553	2 43.5	+59°59'	104.9	+ 1.6	333.1	0.071	111	84	O8 V	8.27	+0.32	-0.68	1.89	6.38	-5.1	11.5	0.038
361	17603	+56°728	2 44.4	+56°38'	106.5	- 1.4	332.8	0.106	114	87	O7 f:	8.45	+0.65	-0.42	2.91	5.54	-5.1	12.5	0.036
362		+59°562	2 45.6	+60°03'	105.1	+ 1.7	332.6	0.077	113	86	O8 V	9.73	+0.47	-0.53	2.34	7.39	-5.1	11.7	0.033
363		+60°586	2 46.4	+60°14'	105.1	+ 2.0	332.4	0.053	114	86	O7	8.48	+0.30	-0.67	1.86	6.62	-5.1	11.7	0.028
364	17857	+63°367	2 47.0	+63°43'	103.5	+ 5.1	332.2	0.102	112	84	B8 Ib	7.66	+0.75	-0.02	2.52	5.14	-5.6	10.7	0.040
365		+56°739	2 47.4	+57°02'	106.7	- 0.8	332.2	0.100	115	87	O8.5 Ib	9.96	+1.00	-0.07	3.90	6.06	-6.6	12.7	0.026
366*			2 48.3	+58°49'	106.0	+ 0.8	332.0	0.141	112	84	B1 V	10.66	+0.57	-0.34	2.49	8.17	-3.1	11.3	0.057
367		+60°594	2 49.1	+61°01'	105.0	+ 2.8	331.8	0.086	121	93	O9 V	9.30	+0.36	-0.64	2.01	7.29	-4.6	11.9	0.043
368	18076	+58°534	2 49.2	+58°41'	106.1	+ 0.7	331.8	0.128	112	84	B0 II-III	9.06	+0.58	-0.42	2.64	6.42	-5.2	11.6	0.048
369		+60°596	2 49.3	+60°16'	105.4	+ 2.2	331.8	0.086	115	87	B1 V: n	9.64	+0.37	-0.54	1.89	7.75	-3.1	10.8	0.046
370*			2 50.3	+57°29'	106.8	- 0.2	331.6	0.128	118	90	B2 III	10.25	+0.81	-0.16	3.15	7.10	-3.6	10.7	0.041
371*			2 51.1	+57°42'	106.8	0.0	331.4	0.121	116	87	B1 II-III	10.04	+0.80	-0.21	3.18	6.86	-4.6	11.5	0.038
372	18326	+59°578	2 51.6	+60°10'	105.7	+ 2.2	331.3	0.070	117	88	O8	7.82	+0.38	-0.63	2.07	5.75	-5.1	10.8	0.034
373		+51°659	2 51.6	+51°42'	109.8	- 5.2	331.2	0.078	103	74	B0 III nn	9.37	+0.40	-0.52	2.10	7.27	-5.0	12.3	0.037
374	18352	+60°608	2 51.9	+60°53'	105.4	+ 2.8	331.2	0.077	115	86	B1 V*	8.80	+0.23	-0.63	1.47	5.33	-3.1	8.4	0.052
375	18409	+62°504	2 52.4	+62°19'	104.7	+ 4.1	331.1	0.092	114	85	O9 Ib	8.36	+0.42	-0.59	2.19	6.17	-6.9	13.1	0.042
376	E 237056	+57°681	2 55.0	+57°13'	107.5	- 0.2	330.6	0.128	125	96	B0.5; V:pe	8.27	+0.75	-0.38	3.09	5.18	-3.6	8.8	0.041
377		+57°687	2 58.7	+57°27'	107.8	+ 0.3	329.8	0.116	118	88	B1 Ib	9.99	+0.89	-0.18	3.45	6.54	-5.8	12.3	0.034
378	19243	+61°525	3 00.7	+62°00'	105.7	+ 4.3	329.3	0.050	130	99	B1 V:e	6.72	+0.22	-0.63	1.44	5.28	-3.1	8.4	0.035
379	19820	+59°609	3 06.2	+59°11'	107.8	+ 2.3	328.2	0.105	114	82	O9 IV	7.1*	+0.51	-0.51	2.46	4.62	-5.4	10.0	0.043
380	E 237090	+59°611	3 07.2	+59°33'	107.7	+ 2.7	328.0	0.111	104	72	B0.5 IV: nn	8.86	+0.53	-0.43	2.43	6.43	-4.2	10.6	0.046
381	E 237091	+59°612	3 07.3	+59°33'	107.7	+ 2.7	328.0	0.105	112	80	B1; V: p:ne	8.67	+0.66	-0.37	2.76	5.91	-3.1	9.0	0.038
382		+59°704	3 09.1	+51°38'	112.1	- 3.9	327.6	0.066	115	83	B1 V: nn	10.34	+0.43	-0.39	2.07	7.27	-3.1	11.4	0.032
383		+51°710	3 11.6	+51°40'	112.4	- 3.7	327.1	0.095	107	74	B5 Ib	9.75	+0.59	-0.18	2.25	7.50	-5.8	13.3	0.042
384	E 237121	+58°587	3 12.7	+58°30'	108.9	+ 2.2	326.9	0.106	110	77	B0.5 V	8.94	+0.46	-0.51	2.22	6.72	-3.6	10.3	0.048
385	20898	+59°648	3 17.1	+60°08'	108.4	+ 3.8	325.9	0.047	108	74	B2 III	7.92	+0.45	-0.42	2.07	5.85	-3.6	9.4	0.023

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
386		+49°9'16	3 17.1 ^m	+49°18'	114.5	- 5.2	325.9	0.046	130	96	B2 p Shell	9.53	+0.16	-0.43	1.20	8.33			0.038
387	20959	+56°6'00	3 17.8	+59°05'	109.1	+ 3.0	325.8	0.095	120	86	B3 III	8.00	+0.27	-0.46	1.41	5.69	-3.3	9.9	0.067
388	21212	+61°58'7	3 20.3	+62°09'	107.6	+ 5.7	325.2	0.088	135	100	B2 (V) e	8.13	+0.59	-0.42	2.49	5.64	-2.0	7.6	0.035
389	21291	+59°8'60	3 21.0	+59°38'	109.1	+ 3.7	325.1	0.075	117	82	B9 Ia	4.20	-0.43	-0.23	1.47	2.73	-6.9	9.6	0.051
390	21399	+58°6'07	3 21.9	+58°32'	109.8	+ 2.9	325.0	0.075	121	86	A0 Ia	4.53	+0.56	-0.12	1.68	2.85	-6.9	9.8	0.045
391	21483	+29°5'66	3 22.7	+30°02'	127.0	-20.2	322.2	0.030	176	138	B3 III	7.03	+0.35	-0.33	1.65	5.38	-3.3	8.7	0.018
392	21803	+44°7'34	3 25.8	+44°32'	118.3	- 8.2	323.8	0.034	132	96	B2 IV	6.40	+0.03	-0.73	0.81	5.59	-2.9	8.5	0.042
393	21856	+34°8'74	3 26.3	+35°06'	124.3	-15.7	322.5	0.018	68	30	B1 V	5.89	-0.06	-0.87	0.60	5.29	-3.1	8.4	0.030
394	22253	+56°8'24	3 29.9	+56°23'	122.0	+ 1.8	323.4	0.040	127	90	B0.5 III	6.53	+0.33	-0.56	1.83	4.70	-4.7	9.4	0.022
395	23080	+33°7'04	3 37.0	+33°48'	127.0	-15.3	320.3	0.010	82	43	B2 Vp Velled	7.48	+0.11	-0.57	1.05	6.43	-2.0	8.4	0.010
396	23180	+31°6'42	3 38.0	+31°58'	128.4	+16.6	319.8	0.014	29	169	B1 II	3.84	+0.05	-0.75	0.93	2.91	-4.9	7.8	0.015
397		+31°6'43	3 38.3	+31°51'	128.5	-16.7	319.7	0.024	150	110	B5 V	8.53	+0.68	+0.01	2.52	6.01	-0.9	6.9	0.010
398	23478	+31°6'49	3 40.4	+32°00'	128.7	-16.2	319.4	0.035	31	170	B3 IV	6.65	+0.09	-0.57	0.87	5.78	-2.5	8.3	0.040
399	23625	+33°7'17	3 41.5	+33°18'	128.0	-15.1	319.4	0.016	28	167	B2 V	6.55	+0.08	-0.62	0.96	5.59	-2.0	7.6	0.017
400	23675	+52°7'14	3 41.9	+52°21'	115.8	- 0.4	321.0	0.067	133	94	B0.5 III	6.72	+0.42	-0.56	2.10	4.62	-4.7	9.3	0.032
401	23800	+52°7'15	3 42.9	+52°11'	116.0	- 0.4	320.8	0.058	123	84	B1 IV	6.94	+0.32	-0.54	1.74	5.20	-3.8	9.0	0.033
402	24131	+33°7'28	3 45.5	+34°03'	128.2	-14.0	318.8	0.022	88	47	B1 V	5.76	+0.01	-0.81	0.81	4.95	-3.1	8.0	0.027
403	24190	+33°7'30	3 46.0	+33°53'	128.4	-14.1	318.7	0.013	95	54	B2 V	7.43	+0.04	-0.63	0.84	6.59	-2.0	8.6	0.015
404*			3 46.1	+52°56'	115.9	+ 0.5	320.2	0.030	124	84	B1 V	11.09	+0.75	-0.14	3.03	8.06	-3.1	11.2	0.010
405*			3 46.7	+46°35'	120.1	- 4.3	319.9	0.041	145	105	B2; IV: mne	10.17	+0.39	-0.48	1.89	8.28	-2.9	11.2	0.022
406	24431	+52°7'26	3 48.1	+52°21'	116.6	+ 0.2	319.8	0.041	118	78	O9 IV-V	6.72	+0.38	-0.61	2.07	4.85	-5.0	9.6	0.020
407	24432	+48°10'19	3 48.1	+48°45'	118.9	- 2.5	319.7	0.056	135	95	B3 II	6.82	+0.55	-0.17	2.25	4.57	-4.6	9.2	0.025
408	24534	+50°5'91	3 49.1	+30°45'	131.1	-15.9	317.6	0.025	49	7	Ope (var)	6.07	+0.31	-0.82					
409		+55°8'37	3 50.0	+55°38'	114.6	+ 2.9	319.3	0.110	133	92	B2 Ib	9.57	+0.71	-0.27	2.85	6.72	-5.8	12.5	0.038
410	24640	+34°7'68	3 50.0	+34°47'	128.4	-12.8	318.1	0.020	99	57	B2 V	5.48	-0.03	-0.75	0.63	4.85	-2.0	6.8	0.032
411		+52°7'29	3 50.1	+52°25'	116.7	+ 0.5	319.4	0.085	124	84	B2 Iab	10.13	+1.06	-0.01	3.90	6.23	-6.5	12.7	0.022
412*			3 51.0	+56°56'	113.9	+ 4.0	319.1	0.067	134	93	O7.5	10.08	+0.27	-0.69	1.77	8.31	-5.1	13.4	0.038
413		+56°8'64	3 51.1	+56°56'	113.9	+ 4.0	319.0	0.084	136	95	O6 mn	9.68	+0.28	-0.69	1.80	7.88	-5.1	13.0	0.047
414		+56°8'66	3 51.4	+56°49'	114.0	+ 3.9	319.0	0.097	136	95	O9 V	10.28	+0.36	-0.60	2.01	8.27	-4.6	12.9	0.048
415	E 237204	+56°8'68	3 52.4	+56°37'	114.2	+ 3.9	318.8	0.082	134	93	B0.5 V	9.14	+0.31	-0.57	1.77	7.37	-3.6	11.0	0.046
416	24912	+35°7'75	3 52.5	+35°30'	128.3	-11.9	317.8	0.027	102	60	O7	4.02	+0.04	-0.93	1.08	2.94	-5.1	8.0	0.025
417		+55°8'38	3 52.8	+55°13'	115.2	+ 2.9	318.8	0.097	133	92	B3 Ib	9.29	+0.82	-0.11	3.06	6.23	-5.8	12.0	0.032
418	E 232874	+53°7'23	3 54.5	+53°27'	116.6	+ 1.7	318.5	0.011	95	54	B0.5 V	8.86	+0.41	-0.43	2.07	6.79	-3.6	10.4	0.005
419*			3 54.7	+52°33'	117.2	+ 1.0	318.5	0.057	128	87	B1 ? p*	10.64	+0.87	-0.18	3.39	7.25			0.017
420	E 237211	+56°8'73	3 55.3	+56°15'	114.8	+ 3.9	318.2	0.075	139	97	O9.5 I? p*	8.98	+0.49	-0.51	2.37	6.61	-6.6	13.2	0.032

TABLE 5—Continued

No.	HD	BD	1900		l	b	φ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v	
			α																	δ
			h ^m	°																
421	E 237213	+55°845	3 56.5	+55°43'	115.3	+ 3.6	318.0	0.079	138	96	B3 Ia	8.72	+0.77	-0.06	2.91	5.81	-6.9	12.7	0.027	
422	25348	+52°752	3 56.6	+53°03'	117.1	+ 1.6	318.1	0.030	122	80	B1 V pnee	8.33	+0.21	-0.65	1.41	6.92	-3.1	10.0	0.021	
423	25443	+61°669	3 57.4	+61°48'	111.2	+ 8.2	317.4	0.115	136	93	B0.5 III	6.74	+0.33	-0.62	1.83	4.91	-4.7	9.6	0.063	
424	25517	+43°886	3 58.1	+44°00'	123.3	- 4.9	317.6	0.055	160	118	B1 V	9.27	+0.25	-0.57	1.53	7.74	-3.1	10.8	0.036	
425	25914	+56°884	4 01.2	+56°50'	115.0	+ 4.8	317.0	0.102	141	98	B6 Ia	7.99	+0.60	-0.28	2.22	5.77	-6.9	12.7	0.046	
426	E 232947	+53°765'	4 17.6	+53°11'	119.2	+ 3.9	314.0	0.137	149	103	B0 Ia	9.32	+0.64	-0.40	2.82	6.50	-6.9	13.4	0.048	
427	+51°921	4 17.7	+51°48'	120.2	+ 2.9	314.0	0.097	140	94	B0 II	9.63	+0.73	-0.30	3.09	6.54	-5.4	11.9	0.031		
428	E 232999	+50°1043	4 37.0	+50°23'	123.3	+ 4.2	310.5	0.082	158	108	B1 IV	9.37	+0.58	-0.31	2.46	6.91	-3.8	10.7	0.033	
429	30353	+43°1069	4 41.8	+43°06'	129.4	+ 0.2	309.8	0.050	149	99	A pe	7.76	+0.46	-0.17						
430	+41°974	4 43.2	+41°30'	130.8	- 0.7	309.6	0.022	156	106	B pe	9.33	+0.17	-0.56							
431	31327	+35°930	4 49.7	+36°01'	135.9	- 3.1	308.4	0.010	102	50	B2 Ib	6.06	+0.41	-0.44	1.95	4.11	-5.8	9.9	0.005	
432	+30°748	4 52.1	+30°33'	140.5	- 6.1	307.7	< .003				B1.5 V	9.66	+0.31	-0.41	1.68	7.98	-2.6	10.6		
433	31617	+43°1147	4 52.2	+43°11'	130.6	+ 1.7	308.1	0.040	163	111	B2 IV	7.42	+0.00	-0.77	0.72	6.70	-2.9	9.6	0.056	
434	+43°1168	4 55.0	+43°42'	130.5	+ 2.4	307.6	0.124	137	85	B9 Iab	9.39	+0.92	-0.20	2.94	6.45	-6.5	13.0	0.042		
435	+40°1189	5 03.3	+40°32'	133.9	+ 1.7	306.3	0.043	160	106	B2: III: nm	8.91	+0.06	-0.67	0.90	8.01	-3.6	11.6	0.048		
436	33357	+41°1101	5 04.6	+42°02'	132.9	+ 2.8	306.1	0.047	154	100	B1: (V) n (e)	8.40	+0.00	-0.73	0.78	7.62	-3.1	10.7	0.060	
437	33461	+41°1106	5 05.3	+41°06'	133.7	+ 2.4	306.0	0.037	167	113	B2: V: mne	7.78	+0.27	-0.55	1.53	6.25	-2.0	8.2	0.024	
438	+39°1204	5 05.3	+39°26'	135.0	+ 1.4	306.0	0.054	153	99	B pe	10.26	+0.40	-0.55							
439	33604	+40°1213	5 06.3	+40°05'	134.6	+ 1.9	305.8	0.026	165	111	B2 V: pe	7.26	+0.05	-0.70	0.87	6.39	-2.0	8.4	0.030	
440*			5 08.2	+36°36'	137.7	+ 0.2	305.6	0.063	137	83	B1 V: p(e)	10.97	+0.73	-0.30	2.97	8.00	-3.1	11.1	0.021	
441	+39°1264	5 14.1	+39°13'	136.2	+ 2.7	304.7	0.062	156	101	B2 V	9.88	+0.34	-0.41	1.74	8.14	-2.0	10.1	0.036		
442	34921	+37°1160	5 15.8	+37°35'	137.7	+ 2.0	304.5	0.079	147	92	B0 IV: pe	7.51	+0.14	-0.86	1.32	6.19	-4.6	10.8	0.060	
443	E 242908	+33°1023	5 16.0	+33°25'	141.2	- 0.3	304.5	0.054	151	96	O5	9.04	+0.28	-0.72	1.80	7.24	-5.1	12.3	0.030	
444	E 242926	+33°1024	5 16.1	+33°13'	141.4	- 0.4	304.5	0.042	146	91	O6	9.35	+0.34	-0.65	1.98	7.37	-5.1	12.5	0.021	
445	E 242935	+33°1026	5 16.2	+33°19'	141.3	- 0.4	304.5	0.065	163	107	O8	9.43	+0.20	-0.73	1.53	7.90	-5.1	13.0	0.042	
446*			5 16.7	+33°29'	141.2	- 0.2	304.4	0.062	154	98	B1 IV?*	10.64	+0.31	-0.62	1.71	8.93	-3.8	12.7	0.036	
447	35215	+30°873	5 18.1	+30°06'	144.2	- 1.8	304.2	0.022	122	66	B1 V	9.40	+0.08	-0.66	1.02	8.38	-3.1	11.5	0.022	
448	35347	+29°886	5 19.0	+29°32'	144.8	- 2.0	304.0	0.024	135	79	B1: (V:) e	8.93	+0.12	-0.74	1.14	7.79	-3.1	10.9	0.021	
449	+42°1286	5 19.4	+42°56'	133.7	+ 5.6	303.6	0.079	143	87	B0.5 V	10.09	+0.28	-0.64	1.68	8.41	-3.6	12.0	0.047		
450	+42°1288	5 20.1	+42°13'	134.4	+ 5.3	303.6	0.090	162	106	B8 Ib	9.48	+0.38	-0.23	1.41	8.07	-5.6	13.7	0.064		
451	35619	+34°1046	5 21.0	+34°41'	140.7	+ 1.3	303.8	0.048	170	114	O7	8.60	+0.23	-0.69	1.65	6.95	-5.1	12.0	0.029	
452	35633	+34°1049	5 21.1	+34°27'	140.9	+ 1.1	303.8	0.023	172	116	B0.5 IV	8.04	+0.32	-0.66	1.80	6.24	-4.2	10.4	0.013	
453	35653	+33°1049	5 21.2	+33°52'	141.4	+ 0.8	303.8	0.045	162	106	B0.5 V	7.44	+0.12	-0.75	1.20	6.24	-3.6	9.8	0.038	
454	+33°1056	5 21.6	+33°14'	142.0	+ 0.5	303.7	0.093	161	105	B0 III	10.61	+0.45	-0.50	2.25	8.36	-5.0	13.4	0.041		
455	+34°1059	5 22.0	+34°56'	140.7	+ 1.6	303.6	0.055	153	97	B0 IV-V	9.22	+0.19	-0.76	1.47	7.75	-4.4	12.2	0.037		

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
456		+34°1058	5 22 ^m 0	+34°35'	140.9	+1.4	303.6	0.063	160	104	O8 nn	8.78	+0.26	-0.73	1.71	7.07	-5.1	12.2	0.037
457	35921	+35°1137	5 23.0	+35°18'	140.4	+1.9	303.5	0.043	143	87	O9.5 III	6.81	+0.20	-0.78	1.50	5.31	-5.7	11.0	0.029
458	35952	+35°1139	5 23.2	+35°53'	140.0	+2.3	303.4	0.033	133	76	B5 II-III	8.84	+0.27	-0.32	1.29	7.55	-3.7	11.2	0.026
459		+35°1141	5 23.3	+35°07'	140.6	+1.9	303.4	0.031	152	95	B0.5 V: n	9.59	+0.10	-0.74	1.14	8.45	-3.6	12.0	0.027
460	36212	+34°1077	5 25.1	+34°48'	141.1	+2.0	303.2	0.044	163	106	B3 II	7.77	+0.24	-0.52	1.32	6.45	-2.5	9.0	0.033
461		+39°1328	5 25.2	+39°59'	136.8	+4.9	302.9	0.096	163	106	O9 III? *	9.85	+0.57	-0.46	2.64	7.21	-6.4	13.6	0.036
462	36280	+34°1079	5 25.5	+34°52'	141.1	+2.1	303.1	0.027	154	97	B0.5 IV n	8.85	+0.10	-0.77	1.14	7.71	-4.2	11.9	0.024
463	36483	+36°1177	5 26.9	+36°24'	140.0	+3.2	302.9	0.083	149	92	O9.5 III	8.18	+0.43	-0.55	2.19	5.99	-5.7	11.7	0.038
464	36547	+23°942	5 27.4	+23°16'	150.9	-3.9	302.8	0.037	144	87	B1 III	8.81	+0.38	-0.56	1.92	6.89	-4.4	11.3	0.019
465		+35°1169	5 27.6	+35°45'	140.6	+3.0	302.8	0.036	133	76	B1: V: pe	9.37	+0.45	-0.40	2.13	7.24	-3.1	10.3	0.017
466	E 244894	+27°797	5 28.3	+27°31'	147.6	-1.4	302.8	0.035	19	141	B1 pe (III, V)	9.86	+0.45	-0.61	2.13	7.73	-3.8	11.5	0.016
467	36879	+21°899	5 29.7	+21°20'	153.0	-4.4	302.4	0.045	152	94	O6	7.56	+0.22	-0.80	1.62	5.94	-5.1	11.0	0.028
468	E 245310	+21°901*	5 30.4	+21°08'	153.2	-4.4	302.3	0.085	146	88	B1: V: mne*	8.87	+0.28	-0.67	1.62	7.25	-3.1	10.4	0.052
469	37032	+34°1118	5 30.5	+34°45'	141.7	+2.9	302.5	0.030	169	112	B0.5 V	8.10	+0.10	-0.78	1.14	6.96	-3.6	10.6	0.026
470	E 245493	+33°1103	5 31.3	+33°54'	142.5	+1.6	302.4	0.024	165	107	B2: V: p(e)	8.63	+0.02	-0.73	0.78	7.85	-2.0	9.8	0.031
471	E 245770	+26°883	5 32.7	+26°16'	149.2	-1.2	302.3	0.016	180	122	B pe	9.39	+0.45	-0.54					
472	37614-5	+38°1250	5 34.7	+38°08'	139.3	+5.4	301.7	0.044	170	112	B2 III	8.20	+0.13	-0.63	1.11	7.09	-3.6	10.7	0.040
473	37737	+36°1233	5 35.7	+36°09'	141.1	+4.6	301.7	0.021	133	75	B0 II:	8.00	+0.31	-0.62	1.83	6.17	-5.4	11.6	0.011
474		+37°1292	5 35.9	+37°56'	139.6	+5.5	301.5	0.025	5	127	B3 V: p(e)	9.08	+0.20	-0.52	1.20	7.88	-1.5	9.4	0.021
475	37767	+36°1236	5 35.9	+36°06'	141.2	+4.6	301.6	0.019	7	129	B3 V	8.94	+0.15	-0.48	1.05	7.89	-1.5	9.4	0.018
476		+34°1150	5 36.4	+34°18'	142.8	+3.7	301.7	0.016	41	163	B2 V	9.58	+0.20	-0.49	1.32	8.26	-2.0	10.3	0.012
477	38017	+30°992	5 37.6	+30°53'	145.8	+2.1	301.7	0.047	13	135	B3 III	8.08	+0.26	-0.47	1.38	6.70	-3.3	10.0	0.034
478	E 246878	+27°850*	5 38.2	+27°12'	149.0	+0.3	301.7	0.012	133	75	B0.5 V: pe	9.38	+0.16	-0.59	1.32	8.06	-3.6	11.7	0.009
479	E 246901	+33°1138	5 38.3	+33°29'	143.7	+3.6	301.5	0.028	158	100	B1: +G5: Ib:	8.08	+1.24	-0.20					
480	38131	+35°1223	5 38.4	+35°08'	142.3	+4.5	301.4	0.018	169	110	B0.5 V	8.19	+0.21	-0.69	1.47	6.72	-3.6	10.3	0.012
481		+34°1162	5 38.6	+34°03'	143.2	+4.0	301.4	0.024	176	117	B2 V: nn	8.93	+0.12	-0.58	1.08	7.85	-2.0	9.8	0.022
482	38191	+21°958	5 38.9	+21°25'	154.0	-2.6	301.5	0.040	152	94	B1: (V) n (e)	8.73	+0.14	-0.69	1.20	7.53	-3.1	10.6	0.033
483	E 247176	+26°943	5 39.5	+26°32'	149.7	+0.2	301.5	0.020	131	72	B2 V	9.59	+0.18	-0.55	1.26	8.33	-2.0	10.3	0.016
484		+36°1261	5 41.7	+36°12'	141.7	+5.6	300.9	0.025	169	110	B2 III? p?	9.09	+0.28	-0.47	1.56	7.53	-3.6	11.1	0.016
485	38658	+28°902	5 42.3	+26°17'	148.6	+1.7	301.2	0.021	0	121	B3 II	8.35	+0.20	-0.59	1.20	7.15	-4.6	11.8	0.018
486	E 247754	+25°989	5 42.4	+25°04'	151.2	0.0	301.2	0.053	150	91	B1 V: nn	9.65	+0.26	-0.60	1.56	8.09	-3.1	11.2	0.034
487	38708	+37°1005	5 42.6	+29°06'	147.9	+2.1	301.1	0.025	167	108	B3: p(e) shell:	8.24	+0.01	-0.49	0.63	7.61	-4.0	11.5	0.040
488	38909	+31°1115	5 44.0	+31°02'	146.4	+3.4	300.9	0.025	152	93	B3 II-III	8.16	+0.01	-0.62	0.63	7.53	-4.0	11.5	0.040
489	39136	+32°1111	5 45.4	+32°13'	145.5	+4.3	300.6	<.005			B3 III	8.80	+0.09	-0.45	0.87	7.93	-3.3	11.2	
490	E 248587	+19°1111	5 46.5	+19°07'	156.9	-2.3	300.9	0.054	146	87	A0 Iab	7.94	+0.65	+0.12	1.95	5.99	-6.5	12.5	0.028

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	$3E_{(B-V)}$	m	M	m-M	p/A_v
			α	δ															
491	E 248893	+22°1090	5 48.0	+22°08'	154.5	- 0.4	300.7	0.075	155	96	B0 II-III	9.69	+0.44	-0.56	2.22	7.47	-5.2	12.7	0.034
492	E 248894	+20°1158	5 48.0	+20°51'	155.6	- 1.1	300.6	0.049	146	87	O8: V; nn	9.29	+0.24	-0.73	1.65	7.64	-5.1	12.7	0.030
493	E 249071	+27°909	5 49.0	+27°54'	149.7	+ 2.7	300.4	0.070	168	108	B2 III:	9.47	+0.39	-0.47	1.89	7.58	-3.6	11.2	0.037
494	39680(A)	+13°1026	5 49.0	+13°49'	161.8	- 4.4	300.3	0.014	143	83	O6: pe	7.99	+0.02	-0.96	1.02	6.97	-5.1	12.1	0.014
495	39712	+30°1055	5 49.2	+30°41'	147.3	+ 4.2	300.3	0.014	162	102	B2 IV	8.38	+0.11	-0.56	1.05	7.33	-2.9	10.2	0.013
496	39746	+27°914	5 49.4	+27°42'	149.9	+ 2.7	300.4	0.040	178	118	B1 II	7.04	+0.22	-0.68	1.44	5.60	-4.9	10.5	0.028
497*			5 49.9	+25°23'	151.9	+ 1.6	300.4	0.070	162	102	B1 III	10.89	+0.68	-0.32	2.82	8.07	-4.4	12.5	0.025
498*			5 49.9	+20°04'	156.5	- 1.1	300.5	0.049	152	92	B1 IV	10.91	+0.33	-0.56	1.77	9.14	-3.8	12.9	0.028
499	39970	+24°1033	5 50.9	+24°14'	153.0	+ 1.2	300.4	0.035	161	101	A0 Ia	6.02	+0.39	-0.20	1.17	4.85	-6.9	11.8	0.030
500	40003	+23°1119	5 51.1	+23°25'	153.8	+ 0.9	300.3	0.062	167	107	B3 Ib	8.60	+0.82	-0.08	3.06	5.54	-5.8	11.3	0.020
501	40111	+25°1052	5 51.8	+25°57'	151.6	+ 2.3	300.2	0.023	164	104	B1 Ib	4.81	-0.06	-0.94	0.60	4.21	-5.8	10.0	0.038
502	E 249695	+30°1071	5 52.2	+30°12'	148.0	+ 4.1	300.0	0.023	176	116	B1: V; pnne	8.99	+0.17	-0.65	1.29	7.70	-3.1	10.8	0.018
503	40297	+27°938	5 52.8	+27°33'	150.4	+ 3.3	300.0	0.030	177	117	A0 Ib	7.27	+0.29	-0.07	0.87	6.40	-5.6	12.0	0.034
504	E 249845	+32°1146	5 53.0	+32°53'	145.8	+ 6.0	299.6	<.003			B2: V; nn*	8.79	+0.08	-0.53	0.96	7.83	-2.0	9.8	
505	E 250028	+25°1065	5 53.8	+25°06'	152.6	+ 2.2	300.1	0.093	164	104	B2: V; pnne*	9.09	+0.23	-0.61	1.41	7.68	-2.0	9.7	0.066
506	E 250163	+19°1166	5 54.4	+19°11'	157.8	- 0.6	300.1	0.036	136	76	B1.5: V; pne	9.62	+0.58	-0.34	2.49	7.13	-2.6	9.7	0.014
507	40589	+27°945	5 54.7	+27°35'	150.6	+ 3.6	299.8	0.015	158	98	B9 Iab:	6.05	+0.25	-0.26	0.93	5.12	-6.5	11.6	0.016
508	E 250289	+23°1148	5 55.0	+23°20'	154.3	+ 1.6	300.0	0.064	162	102	B2 III: e	8.27	+0.56	-0.32	2.40	5.87	-3.6	9.5	0.027
509	E 250290	+23°1149	5 55.0	+23°18'	154.3	+ 1.6	300.0	0.073	163	103	B3 Ib	7.38	+0.61	-0.24	2.43	4.95	-5.8	10.8	0.030
510*			5 56.0	+20°12'	157.1	+ 0.2	299.9	0.044	170	110	B1 V	11.50	+0.61	-0.33	2.61	8.89	-3.1	12.0	0.017
511	40893	+31°1174	5 56.7	+31°02'	147.8	+ 5.7	299.4	0.030	140	79	B0 IV:	8.90	+0.16	-0.78	1.38	7.52	-4.6	12.1	0.022
512	40894	+28°991	5 56.7	+28°40'	149.8	+ 4.6	299.5	0.009	161	101	B2 V	7.56	-0.08	-0.74	0.48	7.08	-2.0	9.1	0.019
513	E 251117	+28°1001	5 58.7	+28°46'	150.0	+ 5.0	299.3	0.033	161	100	B0 IV	9.11	-0.17	-0.75	1.41	7.70	-4.6	12.3	0.023
514	E 251204	+23°1179	5 59.0	+23°24'	154.7	+ 2.4	299.6	0.101	155	95	B0 IV	10.28	+0.48	-0.55	2.34	7.94	-4.6	12.5	0.043
515	E 251311	+23°1183	5 59.4	+23°01'	155.1	+ 2.3	299.6	0.048	0	120	B1.5: IV: n	8.81	+0.34	-0.50	1.77	7.04	-3.4	10.4	0.027
516	41398	+28°1008	5 59.8	+28°56'	149.9	+ 5.3	299.2	0.048	166	105	B2 Ib	7.46	+0.32	-0.65	1.68	5.78	-5.8	11.6	0.029
517	E 251726	+19°1210	6 01.0	+19°02'	158.7	+ 0.7	299.5	0.069	171	111	B1 V: e	9.37	+0.54	-0.54	2.40	6.97	-3.1	10.1	0.029
518	41690	+21°1120	6 01.6	+21°53'	156.3	+ 2.2	299.4	0.058	177	116	B1 V	7.71	+0.22	-0.62	1.44	6.27	-3.1	9.4	0.040
519	E 252325	+20°1278	6 03.1	+20°39'	157.5	+ 1.9	299.3	0.104	163	103	B1: V:	10.79	+0.57	-0.43	2.49	8.30	-3.1	11.4	0.042
520	41997	+15°1079	6 03.2	+15°44'	161.8	- 0.5	299.4	0.070	159	98	O7	8.42	+0.38	-0.61	2.10	6.32	-5.1	11.4	0.033
521	42087	+23°1226	6 03.7	+23°08'	155.4	+ 3.2	299.2	0.043	172	111	B2.5 Ib	5.76	+0.20	-0.64	1.26	4.50	-5.8	10.3	0.034
522	42088	+20°1264	6 04.3	+20°31'	157.7	+ 2.0	299.3	0.052	178	117	O6	7.55	+0.07	-0.89	1.17	6.38	-5.1	11.5	0.044
523*			6 04.3	+13°08'	164.2	- 1.5	299.2	0.079	167	106	O9 V	10.23	+0.46	-0.56	2.31	7.92	-4.6	12.5	0.034
524*			6 05.1	+13°12'	164.3	- 1.3	299.2	0.087	161	100	O9 V	10.57	+0.46	-0.56	2.31	8.26	-4.6	12.5	0.038
525	42379	+21°1143	6 05.3	+21°36'	157.0	+ 2.8	299.1	0.060	170	109	B1 II	7.37	+0.35	-0.58	1.83	5.54	-4.9	10.4	0.033

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
526	42400	+20°1302	6 05.7	+20°58'	157.6	+2.5	299.1	0.047	169	108	B5 II	6.84	+0.18	-0.44	1.02	5.82	-4.6	10.4	0.046
527	E 252956	+13°1148	5 05.4	+13°09'	164.4	-1.3	299.2	0.080	160	99	B0.5 IV	10.18	+0.42	-0.54	2.10	8.08	-4.2	12.3	0.038
528	E 253049	+20°1305	6 05.8	+20°10'	158.3	+2.2	299.1	0.040	176	115	B2 IV	9.56	+0.14	-0.54	1.14	8.42	-2.9	11.3	0.035
529	E 253214	+20°1309	6 06.4	+20°07'	158.4	+2.3	299.1	0.060	173	112	B1.5: V; nn	9.47	+0.24	-0.53	1.47	8.00	-2.6	10.6	0.041
530	E 253247	+18°1123	6 06.5	+18°03'	160.2	+1.4	299.1	0.032	3	122	B0 V	9.78	+0.34	-0.59	1.92	7.86	-4.1	12.0	0.017
531		+18°1124	6 06.9	+18°01'	160.3	+1.4	299.1	0.064	14	133	B0.5 V::	10.76	+0.58	-0.39	2.58	8.18	-3.6	11.8	0.025
532	42896	+20°1322	6 08.2	+20°13'	158.5	+2.7	298.9	0.018	7	126	B1: V; nn	8.59	-0.07	-0.85	0.57	8.02	-3.1	11.1	0.032
533	E 253683	+19°1265	6 08.2	+19°00'	159.6	+2.1	298.9	0.078	159	98	B0.5 IV	9.30	+0.34	-0.58	1.86	7.44	-4.2	11.6	0.042
534	43078	+22°1243	6 09.2	+22°20'	156.8	+3.9	298.7	0.070	165	104	B0 IV	8.78	+0.35	-0.57	1.95	6.83	-4.6	11.4	0.036
535	E 254042	+24°1176	6 09.8	+24°06'	155.3	+4.9	298.5	0.085	173	112	B0.5: IV; nn	8.93	+0.35	-0.58	1.89	7.04	-4.2	11.2	0.045
536	43384	+23°1275	6 10.8	+23°46'	155.7	+5.0	298.5	0.062	170	109	B3 Iab	6.23	+0.45	-0.37	1.95	4.28	-6.5	10.8	0.032
537	43582	+22°1267	6 11.9	+22°41'	156.8	+4.7	298.5	0.028	8	126	B0. III n*	9.12	+0.81	-0.19	3.33	5.79	-5.0	10.8	0.008
538	E 254647	+11°1100	6 12.0	+11°14'	166.8	-0.8	298.8	0.024	11	130	B pe	10.01	+0.39	-0.68					
539	E 254699	+23°1286	6 12.3	+23°36'	156.0	+5.2	298.3	0.074	176	114	B1 V	9.04	+0.40	-0.46	1.98	7.06	-3.1	10.2	0.037
540	E 254755	+22°1273	6 12.5	+22°43'	156.8	+4.8	298.4	0.039	8	126	O9 V: p?	8.84	+0.60	-0.44	2.73	6.11	-4.6	10.7	0.014
541	43703	+23°1289	6 12.6	+23°03'	156.5	+5.0	298.4	0.037	143	81	B1 IV: p	8.62	+0.42	-0.53	2.04	6.58	-3.8	10.4	0.018
542	43753	+23°1297	6 12.9	+23°02'	156.6	+5.0	298.3	0.059	161	99	B0.5 III	7.90	+0.30	-0.64	1.74	6.16	-4.7	10.9	0.034
543*			6 13.1	+14°33'	164.0	+1.0	298.7	0.056	159	98	B0 V	10.89	+0.30	-0.64	1.80	9.09	-4.1	13.2	0.031
544	43818	+23°1300	6 13.2	+23°30'	156.2	+5.3	298.3	0.043	177	115	B0 II	6.92	+0.29	-0.69	1.77	5.15	-5.4	10.6	0.024
545	E 255055	+23°1304	6 13.6	+23°20'	156.4	+5.3	298.3	0.019	163	101	O9 V: p	9.38	+0.26	-0.70	1.71	7.67	-4.6	12.3	0.011
546	44139	+22°1291	6 15.1	+22°13'	157.5	+5.1	298.2	0.046	2	120	B0.5 V	8.78	+0.28	-0.57	1.68	7.10	-3.6	10.7	0.027
547	44498	+08°1296	6 17.0	+08°22'	169.9	-1.1	298.5	0.008	179	118	B2.5 V	8.83	-0.08	-0.59	0.42	8.41	-1.8	10.2	0.019
548	44597	+20°1399	6 17.5	+20°27'	159.3	+4.8	298.1	0.047	170	108	O9 V	9.02	+0.26	-0.69	1.71	7.31	-4.6	11.9	0.027
549	E 256276	+22°1311	6 17.7	+22°27'	157.6	+5.7	298.0	0.033	9	127	B1.5: V; nn	9.24	+0.16	-0.69	1.23	8.01	-2.6	10.6	0.027
550	44637	+15°1176	6 17.7	+15°09'	164.0	+2.3	298.4	0.039	1	120	B2 V: pe	8.03	+0.24	-0.52	1.44	6.59	-2.0	8.6	0.027
551	E 256413	+19°1331	6 18.1	+19°58'	159.8	+4.7	298.1	0.054	168	106	B5 III	8.93	+0.35	-0.37	1.53	7.40	-2.8	10.2	0.035
552	E 256577	+08°1314	6 18.6	+08°21'	170.1	-0.8	298.5	0.035	148	87	B2 IV: p (e)	9.48	+0.13	-0.75	1.11	8.37	-2.9	11.3	0.032
553	44811	+19°1335	6 18.8	+19°45'	160.1	+4.7	298.1	0.035	172	110	O7.5 V	8.42	+0.13	-0.80	1.35	7.07	-5.1	12.2	0.026
554	44965	+11°1162	6 19.6	+11°45'	167.2	+1.1	298.4	0.010	7	123	B3 II	7.82	+0.31	-0.44	1.53	6.29	-4.6	10.9	0.006
555	45166	+08°1332	6 20.8	+08°03'	170.7	-0.4	298.4	0.018	162	100	B pe*	9.88	-0.07	-0.76					
556	45314	+14°1296	6 21.6	+14°57'	164.7	+3.0	298.2	0.031	170	108	O9 ? pe	6.64	+0.15	-0.88	1.38	5.26	-4.6	9.9	0.022
557	E 257971	+11°1191	6 23.1	+11°22'	168.0	+1.7	298.3	<.004			B0.5 III	8.90	+0.06	-0.79	1.02	7.88	-4.7	12.6	
558	45626	-04°1534	6 23.4	-04°23'	181.9	-5.7	297.7	0.044	157	95	B7 pe shell	9.36	+0.05	-0.48	0.51	8.85			0.086
559	45910	+05°1267	6 25.2	+05°57'	173.0	-0.5	298.2	0.017	2	120	B2: III: pe shell	6.77	+0.32	-0.68	1.68	5.09	-3.6	8.7	0.010
560	45995	+11°1204	6 25.6	+11°19'	168.3	+2.2	298.1	0.024	138	76	B2 V: nne	6.15	-0.08	-0.87	0.48	5.67	-2.0	7.7	0.050

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
561	46056	+04°1291	6 26.70	+04°54'	174.0	-0.8	298.2	0.025	154	92	O8	8.15	+0.19	-0.74	1.50	6.65	-5.1	11.8	0.017
562	46149	+05°1282	6 26.6	+05°06'	173.9	-0.6	298.2	<.004			O8	7.61	+0.19	-0.77	1.50	6.11	-5.1	11.2	
563	46150	+05°1283	6 26.6	+05°00'	174.0	-0.6	298.2	0.016	7	125	O6	6.76	+0.13	-0.82	1.35	5.41	-5.1	10.5	0.012
564	E 259135	+04°1299	6 26.7	+04°55'	174.1	-0.6	298.2	0.031	153	91	B1: V: n	8.57	+0.18	-0.70	1.32	7.25	-3.1	10.4	0.023
565	46223	+04°1302	6 27.0	+04°53'	174.2	-0.6	298.2	0.030	169	107	O5	7.28	+0.22	-0.77	1.62	5.66	-5.1	10.8	0.018
566*			6 27.0	+03°38'	175.3	-1.2	298.2	0.053	18	136		11.14	+0.82	-0.10					
567	E 259431	+10°1172	6 27.6	+10°24'	169.4	+2.2	298.1	0.017	106	44	B6 pe	8.74	+0.28	-0.54	1.26	7.48			0.013
568	E 259440	+05°1291	6 27.6	+05°52'	173.4	+0.0	298.2	0.088	164	102	B0: pe	9.17	+0.55	-0.55	2.55	6.62			0.034
569	E 259597	+08°1388	6 28.1	+08°24'	171.2	+1.3	298.1	0.030	75	13	B0.5: V: nne*	8.57	+0.14	-0.72	1.26	7.31	-3.6	10.9	0.024
570		+00°1472	6 28.1	+00°46'	177.9	-2.3	298.1	0.017	148	86	B2 Ib	9.15	+0.70	-0.25	2.82	6.33	-5.8	12.1	0.006
571	46484	+04°1319	6 28.6	+04°44'	174.5	-0.3	298.1	0.030	166	104	B1 V	7.74	+0.36	-0.61	1.86	5.88	-3.1	9.0	0.016
572	46485	+04°1318	6 28.6	+04°36'	174.6	-0.4	298.1	0.039	157	95	O8	8.27	+0.33	-0.68	1.92	6.35	-5.1	11.4	0.020
573*			6 28.9	+11°14'	168.8	+2.8	298.0	0.050	161	99	B3 III	10.53	+0.58	-0.13	2.34	8.19	-3.3	11.5	0.021
574	46559	+02°1292	6 29.0	+02°28'	176.5	-1.3	298.1	0.033	143	81	B8 I	8.15	+0.61	+0.03	2.10	6.05	-6.5	12.6	0.016
575	46573	+02°1295	6 29.1	+02°36'	176.4	-1.2	298.1	0.022	154	92	O7	7.95	+0.33	-0.66	1.95	6.00	-5.1	11.1	0.011
576	E 259954	+08°1399	6 29.2	+08°26'	171.3	+1.6	298.1	0.014	145	83	B2 IV	9.21	+0.06	-0.64	0.90	8.31	-2.9	11.2	0.016
577	46660	+11°1232	6 29.5	+11°12'	168.9	+3.0	298.0	0.038	13	131	B1 V	8.04	+0.31	-0.61	1.71	6.33	-3.1	9.4	0.022
578	46711	+02°1299	6 29.8	+02°51'	176.3	-0.9	298.1	0.064	37	156	B3 II	9.10	+0.87	+0.01	3.21	5.89	-4.6	10.5	0.020
579	46783	+09°1295	6 30.2	+09°56'	170.1	+2.5	298.0	0.027	5	123	B9 Ib	8.06	+0.31	-0.08	1.11	6.95	-5.6	12.6	0.024
580	46847	+02°1302	6 30.5	+02°47'	176.4	-0.8	298.1	0.042	22	140	B0 III: p	8.96	+0.67	-0.37	2.91	6.05	-5.0	11.0	0.014
581	46867	+05°1315	6 30.6	+05°24'	174.1	+0.5	298.1	0.044	156	94	B0.5 V	8.30	+0.22	-0.64	1.50	6.80	-3.6	10.4	0.029
582	46966	+06°1303	6 31.1	+06°10'	173.5	+0.9	298.1	0.011	136	74	O8	6.88	-0.04	-0.93	0.81	6.07	-5.1	11.2	0.014
583	47032	+04°1341	6 31.5	+04°46'	174.9	+0.4	298.1	0.038	161	99	B0 III	8.83	-0.45	-0.57	2.25	6.58	-5.0	11.6	0.017
584	47129	+06°1309	6 32.0	+06°13'	173.6	+1.2	298.1	0.022	144	82	O8	6.08	+0.06	-0.89	1.11	6.97	-5.1	12.1	0.020
585	47240	+05°1334	6 32.5	+05°03'	174.7	+0.7	298.0	0.023	173	111	B1 Ib	6.15	+0.14	-0.73	1.20	4.95	-5.8	10.8	0.019
586	E 261021	+03°1329	6 32.6	+03°42'	175.9	+0.1	298.1	0.020	169	107	B2 III	9.48	+0.66	-0.33	2.70	6.78	-3.6	10.4	0.007
587*			6 32.9	+02°28'	177.0	-0.4	298.0	0.038	13	131	B1 V	10.68	+0.37	-0.40	1.89	8.79	-3.1	11.9	0.020
588	47360	+04°1360	6 33.1	+04°43'	175.0	+0.7	298.0	0.008	165	103	B0.5 V	8.19	+0.13	-0.69	1.23	6.96	-3.6	10.6	0.006
589	47382	+04°1361	6 33.2	+04°42'	175.1	+0.7	298.0	0.017	153	91	B0 III	7.14	+0.17	-0.76	1.41	5.73	-5.0	10.7	0.012
590	47417	+07°1386	6 33.4	+07°00'	173.0	+1.8	298.0	0.005	91	29	B0 IV	6.97	+0.01	-0.86	0.93	6.04	-4.6	10.6	0.005
591*			6 33.9	+03°44'	176.0	+0.4	298.1	0.044	17	135	B2 V	10.70	+0.59	-0.33	2.49	8.21	-2.0	10.2	0.018
592	47761	-04°1607	6 35.1	-04°36'	183.5	-3.2	297.9	0.048	169	107	B2 V: pe	8.63	+0.31	-0.62	1.23	7.40	-2.0	9.4	0.039
593	-00°1385		6 35.2	-00°16'	179.7	-1.2	298.0	0.061	151	89	O8	9.87	+0.31	-0.67	1.86	8.01	-5.1	13.1	0.033
594	47887	+09°1344	6 35.7	+09°34'	171.0	+3.5	297.8	<.004			B2 III:	7.14	-0.18	-0.95	0.18	6.96	-3.6	10.6	
595	48099	+06°1351	6 36.6	+06°27'	173.9	+2.3	297.9	<.004			O6	6.38	-0.05	-0.95	0.81	5.57	-5.1	10.7	

TABLE 5—Continued

No.	HD	BD	1900		l	b	φ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
596	48279	+01°1472	6 37.5	+01°49'	178.1	+ 0.3	289.0	0.029	155	93	O8	7.97	+0.11	-0.81	1.26	6.71	-5.1	11.8	0.023
597	48282	-10°1651	6 37.5	-10°24'	188.9	- 5.4	297.5	0.018	169	107	B3 III	8.85	+0.30	-0.38	1.50	7.35	-3.3	10.6	0.012
598	48663	+12°1267	6 39.4	+12°21'	169.0	+ 5.7	297.5	0.031	2	119	B1 V	8.59	-0.01	-0.73	0.75	7.84	-3.1	10.9	0.041
599		+00°1576	6 39.7	+00°43'	179.3	+ 0.3	298.0	0.050	146	84	O9 III:	9.26	+0.43	-0.59	2.22	7.04	-6.4	13.4	0.022
600*			6 40.0	+02°12'	178.1	+ 1.0	298.0	0.032	164	102	B1 V	10.45	+0.18	-0.57	1.32	9.13	-3.1	12.2	0.024
601	49330	+00°1607	6 42.8	+00°53'	179.6	+ 1.0	298.0	0.037	133	71	B0: pnne	8.88	+0.26	-0.69	1.68	7.20			0.022
602	49585	+00°1624	6 44.0	+00°12'	180.3	+ 1.0	298.0	0.027	180	118	B0.5: (V) nn	9.12	+0.10	-0.71	1.14	7.98	-3.6	11.6	0.024
603	49992	-05°1827	6 46.0	-05°13'	185.3	- 1.1	298.0	0.027	89	27	B1: pne	9.02	+0.11	-0.86	1.11	7.91			0.024
604	50064	+00°1651	6 46.4	+00°25'	180.4	+ 1.6	298.0	0.048	150	88	B6: Ia	8.21	+0.77	-0.26	2.73	5.48	-6.9	12.4	0.018
605	+01°1560	6 46.7	+10°30'	179.5	+ 2.2	298.0	0.013	89	27	O8:	9.66	+0.28	-0.68	1.77	7.89	-5.1	13.0	0.007	
606	50696	+00°1691	6 49.2	+00°18'	180.8	+ 2.2	298.0	0.005	139	77	B1: (V) nne	8.91	-0.01	-0.83	0.75	8.16	-3.1	11.3	0.007
607	-01°1471	6 51.9	-01°37'	182.8	+ 1.9	298.1	0.076	155	94	B0.5 III	9.92	+0.46	-0.49	2.22	7.70	-4.7	12.4	0.034	
608	51756	-02°1856	6 53.5	-02°53'	184.1	+ 1.6	298.1	<.003			B0.5 IV	7.23	-0.07	-0.91	0.63	6.60	-4.2	10.8	
609	52244	-16°1694	6 55.3	-16°03'	195.9	- 4.2	298.0	0.015	13	131	B2: III: pne	9.16	+0.31	-0.58	1.65	7.51	-3.6	11.1	0.009
610	52266	-05°1912	6 55.4	-05°40'	186.8	+ 0.7	298.2	0.012	141	79	O9 V	7.23	-0.01	-0.90	0.90	6.33	-4.6	10.9	0.013
611	+00°1769	6 57.3	+00°38'	181.5	+ 4.1	298.0	0.011	133	71	B3 III	9.35	+0.14	-0.62	1.02	8.33	-3.3	11.6	0.011	
612	53032	-02°1898	6 58.4	-02°36'	184.5	+ 2.8	298.2	<.003			B6: (IV:)	9.32	+0.06	-0.50	0.60	8.72			
613	53367	-10°1848	6 59.7	-10°18'	191.4	- 0.5	298.4	0.011	27	145	B0 IV: e	6.97	+0.44	-0.59	2.22	4.75	-4.6	9.4	0.005
614	53428	-08°1729	6 59.9	-08°42'	190.0	+ 0.3	298.4	0.015	117	55	B2 Ib	8.35	+0.31	-0.56	1.65	6.70	-5.8	12.5	0.009
615	53649	-08°1733	7 00.7	-08°52'	190.2	+ 0.4	298.4	0.021	127	66	B0.5 III	9.12	+0.25	-0.66	1.59	7.53	-4.7	12.2	0.013
616	53667	-08°1734	7 00.8	-08°34'	190.0	+ 0.5	298.4	0.025	127	65	B0.5 III	7.75	+0.24	-0.71	1.56	6.19	-4.7	10.9	0.016
617	53754	-08°1737	7 01.1	-08°39'	190.1	+ 0.6	298.5	0.029	129	68	B1 II	8.16	+0.21	-0.66	1.41	6.75	-4.9	11.6	0.020
618	53756	-12°1777	7 01.1	-12°40'	193.6	- 1.4	298.4	0.005	123	61	B2 IV	7.32	-0.08	-0.78	0.48	6.84	-2.9	9.7	0.010
619	54439	-11°1812	7 03.7	-11°42'	193.1	- 0.3	298.6	0.018	136	74	B2 III ⁿ	7.71	+0.04	-0.77	0.84	6.87	-3.6	10.5	0.021
620	54464	-03°1762	7 03.8	-03°54'	186.3	+ 3.4	298.4	<.003			B2: (V) pe	8.32	-0.01	-0.63	0.69	7.63	-2.0	9.6	
621	-00°1618	7 05.9	-00°52'	183.6	+ 4.9	298.2	<.002				B1 V: ne	9.63	-0.05	-0.78	0.63	9.00	-3.1	12.1	
622	54786	-15°1672	7 05.1	-15°56'	197.0	- 2.1	298.6	0.017	116	55	B0: pe	8.98	+0.23	-0.87	1.59	7.39			0.011
623	54911	-15°1681	7 05.6	-15°31'	196.7	- 1.8	298.6	<.003			B2 II	7.32	-0.08	-0.82	0.48	6.84	-4.7	11.5	
624	55606	-01°1603	7 08.5	-01°54'	185.0	+ 5.4	298.4	0.012	60	178	B1: V: pnne	9.11	-0.04	-0.79	0.66	8.45	-3.1	11.6	0.018
625	56847	-15°1748	7 13.6	-15°27'	197.5	0.0	299.1	0.015	97	36	B7 Ib? shell?	8.91	+0.19	-0.47	0.93	7.98	-5.6	13.6	0.016
626	57386	-08°1856	7 15.9	-08°15'	191.5	+ 4.0	299.1	0.012	141	80	B1.5: V: pnne	8.03	-0.02	-0.76	0.69	7.34	-2.6	9.9	0.017
627	57393	-23°5296	7 15.9	-23°55'	205.2	- 3.7	299.1	0.006	94	33	B pe	9.09	-0.01	-0.77					
628	59075	-18°1847	7 23.2	-18°17'	201.1	+ 0.5	299.9	0.024	3	123	B8 I:	7.65	+0.34	-0.27	1.29	6.36	-6.5	12.9	0.019
629	59094	-15°1837	7 23.3	-15°53'	199.1	+ 1.8	299.8	0.011	118	58	B2 V: nne	8.44	+0.15	-0.70	1.17	7.80	-2.0	9.8	0.009
630	60196	-28°4485	7 28.2	-28°31'	210.6	- 3.6	300.1	0.004	110	50	B0.5 III	8.97	+0.02	-0.86	0.90	9.07	-4.7	13.8	0.004

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
631	60284	-27°4205	7 28.5	-27°39'	209.9	-3.0	300.2	0.018	108	49	B1: II; B2 Iab	9.09	+0.15	-0.79	1.23	7.86	-4.9	12.8	0.015
632	60308	-15°1892	7 28.7	-15°14'	199.2	+3.2	300.2	0.028	149	89	B2 Iab	8.20	+0.42	-0.49	1.98	6.22	-6.5	12.7	0.014
633	60479	-27°4229	7 29.5	-27°45'	210.1	+2.9	300.3	< 0.003			B0: II; B0: Ib	8.41	+0.34	-0.66	1.92	6.49	-5.4	11.9	
634	61347	-13°2143	7 33.7	-13°38'	198.4	+5.1	300.4	0.043	33	154	O9 Ib	8.43	+0.17	-0.76	1.44	6.99	-6.9	13.9	0.030
635	62532	-17°2120	7 39.3	-17°42'	202.6	+4.2	301.2	0.010	127	68	B1: V; pnn	8.41	+0.08	-0.68	1.02	7.39	-3.1	10.5	0.010
636		-29°4849	7 40.0	-29°05'	212.4	-1.6	301.4	0.007	17	139	O9.5 II	10.00	+0.22	-0.72	1.56	8.44	-6.2	14.6	0.004
637	63005	-26°4925	7 41.6	-26°15'	210.2	+0.2	301.7	0.007	143	85	O7	9.11	-0.02	-0.95	0.90	8.21	-5.1	13.3	0.008
638	63290	-27°4533	7 43.0	-27°41'	211.5	-0.3	301.8	0.061	130	72	B2 Iab	9.26	+0.50	-0.43	2.22	7.04	-6.5	13.5	0.027
639	63359	-26°4982	7 43.4	-26°27'	210.5	+0.4	301.9	0.008	25	147	B pe	9.48	+0.04	-0.88					
640	63964	-28°4950	7 46.4	-28°48'	212.9	-0.3	302.2	0.028	124	66		8.18	+0.82	+0.49					
641	64315	-26°5115	7 48.2	-26°10'	210.9	+1.5	302.4	0.066	114	56	O6: nn (e)	9.21	+0.22	-0.74	1.62	7.59	-5.1	12.7	0.041
642	64399	-24°6101	7 48.6	-24°51'	209.8	+2.2	302.4	0.005	119	61	B5 II;	8.29	+0.01	-0.71	0.51	7.78	-4.6	12.4	0.010
643	147889	-24°12684	16 19.4	-24°14'	320.8	+15.7	48.6	0.069	179	48	B2 V	7.92	+0.86	-0.15	3.30	4.62	-2.0	6.6	0.021
644		-33°12155	17 25.7	-33°16'	322.5	-1.3	56.8	0.054	180	57	B0 III	9.09	+0.79	-0.28	3.27	5.82	-5.0	10.8	0.016
645		-33°12242	17 29.6	-33°49'	322.4	-2.3	57.4	0.118	52	109	B1 Ia	9.36	+1.16	+0.03	4.26	5.10	-6.9	12.0	0.028
646		-29°13809	17 31.7	-29°03'	326.7	-0.1	57.6	0.098	158	35	O9 V	9.74	+0.68	-0.34	2.97	6.77	-4.6	11.4	0.033
647	159864	-17°4864	17 31.8	-17°46'	336.3	+5.9	58.1	0.036	60	118	B0.5 II	8.59	+0.24	-0.72	1.56	7.03	-5.2	12.2	0.023
648	160186	-18°4598	17 33.4	-18°21'	336.0	+5.3	58.2	0.043	61	119	B0.5 V	9.05	+0.19	-0.73	1.41	7.64	-3.6	11.2	0.030
649	160529	-33°12361	17 35.3	-33°27'	323.4	-3.1	58.1	0.150	20	78	A2 Ia+	6.67	+1.28	+0.35	3.66	3.01			0.041
650	160704	-23°13515	17 36.3	-23°41'	331.8	+1.9	58.2	0.086	7	65		9.29	+0.72	-0.30	3.00	6.29	-4.7	11.0	0.029
651	160730	-24°13435	17 36.4	-24°15'	331.3	+1.6	58.2	0.078	2	60	O8	9.68	+0.66	-0.40	2.91	6.77	-5.1	11.9	0.027
652*			17 36.9	-28°37'	327.7	-0.8	58.2	0.131	178	57	B1 nn (II-III)	10.56	+0.81	-0.20	3.21	7.35	-4.6	12.0	0.041
653	161061	-28°13519	17 38.3	-28°08'	328.2	-0.8	58.3	0.131	173	52	B2 III	8.47	+0.77	-0.31	3.03	5.44	-3.6	9.0	0.043
654	161103	-27°11872	17 38.5	-27°12'	329.0	-0.4	58.4	0.109	172	50	B2: pe (III-V)?	(8.69)	+0.44	-0.69	2.04	6.65	-2.9	9.6	0.053
655*			17 38.8	-29°53'	326.8	-1.8	58.4	0.105	158	35	B0.5 Ib	10.75	+1.10	+0.02	4.14	6.61	-5.8	12.4	0.025
656	316204		17 39.0	-28°22'	328.1	-1.1	58.4	0.087	168	46	B2 III	9.29	+0.32	-0.52	1.68	7.61	-3.6	11.2	0.052
657	316232		17 39.4	-29°11'	327.5	-1.6	58.5	0.110	4	63	O9 IV	10.30	+0.68	-0.37	2.97	7.33	-5.4	12.7	0.037
658	161291	-27°11899	17 39.6	-27°11'	329.2	-0.6	58.5	0.144	180	58	B1 Iab	8.89	+0.75	-0.25	3.03	5.86	-6.5	12.4	0.048
659	316332		17 41.1	-29°36'	327.3	-2.1	58.7	0.040	16	75	B3 Ia	9.47	+1.38	+0.31	4.74	4.73	-6.9	11.6	0.008
660	316311		17 41.2	-28°55'	327.9	-1.8	58.7	0.059	172	51	B1 Ib	10.24	+0.92	-0.14	3.54	6.70	-5.8	12.5	0.017
661*			17 41.2	-29°23'	327.5	-2.0	58.7	0.072	13	72	B0 n III?	11.06	+0.70	-0.34	3.00	8.06	-5.0	13.1	0.024
662*			17 41.5	-29°30'	327.4	-2.1	58.8	0.065	25	84	B1 Ib-II	10.87	+0.89	-0.11	3.45	7.42	-5.4	12.8	0.019
663	316326		17 41.7	-29°17'	327.6	-1.3	58.8	0.066	6	64	B1 II	10.08	+0.62	-0.32	2.64	7.44	-4.9	12.3	0.025
664	316274		17 42.0	-27°43'	329.0	-1.3	58.8	0.040	4	63	B2 II	10.41	+0.72	-0.14	2.88	7.53	-4.7	12.2	0.014
665	316325		17 42.0	-29°18'	327.7	-2.1	58.8	0.069	3	61	B1 IV	10.60	+0.62	-0.29	2.64	7.96	-3.8	11.8	0.026

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
666	316341		17 42.2	-29°56'	327.1	-2.5	58.9	0.049	180	58	B0.5 V (pe)?	9.74	+0.42	-0.50	2.10	7.64	-3.6	11.2	0.023
667	316393		17 44.0	-28°28'	328.6	-2.1	59.0	0.048	0	59	B3 IV-III	10.71	+0.39	-0.38	1.77	8.94	-4.0	12.9	0.027
668*			17 44.0	-30°08'	327.2	-2.9	59.1	0.034	169	48	B3 IV	11.31	+0.56	-0.13	2.28	9.03	-2.5	11.5	0.015
669	162168	-32°13411	17 44.5	-32°58'	324.8	-4.5	59.3	0.050	161	40	B0 II	8.43	+0.62	-0.35	2.76	5.67	-5.4	11.1	0.018
670	316436		17 44.8	-30°08'	327.3	-3.1	59.2	0.046	7	66	B3: pe (III-V)?	10.22	+0.59	-0.18	2.37	7.85	-2.5	10.4	0.019
671	316464		17 44.8	-30°37'	326.9	-3.3	59.2	0.057	164	43	B1 V (e)?	10.59	+0.50	-0.44	2.28	8.31	-3.1	11.4	0.025
672	316409		17 45.1	-28°54'	328.3	-2.5	59.2	0.062	179	58	B1 V	10.56	+0.46	-0.30	2.16	8.40	-3.1	11.5	0.029
673*			17 45.2	-29°54'	327.5	-3.0	59.2	0.054	11	71	B8 IV?	11.60	+0.41	-0.02	1.50	10.10			0.036
674	316406		17 45.4	-28°46'	328.5	-2.5	59.2	0.055	0	59	B2 IV	10.51	+0.26	-0.46	1.50	9.01	-2.9	11.9	0.037
675*			17 45.6	-28°07'	329.1	-2.2	59.2	0.102	19	78	B1 Ib-II	11.07	+0.77	-0.23	3.09	7.98	-5.4	13.4	0.033
676	316520		17 45.7	-28°45'	328.6	-2.5	59.2	0.051	1	60	B5: nm(e) (III-V)	10.79	+0.33	-0.28	1.47	9.32	-1.8	11.1	0.035
677	316587		17 45.8	-29°55'	327.6	-3.2	59.3	0.011	155	35	B1: n(e) (V)	10.58	+0.33	-0.49	1.77	8.81	-3.1	11.9	0.006
678	316589		17 45.9	-30°02'	327.4	-3.2	59.3	0.026	19	78	B2 nm(e) (III-V)	10.57	+0.31	-0.48	1.65	8.92	-2.9	11.8	0.016
679	162717	-24°13584	17 47.3	-24°15'	332.6	-0.5	59.3	0.067	179	58	B2 III	9.35	+0.50	-0.38	2.22	7.13	-3.6	10.7	0.030
680	162718	-24°13585	17 47.3	-24°45'	332.2	-0.8	59.3	0.077	7	66	B pe	8.73	+0.65	-0.44					
681	316589		17 48.1	-29°47'	327.9	-3.5	59.5	0.027	12	71	B3 II	9.37	+0.30	-0.49	1.50	7.87	-4.6	12.5	0.018
682	316568		17 48.3	-29°43'	328.0	-3.5	59.6	0.033	12	71	B2 pe (IV-V)	9.76	+0.25	-0.62	1.47	8.29	-2.4	10.7	0.022
683	162978	-24°13615	17 48.7	-24°52'	332.2	-1.1	59.4	0.027	179	58	O8	6.20	+0.04	-0.89	1.05	5.15	-5.1	10.2	0.026
684	163065	-30°14934	17 49.1	-30°32'	327.4	-4.1	59.7	0.039	43	102	B1 lab	8.63	+0.37	-0.54	1.89	6.74	-6.5	13.2	0.021
685	316729		17 51.0	-29°34'	328.5	-3.9	59.9	0.031	16	76	B1 n II:	9.94	+0.33	-0.59	1.77	8.17	-4.9	13.1	0.018
686	163453	-28°13895	17 51.1	-28°14'	329.6	-3.3	59.8	0.041	16	75	B0.5: pe (V)?	9.28	+0.65	-0.47	2.79	6.49	-3.6	10.1	0.015
687	163454	-30°14987	17 51.1	-31°00'	327.2	-4.7	60.0	0.031	53	113	B0.5: pe (V)?	8.24	+0.30	-0.72	1.74	6.50	-3.6	10.1	0.018
688	163667	-31°14893	17 52.2	-31°47'	326.6	-5.3	60.2	0.027	18	78	B0.5 III	8.76	+0.42	-0.53	2.10	6.66	-4.7	11.4	0.013
689	163777	-25°12523	17 52.8	-25°10'	332.4	-2.1	59.9	0.019	163	43	B1 II	9.31	+0.44	-0.50	2.10	7.21	-4.9	12.1	0.009
690	316786		17 53.0	-27°15'	330.7	-3.2	60.0	0.037	178	58	B5 IV	11.01	+0.31	-0.22	1.41	9.60	-1.8	11.4	0.026
691	164018	-23°13741	17 54.0	-23°07'	334.4	-1.3	59.9	0.029	132	12	B0.5 III	9.18	+0.65	-0.28	2.79	6.39	-4.7	11.1	0.010
692	164019	-28°13994	17 54.0	-28°36'	329.6	-4.0	60.2	0.049	177	57	B0 Ia	9.31	+0.26	-0.71	1.68	7.63	-6.9	14.5	0.029
693	164032	-29°14322	17 54.1	-29°49'	328.6	-4.7	60.3	0.013	29	90	B1 Ib	7.48	+0.14	-0.73	1.20	6.28	-5.8	12.1	0.011
694	164103	-14°4842	17 54.5	-14°47'	341.6	+2.8	60.1	0.014	38	98	B5 IV	8.12	+0.10	-0.45	0.78	7.34	-1.8	9.1	0.018
695	164188	-15°4767	17 54.9	-15°48'	340.8	+2.3	60.1	0.007	71	131	B0.5 IV	8.70	+0.19	-0.71	1.41	7.29	-4.2	11.5	0.005
696	164384	-23°13789	17 55.7	-23°10'	334.5	-1.7	60.1	<.004			B1.5: V: nm	8.27	-0.03	-0.78	0.66	7.61	-2.6	10.2	
697	164438	-19°4800	17 56.0	-19°06'	338.1	+0.3	60.1	0.028	73	133	O8 IV	7.48	+0.34	-0.66	1.95	5.53	-5.4	10.9	0.014
698	164492	-23°13804	17 56.3	-23°01'	334.7	-1.7	60.2	<.004			O7	7.63	-0.00	-0.86	0.96	6.67	-5.1	11.8	
699	164883	-22°4541	17 58.2	-22°30'	335.4	-1.8	60.3	0.013	114	175	B0 V	7.28	+0.01	-0.83	0.93	6.35	-4.1	10.4	0.014
700		-22°4543	17 58.2	-22°29'	335.4	-1.8	60.3	0.006	130	11	B1 V: n	8.87	+0.01	-0.76	0.81	8.06	-3.1	11.2	0.007

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	$3E_{(B-V)}$	m	M	m-M	p/A_V
			α	δ															
701	165049	-15°4803	17 ^h 59 ^m 0	-15°22'	341.7	+ 1.6	60.4	0.015	49	109	B2 III	8.18	+0.37	-0.50	1.83	6.35	-3.6	10.0	0.008
702	165285	-19°4836	18 00.1	-19°58'	337.8	- 0.9	60.4	0.022	63	123	B0.5 V: nne	9.01	+0.31	-0.63	1.77	7.24	-3.6	10.8	0.012
703	165319	-14°4880	18 00.3	-14°12'	342.8	+ 1.9	60.5	0.029	58	119	B0 Ia	7.94	+0.59	-0.50	2.67	5.27	-6.9	12.2	0.011
704	165502	-17°5020	18 00.7	-17°12'	340.3	+ 0.3	60.5	0.027	156	37	B0 III	9.35	+0.62	-0.43	2.76	6.59	-5.0	11.6	0.010
705	165516	-21°4855	18 01.2	-21°27'	336.6	- 1.9	60.6	0.006	146	26	B0.5 Ib	6.29	+0.12	-0.78	1.20	5.09	-5.8	10.9	0.005
706	165783	-19°4858	18 02.6	-19°52'	338.2	- 1.4	60.2	0.019	83	143	B1: V	8.41	+0.28	-0.49	1.62	6.79	-3.1	9.9	0.012
707	166125	-14°4908	18 04.1	-14°12'	343.3	+ 1.1	60.7	0.027	32	93	B3 II-III	9.08	+0.52	-0.31	2.46	6.62	-4.0	10.6	0.011
708	166167	-21°4879	18 04.3	-21°20'	337.1	- 2.5	60.8	0.036	75	136	B9 Ib	8.59	+0.56	+0.12	1.86	6.73	-5.6	12.3	0.019
709	166286	-16°4736	18 04.8	-16°46'	341.1	- 0.4	60.8	0.020	11	72	B1 II	8.46	+0.23	-0.63	1.47	6.99	-4.9	11.9	0.014
710	166482	-19°4882	18 04.8	-19°12'	339.0	- 1.5	60.8	0.006	26	87	B1.5 V	9.06	+0.20	-0.53	1.35	7.71	-2.6	10.3	0.004
711	166304	-16°4739	18 04.9	-16°44'	341.2	- 0.4	60.8	0.029	53	114	B1 V	9.33	+0.19	-0.63	1.35	7.98	-3.1	11.1	0.021
712	166443	-20°5020	18 05.5	-20°44'	337.8	- 2.4	61.0	0.028	140	21	B1 V: e	8.74	+0.19	-0.77	1.35	7.39	-3.1	10.5	0.021
713	166524	-18°4826	18 05.9	-18°25'	339.8	- 1.4	60.9	0.011	105	166	B0? V pe	9.94	+0.48	-0.56	2.34	7.60	-4.1	11.7	0.005
714	166539	-15°4854	18 06.0	-15°37'	342.3	- 0.0	60.8	0.028	32	93	B0 IV	8.83	+0.25	-0.75	1.65	7.18	-4.6	11.8	0.017
715	166492	-14°4922	18 06.3	-14°58'	342.9	+ 0.2	60.9	0.125	19	80	O9.5: II:	9.73	+0.85	-0.30	3.45	6.28	-6.2	12.5	0.036
716	166628	-19°4895	18 06.4	-19°28'	339.0	- 2.0	60.9	0.010	155	36	B3 Ia	7.17	+0.59	-0.29	2.37	4.80	-6.9	11.7	0.004
717	166734	-15°4861	18 06.6	-15°36'	342.4	- 0.2	60.9	0.024	50	111	B1 (V) ne	9.21	+0.24	-0.63	1.50	7.71	-3.1	10.8	0.016
718	166734	-10°4625	18 06.9	-10°46'	346.6	+ 2.1	61.0	0.070	65	126	O8 f	8.42	+1.09	-0.12	4.20	4.22			0.017
719	166734	-12°4949	18 08.0	-12°55'	344.9	+ 0.9	61.0	0.027	58	119	B9: IV:	10.78	+0.39	+0.13	1.35	9.43			0.020
720	166734	-20°5043	18 08.1	-20°20'	338.4	- 2.8	61.1	0.075	62	123	O6	9.52	+0.85	-0.20	3.51	6.01	-5.1	11.1	0.021
721	167263	-20°5055	18 09.3	-20°25'	338.4	- 3.0	61.2	< .004			O9 II	5.98	+0.04	-0.88	1.05	4.93	-6.4	11.3	
722	167264	-20°5054	18 09.3	-20°46'	338.2	- 3.2	61.2	< .004			B0 Ia	5.38	+0.07	-0.87	1.11	4.27	-6.9	11.2	
723	167330	-12°4954	18 09.6	-12°34'	345.4	+ 0.7	61.1	0.040	74	135	O9 I-II	8.23	+0.66	-0.45	2.91	5.32	-6.6	11.9	0.014
724	167336	-18°4863	18 09.6	-18°24'	340.3	- 2.1	61.1	0.037	161	42	B0 II	8.71	+0.53	-0.48	2.49	6.22	-5.4	11.6	0.015
725	167336	-20°5060	18 09.7	-20°23'	338.5	- 3.1	61.2	0.019	153	34	B0: IV:: pe	8.84	+0.24	-0.77	1.62	7.22	-4.6	11.8	0.012
726	167451	-13°4897	18 10.2	-13°36'	344.5	+ 0.1	61.1	0.021	37	98	B0.5 Ib	8.23	+0.79	-0.27	3.21	5.02	-5.8	10.8	0.007
727	167451	-14°4957	18 10.4	-14°39'	343.6	- 0.5	61.1	0.054	126	7	B0.5 IV	9.81	+0.51	-0.49	2.37	7.44	-4.2	11.6	0.023
728	167543	-14°4959	18 10.6	-14°40'	343.7	- 0.6	61.1	0.052	122	3	B2 III	8.56	+0.43	-0.53	2.01	6.55	-3.6	10.2	0.026
729	167543	-15°4906	18 11.1	-15°41'	342.8	- 1.2	61.2	0.007	30	91	B1 IV: n	9.46	+0.36	-0.52	1.86	7.60	-3.8	11.4	0.004
730	167659	-19°4944	18 11.1	-19°00'	339.9	- 2.7	61.3	0.034	27	88	O8	7.39	+0.22	-0.74	1.59	5.80	-5.1	10.9	0.021
731	167659	-11°4579	18 11.2	-11°50'	346.2	+ 0.7	61.2	0.061	91	152	Bc: V::*	10.44	+1.08	-0.05	4.14	6.30	-4.1	10.4	0.015
732	167659	-12°4964	18 11.8	-12°21'	345.8	+ 0.3	61.2	0.066	96	157	O8	9.82	+0.91	-0.22	3.66	6.16	-5.1	11.3	0.018
733	167838	-11°4581	18 11.8	-11°47'	346.3	+ 0.6	61.2	0.051	83	144	B1: II:	11.32	+0.93	-0.10	3.57	7.75	-4.9	12.6	0.014
734	167838	-15°4911	18 11.9	-15°28'	343.1	- 1.2	61.2	< .004			B5 Ia	6.73	+0.46	-0.36	1.86	4.87	-6.9	11.8	
735	167838	-12°4970	18 12.1	-12°32'	345.7	+ 0.2	61.2	0.054	88	150	B0.5 Ia	8.78	+1.02	-0.11	3.90	4.88	-6.9	11.8	0.014

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
736		-19°4955	18 12.2	-19°09'	339.9	-3.1	61.3	0.061	179	61	B3: Ia:	8.90	+0.96	-0.05	3.48	5.42	-6.9	12.3	0.018
737		-12°4979	18 12.4	-12°17'	345.9	+0.2	61.2	0.021	118	180	O7 (f)	10.44	+0.88	-0.32	3.00	7.44	-6.9	12.4	0.007
738		-11°4586	18 12.5	-11°20'	346.8	+0.8	61.2	0.062	92	153	O8 (17)	9.40	+1.00	-0.14	3.93	5.47	-6.9	12.4	0.016
739	167971	-12°4980	18 12.5	-12°17'	346.0	+0.2	61.2	0.028	150	31	O8 f	7.50	+0.77	-0.32	3.24	4.26	-5.4	11.8	0.009
740		-12°4982	18 12.6	-12°13'	346.0	+0.2	61.2	0.024	95	156	B0 II	9.26	+0.67	-0.42	2.91	6.35	-5.4	11.8	0.008
741		-12°4984	18 12.7	-12°00'	346.2	+0.3	61.3	0.050	103	164	O9 V	9.93	+0.83	-0.26	3.42	6.51	-4.6	11.1	0.015
742		-13°4929	18 13.0	-13°48'	344.7	-0.7	61.3	0.061	78	139	B0 IV	9.85	+0.64	-0.44	2.82	7.03	-4.6	11.6	0.022
743		-13°4928	18 13.0	-13°49'	344.7	-0.7	61.3	0.060	72	133	B0.5: V: ne	10.12	+0.49	-0.56	2.31	7.81	-3.6	11.4	0.026
744	168112	-12°4988	18 13.1	-12°08'	346.2	+0.1	61.3	0.025	127	8	O6	8.52	+0.69	-0.40	3.03	5.49	-5.1	10.6	0.008
745		-13°4930	18 13.2	-13°52'	344.7	-0.7	61.3	0.045	77	138	O9.5 V	9.44	+0.30	-0.70	1.80	7.64	-4.4	12.0	0.025
746		-12°4994	18 13.4	-12°09'	346.2	+0.1	61.3	0.034	156	37	O9: II:	9.81	+0.70	-0.39	3.03	6.78	-4.6	11.4	0.011
747		-13°4936	18 13.4	-13°59'	344.6	-0.8	61.3	0.035	101	162	B1: V: ne	9.71	+0.63	-0.59	2.67	7.04	-3.1	10.1	0.013
748	168206	-11°4593	18 13.5	-11°40'	346.6	+0.3	61.3	0.053	92	153	W R	9.14	+0.72	-0.26	1.08	8.18	-0.9	9.1	0.018
749	168302	-16°4812	18 13.9	-16°03'	342.8	-1.9	61.4	0.020	76	137	B5 V	9.26	+0.20	-0.36	4.14	5.61	-5.0	10.6	0.010
750		-13°4941	18 14.4	-13°06'	345.4	-0.4	61.3	0.040	29	90	O9.5 IV	9.75	+1.08	-0.07	4.14	5.61	-5.0	10.6	0.010
751	168418	-17°5141	16 14.4	-17°02'	342.0	-2.5	61.4	0.016	14	75	B2 III	9.43	+0.33	-0.43	1.71	7.72	-3.6	11.3	0.009
752		-12°5008	18 14.5	-12°41'	345.8	-0.4	61.4	0.048	149	30	B0.5 III	9.81	+1.01	-0.08	3.87	5.94	-4.7	10.6	0.012
753		-12°5009	18 14.7	-12°13'	346.3	-0.2	61.4	0.015	3	65	O8	9.54	+0.68	-0.42	2.97	6.57	-5.1	11.7	0.005
754	168571	-17°5151	18 15.3	-17°26'	341.8	-2.9	61.5	0.023	92	154	B1 Ib-II*	7.79	+0.53	-0.40	2.37	5.42	-5.4	10.8	0.010
755	168607	-16°4829	18 15.5	-16°25'	342.7	-2.4	61.5	0.046	20	81	B9 Ia+p	8.29	+1.60	+0.40	4.98	3.31			0.009
756	168625	-16°4880	18 15.6	-16°25'	342.7	-2.5	61.5	0.095	13	75	B8 Ia+?	8.41	+1.46	+0.38	4.65	3.76			0.020
757		-20°5108	18 16.4	-20°07'	339.5	-4.4	61.7	0.032	39	100	B0.5 II	9.16	+0.53	-0.41	2.43	6.73	-5.2	11.9	0.013
758		-14°5016	18 17.0	-14°42'	344.4	-1.9	61.5	0.011	85	147	B1 II	9.38	+0.64	-0.39	2.70	6.68	-4.9	11.6	0.004
759	169034	-13°4958	18 17.6	-13°39'	345.4	-1.6	61.5	0.042	66	128	B5 Ia	8.14	+1.25	+0.20	4.23	3.91	-6.9	10.8	0.010
760*		-13°4958	18 17.6	-13°49'	345.2	-1.6	61.5	0.061	57	118	W R	12.02	+0.98	+0.54					
761		-11°4620	18 17.9	-11°58'	346.9	-0.8	61.5	0.032	83	145	O5	10.17	+0.80	-0.31	3.36	6.81	-5.1	11.9	0.010
762		-14°5029	18 18.1	-14°12'	344.9	-1.9	61.6	0.029	70	131	B1.5 Ib	9.61	+1.15	-0.02	4.20	5.41	-5.8	11.2	0.007
763		-09°4713	18 18.4	-09°57'	348.7	+0.0	61.5	0.012	46	108	B2: V: pne	9.78	+0.45	-0.41	2.07	7.71	-2.0	9.7	0.006
764		-14°5030	18 18.6	-14°13'	345.0	-2.0	61.6	0.029	3	65	B5 Ia	9.52	+1.03	+0.03	3.57	5.95	-6.9	12.8	0.008
765		-10°4682	18 18.8	-10°52'	347.9	-0.5	61.6	0.049	72	133	O7	9.63	+0.56	-0.55	2.64	6.99	-5.1	12.1	0.018
766		-14°5037	18 19.4	-14°42'	344.6	-2.4	61.7	0.065	177	58	B1.5 Ia (+?)	8.24	+1.39	+0.19	4.92	3.32	-6.9	10.2	0.013
767	169454	-14°5039	18 19.6	-14°02'	345.2	-2.2	61.7	0.046	12	74	B1 Ia+	6.61	+0.94	-0.18	3.60	3.01			0.013
768	169727	-13°4979	18 21.0	-13°43'	345.7	-2.3	61.7	0.033	48	110	O6	9.28	+0.80	-0.36	3.36	5.92	-5.1	11.0	0.010
769	169754	-11°4631	18 21.1	-11°25'	347.7	-1.2	61.7	0.015	44	106	B0.5 Ia	8.38	+1.06	-0.01	4.02	4.36	-6.9	11.3	0.004
770		-14°5062	18 22.2	-14°46'	344.9	-3.1	61.8	0.027	75	136	B0.5: ne (V?)	9.30	+0.48	-0.61	2.28	7.02	-3.6	10.6	0.012

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
771		-09°4742	18 22.9	-09°38'	349.5	-0.8	61.7	0.017	147	29	B2: V;	10.44	+0.75	-0.24	2.97	7.47	-2.0	9.5	0.006
772	170159	-13°4992	18 22.9	-13°04'	346.5	-2.4	61.8	0.025	117	179	B0.5 Ib	8.36	+0.59	-0.41	2.61	5.75	-5.8	11.6	0.010
773		-08°4617	18 23.8	-08°38'	350.5	-0.5	61.7	0.042	138	19	O8.5 (V)	9.36	+0.91	-0.21	3.66	5.75	-5.1	10.8	0.011
774		-12°5083	18 25.8	-12°25'	347.4	-2.7	61.9	0.017	169	51	B1 Ib	9.47	+0.42	-0.57	2.04	7.43	-5.8	13.2	0.008
775		-11°4667	18 26.8	-11°22'	348.4	-2.4	61.9	0.050	145	27	B1: V; pe	9.8*	+0.86	-0.12	3.36	6.49	-3.1	9.6	0.015
776	170938	-15°5004	18 26.9	-15°46'	344.5	-4.5	62.2	0.078	119	1	B1 Ia	7.87	+0.85	-0.25	3.33	4.54	-6.5	11.0	0.023
777		-14°5102	18 27.4	-13°59'	346.2	-3.8	62.1	<.002			B1 V pe	9.01	+0.20	-0.70	1.38	7.62	-3.1	10.7	
778		-12°5104	18 28.3	-12°20'	347.7	-3.2	62.0	0.046	148	30	O7	9.55	+0.58	-0.48	2.70	6.85	-5.1	12.0	0.017
779	172252	-12°5132	18 34.1	-11°58'	348.7	-4.3	62.3	0.100	147	29	B2: npe (V)	9.48	+0.65	-0.36	2.67	6.81	-2.0	8.8	0.037
780	172275	-07°4645	18 34.2	-07°27'	352.7	-2.2	62.0	0.083	1	63	O6	9.35	+0.77	-0.37	3.27	6.08	-5.1	11.2	0.025
781		-12°5133	18 34.4	-12°31'	348.3	-4.6	62.3	0.094	148	31	B1 V	10.78	+0.70	-0.23	2.88	7.90	-3.1	11.0	0.033
782	172367	-07°4650	18 34.7	-07°20'	352.9	-2.3	62.0	0.035	11	73	B0 V	9.50	+0.45	-0.50	2.25	7.25	-4.1	11.4	0.016
783		-13°5056	18 34.7	-13°30'	347.4	-5.2	62.4	0.106	150	33	B0: V;	9.69	+0.78	-0.19	3.24	6.45	-4.1	10.6	0.033
784	172488	-08°4675	18 35.4	-08°49'	351.7	-3.1	62.1	0.012	126	8	B0.5 V	10.14	+0.54	-0.40	2.46	5.16	-3.6	8.8	0.005
785		-13°5073	18 35.7	-13°57'	347.2	-5.6	62.5	0.100	151	33	B1: (IV) pe	10.14	+0.86	-0.28	3.36	6.78	-3.8	10.6	0.030
786	173219	-07°4689	18 39.1	-07°13'	353.5	-3.2	62.2	0.009	38	100	B1: V; pne	7.80	+0.22	-0.77	1.44	6.36	-3.1	9.5	0.006
787	173438	-04°4575	18 40.2	-04°42'	355.9	-2.3	62.1	0.057	53	115	B0.5 Ia	8.23	+0.80	-0.26	3.24	4.99	-6.9	11.9	0.018
788		-12°5163	18 41.3	-12°24'	349.2	-6.1	62.6	0.032	105	168	B9: IV;	9.38	+0.57	+0.25	1.89	7.49			0.017
789		-12°5166	18 41.5	-12°15'	349.3	-6.0	62.6	0.027	129	12	B0.5 I	9.81	+0.70	-0.37	2.94	6.87	-6.5	13.4	0.009
790	174571	+08°3866	18 46.0	+08°35'	8.3	+2.7	62.1	0.066	80	142	B3 V; pe	8.89	+0.56	-0.25	2.28	6.61	-1.5	8.1	0.029
791		-00°3584	18 48.4	-00°41'	0.4	-2.2	62.0	0.011	42	104	O8	9.98	+0.63	-0.45	2.82	7.16	-5.1	12.3	0.004
792	175514	+09°3928	18 50.6	+09°13'	9.4	+2.0	62.0	0.045	106	168	O8: V nn	8.59	+0.59	-0.45	2.70	5.89	-5.1	11.0	0.017
793	175544	+00°4055	18 50.7	+00°08'	1.4	-2.3	62.0	<.004			B3 V	7.35	+0.10	-0.64	0.90	6.45	-1.5	8.0	
794		+11°3707	18 57.9	+11°07'	11.9	+1.3	61.7	0.019	164	46	B1 Ia;	10.57	+1.04	-0.10	3.90	6.67	-6.9	13.6	0.005
795	177284	-02°4840	18 58.9	-02°10'	0.3	-5.2	62.1	0.053	45	107	B0.5 p	8.60	+0.49	-0.51	2.31	6.29			0.023
796		+02°3771	18 59.2	+02°58'	4.8	-2.9	61.8	0.013	96	158	B0 III	9.21	+0.63	-0.39	2.79	6.42	-5.0	11.4	0.005
797	E 230579	+10°3774	18 59.4	+10°58'	11.9	+0.9	61.6	0.040	99	160	B1.5: IV; ne	9.13	+0.53	-0.41	2.34	6.79	-3.4	10.2	0.017
798	177812	+03°3893	19 01.1	+03°06'	5.2	-3.2	61.7	0.030	65	127	B1 Ib	8.60	+0.63	-0.36	2.67	5.93	-5.8	11.7	0.011
799	178124	+11°3738	19 02.3	+11°17'	12.6	+0.5	61.5	0.019	52	113	B1 V nn	9.45	+0.41	-0.36	2.01	7.44	-3.1	10.5	0.009
800	178129	+03°3902	19 02.3	+03°17'	5.5	-3.4	61.7	0.010	48	110	B3 Ia	7.41	+0.50	-0.35	2.10	5.31	-6.9	12.2	0.005
801		+14°3687	19 17.0	+14°42'	17.3	-1.0	60.6	0.056	3	63	B ep	9.90	+1.59	+0.37					
802	E 231285	+14°3698	19 18.9	+15°01'	17.8	-1.3	60.5	0.014	53	114	B0 III	9.50	+0.75	-0.32	3.15	6.35	-5.0	11.4	0.004
803		+22°3687	19 20.5	+22°34'	24.5	+2.1	60.4	0.048	0	60	B2 (V) pe*	9.38	+0.63	-0.36	2.61	6.77	-2.0	8.8	0.018
804	183143	+18°4085	19 23.0	+18°05'	20.9	-0.6	60.2	0.130	179	60	B7 Ia	6.87	+1.24	+0.15	4.08	2.79	-6.9	9.7	0.032
805	E 231564	+12°3927	19 24.8	+12°22'	16.2	-3.8	60.2	0.060	35	95	B1 Ib	10.24	+0.79	-0.25	3.15	7.09	-5.8	12.9	0.019

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	$3E(B-V)$	m	M	m-M	p/A _v
			α	δ															
806	185561	+26°3566	19 25.1	+26°30'	28.5	+ 3.2	60.1	0.024	178	58	B2 III	8.05	+0.17	-0.54	1.23	6.82	-3.6	10.4	0.020
807	184943	+23°3706	19 31.7	+23°38'	26.8	+ 5.4	59.4	0.080	34	93	B9 Ib	8.20	+0.71	-0.06	2.31	5.89	-5.6	11.5	0.035
808		+34°3631	19 33.1	+35°01'	36.7	+ 0.9	59.8	<.003			B2 V	10.16	-0.11	-0.88	0.39	9.77	-2.0	11.8	
809	185418	+16°3928	19 33.9	+17°02'	21.3	- 3.4	59.3	0.015	13	72	B0.5 V	7.45	+0.22	-0.67	1.50	5.95	-3.6	9.6	0.010
810		+25°3912	19 35.7	+25°11'	28.6	+ 0.4	59.0	0.081	33	92	B2.5 V	10.21	+0.70	-0.08	2.76	7.45	-1.8	9.2	0.029
811		+23°3730	19 36.0	+23°47'	27.4	- 0.4	59.0	0.078	22	81	B8 Ib	9.28	+0.99	+0.11	3.24	6.04	-5.6	11.6	0.024
812	185859	+20°4218	19 36.1	+20°15'	24.4	- 2.2	59.0	0.040	8	67	B0.5 Ia	6.49	+0.39	-0.62	2.01	4.48	-6.9	11.4	0.020
813		+28°3434	19 37.3	+28°55'	31.9	+ 2.1	58.9	0.018	46	105	B1 Ib p	8.50	+0.20	-0.71	1.38	7.12	-5.8	12.9	0.013
814		+28°3438	19 38.1	+28°46'	31.9	+ 1.8	58.8	0.009	96	154	B2 IV	8.93	+0.01	-0.70	0.75	8.18	-2.9	11.1	0.012
815		+23°3745	19 38.6	+23°13'	27.2	- 1.2	58.7	0.132	26	85	B0.5 Ib	8.73	+0.66	-0.38	2.82	5.91	-5.8	11.7	0.047
816		+22°3781	19 38.8	+23°02'	27.1	- 1.3	58.7	0.059	10	69	B0 IV	9.75	+0.43	-0.55	2.19	7.56	-4.6	12.2	0.027
817		+23°3747	19 38.9	+23°12'	27.2	- 1.2	58.7	0.066	14	73	B1 III	10.37	+0.61	-0.39	2.61	7.76	-4.4	12.2	0.025
818		+23°3782	19 39.0	+23°03'	27.1	- 1.3	58.7	0.089	8	67	O7	9.34	+0.56	-0.52	2.64	7.60	-5.1	11.8	0.034
819		+25°3941	19 40.3	+25°59'	29.8	- 0.1	58.5	0.005	85	144	B1.5 V	10.41	+0.70	-0.19	2.85	7.56	-2.6	10.2	0.002
820		+23°3759	19 41.0	+23°48'	28.0	- 1.3	58.4	0.062	11	70	B0 II	8.77	+0.77	-0.34	3.21	5.56	-5.4	11.0	0.019
821		+23°3761	19 41.2	+24°04'	28.3	- 1.2	58.4	0.042	28	87	B0 II:	8.83	+0.66	-0.44	2.88	5.95	-5.4	11.4	0.014
822	186745-6	+23°3760	19 41.2	+23°41'	27.9	- 1.4	58.4	0.040	25	83	B8 Ia	7.03	+0.93	+0.05	3.06	3.97	-6.9	10.9	0.013
823		+23°3762	19 41.4	+23°44'	28.0	- 1.4	58.4	0.043	27	86	B0.5 III: m	9.29	+0.76	-0.29	3.12	6.17	-4.7	10.9	0.014
824		+25°3952	19 41.5	+25°07'	29.2	- 0.7	58.4	0.025	38	96	O8	10.15	+0.63	-0.42	2.82	7.33	-5.1	12.4	0.009
825		+24°3866	19 41.5	+24°52'	28.9	- 0.9	58.4	<.003			O8 f	9.57	+1.18	+0.02	4.47	5.10			
826		+22°3800	19 41.5	+22°57'	27.3	- 1.9	58.4	0.012	19	77	B2 III: n	9.61	+0.33	-0.52	1.71	7.90	-3.6	11.5	0.007
827	186841	+23°3767	19 41.7	+23°50'	28.1	- 1.4	58.4	0.056	27	85	B1 Ia	7.85	+0.79	-0.29	3.15	4.70	-6.9	11.6	0.018
828	186943		19 42.2	+28°01'	31.7	+ 0.7	58.3	0.021	18	76	W N	10.23	+0.27	-0.64	1.20	6.28	-5.1	11.4	0.014
829	186980	+31°3765	19 42.4	+31°52'	35.0	+ 2.7	58.4	0.017	29	87	O7.5	7.48	+0.08	-0.84	1.56	7.21	-5.1	12.3	0.005
830		+27°3512	19 42.6	+28°00'	31.8	+ 0.6	58.2	0.008	17	75	O7.5	8.77	+0.20	-0.78	1.56	7.21	-5.1	12.3	0.005
831		+24°3881	19 42.8	+24°36'	28.9	- 1.3	58.2	0.021	37	95	O6 f*	9.12	+0.69	-0.43	3.03	6.09			0.007
832		+27°3513	19 42.9	+27°47'	31.6	+ 0.4	58.2	0.025	40	98	A2 Ia	8.31	+0.39	+0.01	0.99	7.32	-6.9	14.2	0.025
833		+34°3707	19 42.9	+34°24'	37.2	+ 3.9	58.4	0.023	67	125	B3: II:	10.59	-0.04	-0.81	0.48	10.11	-3.3	13.4	0.048
834	187282		19 44.1	+17°57'	23.4	- 5.0	58.4	0.026	4	62	W R	10.51							
835		+24°3893	19 44.6	+24°33'	29.1	- 1.6	58.1	0.014	29	87	B1.5 V	9.63	+0.40	-0.48	1.95	7.68	-2.6	10.3	0.007
836		+28°3485	19 44.8	+28°33'	32.5	+ 0.5	58.0	0.027	57	115	B2 V: n	9.40	+0.10	-0.57	1.02	8.38	-2.0	10.4	0.026
837	187459	+33°3602	19 45.0	+33°12'	36.5	+ 2.9	58.1	0.062	33	91	B0.5 Ib	6.44	+0.20	-0.74	1.44	5.00	-5.8	10.8	0.043
838	E 225985	+32°3583	19 45.7	+32°43'	36.1	+ 2.5	58.0	0.011	149	27	B1 V: pe shell	9.08	+0.10	-0.77	1.08	8.00	-3.1	11.1	0.010
839		+29°3772	19 46.7	+29°09'	33.2	+ 0.4	57.7	0.037	59	117	O7 f	10.10	+0.50	-0.53	2.46	7.64			0.015
840		+22°3836	19 46.8	+22°35'	27.7	- 3.1	57.9	0.046	35	93	B1 II	9.20	+0.49	-0.46	2.25	6.95	-4.9	11.8	0.020

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
841		+29°3774	19°46'38	+29°09'	33.2	+0.4	57.7	0.032	72	130	B2 Ib	9.93	+0.56	-0.36	2.40	7.53	-5.8	13.3	0.013
842		+33°3618	19 47.0	+33°24'	36.8	+2.7	57.8	0.071	41	99	B1 Ib	9.87	+0.55	-0.44	2.43	7.44	-5.8	13.2	0.029
843	187851	+27°3534	19 47.0	+27°27'	31.8	-0.5	57.7	0.024	24	82	B2 V: nn	7.74	+0.13	-0.63	1.11	6.63	-2.0	8.6	0.032
844	187983	+24°3914	19 47.8	+24°44'	29.6	-2.1	57.7	0.019	159	37	A1 Iab	5.58	+0.71	+0.13	2.04	3.54	-6.5	10.0	0.009
845		+21°3959	19 48.5	+21°59'	27.4	-3.8	57.7	0.053	41	98	B2 V p(e)	9.85	+0.34	-0.36	1.74	8.11	-2.0	10.1	0.030
846		+22°3847	19 49.4	+22°21'	27.8	-3.7	57.6	0.046	15	72	B5 III	9.58	+0.23	-0.45	1.17	8.41	-2.8	11.2	0.039
847		+27°3550	19 50.1	+28°04'	32.7	-0.7	57.4	0.035	64	122	B9 Ia	8.94	+0.98	+0.30	3.12	5.82	-6.9	12.7	0.011
848		+29°3814	19 52.7	+29°43'	34.4	-0.4	57.0	0.034	33	90	B0 V	10.18	+0.45	-0.51	2.25	7.93	-4.1	12.0	0.015
849	E 226868	+34°3815	19 54.6	+34°56'	39.0	+2.1	56.9	0.108	135	12	B0 Ib	8.89	+0.85	-0.24	3.45	5.44	-6.2	11.6	0.031
850		+35°3899	19 55.5	+35°51'	39.9	+2.5	56.8	0.047	147	24	B0.5 III	9.12	+0.16	-0.74	1.32	7.80	-4.7	12.5	0.036
851	E 227018	+34°3828	19 56.1	+35°02'	39.2	+1.9	56.6	0.048	120	177	O7	8.99	+0.38	-0.62	2.10	6.89	-5.1	12.0	0.023
852	189779	+29°3844	19 56.6	+29°37'	34.8	-1.1	56.5	0.018	63	120	B2 III	8.22	+0.10	-0.63	1.02	7.20	-3.6	10.8	0.018
853		+29°3842	19 56.6	+30°06'	35.2	-0.9	56.5	0.034	85	141	B1 V: e?	10.11	+0.49	-0.42	2.25	7.86	-3.1	11.0	0.015
854	190066	+21°4027	19 58.1	+21°52'	28.5	-5.7	56.8	0.030	33	90	B1 Iab*	6.48	+0.18	-0.75	1.32	5.16	-6.5	11.7	0.023
855	E 227245	+35°3924	19 58.6	+35°24'	39.8	+1.7	56.3	0.049	135	11	O7	9.74	+0.62	-0.44	2.82	6.92	-5.1	12.0	0.017
856		+36°3827	19 58.6	+36°49'	41.0	+2.5	56.3	0.013	78	134	B0 IV:	10.59	+0.23	-0.69	1.59	9.00	-4.6	13.6	0.008
857		+28°3598	19 59.1	+28°25'	34.1	-2.3	56.3	0.076	39	96	B0 III: mp	9.43	+1.02	-0.05	3.96	5.47	-5.0	10.5	0.019
858		+25°4083	19 59.8	+25°59'	32.2	-3.7	56.2	0.042	160	37	B1 III	8.94	+0.63	-0.31	2.67	6.27	-4.4	10.7	0.016
859	190467	+36°3841	20 00.0	+36°08'	40.6	+1.9	56.1	0.010	153	29	B5 II: n	8.21	+0.17	-0.46	0.99	7.22	-4.6	11.8	0.010
860		+31°3921	20 00.3	+31°52'	37.1	-0.5	56.0	0.015	40	96	B1 Ib	8.70	+0.46	-0.45	2.16	6.54	-5.8	12.3	0.007
861		+33°3717	20 00.6	+33°25'	38.4	+0.3	56.0	0.034	75	131	O7:	10.28	+0.47	-0.54	2.37	7.91	-5.1	13.0	0.014
862	190603	+31°3925	20 00.7	+31°56'	37.2	-0.6	56.0	0.018	76	132	B1.5 Ia+	5.65	+0.53	-0.46	2.34	3.31			0.008
863	190864	+35°3949	20 01.9	+35°19'	40.1	+1.1	55.8	0.020	168	44	O6	7.76	+0.20	-0.78	1.56	6.20	-5.1	11.3	0.013
864	E 227611	+35°3950	20 02.0	+35°37'	40.4	+1.3	55.8	0.035	14	69	B0 pe	8.82	+0.35	-0.70	1.95	6.87			0.018
865		+35°3956	20 02.2	+35°28'	40.3	+1.2	55.8	0.008	27	83	B0.5 V	8.85	+0.19	-0.62	1.41	7.44	-3.6	11.0	0.006
866	E 227634	+35°3957	20 02.3	+35°29'	40.3	+1.1	55.8	0.020	4	60	B0 Ib	7.91	+0.25	-0.66	1.65	6.26	-6.0	12.3	0.012
867*	190967	+34°3871	20 02.4	+35°06'	40.0	+0.9	55.8	0.022	104	160	B1 Ib-II	8.04	+0.41	-0.56	2.01	6.03	-5.4	11.4	0.011
868	190991	+39°4033	20 02.5	+39°47'	43.9	+3.5	55.9	0.027	100	156	B0 IV p	8.22	+0.14	-0.78	1.32	6.90	-4.6	11.5	0.020
869		+35°3961	20 02.7	+36°02'	40.8	+1.4	55.7	0.017	141	17	B3 II	9.68	+0.33	-0.46	1.59	8.09	-4.6	12.7	0.011
870	E 227704	+34°3874	20 02.9	+34°38'	39.7	+0.6	55.7	0.032	137	12	B0 III	8.60	+0.34	-0.63	1.92	6.68	-5.0	11.7	0.017
871	E 227757	+35°3967	20 03.5	+36°04'	40.9	+1.3	55.6	0.025	101	157	O9.5 V	9.20	+0.18	-0.75	1.44	7.76	-4.4	12.2	0.017
872		+36°3882	20 03.7	+36°16'	41.1	+1.3	55.6	0.046	130	6	B1 III:	9.89	+0.38	-0.52	1.92	7.97	-4.4	12.4	0.024
873	191396	+37°3783	20 04.6	+37°50'	42.5	+2.1	55.5	0.028	42	97	B0.5 II	8.13	+0.25	-0.66	1.59	6.54	-5.2	11.7	0.018
874	191423	+42°3599	20 04.7	+42°19'	46.2	+4.6	55.7	0.018	106	162	O9 V:	8.03	+0.16	-0.77	1.41	6.62	-4.6	11.2	0.013
875	E 227902	+37°3785	20 04.9	+37°13'	42.0	+1.7	55.4	0.033	3	59	B1 V	9.25	+0.26	-0.49	1.56	7.69	-3.1	10.8	0.021

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
876		+40°4032	20 04 ^m .9	+40°57'	45.1	+ 3.8	55.6	0.025	79	135	B2 III	10.44	+0.25	-0.55	1.47	8.97	-3.6	12.6	0.017
877		+35°3986	20 05.1	+35°17'	40.5	+ 0.6	55.4	0.012	64	119	B pe	9.98	+0.57	-0.54					
878	191611	+36°3906	20 05.7	+36°12'	41.3	+ 1.0	55.3	<.004			B0.5 III	8.59	+0.37	-0.60	1.95	6.64	-4.7	11.3	
879	E 228041	+35°3998	20 06.2	+35°12'	40.5	+ 0.3	55.2	0.041	130	6	B0.5 V: e	8.97	+0.36	-0.66	1.92	7.05	-3.6	10.6	0.021
880	E 228052	+36°3914	20 06.3	+36°24'	41.5	+ 1.0	55.2	0.011	115	170	B1 II	8.82	+0.47	-0.48	2.19	6.63	-4.9	11.5	0.005
881	E 228053	+44°3365	20 06.6	+45°06'	48.7	+ 5.9	55.6	0.015	17	73	B0: Ib: p	9.54	+0.64	-0.41	2.82	6.72	-6.2	12.9	0.005
882	E 228101	+37°3804	20 06.9	+37°10'	42.2	+ 1.3	55.1	0.015	163	39	B1 V	8.44	+0.07	-0.65	0.99	7.45	-3.1	10.6	0.015
883	E 228104	+35°4004	20 06.9	+35°35'	40.9	+ 0.5	55.1	0.012	75	130	B1: IV: pe	8.84	+0.28	-0.70	1.62	7.22	-3.8	11.0	0.007
884	191978	+40°4050	20 07.5	+41°04'	45.5	+ 3.5	55.2	<.002			O8	8.02	+0.14	-0.78	1.35	6.67	-5.1	11.8	
885	192103	+35°4013	20 08.1	+35°54'	41.3	+ 0.4	54.9	<.004			W R	8.06	+0.05	-0.41					
886	E 228263	+37°3819	20 08.4	+37°21'	42.6	+ 1.2	54.9	0.012	141	16	B1 V	9.42	+0.16	-0.61	1.26	8.16	-3.1	11.3	0.010
887		+39°4076	20 08.4	+39°42'	44.5	+ 2.5	55.0	0.029	59	114	B pe	9.88	+0.58	-0.52					
888	192281	+39°4082	20 09.0	+39°58'	44.8	+ 2.6	55.0	0.015	9	64	O5 f	7.55	+0.38	-0.61	2.10	5.45			0.007
889	E 228368	+34°3920	20 09.5	+34°43'	40.5	- 0.5	54.7	0.046	174	49	O7	8.39	+0.49	-0.51	2.43	5.96	-5.1	11.1	0.019
890		+40°4061	20 09.5	+40°43'	45.4	+ 3.0	54.8	0.005	147	22	B1 V	10.02	+0.23	-0.68	1.47	8.55	-3.1	11.6	0.003
891	192422	+38°3956	20 09.7	+38°28'	43.6	+ 1.6	54.7	0.034	11	66	B0.5 Ib	7.09	+0.50	-0.47	2.34	4.75	-5.8	10.6	0.014
892		+32°3749	20 09.7	+32°15'	38.5	- 2.0	54.8	0.080	19	74	B0: pe	9.92	+0.86	-0.33	3.48	6.44			0.023
893	E 228452	+34°3929	20 10.2	+35°06'	40.9	- 0.4	54.6	0.075	1	56	B3 V	9.77	+0.66	-0.09	2.58	7.19	-1.5	8.7	0.029
894	192539	+31°4001	20 10.3	+31°41'	38.1	- 2.4	54.7	0.025	177	52	B2 III	7.29	+0.13	-0.63	1.11	6.18	-3.6	9.8	0.022
895	E 228456	+36°3948	20 10.3	+36°30'	42.1	+ 0.4	54.6	0.025	139	13	B2 IV	9.86	+0.25	-0.50	1.47	8.39	-2.9	11.3	0.017
896		+37°3837	20 10.3	+37°56'	43.1	+ 1.2	54.6	0.014	159	34	B2 II:	9.47	+0.40	-0.47	1.92	7.55	-4.7	12.2	0.007
897		+32°3752	20 10.4	+33°08'	39.3	- 1.6	54.6	0.076	76	131	B2 V n	9.88	+0.69	-0.23	2.79	7.09	-2.0	9.1	0.027
898	192641	+36°3956	20 10.8	+36°21'	42.0	+ 0.2	54.5	0.025	168	43	W R	7.93	+0.27	-0.45					
899	192639	+36°3958	20 10.8	+37°03'	42.6	+ 0.6	54.6	.004			O8 f	7.11	+0.35	-0.63	1.98	5.13			
900	192660	+39°4096	20 10.9	+40°01'	45.0	+ 2.3	54.6	0.022	140	15	B0 Ia	7.54	+0.63	-0.36	2.79	4.75	-6.9	11.6	0.008
901		+41°3670	20 11.2	+41°32'	46.3	+ 3.2	54.6	0.038	33	88	B0.5 II	10.20	+0.83	-0.22	3.33	6.87	-5.2	12.1	0.011
902	E 228548	+39°4098	20 11.4	+39°40'	44.8	+ 2.1	54.5	0.018	105	160	B0 pe	10.10	+0.69	-0.39	2.97	7.13			0.006
903	E 228587	+36°3966	20 11.7	+36°19'	42.1	+ 0.1	54.4	0.026	131	5	B1 II	10.07	+0.80	-0.14	3.18	6.89	-4.9	11.8	0.008
904	E 228602	+36°3968	20 11.8	+36°32'	42.3	+ 0.2	54.4	0.010	143	18	B1 III	9.84	+0.57	-0.30	2.49	7.35	-4.4	11.8	0.004
905	192832	+41°3675	20 11.9	+42°06'	46.8	+ 3.4	54.5	0.025	63	118	B5 Ia	8.62	+0.89	-0.02	3.15	5.47	-6.9	12.4	0.008
906		+34°3952	20 12.7	+34°48'	41.0	- 1.0	54.3	0.023	1	55	B3 II	9.96	+0.70	-0.13	2.70	7.26	-4.6	11.9	0.008
907	E 228690	+37°3861	20 12.8	+37°37'	43.3	+ 0.6	54.3	0.015	59	114	B0.5 V:	9.25	+0.27	-0.58	1.65	7.60	-3.6	11.2	0.009
908		+37°3862	20 12.8	+37°20'	43.0	+ 0.5	54.3	0.005	128	2	B0 V:	8.99	+0.38	-0.47	2.04	6.95	-4.1	11.0	0.002
909	193032	+38°3980	20 13.0	+38°35'	44.1	+ 1.2	54.2	0.035	38	92	B0 III	8.32	+0.35	-0.58	1.95	6.37	-5.0	11.4	0.018
910	E 228712	+40°4087	20 13.1	+40°34'	45.7	+ 2.3	54.3	0.034	7	62	B0.5 Ia	8.65	+1.13	+0.06	4.23	4.42	-6.9	11.3	0.008

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
911	193076	+37°3866	20 13.3	+37°22'	43.1	+ 0.4	54.2	0.010	96	150	B0.5 II	7.62	+0.33	-0.57	1.83	5.79	-5.2	11.0	0.005
912	193117	+40°4090	20 13.5	+40°32'	45.7	+ 2.2	54.2	0.033	10	64	O9.5 II	8.70	+0.61	-0.42	2.73	5.97	-6.2	12.2	0.012
913	193182	+39°4115	20 13.8	+39°16'	44.7	+ 1.4	54.1	0.014	134	8	A: shell	6.52	-0.09	-0.18					
914	E 228766	+36°3891	20 13.8	+37°00'	42.9	+ 0.1	54.1	0.025	112	166	(O6 f or W R)	9.14	+0.65	-0.37	2.91	6.23	-6.6	10.7	0.009
915	E 228779	+34°3961	20 14.0	+34°30'	40.9	- 1.4	54.1	0.045	0	54	O9.5 Ib	8.92	+1.31	+0.22	4.83	4.09			0.009
916	193237	+37°3871	20 14.1	+37°43'	43.5	+ 0.5	54.1	0.023	37	91	P Cyg	4.83	+0.42	-0.58					
917	+39°4117	20 14.2	+39°43'	45.1	+ 1.7	54.1	0.017	0.017	156	30	B1 II	3.39	+0.87	-0.07	3.39	6.51	-4.9	11.4	0.005
918	+30°3980	20 14.4	+30°30'	37.7	- 3.8	54.2	0.099	0.099	13	67	B9 Ib-II	8.28	+0.76	+0.15	2.46	5.82	-5.0	10.8	0.040
919	E 228841	+38°4000	20 14.8	+38°34'	44.3	+ 0.9	54.0	0.028	174	48	O7.5 p	8.93	+0.57	-0.43	2.67	6.26	-5.1	11.4	0.010
920	E 228854	+35°4062	20 15.0	+36°02'	42.3	- 0.7	53.9	0.032	42	96	O8:	8.93	+0.71	-0.28	3.06	5.87	-5.1	11.0	0.010
921	E 228860	+36°4001	20 15.1	+36°39'	42.8	- 0.3	53.9	0.030	102	156	B0.5 IV	9.68	+0.60	-0.32	2.64	7.04	-4.2	11.2	0.011
922	+36°4000	20 15.1	+38°56'	42.9	- 0.2	53.9	0.054	0.054	81	135	B0.5 Ia	9.63	+0.81	-0.16	3.27	6.36	-6.9	13.3	0.016
923	+38°4002	20 15.1	+39°06'	44.7	+ 1.2	53.9	0.033	0.033	172	46	B1 V	9.22	+0.44	-0.45	2.10	7.12	-3.1	10.2	0.016
924	193443	+37°3879	20 15.2	+37°57'	43.8	+ 0.5	53.9	0.034	56	110	O9 III	7.24	+0.41	-0.54	2.16	5.08	-6.4	11.5	0.016
925	+36°4004	20 15.4	+37°05'	43.2	- 0.1	53.9	0.035	0.035	73	127	B0.5 III:	9.63	+0.90	-0.13	3.54	6.09	-4.7	10.8	0.010
926	E 228882	+40°4113	20 15.4	+40°23'	45.8	+ 1.9	53.9	0.039	136	10	B0.5 Ia	9.21	+1.15	+0.12	4.29	4.92	-6.9	11.8	0.009
927	193514	+38°4006	20 15.5	+38°57'	44.7	+ 1.0	53.9	0.030	48	102	O7 f	7.38	+0.45	-0.51	2.31	5.07			0.013
928	193576	+38°4010	20 15.8	+38°25'	44.3	+ 0.6	53.8	0.015	150	24	W R	8.0*	+0.50	-0.39					
929	E 228913	+35°4067	20 15.8	+35°54'	42.2	- 0.9	53.8	0.041	51	105	B0.5 III: nn	9.96	+0.60	-0.35	2.64	7.32	-4.7	12.0	0.016
930	E 228919	+39°4135	20 15.9	+40°08'	45.7	+ 1.6	53.8	0.017	89	143	B1 IV	9.66	+0.63	-0.28	2.67	7.01	-3.8	10.8	0.006
931	E 228928	+40°4117	20 16.0	+40°20'	45.8	+ 1.7	53.8	<.003			B2 Ib: nn	9.69	+0.89	-0.14	3.39	6.30	-5.8	12.1	
932	E 228929	+39°4136	20 16.0	+39°36'	45.3	+ 1.3	53.8	0.058	51	105	B0.5 Ib	9.63	+1.15	+0.07	4.29	5.34	-5.8	11.1	0.014
933	E 228943	+38°4016	20 16.1	+38°17'	44.2	+ 0.5	53.8	0.025	14	68	B0 II:	9.29	+0.91	-0.10	3.63	5.66	-5.4	11.1	0.007
934	+38°4017	20 16.4	+38°39'	44.5	+ 0.7	53.7	0.015	0.015	172	46		9.91	+0.41	-0.48					
935	E 228969	+38°4018	20 16.5	+38°21'	44.3	+ 0.5	53.7	0.026	174	48	B2 II:	9.50	+0.73	-0.21	2.91	6.59	-4.7	11.3	0.009
936	E 228989	+38°4025	20 16.7	+38°23'	44.4	+ 0.5	53.7	0.031	170	44	O9 V nn	9.72	+0.77	-0.20	3.24	6.48	-4.6	11.1	0.010
937	E 229033	+37°3898	20 17.2	+37°25'	43.6	- 0.2	53.6	0.019	82	135	B0 II-III	8.77	+0.72	-0.23	3.06	5.71	-5.2	10.9	0.006
938	+36°4022	20 17.3	+36°29'	42.9	- 0.7	53.6	0.057	0.057	65	119	O9.5 II	9.94	+0.83	-0.20	3.39	6.55	-6.2	12.8	0.017
939	E 229049	+38°4031	20 17.4	+38°42'	44.7	+ 0.5	53.6	0.033	14	68	B2 III: p	9.62	+0.48	-0.44	2.16	7.46	-3.6	11.1	0.015
940	E 229059	+36°4024	20 17.5	+37°05'	43.4	- 0.4	53.5	0.045	59	112	B1.5 Iap	8.70	+1.53	+0.43	5.34	3.36	-6.9	10.3	0.008
941	193928	+36°4028	20 17.8	+36°36'	43.0	- 0.8	53.5	0.038	68	122	W R	9.78	+0.82	+0.07					
942	+45°3149	20 17.9	+45°44'	50.4	+ 4.6	53.7	0.032	0.032	163	37	B1 V	9.45	+0.32	-0.49	1.74	7.71	-3.1	10.8	0.018
943	+38°4036	20 18.2	+38°18'	44.5	+ 0.2	53.4	0.032	0.032	23	76	B3 Ib-II	8.66	+0.61	-0.14	2.43	6.23	-5.2	11.4	0.013
944	E 229108	+38°4038	20 18.3	+39°08'	45.1	+ 0.7	53.4	0.093	51	105	B0.5 Ib	9.48	+0.81	-0.19	3.27	6.21	-5.8	12.0	0.028
945	194057	+44°3439	20 18.4	+44°30'	49.5	+ 3.8	53.6	0.082	73	127	B1 Ib	7.51	+0.86	-0.16	3.36	4.15	-5.8	10.0	0.024

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
946	E 229115	+34°3992	20 18.4	+34°55'	41.8	- 1.9	53.4	0.065	24	78	B2 IV	9.92	+0.67	-0.06	2.73	7.19	-2.9	10.1	0.024
947	194092	+40°4137	20 18.6	+40°39'	48.4	+ 1.5	53.4	0.014	77	130	B0.5 III	8.26	+0.13	-0.73	1.23	7.03	-4.7	11.7	0.011
948		+38°4043	20 18.7	+38°24'	44.6	+ 0.2	53.4	0.030	50	103	O9 III	9.02	+0.59	-0.39	2.70	6.32	-6.4	12.7	0.011
949		+38°4044	20 18.7	+38°35'	44.7	+ 0.3	53.4	0.049	43	98	B1 V	10.03	+0.49	-0.42	2.25	7.78	-3.1	10.9	0.022
950	E 229153	+37°3910	20 19.0	+37°39'	44.0	- 0.3	53.3	0.022	169	42	B0 I	9.07	+1.17	+0.15	4.41	4.66	-6.5	11.2	0.005
951	E 229159	+38°4050	20 19.2	+38°53'	45.0	+ 0.4	53.3	0.035	79	132	B1.5 Ib	8.54	+1.00	0.00	3.75	4.79	-5.8	10.6	0.009
952*		+38°4053	20 19.2	+39°10'	45.3	+ 0.5	53.3	0.022	115	168	B pe*	10.56	+1.25	-0.19					
953	194205	+37°3913	20 19.3	+39°02'	45.2	+ 0.4	53.3	0.075	61	115	B2 III	9.04	+0.53	-0.32	2.31	6.73	-3.6	10.3	0.032
954	E 229171	+37°3913	20 19.4	+38°08'	44.5	- 0.1	53.2	0.017	20	73	B0.5 III: n	9.33	+0.55	-0.34	2.49	6.84	-4.7	11.5	0.007
955		+38°4054	20 19.5	+38°50'	45.0	+ 0.3	53.2	0.069	73	126	B1: III:	9.98	+1.02	+0.08	3.84	6.14	-4.4	10.5	0.018
956	E 229196	+40°4147	20 19.7	+40°34'	46.5	+ 1.3	53.2	0.043	156	29	O5	8.54	+0.90	-0.15	3.66	4.88	-5.1	10.0	0.012
957	194279	+40°4150	20 19.7	+40°26'	46.3	+ 1.2	53.2	0.061	177	50	B1.5 Ia	7.01	+1.03	-0.03	3.84	3.17	-6.9	10.1	0.016
958	194280	+38°4057	20 19.7	+38°37'	44.9	+ 0.1	53.2	0.094	65	118	B0 Ib	8.39	+0.76	-0.21	3.18	5.21	-6.2	11.4	0.030
959		+36°4049	20 19.8	+36°36'	43.3	- 1.1	53.2	0.008	81	134	B3 II	8.61	+0.72	-0.10	2.76	5.85	-4.6	10.4	0.003
960*		+38°4065	20 19.8	+39°02'	45.2	+ 0.4	53.2	0.121	56	109	B0 V	10.62	+1.19	+0.21	4.47	6.15	-4.1	10.2	0.027
961	E 229202	+39°4162	20 19.8	+39°50'	45.9	+ 0.8	53.2	0.011	109	162	O8 V:	9.53	+0.87	-0.12	3.54	5.99	-5.1	11.1	0.003
962		+36°4048	20 19.8	+36°59'	43.6	- 0.9	53.2	0.063	54	107	B0 Ib	9.66	+1.27	+0.21	4.71	4.95	-6.2	11.2	0.013
963	E 229214	+36°4050	20 20.0	+36°12'	43.0	- 1.4	53.2	0.037	38	91	B1 Ib	9.54	+0.70	-0.26	2.88	6.66	-5.8	12.5	0.013
964	E 229221	+38°4062	20 20.1	+38°11'	44.6	- 0.2	53.1	0.034	66	119	B pe	9.21	+0.92	-0.18					
965	E 229227	+38°4065	20 20.2	+38°08'	44.6	- 0.2	53.1	0.019	63	116	B0 II	9.38	+0.80	-0.15	3.30	6.08	-5.4	11.5	0.006
966	E 229232	+38°4070	20 20.3	+38°47'	45.1	+ 0.1	53.1	0.091	67	120	O5 f	9.53	+0.82	-0.17	3.42	6.11			0.027
967	E 229234	+38°4069	20 20.3	+38°12'	44.6	- 0.2	53.1	0.027	93	146	O9.5 III	8.92	+0.77	-0.19	3.21	5.71	-5.7	11.4	0.008
968	E 229238	+38°4071	20 20.4	+38°13'	44.6	- 0.2	53.1	0.030	86	139	B0 I	8.88	+0.90	-0.06	3.60	5.28	-6.5	11.8	0.008
969	E 229239	+38°4072	20 20.4	+38°11'	44.6	- 0.2	53.1	0.041	99	152	B0 II	8.92	+0.87	-0.15	3.51	5.41	-5.4	10.8	0.012
970*		+38°4065	20 20.5	+39°20'	45.6	+ 0.4	53.1	0.059	27	80	O7	9.86	+1.18	+0.11	4.50	5.36	-5.1	10.5	0.013
971		+39°4168	20 20.7	+39°26'	45.7	+ 0.5	53.0	0.043	4	57	O7	9.99	+1.07	+0.03	4.17	5.82	-5.1	10.9	0.010
972*		+37°3927	20 21.3	+39°08'	45.5	+ 0.2	53.0	0.089	55	108	B0.5: III:	10.63	+1.62	+0.65	5.70	4.93	-4.7	9.6	0.016
973		+39°4177	20 21.3	+37°09'	43.9	- 1.0	53.0	0.029	61	114	O8 f	10.15	+1.25	+0.23	4.68	5.47			0.006
974	194649	+39°4177	20 21.7	+39°54'	46.1	+ 0.6	52.9	0.014	22	75	O6.5	9.00	+0.95	-0.09	3.81	5.19	-5.1	10.3	0.004
975		+36°4063	20 21.9	+37°03'	43.9	- 1.2	52.9	0.099	49	103	O8.5 Ib	9.71	+1.14	+0.08	4.32	5.39	-6.6	12.0	0.023
976		+40°4164	20 22.4	+41°01'	47.1	+ 1.2	52.8	0.010	57	110	B3 II	7.77	+0.23	-0.52	1.29	6.48	-4.6	11.1	0.008
977		+39°4189	20 22.7	+39°20'	45.8	+ 0.1	52.7	0.060	14	67	B2 p? e? *	9.33	+1.11	-0.09	4.05	5.28			0.015
978	194839	+40°4165	20 22.8	+41°03'	47.2	+ 1.1	52.7	0.026	171	44	B0.5 Ia	7.49	+1.00	-0.09	3.84	3.65	-6.9	10.6	0.007
979		+38°4098	20 23.8	+38°26'	45.2	- 0.6	52.6	0.048	68	121	B9 Ib	8.96	+0.88	+0.43	2.82	6.14	-5.6	11.7	0.017
980		+40°4179	20 24.1	+40°16'	46.7	+ 0.5	52.5	0.020	20	72	O8 V:	9.65	+0.57	-0.43	2.64	7.01	-5.1	12.1	0.008

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
981		+37°3945	20 24.7	+38°02'	45.0	- 1.0	52.4	0.067	64	116	B0 II: nn	9.53	+0.77	-0.17	3.21	6.32	-5.4	11.7	0.021
982		+40°4185	20 24.7	+40°18'	46.8	+ 0.4	52.4	0.015	158	320	B0 V:	9.82	+0.84	-0.16	3.42	6.40	-4.1	10.5	0.004
983	195213	+40°4187	20 24.9	+40°28'	47.0	+ 0.4	52.4	0.019	68	120	O7	8.74	+0.85	-0.26	3.51	5.23	-5.1	10.3	0.005
984	195229	+41°3765	20 25.0	+41°40'	47.9	+ 1.2	52.4	0.032	52	104	B0.5 III	7.66	+0.16	-0.71	1.32	6.34	-4.7	11.0	0.024
985	195407	+36°4095	20 26.0	+36°39'	44.1	- 2.1	52.3	0.035	48	100	B0 IV: pe	7.80	+0.34	-0.66	1.92	5.88	-4.6	10.5	0.018
986		+46°2948	20 26.1	+46°19'	51.7	+ 3.9	52.4	0.046	6	58	B1 V: nne*	10.05	+0.28	-0.59	1.62	8.43	-3.1	11.5	0.028
987	195592	+43°3630	20 27.2	+43°59'	50.0	+ 2.3	52.1	0.027	117	169	O9.5 Ia	7.08	+0.87	-0.19	3.51	3.57	-6.9	10.5	0.008
988*			20 27.7	+41°10'	47.8	+ 0.5	51.9	0.040	72	123	B1 Ib?	10.84	+1.29	-0.12	4.65	6.19	-5.8	12.0	0.009
989		+40°4212	20 28.0	+40°52'	47.6	+ 0.2	51.9	0.130	106	158	O9 ?	10.29	+1.63	+0.54	5.82	4.47	-4.6	9.1	0.022
990		+40°4219	20 28.6	+41°06'	47.9	+ 0.3	51.8	0.051	78	130	O8	10.22	+1.19	+0.10	4.50	5.72	-5.1	10.8	0.011
991		+40°4220	20 28.8	+40°58'	47.8	+ 0.2	51.8	0.083	80	132	O7 f	9.20	+1.70	+0.58	6.06	3.14			0.014
992*			20 29.1	+40°55'	47.8	+ 0.1	51.7	0.218	119	171	O	11.51	+3.35		11.01	0.50			0.020
993*			20 29.2	+41°68'	48.0	+ 0.2	51.7	0.039	56	108	O8 (V)	10.67	+1.23	+0.15	4.62	6.05	-5.1	11.2	0.008
994	195965	+47°3136	20 29.3	+47°53'	53.3	+ 4.4	51.9	0.020	35	87	B0 V	6.98	-0.05	-0.90	0.75	6.23	-4.1	10.3	0.027
995*			20 29.6	+40°55'	47.9	0.0	51.6	0.056	51	103	O5 f	10.81	+1.93		6.75	4.06			0.008
996		+40°4227	20 29.6	+40°58'	47.9	+ 0.1	51.6	0.023	86	138	O6 f	9.05	+1.27	+0.16	4.77	4.28			0.005
997*			20 29.7	+41°00'	47.9	+ 0.1	51.6	0.079	94	146	O6 f	10.48	+1.45	+0.27	5.31	5.17			0.015
998		+37°3976	20 30.1	+37°56'	45.6	- 1.9	51.6	0.050	166	37	B1.5 V n	10.25	+0.76	-0.16	3.03	7.22	-2.6	9.8	0.016
999		+41°3804	20 30.2	+41°12'	48.2	+ 0.1	51.5	0.008	51	103	O8.5 Ia	9.89	+1.53	+0.41	5.49	4.40	-6.9	11.3	0.001
1000		+45°3216	20 30.5	+45°19'	51.4	+ 2.6	51.6	0.021	17	68	O8	9.07	+0.39	-0.57	2.10	6.97	-5.1	12.1	0.010
1001		+41°3807	20 30.6	+41°16'	48.3	+ 0.1	51.5	0.075	159	30	O6 f	10.05	+1.44	+0.29	5.28	4.77			0.014
1002		+36°4145	20 32.5	+37°04'	45.2	- 2.8	51.2	0.038	38	89	O9 V	8.95	+0.65	-0.37	2.88	6.07	-4.6	10.7	0.013
1003		+45°3230	20 33.9	+45°47'	52.2	+ 2.5	51.0	0.072	177	48	B0 III	9.40	+0.75	-0.27	3.15	6.25	-5.0	11.2	0.023
1004		+47°3162	20 36.7	+47°44'	54.0	+ 3.3	50.5	0.042	75	126	B1 Ib-II	9.80	+0.64	-0.33	2.70	7.10	-5.4	12.5	0.016
1005	197406	+52°2777	20 38.4	+52°14'	57.6	+ 6.0	50.5	0.020	101	152	W R ? *	10.30	+0.57	-0.45					
1006		+42°3835	20 38.6	+42°49'	50.4	- 0.1	50.1	0.029	16	66	O9 p?	9.20	+0.91	-0.19	3.66	5.54	-4.6	10.1	0.008
1007	197460	+35°4229	20 38.8	+36°02'	45.2	- 4.5	50.3	0.032	3	53	B0.5 Ib	8.14	+0.34	-0.55	1.86	6.28	-5.8	12.1	0.017
1008		+45°3246	20 39.1	+45°32'	52.5	+ 1.6	50.1	< 0.003			B1 V n	9.67	+0.17	-0.64	1.29	8.38	-3.1	11.5	
1009	197770	+56°2477	20 40.7	+56°46'	61.4	+ 8.6	50.5	0.088	130	0	B2 IV	6.32	+0.33	-0.48	1.71	4.61	-2.9	7.5	0.051
1010		+45°3260	20 42.2	+45°58'	53.2	+ 1.5	49.5	0.035	21	71	O9 V	9.06	+0.51	-0.50	2.46	6.60	-4.6	11.2	0.014
1011	E 235350	+50°3189	20 42.3	+50°49'	56.9	+ 4.6	49.7	< 0.004			B0.5 IV	9.27	+0.29	-0.61	1.71	7.56	-4.2	11.8	
1012		+35°4258	20 42.3	+35°11'	45.0	- 5.5	49.8	0.011	7	57	B0.5 V n	9.41	+0.01	-0.74	0.87	8.54	-3.6	12.1	0.013
1013	198478	+45°3291	20 45.5	+45°45'	53.4	+ 0.9	48.9	0.061	5	64	B3 Ia	4.83	+0.40	-0.46	1.80	3.03	-6.9	9.9	0.034
1014	198479	+45°3290	20 45.5	+45°16'	53.1	+ 0.6	48.9	0.057	15	64	B1 III	8.57	+0.38	-0.52	1.92	6.65	-4.4	11.0	0.030
1015	198512	+53°2495	20 45.7	+53°32'	59.4	+ 6.0	49.2	0.041	128	177	B1 V p nne	8.29	+0.37	-0.53	1.89	6.40	-3.1	9.5	0.022

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
1016		+44°3594	20 45.8	+45°03'	52.9	+0.4	48.9	0.044	12	61	B1: V; pne*	9.78	+0.88	-0.37	2.82	6.96	-3.1	10.1	0.016
1017	198781	+63°1663	20 47.6	+63°40'	67.3	+12.3	50.1	0.030	157	27	B0.5 V	6.45	+0.07	-0.77	1.05	5.40	-3.6	9.0	0.028
1018*			20 48.2	+45°39'	53.7	+0.5	48.5	0.050	9	57	B0.5 n V	10.54	+0.41	-0.51	2.07	8.47	-3.6	12.1	0.024
1019	198895	+54°2429	20 48.4	+55°07'	60.8	+6.7	48.9	0.119	149	18	B1 V	8.30	+0.56	-0.31	2.46	5.84	-3.1	8.9	0.048
1020	198931	+43°3747	20 48.6	+44°03'	52.5	-0.7	48.4	0.096	146	14	B1 V pne;	8.72	+0.59	-0.31	2.55	6.17	-3.1	9.3	0.038
1021		+47°3211	20 49.7	+47°33'	55.3	+1.5	48.2	0.068	10	58	B0 II-III	9.79	+0.77	-0.27	3.21	6.58	-5.2	11.8	0.021
1022		+37°4092	20 49.8	+37°48'	48.0	-5.0	48.4	0.028	172	40	B1 III	9.66	+0.29	-0.57	1.65	8.01	-4.4	12.4	0.017
1023	199216	+48°3242	20 50.7	+49°09'	56.6	+2.5	48.1	0.040	135	3	B1 II	7.03	+0.48	-0.46	2.22	4.81	-4.9	9.7	0.018
1024		+44°3627	20 51.3	+44°28'	53.2	-0.7	47.9	0.017	46	94	B3 V	9.85	+0.76	-0.10	2.88	6.97	-1.5	8.5	0.006
1025	199356	+39°4368	20 51.6	+39°55'	49.8	+3.7	48.0	0.051	151	19	B2 IV p;	7.12	+0.15	-0.76	1.17	5.95	-2.9	8.8	0.044
1026		+46°3111	20 52.4	+47°02'	55.2	+0.8	47.7	0.040	11	59	B8 Ia	5.66	+0.47	-0.33	1.68	3.98	-6.9	10.9	0.024
1027	199478	+42°3914	20 52.7	+42°44'	52.0	-2.1	47.7	0.100	150	18	B0 III;	8.43	+1.05	-0.08	4.05	4.38	-5.0	9.4	0.025
1028	199579	+44°3639	20 53.1	+44°33'	53.4	-0.9	47.6	0.020	55	103	O6	5.96	+0.05	-0.85	1.11	4.85	-5.1	10.0	0.018
1029		+45°3339	20 53.2	+45°58'	54.5	0.0	47.6	0.053	29	77	B1 IV	9.93	+0.42	-0.42	2.04	7.89	-3.8	11.7	0.026
1030		+45°3341	20 53.6	+46°09'	54.7	+0.1	47.5	0.068	50	98	B1 II	8.73	+0.48	-0.48	2.22	6.51	-4.9	11.4	0.031
1031		+44°3655	20 54.8	+44°45'	53.8	-1.0	47.3	0.048	42	89	B1 IV	9.24	+0.31	-0.51	1.71	7.53	-3.8	11.3	0.028
1032		+45°3360	20 57.0	+45°51'	54.8	-0.5	46.9	0.030	25	72	B3 V	10.00	+0.20	-0.43	1.20	8.80	-1.5	10.3	0.025
1033	200776	+45°3384	21 00.4	+45°56'	55.3	-0.9	46.3	0.010	31	77	B1 IV; p	7.81	+0.01	-0.82	0.81	7.00	-3.8	10.8	0.012
1034	200857	+54°2470	21 01.0	+54°51'	61.8	+5.2	46.4	0.030	154	20	B3 III	9.66	+0.56	-0.23	2.28	7.38	-3.3	10.7	0.013
1035*			21 01.4	+47°33'	56.6	+0.1	46.1	0.039	33	79	B1 V pne	10.48	+0.48	-0.49	2.22	8.26	-3.1	11.4	0.018
1036		+45°3406	21 03.0	+45°27'	55.3	-1.6	45.8	0.048	48	94	B5 Iab	9.52	+0.59	-0.17	2.25	7.27	-6.5	13.8	0.021
1037		+47°3302	21 05.0	+47°16'	56.8	-0.5	45.4	0.026	0	46	B2 pne (V)	10.49	+0.38	-0.51	1.86	8.63	-2.0	10.6	0.014
1038		+44°3731	21 07.8	+45°05'	55.6	-2.4	44.9	0.036	26	71	B5 III	9.50	+0.07	-0.45	0.69	8.81	-2.8	11.6	0.052
1039	202124	+43°3842	21 08.8	+44°07'	55.0	-3.2	44.8	0.011	90	135	O8.5 Ib	7.80	+0.22	-0.69	1.56	6.24	-6.6	12.8	0.007
1040	202214	+59°2334	21 09.3	+59°35'	66.0	+7.7	45.1	0.017	143	8	B0 V	5.63	+0.11	-0.77	1.23	4.40	-4.1	8.5	0.014
1041		+43°3850	21 09.5	+43°28'	54.7	-3.8	44.7	0.015	50	95	B2 III	7.75	+0.14	-0.61	1.14	6.61	-3.6	10.2	0.013
1042*			21 10.1	+48°00'	58.0	-0.6	44.5	0.044	10	55	B2 ne (V)	10.38	+0.65	-0.17	2.67	7.71	-2.0	9.7	0.016
1043		+41°4064	21 12.3	+42°07'	54.1	-5.1	44.2	0.050	51	95	B3; pne*	9.02	+0.29	-0.22	1.47	7.55	-4.2	9.1	0.034
1044	203938	+46°3294	21 20.2	+46°44'	58.3	-2.7	42.6	0.030	160	23	B0.5 IV	7.08	+0.46	-0.41	2.22	4.86	-4.2	9.1	0.014
1045		+43°3913	21 21.3	+44°01'	56.6	-4.9	42.5	0.050	42	85	B1.5 V; pne	8.86	+0.55	-0.35	2.40	6.46	-2.6	9.1	0.021
1046		+47°3421	21 25.0	+47°37'	59.5	-2.6	41.7	<.005			A0 Iab	9.54	+0.58	+0.01	1.74	7.80	-6.5	14.3	
1047	204710	+44°3832	21 25.4	+44°29'	57.5	-5.0	41.7	0.050	36	78	B8 Ib	6.95	+0.26	-0.24	1.05	5.90	-6.9	12.8	0.048
1048	204722	+43°3941	21 25.5	+43°54'	57.1	-5.4	41.7	0.025	10	52	B2 V; nn (e)	7.67	-0.02	-0.85	0.66	7.01	-2.0	9.0	0.038
1049	204827	+58°2272	21 26.1	+58°18'	66.7	+5.3	41.6	0.122	59	101	B0 V	7.95	+0.81	-0.15	3.33	4.62	-4.1	8.7	0.037
1050	205196	+56°2589	21 28.6	+57°04'	66.2	+4.1	41.0	0.062	79	120	B0 Ib	7.45	+0.57	-0.45	2.61	4.84	-6.2	11.0	0.024

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
1051		+47°3487	21 32.1	+47°28'	60.3	-3.5	40.3	<.003	179	39	B pe*	9.12	+0.68	-0.24					
1052		+48°3437	21 32.6	+48°54'	61.3	-2.5	40.2	0.028	179	39	B1 Iab	8.69	+0.16	-0.70	1.26	7.43	-6.5	13.9	0.022
1053	206183	+56°2614	21 35.3	+56°32'	66.5	+3.1	39.6	0.015	46	86	B0 V	7.40	+0.14	-0.79	1.32	6.08	-4.1	10.2	0.011
1054	206259	+51°3112	21 35.8	+51°54'	63.6	-0.5	39.5	0.017	29	69	B3 III	7.54	+0.05	-0.57	0.75	6.79	-3.3	10.1	0.023
1055*			21 36.5	+49°56'	62.5	-2.1	39.4	0.044	52	91	B0: pe	10.73	+0.52	-0.54	2.46	8.27			0.018
1056		+49°3591	21 36.7	+50°03'	62.6	-2.0	39.3	<.004			O7.5	9.67	+0.52	-0.48	2.52	7.15	-5.1	12.2	
1057		+56°2626	21 38.4	+56°15'	66.7	+2.6	39.0	0.048	20	59	B0.5 III	10.47	+0.65	-0.35	2.79	7.68	-4.7	12.4	0.017
1058	206773	+57°2374	21 39.3	+57°17'	67.4	+3.4	38.8	0.039	170	29	B0 V: pe	6.91	+0.21	-0.82	1.53	5.38	-4.1	9.5	0.025
1059	E 239758	+58°2320	21 41.8	+58°36'	68.5	+4.2	38.4	0.046	51	89	B2 III: mn	9.50	+0.26	-0.54	1.50	8.00	-3.6	11.6	0.031
1060		+49°3615	21 42.2	+49°50'	63.1	-2.7	38.2	0.082	90	47	B1 V:	9.07	+0.33	-0.47	1.77	7.30	-3.1	10.4	0.046
1061	207260	+60°2288	21 42.6	+60°40'	69.9	+5.7	38.3	0.037	46	84	A2 Ia	4.29	+0.52	+0.14	1.38	2.91	-6.9	9.8	0.027
1062		+56°2640	21 43.1	+56°27'	67.3	+2.4	38.1	0.034	23	61	B0.5 p V:	9.25	+0.70	-0.35	2.94	6.31	-3.6	9.9	0.012
1063	207329	+51°3144	21 43.1	+51°39'	64.4	-1.4	38.0	0.038	1	39	B1.5 Ib? e	7.60	+0.29	-0.57	1.62	5.98	-5.8	11.8	0.023
1064		+54°2623	21 43.5	+54°52'	66.4	+1.1	37.9	0.059	23	61	B1 IV	9.66	+0.68	-0.31	2.82	6.84	-3.8	10.6	0.021
1065		+54°2629	21 44.2	+54°52'	66.5	+1.0	37.8	0.048	22	60	B1 II	10.54	+0.65	-0.31	2.73	7.81	-4.9	12.7	0.018
1066	207538	+59°2420	21 44.6	+59°14'	69.2	+4.4	37.8	0.046	61	99	B0 V	7.31	+0.33	-0.64	1.89	5.42	-4.1	9.5	0.024
1067	207793	+52°3043	21 46.5	+52°14'	65.1	-1.2	37.3	0.017	6	43	B0.5 III	6.60	+0.38	-0.56	1.98	4.62	-4.7	9.3	0.009
1068		+47°3588	21 48.9	+47°33'	62.5	-5.2	37.0	0.025	32	69	B1.5 V	9.61	+0.09	-0.66	1.02	8.59	-2.6	11.2	0.024
1069	208220	+42°4241	21 49.7	+43°01'	60.0	-8.9	37.2	0.023	42	79	B1 IV e	9.49	+0.04	-0.75	0.90	8.59	-3.8	12.4	0.026
1070*			21 50.2	+53°45'	66.5	-0.4	36.6	0.054	72	108	B2 p (IV, V)	11.16	+0.46	-0.30	2.10	9.06	-2.4	11.5	0.026
1071	208501	+55°2644	21 51.5	+56°08'	68.0	+1.4	36.3	0.035	43	79	B8 Ib	5.79	+0.74	-0.02	2.49	3.30	-5.6	8.9	0.014
1072	E 235673	+52°3071	21 54.1	+52°19'	66.1	-1.9	35.8	0.052	28	64	O7	9.14	+0.21	-0.77	1.59	7.55	-5.1	12.6	0.033
1073	208905	+60°2320	21 54.3	+60°49'	71.1	+5.0	35.9	0.018	39	75	B1 V p?	6.98	+0.09	-0.73	1.05	5.93	-3.1	9.0	0.017
1074	E 235679	+53°2749	21 55.0	+53°59'	67.2	-0.6	35.6	0.038	51	87	B2 II	8.86	+0.35	-0.55	1.77	7.09	-4.7	11.8	0.021
1075	209145	+59°2443	21 56.1	+59°50'	70.7	+4.1	35.5	<.004			B1 V	7.62	+0.33	-0.50	1.77	5.85	-3.1	9.0	
1076	209296	+56°2676	21 57.2	+56°14'	68.8	+1.0	35.1	0.020	59	94	B6: V: n	8.28	+0.26	-0.23	1.20	7.08	-0.5	7.6	0.017
1077		+58°2373	21 58.1	+59°01'	70.5	+3.3	35.0	0.075	41	76	B5 Ia	9.34	+0.92	-0.93	3.24	6.10	-6.9	13.0	0.023
1078		+54°2676	21 59.7	+54°37'	68.1	-0.5	34.6	0.060	65	100	B1: nne (V)	10.29	+0.46	-0.38	2.16	8.13	-3.1	11.2	0.028
1079	209678	+52°3088	22 00.1	+52°43'	67.1	-2.1	34.6	0.066	33	68	B2 I	8.42	+0.39	-0.47	1.89	6.53	-6.5	13.0	0.035
1080		+51°3239	22 00.3	+51°37'	66.5	-3.0	34.6	0.045	30	65	B2 V	9.92	+0.09	-0.59	0.99	8.93	-2.0	10.9	0.045
1081	209900	+52°3095	22 01.6	+53°01'	67.4	-2.0	34.3	0.048	39	73	A0 Ib-II	8.71	+0.45	+0.23	1.35	7.36	-5.0	12.4	0.036
1082	209975	+61°2246	22 02.1	+61°48'	72.4	+5.3	34.3	0.023	68	103	O9.5 Ib	5.10	+0.09	-0.94	1.17	3.93	-6.6	10.5	0.020
1083		+49°3735	22 02.2	+49°25'	65.5	-5.0	34.3	0.036	35	69	B1.5 V: mn (e)?	9.72	+0.05	-0.64	0.90	8.02	-2.6	11.4	0.040
1084	210072	+54°2683	22 02.7	+54°46'	68.6	-0.6	34.0	0.015	47	81	B2 V	7.65	+0.31	-0.36	1.65	6.00	-2.0	8.0	0.009
1085	210221	+52°3114	22 03.8	+52°49'	67.6	-2.3	33.8	0.041	45	79	A3 Ib	6.14	+0.43	+0.24	1.02	5.12	-5.6	10.7	0.040

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
1086		+53°2790	22 04.3	+54°02'	68.3	- 1.3	33.7	0.070	40	73	O9.5 III? p	9.86	+0.25	-0.71	1.65	8.21	-5.7	13.9	0.042
1087		+52°3122	22 05.0	+53°28'	68.1	- 1.9	33.6	0.037	49	83	B1 V:	9.30	+0.30	-0.60	1.68	7.62	-3.1	10.7	0.022
1088	210478	+60°2348	22 05.6	+60°30'	72.1	+ 4.0	33.5	0.018	49	83	B1 V	7.33	+0.07	-0.71	0.99	6.34	-3.1	9.4	0.018
1089		+57°2465	22 05.9	+57°22'	70.4	+ 1.3	33.4	0.097	41	75	B0.5 n (V)	11.00	+0.73	-0.25	3.03	7.97	-3.6	11.6	0.032
1090	210628	+55°2695	22 06.9	+55°36'	69.5	- 0.2	33.2	0.027	59	92	B6; V:	6.92	+0.10	-0.37	0.72	6.20	-0.5	6.7	0.038
1091	210809	+51°3281	22 07.9	+51°56'	67.7	- 3.4	33.0	0.033	49	82	O9 Ib	7.54	+0.05	-0.89	1.08	6.46	-6.9	13.4	0.030
1092	210839	+58°2402	22 08.1	+58°56'	71.5	+ 2.5	32.9	0.024	59	92	O6 f	5.05	+0.25	-0.76	1.71	3.34			0.014
1093		+52°3135	22 08.4	+53°12'	68.4	- 2.4	32.9	0.043	40	73	B3 II:	9.62	+0.33	-0.50	1.59	8.03	-4.6	12.6	0.027
1094	E 239886	+56°2733	22 08.9	+56°46'	70.4	+ 0.6	32.8	0.110	49	82	B9 Iab	8.84	+0.85	-0.12	2.73	6.11	-6.5	12.6	0.040
1095*			22 09.4	+57°10'	70.7	+ 0.9	32.6	0.079	45	78	B1 III	10.32	+0.65	-0.34	2.73	7.59	-4.4	12.0	0.029
1096	E 239895	+56°2735	22 09.8	+57°10'	70.7	+ 0.8	32.6	0.066	51	84	B8 Ia	8.63	+1.02	-0.12	3.33	5.30	-6.9	12.2	0.020
1097		+53°2820	22 10.1	+53°55'	69.0	- 1.9	32.5	0.049	49	82	B0 IV: n	9.95	+0.10	-0.78	1.20	8.75	-4.6	13.4	0.041
1098*			22 10.7	+53°47'	69.0	- 2.1	32.4	0.028	68	100	B1 IV	10.33	+0.85	-0.17	3.33	7.00	-3.8	10.8	0.008
1099		+54°2718	22 11.3	+54°58'	69.7	- 1.1	32.3	0.060	56	89	B2 III	10.15	+0.19	-0.62	1.29	8.86	-3.6	12.5	0.046
1100*			22 11.7	+60°35'	72.7	+ 3.6	32.2	0.006	100	132	B2 V	10.68	+0.60	-0.17	2.52	8.16	-2.0	10.2	0.002
1101		+53°2833	22 12.4	+53°40'	69.1	- 2.3	32.0	0.053	50	82	B1 III	10.01	+0.22	-0.66	1.44	8.57	-4.4	13.0	0.037
1102		+54°2726	22 13.0	+54°59'	69.9	- 1.2	31.9	0.085	54	86	B1 II	9.38	+0.33	-0.54	1.77	7.61	-4.9	12.5	0.048
1103	E 235781	+52°3167	22 13.2	+53°13'	69.0	- 2.8	31.9	0.042	29	61	B6 Ib	8.59	+0.43	-0.26	1.71	6.88	-5.7	12.6	0.024
1104		+53°2837	22 13.3	+53°42'	69.3	- 2.4	31.9	0.040	45	77	B2 III:	9.97	+0.26	-0.54	1.50	8.47	-3.6	12.1	0.027
1105	E 235783	+53°2838	22 13.4	+53°59'	69.4	- 2.1	31.8	0.047	55	87	B1 Ib	8.68	+0.17	-0.71	1.29	7.39	-5.8	13.2	0.036
1106*			22 14.4	+55°25'	70.3	- 1.0	31.6	0.102	45	77	B0 III:*	10.45	+0.51	-0.51	2.43	8.02	-5.0	13.0	0.042
1107		+53°2843	22 14.9	+53°46'	69.5	- 2.4	31.5	0.058	51	83	O8	9.50	+0.21	-0.75	1.56	7.94	-5.1	13.0	0.037
1108	211853	+55°2721	22 15.0	+55°37'	70.4	- 0.9	31.5	0.089	44	75		9.02	+0.40	-0.55					
1109	211880	+62°2061	22 15.2	+62°43'	74.2	+ 5.2	31.6	0.010	52	84	B0.5 V	7.75	+0.32	-0.60	1.80	5.95	-3.6	9.6	0.006
1110	E 235795	+51°3330	22 15.2	+51°37'	68.4	- 4.3	31.5	0.019	40	72	B1; V: nne	9.14	+0.07	-0.78	0.99	8.15	-3.1	11.2	0.019
1111		+60°2380	22 15.6	+60°16'	73.0	+ 3.1	31.4	0.008	168	20	B2 III	9.04	+0.39	-0.50	1.89	7.15	-3.6	10.8	0.004
1112	E 239923	+58°2421	22 15.8	+58°27'	72.1	+ 1.5	31.3	0.069	54	86	B3 Ib	8.89	+0.83	-0.12	3.09	5.80	-5.8	11.6	0.022
1113	211971	+59°2506	22 15.9	+59°38'	72.7	+ 2.5	31.3	0.014	87	118	A2 Ib	6.89	+0.99	+0.42	2.79	4.10	-5.6	9.7	0.005
1114	212044	+51°3341	22 16.4	+51°21'	68.4	- 4.6	31.3	0.028	49	80	B1; V: pme	6.98	+0.04	-0.91	0.90	0.90	-3.1	9.2	0.031
1115*			22 16.5	+55°53'	70.8	- 0.7	31.2	0.094	58	89	B1 pe (IV)	10.08*	+0.45	-0.53	2.13	7.95	-3.8	11.8	0.044
1116		+54°2745	22 17.4	+55°03'	70.5	- 1.5	31.0	0.069	53	84	B0.5 IV: n	9.56	+0.21	-0.67	1.47	8.09	-4.2	12.3	0.047
1117*			22 18.2	+59°47'	73.0	+ 2.5	30.8	0.060	114	145	B3 V	10.42	+0.87	0.00	3.21	7.21	-1.5	8.7	0.019
1118*			22 18.5	+55°08'	70.7	- 1.5	30.8	0.073	48	79	O5	10.29	+0.27	-0.73	1.77	8.52	-5.1	13.6	0.041
1119	E 235813	+54°2751	22 18.5	+54°18'	70.1	- 2.2	30.8	0.058	43	74	B0 III	8.84	+0.22	-0.74	1.56	7.28	-5.0	12.3	0.037
1120	212455	+54°2756	22 19.3	+54°44'	70.6	- 1.9	30.6	0.058	49	80	B5 Iab	7.87	+0.38	-0.36	1.62	6.25	-6.5	12.8	0.036

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	$3E_{(B-V)}$	m	M	m-M	p/A _v
			α	δ															
1121	E 235825	+54°2758	22 19.7	+54°44'	70.6	-1.9	30.5	0.071	54	85	O9 V	9.28	+0.24	-0.73	1.65	7.63	-4.6	12.2	0.043
1122		+54°2761	22 19.9	+55°11'	70.9	-1.6	30.5	0.065	48	79	O5 f	9.98	+0.34	-0.68	1.98	8.00	-4.4	11.9	0.033
1123		+54°2764	22 20.1	+54°53'	70.7	-1.8	30.4	0.065	46	76	B1 Ib	9.54	+0.28	-0.62	1.62	7.92	-5.8	13.7	0.040
1124*			22 21.0	+61°03'	74.0	+3.4	30.3	0.033	94	125	B3 Vn*	10.60	+0.77	-0.12	2.91	7.69	-1.5	9.2	0.011
1125		+57°2525	22 21.3	+57°20'	72.1	+0.2	30.2	0.046	43	73	B1.5 pe (IV-V)	10.35	+0.25	-0.59	1.50	8.85	-3.0	11.8	0.031
1126		+55°2748	22 21.5	+55°47'	71.4	-1.2	30.1	0.073	53	83	B0.5 V	9.96	+0.44	-0.52	2.16	7.80	-3.6	11.4	0.034
1127	212827	+53°2877	22 22.0	+53°16'	70.2	-3.4	30.1	0.041	44	74	A0 II	8.30	+0.26	+0.12	0.78	7.52	-4.4	11.9	0.052
1128		+62°2078	22 22.2	+62°54'	75.0	+4.9	30.1	0.152	74	104	O7	9.72	+1.11	0.00	4.29	5.43	-5.1	10.5	0.035
1129		+54°2775	22 22.2	+54°57'	71.0	-1.9	30.0	0.062	53	83	B1 V	9.57	+0.30	-0.49	1.68	7.89	-3.1	11.0	0.037
1130		+52°3210	22 23.0	+53°08'	70.2	-3.6	29.9	0.040	54	84	B1 V	10.69	-0.02	-0.78	0.72	9.97	-3.1	13.1	0.056
1131		+53°2885	22 23.2	+53°40'	70.5	-3.1	29.8	0.026	53	83	B2 III	10.46	+0.04	-0.76	0.84	9.62	-3.6	13.2	0.031
1132		+57°2536	22 23.7	+57°52'	72.7	+0.5	29.7	0.064	37	67	B1 II-III	10.32	+0.49	-0.43	2.25	8.07	-4.6	12.7	0.028
1133	213087	+64°1664	22 23.9	+64°37'	76.0	+6.4	29.8	0.017	33	63	B0.5 Ib	5.46	+0.37	-0.59	1.95	3.51	-5.8	9.3	0.009
1134*			22 23.9	+56°59'	72.3	-0.3	29.6	0.078	37	66	B1 III	10.77	+0.53	-0.40	2.37	8.40	-4.4	12.8	0.033
1135	E 239967	+55°2756	22 25.1	+56°08'	72.0	-1.1	29.4	0.055	46	76	B3 II	9.36	+0.33	-0.49	1.59	7.77	-4.6	12.4	0.034
1136	213405	+64°1672	22 26.0	+64°36'	76.2	+6.1	29.4	0.013	9	38	B0.5 V	7.95	+0.47	-0.44	2.25	5.70	-3.6	9.3	0.006
1137*			22 26.2	+56°30'	72.3	-0.9	29.1	0.048	59	89	B0.5 III:	10.49	+0.56	-0.47	2.52	7.97	-4.7	12.7	0.019
1138		+54°2790	22 26.2	+54°17'	71.2	-2.8	29.2	0.052	55	84	B0 IV n	9.69	+0.20	-0.67	1.50	8.19	-4.6	12.8	0.035
1139		+56°2794	22 26.5	+56°43'	72.4	-0.7	29.1	0.067	56	85	A3 Ia	6.65	+0.56	+0.24	1.41	5.24	-6.9	12.1	0.048
1140*			22 26.7	+56°07'	72.2	-1.2	29.0	0.034	62	91	B0 IV	9.89*	+0.60	-0.39	2.70	7.19	-4.6	11.8	0.012
1141		+60°2405	22 27.5	+61°08'	74.7	+3.1	28.9	0.055	88	117	B3 nm (V?)	9.91	+0.54	-0.19	2.22	7.69	-1.5	9.2	0.025
1142	E 235874	+50°3748	22 28.9	+50°42'	69.8	-6.1	28.7	0.029	42	71	B3 III	9.64	0.00	-0.70	0.60	9.04	-3.3	12.3	0.048
1143*		+55°2770	22 29.9	+56°01'	72.5	-1.5	28.4	0.070	60	88	B1.5 II	10.10	+0.37	-0.54	1.86	8.24	-4.8	13.0	0.038
1144*		+55°2770	22 29.9	+56°01'	72.5	-1.5	28.4	0.070	61	89	B1.5 III	9.70	+0.35	-0.54	1.80	7.90	-4.0	11.9	0.039
1145*			22 30.4	+57°50'	73.4	0.0	28.2	0.056	44	72	B2 III	10.45	+0.42	-0.46	1.98	8.47	-3.6	12.1	0.028
1146		+55°2771	22 30.4	+56°11'	72.7	-1.4	28.3	0.075	63	91	B1 IV	9.70	+0.48	-0.45	2.22	7.48	-3.8	11.3	0.034
1147	214419	+56°2818	22 32.9	+56°23'	73.0	-1.4	27.7	0.113	64	92	W R*	8.8*	+0.41	-0.53					
1148	E 240010	+55°2783	22 34.6	+55°19'	72.8	-2.5	27.4	0.079	76	103	B1: IV: pmne	9.48	+0.38	-0.60	1.92	7.56	-3.8	11.4	0.041
1149		+57°2581	22 36.1	+57°54'	74.1	-0.3	27.0	0.063	72	99	B0 III	10.04	+0.61	-0.42	2.73	7.31	-5.0	12.3	0.023
1150		+55°2795	22 38.7	+55°50'	73.5	-2.3	26.5	0.050	49	76	B1 III	9.80	+0.31	-0.52	1.71	8.09	-4.4	12.5	0.029
1151		+53°2964	22 39.2	+53°33'	72.6	-4.3	26.4	0.025	61	87	B2 IV: pmne	9.19	+0.15	-0.71	1.17	8.02	-2.9	10.9	0.021
1152		+54°2847	22 40.3	+55°13'	73.5	-2.9	26.2	0.073	51	77	B1 II? m	10.12	+0.39	-0.53	1.95	8.17	-4.9	13.1	0.037
1153	215605	+57°2597	22 41.3	+57°20'	74.5	-1.1	25.9	0.031	40	66	B2: IV: mne	9.43	+0.25	+0.68	1.47	7.96	-2.9	10.9	0.021
1154	E 240047	+56°2852	22 41.4	+56°55'	74.3	-1.5	25.9	0.048	62	88	B2 III	9.83	+0.35	-0.43	1.77	8.06	-3.6	11.7	0.027
1155		+55°2808	22 42.3	+55°48'	74.0	-2.5	25.7	0.060	51	77	B2 III	10.01	+0.41	-0.46	1.95	8.06	-3.6	11.7	0.031

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
1156	215806	+57°2606	22 42.7 ^m	+57°46'	74.9	- 0.8	25.6	0.040	71	97	B0 Ib	9.20	+0.42	-0.57	2.16	7.04	-6.2	13.2	0.018
1157	215835	+57°2607	22 42.9	+57°33'	74.8	- 1.0	25.6	0.060	63	99	O6 n	8.59	+0.33	-0.65	1.95	6.64	-5.1	11.7	0.031
1158	215836	+55°2809	22 42.9	+55°54'	74.1	- 2.5	25.6	0.073	56	82	B1 II	9.19	+0.50	-0.43	2.28	6.91	-4.9	11.8	0.032
1159		+57°2611	22 43.4	+57°58'	75.0	- 0.6	25.5	0.041	72	97	B0 III	9.64	+0.49	-0.52	2.37	7.27	-5.0	12.3	0.017
1160*			22 43.8	+56°45'	74.6	- 1.8	25.4	0.062	53	79	B0: III: pe	10.18	+0.45	-0.65	2.25	7.92	-5.0	12.9	0.028
1161	216014	+64°1717	22 44.2	+64°32'	77.9	+ 5.3	25.4	0.035	58	83	B0.5 V: nn	6.8*	+0.31	-0.62	1.77	5.03	-3.6	8.6	0.020
1162	216044	+54°2865	22 44.5	+54°36'	73.7	- 3.7	25.3	0.023	64	89	B0 II	8.51	+0.08	-0.82	1.14	7.37	-5.4	12.8	0.020
1163		+61°2352	22 46.0	+61°48'	77.0	+ 2.7	25.0	0.075	63	88	B5 Ib:	10.02	+1.43	+0.49	4.77	5.25	-5.8	11.0	0.016
1164	216248	+57°2625	22 46.3	+58°08'	75.5	- 0.7	24.9	0.034	55	80	B3 II	9.89	+0.44	-0.41	1.92	7.97	-4.6	12.6	0.018
1165	216411	+58°2492	22 47.6	+58°28'	75.7	- 0.4	24.6	0.059	46	71	B1 Ia	7.20	+0.60	-0.43	2.58	4.62	-6.9	11.5	0.023
1166	216438	+52°3315	22 47.8	+53°11'	73.6	- 5.2	24.6	0.031	56	81	B1 II	8.46	+0.06	-0.76	0.96	7.50	-4.9	12.4	0.032
1167	216532	+61°2356	22 48.6	+61°54'	77.3	+ 2.7	24.4	0.044	71	95	O8	8.00	+0.54	-0.47	2.55	5.45	-5.1	10.6	0.017
1168	216629	+61°2361	22 49.4	+61°36'	77.2	+ 2.4	25.2	0.111	105	130	B2 pe	9.30	+0.73	-0.20	2.91	6.39	-4.1	10.0	0.038
1169	216658	+61°2363	22 49.6	+61°36'	77.3	+ 2.3	24.2	0.091	101	125	B0 V	8.89	+0.70	-0.29	3.00	5.89	-4.1	10.0	0.030
1170	216711	+61°2364	22 50.0	+62°04'	77.5	+ 2.7	24.1	0.047	86	110	B1 V	9.05	+0.62	-0.33	2.64	6.41	-3.1	9.5	0.018
1171		+55°2840	22 51.0	+55°51'	75.1	- 3.0	23.9	0.064	46	70	O7.5 p	10.01	+0.45	-0.56	2.31	7.70	-5.1	12.8	0.028
1172		+56°2903	22 51.6	+57°04'	75.7	- 1.9	23.7	0.063	59	83	B0.5: IV:	10.12	+0.22	-0.67	1.50	8.62	-4.2	12.8	0.042
1173	216898	+61°2370	22 51.8	+61°46'	77.6	+ 2.4	23.7	0.085	85	109	O8	8.00	+0.53	-0.48	2.52	5.48	-5.1	10.6	0.034
1174	216927	+58°2511	22 52.0	+58°22'	76.2	- 0.7	23.6	0.040	39	63	B9 Ia	8.31	+0.86	+0.05	2.76	5.55	-6.9	12.4	0.014
1175		+63°1907	22 52.5	+63°56'	78.5	+ 4.3	23.6	0.080	40	64	B1 Ia	9.08	+0.85	-0.21	3.33	5.75	-6.9	12.6	0.024
1176	217035	+62°2136	22 52.6	+62°19'	77.9	+ 2.9	23.5	0.037	91	115	B0 V	7.74	+0.46	-0.54	2.28	5.46	-4.1	9.6	0.016
1177	217061	+61°2372	22 52.8	+62°05'	77.8	+ 2.6	23.5	0.030	87	110	B1 V	8.77	+0.69	-0.25	2.85	5.92	-3.1	9.0	0.010
1178	217086	+61°2373	22 53.0	+62°12'	77.9	+ 2.7	23.4	0.024	93	116	O5	7.64	+0.63	-0.43	2.85	4.79	-5.1	9.9	0.008
1179	217312	+62°2147	22 54.8	+62°32'	78.2	+ 3.0	23.1	0.028	80	103	B0 IV	7.39	+0.39	-0.55	2.07	5.32	-4.6	9.9	0.014
1180	217463	+62°2152	22 55.8	+62°14'	78.2	+ 2.6	22.8	0.016	93	116	B2 V	8.99	+0.54	-0.35	2.34	6.65	-2.0	8.6	0.007
1181	217490	+58°2521	22 56.0	+59°05'	77.0	- 0.3	22.8	0.074	51	74	B0.5 Ia	8.73	+0.80	-0.27	3.24	5.49	-6.9	12.4	0.023
1182	E 240160	+56°2928	22 57.4	+56°27'	76.2	- 2.8	22.5	0.058	75	98	O9	10.02	+0.48	-0.52	2.37	7.65	-4.6	12.2	0.024
1183		+56°2929	22 57.5	+56°30'	76.2	- 2.8	22.5	0.049	63	86	B2 V: nn	10.32	+0.27	+0.43	1.53	8.79	-2.0	10.8	0.032
1184		+56°2930	22 57.8	+57°00'	76.4	- 2.3	22.4	0.080	76	98	B1 IV	9.68	+0.37	-0.51	1.89	7.79	-3.8	11.6	0.042
1185	E 240165	+56°2931	22 58.0	+56°39'	76.3	- 2.6	22.4	0.061	78	100	O9.5 V	10.13	+0.47	-0.53	2.31	7.82	-4.4	12.2	0.026
1186	E 240168	+55°2878	22 58.2	+56°04'	76.1	- 3.2	22.4	0.037	37	59	B1 III	9.17	+0.55	-0.39	2.43	6.74	-4.4	11.1	0.015
1187	E 240171	+56°2934	22 58.5	+56°36'	76.3	- 2.7	22.3	0.045	66	88	B1 V	9.90	+0.18	-0.65	1.32	8.58	-3.1	11.7	0.034
1188	217919	+62°2161	22 59.0	+63°10'	78.9	+ 3.3	22.2	0.015	64	86	B0 IV: n	8.24	+0.62	-0.30	2.76	5.48	-4.6	10.1	0.005
1189		+57°2678	22 59.4	+57°46'	76.9	- 1.7	22.1	0.063	64	86	B0.5 V	9.79	+0.48	-0.49	2.28	7.51	-3.6	11.1	0.028
1190	218066	+62°2163	23 00.0	+62°51'	78.9	+ 3.0	21.9	0.015	37	59	B1: V:	7.62	+0.40	-0.52	1.98	5.64	-3.1	8.7	0.008

TABLE 5—Continued

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
1191	218195	+57°2689	23 01 ^m 70	+57°43'	77.1	- 1.8	21.7	0.055	70	92	O8	8.34	+0.27	-0.70	1.74	6.60	-5.1	11.7	0.032
1192	218323	+63°1928	23 02.0	+63°46'	79.4	+ 3.8	21.5	0.041	68	90	B0.5 II	7.62	+0.59	-0.39	2.61	5.01	-5.2	10.2	0.016
1193	218342	+62°2170	23 02.1	+62°41'	79.0	+ 2.8	21.5	0.041	58	80	B0.5 IV	7.38	+0.41	-0.55	2.13	5.25	-4.6	9.8	0.019
1194	218376	+58°2545	23 02.4	+58°53'	77.7	- 0.8	21.4	0.019	71	92	B0.5 IV	4.84	-0.04	-0.87	0.72	4.12	-4.2	8.3	0.026
1195		+55°2899	23 02.7	+55°28'	76.5	- 4.0	21.4	0.027	63	84	B1 III p	10.21	+0.14	-0.67	1.20	9.01	-4.4	13.4	0.022
1196	E 236044	+53°3076	23 02.7	+54°13'	76.0	- 5.1	21.4	0.035	64	85	B1 V	9.60	+0.20	-0.66	1.38	8.22	-3.1	11.3	0.025
1197		+58°2549	23 04.5	+58°35'	77.8	- 1.2	20.9	0.097	75	96	B0 III	10.31	+0.72	-0.26	3.06	7.25	-5.0	12.2	0.032
1198		+60°2493	23 05.4	+60°56'	78.8	+ 1.0	20.8	0.070	106	127	B0.5 pe*	9.42	+0.84	-0.30	3.36	6.06			0.021
1199	218915	+52°3383	23 06.7	+52°31'	76.0	- 6.9	20.6	0.025	53	84	O9 I	7.20	+0.02	-0.90	0.99	6.21	-6.9	13.1	0.025
1200		+59°2664	23 07.0	+60°03'	78.6	+ 0.1	20.4	0.066	67	87	B1.5 II	9.71	+0.83	-0.20	3.24	6.47	-4.8	11.3	0.020
1201	219287	+58°2565	23 09.6	+58°51'	78.5	- 1.1	19.8	0.023	61	81	B0 Ia	8.91	+1.02	-0.13	3.96	4.95	-6.9	11.8	0.006
1202*		23 10.5	+59°01'		78.7	- 1.0	19.6	0.047	84	103	B0 III*	10.71	+0.68	-0.37	2.94	7.77	-5.0	12.8	0.016
1203	219460	+59°2683	23 10.8	+59°55'	79.0	- 0.2	19.6	0.055	74	94	W R	9.89	+0.62	-0.28					
1204		+61°2408	23 11.1	+61°32'	79.6	+ 1.3	19.5	0.072	93	112	B0 III? p?	9.7*	+0.79	-0.21	3.27	6.43	-5.0	11.4	0.022
1205		+61°2472	23 12.0	+62°12'	79.9	+ 1.9	19.3	0.062	64	83	B5 Ib	9.57	+1.12	+0.11	3.84	5.73	-5.8	11.5	0.016
1206		+63°1962	23 12.8	+63°15'	80.4	+ 2.9	19.2	0.053	63	82	B1 III	8.40	+0.32	-0.56	1.74	6.66	-4.4	11.1	0.030
1207*		23 12.8	+61°20'		79.7	+ 1.1	19.2	0.051	105	124	B0.5 Ib:	10.23	+1.00	-0.09	3.84	6.39	-5.8	12.2	0.013
1208*		23 13.0	+59°29'		79.2	- 0.7	19.1	0.008	39	58	B0.5 V	10.89	+0.46	-0.48	2.22	8.67	-3.6	12.3	0.004
1209		+63°1964	23 13.1	+63°34'	80.5	+ 3.2	19.1	0.089	63	82	B0 II	8.46	+0.71	-0.38	3.03	5.43	-5.4	10.8	0.039
1210	E 240250	+59°2695	23 13.6	+59°19'	79.2	- 0.9	19.0	0.067	90	109	B9 Iab	8.81	+0.65	+0.02	2.13	6.68	-6.5	13.2	0.031
1211		+62°2210	23 14.3	+62°56'	80.4	+ 2.5	18.8	0.144	74	93	B9 Ia	8.42	+1.15	+0.32	3.63	4.79	-6.9	11.7	0.040
1212	220116	+57°2724	23 16.1	+57°43'	78.9	- 2.5	18.5	0.090	81	99	B0.5 V pe	8.69	+0.59	-0.43	2.61	6.08	-3.6	9.7	0.034
1213		+60°2522	23 16.2	+60°38'	79.9	+ 0.3	18.4	0.033	63	81	O7 f	8.67	+0.41	-0.62	2.19	6.48			0.015
1214		+58°2580	23 16.7	+58°25'	79.3	- 1.9	18.3	0.094	75	93	B0.5 V:	10.10	+0.80	-0.27	3.24	6.86	-3.6	10.5	0.029
1215		+60°2525	23 17.3	+60°18'	79.9	- 0.1	18.2	0.029	62	80	B0 III-IV	9.64	+0.30	-0.64	1.80	7.84	-4.8	12.6	0.016
1216		+59°2707	23 17.7	+59°49'	79.8	- 0.6	18.1	0.028	77	95	B9: V:	9.84	+0.08	-0.11	0.42	9.42	+1.0	8.4	0.087
1217*		23 18.4	+61°35'		80.5	+ 1.1	17.9	0.065	86	104	O8 (f)	10.80	+0.75	-0.35	3.18	7.62			0.020
1218		+59°2719	23 20.9	+60°06'	80.3	- 0.4	17.4	0.037	136	154	B2 III:	10.63	+0.65	-0.28	2.67	7.96	-3.6	11.6	0.014
1219	220770	+60°2539	23 21.4	+60°53'	80.6	+ 0.3	17.3	0.048	69	86	A5 Ib	7.84	+0.80	+0.48	1.95	5.89			0.025
1220		+60°2542	23 22.6	+60°50'	80.7	+ 0.2	17.0	0.039	67	84	A2 Ib	8.81	+0.66	+0.19	1.80	7.01	-5.6	12.6	0.022
1221		+60°2553	23 24.1	+60°45'	80.9	+ 0.1	16.7	0.028	72	89	B2 II	10.08	+0.45	-0.43	2.07	8.01	-4.7	12.7	0.014
1222		+59°2735	23 25.5	+59°18'	80.6	- 1.3	16.4	0.100	63	80	B0 Ib	9.89	+1.16	-0.04	4.38	5.51	-6.2	11.7	0.023
1223		+60°2581	23 30.5	+60°51'	81.6	- 0.0	15.3	0.054	60	75	B3 V	10.60	+0.64	-0.09	2.52	8.08	-1.5	9.6	0.021
1224		+60°2582	23 30.9	+60°22'	81.6	- 0.5	15.2	0.068	73	88	B3 Iab	8.68	+0.77	+0.01	2.58	6.10	-6.5	12.6	0.026
1225		+60°2584	23 31.0	+60°38'	81.7	- 0.3	15.2	0.049	59	74	B1 pe (III-V)	10.29	+0.53	-0.58	2.37	7.92	-3.8	11.7	0.021

TABLE 5—Concluded

No.	HD	BD	1900		l	b	ϕ	p	θ	θ'	Spectrum	V	B-V	U-B	3E(B-V)	m	M	m-M	p/A _v
			α	δ															
1226*			23 36.8	+60°57'	82.6	-0.2	13.5	0.062	62	75	B0.5 IV	9.78	+0.53	-0.45	2.43	7.35	-4.2	11.6	0.026
1227		+61°2509	23 39.0	+61°36'	82.8	+0.4	13.4	0.048	77	90	B0.5 Ib	8.42	+0.46	-0.55	2.22	6.20	-5.8	12.0	0.022
1228		+60°2615	23 39.9	+61°07'	82.8	0.0	13.2	0.030	70	83	B0.5 Ib	9.10	+0.60	-0.45	2.64	6.46	-5.8	12.3	0.011
1229		+61°2515	23 40.9	+61°43'	83.1	+0.5	13.0	0.061	84	97	B0.5 V	9.95	+0.43	-0.51	2.13	7.82	-3.6	11.4	0.029
1230		+62°2296	23 42.4	+62°40'	83.4	+1.4	12.7	0.057	115	128	B3 Ia?	8.65	+1.09	+0.06	3.87	4.78	-6.9	11.7	0.015
1231		+61°2526	23 42.8	+61°29'	83.2	+0.2	12.6	0.024	90	103	B2 Ib	8.77	+0.39	-0.50	1.89	6.88	-5.8	12.7	0.013
1232		+62°2299	23 43.1	+62°50'	83.6	+1.5	12.5	0.023	174	7	O8	9.58	+0.61	-0.47	2.76	6.82	-5.1	11.9	0.008
1233		+61°2529	23 43.6	+61°26'	83.2	+0.2	12.4	0.034	88	100	B1 Ib	8.65	+0.53	-0.47	2.37	6.28	-5.8	12.1	0.014
1234	223387	+56°3094	23 44.0	+56°40'	82.3	-4.5	12.4	0.051	68	80	B pe	8.80	+0.21	-0.79					
1235	223385	+61°2533	23 44.0	+61°40'	83.4	+0.4	12.3	0.026	57	69	A3 Ia+	5.42	+0.66	-0.02	1.71	3.71			0.015
1236		+62°2313	23 46.9	+62°45'	84.0	+1.4	11.7	0.035	79	91	B3 Ib	8.82	+0.49	-0.25	2.07	6.75	-5.8	12.6	0.017
1237		+61°2550	23 47.3	+61°34'	83.8	+0.2	11.6	0.029	62	74	B0 IV	9.29	+0.33	-0.63	1.89	7.40	-4.6	12.0	0.015
1238		+61°2559	23 48.6	+61°52'	84.0	+0.5	11.3	0.043	65	76	O9 V	9.72	+0.29	-0.66	1.80	7.92	-4.6	12.5	0.024
1239	223924	+56°3106	23 48.6	+56°16'	82.9	-5.0	11.4	0.035	64	75	B1.5 V	8.24	+0.02	-0.71	0.81	7.43	-2.6	10.0	0.043
1240		+62°2320	23 48.8	+62°40'	84.2	+1.2	11.3	0.049	77	88	B2 V	10.08	+0.37	-0.49	1.83	8.25	-2.0	10.2	0.027
1241	223980	+60°2636	23 48.9	+60°18'	83.7	-1.1	11.3	0.067	80	91	A0 Ia+	6.91	+0.71	-0.05	2.13	4.78			0.031
1242	223987	+60°2637	23 49.2	+61°03'	83.9	-0.4	11.2	0.055	70	81	B1.5 Ib	7.54	+0.51	-0.49	2.28	5.26	-5.8	11.1	0.024
1243	224055	+61°2562	23 49.7	+61°17'	84.0	-0.1	11.1	0.088	67	78	B3 Ia	7.17	+0.71	-0.22	2.73	4.44	-6.9	11.3	0.032
1244	224151	+56°3115	23 50.5	+56°53'	83.2	-4.5	10.9	0.020	87	98	B0.5 II	6.00	+0.22	-0.72	1.50	4.50	-5.2	9.7	0.013
1245	224257	+55°3051	23 51.3	+55°26'	83.1	-5.9	10.8	0.033	66	77	B0 IV	7.98	-0.06	-0.89	0.72	7.26	-4.6	11.9	0.046
1246*			23 51.7	+60°40'	84.1	-0.8	10.7	0.054	89	100	B1 ne (V)	9.84	+0.43	-0.52	2.07	7.77	-3.1	10.9	0.028
1247		+62°2329	23 51.7	+62°56'	84.6	+1.4	10.7	0.077	70	81	B5 V	10.13	+0.40	-0.22	1.68	8.45	-0.9	9.4	0.046
1248		+66°1661	23 52.4	+67°00'	85.4	+5.4	10.5	0.087	89	100	O9 V	8.72	+0.81	-0.20	3.36	5.36	-4.6	10.0	0.028
1249	224424	+58°2676	23 52.7	+59°09'	84.0	-2.3	10.4	0.044	48	58	B1 Iab	8.09	+0.73	-0.22	2.97	5.12	-6.5	11.6	0.015
1250	224425	+56°3119	23 52.7	+56°34'	83.5	-4.9	10.4	.004			A2: V:*	7.30	+0.22	+0.15	0.48	6.82	+2.0	8.8	
1251*			23 53.7	+60°36'	84.3	-0.9	10.2	0.046	85	95	B1 V	10.22	+0.29	-0.59	1.65	8.57	-3.1	11.7	0.028
1252	E 240464	+59°2799	23 53.7	+59°43'	84.2	-1.8	10.2	0.032	73	83	O9 V	9.59	+0.31	-0.61	1.86	7.73	-4.6	12.3	0.017
1253	224599	+59°2801	23 54.1	+59°29'	84.2	-2.0	10.1	0.030	21	31	B0.5: V: pmne	9.55	+0.42	-0.53	2.10	7.45	-3.6	11.0	0.014
1254	224905	+59°2813	23 56.6	+59°54'	84.6	-1.7	9.6	0.024	101	111	B1 V n	8.47	+0.15	-0.56	1.23	7.24	-3.1	10.3	0.020
1255		+66°1675	23 57.0	+66°51'	85.8	+5.2	9.5	0.113	106	116	O7	9.05	+1.09	+0.04	4.23	4.82	-5.1	9.9	0.027
1256		+62°2353	23 57.2	+62°20'	85.1	+0.8	9.4	0.060	74	83	B3 II	9.87	+0.24	-0.60	1.32	8.55	-4.6	13.2	0.045
1257	225094	+62°2356	23 58.3	+63°05'	85.3	+1.5	9.2	0.050	75	84	B3 Ia	6.24	+0.33	-0.54	1.59	4.65	-6.9	11.6	0.031
1258	225146	+60°2663	23 58.8	+60°33'	85.0	-1.1	9.1	0.068	72	81	B0 Ib p	8.60	+0.38	-0.64	2.04	6.56	-6.2	12.8	0.033
1259	225160	+61°2585	23 58.9	+61°40'	85.1	+0.1	9.1	0.053	92	101	O8 f	8.19	+0.27	-0.72	1.74	6.45			0.030

FOOTNOTES

Catalogue
Number

- 3 No. 40 Reference 1. May be variable in magnitude.
4 No. 41 Reference 1.
6 Strong Fe II emission.
13 A 1952, August 21 observation gave $V = 9.01$, $B-V = +0.16$, $U-B = -0.71$. A 1952, September 10 observation gave $V = 8.80$, $B-V = +0.23$, $U-B = -0.80$. The data in the table refers to three concordant 1954 observations.
14 Shell spectrum? Like 27 C Ma? He I 3964 very strong.
29 No. 1 Reference 9.
31 No. 2 Reference 9.
33 No. 3 Reference 9.
37 No. 4 Reference 9.
44 No. 1 Reference 5.
46 No. 89 Reference 8. Very strong Fe II emission.
48 No. 5 Reference 9.
51 No. 6 Reference 9.
53 No. 89 Reference 8.
55 No. 7 Reference 9.
56 Also No. 8 Reference 9.
57 No. 9 Reference 9.
58 No. 102 Reference 8.
59 No. 103 Reference 8.
61 No. 106 Reference 8.
62 No. 108 Reference 8.
63 No. 110 Reference 8. Strong 4430.
65 No. 10 Reference 9.
66 No. 11 Reference 9.
67 No. 2 Reference 5.
69 Five photometric observations gave extreme values in V of 9.79 and 9.94.
74 No. 12 Reference 9.
76 No. 13 Reference 9.
78 No. 14 Reference 9.
79 No. 15 Reference 9.
81 No. 2 Reference 5.
85 No. 1 Reference 2.
86 No. 3 Reference 6.
88 No. 16 Reference 9.
89 No. 17 Reference 9.
91 No. 18 Reference 9.
93 No. 19 Reference 9.
94 No. 20 Reference 9.
96 No. 21 Reference 9.
97 No. 2 Reference 2.
102 No. 5 Reference 6.
112 Shell

FOOTNOTES—Continued

Catalogue
Number

- 116 No. 10 Reference 6.
 117 No. 11 Reference 6.
 118 No. 12 Reference 6.
 119 No. 13 Reference 6.
 123 No. 14 Reference 6.
 142 No. 20 Reference 6.
 146 No. 21 Reference 6.
 148 This star is recorded as No. 80, spectral type O6 f p, in Morgan, Code and Whitford (1955) and as anonymous No. 4 in Nassau and Morgan (1951).
 153 No. 22 Reference 6.
 164 No. 24 Reference 6.
 186 B pme or A pme shell?
 188 No. 3 Reference 2.
 190 Moonlight on spectrogram.
 193 No. 5 Reference 2.
 197 No. 31 Reference 6.
 198 No. 32 Reference 6.
 200 No. 33 Reference 6.
 201 No. 34 Reference 6.
 206 Shell at H δ ? 4481 too strong.
 207 Fainter than 10 Lac.
 215 No. 6 Reference 2.
 216 No. 36 Reference 6.
 233 No. 7 Reference 2.
 242 O II weak.
 252 No. 8 Reference 2.
 259 No. 39 Reference 6.
 261 No. 40 Reference 6.
 283 A type companion of BD +58°451.
 298 No. 22 Reference 9.
 300 H lines very broad.
 301 No. 5 Reference 5.
 305 No. 9 Reference 2.
 309 No. 10 Reference 2.
 311 No. 11 Reference 2.
 322 No. 12 Reference 2.
 335 Northern and preceding companion of BD +60°512.
 352 Luminosity V at 4650. I a-b at 4100.
 366 No. 23 Reference 9.
 370 No. 24 Reference 9.
 371 No. 13 Reference 2.
 374 K weak.
 379 Variable, CC Cas.
 404 No. 14 Reference 2.
 405 No. 6 Reference 5.

FOOTNOTES--Continued

Catalogue Number	
412	No. 7 Reference 5.
419	No. 15 Reference 2. Two line binary?
420	Ia from N III, C III weak.
440	No. 16 Reference 2.
446	No. 17 Reference 2. Moonlight on spectrogram.
461	4650 weak.
468	Fainter, following star is gG8.
497	No. 18 Reference 2.
498	No. 19 Reference 2.
504	Shell
505	Shell
510	No. 20 Reference 2.
523	No. 21 Reference 2.
524	No. 22 Reference 2.
537	Very strong H and K. K.
543	No. 23 Reference 2.
555	High excitation emission superposed on about O9.
566	No. 25 Reference 2.
569	Shell
573	No. 26 Reference 2.
587	No. 27 Reference 2.
591	No. 28 Reference 2.
600	No. 29 Reference 2.
652	No. 33 Reference 7.
655	No. 34 Reference 7.
661	No. 35 Reference 7.
662	No. 30 Reference 7.
668	No. 37 Reference 7.
673	No. 36 Reference 7.
675	No. 38 Reference 7.
731	Moonlight on spectrogram.
760	No. 2 Reference 10.
775	Probably variable 1952, August 22 V = 9.77, B-V = +0.86, U-B = -0.12. 1952, September 8 V = 9.92, B-V = +0.87, U-B = -0.12. Strong H emission.
803	Weak K line.
831	Weak K line.
854	Probably variable
867	1954, July 30 V = 7.94, B-V = +0.40, U-B = -0.57. 1954 July 31 V = 8.14, B-V = +0.42, U-B = -0.56. Variable. V 444 Cygni.
928	No. 14 Reference 3, MWC 342, very strong emission of H and Fe II.
952	No. 16 Reference 3.
960	No. 17 Reference 3.
970	No. 17 Reference 3.

FOOTNOTES—Concluded

Catalogue Number	
972	No. 19 Reference 3.
977	Similar to 27 C Ma?
988	No. 2 in VI Cyg, Reference 11.
992	No. 12 in VI Cyg, Reference 12. Faint companion <u>not</u> included in photometric observations.
993	No. 6 in VI Cyg, Reference 11.
995	No. 9 in VI Cyg, Reference 11.
997	No. 7 in VI Cyg, Reference 11.
1016	Probably 2-line binary.
1018	No. 44 Reference 1.
1035	No. 4 Reference 1.
1042	No. 7 Reference 1.
1043	Shell. May be variable in magnitude.
1051	P Cygni spectrum.
1055	No. 9 Reference 1.
1070	No. 47 Reference 1.
1095	No. 49 Reference 1.
1098	No. 50 Reference 1.
1100	No. 17 Reference 1.
1106	No. 52 Reference 1.
1115	No. 18 Reference 1.
1117	No. 20 Reference 1.
1118	No. 21 Reference 1.
1124	No. 55 Reference 1.
1134	No. 25 Reference 1.
1137	No. 58 Reference 1.
1140	No. 59 Reference 1.
1143	Preceding.
1144	Following.
1145	No. 62 Reference 1.
1147	Variable in magnitude and spectrum. CQ Cep.
1160	No. 65 Reference 1.
1161	Variable. AH Cep.
1198	All lines very weak.
1202	No. 30 Reference 1.
1207	No. 32 Reference 1.
1208	No. 68 Reference 1.
1217	No. 70 Reference 1.
1226	No. 36 Reference 1.
1246	No. 38 Reference 1.
1250	This star was incorrectly recorded in Ap. J. 114, p 258 as HD 224436.
1251	No. 39 Reference 1.

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- | | |
|---------------|--|
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| Reference 6. | Gonzales, G. and Gonzalez, G. 1954, Bol. Obs. Ton. y Tac., No. 9, pp. 26 - 27. |
| Reference 7. | Morgan, W. W., Gonzalez, G. and Gonzalez, G. 1953, Ap. J. 118, 345 - 346. |
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| Reference 9. | Hiltner, W. A. Table 1 of this publication. |
| Reference 10. | Hiltner, W. A. and Iriarte, B. 1955, Ap. J. 121, 556. |
| Reference 11. | Munch, Luis and Morgan, W. W. 1953, 118, 161. |
| Reference 12. | Morgan, W. W., Johnson, H. L., Roman, Nancy G., 1954, PASP 66, 85. |

Column 16.—This column is a computation of the interstellar absorption at that wave length corresponding to the V magnitude. The normal colors adopted are those given in Table 6. A uniform ratio of total to selective absorption of 3 (Hiltner and Johnson 1956) was assumed for all galactic longitudes and latitudes.

Column 17.—This gives the magnitude corrected for interstellar absorption found in column 16.

Column 18.—The absolute magnitudes assumed here are based on the tentative calibration published earlier (Johnson and Hiltner 1956). Blaauw (1956) has shown that the observed luminosity of the early-type stars, especially B2 and B3, is dependent upon whether the star is a member of an association or a field star. Here, however, we have made no corrections for such evolutionary effects.

Column 19.—This column gives the distance modulus of the individual stars.

Column 20.—The astrophysically important quantity—the ratio of interstellar polarization to interstellar absorption—is given in this column. It is, of course, the ratio of columns 9 and 16.

TABLE 6
NORMAL COLORS OF O AND B STARS

Spectral Type	$(B-V)_0$	Spectral Type	$(B-V)_0$	Spectral Type	$(B-V)_0$
O5.....	−0.32	B0.5.....	−0.28	B9.....	−0.06
O6.....	−.32	B1.....	−.26	B9.5.....	−.03
O7.....	−.32	B2.....	−.24	A0.....	.00
O8.....	−.31	B3.....	−.20	A1.....	+ .03
O9.....	−.31	B5.....	−.16	A2.....	+ .06
O9.5.....	−.30	B6.....	−.14	A3.....	+ .09
B0.....	−0.30	B7.....	−.12	A5.....	+0.15
		B8.....	−0.09		

DISCUSSION

Distribution of the Stars

The distribution of the stars in the catalogue is shown in Figures 6, 7, and 8. In the upper part of each figure the stars have been plotted in galactic co-ordinates. Only those stars in the catalogue with galactic latitude from -6° to $+6^\circ$ are on the diagram. Although these data are not free of observational selection, because of the available telescope time and other factors, the well-known regions where few early-type stars are known are well defined: galactic longitudes 350° – 25° and from 110° to 130° . Also many associations can be identified, but a discussion of the associations will not be made here. On the lower sections of the three figures are plotted the stars for which distance moduli are available. In general, the observed stars have distance moduli from 10 to 13. To a first approximation the three diagrams appear to show little more than a general scattering, with a few exceptions, notably the double cluster in Perseus. This scatter for individual distance moduli is to be anticipated, since the probable error for the distance modulus of a single star is of the order of 0.5 mag. One interesting feature should be noted in passing: it is the concentration of stars at increasing distance modulus in passing from longitude 105° backward to, say, 70° . At the double cluster the distance modulus is 11.8, but at 70° it has increased to 12.7, corresponding to distances of 2.3 and 3.5 kpc, respectively. There is little doubt that this is evidence of the Perseus spiral arm (see Morgan, Whitford, and Code 1953).

For purposes of analysis the stars in Table 5 were placed in fifteen galactic-longitude groups. Because of the non-uniform distribution of stars in galactic longitude, the

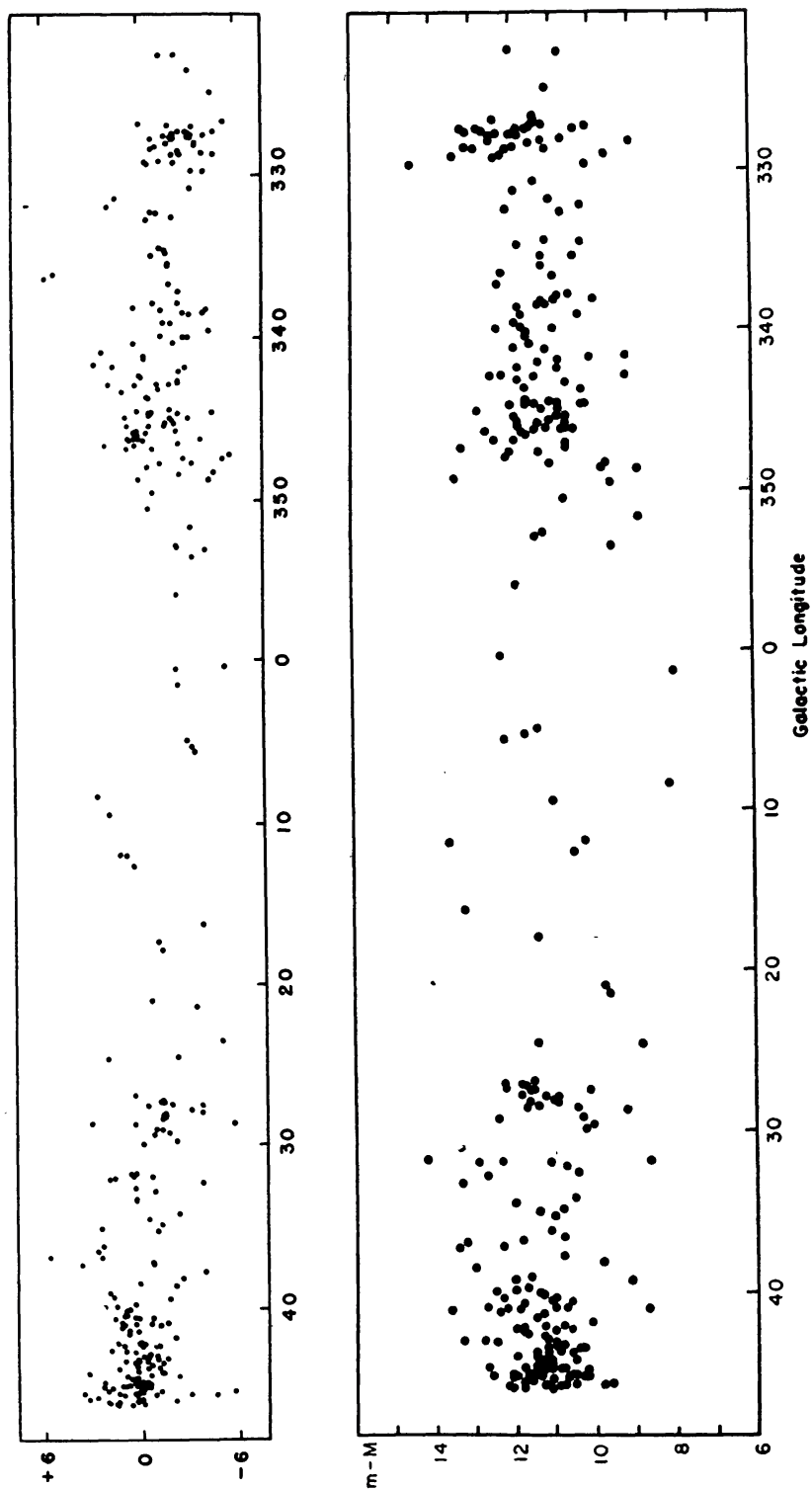


FIG. 6.—Distribution of the stars in the catalogue in galactic co-ordinates, and in galactic longitude and distance modulus. All stars in the catalogue from $l = -6^\circ$ to $l = +6^\circ$ are plotted in the upper figure. The lower figure contains only those stars from $l = -6^\circ$ to $l = +6^\circ$ for which distance moduli are recorded in the table.

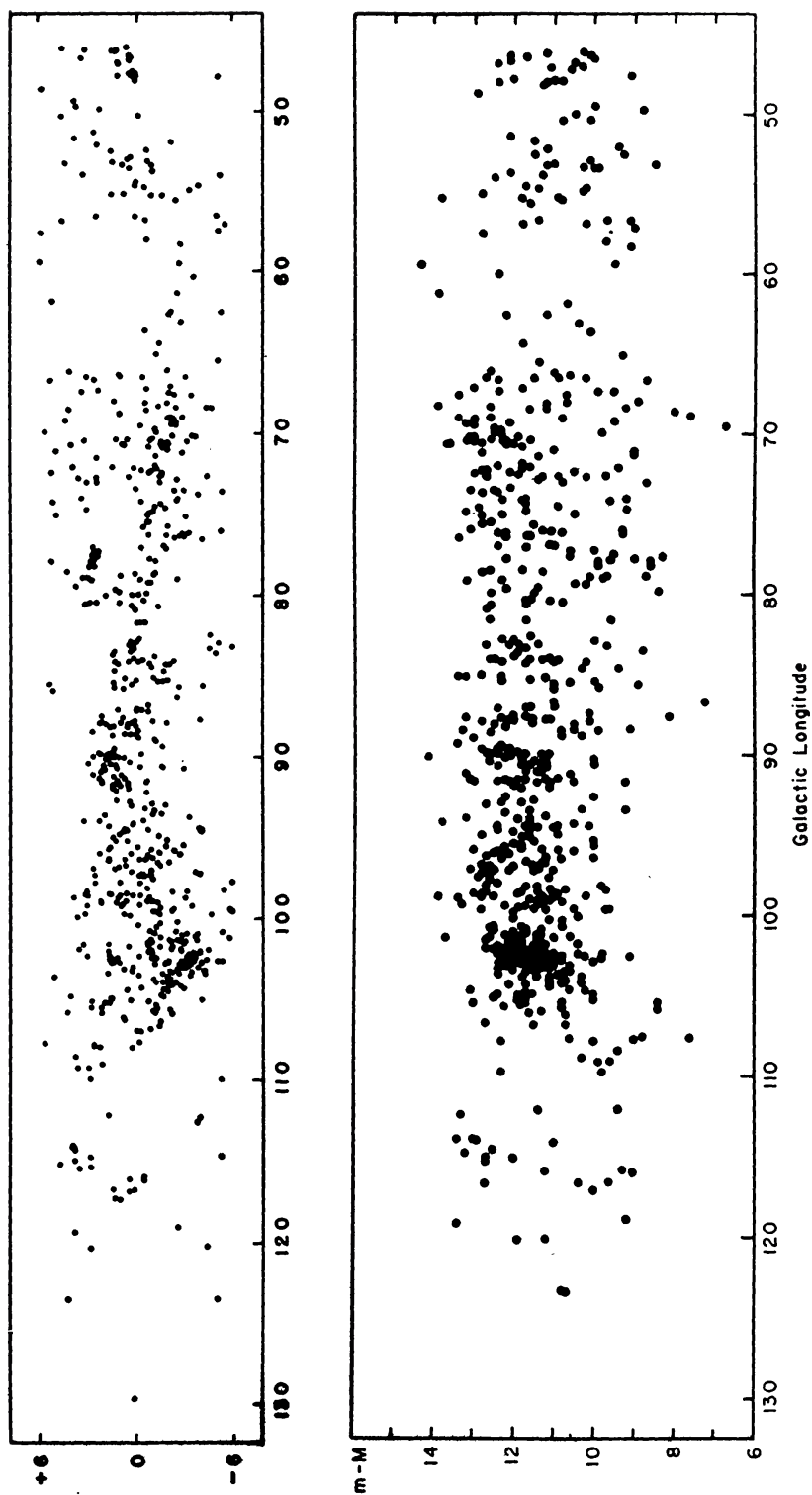


FIG. 7.—Distribution of the stars in the catalogue in galactic co-ordinates and in galactic longitude and distance modulus. All stars in the catalogue from $l = -6^\circ$ to $l = +6^\circ$ are plotted in the upper figure. The lower figure contains only those stars from $l = -6^\circ$ to $l = +6^\circ$ for which distance moduli are recorded in the table.

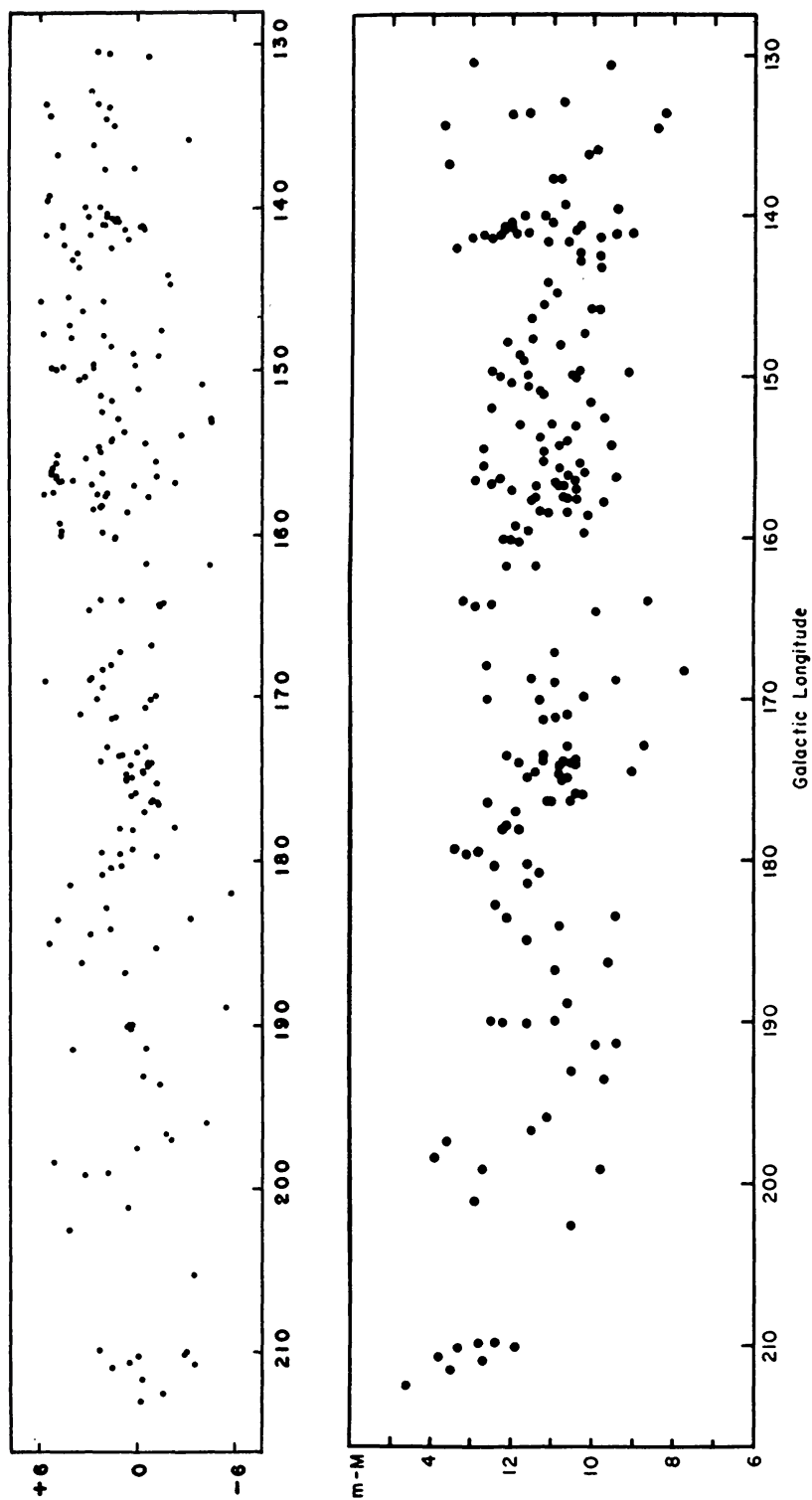


FIG. 8.—Distribution in stars in the catalogue in galactic co-ordinates and in galactic longitude and distance modulus. All stars in the catalogue from $l = -6^\circ$ to $l = +6^\circ$ are plotted in the upper figure. The lower figure contains only those stars from $l = -6^\circ$ to $l = +6^\circ$ for which distance moduli are recorded in the table.

boundary limits in longitude were defined in such a way as to avoid as much as possible large longitude intervals and still have a sufficiently large number of stars in each group to give the statistics some significance. The boundaries of the fifteen groups are given in Table 7, along with the number of stars in each group. In addition, the standard deviation, σ , of the alignment of the electric vector and the average value for the ratio of

TABLE 7
NUMBERS OF STARS, VALUES OF σ AND MEAN RATIOS p/A_v TO
GALACTIC-LONGITUDE GROUPS

l	No. of Stars	σ	p/A_v	l	No. of Stars	σ	p/A_v
322.5-335.0	47	0.31	0.025	85°-95°	130	0.22	0.038
335-350.0	83	.88	.014	95-102.5	158	.10	.045
350-25.0	22	.75	.014	102.5-110.0	90	.11	.041
25-40.5	55	.62	.020	110-140.0	43	.20	.034
40-50.7	124	.77	.012	140-160.0	87	.27	.028
50-65.0	44	.61	.022	160-180.0	51	.43	.020
65-75.0	99	.27	.029	180-213.0	34	0.56	0.016
75-85.0	89	0.35	0.023				

interstellar polarization to interstellar absorption are also given in the table for each group. For all groups the galactic-latitude limits were -6° to $+6^\circ$. The discussion of the data in the present paper will be limited to the more general aspects of interstellar polarization.

Alignment of the Electric Vector

The individual stars with galactic latitude between -6° and $+6^\circ$ are shown in Figures 9-21, where each star is represented by a line. The length of the line gives a measure of the relative amount of polarization, and the inclination of the line corresponds to the plane of vibration for that particular star. Few comments need be made regarding these plots. It is well known that the departure from uniform alignment of the electric vector varies appreciably with galactic longitude (Hiltner 1951). Also the average amount of polarization varies with longitude (Hall and Mikesell 1950; Hiltner 1951). In general, the highest polarization is observed in Perseus, and the lowest on either side of this region. However, there is one outstanding exception. The greatest amount of polarization observed thus far is in Cygnus, where normally the smallest average polarization is found. The star with the highest polarization is No. 12 in association VI Cyg. Its interstellar absorption is near 10 mag., and the polarization is 0.22 mag.

The alignment of the electric vector as a function of galactic longitude is illustrated in Figure 22. In this figure, histograms are shown for the fifteen longitude groups where the number of stars are plotted against the position angle. Two extremes are immediately noted, as well as intermediate cases: a flat-top distribution that shows little or no preference for any position angle and a strong concentration at position angle 90° , that is, the electric vector parallel to the galactic plane. The two extremes are well illustrated by the Cygnus region, $l = 40^\circ$ - 50° (flat-top distribution), and the Cassiopeia-Perseus region, $l = 95^\circ$ - 110° (concentration at 90°).

The variation in alignment of the electric vector with galactic longitude is also illustrated in Figure 23, where the standard deviation of the alignment, σ , from Table 7 is plotted against longitude. There are several features of this diagram that should be noted. First, there is a well-defined minimum at longitude 102° . Second, the slope from 40° to the minimum at 102° is greater than that from 102° to larger galactic longitudes.

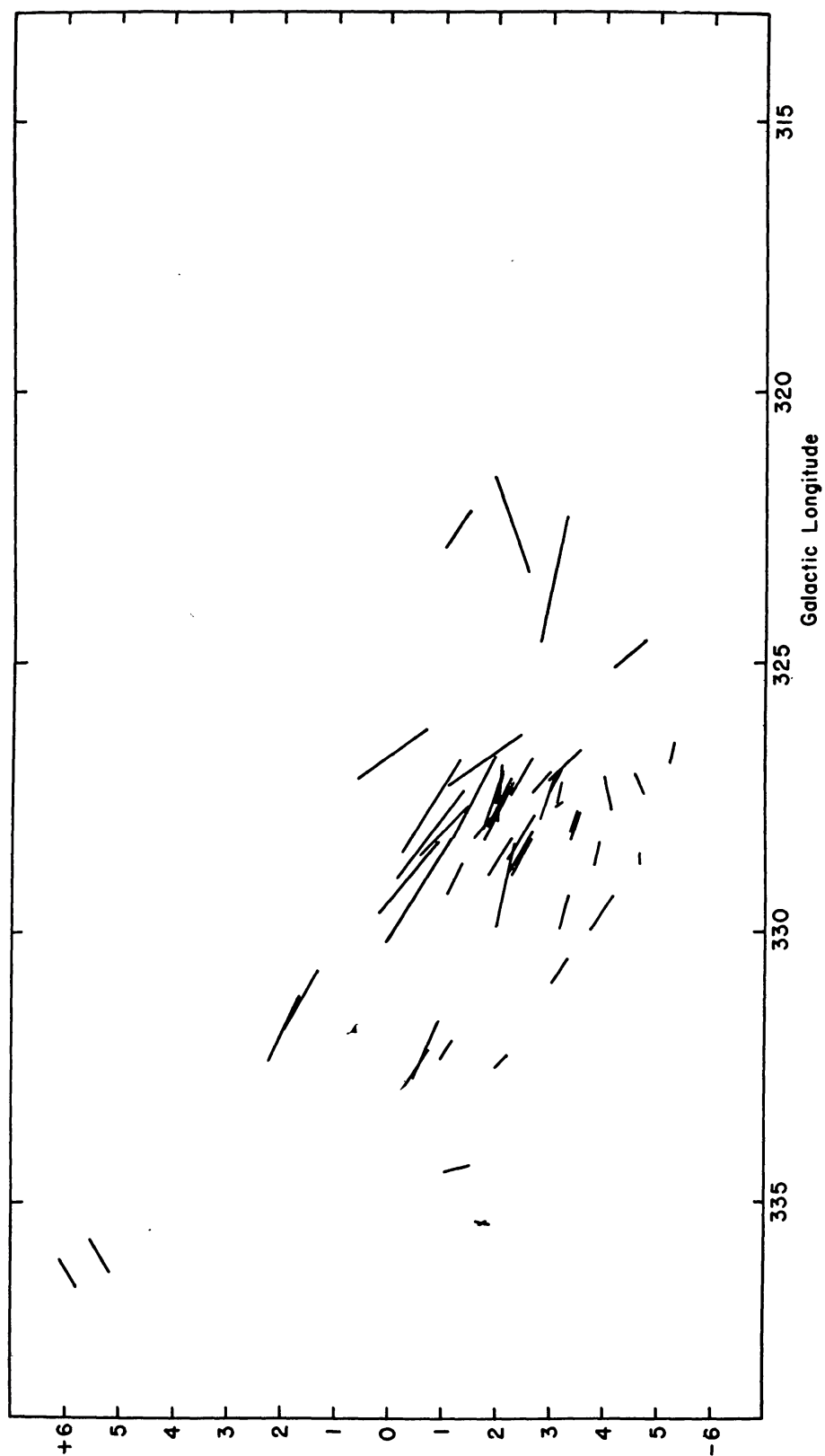


FIG. 9.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

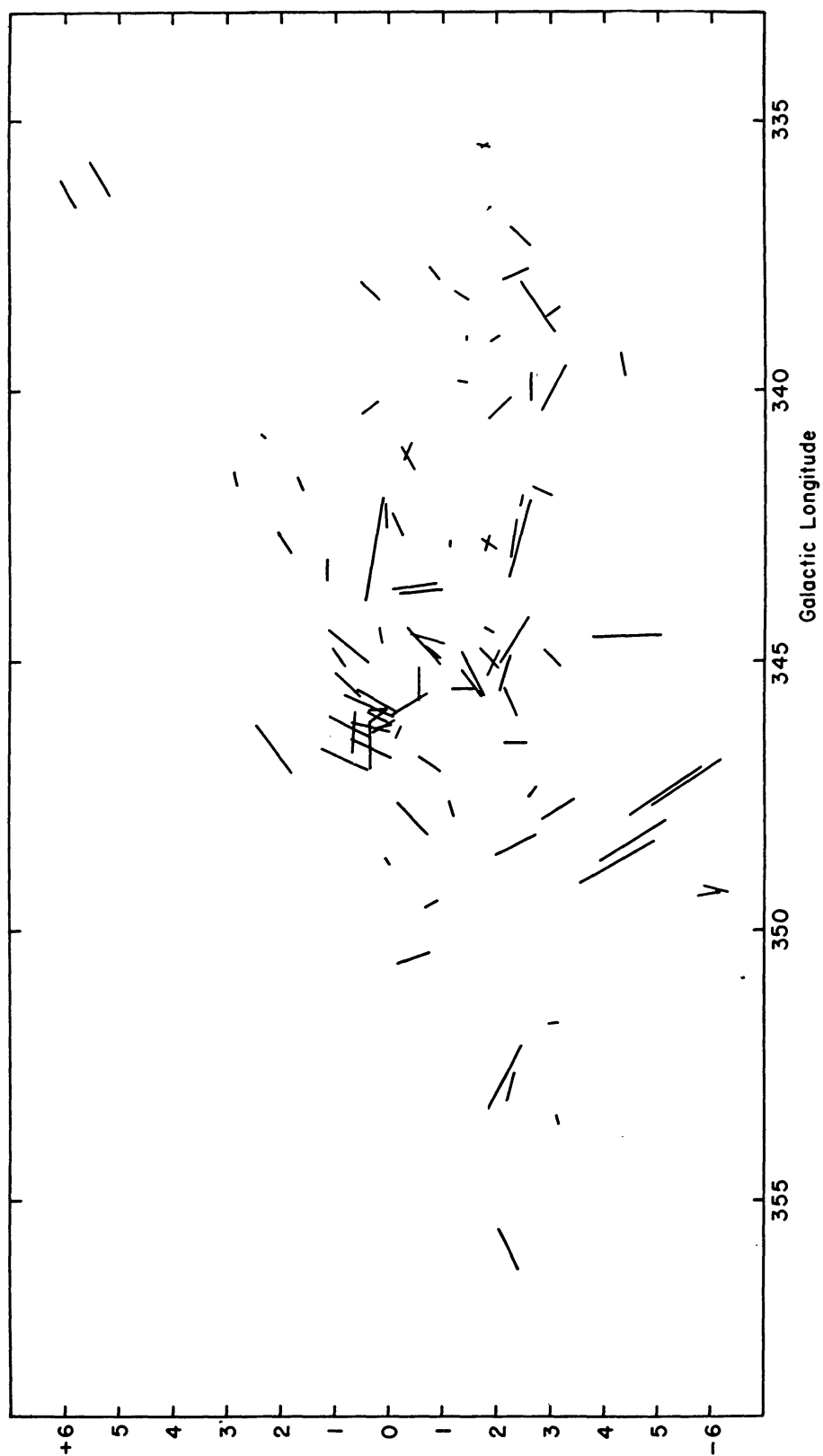


FIG. 10.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

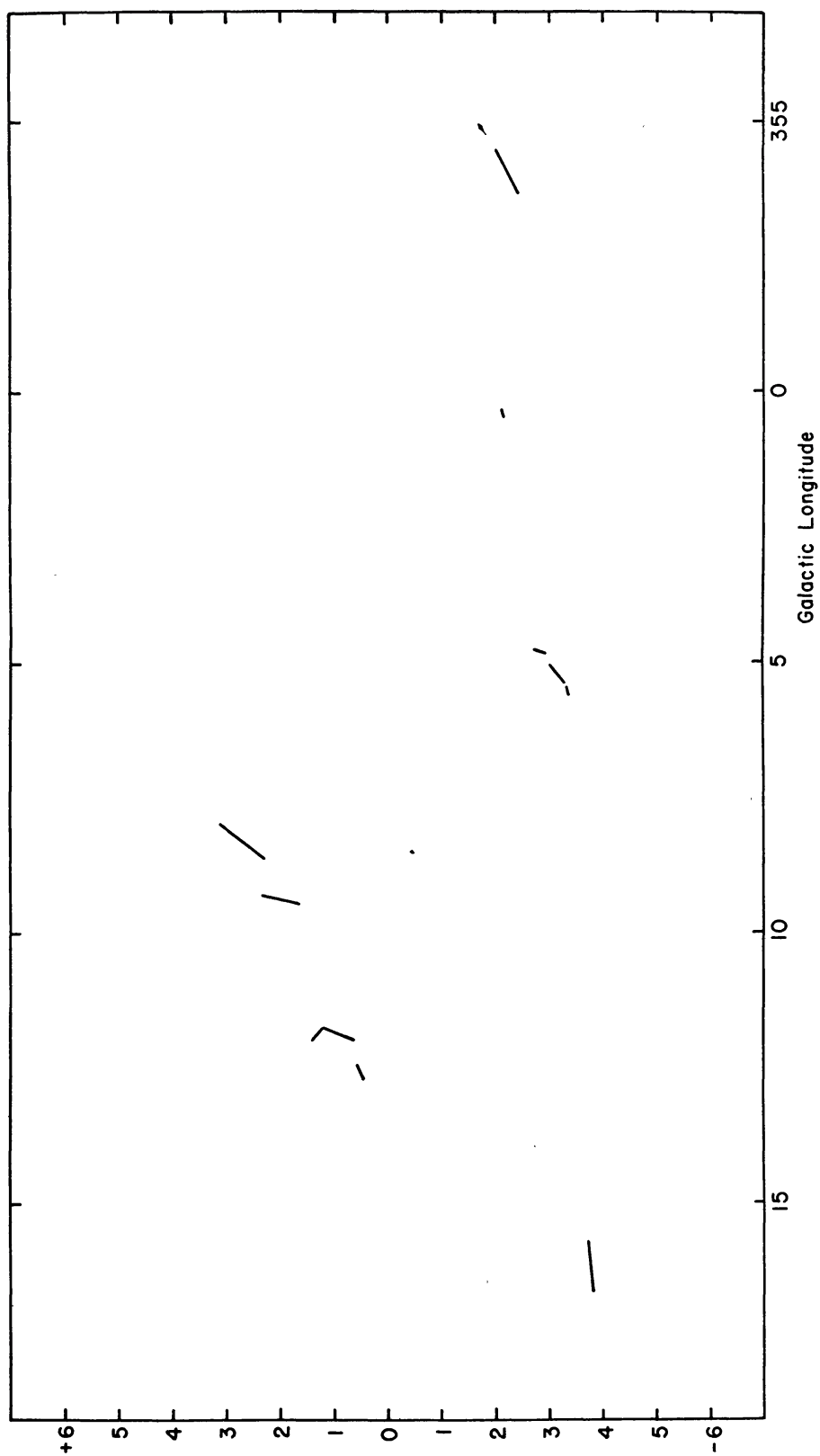


FIG. 11.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

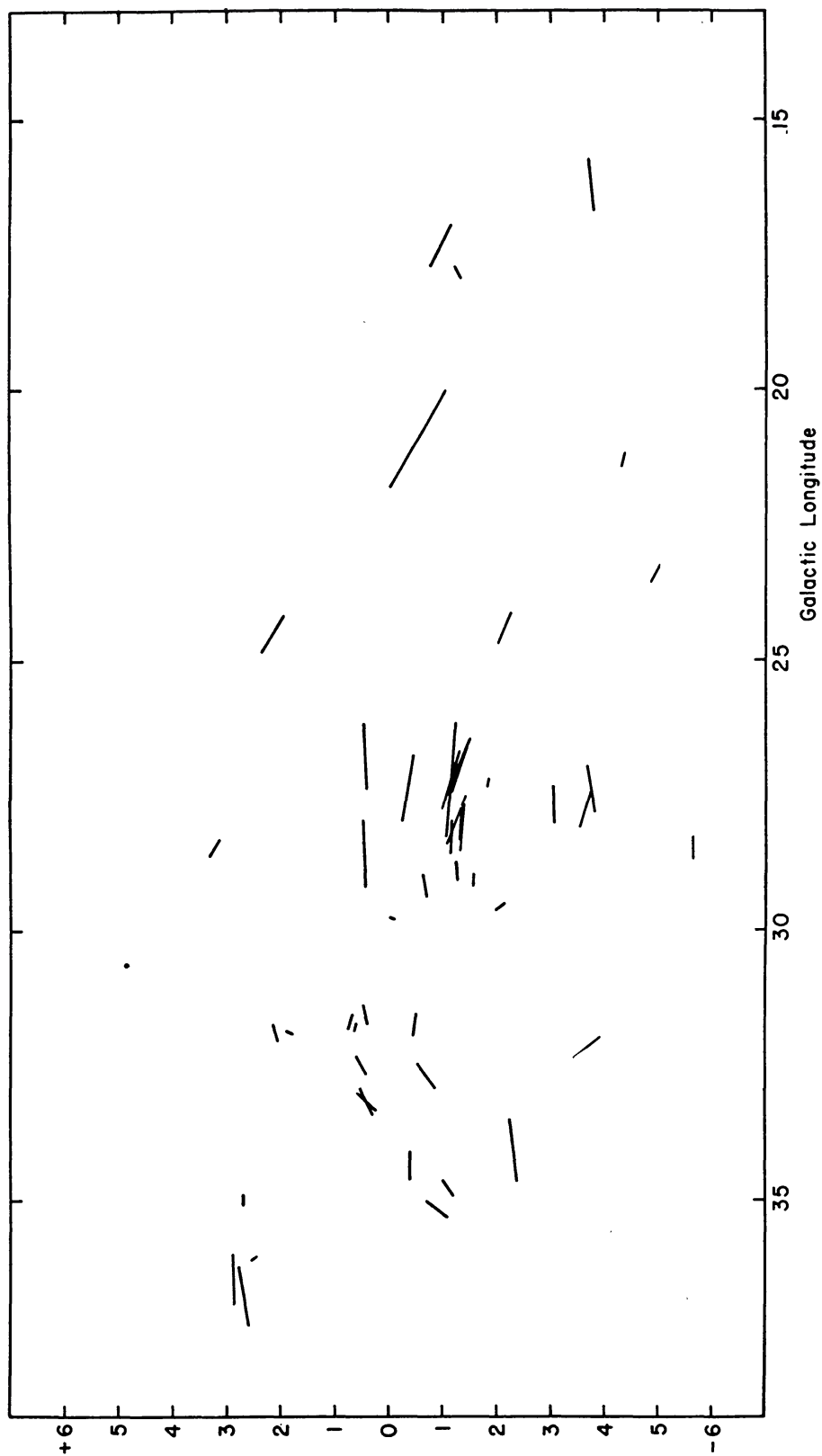


FIG. 12.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

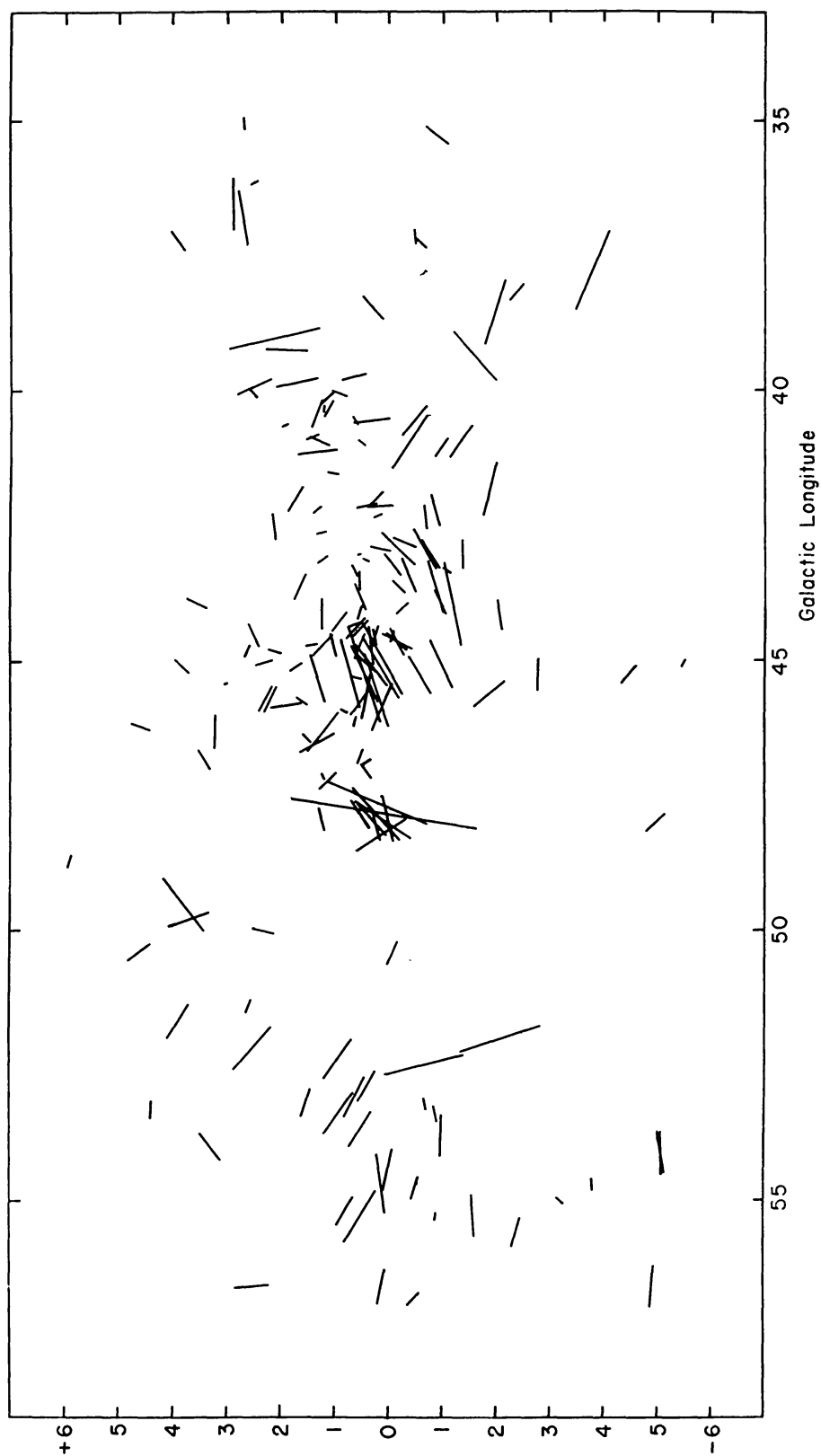


FIG. 13.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration. Note the randomness of the plane of vibration. Although, in general, this region has low polarization, the maximum polarization thus far observed is also found in this region.

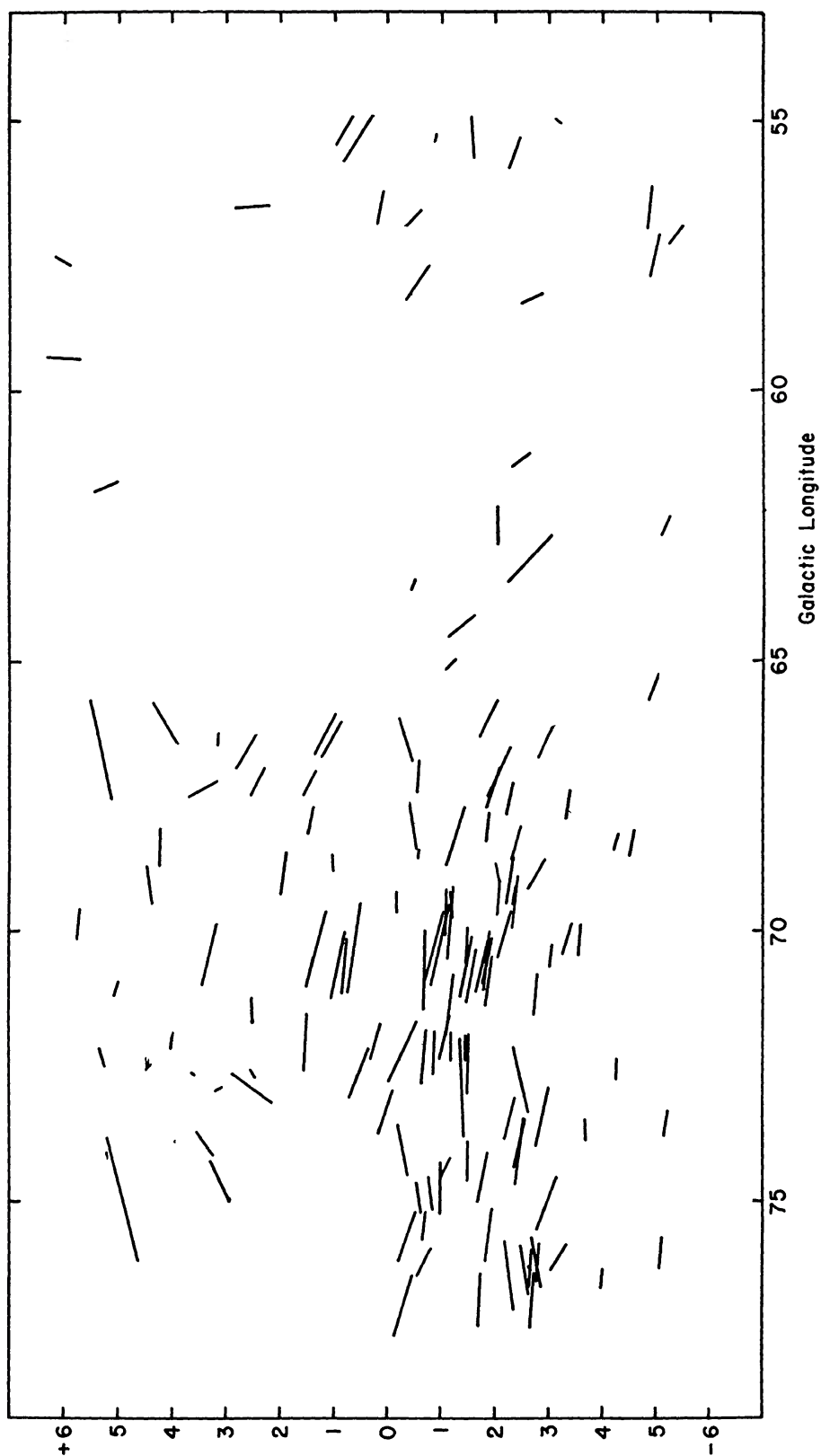


FIG. 14.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

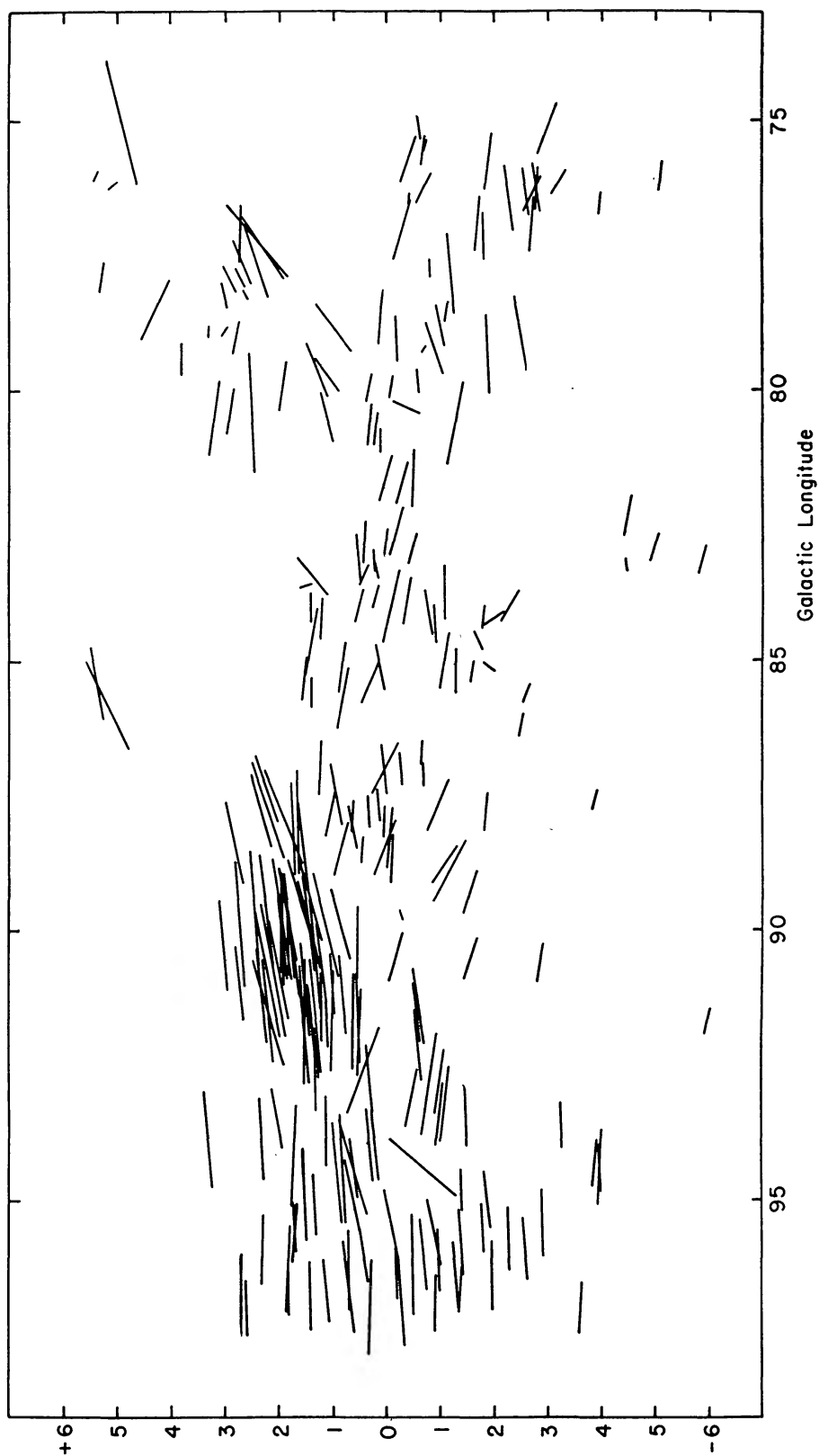


FIG. 15.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

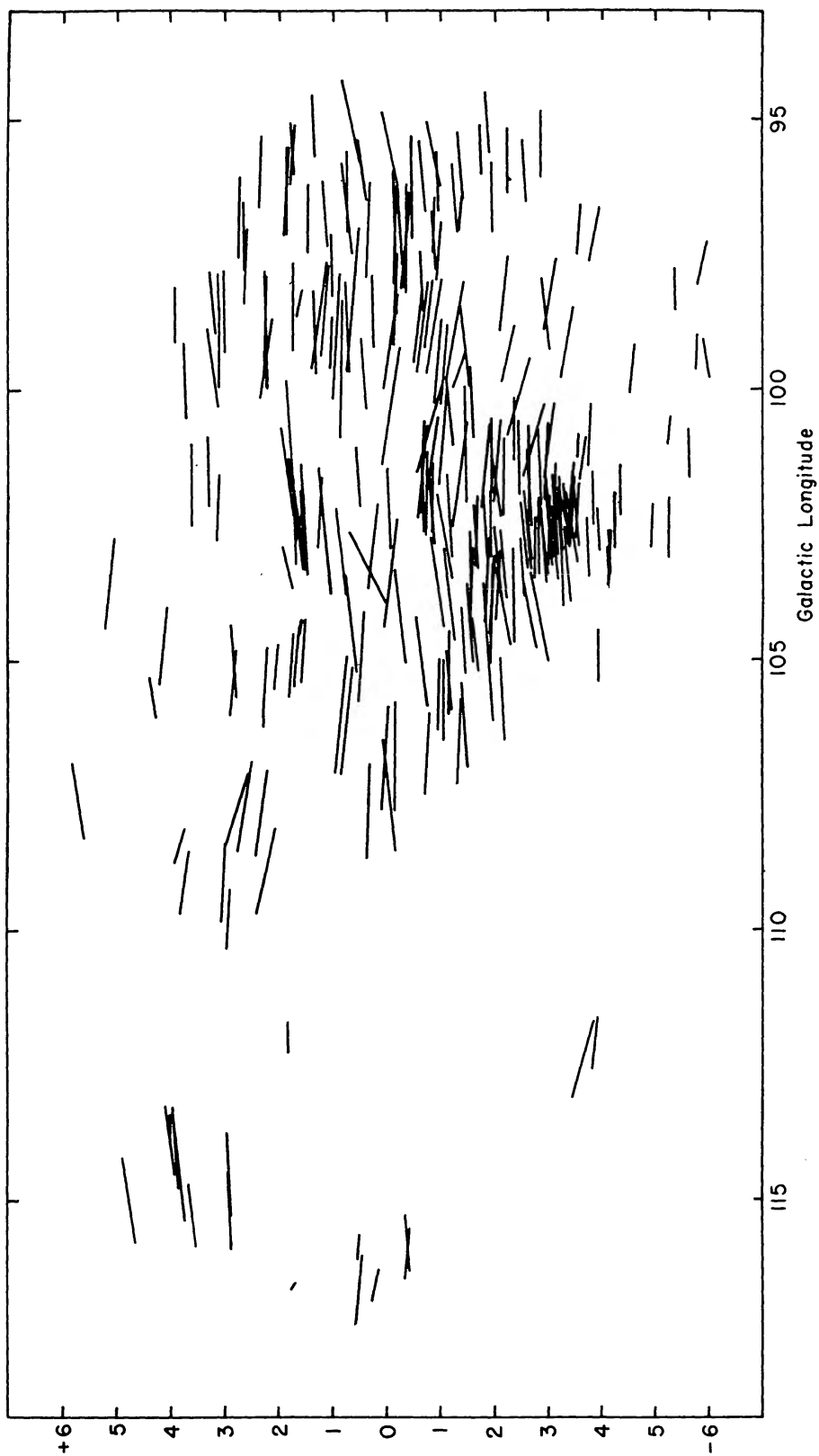


FIG. 16.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration. Not all the stars observed in this region are plotted, because of overlap, especially in η and κ Persei.

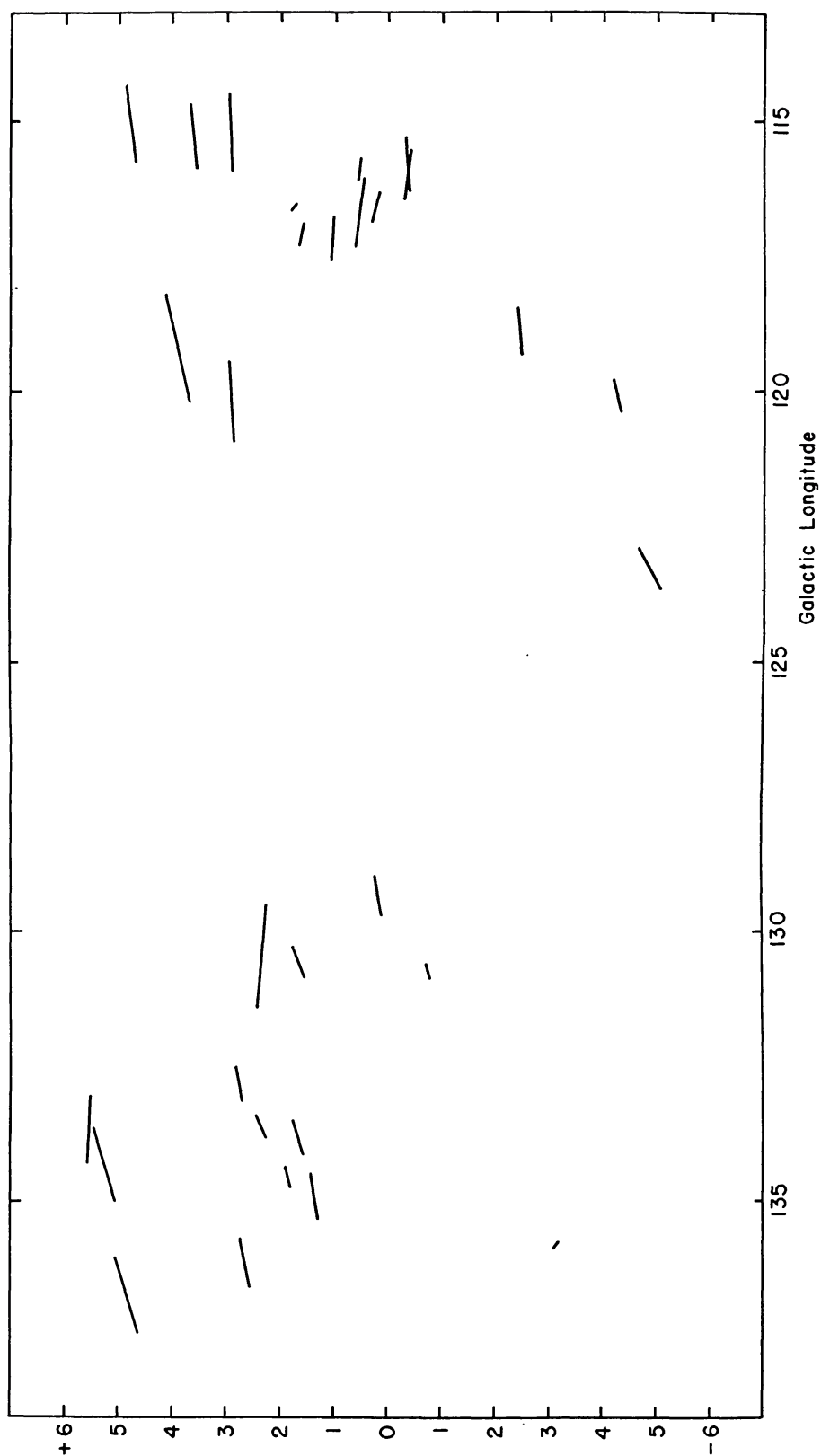


FIG. 17.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

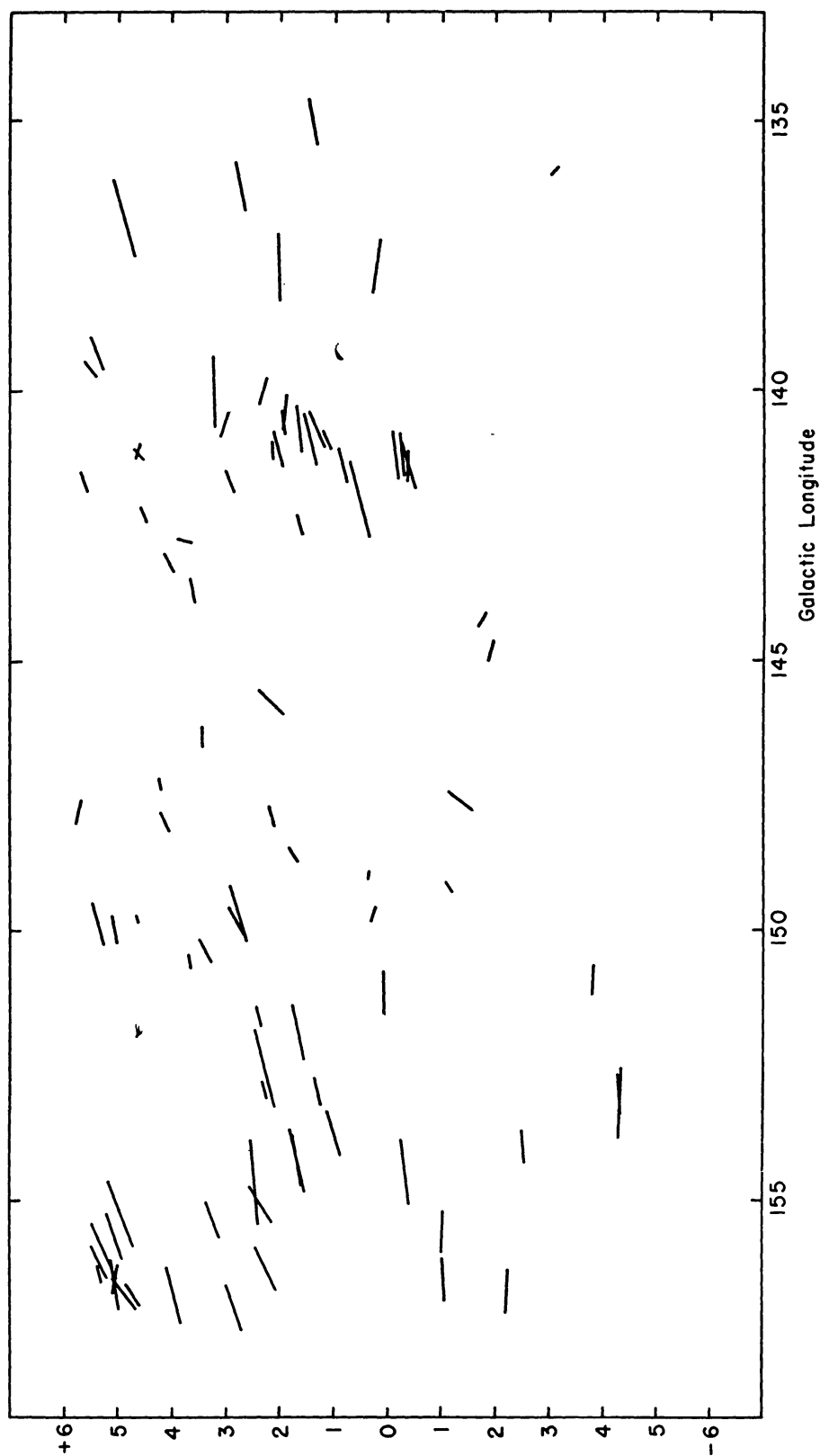


FIG. 18.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

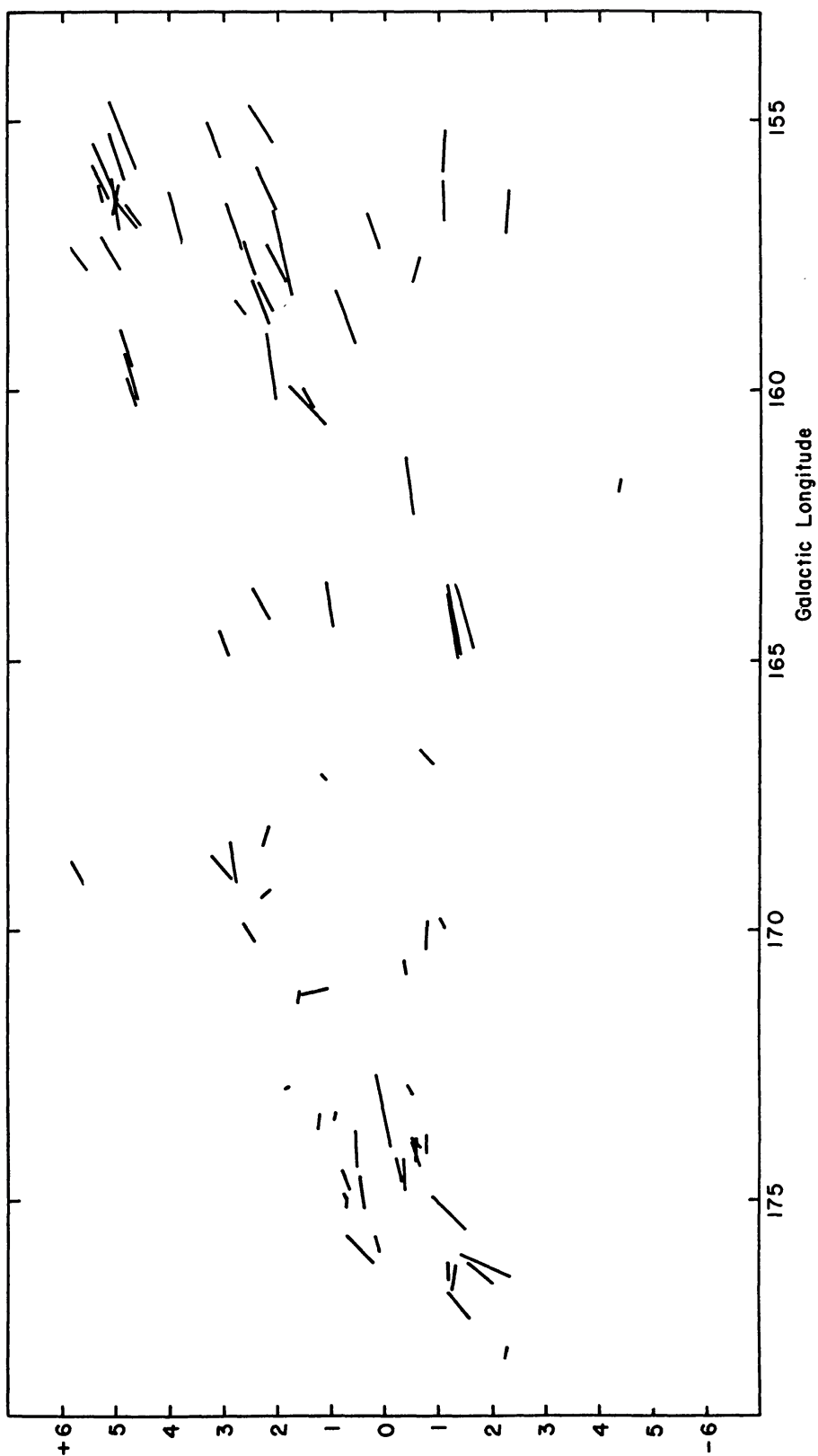


FIG. 19.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

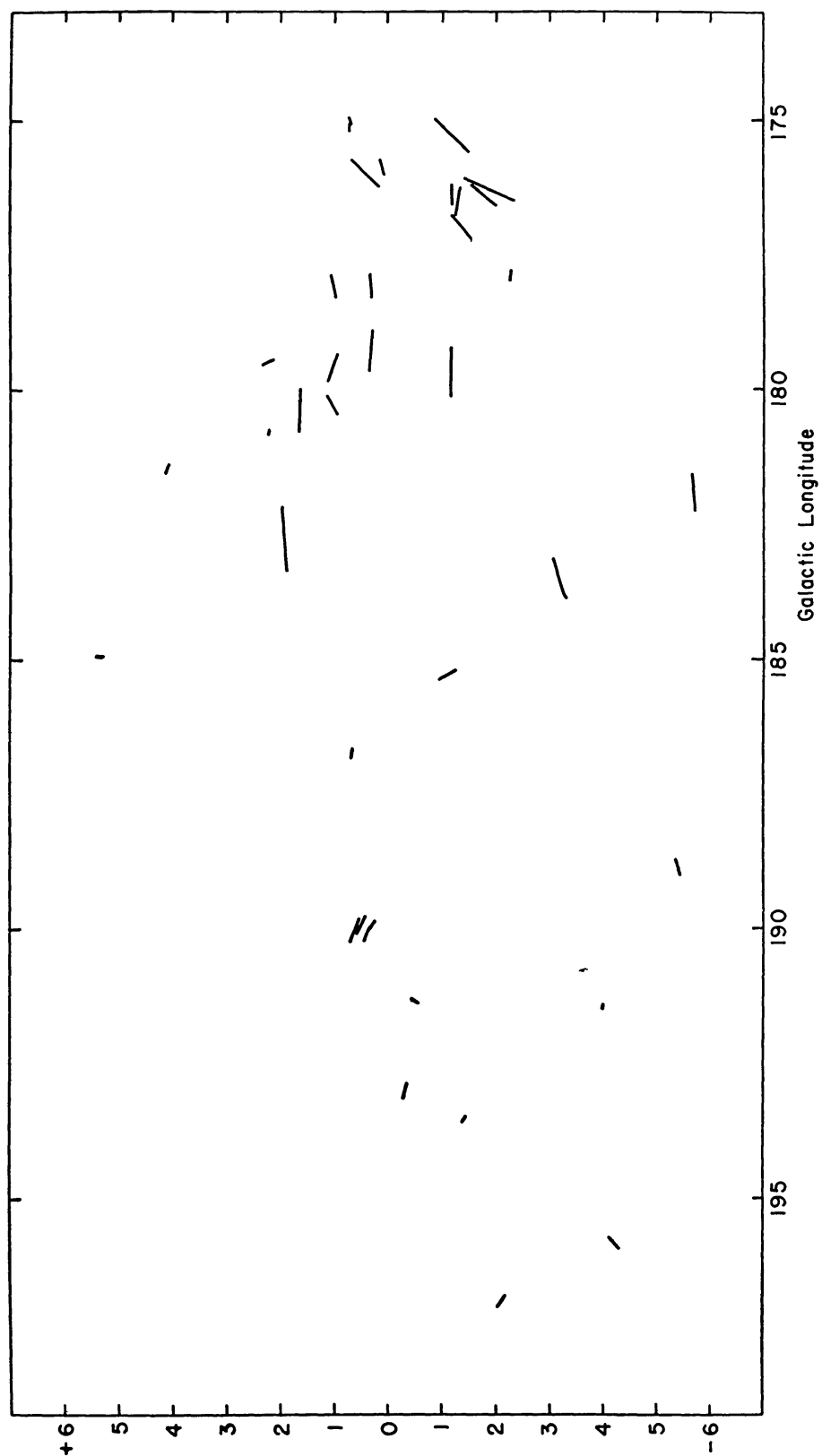


FIG. 20.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

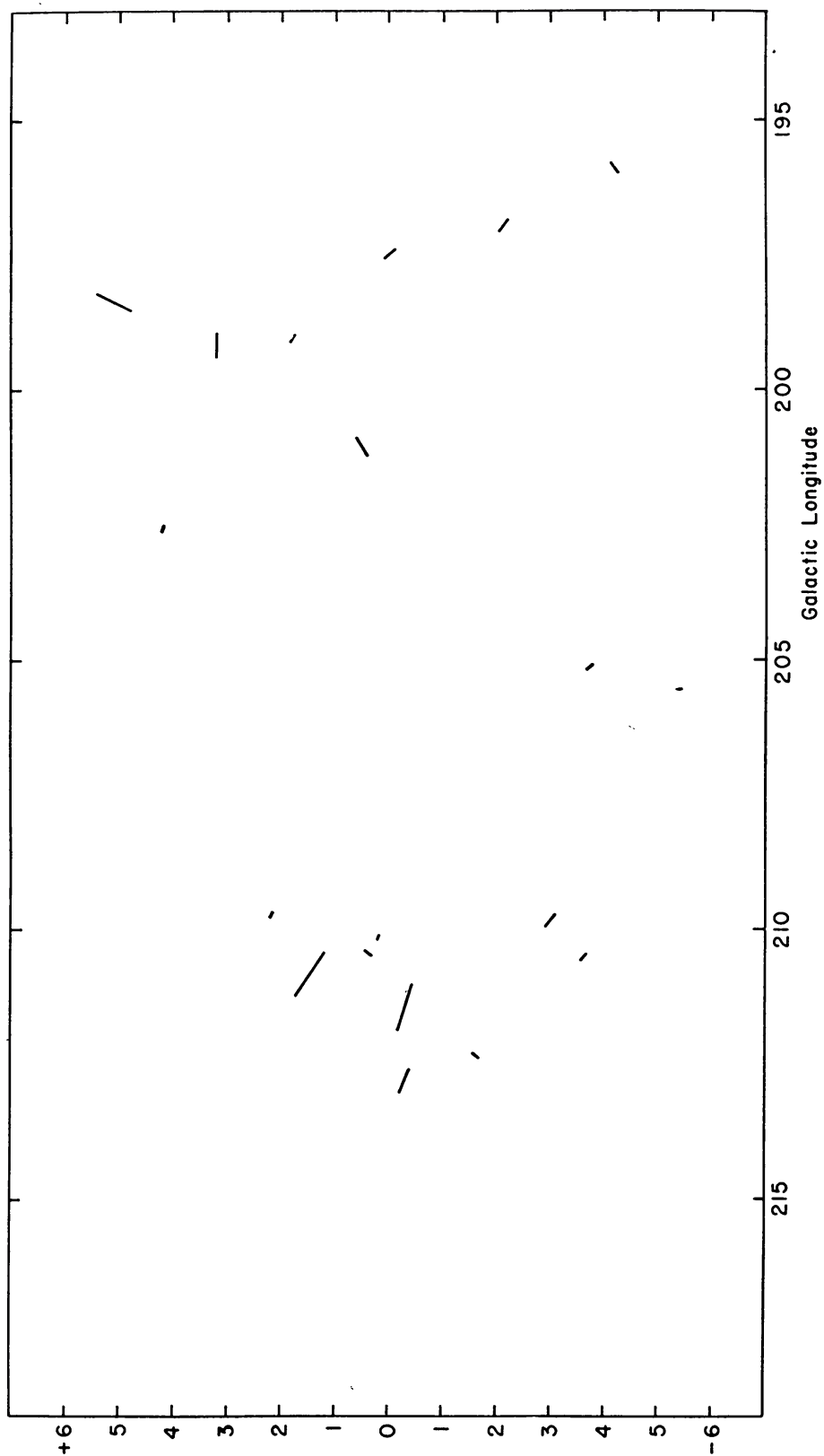


FIG. 21.—Polarization of stars in low galactic latitude. The length of the lines indicates the relative amounts of polarization, and the position angle indicates the plane of vibration.

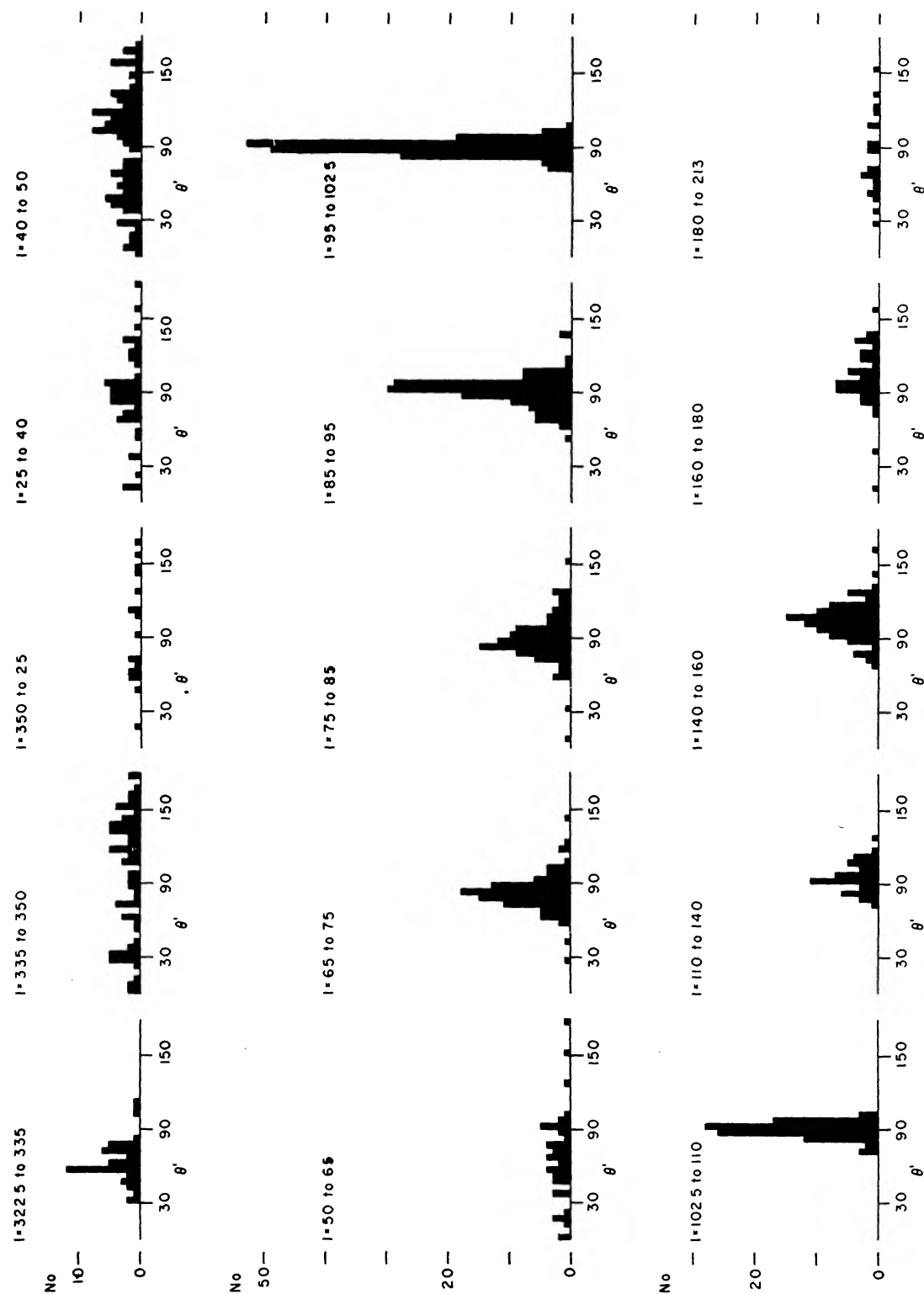


FIG. 22.—Histograms showing the distribution in the planes of vibrations for fifteen longitude groups. Compare the region from $l = 40^\circ$ – 50° with $l = 95^\circ$ – 102.5° .

These variations in alignment with galactic longitude can be interpreted on the assumption that, to a first approximation, the alignment force (magnetic field) is in the plane of the Galaxy more or less parallel to the spiral arms. This general picture of the alignment force has received further support from polarization measurements of the extragalactic nebula NGC 7331 by Elvius (1956). For the reddened part of this nebula the electric vector is approximately parallel to the galactic equator. In the Cassiopeia-Perseus region the line of sight is perpendicular to the axis of the spiral arm and hence perpendicular to the alignment force. Perfect alignment should be displayed. However, the dispersion in this region is about 0.1 radian. This dispersion has been interpreted by Chandrasekhar and Fermi (1953) and Davis (1951) as a "waviness" in the magnetic lines of force caused by the turbulent motions of the gas masses in the spiral arms. This same small dispersion will also introduce a random distribution in the planes of vibration for a line of sight parallel to the axis of a spiral arm, such as we observe in Cygnus; for then a small random waviness will present an apparent magnetic field of random direction. All the evidence thus far accumulated supports the conclusion that the alignment

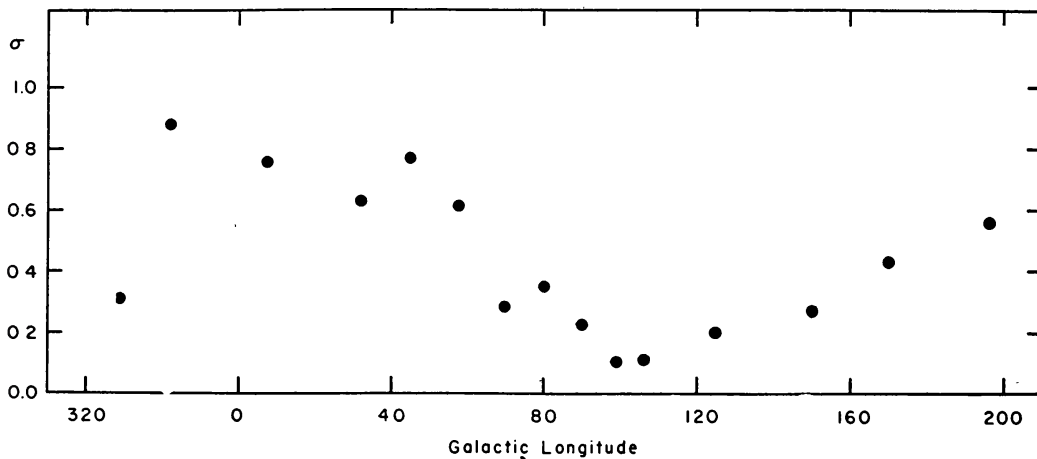


FIG. 23.—The relationship of the standard deviation, σ , of the electric-vector alignment and the galactic longitude. Note the minimum at $l = 102^\circ$, which probably represents the longitude at which the spiral arm is observed normal to the axis of the arm.

force is associated with the Galaxy and that this alignment force is in all cases parallel to the galactic plane except for small local dispersions.

If the conclusion that the alignment force is parallel to the spiral arms is correct, it follows that the minimum in Figure 23 should represent that line of sight which is perpendicular to the spiral arms. This minimum at 102° can be compared directly with other data. Morgan, Whitford, and Code (1953) have published a model of the Galaxy based on their observations of early-type associations. From their Figure 1 the line of sight, which is perpendicular to the spiral arm, is estimated to be near 110° . A model of the Galaxy derived from 21-cm observations, published by van de Hulst, Muller, and Oort (1954), also gives us a value for the quantity in question. From their Figure 11 a value near 135° is estimated. The value $l = 102^\circ$ is in fair agreement with that determined from the O-type associations but appears incompatible with the 21-cm observations.

One further step could be taken in the interpretation of Figure 23. If the spiral arms were linear over the distances considered here, the curve in Figure 23 should be symmetrical about the minimum. The curve is not symmetrical, for it has a smaller slope at greater longitudes. This can be interpreted as a curvature in the spiral arm. However, this point should not be belabored at this time, since the data at greater longitudes are limited and also the assumption is made in this interpretation that the turbulent velocities, the strength of the general magnetic field, and the density of the gas and dust are uniform.

Ratio of Polarization to Absorption

In the theoretical interpretation of interstellar polarization it is of great importance to have a reliable upper limit for the ratio of interstellar polarization to interstellar absorption. This observed value must then be attained by theory as a minimum condition. Up to now, several values have been used in the literature. For example, Greenstein (1951) suggested 0.04 for the ratio of polarization to photographic absorption, while van de Hulst (1950) used the value 0.055. The latter concluded from preliminary calculations that the computed amount of polarization for very long, perfectly aligned ice needles with an index of 1.25 is barely sufficient to explain this ratio.

The large quantity of data in Table 5 should permit an accurate evaluation of this ratio. Because of the danger of depolarization when large absorptions are employed and because of a possible systematic error in the ratio when small absorptions are used, a value based on the data in Table 5 will be derived in a somewhat arbitrary fashion. This ratio will then be examined in detail as to whether or not the value is a reasonable one.

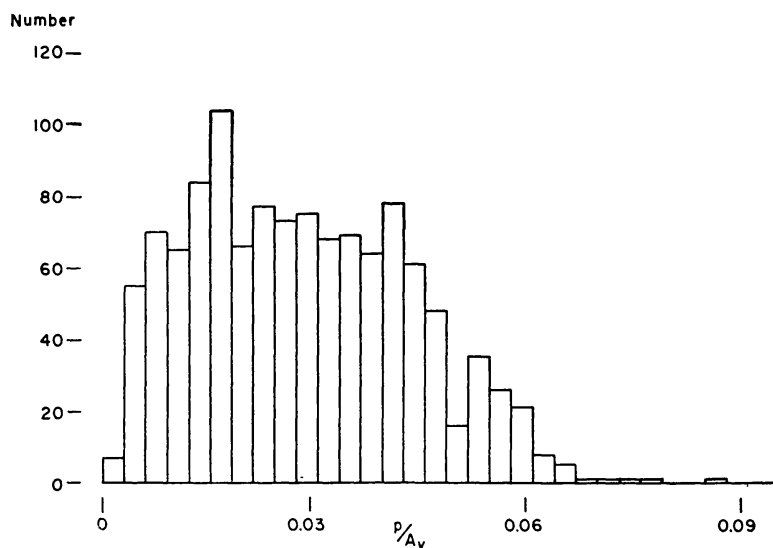


FIG. 24.—Histogram of the ratio of the interstellar polarization to interstellar absorption versus the number of stars. A value of $p/A_v = 0.06$ is estimated to be the minimum upper value for this ratio.

The ratio of polarization to absorption was computed for each star. A histogram was then constructed in which the number of stars was plotted against the ratio p/A_v . The mean value for all stars in this catalogue is 0.028. Note that the ratios given in the histogram refer to the polarization with respect to visual absorption at an effective wave length near 5400 Å. Hence the two values given at the beginning of this section must be multiplied by 0.77 when compared with the values given in Table 5 and in the histogram. In setting a maximum value, four sources of error should be considered: (1) errors in the measured polarization; this should be negligible, since the polarization measurements have a probable error of 0.002 mag.; (2) errors in the measured color; here also the observational errors should be negligible, for the color observations have an accuracy of 0.01 mag.; (3) errors in the assumed intrinsic colors either because of errors in Table 6 or because of the presence of stars with a more blue intrinsic color; (4) error in the ratio of total to selective absorption. The more reliable data all support the conclusion that the value $A_v/E_{(B-V)} = 3$ is the best that can now be determined and that the error is not in excess of 10 per cent. The last two are the greater sources of error and, of course, the most difficult to evaluate. With these precautions in mind, the value 0.06 was selected with the aid of Figure 24. Twenty-five stars have a ratio equal to, or in excess of, this adopted value.

The reasonableness of 0.06, which is 40 per cent larger than the value considered by van de Hulst, can be checked by further consideration of the data in Table 5. First, the polarization was plotted against the absorption for the fifteen longitude intervals (Figs. 25 and 26). Note that, for the regions where the electric vector is well aligned, the value 0.06 for p/A_v forms an excellent upper envelope.

Figure 27 is a diagram in which the standard deviation is plotted as abscissa and the

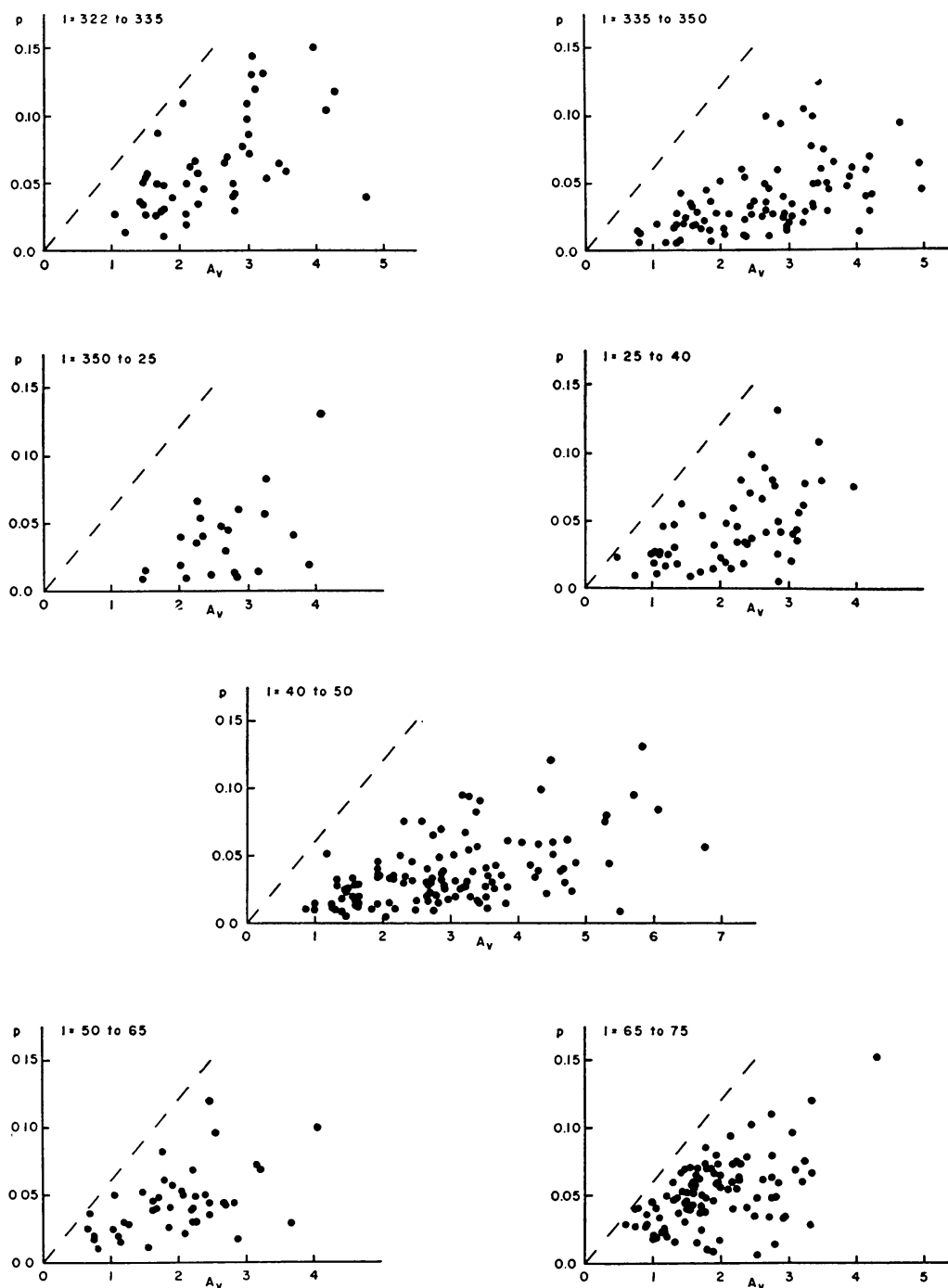


FIG. 25.—Relationship of polarization and absorption for seven galactic-longitude intervals. The absence of a one-to-one correspondence emphasizes that absorption is a necessary, but insufficient, condition for interstellar polarization. The dashed line represents a slope $p/A_v = 0.06$.

ratio p/A_v as ordinate. The general interpretation of this diagram is not immediately apparent, for the relationship of p/A_v and σ must contain many parameters, such as field strength, galactic longitude, turbulent gas velocities, and density. But an excellent correlation is present in which the ratio p/A_v increases as the standard deviation decreases. When this curve is extrapolated out to $\sigma = 0$ (perfect alignment), a value for p/A_v near 0.06 is indicated. It is to be noted that the average value of p/A_v is plotted

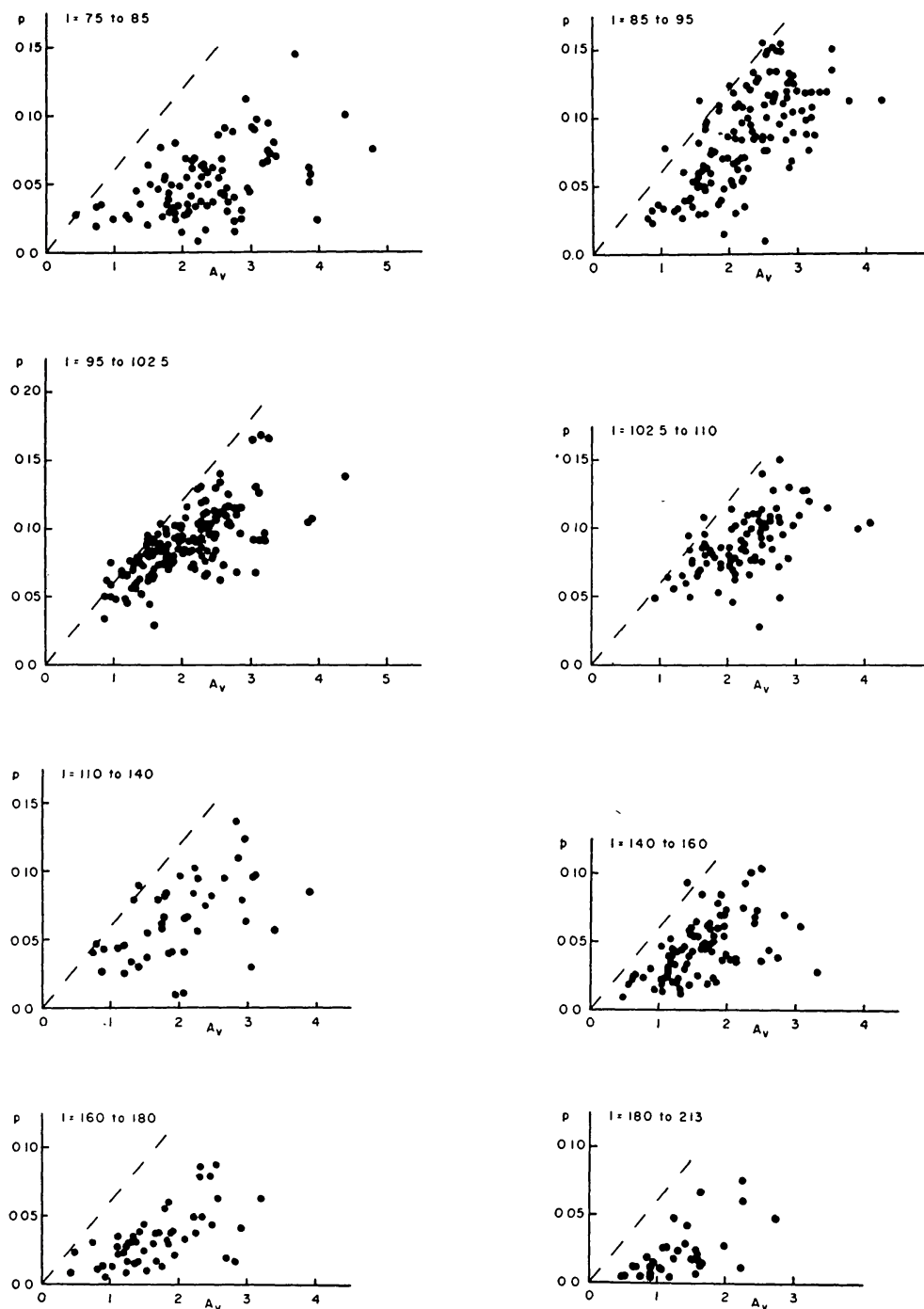


FIG. 26.—Relationship of polarization and absorption for eight galactic-longitude intervals. Note that the dashed line $p/A_v = 0.06$ represents an upper envelope.

in this curve. Hence there is no selection effect present where the larger values of p/A_v are given greater weight.

On the assumption that depolarization is always present because of the absence of perfect alignment even under the most favorable conditions, a correlation should exist between the ratio p/A_v and the amount of interstellar absorption. If this were so, then an upper limit for p/A_v could be obtained by extrapolating such a curve to $A_v = 0$. Such diagrams for the fifteen longitude intervals are shown in Figures 28 and 29. The diagrams do not show anything especially significant except for the Cassiopeia-Perseus

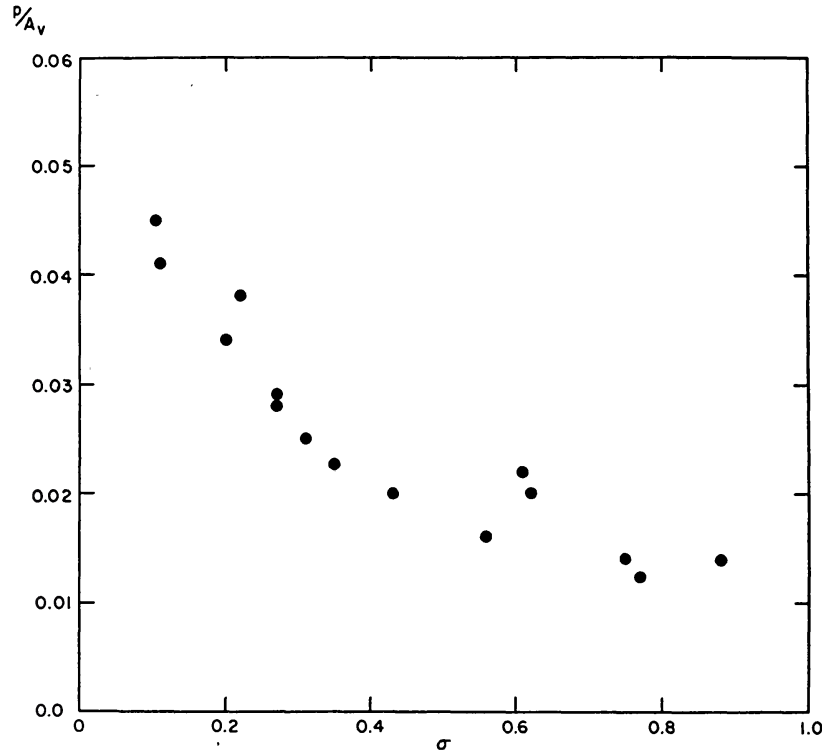


FIG. 27.—Relationship of the ratio of polarization to absorption and the standard deviation

region. Here a correlation is found with the anticipated sign. If the curves for $l = 95^\circ$ – 102.5° and $l = 102.5^\circ$ – 110° are extrapolated out to $A_v = 0$, the intersection will be near $p/A_v = 0.06$ or higher.

Variation of Polarization with Distance

In Figure 30 are four diagrams for two longitude intervals. The absorption is plotted against the distance in two of the four diagrams, and the polarization is plotted also against the distance in the other two. In all four cases little more than a scatter diagram is obtained. In the two diagrams of A_v versus distance, the upper right sections are devoid of stars because of selection. These diagrams emphasize the weak correlation of absorption with distance and the absence of any significant correlation of interstellar polarization with distance.

It is a pleasure to express my appreciation to those who assisted in the preparation of the O and B star catalogue. I wish especially to thank Misses Barbara Perkins and Gail Moeller, the former for contributing immeasurably in the photometric reductions and

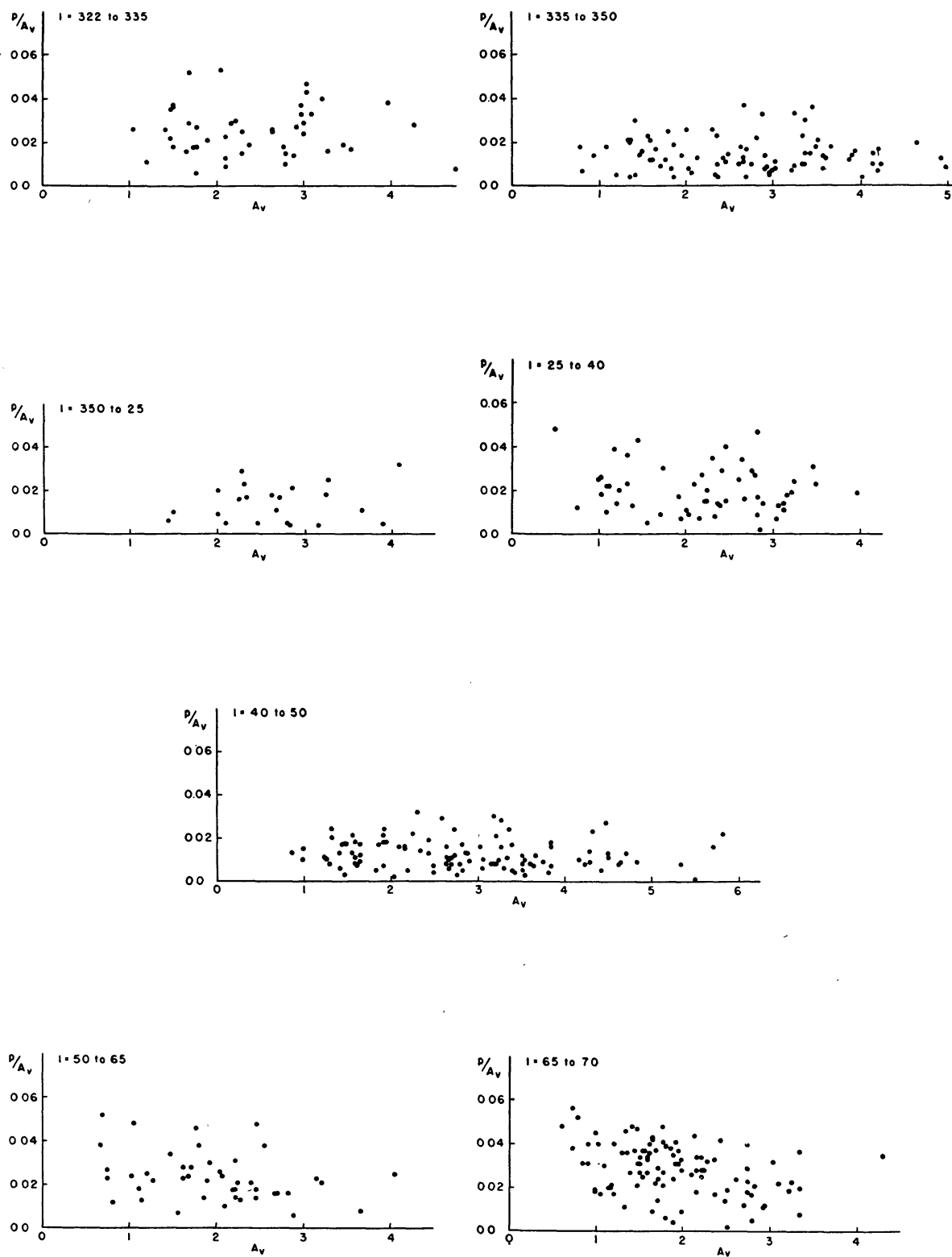


FIG. 28.—Relationship of the ratio of polarization to absorption and interstellar absorption for seven galactic-longitude intervals.

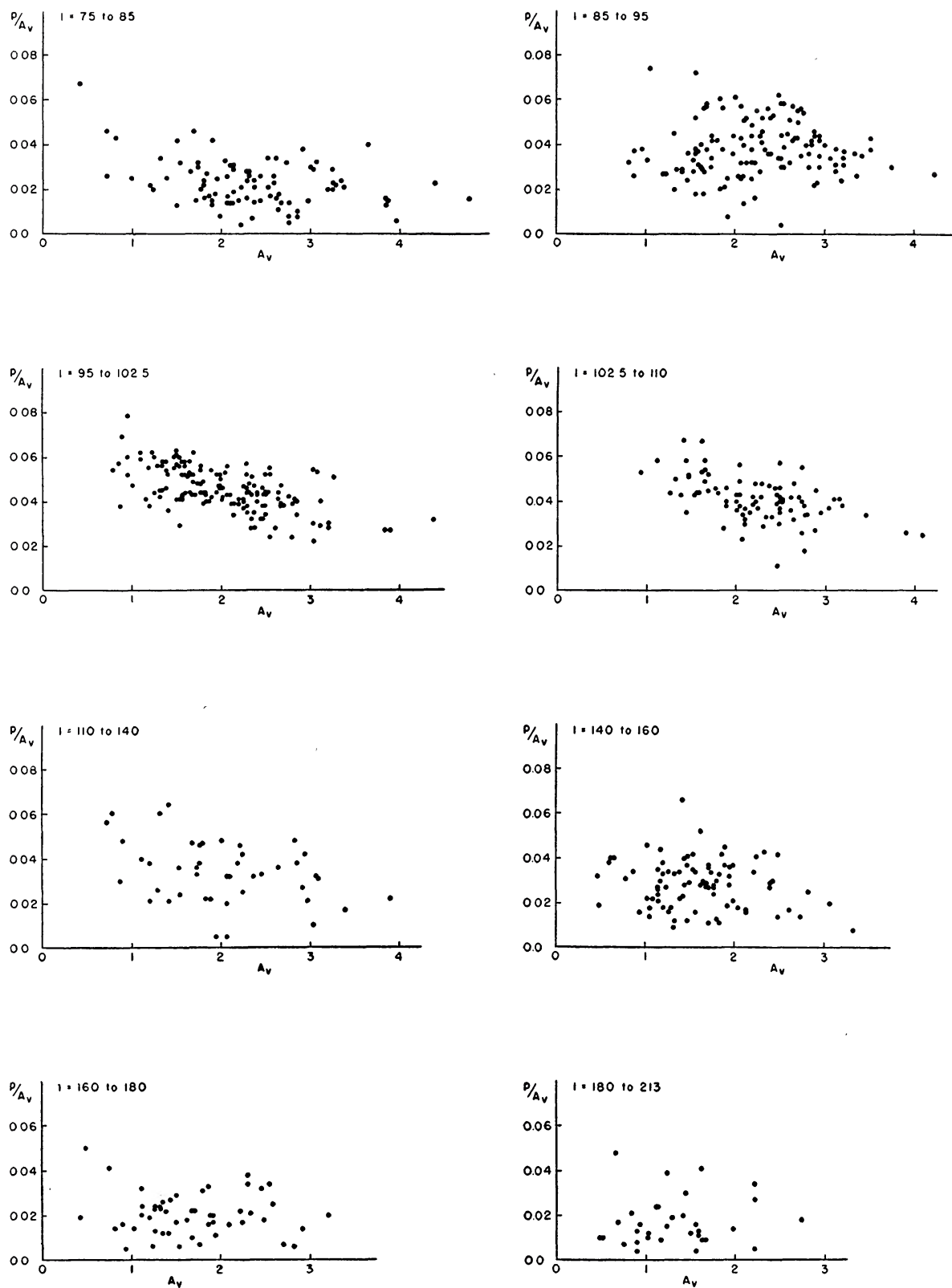


FIG. 29.—Relationship of the ratio of polarization to absorption and interstellar absorption for seven galactic-longitude intervals. Note that from $l = 95^\circ$ to $l = 110^\circ$ the ratio p/A_v increases with decreasing absorption, suggesting the presence of depolarization.

the latter for computational assistance and for preparing the catalogue for publication. My particular thanks are due Dr. W. W. Morgan for the classification of many spectrograms. The National Science Foundation gave financial assistance, for which appreciation is gratefully recorded.

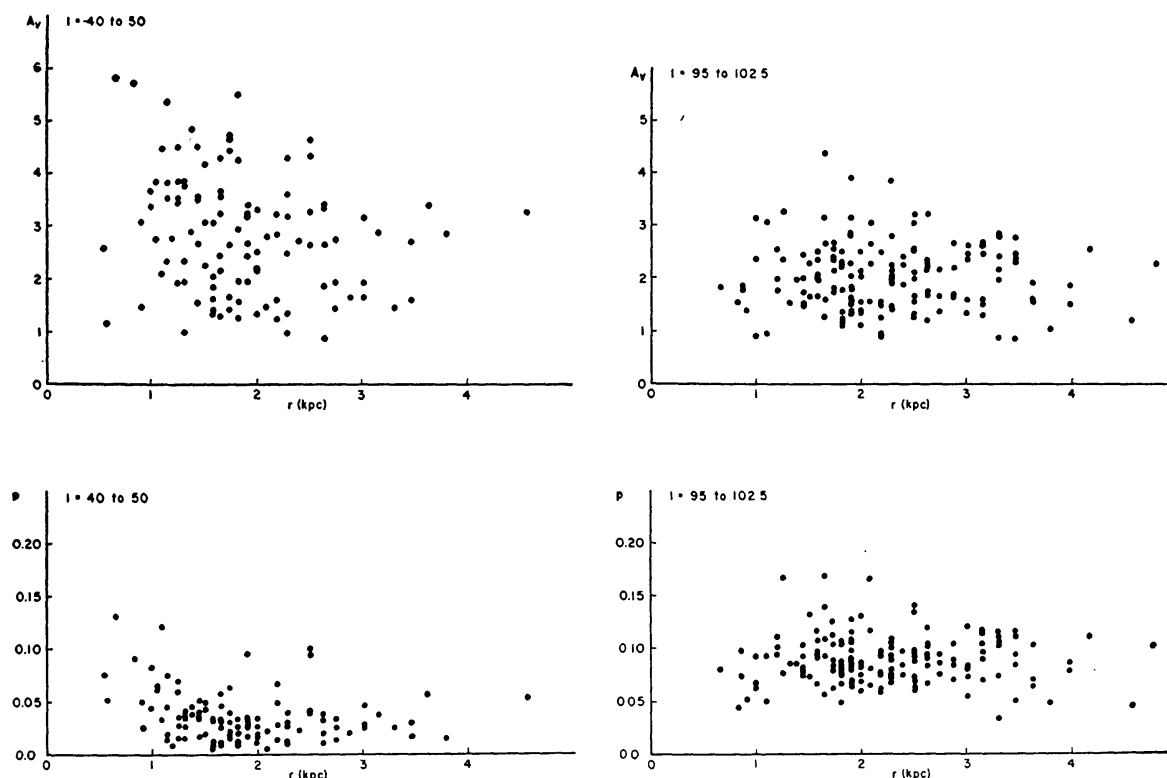


FIG. 30.—Correlation of interstellar absorption with distance and the interstellar polarization with distance. The upper right sections of the A_v versus r (kpc) plots are devoid of stars because of observational selection.

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