

A SURVEY OF GALAXY REDSHIFTS. IV. THE DATA

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ABSTRACT

We present here the complete list of the best available radial velocities for the 2401 galaxies in the merged Zwicky-Nilson catalog brighter than $14.5 m_z$ and with b^{II} above $+40^\circ$ or below -30° . Almost 60% of the redshifts are from the CfA survey and are accurate to typically 35 km s^{-1} .

Subject heading: galaxies: redshifts

I. INTRODUCTION

The art of measuring galaxy redshifts has come a long way since the first measurement by Slipher in 1912 for M31, the brightest galaxy in the northern sky. An excellent review of work through the early 1970s can be found in Sandage (1975). Almost all of the measurements up until the last few years were made with low or moderate dispersion optical spectrographs, sometimes employing image intensifiers, with photographic plates as the primary recording mechanism. Except for a few objects observable at high dispersion, most of the measured velocities were only accurate to 100 km s^{-1} or worse. In addition, for low redshift galaxies, especially low surface brightness objects with no emission lines, night-sky solar absorption lines can degrade the results from photographic spectra (see, e.g., Simkin 1972). The quality of these data was sufficient to analyze large trends in velocity space and to investigate the dynamics of the most massive compact systems. Unfortunately, studies of small groups of galaxies, small-scale irregularities in the Hubble flow, and, in particular, the application of the "cosmic" virial theorem (Davis, Geller, and Huchra 1978) where expected velocity differences and dispersions are of the order of a few hundred km s^{-1} or smaller require considerably more accurate measurements.

Fortunately two recent advances in galaxy velocity measurement techniques improved the situation immensely. Neutral hydrogen spectroscopy at the 21 cm radio line, on one hand, and optical spectroscopy with digital detectors, sky subtraction, and cross-correlation techniques, on the other hand, have moved the precision and accuracy of the measured radial velocities for most objects into the realm of tens of km s^{-1} .

For the last 5 years we have been assembling a catalog of galaxy radial velocities both from sources in

the literature and from measurements made at Kitt Peak and at Mount Hopkins Observatory (now the Fred L. Whipple Observatory). Our goal was to assemble complete radial velocity information for well-defined samples of galaxies for use in statistical correlation analyses, the study of the local luminosity density and luminosity function, and the identification of bound aggregates of galaxies. Two major samples were initially selected for analysis. The first of these is a whole sky sample complete to a $B(0)$ (RC1) magnitude of 13.2 containing ~ 1200 galaxies. This data set is almost identical to the Revised Shapley-Ames Catalog of Sandage and Tammann (1981); computer readable copies have been made available to interested parties. The second data set is a much deeper sample of ~ 2400 galaxies from the Zwicky catalog (Zwicky *et al.* 1961-68, hereafter ZGC) which we will describe and present in the following sections. Papers containing analyses based on this data set have been submitted to the main *Journal* (Davis, *et al.* 1982; Davis and Huchra 1982; Geller and Huchra 1983; Huchra and Geller 1982; Press and Davis 1982; Davis *et al.* 1982). Both of these samples are contained in a much more extensive catalog of galaxy redshifts (more than 7500) which will be published later.

II. THE SAMPLE

The sample selected is all galaxies in the ZGC, Zwicky (1971, hereafter CGC), or Nilson (1973, hereafter UGC) catalogs satisfying the following criteria:

$$m_{\text{pg}} \leq 14.5 \text{ and } \begin{cases} b^{\text{II}} \geq 40^\circ, & \delta \geq 0^\circ, \\ \text{or} \\ b^{\text{II}} \leq -30^\circ, & \delta \geq -2^\circ 5'. \end{cases}$$

Almost all of the entries come from the original ZGC, but ~ 10 additional objects were found satisfying the above criteria in the UGC and CGC. In addition, many objects listed only once in the ZGC are in reality double or multiple galaxies with small separations. All of the objects so described that satisfy the above criteria were

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examined on the Palomar Sky Survey to determine if they were multiple galaxies—as opposed to parts, usually H II regions, of a single galaxy. Individual magnitudes based on Zwicky's original estimate of the total system magnitude were then assigned to each component, and galaxies that did not satisfy the magnitude cut were removed from the sample. This splitting of doubles and multiples is important for the study of the galaxian luminosity function.

The magnitudes for the galaxies in this sample come from two primary sources. In establishing the master catalog in 1976, we decided to adopt the $B(0)$ –ZGC magnitude system (Huchra 1976). For galaxies that have them, we use the $B(0)$ magnitudes or the corrected Harvard magnitudes (Shapley-Ames) given in de Vaucouleurs and de Vaucouleurs (1964, hereafter RC1). For galaxies without these magnitudes but with ZGC magnitudes, we use the ZGC magnitudes or the UGC magnitudes. For the few galaxies with none of the above, we quote whatever estimates are available—appropriate transformations will be derived as needed. Despite all its faults (see, e.g., Kron and Shane 1976; Huchra 1976), the $B(0)$ –ZGC scale is reasonably linear and homogeneous and is by far the largest collection of galaxy magnitudes available. Transformations to other systems cannot be accomplished without morphological type and diameter information which is available for less than one-third of the ZGC. More importantly, recent photoelectric studies (Bothun and Schommer 1982; Huchra and Thuan 1983) have shown the ZGC magnitudes to be well behaved to $m_{pg} = 14.5$ with little need for transformation. The scatter is only on the order of 0.4 mag, and the systematic error is on the order of 0.2 mag or less between various volumes of the catalog.

Other data for the galaxies in the sample—morphological types on the T system of de Vaucouleurs (de Vaucouleurs, de Vaucouleurs, and Corwin 1976, hereafter RC2)—and blue diameters have been taken from the UGC or estimated from Palomar Sky Survey prints.

Our philosophy in assembling this catalog has been to produce a listing for dynamical studies with the *best available* velocities. Much of the data comes from the literature, and in some cases a subjective judgement has been made. In most cases, especially for the faint early-type galaxies, there is only one measured velocity—our own. If more than one measurement of a galaxy's velocity exists, we have chosen to quote the velocity with the lowest associated external measurement error including appropriate “fudge” factors, either those supplied by the authors themselves (e.g., Sandage 1978), or those derived by comparison with other velocities known to be very accurate (e.g., the 21 cm comparisons of Rood 1982, and the RC2 comparison in Tonry and Davis 1978, hereafter Paper I). If the multiple measurements are “discrepant,” i.e., outside the 2σ confidence levels of their combined

external errors, we have attempted to discern the correct velocity by going to the original data—published 21 cm profiles, our own spectra, identified line lists, etc.—or by remeasuring the velocities ourselves. If this could not be done, the velocity with the lowest quoted external error is listed, and the other velocity has been listed in the comments. In general, we regard weighted averaging of measurements as dangerous, primarily because the poorer velocities have quoted errors of only 100 km s^{-1} , but many are wrong by several thousands of km s^{-1} . The only exceptions to this in the catalog are the velocities we have taken from the RC2, which in a few cases are averaged measurements, and the velocities for a small subset of binary galaxies (Turner 1976; White *et al.* 1983) for which we have obtained multiple high quality spectra in order to measure very accurate velocity differences.

In many cases, there are several 21 cm velocities measured for the same galaxy with almost the same quoted error. We, like Rood (1981), have opted to quote the source with the largest number of measured velocities—usually Fisher and Tully (1981). In general, all of the 21 cm measurements agree to within the quoted 1σ errors.

One caveat must be inserted here. A low quoted error, especially on a 21 cm measurement, can be meaningless if the galaxy observed is in a double or multiple or a disturbed system, or if it is an E or S0. In several cases, discrepant optical versus 21 cm velocities were resolved in favor of the optical velocities, despite their larger quoted error, when it was found that the 21 cm velocity probably belonged to some other late-type hydrogen-rich galaxy several beamwidths away with a similar velocity.

III. OBSERVATIONS

The new optical observations reported here come from two efforts at two observatories. The original effort started at KPNO with the white spectrograph plus Carnegie image tube (Ford 1976) on the No. 1 0.9 m telescope. These data were primarily taken at a dispersion of 120 \AA mm^{-1} , but some spectra were obtained at 90 \AA mm^{-1} . These spectra were taken with a long, 2'5 wide slit and recorded on baked IIIa-J plates. The 120 \AA mm^{-1} spectra covered the region 3700–7000 \AA , while the higher dispersion spectra covered 3600–5700 \AA . The plates were measured with the single-axis Grant engines at KPNO and Harvard, and radial velocities were determined from measurements of identifiable absorption or emission lines. Only a small number of the velocities in this catalog derive from this source. Note that these have errors smaller than most previous optical velocities primarily because they have been made at higher dispersion.

The second, and much larger effort has become known as the CfA redshift survey. We have obtained to

date ~ 3000 galaxy spectra using a photon-counting Reticon and a moderate dispersion spectrograph on the Tillinghast 1.5 m reflector on Mount Hopkins. The first version of the detector used electronics copied from designs by Steve Shectman (Shectman and Hiltner 1976) and Varo image intensifiers packaged at SAO (Davis and Latham 1979). The detector system, including image intensifiers, has evolved considerably since then (Latham 1982). The observing procedures and data reductions techniques have been described in Paper I.

Rood (1982) has analyzed the errors in sets of galaxy redshifts by comparing subsets that have highly accurate 21 cm redshifts. For this analysis, we made available to him a very early and preliminary list of the CfA redshifts reported here. He found that our internal errors (calculated from the relative height of the correlation peak and the noise for absorption velocities) underestimated the true error by 10% or 20% if the comparison 21 cm velocities were taken as accurate to 8 km s^{-1} . He concluded that the typical CfA absolute error is $\pm 38 \text{ km s}^{-1}$, with *no* significant dependence on whether the CfA redshift was based on emission line fits or on an absorption line correlation.

As the CfA redshift programs have continued, we have gradually accumulated multiple observations for many objects. We have carried out a preliminary analysis of the errors for 350 galaxies that have been observed more than once, including many galaxies not in the present limited sample. The distribution of calculated standard deviations has a median of less than 20 km s^{-1} but has a fairly long tail, with 20 errors larger than 60 km s^{-1} . We plan to carry out a more careful analysis of the errors for objects with multiple observations when we accumulate enough additional data.

All but 2% of the redshifts listed have quoted errors less than 100 km s^{-1} . For 80% of the redshifts—those measured by us or at 21 cm—the quoted errors should be an accurate representation of the data. The median quoted error for the velocities presented here is only 27 km s^{-1} .

We can almost always measure a galaxy's velocity in 20 minutes to 1 hr—independent of morphological type and without an initial guess as to the bandwidth to search.

IV. THE DATA

Table 1 contains the catalog. There is a total of 2401 objects, 1845 of which are in the northern galactic hemisphere in a region of 1.83 sr, and 556 of which are in the southern galactic hemisphere in a region of 0.83 sr. Column (1) lists the name of the object, either NGC or IC number or a positional designation. This is the nomenclature we will adopt in all future catalogs. Columns (2) and (3) give the coordinates of the galaxies in epoch 1950. These coordinates are primarily from ZGC,

but a few have been updated to more accurate positions from UGC, RC2, or accurate measurements made at KPNO by J.P.H. and M. Aaronson. Columns (4) and (5) give the photographic or $B(0)$ magnitude and its source. Columns (6), (7), and (8) give the *heliocentric* velocity quoted as cz in km s^{-1} , its quoted (internal) error, and source of the velocity. Rood (1982) has evaluated the external errors for various observers, primarily by comparing optical results with (usually) more accurate 21 cm velocities. Additional discussion of expected external errors can be found in Sandage (1978) and in Paper I. Column (9) gives the morphological type in the standard de Vaucouleurs's T notation with extra designations for Irr II (16), unclassified spiral (20), peculiar or untyped (15), and unclassified elliptical (-7). Columns (10) and (11) give the blue major and minor axis diameters from the UGC.

Table 2 contains the source coding for the velocities in the catalog and the associated reference list. Note that some source numbers are missing because this catalog is a subset of the much larger whole sky catalog, and the sources contributing data for southern hemisphere galaxies have not been listed. Table 3 gives the coding for the photometry sources, and Table 2 also lists the number of velocities in the final catalog contributed by each source. We have chosen to arrange the source listing in a manner similar to that of de Vaucouleurs in RC2. Observations are sorted primarily by the observatories at which they were made, with the exception of a few individual observers who have contributed significantly large bodies of data (e.g., Sandage and Fisher and Tully). Originally, we thought that this might allow determination of systematics peculiar to the instrumentation or reduction techniques used at each observatory. However, because most of the velocities in this compilation come from just a few sources whose systematics have already been studied (Sandage 1978; Rood 1982; Paper I), we will not comment further here.

One object in the catalog does not have a velocity. It was not in the ZGC but comes from the CGC—III Zw 92. It is probably stellar; spectra of objects near the Zwicky position show only galactic stars. We include this object in the list only for the sake of completeness. If this object is dropped, then this catalog is complete.

Once again we must stress that this catalog was compiled for statistical analyses of redshift data. In a body of data this size there are sure to be errors, and we ask that if any are found they be reported to us (J.P.H.). It is our goal to compile a complete set of *optical* spectra for the galaxies in this sample in order to study the morphology of galaxy spectra and such questions as the frequency of emission lines and active galactic nuclei (eg. Huchra, Wyatt, and Davis 1982). At present we have spectra of $\sim 60\%$ of the sample. Parties interested in the optical spectra of small numbers of objects should contact the authors.

TABLE I
THE SURVEY

NAME (1)	RA (1950) DEC (2) (3)	m _p (4)	V _H (5)	V _H (6)	(7) (8)	TYPE (9)	D ₁ (10)	D ₂ (11)	NOTES (12)
0000-0211	0 0.6 - 2 11	14.30	1	7323	31 27	4X	1.30	0.80	
0000+2141	0 0.6 21 41	14.40	1	6605	32 27	15 P	1.00	0.70	MK334, IV2W1
N7814	0 0.7 15 52	11.71	0	1051	18 27	2A S	6.50	2.70	
0001+2256	0 1.0 22 56	14.00	1	7301	34 27				
N7816	0 1.2 7 11	14.00	1	5141	48 1	4	2.00	2.00	
N7817	0 1.4 20 28	12.70	1	2342	20 6	4A	4.00	1.10	
N7819	0 1.8 31 12	14.30	1	4953	10 0	3B S	2.00	0.80	
N7820	0 2.0 4 55	13.90	1	3064	19 27	0	1.60	1.70	
N7824	0 2.6 6 38	14.50	1	6134	28 27	2	1.90	1.30	
0003+1955	0 3.8 19 55	14.00	1	7730	26 27	0			MK335
N 1	0 4.7 27 26	13.40	1	4548	10 6	3A S	1.80	1.20	
0005+2644	0 5.6 26 44	14.40	1	8741	36 27	4	3.00	2.50	VV80
N 14	0 6.2 15 32	13.30	1	860	10 2	10B P	2.00	1.70	
N 12	0 6.2 4 20	14.50	1	3940	20 4	4B R			
N 9	0 6.3 23 33	14.50	1	4500	35 27	15	1.80	1.00	
N 16	0 6.5 27 27	13.36	0	3041	23 27	-3X	2.20	1.60	MK545
N 23	0 7.3 25 39	13.12	0	4566	15 6	1B S	2.00	1.10	
N 26	0 7.9 25 33	13.90	1	4583	15 6	2A T	1.50	0.60	
N 27	0 7.9 28 44	14.50	1	7037	24 27	20	2.70	1.50	
N 36	0 8.8 6 6	14.50	1	6106	64 1	3X T	1.20	1.10	
N 39	0 9.7 30 47	14.40	1	4862	42 27	5A	1.00	0.60	
0010+1408	0 10.4 14 8	14.20	1	2058	35 27	15			
N 43	0 10.4 30 39	13.90	1	4785	22 27	-2	1.00	1.00	
N 4	0 10.8 17 13	14.20	1	4992	35 27	20	0.45	0.35	
0011+3037	0 11.3 30 37	14.20	1	4735	30 27	15	2.60	2.10	
N 57	0 12.9 17 3	13.70	1	5458	22 27	-7	1.50	0.40	
0013+1548	0 13.2 15 48	14.00	1	4156	35 27	20	1.70	1.10	
N 63	0 15.1 11 10	12.60	1	1179	20 6	20 P	2.00	1.10	
N 68	0 15.7 29 48	14.05	0	5711	29 0	-3A	1.20	1.10	
N 70	0 15.8 29 48	14.50	1	7146	32 0	5A T	2.00	1.60	VV166, II539
N 76	0 17.0 29 40	14.00	1	7369	34 27	15	1.40	1.20	
N 78A	0 17.9 0 33	14.50	1	5481	26 27	-2			MK547
I1543	0 18.3 21 36	14.20	1	5565	26 27	20	0.80	0.70	
0018+2657	0 18.5 26 57	14.50	1	9227	25 27	-2B	1.40	0.80	
N 80	0 18.6 22 5	13.74	0	5698	22 27	-3A	2.20	2.00	
N 83	0 18.8 22 9	14.21	0	6304	28 27	-5	1.30	1.20	
N 91	0 19.2 22 8	14.50	1	5177	34 27	5X B	2.40	0.90	
N 95	0 19.7 10 13	13.40	1	4891	48 0	5X T	1.80	1.30	
N 97	0 19.9 29 28	13.50	1	4730	27 27	-7			
0020+2710	0 20.6 27 10	14.50	1	3883	35 27	15	1.50	1.50	
N 99	0 21.4 15 30	14.00	1	5184	78 1	6 P			
0022+3105	0 22.7 12 36	14.10	1	5290	26 1	2A	0.90	0.70	
N 105	0 22.7 19 56	14.30	1	4300	33 27	5B	2.00	1.70	
0024+1956	0 23.3 28 56	13.30	1	4737	25 27	-2			
N 108	0 23.3 28 56	13.30	1	4737	25 27	-2			
N 112	0 24.2 31 25	14.00	1	5210	52 27	0	3.10	0.70	
0024+1118	0 24.5 11 18	14.00	1	2189	38 27	5A	1.60	0.90	
N 124	0 25.3 - 2 5	13.80	1	4044	31 27	5A			
0025+3032	0 25.3 30 32	14.30	1	6321	38 27	20	1.60	1.50	
N 125	0 26.3 2 34	13.83	0	5289	50 0	0A			
N 128	0 26.7 2 35	12.92	0	4243	26 0	-2	3.00	0.90	
N 132	0 27.6 1 55	13.80	1	5316	36 27	4X	1.90	1.70	
N 137	0 28.5 9 55	14.20	1	5276	30 27	-2	1.60	1.60	
N 140	0 28.7 30 31	14.20	1	6455	35 27	5			
0028+0556	0 28.9 5 56	14.30	1	2055	32 27	20	1.40	0.80	0031SE
0031+0659A	0 31.4 6 59	14.50	1	5449	29 27	-2			
I 34	0 33.0 8 51	13.90	1	5299	25 27	1B	3.20	1.20	
0033+3136	0 33.3 31 36	14.50	1	6455	42 27	2			
N 160	0 34.1 21 17	14.50	1	8925	29 27	-1A P	3.00	1.60	
0034+2117	0 34.2 23 43	13.70	1	4477	22 0	2	1.20	0.45	
I1559	0 34.2 23 43	13.70	1	4477	22 0	2	3.50	1.10	MK341
N 169	0 34.6 1 40	13.24	4	4355	9 4	4A T	2.80	3.50	ARP282
N 173	0 34.6 8 22	14.30	1	5251	29 1	4B T	2.80	2.30	
N 180	0 35.4 2 27	13.51	0	547	22 27	1X T	2.30	1.80	
N 182	0 35.6 2 27	13.51	0	547	22 27	-7			
N 183	0 35.6 2 27	13.51	0	547	22 27	-7			
N 192	0 36.7 3 3	14.30	1	4210	20 27	1B	2.40	1.10	
N 193	0 36.7 3 3	14.30	1	4340	25 27	-3X S	1.70	1.60	
N 194	0 36.7 2 46	13.65	0	5187	24 27	-5	1.70	1.70	
0036+2522	0 36.8 25 22	14.50	1	4614	29 27	15	1.20	0.90	
N 198	0 36.9 2 31	14.10	1	5262	27 27	5A	1.30	1.30	
N 200	0 37.0 2 37	14.00	1	5140	39 1	4B S	2.00	1.20	
N 207	0 37.5 22 26	14.50	1	5841	29 27	3A S	0.70	0.50	
N 214	0 38.8 25 14	13.17	0	4484	20 0	5X IR	2.20	1.70	
0038-0159	0 38.8 - 1 59	14.40	1	5302	21 27	1	1.20	1.20	
I 43	0 39.8 2 22	14.40	1	4861	10 0	5X P	2.20	2.10	
N 225	0 39.8 0 34	14.50	1	5355	25 27	15	1.50	1.00	
N 227	0 40.1 - 1 48	13.51	0	5297	28 27	-5	1.70	1.40	
N 226	0 40.2 32 18	14.40	1	4967	42 27	15	1.00	1.00	
N 236	0 40.9 2 40	14.50	1	5648	34 27	5A	1.30	1.20	
N 234	0 40.9 14 4	13.50	1	4449	33 27	5A	1.80	1.80	
N 237	0 40.9 - 0 24	14.05	0	4139	27 1	6X3T	2.00	1.20	
N 233	0 41.0 30 19	13.80	1	5430	27 27	-7	2.00	1.70	
N 245	0 43.5 - 1 60	13.18	2	4114	20 1	3A T	1.30	1.30	MK555
0043+2958	0 43.7 29 58	14.50	1	5003	21 27	1A	1.60	0.25	
0044+3224	0 44.2 32 24	14.10	1	2931	20 9	3B	2.80	0.80	
N 252	0 45.3 27 21	13.40	1	4990	31 27	-2	1.80	1.30	
N 257	0 45.5 8 3	13.70	1	5210	27 27	6	2.20	1.60	
N 260	0 45.9 27 25	14.30	1	5206	25 6	5 P	0.90	0.90	
0047+2240	0 47.0 22 40	14.50	1	7461	35 27	15			
N 266	0 47.1 32 0	12.60	1	4702	23 27	1B	0.90	0.90	
N 271	0 48.2 - 2 9	13.20	1	4098	22 27	3B	2.50	2.00	
0048+2908	0 48.9 29 8	14.50	1	10763	35 27	3B	0.90	0.90	SY
0049+2924	0 49.4 29 24	14.30	1	5555	20 27	0			
N 279	0 49.6 - 2 29	14.00	1	5555	20 27	-2	1.60	1.40	MK558
0050+2845	0 50.2 28 45	14.10	1	4985	20 32	15 P	0.70	0.35	NK119
0051+1225	0 51.0 12 25	14.00	1	18116	42 27	15	0.60	0.50	IZW1, SY
N 295	0 52.4 31 16	13.50	1	5889	27 27	5B	2.20	0.90	
N 304	0 53.4 23 51	14.00	1	4991	31 27	15	1.70	0.80	
N 307	0 54.0 - 2 2	14.10	1	4010	22 27	-3			

TABLE 1—Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)					
NAME	RA(1950)DEC	m _p	V _H	TYPE	D ₁	D ₂	NOTES	NAME	RA(1950)DEC	m _p	V _H	TYPE	D ₁	D ₂	NOTES	
N 311	0 54.8 30 0	14.10 1	5048	16 27	-2			0118-0048	1 18.7 - 0 48	14.50 1	5240	23 27	1B	2.10	2.10	
N 315	0 55.1 30 5	12.50 1	4921	18 27	0-5A			N 485	1 18.8 6 45	14.20 1	2251	35 27	20	2.00	0.70	
0055+3113	0 55.1 31 13	14.40 1	4995	18 27	0			N 488	1 19.2 8 56	13.40 1	2474	27 27	20	1.80	0.40	
I1607	0 56.3 20 20	14.50 1	5410	15 27	15			N 493	1 19.2 5 0	11.41 0	2268	10 16	3A1R	6.00	4.30	
0056+2335	0 56.3 23 35	14.50 1	5058	27 27	15			N 497	1 19.6 0 41	13.00 1	2325	20 6	6B S	4.30	1.60	
0057+1504	0 57.0 15 4	14.20 1	5317	32 27	2X			N 502	1 19.9 - 1	14.10 1	8071	49 0	4B T	2.50	1.10	
N 338	0 57.9 30 24	14.00 1	4766	35 27	3			0120+3032	1 20.2 8 47	13.80 1	2489	16 27	20	1.50	1.50	
N 351	0 59.5 - 2 11	14.30 1	4194	23 27	0B			N 516	1 20.7 30 32	14.50 1	10332	29 27	20			
0100+1347A	0 60.1 37 47	14.50 1	12230	40 27	20		NW COMP	N 518	1 21.4 9 18	14.30 1	2432	26 27	-2	1.50	0.50	VV207
0100+1347B	0 60.1 38 47	14.50 1	12562	40 27	20		SE COMP	N 519	1 21.6 12 39	12.56 0	2477	12 0	5X2T	4.30	3.10	
N 354	1 0.6 22 4	14.20 1	4878	43 3	3B P		MK353	N 518	1 21.6 9 4	14.40 1	2704	31 27	1A	1.70	0.60	
I1613	1 2.2 1 51	14.50 1	-238	7 2	10X9S		DD08	0121+3155	1 21.9 31 55	14.20 1	10532	34 27	1	1.20	1.00	AKN42,MK991,SY
I1620A	1 4.5 13 42	14.50 1	11512	47 27	4X			N 521	1 22.0 1 28	12.75 0	4999	27 1	4B R	3.80	3.60	
N 379	1 4.5 32 15	14.16 0	5556	41 27	-3		IVZM38	N 520	1 22.0 3 32	12.75 0	2162	10 16	0	5.00	2.00	VV231
N 380	1 4.5 32 13	14.05 0	4414	25 27	-1		IVZM38,3CR 31	N 530	1 22.1 - 1	50 14.00 1	5007	27 27	1A	1.70	0.50	AKN42,MK991,SY
N 384	1 4.6 32 2	14.45 0	4287	23 27	-5		IVZM38,3CR 31	N 522	1 22.1 9 44	14.20 1	2806	33 27	4A	2.70	0.50	MK1154
N 383	1 4.7 32 9	13.59 0	5071	23 27	-4A		IVZM38,3CR 31	N 524	1 22.2 9 17	12.11 0	2427	30 27	-1A T	3.50	3.50	
0104+1625	1 4.7 16 25	14.50 1	1113	33 27	10		IVZM38,3CR 31	N 525	1 22.2 9 26	14.50 1	2146	31 27	-2	1.60	0.70	
N 382	1 4.7 32 8	14.20 1	5228	27 27	7			N 532	1 22.6 9 0	13.50 1	2332	23 27	1	2.80	0.90	
N 385	1 4.7 32 3	14.38 0	5024	24 27	-3A		IVZM38	I1700	1 22.7 14 36	14.30 1	6356	19 27	-7	2.00	2.00	
N 399	1 6.2 32 22	14.50 1	5234	23 27	1			0122+3153	1 22.7 31 53	14.00 1	4625	30 27	1	2.60	0.80	MK993
0106+3153	1 6.5 31 53	14.50 1	4617	31 27	5			N 533	1 22.9 1 30	13.44 0	5544	18 27	-5	4.00	3.00	
0107+3205	1 7.2 32 5	14.00 1	5220	25 27	20			I1702	1 23.2 16 20	14.50 1	4206	37 27	5A	1.50	1.20	
0109+0104	1 9.0 1 4	14.20 1	6771	30 27	10		AKN33	N 541	1 23.2 - 1	38 14.00 1	5417	20 27	-3	2.40	2.40	
I1639	1 9.2 - 0 55	14.20 1	5395	23 27	-6		MK562	N 545	1 23.4 11 11	14.20 1	5321	17 27	-3A	3.00	2.00	
N 420	1 9.3 31 52	13.40 1	4951	21 27	-2			I 112	1 23.4 - 1	36 13.70 1	5810	41 27	20	0.90	0.40	AKN 46
N 426	1 10.3 - 0 33	14.40 1	5265	23 27	-7			N 547	1 23.5 - 1	36 13.40 1	5524	16 27	-5	1.50	1.50	
N 429	1 10.4 - 0 36	14.40 1	5644	68 27	-2			I1706	1 24.1 1 45	13.60 1	5829	24 27	20	2.00	1.00	
N 428	1 10.4 - 0 43	12.11 0	1150	9 1	9X6S			N 548	1 24.8 14 31	14.20 1	6319	86 1	20	1.20	0.80	
N 430	1 10.5 - 0 51	13.60 1	5284	25 27	-7			0124+1855	1 24.8 18 55	13.80 1	5012	35 27	15	3.40	0.70	MK359
N 437	1 11.8 5 40	14.00 1	5291	19 27	0			0124+3118	1 24.8 31 18	14.40 1	4041	34 27	5	2.00	0.60	
N 442	1 12.1 - 1 17	14.50 1	5620	25 27	15			N 560	1 24.9 - 2	10 14.41 0	5425	74 0	-3	2.00	1.50	
I1652	1 12.2 31 42	14.30 1	5176	30 27	0			N 564	1 25.2 - 2	8 14.02 0	5699	74 0	-5	1.90	1.50	
0112-0046	1 12.3 0 46	14.50 1	10184	37 27	-6			I 121	1 25.6 - 1	34 14.50 1	4505	23 27	1	1.50	0.50	
I1654	1 12.4 29 56	14.30 1	4844	34 27	1			0126-0049	1 25.6 - 0	49 14.00 1	5472	23 27	20	1.60	0.90	
N 448	1 12.8 - 1 53	13.20 1	1917	22 27	-2			N 570	1 26.4 - 0	13 14.20 1	5491	30 27	1B T	2.50	1.70	
N 450	1 13.0 - 1 8	12.37 2	1758	10 0	6X8S			N 577	1 28.1 - 2	15 14.20 1	5935	17 27	1B	2.20	1.80	
N 455	1 13.5 4 2	13.90 1	5269	22 27	15		MK565	N 575	1 28.1 21 11	13.80 1	3126	8 6	5B	1.90	1.80	I1710
N 452	1 13.5 30 46	14.00 1	5437	22 27	-2X R			N 585	1 29.1 - 1	11 14.20 1	5389	25 27	1A	2.70	0.80	
0115+1107	1 15.5 11 7	14.30 1	5062	50 1	6B R			0130+1804	1 30.0 18 4	14.30 1	669	36 27	10	1.20	0.80	
0116+1445	1 16.1 14 45	14.20 1	6903	32 27	15			I1715	1 30.9 12 19	14.50 1	4188	8 6	10	0.70	0.50	
N 467	1 16.6 3 2	13.30 1	5467	22 27	-2			N 598	1 31.1 30 24	6.47 0	-180	1 1	5A4S	73.00	45.00	M 33
I1666	1 17.1 32 12	14.40 1	4897	30 27	5			0131-0117	1 31.6 - 1	17 14.40 1	4929	26 27	2A	1.50	0.50	
N 470	1 17.2 3 9	12.75 0	2370	10 6	3A T			N 606	1 32.1 21 10	14.50 1	9956	30 27	5B	1.70	1.50	
N 471	1 17.3 14 31	14.00 1	4138	25 27	-2			N 622	1 33.4 0 25	14.10 1	5161	8 6	4B T	2.10	1.70	
N 473	1 17.3 16 17	13.60 2	2129	10 1	0X R			N 628	1 34.0 15 32	10.07 0	656	2 1	5A1S	12.00	12.00	MK571
N 474	1 17.5 3 9	12.51 0	2333	21 27	20			0134+2838	1 34.4 28 38	14.40 1	7731	30 27	20	0.90	0.70	
I1672	1 17.9 29 26	14.00 1	7059	37 27	20			0134+0438	1 34.6 4 38	14.50 1	3158	31 27	15	1.70	1.30	
0118+0106	1 18.6 1 6	14.30 1	4947	30 27	3A			N 632	1 34.7 5 37	13.50 1	3151	20 27	-2			

TABLE 1—Continued

NAME (1)	RA (1950) DEC (2) (3)	m_p (4) (5)	VH (6) (7) (8)	TYPE (9)	D ₁ (10) (11)	D ₂ (11)	NOTES (12)
N 638	1 36.3 0 50	14.20 1	4992 34 27	-2	1.40	0.60	
0136+0050	1 37.0 6 58	14.20 1	3178 30 27	15	0.90	0.60	
0137+1539B	1 37.5 15 39	14.38 3	634 10 2	10, 9			D13
N 645	1 37.6 5 28	13.80 1	3312 10 9	4B	3.00	1.30	
I 1721	1 38.8 8 15	14.30 1	2998 37 27	20	1.20	0.50	
N 658	1 39.6 12 20	13.60 1	4299 8 2	3	3.50	1.70	
0139+1343	1 39.6 25 53	13.90 1	3916 29 27	-2			
0140+1254	1 39.7 13 43	13.50 1	767 8 2	10	3.50	1.10	
N 660	1 40.4 12 54	14.30 1	839 26 27	10	2.10	1.50	
I 1723	1 40.4 13 23	11.90 0	856 8 2	1B P	10.00	4.50	
N 664	1 41.2 3 59	13.90 1	5498 21 27	3A	3.60	0.90	
0141+0206	1 41.2 6 38	14.20 1	5412 49 1	3	1.80	1.50	
N 661	1 41.4 2 6	14.00 1	5174 23 27	-2X	1.70	1.60	MR573
0141+1713	1 41.6 28 28	13.00 1	3836 16 27	-3A			
N 665	1 41.6 17 13	13.60 1	4506 24 27	3A	1.40	0.60	
N 670	1 42.3 10 10	13.50 1	5420 20 27	-2	2.40	1.60	
N 671	1 44.3 12 52	14.30 1	5460 28 27	-2	1.70	0.60	
I 1727	1 44.6 27 38	13.04 2	3788 18 1	-2A	2.20	0.80	
N 672	1 45.1 27 11	11.76 0	428 33 27	15B6S	8.00	3.00	VV338
N 673	1 45.7 11 17	13.30 1	5173 15 9	5X S	7.20	2.80	VV338
0145+1221	1 45.8 12 21	14.00 1	5474 90 3	1B P	0.90	0.70	MR575
0146+2000	1 46.0 20 0	14.50 1	8921 29 27	3A	1.10	0.60	
I 162	1 46.1 10 15	14.20 1	5354 33 27	-1	1.00	0.70	VV54
N 675	1 46.3 5 40	10.50 1	1517 20 6	0	5.00	1.80	
N 677	1 46.3 12 48	14.30 1	5100 22 27	-7	2.00	2.00	
I 163	1 46.5 20 28	13.80 1	2735 15 6	20B	2.00	0.90	
N 678	1 46.7 21 45	13.30 1	2863 8 2	3			
0146+1215	1 46.8 12 15	14.20 1	5221 25 27	0	1.60	0.70	MR577
N 680	1 47.0 21 43	13.00 1	2953 16 27	-7			
I 1731	1 47.3 26 57	14.20 1	3426 39 27	5			
N 684	1 47.4 27 24	13.20 1	3513 20 6	3	3.40	0.90	
N 693	1 47.9 5 54	13.50 1	1593 24 27	20	3.20	1.60	
N 694	1 47.9 21 30	13.50 1	2660 8 6	-2			
N 695	1 48.4 21 40	13.70 1	2966 10 6	5X S	0.50	0.30	MR363, VZM122
I 167	1 48.4 21 40	14.00 1	2928 10 6	5X S	3.00	1.70	
N 695	1 48.4 22 20	13.70 1	9708 37 27	15	0.50	0.45	
N 697	1 48.5 22 7	12.70 1	3109 20 6	4X R	5.10	1.70	
0148+0800	1 48.5 8 0	14.20 1	5538 16 27	-7	1.80	1.80	
N 706	1 49.2 6 3	13.20 1	4993 18 27	5A	2.10	1.70	
N 711	1 49.7 17 16	14.50 1	4928 47 27	-2	1.70	0.80	
I 1743	1 50.2 12 28	14.00 1	4611 21 27	1B	2.10	0.90	
N 718	1 50.6 3 57	12.81 0	1756 22 27	1X S	2.60	2.20	
0150+2941	1 50.8 29 41	14.20 1	7683 29 27	3			
0152+0621	1 52.7 6 21	14.50 1	5190 12 1	3A	1.70	1.50	
N 741	1 53.8 5 23	13.20 1	5553 18 27	-5	3.00	3.00	IIZW 38A, VV175
0155+0250A	1 55.6 2 50	14.00 1	5431 35 27	9B P	2.20	0.90	MR582SW, VV122
0155+2507	1 55.6 25 7	14.30 1	4916 29 27	3			
N 765	1 56.0 24 39	14.20 1	5117 28 27	4			
N 768	1 56.1 0 17	14.30 1	6994 19 27	3A	2.10	1.20	
N 766	1 56.1 8 6	14.40 1	8104 39 27	-7			
N 770	1 56.5 18 43	14.20 1	2543 22 27	-5	2.00	2.00	
N 772	1 56.6 18 46	11.42 0	2489 23 27	3A1S	1.10	0.80	
N 774	1 56.9 13 46	14.40 1	4595 23 27	-2	8.00	5.00	
N 776	1 57.1 23 24	13.40 1	4920 10 9	-3X	2.00	1.50	
I 1764	1 57.5 12 24	14.00 1	3483 20 27	20	1.90	1.90	
0157+2103	1 57.6 24 20	14.50 1	5029 31 27	3			
0158+0804	1 58.3 21 3	14.10 1	3051 39 27	15			
N 784	1 58.4 28 36	12.47 0	4756 36 1	20	1.00	0.50	
N 786	1 58.6 15 24	14.30 1	4465 36 27	20	6.80	1.80	
0158+2615	1 58.7 26 18	13.90 1	5102 35 27	1	0.80	0.70	
0158+2618	1 58.9 26 18	14.40 1	5009 15 6	1X S	0.60	0.30	AKN71, SY
N 799	1 59.7 18 8	14.00 1	5834 26 27	1B	2.50	2.00	
N 794	1 59.7 18 8	14.00 1	8225 24 27	-3	1.30	1.10	
0200+2350	2 0.8 23 50	14.10 1	2672 10 2	-8B8	3.00	1.50	
I 195	2 1.0 14 28	14.30 1	3648 28 27	-2	1.50	0.80	
N 803	2 1.0 15 47	13.30 0	2062 20 6	5A S	3.50	1.60	
N 803	2 1.1 14 30	14.20 1	3640 21 27	-3B	3.00	1.50	
I 196	2 1.1 14 30	14.20 1	6332 19 27	4B	1.00	0.50	
N 807	2 2.0 28 45	13.80 1	4684 30 27	-7			
0202+0818	2 2.1 8 18	14.30 1	3508 31 27	20	1.50	0.40	
0203+2933	2 2.2 29 33	14.00 1	5002 28 27	-3			
0203+2944	2 3.3 29 44	14.50 1	4835 25 27	20			
I 1776	2 2.6 5 52	14.40 1	4835 25 27	20	2.30	2.20	
N 817	2 4.8 16 58	13.80 1	4495 35 27	15	0.80	0.35	
0205+1444	2 5.6 14 44	14.30 1	4405 32 27	20	1.20	0.60	
N 820	2 5.6 14 6	13.70 1	4426 20 9	3	1.50	0.90	
N 821	2 5.7 10 46	12.59 0	1716 35 27	-5	3.30	2.20	
N 819	2 5.7 29 0	14.10 1	6566 36 27	15			
N 825	2 5.9 6 5	14.50 1	3398 22 27	1	2.50	1.10	
N 827	2 6.2 7 44	14.00 1	3438 24 27	20	2.70	1.40	
0206+2520	2 6.4 25 20	14.50 1	4872 8 6	15			
0208+0538	2 8.0 5 38	13.70 1	4568 30 27	20	1.10	0.80	MR587
I 211	2 8.5 3 38	13.70 1	3266 15 2	5X S	2.60	2.10	
N 850	2 8.6 - 1 44	14.10 1	8161 23 27	0	1.50	1.40	
N 856	2 11.0 - 0 58	14.40 1	5995 28 27	1A	1.20	0.90	
0211+0353	2 11.1 27 39	13.00 1	3450 29 27	15	0.90	0.70	MR589, IIZW43
N 855	2 11.2 4 57	14.40 1	600 23 27	-7			
I 214	2 11.4 4 57	14.40 1	3448 29 27	15	0.90	0.60	MR590
N 863	2 12.0 - 1 0	14.00 1	7891 17 27	1A	1.30	1.30	
N 864	2 12.8 5 46	11.73 1	1559 8 9	5X3T	4.80	3.50	
N 865	2 13.3 28 22	14.00 1	3619 45 27	0			
N 875	2 14.5 1 19	14.20 1	6381 26 27	0	1.50	1.50	
N 871	2 14.5 14 19	14.30 0	3740 10 6	5B S	1.10	0.35	
N 877	2 15.3 14 19	12.76 0	3910 10 1	4X1T	2.30	1.80	
0215+0525	2 15.7 5 25	14.20 1	9093 24 27	20	1.90	1.80	
0218+1620	2 18.6 16 20	14.00 1	4131 32 27	4X	2.70	1.30	
I 221	2 19.8 28 2	13.80 1	5079 15 9	5	2.50	1.20	
0221-0223	2 21.9 - 2 23	14.00 1	1420 35 27	5A	2.30	1.80	

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2)	(3)	m_p (4)	(5)	V_H (6)	(7)	(8)	TYPE (9)	D_1 (10)	D_2 (11)	NOTES (12)
N 918	2 23.1	18 16	14.30	1	1516	10	2	5X T	3.60	2.10	
N 926	2 23.6	- 0 33	13.90	1	6383	38	27	4B T	2.50	1.30	
N 927	2 24.0	20 16	14.50	1	8258	19	4	5B R	1.30	1.30	MK593
N 934	2 25.0	- 0 28	14.40	1	6353	22	27	-2	1.80	1.60	
N 936	2 25.1	- 1 23	11.28	0	1421	26	27	-1B T	5.60	4.50	
N 930	2 25.1	20 6	13.70	1	4086	37	27	1			
N 935	2 25.4	19 22	13.90	1	4290	33	27	5			
0223-0134	2 25.7	1 34	14.40	1	1762	40	27	20	2.40	0.90	
N 938	2 25.7	20 3	13.80	1	4089	34	27	-7			
N 941	2 25.9	- 1 23	13.20	1	1627	10	2	5X6T	3.50	2.60	
N 955	2 28.0	- 1 20	13.40	2	1534	17	1	2	3.40	1.00	
I 232	2 28.6	- 1 2	14.20	1	6359	30	27	-2	1.70	1.20	
0229-0135	2 29.6	- 1 35	14.30	1	11279	27	27	3B	1.00	0.50	
I 235	2 30.0	20 25	14.50	1	8737	36	27	15	0.40	0.30	MK368
0230+0003	2 30.1	0 3	14.30	1	6162	24	27	20	1.60	0.80	
0230+0024	2 30.4	0 12	14.40	1	6206	30	27	15	0.55	0.45	
0230+0012	2 30.6	9 23	14.50	1	6714	30	27	2A	1.20	0.90	
N 975	2 30.6	20 45	13.30	2	6111	22	27	0	1.30	0.90	
N 976	2 31.2	20 45	13.30	2	4362	23	1	5A3T	1.70	1.50	
0234+0108	2 31.5	1 8	14.40	1	6574	30	27	-2	1.60	1.50	
N 984	2 31.9	23 12	14.50	1	4403	25	27	5	3.00	2.00	
I 238	2 32.6	12 36	14.10	1	6008	21	27	-2	1.80	1.20	
0233+2512	2 33.4	25 12	14.00	1	710	10	2	5			
N 990	2 33.6	11 26	13.90	1	3508	21	27	-7	1.80	1.50	
N 992	2 34.6	20 53	13.50	1	4121	35	27	20	0.90	0.70	AKN88
I 241	2 35.0	1 45	14.30	1	6480	22	27	-7	1.80	1.80	
N 1004	2 35.3	2 7	14.50	1	6931	22	27	15	1.20	0.80	
N 1037	2 35.4	- 2 4	14.50	1	8663	31	27	3B	2.10	0.80	
N 1015	2 35.6	- 1 32	13.50	1	2631	20	2	1B	3.30	3.30	
N 1016	2 35.7	- 1 55	13.30	1	6581	17	27	-7	2.50	2.50	
N 1024	2 36.5	10 38	13.60	1	3472	25	27	2A R	4.80	1.70	
N 1026	2 36.7	6 20	14.10	1	4179	22	27	-2	2.00	1.80	
N 1032	2 36.8	0 53	13.20	1	2659	24	27	1A	3.80	1.30	
N 1029	2 36.9	10 35	14.10	1	3635	18	27	0	1.60	0.50	
I 1827	2 37.1	1 20	14.50	1	5904	26	27	1A	1.20	0.22	
N 1030	2 37.1	17 49	14.50	1	8616	41	27	20			
N 1038	2 37.5	1 18	14.40	1	6069	25	27	1	1.30	0.45	
N 1036	2 37.7	19 5	13.50	1	789	12	3	15	1.60	1.10	MK370, I1828
I 248	2 38.6	17 35	14.40	1	9022	45	27	1			
N 1055	2 39.2	0 14	11.77	0	1002	10	2	3B4	8.00	3.50	
N 1068	2 40.1	- 0 14	9.81	0	1131	6	1	3A T	9.00	8.00	SY
N 1070	2 40.7	4 46	13.00	1	4107	23	27	2A	2.80	2.50	
N 1072	2 41.0	0 5	14.30	1	8021	23	27	3A	1.50	0.50	
N 1073	2 41.1	1 10	11.80	0	1212	8	2	5B3T	5.50	5.50	
I 1843	2 42.8	2 40	14.20	1	6793	31	27	1B	1.70	0.90	
N 1085	2 43.8	3 24	13.60	2	6980	72	1	3A	2.50	1.80	
N 1087	2 43.9	- 0 42	11.74	0	1503	10	4	5X5T	4.00	3.00	
N 1090	2 44.0	- 0 27	11.89	0	2765	10	2	4B7T	4.30	2.10	
0244+0826	2 44.4	8 26	14.30	1	7618	38	27	0	0.90	0.40	
N 1094	2 44.9	- 0 30	13.50	1	6294	58	1	2X S	1.30	1.00	
N 1095	2 45.0	4 26	14.20	1	6364	32	27	5B	1.40	0.90	
I 1856	2 46.3	- 0 58	14.50	1	6486	30	27	3B	1.10	0.60	
0246+0258	2 46.4	2 58	14.00	1	4168	26	27	20	1.60	0.80	
0246+1807	2 46.4	18 7	13.10	1	10010	92	0	15	0.90	0.90	
0246+1727	2 46.6	17 27	14.50	1	6457	31	27	3			
N 1107	2 46.7	7 54	14.10	1	3424	28	27	-2	1.80	1.50	
0246-0105	2 46.9	- 1 56	13.90	1	7158	32	27	3B	1.50	1.50	
N 1121	2 48.2	- 1 23	14.18	3	2597	20	27	20	1.10	0.40	D30
0249-0123	2 48.2	- 1 23	14.18	3	1508	19	2	9B9			
N 1132	2 50.3	- 1 28	13.90	1	6953	17	27	-7	2.00	1.30	
N 1134	2 50.9	12 48	13.20	1	3595	20	6	20	2.50	0.90	
I 267	2 51.1	12 38	14.10	1	3577	21	27	3B	2.10	1.40	
N 1137	2 51.4	2 45	13.50	1	3004	29	27	3A	2.50	1.50	
N 1143	2 52.6	- 0 23	14.20	9	8465	31	27	-2			RING, ARP118
N 1144	2 52.6	- 0 23	13.60	9	8641	32	27	10			RING, ARP118
I 273	2 54.5	- 2 35	14.40	1	3213	30	27	0B	1.80	0.70	
N 1153	2 55.5	3 10	13.50	1	3126	22	27	0	1.40	1.40	
0256+0314	2 56.0	3 14	14.40	1	3098	28	27	15	0.50	0.35	
I 277	2 57.2	2 34	13.80	1	2842	35	27	4B T	1.70	1.70	
0259+0200	2 59.9	2 0	14.00	1	5201	35	27	10	1.40	0.60	
N 1211	3 4.3	- 0 59	13.50	1	3208	22	27	0B	2.90	2.40	
N 1218	3 5.8	3 55	14.00	1	8647	34	27	0	1.20	1.00	
N 1219	3 5.9	1 57	13.50	1	6101	27	27	5A	1.10	1.10	
0309-0035	3 10.2	- 0 35	14.40	1	6847	35	27	3B	1.80	1.40	
0310-0030	3 10.2	- 0 30	14.50	1	6826	21	27	0B	1.00	0.90	
I 302	3 10.2	- 2 0	14.00	1	5911	15	4	4B T	2.20	2.00	
0315-0200	3 15.1	- 2 0	14.50	1	8264	55	27	-2	1.10	1.00	
N 1280	3 15.4	- 0 20	13.90	1	6870	48	27	3A	1.10	1.00	
N 1289	3 16.3	- 2 9	13.80	1	2836	26	27	-3	2.00	1.50	
N 1298	3 17.7	- 2 17	14.20	1	6528	22	27	-3	1.20	1.10	
0318-0032	3 18.4	- 0 32	14.10	1	6285	19	27	15	1.40	1.30	
0320-0205	3 20.2	- 2 5	14.30	1	8227	27	27	15	1.00	1.00	
N 1507	4 1.9	- 2 20	13.06	2	864	10	2	9B S	3.60	1.10	
N 1517	4 6.5	8 31	14.30	1	3483	10	9	5	1.20	1.10	
N 1550	4 17.0	- 0 18	14.40	1	3689	34	27	-7			
N 1552	4 17.7	- 0 48	14.40	1	4924	44	27	-2			
N 1586	4 28.1	- 0 25	14.30	1	3535	40	27	3	1.80	1.70	I12W12
N 1587	4 28.1	0 33	13.45	0	3667	23	27	-5	1.80	1.70	MK616, I12W12
N 1588	4 28.2	0 33	13.30	1	3657	58	0	-5			
N 1589	4 28.2	0 45	13.80	1	3795	27	27	3			
0434-0225	4 34.5	- 2 25	14.50	1	8862	34	27	-2	1.40	0.90	
N 2684	8 51.4	49 21	13.40	1	2858	22	27	20	0.90	0.80	
0853+5218	8 53.1	52 18	13.60	1	4032	21	27	20	1.60	1.40	
N 2692	8 53.4	52 16	14.10	1	3780	30	27	1	1.40	0.40	
N 2693	8 53.4	51 32	13.42	0	4865	24	27	-5	1.80	1.40	
N 2704	8 53.6	39 34	14.40	1	7132	28	27	3B	1.10	1.10	= I2424
0854+4318	8 54.4	43 18	14.50	1	9197	45	27	20	0.80	0.45	
N 2701	8 55.4	53 58	12.71	0	2328	10	2	5X3T	2.00	1.30	
N 2710	8 56.0	55 53	13.80	1	2538	15	9	3B	2.20	1.10	

TABLE 1—Continued

NAME (1)	RA (1950) DEC (2)	(3)	m _p (4)	(5)	V _H (6)	(7)	(8)	TYPE (9)	D ₁ (10)	D ₂ (11)	NOTES (12)
N2712	8 56.2	45 7	12.93	0	1841	25 27	3B1R	3.50	1.70		
0856+4608	8 56.2	46 8	14.50	1	8393	33 27	20	0.55	0.45		
0856+5242	8 56.7	52 42	13.70	1	9036	33 27	3	1.90	1.30		
N2719A	8 57.1	35 55	14.10	1	3085	35 27	10	1.40	0.30	ARP202B	
0901+5149	9 1.0	51 49	13.60	1	4744	41 27	20	0.70	0.70	MK101	
N2830	9 1.5	49 19	14.40	1	2980	31 27	0	1.10	0.60		
N2830	9 1.5	49 19	14.40	1	2980	31 27	0	1.10	0.60		
0902+4723	9 2.6	47 23	14.50	1	8128	26 27	15	1.30	1.10		
0902+3632	9 2.6	36 32	14.50	1	7233	26 27	2	1.30	1.10		
N2745	9 2.8	35 34	14.40	1	7025	26 27	IB	1.80	1.70		
0903+5055	9 3.6	50 55	14.20	1	11293	27 27	3A	0.90	0.90		
N2834	9 4.1	37 24	14.50	1	1758	29 27	3A	1.90	0.60		
0904+3328	9 4.5	33 28	14.30	1	553	15 2	8	2.30	0.80		
N2755	9 4.7	41 55	14.20	1	7547	31 27	20	1.20	0.80		
N2759	9 5.4	37 49	14.20	1	6964	27 27	3	1.00	0.70		
N2756	9 5.4	54 3	13.20	1	870	0 9	3	1.70	1.10		
0906+5446	9 6.4	54 46	14.50	1	3923	25 27	5A S	3.60	1.10		
N2770	9 6.5	33 20	12.10	0	1953	15 2	5A S	3.60	1.10		
0906+5015	9 6.7	50 15	14.40	1	10328	30 27	6	1.30	0.60		
N2767	9 6.7	50 37	14.40	1	4944	30 27	15	0.60	0.50		
N2769	9 7.0	50 39	13.80	1	4854	27 27	1	2.00	0.50		
N2771	9 7.1	50 36	14.00	1	5101	25 27	1B	2.00	1.80		
N2768	9 7.8	60 13	11.48	0	1363	21 27	-5	6.50	3.00		
0908+5128	9 8.0	51 28	14.50	1	2198	45 27	5A	2.50	0.60	POOR VEL	
0908+4651	9 8.3	46 51	14.30	1	4257	31 27	-6	0.80	0.70	MK102	
N2776	9 8.9	45 10	12.25	0	2624	8 1	5X3T	3.30	3.30		
N2778	9 9.2	35 13	13.10	1	2016	22 27	-7	1.40	1.00		
0909+4950	9 9.6	49 50	14.10	1	4017	33 27	5A	1.70	1.20		
N2780	9 9.6	35 7	14.20	1	1951	32 27	3	1.00	0.70		
0909+5311	9 9.9	53 11	14.20	1	7618	23 27	-3	0.90	0.60		
N2783	9 10.6	30 11	13.90	1	6713	28 27	-7	2.10	1.50		
N2782	9 10.9	40 19	12.66	0	2550	10 1	1X P	4.20	3.20		
0911+3020	9 11.6	30 20	14.50	1	6909	28 27	-1	2.00	0.70		
0911+4707	9 11.6	47 7	14.00	1	4235	105 0	20	1.10	0.50		
N2789	9 12.0	29 56	13.80	1	5925	150 3	0	1.70	1.70		
0912+5303	9 12.5	53 3	14.00	1	600	100 27	10	2.50	1.50		
N2793	9 13.7	34 38	13.35	2	1681	3 1	9B P	1.30	1.00		
N2804	9 14.0	20 24	14.00	1	8424	23 27	-2	1.50	1.30		
0914+2538	9 14.1	25 38	14.00	1	1667	35 3	-2	1.40	0.80		
0914+5312	9 14.1	53 12	13.40	1	2322	19 27	1	2.20	0.50		
N2798	9 14.2	42 13	13.29	0	1733	35 1	1B P	2.80	0.90	VV50, ARP283	
N2799	9 14.3	42 12	14.40	1	1882	30 27	9B S	2.10	0.50	VV50, ARP283, 1737(0)	
N2809	9 14.3	20 16	13.90	1	7983	75 3	-2	1.60	1.40		
0914+2610	9 14.5	26 10	14.40	1	6338	30 27	15	0.60	0.40		
0915+4552	9 15.0	45 52	14.40	1	8096	25 0	3X T	1.50	1.20		
N2800	9 15.0	52 43	14.00	1	7623	28 27	-7	1.40	0.90		
N2824	9 16.1	26 29	14.30	1	2760	23 27	-2	1.00	0.60		
N2805	9 16.3	64 19	11.95	0	1736	8 2	7X T	7.50	5.10	MK394	
N2832	9 16.8	33 59	13.31	0	6867	34 27	-4	3.00	2.00		
N2814	9 17.1	64 28	14.00	1	1672	76 22	0 P	1.10	0.20		
N2820	9 17.7	64 28	13.50	0	1576	25 2	5B P	4.40	0.30		
N2844	9 18.6	40 22	14.11	0	1486	9 1	1A R	1.90	0.90		
N2841	9 18.6	51 11	10.27	0	637	10 2	3A1R	7.40	3.50		
0919+3403	9 19.1	34 3	14.50	1	7002	23 27	-2	1.50	1.20		
0919+4446	9 19.8	44 46	14.00	1	2691	35 27	20	1.30	0.30		
N2852	9 20.0	40 23	14.00	1	1811	25 27	1X R	1.10	1.10		
N2854	9 20.6	49 25	13.80	1	2732	20 27	3B	1.90	0.50		
N2856	9 20.8	49 27	13.90	1	2638	19 27	3B	2.10	0.50		
N2857	9 21.1	49 34	14.30	1	4879	8 0	5A S	1.40	2.20		
N2859	9 21.1	49 34	14.30	1	1685	14 27	-1B R	4.50	4.00		
N2862	9 21.9	26 59	13.80	1	4310	0 9	20	2.40	0.60		
0923+1936	9 23.2	19 36	14.40	1	2423	20 0	5	0.80	0.70	MK400	
0923+4605	9 23.2	46 5	14.20	1	4317	23 27	-2	1.10	0.80		
N2870	9 24.2	57 36	13.90	1	3192	25 27	4	2.70	0.70		
12476	9 24.9	30 12	14.50	1	8030	30 27	3	1.30	1.10		
0925+4453	9 25.0	44 53	14.30	1	7706	27 27	5X	1.20	1.00		
0925+1725	9 25.3	17 25	14.50	1	4215	30 27	20	1.00	0.25		
N2880	9 25.7	62 43	12.97	0	1563	30 27	20	2.40	1.50		
0926+5604	9 26.6	56 4	14.50	1	7539	32 27	3B S	1.50	1.30	MK114	
12489	9 27.3	20 17	14.20	1	4294	39 27	3A	1.90	0.45		
N2883	9 27.3	29 46	13.60	1	1712	29 5	0B R	1.20	1.20		
0928+3015	9 28.3	30 15	14.50	1	4138	33 27	20	1.10	0.45		
N2903	9 28.3	21 43	9.67	0	539	26 27	4X2T	13.30	6.00		
N2911	9 31.1	10 22	13.82	0	3254	25 27	-2A P	4.00	3.00		
N2913	9 31.1	9 42	14.10	1	3071	22 27	20	1.20	0.80		
N2914	9 31.4	10 20	14.19	0	3151	76 22	2B S	1.10	0.60		
N2919	9 32.1	10 30	13.60	1	2490	51 27	3X R	1.70	0.50		
N2916	9 32.8	21 56	12.30	1	3695	20 6	3A T	2.50	1.70		
N2918	9 32.8	31 56	13.60	1	6851	54 3	-7	1.40	1.00		
0934+3818	9 34.0	38 18	14.50	1	5995	32 27	15	0.70	0.50		
0934+2003	9 34.4	20 3	14.30	1	8461	30 27	15	0.70	0.50		
N2927	9 34.4	23 49	14.10	1	7556	29 27	3X	0.90	0.80		
N2926	9 34.5	33 4	14.40	1	417	31 27	20	1.80	1.10		
N2925	9 34.6	23 23	14.40	1	7549	36 27	20	1.30	0.35		
0935+2543	9 35.0	25 43	14.30	1	4035	34 27	1A	2.60	0.90		
N2939	9 35.4	9 45	13.50	1	3344	28 27	4	2.80	1.20		
N2943	9 35.8	17 16	14.00	1	8417	24 27	-7	2.20	1.60		
N2942	9 36.1	34 14	13.76	0	4421	45 27	5A3S	2.10	1.60		
N2948	9 36.3	7 11	13.80	1	4959	28 27	4B	1.20	0.30	{ I11Z60, VV83, ARP129A	
0936+3236A	9 36.4	32 36	14.40	9	6724	25 27	0B P	0.80	0.70	AKN209	
0937+4834	9 37.2	48 34	13.50	1	450	150 5	15	1.90	0.40		
0937+4750	9 37.7	47 50	14.50	1	4826	32 27	20	1.70	1.10		
N2954	9 37.7	15 9	13.90	1	6639	24 27	-7	1.10	0.80		
N2954	9 38.0	12 7	13.90	1	6639	32 27	4B	1.50	0.70		
N2955	9 38.2	39 7	13.50	0	7056	34 1	3A3R	0.90	0.80		
I 551	9 38.3	7 10	14.50	1	8581	32 27	15	1.00	0.60		
I 552	9 38.6	10 52	14.50	1	5809	22 27	-2	3.30	2.30		
N2950	9 39.0	59 5	12.08	0	1327	20 27	-2B R	1.30	0.60		
I 555	9 39.2	12 31	14.40	1	6732	25 27	-2	1.90	0.60		
0940+2913	9 40.0	29 13	14.50	1	8540	32 27	5A	1.90	0.60		
0940+4120	9 40.0	41 20	14.10	1	1481	38 27	3A	1.10	0.80		

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2)	(3)	(4)	(5)	(6)	(7)	(8)	TYPE (9)	D ₁ (10)	D ₂ (11)	NOTES (12)
N2964	9 40.0	32 5	12.37 0	13.19	20 6	4X3R	3.50	1.90	MK404		
0940+0943	9 40.2	9 43	13.70 1	3208	35 27	10 P	3.30	1.10			
N2909	9 40.2	66 13	14.10 1	3331	31 27	15	0.40	1.30	MK119		
N2968	9 40.2	32 10	13.25 0	1345	23 22	0 P	2.40	0.70			
N2984	9 41.0	11 18	14.30 1	6200	24 27	2X P	0.70	0.70	=I556		
N2959	9 41.0	68 49	13.70 1	4406	47 3	15 P	1.40	1.40			
0942+1656	9 42.2	16 56	14.30 1	5980	28 27	1B	1.20	1.10			
0942+0920	9 42.6	9 20	13.80 1	5489	28 27	4	1.70	0.60			
N2977	9 43.0	5 10	13.90 1	3738	31 27	2	1.50	0.60			
N2976	9 43.2	68 9	11.09 0	13	14 1	5A P	5.50	3.00			
0943+0438	9 43.4	4 38	14.00 1	5020	24 27	2	1.00	0.90			
N2990	9 43.7	5 56	13.66 2	3198	43 0	5	1.10	0.50	AKN214		
0944+1400	9 44.0	14 0	14.80 1	7222	24 27	20	1.00	0.50			
N2994	9 44.4	22 20	14.40 1	7386	26 27	-2	1.20	0.90			
0944+5415	9 44.5	54 15	14.00 1	7439	30 27	20	0.80	0.80			
N2998	9 45.6	44 19	12.62 0	4777	10 9	5X3T	2.60	1.30			
N3003	9 45.6	33 39	12.52 0	1481	9 1	4 6	5.70	1.70			
N3011	9 46.7	32 27	14.20 1	1464	71 3	-2	0.90	0.80	MK409		
N3009	9 47.0	44 32	14.50 1	4604	36 27	20	0.80	0.70			
N3016	9 47.1	12 55	13.70 1	8844	48 11	3	1.20	1.00			
N3020	9 47.4	13 3	13.20 1	1447	15 2	6B R	3.20	1.80			
N3024	9 47.8	13 0	13.70 1	1506	25 11	5	2.00	0.50			
N3026	9 48.0	28 47	13.80 1	1511	20 9	10	2.60	0.70			
N3021	9 48.0	33 47	13.23 0	1540	15 1	4A T	1.50	0.90			
0948+0914	9 48.5	9 14	14.40 1	5200	37 27	5A	2.10	1.50			
0948+0804	9 48.7	8 4	14.40 1	561	8 2	10B	1.50	1.00			
N3032	9 49.2	29 28	12.86 0	1561	20 6	-2X R	2.30	1.70			
0949+4305	9 49.7	43 5	14.50 1	4798	26 27	3X	2.00	1.00			
N3039	9 49.9	2 22	14.40 1	5036	23 27	2A	1.10	0.60			
N3040SE	9 50.2	19 40	14.50 1	7595	33 27	-3	3.70	2.40			
N3041	9 50.4	16 55	12.55 0	1419	30 2	5X4T	0.80	0.60			
0951+2337	9 51.1	23 37	14.50 1	3957	30 27	15	4.70	0.80			
N3044	9 51.1	1 49	12.54 0	1335	24 0	5B S	26.00	14.00	M81		
N3031	9 51.7	69 18	7.88 0	1335	24 0	2A2S	13.00	6.00			
N3034	9 51.7	69 55	9.57 0	247	2 1	0	2.50	1.60			
N3049	9 52.2	9 30	13.50 1	1495	20 6	3B	1.10	0.90			
0952+3330	9 52.4	33 30	14.50 1	1415	43 27	10	2.20	1.20			
N3055	9 52.7	4 30	13.00 0	1832	23 22	5X3S	1.90	0.50			
N3043	9 52.7	53 33	13.66 2	2935	51 1	3	0.80	0.80	MK710		
N3053	9 52.8	16 40	13.70 1	3797	95 3	1B	0.55	0.50			
I 577	9 53.4	10 44	14.40 1	9002	21 27	20	0.70	0.60			
I2520	9 53.6	17 5	13.80 1	1223	20 9	15	2.40	0.40			
N3060	9 54.0	15 53	14.30 1	3745	27 27	3	1.10	0.50			
0954+1553	9 54.4	45 29	14.40 1	4593	31 27	20	1.50	0.25			
0954+4529	9 54.4	45 29	14.40 1	3751	27 27	20	2.60	0.90			
0955+3731	9 55.1	37 31	14.50 1	1381	15 2	9	1.60	0.80			
N3070	9 55.4	10 36	13.20 1	5391	15 27	-7	2.20	1.60			
N3067	9 55.4	32 37	12.91 0	1460	26 1	2X5S	2.30	1.30			
0955+4758	9 55.7	47 58	14.40 1	1156	43 27	20	1.20	0.80			
N3075	9 56.2	14 39	14.50 1	3566	31 27	5A	1.20	0.80			
N3080	9 57.3	13 17	14.50 1	10602	71 27	1A	1.00	0.90	SEYF 1.5		
0957+0334	9 57.4	5 34	12.20 1	302	5 2	10B8S	6.00	4.00	SEXTANSSE,DDO70		
N3073	9 57.5	55 52	13.80 1	1057	105 3	-3X	2.10	1.10	MK131		
0957+0337	9 57.8	3 37	14.50 1	2080	29 27	20	1.80	0.80			
0957+0439	9 57.9	4 39	14.50 1	4185	33 27	3A	8.70	1.60			
N3079	9 58.6	55 55	11.43 0	1114	25 27	5B3S	1.60	1.20			
N3094	9 58.7	16 1	13.50 1	2388	0 9	1B	1.60	1.20			
N3077	9 59.4	68 58	11.12 0	7	3 1	0 P	6.00	4.50			
N3098	9 59.5	24 57	13.15 0	1401	24 27	-2	2.30	0.60			
0959+1356	9 59.6	13 56	14.30 1	6989	26 27	-2	1.00	0.80			
1000+5941	10 0 4	59 41	14.20 1	3005	34 27	15	0.55	0.45	MK25,VIIIZW308		
N3104	10 0 9	41 0	14.20 1	618	7 2	10X S	3.60	2.30	VII19		
N3102	10 0 9	60 21	14.30 1	3066	26 27	-2	0.90	0.90			
N3106	10 1 1	31 25	14.00 1	6204	23 27	-2	1.80	1.80			
1001+2231	10 1 1	22 31	14.50 1	6139	29 27	-2	1.10	0.80			
N3107	10 1 7	13 52	13.60 1	2743	41 1	15	0.80	0.70			
1002+5903	10 2 5	59 3	13.60 1	2745	35 3	15	0.80	0.80			
1002+1931	10 2 6	19 31	14.30 1	3759	12 27	20	1.50	0.60			
N3111	10 3 0	47 30	14.00 1	4414	0 9	-3	0.90	0.80			
N3121	10 4 1	14 37	14.20 1	8896	23 27	-7	1.10	0.80			
1004+4716	10 4 2	47 16	14.10 1	571	37 27	10	1.60	0.80			
N3118	10 4 3	33 16	14.40 1	1345	20 9	4A	2.50	0.35			
1004+1036	10 4 7	10 36	13.50 1	513	20 6	0	4.70	0.80			
1004+5320	10 4 8	53 20	13.80 1	1121	15 2	5A	4.30	0.50	AKN231		
I 591	10 4 8	12 31	14.00 1	2700	220 5	20	1.30	0.80			
1004+5206	10 4 9	52 6	13.90 1	1092	10 9	7B T	2.60	2.40			
N3126	10 5 4	32 6	13.50 1	5199	24 27	3	2.90	0.50			
1005+1857	10 5 5	18 57	14.30 1	2894	26 27	-1	0.80	0.80			
N3130	10 5 6	10 13	14.30 1	8206	25 27	0	1.10	0.60			
1005+1233	10 5 8	12 33	11.30 1	12	50 3	-4	12.00	9.00	LEO1,DDO74		
N3131	10 5 9	18 29	14.00 1	5251	35 27	3B	2.30	0.70			
1006+1515	10 6 5	15 15	14.50 1	9212	23 27	-7	0.80	0.80			
N3135	10 7 8	46 12	14.30 1	7270	43 27	20	1.00	0.60			
1008+2018	10 8 0	20 18	14.00 1	3824	23 27	1	2.20	1.10			
1008+0041	10 8 0	41	14.00 1	3636	10 9	4X	1.70	1.40			
1009+2807	10 9 4	28 7	14.30 1	4757	30 27	3B	3.00	0.60			
1009+0510	10 9 6	5 10	14.50 1	8468	34 27	15	0.60	0.60			
I 598	10 9 9	43 24	13.80 1	2268	27 27	0	1.60	0.40			
N3156	10 10 1	3 23	13.19 0	1296	25 27	-2	1.80	1.10			
N3153	10 10 2	12 55	13.60 1	2806	15 9	6	2.30	1.00			
N3154	10 10 3	17 17	14.30 1	6592	26 27	20	1.00	0.45			
N3162	10 10 8	22 59	12.30 2	1303	9 1	4X3T	3.90	2.80			
N3165	10 10 9	3 38	14.50 1	1317	39 27	10	1.60	0.80			
N3158	10 10 9	39 1	13.55 0	6617	25 27	-5	2.30	2.20			
N3166	10 11 2	3 40	11.44 0	1339	22 1	OX T	5.00	2.80			
N3163	10 11 2	38 53	14.40 1	6195	27 27	-3A	1.10	1.10			
1011+0716	10 11 4	7 16	14.40 1	1228	15 2	5A	3.00	1.80			
1011+6523	10 11 4	65 23	14.40 1	3315	10 6	5A	2.20	1.40			
N3169	10 11 7	3 43	11.50 0	1299	35 0	1A P	5.50	3.00			
N3164	10 11 8	56 55	14.50 1	7783	32 27	20	0.90	0.70			

TABLE 1—Continued

NAME (1)	RA(1950) DEC (2)	RA(1950) DEC (3)	m _p (4)	V _H (6)	V _H (7)	D ₂ (11)	TYPE (9)	D ₁ (10)	D ₂ (11)	NOTES (12)
1013+4953	10 13.8	49 53	14.40	12601	41 27	20	1.00	0.80		
N3177	10 13.8	21 22	13.31	12309	19 1	3A4T	1.60	1.30		
N3185	10 14.9	21 56	13.23	10237	19 1	1B5R	2.00	1.20		
N3179	10 15.0	41 22	14.20	7258	23 27	-2	2.00	0.50		VV307
N3187	10 15.0	22 8	13.55	16099	20 9	5B P	3.50	1.50		
N3184	10 15.3	41 40	10.59	5059	8 2	6X3T	8.50	7.80		VV307, N3190
N3189	10 15.4	22 5	12.20	1310	38 0	1A4P	0.90	0.50		
I 602	10 15.7	7 18	12.37	1378	35 27	-5	2.50	2.50		
N3193	10 16.0	46 43	13.30	9115	28 1	4B P	0.70	0.40		
N3191	10 16.2	58 28	13.00	2130	26 27	1A R	2.30	1.80		
N3198	10 16.9	45 48	11.09	660	7 2	5B3T	10.00	3.80		
1017+3853	10 17.1	38 53	14.30	2008	37 27	20	1.50	0.80		
1017+8525	10 17.1	65 25	14.20	2296	15 6	20	1.50	0.90		
N3202	10 17.5	43 16	14.20	6694	27 27	1B R	1.30	0.90		
N3209	10 17.8	43 13	14.40	7035	29 27	-7	1.50	1.10		
N3205	10 17.8	25 45	13.90	6197	26 27	-7	1.30	1.10		
N3207	10 18.0	43 14	14.30	6992	28 27	15	1.40	1.00		
1018+2537	10 18.1	25 37	14.00	1350	150 5	15	0.60	0.30		AKN238
N3206	10 18.5	57 11	12.70	1161	15 2	6B S	3.00	2.00		
N3213	10 18.6	19 53	14.30	1412	30 27	4A	1.10	0.80		
N3221	10 19.6	21 50	14.30	4085	26 27	5B	3.30	0.60		
I 605	10 19.8	1 27	14.50	6483	35 27	20	0.70	0.60		
1019+0415	10 19.8	4 15	14.20	6824	30 27	-2A	1.90	0.60		
N3222	10 19.8	20 8	13.93	5567	23 27	3B	0.90	0.80		
N3220	10 20.5	57 17	13.70	1226	35 3	0A	1.00	0.50		
N3226	10 20.7	20 9	12.77	1275	24 27	-5	2.50	2.20		VV209
N3227	10 20.8	20 7	11.75	1200	6 1	1X P	6.50	4.50		VV209
N3225	10 21.8	58 25	13.30	2137	15 2	5	2.30	1.20		
N3239	10 22.4	17 25	12.23	754	7 2	10B P	6.00	4.00		VV95
N3237	10 22.8	39 55	14.20	7079	25 27	-2	1.10	1.10		
1023+1437	10 23.2	14 37	14.20	1350	36 27	20	2.50	0.70		
N3238	10 23.5	57 29	14.10	7369	24 27	-3	1.30	1.30		
1023+1746	10 23.7	17 46	14.40	5528	32 27	5A	1.40	1.10		
N3246	10 24.1	4 7	13.80	2150	15 2	8X	2.30	1.40		
N3245	10 24.5	28 46	12.94	1370	19 27	-2A R	2.90	1.90		{ DD081, VII2W330, CODDINGTON
I2574	10 24.7	68 40	11.20	38	10 2	9X8S	15.00	9.00		
N3248	10 25.0	23 6	13.90	1483	40 3	-2	2.50	1.10		
N3253	10 25.8	12 57	14.40	9726	43 27	4X T	1.20	1.10		
N3251	10 26.5	26 21	14.20	5131	31 27	3A	2.00	0.45		12579
N3254	10 26.5	29 45	12.41	1366	8 16	4A3S	5.30	1.50		
1026+1952	10 26.8	19 52	14.50	8071	27 27	3A	0.80	0.70		
N3265	10 28.2	29 4	14.10	1429	28 27	-7	0.90	0.70		
N3270	10 28.7	25 7	14.10	6293	40 27	3A	3.10	0.80		
1029+0043	10 29.0	0 43	14.30	8582	30 27	4A	1.10	0.70		
N3259	10 29.1	65 18	13.02	1743	60 0	4X7T	2.30	1.10		
N3264	10 29.2	56 19	14.30	1943	10 2	9B	3.50	1.50		
1029+5439	10 29.4	54 39	13.20	1431	30 27	10 P	1.00	0.90		MK33, HARO 2
N3274	10 29.5	27 56	13.12	524	35 27	6X	2.10	1.10		
N3266	10 29.8	65 1	13.50	1900	86 3	02X	1.40	1.20		
N3277	10 30.1	28 46	12.60	1417	15 1	2A3R	2.40	2.10		
N3252	10 30.4	74 1	14.20	1136	30 2	20	2.00	0.70		
1031+5307	10 31.1	53 7	14.00	7109	52 3	0	1.70	0.25		
1031+3531	10 31.6	35 31	14.10	1516	10 6	20	1.00	0.60		
1031+1400	10 31.7	14 0	13.90	3001	34 27	10 P	1.10	0.30		
N3279	10 32.0	11 27	14.10	1422	34 27	5A	2.80	0.35		I 622
N3287	10 32.1	21 55	13.15	1335	33 27	7B7S	2.10	1.00		
1032+4649	10 32.1	46 49	14.10	3338	31 27	-6	0.45	0.40		MK146
1032+4521	10 32.2	45 21	14.20	1758	21 27	2B	1.70	1.10		
1032+2850	10 32.8	28 50	14.20	4413	29 27	15	0.45	0.40		
N3294	10 33.4	37 35	12.35	1571	21 1	5A1S	3.80	1.80		
1033+3842	10 33.6	38 42	14.50	7713	24 27	-3	1.00	0.80		
1033+1358	10 33.7	13 58	14.20	2997	30 27	20	2.40	0.30		
N3299	10 33.8	12 57	14.10	597	30 2	15	2.00	1.70		
I2591	10 33.8	35 18	14.50	6755	31 27	20	1.50	0.80		
N3300	10 34.0	14 26	13.21	2992	31 1	-2X R	1.80	0.90		
N3301	10 34.2	22 8	12.43	1353	75 0	0B T	3.40	1.10		
N3303A	10 34.4	18 24	14.50	6422	49 0	15	2.50	2.00		VV71, ARP192
N3306	10 34.5	12 55	13.70	2884	15 6	9B S	1.40	0.50		
1034+6432	10 34.6	64 32	14.40	1625	55 0	15	0.60	0.60		MK149
N3304	10 34.7	37 43	14.40	6896	33 27	1A	1.50	0.50		
N3319	10 35.7	53 46	11.20	792	4 1	4X3R	3.80	3.50		
1036+4812	10 36.2	41 57	11.95	0	10 2	6B3T	7.50	4.30		
N3320	10 36.5	48 12	14.40	854	32 27	5	1.60	0.50		
N3325	10 36.7	0 3	14.00	2331	9 1	6 6	2.20	1.00		
1036+4811	10 36.8	48 11	14.50	5470	85 3	7	1.00	0.90		
N3323	10 36.9	25 35	14.30	5164	10 27	5	1.00	0.22		
N3326	10 36.9	5 22	14.20	7800	220 5	3A	1.40	0.70		AKN251
N3327	10 37.2	24 21	14.20	6288	29 27	3A	0.70	0.60		
N3332	10 37.8	9 27	13.70	5867	25 27	-2	1.40	1.40		
N3334	10 38.6	37 34	14.10	7202	25 27	-1	1.10	1.00		
1038+3859	10 38.9	38 59	14.50	10693	30 27	4A	1.60	0.35		
N3338	10 39.5	14 1	11.59	1299	7 1	5A3S	5.20	3.50		
1040+1343	10 40.2	13 43	13.80	1178	35 27	20B P	1.10	1.00		
1040+4103	10 40.5	41 3	14.00	8993	37 3	3B	1.30	0.50		
N3344	10 40.8	25 11	10.59	6698	4 1	4X3R	7.50	7.00		
N3346	10 41.0	15 8	12.34	1266	4 1	6B3T	2.60	2.50		
N3351	10 41.3	11 58	10.75	7779	10 9	3B3R	8.50	3.00		
N3352	10 41.5	22 38	14.10	5744	26 27	-2	1.50	1.10		
N3356	10 41.6	7 1	13.30	6184	10 6	3	1.80	0.80		
N3357	10 41.7	14 21	14.30	9809	35 27	-5	1.10	0.90		
N3362	10 42.2	6 52	13.60	8318	33 27	5	1.40	1.10		
N3353	10 43.1	35 14	13.40	948	13 3	10 P	1.50	1.10		MK35, HARO 3
1043+3514	10 43.1	35 14	13.40	2032	26 27	-1	1.10	1.10		
N3348	10 43.4	63 29	11.31	1013	10 2	5B3T	8.00	4.80		
N3359	10 43.5	72 6	12.45	2831	21 27	-5	2.00	2.00		
N3367	10 43.7	14 1	13.60	986	15 2	6	4.60	0.80		
N3365	10 43.9	14 1	12.22	3037	13 0	5B1T	2.30	2.20		
N3368	10 44.1	12 5	10.32	899	10 2	2X T	7.50	5.00		

TABLE 1—Continued

NAME	RA (1950) DEC	m _p	V _H	D ₁	D ₂	NOTES
(1)	(2)	(3)	(4) (5)	(6) (7) (8)	(9)	(10) (11) (12)
N3601	11 12.9	5 23	14.10 1	7800 220	5	
N3600	11 13.0	41 52	12.60 1	7719 10	2	AKN284
N113+0309	11 13.6	3 9	14.50 1	8956 37	20	
N3605	11 14.1	18 18	13.71 0	646 26	27	
N114+1804	11 14.2	18 4	14.30 1	973 20	6	
N3607	11 14.3	18 20	11.42 0	951 21	27	-2A S
N3608	11 14.4	18 26	12.31 0	1197 21	27	-5
N3611	11 14.9	4 50	13.02 0	1620 15	1	1A P
N115+5146	11 15.0	51 46	13.70 1	2843 20	27	3
N3609	11 15.2	26 54	14.10 1	8089 20	27	1.20 1.00
N115+6519B	11 15.4	65 19	14.40 1	9857 33	27	1.70 0.60
N3615	11 15.4	29 40	14.00 1	6684 30	27	-7
N3610	11 15.4	53 4	12.14 0	1765 50	0	-5
N115+1907	11 15.6	49 7	13.60 1	1111 34	27	15
N3614	11 15.6	46 1	12.42 0	2339 10	2	5X3R
N3613	11 15.7	58 16	12.25 0	2054 75	0	-5
N3618	11 15.9	23 45	14.40 1	6805 25	27	3A
N3623	11 16.3	13 22	10.51 0	806 20	2	1X3T
N3619	11 16.5	58 2	12.86 0	1649 75	0	-1A S
N116+2105	11 16.6	21 5	14.50 1	6245 26	27	1B
N116+2856	11 16.8	28 56	14.40 1	6256 23	27	0
N3626	11 17.2	67 31	13.70 1	1328 35	27	20
N3627	11 17.4	18 38	12.11 0	1473 20	6	-1A3T
N3625	11 17.6	58 4	13.90 1	1609 15	2	3X3S
N3628	11 17.7	2 48	14.40 1	1609 15	2	3X S
N117+0248	11 17.7	13 52	10.43 0	847 10	16	3 P
N3630	11 17.7	3 14	13.01 0	1514 22	1	-2
N3633	11 17.9	3 51	14.30 1	2553 30	27	1A
N3629	11 17.9	27 14	12.84 0	1520 20	2	6A5S
N3831	11 18.2	53 27	11.27 0	1161 8	2	5A1S
N3840	11 18.5	3 31	11.82 0	1302 21	27	-5
N3841	11 18.6	3 28	14.00 1	1758 22	27	-7
N3839	11 18.9	18 44	14.00 1	5446 29	27	1
N3846	11 19.1	20 27	12.12 0	4195 24	1	4 1
N3842	11 19.4	59 21	11.96 0	1584 20	9	4A1R
N3649	11 19.6	20 28	14.50 1	4442 44	0	-1
N3648	11 19.8	40 9	13.50 1	2111 50	13	-2
N3652	11 19.9	38 2	12.60 0	2100 180	5	6B P
N3655	11 20.3	16 52	12.93 0	1481 20	2	5A S
N3656	11 20.8	54 7	13.40 1	2828 70	0	0 P
N3659	11 21.1	18 5	13.36 0	1291 30	2	9B S
N3854	11 21.1	59 42	13.40 1	1579 33	27	20 S
N3857	11 21.1	53 12	13.10 1	1215 10	2	5X T
N3858	11 21.3	38 50	13.50 1	2044 15	27	-2A R
N3664	11 21.8	3 36	13.01 0	1370 10	2	9B8P
N3666	11 21.8	11 37	12.54 0	1067 10	2	5A5T
N3665	11 22.0	39 2	12.01 0	2080 16	27	-2A S
N122+6401	11 22.4	64 1	14.10 1	3723 9	0	5A T
N3668	11 22.5	63 43	13.10 1	3449 27	27	4
N3601	11 12.9	5 23	14.10 1	7800 220	5	
N3600	11 13.0	41 52	12.60 1	7719 10	2	AKN284
N113+0309	11 13.6	3 9	14.50 1	8956 37	20	
N3605	11 14.1	18 18	13.71 0	646 26	27	
N114+1804	11 14.2	18 4	14.30 1	973 20	6	
N3607	11 14.3	18 20	11.42 0	951 21	27	-2A S
N3608	11 14.4	18 26	12.31 0	1197 21	27	-5
N3611	11 14.9	4 50	13.02 0	1620 15	1	1A P
N115+5146	11 15.0	51 46	13.70 1	2843 20	27	3
N3609	11 15.2	26 54	14.10 1	8089 20	27	1.20 1.00
N115+6519B	11 15.4	65 19	14.40 1	9857 33	27	1.70 0.60
N3615	11 15.4	29 40	14.00 1	6684 30	27	-7
N3610	11 15.4	53 4	12.14 0	1765 50	0	-5
N115+1907	11 15.6	49 7	13.60 1	1111 34	27	15
N3614	11 15.6	46 1	12.42 0	2339 10	2	5X3R
N3613	11 15.7	58 16	12.25 0	2054 75	0	-5
N3618	11 15.9	23 45	14.40 1	6805 25	27	3A
N3623	11 16.3	13 22	10.51 0	806 20	2	1X3T
N3619	11 16.5	58 2	12.86 0	1649 75	0	-1A S
N116+2105	11 16.6	21 5	14.50 1	6245 26	27	1B
N116+2856	11 16.8	28 56	14.40 1	6256 23	27	0
N3626	11 17.2	67 31	13.70 1	1328 35	27	20
N3627	11 17.4	18 38	12.11 0	1473 20	6	-1A3T
N3625	11 17.6	58 4	13.90 1	1609 15	2	3X3S
N3628	11 17.7	2 48	14.40 1	1609 15	2	3X S
N117+0248	11 17.7	13 52	10.43 0	847 10	16	3 P
N3630	11 17.7	3 14	13.01 0	1514 22	1	-2
N3633	11 17.9	3 51	14.30 1	2553 30	27	1A
N3629	11 17.9	27 14	12.84 0	1520 20	2	6A5S
N3831	11 18.2	53 27	11.27 0	1161 8	2	5A1S
N3840	11 18.5	3 31	11.82 0	1302 21	27	-5
N3841	11 18.6	3 28	14.00 1	1758 22	27	-7
N3839	11 18.9	18 44	14.00 1	5446 29	27	1
N3846	11 19.1	20 27	12.12 0	4195 24	1	4 1
N3842	11 19.4	59 21	11.96 0	1584 20	9	4A1R
N3649	11 19.6	20 28	14.50 1	4442 44	0	-1
N3648	11 19.8	40 9	13.50 1	2111 50	13	-2
N3652	11 19.9	38 2	12.60 0	2100 180	5	6B P
N3655	11 20.3	16 52	12.93 0	1481 20	2	5A S
N3656	11 20.8	54 7	13.40 1	2828 70	0	0 P
N3659	11 21.1	18 5	13.36 0	1291 30	2	9B S
N3854	11 21.1	59 42	13.40 1	1579 33	27	20 S
N3857	11 21.1	53 12	13.10 1	1215 10	2	5X T
N3858	11 21.3	38 50	13.50 1	2044 15	27	-2A R
N3664	11 21.8	3 36	13.01 0	1370 10	2	9B8P
N3666	11 21.8	11 37	12.54 0	1067 10	2	5A5T
N3665	11 22.0	39 2	12.01 0	2080 16	27	-2A S
N122+6401	11 22.4	64 1	14.10 1	3723 9	0	5A T
N3668	11 22.5	63 43	13.10 1	3449 27	27	4

TABLE 1—Continued

NAME (1)	RA (1950) DEC (2)	(3)	m_p (4)	V_H (6)	D_2 (11)	TYPE (9)	D_1 (10)	D_2 (11)	NOTES (12)
N3669	11 22.6	58 0	12.90	1940	2.20	6B	2.20	0.50	
I 692	11 23.5	10 16	14.10	1157	0.80	37 27	0.80	0.60	
N3675	11 23.5	43 52	11.11	0 771	6.80	15	6.80	3.50	
N3677	11 23.5	47 15	13.50	1 7543	3A3S	44 3	3A3S	1.40	
N3678	11 23.6	28 9	14.20	1 7185	-1A R	32 27	4A	0.80	
N3674	11 23.6	57 20	13.10	1 1885	50 13	-2	1.50	0.70	
I 1233+0025	11 23.6	54 1	12.70	0 646	20 9	7A	4.10	2.60	
N3681	11 23.9	17 8	14.50	0 1241	10 6	4X R	2.70	2.00	
I 691	11 23.9	59 26	14.20	1 1210	28 27	15	0.80	0.50	MK169
I 1244+5955	11 24.5	59 55	14.00	1 5169	37 27	20	1.10	0.50	
N3684	11 24.5	17 18	12.63	0 1158	8 6	48.5T	3.50	2.40	
N3685	11 24.8	66 52	13.40	1 1515	23 27	0A S	2.30	1.60	
N3682	11 24.8	66 52	13.40	1 1515	23 27	0A S	2.30	1.60	
N3686	11 25.1	17 30	12.24	0 1168	20 2	4E3S	3.10	2.50	
N3687	11 25.3	29 47	13.03	0 2501	10 1	4X4R	1.80	1.80	
N3691	11 25.6	17 12	13.53	0 1057	20 6	3B	1.10	0.90	
N3689	11 25.6	25 56	13.17	0 2706	27 1	5X3T	1.60	1.00	
I 694	11 25.7	58 50	12.60	1 3115	35 27	9B P	2.90	2.10	MK171, VV118
I 1125+0256	11 25.7	2 56	14.10	1 6824	35 27	20	0.90	0.35	
N3690	11 25.7	58 50	12.73	0 3101	32 27	9B P	2.90	2.10	VV118
N3692	11 25.8	9 41	12.90	1 1766	20 6	3	3.10	0.70	
I 1255+2340	11 25.9	23 40	14.40	1 7388	31 27	3A	1.50	1.10	
I 696	11 26.0	9 22	14.50	1 6311	41 27	5B	1.00	0.90	
N3697	11 26.1	21 4	14.10	1 6261	31 27	3X	2.50	0.70	
N3694	11 26.2	35 41	13.50	1 2250	150 5	20 P	1.10	0.90	AKN296
I 698	11 26.4	9 23	14.40	1 6189	28 27	-1	1.00	0.50	
I 1126+5725	11 26.4	57 25	12.60	0 2446	40 27	5B T	2.40	1.80	
N3701	11 26.8	24 21	14.10	1 2787	36 27	4A	2.00	0.90	
I 1127+2513	11 27.2	25 13	14.50	1 6277	34 27	15	0.60	0.40	
N3705	11 27.5	9 33	11.95	0 1017	10 2	2X4R	5.00	2.20	
N3710	11 28.4	23 2	14.50	1 6491	28 27	-7	1.00	0.80	
N3713	11 29.0	28 25	14.40	1 6989	26 27	-3	1.20	0.80	
N3716	11 29.1	3 46	14.50	1 6636	24 27	-1	0.70	0.60	
N3752	11 29.1	74 54	13.70	1 1898	23 27	2	1.80	0.80	
N3714	11 29.2	28 38	14.30	1 6984	29 27	15	2.20	1.00	AKN297
I 1294+3658	11 29.3	36 58	14.00	1 2477	44 27	3	2.00	1.20	
I 1294+6247	11 29.6	62 47	14.10	1 3648	50 33	20	1.50	0.80	MK175
N3719	11 29.7	1 6	13.80	1 5907	40 27	3A T	2.10	1.50	
N3720	11 29.8	1 5	13.00	2 5979	25 27	2	1.00	0.90	
N3718	11 29.8	53 21	11.72	0 987	10 2	1B P	1.00	0.40	
I 1129+3536	11 29.9	35 36	14.10	1 1851	31 27	15	1.90	0.40	
I 1129+6206	11 29.9	62 6	14.10	1 3251	15 6	5A	3.00	1.10	
I 1304+6334	11 30.4	63 34	13.30	1 1273	20 2	6	3.00	0.80	
N3726	11 30.6	47 18	11.09	0 661	10 2	5X2R	6.10	4.10	
I 1304+4931	11 30.8	49 31	13.90	1 250	8 2	10 P	1.30	0.70	MK178
N3725	11 30.9	62 10	13.60	1 3284	44 3	5B	1.60	1.20	MK179
I 1314+3254	11 31.0	32 54	14.50	1 2619	41 27	15	1.10	0.35	
I 707	11 31.0	21 39	14.40	1 6583	20 32	20	0.60	0.50	AKN301
N3729	11 31.1	53 24	12.26	0 1096	37 27	1B R	3.40	2.40	
I 708	11 31.2	49 20	14.20	1 9438	32 27	-7	1.40	0.90	
I 1317+149	11 31.5	71 49	14.30	1 2807	42 27	20	1.20	0.45	
N3731	11 31.6	12 48	14.30	1 3212	27 27	-7	1.00	0.90	
I 1324+5131	11 32.3	51 31	14.40	1 6155	25 27	-3	1.30	1.00	
N3733	11 32.3	55 8	13.20	1 1188	10 2	5X S	4.80	2.20	
N3737	11 32.9	55 14	13.90	1 5586	120 0	-2B	1.10	1.00	
I 1333+0025	11 33.1	0 25	14.40	1 5949	38 27	20	1.00	0.45	
N3738	11 33.1	54 48	12.20	0 225	30 2	10 P	3.50	3.00	
N3735	11 33.2	70 49	12.60	0 2696	15 2	5A3	4.30	0.90	
I 1334+3536	11 33.2	35 36	14.50	1 1598	30 27	0	1.20	0.60	
N3741	11 33.4	45 34	14.20	1 211	35 27	10	2.10	1.10	
I 1334+5829	11 33.6	58 29	14.30	1 1225	38 27	5A	2.20	0.40	
N3755	11 33.9	36 41	13.90	1 1565	15 9	5X T	3.60	1.40	
N3756	11 34.1	55 6	14.30	1 5577	25 27	-2	1.20	1.20	
N3759	11 34.1	54 34	12.42	0 1282	10 6	4X3T	5.00	2.50	
N3759	11 34.2	55 26	14.50	1 5785	29 27	4B	1.40	1.20	
I 1334+2015	11 34.3	20 15	13.90	1 6202	8 6	5B	0.70	0.30	MK181
N3757	11 34.3	58 42	13.50	1 1267	21 27	-2	1.10	1.10	
I 1334+1551	11 34.5	15 51	14.50	1 3989	38 27	4X	2.20	1.00	
N3768	11 34.6	18 7	13.70	1 3301	22 11	-2	1.50	0.90	
N3767	11 34.7	17 9	14.50	1 6362	26 27	-2B	0.90	0.80	
N3762	11 34.7	62 2	13.30	1 3402	21 27	1	2.30	0.50	
I 1334+2602	11 34.8	26 2	14.50	1 3283	32 27	15	1.10	0.90	
N3769	11 35.1	48 11	12.71	2 724	10 6	3B R	3.30	1.00	
N3772	11 35.2	22 58	14.40	1 3478	44 27	1B	1.20	0.60	
N3770	11 35.2	59 53	13.50	1 3214	27 27	1B	1.10	0.70	
I 1335+5902	11 35.4	59 2	14.00	1 1323	24 27	-2	1.00	1.00	
N3773	11 35.6	12 23	13.34	2 973	9 0	-2A	1.40	1.10	
I 1336+5833	11 36.6	58 33	14.20	1 1154	10 2	6A	3.00	2.40	
I 1336+1014	11 36.7	10 14	14.50	1 6229	28 27	-1	0.90	0.30	
N3780	11 36.7	56 33	12.47	0 2394	10 6	5A3S	3.10	2.50	
N3782	11 36.7	46 47	13.30	2 740	12 2	6X S	1.40	0.70	
N3786	11 37.1	32 11	13.50	1 2712	31 27	1X T	2.20	1.10	
N3788	11 37.1	32 13	13.20	1 2627	23 27	2X T	1.80	0.60	
N3790	11 37.2	17 59	14.50	1 3434	27 27	0	1.10	0.25	
I 1337+2012	11 37.2	20 12	14.20	1 10964	22 27	20	0.80	0.70	
N3795	11 37.4	58 54	14.10	1 1091	41 27	20	0.70	0.40	
I 1337+1735	11 37.6	17 35	14.30	1 3543	31 27	15	0.70	0.50	VV350
N3799	11 37.6	15 36	14.40	1 3325	28 27	3B P	1.90	0.40	VV350
N3800	11 37.6	15 37	13.10	1 3310	11 6	3X T	2.60	1.40	
N3798	11 37.6	24 59	13.90	1 3510	100 15	-2B	2.60	1.40	
N3801	11 37.7	18 0	13.30	1 3254	70 11	-2	2.30	1.30	AKN308
I 719	11 37.7	9 17	13.60	1 1650	150 5	-2	0.90	0.40	
I 1337+2840	11 37.8	28 40	14.50	1 1821	35 27	-2	0.90	0.80	
N3796	11 37.8	60 34	13.40	1 1266	28 27	20	1.40	0.90	
N3806	11 38.1	22 42	14.40	9 7039	50 27	5X T	2.50	0.80	
N3804	11 38.2	56 29	12.72	0 1385	10 6	6X S	2.50	1.70	
N3805	11 38.2	20 37	13.80	1 6472	35 11	-3	1.40	1.10	
N3810	11 38.4	11 45	11.40	0 993	15 2	5A1T	4.10	2.80	

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2) (3)	m_p (4) (5)	V_H (6) (7) (8)	TYPE (9)	D_1 (10) (11)	D_2 (11)	NOTES (12)
N3812	11 38.5 25 7	13.90 1	3667	25 27 -7	1.70	1.60	
N3809	11 38.5 60 10	13.60 1	3443	44 27 -2	1.30	1.20	
N3811	11 38.6 47 58	13.00 1	3104	35 2 6B R	2.50	1.60	MK185
N3813	11 38.7 36 49	12.88 0	1468	25 2 3A T	2.10	1.20	
N3815	11 39.1 25 5	14.20 1	3725	28 27 2A	1.90	1.00	
N139+1615	11 39.2 16 15	14.50 1	750	150 5 15	0.50	0.30	ARN311,HOLM275
N3816	11 39.2 20 22	13.60 1	5548	49 11 -2	1.90	1.10	
N3817	11 39.3 10 35	14.40 1	6100	27 27 OB	1.10	0.80	
N3821	11 39.6 20 36	13.80 1	5535	44 11 1B	1.50	1.30	
N3822	11 39.6 10 33	13.70 1	6123	32 27 -2	1.10	0.70	
N139+1618	11 39.7 16 18	14.30 1	5100	220 5 15 P	0.40	0.40	ARN312
N139+1618	11 39.7 0 37	13.70 1	5400	220 5 15 P	0.40	0.40	ARN312
N3826	11 39.8 18 36	14.30 1	918	15 2 10B	3.10	0.90	
N3827	11 39.8 26 46	14.30 1	9051	41 27 -7	0.90	0.70	
N3828	11 39.8 10 33	13.80 1	6520	24 27 1B	1.40	1.10	
N3829	11 40.0 19 7	13.60 1	3268	20 11 15	0.90	0.70	
N3832	11 40.9 23 0	14.00 1	6924	8 6 5B	2.20	1.80	
I-724	11 41.0 9 13	13.80 1	5928	21 27 1	2.50	1.00	
I41+2015	11 41.2 20 15	14.30 1	6649	36 27 10	1.70	0.30	
N3843	11 41.3 8 12	14.20 1	5908	27 27 0	1.00	0.40	
N3837	11 41.3 20 10	14.20 1	6248	29 27 -7	0.80	0.70	
N3839	11 41.3 11 4	13.60 1	5939	33 27 20	2.30	0.50	
N3835	11 41.4 60 24	13.00 1	2450	47 3 3	0.30	0.70	
N3846	11 41.5 55 18	14.20 1	1396	33 27 20	2.10	1.80	
N3842	11 41.5 20 14	13.30 1	6237	17 27 -5	1.40	1.00	
N3838	11 41.5 58 14	12.70 1	1300	14 27 0A	1.40	0.50	
N141+7001	11 41.7 70 1	13.80 1	2702	10 6 15	0.80	0.45	ARN317
N3853	11 41.7 70 1	13.80 1	3350	16 27 -7	1.50	0.90	
N3860	11 42.2 20 5	14.50 1	6354	30 27 2A	1.20	0.60	
N3861	11 42.2 20 15	14.00 1	5075	27 27 -2	1.50	1.20	
N142+2044	11 42.5 20 44	14.50 1	6878	27 27 -2	0.90	0.25	
N142+6159	11 42.5 61 59	14.50 1	10617	34 27 -5	1.00	1.00	
N3862	11 42.5 19 53	14.00 1	6462	24 27 -5	2.80	0.60	
N3863	11 42.5 8 45	14.00 1	4572	29 27 4	2.80	0.60	
N3876	11 42.8 9 26	13.40 1	2871	20 6 3	1.10	0.80	
N142+5915	11 42.8 59 15	13.50 1	3090	17 33 15	0.90	0.80	V11ZW421
N3850	11 42.9 56 9	14.40 1	1166	25 2 5B	2.20	1.00	
N3873	11 43.1 20 3	13.20 1	5438	30 27 -7	0.90	0.80	
N3872	11 43.2 14 3	13.20 1	3210	22 27 -5	2.30	1.70	
N3869	11 43.2 11 6	13.50 1	3026	25 27 1	1.90	0.40	
N3870	11 43.2 50 29	13.20 1	750	15 2 -2	0.90	0.70	MK186
N3877	11 43.5 47 46	11.96 2	903	10 6 5A S	5.60	1.20	
N3864	11 43.6 20 40	14.00 1	6822	30 11 1	1.90	1.40	
N3879	11 44.1 69 40	13.50 1	1431	10 6 5	2.50	0.45	
N3883	11 44.2 10 58	14.20 1	7050	37 27 3A	3.10	2.80	
N144+1359	11 44.5 13 59	14.40 1	3103	33 27 20	2.00	1.80	
N3886	11 44.5 20 34	13.90 1	5767	32 27 -3	1.20	0.80	
N144+6034	11 44.6 60 34	13.90 1	3574	31 27 20	1.10	1.10	
N3888	11 44.9 56 15	13.00 0	2408	15 2 5X4T	1.70	1.40	MK188
I145+5755	11 45.0 57 55	13.90 1	9253	39 27 15 P	0.80	0.60	
I145+0446	11 45.4 4 46	14.40 1	5981	31 27 4B	1.90	1.70	
N3891	11 45.4 30 39	13.70 1	6196	31 27 4	2.30	1.80	
N3893	11 46.0 49 0	11.10 0	977	8 2 5XIT	4.60	2.50	
N3894	11 46.2 59 42	12.90 1	3257	25 27 -5	2.00	1.40	
N3896	11 46.3 48 57	14.00 1	980	36 3 0B P	1.80	1.00	
N3897	11 46.4 35 18	14.20 1	6398	29 27 4	2.10	2.10	
N3895	11 46.4 59 43	14.00 1	3210	26 27 4B T	1.30	0.90	
N3900	11 46.6 74 36	14.10 1	6815	31 27 20	1.00	1.00	
N3901	11 46.6 27 18	12.63 0	1799	10 1 -1A5R	3.20	1.60	
N3898	11 46.6 56 22	11.60 0	1158	10 6 2A3S	3.60	2.10	
N3902	11 46.7 26 24	14.00 1	3622	31 27 3X S	1.70	1.30	
N3906	11 47.0 48 42	14.10 1	959	36 27 3A	1.70	1.70	
N3910	11 47.4 21 38	14.40 1	7840	30 27 -3	1.60	1.20	AKN327
N3920	11 47.5 25 13	14.10 1	3592	100 15 15	1.30	1.00	
N3912	11 47.5 26 46	13.00 2	1791	19 1 3X5P	1.80	1.00	
I147+4220	11 47.6 42 20	14.20 1	1033	28 27 15	0.35	0.25	
I147+2615	11 47.7 26 15	14.40 1	3757	46 27 2 P	1.80	0.80	
N3914	11 48.0 55 38	14.20 1	936	10 6 7A T	3.10	2.80	I740
N3913	11 48.0 6 51	13.80 1	6141	25 27 3	1.10	0.60	
N3919	11 48.0 20 17	14.50 1	6244	39 27 -7	0.90	0.90	
N3917	11 48.1 52 6	12.48 0	575	10 2 6A P	3.10	1.10	
N3921	11 48.5 55 21	13.40 1	5895	16 0 0A P	2.20	1.30	MK430,I1ZW28,VV31
N3922	11 48.6 52 17	14.50 1	870	44 0 -3	1.10	0.90	
N3923	11 48.6 50 27	13.80 1	2355	11 9 0	1.90	0.90	
I148+3543	11 48.8 35 43	14.30 1	3084	24 27 0	1.20	0.50	
N3929	11 49.1 21 17	14.50 1	7130	29 27 15	0.50	0.35	
N3928	11 49.2 48 58	13.10 1	990	43 3 -5	1.50	1.50	MK190
N3930	11 49.2 38 18	13.50 1	919	20 2 5X S	4.50	3.50	
N3933	11 49.4 17 5	14.20 1	3676	26 27 20	1.40	0.70	
N3935	11 49.8 32 41	14.00 1	3067	29 27 20	1.20	0.70	
N3937	11 50.1 20 55	14.00 1	6618	100 15 -3	1.80	1.60	
N3940	11 50.1 21 17	14.30 1	6500	25 27 -7	1.30	1.20	
I150+0201	11 50.2 2 1	14.40 1	6118	35 27 3A	1.10	1.00	
N3938	11 50.2 44 24	11.02 0	812	8 2 5A1S	5.40	5.10	
N3941	11 50.3 37 16	11.66 0	944	18 1 -2B S	3.60	2.50	
N3944	11 50.5 26 30	14.30 1	3638	26 27 -3	1.40	1.10	
N3945	11 50.6 60 57	11.91 0	1220	75 0 -1B T	5.80	3.60	
N3947	11 50.8 21 2	14.20 1	6250	33 27 3B	1.40	1.40	
N3949	11 51.1 48 8	11.66 0	786	10 6 4A S	2.80	1.70	
N3954	11 51.1 21 10	14.40 1	6971	28 27 5	0.90	0.80	
N3951	11 51.1 33 9	14.50 1	6456	31 27 20	1.20	0.60	
I2973	11 51.2 33 9	14.50 1	3199	32 27 5B	1.50	0.80	
N3953	11 51.2 52 37	11.11 0	1037	9 2 4B1R	6.50	3.40	AKN332
N3956	11 51.7 0 23	13.70 1	1050	150 5 -5	0.80	0.70	
N3958	11 52.0 58 39	13.10 1	3322	23 27 1B S	1.40	0.55	
N3963	11 52.4 58 46	12.52 0	3185	20 6 4X2T	2.90	2.90	
I152+0627	11 52.6 6 27	14.50 1	6973	25 0 3B S	1.30	0.90	
N3968	11 52.9 12 15	13.30 1	6406	15 9 4X T	2.90	1.90	

TABLE 1 — Continued

NAME (1)	RA (1950) DEC (2) (3)	m _p (4) (5)	V _H (6) (7) (8)	TYPE (9)	D ₁ (10) (11)	D ₂ (11)	NOTES (12)
I 746	11 53.0 26 10	14.50 1	5000	33 27 20	1.30	0.35	
I153+4319	11 53.0 43 19	14.40 1	7108	25 27 20	1.40	0.70	
N3971	11 53.0 30 16	13.90 1	6843	100 16 2	1.40	1.20	
I153+0132	11 53.1 1 32	14.10 1	1894	15 2	2.50	2.20	
N3972	11 53.2 55 36	13.76 0	831	6 4A S	3.60	1.00	
N3975	11 53.4 7 2	12.27 0	2504	20 2	3K3S		
N3978	11 53.5 60 48	13.20 1	9978	33 27 4X	1.70	1.60	
N3982	11 53.5 55 24	12.45 0	1110	15 2	3X R	2.40	2.20
I153+5043	11 53.9 50 43	14.00 1	909	10 6	9B		SUP *
N3985	11 54.1 48 37	13.38 2	981	4 0	3.00	0.70	AKN334
I154+5327	11 54.2 53 27	14.10 1	1083	15 2	2.20	0.80	
N3986	11 54.2 32 18	14.00 1	3242	48 27 -2	2.50	0.50	
I154+3225	11 54.3 32 25	14.50 1	3123	27 -2B	0.80	0.70	
I154+3040	11 54.5 30 40	14.50 1	3369	32 27 -2	0.90	0.70	
I154+4933	11 54.7 49 33	14.20 1	776	10 6	4.50	4.30	
I154+5813	11 54.7 58 13	14.50 1	1175	37 27 15	1.70	1.10	
N3987	11 54.7 25 29	14.40 1	4543	38 27 3	2.30	0.40	
N3991	11 54.9 32 16	13.83 0	3111	34 27 10	1.40	0.35	
N3990	11 55.0 55 44	13.85 0	705	22 27 -3	1.40	0.80	
N3992	11 55.0 53 59	10.80 0	1051	10 2	4B1T		
N3994	11 55.0 32 33	13.68 0	3118	27 27 5A P	6.30	4.60	VV249
N3996	11 55.0 14 35	14.40 1	6989	30 27 20	1.10	0.60	
N3995	11 55.2 32 34	12.96 0	3307	31 27 9A P	0.90	0.70	
N3997	11 55.2 25 33	14.30 1	4727	35 27 8B P	2.80	1.00	
N3998	11 55.4 28 9	14.00 1	3410	78 3	1.60	1.30	VV249
N4004	11 55.5 55 44	11.79 0	1028	20 27 20	3.00	2.50	MK432, VV230
N4005	11 55.6 25 24	14.10 1	4423	34 27 20	1.10	0.60	
N4008	11 55.7 28 28	13.61 0	3550	49 1 2	2.40	1.30	
N4013	11 56.0 44 14	12.43 0	835	10 2	5.10	1.10	
N4014	11 56.0 16 27	13.50 1	3775	24 27 0	1.90	1.10	
I 749	11 56.0 43 1	13.40 1	806	10 27 5B5T	2.50	2.10	
N4010	11 56.0 47 32	13.10 1	905	10 2 6B S	4.00	0.90	
N4015	11 56.1 25 19	14.20 1	4341	30 27 -2	1.40	1.40	
N4017	11 56.1 27 43	13.50 1	3412	32 27 4X	1.80	1.50	
I 750	11 56.3 43 0	13.00 1	704	22 27 0	3.10	1.50	
N4022	11 56.4 25 30	14.40 1	4390	23 27 -2	1.30	1.20	
N4020	11 56.4 30 41	13.20 1	760	20 6 7B	2.00	1.00	
I156+5259	11 56.5 52 59	14.50 1	1068	10 6 6B	4.50	3.20	
N4026	11 56.9 51 14	12.13 0	878	75 0	4.50	1.10	
N4029	11 57.5 8 28	14.50 1	6444	29 27 3X	1.20	0.70	
N4032	11 58.0 20 21	13.00 2	1263	20 6 10 5	1.90	1.80	
I 755	11 58.6 14 23	13.90 1	1501	35 27 3B	2.70	0.20	
N4037	11 58.8 13 41	12.74 0	936	25 2 3B7T	2.80	2.50	
N4034	11 58.9 69 37	14.50 1	2384	51 27 5A	1.80	1.30	
N4036	11 58.9 62 10	11.87 0	1401	22 27 -3	3.70	1.80	
I159+6237	11 59.2 62 37	14.50 1	1120	15 2 10	1.70	0.50	
I159+3007	11 59.5 30 7	14.30 1	3086	30 27 5	2.10	1.10	
N4041	11 59.7 62 25	11.93 0	1219	39 27 4A3T	2.80	2.80	
N4043	11 59.8 4 37	14.10 1	6462	25 27 20	0.60	0.50	
I159+3008	11 59.8 30 8	14.40 1	3174	23 27 3	1.90	0.40	
I200+4120	12 0.0 41 20	14.40 1	6131	9 0	2.10	1.70	
I200+6439	12 0.1 64 39	13.00 1	1447	28 0	3.00	2.00	MK195
N4045	12 0.2 2 16	13.06 0	1942	20 27 1X R	0.55	0.45	VV384
N4047	12 0.3 18 17	14.40 1	4777	30 27 15	1.20	1.00	
N4048	12 0.3 48 55	12.94 0	3421	31 27 3A5T	0.90	0.70	
N4049	12 0.4 19 2	14.20 1	839	25 27 15	6.00	5.00	
N4051	12 0.6 44 49	11.23 0	710	15 2 4A3T	0.60	0.50	AKN345
I200+1646	12 0.6 16 46	14.00 1	4848	29 27 15	0.60	0.70	
N4058	12 1.2 3 50	14.00 1	5800	22 27 1	1.20	0.90	VV179
N4061	12 1.5 20 31	12.17 0	7336	32 27 -5	3.00	2.00	
N4062	12 1.5 32 11	12.17 0	769	10 2 5A3S	4.80	2.00	
N4068	12 1.5 52 52	13.30 1	213	7 2 10 9	3.00	1.80	
N4065	12 1.5 20 31	14.00 1	6374	33 27 -5	4.20	1.10	
N4064	12 1.6 18 43	12.60 0	1033	47 1 1B5P	4.20	1.80	
N4066	12 1.6 20 38	14.40 1	7386	31 27 -7	1.10	1.00	
N4070	12 1.6 20 42	14.30 1	7222	27 27 -7	1.20	1.00	
N4067	12 1.6 11 8	13.20 1	2403	25 27 3A S	1.20	0.90	
I 758	12 1.7 62 47	14.40 1	1275	10 2 5B	2.00	1.90	
N4073	12 1.9 2 11	12.98 0	5966	20 27 -3A	2.10	1.60	
N4076	12 2.0 20 28	14.30 1	6267	35 27 20	0.90	0.90	
N4081	12 2.0 64 43	13.60 1	1312	37 11 1	1.80	0.80	
N4077	12 2.1 2 4	14.50 1	7030	20 27 -3	1.00	0.70	
I202+3127	12 2.1 31 27	14.00 1	7473	16 27 20	0.80	0.80	
N4078	12 2.2 10 52	13.90 1	410	150 3 -2	1.30	0.40	
N4080	12 2.4 27 16	14.00 1	749	71 33 10	1.30	0.50	
I202+1809	12 2.8 50 38	9	4378	35 27 4B T	1.10	0.80	
N4085	12 3.0 50 49	11.39 0	750	10 6 5X5S	2.70	0.80	
N4088	12 3.0 20 46	14.40 1	6741	29 27 4	5.90	2.20	
N4092	12 3.3 47 45	11.31 0	559	10 6 5X3T	7.20	1.70	
N4096	12 3.5 20 53	14.50 1	7330	34 27 20	1.10	1.10	
N4098	12 3.6 49 52	11.98 0	1080	10 6 4A2T	5.60	1.90	
N4100	12 3.9 52 59	12.67 0	862	30 2 3X S	3.20	1.90	
I204+3930	12 4.0 39 30	14.50 1	10982	32 27 15	1.60	1.00	
N4104	12 4.1 28 27	13.70 1	8220	37 27 -2	2.60	1.50	
N4108	12 4.3 67 27	13.00 1	2485	40 11 5A P	1.80	1.60	
N4111	12 4.5 43 21	12.08 0	794	14 0 -1A R	4.30	0.80	
N4108A	12 4.7 67 30	14.50 1	2575	37 27 5B	1.60	1.40	
N4116	12 5.1 2 58	12.71 0	1323	10 0 8B5T	3.80	2.50	
N4117	12 5.2 43 24	14.30 1	6767	30 27 -2	2.50	0.90	
I205+2531A	12 5.5 25 31	14.40 1	958	28 27 -7	1.00	0.90	
N4123	12 5.6 3 9	12.04 0	1328	10 6 5B5R	5.00	4.00	
N4124	12 5.6 10 40	12.68 0	1674	33 27 -1A R	4.10	1.80	
N4125	12 5.6 65 27	11.36 0	1340	24 27 -5 P	6.00	5.00	
I3014	12 6.0 39 6	14.40 1	6330	30 27 3A	1.10	0.90	
N4120	12 6.0 69 50	14.10 1	2251	41 27 20	1.80	0.40	
N4127	12 6.0 77 5	13.50 1	1813	10 9 4A	3.20	1.60	
N4128	12 6.1 69 3	12.95 2	2315	20 27 -2A	2.50	0.90	

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2)	(3)	m _p (4)	V _H (6)	(7)	(8)	TYPE (9)	D ₁ (10)	D ₂ (11)	NOTES (12)
N4131	12 6.2	29 35	14.10	1	3731	25 27	20	1.50	0.80	
N4133	12 6.2	75 12	13.10	1	1363	26 27	3X	2.00	1.60	
1206+4201	12 6.4	42 1	14.30	1	927	23 27	2A	1.30	0.80	
1206+3151	12 6.6	31 51	14.40	1	6755	31 27	-7	1.20	1.20	
N4134	12 6.6	29 27	13.80	1	3828	26 27	3	2.30	0.80	
N4136	12 6.8	30 12	11.76	2	618	8 2	5XSR	4.20	4.20	
N4142	12 7.0	53 24	14.30	1	1141	20 6	5B	2.20	1.10	
N4138	12 7.0	43 58	12.80	0	1039	100 0	-1A R	2.90	1.80	
N4143	12 7.1	42 49	12.40	0	784	100 0	-2X S	2.10	1.80	
1207+5648	12 7.2	56 48	14.50	1	7864	30 27	3A	1.00	0.80	
N4141	12 7.3	59 7	14.50	1	1980	50 27	5B	1.40	0.90	
N4144	12 7.5	40 10	11.68	0	1013	10 2	7X3T	6.50	4.30	
N4144	12 7.5	46 44	12.29	0	283	10 6	6X5S	6.90	1.70	
1207+2535	12 7.6	25 35	14.50	1	6019	26 27	5A	1.10	0.50	
N4146	12 7.8	26 42	13.80	1	6542	27 27	2B R	1.70	1.60	
N4150	12 8.0	30 41	11.48	0	244	50 0	-2A R	2.10	1.50	
N4151	12 8.0	39 41	11.48	0	989	10 2	2X T	7.00	6.00	
N4149	12 8.0	58 35	13.90	1	3056	24 27	7X3T	1.40	0.25	
N4152	12 8.1	16 19	13.25	0	2161	10 8	5X4T	2.20	1.90	
N4159	12 8.3	76 25	14.30	1	1761	35 27	20	1.50	0.60	
N4156	12 8.3	39 45	14.28	0	6747	21 27	3B T	1.40	1.30	
1208+6412	12 8.5	64 12	14.00	1	2641	30 11	20	1.90	0.30	
N4158	12 8.6	20 27	13.13	0	2445	25 27	3A R	1.70	1.60	
N4157	12 8.6	50 46	11.80	2	771	10 2	3X3S	7.70	1.30	
N4161	12 9.0	58 0	13.70	1	4941	25 27	20	1.20	0.80	
N4162	12 9.3	24 24	12.77	2	2552	23 22	4A3T	2.50	1.30	
N4166	12 9.6	18 2	14.30	1	6954	32 27	-2B	1.10	0.90	
N4163	12 9.6	36 27	13.70	1	170	10 2	10	2.10	2.00	
N4169	12 9.7	29 27	12.90	1	3777	28 27	-2	1.80	0.90	
N4168	12 9.7	13 29	12.77	0	2307	21 27	-5	2.80	2.50	
N4172	12 9.8	56 27	14.40	1	9274	21 27	20	1.40	1.30	
N4173	12 9.8	29 29	13.70	1	1127	20 2	7B	5.10	0.80	
N4174	12 9.9	29 25	14.50	1	3980	30 27	20	0.80	0.30	
N4175	12 10.0	29 26	14.20	1	4034	31 27	20	2.10	0.40	
I 769	12 10.0	12 24	14.10	1	2188	33 27	4A R	2.50	1.70	
N4178	12 10.2	11 9	12.10	0	381	15 2	8B3T	5.50	1.70	
N4180	12 10.3	1 35	12.21	0	1239	34 27	-2	3.80	1.00	
N4181	12 10.5	7 19	13.20	1	2120	13 3	2	1.70	0.50	
N4183	12 10.8	43 59	12.51	0	934	10 2	6A7S	5.50	0.60	
N4185	12 10.8	28 47	13.50	1	3844	42 27	3	2.90	2.20	
N4187	12 11.0	51 2	14.50	1	9187	27 27	-7	1.20	0.80	
N4190	12 11.2	36 55	13.20	2	234	7 2	10 P	1.80	1.70	
N4189	12 11.2	13 42	12.96	0	2133	30 2	6X3T	2.70	2.20	
N4192	12 11.3	15 11	11.21	0	1138	10 6	2X2S	9.90	2.20	
N4191	12 11.3	7 28	13.90	1	2634	33 3	-2	1.20	0.90	
N4193	12 11.3	13 27	13.40	1	2465	21 27	5X S	2.30	1.10	
N4194	12 11.7	54 48	13.00	1	2528	15 3	10B P	2.30	1.60	
N4196	12 11.9	28 42	13.70	1	3982	100 15	-2 P	1.50	1.20	
N4197	12 12.0	6 5	13.80	1	2082	38 27	6	3.80	0.60	
N4200	12 12.2	12 27	14.10	1	2347	28 27	-2	1.50	0.80	
1212+3614	12 12.5	36 14	14.20	1	948	20 2	9	1.60	1.00	
N4205	12 12.5	64 4	13.80	1	1435	25 11	20	2.10	0.80	
N4203	12 12.6	33 29	11.80	0	1089	14 1	-3X	3.50	3.30	
N4206	12 12.7	13 18	13.00	0	701	25 2	4A S	5.80	0.90	I3064
N4204	12 12.7	20 56	14.20	1	861	8 2	8B S	4.70	4.70	
N4210	12 12.9	66 16	13.40	1	2501	25 11	3B R	2.10	1.50	
N4207	12 13.0	9 52	13.70	1	618	29 27	15	1.60	0.80	
N4212	12 13.1	14 11	12.08	0	-84	27 27	4A5	2.90	1.90	
N4211A	12 13.1	28 27	14.50	1	6576	24 0	0 P	1.70	1.70	
N4213	12 13.1	24 15	14.30	1	6704	24 27	-7	11.00	9.00	
N4214	12 13.1	36 36	10.38	0	294	4 1	10X6S	8.50	1.70	HARO 28
N4218	12 13.3	48 24	13.20	1	725	20 6	1	8.50	1.70	
N4216	12 13.4	13 25	11.17	0	135	10 6	3X3S	8.50	1.60	
N4217	12 13.4	47 22	11.81	0	1032	10 6	3	5.50	1.60	
N4215	12 13.4	6 41	13.04	0	2067	24 27	-1A5R	1.60	0.60	
N4221	12 13.6	66 31	13.60	1	2816	45 11	-1B R	1.90	1.30	
N4220	12 13.7	48 10	12.56	0	954	10 6	-1A R	3.80	1.40	
N4226	12 14.0	47 17	14.40	1	7238	28 27	20	1.10	0.50	
N4224	12 14.0	33 48	13.80	1	6450	26 27	0X	1.60	1.00	
N4224	12 14.0	7 44	13.21	0	2651	36 1	1A S	2.00	1.00	
N4229	12 14.1	33 50	14.30	1	6813	21 27	20	1.30	0.90	
N4231	12 14.3	47 43	14.50	1	7418	26 27	15	1.30	1.10	
N4236	12 14.3	69 45	10.40	0	-7	4 1	8B7S	23.00	8.00	
N4238	12 14.4	13 54	14.10	1	-169	34 27	15	0.60	0.50	
N4238	12 14.4	63 42	14.20	1	2771	37 27	5A	1.80	0.45	
N4234	12 14.6	3 58	13.65	0	2075	66 0	8B7S	1.20	1.10	
N4235	12 14.6	7 28	12.86	0	2596	18 1	1A S	3.90	0.80	SY
N4233	12 14.6	7 54	13.41	0	2224	75 1	-1	2.00	0.90	
N4237	12 14.7	15 36	12.78	0	915	16 27	-7	2.20	1.40	
N4239	12 14.7	16 48	13.50	1	946	17 27	-7	1.60	1.00	
N4241	12 14.9	6 58	13.60	1	2235	25 27	0A S	2.50	1.50	
1215+2250	12 15.0	22 50	14.50	1	403	10 2	5A	5.50	0.30	
N4242	12 15.0	45 54	11.96	0	516	10 2	8X7S	5.70	3.80	
N4244	12 15.0	38 5	10.92	0	247	5 2	6A7S	18.50	2.50	
N4245	12 15.1	29 53	12.57	0	890	65 0	0B5R	3.50	3.50	
N4250	12 15.1	71 5	13.00	1	2121	23 27	-1X R	2.50	1.90	
I3107	12 15.3	11 7	14.50	1	7299	32 27	20	1.50	0.70	
I3115	12 15.4	6 56	14.40	1	2261	23 27	5B	1.70	1.30	
N4246	12 15.4	7 28	13.60	0	3724	10 0	5A S	2.40	1.20	
N4248	12 15.4	47 41	13.90	1	1014	75 0	0	3.20	1.20	
N4251	12 15.6	28 27	14.20	1	1484	25 6	0	3.60	2.00	
1215+4427	12 15.7	44 27	14.20	1	7380	32 27	5	1.50	0.70	MK203
N4253	12 15.9	30 5	13.70	1	3876	71 16	1B P	0.90	0.90	MK766,SY
N4254	12 16.3	14 42	10.52	0	2470	10 6	5A1S	5.00	4.70	
N4256	12 16.4	66 11	12.70	1	2577	51 1	3A S	4.50	0.80	
N4255	12 16.4	5 4	13.50	1	1696	50 13	-2	1.20	0.60	
N4258	12 16.5	47 35	9.19	0	449	7 2	4X S	22.00	9.00	
1216+0408	12 16.6	4 8	14.50	1	1582	39 0	-5	0.50	0.40	MK49,HARO 8

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2)	(3)	m _p (4)	V _H (6)	(7)	(8)	TYPE (9)	D ₁ (10)	D ₂ (11)	NOTES (12)
N4313	12 20.1	12 5	13.20	1	1458	21 27	2A T	3.50	0.80	
N4318	12 20.2	8 29	14.10	1	1215	17 27	-7	0.80	0.60	AKN359
N4316	12 20.2	9 37	14.00	1	1262	28 27	5	2.70	0.50	
N4321	12 20.4	16 6	10.26	0	1560	13 27	4X1S	6.80	5.80	
N4332	12 20.6	6 7	12.20	1	2843	46 11	1B S	2.40	1.70	
N4334	12 20.6	5 32	12.60	0	1681	14 27	-1A S	2.10	0.90	
N4335	12 20.6	58 84	13.70	1	4615	22 27	5	1.90	1.50	
N4330	12 20.7	11 39	14.00	1	1552	33 27	5	4.50	0.90	
N4346	12 21.0	47 16	12.49	0	762	20 27	-2	3.20	1.30	
N4339	12 21.0	6 22	12.83	0	1287	20 27	5	2.00	2.00	
N4336	12 21.0	19 43	13.60	1	1134	34 3	0B	1.60	0.90	
N4340	12 21.1	0 7	12.25	0	932	10 27	-1B R	3.60	3.10	I3256
N4342	12 21.1	7 22	13.91	0	714	50 0	20	1.00	0.40	
N4343	12 21.1	7 14	13.66	0	1012	10 6	3A T	2.60	0.70	
N4344	12 21.1	17 49	13.70	1	1247	34 3	-2B	1.40	1.30	
I 780	12 21.2	12 45	14.30	1	-437	10 6	9B P	1.90	1.60	
N4350	12 21.4	16 58	12.30	0	1247	20 27	-2A	2.50	0.90	
N4351	12 21.5	12 29	13.50	1	2320	10 6	2B T	1.90	0.80	
N4352	12 21.5	11 30	14.00	1	2106	22 27	-2A	1.60	1.40	
N4364	12 21.6	58 40	14.30	1	4496	27 27	-2	1.30	1.20	
I 3268	12 21.6	6 53	14.20	1	764	150 0	15 P	0.70	0.70	
N4357	12 21.6	49 3	13.50	1	4113	52 3	4A	3.90	1.50	I3273
N4356	12 21.7	8 49	14.30	1	1173	32 27	5	2.60	0.50	
N4359	12 21.7	31 48	13.90	1	1253	10 2	5B T	3.60	1.00	
N4360	12 21.8	9 34	13.90	1	7019	65 3	-5	1.40	1.10	
N4365	12 21.9	7 36	11.18	0	1240	12 27	-5	5.50	4.50	
N4369	12 22.1	39 40	12.84	0	1052	10 16	1A T	2.40	2.40	
N4370	12 22.4	7 43	14.10	1	787	37 27	1	1.50	0.80	
N4371	12 22.4	11 59	12.25	0	941	20 27	-1B R	4.50	2.10	
N4386	12 22.4	75 48	12.89	2	1649	14 27	-3X	2.80	1.70	
N4375	12 22.5	28 50	13.90	1	9055	10 8	2B R	1.40	1.00	
N4374	12 22.5	13 10	10.82	0	1033	10 27	-5	5.00	4.00	
N4376	12 22.7	6 1	13.90	1	1156	35 27	10	1.60	0.90	
N4377	12 22.7	15 2	13.20	0	1375	15 27	-3A	1.50	1.20	
N4379	12 22.8	15 53	12.77	0	1071	10 27	-3 P	1.50	1.30	
N4380	12 22.8	10 18	12.37	0	863	7 6	3A T	3.50	2.20	
N4378	12 22.8	5 12	12.34	0	2543	8 1	1A R	3.30	3.10	
N4384	12 22.8	54 47	13.50	1	2423	220 5	1 P	1.40	1.10	MK207
N4382	12 22.9	18 28	10.43	0	758	13 27	-1A P	7.40	5.50	
N4383	12 22.9	16 45	12.90	2	1694	31 27	1 P	1.80	0.90	
N4391	12 23.0	65 13	13.80	1	1337	74 11	-3A	1.20	1.20	VIIIZW454
I 3322A	12 23.2	7 30	14.40	1	1001	10 2	6B S	3.50	0.40	
N4389	12 23.1	45 58	12.97	0	717	11 1	4B7	2.60	1.80	
N4387	12 23.1	13 5	13.42	0	583	26 27	-5	1.90	0.90	
N4385	12 23.1	0 51	12.85	0	2142	7 1	-1B4T	1.90	1.10	
N4388	12 23.2	12 56	12.69	0	2510	10 6	3A S	6.20	1.70	
N4390	12 23.2	10 44	13.70	1	1118	43 27	4X S	1.80	1.40	
N4393	12 23.3	27 50	13.80	1	755	8 2	7X	3.50	3.00	
N4395	12 23.3	33 49	10.84	0	318	5 2	9A8S	16.00	13.00	

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2)	V _H (6)	D ₁ (10)	D ₂ (11)	NOTES (12)	NAME (1)	RA(1950)DEC (2)	V _H (6)	D ₁ (10)	D ₂ (11)	TYPE (9)	V _H (6)	m _p (4)	m _p (5)	V _H (7)	TYPE (8)	D ₁ (10)	D ₂ (11)	NOTES (12)
N4394	12 23.4	18 29	11.90	0	914	8 6	3B3R	3.60	3.40			498	10	1	10	1	3.20	1.10	
N4396	12 23.5	15 57	13.70	1	-155	26 27	7A	3.50	1.20			1600	20	3	0		1.40	0.50	
N4402	12 23.6	13 23	12.91	0	265	37 27	3	3.80	1.10			895	28	27	-7		1.20	0.90	
N4405	12 23.7	16 28	12.90	1	1742	31 27	0A T	1.70	1.10			2360	32	27	1		1.40	0.90	
N4406	12 23.7	13 13	10.75	0	-221	9 27	-5	12.00	9.00			997	10	27	-5		8.00	7.00	
N4410A	12 23.9	9 18	14.30	9	7564	31 21	2					2236	10	27	-5		3.60	2.30	
N4410B	12 24.0	9 18	14.30	9	7567	75 21	-2					1624	20	27	-2		1.90	1.10	
N4411A	12 24.0	12 53	13.04	0	1280	20 9	7X P	2.30	2.20			1355	11	27	-3A R		1.70	1.10	
N4413	12 24.0	31 30	11.21	0	96	9 6	3B T	4.40	1.70			1355	11	27	-2B S		3.80	3.50	I3427
N4414	12 24.0	4 14	13.25	2	1735	20 2	5A T	4.80	3.20			1845	36	27	-7		1.60	0.90	
N4415	12 24.1	8 42	14.20	1	910	38 27	0	1.60	1.40			872	100	0	-2B S		1.50	1.40	
N4416	12 24.2	8 12	13.50	1	1380	23 27	5B	1.80	1.60			2422	21	27	5X S		2.50	1.20	
N4411B	12 24.3	9 10	14.40	1	1269	20 9	7A	3.20	3.20			1586	10	27	-6		7.00	7.00	I2W38
N4417	12 24.3	9 52	12.43	0	843	15 27	-2B	3.10	1.00			875	80	1	0B S		1.50	0.90	
N4419	12 24.4	15 19	12.23	0	-182	12 27	1B S	2.20	1.00			460	50	27	10B6P		3.00	2.50	VV30,560(22)
N4420	12 24.4	2 46	12.94	0	1678	10 8	4B5R	2.20	1.00			582	26	27	7B5P		7.00	3.50	VV30
N4421	12 24.5	15 44	12.35	0	1602	23 27	0B S	2.50	1.80			990	40	3	0B P		4.60	1.40	
N4422	12 24.5	22 55	14.20	1	6849	29 27	1B R	1.10	1.10			1265	15	27	-4		7.00	7.00	
N4423	12 24.6	6 9	14.40	1	1092	25 2	20	2.20	0.35			944	22	27	-5		1.80	1.70	
N4424	12 24.7	9 42	12.57	0	432	15 27	1B5S	3.60	0.90			1802	25	27	1A S		2.10	2.10	I3438
N4425	12 24.7	13 1	13.21	0	1883	50 0	-2B5	2.90	0.90			497	29	27	1B S		1.80	1.00	
N4430	12 24.9	6 32	13.40	1	1472	20 27	3B T	2.90	2.30			33	150	3	2A		1.60	0.90	STAR SUPERPOSED
N4431	12 24.9	11 23	11.43	0	1131	16 27	-1A R	5.50	2.50			4572	30	27	-6		4.50	4.30	
N4434	12 25.0	12 34	14.50	1	913	30 27	-2A R	1.70	1.00			1350	13	27	-5		2.00	1.10	
N4441	12 25.1	65 4	13.50	1	1068	14 27	-5	1.30	3.50			1107	34	3	0X S		1.70	1.10	MK213
N4435	12 25.1	13 21	12.03	0	1439	44 11	-1X P	4.50	3.50			1763	42	0	9B5T		4.00	3.00	VV76
N4438	12 25.2	13 17	11.30	0	773	15 27	-2B S	3.70	1.90			1506	20	2	6X S		3.50	1.70	
I3376	12 25.3	27 16	14.40	1	38	10 6	0A P	9.70	3.90			2086	36	27	5B		1.20	0.80	
N4440	12 25.4	12 34	13.09	0	739	19 27	1B T	1.70	1.60			685	35	27	20X		1.60	1.50	
N4442	12 25.5	10 5	11.70	0	585	19 27	-2B S	4.50	0.40			2732	26	27	-7		1.50	0.90	
N4445	12 25.7	9 43	13.70	1	300	43 27	2	2.60	0.80			2370	5	8	3A1T		6.70	3.00	
N4448	12 25.8	28 54	12.29	0	693	65 0	2B4R	6.00	1.50			1359	22	27	-3B		3.50	1.70	
N4449	12 25.8	44 22	10.08	0	200	5 0	10B5	4.00	4.50			2270	29	27	-2		2.40	1.70	
I3391	12 25.9	18 41	13.90	1	1739	37 27	5	1.10	0.90			681	75	21	1		1.70	1.50	
N4450	12 26.0	17 22	11.29	0	1957	12 6	2A S	5.50	3.70			1529	10	6	8B9T		4.70	3.00	REINMUTH 80
N4451	12 26.1	9 32	13.57	0	860	42 1	1	1.50	1.00			540	10	2	10		2.30	1.80	
N4452	12 26.2	12 2	13.33	0	212	42 1	1	2.70	0.60			4698	33	27	15		0.80	0.35	
I3392	12 26.2	15 16	13.30	1	1678	28 27	3A	2.10	0.90			8111	26	27	4A		1.20	1.10	
N4455	12 26.2	23 6	12.83	0	644	10 2	7B7S	4.00	3.50			1131	7	2	6A S		10.80	1.50	
I226+4330	12 26.3	43 30	14.38	3	543	10 2	10 9	4.00	3.50			28	44	0	10B S		2.70	2.10	
N4460	12 26.3	45 8	12.47	0	538	11 1	-1B S	4.20	2.20			503	10	2	6B		4.00	1.10	
N4457	12 26.4	3 51	12.00	2	894	23 6	0X R	3.40	2.80			940	52	3	-3		1.30	1.10	
N4458	12 26.4	13 31	13.32	0	683	24 27	-5	1.50	1.50			907	32	27	15		1.00	0.60	
N4459	12 26.5	14 15	11.95	0	1215	16 27	-1A R	3.50	2.70			958	40	27	2B T		1.70	0.70	
N4461	12 26.5	13 28	12.37	0	1925	18 27	-1B S	3.60	1.30			2358	16	27	0		2.70	0.60	
N4464	12 26.8	8 26	13.77	0	1199	50 0	0	1.00	0.70			1429	5	1	7B5T		3.80	2.50	
I3414	12 26.9	7 3	14.20	1	597	47 27	20	1.70	1.00			2316	10	8	6B S		4.20	1.10	

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2)	(3)	m _p (4)	(5)	V _H (6)	(7)	(8)	TYPE (9)	D ₁ (10)	D ₂ (11)	NOTES (12)
N4399	12 31.2	11 16	14.50	1	1.226	26	27	0	1.60	0.60	
N4525	12 31.3	30 34	13.00	1	1.196	33	27	5B	3.00	1.60	
I 800	12 31.4	7 58	14.30	1	2.226	36	27	5B	1.50	1.20	
N4526	12 31.5	7 58	10.97	0	0.62	15	27	-2X S	7.00	2.70	
N4528	12 31.6	11 36	12.98	0	1.374	21	27	-3	6.50	2.00	
N4534	12 31.6	35 48	13.20	1	803	8	27	7A S	4.50	3.30	
N4531	12 31.7	13 21	13.30	1	8	33	27	1	3.50	2.30	
N4532	12 31.8	6 44	12.59	0	2010	20	27	10B5	12.38	7.00	
N4535	12 31.8	8 29	10.90	0	1.966	8	27	5X1S	7.80	7.00	
N4536	12 31.9	7 26	11.21	0	1.814	8	27	4X3T	7.00	0.80	
I 3521	12 32.1	7 26	14.20	1	573	35	27	10	1.10	0.80	
N4539	12 32.1	18 29	13.17	0	1.287	31	27	1B S	3.00	1.10	
N4540	12 32.3	6 38	13.10	1	2.716	10	27	5X S	2.90	1.60	
N4541	12 32.3	15 59	13.23	0	1.886	10	8	6X7T	2.10	1.70	
N4544	12 32.6	0 3	14.00	0	6.915	46	27	4X R	5.50	4.50	
N4548	12 32.9	14 46	11.19	0	0.950	19	27	3B T	2.40	0.60	
N4544	12 33.0	3 19	14.40	1	1.126	28	27	20	3.30	0.90	
N4550	12 33.0	12 30	12.73	0	381	15	6	-1B	2.40	0.70	
N4552	12 33.1	72 30	14.30	0	6.959	32	27	3A	0.70	0.50	
N4551	12 33.1	12 50	11.30	0	322	13	27	-5	3.40	3.40	
N4555	12 33.2	26 48	13.27	0	1.198	15	27	-5	1.70	1.50	
N4556	12 33.2	26 48	13.50	1	6.697	100	15	-5	1.40	1.10	
I 3337	12 33.3	27 11	14.40	1	7434	29	27	-7	1.20	1.00	
N4559	12 33.4	73 57	13.50	1	1.331	22	27	-7	0.90	0.90	
N4561	12 33.5	28 14	10.56	0	0.816	10	2	6X4T	13.00	5.20	VV571
N4566	12 33.6	19 36	13.30	2	1.395	20	6	8B6T	1.40	1.10	
N4565	12 33.7	54 30	13.90	1	5.290	150	0	20	1.20	0.80	
N4564	12 33.9	11 43	12.24	0	1.119	19	27	-5	15.50	1.90	
N4567	12 34.0	11 32	12.37	0	2.186	43	27	4A T	2.60	1.60	
I 3582	12 34.0	26 29	14.30	0	7045	25	27	2	3.00	0.22	VV219
N4568	12 34.1	11 31	11.98	0	2.232	40	27	4A T	0.40	0.40	MK649
N4569	12 34.1	13 26	10.58	0	-245	6	1	7A R	5.10	2.40	
N4571	12 34.4	14 30	12.12	0	343	6	1	7A R	11.40	4.70	
N4570	12 34.4	7 31	12.24	0	1.730	75	0	-2	4.20	3.70	
N4578	12 35.0	9 50	12.48	0	2.284	15	27	-2A R	3.20	2.50	
N4579	12 35.2	12 6	10.72	0	1.520	10	6	3X T	6.00	5.00	
N4580	12 35.3	5 59	12.87	0	0.999	25	27	1X5T	2.60	1.80	
N4589	12 35.5	74 28	12.40	0	1.985	16	27	-5	3.00	2.60	
N4581	12 35.6	1 44	13.40	1	1.818	24	27	-7	1.80	1.10	
N4584	12 35.8	13 23	14.20	1	1.737	29	27	3A	3.90	1.10	
N4586	12 35.9	4 36	12.88	0	819	22	27	1A5S	3.90	1.20	
N4587	12 36.0	2 56	14.40	1	901	29	27	-2	1.20	0.70	
I 3264	12 36.4	32 23	14.00	1	4.331	25	27	20	1.00	0.80	
I 3264+0038	12 36.5	0 17	14.40	1	6.944	26	27	15	0.80	0.80	
N4591	12 37.3	6 17	14.10	1	2.850	29	27	20	1.80	0.90	
I 3631	12 37.3	13 15	14.50	1	2.859	60	27	15	1.00	0.70	
N4596	12 37.4	10 27	11.88	0	1.853	28	27	-1B R	4.50	4.00	
N4595	12 37.4	15 34	13.24	0	660	34	1	3X5T	1.70	1.10	
N4598	12 37.7	8 39	14.10	1	1.961	23	27	-2B	1.70	1.50	
N4600	12 37.8	3 24	13.70	1	7.87	34	3	-2	1.30	0.90	
N4605	12 37.8	61 53	11.09	0	1.50	25	4	5B P	7.00	2.50	
N4599	12 37.9	1 27	13.70	1	1.878	23	27	-2	1.80	0.80	
I 3651	12 38.3	27 0	14.40	1	4.732	27	27	-2	1.00	1.00	
N4606	12 38.4	12 11	13.11	0	1.645	19	27	1B S	2.80	1.60	
I 2288+0140	12 38.7	1 40	14.30	1	1.737	30	27	15	1.00	0.40	9300(5) AKN385
N4608	12 38.8	10 26	12.48	0	1.864	24	27	-2B R	3.10	3.00	
N4617	12 38.8	50 42	14.20	1	4.639	27	27	3A	3.10	0.50	
N4614	12 39.0	26 18	14.20	1	4.783	26	27	0B	1.10	0.90	
N4612	12 39.0	7 35	12.59	0	1.884	24	27	-2X R	1.60	1.30	
N4615	12 39.1	26 20	13.80	1	4.689	30	3	5	1.60	1.00	
N4618	12 39.1	41 26	11.60	0	5.46	8	2	9B T	4.50	3.50	VV173
N4619	12 39.3	35 20	13.50	1	6.829	33	27	3B R	1.50	1.50	
N4621	12 39.3	11 55	11.28	0	4.44	13	27	-5	4.50	3.50	
N4625	12 39.5	41 34	13.22	0	6.10	10	2	9X T	1.50	1.40	
N4620	12 39.5	13 13	14.00	1	1.214	60	3	-2	1.80	1.70	
N4623	12 39.6	7 57	13.03	0	1.788	56	27	-1B	2.20	0.70	
N4627	12 39.6	32 51	13.34	0	8.28	53	27	-5	2.10	1.60	
N4631	12 39.7	32 49	10.04	0	6.20	5	0	7B5S	17.00	3.50	
N4648	12 39.9	74 42	12.60	1	1.503	19	27	-5	1.70	1.30	
N4632	12 40.0	0 11	12.38	0	1.693	30	0	5A4	3.20	1.20	
N4630	12 40.0	4 14	13.10	2	6.85	37	27	10B S	1.80	1.30	
N4633	12 40.1	14 38	13.88	0	3.04	35	27	7	2.00	0.80	
N4635	12 40.2	20 13	13.70	1	9.81	30	2	7X S	1.80	1.40	
N4634	12 40.2	14 34	13.60	1	1.44	30	27	6B	2.60	0.50	
N4638	12 40.3	11 43	12.48	0	1.148	18	27	-3	2.90	1.90	
N4636	12 40.3	12 58	11.01	0	9.37	15	27	-5	7.00	5.00	
N4639	12 40.6	28 0	14.50	1	9.83	20	2	4X4T	3.20	2.20	
I 2240+2800	12 40.6	28 0	14.50	1	7.492	33	27	15	0.60	0.40	
N4646	12 40.6	55 7	13.80	1	4.551	127	0	15	0.60	0.30	
N4643	12 40.8	2 15	11.64	0	1.346	59	0	0B T	3.00	3.00	
N4647	12 41.0	11 51	12.34	0	1.450	41	27	5X T	2.90	2.40	VV206
N4649	12 41.1	11 49	10.30	1	1.095	17	27	-5	7.00	6.00	VV56
N4651	12 41.2	16 40	11.61	0	7.94	11	0	5A3T	3.90	2.50	
N4654	12 41.4	13 24	11.28	0	1.044	10	2	6X3T	5.30	2.90	
I 2241+5510	12 41.5	55 10	14.50	9	4.942	31	27	15	1.90	1.00	MK220, IZW41
N4656	12 42.0	11 28	11.18	0	6.49	7	2	9B7P	22.00	3.00	=N4657
N4660	12 42.0	11 28	12.30	0	1.115	14	27	-5	2.40	2.10	
N4659	12 42.0	13 47	13.30	1	2.67	50	13	0	1.80	1.30	
N4662	12 42.1	37 23	14.10	1	6.991	27	27	4B T	2.50	2.00	
I 3725	12 42.4	19 1	14.40	1	6.598	21	27	20	1.00	0.35	
N4665	12 42.6	3 20	11.74	2	7.85	50	0	0B S	4.50	4.50	
I 813	12 42.7	23 19	14.40	1	7.023	29	27	20	1.10	1.00	
N4670	12 42.8	27 24	13.44	0	1.051	29	27	0B P	1.60	1.40	HARO 9, ARP 163
N4673	12 43.1	27 20	13.70	1	6.939	10	27	-5	1.00	0.80	MK656
N4686	12 44.4	54 49	13.70	1	5.019	28	27	1	2.10	0.70	
I 2244+5155	12 44.6	51 55	14.10	1	5.10	15	2	10	1.80	1.30	

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2)	RA(1950)DEC (3)	m _p (4)	V _H (6)	V _H (7)	TYPE (8)	D ₁ (10)	D ₂ (11)	NOTES (12)
N5440	14 0 8	35 0	13.40	3754	23 27	1	3.20	1.60	
N5434	14 0 9	49 41	14.30	4634	10 32	5A	1.80	1.80	
N5448	14 0 9	49 25	12.53	2023	10 1	1X4R	4.30	2.00	
1401+3846	14 1.2	38 46	14.20	5733	31 27	1	1.10	0.50	
N5444	14 1.2	35 22	13.04	3974	41 1	-3A	2.50	2.00	
N5445	14 1.3	35 16	14.10	3901	22 27	-1	1.70	0.70	
1401+3917	14 1.5	39 17	14.40	5823	32 27	3B	1.10	0.90	
N5457	14 1.5	54 36	8.58	231	7 2	6X1T	28.00	28.00	M101, VV344, ARP26
1401+3559	14 1.6	35 59	14.20	3829	21 27	20	1.30	0.30	
N5454	14 2.3	14 37	14.40	7681	23 27	-2	1.60	1.00	
N5456	14 2.5	12 7	14.20	7147	34 27	-2	1.20	1.00	
N5459	14 2.5	13 22	14.50	5261	27 27	-2	1.10	1.00	
N5473	14 3.0	55 8	12.66	2006	38 0	-3X S	2.20	1.70	
N5474	14 3.3	53 54	11.74	277	7 2	6A P	6.50	5.30	
N5475	14 3.5	55 59	13.40	1490	50 13	0	2.10	0.40	
N5463	14 3.7	9 36	14.10	7235	25 27	20	1.20	0.50	
N5477	14 3.8	54 42	14.50	1292	3 0	9A8S	1.90	1.40	
N5480	14 4.0	6 16	14.50	1023	33 27	3A	2.60	0.40	
N5481	14 4.5	50 57	12.90	1860	20 27	5A2S	1.70	1.00	
N5486	14 4.8	50 57	13.50	2004	23 27	-3A	1.80	1.30	
N5485	14 5.7	55 20	12.80	1985	50 0	-2A P	2.70	2.00	
1406+0718	14 6.0	7 18	14.50	1383	10 6	9A6S	1.80	0.90	
N5482	14 6.0	9 10	14.20	1929	38 27	5A	1.50	0.90	
1 979	14 7.1	15 4	14.50	7100	22 27	-2	1.20	0.90	
1407+4916	14 7.5	49 16	14.40	1973	25 27	2B	1.10	0.70	
N5490	14 7.6	17 47	13.80	5008	34 27	15	1.10	0.20	
1407+1836	14 7.7	18 36	14.50	5116	25 27	-5B	2.30	1.80	
1 983	14 7.7	17 58	14.50	5452	17 27	2B	1.90	0.40	
N5492	14 8.2	19 51	13.70	2285	20 6	3 P	6.00	5.50	
N5500	14 8.4	48 47	14.50	1891	28 27	-7	1.80	0.40	
N5491	14 8.5	6 36	13.90	727	0 9	20	1.60	1.00	
N5499	14 8.7	36 8	14.50	8424	23 27	15	1.70	1.10	MK669
N5504	14 9.5	16 4	13.90	5300	30 27	-3	1.40	1.10	
N5505	14 10.1	13 32	14.10	4272	29 27	1B	1.00	0.70	
N5515	14 10.5	39 32	13.70	7603	46 27	2	1.50	0.80	
N5520	14 10.5	50 36	13.30	1906	40 3	3	1.80	1.10	
N5513	14 11.2	20 40	14.10	4993	25 27	-2	1.90	1.10	
N5514	14 11.2	7 54	14.50	7343	30 27	20 P	2.30	1.00	MERGING DOUBLE??
1411+1244	14 11.8	12 44	14.40	5909	31 27	20	1.00	0.80	
1411+1551	14 12.0	15 51	14.00	4871	26 27	3B	2.00	0.70	
1 988	14 12.3	58 0	14.50	8070	25 27	2	2.00	0.70	
N5526NE	14 12.3	58 0	14.20	2025	31 27	4A	2.00	0.20	
1 989	14 12.3	3 21	13.40	7570	28 27	-7	1.30	1.10	
N5522	14 12.4	13 23	14.10	4595	23 27	3A	1.80	0.35	
1422+1421	14 12.5	14 21	14.30	4966	31 27	1A	2.00	1.00	
N5523	14 12.6	25 33	12.64	1068	10 2	6A4S	4.70	1.40	
N5521	14 12.9	4 38	14.30	12300	220 5	15	0.70	0.60	AKN443
N5525	14 13.2	14 31	14.00	5555	18 27	-2	1.20	0.70	
N5529	14 13.5	36 27	12.90	1	5	5	6.20	2.00	
N5533	14 14.0	35 35	12.98	3864	15 2	2A T	3.70	2.00	
N5536	14 14.3	39 44	14.50	5848	16 27	1B	1.00	1.00	
N5532	14 14.4	11 2	13.30	7367	24 27	-2	1.60	1.60	
N5541	14 14.4	39 49	13.40	7698	26 27	20 P	0.90	0.70	AKN444
1 995	14 15.0	58 2	14.50	3132	37 27	20	1.20	0.30	VV210
N5544	14 15.0	36 48	13.80	3046	17 27	0B R	1.00	1.00	
N5545	14 15.0	36 48	13.80	3046	28 27	4A S	1.10	0.30	VV210
N5546	14 15.7	7 48	14.10	7324	29 27	-7	1.30	1.10	
N5547	14 15.7	26 39	14.20	4310	31 27	20	1.10	0.80	
N5548	14 15.7	25 22	13.54	4980	8 0	0A P	1.70	1.50	
N5549	14 16.0	13 6	14.20	7404	29 27	-2	1.50	0.70	
N5550	14 16.3	36 43	12.60	3258	18 27	-5	2.20	2.00	
N5557	14 17.2	18 6	14.50	5738	33 27	-1	0.80	0.40	
1 999	14 17.3	18 5	14.40	5628	28 27	-2	0.70	0.40	
I1000	14 17.3	18 5	13.48	1733	20 6	3B P	4.00	0.90	
N5560	14 17.6	4 13	14.50	9139	28 27	15	0.70	0.60	
N5562	14 17.7	10 29	14.50	1569	24 1	2B4R	6.20	2.30	
N5566	14 18.2	56 57	11.66	303	5 2	7X7S	6.10	4.00	
N5574	14 18.4	3 28	13.58	1582	21 27	-3B	1.10	0.80	
N5575	14 18.5	6 26	14.50	7675	28 27	-2	1.00	1.00	
N5576	14 18.5	3 30	12.16	1523	20 27	-5	3.00	2.30	
N5577	14 18.7	39 56	13.00	1314	50 13	7	2.80	1.70	
N5582	14 18.7	71 49	13.90	7595	35 27	6 P	0.90	0.90	MK286, VIIIZW547
N5583	14 18.8	13 27	14.20	5007	35 27	15	0.80	0.60	
N5587	14 19.3	35 29	14.30	3391	30 27	1B	1.30	1.30	
N5589	14 19.3	35 25	13.60	3242	26 27	-2	1.80	1.80	
N5590	14 19.8	14 9	14.00	2294	0 9	0	2.70	0.80	
1420+1518	14 20.0	15 18	14.20	2240	35 27	15 P	0.80	0.40	
N5591	14 20.2	13 57	14.50	7642	31 27	8 P	1.90	0.80	
N5596	14 20.4	37 21	14.50	3167	21 27	-2	1.20	0.90	
N5598	14 20.5	40 33	14.50	5468	20 27	-2	1.50	1.90	
N5602	14 20.8	33 4	14.50	10244	28 27	1	0.90	0.50	MK471
1420+3304	14 20.8	33 4	14.50	10244	28 27	1B	0.90	0.50	
1420+0157	14 20.9	1 57	13.60	1392	0 9	5B	2.50	1.30	
N5603	14 21.3	42 0	14.30	5625	25 27	-2	1.40	1.40	
N5608	14 21.4	14 52	13.42	2349	20 22	5 P	3.00	1.70	
N5600	14 22.0	33 5	12.70	3872	75 0	2A R	1.40	1.40	
N5614	14 22.0	35 15	13.50	1695	50 13	-2	2.80	2.20	
N5611	14 22.1	24 50	14.50	5087	26 27	1B	2.00	0.60	
N5610	14 22.1	44 45	13.90	153	7 2	10A7	2.00	2.00	
1422+4445	14 22.8	32 42	14.20	4175	25 27	15 P	0.55	0.50	DI90, IZW87
1423+3242	14 24.4	48 47	14.20	3890	29 27	3A	1.80	1.00	AKN450
N5622	14 24.4	51 50	14.10	1921	35 27	20	1.10	0.70	
N5624	14 24.8	5 1	14.00	8329	40 27	3X T	2.40	1.10	

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2)	D ₁ (10)	D ₂ (11)	TYPE (9)	V _H (7)	mp (4)	mp (5)	RA(1950)DEC (3)	mp (4)	V _H (6)	TYPE (8)	D ₁ (10)	D ₂ (11)	NOTES (12)
N5804	14 55.4	49 52	14.00	1	4097	28	0	3B	1.30	1.10				
N5798	14 55.5	30 10	13.50	1	1792	8	6	10	1.40	0.90				
1457+1650	14 57.1	16 50	14.50	1	10003	31	27	-7	1.30	1.10				
N5820	14 57.2	54 5	13.61	0	3235	22	27	-2	2.20	2.00				
N5806	14 57.5	2 5	12.70	0	1353	10	6	3X5S	3.00	1.50				
N5832	14 57.6	71 53	13.30	1	451	10	2	3B T	3.70	2.50				SEXP 1
N5813	14 58.7	1 54	12.09	0	1952	23	27	-5	3.40	0.45				
N5828	14 59.0	50 11	14.30	1	4030	30	27	20	0.60	0.70				
1459+4454	14 59.4	44 54	14.30	1	626	32	27	15	0.80	0.35				VV244
N5827	14 59.6	26 10	13.70	1	6588	31	27	15	1.20	0.90				VV244
N5831	15 1.6	1 25	13.05	0	1683	22	27	-5	2.00	1.80				
1501+1038	15 1.6	10 38	14.00	1	10921	37	27	15						
N5837	15 2.3	12 50	14.50	1	8611	32	27	20	1.00	0.60				
N5839	15 2.9	1 50	13.90	1	1211	20	27	-2A	1.20	1.20				
N5838	15 2.9	2 18	12.14	0	1359	35	27	-3A	3.50	1.50				
1503+0842	15 3.1	8 42	14.50	1	8305	29	27	1	0.90	0.80				
N5845	15 3.5	1 50	13.51	0	1446	10	27	-5	0.60	0.30				
N5846	15 3.9	1 48	11.76	0	1709	11	27	-5	3.00	3.00				
N5850	15 4.6	1 44	12.25	0	2527	13	27	3B1R	5.00	4.50				AKN478
N5860	15 4.7	42 50	14.20	1	5495	97	33	15	1.00	1.00				IZW117
N5866	15 5.1	55 57	11.19	0	672	9	1	1A	6.50	3.00				
N5857	15 5.2	19 47	14.29	0	4772	21	27	3B S	1.30	0.60				
11100	15 5.3	63 12	14.10	1	6561	26	27	20	1.00	0.70				
N5859	15 5.3	19 46	13.57	0	4782	31	27	4B S	2.90	0.70				
N5854	15 5.3	2 46	12.93	0	1669	35	27	-1B S	2.20	0.60				
N5874	15 6.5	54 57	14.10	1	3128	10	22	4X T	2.60	1.70				
N5864	15 7.0	3 15	12.89	0	1850	29	27	-2B S	2.40	0.80				
1507+5229	15 7.0	52 29	14.10	1	2470	29	27	15	0.45	0.40				
N5865	15 7.3	0 39	13.50	1	2042	35	27	-2	2.40	1.70				=N5869
N5875	15 7.7	52 43	13.40	1	3527	20	6	3A	2.60	1.30				
N5876	15 8.1	54 42	13.90	1	3089	72	3	2B R	2.80	1.30				
1508+6723	15 8.2	67 23	13.60	1	-188	20	11	-5	40.00	25.00				URSA MINOR, DD0199
N5879	15 8.5	57 11	12.32	0	775	15	2	4A4T	4.80	1.70				
1509+4620	15 9.5	46 20	14.10	1	5630	24	27	1B	1.30	1.30				
N5884	15 10.6	60 0	13.20	1	2485	25	2	6B	3.30	0.50				
N5888	15 11.2	41 27	14.50	1	8738	29	27	3B	1.50	0.90				
N5893	15 11.8	42 9	14.10	1	5381	15	6	3B R	1.40	1.30				
N5899	15 13.2	42 14	12.79	0	2554	25	6	5X1T	2.80	1.20				
1513+1042	15 13.8	10 42	14.30	1	6487	26	27	5B	3.00	0.80				
N5905	15 14.0	55 42	12.41	0	3391	9	6	3B1R	4.70	3.60				
N5906	15 14.6	56 30	11.40	1	666	7	2	5ABS	12.80	1.80				#5907
N5908	15 15.4	55 35	12.96	2	3309	10	6	3A S	3.00	1.30				
N5918	15 17.7	45 4	14.00	1	5169	34	27	5	1.90	0.80				
N5921	15 19.5	15 15	11.65	0	1450	36	27	4B2R	5.30	4.60				
N5928	15 23.7	18 15	13.80	1	4567	63	3	-2	2.20	1.60				
N5929	15 24.3	41 51	14.00	1	2550	22	27	2	1.00	0.90				IZW112
N5930	15 24.4	41 51	13.60	1	2617	29	27	3X T	2.00	0.80				IZW112
N5939	15 24.4	68 55	13.70	1	6657	26	27	20	0.90	0.40				
1524+4044	15 24.8	40 44	14.00	1	2619	10	2	4X	4.50	0.80				
N5934	15 26.4	43 5	14.50	1	5600	33	27	15	0.70	0.30				
N5949	15 27.3	64 56	13.07	2	435	10	1	4A R	2.30	1.10				
N5936	15 27.7	13 10	13.41	0	4012	31	27	3B1T	0.90	1.20				
11124	15 27.9	23 48	14.50	1	5242	30	27	20	3.30	2.50				
N5945	15 28.0	43 5	14.10	1	5521	27	27	1B	0.80	0.80				
N5940	15 28.8	7 38	14.30	1	10144	31	27	2B	0.80	0.80				
1531+6744	15 31.4	67 44	14.40	1	6461	36	27	5A	1.60	1.20				
N5951	15 31.4	15 10	13.80	1	1784	15	2	5B	3.50	0.70				
11129	15 32.7	68 25	13.70	1	6540	5	9	5	1.70	1.30				VV244
N5953	15 32.7	15 22	13.30	1	1983	28	27	1A P	1.20	1.00				
N5954	15 32.8	15 22	13.70	1	2012	28	27	6X T	4.00	3.00				VV244
N5963	15 32.8	56 45	13.00	1	655	8	6	20	1.70	1.70				
N5966	15 32.8	11 55	13.30	1	1899	8	6	5	1.70	1.70				
N5958	15 32.7	28 50	13.20	1	2021	36	27	20	1.10	1.00				
N5958	15 32.8	23 40	14.40	1	5369	53	27	15	2.00	1.80				
N5965	15 32.8	56 52	13.40	1	3416	10	6	3	6.00	0.90				
N5957	15 33.0	12 13	13.30	1	1829	12	6	3X R	2.80	2.80				
N5961	15 33.2	31 1	14.00	1	1828	20	9	15	0.90	0.30				AKN478
1534+3850	15 34.0	38 50	14.50	1	5584	34	27	15	0.90	0.30				IZW117
1534+4500	15 34.0	45 0	14.40	1	8857	35	27	20B	0.80	0.70				
N5966	15 34.0	39 57	13.90	1	4525	22	27	-7	1.80	1.10				
N5962	15 34.2	16 46	12.38	0	1963	10	1	5A3R	2.80	2.00				
I4562	15 34.3	43 39	13.80	1	5860	80	33	-5	1.10	1.10				IZW118
I4564	15 34.8	43 41	14.40	1	5669	25	27	20	1.50	1.30				
I4566	15 35.0	43 43	14.30	1	5628	27	27	2X	1.90	1.30				
N5964	15 35.1	6 9	14.20	1	1447	10	2	7B	4.40	3.40				
I4567	15 35.5	43 28	13.50	1	5722	15	9	5	1.60	1.20				
N5970	15 36.1	12 21	12.40	0	1992	25	0	5B4R	2.90	2.00				
1536+0445	15 36.4	4 45	14.40	1	6820	32	27	5A	1.30	1.20				
N5981	15 36.8	59 33	14.20	1	2611	27	27	4A	2.80	0.35				
N5974	15 37.0	59 31	12.63	0	2007	35	27	15	0.65	0.35				AKN482
N5982	15 37.6	59 31	12.63	0	2936	20	27	-5	3.00	2.10				
11132	15 37.9	20 51	14.40	1	4486	31	27	5A	1.30	1.10				
N5985	15 38.6	59 30	12.11	0	2521	10	6	3X1R	5.80	3.10				
N5987	15 38.9	58 14	13.30	1	2987	22	27	3	5.10	1.80				
N5980	15 39.1	15 57	13.30	1	4146	37	3	20	1.90	0.60				
N5989	15 40.5	59 55	13.60	1	2878	15	9	5	1.00	0.90				
N5984	15 40.6	14 23	13.21	0	1118	9	1	7B4T	2.90	0.60				
N5992	15 42.6	41 15	14.20	1	9518	28	27	20	1.00	0.80				MK489
N5993	15 42.7	41 17	13.90	1	9578	37	27	3	1.20	0.90				
1543+2044	15 43.6	20 44	14.50	1	2089	15	2	5A	2.30	2.20				
N5990	15 43.8	2 34	13.10	1	3809	36	27	1	1.60	0.90				
N5996	15 44.7	18 2	13.20	1	3212	30	3	7B P	3.80	2.80				MK691
N6001	15 45.7	28 48	14.40	1	9864	27	27	5A	1.10	1.10				
N6003	15 45.7	19 11	14.40	1	4060	29	27	-2	1.10	1.10				
11141	15 47.5	12 33	14.50	1	4458	28	27	15	0.50	0.45				
N6004	15 48.1	19 5	13.40	1	3818	40	3	5B	1.80	1.60				
11144	15 49.7	43 33	14.40	1	12096	28	27	-3	0.70	0.50				MK491
1549+4723	15 49.7	47 24	13.60	1	5958	18	27	20	1.40	0.70				

TABLE 1—Continued

NAME (1)	RA (1950) DEC (2)	m_p (4)	V_H (6)	TYPE (9)	D_1 (10)	D_2 (11)	NOTES (12)
N6008	15 50.7 21 16	14.20 1	4865	22 27	1.50	1.50	
N6015	15 50.7 62 28	11.76 0	834	10 2	7.00	2.40	
N6007	15 51.0 12 6	14.10 1	10548	14 0	1.70	1.20	6A3S
N6012	15 51.9 14 45	13.10 1	1848	20 6	2.10	1.60	
1552+1645	15 52.3 16 45	14.50 1	2206	100 15	0.70	0.20	AKN489
N6014	15 52.4 6 5	13.80 1	2429	27 27	2.00	1.60	
1554+4800	15 54.2 48 0	14.10 1	5996	21 27	1.30	1.10	
N6017	15 54.8 6 8	13.80 1	1791	22 27	0.80	0.80	
1554+4201	15 54.9 42 1	14.30 1	10402	20 27	0.40	1.00	I2W129
N6020	15 55.0 22 33	14.50 1	4358	25 27	1.40	1.00	
N6021	15 55.2 16 5	14.10 1	4738	25 27	1.60	0.80	
11152	15 55.3 48 14	14.40 1	5931	25 27	1.10	1.10	
11153	15 55.6 48 18	13.60 1	744	0 9	1.20	1.10	
11151	15 56.2 17 35	13.40 1	4680	36 27	1.30	1.10	
1555+6404	15 56.5 64 4	13.90 1	9223	30 27	2.50	0.80	
1557+4849	15 57.2 48 49	14.30 1	6011	27 27	1.30	0.80	
1358+2100	15 58.2 21 0	14.20 1	4777	27 27	1.40	0.80	
N6030	15 59.6 18 6	14.50 1	4491	25 27	1.10	0.70	
N6038	16 0.8 37 29	14.40 1	9872	37 27	1.20	1.10	
1600+4120	16 0.9 41 20	14.50 1	9264	27 27	1.00	0.50	
1601+3946A	16 1.2 39 46	14.50 1	3414	22 27	1.00	0.70	
11169	16 1.9 13 53	14.10 1	6035	25 27	1.00	0.90	
1602+4928	16 2.1 49 28	14.30 1	4762	20 6	1.60	0.55	MK297,ARP209,VW86
N6052	16 3.0 20 41	13.64 0	4762	20 6	0.80	0.55	
11174	16 3.7 15 10	14.50 1	4706	26 27	1.10	1.10	
N6060	16 4.1 19 55	14.40 1	11755	41 27	2.10	1.10	
1604+4129	16 4.1 19 55	13.60 1	1989	34 27	0.80	0.60	AKN497
N6062	16 4.1 19 55	14.40 1	11755	41 27	1.10	0.90	
1604+1627	16 4.6 16 27	14.30 1	11015	26 27	1.10	0.70	
1604+3014	16 4.6 16 27	14.40 1	6605	43 27	1.70	0.90	
N6073	16 7.9 16 24	14.50 1	9245	29 27	1.00	0.20	
N6090	16 10.3 61 24	14.00 1	8754	38 3	1.60	1.50	MK496,I2W135
N6085	16 10.5 29 30	14.50 1	10191	32 27	1.20	0.35	
1613+6350	16 13.2 63 50	14.50 1	9383	35 27	0.80	0.45	
N6103	16 13.7 32 4	14.40 1	1794	37 27	1.60	0.70	
N6111	16 13.9 32 4	13.80 1	2898	0 9	1.60	0.70	I1210
N6104	16 13.9 32 4	14.10 1	6382	25 27	0.90	0.70	RING
11221	16 15.6 53 8	13.80 1	5615	22 27	1.20	1.20	
1616+4613	16 16.6 46 13	14.50 1	5691	37 27	0.80	0.20	
N6123	16 16.6 42 4	14.40 1	3986	23 27	0.50	0.40	I2W141
N6120	16 18.0 37 54	14.30 1	9203	38 27	1.40	1.40	=N6128
N6127	16 18.2 58 6	13.00 1	4609	34 27	1.10	0.70	
N6130	16 18.5 57 45	14.20 1	5066	32 27	0.90	0.90	
N6126	16 19.6 36 30	14.50 1	9759	24 27	1.10	1.10	
N6131	16 20.2 59 3	14.20 1	5054	37 27	1.00	1.00	
N6143	16 20.6 35 12	13.90 1	5235	54 0	1.00	1.00	
N6137	16 21.3 38 2	14.10 1	9306	21 27	1.90	1.20	
N6146	16 23.5 41 1	13.80 1	8738	28 27	1.30	1.00	
N6154	16 24.2 49 57	14.00 1	5982	23 27	2.20	2.20	
N6155	16 24.7 48 25	13.00 1	2424	30 11	1.40	0.90	
1626+4120	16 26.8 41 20	14.30 1	9534	39 27	0.55	0.45	AKN504
N6166	16 26.9 39 40	13.90 1	9684	34 27	2.20	1.70	ABELL2199
N6173	16 28.1 40 50	14.90 1	8600	25 27	1.90	1.40	
N6189	16 30.8 59 42	13.30 1	5533	50 11	1.80	0.80	
N6190	16 31.2 58 33	13.20 1	3355	15 9	1.60	1.40	
N6185	16 31.4 58 32	14.50 1	10301	32 27	2.90	0.80	
1631+2906	16 31.8 29 6	14.20 1	963	20 6	1.20	1.90	VV625
N6197	16 36.1 36 10	14.20 1	9424	28 27	1.40	1.00	14615
1636+5026	16 36.2 50 26	13.90 1	2457	0 9	1.00	0.80	
1638+5750	16 38.0 57 50	14.10 1	5213	24 27	1.60	1.50	
N6207	16 41.3 36 56	12.26 0	852	10 2	3.30	1.20	
I5090	21 9.0 - 2 14	14.50 1	9217	35 27	20		
I1368	21 11.7 1 58	14.30 1	4009	31 27	20	1.30	0.50
N7047	21 13.9 - 1 2	14.30 1	5796	47 27	20	0.60	0.60
N7077	21 27.4 2 12	14.30 1	1142	14 27	-7		AKN549
N7081	21 28.8 2 16	13.70 1	3226	37 27	20		
N7102	21 37.3 6 4	14.00 9	4859	49 27	3B		
2145-0154	21 45.8 - 1 54	14.30 1	8153	10 27	5	0.90	0.50
N7156	21 52.0 - 2 42	13.50 1	3979	35 9	5	1.60	1.40
I1411	21 53.5 - 1 45	14.50 1	8043	43 27	-7	0.90	0.50
2156+1148	21 56.2 11 48	14.30 1	9330	34 27	15	0.50	0.50
N7189	22 0.7 0 20	14.40 1	9041	32 27	15	0.90	0.60
N7194	22 1.1 12 23	14.50 1	8139	43 27	-7		
N7241	22 13.4 18 59	13.80 1	1447	10 9	4B P	3.50	0.80
N7280	22 24.0 15 54	13.60 1	1903	20 6	-2X R	1.90	1.30
N7290	22 26.0 16 54	13.80 1	2896	20 6	4A R	1.70	1.00
2230+0750	22 30.6 5 19	13.40 1	1966	27 27	15	0.60	0.40
N7311	22 32.1 5 33	14.50 1	8283	37 27	2A	1.80	0.90
N7312	22 32.1 5 33	14.50 1	8283	37 27	3B	1.70	1.00
N7316	22 33.5 20 4	13.70 1	5551	20 6	20	1.10	0.90
N7321	22 34.0 21 22	14.00 1	7145	36 27	3		MK307
N7323	22 34.4 18 53	14.00 1	5522	42 27	3		
N7328	22 35.1 10 16	14.30 1	2793	27 27	2A	2.10	0.70
15243	22 37.7 7 47	14.30 1	7487	36 27	1B	0.90	0.80
N7360	22 39.0 23 7	14.30 1	7155	36 27	15 P	0.70	0.60
N7364	22 41.9 - 0 23	13.80 1	4697	28 27	15	0.70	0.30
N7385	22 42.6 6 10	14.20 1	1935	10 2	15	1.70	1.20
2242+0610	22 47.4 11 21	14.09 0	7829	65 0	-5	3.30	1.70
N7391	22 48.1 - 1 47	13.70 1	3085	26 27	-7	1.80	1.70
N7395	22 49.0 22 49	14.10 1	7747	50 27	-3	1.30	1.00
2253+1232	22 53.1 12 32	14.40 1	7281	31 27	1A	1.60	1.00
N7422	22 53.6 3 40	14.30 1	4820	35 27	3B	1.60	0.90
N7428	22 54.7 - 1 18	13.80 1	3057	25 27	20	0.90	0.70
2255+1931	22 55.1 19 31	14.50 1	5682	56 27	15		

TABLE 1—Continued

NAME (1)	RA(1950)DEC (2) (3)	m_p (4) (5)	V_H (6) (7) (8)	TYPE (9)	D_1 (10) (11)	D_2 (11)	NOTES (12)
N7435	22 55.6 25 53	14.20 9	7409 29 27	-7	1.80	1.80	
N7437	22 55.7 14 17	14.40 1	2117 30 2	5A			
N7442	22 56.9 15 17	14.20 1	7268 31 27	5			
N7446	22 57.6 15 43	12.23 0	2192 20 27	4A3T	2.70	1.10	
N7454	22 58.6 16 7	13.60 1	2007 20 27	-5	1.80	1.50	
N7458	22 58.9 1 29	13.90 1	4981 26 27	-7	1.10	0.90	
N7460	22 59.2 2 0	14.20 1	3296 28 1	3 P	1.10	1.00	
N7461	22 59.3 15 19	14.50 1	4272 39 27	-2			
N7463	22 59.4 15 43	13.50 1	2445 26 0	3X P	3.20	0.60	2058(33)
N7464	22 59.4 15 42	14.50 1	1877 32 0	-5 P	0.50	0.50	
N7465	22 59.5 15 42	13.30 1	1959 23 3	-1B P	1.20	0.70	MK313,AKN573,H0802
N7468	23 0.5 16 20	14.00 1	2089 12 3	-5 P	0.90	0.60	MK314
N7469	23 0.7 8 36	13.06 1	4780 36 27	1X T	1.60	1.10	
2302-0145	23 2.1 - 1 45	14.00 1	0 0 0	0 0 0	0.25	0.22	IIIZW92,STAR?
N7479	23 3.4 12 3	11.93 0	2392 9 1	5B1S	4.40	3.40	
N7483	23 3.3 3 16	14.30 1	4930 28 27	1B	1.60	0.90	
15285	23 4.4 22 40	14.40 1	6188 23 27	15	1.70	1.30	RING,IIZW188
2304+1536	23 4.9 15 36	14.00 1	15015 27 27	15	0.20	0.20	IIIZW93
N7489	23 5.1 22 44	14.30 1	6239 15 6	5	2.20	1.10	
N7497	23 6.7 17 54	13.30 1	1710 15 2	5			
N7506	23 9.2 - 2 26	14.30 1	3884 20 27	-2	1.70	1.10	
2309+0914	23 9.3 9 14	14.20 1	6427 25 27	20	1.20	0.60	
2310+1538	23 10.3 15 38	14.00 1	7506 33 27	-6	0.20	0.20	IIIZW95
N7515	23 10.5 12 25	14.00 1	4479 34 27	20	1.70	1.40	
N7516	23 10.7 6 9	14.50 1	3531 5 32	1X R	1.50	1.40	MK527
N7537	23 12.0 4 14	14.13 0	2648 28 27	4A	2.10	0.50	
N7539	23 12.0 23 24	13.70 1	6048 42 27	12			
2312-0002	23 12.1 - 0 2	14.40 1	4389 31 27	-2	0.60	0.60	
N7548	23 12.7 4 16	12.80 0	2607 30 27	4B3T	3.40	1.10	
N7550	23 12.8 25 0	14.50 1	7925 34 27	-2			
N7549	23 12.8 18 41	13.90 1	5109 33 27	-3A	1.40	1.40	
N7563	23 13.4 12 55	14.10 1	4651 28 27	6B P	2.80	0.70	
N7562	23 13.4 6 25	13.24 0	3608 16 27	-5	2.10	0.90	
N7568	23 13.9 24 13	14.50 1	8439 37 27	20			
N7570	23 14.2 13 13	14.30 1	4655 28 27	1B	1.60	0.80	
N7591	23 15.7 6 19	13.80 1	4964 15 6	3B	1.90	0.80	
2316+2457	23 16.2 24 57	14.00 1	8081 32 27	1B	1.00	0.80	MK319
N7603	23 16.4 - 0 2	14.40 1	8790 56 5	3A T	1.40	0.90	MK530
11481	23 16.9 5 38	14.50 1	6118 30 27	15	0.90	0.80	
2317+0112	23 17.1 1 12	14.50 1	9006 40 27	20	0.90	0.60	
N7612	23 17.2 8 18	13.89 0	3383 65 0	0B	1.20	0.70	
2317+2600	23 17.4 26 0	14.10 1	5864 24 27	-2	1.50	1.00	
2317+1941	23 17.6 15 41	14.30 1	4380 33 27	20	1.30	1.00	
N7620	23 17.6 23 57	13.50 1	9865 26 27	6	1.30	1.20	MK321
2317-0207	23 17.7 - 2 7	14.40 1	3363 30 27	5A	1.60	0.90	
N7619	23 17.7 7 56	12.78 1	3747 20 27	-2	2.80	2.50	
N7624	23 17.9 27 2	13.70 1	4351 25 9	5	1.00	0.70	MK323
N7623	23 18.0 8 7	14.17 0	3674 30 27	-1A	1.60	1.00	
N7625	23 18.0 16 57	13.45 0	1620 10 1	-1A T	1.50	1.50	IIIZW103,VV280
N7626	23 18.2 7 57	12.90 0	3450 25 27	-5 P	2.40	1.80	
N7628	23 18.4 25 37	13.80 1	4180 39 27	-7			
N7631	23 18.8 7 56	13.70 1	3742 5 32	3A	1.80	0.80	
N7633	23 19.2 8 37	13.70 1	3150 45 0	-2B	1.20	0.90	
N7634	23 20.3 1 10	14.50 1	8930 32 27	20	0.45	0.45	
N7642	23 21.4 9 24	13.50 1	3593 71 33	-2			MK531
N7653	23 22.3 15 0	13.80 1	6202 20 9	3	1.70	1.50	
2322+2813	23 22.9 28 13	14.00 1	6915 28 27	0			
N7660	23 23.3 26 45	13.90 1	5707 20 27	-5	1.10	0.80	
N7664	23 24.2 24 48	13.30 1	3481 15 9	5	3.30	1.80	
N7671	23 24.8 12 12	13.89 1	3842 43 27	-2A	1.40	0.80	
N7673	23 25.2 23 19	12.70 1	3402 12 3	5A P	1.70	1.60	MK325,IVZW149
N7674	23 25.4 8 30	13.60 1	8662 35 27	4A R	1.00	0.90	MK533, VV343
N7677	23 25.6 23 15	13.90 1	3543 16 6	4X R	1.70	1.10	MK326
N7678	23 26.0 22 9	12.68 0	3489 10 1	5XIT	2.50	1.80	
2326+1428	23 26.1 14 28	12.92 0	-178 7 2	10 9			PEGASUS,DDO216
N7679	23 26.2 3 14	13.47 1	5120 25 27	-2B P	1.70	1.10	MK534, VV329
2326+1703	23 26.4 17 3	14.20 1	6834 40 27	-2	1.40	1.20	
N7682	23 26.5 3 15	14.30 1	5134 35 27	2B R	1.10	0.90	SY 2
2329+2540	23 29.1 25 40	14.40 1	7969 33 27	3			
N7691	23 30.0 15 34	14.20 1	4061 36 27	4X	2.40	1.70	
2330+2339	23 30.0 23 39	14.00 1	5177 29 27	-2			
2330+2911	23 30.2 29 11	14.50 1	5595 30 27	-2			
N7698	23 31.5 24 40	14.50 1	7028 29 27	-2			
2332+0703	23 32.9 7 3	14.40 1	5207 35 27	15	1.60	0.40	
2333+0457	23 33.1 15 2	14.00 1	5777 26 27	-2A	1.70	0.30	
N7711	23 33.7 23 20	13.70 1	4857 27 27	-2	4.00	1.60	
N7712	23 33.3 23 20	13.70 1	3033 36 27	15			
N7714	23 33.7 1 53	13.10 1	2894 19 27	3B P	1.80	1.30	MK538, VV51
N7716	23 34.0 0 1	13.28 1	2574 21 27	3X3R	2.50	1.80	
I1503	23 35.9 4 32	14.30 1	6141 35 27	20	1.00	0.45	
N7720	23 36.0 26 45	13.90 1	9141 29 27	-3 P	1.60	1.30	
N7722	23 36.2 15 41	13.70 1	4036 28 27	0	2.20	1.90	
N7728	23 37.4 26 52	14.30 1	9498 42 27	-7			
2338+2557	23 38.1 25 57	14.50 1	756 8 2	9 8	3.00	3.00	
I1504	23 38.7 3 45	14.50 1	6306 27 27	3A	1.90	0.50	
N7731	23 39.0 3 28	14.30 1	2868 30 27	1B	1.50	1.00	ZCG
N7732	23 39.1 3 27	14.50 1	2957 37 27	8 P	1.90	0.70	ZCG
2339-0137	23 39.3 - 1 37	14.20 1	6754 28 27	15	0.90	0.80	
N7738	23 41.4 25 48	12.26 0	750 10 2	6B3S	4.40	2.90	
N7741	23 41.5 0 14	14.40 1	6771 22 27	3B	2.10	1.50	=N7739
N7742	23 41.7 10 29	12.37 0	1655 19 27	3A R	2.00	1.80	
N7743	23 41.8 9 39	12.30 1	1658 25 27	-1B R	2.50	2.10	
N7746	23 42.8 - 1 57	14.50 1	6883 20 27	-2	1.40	1.10	
N7747	23 43.0 27 6	14.50 1	7756 34 27	3			
N7750	23 44.1 3 31	13.80 1	3847 20 32	6B P	1.70	0.80	
N7751	23 44.4 6 35	13.90 1	3241 25 27	15	1.60	1.50	

TABLE 1—Continued

NAME	RA (1950) DEC		m_p		v_H		TYPE	D_1	D_2	NOTES	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
N7752	23 44.5	29 11	14.30	1	5142	20	22	0	0.45	0.20	AKN585, IVZW165, VV5
N7753	23 44.6	29 12	13.20	1	5180	26	27	4X T	3.50	1.80	IVZW165B, VV5
N7757	23 46.2	3 54	13.90	1	2955	10	9	5A T	2.50	2.20	ARP68
N7767	23 48.3	26 49	14.20	1	8013	27	27	0			I1511
N7768	23 48.4	26 53	14.00	1	8123	24	27	-5	1.60	1.30	
N7769	23 48.5	19 52	13.04	0	4199	26	27	3A T	1.80	1.80	
2348+0046	23 48.6	0 46	14.40	1	8214	21	1	3	1.80	0.70	
N7771	23 48.9	19 50	13.39	0	4364	31	27	1B S	2.50	1.20	
N7775	23 49.9	28 30	13.90	1	6697	33	27	5			
N7778	23 50.7	7 36	13.80	1	5242	28	27	-7	1.10	1.00	
2350+2801	23 50.7	28 1	14.50	1	6946	28	27	-2			
N7779	23 50.9	7 36	13.60	1	5153	23	27	0	1.40	1.00	
N7782	23 51.3	7 42	13.33	0	5368	20	1	3A S	2.10	1.30	
N7777	23 51.4	28 13	14.40	1	6939	27	27	-7			
2352+2836	23 52.0	28 36	14.30	1	6841	36	27	-2			
N7785	23 52.8	5 38	13.22	0	3833	26	27	-5	1.80	1.20	
N7786	23 52.8	21 19	13.90	1	4280	40	27	15			
2353+1738	23 53.0	17 38	14.40	1	1777	20	2	15	3.00	1.30	
I1516	23 53.7	-1 12	14.30	1	7267	23	27	4	1.30	1.20	
2354+1330	23 54.1	13 30	14.30	1	10866	31	27	20	0.90	0.50	
2354+1633	23 54.2	16 33	14.50	1	1788	36	27	10	2.60	0.90	
N7794	23 56.0	10 26	13.80	1	5264	31	27	20	1.40	1.30	
N7798	23 56.9	20 29	12.70	1	2403	15	2	0	1.40	1.30	MK332
N7800	23 57.0	14 32	13.40	1	1748	15	2	10	2.30	1.60	
2358+2808	23 58.2	28 8	14.40	1	8896	39	27	15	0.70	0.70	
N7803	23 58.8	12 50	13.80	1	5314	29	27	0	1.00	0.70	
N7805	23 58.9	31 9	14.30	1	4948	21	27	-2X P	1.00	0.00	MK333, VV226
N7806	23 58.9	31 10	14.40	1	4827	22	27	20			
2359+2313	23 59.1	23 13	13.20	1	4383	26	27	6 R	2.70	1.30	III2W125, VV254
2359+2314	23 59.2	23 14	13.90	1	4530	56	0	7B P	1.60	0.50	III2W125, VV254
N7810	23 59.8	12 41	14.30	1	5532	29	27	-2	1.00	0.70	

SOURCE LISTING FOR TABLE 1

Source 0:

Corwin and Emerson 1982
 de Vaucouleurs, Shobbrook, and Strobel 1976
 de Vaucouleurs and de Vaucouleurs 1976
 de Vaucouleurs, de Vaucouleurs, and Corwin 1976
 de Vaucouleurs, de Vaucouleurs, and Nieto 1979
 Kelton 1980

Source 1:

Sandage 1978
 Sandage and Tammann 1981

Source 2:

Fisher and Tully 1981

Source 3:

Huchra and Thuan at Kitt Peak No. 1 0.9 m telescope
 Huchra and Sargent 1973

Source 4:

Rubin *et al.* 1976

Source 5:

Arakelian, Dibay, and Esipov 1975a
 Arakelian, Dibay, and Esipov 1975b
 Arakelian, Dibay, and Esipov 1976a
 Arakelian, Dibay, and Esipov 1976b
 Arkhipova and Esipov 1979
 Arkhipova, Esipov, and Savel'eva 1976
 Afanas'ev, Denisjuk, and Lipovetsky 1979
 Denisjuk and Lipovetsky 1977
 Denisjuk, Lipovetsky, and Afanas'ev 1976
 Dibay, Doroshenko, and Terebizh 1976
 Doroshenko and Terebizh 1975
 Kopilov *et al.* 1976
 Markarian, Lipovetsky, and Stepanian 1980a
 Markarian, Lipovetsky, and Stepanian 1980b

Source 6:

Bieging and Biermann 1977
 Biermann, Clarke and Fricke 1979
 Chincarini, Giovanelli, and Haynes 1979
 Giovanelli and Haynes 1981
 Helou, Salpeter, and Krumm 1979
 Krumm and Salpeter 1977
 Krumm and Salpeter 1979a
 Krumm and Salpeter 1979b
 Krumm and Salpeter 1979c
 Krumm and Salpeter 1980
 Peterson 1979
 Olson 1979

Source 8:

Bieging 1978
 Huchtmeier and Bohnenstengel 1975
 Huchtmeier, Tammann, and Wendker 1976
 Huchtmeier, Tammann, and Wendker 1977

Source 9:

Knapp *et al.* 1977
 Knapp, Faber, and Gallagher 1978
 Knapp, Gallagher, and Faber 1978
 Knapp 1978
 Romanishen 1980
 Shostak 1978
 Thonnard *et al.* 1978

Source 11:

Hartwick and Sargent 1978
 Jenner 1974
 Kirshner, Oemler, and Schechter 1978
 Kirshner 1977

Source 13:

Davis, observations at McGraw Hill
 Schild and Davis 1979

Source 15:

Gregory 1976
 Gregory and Thompson 1978
 Gregory, Thompson, and Tiftt, 1980
 Thompson, Welker, and Gregory 1978
 Tiftt 1972
 Tiftt 1974
 Tiftt and Gregory 1973
 Tiftt and Gregory 1976
 Tiftt and Gregory 1979

Source 16:

Chincarini and Rood 1972*a*
 Chincarini and Rood 1972*b*
 Chincarini and Rood 1976*a*
 Chincarini and Rood 1976*b*
 Chincarini and Rood 1977
 Dickel and Rood 1978
 Dickel and Rood 1980
 Kintner 1971
 Rood and Dickel 1976

Source 21:

Eastmond and Abell 1978
 Stauffer and Spinrad 1978

Source 22:

Balkowski, Chamaroux, and Weliachew 1978
 Bottinelli and Gouguenheim 1976
 Bottinelli and Gouguenheim 1977
 Bottinelli, Gouguenheim, and Paturel 1980
 Bottinelli, Gouguenheim, and Paturel 1981
 Bottinelli, Gouguenheim, and Paturel 1982

Source 27:

Elvis *et al.* 1981
 This paper.
 Schwartz *et al.* 1980
 Sheckman, Stefanick, and Latham 1983
 Tonry and Davis 1979
 White *et al.* 1982

Source 32:

Bothun *et al.* 1982
 Heckman, Balick, and Sullivan 1978
 Schommer, Sullivan, and Bothun 1981
 Sullivan *et al.* 1981

Source 33:

Rood 1981

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TABLE 2
 RADIAL VELOCITY SOURCES

Number	Source	Number of Velocities
0	RC2	124
1	Sandage	133
2	Tully and Fisher	226
3	Huchra and Thuan (KPNO, Markarians)	80
4	Rubin and Ford	6
5	Russian (Buyrakan, Alma-Alta, SAO)	19
6	Areceibo	152
8	German 21 cm	6
9	NRAO 21 cm	65
11	KPNO	27
13	Davis	9
15	Steward Observatory	7
16	Rood (and Dickel, Chincarini, and Kintner)	10
21	Lick Observatory	7
22	French 21 cm	14
27	CfA survey (MHO)	1493
32	Sullivan, Bothun, and Schommer	10
33	Rood catalog 1980	13

TABLE 3
 PHOTOMETRY AND MAGNITUDE SOURCES
 A.

Number	Source
0	$B(0)$ (RC1)
1	Zwicky (ZGC, CGC)
2	Shapley-Ames
3	Tully and Fisher (DDO dwarfs)
4	Graham
5	Markarian, Russian estimates
9	Observer's eye estimates (split doubles)

B.	
Source	Approximate Conversions ^a to $B(0)$ –ZGC
3	$B = B_3 + 1.38$
4	$B = B_4 + 0.34$

^aThese conversions have been applied to derive the magnitudes listed in Table 1.

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