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STRUCTURES, SPECTRAL INDEXES, AND OPTICAL IDENTIFICATIONS OF RADIO SOURCES SELECTED FROM THE B3 CATALOGUE

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ABSTRACT

This paper presents the first results of a large program of optical identifications of radio sources from the *Third Bologna (B3) Catalogue*. A homogeneous sample of 1103 radio sources, selected from the B3 Catalogue at 408 MHz and covering the flux-density range from 2.0 to 0.1 Jy, has been mapped at 1465 MHz using the VLA at 15 arcsec resolution. Both positonal and structural information have been derived and are presented here. Optical identifications have been attempted for all of the sources using the Palomar Sky Survey prints, resulting in 354 proposed identifications. The run of identification percentage, largest angular size (LAS), and spectral index with flux density is analyzed. Evidence is given that sizable intrinsic radio-optical displacements are possible for steep-spectrum unresolved sources. The fraction of "empty field" identifications (fainter than $m_r = 20$) increases from 15% for $S_{408} \geqslant 10$ Jy to 86% in the 20-60 mJy interval. The 408-1465 MHz spectra become steeper with decreasing flux density to about 50 mJy, and become flatter at lower flux densities. Correspondingly, a small discontinuity is found in the behavior of the apparent diameter versus flux-density relation, at a similar flux density. A negative correlation is found between the metric size and redshift for radio galaxies, confirming an earlier result of Grueff et al. (1977).

I. INTRODUCTION

It is generally recognized that radio-source counts are difficult to reconcile with the counts expected in a Euclidean space uniformly filled with radiating sources. When the predictions are based on relativistic metrics, in the generally accepted framework of an expanding universe, the difficulties are much aggravated.

Since no reasonable universe model (i.e., metric) has been devised explaining the empirically measured radio-source counts, a widely accepted explanation of the discrepancy has been that the space density of radio sources, or their absolute luminosity, or both, must vary with cosmological epoch.

Much effort has been devoted since the pioneering work of Oort (1961), Longair (1966), and Rowan-Robinson (1967) to define the properties of the cosmological evolution of the radio sources.

The source counts are now known with high accuracy at many frequencies (see, for example, Kellermann and Wall (1986) for a review on the subject), and recent advances have extended them over a range of as many as five orders of magnitude in flux density, reaching a surface density of 10⁶/sr (Windhorst *et al.* 1985; Weistrop *et al.*, 1987, and references therein).

However, modeling the counts with a cosmological evolution requires a detailed knowledge of the source absolute-luminosity distribution at each flux density, which can only be attained through radio-source optical identifications. This has proved to be a formidable task; after two decades of effort, it can be considered complete only for a sample limit-

ed to a few dozen of the strongest radio sources on the sky (Gunn et al. 1981; Peacock et al. 1981; Spinrad et al. 1985).

A physical understanding of a model cosmological evolution needs a detailed study of physical properties of individual sources at large redshifts, a process now only in the beginning stages (see, for example, Djorgovski 1988, and references therein).

At present, these studies are mostly restricted to the 3CR sample, which includes sources spanning a very wide range in absolute power and redshift, albeit with limited statistics. However, due to the very steep source counts, most sources in the 3CR Catalog fall within a rather restricted flux-density range (close to the Catalog limit) so that, in practice, sources with a given absolute power are only observed in a narrow redshift range. To overcome this limitation, and to extend our knowledge of the power–redshift plane (P-z), it is necessary to extend the optical identification process down to sources with much fainter flux densities.

The basic aspects of the problem are the same at all frequencies; much progress, however, has been made at low frequencies, not only for obvious, historical reasons, but also because the evolution as shown by the source counts is especially evident at low frequency.

At 408 MHz, systematic optical identifications have been made in the past on the B2 Catalogue (Grueff and Vigotti 1975, and references therein; Allington-Smith *et al.* 1982) and on the various 5C catalogs (see Benn *et al.* (1982) for comprehensive references on 5C source counts). These works were relevant to flux densities in the range 5–1 Jy and 1–0.01 Jy, respectively. This latter interval (reaching the

faintest flux density at which the 408 MHz counts are known) has been the subject of a recent, in-depth study (Benn *et al.* 1988, and references therein).

The number of sources involved in these studies, however, is not very large, especially in the interval from 1 to 0.1 Jy, where only a few hundred sources (giving a few dozen identifications) have been studied. The first section of the recently published B3 Catalogue (Ficarra et al. 1985), covering a sky area of 0.78 sr and listing over 13 000 sources down to a 408 MHz flux density of 0.1 Jy, is ideally suited to provide a complete source sample in this flux-density range. A large observational program has been started at the NRAO's Very Large Array (VLA) radio telescope, aimed at obtaining accurate medium- and high-resolution maps of a suitably large sample of B3 sources. This paper describes a set of medium-resolution VLA observations of a complete subsample of 103 B3 sources, and the results of an optical identification program performed on the POSS prints.

The sample-selection criterion and the possible biases affecting it are analyzed in Sec. II. Section III deals with the VLA observations, radio-data reduction, and discussion of some sources of error. The identification procedure is described in Sec. IV; the data themselves, and further sources of error that affect the identification procedure, are described in Sec. V. In Sec. VI, the data are analyzed and compared to results from previous studies at the same frequency. A full discussion of these results in the frame of cosmological evolution of the radio-source properties, and a comparison with similar data at other observing frequencies, are deferred to future papers.

II. THE DEFINITION OF THE SAMPLE

Five complete subsamples of the B3 Catalogue, separated by equal increments in logarithmic flux density, were defined down to the Catalogue limit of 0.1 Jy. The selection criterion adopted consists in fixing the sample's declination limits in such a way as to yield a roughly equal number of sources in each flux-density interval.

In addition, we restricted the right ascension range to exclude sky areas at low galactic latitude, because obscuration makes these unsuitable for optical identifications, and confusion makes them unsuitable for VLA snapshot-mode observations. Thus the samples were selected only from the R.A. intervals 23^h00^m-03^h00^m and 07^h00^m-15^h00^m. Table I shows the sample definitions, and the number of sources in each sample. All the sky-area limits are at 1950.0 epoch, except the declination limits for sample 4, which correspond to the whole B3 Catalogue, and are referred to 1978.0 epoch.

Also, small regions of incompleteness are present in each sample; see Ficarra et al. (1985) for details on these. The percentage of sky area affected is negligible, since the main incompleteness areas in B3 are entirely within the limits of the excluded R.A. intervals.

TABLE I. Definition of the B3 samples.

Sample #	Declination range	Flux-density range	Number of sources
0	+ 39°38′ to + 40°00′	$0.1 \le S < 0.2$	196
1	+ 38°50' to + 40°00'	$0.2 \le S < 0.4$	268
2	$+ 38^{\circ}00' \text{ to } + 40^{\circ}48'$	$0.4 \le S < 0.8$	257
3	$+38^{\circ}00'$ to $+44^{\circ}30'$	$0.8 \le S < 1.6$	217
4	$+37^{\circ}15'$ to $+47^{\circ}37'$	1.6≤S	165

We note that the number of sources in sample 0 and sample 4 is somewhat smaller; for sample 4, the number is limited to the extension of the whole B3 Catalogue. For sample 0, the low number is due to the fact that the samples were originally defined by the provisional B3 list, and to ensure completeness, even very uncertain sources were included; most of these were later deleted from the final Catalogue. This final trimming significantly affected only the faintest flux-density interval. In fact, observing these uncertain sources helped to define a completeness limit for the B3 Catalogue itself, as discussed in the original paper.

The samples now include all the B3 Catalogue sources meeting the above selection criteria, with no further selection. Specifically, the Catalogue includes a number of sources marked with a four-digit number (see the original paper) indicating confusion, higher noise, and, in general, possible problems; these sources were all included. Consequently, the five samples should be a fair statistical sample of the extragalactic source population at large as present in the B3 Catalogue.

It is perhaps worthwhile to point out that, owing to the Bologna telescope interferometric response (a HPFW of $3' \times 5'$ with a rather peculiar UV plane coverage), there are substantial selection effects against diffuse sources with typical size exceeding about 2 arcmin, as discussed in the B3 paper. Such diffuse sources appear, in retrospect, to be very rare, and statistics such as the median angular size are most likely unbiased by this selection effect. However, they must be carefully evaluated to obtain any meaningful estimate of statistics related to the "tail" of the size distribution toward large angular sizes. This statement, of course, applies practically to any deep low-frequency catalog of radio sources, and most notably to the 5C, Molonglo (Robertson 1977), and Texas (Douglas $et\ al.\ 1980$) catalogs.

III. THE VLA OBSERVATIONS

Ideally, one would need to observe each source at two frequencies at least, to obtain full spectral and structural information. Also, mapping only at the highest VLA angular resolution would not be adequate, because these maps would be insensitive to low-brightness features. Furthermore, the VLA is capable of producing maps with a very high dynamic range and with full polarization information, and of course it would be extremely interesting to exploit both these capabilities, to gain information about the physics driving the radio sources.

To extend such careful mapping to a sample of over one thousand sources would require a very large amount of observing time; the program was thus limited to short integration time, "snapshot" maps at a single frequency, and two array configurations, A and C. The frequency selected was 1465 MHz, with a bandwidth of 50 MHz; this was the lowest frequency available at the VLA when the observations were planned (1980) but still different enough from the B3 frequency that useful spectral-index information could be obtained.

Integration time was generally 3 min per map, regardless of the 408 MHz flux density. The expected map noise was 0.3 mJy/beam, while the faintest B3 sources, for a spectral index of $\alpha = -1.2$ and an angular area size of four beams (at C configuration), would have a brightness of about 6 mJy/beam. These would be unusual parameters for a radio source, as we show later. In some cases, however, sources proved to be fainter than this limit, and others were confused

by sources outside the initial map area. To deal with these cases, about one hundred sources were reobserved at lower resolution with the VLA in its D configuration.

Most sources were observed close to meridian transit, and thus also close to zenith. The resulting beam shapes were therefore very similar for all maps, with minimal ellipticity and a HPFW of 1.4, 14, and 42 arcsec, respectively, for A, C, and D configurations. The flux-density scales of all observing sessions were normalized to that of Baars *et al.* (1977) by observing 3C 286, whose flux density on this scale is 14.51 Jy at 1465 MHz.

All observing was done between November 1981 and March 1983; the present paper deals with the lower-resolution C and D configuration total-intensity maps only, which are fully adequate for the purpose of optical identifications on the POSS prints. A detailed radio-structure classification must await the reduction of the A configuration and polarization data.

Data reduction was first performed in a standardized way, using a standard CLEAN algorithm (Clark 1980) and a map size of 256×256 pixels, giving a field of about 20×20 arcmin. For most sources, this procedure gave a good-quality map, with a rms noise usually ~ 1 mJy per beam. Very faint and/or diffuse sources, or heavily confused fields, were remapped and deconvolved using the ungridded-subtraction CLEAN algorithm (Schwab 1984) that is implemented in the AIPS task Mx. This algorithm significantly reduces the rms fluctuations due to sidelobes of confusing sources in VLA snapshot maps.

In addition, about one hundred fields were reobserved in D configuration; this gave useful results not only in the cases of very diffuse sources, but also for very crowded and confused fields. Source parameters (position, peak, and integrated flux density) were measured by hand on the maps, which generally had a scale of about 2 arcsec/mm. Integrated flux densities for extended sources and components were obtained by multiplying the peak flux density by the half-power area, normalized to that of a point source.

Errors in positions, although larger than those achievable with a digitized measurement, were smaller than the errors in optical positions, as we will show later. Errors in flux density introduced by the manual measurement were also smaller than those intrinsic in the observations. A detailed error analysis will be given in Sec. V.

IV. THE IDENTIFICATION PROCEDURE

The nominal radio positions were at first located on the PSS prints with an accuracy of about 10 arcsec, and a 10× enlargement of both E and O prints was made. The optical position of the three optical objects closest to the radio position, and of three reference stars (14–17 mag) a few minutes of arc away, were measured with the Bologna x-y plate measuring machine, with reference to FK4 stars and with an rms accuracy better than 1 arcsec. Transparent overlays were produced at the scale of the print enlargements (about 6 arcsec/mm) on which the measured optical objects were marked, together with the original B3 position and the position(s) of the radio component(s) measured at VLA. By means of these overlays, all optical candidates within a given searching area were selected, and their optical position remeasured on the PSS prints.

The final optical positions were measured using a linear interpolation from ten FK4 reference stars conveniently located around each object. Figures 1(a) and 1(b) show the

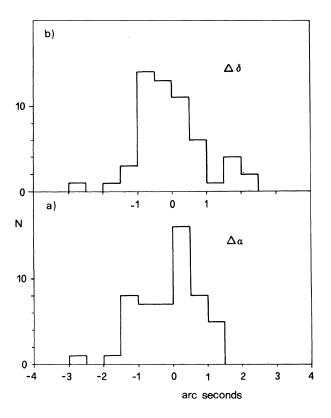


FIG. 1. Histograms of the differences in R.A. ($\Delta \alpha$) and in Dec. ($\Delta \delta$) for the optical objects (identifications and secondary reference stars) that have been measured on more than one plate.

histogram of the differences in positions for objects close to PSS print boundaries, which can be measured on two or more plates.

The rms errors on a single measurement, inferred from Fig. 1, are 0.61 arcsec in R.A. and 0.68 arcsec in Dec. These are probably overestimated, since objects close to plate borders normally are not measurable in ideal conditions (i.e., choosing the ten FK4 stars to be evenly distributed around the object). We note that a *local*, *linear* fit for each object was found preferable to a higher-order, full-print solution, which gave inferior results even when many reference stars were measured. This is certainly due to relatively large print distortion; the problem is also present on plates, and in this case it must be caused by the optics of the 48" Schmidt telescope (see discussion in Benn *et al.* 1988). The search for optical identification has been done differently according to the radio-source morphological classification and largest angular size (LAS).

a) LAS < 60 arcsec (916 Sources)

For single-peak sources a single circular area of radius 10 arcsec was inspected; for multiple-peak sources (double and triple sources) two 10 arcsec radius areas were inspected, centered at the unweighted average position (midpoint) and at the brightness-weighted average position (radio centroid); in addition, an area of 4 arcsec radius was inspected, centered at each radio component.

b) LAS≥60 arcsec (126 Sources)

Only 15 such sources are single peaked, the remainder being double, triple, or more complex. The basic searching method was the same as before, but the radius of the searching area for the centroid and midpoint positions was taken to be 20% of the LAS. Sometimes, an even larger radio—optical displacement was accepted, when a distorted radio image and a very bright optical candidate suggested a very probable identification (see below).

If more than one optical counterpart was found for a radio source, preference was given to midpoint or centroid positions, and to bright objects; however, all objects found are reported in the Notes to Table II (see Sec. V). At this stage, emphasis was placed on completeness of possible candidates rather than on reliability of identifications.

Magnitudes of starlike objects were obtained by reference to star images in Selected Area 57 (see Grueff *et al.* 1984); they were measured by eyeball estimate on the enlargements, and are therefore not very accurate, although previous experience indicated that the probable error is about 0.5 mag.

For galaxies, the image size has been measured, and from it the redshift has been inferred, following an established procedure for radio galaxies (Sandage 1972; Grueff and Vigotti 1977). The method has been recalibrated using spectroscopic redshifts available for 33 radio galaxies in our sample. Some of these are available in the literature, and many were measured by Kron (1986) as an optical followup of this program. Figure 2 shows the correlation between such spectroscopic redshifts and our estimate.

V. THE RADIO AND OPTICAL DATA

Table II lists all the radio and optical data, as follows:

Column 1. The IAU name. This was not given in the B3
Catalogue, and was obtained from the B3 position (hours, minutes, degrees, and tenths of degrees) adding a letter (A,

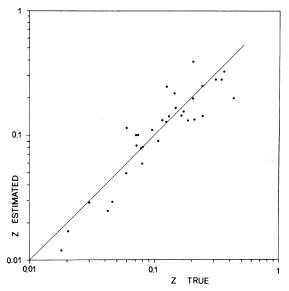


FIG. 2. Correlation between spectroscopic redshifts (z_{true}) and redshifts estimated by measuring image size on the Palomar Sky Survey prints, for all galaxies in the B3 sample with spectroscopic redshift. The solid line is not a fit, but it is $z_{\text{true}} = z_{\text{estimated}}$.

B, etc.) in order of R.A., in case of ambiguity. Note that this designation does not always match the new VLA position, although this happens rarely (see, for example, 0158+394). In the case of physically connected multiple sources, a single name is given if they correspond to a single source in the B3 Catalogue; however, some sources listed separately in B3 happen to be parts of the same source (see, for example, the sources 0050+401, 0050+403, and 0050+402B, which are physically connected) and in this case they retain their individual B3 names. If the B3 name is underlined, this is a reference to a note.

Column 2. The 4C name; if the source is also in the 3CR Catalogue, the 3CR name is given instead. 3CR names are recognizable by the format (integer number, or at most one decimal digit), while 4C names are in the DD.NN format. Identification with a 4C source is sometimes ambiguous, as discussed in the B3 Catalogue.

Column 3. The digit indicates the source parent subsample, as per Table I. This number indicates inclusion in the sample as originally selected; for example, the physical double 0218 + 399(A + B) is listed as

$$0218 + 399A$$
 1, $0218 + 399B$ 2,

since the respective B3 flux densities are 0.36 and 0.49 Jy, and the components were originally selected as parts of two different samples. The VLA map showed them to be part of the same source; consequently the total 408 MHz flux density is now listed as 0.85 Jy (column 13) and in any subsequent analysis the source will be considered part of sample 3, $0.8 \le S < 1.6$ Jy. Another example is given by the following double source 0218 + 402(A + B); only one component (A) was originally included in sample 2 (although both components are separately listed in B3) since component B did not meet the selection criteria as given in Sec. II.

Columns 4-9. The source (or component) position, at epoch 1950.0.

Columns 10 and 11. The source (or component) flux density at 1.46 GHz; units are milliJanskys. A "+" preceding the flux density indicates that the source (component) was resolved, and an integrated flux density is given.

Column 12. A simple morphological classification of the radio structure, as follows: U = unresolved, the synthesized beam is not appreciably broadened; R = resolved, only one emission peak is present, but the antenna beam is enlarged; D = double source, two emission peaks are present and they appear to be physically related; T = triple source, three peaks present and possibly related.

This coarse classification was adequate for the purpose of optical identifications on the PSS; a much more detailed structural classification will be possible when the A configuration observations are analyzed.

The source largest angular size (LAS), measured in arcseconds, follows the classification; U implies an (average) upper limit of 5 arcsec; R sources were given a size by measuring the largest HPFW, and deconvolving it quadratically with the antenna beam; for D and T sources the separation between the (outermost) components is given.

Column 13. The total 408 MHz flux density; generally it is taken from B3, but for extended, strong sources it has been remeasured integrating the B3 map on the structure revealed by the VLA data. Units are Janskys.

Column 14. The spectral index, computed between 1465

and 408 MHz; for multiple sources, the 1465 MHz flux densities have been added.

Column 15. The proposed optical identification: G = galaxy, B = starlike, blue object, N = starlike object of neutral color. A question mark indicates an uncertain optical classification, it does *not* necessarily indicate an uncertain identification. An asterisk preceding the optical classification indicates that the identification was accepted even if it does not meet a uniform criterion of positional agreement (see below).

Column 16. For N and B objects, the red magnitude is given; for galaxies, the redshift is given, estimated as explained in Sec. IV. However, if a spectroscopic redshift is available in the literature, it is given in this column, preceded by an asterisk. In this case, the reference given (see below) is to the redshift measurement.

Columns 17 and 18. The seconds of R.A. and arcseconds of Dec. of the *optical* object; hours and minutes in R.A., and degrees and arcminutes in Dec. are generally given by the radio position. This allows the recovery of full optical positional information.

Columns 19 and 20. Radio-optical coordinates differences, in arcseconds.

Column 21. A single digit indicates, for multiple sources, the radio position adopted (see Sec. IV) as follows: 1 = first component; 2 = second component; 3 = third component; 4 = unweighted average position (midpoint); 5 = weighted average position (radio centroid).

Column 22. A reference code number, underlined for better readability (see Table II(b)) if the source has been identified previously. For sources with a measured redshift, only the reference for the redshift is given; for 3CR sources, the reader is referred also to Spinrad et al. (1985).

Table II lists all the B3 sources meeting the selection criteria discussed in Sec. II; however, some were not observed; for various random reasons, some were not detected. For these, the columns from 4 to 12 are left blank, and are discussed in a note to the table. For double and triple sources, the columns 12–21 are filled only for the first component; the relevant information obviously refers to the source as a whole.

In Fig. 3, all the source maps are shown that were considered not to be adequately described by the data in Table II; the position of the proposed identification (if any) is marked with a cross.

Errors in optical positions have been already discussed in Sec. IV; radio-position uncertainties can now be conveniently estimated by reference to optical positions of safe, unambiguous identifications. For this purpose, we select the radio sources in Table II meeting all the following three criteria: (i) unresolved (U); (ii) flat radio spectra, namely $\alpha \geqslant -0.5$; (iii) identified with an object brighter than 19 mag. The last requirement minimizes the number of spurious identifications, while the first two help to eliminate possible cases of intrinsic radio-optical displacements.

There are 24 such sources in Table II, while the expected random-coincidence number is about 0.2. The results of the radio-optical comparison for these objects are given in Table III.

One can see that the R-O rms displacement is 0.68 in R.A. and 0.82 in Dec., with negligible systematic shift in R.A. and a small, probably not statistically significant shift in Dec.

Considering the errors given in Sec. IV for the optical, these R-O differences indicate a radio-position rms error of.

about 0.30–0.45 arcsec, close to what is expected from VLA data at this frequency and configuration, and still negligible compared to the optical errors.

Table III also shows some interesting results on radiooptical positional differences for *steep*-spectrum unresolved sources (same selection as above, but now $\alpha < -0.50$); their rms dispersion is very much increased (second row).

However, the expected number of spurious identifications in the sample is now of the order of 3. The last line in Table III shows the results obtained upon deletion of the four objects with the largest radio-optical displacements; one can see that the R-O rms displacement is still significantly larger for steep spectra. Thus, it appears that sizable *intrinsic* radio-optical displacements are possible for steep-spectrum sources, even if they look *unresolved* in a 14 arcsec beam map.

A discussion of errors in 408 MHz flux densities is given in Ficarra *et al.* (1985); the errors in the 1.46 GHz flux densities can be estimated by comparison with published data for 3CR sources.

There are 22 3CR sources in Table II; Table IV shows the results of a comparison with flux densities taken from Kellermann *et al.* (1969, hereafter referred to as KPW). The sample has been split according to 1.5 GHz flux density (median 1.8 Jy) and according to angular size (median 17 arcsec). The ratio R = KPW/VLA is given, using uncorrected KPW data.

After a 4% correction due to a small difference in observing frequency, we are left with a 13% difference, possibly due to resolution losses in the VLA data, confusion in the KPW data, or both, although the ratio appears to be independent of flux density, and only vaguely correlated with source angular size.

For example, the largest angular size is that of 3C 46, which gives R=0.97; the average for the four unresolved 3C sources (3C 186, 216, 299, and 470) is R=1.13. Moreover, the rms noise and confusion error quoted by KPW is 0.1 Jy, of the order of less than 7% in our 3CR sample. Thus, most of the observed *dispersion* should be due to the present measurements. An attempt to check the reliability of the manual measuring procedure has been made, by remeasuring with a proper fitting algorithm a number of representative maps. The measuring error has been found to be negligible for unresolved or barely resolved (<15 arcsec) source components. Consequently, the manual measuring procedure cannot be the source of the large observed dispersion. None of the 3CR sources in our sample is known to be variable.

A rather large sky area has been searched for optical identification, as described in Sec. IV; however, only identifications thought to be very reliable are retained in Table II. Specifically, for LAS < 60 arcsec the radius of the centroid and midpoint areas has been restricted to 6 arcsec; for $60 \le \text{LAS} < 120$, objects fainter than m=18 ($z \approx 0.25$ for galaxies) have been searched in areas with radius = LAS/10 (centroid and midpoint positions), while objects brighter than these limits have been accepted up to a radius of LAS/5. Identifications with a component were always restricted to a 4 arcsec radius; in all cases, additional objects out to larger radio—optical displacements are listed in the notes to Table II, although very few of them are likely to be associated with the radio sources.

A few identifications, for which the above conditions on positional agreement are not met, but which are considered to be very probable on other grounds, are also listed in Table

TABLE II. The radio and optical data.

1	2	-3-	4		56	7	'8	9	10-	11-	-12	13	14-	15	16	17	18	19	202	122-
0000+394		0			7.8		31 28			37 37	D190 D	. 19	74	N	17.5	8.25	6.3	.0	-13.8 4	· ·
0000+399		0	00	00	57.7	39	56	44	+	46	R 13	.15	93							
0001+395		0	00	01	41.4	39	33	10	+	30	R 12	.13	-1.15							
0001+398		1			43.7				÷ +		D 36	.22	83	G?	0.198	45.28	30.5	1	8 5	
0003+380		2	00	03	22.3	38	03	33	3	47	U	. 49	27	N	16.9	22.35	33.0	6	.0	17
0003+387	38.01	3	00	03	45.8	38	43	45	4	06	U	1.36	95							
0003+397		0										.11								
0004+380A	38.02	2	00	04	1.4	38	02	25	2	64	U	.79	86							
0005+383B		2	00	05	47.4	38	20	30	+ 2	70	R 89	.53	53	G	0.080	47.47	28.6	8	1.4	
0006+397		3	00	06	28.5	39	45	05	41	95	U	1.15	66	В	18.7	28.54	5.2	5	2	50
0008+392		1			2.4 0.4		17 17			52 23	D 31 D	. 20	77							
0010+392		2	00	10	7.1	39	16	15	13	37	U	. 44	91							
0010+395		0			34.8 37.0		31 31		+ :		D 25 D	.14	-1.52							
0010+402		3			14.3 18.6				+ 15		D 57 D	1.00	94	G	0.328	16.48	7.6	3	6 4	
0010+405	40.01	4	00	10	54.2	40	34	56	+108	3 7	R 15	3.26	86	G	0.165	54.29	56.2	-1.0	2	
0013+387		2	00	13	22.8	38	43	47	21	13	U	.74	98	В	18.6	22.79	47.0	.i	.0	
0013+393		1	00	13	11.2	39	20	27	10)1	U	.27	77							
0014+395		1	00	14	16.4	39	31	23	5	3	U	.21	-1.08							
0015+399					3.9 3.5				+ 4		D 73 D	.14	65							
0017+395		0	00	17	10.0	39	35	15	+ 4	6	R 10	. 15	93							
0017+432					26.4 32.3				+ 16 + 8		D 65 D	. 80	92							
0018+393			00	18	41.4 44.1 46.7	39	22	00	+ 3	5		.20	96							
0019+391		1	00	19	21.0	39	09	08	8	1	U	, 29	-1.00	B?	21.0	20.64	9.3	4.2	-1.3	

TABLE II. (continued)

1	?	. 3 -	/	6	6	7		0	1/)-11.			= 11. (cont		15	16	17	18	10-	2021	22-
11			_							,-11			10	14	- 13		11	10		20 21	
0019+431	43.01	4			7.3 9.8					202 202		28	2.22	-1.34	В	18.5	8.17	47.1	4.1	1 4	8
0020+437	43.02	3			49.7 53.0					233 99		44	1.22	-1.02							
0021+383		2	00	21	34.1	38	18	33		197	U		.59	86							
0021+395		0	00	21	38.7	39	32	29	+	54	R	6	.16	85							
0022+390		3	00	22	46.7	39	02	59		966	U		1.10	10	В	18.4	46.64	58.9	.7	.1	17
0022+394		0	00	22	24.4	39	29	18		45	U		. 15	94							
0022+399		1	00	22	3.4	39	59	35		95	U		. 20	58	В	18.5	3.51	36.4	-1.3	-1.4	
0022+424		3	00	22	54.9	42	27	15		370	U		.80	60	N	19.5	55.10	16.0	-2.2	-1.0	
0023+382		2	00	23	30.0	38	14	55		247	U		.65	76	N	19.0	29.83	58.0	2.0	-3.0	
0025+394		0			52.8 54.2		28 27	15 58	+	24 17		23	.12	84	N	20.0	53.55	5.0	6	1.5 4	
0026+397		0			50.6 50.7		46 47			14 12	D D	64	.16	-1.42	G	0.198	50.89	14.0	-2.2	-3.0 2	
0027+380		2			41.9 42.3		00 00			87 60	D D	14	.58	-1.08	В	19.3	42.10	47.2	.0	.8 4	
0027+395		2	00	27	3.4	39	32	04	+	170	R	10	.41	69	В	18.4	3.23	3.4	2.0	.6	ģ
0028+390		2	00	28	56.9	39	02	31		138	U		. 47	96							
0028+394		2			29.3 31.5					77 82		25	. 45	82							
0028+409	40.02	3	00	28	7.6	40	54	20		218	U		1.26	-1.38							
0028+450	45.02	4			6.7 10.0		05 05			90 290		34	1.62	-1.14	N	17.4	9.72	14.6	3.0	6 2	
0029+394		3	00	29	54.0	39	25	42	+	300	R :	11	.97	92							
0029+398		i	00	29	34.9	39	50	38		125	U		. 29	66							
0030+390		1	00	30	13.6	39	03	43		32	U		. 20	-1.43							
0030+394		0											.11								
0030+396	•	0											.10								
0031+391	13	4			32.4 33.7		07 07			199 479		26	6.41	-1.05							41

TABLE II. (continued)

										T	ABLE	II. (con	tinued)							
1	2	3	4-	-5	6	7	8	9	10-1	11	2	13	14-	1!	516	17	18	19-	20	2122
0031+393		1	00 3	31 30	. 0	39	19 4	2	5	L U		. 26	-1.28							
0031+395		0										.10								
0031+396		1										. 34								
0031+398		0										.11								
0032+390		1	00 3	32 29	. 2	39	02 3	5	+ 88	3 R	31	. 35	-1.08							
0032+394		1	00 3	32 43	.8	39	24 1	5	112	2 U		. 35	89							
0032+423	42.01	3	00 3	2 23	. 2	42	21 4	7	278	3 U		.92	94	В	* 1.588	23.26	49.6	7	-2.6	12
0033+397				3 19 3 19					+ 47		12	. 29	-1.05							
0033+425	42.02			3 55. 3 55.			35 4 36 0		+ 98 183	B D	25	1.14	-1.10							
0034+387	:	2	00 3	4 37.	1	38	42 4	6	151	U		.54	-1.00							
0034+393		1	00 3	4 54.	2	39	21 4	2	222	U		. 20	.08	В	* 1.937	54.24	42.4	5	4	3
0034+444	44.02	4	00 3	4 9.	6	44	26 5	1	607	U		2.25	-1.03							
0035+385A 0035+385B				5 1. 5 8.					+ 343 + 334		82	2.55	-1.04							
0036+398	(0	00 3	6 49.	8	39	52 0	7	+ 38	R	9	.13	96							
0037+394	(0	00 3	7 36.	3	39	28 2	3	55	U		.12	61							
0037+396	()	00 3	7 34.	0	39	38 3	7	45	U		.14	89							
0038+399	:	1	00 3	8 41.	2	39 !	56 0	4 -	+ 90	R	65	.22	70	G	0.247	40.64	54.4	6.4	9.6	
0039+373	1	1 (00 3	9 24.	3	37 :	23 10)	844	U		2.00	68							
0039+391	39.02 3	3 (00 3	9 11.	6	39 (08 5	4	276	U		1.02	-1.02							
0039+398	39.03 4	(00 3	9 33.	7 :	39 !	53 23	3	701	U		1.98	81							
0039+412	3	3 (00 3	9 34.	5	41 :	13 0:	l	350	U		.91	75							
0040+470	46.01 4			37. 37.	-				184 298		14	1.83	-1.05							
0041+382A	2	. (0 4:	5.	9 ;	38 1	13 45	j	206	U		.66	91							
0041+393	1		00 4:	14.	5 3	39 2	21 31	. +	118	R	10	.33	81							
0041+405	2	: 0	0 4:	10.	0 4	40 3	30 10)	148	U		. 42	82							

TABLE II. (continued)

1	23		4	56-	7	?8	9	10-	11-	12	13	14	15	16	17	18	19-	202	122
0041+425	42.03 3	0	0 41	53.9	42	31	37	4	31	U	1.26	84							
0042+381A	2	. 0	0 42	2 24.7	38	06	53	2	71	U	. 65	69							
0042+381B	2			32.1						T 98	.58	96							
				2 33.5 2 35.4		08 09		+	14 84										
0042+386	2	0	0 42	2 1.4	38	40	36	1	41	U	.57	-1.10							
0043+398	0	0	0 43	10.0	39	50	35	+	13	D 40	.10	-1.08	G	0.328	11.50	17.1	-4.6	2.4 4	27
		0	0 43	12.2	39	50	04	+	12	D									
0045+393	1	0	0 45	17.1	39	21	05	1	92	U	.22	11							
0045+395	0	0	0 45	10.4	39	32	37	+	94	R 11	.18	51	N	16.0	10.28	36.4	1.4	.6	4
0045+396	1	0	0 46	.0	39	37	20	+ 1	07	R 28	. 31	83	G	0.282	.14	22.7	-1.6	-2.7	27
0045+400	40.03 4	0	0 45	27.6	40	05	32	+ 6	51	R 42	1.73	77	G	0.247	27.59	29.7	.1	2.3	4
0045+404	2	0	0 45	58.6	40	28	43	+ 1	14	R 10	. 56	-1.25							
0046+439	3			3.8				+ 1		D 18	.96	-1.19							
0049+379	37.03 4	0() 49	31.5	37	59	11	7	17	U	2.55	-1.00							
0049+395	0			19.4		34				D212	. 15	-1.66							
		0() 49	35.8	39	35	53		7	D									
0050+401				45.3		11		2	23	T446	1.22	98	G	0.153	45.11	10.0	-2.4	-2.0 3	
0050+403				45.6		18			11										
0050+402B	2	00) 50	44.9	40	15	08		11										
0051+397	0	00	51	13.6	39	42	44	•	49	U	. 15	88							
0051+404	40.04 4	00	51	40.5	40	25	56	+ 76	31	R 12	2.44	91							
0052+380	38.04 3	00	52	10.1	38	05	35	+ 35	51	R 28	1.25	-1.00							
0052+392	2			53.5 54.0				+ 6		D 22 D	. 41	99							
0052+395	1	00	52	53.8	39	32	02		79	U	. 28	99							
0053+394	2			1.7 3.2		28 28			'5 21	D 30 D	. 60	88	G	0.198	2.71	43.0	-3.0	4.0 4	
0053+439	43.03 3	00	53	57.2	43	57	11	+ 35	0	R 18	1.35	-1.06							
0054+396	1	00	54	42.1	39	41	05	8	1	U	. 28	97							

TABLE II. (continued)

1	2	-3-	A	5	6	7	8	9-	-10)-11-	-12-	13	14	15	16	17	18	19	202	122
0056+389					51.2						R 1		-1.15							
0057+395		0	00	57	17.5	39	33	26	+	58	R	7 .19	93							
0057+397					3.2			37		7		.11	-2.15							
0058+403					4.8						R		90							
0059+397		U			38.0 38.6					14	D 2 D	7 .11	85							
0059+461	46.02	4			53.1 55.8		08 08			590 583	D 3	2 3.92	95							
0100+388		2	01	00	55.1	38	48	35		169	U	.57	95							
0100+397		0	01	00	9.5	39	43	56	+	35	R 1	7 .11	90							
0103+422	42.04	4	01	03	51.5	42	13	53	+	580	R	8 2.37	-1.10							
0105+441		3	01	05	17.8	44	09	01		348	U	1.15	94							
0106+380		2	01	06	36.5	38	00	46		174	U	. 45	74	В	15.9	36.49	47.8	.1	-1.8	
0106+397		2	01	06	35.1	39	44	04		151	U	. 46	87							
0107+397		2	01	07	.8	39	42	30		165	U	.61	-1.03							
0107+398		0	01	07	53.9	39	51	25	+	35	R 1	5 .11	90	В	18.6	54.05	22.2	-1.7	2.8	
0107+399		1	01	07	13.2	39	55	16		57	U	. 26	-1.19							
0108+396		1			10.5 12.3					45 60	D 2 D	0 .32	87							
0108+402		2	01	08	14.1	40	17	47	+	169	R 1	7 .66	-1.07							
0109+390		i			44.6 46.5		02 02			29 23	D 2 D	2 .28	-1.32							
0109+415		3	01	09	16.5	41	31	05	+ !	590	R 4	0 1.14	52	G	0.110	16.36	3.8	1.6	1.2	26
0109+416B	41.01	4			20.3 26.8					261 437	D 7	6 1.96	81	G?	0.180	24.70	28.9	-3.7	-13.7 5	
0110+386		2			6.3 8.0					78 69	D 2:	2 .49	94							
0110+395		1	01	10	46.6	39	34	40		84	U	.30	-1.00							
0110+398		0	01	10	37.6	39	54	35		39	U	.13	94							
0110+401		3	01	10	26.5	40	10	19		474	U	1.08	65	В	20.0	26.48	19.6	.2	6	50

TABLE II. (continued)

1	23		45	56	7	8	9	10-11-	12-	13	14	15	516	17	18	19-	202122
0112+400	2	0	1 12	23.5	40	04 2	20	125	U	.54	-1.15						
0112+432	43.04 3	0	1 12	3.5	43	16 2	25	+ 282	R	B 1.09	-1.06						
0113+400	40.05 4			32.3		01 2		285 330	D 20	1.85	86						
0114+399	2			34.7		57 (D 22	2 .44	-1.18						
0115+394	1			36.6		57 (32 88		. 29	93						
0115+453A	36 4	0	1 15	3.5	45	20 3	35	+1473	R 12	2 4.27	83						
0115+469	46.03 4	0	l 15	22.9 27.0 25.9	46		21	+ 110 + 150 21	T	1. 77	-1.44						
0116+397	1	0	1 16	25.2	39	43 ()6	47	U	.21	-1.17						
0116+438	3			26.4 28.7				+ 236 + 173		3 1.05	-,74	G	0.220	27.57	57.3	-2.1	-1.0 5
0119+395	1	0	1 19	34.6	39	32 4	6	+ 54	U	.21	-1.06						
0119+397	2	0:	19	40.9	39	45 2	:6	+ 145	R 8	. 48	94						
0120+380	2			59.5		02 5		+ 44 68		.54	-1.23						
0120+405	40.06 4	0:	20	32.2	40	31 2	:0	520	U	1.68	92						
0121+389	2	0	21	15.9	38	57 4	8	+ 153	R 15	. 45	85						
0122+395	0			33.9 35.4		30 1 30 1		+ 43 16		.16	78						
0123+385	2			17.5 17.9		35 0 35 1		73 66	D 13	. 49	99						
0123+396	1	0:	23	31.9	39	38 3	9	+ 143	R 24	.33	66	G	0.132	31.85	38.1	.6	.9
0123+402	3	01	. 23	4.9	40	13 0	1	229	U	.81	99						
0124+387	2	01	. 24	50.8	38	44 3	9	129	U	. 43	94						
0126+392A	1	01	26	33.8	39	14 2	7	71	U	.32	-1.18						
0127+395	0	01	27	47.6	39	34 4	8	39	U	.10	74						
0127+399	1			54.1 54.5		54 3 54 4		49 38	D 11	. 34	-1.07						
0128+389	1									.20							

TABLE II. (continued)

										IABL	E II. (con	tinuea)							
1	2	3-	4	5	6	7	8-	-9-	-10-11	12	13	14-	15	516	17	18	19	2021	22
0128+394		3	01	28	34.7	39	27 3	32	293	U	.92	90							
0130+381	38.05	3	01	30	48.6	38	07 3	38	384	U	1.07	80	G	0.392	48.66	37.4	7	.6	5
0130+384		2			4.3 6.2		25 ± 25 ± 25		81 65	D 37	.53	-1.01	В	18.7	5.06	38.1	2.2	.9 4	
0130+398		1	01	30	17.3	39	47 5	59	+ 112	R 11	.28	72							
0131+390	:	2			48.6 51.1				+ 91 + 66		.47	86	G	0.282	48.91	18.7	8.6	7.9 5	
0132+376A					29.4				+ 635		4.32	-1.05	G	* 0.437	34.08	47.0	3.7	3.8 5	37
0132+376B	•	4	01	32	40.8	37	39 2	24	+ 495	D									
0132+392	:				35.6 42.2		12 4 13 0		89 36	D 77 D	. 35	81							
0133+381	:				42.8 44.1		10 4 10 5		30 + 85	D 18 D	. 47	-1.10							
0134+386	38.06	3			52.7 55.2				+ 114 + 239		1.17	94	G	0.198	53.93	10.0	.2	3.0 4	
0134+389	;	1	01	34	20.1	38	56 2	20	+ 93	R 8	.31	94							
0136+396	39.04		01	36	25.1 33.5 43.4	39	41 5	1	+ 400 37 + 600	T	3.89	-1.04	G	* 0.211	33.54	51.9	5	9 2	34
0137+385	2				50.0 51.0				+ 72 + 51		.42	96							
0137+401	3	3	01	37	36.3	40	09 0	4	277	U	. 82	85	В	18.5	36.18	3.9	1.4	.1	50
0138+394	2	2	01	38	31.5	39	25 3	0	+ 108	R 12	. 43	-1.08							
0139+389A	2	2	01	39	13.0	38	57 3	3	182	U	. 43	67	В	20.8	13.02	34.4	2	-1.4	
0140+387	38.07 4	ì.	01	40	36.0	38	47 0	6	402	U	1.81	-1.18							
0141+398	1	l	01	41	33.8	39	48 1	1	78	U	. 29	-1.03	N	14.5	33.59	8.2	2.4	2.8	
0143+393	1	l	01	43	2.4	39	18 1	5	85	U	. 38	-1.17							
0143+446B	44.04 4				44.7 46.1				+ 157 + 326		1.71	99	N	14.0	45.30	16.9	1.1	8.6 4	
0144+391	1	Ĺ	01	44	24.5	39	09 5	2	91	U	. 25	79							
0144+399	1		01	44	17.9	39	58 5	2	+ 55	R 15	.21	-1.05							
0144+430	43.05 3	}	01	44	55.8	43	04 4	7	+ 255	R 19	.92	-1.01	В	18.6	55.86	48.1	7	-1.1	

TABLE II. (continued)

1	2	-3-	-`-4	5	6		71	B9	1()-11	12	13	14-	1	516	17	18	19-	202:	 122	 }
																··			į.		
0144+432		3	01	44	53.6	43	1	7 19		319	U	.82	74								
0146+394		1			46.9 47.2			5 26 3 14		85 32	D132 D	. 24	56	;							
0147+397		1	01	47	16.1	39	44	46	+	100	R 35	.26	75	G	0.328	16.32	49.9	-2.5	-3.9		
0147+398		0	01	47	36.9	39	52	2 23	+	45	R 46	.12	77	*G	0.124	36.50	27.0	4.6	-4.0		
0147+400		3	01	47	20.1	40	02	38		551	U	1.54	81								
0149+398		2	01	49	8.7	39	49	46	+	258	R 39	.59	65	G	0.080	8.66	47.3	.5	-1.3		
0150+406	40.07				46.6 49.8			19		159 32	D 41 D	.83	-1.15	N	16.0	47.88	6.5	3.6	3.0 4		
0152+382		2			17.5 20.0					97 60	D 40 D	.64	-1.10								
0152+435	54	4			25.3 27.2					987 522	D 49	5.27	98								
0153+417	41.02	4			19.6 17.6					328 243	D 47	2.14	-1.04	N	19.5	18.66	48.6	7	.4 4	8	
0157+393A					7.4 9.9			26 22	+	35 58	D 29	.32	97								
0157+393B	39.05		01	57	47.2 50.9 51.8	39	21	30	+	109 192 80		1.12	85	G	* 0.072	51.82	30.7	2	-1.7 3	34	
0157+405A 0157+405B					3.9 51.7					659 700	D568 D	4.39	92	G	0.066	22.25	34.7	63.0	-11.7 4		
0157+442	44.05	4	01	57	32.7	44	12	46	1	021	U	3.26	91	N	19.0	32.74	44.6	4	1.4	8	
0158+391	:	1	01	58	50.0	39	09	57	+	90	R 37	. 26	83								
0158+394	(0	01	59	.2	39	28	54		95	U	.12	- 18	В	18.4	.20	55.0	.0	-1.0		
0159+390	1				49.9 53.3			26 04		34 28	D 45 D	. 24	-1.06	#G	0.198	50.87	1.0	8.5	14.0 4		
0159+397	1	l	01	59	18.2	39	45	12	+	72	R 20	. 23	91								
0200+393	2	2	02	00	48.6	39	18	19	+ ;	236	R 8	.59	72								
0201+390	1	l	02	01	43.0	39	05	04	+ :	102	R 12	.27	76								
0201+396	1	l	02	01	36.0	39	40	58		56	U	. 28	-1.26								
0201+402	2	2	02	01	36.3	40	15	21	+ :	165	R 8	. 47	82								

TABLE II. (continued)

										I ABI	LE II. (cont	inued)							
1	23-		4!	56	7	8	9-	-10	-11-	-12	13	14	-1!	516	17	18	19-	2021	22
0202+380	2	0	2 0:	2 50.3 2 52.2 2 54.5	38	01	14		117 6 40	T131 T T	. 44	78	G	0.247	52.00	17.0	2.4	-2.5 2	
0205+395	2	0:	2 0	5 4.5	39	30	47	+	160	R 8	.47	84							
0205+398	0	0:	2 0	5 52.9	39	52	50	+	23	R 12	.10	-1.15							
0207+389	1	0:	2 0	7 6.9	38	57	15	+	82	R 11	.22	77	G	* 0.018	7.01	19.0	-1.3	-4.0	9
0207+395	1	0	2 0	7 7.3	39	35	52	+	106	R 8	. 36	96	N	18.0	7.47	51.6	-2.0	. 4	
0207+397	1	0:	2 0	7 52.4	39	47	32		138	U	.39	81	G	0.328	52.44	33.4	5	-1.4	
0207+399	0	0	2 0	7 12.6	39	59	26		41	U	.10	70							
0209+386	2	0:	2 09	9 41.0	38	36	50	+	177	R 17	.64	-1.01							
0209+390	1	0	2 0	9 47.2	39	03	17		54	U	.23	-1.14	В	20.0	47.64	15.1	-5.1	1.9	
0209+394	0	0:	2 0	9 33.8	39	28	15		69	U	.13	50	В	18.6	33.86	16.3	7	-1.3	
0210+396	0	0	2 1	0 30.1	39	40	07	+	39	R 8	.16	-1.11							
0211+393	2			1 7.1 0 57.7					72 112	D111 D	.52	81	G	0.198	1.88	58.3	-5.8	.1 5	
0213+392	1			3 11.1 3 6.9					42 47	D 49 D	.31	98							
0213+398	1	0	2 1	3 18.2	39	51	39	+	42	R 12	.21	-1.26							
0213+407	2	0	2 1	3 46.1	40	47	02		174	U	.51	84	G	0.247	46.36	2.6	-2.9	6	
0213+412	41.03 3	0:	2 13	3 23.8	41	17	58		520	U	1.26	69							
0214+393	2	0:	2 14	4 32.2 4 33.3 4 35.6	39		29		18 138 134		77	77	G	0.117	34.12	35.2	2.0	5.6 5	
0216+388	1	0:	2 10	6 48.6	38	52	00		57	U	.30	-1.30							
0216+393	1	0:	2 10	5 30.4	38	18	51		130	U	.20	34							
0216+403	2	0:	2 16	57.3	40	21	58	+	193	R 8	.57	85							
0216+423	42.06 4			5 58.8 5 3.3					429 191	D 53 D	2.30	-1.03							
0217+395	0	0:	2 1	7 3.1	39	30	56		70	U	.16	65	N	18.5	3.16	56.7	7	7	
0217+417	3			7. 4. 5 7. 6.5		43 43		+	97 32	T 61	. 85	94	В	* 1.430	6.31	56.9	3.6	-5.6 4	Ž

TABLE II. (continued)

1	2	-3-	4	5	6	7	8-	-9-	-10-11	12	13	14	15	16	17	18	19	2021	22-
			02	17	8.9	41	44	10	+ 126	T									
0218+396	39.06	4	02	18	44.9	39	41	18	+ 404	D 87	2.93	-1.07							
			02	18	40.4	39	42	28	+ 342	D									
0218+397		0									. 14								
0218+399A		1	02	18	36.5	39	55	01	+ 101	D120	.85	-1.13							
0218+399B		2	02	18	44.9				+ 100										
0218+402A		2	02	18	58.0	40	15	10	+ 51	D 88	.69	-1.00	N	13.5	56.27	41.6	-8.8	-5.1 4	
0218+402B			02	18	53.0	40	14	03	+ 142	D									
0219+397		2	02	19	33.3	39	47	02	111	U	. 44	-1.08							
0219+421		3	02	19	24.1	42	07	17	+1100	R270	1.18	05	G	0.002	24.66	18.6	-6.2	-1.6	14
0219+428A	66A	4	02	19	30.1	42	48	32	1670	U	5.05	87 *	В	16.0	30.00	30.0	1.1	2.0	
0219+443		3			5.1				+ 112		.89	-1.17	В	17.3	6.20	17.8	5	.2 4	
			02	19	7.2	44	19	39	+ 88	D									
0220+388		2	02	20	4.4	38	49	31	145	U	.54	-1.03							
0220+393A		3	02	20	28.2	39	22	24	+ 391	R 21	1.04	77	G	0.220	28.34	28.1	-1.6	-4.1	
0220+397	65	4	02	20	36.6	39	47	17	+2853	R 17	9.08	91							
0220+427A	66	4	02	20	10.9	42	46	02	+3000	D 90	14.83	63 *(G	* 0.021					22
0219+427D		4	02	20	2.8	42	46	02	+3600	D									
0221+383		2	02	21	8.8	38	18	49	94	D 85	.43	93							
			02	21	15.6	38	18	19	38	D									
0221+393		1	02	21	36.3	39	17	54	22	D164	.21	-1.17							
			02	21	38.2	39	20 3	35	+ 25	D									
0221+396		1	02	21	44.4	39	41	44	+ 48	R 57	.22	-1.19							
0222+397		0									. 14								
0222+403	40.09	4	02	22	36.7	40	18 5	51	+ 530	T 92	2.19	61	;	0.117	37.66	2.4	7	.6 2	
					37.6	40	18 (03	61	T									
			02	22	38.4	40	17 2	21	+ 410	T									
0222+422A		3	02	22	22.6	42	16	10 .	250	U	.81	92							
0224+393		3	02	24	.9	39	18 1	15	374	U	.89	68 E	3	19.5	.97	14.2	8	.8	
0224+396		0	02	24	52.0	39	36 2	28	+ 61	R 10	.18	85							
0225+381		2			23.7				+ 50		.47	-1.07	i	0.050	25.09	49.0	.8	4 5	
			02	25	26.2	38	07 3	39	+ 70	D									

TABLE II. (continued)

										IABL	e II. (con	illucu)							
1	-23	3	4!	56	7	'B	9	10	0-11-	12	13	14-	15	16	17	18	19-	2021	22
0225+389	1			5 54.1 5 53.6					64 26	D131 D	.22	70	В	15.8	52.93	22.5	11.9	-8.7 5	
0225+427	8	3 (2 25	5 44.1	42	47	31		244	U	.86	99							
0226+394	2	0	2 26	38.6 342.1 341.1	39	29	21	+	29 63 54		. 40	-,79	G	0.247	39.16	52.0	11.9	-8.7 5	
0006+306											04	4 00							
0226+396	1		2 20	49.6	39	39	41	+	44	R 12	.21	-1.22							
0226+467 4	6.05 4	0	2 26	5.0	46	46	58	+	747	R 8	2.45	93	N	20.0	5.20	54.0	-2.0	4.0	8
0227+397	1	0	2 27	22.7	39	45	27	+	76	R 20	. 23	87							
0227+398	2	0	2 27	59.7	39	50	15		207	U	.68	93							
0228+392	1	0	2 28	8.8	39	14	05		83	U	. 38	-1.19	N	13.5	1.16	2.0	-4.2	3.0	
0228+393 3	9.08 4			41.3			43 52		382 382	D 13 D	2.62	97							
0228+409A	3	0	2 28	29.6	40	56	39		322	U	.90	81							
0231+385	2	0	2 31	21.6	38	31	47	+	185	R 10	. 47	73							
0231+391	1			43.3 46.9		10 10			33 37	D 49 D	. 25	-1.00							
0231+405A	2	0:	2 31	50.9	40	30	52		219	U	. 43	53							
0232+411B 49 0232+411C				41.6					430 350	D109 D	2.75	99	В?	17.4	45.82	13.5	-1.0	-2.4 5	
0233+390	1			41.4 44.5		59 00			106 11	D 37 D	.34	84							
0236+399	1	02	2 36	58.8	39	59	06		41	U	. 25	-1.42							
0236+438	3			52.4 52.9		48 49			102 102		1.05	-1.28							
0237+389	1			45.2 39.2					30 37		. 24	-1.00							
0237+396	0	02	37	46.1	39	37	48		26	U	.12	-1.20							
0237+435	3			14.2 14.2			15 57		276 110	D 18	1.25	92							
0239+395	2	02	39	47.3 47.8 48.3	39	31	20	+	123 60 30		.64	86	G	0.180	47.35	39.6	2.7	1.0 5	

TABLE II. (continued)

									LABL	E II. (con	tinuea)							
1	23	} <i>i</i>	45	56	7	78	39	10-11	12	13	14	15	16	17	18	19-	2021	22
0239+397	1	02	2 39	44.6	39	43	02	124	V	.37	86	В	20.0	44.63	.7	3	1.3	
0240+404	2			22.0			12	138	D113	.40	68	G	0.220	24.67	2.2	-10.9	5.0 5	
		02	٠ 40	7 51.0	40	/ 20	40	7 30	ע									
0241+393B				27.8				+ 200		3.23	-1.16	G	0.247	23.76	35.7	-24.2	-15.4 4	
0241+393A	3			20.1			47 02	166 + 368										
0241+395	1	02	2 41	29.2	39	31	03	+ 86	R 10	. 28	92							
0242+395	1	02	2 42	18.4	39	34	06	68	U	. 26	-1.05							
0243+439	3	02	2 43	3 2.1	43	59	02	285	D 17	1.01	62							
		02	43	2.7	43	59	18	172	D									
0244+377	37.07 4	02	2 44	23.8	37	42	21	564	U	1.73	88							
0246+392	2	02	2 46	22.6	39	16	51	+ 142	R 33	. 46	92							
0246+393	39.10 4	02	2 46	58.8	39	22	21	+ 674	T145	6.17	97	G	0.198	4.78	8.7	9	.3 2	18
		02	47	4.7	39	22	09	21	T									
0247+393A	4	02	47	11.3	39	22	08	+1100	T									
0246+396	1	02	46	48.0	39	39	18	79	U	. 25	90							
0246+428A	42.08 4	02	46	10.8	42	52	13	+ 900	D140	4.97	81	G	0.132	15.18	.0	3.5	5.4 5	49
0246+428B	3	02	46	20.3	42	53	59	+ 880	D									
0247+395	0	02	47	10.0	39	30	28	+ 48	R 30	.12	72							
0247+404	3	02	47	58.2	40	29	53	+ 307	R 15	.94	88							
0248+392	2	02	48	46.7	39	16	13	114	D 15	.61	94							
		02	48	45.6		16		69										
0248+396	0	02	48	44.7	39	39	13	36	U	.13	-1.00							
0248+467	4	02	47	38.4	46	45	03	+ 990	R600	2.40	69	G	0.029	39.50	55.0	-11.2	8.0	
0249+383	3	02	49	59.0	38	23	11	616	U	.95	34	B?	18.3	58.98	10.9	.2	.1	
0250+384	38.08 4					29			D 47	1.64	-1.24							
		UZ.	อน	42.3	30	29	V4	180	ע									
0250+396	2			6.9 8.5		41 41		49 + 87	D 24 D	. 42	88							
0054.000																		
0251+393	1			31.1 33.2		19 19		217 21	D 26 D	. 27	10							
						••	40	. 00										
0252+385	2	02	52	59.2	38	30	4()	+ 38	D 29	. 47	-1.16							

TABLE II. (continued)

1	2	-:3-	4	·5	56		78	39	1()-11-	-12	13	14-	15	516	17	18	19-	202	122
0252+388		1	02	52	50.0	38	3 52	2 17	+	61	R 10	.20	93							
0252+399		0	02	52	35.0	39	9 54	13		25	U	.10	-1.08							
0253+396		0	02	53	35.0	39	39	52	+	34	R 8	.14	-1.11							
0254+406	40.10	3	02	54	36.6	4(38	33		438	U	1.43	93							
0255+460	46.07	4	02	55	8.0	46	6 04	08		654	U	1.74	77	В	21.0	8.10	6.0	-1.0	2.0	ğ
0258+435	43.07	3	02	58	53.9	43	3 31	. 00	+	470	R 80	1.31	80	G	* 0.065	54.40	4.0	-5.4	-4.0	16
0258+443		3	02	58	13.7	44	18	38		440	U	1.09	71							
0259+387		2	02	59	47.0	38	44	56	+	65	D 34	. 43	88	G	0.132	48.30	55.0	1.7	3.0 4	
			02	59	49.9	38	45	00	+	75	D									
0259+391		1	02	59	18.0	39	09	11	+	100	R 21	. 28	81							
0700+375	37.18	4	07	00	41.1	37	31	27		540	U	2.07	-1.05							
0700+390		1			44.7 32.2					70 100	D194 D	. 23	24							
0700+398		0	07	00	37.8	39	52	55		20	U	.11	-1.33							
0700+399		0	07	00	56.8	39	53	51	+	75	R 30	.13	43							
0701+392		3	07	01	5.1	39	15	54		449	U	1.17	75	N	18.7	5.07	54.3	.3	3	50
0701+397		0	07	01	44.1	39	42	22	+	22	R 40	.11	-1.26							
0701+401		4			53.3 53.6		06 07			172 428	D 18	1.67	80	G?	0.328	53.06	7.4	5.2	-1.6 5	
0702+396		0			24.2		39			41		.13	90							
0703+390		1	07	03	22.8	39	00	12		112	U	.31	80							
0703+426A	42, 23	Δ	07	03	5.R	A9	38	A 2		120	T226	4.30	- 57	*C	* 0.060	12 18	17 3	2 4	-3.3 3	16
		•			10.6					080		7.00	.51	U	- 0.000	12.10	11.0	4.4	0.0 0	70
					12.4					680										
0703+426B	;	3	07	03	30.6	42	36	53	:	212	D100	1.04	85							
					30.6		38			138										
0703+468	•	4	07	03	5.9	46	52	36	1!	98	U	1.90	14							
0704+384	38.20	4	07	04	7.6	38	26	56		139	D 16	2.87	-1.06	В	* 0.579	8.41	56.8	-1.3	.2 4	36
					9.0		26			307				_						
704+397	(0	07	04	5.8	39	46	24		36	U	. 14	-1.06							
704+399	•		07	O.A	17.8	30	54	10		67	11	.20	86							

TABLE II. (continued)

1	2	3	4	-56	7	'8	9	1()-11·	12	13	14	15	16	17	18	19	202122-
0704+418	;	0	7 ()4 47.3)4 49.6)4 51.3	41	53	40			T 60 T	.84	-1.05						
0705+398	() 0	7 (5 52.3	39	53	24		42	U	. 19	-1.18	G?	0.392	51.94	22.2	4.1	1.8
0706+396	1	. 0	7 0	6 34.5	39	41	39	+	103	R 17	. 35	96						
0707+380A	2	2 0	7 0	7 16.1	38	04	14		157	U	. 43	79						
0708+384	2	2 0	7 0	8 25.5	38	28	55		135	U	. 46	96						
0708+388	2	0	7 0	8 43.1	38	53	28	+	210	R 8	.66	90	G	0.282	42.80	26.8	3.5	1.2
0709+393	1			9 35.8 9 22.5		18 18		+	50	D100	.29	-1.38						
0709+398	1	. 0	7 0	9 22.6	39	53	51	+	116	R 8	. 26	63						
0709+405	2	0	7 0	9 32.7	40	33	11	+	163	R 18	. 49	86						
0709+409	40.18 3			9 1.0 9 1.3		56 56			160 154	D 21 D	1.29	-1.11	N	20.0	1.01	32.9	1.5	-1.2 5
0710+403	2			0 56.3 0 57.4		21 21			48 100	D 26	.54	-1.01	G	0.247	56.94	15.3	-1.0	8 4
0710+457	45.13 4			0 49.3 0 55.3		45 45			573 300	D 64	3.00	97	G	0.165	52.28	19.3	.2	.2 4
0711+397	2	0	7 1	1 51.5	39	45	10		200	U	. 79	-1.08						
0711+399	0	07	7 1	1 5.3	39	58	00	+	30	U	.10	94						
0712+382	2	07	7 1:	2 26.8	38	13	26		231	U	.50	61						
0712+387	2			2 8.6 2 10.9		44 44			121 88	D 42 D	.71	96						
0712+388	1	07	12	2 24.5	38	53	54	+	101	R 12	. 25	71						
0712+390	1	07	12	2 12.0	39	05	23		74	U	. 25	95						
0712+391	2	07	12	2 3.9 2 3.7 2 3.7	39 39 39	06	39		64	T 25 T T	.50	-1.01						
0714+405	2			42.8	40 40				94 97	D 39 D	. 40	87						
0717+393	i			21.3	39 39			+	21 61	D 24	.31	-1.04						

TABLE II. (continued)

1	23		45	56	7	8	91	0-11	12	13	14	15	16	17	18	19-	202122-
0720+381	3			42.2		08 5 09 4			D 50	.90	87	G	0.220	44.03	41.4	-1.5	4 2
0720+412	3	0	7 20	11.5	41	14 0	9 +	204	R 20	.96	-1.21						
0721+394	1	0	7 21	34.3	39	27 1	8	52	U	.20	-1.06						
0721+398	1	0	7 21	. 4	39	49 4	8	64	U	. 22	97						
0722+385	2	0	7 22	21.0	38	32 3	9	189	U	.59	89						
0722+393A	39.17 4	0	7 22	25.1	39	23 3	2	1010	U	2.91	83						
0723+397	2			28.2		46 0 45 4			D 17	.41	-1.20						
0724+396	i	07	7 24	45.0 45.1	39		0 +	50	D 7	. 24	-1.09	G?	0.282	45.00	35.0	.6	-1.5 4
0726+402	2	07	7 26	37.9		17 1		272		.79	84						
0726+431	43.14 3	0	26	16.1 16.7 17.3	43	07 25 07 35 07 45	5	14		1.29	-1.17	В	* 1.072	16.70	35.5	.0	5 2 <u>48</u>
0727+401	2	07	27	10.0	40	07 4	2	367	U	.40	07						
0728+389	1	07	28	34.4	38	57 5	i	98	U	.20	56						
0728+395	1	07	28	30.8	39	29 5	9 +	79	R 24	.30	-1.05						
0729+391	1	07	29	57.1	39	11 36	6	151	U	. 26	43	В	18.4	57.02	34.9	.9	1.1
0729+395	1	07	29	36.5	39	31 3	5 +	80	R 8	. 28	98	G	0.110	36.28	35.0	2.5	.0
0729+397	0	07	29	33.2	39	45 07	7	53	U	.15	81						
0729+437	3	07	29	11.1	43	42 07	7	295	U	.90	87						
0730+396	1	07	30	25.0	39	41 51	l	57	U	.21	-1.02						
0731+438	43.15 4	07	31	49.4	43	50 57	7 +	745	R 10	2.60	98						
0733+389	1			33.3 38.4		59 24 59 02			D 63 D	. 24	-1.21						
0735+388	1	07	35	31.9 32.1 34.2	38	53 36 53 18 52 47	+	22		. 36	99	G	0.180	32.13	19.6	3	-1.6 2
0735+390	2			37.5 39.3		03 04 03 06			D 21 D	. 44	91	G	0.282	38.50	5.5	-1.2	5 4
0735+395	1	07	35	41.0	39	32 37	,	108	U	.28	75						

TABLE II. (continued)

12-	3	4	5	6	7	8	9	-10-1	12	2	13	14	-15	16	17	18	19	202	122
0736+386	2	07	36	48.5	38	40 4	15	250	3 U		.77	87							
0736+398	0	07	36	4.3	39	54 ()4	+ 66	R	60	. 14	59							
0736+400	2	07	36	41.5	40	01 4	17	19	U		.53	80	G	0.198	41.17	43.3	3.8	3.7	
0739+396	2			27.7 29.1		36 4 36 2		+ 80		27	. 49	-1.16							
0739+397a	3			44.8 47.3		46 2 46 3			D D	25	1.02	-1.62	G?	0.198	45.83	28.8	6	9 5	
0739+397ь	3	07	39	46.0	39	48 4	1	495	U		1.02	57	В	19.2	45.96	39.5	.5	1.5	
0739+398	0	07	39	13.2	39	51 4	2	129	U		.17	22	В	19.9	13.28	42.4	9	4	
0740+380C 186	4	07	40	56.8	38	00 3	31	1072	? U		5.55	-1.29	В	* 1.063	56.75	31.6	.6	6	12
0740+393 39.1	8 4	07	40	35.7	39	22 1	4	+ 457	R	10	2.08	-1.19							
0740+474B 47.2	26 4	07	40	48.8	47	25 5	6	+ 521	R	12	1.63	89							
0741+396	0	07	41	7.1	39	41 4	7	+ 22	. R	60	. 14	-1.45							
0741+399	0	07	41	57.0	39	58 2	1	46	U		.14	87							
0741+407	2			52.3 53.6		45 4 45 3			i D	18	. 49	-1.06							
0742+376 37.1	19 4			18.8 22.6		39 1 38 3			D D	60	2.10	-1.13							18
0742+394	2	07	42	39.5	39	24 1	9	+ 123	R	21	. 45	-1.02							30
0743+392B	3	07	43	53.8	39	17 1	9	+ 270	R	15	.87	92							
0743+399	0	07	43	7.0	39	58 4	3	+ 29	R	13	.10	97							
0744+399	i	07	44	9.5	39	57 3	8	74	U		.20	78							
0744+464 46.1	.6 4	07	44	7.2	46	26 2	5	444	U		1.66	-1.03							
0745+397	0	07	45	38.9	39	46 2	3	40	U		.11	79							
0745+398	2	07	45	18.5	39	48 3	8	+ 100	R	11	. 41	-1.11							
0746+399	2	07	46	59.6	39	58 5	1	+ 190	R	20	. 75	-1.08							
0747+398A 39.1	9 3	07	47	2.6	39	49 1	2	283	U		.97	97							
0747+398B	3	07	47	57.2	39	51 4	7	+ 120	R	8	.88	-1.56							
0748+413B	3	07	48	54.1	41	23 3	7	198	U		.83	-1.12							

TABLE II. (continued)

1	2	3-	4	5	6	7	8	9	10	-11-	-12	13	14-	1	516	17	18	19-	202	122-
0749+398	39.20	3	07	49	15.4	39	52	02		265	U	1.02	-1.06							
0749+399		0	07	49	28.5	39	54	35		53	U	.12	64							
0750+400		2			56.9						D 53	. 44	96							
			07	50	59.2	40	04	07	+	75	D									
0750+402		2			15.7 18.7					61 43	D 44 D	. 45	-1.15							
0751+392		3			5.6			04		220		. 80	-1.01							
0752+398		1			7.2 9.4			11 25	+	27	D 28 D	. 21	98							
0753+383	38.22	3	07	53	30.3	38	18	19		321	D 60	1.51	-1.03							
			07	53	32.2			23		84	D									
0753+391		2			3.8						D 65	. 48	97	G	0.328	6.20	25.0	-4.3	1.3 5	
					7.8					71										
0754+394		0	07	54	41.3	39	28	50	+	35	R 40	.13	-1.03	×В	* 0.096	38.20	34.0	35.8	16.0	52
0754+396	39.21	3	07	54	46.9	39	37	40		449	U	1.53	96							
0754+397	,	0	07	54	36.9	39	44	45	+	25	R 30	.17	-1.50	G	0.282	36.80	45.0	1.1	.0	
0755+379B		4	07	55	9.0	37	55	20	+2	285	R140	5.42	68	G	* 0.043	9.05	20.9	6	9	6
0756+377	37.21	4	07	56	28.4	37	47	04	+1	290	R 19	4.54	99							
0756+383	;	3	07	56	32.9	38	22	37	+ :	354	R 25	.97	79	G	0.153	32.73	38.9	2.0	-1.9	
0756+406	;	2	07	56	52.6	40	38	11		167	U	.50	86	В	18.8	52.64	9.8	5	1.2	
0757+395		ı	07	57	29.6	39	34	12	+	35	T160	. 29	77	G	0.057	32.35	55.4	-1.7	1.6 2	
					32.2					40										
			V1	51	32.5	39	31	35	+	33	1									
0757+399		1	07	57	10.6	39	55	24		91	U	. 32	99							
0759+392	;				2.5			38			D 43	.20	87							
			07	59	3.2	39	13	21	+	37	D									
0759+397	:	l	07	59	40.9	39	45	02		137	U	.39	82							
0800+399	1	l	80	00	39.3	39	58	35		86	U	.22	74	В	21.0	39.00	38.0	3.4	-3.0	
0800+472	47.27	4	80	00	38.2	47	13	12	(309	U	2.06	73	В	21.0	38.30	14.0	-1.0	-2.0	ğ
0801+394	()	80	01	17.8	39	29	06	+	43	R 12	.18	-1.12							
0801+399	(١	OR	01	11.1	39	58	28		32	IJ	.18	-1.35							

TABLE II. (continued)

													`								
1	2	-3-	4	5	6-	7	8	9-	-10)-11-	-12		-13	14	15	16	17	18	19	2021	22
0801+401		2	08	01	58.9	40	06	18		261	U		.58	63							
0802+398		2	08	02	36.6	39	49	21		113	U		.41	-1.01	В	20.6	36.63	22.7	3	-1.7	
0802+406		2	08	02	8.6	40	36	35		175	U		. 49	81							
0803+426		3	08	03	16.1	42	41	30	+	88	R	20	. 42	-1.22	*G	0.153	18.40	33.0	-25.2	-3.0	
0803+427		3			40.9 41.1					80 40		6	. 58	-1.24	G	0.142	40.90	30.0	.7	-4.0 5	
0804+399		0	08	04	25.1	39	55	23	+	38	R :	13	. 15	-1.07	G	0.220	25.52	19.5	-4.8	3.5	
0805+391		1	80	05	2.4	39	09	47	+	75	R 2	20	. 23	88	G	0.198	2.45	45.5	6	1.5	
0805+392		1	08	05	24.4	39	15	36	+	60	R :	17	. 23	-1.05							
0805+406	40.19	3	08	05	40.7	40	41	45		438	U	1	1.33	87	В	21.0	40.64	44.6	.7	. 4	
0806+399		2	08	06	11.4	39	58	20		246	U		. 49	54							
0806+426	194	4	08	06	37.9	42	36	58	+1	.970	R 1	18 5	5. 6 8	83	G	* 0.312	37.58	55.1	3.5	2.9	37
0807+399		1	80	07	24.3	39	59			30 10	T	37	. 23	-1.08							
0809+404	40.20	4			19.7 31.6			03		18 955		2	2.31	69	G?	0.282	31.61	3.1	1	1	8
0810+460B	46.17	4	08	10	58.6	46	05	48	1	059	U		4.08	-1.06	G	0.328	58.57	47.5	.3	.5	
0811+388	38.23	3			53.8 54.1			09 40		307 156		29 1	1.51	93	G	* 0.132	53.78	57.0	1.4	2.2 5	46
0811+391		1			4.6 11.2		09 07	29 37		21 53	D13	35	. 27	-1.01							
0812+382	38.24	3	08	12	44.2	38	13	29	+	409	R 3	31	.97	68	G	0.132	44.41	30.7	-2.5	-1.7	50
0812+398		0	08	12	38.9	39	52	45	+	20	R 3	30	. 10	-1.26							
0812+399		0	08	12	38.1	39	58	26	+	30	R 2	23	.12	-1.08							
0812+406		2	08	12	46.9	40	38	33		213	U		.70	93	N	18.4	46.79	34.0	1.2	-1.0	
0813+381		2	08	13	34.7	38	80	22	, +	125	R 1	.1	. 44	99							
0813+393		1			33.3 35.7					49 22		31	.21	85	G	0.328	34.62	34.2	-1.4	-1.7 4	
0813+398		1			23.1 29.6		53 53		+	70 45	D 6	34	.31	78	G	0.282	29.63	46.0	3	.0 2	

TABLE II. (continued)

1	2	-3-	4	5	6	7	8-	-9-	-10-11-	-12	13	14	-1	516	17	18	19-	202	l22-
0814+383		2	08	14	2.0	38	20	47	138	U	.56	-1.10							
0814+425		3	08	14	51.7	42	32	80	1212	U	1.42	12	В	19.1	51.70	6.8	0.0	-1.2	
0814+441		3	08	14	8.6	44	08	55	241	U	. 84	98							
0815+397		0	08	15	25.0	39	47	40	+ 43	R 23	.16	-1.03							
0818+472A	197.1	4	08	18	.9	47	12	10	+1651	R 18	4.68	82	G	* 0.128	.90	11.2	.0	-1.2	42
0819+397		0	08	19	10.5	39	45	26	50	U	. 19	-1.05							
0820+392		2			5.5 6.7		16 15		86 67	D 26 D	.58	-1.04	G	0.282	5.65	20.2	-1.7	-2.2 1	
0820+431	43.16	4			2.5 3.3		06 4 06 4		456 456	D 9	3.06	-,95	N	19.5	2.76	37.2	1.5	.8 4	Ŗ
0821+394	39.23	4	08	21	37.4	39	26	29	1237	U	2.59	58	В	* 1.216	37.31	27.7	1.0	1.3	36
0821+395		0			30.0 34.1		33 : 33 (14 13	D 55 D	. 13	-1.23							
0821+399		0									.11								
0821+447	44.17	4			49.5 51.2		46 C		483 235	D 23	2.26	90	В	* 0.893	50.27	14.2	.8	1.3 4	44
0822+390		1	08	22	12.6	39	02 ()2	+ 80	R 9	.22	79							
0822+394		4	08	22	5.5	39	29 3	33	1187	U	1.76	31							
0822+398		0	08	22	12.5	39	50 5	54	26	U	. 15	-1.37							
0823+384B		2	08	23	56.7	38	29 5	3	+ 174	R 30	. 41	67	G	0.198	56.74	48.4	5	4.6	
0823+399		0			35.3 35.5		58 2 58 4		26 19	D 16 D	.12	77	N	16.5	35.30	37.3	1.1	3 4	
0824+397		1			47.0 50.7				+ 60 + 20		. 27	95	В	17.7	48.59	38.5	3.0	1.5 4	
0827+378	37.24	4	08	27	55.2	37	52 1	.8	1873	U	5.17	80	В	* 0.914	55.10	18.2	1.2	2	12
0827+387		2	08	27	8.8	38	47 5	57	143	U	.60	-1.12							
0827+395		0	08	27	1.6	39	33 5	2	+ 50	R 20	.11	62	G	0.165	1.76	51.8	-1.8	.2	
0827+399		0									.11								
0827+458	45.16	4			7.9 6.6		53 4 53 3		270 267		2.36	-1.16							
0828+381		2	08	28	35.8	38	06 4	.3	+ 170	R 30	. 46	78	G	0.220	35.90	46.0	-1.2	-3.0	

TABLE II. (continued)

1	2	-3-	4	5	6	7	8	9	10)-11-			13		15	16	17	18	19-	202122-
0829+395		2	08	29	58.3	39	31	34		190	U		.63	94						
0829+425		3	08	29	26.4	42	35	13	+	400	R	4	.82	56	В	18.5	26.28	12.5	1.3	.5
0831+393		i	08	31	38.4	39	21	13		73	U		.21	83						
0831+399		1			12.4	39	55	34	+	60	D	99	. 25	85						
			80	31	20.2	39	54	52	+	25	D									
0832+395		1	80	32	14.6	39	33	09		81	U		. 20	71						
0832+399		0			19.9				+	15			.11	85						
					22.1		55 54		+	6 16	T									
0834+399		0			8.9					39			.10	74						
0834+450A	AE 17	4	Λa	24	26.4		50			CEA	n		2 45	77	~	0.450	07.00	F7 0	0.4	2.2.4
V034+43UA	45.17	4			28.1					650 650			3.45	77	G	0.153	27.30	57.3	-2.1	-3.3 4
0836+399		0	80	36	55.2	39	54	29	+	34	R	5	.12	99						
0836+402	40.21	4	08	36	54.1	40	15	03	+	140	D	49	1.87	98	G?	0.282	54.37	39.9	-1.4	-1.4 4
			80	36	54.4	40	14	14	+	395	D									
0836+426	42.26	3	08	36	35.6	42	38	33		488	U		1.12	65	В	20.0	35.50	34.1	1.1	-1.1
0837+399		0	80	37	50.3	39	55	31		28	D	26	. 16	-1.24						
			80	37	52.6	39	55	30		5	D									
0838+396		0	80	38	54.6	39	37	58		51	U		.15	84						
0840+400		2	80	40	50.5	40	03	53		126	U		.58	-1.20						
0840+424A		4	80	40	11.5	42	26	20	1	125	U		2.28	55						
0841+386	:	2	80	41	14.8	38	41	49	;	311	U		. 49	36						
0841+397	(0	80	41	6.0	39	45	03	+	19	R	8	.13	-1.50						
0841+403	;	3	08	41	37.9	40	19	09	+ ;	226	D	34	1.12	91	N	19.5	39.40	10.1	.0	-1.1 4 50
			08	41	40.9	40	19	09	+ :	123	D									11.14
0841+407	2				52.4	40				89		24	.40	74						
			80	41	50.5	40	42	17		67	D									
0842+401	2	2	80	42	47.6	40	07	55	+ 2	200	R	35	.57	82						
0843+425	3				57.5	42	33	50	+ 1	.30	T	96	.91	80	N	18.5	58.65	44.8	3.8	-2.8 4
					59.2 .3					32 .64										
0844+396	()	80	44	35.5	39	41	06	ŧ	34	R	8	.11	92						

TABLE II. (continued)

1	2	-3-	4	5	6		78	9	10-11-	12		13	14	15	16	17	18	19	202	122-
0847+406		2	08	47	24.8	4(40	28	+ 61	R	14	.48	-1.62							
0849+394		0			24.9 24.9		30 30		17 17	D D	32	.11	92							
0849+424	42.27	3			15.6 15.7		26 26		205 212		15	1.31	90	В	18.0	15.71	47.5	7	.0 4	ģ
0850+383		2			42.1 40.6		23 22		32 67	D D	56	.40	-1.09							
0852+384		2	08	52	43.2	38	25	03	+ 141	R	16	. 44	89							
0854+399B 0854+399A					34.0 23.9				+ 234 + 100		59	1.46	-1.16	G?	0.282	29.70	4.5	-8.6	8.0 4	1
0855+397		0	08	55	2.1	39	42	33	+ 33	R	55	.10	87							
0855+419		3	08	55	44.0	41	54	59	+ 270	R	12	.96	99							
0856+386		2										. 40								
0856+397		0			24.9 25.9		41		19 + 20	D D	20	. 12	86							
0856+406	40.22	3	08	56	45.1	40	36	18	229	U		1.07	-1.21							
0857+391		3			41.3 42.0		08 07		283 + 139		18	1.28	87	G	0.220	41.63	2.6	-1.2	2 5	50
0857+402		2	08	57	15.9	40	16	43	194	U		.56	83							
0858+386		2	08	58	20.8	38	38	59	284	U		.74	75							
0858+388		2	08	58	3.0	38	53	55	+ 74	R	8	. 42	-1.36							
0858+452	45.18	4	08	58	54.7	45	12	43	+ 728	R	10	2.17	86							
0859+470	47.29	4	08	59	39.9	47	02	56	2145	U		2.81	21	В	* 1.462	39.90	57.0	.0	-1.0	44
0900+380B		2	09	00	49.8	38	04	28	+ 133	R	24	. 45	96							
0900+389		2			58.0 2.6				+ 111 + 40		31	.55	-1.01							
0900+395		0			11.7 15.1				+ 23 + 14		32	. 15	-1.10							
0900+428	42.28	4	09	00	58.8	42	50	02	+1237	R	8	2.65	60	G?	0.328	58.74	.6	.7	1.5	ğ
0902+383		2	09	02	17.7	38	19	26	+ 300	R 2	20	.70	66							

TABLE II. (continued)

										TAE	BLE II. (con	itinued)							
1	2	-3-	4-	-5-	6	7	78-	-9-	-10-11	12-	13	14	15	516	17	18	19-	2021	22
0902+384		2	09	02	2.5	38	3 26	34	149	U	.61	-1.11							
0902+414	41.18	4	09	02	48.0	41	28	31	+ 655	R	8 2.03	89	N	17.5	47.88	30.4	1.3	.6	5
0902+416		3	09	02	7.2	41	40	39	329	U	.93	81	N	19.5	7.48	35.8	-3.1	3.3	
0903+428		3	09	03	9.7	42	51	80	+ 244	R	B 1.20	-1.25							
0904+386		2	09	04	34.9	38	39	46	+ 150	R 1	4 .43	83	В	17.8	35.15	46.5	-2.9	5	
0904+396		1			25.8		36		+ 13		3 .26	-1.20							
					27.8		36		43										
0904+399		0	09	04	15.5	39	56	26	85	U	. 16	50	N	17.5	15.42	27.0	.9	-1.0	
0904+417B 4	41.19	4			16.0 20.8		46		+ 407 977		9 4.09	85	G	0.282	18.46	50.6	-,7	-1.6 4	
0905+380A 2	217	4	09	05	41.3	38	3 00	29	+1865	R 1	7 7.09	-1.05							
0905+399 3	39.24	3			1.3		55 55		181 + 50	D100	6 .94	-1.10							
0906+383		2	09	06	53.3	38	18	31	112	U	.61	-1.33							
0906+421		3	09	06	30.8	42	2 09	33	+ 225	R 1	7 1.29	-1.37	G	0.083	31.11	34.0	-3.4	-1.0	
0906+430 2	216	4	09	06	17.3	43	05	59	3930	U	11.90	87	В	* 0.670	17.26	58.0	.4	1.0	38
0907+381		2	09	07	45.0	38	3 11	32	261	U	. 43	39	В	17.4	44.92	32.5	.9	5	
0908+380B		3	09	08	39.6	38	02	37	+ 135	R 1	2 1.00	-1.57							
0908+380C 3	38.27	4			53.3 54.7		3 04 3 03		561 431	D 1	9 4.58	-1.20							
0909+395		0	09	09	30.0	39	35	07	26	U	.10	-1.05							
0909+432		3	09	09	44.9	43	3 17	44	+ 329	R	7 1.21	-1.02							
0910+392		2			39.5 43. 7				+ 43 + 60		8 .41	-1.08	В	19.0	42.31	37.7	-4.2	-2.2 5	
0911+384		2	09	11	27.9	38	29	10	+ 203	R 1	2 .65	91							
0911+395		1	09	11	28.1	39	35	08	117	U	.39	94							
0911+418		3			31.7 32.7				+ 226 + 245		6 1.00	59	G	0.071	32.12	41.5	.9	-5.5 4	
0912+388		i	09	12	25.0	38	50	26	118	U	.37	90							
0912+392		1	09	12	55.5	39	12	51	53	U	. 21	-1.08	В	20.0	55.43	50.9	.8	.1	

TABLE II. (continued)

1	2	-3-	4	5	6	7	89	10-11	12	13	14	15	16	17	18	19-	202	122-
0913+385		2	09	13	39.3	38	30 41	+ 344	R 30	.70	56	G	* 0.071	39.15	39.2	1.8	1.8	15
0913+391	38.28	4	09	13	39.5	39	07 02	1200	U	1.65	25	В	18.5	39.50	1.7	.0	.3	19
0914+390		1	09	14	32.7	39	01 54	+ 90	R 65	. 33	-1.02							
0917+458A 0917+458B					46.6 54.2			+3540 +2725		24.30	-1.06	G	* 0.174	51.00	42.0	-6.2	5.5 4	35
0918+381	38.29	4	09	18	37.3 38.7 40.4	38	06 40 06 55 07 14	201		2.45	-1.07	N	18.8	39.27	58.1	-5.5	-1.8 4	
0918+395		0			23.9 25.3			+ 17 + 21		.12	90	N	18.7	24.27	29.0	3.8	2.0 4	
0918+444	44.18	3			22.1 9.5			+ 224 + 40		1.03	-1.07	G	0.198	17.29	31.5	-15.9	1.5 4	
0919+381		3	09	19	8.0	38	06 52	+ 298	R 13	1.05	99							
0920+390		2	09	20	6.3	39	02 32	351	U	.43	16							
0920+408		3	09	20	50.6 51.5 55.0	40		+ 114 + 109 15	T	.86	-1.01	G	0.090	50.94	51.6	4.0	.6 5	
0921+400		2	09	21	40.8	40	03 27	143	U	. 47	93							
0922+397		1	09	22	44.1	39	48 06	35	U	. 24	-1.51							
0922+407		2	09	22	50.7	40	42 49	314	U	.48	33	В	19.5	50.59	48.6	1.2	. 4	
0922+422		3	09	22	47.8	42	16 35	+ 210	R 6	.97	-1.20	В	17.9	47.56	37.2	2.7	-2.2	
0922+425	42.29	3	09	22	11.9	42	30 26	+ 244	R 14	1.15	-1.22							
0923+392	39.25	4	09	23	55.3	39	15 24	2972	U	3.33	09	В	* 0.698	55.29	23.4	.1	.6	12
0923+398		1	09	23	38.3	39	50 47	145	U	. 35	69	G	0.392	38.48	50.0	-2.1	-3.0	
0926+388		2	09	26	34.5	38	49 12	124	U	.50	-1.09	В?	18.5	34.45	13.6	.6	-1.6	
0926+392		1	09	26	8.4	39	12 23	86	U	.27	90							
0929+395		1	09	29	18.2	39	31 52	93	U	. 24	74							
0930+389		3	09	30	.7	38	55 10	260	U	.92	99							
0930+395		1			34.6 35.4		35 03 35 17	41 51	D 17	.34	-1.02							
0931+399	39.26	4	09	31	59.7	39	55 30	+ 876	R 14	3.16	-1.01	G	0.328	59.77	31.2	8	-1.2	24

TABLE II. (continued)

1	2	-3-	4	5	6	7	8-	-9-	-10-11-	-12	13	14	-15	16	17	18	19-	2021	22
0932+397		1	09	32	5.2	39	46	26	85	U	.28	93							
0934+387		2	09	34	48.1	38	45	20		D108	.67	97							
			09	34	48.2	38	47	80	65	D									
0935+397		1	09	35	33.0	39	47	53	143	Ü	.32	63	N	19.5	33.06	52.5	7	.5	
0935+428A	42.30	3	09	35	6.6	42	52	07	387	U	1.35	98							
0936+398		i	09	36	17.9	39	53	19	83	U	.33	-1.08							
0936+399		0									. 14								
0936+405	40.23	4	09	36	13.4	40	30	13	+ 279	D 26	2.12	-1.09	N	18.5	13.85	36.7	1.7	2.3 2	
			09	36	14.0	40	30	39	+ 251	D									
0937+391	39.27	4							+ 219		1.88	86	В	* 0.618	59.10	31.0	1.1	6 5	?
			09	38	.1	39	07	21	+ 408	D									
0937+396		0	09	37	38.7	39	42	14	+ 37	R 7	. 15	-1.10							
0938+399A		0									.16								
0938+399B	223.1	4							+ 934		4.86	88	G	* 0.107	18.23	22.2	.2	1.3 4	31
			09	38	19.0	39	58	58	+ 650	D									
0942+394		0	09	4 2	51.9	39	28	49	48	U	.10	57							
0942+399		0	09	42	56.6	39	56	43	+ 56	R 12	. 19	96							
0943+399		3	09	43	13.9	39	58	10	+ 230	R 8	.95	-1.11			,				
0944+390A		1	09	44	7.3	39	05	10	+ 60	R 13	. 24	-1.09							
0944+390B		1	09	44	23.6	39	00	46	96	U	.27	81	G?	0.392	23.61	46.6	1	6	
0944+397		i	09	44	44.8	39	47	07	+ 68	R 10	. 25	-1.02							
0945+408	40.24	4	09	45	50.1	40	53	43	1280	R 3	2.45	51	В	* 1.252	50.16	44.1	7	-1.1	44
0945+419	41.20	4	09	45	23.7	41	55	41	+ 580	R 23	2.21	-1.05							
0947+405		2	09	47	23.7	40	31	59	110	U	. 44	-1.09							
0947+424	42.31	3	09	47	9.3	42	26	54	+ 251	D 55	1.48	99							
		•			14.2				+ 166		2. 10								
0948+390		2	09	48	58.6	39	04	38	+ 117	R 13	. 40	96	G	0.328	58.48	34.6	1.4	3.4	
0950+402		2	09	50	58.1	40	14	07	92	D 26	. 55	-1.21							
					.2				+ 25										
0951+398		1	09	51	27.0	39	52	38	+ 40	D 54	. 27	-1.02	*G	0.153	27.44	25.8	-2.5	-12.2 5	

TABLE II. (continued)

										Т.	ABL	E II. (con	tinued)							
1	2-	3	4	5	6	7	8	9-	10-11	12	2	13	14-	15	16	17	18	19-	202	2122
0951+408		3			38.7 39.7		50 51		102 146		17	. 92	-1.03	В	18.5	39.03	56.5	1.9	1.0 4	ı
0951+422		3	09	51	7.0	42	15	19	424	U		1.08	73	G?	0.282	7.10	21.0	-1.1	-2.0	
0953+382		2	09	53	43.4	38	17	19	+ 181	R	14	.65	-1.00							
0953+398		2	09	53	5.9	39	49	31	295	U		.50	41	N	18.5	5.90	32.1	.0	-1.1	
0954+436		3	09	54	39.2	43	41	08	+ 380	R	12	1.11	84	G	0.247	39.06	8.8	1.5	8	
0955+380		2	09	55	30.4	38	01	37	129	U		. 46	-1.00							
0955+387	38.30	3			1.0 2.3				+ 150 + 197		18	1.42	-1.10	N	20.0	1.66	19.9	1	9 4	1
0955+390		3	09	55	42.9	39	02	44	392	U		1.05	-,77							
0955+396		2	09	55	55.0	39	36	52	148	U		. 49	94							
0956+391		1			41.0 43.8		12 10		29 29		78	.28	-1.23							
0956+404		2	09	56	34.8	40	29	52	+ 100	R	8	.47	-1.21							
0956+475	47.31	4	09	56	8.0	47	35	37	450	U		2.10	-1.21							
0957+399		1	09	57	44.4	39	55	12	64	U		. 24	-1.04							
0958+390A		1	09	58	23.8	39	02	24	+ 115	R	10	.34	85							
0958+391		1	09	58	17.7	39	06	14	+ 41	R	22	.22	-1.32							
1004+446	44.19	4			13.5 15.1		39 40		734 + 360		35	4.22	-1.06							
1007+417	41.21	4	10	07	26.1	41	47	16	+1500	R	25	4.10	79	*B	* 0.613	26.13	25.3	3	-9.3	45
1007+422		3	10	07	22.8	42	14	19	412	U		1.00	70							
1008+395		0	10	80	56.2	39	34	54	+ 52	R	12	.17	93							
1008+423		3	10	08	53.5	42	19	23	570	U		1.12	53							
1008+467A	239	4	10	80	39.3	46	43 (09	+1262	R :	11	6.55	-1.29							
1009+389A		1	10	09	26.0	38	58 !	56	100	U		.29	83							
1009+434	43.18	3	10	09	7.0	43	27 !	55	+ 163	R :	10	.91	-1.35							
1012+389		1	10	12	59.2	38	56 !	50	85	U		.33	-1.06	N	20.5	59.50	48.2	-3.5	1.8	
1012+395		0	10	12	52.6	39	35 ()4	+ 70	R	10	.18	74							

TABLE II. (continued)

1	2	-3-	4	5	6	7	8	9-	-10-11-	-12	13	14	15	16	17	18	19-	2021	22
1012+425	42.32	3			30.8 32.3		34 34		116 116	D 22	.90	-1.06							
1013+410 1012+410B					3.5 52.8				+ 386 + 271		2.86	-1.15	G	0.117	58.78	44.8	3.5	2.8 5	
1014+392	39.29	4	10	14	16.5	39	16	23	1253	U	3.08	71	G	* 0.206	16.56	20.7	7	2.3	33
1014+397A 1014+397B	39.30				15.5 23.5				+ 279 + 349		2.15	97	G	* 0.060	19.36	9.5	6.7	17.4 5	34
1015+383		2	10	15	27.8 28.8 30.5	38	20	32	+ 103 + 50 + 60	T	.64	86	В	17.5	28.92	34.5	-1.4	-2.5 2	
1016+388B		2	10	16	48.1 49.6 53.9	38	48 48 48	35	17 25 84		.43	96							
1016+396		0	10	16	29.5	39	37	45	11	U	.14	-1.99							
1016+397		0			55.0			07 43	+ 28 + 23		.11	60	G	0.100	56.98	27.8	3.2	1.3 5	
1016+443		3	10	16	46.5	44	23	30	315	U	1.00	91	G?	0.328	46.18	30.4	3.4	4	
1018+393		1	10	18	41.1	39	19	03	53	U	. 24	-1.18							
1018+405		2	10	18	47.1	40	34	48	+ 197	R 20	.67	96							
1019+382A		2	10	19	27.2	38	18	02	185	U	.56	87							
1019+394	39.31	3	10	19	58.7	39	24	00	+ 367	R 8	1.40	-1.05							1
1019+395		1	10	19	18.8	39	32	39	74	U	. 28	-1.04							
1019+397		0			40.4 42.1		47 47		41 16	D 19	.17	86	В	16.0	40.57	.8	-2.0	8 1	
1020+400		4	10	20	14.6	40	03	28	1103	U	1.77	37	В	16.3	14.56	26.8	.5	1.2	50
1021+384		2	10	21	.9	38	24	00	226	U	.57	73							
1022+432	43.19	4	10	22	30.6	43	12	58	+ 833	R 15	2.68	92							
1023+393		i	10	23	8.6	39	20	39	+ 83	R 15	. 32	-1.06	*G	0.142	8.05	40.5	6.4	-1.5	
1024+463	46.21	4			13.1 13.4				+ 520 + 612		4.09	-1.01							
1025+390B	39.32	3	10	25	49.4	38	59	57	637	U	1.54	69	G	0.180	49.33	58.3	.8	-1.3	50
1025+394		1	10	25	55.9	39	26	08	64	U	.29	-1.18							

TABLE II. (continued)

1	23	4	5	6	7	8	-9	-10-1	1	12	13	14	-15	516	17	18	19	202	122
1027+383	2			43.7 48.8		18 S			5 1 2 1	D 64	.72	87							
1027+390	1	10	27	31.7	39	02 2	25	+ 76	3 !	R 35	.23	87							
1027+392	3	10	27	21.7	39	13	18	379	9 1	U	.83	61							
1028+400	2	10	28	21.8	40	02 2	21	116	3 1	IJ	.42	-1.01							
1028+402	3			7.2 7.6				+ 13			.82	-1.17							
.030+398	2	10	30	27.5	39	51 2	20	39	7 1	IJ	.70	44							
1030+415	3	10	30	7.8	41	31 3	34	58	7 (J	1.02	43	В	* 1.120	7.78	34.0	.2	.0	45
.033+387A	3			29.8 30.9				+ 5° + 5°			.33	88	G	0.247	29.70	5.2	7.2	-2.5 5	
.033+387В	3	10	33	52.8	38	42 1	19	+ 10	5 1	R 20	.36	97							
.033+388	1	10	33	38.0 42.1 45.4	38	51 (9	+ 30 + 30 + 80) :	ſ	. 29	51	G	0.124	43.11	42.5	.2	6 5	
033+399	0										.13								
033+408	3			30.8 31.7		51 5 50 5		213 + 63		D 22	.95	97	N	20.0	31.77	2.0	-5.9	-1.0 4	
034+397	0			39.6 41.4		43 2 43 4		+ 1	5 1		.10	-1.22							
034+404	40.26 4	10	34	18.3	40	27	13	+ 63	3 1	R 10	2.15	95							
035+398	1			23.0 23.9		48 3 48 2			7 I	D 14	. 21	82							
037+399	1	10	37	16.1 18.7 22.8	39	58 (8(+ 29 + 10 + 2	ŝ '	Γ	. 28	-1.06							
.038+398	1	10	38	36.5	39	49 3	38	+ 103	3 1	R 8	.36	98							
039+397	2	10	39	8.7	39	42	11	+ 24	6 1	R 22	.66	77	*G	0.124	7.48	34.0	14.0	7.0	
039+424	3	10	39	11.8	42	26	13	25) (IJ	.87	98							
040+395	2			10.5 15.9				+ 94 + 119			.76	-1.00							
1040+397	0	10	40	25.3	39	45 2	22	+ 5	0 1	R 15	.13	75							

TABLE II. (continued)

											1 1	SLE II. (contin	rucu)					 			
1	2	-3-	4-	-5-	6		7	89	1()-11-	-12-		13	14	-15	16	17	18-	 -19	202	2122	·
1040+398		0	10	40	43.8	39	4!	9 57	+	40	R 4	.0 .	.11	79	G	0.198	43.80	57.5	.0	5		
1041+392		2	10	41	34.5	39	1 1	6 36	+	189	R 1	4 .	.60	91								
1042+392	39.33	3	10	42	23.6	39	3 1	2 25	+	573	R 1	0 1.	.50	75								
1042+393		1	10	42	29.7	39	20	0 06	+	68	R 5	ο.	28	-1.11								
1042+397		0	10	42	48.6	39	4!	5 56		107	U		17	36								
1043+394		1			5.7 7.1			9 02 8 48	+		D 2	1 .	.30	93								
1044+454		4	10	44	38.6	45	5 2	4 43		412	U	1.	67	-1.10								
1047+387		2	10	47	56.0	38	3 4	7 43	+	153	U		. 42	79								
1047+396		0			20.8 25.4			1 43 1 31			D 5	4 .	. 16	-1.09								
1049+384		3	10	49	22.3	38	3 2	7 39		613	U	1.	. 24	55							1	
1050+391		1	10	50	44.2	39	9 0	9 46	+	129	R 1	.2	.37	83								
1052+380		3	10	52	56.1	38	3 0:	2 02		198	U	,	.82	-1.11								
1052+389		1			35.1 36.9			6 16 6 22			D 2	: i .	. 24	-1.14								
1053+384		2			23.7 24.0			4 25 5 05			D 4	0 .	. 75	87								
1053+394		i			59.0 .6			7 35 7 22		52 31	D 2	.2	. 28	95								
1054+396		0	10	54	37.8	39	9 4	1 18		74	U		. 18	70								
1055+381		2			19.5 21.1			0 06 0 32			D 3	2 .	. 60	76								
1055+396		0			45.8 57.6			6 54 4 48	+		D18	8 .	. 16	67								
1055+404A		3	10	55	11.1	40) 2(6 23		311	U		94	87								
1055+404B	40.27	3			48.3 49.3			9 56 0 28		237 35	D 3	8 1.	.08	-1.08								
1056+387		3	10	56	28.3	38	3 4:	1 59	+	257	R 2	ο.	86	95								
1056+396		3	10	56	22.8	39	4:	1 10	+	242	R	8.	82	96								
1056+399		0	10	56	15.0	40	0(0 07		74	U		14	50								

TABLE II. (continued)

								TABL	E II. (conti	inued)							
2-	3	4-	-5-	6	7	89	10-11-	-12	13	14	-15	16	17	18	19-	2021	22
1056+432A 247	4	10	56 (08.2	43	17 29	+2700	R 14	7.01	75	В	18.9					
1058+393	1	10	58 4	42.2	39	20 40	245	U	.34	26							
1100+398	0	11	00 ;	36.2	39	49 56	35	U	. 14	-1.09		,					
1101+384	3	11	01 4	40.5	38	28 43	576	U	1.14	54	G	* 0.030	40.49	41.9	.1	1.1	ä
1101+395	0	11	01 !	50.5	39	31 02	53	U	. 19	-1.00							
1101+396	0	11	01 1	15.4	39	37 06	+ 20	R 10	.13	-1.46							
1103+393	2	11	03 2	21.4	39	22 17	+ 173	R 15	.52	86							
1104+390	1	11	04 5	54.0	39	05 18	+ 70	R 48	.20	82							
1104+397	0	11 11		10.9 17.6			+ 25 + 10		.12	96							
1105+390	1	11	05 3	36.4	39	02 07	+ 119	R 46	.23	52	G	0.247	36.81	9.0	-4.8	-2.0	
1105+392 39.3	4 4			49.8 53.9		15 16 14 35	669 + 90	D 56 D	2.31	87	N	18.5	51.48	57.4	4.3	-1.9 4	23
1106+380	3	11	06 4	43.4	38	00 48	1121	U	1.29	11							
1107+379 37.29	94			2.6 6.1		54 35 54 57		D 50 D	5.63	79	G	* 0.346	4.53	45.9	-1.0	.7 5	34
1107+389	1								. 24								
1108+394	0	11	08 :	28.7	39	28 51	+ 30	R 45	.10	94							
1108+399	3	11	08 3	33.7	39	56 32	+ 329	R 12	.93	81	N	20.0	33.54	32.3	1.8	3	29
1108+411B 41.2	3 4	11	08 !	52.8	41	06 35	+ 771	R 22	3.20	-1.12	*G	* 0.074	53.45	42.2	-7.3	-7.2	43
1109+437 43.2	1 4			51.2 52.8		42 47 41 56		D 53 D	4.77	-1.09	*B	* 1.680	52.28	6.1	5.6	-10.1 2	51
1110+391	1	11 11		41.9 41.3		09 59 09 31		D 28	.32	-1.12							
1111+391	1	11	11 4	44.6	39	06 56	139	U	.37	77							
1111+396A	0	11	11 !	53.0	39	43 35	+ 27	R 13	.19	-1.53							
1111+396B	0								.17								
1111+398	0								.18								
1111+408 254	4	11	11 5	53.0	40	53 41	+2487	R 13	10.92	-1.16	В	* 0.734	53.28	41.9	-3.2	9	12
1112+435	3	11	12 3	34.4	43	31 05	+ 246	R 15	.83	95	G?	0.247	34.61	.5	-2.3	4.5	

TABLE II. (continued)

1	23-		4	56	}	-7-	-8-	-9-	-10	-11-	-13	2	13	14	-15	16	17	18	19	2021	22
1115+380A	2	1:	1 1	5 21.	.0	38	04	31		202	U		.70	97							
1115+399	0	1	1 1	5 12	.8	39	57	08	+	53	R	8	. 15	81							
1116+388	1	1	1 1	6 11.	.4	38	50	50		85	U		. 20	67							
1116+392	1			6 19					+	70		83	. 36	91	В	18.0	19.50	17.5	.0	5 2	
				6 19. 6 20.			15 15		+	12 31											
1117+441	3			7 29. 17 31.						124 187		32	1.01	92							
1118+390	1			18 28 18 31						23 31			. 20	-1.03							
1119+398	1												.22								
1121+399	2	1	1 2	21 4.	.3	39	54	18		268	U		. 46	42							
1121+435	3	1	1 2	21 48	. 2	43	32	09		408	U		1.20	85							
1121+444	3			21 10 21 10			24 25			127 209		29	1.39	-1.11							
1122+390	1	1	1 2	22 1	. 2	39	02	16	+	89	R	36	.22	71	G	* 0.007	1.09	13.0	1.3	3.0	ä
1122+397	1			22 58 23 1			42 41			84 21		32	. 29	80							
1123+395	1	1	1 2	23 46	. 2	39	35	13		127	U		. 36	82	В	16.4	45.85	15.1	4.0	-2.0	
1127+380	2	1	1 2	27 14.	.6	38	04	37		227	U		.78	97							
1128+385	2	1	1 2	28 12	.5	38	31	51		794	U		.52	.33	В	18.6	12.55	52.3	6	-1.3	10
1128+392	2			28 31 28 32						34 86		8	.56	-1.21							
1128+396	1			28 48 28 48						32 45		25	. 25	92							
1128+436	3			28 4 28 5			41 42			271 64		56	1.55	-1.20							
1128+455	4	1	1 2	28 56	, 4	45	31	23	. 1	886	U		4.37	66	N	18.5	56.41	25.3	1	-2.3	
1130+387	2	1	1 3	30 17	.0	38	43	31		171	U		. 48	81							
1131+388	2			31 22 31 25						155 133		36	.75	75	G	0.328	23.78	27.0	-1.5	-3.0 4	
1131+391	1	1	1 3	31 33.	.1	39	07	52		132	R	21	. 31	67							

TABLE II. (continued)

1	23		4!	56	7	89	10-1	1-	-12	13	14	-15	16	17	18	19	202	122
1131+437	43.22 4	1	1 3:	1 57.3	43	44 36	+140)8	R 8	3.90	80							
1132+396	0	1	1 32	2 22.0	39	39 37	+ 3	33	R 7	. 11	94							
1132+406	2		1 32 1 32	2 .3			+ 9			.77	95	G	0.392	.61	47.7	2	1.6 5	
1132+410	40.29 3	1	1 32	2 5.3	41	00 28	+ 26	3	R 8	1.10	-1.12							
1133+395	0	1	1 33	3 46.3	39	33 51	+ 5	3	R 10	. 14	76							
1133+432	3	1	1 33	3 15.3	43	15 20	131	9	U	.88	.32							
1134+406	2	1	1 34	47.1	40	39 07	17	6	U	.53	86							
1135+390	1	1	1 35	18.8	39	01 45	+ 4	4	R 8	.22	-1.26							
1135+401	2	1	1 35	5 1.1	40	07 25	37	0	U	.66	45							
1136+383	3	1	1 36	5 55.2	38	20 19	+ 40	1	U	. 84	58							
1136+390	2	1	1 36	30.5	39	03 55	+ 18	17	R 8	. 49	76							
1136+420	42.33 3	1	1 36	3 19.5	42	05 17	36	0	U	1.09	87							
1137+396	0			7 45.1 7 47.3			+ 2+ 2			.11	72	N	17.0	46.22	40.7	2	-2.2 4	
1140+394	1			35.9 36.9			+ 4			.32	98							
1140+399	0			40.7 42.0		55 19 54 52		9	D 30 D	.14	-1.02							
1141+374	37.32 4			41.8			+ 66 + 74			4.75	95	G	0.110	49.60	15.6	-1.8	3.9 4	15
1141+392	2			9.3			+ 8 + 7			.60	-1.04							
1141+400	2	1	1 41	55.1	40	00 02	12	2	U	.41	95	N	18.5	55.26	2.2	-1.8	2	
1141+466	46.23 4	1	1 41	.4	46	37 59	+ 81	.4	R 12	2.60	91	G	0.057	.29	59.4	1.1	4	8
1142+392	2	1	1 42	2 56.5	39	13 36	+ 15	6	R 8	.57	-1.02	*B	18.0	56.29	26.0	2.4	10.0	
1143+405	2	1	1 43	50.0	40	31 38	10	6	U	. 49	-1.20							
1143+456	45.22 4	1	1 43	3 37.0	45	37 17	63	3	U	2.26	-1.00							
1144+398	0	1	1 44	40.0	39	53 32	+ 4	6	R 12	.12	75							
1144+402	3	1	1 44	21.0	40	15 13	100	1	U	.93	.06	В	18.0	20.98	13.9	.2	9	

TABLE II. (continued)

1	23	}	-4	-56		78	9	10	0-11	1	2	13	14	15	516	17	18	19-	202	122
1144+404	2	2 :	11 4	14 5.5	40	24	41		169	U		.51	87							
1148+387	38.31 4	. 1	11 4	18 53.3	38	42	33	+	555	R	6	1.83	94	В	* 1.303	53.32	34.4	2	-1.4	47
1148+477	47.33 4	. 1	11 4	8 32.3	47	45	36	+	503	R	13	2.29	-1.19	В	* 0.867	32.28	36.1	.2	1	53
1149+390	1	. 1	11 4	9 1.8	39	02	55	+	54	R	8	.33	-1.42							
1149+398	1			9 4.7					40 30			. 21	86							
1150+388	2			0 9.4		48			246			.66	77							
1150+401	2			0 24.0 0 26.8					68 62			. 55	-1.13							
1150+438	3			60 6.2		53			284			.96	96							
1151+383	3	1	.1 5	1 25.9	38	21	49	+	493	R	15	1.42	83	G?	0.392	25.75	47.3	1.8	1.7	
1151+384B	38.32 4			1 14.6					49 4 520			2.47	70	G	0.142	17.41	30.4	5	-2.8 5	18
1151+395	0											.12								
1151+408	3	1	1 5	1 19.0	40	53	34		653	U		. 88	23							
1151+456	45.23 4			1 44.8 1 44.9					270 427		62	2.28	93	G?	* 0.192	44.84	11.5	.2	.5 5	45
1153+407B	3	1	1 5	3 17.6	40	47	26	+	200	R	11	.90	-1.18							
1153+451	45.24 4			3 32.2 3 35.0		06 07			243 405			1.79	80							
1154+397	0	1	1 5	4 12.7	39	45	00	+	75	R	107	. 14	49	G	0.142	12.98	5.9	-3.2	-5.9	
1154+398	0	1	1 5	4 54.8	39	52	48		40	U		.15	-1.03							
1156+389	1			6 29.7 6 30.7					43 59		22	.31	87							
1157+396	0	1	1 5	7 17.3	39	41	00	+	31	U		. 16	-1.28							
1157+460	46.25 4	1	1 5	7 57.2	46	05	24	1	042	U		2.88	80							
1158+393	1			8 21.8 8 21.8		19 19			60 10		21	. 30	-1.14							
1159+395	3	1	1 5	9 16.3	39	35	52	!	548	U		. 83	33							
1200+393	1	13	2 00	26.9	39	22	28	+	88	R	15	. 25	82							

TABLE II. (continued)

										ABLE	II. (conti	inueu)							
1	23-	4	5	6	7	8-	-9-	-10-11-	-12	?	13	14	-15	16	17	18	19	2021	22
1201+394	3	12	01	33.7	39	29	00	430	U		1.11	74	N	19.0	33.69	.1	.1	1	į
1201+396	0	12	01	9.4	39	39	37	+ 52	R	9	.16	88							
1202+388	1	12	02	58.4	38	50	45	+ 97	R	14	.30	88							
1202+397	0	12	02	15.9	39	46	29	54	U		.11	56							
1203+384	2			43.7 45.3				+ 97 + 95		32	.67	98	В	18.1	44.74	17.3	-2.8	-2.3 4	
1204+399	1	12	04	4.6	39	57	4 5	206	U		.34	39	В	18.2	4.55	44.8	.6	.2	
1204+401	40.30 3	12	04	33.9	40	11 2	21	230	U		1.00	-1.15							
1205+390	1	12	05	25.2	39	05 3	31	+ 40	U		. 21	-1.30							
1205+392	39.35 4			19.1 21.2				+ 210 + 126		24	1.83	-1.33	G	* 0.243	19.53	41.5	4.1	-1.5 5	34
1206+399a	0	12	06	31.6	39	56 !	57	+ 44	R	30	.10	64	G	0.142	31.36	55.0	2.7	2.0	
1206+399b	0	12	06	36.7	39	55 2	24	+ 42	R	30	.10	68	G	0.142	36.50	24.0	2.3	.0	
1206+439B	268.4 4	12	06	42.0	43	56 (00	+1926	R	10	5.69	85	B	* 1.400	42.06	1.9	6	-1.9	12
1207+386	3			36.7 38.5				+ 145 + 153		21	. 94	90							1
1208+396	2	12	08	1.0	39	41 (02	304	U		.76	72	G	* 0.003	1.03	1.6	3	. 4	11
1209+396	2	12	09	56.7	39	39	41	+ 260	R	22	.72	80							
1209+399	0	12	09	24.3	39	59	30	59	U		.19	92							
1211+388	1	12	11	59.5	38	51	49	+ 95	R	10	. 34	-1.00							
1212+380	3	12	2 12	26.1	38	05 :	31	278	U		1.08	-1.06							
1212+389	1	12	2 12	43.2	38	56	03	83	U		.30	-1.01	B	21.0	43.32	3.5	-1.4	5	
1213+389	1	12	2 13	53.2	38	54 !	57	+ 79	R	18	.27	96							
1216+400	2	12	2 16	34.8	40	04	30	119	U		. 49	-1.11							
1216+402	3	12	2 16	7.5	40	17	25	312	U		1.00	91							
1217+427	3	12	2 17	25.1	42	46	29	240	U		.87	-1.01							
1218+395	1			41.0				+ 39 + 45		40	.33	-1.07							
1218+398	0			24.2 25.4				+ 13 + 13		18	.11	-1.13							

TABLE II. (continued)

	0 0		4 5			_		40.44											
1	23		45	0	/	8	y-	10-11	17		13	14-	1:	b16	1/	18	19-	2021	22
1218+421	3	1	2 18	44.1	42	08	56	+ 350	R	43	1.08	88	*G	0.071	44.58	52.5	-5.3	3.5	
1219+382	2	1	2 19	42.4	38	15	52	+ 119	R	11	.58	-1.24							
1220+393	1			52.6		21 20		51 + 26	D D	33	. 29	-1.04							
1220+408	40.31 3	1	2 20	6.8	40	52	59	448	U		1.50	95							
1221+394	1	1	2 21	41.7	39	25	27	81	U		. 28	97							
1221+397	0	1	2 21	39.6	39	46	33	52	U		. 12	65							
1221+398	0			18.8				+ 47 + 40		33	.13	31	G	0.247	19.41	23.5	1	-2.0 4	
1222+390	1	1:	2 22	53.2	39	05	06	+ 62	R	8	.21	96							
1222+398	39.36 0			4.0 2.7				+ 30 + 15		54	.16	99							
1222+423	272 4			59.6 1.6		22 23		+ 506 636		52	4.02	99							
1223+395	2	13	2 23	22.6	39	30	59	476	U		.51	05							
1225+403	2	12	2 25	45.9	40	20	48	105	U		. 47	-1.17							
1225+442	3	12	2 25	15.7	44	17	16	339	U		.93	79	G	0.220	15.72	16.8	2	8	8
1226+395	0	12	2 26	44.9	39	32	26	31	U		.10	92							
1228+397	2			24.7 27.6		46 46		+ 35 157		52	.60	89	В	17.7	25.90	33.8	2.9	-1.8 4	
1228+419A	. 3	12	28	8.5	41	55	28	+ 801	R1	20	1.77	62	*G	* 0.0016	9.00	13.0	-5.6	15.0	
1229+397	2	12	29	32.5	39	47	13	+ 124	R	8	.40	92							
1229+405	3	12	29	14.2	40	34	05	+ 261	R	10	.91	98	В	19.0	13.84	2.4	4.1	2.6	
1230+398	0			16.0		53		26		51	. 14	-1.00							
12317307	2			18.7		53		13		۰	47	4 00							
1231+394				57.3				+ 121			.47	-1.06							
1231+432								+ 273		22	.82	86							
1232+394				45.7		27		79			.30	-1.05							
1232+397A				3.9	39	47	06	+ 259	R	20	. 46	45							
1232+397B	39.37 3	12	32	39.0	39	42	10	218	U		1.13	-1.29							

TABLE II. (continued)

1	23)	4-	-5-	6	7	8	9	10)-11			13		15	516	17	18	19	2021	122-
1232+399	0	1	.2 ;	32	24.8	39	55	15		60	U		.13	61							
4000 - 4444	44 64 4		•	~~											_						
1232+414A	41.24 4				7.8					278 260			1.81	95	G	0.165	5.00	6.0	.0	-1.0 4	29
1233+399	0	1	2 3	33	50.2			33		25			.11	-1.16							
1233+418	3	. 1	2 :	33	10.8			38		641			1.47	65	c	0.247	10.85	37.3	6	.7	
															•	01241	10.00	07.0	.0	• (
1234+396					26.2	39	30	58		284	U		.54	50							
1236+444A	3	1	2 3	36	10.5	44	30	12	+	193	R	20	. 45	66							
1236+444B	3				15.3					48		237	. 41	84	G	0.180	23.24	24.9	9.7	-9.4 4	
		i	2 3	36	33.0	44	25	04	+	93	D										
1239+382	2				46.4					50		34	. 44	-1.34	G	0.153	47.74	22.0	1.3	.5 4	
		1	2 3	59	49.3	38	15	24	+	30	D										
1239+390	2				8.8			57		107		18	. 75	-1.03							
		1	2 3	59	9.3	39	05	15		95	D										
1239+396	1	1	2 3	39	23.8	39	37	14	+	118	R	14	.31	76	G	0.198	23.56	13.3	2.8	.7	
1239+442B	44.20 3	1	2 3	39	56.1	44	12	19	+	307	D	44	1.21	92	В	18.0	57.00	34.3	2.7	3.2 4	
		1	2 3	39	58.4	44	12	56	+	68	D										
1240+381	2	1	2 4	0	27.0	38	07	25		420	U		. 41	.02	В	* 1.316	27.03	25.1	4	1	20
1240+395	1	1	2 4	0	29.0	39	32	11	+	60	R	8	. 36	-1.40							
1241+411	3	1	2 4	1	57.1	41	80	00		933	U		.80	.12	G?	0.165	57.09	1.4	.1	-1.4	
1242+391	1	•	2 A	2	6.3	30	10	43		34	n	43	25	-1.29							
1242.031	•				7.1				+	14		40	.23	-1.25							
1242+410	4	1	2 4	2	26.4	41	04	29	1	457	U		2.01	25	В?	19.5	26.37	30.2	3	-1.2	ğ
1244+389	38,33 ▲	1	2 A	Δ	22.0	38	58	06		271	ח	22	2.17	-1.09							
12111000	00100 4				23.8		57			271			2,11	1.00							
1244+397	0	1	2 4	4	57.0	39	44	10		41	U		.16	-1.07							
1245+389	1	1	2 4	5 !	57.6	38	58	36	+ 1	130	R	19	. 38	84							
1245+396															BΛ	10.0	44.00	20.0	•		
12437330	1				40.9 41.1		38 38			38 56		30	. 33	90	D!	19.2	41.02	30.2	.0	8 5	
1245+399	1	1 1) A	5 '	26.7	30	56	36	+	72	D	19	.30	85							
-2-10-000	•				27.1					30			.00	.00							
1246+385C	2	1:	2 4	6 !	50.8	38	33	45		85	D	57	.70	91							
1246+385B	_				50.8					134		٠.	110								

TABLE II. (continued)

1	2	-3-	4	5	6		78	9	10-11	:	12	13	14	15	516	17	18	19-	202	122
1247+450A	45.26	4	12	47	2.7	45	01	. 02	+ 464	I	18	1.68	73	В	* 0.799	3.61	10.9	-3.3	-1.9 4	53
			12	47	3.9	45	01	16	+ 197	I)									
1249+393		1	12	49	23.7	39	19	28	108	Į	I	. 26	69							
1249+432	43.25	3	12	49	41.0	43	14	00	437	į	ı	1.40	91							
1249+475	47.35	4	12	49	56.8	47	31	48	342	r	42	3.29	-1.14							
		•			.8			02	428			0.25	1117							
1250+384		2	12	50	9.6	38	27	00	183	ι	ı	. 61	94	G	0.392	9.52	59.7	.9	.3	
1250+390		2	12	50	27.8	39	05	53	119	U		. 46	-1.06							
1251+398		0	12	51	49.1	39	49	24	35	n	29	. 15	- 93	R	19.2	49.36	38.5	.5	1 4	
		•			49.7			53	11					b	13.2	43.00	00.5	• • •	•• •	
1253+374	37,35	4	12	53	55.3	37	29	37	306	n	38	2.27	-1.03							
		•			56.6			12	306			2.2	1.00							
1253+432	43.26	3	12	53	24.5	43	14	39	410	U		1.42	97							
1254+476	280	4	12	54	40.9	47	36	32	+4051	R	12	13.71	96							39
1255+448	44.22	4	12	55	45.1	44	51	27	+ 540	D	28	2.90	98							
					42.7				+ 290											
1256+392		2	12	56	42.2	39	16	30	+ 215	R	15	.80	-1.03	*B	17.6	41.87	22.9	3.8	7.1	
1257+383	38.34	4	12	57	52.3	38	20	29	337	D	32	2.07	98							
					54.4		20		253											
1257+399		0	12	57	25.5	39	57	01	+ 16	ח	30	.11	97							
		•			25.9				+ 16			•••	•01							
1258+395		0	12	58	22.5	30	35	00	+ 31	n	4.4	18	- 87	N	18.5	23.56	10 1	4.7	2.0 5	
		•			25.6				+ 28			.10	.01	N	10.5	20.50	10.1	4.1	2.0 3	
1258+404	280.1	Δ	12	58	13.1	40	25	19	772	n	17	Δ 51	-1 04	R	* 1.656	13 00	15 0	-2 2	1.4	12
1200.404	200.1				14.5		25		424			7.31	1.04		* 1.000	10.55	13.3	-2.2	.1 4	1.2
1259+395	•	0	12	59	41.2	39	31	29	+ 26	R	40	.10	-1.05	*B	19.5	41.76	32.0	-6.5	-3.0	
1300+397		1	13	00	29.1	39	46	00	+ 87	R	10	.27	- 80 :	⊾ D	17.8	29.06	7.6	.5	-7.6	
1301+382	38.35				23.7 24.9				+ 224 + 245		22	1.65	99	G	* 0.126	24.51	17.9	-2.2	-3.0 5	34
1301+393					.9 2.1				+ 28 + 61		26	.32	-1.00	N	19.5	1.09	21.6	4.7	1.4 4	
					38.8				+ 437											

TABLE II. (continued)

1	2 2		A 5		7		0	10 11		E II. (con		_ 15	16	17	19	10	2021	22
1	23		45	0		0-	-9-	-10-11-	-12	13		-13	10		10	15		22
1305+393	1	1	3 05	19.0	39	20	43	+ 139	R 12	. 35	72							
1306+396	1	1	3 06	9.6	39	42	00	64	D 20	. 35	-1.18		,					
		1	3 06	11.4	39	42	03	14	D									
1308+392	1	1	3 08	3 20.6	39	12	57	159	R 15	. 36	64							
1309+412A	3	1	3 09	25.8	41	11	58	163	D351	.83	69	G	0.087	26.92	54.7	2.0	-1.7 4	
		1	3 09	28.4	41	17	48	+ 180	D									
1311+419	3	1	3 11	48.5	41	56	13	+ 84	D 35	1.37	-1.40							
		1	3 11	50.5	41	56	41	+ 147	D									
1312+393	2	1	3 12	49.5	39	19	34	+ 212	R 8	.71	95	B	20.0	49.40	33.2	1.2	.8	
1313+387	3	1	3 13	5.9				+ 90		1.05	-1.22							
		1	3 13	8.9	38	47	20	+ 131	D									
1313+392	1	1	3 13	3 25.2	39	14	22	139	U	.28	55	G	0.392	25.18	24.3	.2	-2.3	
1314+453A	45.27 4	1	3 13	59.8	45	20	18	582	U	1.75	86							
1315+395	2	1	3 15	34.5	39	31	05	+ 160	R 16	.69	-1.15							
1315+396	39.38 3	1	3 15	2.8	39	41	14	618	U	1.16	49	В	17.3	2.86	15.4	7	-1.4	48
1317+380	2	1	3 17	36.2	38	03	07	+ 249	R 11	. 75	86	В	18.6	36.12	9.4	.9	-2.4	
1317+389	1	1	3 17	45.0	38	56	05	253	U	.31	16	В	19.7	44.67	1.7	3.8	3.3	
1317+393	1	1	3 17	28.0	39	18	35	+ 99	R 22	.28	81							
1318+398	1	1	3 18	12.6	39	48	36	61	U	.20	93							
1319+388	1	1	3 19	4.7	38	51	13	+ 84	R 5	.29	97							
1319+397	0	1	3 19	57.6	39	46	29	47	U	.16	96							
1319+398	i	1	3 19	33.9	39	53	55	111	U	.31	80							
1318+428C				.0				+ 821		4.87	76	G	* 0.079	5.16	55.5	2.6	-8.0 4	32
1319+428A	4	1	3 19	10.8	42	51	00	+1025	D									
1320+389	1			5.8		59		29		.20	-1.03							
		1	3 20	7.0	38	59	37	+ 25	D									
1321+415	41.25 4	1	3 21	10.4				+ 290		1.72	87	G	0.392	11.10	52.1	-1.1	.4 4	ë
		1	3 21	11.6	41	30	50	+ 280	D									
1322+398	0	13	3 22	30.9	39	49	19	+ 52	R 14	.19	-1.01							
1324+390	1	1	3 24	47.4	39	04	50	45	D 66	. 24	97							
		1	3 24	48.3	39	05	56	+ 25	D									

TABLE II. (continued)

										TABL	E II. (conti	nued)							
1	2	-3-	4	5	6	7	8-	-9-	-10-11-	-12	13	14	15	516	17	18	19	202	122
1324+431	43.28	3			50.2 51.9		10 10		+ 115 187		1.08	-1.00							
1327+390		1	13	27	51.5	39	00	55	109	U	.38	98							
1327+391		1	13	27	15.2	39	09	43	53	U	.23	-1.15							
1327+398		0			51.6 56.6				+ 14 + 12		.12	-1.20							
1327+474C		4	13	27	46.3	47	27	09	+1300	R400	3.07	67	G	* 0.0017	45.98	21.5	3.2	-12.5	
1328+388		2	13	28	58.2	38	50	26	212	U	. 42	54							
1328+396		1	13	28	45.7	39	36	43	161	U	. 34	59							
1330+380		2			32.1 40.8				+ 71 + 86		.47	86							
1330+389		1	13	30	14.1	38	55	33	+ 62	R 18	.20	92							
1330+406					43.4 44.7		39 39		61 154	D 17	. 69	91							
1331+381		2	13	31	15.7	38	11	21	+ 147	R 26	. 49	94							
1332+385		2			12.2 12.8				+ 46 + 139		.51	79	G	0.110	12.42	19.3	.9	-1.8 4	
1333+392		1	13	33	38.7	39	15	13	110	U	.37	95							
1333+412	41.26	4			9.2 9.8		15 15		312 390	D 12 D	2.98	-1.13	G	* 0.187	9.61	22.4	9	-1.0 5	8
1334+417		3	13	34	16.6	41	46	29	347	U	.89	74							
1335+391		1									.24								
1336+391A	288	4	13	36	38.3	39	06	24	+2820	R 13	10.00	99	G	* 0.246	38.47	21.5	-2.0	2.5	<u>37</u>
1336+393		2	13	36	4.0	39	21	10	95	U	.40	-1.13							
1336+396C					57.6 58.0		41 5		+ 218 134		1.18	95							
1336+397A		0	13	36	5.3	39	43 4	45	64	U	. 16	72							
1336+397B		1	13	36	44.2	39	45 ()7	22	U	.22	-1.80							
1336+395		1									.26								
1336+396A		0									.14								
1336+396B		0									.18								

TABLE II. (continued)

									IABL	E II. (cont	illued)			- I				
1	23		45	56	7	8	-9-	-10-11-	-12	13	14-	15	16	17	18	19-	202	122
1336+401	2									. 41								
1337+385	2	1	3 37	7 13.3	38	30 2	20	94	U	.44	-1.21		,					
1337+396	0									. 19								
1338+391	1									. 20								
1338+394	0	ī	3 38	57.8	39	29 5	9	+ 76	R 20	. 18	68	В	19.0	57.56	58.0	2.8	1.0	
1339+438	43.29 3			45.9 47.7		50 3 50 2		+ 137 181		1.10	97							
1339+472	47.38 4			41.3		12 2 12 1		301 301	D 14	2.21	-1.02	В	19.7	41.73	25.0	.7	-1.5 4	8
1340+439	3	13	3 40	59.9	43	58 2	27	462	U	1.20	75							
1341+392	39.40 3	13	3 41	10.1	39	13 3	9	+ 335	R 23	1.22	-1.01	N	20.5	10.10	36.0	.0	3.0	
1342+389A	3	13	3 42	14.8	38	56 3	31	+ 213	R 15	.86	-1.09	В	17.5	15.11	31.3	-3.6	3	
1342+389B	2	13	3 42	37.9	38	59 3	37	+ 188	R 19	. 46	70	*G	0.220	37.29	35.0	7.1	2.0	
1343+386	38.37 3	13	3 43	26.6	38	38 1	.2	829	U	1.52	48	В	* 1.844	26.76	12.1	-1.9	1	36
1343+430	43.30 4	13	3 43	26.7	43	05 1	.6	+1042	R 11	2.72	75							
1344+397	0	13	3 44	55.2	39	43 5	5	86	U	.16	49							
1345+398	0	13	45	4.5	39	50 5	4	+ 55	R 8	.18	93							
1346+392	1			47.6 47.9		15 0 16 1		32 37	D 72	. 22	91							
1347+391	2	13	47	16.6	39	06 3	4	154	U	. 44	82							
1347+396	1	13	47	.5	39	37 5	9	163	U	. 38	66							
1347+398	1			6.7 8.2		51 4 51 3		54 + 58	D 21	. 39	98							
1347+403	2	13	47	44.2	40	21 1	2	109	U	. 43	-1.08							
1348+392	2	13	48	23.6	39	14 1	2	155	U	.50	92	В	19.0	23.49	13.3	1.3	-1.3	
1348+396	1			30.4 32.4		36 3 35 5		+ 40 56		. 22	65							
1349+394	0			39.6 42.9		26 4 30 2		21 16	D222 D	.10	78							
1349+388	1	13	49	10.9	38	53 0	2	233	U	. 22	. 05	В	20.5	10.63	3.4	3.1	-1.4	10

TABLE II. (continued)

1	2	-3-	4	5	6	7	8	9-	-10-	11-	-12	13	14	-15	16	17	18	19-	2021	22
																		· · · · · · · · · · · · · · · · · · ·		
1350+395		1	13	50	21.3	39	33 2	22	+	75	R 13	. 29	-1.06							
1350+432	43.31	3	13	50	24.0	43	14 (9	1	53	U	.83	-1.33							
1352+383		2			53.8 55.2		19 2 19 4			45 64	D 29 D	. 44	-1.09							
1352+397		1		52 52	.2 7.2		42 (43 1				D108 D	.32	-1.01							
1352+403		2		52 52			20 5 20 2				D 24 D	. 47	-1.10							
1353+380		2			43.8 46.1		00 C			68 87	D 27 D	. 49	90							
1353+397		2		53 54	52.7		47 5 48 1			27 21	D 87 D	.53	-1.00							
1354+397	39.41	3			8.0 9.5		44 2 43 4			38 23	D 42 D	.96	-1.40							
1355+380					30.6 32.3		04 0 04 3				D 34 D	.60	89	В	20.0	30.54	4.8	.7	-1.9 1	
1356+393		2	13	56	40.8	39	18 3	5	2	48	U	.74	86							
1356+397		0	13	56	7.1 8.5 10.8	39	47 3 47 1 47 0	8		6	T 53 T T	.12	73	*B	20.2	8.84	16.8	-3.9	1.2 2	
1357+392		1	13	57	5.3	39	15 ()5	+	53	R 37	.20	-1.04	B?	21.2	4.97	5.6	3.8	6	
1357+394A		1	13	57	48.8	39	27 3	4	1	85	U	.21	10							
1357+394B					56.0 56.9		25 1 25 3			47 56	D 20 D	. 41	-1.08	В	20.5	56.50	25.7	1	-1.9 5	
1358+433	43.32				28.2 31.0		18 3 18 3			07 07	D 30 D	1.37	94							
1359+419		3	13	59	30.0	41	56 4	2	+ 3	15	R 11	1.16	-1.02							
1401+387	38.38				4.6 5.5		42 5 41 3				D 72 D	1.64	85	В	15.8	4.55	20.8	5.6	-5.0 5 2	3
1401+395		0	14	01	59.3	39	35 3	0	+ !	52	R 7	.17	93							
1402+382					20.4 21.8		15 0 14 3		+ ! 1:		D 29 D	.64	-1.04	B?	16.5	21.90	34.3	-1.2	2.7 2	
1403+395		1	14	03	6.6	39	31 4	1	+ (61	R 18	. 24	-1.07							

TABLE II. (continued)

1	23	4	5	6	7	8	9-	10	-11-	-12	13	14	15	16	17	18	19	202	122
1406+397	1	14	06	20.4	39	45	42		102	U	.32	90							
1407+388	1	14	07	21.1	38	52	12		51	D 14	. 26	73	G?	0.392	21.30	14.5	-2.3	-2.5 1	
		14	07	22.3	38	52	80		51	D				*					
1408+398	2	14	08	37.3	39	48	42	+	137	R 26	. 42	88							
1408+399	0	14	08	13.7	39	59	32	+	44	R 32	.17	-1.06							
1409+390	2	14	09	37.7	39	00	23		179	U	. 46	74							
1409+394	1	14	09	22.7	39	28	21	+	118	R 29	. 29	70							
1410+438	*3 33 3	4.6	10	16 4	42	52	25		200	D 73	1 24	-1.08							
1410+436	40.00 0			20.2		51			130		1.34	-1.00							
1411+391A	1	14	- 11	48.8	39	07	26		81	U	. 22	78							
44442010		• •		EE 0	20	00	20		EΛ	n 20	20	- 04							
1411+391B	1			55.0 57.2		09 09			7 4	D 38 D	. 39	84							
1411+397	0	14	- 11	9.3	39	44	56	+	61	R 19	.13	59	G?	0.328	9.43	57.3	-1.5	-1.4	
1411+427	9	1.6	4.1	39.4	42	٧.5	1.4		107	D 32	.96	-1.08							
14111421	3			42.0					114		. 30	-1.00							
1412+392	2	14	12	59.5	39	13	11		199	U	.47	67							
1412+397	0	1 4	12	45.0	39	43	56		20	D 39	.17	-1.22							
- /	•			48.3		44			16		•••								
1413+398	0	14	13	12.8	39	51	37	+	30	R 10	.13	-1.15							
1414+398	1	14	14	30.8	39	51	35	+	46	D139	. 24	-1.07	#G	0.031	29.20	12.0	.0	5.0 2	
				29.2					15										
1415+391	1	14	15	49.9	39	12	11	+	11	D 47	.21	97							
		14	15	52.4	39	11	33		50	D									
L416+400	2	14	16	56.6	40	00	37		98	D 24	.67	96	В	20.0	56.66	24.8	1	.2 4	
		14	16	56.7		00			98										
1417+383	2	14	17	51.6	38	20	09	+ ;	199	R 15	.54	78							
1417+385	2	14	17	43.0	38	35	32		750	U	.47	.37	В	19.3	43.05	32.6	6	6	10
1417+397	0	14	17	44.1	39	46	05	+	15	D 57	. 12	-1.01							
	,			49.1					18		-								
1418+388	2	14	18	58.6	38	49	25		132	U	.55	-1.12							
1419+397	2	14	19	21.6	39	47	11	;	315	U	.57	46	G	0.328	21.56	13.0	.5	-2.0	
1419+399	^	1 4	10	23.9	30	57	NΑ	1	RΛ	R 40	.14	_ ^^	D	17.4	23.92	8.0	2	.0	

TABLE II. (continued)

1	2	-3-	4	5	6	7	·E	39	10)-11-	12		13	14-	15	16	17	18	19-	2021	22
1419+419	299	4	14	19	6.4	41	. 58	30	2	640	U		8.17	89	G	* 0.367	6.17	29.0	2.6	1.0	40
1420+386		2			9.8	38	40	20	+	74	D	29	. 41	92							
			14	20	11.3	38	40	44	+	52	D										
1422+395		1	14	22	16.1	39	35	07	+	52	T1	36	. 26	-,44	*G	0.247	17, 20	24.8	12.7	12.2 2	
·····					18.3					50				• • •	•		1,,,,,	2110		12.2 2	
			14	22	27.9	39	35	04	+	47	Ţ										
1422+401B		2	14	22	27.9	40	06	51		235	U		.74	90							
1424+380	38.39	2	14	24	02.9	38	02	26	+	40	R	45	.78	-2.32							
1426+394		2	14	26	12.9	39	25	41	+	196	R	8	. 44	63							
1426+398		1	14	26	41.9	39	50	34	+	53	T1	83	. 27	79							
			14	26	45.5	39	52	02		5	Ţ										
			14	26	48.6	39	53	21	+	40	T										
1427+404		2	14	27	56.6	40	24	16	+	99	D	42	. 41	96	*G	0.132	56.20	44.7	13.7	-9.6 4	
			14	27	58.2	40	24	54		21	D										
1428+380		2	14	28	31.5	38	03	07	+	70	D	41	.52	-1.09	G	0.220	32.18	24.4	.1	05	
			14	28	33.0	38	03	4 5	÷	59	D										
1428+385		3	14	28	52.1	38	32	54		87	T	41	.82	-1.01							
					53.4			35		70											
			14	28	55.5	38	33	05		70	Ţ										
1429+392		1	14	29	36.1	39	12	48		91	U		.31	96							
1429+395		1	14	29	42.3	39	32	18		131	U		. 38	83							
1430+399		0	14	30	25.1	39	57	40		19	D	66	. 14	-1.23							
			14	30	29.9	39	58	22		10	D										
1432+382		3	14	32	56.4	38	17	54	+	458	R :	26	1.09	68	G	0.282	56.24	55.2	1.9	-1.2	50
1432+389		1	14	32	14.0	38	56	03		57	U		.22	-1.06							
1432+397A		0	14	32	19.8	39	42	39		42	U		.10	68							
1432+397B		0	14	32	57.1	39	47	13	+	54	R	8	.15	80	N	18.5	56.88	14.0	2.5	-1.0	
1432+428B		3	14	32	32.4	42	49	25		740	U		.93	18							
1435+383		2	14	35	32.9	38	20	42		182	U		.54	85	В	17.0	33.32	43.7	-4.9	-1.6	
1435+429	42.38	3	14	34	59.0	42	57	15	+	263	R 2	20	.92	98							
1436+399		0			36.9 45.5			56 50		11 23		99	.13	-1.05							

TABLE II. (continued)

1	23	}	-4	56	7	78	39	1	0-11-	1:	2	13	14	15	16	17-	18-	19-	202	2122-
1437+397	1	. :	14 3	7 11.9	39	46	33		36	D	10	. 24	85							
		1	14 3	7 12.4	39	46	24		45	D										
1437+427	42 3G 4	. ,	143	7 5A B	45) AE	: 53		330	ח	E A	1.91	-1.18							
1407.427	72.00 1			7 52.8					94		34	1.51	-1.10							
										_										
1438+382	2	: 1	14 3	8 11.5	38	3 14	46		185	U		.67	-1.01							
1438+385	3	. 1	4 3	8 22.4	38	. 33	05		947	R	Я	.96	01							
1700.000	•			V 22.7	00		. 00	·	341		Ū	.00	•01							
1438+406	2	: 1	4 3	8 30.9	40	41	17	+	89	R	8	. 40	-1.18	G	0.282	31.24	14.3	-3.9	2.7	
1441+409	٨	,	/ A	1 3.1	40	. .	10		960			1 60	- 50							
14417403	4		.4 4.	1 3.1	40	31	10		869	U		1.68	52							
1442+383	2	1	4 42	2 17.8	38	21	12	+	151	R	8	. 42	80							
4440.004	•					••														
1442+384	2			2 37.3 2 43.5					85 53		72	. 46	94							
		_	. 7 76	2 40.0	30	23	J2	•	55											
1442+441	44.23 3	1	4 42	2 57.4			55		110	D	49	1.24	-1.13							
		1	4 42	2 58.8	44	10	42		185	D										
1444+395	0	1	4 44	4 30.1	39	33	32		58	U		. 15	74							
	•	-				-	-		-	·			• • •							
1444+417A									200		97	1.58	-1.03	В	18.2	32.36	50.1	3.2	1.4 4	
1444+417C		1	4 44	37.0	41	45	57	+	225	D										
1445+410	3	1	4 45	17.3	41	00	15	+	309	R	8	.98	91	G	0.180	17.32	15.2	2	2	
																			-	
1446+399	0			5 5.4					20		05	.18	74							
		1	4 40	6 16.1	39	20	00	†	50	ע										
1446+440	44.24 3	1	4 46	6 40.1	44	04	39	+	260	D	51	1.42	90							
		1	4 46	42.4	44	05	24	+	193	D										
1447+380	2	1.	Δ Δ7	18.1	38	01	06	+	88	P	R	. 42	-1,22							
	-	•				••	•••		00		•	172	11.22							
1447+400	3			32.5		00			124		40	.97	-1.08							
		1	4 47	34.2	40	01	04		122	D										
1447+402	40.33 3	1	4 47	4.6	40	13	36	+ ;	228	T :	99	1.12	77	G	0.132	4.76	9.6	10.3	-8.0 5	50
		1	4 47	4.8					102		_			-			•	2010	51.5 5	2.2
		14	4 47	9.3	40	12	12		91	T										
1449+380	2	14	ΔQ	1.2	38	0.3	50	+	159	R '	20	.52	93							
- / 10 . 000		•	. 73		UU	00	50	٠.	.03		-0	102	. 30							
1449+421	41.29 4	14	49	14.2	42	07	00	(582	U		2.37	98							
14501300	4											20								
1450+390	1											. 39								
1450+391B	39.42 3	14	50	7.8	39	80	37	+ 5	500	D23	35	1.68	61	G	0.100	12.20	30.3	-42.1	28.7 5	
1450+392	1	14	50	10.0	39	12	31	+ 2	270	D										
1450+396	٨	4.6	. EA	7.4	20	20	۸7	1	35	n e	2	.11	90							

TABLE II. (continued)

1	23		4!	56	7	8-	-9-	-10	-11-	-12	13	14-	15	516	17	18	19-	2021	l22-
1451+396	1	1	4 5:	1 53.3	39	37	59		87	U	.32	-1.02							
1452+394	1	1	4 5	2 59.4	39	23	58	+	97	R 11	. 24	71	G	0.198	59.42	56.1	2	1.9	
1453+397	1	1	4 50	3 34.5	39	46	03		73	U	. 29	-1.08							
1454+394	1	1	4 54	4 24.2	39	26	48		74	U	. 26	98							
1455+399	0	1	4 5	5 52.1	39	57	58	+	20	R 18	.10	-1.26							
1455+421	42.40 3	1	4 5	5 49.0	42	10	48		372	U	1.39	-1.03							
1457+388A	2	1	4 5	7 14.0	38	48	39	+	77	D 23	.51	-1.11	*B	18.9	14.61	25.0	1.6	6.5 4	
				7 15.5		48													
1458+433	3	1	4 58	3 40.5	43	21	41		370	U	1.08	84							
1459+399	1	1	4 59	8.1	39	53	49		38	D177	. 22	65							
		1	4 59	21.9		55			58										
2300+382	2	2	3 00	54.4	38	12	28	+	168	R 7	.61	-1.01	G	0.220	54.52	22.2	-1.4	5.8	
2301+394A	i	2	3 01	28.4	39	25	13		138	U	.35	73							
2301+394B	1	2	3 0	36.1	39	27	01		55	D 15	.33	-1.00	N	20.0	37.00	55.2	2.3	-3.2 2	
		2	3 01	37.2	39	26	52		37	D									
2301+398	1	2	3 0	1 5.7	39	50	02	+	28	D 29	.37	-1.35	N	19.5	7.40	3.0	-3.0	1.9 5	
		2	3 01	8.2	39	50	07	+	38	D									
2301+430	42.54 3	2	3 01	30.9	43	01	34	+	141	T 98	1.01	-1.18	N	16.0	30.14	11.2	-6.4	-9.9 5	
				28.8		00				T									
		2	3 0:	1 27.2	43	00	04	+	80	Ť									
2301+443	44.42 4	2	3 01	27.8	44	22	55		966	U	4.04	-1.12							
2302+396	0	2	3 02	2 27.2	39	40	32	+	9	R 30	. 15	-2.20							
2302+402	40.48 4	2	3 02	34.8	40	12	41	1	163	U	2.53	61							
2303+391A	39.72 4	2	3 03	45.3	39	09	33	+ ;	360	D167	1.85	89	G	* 0.206	43.84	6.4	1.9	-10.9 4	34
		2	3 03	3 42.7	39	12	18	+ :	236	D									
2304+377	4	23	3 04	39.4	37	46	28	13	354	U	2.60	51	N	20.0	39.45	27.5	6	.5	18
2304+398	1	23	3 04	44.3	39	53	55	+	63	R 25	. 20	90							
2304+429	3	23	3 04	12.1	42	54	15	+ 1	138	D 41	. 84	-,94							
				13.8	42	54	52	+ :	116	D									
2305+404	40.49 3	23	3 05	33.1	40	25	34	+ 1	189	R 7	. 99	-1.30							
2306+392	1	2:	3 NF	34.6	39	17	19	+	71	R 12	. 22	89							

TABLE II. (continued)

1	23		45	56	7	8-	-9-	-10-11	-12	13	14-	15-	16	17	18	19-	202	122-
2308+393	1			3 34.5 3 36.3				+ 36 + 41		. 24	89							
2308+395	0	2	3 08	19.4	39	35	24	33	U	.11	94							
2308+400	2	2	3 08	32.7	40	03	51	146	U	.63	-1.15							
2311+387	2	2	3 11	37.5	38	45	29	238	U	.50	58							
2311+396A	0	2	3 11	27.9	39	36	42	+ 35	R 76	.12	96	N	18.5	27.90	42.0	.0	.0	
2311+396B	0	2	3 11	53.8	39	38	51	32	U	.13	-1.10							
2311+469	46.47 4	23	3 11	29.2	46	55	55	1802	U	4.34	69	В	17.5	29.14	54.5	.6	.5	51
2313+406	2			46.9				+ 127 + 66		.68	99	∗G?	0.026	47.42	47.3	-2.5	7.2 4	
2315+396	39.73 4			25.0 25.2				+ 586 + 308		2.50	81	N	20.0	25.02	11.9	.9	1.6 4	24
2316+398	1			56.4 58.2				+ 42 + 47		. 29	93	В	20.0	57.66	38.5	-3.5	4.0 5	
2318+389	1	23	18	54.8	38	55	48	59	Ü	. 22	-1.03							
2320+396	1			19.6				+ 33 + 58		. 26	82							
2320+416B 2320+417	3			18.7				+ 145 + 15		1.07	-1.49	* G	0.165	19.46	45.7	-2.7	-14.5 5	
2321+423	4	23	3 21	30.3	42	19	19	688	U	2.07	86							
2322+396	0	23	3 22	52.8	39	41	06	126	U	.12	.04	В	17.8	52.78	7.2	.2	-1.2	
2322+403	3	23	3 22	23.8	40	23	52	317	U	.85	77							
2323+388	2	23	23	14.8	38	49	25	154	U	.48	89							
2323+398	0			6.0 6.4		51 51		19 14	D 16	.17	-1.28							
2323+435A	4	23	23	18.4	43	30	28	1626	U	2.90	45	G	0.220	18.34	28.2	.6	2	13
2324+394B	1	23	24	42.6	39	26	48	+ 47	R 18	. 26	-1.34							
2324+394A	0									.17								
2324+395	0									. 19								
2324+399	1									. 24								

TABLE II. (continued)

									•	ABL	e II. (Cont	mucu,						
1	23-	4	5	6	7	8-	-9-	-10-11-	-13	2	13	14	-15-	16	17	18	19	202122
2324+405	40.50 4			30.0 30.9				+ 990 +1652		16	5.52	58						
2325+396	1	23	25	33.2	39	39	10	58	U		.28	-1.23						
2326+395	2	23	26	24.9	39	31	25	198	U		.51	74						
2326+422	3			33.0 33.0		15 15		201 207		16	1.02	72	G	0.247	33.10	31.5	-1.1	4 5
2327+391	1			58.5		10		86			.36	-1.12						
2327+407	2	23	27	42.7	40	47	52	+ 234	R	6	. 48	56	В	17.5	42.88	51.8	-2.0	. 2
2327+422	3	23	27	39.5	42	17	13	+ 312	R	17	1.12	-1.00						
2328+397	0	23	29	0.0	39	46	58	+ 20	R	80	.11	-1.33						
2329+398	0			45.5 48.4		50 50		+ 22 21		34	.18	-1.12	В	21.2	46.68	43.8	2.7	1.3 5
2330+387	3	23	30	35.4	38	44	38	664	U		1.12	41						
2330+389	1	23	30	1.3	38	58	28	76	U		.30	-1.08						
2330+397	0	23	30	27.2	39	45	21	68	U		. 18	76						
2330+402	4	23	30	26.2	40	14	02	803	U		1.78	62						
2330+435	43.58 3			54.5 58.2		30 30		146 88			1.15	-1.25	N	15.4	56.10	15.0	2.7	-2.5 4
2331+399	3	23	31	17.2	39	55	53	+ 255	R	20	.83	93						
2332+388	2	23	32	34.8	38	49	34	105	U		. 42	-1.09						
2332+399	1	23	32	7.1	39	56	47	147	U		. 39	76						
2333+397	0	23	33	59.1 1.4 3.6	39	43 42 43	56	15 + 15 17	T		. 16	96						
2333+399	0	23	33	6.2	39	55	07	46	U		.12	75						
2334+398	3	23	34	26.6 28.1 29.0	39	49	14	+ 280 21 + 151	T		1.01	63	G	0.142	28.00	8.8	-1.1	.9 4
2335+392	2	23	35	43.0	39	16	56	+ 170	R	14	. 56	93	B?	19.0	43.32	55.5	-3.7	.5
2336+381	3			24.1 25.7				+ 183 + 82			.90	96	N	17.5	25.00	41.8	-1.2	5.7 4
2337+398	i	23	3 37	15.0	39	52	07	87	U		. 24	80	G	0.282	15.02	7.6	2	6

TABLE II. (continued)

											1 A	BLE	II. (cont	inued)							
1	2-	3		45	56-		78	39	10)-11	12		13	14	1	516	17	18	19	202	122
2338+390		2	23	38	44.9	39	9 01	. 51	+	177	R	10	.62	98	В	19.7	44.84	49.3	.7	1.7	
2338+393		1			47.6 56.4			14			D1 D	39	. 23	43							
23401305	20 5	, ,						39				97	00	-1 10							
2340+386	30.3	4 3			59.8					83	D D	21	.90	-1.10							
2341+396a		1	23	3 41	37.5	39	37	15	+	76	R	20	.37	-1.24	G	0.198	37.40	14.0	1.2	1.0	
2341+396b		1			42.9 45.4			00 52		19 11	D.	73	.37	-1.97	G	0.220	44.10	31.2	-3.3	3.9 5	
2341+399		1			54.5						R:	17	.35	-1.00							
2342+394					29.2						R		.11	-1.22							
2344+429		3	23	44	52.9	42	54	12		441	U		.92	58	В	17.5	52.88	12.7	.2	7	
2347+397		0	23	47	54.1	39	45	21	+	31	R 1	15	.12	-1.06							
2348+387		2			1.4			39			T 8	30	. 43	89							
					3.9 4.8		46 46	47 39		32 58											
2348+450	45.50) 4	23	48	57.0	45	01	49	1	594	U		1.80	87							
2349+396		2	23	49	31.8	39	38	21		162	U		.51	90							
2349+410	41.46	3	23	49	21.5	41	04	33	;	394	U		1.38	98	В	19.2	21.46	34.0	.5	-1.0	
2350+395		0	23	50	17.2	39	31	13		195	U		. 15	.21							
2351+394		2			8.3 10.2					68 81	D 3	35	.59	-1.08							
2351+398		0	23	51	9.1	39	49	00		21	U		.11	-1.30							
2351+400B	40.51	4					01				D 8	3	1.98	-1.05							
					28.6		01			254											
2351+456	45.51						36			69		_			N	20.0	50.04	23.0	4	-1.0	25
2352+385					5.8						R			91							
2354+397		U			32.7 36.2		46 45			35 14	D 7 D	9	. 20	-1.10							
2354+471 2355+471A	47.63				52.6 3.5					60	D25	8	4.40	72	G	* 0.046	57.10	41.2	10.9	-15.7 5	16
2355+397					38.7			11		54			. 33	-1.42							

TABLE	Н.	(continued)

1	2	-3-	4	5	6	7	8	9-	-10-11-	12	!	13	14	-15	16	17	18	19	20212
2355+398		2	23	55	28.0	39	49	47	159	U		.56	99	В	18.0	27.68	45.0	3.7	2.0
2356+390		3	23	56	26.5	39	05	47	373	U		.93	72						
2356+437	470	4	23	56	2.3	43	47	57	1536	U		5.36	98						
2357+398		1	23	57	5.3	39	49	54	+ 67	R	11	.32	-1.23	G	0.198	5.24	49.6	.7	4.4
2358+390		1	23	58	7.9	39	01	22	204	U		.37	47						
2358+406	40.52	4	23	58	19.4	40	37	19	1181	U		2.02	42						
2358+416	41.47	4			45.7 46.0	41 41			212 297		23	2.21	-1.15						
2359+394		3			7.4 11.2				+ 201 + 70		45	.96	99						

Notes to TABLE II.

0001+398	Confused by an 8 mag. star, high reddening.	0031+395	Not detected at VLA (< 3 mJy); source marked as "bad" in B3 catalog.
0003+397	Not detected at VLA (<1mJy).		·
0005+383B	Peculiar triple radiosource with strong central comp.; gal. in cluster, see map.	0031+396	Not detected at VLA (< 3 mJy); source marked as "bad" in B3 catalog.
0010+402	Could be cluster member.	0031+398	Not detected at VLA (< 3 mJy); source marked as "bad" in B3 catalog.
0010+405	Compact galaxy.		-
0013+393	Object plate limit only in red 9" NE.	0035+385A	Object 18.5 mag 4" preceding the North component. Physical double with 0035+385B
0015+399	The two radio components could be physically unrelated; the field is empty anyway.	0038+399	Brightest member of a faint cluster.
0020+437	A 19.5 magnitude bluish starlike object is 8" N of radio midpoint.	0039+412	The source is within a spiral arm of M31. Nothing evident as possible id.
0026+397	Probably a "tail" source; the galaxy coincides with the N. comp.	0041+382 A	Stellar object 14 mag. 8" SE.
		0045+393	Stellar object 9" SW, 16 mag.
0028+394	A 20 magnitude galaxy is 7" S from radio centroid.	0045+396	A second gal. is 6" NE, probably interacting.
0029+394	A 15 magnitude neutral color starlike object 8" NE.	0045+404	The radio map shows a faint halo (< 4 mJy peak) diam. 30".
0030+394	Not detected at VLA (< 3 mJy).		•
0030+396	Not detected at VLA ((3 mJy),	0049+395	The two components do not appear to be physically connected.

0050+401	Triple source, with B30050+403 and 0050+402B; this latter was not originally included in the VLA sample. Total 408Mhz flux is	0146+394	The two radio comp. are probably physically unrelated. The B3 flux is probably uderestimated.
	given.	0147+398	Very red galaxy, perhaps in group.
0058+403	A 15 mag. neutral color starlike object 7" S.	0152+382	The radiosource could be a "tail".
0059+397	A 17.5 mag. object very red and compact, 3" W of the S component.	0152+435	There is a faint galaxy 7" SE from the N comp.
0059+461	A 19 mag object 3" S of the N	0157+393A	The radiosource could be a "tail".
00001401	component.	0157+442	Cluster or group of galaxies?
0107+399	Stellar object 8" N 16.5 mag., possibly blue.	0158+394	Also a 18 mag. galaxy 4" NE.
0108+396	Object coincident with the	0207+389	NGC 828
	midpoint, diffuse, elongated, visible only in blue, 20 mag.	0207+395	The object is confused by a 13 mag. star 7" SE; it could be
0108+402	Spiral galaxy 15 mag. 15"NW.		blue.
0109+415	Galaxy in compact group.	0211+393	Galaxy in group.
0110+401	Also a 19 mag. galaxy 7"W.	0213+407	Galaxy in cluster?
0115+453A	The identification listed by Spinrad et al. 1985 is not	0213+412	A faint object, possibly a galaxy, 8°W.
	confirmed: our position differs from the position listed there by	0214+393	Double galaxy? Interacting?
0116+438	8 arc sec.	0218+396	Blue starlike object, 17 mag.,6"NW from comp. S.
0110*430	Also a blue object, 18.5 mag. 4"S of component S.	0218+397	Undetected at VLA (< 3 mJy); source marked as "bad" in B3
0119+397	Object at plate limit, only in red. 7 SE.		catalog.
0120+405	Object very red 9" NE.	0218+399A	A 18.5 magnitude galaxy, 30" SW of radio centroid, coincides with an extension of S component; may be
0123+396	Galaxy in cluster.		the identification. Cluster.
0128+389	Not detected at VLA ((1 mJy).	0218+402B	Includes the source B30218+402A;
0131+390	Galaxy bluish in color.		the B3 positions are in error; the 408 MHz flux given is the
0132+392	The two radio comp. could be physically unrelated.	0219+397	total. Stellar red object 17 mag. 8" E.
0134+389	A 15 magnitude neutral color starlike object 6" S.	0219+421	Nucleus of NGG 891; the fluxes are unreliable at both frequencies.
0143+446B	The object could be a red, compact galaxy or the chance superposition of two stars.	0219+428A	Part of 3C66. BLO (see Spinrad et al. 1985)

0220+393A	A 18.5 magnitude galaxy 14" NE.	0258+435	Includes also 0258+434B listed separately in B3. The source is a "tail". The published map is C-
0159+390	Galaxy in cluster, alternate possible identification. Radiosource structure is		config. but the tabular data are from a D-config. map.
	distorted (see map).	0259+391	A 20.5 mag. blue starlike object 9" S.
0201+396	A possible second radio component		
	at 020135.4, +394055, 15mJy. The field remains empty.	0220+427A	Part of 3066, physical double with B3 0219+427D.Classification,
0202+380	Wide double source, uncertain ident., four other candidate id. present.		positions and fluxes are from a D-config. map; the published map is C-config.
		0221+383	A 19.5 mag. red object on the line
0221+393	Id. uncertain, many candidates in between the two comp. There is also a very diffuse object		joining the components, but far from midpoint or baricenter.
	(galaxy?) 30 arcsec in size, 1 arcmin S of the S comp.	0700+390	The radio components could be physically unrelated; there is a
0222+397	Undetected at VLA (<3 mJy).		18.5 mag. blue object some 20" from the midpoint (position 070040.21 +390321.5). The B3 flux
0225+389	There might be a third radio component at 022552.83, +385519.		is underestimated.
		0703+426A	Galaxy in cluster, coincides with
0233+390	A 19 magnitude galaxy 7" NE of the radio centroid. A second very faint object (G?) sits on the		the S comp.; "tail" radiosource. B3 flux is probably underestimated.
	strong radio component. The radio comp. could be unrelated.	0703+426B	There is a compact object, 17 mag.
0237+396 A	17.5 mag. galaxy 7" NW.		possibly in cluster, at 07 03 31.0 +42 37 59.
0240+404 Th	e physical connection between the	0708+388	Bluish color.
	radio components is doubtful.	0700 : 000	m
0241+393B T	he source 0241+393A is also in the	0709+393	Two radio comp. probably unrelated.
	field, but probably without		
	physical relation (see map).The R-O shift referred to the	0710+403	Possible cluster or small group.
	midpoint of the two components is da=+1.6, dd=+1.3 arcsec.	0712+391	The central radio comp. is visible on a high-resolution, A-array VLA map.
0246+393	Physically connected with		
	B30247+393A; is 3C73.	0720+381	The galaxy coincides with the N comp.; the radiosource is not
0248+467	Associated to B30247+468B; ident. is IC260. Positions and fluxes from D-config. map. The published		adequately described by a double source model (see map).
	map (erroneously named 0247+467) is C-config.	0724+396	Bluish color, coincident with the N comp.(the data are from A-conf.) C-map shows further
0250+384 A	19.5 mag. blue starlike object 7" E of the radio centroid.		extension toward North; also a very red object, 18 mag., 7" NE.

Stellar object, neutral color, 17.5 mag., 10" E. 0805+406 A second 20 mag. object 7" NW 17.5 mag., 10" E. 0807+399 Could be a "tail" source.
O739+395 Galaxy in cluster, brightest member. O807+399 Could be a "tail" source. O810+4608 A second plate limit object 10" N both objects are visible also in blue O733+389 Red double stellar object. O811+388 Galaxy in group. O736+400 Bluish color. O818+472A Galaxy in group. O739+397 Two physically unrelated sources: the S comp. is identified with a very red, compact object, the N comp. with a 19 mag. blue object. B3 flux is for the whole complex, the spectral index for the unresolved component (N) is a lower limit. O742+376 The two radio comp. could be physically unrelated. There is a faint, blue stellar object, visible only on the blue printat about 1 arcsec from the S component. O753+391 A 18.5 magnitude galaxy 12" NE of radio centroid. Also a second, very faint bluish galaxy, closer to midpoint. O754+394 D map only; the bright blue object is a confirmed quasars with
member. 0810+460B A second plate limit object 10° N both objects are visible also in blue 0733+389 Red double stellar object. 0811+388 Galaxy in group. 0736+400 Bluish color. 0818+472A Galaxy in group. 0739+397 Two physically unrelated sources: 0821+399 Undetected at VLA; marked as "backing B3. very red, compact object, the N comp. with a 19 mag, blue object. 0821+447 Cluster or group of faint galaxies in the field. B3 flux is for the whole complex, the spectral index for the unresolved component (N) is a lower limit. 0823+384B Other galaxies in the field; the source could be a "tail". 0742+376 The two radio comp. could be physically unrelated. There is a faint, blue stellar object, visible only on the blue printat about 1 arcsec from the S component. 0836+402 Compact object; a second fainter object 8° S; both are visible also in blue. 0753+391 A 18.5 magnitude galaxy 12° NE of radio centroid. Also a second, very faint bluish galaxy, closer to midpoint. 0847+406 A second fainter radio component at 084718.8, +404200, 30 mJy, probably unrelated; the spectral index is for the two sources to midpoint.
0733+389 Red double stellar object. 0735+388 Possibly in cluster. 0811+388 Galaxy in group. 0736+400 Bluish color. 0818+472A Galaxy in group. 0739+397 Two physically unrelated sources: the S comp. is identified with a very red, compact object, the N coap. with a 19 mag. blue object. B3 flux is for the whole complex, the spectral index for the unresolved component (N) is a lower limit. 0742+376 The two radio comp. could be physically unrelated. There is a faint, blue stellar object, visible only on the blue printat about 1 arcsec from the S component. 0753+391 A 18.5 magnitude galaxy 12" NE of radio centroid. Also a second, very faint bluish galaxy, closer to midpoint. 0847+406 A second fainter radio component at 084718.8, +404200, 30 mJy, probably unrelated; the spectral index is for the two sources
0736+400 Bluish color. 0818+472A Galaxy in group. 0739+397 Two physically unrelated sources: the S comp. is identified with a very red, compact object, the N comp. with a 19 mag. blue object. B3 flux is for the whole complex, the spectral index for the unresolved component (N) is a lower limit. 0742+376 The two radio comp. could be physically unrelated. There is a faint, blue stellar object, visible only on the blue printat about 1 arcsec from the S component. 0753+391 A 18.5 magnitude galaxy 12" NE of radio centroid. Also a second, very faint bluish galaxy, closer to midpoint. 0818+472A Galaxy in group. 0821+399 Undetected at VLA; marked as "bad in the field. 0823+384B Other galaxies in the field; the source could be a "tail". 0827+399 Undetected at VLA; marked as "bad in B3. 0836+402 Compact object; a second fainter object 8" S; both are visible also in blue. 0753+391 A 18.5 magnitude galaxy 12" NE of radio centroid. Also a second, very faint bluish galaxy, closer to midpoint. 0847+406 A second fainter radio component at 084718.8, +404200, 30 mJy, probably unrelated; the spectral index is for the two sources
O818+472A Galaxy in group. O739+397 Two physically unrelated sources: the S comp. is identified with a very red, compact object, the N comp. with a 19 mag. blue object. B3 flux is for the whole complex, the spectral index for the unresolved component (N) is a lower limit. O742+376 The two radio comp. could be physically unrelated. There is a faint, blue stellar object, visible only on the blue printat about 1 arcsec from the S component. O753+391 A 18.5 magnitude galaxy 12" NE of radio centroid. Also a second, very faint bluish galaxy, closer to midpoint. O754+394 D map only; the bright blue object is a confirmed quasars with O821+399 Undetected at VLA; marked as "bad in B3. Compact object; a second fainter object 8" S; both are visible also in blue. O837+399 Could be a "Tail". O847+406 A second fainter radio component at 084718.8, +404200, 30 mJy, probably unrelated; the spectral index is for the two sources
the S comp. is identified with a very red, compact object, the N comp. with a 19 mag. blue object. B3 flux is for the whole complex, the spectral index for the unresolved component (N) is a lower limit. 0742+376 The two radio comp. could be physically unrelated. There is a faint, blue stellar object, visible only on the blue printat about 1 arcsec from the S component. 0753+391 A 18.5 magnitude galaxy 12" NE of radio centroid. Also a second, very faint bluish galaxy, closer to midpoint. 0754+394 D map only; the bright blue object is a confirmed quasars with in B3. 0821+447 Cluster or group of faint galaxies in the field; the spectral index is for the two sources could be a "tail". 0827+399 Undetected at VLA; marked as "bad in B3. Compact object; a second fainter object 8" S; both are visible also in blue. 0836+402 Compact object; a second fainter object also in blue. 0847+406 A second fainter radio component at 084718.8, +404200, 30 mJy, probably unrelated; the spectral index is for the two sources
B3 flux is for the whole complex, the spectral index for the unresolved component (N) is a lower limit. O742+376 The two radio comp. could be physically unrelated. There is a faint, blue stellar object, visible only on the blue printat about 1 arcsec from the S component. O753+391 A 18.5 magnitude galaxy 12" NE of radio centroid. Also a second, very faint bluish galaxy, closer to midpoint. B3 flux is for the whole complex, in the field. O823+384B Other galaxies in the field. O827+399 Undetected at VLA; marked as "bad in B3. Compact object; a second fainter object 8" S; both are visible also in blue. O836+402 O837+399 Could be a "Tail". O847+406 A second fainter radio component at O84718.8, +404200, 30 mJy, probably unrelated; the spectral index is for the two sources teacher.
unresolved component (N) is a lower limit. 0823+384B Other galaxies in the field; the source could be a "tail". 0742+376 The two radio comp. could be physically unrelated. There is a faint, blue stellar object, visible only on the blue printat about 1 arcsec from the S component. 0836+402 O836+402 Compact object; a second fainter object 8" S; both are visible also in blue. 0753+391 A 18.5 magnitude galaxy 12" NE of radio centroid. Also a second, very faint bluish galaxy, closer to midpoint. 0847+406 O847+406 A second fainter radio component at 084718.8, +404200, 30 mJy, probably unrelated; the spectral index is for the two sources treather.
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to midpoint. 084/+406 A second fainter radio component at 084718.8, +404200, 30 mJy, 0754+394 D map only; the bright blue object is a confirmed quasars with A second fainter radio component at 084718.8, +404200, 30 mJy, probably unrelated; the spectral index is for the two sources
is a confirmed quasars with
in the direction of the radio-
optical displacement. 0855+397 Only a D-config. map (45" resolution) available.
0754+397 D map only. 0902+414 Galaxy 16 mag. 8" North-East
0755+379A See 0755+379B. 0902+416 A second 20 mag red object 3" SE
0755+379B Connected to 0755+379A, a double- source model is not a good fit, 0906+421 Group, cluster?
see map. It is part of 4C37.21. NGC 2484. 0908+380B Confused at 408 MHz by 0908+380C
0759+392 A 18.5 magnitude galaxy 9" N of 0912+392 Only low resolution D map. A 17 the S component. A second very mag blue galaxy 10" following. faint object close to the S comp.
0914+390 D-map only (45" resolution) 0803+426 Very close to 0803+427; both are
identified with galaxies in 0917+458A Cluster, 3C219.
0920+408 The physical connection of the fainter component is doubtful.

0936+399	The source is confused in the B3 Catalog; the VLA map shows two	1042+392	D-map only.
	unrelated fainter sources.(delete from the sample)	1042+393	A 19.5 magnitude galaxy 10" S.
0938+399A	Not detected at VLA; ($<$ 3mJy) source marked as 'bad' in B3.	1055+396	Two unrelated sources. The S- component coincides witha 16.0
0938+399B	A very interesting source, X-shaped; see map; see also Gregorini et al., 1988.		mag galaxy, the N-component with a faint stellar object.(delete from the sample)
0944+390B	Blue very faint and slightly fuzzy object.	1055+404B	Possibly a tail source.
0951+398	The radio structure is slightly distorted.	1104+390	D-map only; could be a physical double with 1105+390. Both sources are extended along the line joining them.
0955+387	Also a 19.5 mag galaxy 10" N of the midpoint position.	1105+390	D-map only; see note for 1104+390.
1007+417	The source is elongated in the direction of the quasar.	1107+389	Undetected at VLA (< 6 mJy); marked as 'bad' in B3.
1012+395	D-map only.	1108+394	D-map only.
1014+392	Galaxy in cluster.	1108+411B	Galaxy in group. Probably a tail source.
1014+397A	A 20 mag. galaxy, closer to midpoint, has been proposed as identification by ref. 28	1109+437	Some faint red objects in the field, probably a distant cluster.
1016+388B	The last component seems to be physically unconnected. Empty fields anyway.	1111+396B	Not detected at VLA (< 1 mJy); marked as 'bad' in B3.
1019+397	Could be a "Tail".	1111+398	Not detected at VLA (< 1 mJy); marked as 'bad' in B3.
1022+432	A 18.5 magnitude neutral color starlike object 11" E.	1119+398	Not detected at VLA (< 1 mJy); marked as 'bad' in B3.
1023+393	Galaxy in cluster. Tail ?. The galaxy lies on the head of the tail.	1121+444	A very red stellar object 18 mag. is 7" from comp. S
1033+388	Confused at 408 MHz. B3 flux unreliable.	1122+390	NGC 3665. The source is extended in a direction roughly
1037+399	There is a 16.5 mag red starlike object at 103721.9 395753.6		perpendicolar to optical major axis.
1039+397	Interacting galaxy in cluster, the source is probably a tail. The galaxy is on the head of the	1123+395	There is also a plate limit object or whisp closer to radio- position, visible only in red.
	tail.	1133+432	Faint cluster in the field.
1040+398	D-map only.	1137+396	Faint cluster in the field.

1141+374	The source is resolved as a double even in B3 Catalog, but the	1223+395	There is a 19 mag. galaxy 9" SW.
	southern component was lost because it is out of the Catalog limit in Dec. The 408 MHz flux given is the total. Identifi- cation is an interacting galaxy	1228+397	There are also two red 18 mag galaxies in the field, one very close to the N component, at 122827.42 394645.
	in a compact group.	1228+419A	Includes 1228+419B and 1227+419. The ID is NGC 4485. The optical
1142+392	The radiosource is elongated in the direction of the blue object.		position is not well defined on PSS print.
1151+395	Undetected at VLA (< 3 mJy); marked as 'bad' in B3.	1232+394	A 18 mag. blue starlike object 7" SE.
1151+456	Compact galaxy, z=0.192.	1232+397A	There is a 20 mag galaxy 8" W; however the source is not
1154+397	Complex source, could be a wide tail. VLA flux uncertain, the		extended in this direction.
	source is diffuse (see map).	1233+418	Brightest cluster member.
1206+399	The B3 source becomes two sources (see map); both are identified with galaxies in the same cluster; the B3 flux has been split evenly between the two.	1236+444B	The galaxy is very close to a probably real central radio component, not listed (\$408 < 100 mJy). There is also a 17.5 mag blue object on the line
1208+396	Spiral galaxy NGC4151 z=0.003 (ref.)		joining the component, at 123627.57 442553.9 .
1209+396	Possibly a "tail", see map.	1241+411	Very red compact object.
1211+388	A 19.5 magnitude galaxy 7" SE. The source is extended but not in direction of the galaxy.	1249+475	There is a blue 19 mag galaxy 9" out of the line joining the components, at 124956.62 473207.0
1217+427	There is a 19 mag galaxy 6" NE of the radio-position.	1255+448	There is a 18 mag. galaxy at 125543.41, +445140 . The source
1218+421	Bright spiral galaxy (UGC7416)		is a tail, see map. The double structure is not a good fit.
1220+408	There is a 18 mag stellar object visible only on the blue print, 7" NW.	1256+392	The blue object lies on the axis of the sources which could be a "tail" or an unequal double.
1221+398	The galaxy could be in a cluster. The B3 flux could be underestimated.	1259+395	D-map only; the blue object lies on the axis of the sources which is asymmetric and could be an unequal double.
1222+423	3C272. The (uncertain) identification listed by Spinrad et al. 1985 is not confirmed by our data.	1300+397	The blue object lies on the axis of the sources which is asymmetric and could be an unequal double.
			•

1309+412A	The source includes B31309+413 and B31309+412. The 408 MHz flux is the total.	1336+396A	Not detected at VLA (< 3 mJy); CHI SQUARE very high in B3 catalog.
1311+419	The source is slightly distorted. A 19 magnitude galaxy is out of the line joining the components,	1336+396B	Not detected at VLA (< 3 mJy); source marked as "bad" in B3 catalog.
	10" from the midpoint. There is a third source in the field, at 131148.7 415711 ,with 1460 MHz flux of 13 mJy, coinciding with a	1336+401	Not detected at VLA (<1.5 mJy); source marked as "bad" in B3 catalog.
	bluish 19 mag galaxy possibly in cluster.	1337+396	Not detected at VLA (< 3 mJy).
1317+389	There is a 20 mag blue object 7° SE.	1338+391	Not detected at VLA (< 3 mJy); source marked as "bad" in B3 catalog.
1318+428C	Double with 1319+428A. Total 408 MHz flux is given.	1342+389A	Also a 16 mag. red object at 134214.8 385630 .
1324+390	There is a 19.5 neutral color object on the line joining the components, about 13" N from the radio centroid.	1342+389B	The proposed identification is uncertain, the source is elongated in direction of R-O discrepancy.
1327+398	D-map only.	1344+397	There is a 19.5 mag galaxy 8" W.
1327+474C	M51. The 408 MHz flux is inclusive of B31327+427A and B.	1349+394	Probably two unrelated sources, if so they should fall below the flux limit of the sample.
1328+396	There is a 18.5 neutral color object about 8" NE from the radio source.	1352+397	A 20 mag blue object at 135206.3 394258 is 6" out of the line and closer to the faint component.
1332+385	Compact galaxy in cluster.	1353+380	A 19 mag galaxy at 135346.36
1333+412	Brightest cluster member.		380004.2, very close to the stronger component but outside
1335+391	Not detected at VLA (< 3 mJy); source marked as "bad" in B3		the line joining the components.
	catalog.	1357+392	D-map only.
1336+393	D-map only.	1407+388	Galaxy possibly in distant cluster.
1336+397A	D-map only.	1414+398	The galaxy coincides with the S
1336+397B	D-map only; source confused at 408 MHz by sidelobes of 3C288=1336+391A.	1414.030	component; the two radio component could be unrelated. They are not resolved in B3.
1336+395	Not detected at VLA (< 6 mJy); source marked as "bad" in B3 catalog.	1419+399	A second radio component at 141916.2 395449 (1460 Mhz flux is 20 mJy) probably unrelated. D- map only.

1420+386	A 20 mag object 12" SE of the second component.	1446+440	There is a 19 mag. galaxy at 144641.35. +440449, about 10" S from the radio centroid, not on
1422+395	The galaxy is between the first two component. In the field of third component there are: a 16 mag very red compact object, 6"		the line joining the two components. The source is simmetrical and undistorted.
	SW; a 19 mag blue object (visible only in blue) 5" N (see map). The B3 flux is probably	1447+402	Double galaxy in cluster, radio structure distorted.
	underestimated.	1450+390	Part of 1450+391B.
1424+380	D-map only. Very steep spectrum, there is a rich cluster in the field. No obvious identif.	1450+391B	Distorted and diffuse, listed in B3 as three sources: 1450+390, 1450+391B, 1450+392. The 408 MHz flux given is the sum and is
1427+404	The source is distorted and asymmetric, the identification is very probable.		underestimated.(see map). Identification is very probable, galaxy in cluster.
1428+380	Double galaxy.	1457+388A	Very blue object, not on the line joining the component, possible
1430+399	The two component could be physically unrelated.		identification.
1436+399	There is a 18 mag blue object 9" W	1458+433	D-map only.
1437+397	of the first component. There is a third component at	1459+399	B3 position (and flux) correspond to the second component. Physical connection is probable. Empty
	143719.0, +394535 (1460 MHz flux is 35 mJy) coinciding with a 15		fields anyway.
	mag compact object, perhaps a galaxy.	2302+396	D map only, probably resolved. The B3 flux is not very good, but the spectrum is certainly very steep.
1438+385	The source is a flat spectrum, but looks resolved. A very red stellar object, m≈18, 8"E and 3"N of the radio position, has been	2311+396A	Tabular data are from a D-config. map; published map is C-config.
	proposed as identification by ref. 50.	2313+406	There is a 18 mag. compact object, perhaps a galaxy, on the line joining the components 7° S from
1442+441	There is a 19 mag galaxy, perhaps in cluster, some 10" E of the midpoint.	2323+435A	midpoint. Double Galaxy.
1444+417A	The source is physical double with 1444+417C, listed in B3 but outside the sample area. The 408 MHz flux given is total.	2324+394A	Not detected at VLA (<1.5 mJy); very high CHI SQUARE in B3 catalog.
	-	2324+395	Not detected at VLA (< 4 mJy);
1446+399	The physical connection of the two component is not certain.		source marked as "bad" in B3 catalog.

2324+399	Not detected at VLA (< 1 mJy); source marked as "bad" in B3 catalog.	2351+394	There is a 16.5 mag. neutral color object about 8" NE from the radio centroid.
2328+397	D-map only.	2351+398	D-map only. Angular diameter < 20".
2329+398	Also a 20 mag neutral object 6" N.		
2332+388	There is a 19 mag galaxy 7" S.	2354+397	Physical connection of components doubtful. Two plate limit objects on the line joining the
2332+399	There is a 15 mag neutral object 5" NE.		components.
		2354+471	Source is DA613. Tabular data are
2333+397	Many objects in the field, no obvious identification.		from a D-config. map; the published map is C-config.; the optical position is not very
2338+393	A 17.5 mag. red compact object close to S comp. (pos. 233855.2		accurate.
	391855.0).	2356+437	3C470. See map. The component NE is real, and approximately of 70
2341+396	Also a faint double source on the field (see map), unrelated to the main source, with total flux		mJy, probably unrelated. Empty field.
	about 30 mJy. The B3 flux includes this double, which is identified with a 18 mag. galaxy.	2357+398	Galaxy in cluster.

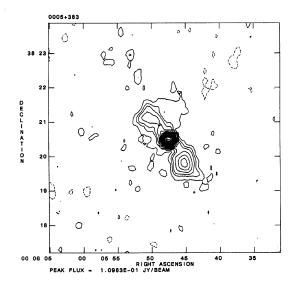
References to TABLE II

1 ALLINGTON-SMITH,J.R., et al. 1982.	18 KATGERT-MERKELIJN,J., et al. 1980.
2 ARP,H.C., et al. 1979.	19 KUHR,H. 1977.
3 BALDWIN,J.A., et al. 1973	20 KUHR,H. 1980.
4 BORNGEN,F., et al. 1970.	21 LYNDS,R. AND WILLS,D. 1968.
5 BOZYAN,E.P. 1979.	22 MALTBY,P., et al. 1963.
6 BURBIDGE,E.M. 1970.	23 OLSEN,E.T. 1970.
7 BURBIDGE,E.M., et al. 1972	24 PADRIELLI,L. AND CONWAY,R.G. 1977.
8 COHEN,A.M., et al. 1977,	25 PETERSON, B.M., et al. 1978.
9 COLLA,G., et al. 1975.	26 PORCAS,R.W., et al. 1980.
10 CONDON,J.J., et al. 1979.	27 RICHTER, G.A., et al. 1974.
11 DAVIES,R.D. 1973.	28 RUDNICK,L. AND ADAMS,M.T. 1979.
12 DE VENY,J.B., et al. 1971.	29 RUDNICK,L. AND OWEN,F.N. 1977.
13 EDWARDS,T., et al. 1975.	30 DE RUITER, H.R., et al. 1977.
14 FANTI.C, et al. 1981.	31 SANDAGE,A. 1966.
15 FANTI,R., et al. 1978.	32 SANDAGE,A. 1967.
16 GREGORY,S.A. AND BURNS,J.O. 1982.	33 SANDAGE,A., et al. 1976.
17 JOHNSON,K.H. 1974.	34 SARGENT, N.L.W. 1973.

References to TABLE II. (continued)

- 35 SCHMIDT,M. 1945.
- 36 SCHMIDT, M. 1974.
- 37 SMITH, H.E. AND SPINRAD, H. 1980.
- 38 SMITH, H.E., et al. 1976.
- 39 SPINRAD, H. 1982.
- 40 SPINRAD, H. AND SMITH, H.E. 1973.
- 41 SPINRAD, H., et al. 1981.
- 42 STRITTMATTER, P.A., et al. 1974.
- 43 ULRICH, M.H. 1976.
- 44 WALSH, D. AND CARSWELL, R.F. 1982.

- 45 WALSH, D., et al. 1979.
- 46 WILKINSON, A., et al. 1981.
- 47 WILLS, B.J. AND WILLS, D. 1979.
- 48 WILLS, D. AND WILLS, B.J. 1976.
- 49 WILLSON, M.A.G. 1972.
- 50 GRUEFF, G. AND VIGOTTI, M. 1979.
- 51 COHEN, A.M., et al. 1977.
- 52 KRISS, G.A., CANIZARES, C.R. 1982.
- 53 WALSH,D., et al. 1984.



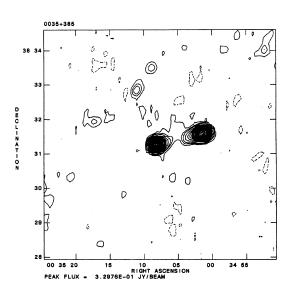


FIG. 3. Maps of radio sources not adequately described by the numerical data of Table II.

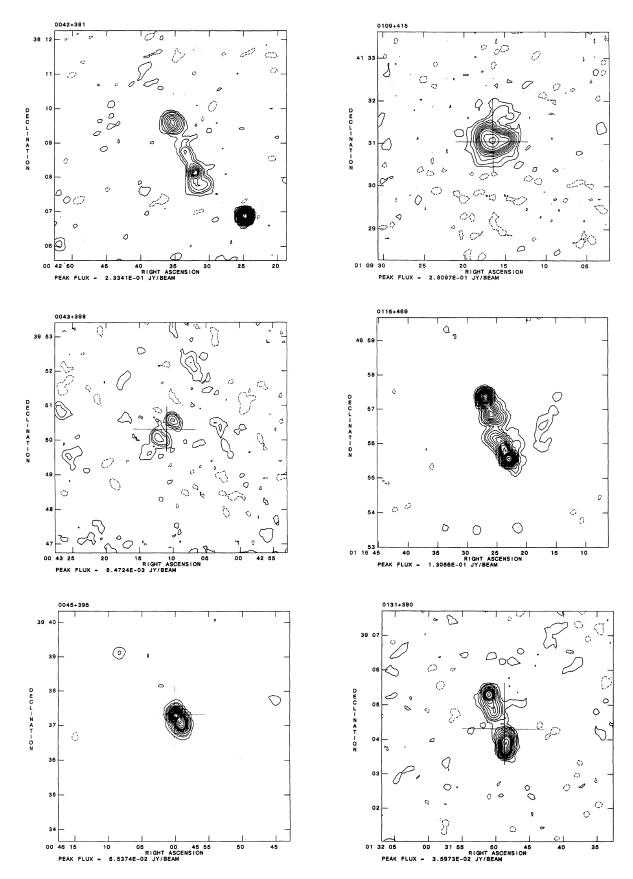


Fig. 3. (continued)

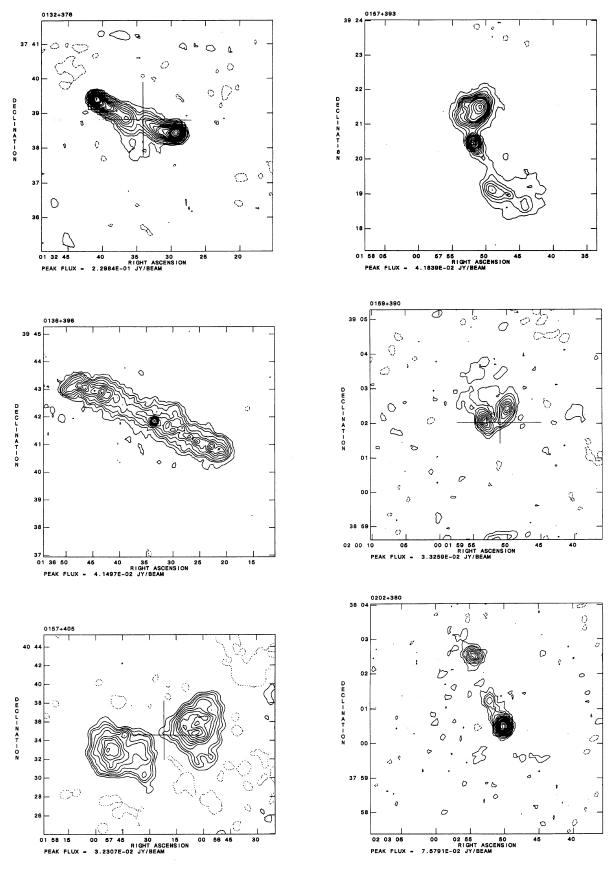


FIG. 3. (continued)

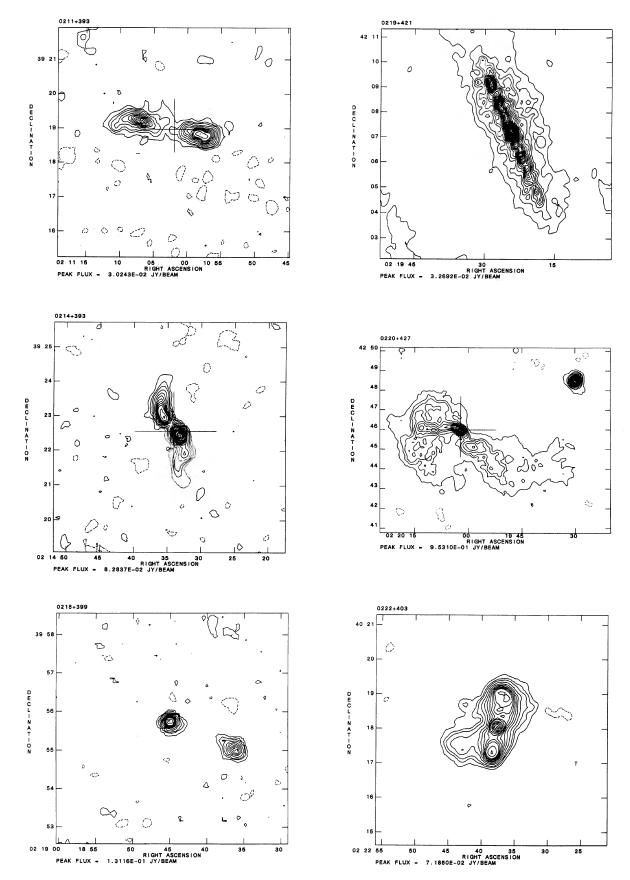


FIG. 3. (continued)

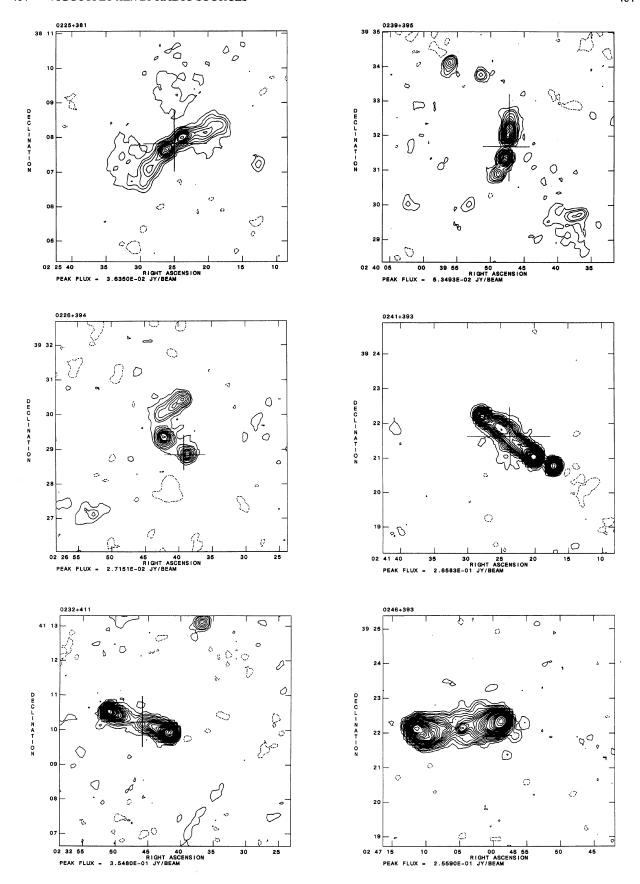


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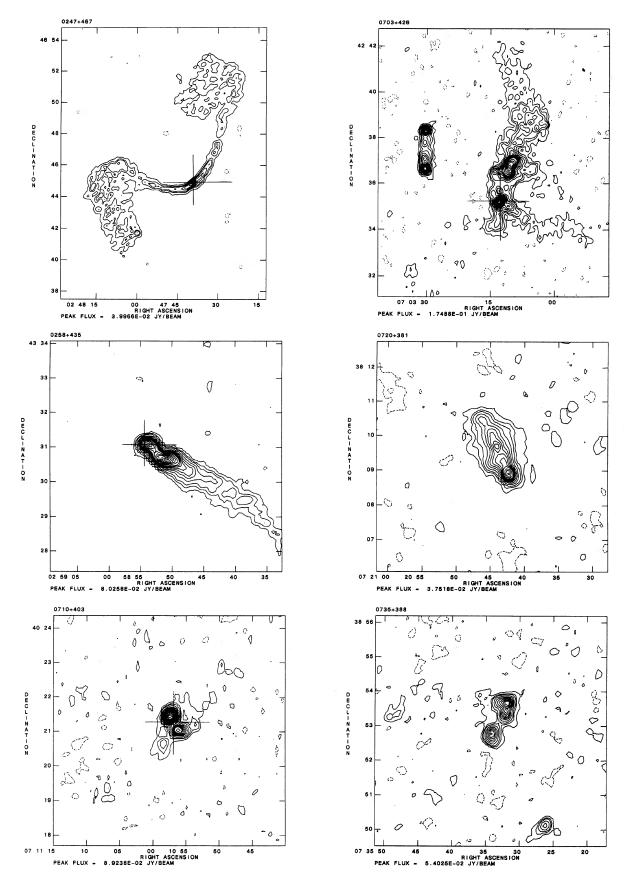


FIG. 3. (continued)

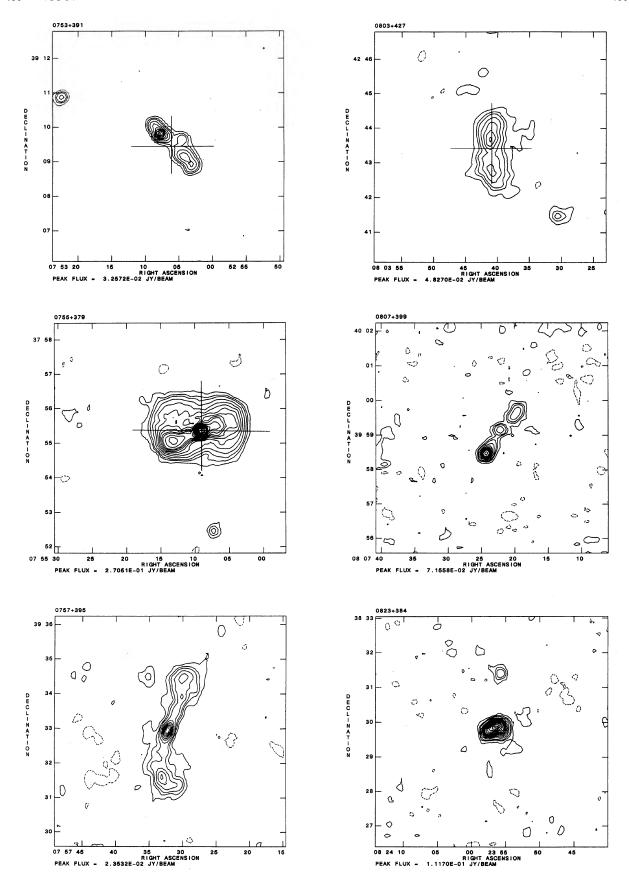


Fig. 3. (continued)

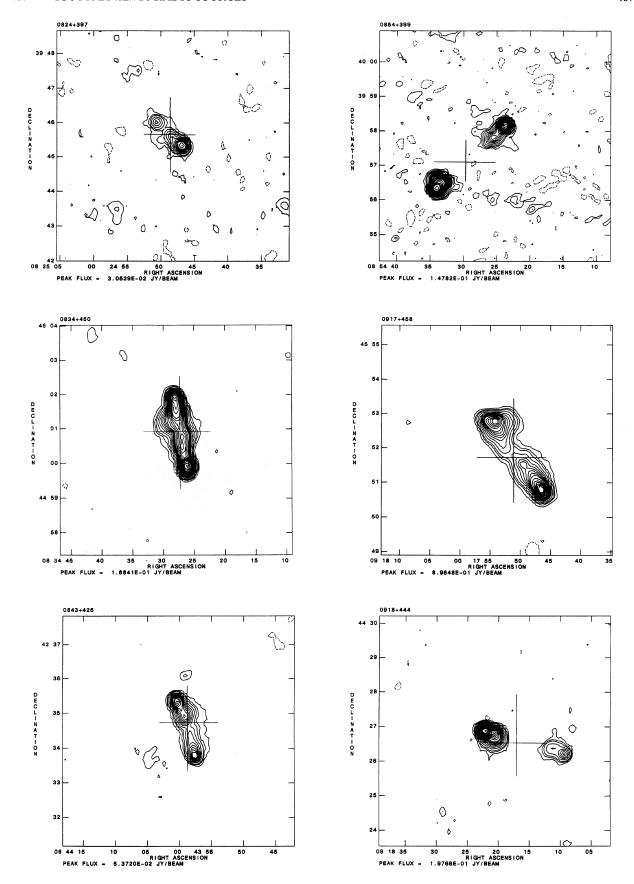


FIG. 3. (continued)

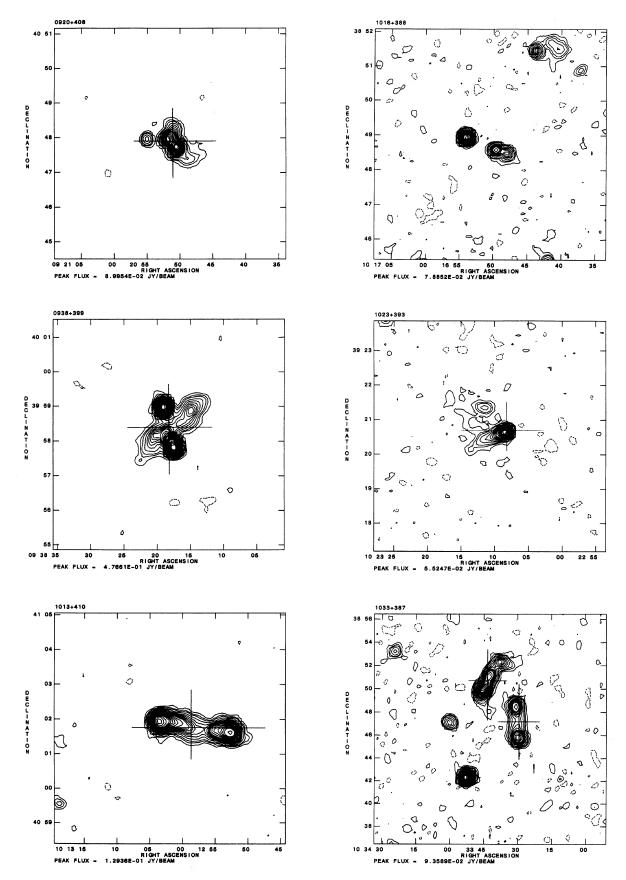


Fig. 3. (continued)

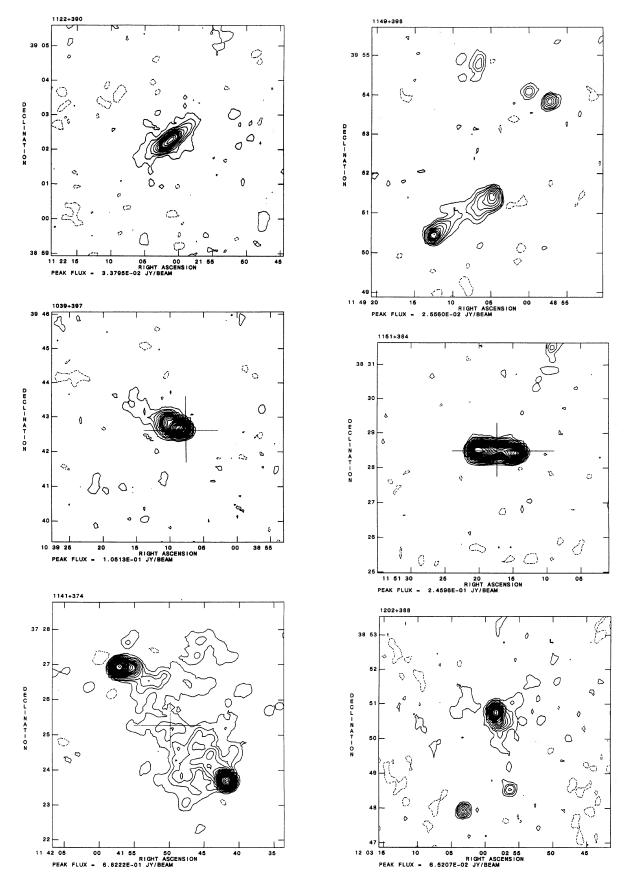


FIG. 3. (continued)

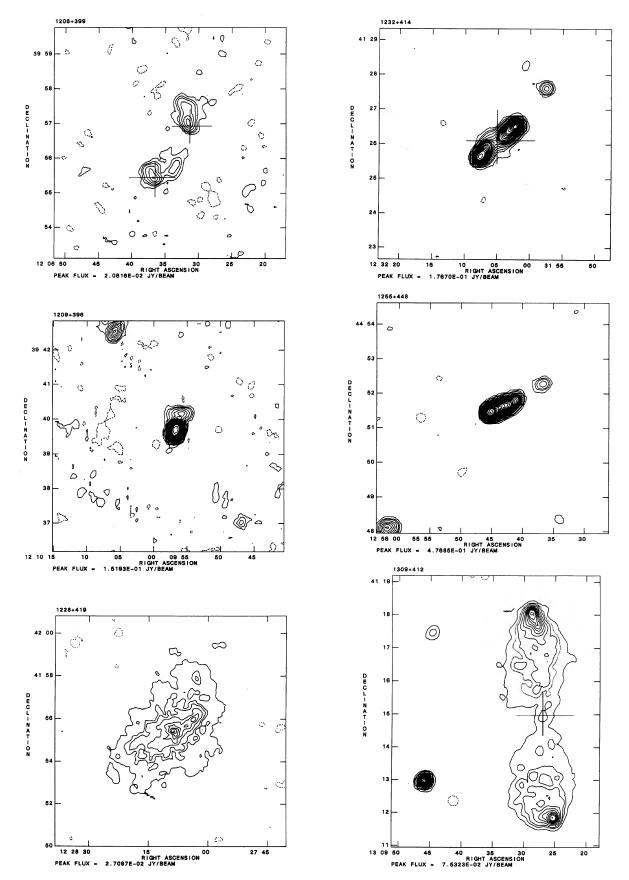


Fig. 3. (continued)

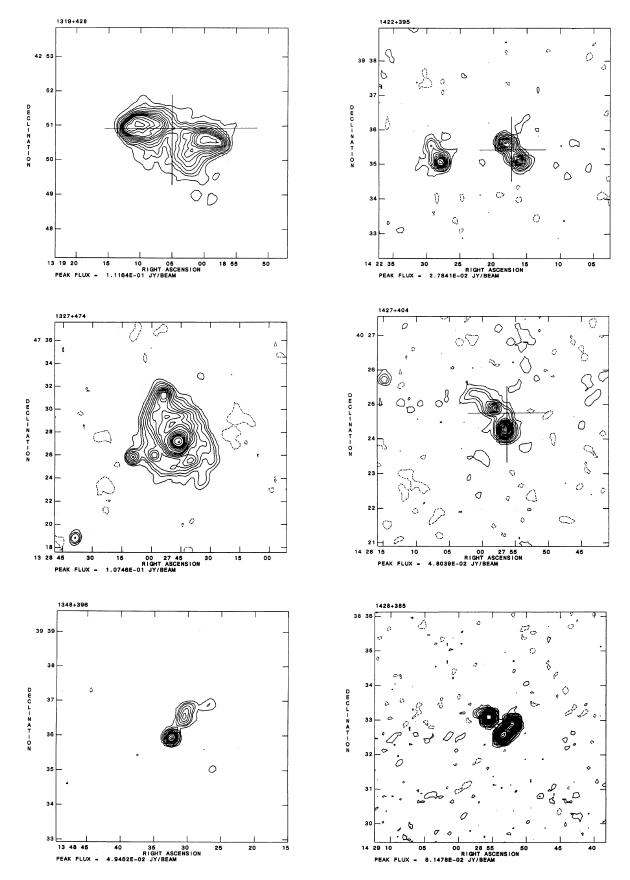


Fig. 3. (continued)

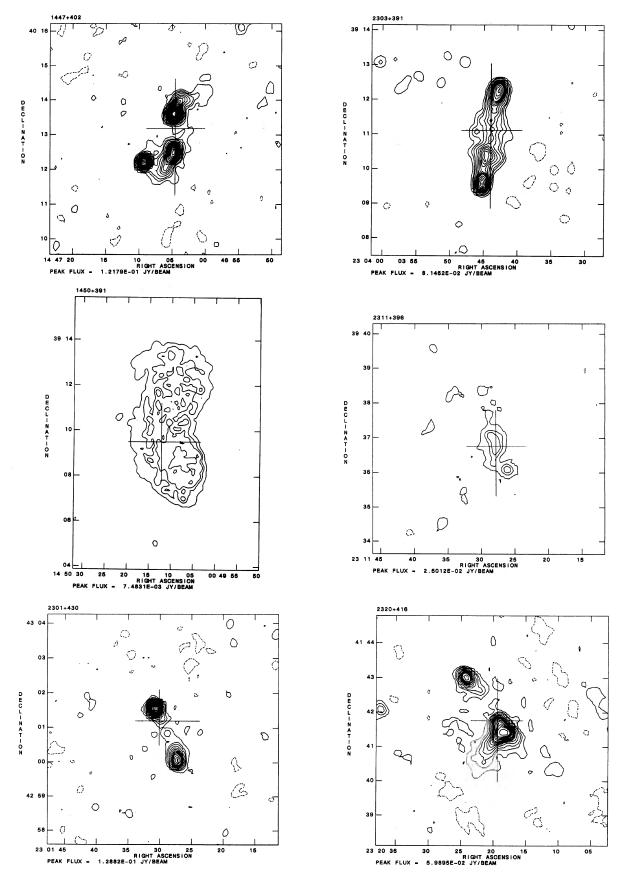


Fig. 3. (continued)

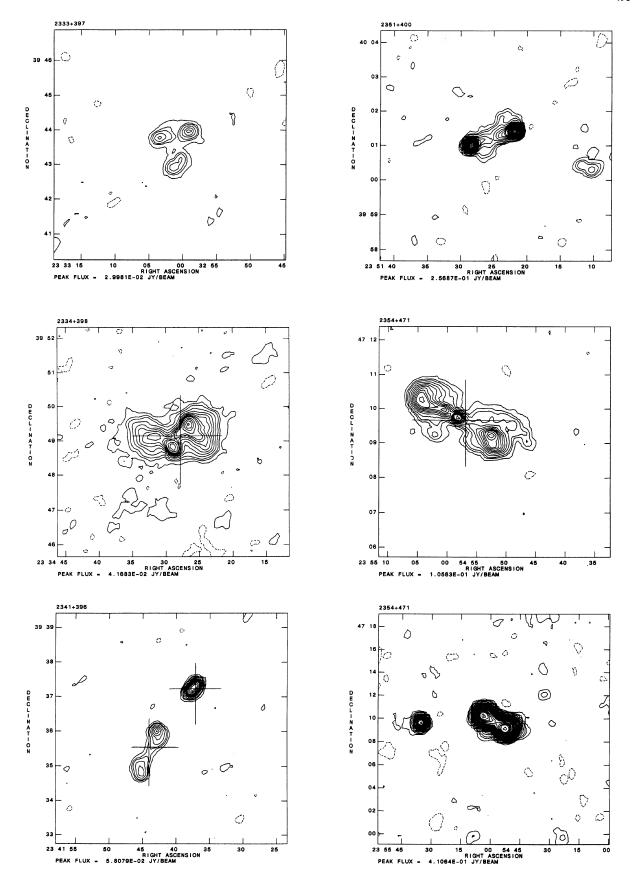


FIG. 3. (continued)

TABLE III. Radio-optical positional comparison for safe identifications.

Smootmal		R.A.		Dec.	
Spectral index	Number	mean	dispersion	mean	dispersion
> − 0.5 < − 0.5	24	-0.03 ± 0.14	0.68	-0.27 + 0.17	0.82
< -0.5	47	0.29 ± 0.27	1.83	-0.30 + 0.23	1.55
< -0.5	43	0.33 ± 0.21	1.32	-0.22 ± 0.22	1.38
(less 4 obj.)				_	

II, with an asterisk preceding the optical classification; a good example of this is 0754 + 394.

Sources with LAS > 120 arcsec (47 objects in all) have been individually assessed. Most of them are safely identified with bright galaxies; the identifications in this range included in Table II, but considered uncertain, are marked with an asterisk preceding the optical classification, and are discussed in a note.

Table II(b) gives references for sources previously identified. These references are not complete; for sources for which a redshift has been published, only the reference to the redshift measurement is given. For 3CR sources, reference is made also to Spinrad *et al.* (1985), where further references to original papers can be found. Note that some 3CR sources classified as empty fields in Table II are in fact identified with objects beyond the limit of the POSS.

Table V shows the number of identifications proposed in Table II, according to LAS and radio-structure classification. Also shown in Table V are the expected numbers of random coincidences, computed on the basis of area searched, and a plate density of 2×10^{-4} objects/sq. arcsec. The random coincidence numbers shown refer to the total area searched (including thus objects in the notes) and are actually to be considered upper limits to the contamination of Table II.

VI. DISCUSSION

It has been well known since the early days of radio-source optical identification that the fraction of radio sources with optical identifications on the POSS plates sharply decreases with decreasing radio flux density. Figure 4 shows this trend in our data, separately for galaxies (dark symbols) and for blue starlike objects (light symbols). We also plotted in Fig. 4 some data points derived from the 5C 12 identification program (Benn et al. 1988) and data concerning the B2 and All-Sky catalogs at 408 MHz (Grueff and Vigotti 1977, and references therein). The present data are shown divided in three groups, including the N optical category, i.e., starlike objects of neutral color; these were classified as quasars in

Table IV. Comparison of 3CR 1.5 GHz flux densities in Table II with KPW (1969) measurements.

3CR	R	σ	Number
strong	1.17	+ 0.14	11
faint	1.17	\pm 0.20	11
compact	1.13	$\frac{-}{+}$ 0.15	11
compact extended	1.21	± 0.19	11
all	1.17	± 0.17	22

the 5C 12 and All-Sky catalogs, and were forced in either the quasar or the galaxy classification in the B2 sample. The horizontal dotted line is a conservative upper limit to the amount of random contamination in the present data.

The fraction of identification fainter than $m_r \approx 20$ (empty fields, invisible on the PSS) steadily increases from a mere 15% for $S_{408} \geqslant 10$ Jy, to 86% for sources in the 20–60 mJy interval. This trend obviously indicates some sort of positive correlation between the radio and optical flux densities; apart from that, a more detailed interpretation must await a complete identification program, with full redshift information, and the data themselves show the magnitude of the observational effort needed. We note that the identification program for the 5C 12 has been pushed to a limit of $m_v \approx 23$, and at that optical limit fully two-thirds of the sources remain unidentified.

Table VI lists the *average* source spectral index, and the *median* source LAS, computed in each B3 subsample. For the spectral index, standard errors of the mean are quoted; for the largest angular size, the 15% and 85% percentiles of the median are given.

In most cases, the median LAS is smaller than the HPBW of the present observations, so that it is evaluated mostly in connection with slightly resolved sources (R in Table II). LAS for R sources were computed by deconvolving quadratically the sources with the map beam (see Sec. V), which amounts to assuming a Gaussian shape for the beam and the source, an assumption certainly valid for the beam, but unlikely for the source. Figure 5 shows the theoretical correction to apply to LAS, evaluated in this way, if the source is an equal point double instead of a Gaussian. Also shown in Fig. 5 is the correction we actually adopted; it has been estimated statistically, by measuring a number of sources called R in Table II, but for which we already had the information coming from the A array maps available, at a resolution of 1.5 arcsec. We estimate that biases introduced in Table VI by the uncertainty in this correction are negligible compared to statistical errors. Uncorrected median LAS values are also given in Table VI for reference; in Table II, only uncorrected LAS values are given.

TABLE V. Statistics of the identification proposed in Table II, according to source classification.

	U + R	Double	Triple	Total	
LAS < 60"	681	224	11	916	sources
	188	87	7	282	identif.
	15	14	1	30	random
60" ≤ LAS < 120	8	54	17	79	sources
	6	24	10	40	identif.
	1	7	2	10	random

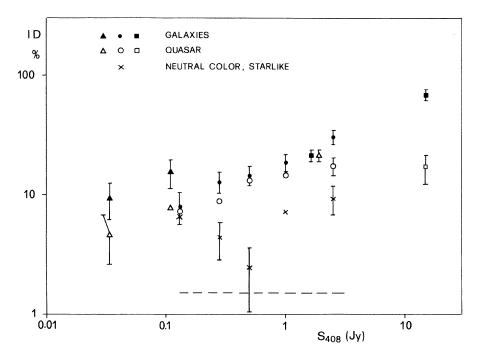


FIG. 4. Fraction of radio sources identifiable on the Palomar Sky Survey versus flux density. The horizontal dashed line indicates the level of expected random contamination in the present data (light and dark circles, crosses). Triangles indicate data from Benn *et al.* (1988), squares are from Grueff and Vigotti (1977).

Figure 6 shows the run of the average spectral index versus flux density at 408 MHz, computed in the B3 sample (light circles) and in the 5C 12 sample (dark circles). Neglecting for the moment the data point at 20 mJy, there appears to be a small but significant trend toward steeper spectra at low flux density. The straight line drawn is the least-square fit (data points weighted according to error), and its slope differs from zero at the 2.6σ level (probability less than 0.5%). The fit with a straight line is very good ($\chi^2 = 1.7$); on the other hand, the inclusion of the last point at 20 mJy will give an overall slope not significantly different from zero, but a rather bad fit (probability $\approx 5\%$).

Thus, there seems to be some evidence of the spectra becoming steeper with flux density decreasing to about 50 mJy, and becoming sharply flatter for flux densities fainter than that. There is good agreement between spectral indexes in the present sample and in the 5C 12 sample, in the overlapping flux-density range. Possible experimental biases producing the flat spectra in the faint 5C 12 interval have been searched, without finding any.

The suspicion that some real change is happening in the source population below ≈ 50 mJy is reinforced by inspecting Fig. 7, which shows the run of the median angular size (LAS) against flux density. The data from the present work

TABLE VI. Average spectral index and median LAS in the five B3 samples.

		S	— Median	
Sample	Spectral index	corrected (70% confid. int.)	uncorr.	flux (Jy)
0	-0.930 + 0.025	8–11	10.5	0.13
1	-0.920 ± 0.016	9-12	12	0.28
2	-0.893 ± 0.016	7–10	8	0.5
3	-0.883 ± 0.021	7–14	11	1.0
4	-0.890 ± 0.019	11-18.5	16	2.5

and the 5C 12 are plotted with data taken from Oort (1988, and references therein) (error bars for 5C 12 data also mark the 15% and 85% percentiles; note that error bars from Oort (1988) are at the 35%-65% percentiles).

We can see that:

(i) Present data are entirely consistent with data at higher flux densities; (ii) 5C 12 data confirm the trend established by Oort (1988) and co-workers, of very compact angular sizes for faint sources; (iii) Present data define the LAS-

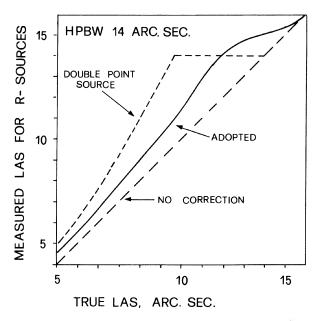


FIG. 5. Correction to apply to the LAS measured for barely resolved sources, if they are in fact equal doubles (small dash), and the empirical correction adopted (full line).

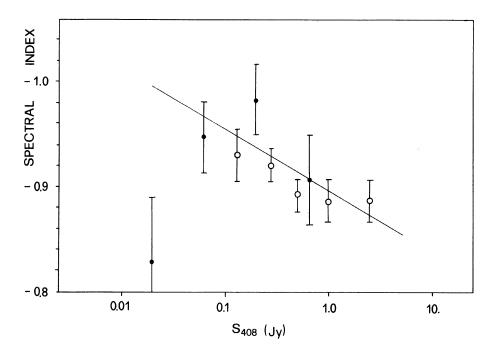


FIG. 6. Average spectral index as a function of flux density. Light circles represent the present data; dark circles are from Benn et al. (1988). The full line is the best fit to the data, excluding the point at 20 mJy.

flux-density relation in the interval 100–600 mJy, previously poorly defined, and show that a plateau is probably reached for LAS in this range.

Note that there is good agreement between the B3 and 5C 12 points at S = 0.10 Jy, the latter being obtained with data at much higher resolution (5 arcsec, VLA B array at 1.46 GHz).

For identifications with galaxies, Table II gives a rough estimate of redshift; although inaccurate (see Fig. 2), these values can be used to derive metric sizes and absolute powers. A Friedmann model with $q_0=0.5$ and $H_0=75$ km/s/Mpc has been adopted, and metric sizes were derived from uncorrected LAS values in Table II.

Figure 8 shows the histogram of source metric sizes, separately for low (z < 0.2) and high (z > 0.2) redshifts, the val-

ue 0.2 being the approximate median of the sample redshift distribution. Because only reasonably strong sources can be observed for z>0.2, a lower limit in absolute power of $\log P>25$ (P in W/Hz) has been adopted, corresponding roughly to the lowest power still represented in the "distant" sample. The 70% confidence levels for the median in the two observed distributions are 60–83 kpc for the distant galaxies and 87–126 kpc for the nearby ones, the medians being 70 and 112 kpc, respectively; these values differ at the 1.5% significance level.

Possible systematic errors in our estimated redshifts are very unlikely to have caused this result; in particular, there could be some hint in Fig. 2 for a systematic underestimation of the redshifts smaller than 0.05, which (if confirmed and corrected) will increase the difference in metric sizes. This

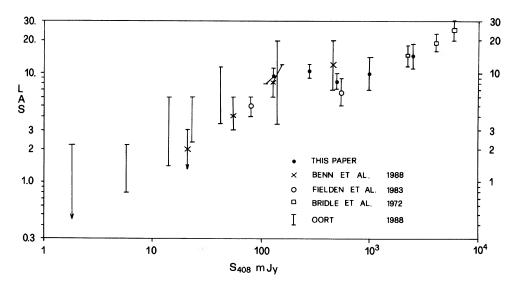


FIG. 7. Median angular size (LAS) as a function of flux density. Error bars in the data from Oort (1988) mark the 35%-65% percentiles, while other error bars mark the 15%-85% percentiles (i.e, they represent roughly ± 1 rms).

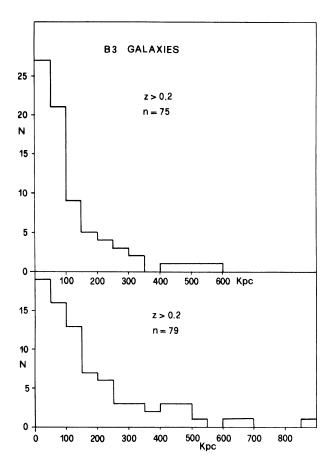


FIG. 8. Histograms of metric sizes for "near" radio galaxies (z < 0.2) and "far" radio galaxies (z > 0.2). Nearby radio galaxies are significantly more extended.

difference is also insensitive to a choice of a lower value for q_0 , while, of course, a higher q_0 would make things worse. Only with the adoption of a "Euclidean" model, i.e., LAS $\propto 1/z$, the probability for the two medians being equal would be substantially increased.

On the other hand, it is well known that in any flux-density-selected sample there is a correlation between absolute power and distance (Malmquist bias), and Fig. 9 shows this effect in our data (including $\log P \leq 25$).

If our sample is split according to absolute power instead of redshift, we find a median metric size of 70 kpc for $\log P \ge 26.0$ and 106 kpc for $\log P < 26.0$. Consequently, a smaller metric size could be associated either with higher absolute power or higher redshift.

We can test which correlation is the most likely to be true, using the rank-correlation test (see, for example, Dixon and Massey 1969). In this test, a correlation coefficient R is defined as follows:

$$R = 1 - (6\Sigma_1 d_1^2) / [N(N^2 - 1)],$$

where d_1 is the *i*th rank difference between the two variables considered, and N is the sample size.

Note that a nonparametric test is needed, due to the strongly non-Gaussian shape of the diameter distribution (Fig. 8). Applying the test to the (absolute power) versus

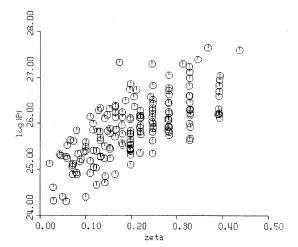


FIG. 9. Correlation between redshift and absolute power for radio galaxies in the present sample, due to Malmquist bias.

(metric diameter) correlation, we find R=-0.061, a value not significantly different from zero (the minus sign would imply smaller sizes for higher power). The (redshift)-(metric diameter) correlation gives R=-0.205, a highly significant value (bilateral random probability less than 1%). Both values of R are calculated for strong sources only (log P>25.0).

We thus conclude that the present data indicate a negative correlation (evolution) of metric sizes of strong radio galaxies with redshift, confirming a result obtained by Grueff et al. (1977), and already noted for quasars by Wardle and Miley (1974). A similar conclusion has been reached recently by Kapahi (1986).

Figure 10 shows the absolute power distribution of radio galaxies in Table II. The peak at $\log P = 26$ is, of course, expected, given the median sample flux density (≈ 0.5 Jy) and redshift (≈ 0.2); a detailed study of the distribution, and the determination of the luminosity function, are deferred to future papers.

For quasars in Table II, little can be learned without spec-

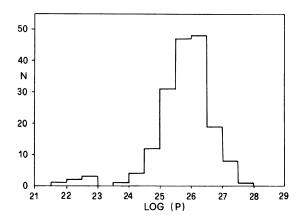


FIG. 10. Distribution of absolute power at 408 MHz for radio galaxies in the present sample. A Friedmann model with $H_0=75$ and $q_0=0.5$ is adopted.

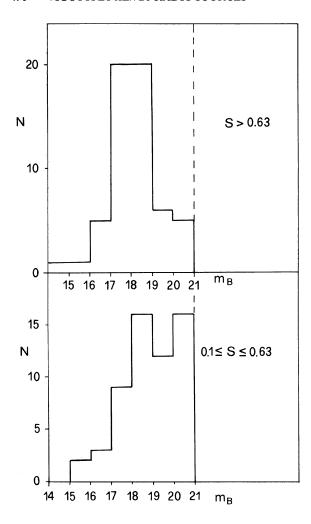


FIG. 11. Distribution of apparent blue magnitudes for B identifications (quasars), radio bright $S_{40\text{N}} > 0.63$ Jy), and radio faint ($S_{40\text{N}} \leqslant 0.63$ Jy). The dashed line is the Palomar Sky Survey cutoff.

troscopic redshifts, since the very large dispersion generally observed for quasars' optical luminosity prevents any meaningful redshift estimate from apparent magnitude.

In Fig. 11 we show the magnitude distribution of blue object identifications, divided in two equally populated groups according to 0.4 GHz flux density; one can see that the POSS optical cutoff (dotted line at $m_B \approx 21$) is almost ineffective for "high flux density" blue object identifications (an effect first noted in the 3CR by Bolton (1969)), while it is definitely at work in fainter source samples (see also the discussion in Grueff and Vigotti (1973)).

VII. CONCLUSION

We have mapped a large sample of radio sources selected at low frequency, free as far as possible from unwanted biases, and suitable for study of the cosmological evolution of radio sources. The sample covers the flux-density decade 1-0.1 Jy (at 408 MHz) and should provide a suitable database to extend a program of complete optical identifications beyond the 3CR Catalogue. As a first step in this direction, we give intermediate-resolution, accurate radio positions and structures, as well as optical identifications insofar as permitted by the Palomar Sky Survey red and blue prints. The ongoing program will eventually include high-resolution (1.5 arcsec) radio mapping of all the sources, morphological classification of radio structures, complete identification of empty fields, and spectroscopic redshift determination for all the sources. These, and other data, should lead to a better understanding of the evolutionary properties of the extragalactic radio-source population.

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REFERENCES

Allington-Smith, J. R., Perryman, M. A. C., Longair, M. S., Gunn, J. E., and Westphal, J. A. (1982). Mon. Not. R. Astron. Soc. 201, 331.

Arp, H. C., De Ruiter, H. R., and Willis, A. G. (1979). Astron. Astrophys. 77. 86.

Baars, J. W. M., Genzel, R., Pauliny-Toth, I. I. K., and Witzel, A. (1977). Astron. Astrophys. Suppl. 61, 99.

Baldwin, J. A., Burbidge, E. M., Hazard, C., Murdoch, H. S., Robinson, L. B., and Wampler, E. J. (1973). Astrophys. J. 185, 739.

Benn, C. R., Grueff, G., Vigotti, M., and Wall, J. V. (1982). Mon. Not. R. Astron. Soc. 200, 747.

Benn, C. R., Grueff, G., Vigotti, M., and Wall, J. V. (1988). Mon. Not. R. Astron. Soc. (in press).

Bolton, J. (1969). Astron. J. 74, 131.

Borngen, F., Bronkalla, W., and Dautcourt, G. (1970). Astrophys. J. 162,

Bozyan, E. P. (1979). Astron. J. 84, 910.

Burbidge, E. M. (1970). Astrophys. J. Lett. 160, L33.

Burbidge, E. M., and Strittmatter, P. A. (1972). Astrophys. J. Lett. 174, L57.

Clark, B. G. (1980). Astron. Astrophys. 89, 377.

Cohen, A. M., Porcas, R. W., Browne, I. W. A., Daintree, E. J., and Walsh, P. (1977). Mem. R. Astron. Soc. 84, 1.

Colla, G., Fanti, C., Fanti, R., Gioia, I., Lari, C., Lequeux, J., Lucas, R., and Ulrich, M. H. (1975). Astron. Astrophys. Suppl. 20, 1.

Condon, J. J., Buckman, M. A., and Machalski, J. (1979). Astron. J. 84, 149.

Davies, R. D. (1973). Mon. Not. R. Astron. Soc. 161, 25P.

De Ruiter, H. R., Willis, A. G., and Arp, H. C. (1977). Astron. Astrophys. Suppl. 28, 211.

De Veny, J. B., Osborn, W. H., and Janes, K. (1971). Publ. Astron. Soc. Pac. 83, 611.

Djorgovski, S. (1988). In Proceedings of the Erice Workshop Toward Understanding Galaxies at Large Redshifts (in press).

Douglas, J. N., Bash, F. N., Torrence, G. W., and Wolfe, C. (1980). Univ. Texas Publ. Astron. No. 17.

Edwards, T., Kronberg, P. P., and Menard, G. (1975). Astron. J. 80, 1005. Fanti, C., Fanti, R., Feretti, L., Ficarra, A., Gioia, I. M., Giovannini, G., Gregorini, L., Mantovani, F., Marano, B., Padrielli, L., Parma, P., To-

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masi, P., and Vettolani, G. (1981). Astron. Astrophys. 105, 200.

Fanti, R., Gioia, I., Lari, C., and Ulrich, M. H. (1978). Astron. Astrophys. Suppl. 34, 341.

Ficarra, A., Grueff, G., and Tomassetti, G. (1985). Astron. Astrophys. Suppl. 59, 255.

Fomalont, E., et al. (1984). Science 225, 23.

Gregorini, L., Padrielli, L., Parma, P., and Gilmore, G. (1988). Astron. Astrophys. Suppl. (in press).

Gregory, S. A., and Burns, J. O. (1982). Astrophys. J. 255, 373.

Grueff, G., Schiavocampo, P., Vigotti, M., and Zanni, M. (1977). Astron. Astrophys. 60, 321.

Grueff, G., and Vigotti, M. (1973). Astron. Astrophys. Suppl. 11, 41.

Grueff, G., and Vigotti, M. (1975). Astron. Astrophys. Suppl. 20, 57.

Grueff, G., and Vigotti, M. (1977). Astron. Astrophys. 54, 475.

Grueff, G., and Vigotti, M. (1979). Astron. Astrophys. Suppl. 35, 371. Grueff, G., Vigotti, M., Wall, J. V., and Benn, C. R. (1984). Mon. Not. R.

Astron. Soc. 206, 475. Gunn, J. E., Hoessel, J. G., Westphal, J. A., Perryman, M. A., and Longair, M. S. (1981). Mon. Not. R. Astron. Soc. 194, 111.

Johnson, K. H. (1974). Astron. J. 79, 1006.

Kapahi, V. K. (1986). In Observational Cosmology, IAU Symposium No. 124, edited by A. Hewitt, G. Burbidge, and L. Z. Fang (Reidel, Dordrecht), p. 251.

Katgert-Merkelijn, J., Lari, C., and Padrielli, L. (1980). Astron. Astrophys. Suppl. 40, 91.

Kellermann, K. I., Pauliny-Toth, I. I. K., and Williams, P. J. S. (1969). Astrophys. J. 157, 1.

Kellermann, K. I., and Wall. J. V. (1986). In *Observational Cosmology*, IAU Symposium No. 124, edited by A. Hewitt, G. Burbidge, and L. Z. Fang (Reidel, Dordrecht), p. 545.

Kriss, G. A., and Canizares, C. R. (1982). Astrophys. J. 261, 51.

Kron, R. G. (1986). Private communication.

Kuhr, H. (1977). Astron. Astrophys. Suppl. 29, 139.

Kuhr, H. (1980). Ph.D. thesis, University of Bonn.

Longair, M. S. (1966). Mon. Not. R. Astron. Soc. 133, 421.

Lynds, R., and Wills, D. (1968). Astrophys. J. Lett. 153, L23.

Maltby, P., Matthews, T. A., and Moffet, A. T. (1963). Astrophys. J. 137, 153.

Olsen, E. T. (1970). Astron. J. 75, 764.

Oort, J. H. (1961). In OECD Symposium on Large Antennas for Radioastronomy (OECD, Paris), p. 35.

Oort, M. J. A. (1988). Astron. Astrophys. 193, 5.

Padrielli, L., and Conway, R. G. (1977). Astron. Astrophys. Suppl. 27, 171

Peacock, J. A., Perryman, M. A. C., Longair, M. S., Gunn, J. E., and West-phal, J. A. (1981). Mon. Not. R. Astron. Soc. 194, 601.

Peterson, B. M., Craine, E. R., and Strittmatter, P. A. (1978). Publ. As-

tron. Soc. Pac. 90, 386.

Porcas, R. W., Urry, C. M., Browne, I. W. A., Cohen, A. M., Daintree, E. J., and Walsh, D. (1980). Mon. Not. R. Astron. Soc. 191, 607.

Richter, G. A., Richter, G. M., Richter, L., and Richter, N. B. (1974). Astron. Nachr. 295, 19.

Robertson, J. G. (1977). Aust. J. Phys. Part II 30, 231.

Rowan-Robinson, M. (1967). Nature 216, 1289.

Rudnick, L., and Adams, M. T. (1979). Astron. J. 84, 437.

Rudnick, L., and Owen, F. N. (1977). Astron. J. 82, 1.

Sandage, A. (1966). Astrophys. J. 145, 1.

Sandage, A. (1967). Astrophys. J. Lett. 150, L145.

Sandage, A. (1972). Astrophys. J. 178, 25.

Sandage, A., Kristian, J., and Westphal, J. A. (1976). Astrophys. J. 205, 688.

Sargent, W. L. W. (1973). Astrophys. J. Lett. 182, L13.

Schmidt, M. (1965). Astrophys. J. 141, 1.

Schmidt, M. (1974). Astrophys. J. 193, 505; 195, 253 (E).

Schwab, F. R. (1984). Astron. J. 89, 1076.

Smith, H. E., and Spinrad, H. (1980). Publ. Astron. Soc. Pac. 92, 553.

Smith, H. E., Spinrad, H., and Smith, E. O. (1976). Publ. Astron. Soc. Pac. 88, 621.

Spinrad, H. (1982). Publ. Astron. Soc. Pac. 94, 397.

Spinrad, H., Djorgovski, S., Man, J., and Aguilar, L. (1985). Publ. Astron. Soc. Pac. 97 932.

Spinrad, H., and Smith, H. E. (1973). Astrophys. J. Lett. 179, L71.

Spinrad, H., Stauffer, J., and Butcher, H. (1981). Astrophys. J. 244, 382. Strittmatter, P. A., Carswell, R. F., Gilbert, G., and Burbidge, E. M.

(1974). Astrophys. J. 190, 509.Thompson, A. R., Clark, B. G., Wade, C. M., and Napier, P. J. (1980).Astron. Astrophys. Suppl. 25, 453.

Ulrich, M. H. (1976). Astrophys. J. 206, 364.

Walsh, D., Beckers, J. M., Carswell, R. F., and Weymann, R. J. (1984). Mon. Not. R. Astron. Soc. 211, 443.

Walsh, D., and Carswell, R. F. (1982). Mon. Not. R. Astron. Soc. 200, 191.Walsh, D., Wills, B. J., and Wills, D. (1979). Mon. Not. R. Astron. Soc. 189, 667.

Wardle, J. F. C., and Miley, G. K. (1974). Astron. Astrophys. 30, 305.

Weistrop, D., Wall, J. V., Fomalont, E. B., and Kellermann, K. I. K. (1987). Astron. J. 93, 805.

Wilkinson, A., Hine, R. G., and Sargent, W. L. W. (1981). Mon. Not. R. Astron. Soc. 196, 669.

Wills, B. J., and Wills, D. (1979). Astrophys. J. Suppl. 41, 689.

Wills, D., and Wills, B. J. (1976). Astrophys. J. Suppl. 31, 143.

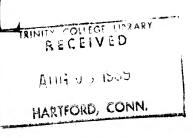
Willson, M. A. G. (1972). Mon. Not. R. Astron. Soc. 156, 7.

Windhorst, R. A., Miley, G. K., Owen, F. R., Kron, R. G., and Koo, D.C. (1985). Astrophys. J. 289, 494.

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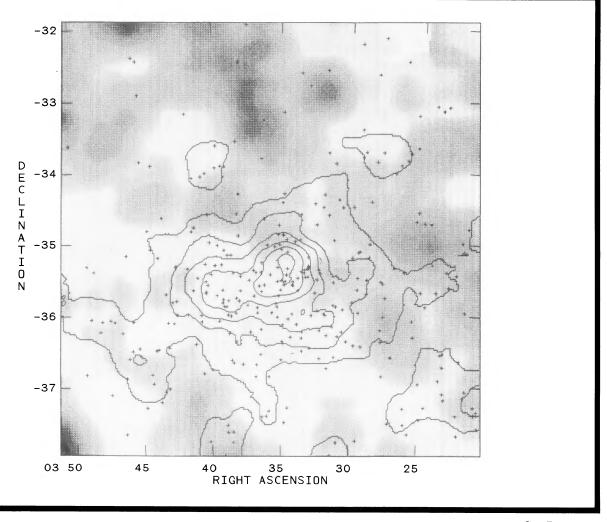
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