

Radio identification of decametric sources.

I. Catalogue

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Abstract. We describe a method of plotting continuous spectra for radio sources on the basis of entries of various source catalogues in comparatively large error boxes around a given sky position. Sources from the UTR-2 catalogue (Braude et al., 1978, 1979, 1981, 1985, 1994), observed at decametric wavelengths (10–25 MHz) with an antenna beam of about 40', were cross-identified with entries from other radio catalogues at higher frequencies. Using the CATS database we extracted all sources within 40' around UTR positions to find candidate identifications. The spectrum for each source was fitted with a set of curves using the least squares method to find the best fit. We preferentially selected radio counterparts whose radio spectrum extrapolated to low frequencies matched the UTR decametric flux densities, and whose coordinates were close to the gravity centre of UTR positions. Among all 1822 sources in the UTR catalogue we found about 350 sources to be blends of two or more sources. As the most probable true coordinates of the radio counterparts we used positions from the FIRST, NVSS, TXS, GB6, or PMN catalogues. Using low-frequency sources (26, 38, 85 MHz) from CATS we checked the reliability of some of our identifications. We show examples of the above methods, including raw and "cleaned" spectra. Identifications with objects from optical, X-ray and infrared catalogues, as well as a subsample of UTR sources with ultra-steep spectrum are presented.

Key words: radio continuum: radio sources – general; radio sources – catalogue radio sources – identification; radio sources – spectra; catalogues: cross-identification

1. Introduction

The catalogue of 1822 radio sources obtained with the UTR telescope near Kharkov (Braude et al., 1978, 1979, 1981, 1985, 1994, <http://www.ira.kharkov.ua/UTR2/>) covers about 30% of the sky at six frequencies from 10 to 25 MHz, and is currently the lowest-frequency catalogue of its size. It provides an ideal basis to study the little known optical identification content of sources selected at decametric frequencies. The optical identification rate in the original version of the UTR-2 catalogue (UTR in what follows) is only 19%. Our goal is to identify all UTR sources with known radio sources. This cross-identification yields both the radio continuum spectrum and accurate coordinates for the radio counterparts, thus allowing one to search for optical counterparts on the Digitized Sky Surveys. The radio spectral characteristics may also be used to select certain samples, e.g. steep radio spectra and the lack of an optical identification tend to point to high-redshift radio galaxies.

The very large uncertainties of the UTR source

positions ($\sim 0.7^\circ$) forced us to use an interactive process to derive radio source spectra. In this process we use the radio sources known from low- and intermediate-frequency catalogues as the most likely candidates, which help us to discard the multitude of weaker sources in the UTR error box provided e.g. by the recent and sensitive NVSS (Condon et al., 1998) and FIRST (White et al., 1997) source catalogues. All catalogue entries are extracted from the catalogue collection combined in the CATS database (Verkhodanov et al., 1997a).

The work on the revision of coordinates and spectra of the decametre sources of the UTR catalogue was initiated by the authors in 1996 and has been conducted until the present time (Andernach et al., 1997; Verkhodanov et al., 1997b,c, 1998a,b; Verkhodanova et al., 1998). The publication of new radio source measurements implies a permanent refinement of continuum radio spectra bringing about minor changes in their parameters. More recently we started to work on the identification of samples of the UTR catalogue (Andernach et al., 2000; Verkhodanov et al.,

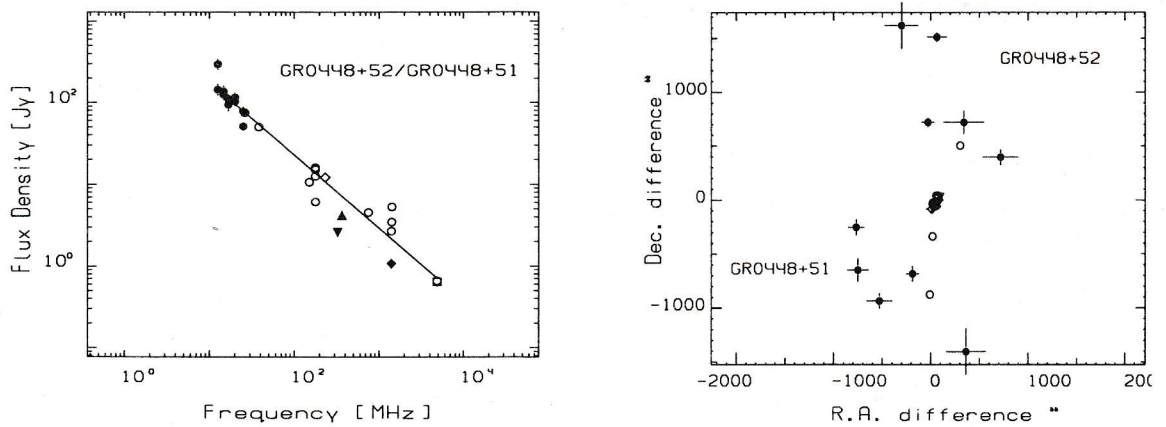


Figure 1: Example of a real source (4C+52.10) which has been observed as two independent UTR sources in adjacent observational strips. The left panel shows a spectrum, and the right panel shows the position of a confused source. Horizontal and vertical bars indicate the positional errors in R.A. and DEC, respectively.

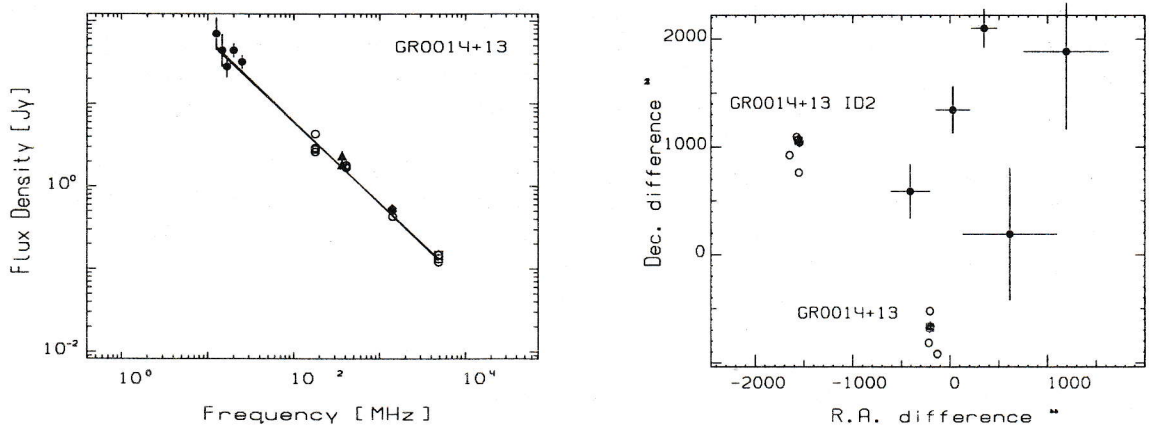


Figure 2: Left panel: spectra of two sources contributing to one UTR object. Their contribution in the radio spectrum is practically indistinguishable. The right panel shows the relative positions of all radio catalogue entries contributing to the spectrum. The data have already been cleaned from other irrelevant sources in the area. Filled circles correspond to the UTR catalogue entries, with horizontal and vertical bars indicating the positional errors in R.A. and DEC, respectively. Two groups of non-UTR points (corresponding to 2 blending sources within the UTR beam) are visible at the lower and left edge of the chart.

2000), and the requests of other interested radio astronomers, as well as the authors of the UTR catalogue motivated us to publish the procedures of identification and the resulting list.

The main goal of the present paper is to derive precise coordinates of the decametric sources of the UTR survey, which will further be used for cross-identifications. One of the tasks was establishment of cross-identification lists in the form of files for each object and their inclusion in the CATS system. For this reason, we do not give here flux densities at different wavelengths, except for 18 objects of the RC catalogue (Parijskij et al., 1991, 1992) expected to be useful in further studies by the RATAN-600 group. All the information about the fluxes and references to their original papers is available from the CATS

database (<http://cats.sao.ru>).

2. Plotting of radio continuum spectra

To prepare radio continuum spectra for decametric sources of the UTR catalogue (Braude et al., 1978, 1979, 1981, 1985, 1994), detected at 10, 12.6, 14.7, 16.7, 20, and 25 MHz, we first need to identify the sources with other known radio sources within their large error boxes (we used a box of $40' \times 40'$) drawn from the CATS database. CATS provides a graphical interface which displays a "radio spectrum" for all sources found in the error box at various frequencies. By human interaction the most deviant flux measurements in the spectrum can be recognized as inappropriate counterparts, and are discarded from the spectrum. This "cleaning" is achieved with the pro-

gramme *spg* (Verkhodanov, 1997).

The steps used in the identification of UTR sources are the following:

1. From the main radio catalogues of the CATS database (Verkhodanov et al., 1997a) we extract all entries in the search box of $40' \times 40'$, except for the recent and very sensitive NVSS and FIRST catalogues.

2. All objects with flux measurements at several frequencies are separated in the search box of $40' \times 40'$.

3. The spectrum of each object, excluding the UTR data points, is fitted with the best of several curves (see sect. 3) and extrapolated to the UTR frequencies.

4. Inside the search box we select counterparts by the following rules:

(a) the decametric flux densities, as extrapolated from the fitted spectra, should be close to the observed UTR fluxes;

(b) positions of the radio counterparts should be close to the mean position as listed in the UTR catalogue.

The resulting number of candidate identifications per UTR source ranges from 1 to 4 (see also Fig. 1). In the case of more than one counterpart, we consider that all counterparts satisfying the described criteria contribute to the UTR source flux, i.e. the UTR detection is a result of blending of one or more independent sources.

5. For further (e.g. optical) identification we defined "best radio coordinates" from the following catalogues (in order of decreasing priority): TXS (365 MHz), GB6 (4850 MHz), 87GB (4850 MHz), PMN (4850 MHz). It turns out that all UTR sources (with three exceptions, see below) have a counterpart from at least one of these catalogues.

6. If the identification area is poor of objects (e.g. at low declination, covered by only few radio surveys), and there are no sources detected simultaneously at several frequencies (i.e. no spectral fit is possible), then all objects within the box are retained for further study.

7. The best radio coordinates were then used for identification with NVSS or FIRST sources. The use of flux densities from NVSS or FIRST usually improved the smoothness of the radio spectra.

8. Only if an NVSS or FIRST identification was found, the "best radio positions" of item 5 were overwritten with the NVSS/FIRST position.

9. The "best radio positions" are used for identification of UTR objects with optical object catalogues (e.g. from the APM scans of POSS or ESO/SERC surveys) or catalogues in other wavelength ranges.

One of the problems of identification inside a wide

antenna beam is source confusion, i.e. when more than one strong source is located within the UTR telescope beam and contributes to the UTR flux. As mentioned in item (4) above, we have considered such sources and mark them as 'ID#' in Table 1. An example of one such source is shown in Fig. 2.

To check the reliability of the derived spectra we used the low frequency catalogues 6C, 7C at 151 MHz (Baldwin et al., 1985; Hales et al., 1988, 1990, 1991, 1993a, 1993b; McGilchrist et al., 1990), 3C, 4C at 178 MHz (Edge et al., 1959; Bennet, 1961; Pilkington and Scott, 1965), and other catalogues included in Dixon's Master List, like CL (Viner & Erickson, 1975, 26 MHz), WKB (Williams et al., 1966, 38 MHz), MSH (Mills et al., 1958, 1960, 1961, 85 MHz). For the region of the sky where these surveys overlap with the area covered by the UTR catalogue, we find that the low frequency fluxes from the former surveys match our spectral fits for UTR sources, and that source coordinates from these surveys are close to those derived by our method. This confirms the reliability of our methods of source separation.

3. The catalogue of counterparts

The resulting catalogue of 2316 radio counterparts, including all multiple identifications, is given in Table 1. In the columns of this table we give the original (B1950-based) UTR source name, the right ascension and declination (B1950 and J2000.0) of the best radio position, Galactic latitude, spectral indices of the best-fitting spectrum at 365, 1400 and 5000 MHz, best-fitting radio spectral parameters, presence of known optical, infrared or X-ray emission (marked as "em." in Column 11), and other names. Column 1 lists a sequence number for each radio identification. If there is more than one radio identification we assign sequence numbers ID2, ID3, etc. in column 2 of Table 1. However, we omit the "ID1" in all cases. Column 3 lists a sequence number of another radio identification if the latter significantly contributes to the UTR flux, or marks confused sources with a symbol 'c'. The spectrum is parameterized by the formula $\lg S(\nu) = A + Bx + Cf(x)$, where S is the flux density in Jy, x is the logarithm of the frequency ν in MHz, and $f(x)$ is one of the following functions: $\exp(-x)$, $\exp(x)$, or x^2 . Identifications with known X-ray sources are indicated with an "X" in column (11) of Table 1, while infrared ("I") and optical ("O") identifications are further detailed in separate Tables 4 and 5. Column 12 lists the names of sources from the known radio catalogues: 3C (Edge et al., 1959; Bennett, 1961), 4C (Pilkington and Scott, 1965) and PKS (Otrupcek and Wright, 1990), with which the UTR sources are identified.

Only for three sources we were unable to find identifications among the catalogues described above:

GR 0801-11, GR 0930-00, and GR 1040-02.

There are not enough data to be sure of the identifications of the sources GR 0520-08, GR 0537-00, GR 0629+02, and GR 2345+03. For these sources we quote a less accurate position and mark the position with a question mark.

We worked with both existing versions of the UTR catalogue: the printed version (Braude et al., 1978, 1979, 1981, 1985, 1994) and the more recent electronic one (<http://www.ira.kharkov.ua/UTR/>). We included UTR sources of all reliability levels (A,B,C) as given in the UTR catalogue. There are 64 sources in the electronic version which are not in the printed version, and 4 sources vice versa. Some of the sources are listed with different names in the printed and elec-

tronic versions.

In Table 1 we kept the names from the printed catalogue version for the following sources (new names from the electronic version are given in brackets): GR 0224+03 (GR 0227+03), GR 0307+17 (GR 0307+16), GR 0411+14 (GR 0411+13), GR 0919+55 (GR 0918+55), GR 0929+07 (GR 0930+07), GR 1039+03 (GR 1039+02), GR 1142+00 (GR 1142-00), GR 1538+01 (GR 1539+01), GR 1547+03 (GR 1548+03).

Table 1 also includes the following sources, which are present in the printed version, but are absent in electronic one: GR 1915+56, GR 2355+19, GR 2355-02, GR 2358+08.

Table 1: Radio Identifications for all UTR catalogue sources

N 1 N	name 2 N	conf. 3 N	RA+Dec(B1950) 4 h m s + ° / //	RA+Dec(J2000) 5 h m s + ° / //	b 6 o	α_{365} 7	α_{1400} 8	α_{5000} 9	spectrum 10	em. 11	radio names 12
1	GR0002+00		000332.2+003719	000606.0+005401	-59.92	-0.98	-0.66	-0.36	+4.307 - 2.397 π + 0.276 π^2		PKS 0003+006
2	ID2		000416.8+002007	000650.6+003649	-60.26	-1.52	-1.52	-1.52	+3.670 - 1.522 π		
3	GR0002+12		000107.1+124955	000341.0+130637	-48.13	-0.97	-0.97	-0.97	+3.167 - 0.966 π	O	4C+12.01, PKS 0001+128
4	GR0003+15		000325.2+155305	000559.4+160947	-45.33	-0.75	-0.75	-0.75	+2.303 - 0.748 π	OX	4C+15.01, PKS 0003+158 4C+17.03
5	GR0003+17		000330.3+175204	000604.5+180845	-43.41	-1.04	-1.04	-1.04	+2.785 - 1.038 π		
6	ID2		000250.0+171742	000524.1+173424	-43.93	-1.11	-0.93	-0.76	+3.557 - 1.894 π + 0.153 π^2		
7	ID3		000345.6+165600	000619.8+171242	-44.33	-1.27	-1.27	-1.27	+3.193 - 1.270 π		
8	ID4		000449.5+173511	000723.9+175152	-43.76	-1.15	-0.99	-0.85	+3.546 - 1.831 π + 0.133 π^2		
9	GR0003-00		000348.8-002107	000622.6-000425	-60.86	-0.63	-0.63	-0.63	+2.549 - 0.629 π	O	3C 2, PKS 0001+128
10	GR0004+05		000432.5+051927	000706.5+053609	-55.56	-0.93	-0.82	-0.71	+3.376 - 1.428 π + 0.097 π^2	OX	4C+05.02
11	ID2		000505.4+054420	000739.4+060101	-55.20	-1.17	-0.89	-0.62	+4.272 - 2.404 π + 0.241 π^2		
12	ID3		000701.3+054519	000935.3+060200	-55.33	-1.26	-1.26	-1.26	+3.323 - 1.261 π		
13	GR0004-05		000555.8-061527	000829.3-055846	-66.51	-1.01	-1.01	-1.01	+3.290 - 1.010 π	O	4C-06.01, PKS 0005-062 4C+12.03, PKS 0007+124 4C+00.01, PKS 0010+005 4C+05.03, PKS 0011+054
14	GR0007+12		000719.3+122841	000953.6+124522	-48.86	-0.83	-0.83	-0.83	+2.851 - 0.833 π		
15	GR0010+00		001037.1+003502	001310.9+005142	-60.54	-0.86	-0.86	-0.86	+2.923 - 0.862 π	O	
16	GR0010+05		001127.4+052830	001401.6+054511	-55.90	-0.84	-0.84	-0.84	+2.706 - 0.838 π		
17	ID2		000939.5+055328	001213.6+061009	-55.38	-1.18	-1.18	-1.18	+3.142 - 1.177 π		
18	GR0011+11		001237.5+110849	001512.1+112529	-50.46	-1.11	-1.11	-1.11	+2.973 - 1.114 π	O	4C+11.02
19	GR0014+06		001502.4+062412	001736.7+064051	-55.21	-1.11	-1.11	-1.11	+2.858 - 1.109 π	O	4C+13.02
20	GR0014+13		001350.2+131431	001625.0+133111	-48.47	-0.98	-0.98	-0.98	+2.743 - 0.982 π		
21	ID2		001217.8+134316	001452.5+135956	-47.93	-1.00	-1.00	-1.00	+2.783 - 0.997 π	O	
22	GR0015+17		001502.5+175246	001737.9+180926	-43.98	-0.94	-0.94	-0.94	+2.881 - 0.937 π	O	4C+17.05, PKS 0015+178
23	GR0016-11		001807.3-113618	002039.9-111939	-72.62	-0.80	-0.45	-0.26	-1.002 + 0.001 π + 10.403 $e^{-\pi}$		PKS 0018-116
24	ID2		001549.3-112818	001822.0-111138	-72.27	-1.21	-1.00	-0.81	+4.282 - 2.104 π + 0.175 π^2		
25	GR0017-09		001817.5-091413	002050.4-085735	-70.44	-1.10	-1.10	-1.10	+3.243 - 1.095 π		
26	GR0018+15		001750.0+152414	002025.3+154053	-46.53	-0.85	-0.85	-0.85	+3.016 - 0.851 π	OX	PKS 0018-092 3C 9, 4C+15.02 PKS 0017+15
27	GR0019+06		001958.0+055127	002232.5+060804	-56.01	-0.75	0.03	0.76	+5.977 - 4.158 π + 0.665 π^2	O	PKS 0019+058
28	ID2		002037.0+064840	002311.5+070518	-55.11	-1.95	-1.95	-1.95	+4.386 - 1.946 π		
29	GR0019+43		001908.5+431146	002147.9+432824	-19.07	-1.06	-1.06	-1.06	+3.026 - 1.057 π	O	4C+43.01
30	ID2		001726.5+431329	002005.4+433007	-19.00	-1.16	-0.99	-0.82	+3.916 - 1.943 π + 0.152 π^2		
31	ID3		002050.4+434619	002330.4+440256	-18.54	-1.10	-0.94	-0.80	+3.742 - 1.772 π + 0.132 π^2		
32	GR0020-03		001942.6-033844	002216.0-032206	-65.24	-0.91	-0.51	-0.29	-1.325 + 0.003 π + 11.809 $e^{-\pi}$		
33	GR0020-08		002046.1-080127	002319.0-074449	-69.50	-1.13	-1.13	-1.13	+3.499 - 1.133 π		
34	GR0023+19		002239.7+191646	002515.9+193322	-42.89	-1.18	-1.18	-1.18	+2.951 - 1.182 π		
35	ID2		002308.2+193534	002544.6+195211	-42.59	-1.09	-1.09	-1.09	+2.869 - 1.086 π		
36	GR0025+07		002600.1+071937	002834.9+073612	-54.83	-1.24	-1.03	-0.84	+4.166 - 2.160 π + 0.179 π^2		
37	ID2		002608.0+075435	002842.9+081110	-54.26	-1.23	-1.02	-0.82	+4.136 - 2.133 π + 0.177 π^2		
38	GR0025+12		002437.0+123524	002712.5+125200	-49.58	-1.03	-1.03	-1.03	+2.961 - 1.031 π		
39	GR0025+13		002424.3+132928	002659.8+134604	-48.68	-1.10	-1.10	-1.10	+3.091 - 1.104 π		
40	ID2		002523.2+134106	002758.9+135742	-48.52	-1.20	-0.92	-0.65	+4.344 - 2.449 π + 0.243 π^2		
41	GR0025-00		002555.3-004305	002829.0-002630	-62.75	-0.88	-0.88	-0.88	+2.692 - 0.880 π	O	4C-00.02, PKS 0025-007 PKS 0027-120 PKS 0026-114 PKS 0029+018 4C+06.02, PKS 0030+062 3C 14, 4C+18.01, PKS 0033+180
42	GR0026-11		002727.1-120038	002959.2-114404	-73.80	-0.97	-0.97	-0.97	+2.989 - 0.969 π		
43	ID2		002650.5-112826	002922.6-111151	-73.25	-0.99	-0.93	-0.89	+3.216 - 1.211 π + 0.044 π^2		
44	GR0031+02		002934.0+012023	003208.0+013656	-60.88	-1.11	-1.11	-1.11	+3.216 - 1.110 π	O	PKS 0029+018
45	GR0031+06		003040.2+061144	003315.0+062816	-56.11	-0.99	-0.99	-0.99	+3.013 - 0.991 π	O	4C+06.02, PKS 0030+062
46	GR0033+08		003308.6+081540	003543.8+083211	-54.13	-1.13	-0.62	-0.13	+5.393 - 3.391 π + 0.441 π^2		
47	ID2		003340.9+075833	003616.1+081504	-54.43	-1.11	-0.82	-0.54	+4.597 - 2.400 π + 0.251 π^2	O	
48	ID3		003401.8+074339	003636.9+080009	-54.69	-1.16	-0.82	-0.50	+4.864 - 2.642 π + 0.289 π^2	O	
49	GR0034+12		003541.9+121102	003818.0+122732	-50.28	-0.76	-0.53	-0.31	+3.639 - 1.777 π + 0.198 π^2	OX	PKS 0035+120
50	GR0034+18		003329.4+182128	003606.5+183759	-44.09	-0.87	-0.87	-0.87	+3.003 - 0.873 π	O	
51	GR0035+13		003508.4+130327	003744.7+131956	-49.40	-0.90	-0.90	-0.90	+3.049 - 0.898 π		3C 16, 4C+12.01

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
	N		h m s + ° ' "	h m s + ° ' "	°	α_{365}	α_{1400}	α_{5000}			
GR0035	+50		003541.6+501857	003828.4+503526	-12.23	-0.81	-0.81	-0.81	+2.577 - 0.806z	O	PKS 0035+130
GR0035	-01		003430.5-012539	003704.0-010909	-63.80	-0.70	-0.70	-0.70	+2.813 - 0.702z	OX	4C+50.02 3C 15, 4C-01.03, PKS 0034-014
GR0036	-02		003547.1-022410	003820.4-020740	-64.80	-0.67	-0.67	-0.67	+2.905 - 0.670z	O	3C 17.0, PKS 0035-024
GR0037	+03		003646.0+030321	003920.4+031949	-59.40	-0.70	-0.40	-0.12	+3.850 - 2.013z + 0.256z ²		4C+03.01, PKS 0036+030
ID3			004002.3+031215	004236.8+032841	-59.32	-1.15	-0.89	-0.64	+4.252 - 2.295z + 0.224z ²		
ID3			003735.7+035801	004010.3+041429	-58.51	-1.20	-0.83	-0.49	+4.727 - 2.794z + 0.312z ²		
GR0037	+05		003717.3+043903	003952.0+045531	-57.82	-0.93	-0.79	-0.65	+3.520 - 1.570z + 0.124z ²	O	4C+04.03, PKS 0037+046
ID2			003600.0+043421	003834.6+045050	-57.87	-1.12	-0.82	-0.54	+4.422 - 2.445z + 0.258z ²		
GR0038	+08		003817.9+083608	004053.4+085235	-53.90	-0.82	-0.82	-0.82	+2.699 - 0.823z		4C+08.05, PKS 0038+086
GR0038	+09		003814.6+094656	004050.4+100323	-52.73	-0.69	-0.69	-0.69	+2.848 - 0.695z	O	3C 18, 4C+09.02, PKS 0038+097
GR0039	+51		004019.6+514709	004308.8+520334	-10.79	-0.64	-0.74	-0.84	+2.551 - 0.214z - 0.084z ²	O	3C 20, 4C+51.02
GR0039	-05		004010.8-062759	004243.2-061133	-68.96	-0.94	-0.60	-0.28	+4.558 - 2.428z + 0.290z ²		PKS 0040-065
GR0039	-09		003752.5-093155	004024.4-091527	-71.94	-1.28	-0.82	-0.39	+5.494 - 3.285z + 0.392z ²		
GR0040	+12		004006.6+123032	004243.1+124658	-50.03	-0.93	-0.93	-0.93	+2.681 - 0.929z	O	4C+12.06
GR0040	+46		004037.5+470012	004324.4+471637	-15.57	-1.02	-1.02	-1.02	+2.880 - 1.019z	O	
GR0040	-10		004216.6-114528	004447.8-112903	-74.28	-1.74	-1.74	-1.74	+3.907 - 1.737z		
GR0041	+15		004321.1+153804	004558.5+155427	-46.94	-1.08	-0.90	-0.72	+3.551 - 1.891z + 0.158z ²		
GR0042	+13		004246.4+132340	004523.2+134004	-49.18	-0.64	-0.64	-0.64	+2.132 - 0.642z	O	4C+13.06, PKS 0042+133
GR0043	-00		004308.1+000442	004541.9+002106	-62.49	-0.98	-0.98	-0.98	+2.765 - 0.983z	O	PKS 0043+000
GR0046	-01		004530.2-005904	004803.7-004242	-63.57	-1.22	-1.00	-0.80	+4.369 - 2.155z + 0.183z ²		PKS 0045-009
ID2			004645.4-005921	004918.9-004301	-63.58	-1.00	-0.56	-0.32	-1.650 + 0.000z + 12.981e ^{-z}		
GR0048	-02		004712.0-025918	004945.1-024258	-65.58	-0.84	-0.84	-0.84	+2.776 - 0.843z	O	PKS 0047-029
GR0049	+07		004852.4+071237	005128.0+072855	-55.39	-1.01	-1.01	-1.01	+2.889 - 1.015z	O	4C+07.02
GR0049	+49		005143.3+490610	005434.9+492225	-13.49	-0.99	-0.89	-0.79	+3.243 - 1.466z + 0.092z ²		4C+49.03
ID2			005042.1+493254	005333.7+494910	-13.05	-0.96	-0.74	-0.52	+3.687 - 1.956z + 0.194z ²		
GR0050	+12		005058.1+125435	005335.4+131051	-49.69	-1.00	-1.00	-1.00	+2.942 - 1.003z		4C+12.07
GR0050	+13		005009.8+140332	005247.4+141949	-48.54	-1.17	-1.17	-1.17	+3.232 - 1.174z		
GR0051	+15		005007.3+155021	005245.3+160638	-46.76	-1.10	-0.65	-0.21	+4.709 - 3.099z + 0.390z ²		PKS 0051+171
GR0051	+17		005113.9+171103	005352.4+172719	-45.41	-1.05	-0.93	-0.81	+3.618 - 1.575z + 0.103z ²		
ID2			005109.2+162552	005347.5+164208	-46.17	-1.18	-1.33	-1.46	+2.677 - 0.564z - 0.121z ²	O	
GR0053	+43		005357.3+435710	005646.5+441323	-18.64	-0.94	-0.94	-0.94	+2.594 - 0.944z		4C+43.03
GR0054	+08	85	005453.3+090141	005729.7+091754	-53.54	-1.01	-1.01	-1.01	+2.845 - 1.009z	O	4C+09.03
GR0054	-01		005500.8-013910	005734.1-012258	-64.21	-0.64	-0.64	-0.64	+2.717 - 0.637z	O	3C 29
GR0055	+09	83	005453.3+090141	005729.7+091754	-53.54	-1.01	-1.04	-1.07	+2.691 - 0.869z - 0.027z ²	O	4C+09.03
GR0058	+47		005918.1+473247	010211.1+474854	-15.02	-0.78	-0.78	-0.78	+2.388 - 0.779z	O	4C+47.01
GR0059	+10		010019.1+102914	010256.2+104520	-52.01	-1.13	-0.81	-0.52	+4.298 - 2.513z + 0.270z ²		
GR0100	+01		005939.9+014736	010214.3+020343	-60.69	-1.11	-0.82	-0.55	+4.803 - 2.382z + 0.248z ²		PKS 0059+017
GR0100	+07		010052.1+083310	010328.6+084916	-53.93	-1.07	-0.75	-0.44	+4.382 - 2.483z + 0.276z ²		
ID2			010109.6+074812	010345.9+080417	-54.67	-0.85	-0.47	-0.27	-1.327 - 0.001z + 10.965e ^{-z}		
ID3			010027.1+074240	010303.3+075846	-54.78	-1.15	-0.75	-0.38	+4.792 - 2.886z + 0.339z ²		
ID4			005957.6+082122	010234.0+083728	-54.15	-1.24	-0.79	-0.35	+5.148 - 3.240z + 0.390z ²		
GR0100	+14		005925.9+142716	010204.2+144324	-48.07	-0.90	-0.90	-0.90	+3.014 - 0.898z		4C+14.03, PKS 0059+146
ID2			010009.8+143634	010248.2+145240	-47.90	-0.97	-0.97	-0.97	+3.114 - 0.966z		PKS 0100+144
GR0100	+18		010000.8+185522	010240.7+191129	-43.60	-0.93	-0.93	-0.93	+2.540 - 0.934z	O	4C+18.05
GR0100	+46		005954.4+460832	010246.6+462938	-16.42	-0.89	-1.01	-1.13	+2.230 - 0.351z - 0.105z ²	O	4C+46.02
GR0100	+51		010018.7+510518	010314.6+512124	-11.47	-1.06	-1.06	-1.06	+3.016 - 1.056z		
GR0101	+42		010351.5+421353	010642.4+422955	-20.28	-0.90	-0.90	-0.90	+2.677 - 0.897z	O	4C+42.04
GR0101	-06		010238.4-070854	010509.9-065250	-69.49	-0.97	-0.97	-0.97	+2.863 - 0.967z		PKS 0102-071
GR0103	+48		010214.5+483542	010509.1+485146	-13.95	-0.92	-0.78	-0.65	+3.268 - 1.520z + 0.118z ²		4C+48.05
GR0104	+06		010320.3+061210	010556.1+062812	-56.22	-1.10	-1.10	-1.10	+3.044 - 1.101z	O	4C+06.06, PKS 0103+061
GR0105	+07		010747.1+074545	011023.6+080142	-54.54	-1.06	-0.56	-0.10	+5.129 - 3.232z + 0.424z ²		
ID2			010640.8+071617	010917.1+073216	-55.07	-1.17	-0.70	-0.26	+5.146 - 3.217z + 0.400z ²		
GR0105	+53		010729.7+534157	011030.5+535754	-8.80	-1.36	-1.36	-1.36	+3.716 - 1.358z		4C+53.01
GR0105	-10		010604.1-105011	010834.2-103412	-72.96	-0.99	-0.99	-0.99	+2.859 - 0.985z		PKS 0106-108
GR0106	+01		010604.5+011900	010838.7+013459	-60.99	-0.51	-0.21	0.07	+3.521 - 1.822z + 0.256z ²	OX	PKS 0106+013
ID2			010730.1+011615	011004.3+013212	-60.99	-1.21	-0.83	-0.47	+4.880 - 2.893z + 0.328z ²		
ID3			010445.5+011800	010719.7+013401	-61.05	-1.26	-0.95	-0.66	+4.616 - 2.598z + 0.262z ²		
GR0106	+12		010612.2+130232	010850.5+131831	-49.34	-0.69	-0.69	-0.69	+3.259 - 0.691z	O	3C 33, 4C+13.07, PKS 0106+130
GR0106	-09		010659.5-090902	010930.1-085304	-71.26	-1.02	-1.02	-1.02	+2.742 - 1.016z		PKS 0106-091
GR0107	+57		010808.1+571257	011113.1+572853	-5.29	-0.90	-0.90	-0.90	+2.753 - 0.899z		4C+57.01
GR0108	+46		010905.0+471216	011200.7+472811	-15.26	-1.11	-1.11	-1.11	+2.759 - 1.107z		
GR0109	+17		010909.8+173758	011150.0+175353	-44.70	-0.99	-0.84	-0.70	+3.558 - 1.636z + 0.126z ²	O	PKS 0109+176
ID2			010957.1+173610	011237.4+175204	-44.71	-1.10	-1.00	-0.91	+3.511 - 1.545z + 0.086z ²		
GR0109	+41		010926.8+413908	011218.7+415502	-20.79	-0.87	-0.87	-0.87	+2.589 - 0.872z	O	4C+41.01
ID2			010916.5+413105	011208.3+414700	-20.92	-0.87	-0.70	-0.54	+3.331 - 1.626z + 0.147z ²		
GR0109	+48		010535.5+483732	010831.2+485331	-13.88	-0.83	-0.67	-0.52	+3.047 - 1.541z + 0.138z ²		
GR0109	+49		010910.8+491746	011208.3+493341	-13.17	-0.87	-0.87	-0.87	+2.952 - 0.870z		
GR0110	-12		010901.8-123633	011131.1-122038	-74.48	-1.06	-1.06	-1.06	+2.819 - 1.059z		
ID2			011049.9-125815	011319.0-124222	-74.69	-1.09	-1.09	-1.09	+2.840 - 1.092z		
GR0111	+15		011021.1+151256	011300.5+152849	-47.07	-0.88	-0.88	-0.88	+2.664 - 0.885z		PKS 0110+152
GR0115	+02		011359.5+011245	011633.8+012834	-60.76	-1.19	-1.19	-1.19	+3.367 - 1.192z	O	PKS 0113+012, 4C+01.03
GR0115	+45		011503.5+452035	011759.5+453621	-17.02	-0.92	-1.05	-1.17	+2.294 - 0.337z - 0.113z ²	O	3C 36, 4C+45.03
GR0115	+46		011526.6+465711	011824.1+471257	-15.41	-0.99	-0.99	-0.99	+2.796 - 0.986z		4C+46.03
GR0116	-03		011713.9-025935	011946.5-024351	-64.68	-0.87	-0.48	-0.28	-1.531 + 0.004z + 11.354e ^{-z}		
GR0117	-08		011804.0-082659	012034.5-081117	-69.84	-1.15	-0.71	-0.29	+5.050 - 3.096z + 0.379z ²		
GR0119	-03		011825.8+032833	012101.0+034415	-58.32	-0.99	-0.99	-0.99	+3.132 - 0.989z	OX	PKS 0118+034
ID2			01194								

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		<i>N</i>	<i>h m s + ° //</i>	<i>h m s + ° //</i>	<i>°</i>	α_{865}	α_{1400}	α_{5000}			
132	ID2		012056.2+425825	012352.0+431403	-19.24	-0.99	-0.86	-0.74	+3.230 - 1.542 x + 0.108 x^2		
133	GR0120+49		011944.7+495116	012246.1+500656	-12.44	-1.10	-1.22	-1.32	+2.488 - 0.612 x - 0.096 x^2		4C+49.05
134	GR0121+51		012033.7+511253	012336.8+512832	-11.08	-1.02	-0.74	-0.47	+4.155 - 2.253 x + 0.241 x^2		
135	GR0121-05		011906.3-053407	012137.9-051826	-67.02	-1.10	-1.10	-1.10	+2.965 - 1.096 x		
136	GR0122+08		012413.9+081358	012651.3+082931	-53.36	-0.89	-0.49	-0.28	-1.454 + 0.002 x + 11.536 e^{-x}		
137	GR0122+57		012227.1+573326	012538.7+574902	-4.75	-0.91	-1.10	-1.27	+1.706 - 0.101 x - 0.158 x^2		4C+57.02
138	GR0123+13		012333.4+140439	012613.2+142013	-47.68	-0.94	-0.94	-0.94	+2.705 - 0.938 x		
139	GR0123-01		012331.6-013936	012604.7-012402	-62.96	-0.86	-0.86	-0.86	+3.410 - 0.857 x		4C-01.08
140	GR0124+09		012445.5+085900	012723.2+091432	-52.60	-0.90	-0.59	-0.29	+4.607 - 2.273 x + 0.268 x^2	O	4C+08.07, PKS 0124+089
141	GR0124+49		012417.9+493058	012720.4+494630	-12.68	-1.16	-1.32	-1.47	+2.301 - 0.451 x - 0.138 x^2		4C+49.06
142	GR0129+06		012844.9+060812	013121.5+062338	-55.11	-0.93	-0.93	-0.93	+3.072 - 0.932 x	O	3C 44, 4C+06.07, PKS 0128+061
143	GR0129-06		012941.6-070801	013212.2-065237	-67.55	-0.89	-0.89	-0.89	+2.911 - 0.893 x	OX	PKS 0129-071
144	GR0130+19		012854.6+193540	013137.6+195105	-42.02	-1.20	-0.93	-0.66	+4.278 - 2.418 x + 0.237 x^2		
145	ID2		012914.5+194556	013157.6+200121	-41.84	-1.09	-0.82	-0.56	+4.087 - 2.271 x + 0.231 x^2		
146	ID3		013025.1+200310	013308.4+201832	-41.50	-1.12	-0.98	-0.85	+3.587 - 1.738 x + 0.120 x^2		
147	GR0130-11		013204.9-115358	013433.1-113838	-71.50	-0.80	-0.17	0.42	+5.163 - 3.543 x + 0.536 x^2		
148	GR0131+46		013051.1+464203	013352.8+465725	-15.30	-0.93	-0.99	-1.04	+2.281 - 0.675 x - 0.050 x^2	O	4C+46.04
149	GR0131-00		013139.0-001136	013412.7+000345	-60.93	-0.75	-0.42	-0.24	-0.550 + 0.001 x + 9.783 e^{-x}		PKS 0131-001
150	ID2		013217.8-001309	013451.6+000211	-60.90	-1.11	-0.73	-0.36	+4.897 - 2.803 x + 0.330 x^2		
151	ID3		013239.9-002242	013513.6-000722	-61.02	-1.09	-0.74	-0.41	+4.715 - 2.629 x + 0.300 x^2		
152	ID4		013054.2-001047	013327.9+000435	-60.98	-1.24	-0.81	-0.41	+5.305 - 3.099 x + 0.363 x^2		
153	GR0132+08		013237.5+075548	013515.0+081107	-53.13	-0.71	-0.71	-0.71	+2.562 - 0.708 x	O	PKS 0132+079, 4C+07.05, 4C+13.09
154	GR0132+14		013223.4+131521	013503.4+133041	-48.00	-0.85	-0.85	-0.85	+2.345 - 0.854 x		
155	GR0132-03		012810.4-035337	013042.5-033810	-64.70	-1.65	-1.37	-1.11	+5.029 - 2.888 x + 0.241 x^2		
156	GR0133+20		013339.2+204140	013623.2+205658	-40.71	-0.92	-0.92	-0.92	+3.474 - 0.920 x	OX	3C 47, 4C+20.07, PKS 0133+207
157	GR0133+43		013306.5+434003	013605.9+435521	-18.22	-1.05	-0.88	-0.73	+3.308 - 1.778 x + 0.142 x^2		
158	GR0135+09		013439.4+091516	013717.7+093032	-51.71	-0.82	-0.82	-0.82	+2.561 - 0.824 x		4C+09.06, PKS 0134+092
159	GR0135-08		013446.1-092712	013715.4-091156	-69.06	-1.34	-1.34	-1.34	+3.571 - 1.336 x	O	
160	GR0136+58		013555.2+582039	013913.9+583551	-3.70	-1.05	-0.89	-0.74	+3.414 - 1.750 x + 0.136 x^2		
161	GR0136-06		013514.7-065354	013745.2-063839	-66.75	-1.21	-1.08	-0.96	+3.778 - 1.786 x + 0.112 x^2		
162	GR0137-01		013535.0-020034	013807.8-014520	-62.37	-1.12	-1.12	-1.12	+3.125 - 1.115 x	O	4C-02.07, PKS 0135-020
163	GR0138+07		014157.8+071359	014435.3+072901	-53.07	-0.90	-0.50	-0.29	-1.587 - 0.001 x + 11.696 e^{-x}		
164	GR0140+09		013958.1+093717	014236.7+095223	-50.97	-1.06	-1.06	-1.06	+2.883 - 1.060 x	O	
165	ID2		014111.8+093159	014350.5+094702	-50.96	-1.11	-1.11	-1.11	+2.905 - 1.111 x		
166	GR0140+12		014051.4+120037	014331.4+121541	-48.63	-0.77	-0.39	-0.03	+3.905 - 2.448 x + 0.327 x^2		
167	GR0140-01		014044.2-013403	014317.3-011859	-61.35	-0.95	-0.70	-0.48	+4.119 - 2.007 x + 0.207 x^2	O	4C-01.09, PKS 0140-015
168	GR0141+42		014058.5+421716	014358.7+423219	-19.29	-1.18	-0.92	-0.68	+4.100 - 2.325 x + 0.223 x^2		
169	GR0142-03		014051.7-030201	014324.0-024657	-62.66	-1.13	-1.02	-0.93	+3.620 - 1.577 x + 0.088 x^2	O	PKS 0140-030
170	ID2		014148.4-035449	014420.3-033946	-63.35	-1.08	-0.98	-0.89	+3.553 - 1.525 x + 0.086 x^2	O	PKS 0141-039
171	GR0144+44		014346.1+444111	014649.3+445609	-16.84	-0.97	-0.97	-0.97	+2.740 - 0.967 x		
172	GR0144+49		014348.2+501513	014657.8+503011	-11.40	-1.13	-1.17	-1.20	+2.756 - 0.953 x - 0.034 x^2		
173	ID2		014513.6+500134	014823.3+501629	-11.57	-1.03	-0.78	-0.54	+3.812 - 2.144 x + 0.217 x^2		
174	GR0145+43		014453.6+431719	014755.7+433215	-18.15	-0.96	-0.83	-0.71	+3.100 - 1.517 x + 0.109 x^2		
175	ID2		014455.9+430448	014757.7+431944	-18.36	-1.05	-1.05	-1.05	+2.713 - 1.047 x	O	
176	GR0145+46		014523.9+463551	014829.6+465046	-14.91	-0.95	-0.95	-0.95	+2.554 - 0.955 x		
177	GR0145+53		014515.4+531749	014829.7+533244	-8.38	-0.70	-0.70	-0.70	+2.764 - 0.701 x	O	3C 52, 4C+53.02
178	GR0145-00		014542.3+000450	014816.2+001945	-59.33	-0.93	-0.93	-0.93	+2.840 - 0.934 x		PKS 0145+000
179	GR0145-05		014414.3-052527	014645.1-053759	-64.79	-0.87	-0.87	-0.87	+2.833 - 0.866 x		4C-05.07, PKS 0144-058 PKS 0146+061
180	GR0146+06		014611.5+060646	014848.6+062140	-53.75	-1.05	-1.05	-1.05	+3.151 - 1.047 x		
181	ID2		014713.1+061535	014950.2+063027	-53.52	-1.24	-1.08	-0.94	+4.135 - 1.934 x + 0.135 x^2	O	
182	GR0147+13		014646.2+131956	014927.2+133449	-46.93	-1.21	-0.98	-0.77	+4.337 - 2.210 x + 0.195 x^2	O	
183	GR0147+47		014835.9+473246	015143.6+474735	-13.86	-0.94	-1.04	-1.15	+2.060 - 0.466 x - 0.092 x^2		4C+47.03
184	GR0148+07		014919.4+073907	015157.4+075355	-52.03	-1.22	-0.76	-0.33	+5.086 - 3.210 x + 0.389 x^2		
185	GR0148+16		014754.1+160541	015036.8+162031	-44.22	-1.12	-1.12	-1.12	+2.819 - 1.116 x	O	
186	GR0148+51		014918.8+510926	015231.3+512413	-10.32	-1.13	-0.90	-0.68	+3.841 - 2.135 x + 0.197 x^2		
187	GR0149+01		014945.7+011842	015220.2+013328	-57.78	-0.88	-0.49	-0.28	-1.794 + 0.002 x + 11.458 e^{-x}		
188	GR0150-03		015052.1-034845	015323.9-033400	-62.17	-1.02	-1.02	-1.02	+3.152 - 1.018 x	O	4C-03.05, PKS 0150-038
189	GR0150-08		015151.0-083127	015420.1-081644	-65.98	-1.16	-0.98	-0.81	+3.885 - 1.936 x + 0.152 x^2		
190	GR0151-06		015039.9-070019	015309.9-064534	-64.91	-0.95	-0.95	-0.95	+2.691 - 0.955 x		PKS 0150-070
191	GR0152+04		015155.1+040730	015431.2+042212	-55.01	-1.21	-1.21	-1.21	+3.339 - 1.210 x		
192	ID2		015315.3+040738	015551.4+042218	-54.87	-1.14	-1.01	-0.87	+3.810 - 1.754 x + 0.119 x^2		
193	GR0152+05		015345.3+052301	015622.1+053740	-53.68	-0.90	-0.69	-0.50	+3.763 - 1.798 x + 0.176 x^2	OX	4C+05.10, PKS 0153+053
194	ID2		015106.2+052047	015343.0+053531	-53.98	-1.20	-0.82	-0.46	+4.932 - 2.869 x + 0.326 x^2	X	
195	GR0152+43		015226.0+433115	015530.2+434555	-17.60	-0.82	-0.82	-0.82	+2.823 - 0.817 x	O	3C 54, 4C+43.06
196	GR0154+41		015318.8+414745	015621.3+420224	-19.23	-0.92	-0.85	-0.79	+3.040 - 1.216 x + 0.058 x^2	O	4C+41.02
197	GR0154+45		015424.8+450345	015731.1+451821	-16.02	-1.16	-0.90	-0.65	+4.029 - 2.309 x + 0.224 x^2		
198	GR0156+12		015628.1+123801	015909.3+125234	-46.75	-1.16	-1.16	-1.16	+3.123 - 1.165 x	O	
199	GR0156-11		015514.1-105816	015741.6-104341	-67.37	-0.90	-0.90	-0.90	+3.186 - 0.899 x	O	PKS 0155-109
200	GR0157+53		015555.8+531438	015913.7+532911	-8.05	-0.93	-0.84	-0.75	+3.351 - 1.352 x + 0.082 x^2		4C+53.03
201	ID2		015833.0+530805	020151.5+532232	-8.05	-1.05	-0.95	-0.86	+3.491 - 1.470 x + 0.082 x^2		
202	GR0157-01		015540.7-013112	015813.7-011637	-59.59	-1.21	-0.88	-0.56	+4.754 - 2.666 x + 0.284 x^2		PKS 0157+011
203	GR0158+01		015729.4+011042	020004.0+012512	-57.02	-0.96	-0.96	-0.96	+2.915 - 0.961 x	O	
204	GR0158+58		015810.2+585234	02013							

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	h m s + o //	h m s + o //	o	α_{365}	α_{1400}	α_{5000}			
	ID3		020346.5-060739	020616.7-055323	-62.29	-0.95	-0.68	-0.44	+3.926 - 2.094x + 0.224x ²		PKS 0203-061
	GR0205-10		020448.8-093141	020716.8-091727	-64.73	-1.21	-1.06	-0.93	+4.097 - 1.845x + 0.124x ²		
	ID2		020732.8-101802	021000.2-100354	-64.82	-1.01	-0.67	-0.34	+4.706 - 2.547x + 0.299x ²	OX	
	GR0207+09		020707.6+093553	020947.5+095002	-48.44	-0.82	-0.82	-0.82	+2.658 - 0.819x		4C+09.08, PKS 0207+095
	GR0207+15		020728.4+151821	021012.0+153229	-43.25	-0.84	-0.84	-0.84	+2.533 - 0.836x		4C+15.06, PKS 0207+153
	GR0207-10		020917.3-130907	021142.8-125503	-66.45	-0.97	-0.54	-0.31	-1.570 + 0.001x + 12.604x ^{-x}		
	GR0208+49		020741.6+495347	021058.0+500754	-10.75	-0.95	-0.74	-0.55	+3.449 - 1.833x + 0.173x ²		
	GR0208-03		020741.7-035812	021013.1-034404	-59.98	-1.14	-1.00	-0.87	+3.876 - 1.754x + 0.120x ²		4C-03.06, PKS 0207-039
	ID2		020934.0-032124	021205.7-030720	-59.21	-1.28	-1.19	-1.10	+3.835 - 1.688x + 0.079x ²		
	GR0209+07		020948.5+070800	021226.8+072202	-50.32	-1.12	-1.12	-1.12	+3.290 - 1.120x	O	PKS 0209+071
	GR0209+44		020803.4+445618	021113.1+451024	-15.45	-1.24	-0.74	-0.27	+5.274 - 3.415x + 0.425x ²		
	GR0209+51 228		020850.4+520712	021210.6+522116	-8.58	-1.06	-0.97	-0.89	+3.363 - 1.452x + 0.076x ²		4C+52.04
	GR0211+11		021159.6+114240	021441.1+115637	-46.02	-1.20	-0.89	-0.59	+4.798 - 2.555x + 0.265x ²		
	ID2		020953.2+113542	021234.5+114944	-46.35	-1.36	-1.07	-0.78	+4.951 - 2.670x + 0.255x ²		
	ID3		021144.8+112454	021426.1+113852	-46.31	-1.29	-0.80	-0.33	+5.664 - 3.463x + 0.424x ²		
	GR0211+52 224*		020850.4+520712	021210.6+522116	-8.58	-1.11	-0.97	-0.83	+3.794 - 1.730x + 0.121x ²		4C+52.04
	GR0212+13		021142.3+134252	021425.1+135649	-44.25	-0.98	-0.83	-0.68	+3.296 - 1.660x + 0.132x ²		
	ID2		021209.5+135132	021452.4+140529	-44.08	-1.09	-0.90	-0.73	+3.552 - 1.904x + 0.159x ²		
	ID3		021241.5+134219	021524.4+135615	-44.16	-1.15	-1.15	-1.15	+2.922 - 1.150x		
	GR0212+19		021218.9+194655	021506.0+200051	-38.69	-0.81	-0.81	-0.81	+2.515 - 0.809x		4C+19.08, PKS 0212+197
	GR0213+17		021346.5+175240	021632.3+180633	-40.28	-0.93	-0.84	-0.76	+3.285 - 1.329x + 0.077x ²	OX	4C+17.11, PKS 0213+178
	GR0215+10		021423.6+105011	021704.6+110402	-46.52	-0.88	-0.74	-0.62	+3.486 - 1.449x + 0.112x ²		4C+10.06, PKS 0214+108
	GR0215+42		021600.3+421911	021908.5+423258	-17.45	-1.01	-0.82	-0.63	+4.033 - 1.860x + 0.166x ²	O	
	GR0215+58		021431.6+585145	021807.6+590535	-1.92	-1.03	-0.72	-0.42	+4.305 - 2.411x + 0.269x ²		
	ID2 250		021856.3+583435	022233.3+584814	-2.00	-0.96	-0.68	-0.42	+4.072 - 2.181x + 0.238x ²		
	GR0216+54		021553.0+535650	021918.8+541037	-6.51	-0.99	-0.99	-0.99	+2.662 - 0.992x		4C+53.05
	ID2 247		021935.1+543512	022303.4+544849	-5.72	-0.77	-0.86	-0.95	+2.066 - 0.354x - 0.081x ²		4C+54.03
	GR0217+01		021723.8+014204	021958.8+015548	-53.96	-0.94	-0.72	-0.52	+3.793 - 1.870x + 0.182x ²	O	PKS 0217+017
	GR0218+11		021806.0+110800	022047.4+112143	-45.83	-0.77	-0.77	-0.77	+2.552 - 0.766x	O	4C+11.10, PKS 0218+111
	GR0219+08		021922.6+081308	022202.0+082647	-48.20	-0.79	-0.79	-0.79	+2.823 - 0.790x	O	4C+08.08, PKS 0219+082
	GR0219+42		022003.0+424602	022312.7+425939	-16.77	-0.75	-0.75	-0.75	+3.254 - 0.753x	OX	4C+42.07
	GR0219-01		021807.8-011757	022040.8-010414	-56.28	-1.41	-1.10	-0.81	+5.119 - 2.782x + 0.267x ²		
	GR0220+05		022043.1+062555	022321.3+063930	-49.55	-1.05	-0.79	-0.54	+4.188 - 2.195x + 0.224x ²		4C+06.10
	ID2		022149.8+064552	022428.3+065925	-49.12	-0.65	-0.10	0.41	+4.861 - 3.049x + 0.468x ²		
	GR0220+44		021933.4+451657	022246.3+453034	-14.45	-1.01	-0.75	-0.51	+3.903 - 2.140x + 0.221x ²	OX	PKS 0221+067
	GR0220+54 247		021935.1+543512	022303.4+544849	-5.72	-0.81	-0.91	-1.00	+2.176 - 0.375x - 0.085x ²		4C+54.03
	GR0220+57		021805.6+563559	022138.8+570740	-3.62	-1.28	-0.81	-0.37	+5.257 - 3.350x + 0.403x ²		
	GR0220+58 237		021856.3+583435	022233.3+584814	-2.00	-0.90	-0.67	-0.44	+3.683 - 1.943x + 0.203x ²		
	GR0223-09		022357.0+090000	022625.0-084632	-61.01	-1.00	-1.00	-1.00	+2.572 - 1.003x		
	GR0224+03		022319.5+033352	022555.8+034721	-51.58	-1.28	-1.28	-1.28	+3.377 - 1.278x		
	GR0224+52		022407.0+522018	022732.4+523343	-7.59	-0.97	-1.09	-1.20	+2.252 - 0.463x - 0.099x ²		PKS 0223+035
	GR0225+14		022557.0+134835	022840.7+140158	-42.56	-1.11	-1.11	-1.11	+2.853 - 1.105x		4C+52.05
	GR0225+46		022605.2+464658	022921.8+470018	-12.64	-0.76	-0.76	-0.76	+2.365 - 0.761x	O	4C+46.05
	GR0225+49		022526.7+492611	022847.3+493933	-10.22	-0.95	-0.95	-0.95	+2.848 - 0.950x		
	GR0226+07		022635.9+082458	022915.7+083818	-47.09	-1.18	-1.18	-1.18	+3.253 - 1.183x		PKS 0226+084
	ID2		022704.0+072612	022943.1+073931	-47.85	-1.24	-1.06	-0.89	+4.027 - 2.031x + 0.154x ²		
	GR0228+54		023104.8+543316	023436.8+544623	-5.15	-0.91	-0.60	-0.30	+4.025 - 2.288x + 0.269x ²		
	GR0228+57		022620.5+573126	022957.8+574445	-2.64	-0.82	-0.82	-0.82	+2.335 - 0.819x		4C+57.05
	GR0229+11		022843.7+112239	023125.8+113554	-44.30	-1.13	-1.06	-1.00	+3.174 - 1.441x + 0.060x ²		
	ID2		022922.6+111640	023204.6+112953	-44.31	-1.25	-1.12	-0.99	+3.578 - 1.836x + 0.114x ²		
	GR0229+17		022816.8+172401	023103.3+173717	-39.15	-0.88	-0.88	-0.88	+2.394 - 0.875x	O	
	GR0231+13		023338.4+134901	023622.5+140203	-41.60	-1.07	-1.07	-1.07	+2.858 - 1.067x	O	
	ID2		023117.2+130921	023400.7+132229	-42.46	-1.08	-1.08	-1.08	+2.914 - 1.082x		
	GR0232-03		023047.4-033406	023318.7-032056	-55.97	-1.00	-1.00	-1.00	+2.949 - 0.999x	O	PKS 0230-035
	ID2		023236.3-041510	023507.0-040205	-56.16	-0.81	-0.68	-0.55	+3.387 - 1.404x + 0.115x ²	OX	4C-04.06, PKS 0232-042
	GR0233+48		023341.1+475446	023701.4+480746	-11.10	-1.08	-0.98	-0.90	+3.200 - 1.480x + 0.079x ²		
	GR0234+15		023421.7+153708	023707.3+155008	-39.97	-0.90	-0.90	-0.90	+2.596 - 0.905x		
	GR0234+46		023501.2+463842	023819.8+465139	-12.17	-1.13	-0.99	-0.86	+3.446 - 1.726x + 0.117x ²		
	GR0234+58		023418.5+585853	023802.6+591151	-0.90	-0.92	-1.02	-1.12	+2.860 - 0.465x - 0.088x ²	O	3C 69, 4C+58.08
	GR0235+01		023600.9+022141	023836.5+023436	-50.64	-1.04	-1.04	-1.04	+3.024 - 1.038x		PKS 0235+023
	GR0235+57		023601.8+565819	023941.1+571113	-2.65	-1.03	-0.84	-0.67	+3.493 - 1.831x + 0.157x ²		
	GR0237+10		023549.6+095712	023830.9+101008	-44.56	-0.87	-0.87	-0.87	+2.783 - 0.874x		4C+09.11, PKS 0235+099
	ID2		023746.0+094423	024027.2+095713	-44.46	-1.00	-1.00	-1.00	+2.919 - 1.003x		PKS 0237+097
	GR0237+43		023653.0+434904	024007.8+440156	-14.61	-1.19	-1.19	-1.19	+3.147 - 1.192x		
	ID2		023714.3+433509	024028.9+434800	-14.80	-1.01	-0.82	-0.63	+3.729 - 1.848x + 0.164x ²		
	GR0237-11		023702.6-114020	023927.7-112727	-60.19	-0.95	-0.95	-0.95	+2.774 - 0.954x		PKS 0237-116
	GR0238+08		023806.7+082009	024046.8+083258	-45.56	-0.94	-0.70	-0.47	+3.707 - 1.997x + 0.206x ²	OX	
	GR0238+58		023808.4+592326	024155.0+593614	-0.33	-0.86	-0.54	-0.24	+4.030 - 2.277x + 0.276x ²	O I	
	GR0239+42		023908.2+421006	024221.1+422251	-15.94	-1.26	-1.26	-1.26	+3.123 - 1.258x		
	GR0240+19		023952.7+184357	024241.2+185641	-36.62	-1.00	-1.00	-1.00	+2.705 - 1.000x		
	GR0240+49		024016.7+495650	024342.3+500932	-8.80	-0.79	-0.79	-0.79	+2.592 - 0.785x		4C+49.08
	GR0240-00		024007.1-001332	024240.7-000048	-51.93	-0.64	-0.69	-0.74	+2.423 - 0.411x - 0.045x ²	OXI	3C 71, 4C-00.13, PKS 0240-002
	GR0241+03		024217.6+031509	024454.0+032747	-48.95	-1.26	-1.01	-0.77	+4.395 - 2.363x + 0.215x ²		
	GR0241-02		024011.7-032430	024243.0-031147	-54.23	-0.88	-0.64	-0.41	+3.556 - 1.939x + 0.207x ²		PKS 0240-034
	GR0242+00		024259.6+005542	024534.1+010817	-50.60	-1.05	-1.05	-1.05	+2.802 - 1.051x	O	4C+00.09, PKS 0242+009
	ID2		024512.6+011853	024747.4+013122	-49.94	-1.13	-1.13	-1.13	+2.997 - 1.130x		PKS 0245+013
	GR0242+53										

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
	N	$h m s . o' ''$	$h m s . o' ''$	o'	α_{385}	α_{1400}	α_{5000}				
GR0323-03		032910.6-033452	032441.2-032420	-46.40	-0.99	-0.99	-0.99		+3.112 - 0.992 \times	O	PKS 0322-035
GR0324+54		032329.6+551004	032718.6+552029	-1.06	-0.62	-0.62	-0.62		+2.881 - 0.624 \times	O	3C 86, 4C+55.06
GR0325+02		032518.5+022324	032754.5+023344	-42.02	-0.71	-0.71	-0.71		+2.850 - 0.711 \times	OX	3C 88, 4C+02.10, PKS 0325+023, 4C+53.06
GR0325+53		032607.3+532215	032952.0+533232	-2.33	-0.73	-0.73	-0.73		+2.652 - 0.733 \times	O	4C+53.06
GR0327+45		032653.3+453439	033021.0+454453	-8.69	-1.02	-1.15	-1.27		+2.305 - 0.464 \times - 0.109 \times ²	O	4C+45.05
GR0327+46		032503.1+460745	032831.5+461806	-8.41	-0.96	-0.96	-0.96		+2.718 - 0.965 \times	O	4C+46.08
ID2		032919.1+461106	033248.5+462112	-7.95	-0.98	-0.98	-0.98		+2.731 - 0.983 \times	O	
GR0327+55		032828.7+554501	033220.6+555510	-0.18	-1.06	-0.72	-0.39		+4.707 - 2.559 \times + 0.293 \times ²	O	4C+55.07
ID2		032740.3+550538	033130.2+551550	-0.78	-1.17	-0.76	-0.37		+5.128 - 2.956 \times + 0.349 \times ²	O	
ID3		032606.2+551710	032956.1+552727	-0.75	-1.37	-1.09	-0.81		+4.890 - 2.633 \times + 0.246 \times ²	I	
GR0327+57		032624.0+572330	033020.4+573345	1.01	-1.21	-1.29	-1.36		+2.823 - 0.877 \times - 0.065 \times ²	O	
GR0327-10		032653.1-110908	032916.6-105852	-49.59	-1.23	-0.86	-0.52		+4.888 - 2.847 \times + 0.315 \times ²	O	
GR0328+06		032823.8+061708	033103.5+062720	-38.84	-1.11	-0.92	-0.74		+3.747 - 1.953 \times + 0.164 \times ²	O	
GR0329+17		032927.5+170131	033217.6+171138	-30.96	-1.03	-1.03	-1.03		+2.875 - 1.034 \times	O	4C+17.16, PKS 0329+170, 4C+51.08
GR0329+51		032818.2+512054	033158.4+513104	-3.81	-0.95	-0.95	-0.95		+2.752 - 0.955 \times	O	
GR0329-03		032741.4-041611	033011.2-040557	-45.70	-1.24	-1.24	-1.24		+3.266 - 1.237 \times	O	
GR0329-07		032929.8-072229	033156.7-071222	-47.08	-0.98	-0.98	-0.98		+2.813 - 0.977 \times	O	PKS 0329-073
GR0330+08		033212.1+075016	033453.3+080014	-37.09						OX	PKS 0332+078
ID2		033056.0+081240	033337.5+082242	-37.06	-0.96	-0.54	-0.14		+4.698 - 2.808 \times + 0.361 \times ²	O	
GR0330+43		033049.9+432221	033414.2+433222	-10.08	-0.82	-0.82	-0.82		+2.392 - 0.824 \times	O	4C+43.10
GR0331+11		033058.2+113203	033342.9+114205	-34.72	-0.85	-0.85	-0.85		+2.465 - 0.853 \times	O	
GR0332+13		033340.4+125241	033626.6+130233	-33.30	-0.64	-0.64	-0.64		+2.288 - 0.637 \times	O	4C+12.15, PKS 0333+128
GR0332+48		033227.4+484154	033602.4+485149	-5.59	-1.04	-0.85	-0.69		+3.649 - 1.890 \times + 0.166 \times ²	O	
GR0332+53		033241.3+532858	033627.9+533852	-1.68	-0.89	-0.89	-0.89		+2.816 - 0.889 \times	O	4C+53.07
GR0332-01		033143.1-012133	033415.7-011133	-43.16	-0.96	-0.96	-0.96		+3.464 - 0.956 \times	O	4C-01.12, PKS 0331-013
GR0333+01		033434.4+013400	033709.7+014349	-40.78	-1.01	-1.01	-1.01		+2.798 - 1.011 \times	O	
GR0334+50		033403.7+503603	033743.4+504552	-3.90	-0.70	-0.70	-0.70		+2.722 - 0.697 \times	O	3C 91, 4C+50.10
GR0334+58		033555.0+590405	033959.9+591432	3.12	-1.32	-0.98	-0.65		+4.964 - 2.829 \times + 0.294 \times ²	O	
GR0335+07		033601.4+072809	033842.3+073754	-36.65	-1.12	-1.12	-1.12		+3.051 - 1.116 \times	O	4C+07.12
ID2		033625.2+071922	033906.0+072905	-36.67	-1.04	-0.99	-0.93		+3.200 - 1.281 \times + 0.047 \times ²	O	
GR0336+09		033532.0+095458	033815.3+100444	-35.06	-1.11	-0.81	-0.52		+4.686 - 2.441 \times + 0.260 \times ²	OX	
GR0336+46		033532.2+464500	033903.8+465444	-6.86	-0.90	-0.63	-0.38		+3.551 - 2.071 \times + 0.229 \times ²	O	
ID2		033601.1+466567	033933.2+470640	-6.65	-0.86	-0.72	-0.59		+2.983 - 1.472 \times + 0.119 \times ²	O	
GR0338+14		033722.3+143212	034010.2+144151	-31.48	-1.19	-1.04	-0.90		+3.644 - 1.843 \times + 0.127 \times ²	O	
GR0338+49		033913.7+493806	034252.2+494737	-4.18	-1.04	-0.90	-0.76		+3.506 - 1.657 \times + 0.121 \times ²	O	4C+49.10
GR0338+51		033929.9+513137	034312.9+514106	-2.64	-1.00	-1.00	-1.00		+2.617 - 0.996 \times	O	
GR0338-12		033908.7-125735	034129.9-124801	-47.79	-0.95	-0.71	-0.47		+3.966 - 2.033 \times + 0.211 \times ²	O	PKS 0339-129
GR0339-04		033942.2-044413	034211.4-043442	-43.51	-0.92	-0.67	-0.45		+3.927 - 1.977 \times + 0.207 \times ²	O	4C-04.12, PKS 0339-047
GR0340+04		034051.5+044823	034330.0+045750	-37.51	-0.79	-0.79	-0.79		+2.885 - 0.789 \times	OX	3C 93, 4C+04.13, PKS 0340+048
GR0341+17		033937.1+172554	034228.2+173525	-29.02	-1.04	-0.86	-0.68		+3.764 - 1.853 \times + 0.158 \times ²	O	
GR0341+52		033947.0+521624	034332.0+522553	-2.02	-1.08	-0.74	-0.41		+4.503 - 2.611 \times + 0.298 \times ²	O	
GR0342+08		034327.1+074213	034608.5+075131	-35.12	-1.00	-0.62	-0.27		+4.300 - 2.625 \times + 0.318 \times ²	O	
GR0344+12		034406.7+120114	034652.4+121029	-32.08	-0.96	-0.96	-0.96		+2.702 - 0.958 \times	O	4C+11.17
GR0344+42		034433.3+425023	034758.9+425935	-8.99	-0.99	-0.76	-0.54		+3.689 - 1.997 \times + 0.197 \times ²	O	
ID2		034610.2+415457	034934.4+420403	-9.52	-1.03	-0.75	-0.48		+3.937 - 2.252 \times + 0.239 \times ²	O	
GR0345+19		034438.9+190738	034732.1+191650	-26.97	-1.24	-1.24	-1.24		+2.987 - 1.242 \times	O	
ID2		034510.8+193257	034804.5+194208	-26.58	-1.22	-1.16	-1.10		+3.254 - 1.497 \times + 0.054 \times ²	O	
ID3		034536.6+191524	034830.0+192433	-26.72	-1.04	-0.90	-0.76		+3.372 - 1.683 \times + 0.125 \times ²	O	
GR0346+00		034524.5+005452	034759.2+010402	-39.06	-1.23	-1.23	-1.23		+3.262 - 1.228 \times	O	4C+00.13, PKS 0345+009, 4C+45.06
GR0346+45		034757.2+450644	035127.6+451544	-6.83	-0.85	-0.74	-0.63		+3.034 - 1.358 \times + 0.099 \times ²	O	
GR0347+05		034707.4+054211	034946.8+055116	-35.73	-0.63	-0.69	-0.74		+2.188 - 0.391 \times - 0.047 \times ²	O	4C+05.16, PKS 0347+057, 4C+49.11
GR0348+13		034714.2+131006	035001.1+131909	-30.74	-1.04	-1.04	-1.04		+3.013 - 1.040 \times	O	PKS 0347+131
GR0348+49		034835.8+491007	035214.9+491904	-3.61	-1.03	-1.03	-1.03		+2.791 - 1.035 \times	O	4C+49.11
GR0348+57		034753.4+574520	035156.7+575418	3.02	-0.80	-0.97	-1.12		+1.768 - 0.072 \times - 0.142 \times ²	O	4C+57.08
GR0348-03		034747.0-040013	035016.8-035111	-41.43	-0.98	-0.75	-0.54		+3.731 - 1.981 \times + 0.195 \times ²	O	
GR0349+17		035111.3+171643	035402.8+172532	-27.19	-0.94	-0.94	-0.94		+2.749 - 0.941 \times	O	4C+17.20, PKS 0351+172
GR0350+55		034909.9+560804	035308.1+561658	1.87	-1.18	-0.75	-0.34		+4.922 - 3.079 \times + 0.370 \times ²	O	
GR0350-07		035005.5-071958	035232.0-071104	-42.72	-0.83	-0.99	-1.15		+2.187 - 0.104 \times - 0.141 \times ²	O	PKS 0350-073
GR0351+41		035107.4+414536	035431.9+415424	-9.06	-0.99	-0.99	-0.99		+2.736 - 0.992 \times	O	4C+41.09
GR0352+03		035322.7+024743	035559.3+025624	-36.33	-0.87	-0.75	-0.64		+3.227 - 1.393 \times + 0.102 \times ²	OX	4C+02.11, PKS 0353+027
GR0352+12		035259.2+122304	035545.5+123146	-30.25	-0.96	-0.85	-0.75		+3.527 - 1.444 \times + 0.094 \times ²	O	PKS 0353+123
GR0354+19		035340.1+185155	035633.5+190034	-25.66	-0.91	-0.91	-0.91		+2.824 - 0.910 \times	O	4C+18.11, PKS 0353+188, 4C+41.10
GR0354+41		035416.5+414009	035741.4+414845	-8.75	-0.96	-0.96	-0.96		+2.677 - 0.961 \times	O	4C+47.11
GR0354+47A		035318.7+471144	035654.3+472023	-4.64	-1.09	-1.17	-1.25		+2.584 - 0.739 \times - 0.069 \times ²	O	4C+47.12
GR0354+47B		035508.6+475425	035846.1+480258	-3.89	-0.85	-0.75	-0.66		+2.931 - 1.261 \times + 0.081 \times ²	O	4C+47.12
GR0354+59		035148.0+593144	035558.8+594027	4.72	-1.05	-0.92	-0.80		+3.337 - 1.617 \times + 0.111 \times ²	O	
ID2		035554.1+592050	040005.2+592918	4.91	-0.77	-0.43	-0.24		-1.316 + 0.004 \times + 10.056 $e^{-\times}$	O	
GR0356+10		035608.5+101820	035852.8+102650	-31.05	-0.72	-0.72	-0.72		+3.251 - 0.719 \times	OX	3C98, 4C+10.12, PKS 0356+102, 4C+50.11
GR0356+14		035612.2+142752	035900.9+143622	-28.26	-0.90	-0.90	-0.90		+2.923 - 0.896 \times	O	PKS 0356+144
GR0356+51		035545.2+504920	035929.6+505750	-1.60	-0.28	-0.16	-0.09		+0.494 + 0.000 \times + 3.607 $e^{-\times}$	O	
ID2		035905.2+512426	040251.7+513243	-0.82	-1.05	-0.74	-0.45		+4.085 - 2.422 \times + 0.267 \times ²	O	
GR0356+57		035524.7+570835	035927.7+571706	3.19	-0.88	-0.88	-0.88		+2.506 - 0.876 \times	O	4C+57.09
ID2											

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	$h m s + o //$	$h m s + o //$	o	α_{365}	α_{1400}	α_{5000}			
453	GR0400+06		035929.5+053255	040208.9+054113	-33.44	-1.08	-1.08	-1.08	+3.055 - 1.077 \times	O	
454	GR0400+08		040052.5+075254	040334.4+080107	-31.72	-1.15	-0.82	-0.51	+4.450 - 2.571 \times + 0.278 \times^2		
455	GR0401+02		040248.3+023235	040524.7+024041	-34.60	-0.89	-0.84	-0.80	+2.844 - 1.101 \times + 0.041 \times^2		PKS 0402+025
456	GR0401-02		040043.5-030813	040314.1-025959	-38.25	-0.92	-0.92	-0.92	+2.826 - 0.924 \times		4C-03.16, PKS 0400-031
457	GR0402+53		040137.7+540341	040532.1+541148	1.43	-0.91	-0.91	-0.91	+2.425 - 0.907 \times		
458	GR0404+42		040436.1+425200	040804.5+425957	-6.59	-0.87	-1.01	-1.13	+2.662 - 0.269 \times - 0.117 \times^2		3C 103, 4C+42.11
459	GR0404+49		040350.5+495024	040733.9+495823	-1.50	-1.22	-0.97	-0.73	+4.121 - 2.308 \times + 0.213 \times^2		
460	GR0405+03		040447.9+033250	040725.3+034048	-33.60	-0.63	-0.60	-0.57	+2.818 - 0.768 \times + 0.027 \times^2	O I	3C105, 4C+03.08, PKS 0404+035
461	GR0405+07		040833.5+070009	041114.6+070752	-30.77	-0.85	-0.66	-0.48	+3.801 - 1.677 \times + 0.162 \times^2		4C+07.14, PKS 0408+070 PKS 0405-116
462	GR0405-11		040502.4-113958	040724.0-113201	-41.56	-1.16	-0.96	-0.77	+4.110 - 2.047 \times + 0.173 \times^2		
463	GR0406+47		040805.1+464817	041142.1+465600	-3.27	-1.18	-0.91	-0.66	+4.029 - 2.353 \times + 0.229 \times^2		
464	GR0406-02		040548.6-032814	040818.9-032020	-37.36	-1.17	-1.17	-1.17	+3.200 - 1.170 \times		PKS 0405-034
465	GR0407+51		040801.1+511950	041149.0+512732	0.05	-1.17	-0.78	-0.40	+4.663 - 2.903 \times + 0.338 \times^2		
466	GR0407+52		040855.4+524820	041247.6+525559	1.23	-1.15	-0.69	-0.26	+4.951 - 3.148 \times + 0.390 \times^2		
467	GR0408+57		040852.3+580746	041301.8+581525	5.12	-1.10	-1.22	-1.33	+2.522 - 0.588 \times - 0.100 \times^2		4C+58.10
468	GR0409+16		040848.7+170623	041140.8+171405	-24.24	-0.88	-0.88	-0.88	+2.764 - 0.877 \times	O	4C+17.23, PKS 0408+171
469	GR0410+01		041016.4+013117	041251.8+013854	-33.67	-1.14	-0.79	-0.46	+4.495 - 2.658 \times + 0.297 \times^2		
470	ID2		041116.9+014714	041352.6+015446	-33.32	-1.16	-0.84	-0.53	+4.448 - 2.597 \times + 0.280 \times^2		
471	GR0410-01		040950.0-010711	041222.6-005933	-35.25	-0.95	-0.95	-0.95	+3.161 - 0.948 \times	O	3C 107, PKS 0409-011
472	GR0411+11		041056.7+110411	041342.1+111145	-27.78	-0.81	-0.81	-0.81	+3.139 - 0.805 \times	O XI	3C 109, 4C+11.18, PKS 0410+110
473	GR0411+14		041139.5+140917	041428.4+141648	-25.67	-0.78	-0.68	-0.57	+3.318 - 1.255 \times + 0.092 \times^2		4C+14.11, PKS 0411+141
474	GR0411+54		041115.3+545309	041514.2+550039	2.98	-1.00	-0.74	-0.48	+3.728 - 2.177 \times + 0.229 \times^2		
475	GR0411-08		041151.7-083319	041416.5-082548	-38.63	-1.18	-1.18	-1.18	+5.207 - 1.181 \times		
476	GR0412+06		041005.1+063047	041245.7+063824	-30.77	-0.95	-0.40	0.11	+3.212 - 0.964 \times + 0.465 \times^2		
477	GR0414+43		041647.7+433444	042019.0+434153	-4.54	-0.91	-0.75	-0.61	+3.288 - 1.597 \times + 0.134 \times^2		4C+43.11
478	GR0415-06		041449.6-060110	041717.0-055351	-36.76	-0.96	-0.96	-0.96	+3.013 - 0.964 \times	O X	PKS 0414-060
479	GR0416+54		041516.5+542751	041914.7+543505	3.08	-0.99	-0.99	-0.99	+2.681 - 0.992 \times		4C+54.05
480	GR0416-02		041620.5-030826	041851.0-030113	-34.96	-0.97	-0.91	-0.86	+3.373 - 1.220 \times + 0.049 \times^2		PKS 0416-031
481	GR0417+07		041732.2+073458	042014.1+074206	-28.65	-1.06	-1.06	-1.06	+2.928 - 1.057 \times		
482	GR0417+17		041729.0+174647	042022.2+175355	-22.24	-0.97	-0.97	-0.97	+3.039 - 0.967 \times	O X	3C 114, 4C+17.24, PKS 0417+177
483	GR0418+53		041911.2+525547	042305.5+530246	2.39	-0.92	-0.61	-0.31	+4.068 - 2.280 \times + 0.266 \times^2		
484	ID2		041757.6+525242	042151.5+525946	2.23	-1.11	-0.96	-0.81	+3.637 - 1.792 \times + 0.133 \times^2		
485	GR0419+15		041730.7+150956	042020.9+151703	-23.93	-0.80	-0.80	-0.80	+2.592 - 0.797 \times	O	4C+15.13, PKS 0417+151
486	GR0419-01		042036.1-003217	042309.3-002521	-32.67	-1.18	-0.79	-0.42	+4.938 - 2.896 \times + 0.335 \times^2		
487	GR0419-08		042047.7-083829	042312.2-083134	-36.73	-0.84	-0.84	-0.84	+2.507 - 0.839 \times		PKS 0420-086
488	GR0420+41		042027.9+414308	042356.0+415003	-5.38	-0.35	-0.20	-0.12	+0.039 - 0.004 \times + 4.495 e^{-x}	O	4C+41.11
489	ID2		042237.4+412009	042605.0+412655	-5.36	-0.88	-0.88	-0.88	+2.495 - 0.885 \times	O	4C+41.12
490	GR0421+00		042117.2+002413	042351.5+003107	-32.02	-0.70	-0.70	-0.70	+2.333 - 0.696 \times	O	PKS 0421+004
491	ID2		042212.5+002917	042446.8+003607	-31.78	-0.62	-0.30	0.00	+3.635 - 2.015 \times + 0.272 \times^2	O X	PKS 0422+004
492	ID3		042331.5+001850	042605.7+002534	-31.60	-1.15	-1.04	-0.94	+3.397 - 1.623 \times + 0.092 \times^2		
493	GR0423+05		042341.0+053539	042620.8+054223	-28.59	-0.94	-0.55	-0.18	+4.213 - 2.663 \times + 0.336 \times^2		
494	ID2		042238.7+053024	042518.4+053712	-28.85	-1.09	-0.72	-0.37	+4.385 - 2.734 \times + 0.320 \times^2		
495	GR0424+03		042338.2+030557	042615.3+031241	-30.03	-1.12	-1.12	-1.12	+3.110 - 1.119 \times		
496	GR0424+08		042253.9+082532	042536.8+083218	-27.08	-0.77	-0.61	-0.45	+3.284 - 1.482 \times + 0.139 \times^2		4C+08.14, PKS 0422+084 4C+08.15, PKS 0424+087
497	ID2		042441.8+084651	042725.0+085330	-26.51	-0.86	-0.86	-0.86	+2.681 - 0.859 \times		
498	GR0424+17		042635.9+165856	042928.4+170527	-21.09	-1.10	-0.75	-0.42	+4.291 - 2.636 \times + 0.300 \times^2		
499	ID2		042315.1+164829	042607.4+165514	-21.82	-1.06	-1.06	-1.06	+2.777 - 1.060 \times	O X	
500	GR0424+47		042423.3+470427	042803.1+471106	-1.13	-0.90	-0.75	-0.60	+3.273 - 1.584 \times + 0.133 \times^2		4C+47.13
501	GR0424-10		042422.7-111801	042644.3-111119	-37.14	-1.04	-1.04	-1.04	+2.791 - 1.037 \times		PKS 0424-112
502	GR0425+42		042546.6+422515	042916.6+423149	-4.19	-0.97	-0.97	-0.97	+2.960 - 0.974 \times		4C+42.13
503	GR0425+55		042444.2+551136	042846.4+551813	4.56	-0.71	-0.71	-0.71	+2.401 - 0.715 \times		4C+55.08
504	ID2		042559.2+545820	043000.9+550451	4.54	-1.03	-1.03	-1.03	+3.060 - 1.029 \times		4C+54.06
505	GR0426+49		042512.3+501234	042859.9+501909	1.15	-0.90	-0.82	-0.75	+3.122 - 1.236 \times + 0.066 \times^2		4C+50.12
506	GR0426+57		042242.1+574825	042653.1+575509	6.18	-0.74	-0.59	-0.46	+2.828 - 1.350 \times + 0.120 \times^2		
507	GR0426-01		042615.9-010412	042848.6-005739	-31.76	-1.28	-1.28	-1.28	+3.344 - 1.284 \times		
508	GR0427+15		042626.4+154423	042917.6+155055	-21.91	-1.07	-1.07	-1.07	+2.892 - 1.069 \times		
509	GR0427-03		042800.5-034655	043030.2-034028	-32.79	-1.23	-1.05	-0.89	+4.073 - 1.995 \times + 0.150 \times^2		PKS 0426+157 PKS 0428-037
510	GR0428+01		042831.8+010630	043106.8+011255	-30.11	-0.84	-0.84	-0.84	+2.827 - 0.841 \times	O	4C+01.10, PKS 0428+011 4C+44.11
511	GR0428+44		042811.6+443524	043146.3+444147	-2.37	-0.82	-0.54	-0.27	+3.857 - 2.068 \times + 0.243 \times^2		
512	GR0428+55		043027.6+551057	043430.6+551710	5.15	-1.28	-0.83	-0.41	+5.071 - 3.226 \times + 0.380 \times^2		
513	GR0430+05		043031.5+051459	043311.0+052115	-27.40	-0.36	-0.04	0.27	+3.510 - 1.797 \times + 0.280 \times^2	O XI	4C+05.20, PKS 0430+052 4C+18.12, PKS 0430+188
514	GR0430+19		043006.3+185135	043301.2+185752	-19.26	-1.05	-1.05	-1.05	+2.773 - 1.051 \times	O	
515	GR0430+49		043027.5+490904	043413.1+491518	1.04	-0.97	-0.87	-0.78	+3.190 - 1.387 \times + 0.082 \times^2		
516	ID2		043134.4+485221	043519.4+485821	0.98	-0.87	-0.80	-0.73	+2.975 - 1.185 \times + 0.061 \times^2		
517	GR0432+03		043235.6+032807	043513.1+033414	-27.97	-1.09	-1.09	-1.09	+3.259 - 1.089 \times	O	PKS 0432+034
518	ID2		043310.7+032626	043548.2+033232	-27.86	-1.16	-1.16	-1.16	+3.336 - 1.156 \times	O	
519	GR0432+07		043227.6+074856	043510.0+075504	-25.53	-1.13	-0.90	-0.69	+4.234 - 2.112 \times + 0.192 \times^2		
520	GR0433+59		043040.9+584027	043456.8+584639	7.54	-0.95	-0.87	-0.80	+3.231 - 1.295 \times + 0.067 \times^2		4C+58.11
521	ID2		043232.2+593711	043652.3+594315	8.35	-1.06	-0.86	-0.68	+3.826 - 1.913 \times + 0.167 \times^2		
522	GR0433-06		043313.3-054828	043540.8-054223	-32.67	-0.98	-0.66	-0.36	+4.273 - 2.376 \times + 0.272 \times^2		PKS 0433-057
523	GR0434+09		043359.0+095657	043643.8+100259	-23.98	-1.15	-1.15	-1.15	+2.895 - 1.147 \times	O X	

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3 N	4 h m s + ° ' "	5 h m s + ° ' "	6 °	7 α ₃₆₅	8 α ₁₄₀₀	9 α ₅₀₀₀	10	11	12
	ID2		043729.1-074126	043954.4-073538	-32.63	-1.21	-0.99	-0.78	+4.100 - 2.186x + 0.190x ²		
	GR0438+08		043910.2+082109	044153.3+082650	-23.86	-0.94	-0.62	-0.31	+4.266 - 2.356x + 0.276x ²	OX	4C+08.16
	GR0438+50		043647.0+502156	044036.5+502744	2.61	-0.51	0.04	0.57	+4.443 - 2.934x + 0.473x ²	I	
	GR0439+17		043935.1+175424	044229.2+180003	-18.10	-1.00	-0.84	-0.69	+3.499 - 1.691x + 0.135x ²		4C+17.27, PKS 0439+179
	GR0439+50		044109.3+511845	044502.0+512414	3.75	-1.06	-0.82	-0.60	+3.846 - 2.098x + 0.203x ²		
	GR0439+53		043850.1+532015	044248.4+532554	4.82	-0.95	-1.02	-1.09	+2.325 - 0.619x - 0.064x ²		
	GR0439+57		043958.4+565820	044009.2+570354	7.33	-1.09	-0.90	-0.71	+3.636 - 1.935x + 0.165x ²		
	GR0439-00		043922.3-004422	044155.2-003842	-28.80	-0.96	-0.96	-0.96	+2.879 - 0.957x		4C-00.18, PKS 0439-007
	GR0440+44		043931.1+434800	044305.3+435338	-1.41	-1.14	-0.95	-0.78	+3.901 - 1.954x + 0.159x ²		
	ID2		044115.4+435431	044449.9+440001	-1.10	-1.08	-0.87	-0.67	+3.986 - 2.021x + 0.183x ²		
	GR0442+02		044203.7+024223	044440.5+024752	-26.41	-0.91	-0.91	-0.91	+2.892 - 0.908x	O	4C+02.16, PKS 0442+027 4C+50.14
	GR0442+50		044256.1+503214	044646.8+503737	3.46	-0.91	-0.91	-0.91	+2.879 - 0.912x		
	GR0443-05		044338.0+054849	044618.2+055411	-24.38	-1.14	-1.00	-0.86	+3.819 - 1.785x + 0.125x ²	O	
	GR0443+15		044231.4+150517	044522.2+151043	-19.25	-0.99	-0.99	-0.99	+2.789 - 0.987x	O	4C+15.15, PKS 0442+150
	GR0443+54		044009.1+552201	044414.2+552734	6.30	-0.89	-0.74	-0.60	+3.259 - 1.528x + 0.125x ²		4C+55.09
	GR0444+17		044414.3+171006	044707.7+171526	-17.67	-0.99	-0.84	-0.69	+3.612 - 1.661x + 0.131x ²		4C+17.28, PKS 0444+171
	ID2		044615.7+173656	044909.6+174207	-17.01	-1.01	-0.90	-0.80	+3.456 - 1.481x + 0.092x ²	O	4C+17.29, PKS 0446+176
	GR0445+12		044602.7+121940	044850.4+122452	-20.19	-1.04	-1.04	-1.04	+2.891 - 1.036x		
	GR0445+44		044527.3+445622	044904.5+450134	0.14	-0.82	-0.82	-0.82	+3.371 - 0.82x		3C 129, 4C+44.12
	GR0445+58		044305.2+575312	044720.0+575833	8.24	-0.82	-0.46	-0.26	-1.284 + 0.002x + 10.709x ^{-m}		
	ID2		044401.8+581634	044818.2+582151	8.59	-0.84	-0.47	-0.27	-1.384 + 0.001x + 10.955x ^{-m}		
	ID3		044812.1+575833	045227.9+580333	8.82	-1.18	-0.93	-0.69	+4.152 - 2.284x + 0.215x ²		
	GR0446-09		044521.9-085458	044745.8-084942	-31.46	-1.33	-1.26	-1.19	+3.424 - 1.660x + 0.064x ²		
	GR0448+09		044909.7+091149	045153.9+091648	-21.35	-1.10	-1.07	-0.35	+4.414 - 2.784x + 0.329x ²		
	ID2		044830.5+090928	045114.6+091430	-21.51	-1.20	-1.20	-1.20	+2.921 - 1.204x		
	GR0448+19		045013.1+195220	045310.0+195714	-14.90	-1.15	-0.97	-0.79	+3.755 - 1.979x + 0.161x ²		
	GR0448+51		044900.4+520038	045256.0+520535	5.13	-0.89	-0.89	-0.89	+3.142 - 0.892x		3C 130, 4C+52.10
	GR0448-04		044831.7-043657	045100.4-043155	-28.76	-0.91	-1.00	-1.09	+2.363 - 0.508x - 0.078x ²	O	PKS 0448-046
	GR0449+43		044827.8+434859	045202.8+435359	-0.17	-1.02	-0.75	-0.50	+4.096 - 2.184x + 0.228x ²		
	GR0449+47		045021.0+474544	045405.2+475036	2.60	-1.08	-0.98	-0.89	+3.337 - 1.486x + 0.080x ²		4C+47.12
	GR0450+13		045232.4+135246	045622.0+135731	-18.00	-1.09	-0.95	-0.81	+3.827 - 1.723x + 0.123x ²		PKS 0452+138
	GR0450+57		045004.3+575248	045420.0+575740	8.95	-0.72	-0.80	-0.88	+2.039 - 0.372x - 0.068x ²		4C+57.11
	GR0451+09		045223.4+100447	045508.6+100933	-20.20	-0.97	-0.97	-0.97	+2.736 - 0.966x		PKS 0452+100 4C+49.12
	GR0451+49		045238.4+493106	045627.4+493548	4.00	-1.14	-1.14	-1.14	+2.891 - 1.137x		
	ID2		044845.9+490936	045233.5+491434	3.29	-1.10	-0.96	-0.82	+3.438 - 1.705x + 0.119x ²		
	ID3		045042.7+495200	045432.4+495650	3.98	-1.05	-0.90	-0.75	+3.487 - 1.741x + 0.134x ²		
	GR0451+59		045532.4+590949	045954.1+591418	10.31	-1.35	-1.05	-0.77	+4.619 - 2.651x + 0.254x ²		
	ID2		045035.3+585545	045455.4+590034	9.66	-1.04	-0.49	0.02	+5.220 - 3.414x + 0.464x ²		
	GR0452+00		045115.2+003552	045349.7+004042	-25.56	-1.06	-0.93	-0.81	+3.473 - 1.623x + 0.110x ²		PKS 0451+005
	GR0452+41		044956.8+414334	045327.6+414828	-1.30	-0.99	-0.80	-0.62	+3.622 - 1.839x + 0.165x ²		
	GR0453-00		045315.4-001410	045548.9-000928	-25.56	-0.92	-0.92	-0.92	+2.946 - 0.915x	O	PKS 0453-002
	GR0454+04		045436.4+041456	045714.9+041933	-22.94	-1.08	-0.96	-0.85	+3.276 - 1.598x + 0.101x ²		
	GR0454+06		045402.6+061019	045643.4+061458	-22.02	-1.09	-0.72	-0.38	+4.564 - 2.687x + 0.312x ²		
	GR0454+52		045521.0+530053	045920.3+530523	6.51	-0.93	-0.75	-0.58	+3.487 - 1.739x + 0.157x ²		4C+53.12
	GR0455+04		045626.3+045141	045905.6+045610	-22.22	-1.06	-0.90	-0.75	+3.527 - 1.761x + 0.137x ²		
	ID2		045535.9+045938	045815.3+050410	-22.33	-1.05	-1.05	-1.05	+2.789 - 1.054x		
	ID3		045515.5+044921	045754.7+045354	-22.49	-1.11	-0.95	-0.83	+3.508 - 1.726x + 0.121x ²		
	ID4		045436.4+041456	045714.9+041933	-22.94	-1.12	-1.12	-1.12	+2.874 - 1.116x		
	GR0455+51		045615.0+510836	050008.8+511303	5.47	-0.81	-0.81	-0.81	+2.311 - 0.806x	O	4C+51.15
	GR0456+08		045526.9+083948	045810.4+084421	-20.36	-1.09	-0.67	-0.27	+4.732 - 2.940x + 0.361x ²		
	GR0456+50		045617.2+501242	050008.3+501709	4.89	-1.00	-0.91	-0.82	+3.160 - 1.390x + 0.077x ²		4C+50.15
	GR0456+57		045733.2+573224	050148.5+573644	9.53	-1.22	-0.63	-0.07	+5.699 - 3.804x + 0.505x ²		
	GR0458+01		045803.2+012556	050038.6+013019	-23.68	-0.89	-0.77	-0.65	+3.366 - 1.424x + 0.104x ²	O	4C+01.12, PKS 0458+014
	GR0458+47		045841.0+474148	050225.8+474605	3.65	-0.79	-0.62	-0.46	+3.463 - 1.543x + 0.146x ²	OX	4C+47.15
	GR0458+55		045938.2+561911	050349.1+562323	9.02	-1.01	-0.84	-0.68	+3.426 - 1.757x + 0.145x ²		
	GR0459-03		045851.1-033644	050120.8-033225	-26.02	-1.22	-1.22	-1.22	+3.359 - 1.222x	OX	
	GR0500+59		045828.5+592038	050251.4+592455	10.72	-1.06	-1.06	-1.06	+2.777 - 1.060x		
	ID2		050026.8+593512	050450.9+593920	11.06	-1.11	-1.11	-1.11	+2.810 - 1.114x		
	GR0501+05		050216.7+052702	050456.7+053106	-20.68	-1.20	-0.81	-0.43	+4.943 - 2.927x + 0.337x ²		
	GR0501+07		050345.6+073744	050628.1+074142	-19.20	-0.88	-0.88	-0.88	+2.167 - 0.878x		
	ID2		050323.0+072225	050605.2+072624	-19.42	-0.99	-0.99	-0.99	+2.380 - 0.989x		
	ID3		050308.9+070350	050550.7+070750	-19.64	-0.98	-0.62	-0.28	+4.099 - 2.539x + 0.305x ²		
	ID4		050124.8+071916	050406.9+072324	-19.86	-1.03	-0.61	-0.22	+4.396 - 2.848x + 0.355x ²		
	GR0501+12		050201.9+121418	050449.7+121823	-17.03	-0.96	-0.74	-0.54	+3.600 - 1.883x + 0.181x ²		
	GR0501-12		050022.9-130040	050241.7-125628	-29.89	-0.98	-0.85	-0.73	+3.293 - 1.535x + 0.109x ²		
	GR0503+09		050248.8+092144	050533.3+092546	-18.46	-1.04	-1.04	-1.04	+2.798 - 1.041x		
	GR0503-09		050550.9-094653	050813.4-094304	-27.31	-1.01	-0.79	-0.58	+3.995 - 1.983x + 0.190x ²		
	ID2		050519.9-092106	050742.9-091714	-27.24	-1.51	-1.51	-1.51	+3.642 - 1.510x		
	GR0504+17		050505.3+171950	050759.3+172341	-13.54	-0.96	-0.96	-0.96	+2.785 - 0.960x		4C+17.31, PKS 0505+173
	GR0505-01	604	050648.7-015534	050920.3-015149	-23.46	-0.93	-0.93	-0.93	+2.504 - 0.928x		
	GR0506+19		050604.0+195332	050901.3+195719	-11.88	-0.90	-0.72	-0.56	+3.258 - 1.660x + 0.149x ²		
	ID2		050733.2+192224	051029.9+192605	-11.89	-1.02	-0.87	-0.73	+3.300 - 1.667x + 0.127x ²		
	GR0506+59		050555.4+591551	051018.8+591936	11.44	-1.13	-0.86	-0.62	+4.210 - 2.280x + 0.225x ²		
	GR0506-02	600	050648.7-015534	050920.3-015149	-23.46	-1.03	-0.83	-0.65	+3.734 - 1.877x + 0.166x ²		
	ID2		050832.8-015814	051104.4-015436	-23.10	-1.08	-0.92	-0.77	+3.653 - 1.781x + 0.137x ²		
	GR0507+03		050629.9+034402	050907.9+034748	-20.68	-1.01	-0.87	-0.73	+3.480 - 1.653x + 0.125x ²		
	GR0507-07		050837.0-073752	051102.0-073414	-25.74	-0.87	-0.87	-0.87	+2.767 - 0.870x	O	PKS 0508-076 4C+54.07
	GR0508+53		0508								

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		<i>N</i>	<i>h m s</i> \pm \circ \prime $\prime\prime$	<i>h m s</i> \pm \circ \prime $\prime\prime$	α	α_{365}	α_{1400}	α_{5000}			
614	GR0514+45		051347.9+453350	051728.5+453703	4.46	-0.67	-0.38	-0.11	+3.780 - 1.926 x + 0.245 x^2	OX	4C+45.08
615	ID2		051707.0+452537	052047.5+452835	4.86	-0.79	-0.59	-0.41	+3.546 - 1.643 x + 0.167 x^2		4C+45.09
616	GR0514+56		051505.6+555001	051916.1+555307	10.49	-0.98	-0.55	-0.31	-1.568 + 0.002 x + 12.786 e^{-x}		
617	GR0515+10		051436.7+103112	051722.6+103424	-15.39	-1.30	-1.18	-1.08	+3.820 - 1.794 x + 0.097 x^2		
618	GR0515+50		051537.9+505128	051932.4+505432	7.75	-0.83	-0.88	-0.93	+2.607 - 0.605 x - 0.044 x^2	O	3C 137, 4C+50.16
619	GR0516+03		051628.0+032720	051905.7+033024	-18.69	-1.14	-1.14	-1.14	+3.110 - 1.142 x		
620	GR0516+52		051418.5+524955	051818.8+525305	8.71	-1.13	-0.66	-0.21	+4.831 - 3.195 x + 0.403 x^2		
621	GR0517+43		051653.0+440312	052030.4+440612	4.04	-1.02	-0.71	-0.43	+3.865 - 2.350 x + 0.260 x^2		
622	GR0518+19		051907.9+193804	052205.2+194055	-9.49	-1.18	-1.18	-1.18	+3.068 - 1.183 x	O	PKS 0519+196
623	GR0518+54		051909.6+540530	052314.3+540818	10.01	-1.30	-0.72	-0.17	+5.791 - 3.827 x + 0.494 x^2		
624	GR0518+57		052019.3+573624	052437.0+573907	12.07	-0.94	-0.72	-0.51	+3.525 - 1.910 x + 0.189 x^2		
625	GR0518-02		051732.8-022554	052003.7-022254	-21.36	-1.12	-0.87	-0.63	+4.393 - 2.213 x + 0.214 x^2		PKS 0517-024
626	ID2		051738.7-024312	052009.3-024013	-21.47	-1.00	-0.60	-0.21	+4.895 - 2.793 x + 0.349 x^2		PKS 0517-027
627	GR0520-08		051945-075100 ?	052210-074800 ?	-23.38						
628	GR0522+07		052141.2+074716	052424.0+074957	-15.35	-0.84	-0.84	-0.84	+2.572 - 0.836 x	O	4C+07.16, PKS 0521+077 4C+51.18
629	GR0522+51		052209.0+513709	052606.1+513946	9.02	-0.95	-0.95	-0.95	+2.908 - 0.948 x		
630	GR0522+55		052138.9+555618	052550.3+555856	11.32	-0.84	-0.58	-0.34	+3.497 - 1.987 x + 0.223 x^2		
631	ID2 642		052540.9+560844	052953.4+561204	11.91	-1.09	-1.09	-1.09	+2.754 - 1.091 x		
632	GR0523+11		052327.4+113831	052614.8+114104	-12.96	-0.96	-0.96	-0.96	+2.988 - 0.963 x	O	4C+11.20, PKS 0523+116
633	GR0523+52		052718.2+532441	053121.2+532655	10.65	-1.15	-0.99	-0.84	+3.476 - 1.838 x + 0.135 x^2		
634	GR0524-09		052433.6-092318	052656.5-092049	-22.99	-0.94	-0.94	-0.94	+2.804 - 0.943 x		PKS 0524-093
635	GR0525+41		052514.4+414038	052847.1+414302	3.96	-1.03	-1.03	-1.03	+2.995 - 1.027 x		4C+41.14
636	GR0526+15		052607.6+151653	052859.4+151914	-10.47	-0.84	-0.84	-0.84	+2.738 - 0.844 x	O	4C+15.16, PKS 0526+152
637	GR0526-03		052656.0-032650	052925.8-032431	-19.77	-1.07	-0.86	-0.65	+3.813 - 2.028 x + 0.186 x^2		
638	GR0527+43		052807.1+434439	053144.3+434650	5.54	-1.04	-1.00	-0.96	+2.939 - 1.230 x + 0.037 x^2		4C+43.12
639	GR0527+49		053035.1+492536	053426.3+492736	8.96	-1.16	-0.89	-0.62	+3.986 - 2.383 x + 0.238 x^2		
640	GR0528+01		052803.4+011601	053038.6+011814	-17.27	-1.06	-0.88	-0.72	+3.835 - 1.815 x + 0.148 x^2		4C+01.14, PKS 0528+012
641	ID2		052743.6+004957	053018.3+005212	-17.55	-1.23	-1.23	-1.23	+3.329 - 1.232 x		
642	GR0528+56 631		052540.9+560844	052953.4+561104	11.91	-1.04	-0.89	-0.74	+3.333 - 1.731 x + 0.134 x^2		
643	ID2		052958.5+562225	053412.0+562426	12.53	-1.01	-0.74	-0.49	+3.729 - 2.182 x + 0.229 x^2		
644	GR0528+59		052826.9+592514	053252.9+592722	13.93	-1.14	-0.94	-0.75	+3.756 - 2.026 x + 0.173 x^2		
645	ID2		052944.4+583149	053406.5+583351	13.62	-1.08	-0.77	-0.49	+4.164 - 2.403 x + 0.259 x^2		
646	ID3		053243.2+590135	053707.7+590325	14.20	-1.16	-1.16	-1.16	+2.765 - 1.160 x		
647	GR0528-05		052853.2-053413	053120.5-053203	-20.32	-1.01	-0.51	-0.04	+4.799 - 3.201 x + 0.427 x^2		
648	GR0529+06		052848.0+062817	053129.3+063027	-14.51	-0.88	-0.88	-0.88	+3.256 - 0.879 x	O	3C 142.1, 4C+06.23, PKS 0528+064 PKS 0531+194
649	GR0529+19		053147.4+192525	053444.5+192722	-7.11	-0.72	-0.72	-0.72	+3.056 - 0.716 x		
650	GR0529+55		053027.7+552225	053437.5+552424	12.07	-1.15	-0.98	-0.82	+3.719 - 1.868 x + 0.141 x^2		
651	GR0531+04		053155.8+050146	053435.4+050343	-14.57	-1.02	-1.02	-1.02	+3.040 - 1.019 x	O	PKS 0531+050
652	GR0531-00		053111.7-010810	053344.2-010610	-17.74	-1.05	-0.85	-0.66	+3.768 - 1.937 x + 0.173 x^2	O	PKS 0531-011
653	GR0532+51		053304.3+511450	053700.8+511638	10.26	-1.03	-0.92	-0.81	+3.073 - 1.541 x + 0.099 x^2	O	
654	GR0533+17		053430.7+165239	053724.6+165424	-7.91	-1.18	-0.91	-0.65	+4.580 - 2.389 x + 0.235 x^2		
655	GR0533-11		053313.8-120412	053533.4-120221	-22.21	-0.66	-0.66	-0.66	+2.299 - 0.662 x		PKS 0533-120
656	GR0534+52		053436.3+525647	053838.1+525829	11.34	-1.13	-1.01	-0.91	+3.463 - 1.612 x + 0.095 x^2		
657	GR0534+55		053030.2+552200	053440.1+552359	12.08	-1.08	-1.00	-0.92	+3.051 - 1.443 x + 0.071 x^2		
658	ID2		053340.2+554235	053751.4+554421	12.64	-1.09	-0.65	-0.24	+4.487 - 3.014 x + 0.375 x^2		
659	ID3		053507.2+551145	053916.6+551325	12.55	-1.12	-0.74	-0.37	+4.337 - 2.818 x + 0.331 x^2		
660	GR0534-02		053423.7-031033	053653.7-030846	-18.00	-1.03	-1.23	-1.42	+2.202 - 0.162 x - 0.170 x^2	O	4C-03.21, PKS 0534-031
661	GR0535+15		053417.1+153053	053709.3+153239	-8.68	-1.07	-0.82	-0.58	+4.193 - 2.178 x + 0.216 x^2		
662	ID2		053639.4+155024	053932.1+155159	-8.02	-1.29	-1.12	-0.96	+4.142 - 2.042 x + 0.146 x^2		
663	GR0535+57		053829.2+565726	054245.3+565850	13.84	-1.07	-0.87	-0.68	+3.581 - 1.965 x + 0.174 x^2		
664	GR0537+47		053802.9+472741	054149.2+472908	8.99	-0.67	-0.55	-0.43	+3.118 - 1.220 x + 0.107 x^2		4C+47.16
665	GR0537+52		053745.4+523025	054145.9+523153	11.53	-1.21	-0.58	0.02	+6.121 - 3.968 x + 0.539 x^2		
666	GR0537+54		053551.6+535816	053956.8+535952	12.02	-1.15	-0.89	-0.65	+3.864 - 2.260 x + 0.217 x^2		
667	GR0537-00		053907-004400 ?	054140-004230 ?	-15.81						
668	GR0538+49		053842.9+494948	054235.5+495112	10.30	-0.32	-0.68	-1.03	+0.451 + 1.267 x - 0.310 x^2	OX	3C 147, 4C+49.14
669	ID2		053746.0+490108	054136.3+490236	9.75	-0.96	-0.96	-0.96	+2.721 - 0.965 x		
670	GR0539+04		053919.4+040805	054158.0+040930	-13.41	-1.07	-0.76	-0.48	+4.412 - 2.394 x + 0.259 x^2	OX	4C+04.20
671	GR0539+51		054039.6+513941	054437.6+514057	11.49	-1.12	-0.84	-0.56	+4.213 - 2.377 x + 0.245 x^2		
672	GR0539+57		054159.3+575259	054619.3+575408	14.70	-0.98	-0.67	-0.37	+3.896 - 2.362 x + 0.269 x^2		
673	GR0539+59		053911.0+593236	054338.0+593358	15.17	-0.98	-0.88	-0.79	+2.954 - 1.411 x + 0.084 x^2		
674	GR0541+07		053957.6+074740	054240.5+074901	-11.45	-1.25	-0.57	0.07	+6.562 - 4.227 x + 0.581 x^2		
675	ID2		054140.6+074633	054423.5+074747	-11.09	-1.42	-0.88	-0.37	+6.212 - 3.800 x + 0.464 x^2		
676	GR0541+56		053928.7+562909	054343.0+563029	13.72	-0.72	-0.40	-0.23	-1.496 + 0.001 x + 9.306 e^{-x}		
677	GR0542-01		054346.5-010146	054619.1-010041	-14.92	-1.05	-0.67	-0.31	+4.517 - 2.712 x + 0.325 x^2		
678	GR0542-02		054216.5-023617	054447.2-023505	-15.99	-1.04	-0.57	-0.13	+5.128 - 3.099 x + 0.402 x^2		
679	GR0543+47		054216.6+475421	054604.2+475530	9.83	-0.90	-1.02	-1.14	+1.995 - 0.350 x - 0.107 x^2		4C+47.17
680	GR0545+02		054611.9+020044	054848.0+020138	-12.94	-0.98	-0.73	-0.48	+3.907 - 2.111 x + 0.220 x^2		
681	GR0545+03		054829.8+031938	055107.4+032022	-11.80	-1.15	-0.85	-0.56	+4.284 - 2.494 x + 0.262 x^2		
682	GR0545+46		054552.0+463515	054936.3+463608	9.69	-1.12	-1.12	-1.12	+2.876 - 1.119 x		
683	GR0546+44		054613.3+440533	054951.7+440626	8.50	-0.96	-0.87	-0.79	+3.101 - 1.320 x + 0.071 x^2		
684	GR0548+09		054903.9+100436	055149.5+100518	-8.37	-0.90	-0.90	-0.90	+2.551 - 0.897 x		4C+44.14 4C+10.17
685	GR0548-09		054910.5-102424	055132.0-102342	-17.97	-0.84	-1.00	-1.14	+1.885 - 0.171 x - 0.131 x^2		PKS 0549-103
686	GR0549+50		055104.8+4921								

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		<i>N</i>	<i>h m s . o ' ' '</i>	<i>h m s . o ' ' '</i>	<i>o</i>	α_{365}	α_{1400}	α_{5000}			
789	GR0639+59		063937.5+595823	064404.8+595521	22.35	-0.76	-0.76	-0.76	+2.506 - 0.760 \times	O	
790	GR0640+52		064007.0+532049	064408.9+531746	20.41	-1.08	-0.75	-0.44	+3.936 - 2.501 \times + 0.278 \times^2	I	
791	GR0641-00		064145.6-004315	064418.5-004622	-1.94	-1.36	-1.36	-1.36	+3.449 - 1.357 \times		4C-00.22
792	ID2		064223.1-004108	064456.0-004418	-1.78	-1.14	-0.88	-0.63	+4.301 - 2.293 \times + 0.225 \times^2		
793	GR0641-06		064021.1-064430	064247.0-064731	-5.01	-1.25	-1.25	-1.25	+3.300 - 1.251 \times		3C 167, 4C+05.29
794	GR0642+05		064236.7+053443	064516.8+053132	1.15	-0.85	-0.85	-0.85	+2.761 - 0.853 \times		4C+13.34
795	GR0643+13		064237.3+133003	064526.8+132652	4.79	-1.00	-0.87	-0.76	+3.388 - 1.540 \times + 0.106 \times^2		
796	GR0643+55		064505.3+561228	064916.7+560903	21.96	-0.98	-0.98	-0.98	+2.471 - 0.981 \times		
797	GR0643-09		064414.7-093349	064637.4-093707	-5.43	-1.14	-1.14	-1.14	+2.981 - 1.137 \times		
798	GR0644+17		064336.0+172230	064630.2+171914	6.75	-1.04	-1.04	-1.04	+2.903 - 1.037 \times	O	4C+17.37
799	GR0645+57		064359.6+572735	064815.8+572414	22.18	-1.23	-0.98	-0.75	+4.011 - 2.321 \times + 0.213 \times^2		
800	ID2		064640.0+580355	065058.4+580023	22.69	-1.11	-1.11	-1.11	+2.778 - 1.113 \times		
801	GR0645-02		064558.0-021845	064829.0-022210	-1.74	-0.86	-0.86	-0.86	+2.763 - 0.859 \times		4C-02.28
802	GR0646+41		064720.5+413401	065052.0+413028	17.49	-1.24	-1.24	-1.24	+3.280 - 1.242 \times		4C+41.17
803	GR0646-01		064756.7-011021	065029.1-011354	-0.77	-1.10	-0.92	-0.75	+3.775 - 1.855 \times + 0.154 \times^2		
804	GR0647+07		064647.2+071936	064929.3+071607	2.88	-1.17	-0.76	-0.36	+4.828 - 3.004 \times + 0.357 \times^2		
805	GR0647+45		064736.1+451259	065115.5+450924	18.83	-0.89	-0.89	-0.89	+2.886 - 0.895 \times	O	3C 169.1, 4C+45.12
806	GR0648+19		064835.6+194002	065132.6+193625	8.82	-1.08	-1.44	-1.78	+1.619 + 0.491 \times - 0.307 \times^2		
807	GR0648+46		064710.0+463236	065052.5+462903	19.22	-1.18	-1.18	-1.18	+2.791 - 1.182 \times		
808	GR0648+48		064900.4+483510	065248.0+483129	20.19	-0.85	-0.73	-0.62	+2.938 - 1.356 \times + 0.099 \times^2	O	4C+48.18
809	GR0649+15		065014.3+154240	065306.6+155036	7.51	-1.08	-0.95	-0.83	+3.241 - 1.658 \times + 0.112 \times^2		
810	GR0649+50		065014.3+502255	065406.5+501909	20.95	-0.98	-0.98	-0.98	+2.683 - 0.981 \times		4C+50.19
811	GR0650+42		064927.2+423649	065300.8+423307	18.23	-1.01	-1.01	-1.01	+2.815 - 1.006 \times		4C+42.21
812	GR0650-03		065245.0-031957	065514.9-032351	-0.70	-1.07	-0.60	-0.16	+4.678 - 3.108 \times + 0.398 \times^2		
813	GR0650-06		064904.1-063719	065130.2-064057	-3.03	-1.19	-1.19	-1.19	+3.108 - 1.190 \times		
814	GR0651+00		065116.9+000857	065350.8+000509	0.58	-0.91	-0.91	-0.91	+2.718 - 0.908 \times		
815	GR0651+06		065028.1+062155	065309.0+061810	3.25	-0.97	-0.97	-0.97	+2.880 - 0.966 \times		4C+06.26
816	GR0651+44		065013.0+442555	065350.5+442209	19.00	-1.21	-0.86	-0.52	+4.473 - 2.756 \times + 0.302 \times^2		
817	GR0651+54		065115.8+541347	065519.6+540956	22.24	-0.79	-0.90	-1.01	+2.452 - 0.293 \times - 0.097 \times^2		3C 171.0, 4C+54.11
818	GR0653+04		065240.8+041612	065519.3+041218	2.78	-0.99	-0.99	-0.99	+2.579 - 0.991 \times		
819	GR0653+08		065317.5+083804	065601.0+083407	4.91	-0.89	-0.89	-0.89	+2.642 - 0.895 \times		
820	GR0653+10		065302.3+104654	065548.4+104259	5.82	-0.93	-0.93	-0.93	+2.822 - 0.929 \times		4C+10.21
821	GR0653+12		065354.4+115917	065641.8+115518	6.56	-1.10	-1.10	-1.10	+2.984 - 1.103 \times		
822	GR0653+58		065402.9+584740	065823.4+584337	23.81	-1.10	-1.10	-1.10	+2.708 - 1.099 \times	I	
823	GR0653-08		065223.0-084418	065446.7-084810	-3.27	-1.29	-0.97	-0.67	+4.596 - 2.679 \times + 0.272 \times^2		
824	GR0654+48		065545.0+482413	065991.6+482004	21.19	-1.16	-0.83	-0.52	+4.178 - 2.608 \times + 0.282 \times^2		
825	GR0655+02		065466.3+021504	065732.6+021101	2.35	-1.15	-0.98	-0.82	+3.820 - 1.884 \times + 0.144 \times^2		
826	GR0656+17		065532.4+163036	065825.7+164630	9.07	-1.08	-1.08	-1.08	+2.959 - 1.079 \times	O	4C+16.20
827	ID2		065704.7+173335	065958.8+172922	9.71	-0.99	-0.99	-0.99	+2.744 - 0.994 \times		4C+17.38
828	ID3		065707.8+171336	070001.5+170922	9.58	-0.55	0.11	0.73	+4.924 - 3.447 \times + 0.565 \times^2		
829	GR0656+54		065643.1+542000	070046.7+541546	23.04	-0.92	-0.92	-0.92	+2.917 - 0.924 \times	O	4C+54.12
830	ID2		070104.5+535817	070506.5+535344	23.56	-0.94	-0.52	-0.30	-1.703 - 0.003 \times + 12.085 $e^{-\times}$		
831	GR0656-02		065601.3-023030	065832.2-023438	0.40	-1.25	-1.25	-1.25	+3.365 - 1.246 \times		
832	GR0657+19		065729.0+193328	070025.6+192913	10.66	-1.26	-1.26	-1.26	+3.243 - 1.259 \times		4C+19.25
833	ID2		065733.4+190957	070029.6+190542	10.51	-1.02	-0.81	-0.61	+3.845 - 1.952 \times + 0.181 \times^2		
834	GR0658+55		070004.3+554747	070412.6+554318	23.87	-1.16	-0.94	-0.73	+3.870 - 2.117 \times + 0.187 \times^2		
835	GR0658-06		065847.5-062554	070114.0-063014	-0.79	-0.78	-0.43	-0.25	-1.376 + 0.002 \times + 10.118 $e^{-\times}$		
836	GR0658-08		065728.9-083107	065953.0-083521	-2.04	-1.18	-0.90	-0.63	+4.318 - 2.420 \times + 0.242 \times^2		
837	GR0700+50		070029.8+503455	070421.7+503025	22.57	-0.80	-0.80	-0.80	+2.388 - 0.796 \times	O	4C+50.20
838	GR0702+59		070309.4+593409	070732.1+592927	25.12	-0.84	-0.84	-0.84	+2.311 - 0.837 \times		4C+59.08
839	GR0703+42		070310.3+423644	070643.0+423204	20.61	-0.74	-0.74	-0.74	+2.734 - 0.739 \times		4C+42.23
840	GR0703-03		070525.3-032252	070755.2-032739	2.08	-1.22	-1.05	-0.89	+4.002 - 1.958 \times + 0.144 \times^2		
841	GR0704+43		070521.6+430616	070855.1+430127	21.14	-1.12	-1.12	-1.12	+2.797 - 1.119 \times		
842	GR0704+50		070345.8+500555	070736.1+500112	22.94	-1.01	-1.18	-1.35	+1.978 - 0.246 \times - 0.149 \times^2	O	4C+50.21
843	GR0704-12		070300.8-121526	070520.5-122003	-2.56	-0.79	-0.63	-0.47	+3.500 - 1.526 \times + 0.143 \times^2	I	PKS 0702-122
844	ID2		070444.6-120223	070704.7-120707	-2.09	-1.13	-0.73	-0.34	+4.812 - 2.903 \times + 0.346 \times^2		
845	GR0705+02		070802.6+020315	070838.6+015825	4.73	-1.25	-1.03	-0.82	+4.200 - 2.220 \times + 0.189 \times^2		
846	GR0705+19		070640.3+195936	070937.3+195443	12.80	-0.90	-0.90	-0.90	+2.669 - 0.898 \times	O	4C+19.26, PKS 0706+199 PKS 0705-079
847	GR0705-07		070524.3-075432	070749.1-075920	-0.02	-0.99	-1.14	-1.28	+2.307 - 0.327 \times - 0.129 \times^2		
848	GR0706-00		070638.3-004137	070911.3-004630	3.59	-1.12	-0.92	-0.73	+4.071 - 2.014 \times + 0.174 \times^2		
849	GR0707+47		070733.8+471559	071116.5+471100	22.75	-0.96	-0.83	-0.71	+3.180 - 1.512 \times + 0.108 \times^2	I	
850	GR0707+48		070846.6+481110	071231.4+480606	23.20	-0.94	-0.94	-0.94	+2.536 - 0.943 \times		4C+48.19
851	GR0707-05		070835.3-060422	071102.2-060923	1.53	-1.10	-1.10	-1.10	+3.000 - 1.099 \times		
852	GR0708-06		070724.0+062201	071004.8+061705	7.00	-0.92	-0.92	-0.92	+2.599 - 0.920 \times		
853	ID2		070906.6+060346	071147.0+055843	7.24	-1.15	-0.90	-0.67	+3.987 - 2.229 \times + 0.211 \times^2		
854	GR0708+09		070908.0+100726	071153.0+100222	9.07	-1.05	-0.79	-0.55	+3.829 - 2.171 \times + 0.210 \times^2		
855	ID2		070825.4+100351	071110.4+095850	8.88	-1.19	-1.06	-0.93	+3.512 - 1.782 \times + 0.115 \times^2		
856	GR0708+57		070925.5+575619	071340.5+575112	25.59	-0.90	-0.90	-0.90	+2.258 - 0.903 \times		
857	GR0710+11		071016.3+115130	071303.4+114622	10.08	-0.96	-1.05	-1.14	+2.922 - 1.054 \times - 0.080 \times^2	OX	3C 175, 4C+11.26, PKS 0710+118 4C+45.13
858	GR0711+45		071050.6+454524	071429.4+454012	22.87	-0.80	-0.80	-0.80	+2.587 - 0.796 \times	O	
859	ID2		071117.2+452520	071455.2+452005	22.85	-1.03	-0.88	-0.74	+3.542 - 1.705 \times + 0.131 \times^2		
860	GR0711+53		071242.0+532831	071641.1+532310	25.11	-0.72	-0.72	-0.72	+2.423 - 0.716 \times	OX	4C+53.16
861	GR0712+10		071348.7+105132	071634.6+104610	10.42	-1.10	-1.10	-1.10	+2.744 - 1.098 \times		
862	GR0712+14		071114.4+144133	071404.7+143621	11.53	-0.72					

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3 N	4				6 o	7 8 9			10		11	12
			h m s + o //					α_{265}	α_{1400}	α_{5000}				
	ID2		072237.9+124224	072525.6+123624	13.17	-1.05	-1.05	-1.05	+3.113	-1.051x		O	PKS 0722+127	
	GR0722-12		072224.7-130049	072443.9-130647	1.26	-1.16	-1.16	-1.16	+3.062	-1.159x				
	GR0723+48		072350.6+474813	072732.8+474207	25.55	-1.05	-1.05	-1.05	+2.698	-1.053x			4C+47.24	
	ID2		072306.8+474630	072649.0+474027	25.42	-1.29	-1.29	-1.29	+3.095	-1.286x				
	GR0723+50		072420.2+504039	072809.7+503431	26.26	-0.81	-0.70	-0.61	+2.941	-1.246x + 0.086x ²			4C+50.22	
	GR0723-09		072232.0-093359	072455.2-093957	2.93	-0.96	-1.10	-1.23	+2.406	-0.325x - 0.123x ²		I	PKS 0722-095	
	GR0724+46		072500.1+470054	072840.3+465443	25.55	-1.08	-0.91	-0.75	+3.574	-1.803x + 0.142x ²				
	GR0725+04		072533.7+042034	072812.1+041423	10.11	-1.18	-1.18	-1.18	+3.116	-1.182x		O	4C+04.28	
	GR0725+14		072520.2+144346	072810.2+143736	14.63	-0.82	-0.96	-1.09	+2.189	-0.205x - 0.120x ²		O	3C 181, 4C+14.24, PKS 0725+147	
	GR0725+57		072805.8+572041	073215.6+571417	27.96	-0.96	-0.79	-0.62	+3.375	-1.705x + 0.146x ²				
	GR0725-01		072433.0-015915	072704.5-020522	6.96	-0.82	-0.82	-0.82	+3.001	-0.824x			3C 180, 4C-02.31, PKS 0724-019	
	GR0725-05		072359.5-061927	072626.3-062531	4.79	-1.20	-1.01	-0.82	+4.319	-2.069x + 0.169x ²			4C+12.30, PKS 0725+122	
	GR0726+12		072545.7+121622	072832.8+121010	13.67	-0.85	-0.85	-0.85	+2.660	-0.849x			4C+43.14	
	GR0726+43		072617.3+430741	072948.9+430125	24.81	-1.00	-1.00	-1.00	+2.705	-1.001x		O	4C+43.14	
	GR0727+08		072658.5+074234	072940.6+073617	11.94	-1.03	-0.70	-0.39	+3.941	-2.466x + 0.280x ²				
	ID3		072615.5+074440	072857.6+073826	11.79	-0.61	-0.34	-0.19	-1.189	+0.002x + 7.944e ^{-x}				
	GR0727+17		072743.6+174612	073037.1+173951	16.42	-0.92	-0.92	-0.92	+2.665	-0.920x		O	4C+17.41, PKS 0727+177	
	ID2		072750.7+172659	073043.8+172038	16.31	-1.09	-1.09	-1.09	+2.825	-1.088x				
	GR0728+15		072744.7+152133	073035.4+151512	15.42	-0.75	-0.64	-0.53	+3.114	-1.255x + 0.098x ²		O	4C+15.20, PKS 0727+153	
	GR0729+48		073000.4+474212	073341.6+473541	26.53	-0.99	-0.99	-0.99	+2.618	-0.990x			4C+47.25	
	GR0729+52		072946.7+520051	073339.0+515421	27.35	-0.88	-0.88	-0.88	+2.664	-0.883x		O	4C+52.17	
	GR0730+42		072942.1+421819	073311.8+421149	25.20	-1.06	-0.94	-0.82	+3.319	-1.592x + 0.104x ²				
	GR0730+59		072947.8+595559	073407.5+594927	28.49	-1.11	-0.79	-0.49	+4.030	-2.485x + 0.269x ²				
	GR0731+02		073118.8+020856	073354.8+020222	10.38	-0.89	-1.04	-1.17	+2.103	-0.264x - 0.123x ²			4C+02.20, PKS 0731+021	
	GR0731+50		073149.6+501831	073537.0+501152	27.35	-0.91	-0.46	-0.03	+4.436	-2.912x + 0.390x ²				
	GR0732+08		073303.5+074825	073545.6+074143	13.33	-1.11	-0.90	-0.70	+4.135	-2.052x + 0.183x ²				
	GR0732+43		073149.4+435057	073521.9+434419	25.96	-0.97	-1.02	-1.07	+2.612	-0.733x - 0.046x ²		O	4C+43.15	
	GR0734+19		073603.2+192757	073858.3+192103	18.91	-1.19	-1.04	-0.89	+3.819	-1.863x + 0.131x ²				
	GR0734+45		073450.8+452412	073826.2+451722	26.84	-1.13	-0.62	-0.13	+5.071	-3.391x + 0.441x ²				
	GR0734+48		073655.7+483055	074037.9+482356	27.83	-1.05	-0.64	-0.25	+4.302	-2.872x + 0.355x ²				
	GR0734-06		073210.5-064214	073437.0-064851	6.40	-1.13	-0.75	-0.39	+4.671	-2.820x + 0.329x ²				
	GR0735+51		073627.4+513200	074017.4+512503	28.29	-0.80	-1.01	-1.22	+1.324	+0.157x - 0.186x ²		O	4C+51.24	
	GR0735+52		073536.1+523129	073929.1+522435	28.31	-0.97	-0.74	-0.52	+3.374	-1.977x + 0.197x ²				
	GR0736-03		073759.9-030354	074030.3-031054	9.41	-0.94	-0.76	-0.60	+3.635	-1.701x + 0.149x ²			PKS 0737-030	
	GR0739-00		073834.5-005908	074107.1-010610	10.52	-1.00	-1.00	-1.00	+3.015	-1.000x		O	PKS 0738-009	
	GR0740+42		074036.4+423204	074405.3+422452	27.21	-1.11	-0.78	-0.47	+4.148	-2.585x + 0.279x ²				
	GR0740+47		074048.9+472555	074428.0+471841	28.27	-0.78	-0.78	-0.78	+2.243	-0.781x		O	4C+47.26	
	GR0741+12		074241.5+121648	074528.2+120929	17.41	-0.92	-0.92	-0.92	+2.718	-0.919x			PKS 0742+122	
	ID2		073926.6+115219	074212.9+114513	16.52	-1.04	-0.81	-0.58	+3.734	-2.095x + 0.205x ²				
	GR0741+50		074217.5+502218	074603.6+501458	29.01	-0.92	-0.92	-0.92	+2.571	-0.918x			4C+50.24	
	GR0741-05		073954.1-050429	074222.5-051137	8.86	-1.30	-0.94	-0.61	+5.050	-2.843x + 0.302x ²				
	GR0742+02		074229.8+020631	074505.7+015913	12.84	-0.97	-0.97	-0.97	+3.197	-0.973x			PKS 187, 4C+02.21, PKS 0742+021	
	GR0742+44		074255.2+444413	074628.2+443651	28.09	-1.10	-0.91	-0.74	+3.745	-1.900x + 0.157x ²				
	GR0742+57		074228.1+573201	074635.9+572439	29.90	-1.05	-1.05	-1.05	+3.049	-1.050x				
	GR0743+04		074221.4+033006	074458.7+032248	13.45	-1.10	-0.78	-0.48	+4.150	-2.490x + 0.272x ²				
	GR0743-08		074450.8-083510	074715.4-084237	8.23	-1.25	-1.25	-1.25	+3.328	-1.250x				
	GR0745+54		074529.1+540050	074924.7+535318	29.98	-0.99	-0.99	-0.99	+2.738	-0.988x			4C+54.14	
	ID2		075023.3+540256	075418.1+535504	30.70	-0.93	-0.83	-0.74	+3.069	-1.349x + 0.082x ²			4C+54.15	
	GR0745-03		074521.0-034707	074750.7-035437	10.68	-1.00	-0.90	-0.81	+3.241	-1.439x + 0.085x ²			4C-03.30, PKS 0745-038	
	GR0746+11		074508.1+115307	074754.4+114538	17.79	-0.97	-0.97	-0.97	+2.625	-0.969x		O	4C+11.27, PKS 0745+118	
	GR0746+50		074707.0+504549	075053.3+503810	29.82	-1.00	-0.85	-0.71	+3.401	-1.638x + 0.125x ²			4C+50.25	
	GR0746-00		074557.4-004712	074830.3-005443	12.24	-1.31	-1.31	-1.31	+3.312	-1.307x		O	4C-00.29, PKS 0745-007	
	GR0746-10		074557.6-113915	074811.9-114647	6.95	-1.08	-1.08	-1.08	+2.970	-1.084x				
	GR0747+16		074812.8+162815	075104.0+162034	20.37	-0.82	-0.82	-0.82	+2.402	-0.821x		O	4C+16.24, PKS 0748+164	
	GR0748+42		074931.5+421910	075258.9+421122	28.76	-0.99	-0.83	-0.69	+3.270	-1.665x + 0.132x ²				
	GR0748+55		074546.2+560154	074948.1+555420	30.22	-0.86	-0.67	-0.49	+3.923	-1.710x + 0.165x ²			4C+56.16	
	GR0750+45		074908.6+460442	075243.6+456566	29.42	-0.54	-0.30	-0.17	-0.569	+0.001x + 7.026e ^{-x}		O		
	ID2		074849.6+453416	075223.6+452631	29.28	-1.11	-0.69	-0.28	+4.593	-2.983x + 0.365x ²				
	GR0750-05		075018.0-050131	075246.5-050919	11.15	-1.25	-1.03	-0.83	+4.367	-2.204x + 0.186x ²				
	GR0751-11		074830.4-120840	075051.3-121622	7.24	-0.91	-0.91	-0.91	+2.702	-0.914x				
	GR0752+15		075151.4+152242	075411.2+151447	20.73	-1.22	-1.02	-0.82	+3.930	-2.123x + 0.176x ²				
	GR0752+57		075331.1+574735	075737.5+573930	31.39	-1.03	-1.10	-1.16	+2.619	-0.726x - 0.059x ²				
	GR0752-01		075133.3-005617	075406.0-010411	13.40	-1.16	-0.86	-0.58	+4.315	-2.481x + 0.257x ²				
	GR0752-02		075223.1-021433	075454.4-022229	12.96	-0.96	-0.96	-0.96	+2.875	-0.962x			PKS 0752-022	
	GR0753+02		075309.9+021841	075546.0+021041	15.29	-0.95	-1.03	-1.11	+2.504	-0.598x - 0.069x ²			4C+02.22, PKS 0753+023	
	GR0755+03		075504.8+025908	075741.5+025100	16.03	-0.79	-0.66	-0.53	+3.024	-1.367x + 0.113x ²		O	PKS 0755+029	
	ID2		075621.5+030416	075858.3+025604	16.35	-1.09	-1.09	-1.09	+2.802	-1.086x				
	GR0757+08		075727.2+083543	080009.6+082726	19.09	-1.22	-1.11	-0.99	+3.779	-1.741x + 0.101x ²				
	GR0758+14		075845.0+142304	080133.5+141442	21.84	-0.82	-0.92	-1.00	+2.494	-0.413x - 0.080x ²		OX	3C 190, 4C+14.25, PKS 0758+143	
	GR0758+50		075751.7+501759	080135.0+500939	31.46	-0.90	-0.93	-0.97	+2.795	-0.739x - 0.031x ²		O		
	GR0759+19		080031.4+194338	080325.7+193509	24.33	-1.06	-0.85	-0.66	+3.558	-1.958x + 0.176x ²				
	GR0759+45		080005.7+455720	080338.8+454852	31.28	-1.07	-1.07	-1.07	+2.965	-1.066x				

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		<i>N</i>	<i>h m s + ° / ''</i>	<i>h m s + ° / ''</i>	<i>°</i>	α_{365}	α_{1400}	α_{5000}			
	GR0842+15		084317.8+151031	084605.1+145931	32.03	-1.08	-1.08	-1.08	+3.194 - 1.075 α		4C+15.26, PKS 0843+151
	GR0842+19		084159.1+193323	084450.7+192228	33.37	-1.14	-0.91	-0.69	+4.079 - 2.158 α + 0.199 α^2		
	GR0842+56		084251.5+560054	084639.5+554954	38.18	-1.04	-1.04	-1.04	+2.743 - 1.045 α		
	GR0842+58		084141.0+590329	084538.6+585233	37.61	-0.94	-0.94	-0.94	+2.438 - 0.945 α		
	ID2		084308.0+590800	084705.5+585700	37.78	-1.14	-0.93	-0.74	+3.551 - 2.040 α + 0.176 α^2		
	GR0843+46		084313.1+463241	084639.7+462141	38.75	-1.08	-1.08	-1.08	+2.854 - 1.083 α		
	ID2		084418.1+462413	084744.2+461309	38.94	-0.80	-0.48	-0.17	+3.867 - 2.233 α + 0.279 α^2		
	GR0845+53		084411.8+540350	084754.4+535246	38.58	-0.72	-0.72	-0.72	+2.461 - 0.719 α		4C+54.17
	GR0845-11		084548.0-112247	084811.7-113354	19.50	-1.11	-1.11	-1.11	+3.180 - 1.113 α		
	GR0846+06		084557.1+060631	084836.1+055522	28.70	-0.88	-0.88	-0.88	+2.825 - 0.881 α		4C+06.32, PKS 0845+061
	GR0847+10		084658.0+100024	084940.4+094912	30.69	-0.88	-0.88	-0.88	+2.523 - 0.876 α	○	4C+09.31, PKS 0846+100
	GR0847+49		084755.7+491036	085126.3+485920	39.50	-1.00	-1.00	-1.00	+2.835 - 1.001 α		
	GR0848+42		084915.7+422648	085234.1+421528	39.70	-0.96	-0.96	-0.96	+2.682 - 0.957 α	○	4C+42.27
	ID2		084805.6+422408	085124.2+421252	39.48	-1.16	-1.01	-0.87	+3.579 - 1.827 α + 0.130 α^2		
	GR0849-07		084807.0-090155	085032.8-091310	21.30	-1.02	-0.91	-0.82	+3.251 - 1.461 α + 0.087 α^2		
	GR0850+58		085050.1+580854	085442.0+575729	38.93	-0.45	-0.18	0.07	+2.934 - 1.605 α + 0.226 α^2	OX	4C+58.17
	GR0851+01		084953.2+005352	085227.7+004231	27.00	-1.06	-1.06	-1.06	+2.917 - 1.059 α		PKS 0849+009
	GR0851+14		085022.9+140418	085308.8+135255	33.16	-0.97	-1.10	-1.23	+2.728 - 0.387 α - 0.114 α^2	OX	3C 208, 4C+14.28, PKS 0850+140
	ID2		085153.3+141719	085439.3+140552	33.58	-0.87	-0.78	-0.70	+3.493 - 1.229 α + 0.071 α^2	OX	3C 208.1, 4C+14.29, PKS 0851+142
	GR0851+52		085136.5+525029	085514.1+523901	39.80	-0.95	-0.80	-0.67	+3.360 - 1.585 α + 0.124 α^2		4C+52.19
	GR0851-03		085057.6-032944	085328.2-034108	24.93	-0.84	-0.84	-0.84	+2.788 - 0.841 α	○	4C+09.31, PKS 0850-034
	GR0852+07		085108.9+070623	085348.6+065458	30.30	-0.58	-0.33	-0.19	-0.459 + 0.001 α + 7.585 α^2	○	PKS 0851+071
	GR0852-11		085307.5-124506	085530.2-125637	20.17	-1.12	-1.12	-1.12	+3.152 - 1.115 α		
	GR0853+06		085240.0+060600	085518.9+055430	30.16	-1.04	-1.04	-1.04	+2.738 - 1.037 α		4C+06.33, PKS 0852+061
	GR0853+12		085237.0+122856	085521.4+121726	33.00	-1.26	-1.26	-1.26	+3.412 - 1.263 α	○	4C+12.32
	GR0853+15		085309.6+152412	085556.5+151240	34.30	-1.09	-0.90	-0.72	+3.914 - 1.939 α + 0.165 α^2		4C+15.27, PKS 0853+153
	ID2		085243.6+150000	085530.2+144830	34.05	-1.18	-0.91	-0.64	+4.367 - 2.397 α + 0.237 α^2		
	GR0853-05		085341.4-060342	085609.9-061515	24.10	-1.14	-1.14	-1.14	+3.128 - 1.137 α		
	GR0854+03		085426.9+034924	085703.8+033749	29.45	-1.07	-1.07	-1.07	+2.870 - 1.065 α		PKS 0854+038
	ID2		085506.6+033410	085743.2+032232	29.47	-1.06	-0.83	-0.62	+3.881 - 2.041 α + 0.192 α^2		
	GR0855+10		085433.8+100026	085715.9+094851	32.37	-0.93	-0.93	-0.93	+2.878 - 0.931 α	○	4C+09.32, PKS 0854+100
	GR0855-03		085440.9-032805	085711.7-033940	25.73	-0.80	-0.69	-0.59	+3.064 - 1.252 α + 0.089 α^2	○	PKS 0854-034
	GR0856+17		085520.3+173659	085809.2+172520	35.62	-1.09	-1.09	-1.09	+3.147 - 1.093 α		
	GR0856+51		085335.5+512210	085709.3+511036	40.26	-1.11	-0.74	-0.38	+4.487 - 2.758 α + 0.321 α^2		
	ID2		085643.9+511157	090016.6+510013	40.76	-1.13	-1.13	-1.13	+2.963 - 1.132 α		
	GR0858+45		085854.5+451246	090215.6+450056	41.49	-0.84	-0.84	-0.84	+2.549 - 0.843 α	○	4C+45.18
	GR0858-02		085815.7-021538	090047.5-022726	27.13	-0.97	-0.73	-0.51	+3.791 - 2.024 α + 0.205 α^2		PKS 0858-022
	ID2		085704.7-014713	085936.8-015857	27.14	-1.54	-1.54	-1.54	+3.536 - 1.544 α		
	GR0859+50		090019.8+502431	090350.4+501236	41.41	-0.84	-0.84	-0.84	+2.569 - 0.841 α	○	4C+50.28
	GR0859-01		085936.8-011801	090209.4-012952	27.93	-1.10	-0.84	-0.60	+4.073 - 2.230 α + 0.221 α^2		
	GR0900+07		090127.7+070308	090407.2+065111	32.54	-1.06	-0.74	-0.44	+4.556 - 2.460 α + 0.273 α^2		
	GR0900-05		085956.0-050448	090225.5-051640	25.94	-0.91	-0.91	-0.91	+2.944 - 0.908 α		PKS 0859-050
	GR0900-12		085921.1-114432	090144.9-115622	21.99	-1.26	-1.04	-0.82	+4.292 - 2.250 α + 0.193 α^2		
	ID2		090202.5-122037	090426.0-123236	22.17	-1.15	-1.15	-1.15	+3.228 - 1.154 α		
	GR0901+47		085940.0+470257	090304.0+465104	41.56	-0.37	-0.21	-0.12	+0.088 + 0.001 α + 4.845 α^2	OX	4C+47.29
	ID2		090109.7+472741	090434.1+471544	41.79	-1.02	-1.02	-1.02	+2.684 - 1.020 α	OX	
	GR0901+55		085947.4+561234	090331.0+560040	40.48	-1.01	-0.60	-0.21	+4.427 - 2.802 α + 0.350 α^2		
	ID2		085947.4+561234	090331.0+560040	40.48	-0.84	-0.17	0.46	+5.283 - 3.765 α + 0.571 α^2		
	GR0903+08		090330.7+085637	090611.6+084433	33.86	-1.01	-1.01	-1.01	+2.969 - 1.008 α		PKS 0903+089
	GR0903+11		090321.3+111530	090604.2+110328	34.86	-0.92	-0.92	-0.92	+2.757 - 0.918 α		4C+11.31, PKS 0903+112
	GR0903+41		090420.2+414700	090734.9+413454	42.47	-0.87	-0.87	-0.87	+2.953 - 0.873 α	○	4C+41.19
	GR0904+17		090344.1+165817	090631.9+164613	37.25	-0.92	-1.00	-1.09	+2.620 - 0.545 α - 0.073 α^2	OX	3C 215, 4C+16.26, PKS 0903+169
	GR0905+42		090617.3+430600	090933.5+425347	42.84	-0.67	-0.67	-0.67	+2.738 - 0.667 α	OX	3C 216, 4C+43.17
	GR0905+57		090457.3+571545	090842.0+570336	40.96	-1.10	-0.93	-0.77	+3.437 - 1.838 α + 0.144 α^2		
	ID2		090603.8+565904	090947.5+564651	41.17	-1.04	-1.04	-1.04	+2.434 - 1.040 α		
	GR0907+54		090634.6+543933	091012.2+542719	41.72	-0.84	-0.84	-0.84	+2.446 - 0.840 α		4C+54.18
	GR0908+18		090705.3+183405	090954.2+182151	38.57	-0.93	-0.93	-0.93	+2.845 - 0.931 α	OX	PKS 0907+185
	GR0909+08		090939.9+082318	091220.2+081056	34.96	-0.93	-0.93	-0.93	+2.770 - 0.931 α		4C+08.28, PKS 0909+084
	GR0909+52		090837.1+525321	091210.2+524101	42.34	-0.96	-0.96	-0.96	+2.724 - 0.958 α	○	4C+52.20
	GR0910+06		091020.6+065219	091259.7+063955	34.39	-1.21	-0.93	-0.67	+4.236 - 2.438 α + 0.239 α^2		
	GR0910+48		091037.5+483955	091401.9+482729	43.26	-1.23	-1.23	-1.23	+3.104 - 1.225 α		
	GR0911+17		091117.1+172819	091404.8+171552	39.11	-0.83	-0.83	-0.83	+2.781 - 0.828 α	○	4C+17.48, PKS 0911+174
	GR0912+02		091243.4+024034	091519.1+022803	32.81	-1.09	-1.09	-1.09	+3.016 - 1.094 α		
	GR0912+10		091137.6+101906	091419.4+100638	36.27	-0.90	-0.55	-0.22	+4.215 - 2.427 α + 0.298 α^2		
	ID2		091231.1+103058	091513.0+101828	36.55	-0.96	-0.69	-0.43	+3.977 - 2.145 α + 0.232 α^2	○	
	GR0913+58		091313.8+585123	091700.1+583849	41.62	-0.92	-1.06	-1.19	+2.288 - 0.320 α - 0.118 α^2	○	4C+58.18
	GR0914+12		091314.3+114720	091557.2+113448	37.27	-1.14	-1.14	-1.14	+2.988 - 1.140 α		
	GR0915+49		091412.3+501622	091738.6+500346	43.62	-0.93	-0.93	-0.93	+2.609 - 0.926 α	○	4C+50.29
	GR0915-02		091348.9-023205	091620.7-024438	30.23	-1.02	-0.87	-0.73	+3.695 - 1.666 α + 0.126 α^2		PKS 0913-025
	GR0915-11		091541.3-115303	091805.8-120542	25.09	-0.95	-0.95	-0.95	+4.588 - 0.949 α	OX	3C 218, PKS 0915-118
	GR0918+45		091749.6+455133	092107.6+453847	44.76	-0.83	-0.83	-0.83	+3.437 - 0.835 α	OX	3C 219, 4C+45.19
	GR0919+08		091918.0+084129	092158.2+082840	37.21	-0.98	-0.98	-0.98	+2.806 - 0.981 α	○	4C+08.29, PKS 0919+086
	GR0919+53		091919.2+531512	092250.0+530221	43.84	-0.81	-0.92	-1.02	+2.175 - 0.341 α - 0.092 α^2		4C+53.18
	GR0919+55		092043.4+554123	092419.0+552828	43.45	-1.					

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	$h m s_{+} o' ''$	$h m s_{+} o' ''$	$^{\circ}$	α_{365}	α_{1400}	α_{5000}			
1116	GR0922+42		092212.1+423026	092524.3+421728	45.77	-1.16	-1.16	-1.16	+3.150 - 1.159 \times	O	PKS 0922+149
1117	ID2		092248.0+421636	092559.7+420336	45.89	-1.21	-1.21	-1.21	+3.202 - 1.211 \times	O	
1118	GR0923+52		092319.2+521837	092646.9+520536	44.64	-1.13	-1.13	-1.13	+3.040 - 1.130 \times	OX	4C+52.21
1119	GR0924+08		092323.1+075138	092602.6+073838	37.70	-1.12	-1.03	-0.94	+3.365 - 1.527 \times + 0.079 \times^2		4C+07.28
1120	GR0924+53		092450.2+532912	092819.7+531606	44.59	-1.16	-1.16	-1.16	+3.178 - 1.158 \times		4C+53.19
1121	GR0926+11		092601.3+114734	092843.5+113426	40.09	-0.91	-0.83	-0.74	+2.993 - 1.292 \times + 0.074 \times^2	O	4C+11.32, PKS 0926+117
1122	GR0927+59		092712.4+590829	093054.3+585516	43.24	-0.82	-0.91	-1.00	+2.080 - 0.400 \times - 0.081 \times^2	O	
1123	GR0928+06		092738.5+062840	093016.8+061528	37.95	-1.32	-1.32	-1.32	+3.651 - 1.319 \times	OX	4C+06.36, PKS 0927+064
1124	GR0928+10		092828.7+100954	093109.6+095640	39.90	-0.97	-0.97	-0.97	+2.716 - 0.973 \times	O	4C+10.26, PKS 0928+101
1125	GR0928+48		092813.2+480456	093132.1+475142	46.23	-0.87	-0.87	-0.87	+2.484 - 0.872 \times		4C+48.26
1126	GR0929+07		093005.2+074730	093244.4+073411	39.12	-1.09	-0.81	-0.56	+4.251 - 2.281 \times + 0.233 \times^2		
1127	GR0930+19		093145.6+195306	093433.7+193943	44.49	-1.08	-0.88	-0.68	+3.961 - 1.997 \times + 0.178 \times^2		
1128	GR0930-00		093010 -003400 ?	093300 -004730 ?	34.72						
1129	GR0932+54		093259.4+545351	093629.2+544024	45.35	-0.82	-0.82	-0.82	+2.359 - 0.816 \times	O	4C+54.19
1130	GR0933+02		093241.6+021726	093516.9+020401	36.83	-0.83	-0.83	-0.83	+2.541 - 0.826 \times	O	PKS 0932+022
1131	GR0935+42		093506.7+425207	093816.6+423835	48.11	-0.91	-0.91	-0.91	+2.530 - 0.910 \times		4C+42.30
1132	GR0935-03		093457.0-040908	093727.8-042239	33.59	-1.18	-1.33	-1.47	+2.545 - 0.512 \times - 0.130 \times^2		
1133	GR0937+02		093643.8+021326	093918.9+015950	37.64	-1.10	-1.10	-1.10	+3.163 - 1.100 \times		4C+02.28, PKS 0936+022
1134	GR0937+12		093544.1+121826	093826.3+120452	42.45	-0.93	-0.93	-0.93	+2.565 - 0.933 \times		
1135	GR0937-11		093934.9-113243	094200.8-114626	29.81	-1.10	-1.10	-1.10	+3.300 - 1.100 \times		PKS 0939-115
1136	GR0938+56		093935.7+553830	094304.8+552446	46.00	-0.98	-0.81	-0.66	+3.443 - 1.689 \times + 0.139 \times^2		
1137	GR0939-01		093850.0-012920	094122.7-014301	35.96	-0.90	-0.68	-0.48	+3.900 - 1.861 \times + 0.187 \times^2	O	PKS 0938-014
1138	GR0939-08		094048.1-072421	094316.9-073807	32.72	-0.88	-0.88	-0.88	+2.738 - 0.880 \times		PKS 0940-074
1139	ID2		094108.6-080545	094336.9-081932	32.35	-0.65	-0.65	-0.65	+2.442 - 0.646 \times		PKS 0941-080
1140	GR0940+14		093932.2+135932	094215.4+134549	44.01	-0.78	-0.98	-1.17	+2.021 + 0.082 \times - 0.169 \times^2	O	3C 225, 4C+14.32, PKS 0939+140
1141	GR0941+50		094054.0+503005	094413.3+501617	47.74	-2.31	-3.11	-3.86	+0.851 + 1.177 \times - 0.681 \times^2		
1142	ID2		094126.3+502532	094445.3+501144	47.84	-1.07	-0.85	-0.64	+3.502 - 2.033 \times + 0.188 \times^2		
1143	GR0942+10		094136.1+100007	094416.4+094619	42.68	-0.96	-1.08	-1.19	+2.712 - 0.418 \times - 0.105 \times^2	O	3C 226, 4C+10.27, PKS 0941+100
1144	GR0942+12		094308.1+121923	094549.9+120531	44.08	-0.78	-0.62	-0.46	+3.021 - 1.511 \times + 0.142 \times^2	O	4C+12.35, PKS 0943+123
1145	GR0942+54		094252.4+544359	094618.5+543006	46.75	-1.24	-1.24	-1.24	+3.099 - 1.236 \times		
1146	GR0942-02		094156.7-024447	094428.6-025836	35.83	-1.08	-0.82	-0.58	+4.043 - 2.215 \times + 0.221 \times^2		
1147	GR0943-12		094413.0-131410	094638.0-132804	29.53	-0.90	-0.50	-0.12	+4.312 - 2.646 \times + 0.341 \times^2		
1148	ID2		094512.3-125425	094737.5-130822	29.93	-1.53	-1.53	-1.53	+3.423 - 1.533 \times		
1149	GR0945+07		094513.4+073915	094752.0+072518	42.31	-0.81	-0.81	-0.81	+3.350 - 0.810 \times		3C 227, 4C+07.29, PKS 0945+076
1150	GR0945+42		094523.6+415542	094830.1+414144	50.10	-0.99	-1.12	-1.23	+2.243 - 0.450 \times - 0.106 \times^2	O	
1151	GR0945+45		094643.5+451055	094953.7+445654	49.86	-1.06	-0.67	-0.31	+4.469 - 2.726 \times + 0.326 \times^2		
1152	GR0946-05		094716.4-050548	094946.8-051949	35.43	-1.20	-1.20	-1.20	+3.091 - 1.195 \times		
1153	GR0947+12		094807.9+122928	095049.6+121524	45.25	-1.07	-0.96	-0.85	+3.470 - 1.567 \times + 0.097 \times^2	O	PKS 0948+124
1154	GR0947+14		094727.7+143359	095010.8+141957	45.99	-0.79	-0.79	-0.79	+3.030 - 0.794 \times	O	3C 228, 4C+14.34, PKS 0947+145
1155	GR0947-07		094742.1-084907	095010.2-090310	33.11	-1.03	-0.65	-0.30	+4.399 - 2.693 \times + 0.324 \times^2		
1156	GR0948+52		094929.3+521840	095249.0+520432	48.49	-1.17	-0.88	-0.61	+4.188 - 2.437 \times + 0.247 \times^2		
1157	GR0948+58		095133.5+592948	095506.5+591535	45.95	-1.13	-0.74	-0.36	+4.320 - 2.862 \times + 0.338 \times^2		
1158	GR0949+53		094930.2+532713	095251.8+531306	48.10	-0.97	-0.97	-0.97	+2.651 - 0.973 \times		4C+53.20
1159	GR0949-02		094922.6-020836	095155.0-022242	37.67	-1.20	-0.87	-0.57	+4.833 - 2.622 \times + 0.278 \times^2		
1160	GR0950+00		094925.0+001240	095158.9-000127	39.10	-0.91	-1.14	-1.36	+2.114 + 0.117 \times - 0.200 \times^2	O	3C 230, 4C+00.32, PKS 0949+002
1161	GR0950+56		095138.1+563221	095504.6+561808	47.22	-1.00	-1.00	-1.00	+2.329 - 0.995 \times		
1162	GR0951+00		095149.4+005803	095423.7+004350	40.03	-1.19	-1.07	-0.95	+3.819 - 1.731 \times + 0.105 \times^2		4C+00.33, PKS 0951+009
1163	GR0951+09		095217.1+094409	095456.8+092956	44.86	-1.07	-1.07	-1.07	+3.109 - 1.073 \times	OX	PKS 0952+097
1164	GR0952-12		095347.2-121703	095613.4-123120	31.88	-1.30	-1.04	-0.79	+4.167 - 2.454 \times + 0.225 \times^2		
1165	GR0953+45		095220.9+454041	095530.3+452627	50.73	-1.21	-0.99	-0.78	+4.111 - 2.191 \times + 0.191 \times^2		
1166	GR0953+55		095452.1+550617	095814.8+545156	48.22	-0.90	-0.90	-0.90	+2.622 - 0.903 \times	O	
1167	GR0953-07		095407.0-071142	095636.3-072559	35.38	-1.29	-1.29	-1.29	+3.088 - 1.294 \times		
1168	GR0954+16		095444.6+162113	095728.3+160654	48.32	-0.83	-0.83	-0.83	+2.375 - 0.830 \times	O	4C+16.28, PKS 0954+163
1169	GR0954+49		095453.9+493505	095807.7+492045	50.15	-1.03	-0.84	-0.66	+3.595 - 1.859 \times + 0.162 \times^2		
1170	GR0956+03		095549.2+033835	095825.0+032413	42.39	-1.03	-1.03	-1.03	+3.120 - 1.026 \times		4C+03.17, PKS 0955+036
1171	GR0956+43		095439.1+434108	095745.5+432648	51.53	-0.94	-0.79	-0.63	+3.365 - 1.641 \times + 0.136 \times^2		
1172	GR0956+47		095608.0+473537	095918.8+472114	50.91	-1.07	-1.22	-1.36	+2.285 - 0.405 \times - 0.129 \times^2	O	4C+47.31
1173	GR0956-03		095634.2-031222	095906.0-032645	38.42	-1.06	-1.06	-1.06	+2.952 - 1.063 \times		4C-03.39, PKS 0956-032
1174	GR0957-05		095629.1-050531	095859.8-051954	37.20	-1.12	-1.12	-1.12	+3.275 - 1.121 \times		
1175	GR0958-00		095850.9-001135	100124.5-002603	40.74	-0.99	-0.99	-0.99	+3.152 - 0.994 \times		PKS 0958-001
1176	GR1000+08		100026.7+082227	100305.3+080755	45.92	-1.18	-1.08	-0.98	+3.457 - 1.643 \times + 0.090 \times^2		
1177	GR1000+20		100011.4+200624	100257.1+195153	50.88	-0.86	-0.86	-0.86	+2.743 - 0.856 \times	O	4C+20.20, PKS 1000+201
1178	GR1000+55		095835.0+555516	100157.8+554048	48.36	-0.72	-0.57	-0.43	+2.847 - 1.365 \times + 0.126 \times^2	OXI	4C+55.19
1179	GR1001+53		100211.4+531655	100528.5+530219	49.92	-0.90	-0.90	-0.90	+2.411 - 0.897 \times		4C+53.21
1180	GR1002+10		100205.6+104121	100445.4+102646	47.43	-1.10	-1.01	-0.92	+3.284 - 1.507 \times + 0.079 \times^2		
1181	GR1002+48		100330.7+482748	100640.6+481309	51.84	-0.98	-0.98	-0.98	+2.885 - 0.979 \times		4C+48.27
1182	GR1003-03		100321.0-023430	100553.3-024908	40.13	-1.00	-0.80	-0.61	+3.642 - 1.886 \times + 0.173 \times^2	OX	
1183	GR1004+12		100312.0+120919	100552.6+115441	48.37	-1.14	-0.82	-0.51	+4.521 - 2.563 \times + 0.277 \times^2		
1184	GR1004+44		100749.4+440859	101053.2+435412	53.75	-1.06	-0.85	-0.66	+3.797 - 1.980 \times + 0.179 \times^2		
1185	GR1004+59		100415.2+592250	100742.6+590810	47.42	-0.79	-0.79	-0.79	+2.573 - 0.794 \times	O	4C+59.11
1186	GR1005+07		100522.1+074458	100800.1+073016	46.63	-0.57	-0.78	-0.97	+1.462 + 0.351 \times - 0.179		

Table 1: Radio Identifications for all UTR catalogue sources (continued)

	2	3	4	5	6	7	8	9	10	11	12
	N	$h\ m\ s_{+}\ o\ ''$	$h\ m\ s_{+}\ o\ ''$	$h\ m\ s_{+}\ o\ ''$	$h\ m\ s_{+}\ o\ ''$	α_{365}	α_{1400}	α_{5000}			
GR1008+46		100835.4+464325	101141.7+462836	53.19	-1.02	-1.16	-1.30	+2.647 - 0.395x - 0.122x ²			3C 239, 4C+46.20
GR1008-01		100656.8-011926	100929.7-013412	41.62	-1.09	-0.97	-0.85	+3.459 - 1.611x + 0.107x ²			
GR1008-07		100735.4-071535	101005.2-073022	37.81	-0.99	-0.99	-0.99	+3.017 - 0.994x		O	PKS 1007-072
GR1009+06		100823.1+063928	101100.4+062440	46.66	-0.89	-1.03	-1.16	+2.488 - 0.279x - 0.119x ²		O	3C 238, 4C+06.38, PKS 1008+066
GR1011+07		101319.1+075715	101557.0+074217	48.40	-1.34	-1.34	-1.34	+3.155 - 1.335x			
GR1011+54		101122.4+541329	101437.7+535834	50.75	-0.99	-0.99	-0.99	+2.960 - 0.993x		O	4C+54.20
GR1012+11		101153.2+122351	101433.5+120856	50.36	-1.13	-0.92	-0.72	+3.788 - 2.060x + 0.181x ²			
ID2		101348.6+120637	101628.7+115138	50.63	-0.99	-0.74	-0.50	+3.675 - 2.101x + 0.216x ²			
GR1012+48		101250.2+485344	101557.9+483846	53.14	-0.92	-0.80	-0.68	+3.127 - 1.445x + 0.103x ²			4C+48.28
GR1014+10		101351.8+095902	101630.7+094403	49.58	-0.83	-0.73	-0.64	+2.885 - 1.256x + 0.083x ²		O	PKS 1013+099
GR1014+42		101231.6+423448	101532.6+421951	54.94	-1.11	-1.11	-1.11	+2.817 - 1.106x			
ID2		101646.5+423626	101946.6+422121	55.70	-1.07	-0.87	-0.67	+3.641 - 1.976x + 0.176x ²			
GR1015+53		101517.1+533436	101830.1+531934	51.56	-1.05	-1.05	-1.05	+2.542 - 1.047x			
GR1015+59		101536.1+592630	101858.6+591128	48.61	-0.98	-0.71	-0.44	+3.744 - 2.209x + 0.239x ²		OX	
GR1017+48		101718.1+483221	102024.0+481715	53.96	-1.11	-0.97	-0.83	+3.686 - 1.765x + 0.127x ²			
GR1017+56		101426.9+564226	101745.0+562725	49.94	-1.09	-0.83	-0.58	+3.999 - 2.224x + 0.222x ²			
ID2		101433.4+555821	101750.2+554320	50.32	-1.06	-0.73	-0.41	+4.248 - 2.507x + 0.283x ²			
GR1017-07		101613.9-072902	101843.8-074406	39.19	-1.24	-1.24	-1.24	+3.316 - 1.237x		OX	
ID2		101622.5-074432	101852.3-075936	39.03	-1.26	-1.26	-1.26	+3.310 - 1.259x			
GR1018+50		101816.8+501623	102124.4+500115	53.42	-1.06	-0.64	-0.25	+4.386 - 2.901x + 0.359x ²			
GR1019+07		101912.6+082342	102150.4+080832	49.86	-0.85	-0.72	-0.60	+3.141 - 1.424x + 0.112x ²			PKS 1019+083
GR1020+59		102023.8+591945	102344.0+590433	49.18	-0.76	-0.76	-0.76	+2.517 - 0.757x			4C+59.13
GR1021+02		102117.9+024818	102352.9+023306	47.00	-0.92	-0.67	-0.43	+3.763 - 2.035x + 0.217x ²		O	PKS 1021+028
GR1021+57		101856.5+574148	102214.4+572639	49.93	-1.06	-0.64	-0.24	+4.358 - 2.910x + 0.361x ²			
GR1021-11		102319.0-114331	102547.1-115847	37.30	-1.26	-1.07	-0.90	+4.247 - 2.066x + 0.158x ²			
GR1022+09		102220.1+092121	102458.3+090606	51.03	-1.21	-1.21	-1.21	+3.040 - 1.211x			
GR1022+19		102236.9+202536	102520.7+201021	55.95	-0.96	-0.96	-0.96	+3.077 - 0.962x		O	4C+20.22, PKS 1022+204
GR1022+43		102230.7+431258	102529.9+425743	56.55	-0.94	-0.99	-1.03	+2.621 - 0.748x - 0.038x ²		O	4C+43.19
GR1023+06		102355.1+064250	102632.0+062732	49.88	-1.01	-1.01	-1.01	+3.134 - 1.011x		O	
GR1023-01		102257.0-020221	102529.7-021737	44.17	-1.06	-1.06	-1.06	+3.019 - 1.058x			PKS 1022-020
GR1024+48		102429.1+483310	102732.9+481751	55.05	-0.92	-0.92	-0.92	+2.836 - 0.922x			4C+48.30
GR1025+07		102449.2+074914	102726.6+073355	50.70	-1.06	-0.87	-0.69	+3.863 - 1.893x + 0.163x ²		O	
GR1025+46		102413.4+461840	102715.0+460322	55.86	-0.80	-0.88	-0.96	+2.181 - 0.421x - 0.073x ²			4C+46.21
GR1027+03		102803.6+034958	103039.0+033434	48.96	-0.67	-0.37	-0.21	-1.032 - 0.001x + 8.610e ^{-x}			
GR1027-08		102822.0-091000	103051.5-092525	40.04	-1.01	-1.16	-1.30	+2.377 - 0.362x - 0.127x ²			PKS 1028-091
GR1028+42		102848.0+420950	103144.7+415424	57.96	-0.99	-0.84	-0.70	+3.200 - 1.636x + 0.127x ²			
GR1028+52		102836.5+524104	103143.6+522538	53.74	-0.76	-0.76	-0.76	+2.357 - 0.760x		O	4C+52.22
GR1028-06		102828.8-055735	103059.9-061300	42.41	-1.15	-1.15	-1.15	+3.172 - 1.153x			
GR1029-11		103107.2-115502	103335.6-121032	38.40	-0.62	-0.62	-0.62	+2.215 - 0.622x			PKS 1031-119
GR1030+08		103139.9+085159	103417.5+083628	52.68	-1.09	-0.89	-0.69	+3.884 - 1.981x + 0.174x ²			
GR1030+58		103019.5+583006	103333.9+581438	50.70	-0.85	-0.92	-0.99	+2.848 - 0.521x - 0.064x ²		O	3C 244.1, 4C+58.21
GR1031+18		103137.0+183308	103419.2+183738	57.41	-1.16	-1.40	-1.64	+1.898 - 0.075x - 0.211x ²		OX	
GR1031+50		103255.5+494845	103567.9+493312	55.73	-1.07	-0.98	-0.89	+3.250 - 1.481x + 0.080x ²			
GR1032+11		103126.4+112802	103405.1+111232	54.05	-0.88	-0.96	-1.03	+2.446 - 0.548x - 0.065x ²		O	4C+11.35, PKS 1031+114
GR1033+00		103331.3+002121	103605.1+000547	47.73	-0.60	-0.34	-0.19	-0.757 + 0.003x + 7.865e ^{-x}		OX	4C+00.37, PKS 1033+003
GR1033+48		103334.4+484958	103635.7+483424	56.28	-1.03	-0.94	-0.85	+3.185 - 1.452x + 0.082x ²			4C+48.31
GR1033-09		103334.6-100226	103604.0-101759	40.22	-1.01	-0.91	-0.81	+3.306 - 1.459x + 0.088x ²			PKS 1033-100
GR1035+56		103858.8+563619	104206.8+562037	52.78	-1.03	-0.69	-0.37	+4.023 - 2.511x + 0.289x ²			
GR1035-05		103536.4-054826	103807.7-060403	43.73	-1.07	-1.07	-1.07	+3.008 - 1.070x			
GR1036+45		103321.1+460704	103620.0+455130	57.40	-1.26	-1.01	-0.78	+4.213 - 2.352x + 0.213x ²			
GR1036+59		103600.7+593005	103914.1+591427	50.66	-1.09	-0.79	-0.49	+3.921 - 2.453x + 0.265x ²			
GR1037+05		103650.0+055148	103926.1+053609	51.94	-0.98	-0.98	-0.98	+2.819 - 0.975x			PKS 1036+058
GR1037+46		103633.9+462728	103932.1+461150	57.77	-1.17	-1.17	-1.17	+2.831 - 1.169x			
GR1038+50		103904.4+502923	104205.6+501341	56.26	-1.04	-1.20	-1.35	+2.337 - 0.330x - 0.138x ²		O	4C+50.31
GR1038-11		103935.7-114405	104204.8-115948	39.85	-1.03	-0.85	-0.68	+3.705 - 1.805x + 0.152x ²			PKS 1039-117
GR1039+03		103904.1+025815	104139.0+024233	50.51	-0.62	-0.62	-0.62	+2.354 - 0.616x		O	PKS 1039+029
GR1040+12		104005.9+121915	104244.5+120332	56.30	-0.68	-0.59	-0.50	+3.156 - 1.090x + 0.080x ²		OX	3C 245, 4C+12.37, PKS 1040+123
GR1040-02		103858 - 021400 ?	104130 - 022930 ?	46.91							
GR1041+06		104104.2+055257	104340.2+053712	52.77	-0.98	-0.98	-0.98	+2.816 - 0.975x		O	4C+05.45, PKS 1041+058
GR1042+53		104240.0+530658	104542.5+525111	55.29	-0.91	-0.69	-0.48	+3.437 - 1.904x + 0.193x ²		O	
GR1045+07		104550.8+073628	104827.3+072036	54.78	-1.24	-0.92	-0.61	+4.728 - 2.658x + 0.277x ²			
GR1045-00		104447.2-004934	104720.6-010524	48.93	-1.02	-0.86	-0.70	+3.853 - 1.757x + 0.143x ²			4C-00.39, PKS 1044-008
GR1046+15		104635.9+154247	104915.4+152654	59.34	-0.95	-0.73	-0.52	+3.512 - 1.921x + 0.189x ²		O	
GR1046-05		104451.1-061439	104722.5-063030	44.92	-1.02	-0.64	-0.27	+4.815 - 2.715x + 0.330x ²			PKS 1044-062
GR1046-10		104756.1-103318	105026.1-104912	42.03	-0.92	-0.56	-0.21	+4.302 - 2.539x + 0.315x ²			PKS 1047-105
GR1047+44		104719.5+443225	105013.3+441631	60.28	-1.03	-0.95	-0.86	+3.079 - 1.418x + 0.075x ²			
GR1047+48		104714.9+482302	105011.6+480708	58.48	-1.08	-0.74	-0.42	+4.252 - 2.555x + 0.288x ²			PKS 1048+002
GR1047-02		104653.4-023860	104926.2-025453	47.96	-0.84	-0.84	-0.84	+2.613 - 0.838x			4C-02.43, PKS 1046-026
GR1048+00		104806.5+001200	105040.3-000355	50.24	-1.03	-1.26	-1.48	+1.947 - 0.010x - 0.199x ²			
GR1048+08		104730.6+082551	105007.3+080957	55.60	-1.09	-1.09	-1.09	+3.074 - 1.093x		O	4C+08.33, PKS 1047+084
ID2		104955.2+082206	105231.9+080609	56.04	-1.00	-0.83	-0.67	+3.747 - 1.748x + 0.146x ²			PKS 1049+083
GR1048+09		104748.9+094144	105026.1+092550	56.42	-1.00	-0.88	-0.76	+3.421 - 1.539x + 0.105x ²		O	PKS 1047+096
GR1048+51		104848.4+510847	105146.9+505251	57.19	-1.27	-1.27	-1.27	+2.756 - 1.271x			
GR1048+55		105059.4+553750	105401.3+552151	54.69	-1.09	-0.69	-0.30	+4.771 - 2.881x + 0.349x ²			
ID2		104844.9+553912	105147.8+552316	54.44	-0.79	-0.44	-0.25	-1.127 + 0.000x + 10.300e ^{-x}		O	
ID3		1047									

Table 1: *Radio Identifications for all UTR catalogue sources (continued)*

1	2	3 N	4 h m s + o / //	5 h m s + o / //	6 o	7 α_{365}	8 α_{1400}	9 α_{5000}	10	11	12
1274	GR1053+19		105137.5+191621	105417.9+190022	61.94	-1.02	-1.02	-1.02	+2.737 - 1.024x		
1275	GR1055+43		105608.1+431728	105858.7+430123	62.25	-0.71	-0.78	-0.83	+2.346 - 0.448x - 0.052x ²	O	3C 247, 4C+43.20
1276	GR1055+57		105530.8+570413	105832.4+564809	54.19	-1.09	-0.80	-0.53	+4.058 - 2.364x + 0.248x ²		
1277	GR1055+58		105527.8+585935	105831.5+584330	52.83	-0.89	-0.89	-0.89	+2.423 - 0.894x	O	
1278	GR1056+45		105754.7+454812	110046.3+453205	61.35	-1.12	-0.86	-0.62	+4.108 - 2.238x + 0.219x ²		
1279	GR1057+09		105707.2+091538	105943.8+085932	57.99	-1.07	-1.07	-1.07	+3.152 - 1.074x		4C+09.38, PKS 1057+092 4C+15.36, PKS 1057+156
1280	GR1058+15		105801.4+154033	110040.0+152426	61.75	-1.07	-1.07	-1.07	+2.951 - 1.072x		
1281	GR1058+56		105831.5+563551	110131.3+561943	54.81	-1.09	-0.60	-0.34	-2.133 + 0.006x + 14.152e ^{-x}		
1282	GR1059-00		105930.5-010010	110203.9-011618	51.28	-0.82	-1.00	-1.18	+2.047 - 0.023x - 0.156x ²	O	3C 249, 4C-00.42, PKS 1059-010 PKS 1059+031 PKS 1101+113
1283	GR1100+03		105932.5+030648	110207.2+025039	54.32	-0.93	-0.93	-0.93	+2.622 - 0.928x		
1284	GR1100+11		110157.8+111935	110434.8+110324	60.19	-0.95	-0.95	-0.95	+2.872 - 0.948x	O	
1285	GR1100+53		110030.8+532303	110326.9+530653	57.21	-0.93	-0.61	-0.30	+3.803 - 2.344x + 0.276x ²		
1286	GR1101+59		110138.4+594101	110440.4+592449	52.86	-0.93	-0.93	-0.93	+2.613 - 0.933x	O	
1287	GR1101-10		105941.8-111257	110212.1-112906	43.17	-1.31	-1.31	-1.31	+3.414 - 1.308x		
1288	GR1103+42		110319.6+423735	110608.0+422122	63.72	-1.11	-0.87	-0.65	+3.792 - 2.132x + 0.200x ²		
1289	GR1103+56		110435.8+560859	110732.6+555245	55.72	-1.12	-0.78	-0.47	+4.537 - 2.589x + 0.287x ²	O	
1290	GR1103-08		110257.9-080934	110529.3-082546	46.15	-1.05	-0.70	-0.37	+4.340 - 2.582x + 0.299x ²		
1291	GR1104+05		110440.5+054923	110715.8+053308	57.14	-0.93	-0.90	-0.88	+2.910 - 1.068x + 0.026x ²	O	4C+05.48, PKS 1104+058
1292	GR1104+08		110425.0+085416	110701.2+083802	59.16	-1.29	-1.04	-0.80	+4.489 - 2.400x + 0.216x ²		4C+08.34
1293	GR1105+12		110443.1+125556	110720.4+123941	61.67	-0.94	-0.94	-0.94	+2.756 - 0.941x		4C+12.38, PKS 1104+129
1294	GR1105+16		110436.6+164416	110715.0+162801	63.64	-0.56	-0.31	-0.18	-0.370 + 0.004x + 7.330e ^{-x}	O	4C+16.30, PKS 1104+167
1295	GR1105+45		110526.5+453139	110815.9+451524	62.62	-1.01	-1.01	-1.01	+2.440 - 1.008x		
1296	GR1105-03		110504.2-025148	110737.1-030802	50.72	-0.84	-0.84	-0.84	+2.412 - 0.842x	O	4C-02.45, PKS 1105-028
1297	GR1106+18		110627.1+185223	110905.9+183607	64.99	-0.84	-0.72	-0.60	+3.078 - 1.371x + 0.104x ²		4C+18.31, PKS 1106+188
1298	GR1107-08		110717.0-085333	110948.4-090950	46.14	-1.05	-0.79	-0.54	+3.897 - 2.191x + 0.223x ²		
1299	GR1107-10		110822.3-103643	111053.3-105302	44.84	-0.94	-0.52	-0.30	-1.682 + 0.002x + 12.187e ^{-x}		
1300	GR1108+03		110848.1+032529	111122.7+030910	56.14	-0.89	-0.89	-0.89	+2.692 - 0.887x		PKS 1108+034
1301	GR1108+48		110928.5+481222	111218.1+475603	61.63	-0.98	-0.84	-0.70	+3.192 - 1.612x + 0.123x ²		
1302	GR1109+53		110908.2+540724	111201.7+535106	57.63	-1.30	-0.77	-0.26	+5.687 - 3.652x + 0.458x ²		
1303	GR1110+43		110952.8+434158	111240.0+432538	64.25	-0.86	-0.94	-1.01	+2.450 - 0.526x - 0.066x ²		4C+43.21
1304	GR1110+47		110907.2+465442	111156.2+463823	62.36	-1.02	-0.83	-0.66	+3.355 - 1.833x + 0.159x ²		
1305	GR1111+11		111050.1+112809	111326.7+111149	62.01	-1.02	-1.02	-1.02	+2.922 - 1.019x		
1306	GR1112-01 1307		111058.9-015635	111332.1-021255	52.35	-0.81	-0.81	-0.81	+2.720 - 0.807x	O	4C-01.25, PKS 1110-019
1307	GR1112-03 1306		111058.9-015635	111332.1-021255	52.35	-0.89	-0.89	-0.89	+2.951 - 0.886x	O	4C-01.25, PKS 1110-019
1308	ID2		111500.6-021937	111733.9-023601	52.64	-0.90	-0.68	-0.47	+3.933 - 1.862x + 0.188x ²	O	4C-02.46, PKS 1115-023
1309	GR1113+02		111217.1+020628	111451.3+015006	55.72	-1.03	-0.75	-0.48	+3.905 - 2.285x + 0.244x ²		
1310	ID2		111437.5+013624	111711.6+012000	55.71	-1.13	-0.83	-0.54	+4.106 - 2.468x + 0.261x ²		
1311	GR1113+59		111315.4+593619	111611.4+591956	53.85	-1.07	-1.07	-1.07	+3.109 - 1.073x	O	
1312	GR1114+08		111425.3+081742	111700.9+080119	60.59	-1.22	-1.05	-0.89	+3.845 - 1.973x + 0.147x ²		
1313	GR1114+53		111433.7+530819	111724.4+525156	58.89	-1.36	-1.54	-1.71	+2.520 - 0.575x - 0.153x ²		
1314	GR1114-10		111233.9-101006	111505.2-102627	45.76	-1.02	-1.02	-1.02	+3.020 - 1.025x		PKS 1112-101
1315	GR1115-07		111543.2-072646	111815.3-074311	48.48	-0.92	-0.92	-0.92	+2.679 - 0.917x		PKS 1115-074
1316	GR1117+07		111657.2+090942	111932.9+085317	61.64	-0.89	-0.74	-0.60	+3.048 - 1.534x + 0.126x ²		
1317	GR1118+45		111810.1+450924	112055.6+445258	64.67	-1.09	-0.81	-0.54	+4.005 - 2.317x + 0.240x ²		
1318	ID2		111851.7+453519	112137.1+451852	64.50	-1.07	-0.87	-0.68	+3.667 - 1.957x + 0.173x ²		
1319	GR1118-09		112051.7-093238	112323.6-094907	47.33	-0.82	-0.45	-0.26	-1.290 + 0.001x + 10.584e ^{-x}		
1320	ID2		111827.4-092658	112059.2-094325	47.12	-1.65	-1.65	-1.65	+3.838 - 1.649x		
1321	GR1120+44		112110.7+442509	112355.0+440840	65.54	-1.11	-1.11	-1.11	+3.025 - 1.111x		
1322	GR1121+05		112202.8+051248	112437.5+045619	59.66	-0.88	-1.03	-1.16	+2.141 - 0.270x - 0.120x ²		PKS 1122+052
1323	GR1122-03		112120.1-033831	112353.1-035500	52.44	-1.00	-0.78	-0.56	+3.636 - 1.985x + 0.192x ²		
1324	ID2		112138.5-032036	112411.6-033705	52.74	-1.09	-0.97	-0.85	+3.340 - 1.636x + 0.106x ²		
1325	ID3		112147.8-040218	112420.8-041847	52.17	-1.05	-0.82	-0.61	+3.688 - 2.029x + 0.192x ²		
1326	GR1123+12		112350.9+123708	112626.9+122037	65.20	-0.84	-0.84	-0.84	+2.720 - 0.841x		4C+12.41, PKS 1123+126
1327	GR1123+19		112206.4+193559	112443.9+191929	68.65	-0.84	-0.74	-0.64	+3.208 - 1.295x + 0.088x ²	O	3C 258
1328	GR1126+10		112653.5+102725	112929.0+101053	64.31	-1.03	-1.03	-1.03	+2.958 - 1.028x	O	PKS 1126+104
1329	GR1126+13		112655.4+142234	112931.5+140601	66.88	-1.17	-0.83	-0.50	+4.412 - 2.688x + 0.296x ²		
1330	GR1126+58		112543.2+585018	112832.6+583346	55.41	-0.76	-0.62	-0.49	+3.060 - 1.384x + 0.121x ²	OXI	
1331	GR1126-06		112640.3-064647	112912.9-070320	50.44	-0.98	-0.98	-0.98	+2.777 - 0.975x	O	4C-06.29, PKS 1126-067
1332	GR1126-11		112701.8-104354	112933.8-110027	47.00	-0.96	-0.68	-0.41	+3.947 - 2.213x + 0.244x ²		
1333	GR1127-02		112736.2-031300	113009.5-032932	53.64	-0.96	-0.87	-0.79	+3.281 - 1.348x + 0.076x ²		4C-03.42, PKS 1127-032
1334	GR1127-04		112857.4-044348	113130.5-050022	52.51	-0.54	0.09	0.68	+4.787 - 3.286x + 0.536x ²		PKS 1128-047
1335	GR1129+43		112805.2+434116	113047.4+432443	66.97	-1.01	-1.01	-1.01	+2.765 - 1.006x		
1336	GR1130+50		113029.6+502514	113313.2+500840	62.56	-0.92	-0.78	-0.66	+3.470 - 1.500x + 0.114x ²	O	
1337	GR1131+45		113123.1+452114	113404.9+450439	66.33	-0.98	-0.98	-0.98	+2.690 - 0.978x		4C+45.21
1338	ID2		113023.4+451545	113305.4+445911	66.26	-0.93	-0.80	-0.67	+3.170 - 1.502x + 0.112x ²		
1339	GR1131+57		113645.3+580157	113929.2+574519	56.86	-1.22	-1.00	-0.80	+3.697 - 2.150x + 0.182x ²		
1340	GR1132+49		113110.9+491958	113353.9+490323	63.46	-0.87	-0.45	-0.06	+4.516 - 2.686x + 0.355x ²		
1341	GR1133+56		113529.8+560340	113813.4+564703	58.45	-1.05	-0.77	-0.50	+3.996 - 2.286x + 0.241x ²		
1342	GR1133-11		113402.1-112034	113634.4-113711	47.21	-1.08	-0.90	-0.73	+3.716 - 1.865x + 0.153x ²		
1343	GR1134-02		113543.0-025805	113816.4-031442	54.87	-1.13	-0.89	-0.66	+3.926 - 2.172x + 0.204x ²		
1344	GR1135-13		113524.2-124903	113756.4-130540	46.00	-1.02	-1.02	-1.02	+3.163 - 1.025x		PKS 1135-128
1345	GR1136+46		113544.7+462456	113825.4+460819	66.12	-0.87	-0.87	-0.87	+2.419 - 0.867x	O	4C+46.22
1346	ID2		113515.8+462818	113756.7+461142	66.03	-1.00	-1.00	-1.00	+2.603 - 1.004x		
1347	GR1137+12		113752.6+121945	114027.7+120307	67.54	-0.68	-0.68	-0.68	+2.244 - 0.683x		4C+12.42, PKS 1137+123 PKS 1136-096
1348	GR1137-09		113632.9-093945	113905.5-095622	48.99	-1.10	-1.10	-1.10	+2.950 - 1.100x	OX	4C+01.32, PKS 1138+015
1349	GR1138+01		113834.3+013056	114108.2+011418	59.10	-0.73	-0.73	-0.73	+2.709 - 0.732x		

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	h m s + ° ' "	h m s + ° ' "	°	α_{365}	α_{1400}	α_{5000}			
GR1139+05			113837.1+060035	114111.4+054357	62.85	-1.02	-0.87	-0.72	+3.695 - 1.678x + 0.129x ²	O	4C+06.42, PKS 1138+060
GR1139+42			113735.5+423415	114014.9+421738	69.01	-0.92	-0.69	-0.48	+3.482 - 1.915x + 0.194x ²		
GR1139+48			114254.2+482538	114533.1+480858	65.38	-1.22	-1.00	-0.79	+3.786 - 2.182x + 0.188x ²		
GR1139+56			113914.3+563424	114156.6+561746	58.28	-1.17	-0.74	-0.33	+4.724 - 3.048x + 0.367x ²		
GR1139+58			114007.4+582434	114249.9+580756	56.74	-0.99	-1.02	-1.05	+2.779 - 0.844x - 0.028x ²	OX	
GR1140+51			114135.6+513230	114415.6+511551	62.73	-0.90	-0.76	-0.62	+3.174 - 1.555x + 0.127x ²		
GR1141+46			114100.5+463759	114339.6+462120	66.57	-0.91	-1.00	-1.08	+2.297 - 0.527x - 0.075x ²	OX	4C+46.23 PKS 1142-002
GR1142+00			114220.3-001457	114454.0-003137	58.05	-0.93	-0.93	-0.93	+2.821 - 0.926x		
GR1142+19			114229.8+195317	114505.2+193638	73.04	-0.80	-0.62	-0.45	+4.082 - 1.564x + 0.150x ²	OX	3C 264, 4C+19.40, PKS 1142+198
GR1142+50			114304.3+500248	114543.4+494608	64.09	-0.94	-1.18	-1.41	+1.806 + 0.133x - 0.209x ²	O	3C 266, 4C+50.33, 4C+45.22
GR1144+45			114337.0+453718	114615.2+452038	67.63	-1.03	-1.03	-1.03	+3.005 - 1.035x		
GR1144-07			114613.9-070820	114847.2-072501	52.27	-1.18	-1.18	-1.18	+3.010 - 1.178x		
GR1146+48			114634.2+481727	114911.9+480046	65.85	-1.14	-0.74	-0.36	+4.449 - 2.888x + 0.342x ²		
GR1146-03			114612.6-041821	114846.1-043502	54.86	-1.05	-0.87	-0.70	+3.502 - 1.844x + 0.155x ²		
GR1146-11			114700.9-103452	114934.0-105132	49.16	-1.08	-0.73	-0.39	+4.586 - 2.642x + 0.304x ²		
GR1147+05			114613.4+051208	114847.5+045528	63.24	-0.99	-0.99	-0.99	+3.004 - 0.992x		4C+05.53, PKS 1146+052
GR1148+12			114721.0+130356	114955.6+124716	69.68	-0.90	-1.01	-1.11	+2.652 - 0.443x - 0.090x ²		3C 267, PKS 1147+130
GR1149+42			114937.4+421027	115213.6+415346	70.91	-1.24	-1.24	-1.24	+2.917 - 1.235x		
GR1149+47			114832.3+474538	115109.3+472857	66.47	-0.97	-1.05	-1.13	+2.394 - 0.599x - 0.072x ²	O	
GR1149-05			114837.5-050130	115110.9-051811	54.45	-1.06	-0.74	-0.44	+4.390 - 2.442x + 0.270x ²	O	
GR1150+08			115120.8+080307	115354.9+074625	66.33	-1.08	-1.08	-1.08	+2.969 - 1.083x		
GR1150+49			115048.0+494750	115324.5+493109	64.98	-0.59	-0.46	-0.33	+2.791 - 1.168x + 0.113x ²	OX	4C+49.22
GR1150+51			115110.5+513347	115346.5+511705	63.50	-1.01	-1.01	-1.01	+2.850 - 1.012x	O	4C+51.28
GR1152+04			115219.5+044054	115453.4+042412	63.57	-0.92	-0.92	-0.92	+2.758 - 0.922x	O	4C+04.37
GR1152+45			115144.9+453951	115420.7+452310	68.49	-0.79	-0.71	-0.64	+2.818 - 1.111x + 0.063x ²	OX	4C+45.23
GR1152+52			115327.2+522917	115602.9+521235	62.86	-1.19	-1.37	-1.54	+2.034 - 0.421x - 0.151x ²		4C+52.24
GR1152+55			115639.2+540949	115913.8+535307	61.57	-0.87	-0.70	-0.53	+3.823 - 1.636x + 0.149x ²	O	
GR1152+58			115327.4+590347	115603.7+584705	56.91	-0.70	-0.70	-0.70	+2.373 - 0.702x	O	4C+59.17
GR1154-04			115336.1-042020	115609.8-043702	55.56	-1.22	-1.00	-0.78	+4.286 - 2.217x + 0.194x ²		
GR1155+19			115459.4+191911	115733.5+190229	75.22	-1.01	-1.01	-1.01	+2.926 - 1.011x	O	4C+19.41, PKS 1154+193
GR1155+47			115356.0+470140	115631.3+464459	67.59	-1.13	-0.95	-0.79	+3.456 - 1.890x + 0.149x ²		
GR1155-01			115437.3-010729	115711.0-012411	58.62	-1.05	-0.94	-0.83	+3.221 - 1.544x + 0.096x ²		PKS 1154-011
GR1156+06			115659.7+062130	115933.5+060448	65.60	-1.23	-0.93	-0.65	+4.388 - 2.533x + 0.254x ²		
ID2			115738.6+063323	120012.4+061641	65.85	-1.18	-0.88	-0.58	+4.371 - 2.530x + 0.263x ²		
GR1156+55			115445.1+551421	115720.6+545739	60.48	-0.90	-0.57	-0.26	+4.279 - 2.357x + 0.284x ²		
GR1158+12			115819.6+122711	120053.4+121029	70.92	-1.10	-0.99	-0.90	+3.540 - 1.548x + 0.088x ²		
GR1158+42			115819.6+425600	120053.5+423918	71.38	-1.15	-1.15	-1.15	+2.871 - 1.149x		
GR1158+57			115930.8+581843	120204.2+580202	57.90	-0.92	-0.92	-0.92	+2.799 - 0.919x		
GR1200-10			115938.7-102410	120212.5-104053	50.35	-0.70	-0.88	-1.05	+1.446 + 0.102x - 0.156x ²	O	4C+58.23
GR1201+50			120226.4+495709	120458.9+494027	65.75	-0.91	-0.69	-0.49	+3.536 - 1.850x + 0.184x ²	O	PKS 1159-104
GR1202+48			120214.8+484942	120447.4+483301	66.74	-0.96	-0.80	-0.64	+3.416 - 1.689x + 0.142x ²	OX	
ID2			120240.1+483436	120512.6+481755	67.00	-0.92	-0.92	-0.92	+2.588 - 0.920x	O	
GR1202+51			120035.1+515647	120308.1+514005	63.83	-0.73	-0.59	-0.46	+2.734 - 1.320x + 0.116x ²		
GR1202+52			120204.3+524523	120436.8+522841	63.18	-0.79	-0.66	-0.34	+3.340 - 1.808x + 0.198x ²	O	4C+52.25 PKS 1201-041 PKS 1204-126 PKS 1203+043
GR1202-04			120128.3-040602	120402.1-042244	56.48	-0.71	-0.71	-0.71	+2.518 - 0.708x		
GR1203-11			120404.2-123719	120638.3-125400	48.52	-0.86	-0.86	-0.86	+2.613 - 0.864x		
GR1204+04			120346.3+042254	120619.9+040612	64.58	-0.90	-0.90	-0.90	+3.030 - 0.902x		
ID2			120538.4+043141	120812.0+041500	64.90	-1.04	-1.00	-0.95	+3.326 - 1.254x + 0.041x ²		
GR1204-08			120354.0-072319	120628.0-074001	53.54	-1.34	-1.34	-1.34	+3.521 - 1.336x		
GR1206+10			120456.2+105234	120729.6+103552	70.50	-1.18	-0.80	-0.45	+4.814 - 2.836x + 0.323x ²		
GR1206+43			120642.0+435600	120913.5+433918	71.40	-0.80	-0.90	-1.00	+2.256 - 0.337x - 0.090x ²	OX	3C 268.4, 4C+43.23
GR1206+55			120304.7+560808	120536.6+555127	60.11	-0.75	-0.42	-0.24	-1.416 + 0.003x + 9.792e ^{-x}		
GR1207+46			120726.5+463447	120957.6+461806	69.15	-0.94	-0.94	-0.94	+2.603 - 0.943x	O	4C+46.26
GR1208+51			120859.0+510932	121129.1+505252	65.06	-1.07	-1.07	-1.07	+2.714 - 1.073x	O	
GR1208-10			120916.0-102127	121150.3-103808	51.03	-0.99	-0.99	-0.99	+2.726 - 0.990x	O	PKS 1209-103
ID2			120823.2-093724	121057.5-095405	51.69	-1.10	-1.10	-1.10	+3.016 - 1.100x		
GR1210+19			121023.5+194228	121256.1+192547	78.29	-0.70	-0.32	0.04	+3.950 - 2.379x + 0.327x ²	O	PKS 1210+197
ID2			120909.8+192342	121142.5+190701	77.86	-1.10	-1.10	-1.10	+2.803 - 1.095x		
GR1210+48			121102.3+483955	121332.0+482314	67.50	-1.00	-1.00	-1.00	+2.765 - 0.999x		4C+48.34
GR1211+42			121017.7+423725	121248.4+422045	72.87	-1.14	-1.14	-1.14	+2.867 - 1.136x		
GR1212+53			121301.7+535234	121529.8+533554	62.71	-0.68	-0.72	-0.77	+2.285 - 0.466x - 0.041x ²	O	
GR1213+02			121218.8+030850	121452.3+025209	64.21	-1.16	-0.94	-0.73	+4.095 - 2.124x + 0.188x ²		4C+03.22
ID2			121214.7+032025	121448.3+030344	64.39	-1.12	-0.88	-0.66	+4.108 - 2.142x + 0.200x ²		
ID3			121228.8+025804	121502.4+024123	64.06	-0.89	-0.49	-0.28	-1.625 - 0.000x + 11.488e ^{-x}		
GR1213+45			121415.8+453052	121645.0+451412	70.61	-1.08	-0.81	-0.55	+3.822 - 2.249x + 0.229x ²		
ID2			121145.4+455645	121415.2+454004	70.04	-1.15	-0.88	-0.62	+3.952 - 2.338x + 0.232x ²		
ID3			121525.0+455911	121753.7+454232	70.26	-1.00	-0.69	-0.40	+3.889 - 2.378x + 0.268x ²		
ID4			121251.5+455014	121521.1+453334	70.22	-1.04	-0.54	-0.07	+4.688 - 3.218x + 0.425x ²		
GR1213-05			121201.8-055018	121435.9-060659	55.58	-1.24	-1.24	-1.24	+3.162 - 1.238x		
GR1214-03			121521.2-032042	121755.3-033721	58.20	-1.26	-1.26	-1.26	+3.326 - 1.261x	O	PKS 1215-033 PKS 1215+039
GR1215+04			121506.1+035633	121739.6+033953	65.19	-0.89	-0.89	-0.89	+3.056 - 0.891x	OX	3C 270, 4C+06.44, PKS 1216+061
GR1216+06			121642.1+060619	121915.3+054940	67.36	-0.63	-0.63	-0.63	+3.048 - 0.626x		
GR1216+56			121558.1+554812	121824.6+553132	60.98	-0.86	-0.67	-0.48	+3.345 - 1.735x + 0.170x ²		
GR1216-04			121636.5-044024	121910.8-045703	56.99	-0.81	-0.81	-0.81	+2.442 - 0.806x		PKS 1216-046
GR1216-09			121600.0-100205	121834.7-101845	51.72	-0.71	-0.71	-0.71	+2.616 - 0.708x		PKS 1216-100
GR1219+50			122025.8+504333	122251.9+502655	66.05	-1.09	-1.32	-1.54	+1.863 - 0.087x - 0.196x ²		4C+50.34
ID2			121619.7+504246								

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3 N	4 h m s + o //	5 h m s + o //	6 o	7 α_{365}	8 α_{1400}	9 α_{5000}	10	11	12
1436	GR1224-08		122428.8-083151	122703.7-084827	53.58	-1.21	-1.21	-1.21	+3.262 - 1.212 π	O	
1437	GR1225+08		122528.1+074207	122800.8+072532	69.53	-1.10	-0.87	-0.65	+4.389 - 2.109 π + 0.197 π^2	OX	PKS 1225+077
1438	GR1225-02		122523.3-022025	122757.4-023700	59.72	-0.92	-0.60	-0.30	+4.355 - 2.333 π + 0.275 π^2		PKS 1225-023
1439	GR1226+02		122633.0+021940	122906.4+020305	64.36	-0.33	-0.14	0.04	+3.696 - 1.168 π + 0.163 π^2	OXI	3C 273,4C+02.32, PKS 1226+023
1440	GR1226+56		122506.4+561232	122728.8+555557	60.87	-1.20	-0.78	-0.38	+5.201 - 3.030 π + 0.358 π^2		
1441	GR1227+06		122819.1+063046	123051.9+061412	68.54	-1.15	-0.84	-0.55	+4.527 - 2.493 π + 0.263 π^2		
1442	GR1227-04		122754.9-045328	123029.4-051002	57.31	-1.03	-0.56	-0.12	+5.079 - 3.104 π + 0.404 π^2		
1443	GR1227-10		122606.4-103623	122841.6-105258	51.59	-1.30	-1.30	-1.30	+3.722 - 1.298 π		PKS 1226-105
1444	GR1228+12		122817.6+123955	123049.5+122321	74.49	-0.78	-0.78	-0.78	+4.742 - 0.778 π	OXI	3C274,4C+12.45, PKS 1228+126
1445	GR1228+48		122843.1+481540	123107.2+475907	68.77	-1.14	-1.14	-1.14	+2.782 - 1.140 π		
1446	GR1228-02		122926.0-020731	123200.2-022404	60.10	-0.77	-0.52	-0.29	+4.027 - 1.871 π + 0.214 π^2	OX	PKS 1229-021
1447	GR1229-01		122931.4-011822	123205.4-013455	60.91	-1.06	-1.06	1.06	+3.241 - 1.062 π		PKS 1229-013
1448	GR1229-10		123037.7-100846	123313.2-102518	52.19	-0.68	-0.38	-0.22	-0.599 + 0.001 π + 8.794 π^2		PKS 1230-101
1449	ID2		123009.5-101804	123244.9-103437	52.02	-1.26	-0.82	-0.41	+5.324 - 3.182 π + 0.375 π^2		
1450	GR1230+57		123037.3+573846	123256.6+572214	59.58	-1.18	-0.66	-0.17	+5.436 - 3.458 π + 0.445 π^2		
1451	GR1231+43		123153.9+431343	123418.6+425712	73.80	-1.01	-0.86	-0.71	+3.396 - 1.690 π + 0.132 π^2		
1452	GR1231-07		123033.7-082321	123308.8-083953	53.93	-1.31	-1.31	-1.31	+3.407 - 1.308 π	O	
1453	ID2		123236.4-080325	123511.6-081956	54.32	-1.10	-0.70	-0.32	+4.694 - 2.860 π + 0.343 π^2		
1454	GR1232+42		123202.9+412625	123428.2+410954	75.54	-0.85	-0.71	-0.58	+3.143 - 1.443 π + 0.116 π^2		4C+41.24
1455	ID2		123310.9+415338	123535.7+413707	75.15	-0.81	-0.63	-0.46	+3.249 - 1.579 π + 0.151 π^2		
1456	GR1232+54		123225.0+542411	123445.2+540740	62.83	-1.15	-1.08	-1.01	+3.462 - 1.488 π + 0.065 π^2		4C+54.29
1457	ID2		122627.9+540437	122850.7+534802	63.00	-1.00	-1.00	-1.00	+2.839 - 0.997 π		4C+54.28
1458	GR1235+05		123634.5+053553	123907.2+051924	68.00	-0.96	-0.66	-0.38	+4.537 - 2.262 π + 0.254 π^2		PKS 1236+056
1459	ID2		123534.4+054658	123807.2+053029	68.15	-1.27	-0.94	-0.63	+5.049 - 2.712 π + 0.281 π^2		
1460	GR1235+53		123414.4+534211	123634.2+532541	63.56	-1.22	-1.08	-0.94	+3.717 - 1.863 π + 0.125 π^2	O	
1461	ID2		123444.4+531052	123704.3+525422	64.08	-0.99	-0.84	-0.69	+3.462 - 1.664 π + 0.131 π^2		
1462	ID3		123531.1+535007	123750.4+533338	63.45	-1.14	-1.07	-1.01	+3.283 - 1.424 π + 0.056 π^2		
1463	ID4		123630.7+530603	123850.0+524934	64.19	-1.01	-0.87	-0.74	+3.427 - 1.623 π + 0.119 π^2		
1464	GR1235+57		123505.0+573156	123722.3+571527	59.77	-1.05	-0.60	-0.17	+4.533 - 3.048 π + 0.389 π^2		
1465	ID2		123732.8+571738	123949.2+570110	60.04	-1.15	-0.81	-0.49	+4.191 - 2.642 π + 0.291 π^2		
1466	GR1236+00		123632.6-002302	123906.5-003930	62.06	-1.09	-1.09	-1.09	+3.118 - 1.086 π		
1467	GR1238+44		123908.9+435643	124131.5+434016	73.34	-1.07	-0.85	-0.64	+3.816 - 2.057 π + 0.192 π^2		
1468	GR1238+49		123849.0+494900	124109.1+493233	67.50	-1.09	-0.87	-0.66	+3.683 - 2.077 π + 0.192 π^2		
1469	GR1238+51		123900.0+515801	124118.9+514134	65.36	-1.05	-1.05	-1.05	+2.768 - 1.053 π		
1470	GR1239+57		123941.6+574703	124156.7+573037	59.57	-0.84	-0.94	-1.04	+2.077 - 0.407 π - 0.085 π^2		4C+57.20
1471	GR1239-12		123829.5-113946	124105.7-115613	50.85	-1.03	-1.03	-1.03	+2.573 - 1.035 π		
1472	GR1240+42		124153.9+423140	124416.3+421516	74.80	-0.92	-0.59	-0.28	+3.930 - 2.374 π + 0.283 π^2		
1473	GR1240-06		124112.3-063723	124347.6-065348	55.92	-1.03	-1.03	-1.03	+2.777 - 1.029 π		PKS 1241-066
1474	ID2		124002.7-060904	124237.8-062530	56.38	-1.21	-1.48	-1.73	+1.960 - 0.036 π - 0.229 π^2		
1475	GR1242-02		124120.5-024925	124354.9-030550	59.72	-1.04	-1.04	1.04	+2.728 - 1.045 π		PKS 1241-028
1476	GR1243+04		124305.4+033943	124538.4+032320	66.22	-1.25	-1.25	-1.25	+3.421 - 1.249 π	OX	4C+03.24, PKS 1243+036 PKS 1244-112
1477	GR1244-11		124424.5-111407	124701.0-113029	51.35	-0.89	-0.89	-0.89	+2.796 - 0.889 π		
1478	GR1245+19		124537.5+185431	124806.7+183810	81.47	-0.90	-0.90	-0.90	+2.429 - 0.902 π	O	
1479	GR1245+41		124509.3+420636	124731.0+415015	75.27	-1.08	-0.45	0.16	+5.545 - 3.869 π + 0.544 π^2		
1480	ID2		124735.4+414722	124956.6+413102	75.61	-1.00	-0.60	-0.22	+4.438 - 2.747 π + 0.341 π^2	O	
1481	GR1246+56		124456.6+561220	124710.6+555558	61.19	-0.92	-0.51	-0.29	-1.729 + 0.003 π + 12.004 π^2		
1482	ID2		124456.3+562005	124710.1+560343	61.06	-1.23	-0.80	-0.38	+5.012 - 3.137 π + 0.372 π^2		
1483	ID3		125112.4+560812	125323.8+555156	61.26	-0.92	-0.51	-0.30	-1.736 + 0.002 π + 12.014 π^2		
1484	GR1247+09		124617.7+093241	124849.1+091620	72.13	-0.97	-0.97	-0.97	+2.920 - 0.968 π		4C+09.43, PKS 1246+095
1485	GR1247+45		124739.7+452715	124959.2+451056	71.94	-0.89	-0.47	-0.07	+4.330 - 2.729 π + 0.359 π^2		
1486	GR1247-05		124645.5-055436	124920.7-061056	56.69	-1.10	-1.10	-1.10	+3.048 - 1.095 π	OX	PKS 1246-059
1487	GR1248+08		124913.0+091245	125144.5+085628	71.81	-0.77	-0.77	-0.77	+2.656 - 0.773 π		4C+09.44, PKS 1249+092
1488	GR1248+50		124925.4+505046	125141.4+503428	66.55	-0.89	-0.89	-0.89	+2.843 - 0.887 π	O	3C 277, 4C+50.35
1489	GR1249+52		124954.3+530148	125208.6+524530	64.37	-0.96	-1.15	-1.34	+1.959 - 0.084 π - 0.170 π^2	O	4C+52.26
1490	GR1249-00		124956.8-010401	125230.9-012018	61.53	-1.02	-0.80	-0.58	+3.776 - 2.022 π + 0.195 π^2		
1491	ID2		124837.4-001042	125111.2-002701	62.42	-0.97	-0.56	-0.17	+4.458 - 2.766 π + 0.351 π^2		
1492	ID3		125038.0-005651	125312.1-011307	61.65	-1.18	-0.71	-0.26	+4.991 - 3.274 π + 0.408 π^2		
1493	GR1249-03		124928.3-035021	125203.1-040639	58.76	-0.57	-0.32	-0.18	-0.694 + 0.001 π + 7.390 π^2		PKS 1249-038
1494	GR1250+03		124949.9+033207	125222.8+031550	66.13	-0.78	-0.59	-0.42	+3.386 - 1.608 π + 0.161 π^2	O	PKS 1249+035
1495	GR1250+05		125115.5+055239	125347.8+053623	68.47	-1.15	-1.15	-1.15	+3.122 - 1.147 π		4C+05.56, PKS 1251+058
1496	ID2		125012.9+053318	125245.3+051702	68.15	-1.13	-0.83	-0.55	+4.318 - 2.432 π + 0.255 π^2		
1497	GR1251-11		124949.6-114151	125226.4-115808	50.90	-1.29	-0.66	-0.07	+6.508 - 4.054 π + 0.539 π^2	O	
1498	ID2		125338.9-113024	125616.0-114637	51.08	-1.38	-0.82	-0.28	+6.337 - 3.843 π + 0.481 π^2		
1499	GR1253+02		125329.6+023645	125602.7+022031	65.19	-0.91	-0.91	-0.91	+2.616 - 0.908 π		4C+02.35, PKS 1253+026
1500	GR1253+42		125308.2+422642	125527.7+421028	74.93	-1.03	-0.78	-0.54	+3.889 - 2.142 π + 0.217 π^2		
1501	GR1253+59		125404.6+591407	125611.8+585754	58.15	-0.84	-0.84	-0.84	+2.233 - 0.844 π		
1502	GR1253-08		125501.1-082434	125737.3-084046	54.16	-0.89	-0.89	-0.89	+2.686 - 0.891 π		PKS 1254-083
1503	ID2		125438.5-082050	125714.7-083703	54.23	-0.75	-0.58	-0.41	+3.196 - 1.501 π + 0.147 π^2		
1504	GR1254+47		125437.9+473620	125654.1+472007	69.76	-0.76	-0.86	-0.95	+2.571 - 0.328 π - 0.084 π^2		3C 280, 4C+47.36
1505	GR1254-05		125335.8-053107	125611.2-054720	57.06	-0.32	-0.17	-0.03	+2.811 - 0.969 π + 0.127 π^2	OXI	PKS 1253-055
1506	GR1256+03		125626.4+035929	125859.0+034318	66.52	-0.72	-0.40	-0.23	-1.198 + 0.003 π + 9.411 π^2		
1507	GR1256+44		125544.5+445132	125802.0+443520	72.49	-0.95					

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	$h m s + \circ / ''$	$h m s + \circ / ''$	\circ	α_{365}	α_{1400}	α_{5000}			
	GR1303-11		130210.6-111655	130448.1-113259	51.19	-1.21	-1.13	-1.05	+3.559 - 1.573x + 0.071x ²		
	GR1304+09		130305.2+091118	130536.1+085516	71.49	-0.87	-0.87	-0.87	+2.893 - 0.865x		4C+09.45, PKS 1303+091
	GR1304+42		130539.2+424559	130755.4+422959	74.27	-1.12	-0.78	-0.45	+4.162 - 2.645x + 0.297x ²		
	GR1304+46		130431.9+464934	130645.6+463333	70.33	-1.23	-0.94	-0.67	+4.707 - 2.476x + 0.244x ²	O	
	GR1305+06		130522.5+065816	130754.0+064216	69.21	-0.95	-0.95	-0.95	+3.061 - 0.952x	O	4C+06.45, PKS 1305+069
	GR1305-09		130602.1-093432	130839.2-095032	52.79	-0.56	-0.56	-0.56	+2.376 - 0.556x	O	PKS 1306-095
	GR1307+00		130715.9+000321	130949.7-001237	62.31	-0.88	-0.88	-0.88	+2.955 - 0.884x	O	PKS 1308-025 PKS 1307+000 PKS 1309-023 4C+06.46
	GR1308-02		130852.9-023258	131127.6-024854	59.67	-1.08	-1.08	-1.08	+2.771 - 1.081x		
	ID2		130902.4-021813	131137.0-023408	59.91	-0.92	-0.72	-0.53	+3.419 - 1.808x + 0.173x ²		
	GR1309+06		130849.3+061824	131120.9+060229	68.39	-1.04	-0.91	-0.79	+3.472 - 1.595x + 0.109x ²		
	GR1309-11		130833.6-111922	131111.4-113518	50.99	-1.06	-0.85	-0.65	+3.847 - 1.957x + 0.176x ²		
	GR1310+53		130914.6+533343	131121.1+531748	63.57	-1.06	-0.78	-0.53	+3.597 - 2.244x + 0.232x ²		
	ID2		131250.0+533211	131455.2+531620	63.50	-1.02	-0.65	-0.30	+3.940 - 2.619x + 0.313x ²		
	GR1310-04		130934.5-034846	131209.7+040440	58.40	-1.05	-1.05	-1.05	+2.724 - 1.047x		PKS 1309-038
	ID2		130833.7-045123	131109.2-050719	57.40	-1.13	-1.13	-1.13	+2.829 - 1.127x		
	GR1312+55		131057.3+554943	131300.8+553350	61.30	-1.07	-0.75	-0.45	+4.287 - 2.473x + 0.274x ²		
	GR1313-11		131347.0-121026	131625.5-122615	49.97	-0.89	-0.89	-0.89	+2.847 - 0.886x		PKS 1313-121
	GR1314+07		131343.5+071809	131614.6+070220	69.07	-0.66	-0.49	-0.33	+3.221 - 1.428x + 0.149x ²		4C+07.32, PKS 1313+073
	GR1316+51		131741.4+520350	131946.4+514806	64.76	-0.69	-0.53	-0.38	+3.059 - 1.368x + 0.133x ²	O	4C+52.27
	GR1316+52		131633.8+530250	131838.2+524705	63.85	-0.99	-0.69	-0.42	+3.688 - 2.268x + 0.250x ²		
	ID2		131816.6+525826	132020.4+524243	63.85	-1.13	-0.93	-0.75	+3.459 - 1.972x + 0.165x ²		
	GR1316-00		131704.7-003357	131938.7-004941	61.23	-0.75	-0.75	-0.75	+2.554 - 0.746x	O	PKS 1317-005
	GR1317+01		131753.7+015619	132026.8+014036	63.62	-0.56	-0.32	-0.18	-0.540 - 0.003x + 7.269e ^{-x}	OX	PKS 1317+019
	GR1318+54		132002.9+551340	132203.5+545760	61.61	-1.22	-1.22	-1.22	+2.998 - 1.223x		
	GR1319+11		131849.6+112231	132118.9+110649	72.51	-0.65	-0.65	-0.65	+2.415 - 0.649x	O	PKS 1318+113
	GR1319+42		131904.6+425117	132117.2+423536	73.38	-0.80	-0.80	-0.80	+2.770 - 0.796x	I	3C 285, 4C+42.37
	GR1319-05		131921.1-060713	132157.4-062253	55.69	-1.17	-1.17	-1.17	+3.235 - 1.169x		PKS 1319-061
	GR1320+05		132013.8+054400	132245.3+052821	67.10	-1.12	-0.84	-0.57	+4.229 - 2.379x + 0.245x ²		
	ID2		132054.5+053948	132326.0+052410	66.98	-1.00	-1.00	-1.00	+2.526 - 1.002x		
	ID3		132217.3+055149	132448.7+053613	67.06	-1.13	-0.93	-0.74	+3.899 - 2.024x + 0.174x ²		
	GR1320+43		131909.5+425058	132122.1+423517	73.38	-0.75	-0.75	-0.75	+2.616 - 0.746x	I	3C 285, 4C+42.37
	ID2		132020.3+431306	132232.3+425726	72.96	-1.32	-1.32	-1.32	+3.270 - 1.321x		
	ID3		131904.4+434035	132116.4+432454	72.63	-1.19	-0.87	-0.58	+4.362 - 2.560x + 0.269x ²		
	GR1321+03		132045.2+032352	132317.7+030814	64.83	-0.85	-0.85	-0.85	+2.758 - 0.845x		4C+03.27, PKS 1320+033
	GR1321-07		132054.4-074742	132331.5-080321	53.97	-1.07	-1.07	-1.07	+3.051 - 1.068x		
	GR1322+59		132237.6+592355	132431.3+590819	57.48	-0.87	-0.87	-0.87	+2.466 - 0.865x	O	4C+59.18
	GR1322-10		132234.7-110202	132513.2-111738	50.71	-0.93	-0.33	0.23	+5.311 - 3.546x + 0.511x ²	OX	PKS 1322-110
	ID2		132126.2-102050	132404.4-103628	51.44	-1.16	-1.16	-1.16	+3.199 - 1.156x		
	GR1323+49		132403.2+495010	132608.3+493436	66.58	-0.90	-0.79	-0.69	+3.169 - 1.396x + 0.096x ²		
	GR1325+04		132515.2+043714	132747.0+042142	65.64	-1.11	-0.71	-0.33	+4.722 - 2.882x + 0.345x ²		
	GR1325+42		132519.0+420556	132730.6+415024	73.54	-1.01	-0.78	-0.57	+3.529 - 1.991x + 0.192x ²		
	GR1325-01 D ₃		132503.7-014740	132738.3-020311	59.54	-0.81	-0.69	-0.58	+3.267 - 1.337x + 0.103x ²	O	PKS 1325-017
	GR1325-02 D ₃		132429.3-023426	132704.2-024959	58.83	-0.92	-0.68	-0.45	+3.846 - 1.974x + 0.206x ²	O	PKS 1324-025
	ID2 D ₃		132503.7-014739	132738.3-020311	59.54	-0.81	-0.72	-0.63	+3.131 - 1.217x + 0.079x ²	O	PKS 1325-017
	GR1326+06		132506.1+060605	132737.3+055033	67.04	-1.60	-1.60	-1.60	+3.714 - 1.601x		
	GR1327+08		132818.4+091149	133048.1+085622	69.57	-0.82	-0.58	-0.35	+3.473 - 1.875x + 0.206x ²		4C+09.46
	GR1327+58		132729.4+590158	132921.5+584630	57.67	-0.96	-0.96	-0.96	+2.607 - 0.957x	OX	4C+59.19
	GR1328+47		132746.3+472716	132952.7+471148	68.56	-0.88	-0.90	-0.93	+2.414 - 0.747x - 0.025x ²	OXI	
	GR1328+50		132934.1+502318	133136.9+500754	65.75	-0.84	-0.84	-0.84	+2.640 - 0.837x		4C+50.36
	GR1328+57		132737.0+572958	132931.4+571430	59.14	-1.13	-0.88	-0.65	+3.758 - 2.186x + 0.207x ²		
	ID2		133011.5+563854	133206.2+562330	59.84	-1.03	-0.66	-0.31	+4.178 - 2.657x + 0.317x ²		
	GR1328-05		132904.5-053838	133140.9-055404	55.57	-1.17	-1.17	-1.17	+3.126 - 1.169x		
	GR1329+44		132948.5+441925	133157.2+440401	71.20	-1.13	-0.90	-0.69	+3.831 - 2.119x + 0.193x ²		
	GR1329+54		132932.2+544155	133129.9+542630	61.72	-1.13	-0.66	-0.22	+5.158 - 3.199x + 0.403x ²		
	GR1330+02		133023.6+021609	133256.4+020046	62.99	-0.65	-0.52	-0.40	+3.180 - 1.239x + 0.113x ²	OX	3C287.1,4C+02.36, PKS 1330+022
	GR1330+45		133014.4+453907	133221.8+452943	70.00	-1.10	-0.76	-0.44	+4.313 - 2.581x + 0.289x ²		
	GR1330+52		133031.5+530153	133231.0+524630	63.23	-0.90	-0.66	-0.42	+3.620 - 1.985x + 0.211x ²		
	GR1331-10		133111.6-095202	133350.0-100723	51.36	-0.87	-0.65	-0.44	+3.922 - 1.844x + 0.190x ²		PKS 1331-098
	GR1332+06		133149.1+065020	133419.8+063500	67.07	-0.93	-0.93	-0.93	+2.613 - 0.932x		4C+06.48, PKS 1331+068
	GR1333+03		133359.3+032941	133631.5+031424	63.79	-0.97	-0.47	0.01	+4.855 - 3.167x + 0.429x ²		
	GR1333+43		133319.9+432318	133528.6+430800	71.67	-1.09	-0.75	-0.44	+4.264 - 2.546x + 0.285x ²		
	ID2		133428.8+432842	133637.0+431325	71.49	-1.03	-0.81	-0.60	+3.725 - 1.987x + 0.187x ²		
	GR1334+56		133341.6+564632	133534.7+563114	59.56	-0.77	-0.43	-0.25	-1.253 + 0.002x + 10.018e ^{-x}		
	GR1335+51		133428.4+522102	133627.2+520546	63.64	-1.25	-1.12	-1.00	+3.626 - 1.825x + 0.112x ²		
	GR1335+52		133529.2+524522	133727.2+523008	63.21	-0.97	-0.82	-0.67	+3.303 - 1.650x + 0.132x ²		
	ID2		133722.4+522128	133920.3+520616	63.46	-0.93	-0.71	-0.51	+3.488 - 1.859x + 0.182x ²	OX	
	GR1336+17		133631.5+180224	133856.3+174712	75.60	-1.22	-1.22	-1.22	+3.125 - 1.221x		
	GR1336-05		133531.3-061157	133808.1-062711	54.57	-0.76	-0.76	-0.76	+2.918 - 0.763x	O	PKS 1335-061
	GR1338+47		133941.8+471223	134145.0+465716	67.84	-0.90	-0.90	-0.90	+2.661 - 0.898x	O	4C+47.38
	ID2		133718.9+465519	133923.1+464008	68.29	-0.90	-0.72	-0.56	+3.367 - 1.662x + 0.149x ²		
	GR1339+01		133850.0+010506	134123.3+004958	61.10	-0.94	-0.59	-0.26	+4.318 - 2.484x + 0.301x ²		
	GR1339+12		133930.0+121348	134157.7+115842	70.77	-1.04	-1.04	-1.04	+2.664 - 1.038x	O	
	ID2		134009.1+120448	134236.8+114942	70.55	-1.07	-0.99	-0.91	+3.069 - 1.430x + 0.072x ²		
	GR1339+43		133947.7+435023	134154.3+433517	70.64	-1.05	-1.05	-1.05	+2.773 - 1.050x		4C+43.29
	GR1340+08		134017.9+084918	134247.3+083412	67.82	-0.89	-0.76	-0.63	+3.238 - 1.455x + 0.111x ²		4C+08.39
	GR1340+53		133941.0+535939	134135.9+534432	61.82	-0.71	-0.69	-0.67	+2.444 - 0.811x + 0.019x ²		
	GR1341+04		134322.8+041510								

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	h m s + o / //	h m s + o / //	o	α_{865}	α_{1400}	α_{5000}			
1604	GR1342-02		134316.9-023731	134552.1-025231	57.25	-0.95	-0.95	-0.95	+2.640 - 0.950 α		4C-02.58, PKS 1343-026
1605	GR1343+45		134210.1+451100	134414.7+445558	69.30	-1.21	-0.97	-0.75	+3.883 - 2.237 α + 0.201 α^2		
1606	ID2		134310.3+454028	134514.2+452528	68.80	-0.98	-0.56	-0.17	+4.350 - 2.814 α + 0.358 α^2		
1607	ID3		134314.6+451843	134518.8+450343	69.09	-1.07	-0.80	-0.54	+3.880 - 2.283 α + 0.236 α^2		
1608	GR1343+48		134423.4+482804	134623.9+481306	66.35	-0.92	-0.92	-0.92	+2.589 - 0.919 α		4C+48.37
1609	GR1344+59		134353.5+590152	134538.4+584653	56.97	-1.03	-0.95	-0.87	+3.244 - 1.382 α + 0.069 α^2		4C+59.20
1610	ID2		134156.0+600726	134339.6+595223	56.05	-1.20	-1.13	-1.05	+3.441 - 1.534 α + 0.065 α^2		
1611	GR1344-07		134423.6-074826	134701.5-080324	52.33	-0.92	-1.06	-1.19	+2.460 - 0.322 α - 0.117 α^2		PKS 1344-078
1612	GR1344-10		134428.6-112628	134708.4-114125	48.90	-0.98	-0.98	-0.98	+2.682 - 0.977 α		PKS 1344-114
1613	GR1348-11		134825.4-111632	135105.4-113122	48.73	-0.98	-0.55	-0.32	-1.705 - 0.001 α + 12.717e $^{-\alpha}$		
1614	ID2		134812.6-103629	135052.2-105119	49.37	-1.75	-1.75	-1.75	+4.052 - 1.747 α		
1615	GR1349+07		134918.2+072810	135148.0+071323	65.48	-1.18	-1.18	-1.18	+3.235 - 1.184 α		
1616	ID2		134839.6+074338	135109.2+072849	65.78	-0.98	-0.67	-0.38	+4.214 - 2.321 α + 0.262 α^2		
1617	GR1349+56		134954.2+561428	135141.7+555940	59.16	-0.77	-0.43	-0.25	-1.204 + 0.001 α + 9.948e $^{-\alpha}$		
1618	ID2		135319.6+555406	135506.4+553926	59.24	-0.82	-0.46	-0.26	-1.611 + 0.004 α + 10.687e $^{-\alpha}$		
1619	ID3		135319.6+555406	135506.4+553926	59.24	-1.27	-0.81	-0.38	+5.173 - 3.291 α + 0.394 α^2		
1620	ID4		135319.6+555406	135506.4+553926	59.24	-1.19	-0.78	-0.39	+4.802 - 3.009 α + 0.354 α^2		
1621	GR1349-01		134952.3-005243	135226.6-010730	58.16	-1.04	-1.04	-1.04	+2.772 - 1.039 α		PKS 1349-008
1622	GR1349-05		134843.3-053410	135120.2-054859	54.01	-0.85	-0.85	-0.85	+2.608 - 0.852 α		PKS 1348-055
1623	GR1350+06		134911.4+063342	135141.7+061864	64.74	-1.40	-1.40	-1.40	+3.649 - 1.399 α		
1624	GR1350+43		135024.1+431409	135228.6+425923	69.88	-1.31	-1.45	-1.58	+2.588 - 0.711 α - 0.117 α^2		4C+43.31
1625	GR1351+57		135636.3+580634	135817.7+575200	57.09	-0.94	-0.94	-0.94	+2.690 - 0.943 α		4C+58.29
1626	ID2		135142.0+574035	135326.2+572552	57.77	-0.67	-0.37	-0.21	-1.049 + 0.002 α + 8.687e $^{-\alpha}$		
1627	GR1352+16		135216.3+162926	135440.7+161244	71.75	-1.07	-1.22	-1.36	+2.559 - 0.405 α - 0.129 α^2		3C 293.1, PKS 1352+164 PKS 1354-085 PKS 1352+099
1628	GR1352-09		135416.2-083418	135654.9-084855	50.71	-1.14	-1.21	-1.28	+2.657 - 0.803 α - 0.065 α^2		
1629	GR1353+10		135250.1+095500	135518.3+094020	66.94	-0.90	-0.77	-0.64	+3.175 - 1.464 α + 0.111 α^2		
1630	GR1353+56		135417.7+564514	135602.7+563036	58.43	-1.01	-0.88	-0.75	+3.337 - 1.593 α + 0.114 α^2		
1631	GR1354-00		135345.6-003459	135619.8-004937	57.98	-0.90	-0.90	-0.90	+2.577 - 0.898 α		PKS 1353-005 4C+01.39, PKS 1354+013 PKS 1355+010
1632	GR1355+01		135428.4+011916	135701.5+010440	59.57	-0.75	-0.75	-0.75	+2.731 - 0.752 α		
1633	ID2		135520.5+010108	135753.8+004632	59.20	-0.83	-0.83	-0.83	+2.868 - 0.828 α		
1634	ID3		135549.0+012920	135822.0+011446	59.54	-1.26	-1.26	-1.26	+3.383 - 1.258 α		
1635	GR1355+03		135323.9+034038	135555.7+032558	61.73	-0.93	-0.64	-0.37	+3.851 - 2.198 α + 0.247 α^2		
1636	ID2		135551.8+031610	135823.8+030136	61.06	-0.94	-0.74	-0.56	+3.501 - 1.813 α + 0.170 α^2		
1637	GR1355+08		135418.5+083901	135647.4+082423	65.72	-1.16	-0.84	-0.54	+4.718 - 2.541 α + 0.270 α^2		
1638	GR1355+19		135442.0+193344	135704.4+191908	73.04	-0.56	-0.38	-0.21	+3.128 - 1.340 α + 0.153 α^2		4C+19.44, PKS 1354+195
1639	GR1356+57		135631.9+580656	135813.3+575222	57.09	-0.94	-0.94	-0.94	+2.699 - 0.945 α		
1640	GR1358+43		135829.6+431832	140032.1+430403	68.78	-0.97	-0.97	-0.97	+2.608 - 0.970 α		
1641	GR1358+51		135709.0+512747	135901.7+511315	62.73	-0.90	-0.82	-0.75	+2.702 - 1.234 α + 0.066 α^2		
1642	GR1359+53		135830.6+535128	140019.0+533700	60.62	-0.88	-0.94	-0.99	+2.384 - 0.642 α - 0.047 α^2		4C+53.29
1643	ID2		140017.5+531548	140206.3+530123	60.97	-0.98	-0.98	-0.98	+2.735 - 0.979 α		
1644	GR1359-06		135814.8-063113	140052.5-064542	52.17	-1.23	-1.40	-1.55	+2.444 - 0.516 α - 0.140 α^2		4C-06.36
1645	GR1400+12		135923.6+123025	140150.0+121569	67.80	-1.11	-1.11	-1.11	+2.955 - 1.106 α		PKS 1359+125
1646	GR1400+50		135959.0+501642	140152.4+500216	63.42	-0.95	-0.75	-0.57	+3.396 - 1.798 α + 0.166 α^2		
1647	ID2		140135.8+500459	140329.1+495037	63.42	-1.11	-0.89	-0.68	+3.689 - 2.079 α + 0.189 α^2		
1648	ID3		140202.0+502347	140354.7+500926	63.13	-1.06	-0.93	-0.80	+3.311 - 1.669 α + 0.118 α^2		
1649	ID4		140223.9+503128	140416.3+501707	62.99	-1.09	-0.89	-0.70	+3.610 - 1.990 α + 0.175 α^2		
1650	GR1400+57		140108.5+574808	140248.7+573345	57.06	-0.94	-1.05	-1.15	+2.326 - 0.474 α - 0.091 α^2		4C+57.24
1651	GR1403+03		140458.4+025022	140730.5+023608	59.46	-0.97	-0.67	-0.39	+3.804 - 2.267 α + 0.254 α^2		
1652	ID2		140415.0+034045	140646.6+032630	60.25	-0.98	-0.84	-0.71	+3.182 - 1.588 α + 0.119 α^2		
1653	ID3		140421.1+025932	140653.2+024516	59.67	-1.03	-0.86	-0.71	+3.348 - 1.756 α + 0.142 α^2		
1654	GR1403+18		140410.3+184541	140632.4+183125	70.71	-0.98	-0.98	-0.98	+2.771 - 1.084 α		PKS 1404+187 4C+51.31
1655	GR1403+51		140534.6+514545	140724.1+513132	61.71	-0.91	-0.81	-0.71	+3.118 - 1.363 α + 0.088 α^2		
1656	GR1404-11		140402.1-105847	140642.7-111303	47.53	-1.07	-0.89	-0.73	+3.538 - 1.835 α + 0.150 α^2		
1657	ID2		140425.3-113652	140706.3-115107	46.91	-0.93	-0.93	-0.93	+2.476 - 0.934 α		
1658	GR1405+10		140548.4+102334	140815.8+100922	65.19	-0.97	-1.00	-1.03	+2.669 - 0.827 α - 0.027 α^2		4C+10.38, PKS 1405+104 4C+55.28
1659	GR1405+56		140947.9+555628	141128.6+554224	57.98	-1.07	-0.88	-0.70	+3.853 - 1.910 α + 0.164 α^2		
1660	ID2		140407.9+563216	140549.5+561800	57.93	-1.34	-0.91	-0.50	+5.193 - 3.227 α + 0.368 α^2		
1661	ID3		140504.4+562119	140646.0+560705	58.01	-1.31	-0.82	-0.35	+5.433 - 3.497 α + 0.426 α^2		
1662	GR1405-01		140414.3-014002	140649.1-015417	55.76	-0.88	-0.88	-0.88	+2.781 - 0.875 α		4C-01.31, PKS 1404-016
1663	GR1405-09		140505.7-092856	140745.4-094310	48.77	-1.07	-1.07	-1.07	+2.859 - 1.072 α		
1664	GR1407+54		141047.6+550914	141229.5+545512	58.54	-1.05	-0.77	-0.50	+3.885 - 2.286 α + 0.241 α^2		
1665	GR1408+17		140753.2+174810	141015.6+173403	69.46	-0.93	-1.05	-1.17	+2.352 - 0.396 α - 0.104 α^2		4C+17.57
1666	GR1409+15		140847.8+153227	141111.7+151822	68.02	-0.98	-0.81	-0.65	+3.408 - 1.720 α + 0.144 α^2		PKS 1408+155
1667	ID2		141019.6+152914	141243.4+151512	67.69	-1.11	-1.11	-1.11	+2.812 - 1.105 α		
1668	GR1409+52	1670	140933.4+522613	141120.6+521209	60.80	-0.45	-0.88	-1.29	+0.485 + 1.466 α - 0.373 α^2		3C 295
1669	GR1410+43		141016.7+435221	141215.9+433819	66.80	-0.96	-0.96	-0.96	+2.647 - 0.957 α		4C+43.33
1670	GR1410+52	1668	140933.4+522613	141120.6+521209	60.80	-0.44	-0.88	-1.30	+0.473 + 1.478 α - 0.375 α^2		3C 295
1671	GR1411+08		141211.3+081834	141439.8+080437	62.59	-1.25	-1.25	-1.25	+3.368 - 1.245 α		PKS 1412+083
1672	ID2		141134.0+080858	141402.6+075500	62.58	-1.19	-0.90	-0.62	+4.546 - 2.464 α + 0.249 α^2		
1673	GR1411-05		141110.8-054555	141348.4-055954	51.34	-0.94	-1.04	-1.12	+2.596 - 0.539 α - 0.079 α^2		PKS 1411-057
1674	GR1414+11		141426.9+110232	141653.5+104840	64.11	-0.69	-0.69	-0.69	+2.672 - 0.691 α		3C 296, PKS 1414+110
1675	GR1414+48		141448.4+481629	141640.5+480238	63.31	-1.01	-1.05	-1.09			

Table 1: Radio Identifications for all UTR catalogue sources (continued)

	2	3	4	5	6	7	8	9	10	11	12
	N		h m s + ° ' ''	h m s + ° ' ''	°	α_{865}	α_{1400}	α_{5000}			
GR1423+58			141956.9+575311	142129.6+573932	55.60	-1.06	-1.06	-1.06	+2.441 - 1.058x		PKS 1420+198
ID2			142323.6+582921	142453.6+581551	54.84	-0.94	-0.94	-0.94	+2.349 - 0.942x		
ID3			142401.4+574018	142533.1+572649	55.43	-0.92	-0.92	-0.92	+2.317 - 0.918x		
GR1424+54 1702			142612.9+543742	142750.6+542420	57.53	-0.92	-0.92	-0.92	+2.789 - 0.915x	O	
GR1424-06			142328.1-061030	142606.3-062359	49.40	-1.10	-0.67	-0.27	+4.671 - 2.968x + 0.365x ²		
ID2			142345.2-063147	142623.6-064515	49.06	-1.17	-0.93	-0.70	+4.035 - 2.249x + 0.210x ²		
ID3			142510.6-060733	142748.8-062057	49.20	-1.02	-0.84	-0.67	+3.595 - 1.812x + 0.154x ²		
GR1425+03			142500.6+032900	142732.0+031536	56.88	-0.88	-0.88	-0.88	+2.536 - 0.877x	O	PKS 1425+034
ID2			142632.4+030500	142904.1+025140	56.33	-0.78	-0.48	-0.19	+3.749 - 2.116x + 0.260x ²		PKS 1426+030
ID3			142631.9+034933	142903.1+033612	56.88	-1.14	-0.86	-0.60	+4.083 - 2.348x + 0.236x ²		
GR1425-11			142450.8-104109	142732.1-105434	45.39	-1.16	-1.16	-1.16	+3.440 - 1.161x		PKS 1424-106
GR1426-01			142556.6-011046	142831.3-012408	53.12	-0.74	-0.90	-1.05	+1.981 - 0.062x - 0.133x ²	O	3C 300.1, 4C-01.34, PKS 1425-011
GR1427+43			142638.8+435327	142834.1+434006	64.38	-1.15	-0.83	-0.52	+4.183 - 2.568x + 0.277x ²		
ID2			142725.3+441353	142920.0+440034	64.08	-1.03	-0.68	-0.35	+4.146 - 2.559x + 0.298x ²		
GR1427+54 1690			142612.9+543742	142750.6+542420	57.53	-0.79	-0.97	-1.13	+1.490 - 0.010x - 0.152x ²	O	
ID2			142744.1+541930	142921.9+540611	57.60	-0.59	-0.47	-0.36	+2.480 - 1.104x + 0.101x ²		
GR1428+07			142734.8+072819	143003.4+071501	59.31	-0.76	-0.76	-0.76	+2.621 - 0.765x		PKS 1427+074
ID2			142812.8+073321	143041.3+072005	59.25	-1.10	-0.82	-0.55	+4.328 - 2.359x + 0.245x ²	OX	
GR1429+45			142749.8+451404	142943.0+450046	63.47	-0.94	-0.94	-0.94	+2.534 - 0.936x		
GR1429+50			142925.3+495552	143110.9+494237	60.42	-1.14	-0.65	-0.18	+5.179 - 3.320x + 0.425x ²		
GR1429+52			142836.4+523052	143017.5+521734	58.79	-0.79	-0.79	-0.79	+2.267 - 0.793x	O	
ID2			143101.4+523954	143241.5+522644	58.42	-1.15	-1.15	-1.15	+2.752 - 1.147x		
GR1429+57			142946.4+582356	143114.1+581042	54.38	-1.12	-0.91	-0.71	+3.681 - 2.046x + 0.180x ²		
ID2			143037.6+580823	143205.7+575511	54.51	-1.11	-0.70	-0.32	+4.475 - 2.892x + 0.348x ²	O I	
GR1431+06			143148.1+063516	143417.2+062209	57.94	-0.76	-0.83	-0.89	+2.066 - 0.457x - 0.059x ²		4C+06.50, PKS 1431+065 4C+09.51
GR1432+09			143217.0+094434	143443.8+093129	59.94	-1.18	-1.18	-1.18	+3.137 - 1.176x		
ID2			143242.9+093321	143509.8+092016	59.74	-1.22	-0.90	-0.59	+4.657 - 2.621x + 0.274x ²		
GR1433+07			143545.6+081234	143813.3+075938	58.30	-1.22	-0.85	-0.49	+5.079 - 2.872x + 0.322x ²		
ID2			143045.5+080921	143313.5+075611	59.19	-1.30	-0.90	-0.52	+5.305 - 3.075x + 0.346x ²		
GR1433+17			143336.0+174235	143556.6+172933	64.05	-0.79	-0.58	-0.38	+3.553 - 1.698x + 0.178x ²	O	4C+17.59, PKS 1433+177
GR1433-10			143208.1-104052	143449.8-105357	44.45	-1.32	-1.32	-1.32	+3.239 - 1.318x		
ID2			143346.0-103023	143627.6-104324	44.38	-1.26	-1.26	-1.26	+3.262 - 1.265x		
GR1434-07			143439.9-074038	143719.5-075337	46.59	-0.96	-0.96	-0.96	+2.900 - 0.962x	O	PKS 1434-076
GR1434+03			143425.9+033712	143657.1+032413	55.38	-0.70	-0.61	-0.52	+3.110 - 1.094x + 0.077x ²	O	PKS 1434+036
ID2			143551.0+035312	143822.0+034016	55.33	-1.02	-1.02	-1.02	+3.086 - 1.021x	OX	PKS 1435+038
GR1435+53			143625.5+525714	143803.5+524419	57.62	-1.10	-1.22	-1.34	+2.183 - 0.567x - 0.104x ²		
GR1436+05			143400.5+054129	143630.2+052828	56.92	-1.18	-0.82	-0.47	+4.739 - 2.793x + 0.314x ²		
ID2			143432.4+051915	143702.3+050616	56.57	-1.06	-0.77	-0.49	+4.310 - 2.359x + 0.253x ²		
ID3			143404.7+051513	143634.7+050212	56.61	-1.25	-1.11	-0.98	+3.903 - 1.864x + 0.120x ²		
ID4			143532.0+060055	143801.4+054758	56.87	-1.42	-1.42	-1.42	+3.482 - 1.416x		
GR1436-06			143605.8-070204	143844.8-071459	46.91	-0.93	-0.93	-0.93	+2.971 - 0.928x		PKS 1436-070
GR1437+00			143559.9+000729	143833.6-000527	52.54	-1.04	-1.04	-1.04	+3.006 - 1.040x		4C+00.50, PKS 1435+001 4C+42.39
GR1437+42			143751.1+424701	143945.5+423411	63.13	-1.01	-1.01	-1.01	+2.901 - 1.015x	O	
ID2			143459.1+425715	143653.9+424416	63.52	-1.13	-1.13	-1.13	+2.973 - 1.131x		
GR1437+46			143625.0+465656	143813.6+464401	61.28	-1.22	-0.82	-0.45	+4.629 - 2.958x + 0.339x ²	O	
ID2			143759.7+470038	143947.9+464748	61.02	-1.22	-0.90	-0.60	+4.308 - 2.612x + 0.272x ²		
GR1438+56			143500.4+561417	143631.6+560118	55.50	-1.09	-0.75	-0.42	+4.158 - 2.599x + 0.294x ²		
ID2			143859.5+562624	144028.9+561336	54.97	-0.79	-0.44	-0.25	-1.621 + 0.004x + 10.243e ^{-x}		
GR1439+54			144201.5+545642	144333.5+544403	55.68	-0.96	-0.96	-0.96	+2.672 - 0.956x		4C+54.32
ID2			143813.6+545014	143907.0+543723	56.15	-1.07	-1.07	-1.07	+2.731 - 1.070x		
ID2			144113.5+540653	144247.6+535411	56.32	-1.06	-0.85	-0.65	+3.739 - 1.982x + 0.180x ²		
GR1440+52 1738			144123.5+521419	144301.5+520138	57.50	-0.68	-0.68	-0.68	+2.577 - 0.684x	OX	3C 303, 4C+52.33
GR1441+52 1739			144123.5+521419	144301.5+520138	57.50	-0.73	-0.73	-0.73	+2.722 - 0.731x	OX	3C 303, 4C+52.33
GR1443+41			144432.7+414548	144627.2+413316	62.42	-0.91	-0.91	-0.91	+2.529 - 0.907x	O	4C+41.28
GR1443+48			144400.3+480235	144545.3+475002	59.61	-0.98	-0.81	-0.65	+3.212 - 1.715x + 0.144x ²		
ID2			144620.1+475821	144804.6+474554	59.32	-1.10	-0.90	-0.70	+3.526 - 1.997x + 0.175x ²		
GR1443-08			144219.4-073937	144459.2-075214	45.49	-1.32	-1.32	-1.32	+3.321 - 1.321x		
GR1444+07			144403.9+074132	144631.8+072900	56.39	-1.02	-1.02	-1.02	+2.999 - 1.018x	OX	4C+07.38, PKS 1444+076
GR1445+06			144403.9+062038	144632.9+060805	55.52	-0.68	-0.38	-0.22	-1.027 + 0.000x + 8.824e ^{-x}		
ID2			144410.6+063810	144639.3+062537	55.69	-1.12	-1.00	-0.89	+3.419 - 1.619x + 0.098x ²		
ID3			144457.4+060501	144726.5+055231	55.18	-1.12	-0.83	-0.56	+4.132 - 2.369x + 0.244x ²		
GR1445+17			144448.9+180023	144708.4+174753	61.77	-0.89	-0.89	-0.89	+2.828 - 0.895x	O	PKS 1444+180
ID2			144623.1+174559	144842.7+173333	61.33	-1.11	-1.00	-0.89	+3.666 - 1.619x + 0.099x ²		
GR1446+44			144641.0+440457	144831.8+435231	61.12	-1.00	-1.00	-1.00	+2.846 - 1.004x		4C+44.24
ID2			144537.8+441006	144728.6+435737	61.26	-1.23	-1.04	-0.86	+3.978 - 2.077x + 0.165x ²		
GR1446+45			144511.8+450900	144701.2+445630	60.88	-1.02	-0.70	-0.40	+3.977 - 2.419x + 0.273x ²		
ID2			144636.3+451823	144825.2+450557	60.59	-1.11	-0.77	-0.45	+4.173 - 2.603x + 0.291x ²		
GR1447+50			144657.6+502713	144837.5+501448	57.88	-0.77	-0.77	-0.77	+2.251 - 0.771x		4C+50.39
GR1447+56			144543.2+561009	144711.1+555740	54.47	-1.23	-0.91	-0.61	+4.474 - 2.611x + 0.270x ²		
GR1447+57			144504.4+570418	144630.1+565148	53.93	-1.26	-1.26	-1.26	+2.851 - 1.261x		
ID2			144652.0+575414	144815.0+574148	53.18	-1.00	-1.00	-1.00	+2.531 - 1.002x		
ID3			144842.7+580128	145004.7+574908	52.92	-0.99	-0.76	-0.54	+3.500 - 2.024x + 0.201x ²		
GR1449+00			144926.9+004502	145200.1+003246	50.71	-1.13	-1.13	-1.13	+3.286 - 1.127x		4C+00.53, PKS 1449+007
GR1449-09			145254.4-094503	145536.2-095709	42.24	-1.09	-1.09	-1.09	+3.014 - 1.086x		
GR1449-12			144957.1-125847	145241.4-131102	40.10	-0.90	-0.90	-0.90	+3.011 - 0.903x		PKS 1449-129
GR1451+42			144605.8+423326	144758.9+422059	61.85	-1.12	-0.90	-0.70	+3.755 - 2.064x + 0.185x ²		
ID2			144814.4+431700	145006.0+430439	61.20	-1.18	-1.01	-0.84	+3.653 - 1.937x + 0.148x ²		
GR1451+53			144857.6+533220	145030.6+532000	55.80	-1.05	-1.05	-1.05	+2.884 - 1.049x	O	4C+53.32
GR1452+05			145356.1+0508								

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3 N	4 h m s + ° / //	5 h m s + ° / //	6 °	7 α_{365}	8 α_{1400}	9 α_{5000}	10	11	12
1771	GR1453+16		145345.6+163857	145605.7+162653	59.26	-0.96	-0.96	-0.96	+3.100 - 0.957x		4C+16.43, PKS 1453+166
1772	ID2		145206.6+163607	145426.8+162358	59.59	-0.82	-0.71	-0.60	+3.355 - 1.297x + 0.094x ²		3C 306, PKS 1452+165
1773	GR1453-10		145312.4-105654	145555.2-110859	41.25	-0.68	-0.80	-0.92	+2.112 - 0.140x - 0.105x ²	O	PKS 1453-109
1774	GR1454+42		145549.0+421040	145740.7+415842	60.31	-0.87	-0.87	-0.87	+2.428 - 0.867x	O	4C+42.40
1775	GR1454-05A		145232.4-052704	145510.7-053912	45.62	-0.96	-0.96	-0.96	+3.009 - 0.964x		4C-05.61, PKS 1452-054
1776	GR1454-05B		145402.7-060540	145641.5-061743	44.89	-0.80	-0.64	-0.50	+3.449 - 1.488x + 0.134x ²	O	PKS 1454-060
1777	GR1455+48		145408.1+475300	145551.0+474056	58.23	-0.89	-0.78	-0.68	+2.954 - 1.348x + 0.090x ²		4C+47.39
1778	ID2		145621.3+484501	145802.0+483304	57.49	-0.91	-0.91	-0.91	+2.288 - 0.908x		
1779	GR1458+42		150005.5+420838	150156.5+415653	59.57	-1.13	-0.97	-0.81	+3.544 - 1.843x + 0.139x ²		
1780	GR1458+45		145840.9+452052	150027.1+450902	58.66	-1.03	-0.85	-0.67	+3.307 - 1.836x + 0.157x ²		
1781	ID2		145755.8+453614	145941.7+452422	58.67	-1.07	-0.76	-0.46	+3.895 - 2.448x + 0.269x ²		
1782	GR1458+51		145814.3+514547	145948.6+513355	55.68	-0.90	-0.90	-0.90	+2.436 - 0.902x		
1783	GR1458-08		145748.6-084644	150029.8-085835	42.24	-1.11	-0.93	-0.77	+3.575 - 1.870x + 0.149x ²		
1784	ID2		145937.7-084208	150218.8-085353	42.01	-1.03	-0.78	-0.54	+3.870 - 2.112x + 0.212x ²		
1785	GR1459+52		145915.7+524902	150047.5+523713	54.97	-0.97	-0.97	-0.97	+2.482 - 0.966x		4C+52.34
1786	GR1500+05		145839.0+063428	150107.5+062239	52.87	-1.15	-1.15	-1.15	+3.010 - 1.153x		
1787	GR1500+43		145840.5+432141	150029.9+430952	59.41	-0.98	-0.98	-0.98	+2.603 - 0.978x		
1788	GR1500+47		145754.6+480815	145936.2+475622	57.56	-1.16	-0.80	-0.46	+4.367 - 2.756x + 0.311x ²		
1789	ID2		150250.3+475326	150431.1+474149	56.94	-0.98	-0.76	-0.56	+3.502 - 1.918x + 0.184x ²		
1790	GR1501-00		150259.5-000608	150533.5-001743	47.69	-0.79	-0.79	-0.79	+2.431 - 0.793x	OX O	4C-00.58, PKS 1502-001 4C+03.31, PKS 1502+039
1791	GR1502+03		150236.0+035847	150506.5+034711	50.47	-1.16	-1.26	-1.36	+2.859 - 0.711x - 0.088x ²		
1792	GR1502+57		150015.2+570935	150135.8+565750	52.31	-0.71	-0.71	-0.71	+2.265 - 0.713x	O	
1793	GR1502-10		150245.9-120926	150530.1-122102	38.85	-1.18	-0.92	-0.67	+4.484 - 2.323x + 0.223x ²		
1794	GR1505+58		150628.8+580813	150744.5+575647	51.05	-0.96	-0.96	-0.96	+2.589 - 0.964x		
1795	GR1506+01		150556.1+011333	150828.9+010207	48.05	-0.88	-0.88	-0.88	+2.825 - 0.881x	O	4C+01.41, PKS 1505+012
1796	GR1506+48		150627.2+490954	150804.8+485828	55.83	-0.98	-0.81	-0.65	+3.281 - 1.741x + 0.148x ²		
1797	ID2		150809.3+485111	150947.1+483951	55.72	-1.19	-0.78	-0.39	+4.559 - 2.985x + 0.351x ²		
1798	GR1506-07		150807.0-072528	151047.2-073647	41.58	-0.94	-0.94	-0.94	+2.653 - 0.942x		PKS 1508-074
1799	GR1507+03		150728.4+031125	150959.5+030004	49.04	-0.96	-0.67	-0.40	+4.027 - 2.227x + 0.247x ²		PKS 1507+031
1800	ID2		150713.0+040104	150943.4+034942	49.61	-1.18	-1.02	-0.87	+3.772 - 1.870x + 0.135x ²		
1801	GR1507+51		150732.0+520407	150903.2+515244	54.30	-1.06	-0.83	-0.63	+3.659 - 2.024x + 0.189x ²		
1802	ID2		150809.8+520908	150940.7+515748	54.17	-0.95	-0.95	-0.95	+2.470 - 0.949x		
1803	ID3		150957.9+520240	151128.5+515126	53.98	-1.04	-0.84	-0.64	+3.598 - 1.957x + 0.178x ²		
1804	ID4		150830.3+513204	151002.5+512045	54.43	-0.77	-0.43	-0.25	-1.318 + 0.002x + 10.016e ^{-x}		
1805	GR1507+53		150755.1+532957	150922.9+531836	53.51	-0.86	-0.68	-0.51	+3.290 - 1.639x + 0.152x ²	I	
1806	ID2		150818.3+540853	150944.5+535733	53.12	-1.03	-1.03	-1.03	+2.365 - 1.035x		
1807	GR1508+05		150827.1+055557	151055.9+054439	50.55	-1.22	-1.22	-1.22	+3.511 - 1.222x	OX	PKS 1508+059 3C 313, 4C+08.44, PKS 1508+080
1808	GR1508+08		150830.1+080242	151057.0+075125	51.78	-0.87	-0.87	-0.87	+3.269 - 0.865x		
1809	GR1508+17		150843.2+181310	151100.9+180153	56.64	-0.88	-0.90	-0.93	+2.431 - 0.771x - 0.021x ²		4C+18.41, PKS 1508+182
1810	ID2		150858.0+181921	151115.6+180805	56.63	-0.98	-0.98	-0.98	+2.738 - 0.978x		
1811	GR1510+02		150952.8+013222	151225.4+012109	47.51	-0.72	-0.85	-0.98	+1.899 - 0.132x - 0.114x ²		PKS 1509+015
1812	GR1510+15		150952.3+155139	151212.1+154025	55.43	-0.78	-0.70	-0.62	+2.867 - 1.131x + 0.069x ²	O	4C+15.45, PKS 1509+158 4C+15.46, PKS 1511+158
1813	ID2		151155.9+155306	151415.6+154159	55.00	-1.14	-1.14	-1.14	+2.997 - 1.141x	O	
1814	ID3		151012.1+150749	151232.6+145636	55.04	-1.02	-0.81	-0.62	+3.631 - 1.903x + 0.173x ²	OX	
1815	GR1510+44		150957.9+444159	151142.9+443045	57.05	-1.02	-0.94	-0.85	+3.313 - 1.407x + 0.075x ²	OX	4C+44.25
1816	ID2		151145.1+441902	151330.4+440754	56.87	-1.19	-0.94	-0.70	+4.172 - 2.284x + 0.214x ²		
1817	ID3		151230.7+442618	151415.7+441512	56.70	-1.25	-1.10	-0.96	+3.839 - 1.903x + 0.128x ²		
1818	GR1510+49		150954.6+500513	151129.6+493558	54.92	-0.98	-0.84	-0.72	+3.074 - 1.561x + 0.114x ²	I	
1819	ID2		151106.0+495546	151241.0+494435	54.82	-1.07	-0.87	-0.67	+3.500 - 1.968x + 0.175x ²		
1820	ID3		151121.5+494619	151256.7+493509	54.85	-0.95	-0.72	-0.50	+3.446 - 1.956x + 0.197x ²		
1821	GR1511+45		151038.5+455212	151221.4+454059	56.53	-0.96	-0.96	-0.96	+2.780 - 0.965x		4C+45.29
1822	GR1511-08		151008.9-085449	151250.5-090601	40.14	-0.36	0.15	0.65	+4.333 - 2.639x + 0.444x ²	OX	PKS 1510-089
1823	GR1512+04		151126.1+043204	151356.0+042056	49.11	-1.00	-0.80	-0.61	+3.791 - 1.884x + 0.172x ²	O	
1824	GR1514+00		151406.7+002602	151640.2+001502	45.99	-0.48	-0.27	-0.15	+0.067 - 0.000x + 6.193e ^{-x}	O	PKS 1514+004
1825	GR1514+41		151506.3+420932	151654.6+415834	56.90	-1.04	-1.04	-1.04	+2.816 - 1.041x		
1826	GR1514-08		151427.5-083929	151709.1-085027	39.61	-0.64	-0.36	-0.21	-0.512 + 0.001x + 8.340e ^{-x}		
1827	GR1515+07		151417.1+071217	151644.6+070118	50.12	-1.04	-1.28	-1.51	+2.733 + 0.006x - 0.205x ²	OX	3C 317, 4C+07.40, PKS 1514+072 4C+19.49, PKS 1515+198
1828	GR1515+19		151549.5+195338	151805.1+194244	55.68	-0.98	-1.15	-1.31	+1.760 - 0.242x - 0.144x ²		
1829	GR1516+52		151517.4+524135	151645.2+523038	52.96	-1.13	-0.82	-0.52	+4.207 - 2.485x + 0.265x ²		
1830	ID2		151647.8+523813	151815.4+522721	52.78	-0.99	-0.73	-0.49	+3.814 - 1.431x + 0.222x ²		
1831	GR1517+46		151704.4+462945	151844.8+461854	55.26	-0.90	-0.78	-0.66	+3.122 - 1.441x + 0.105x ²	O	4C+46.30
1832	GR1518+54		151813.3+535341	151937.4+534253	51.99	-1.10	-0.69	-0.30	+5.196 - 2.915x + 0.354x ²		
1833	GR1519+07		151924.0+075223	152150.8+074141	49.45	-1.91	-2.30	-2.67	+3.220 - 0.207x - 0.333x ²	OX	3C 318.1, 4C+07.41
1834	GR1519+51		151937.3+511627	152107.4+510544	53.01	-0.96	-0.96	-0.96	+2.934 - 0.964x		
1835	GR1519+59		152101.4+592127	152208.6+591048	48.81	-1.08	-0.91	-0.75	+3.425 - 1.833x + 0.147x ²	OX	
1836	ID2		152140.2+591445	152247.6+590408	48.80	-1.15	-0.81	-0.49	+4.235 - 2.623x + 0.288x ²		
1837	GR1520-05		152007.5-045324	152245.7-050404	41.29	-0.80	-0.80	-0.80	+2.671 - 0.802x		PKS 1520-048
1838	GR1520-07		152154.4-073251	152435.1-074324	39.12	-0.95	-0.95	-0.95	+2.599 - 0.947x		
1839	ID2		152308.2-080615	152549.5-081644	38.51	-1.31	-1.69	-2.04	+1.488 + 0.339x - 0.322x ²		
1840	GR1521+04		152002.7+041109	152232.8+040029	47.19	-0.94	-0.64	-0.36	+4.245 - 2.253x + 0.256x ²	O	4C+04.52, PKS 1520+041
1841	ID2		152328.5+045107	152558.0+044039	46.90	-1.21	-0.90	-0.60	+4.631 - 2.587x + 0.268x ²		
1842	ID3		152202.1+050643	152431.4+045610	47.34	-1.11	-0.82	-0.54	+4.435 - 2.402x + 0.252x ²		
1843	GR1521+05		152255.0+054806	152523.6+053736	47.66	-1.04	-0.71	-0.40	+4.394 - 2.479x + 0.281x ²		
1844	GR1521+54		152244.6+543851	152405.6+542818	51.05	-0.91	-1.00	-1.09	+2.733 - 0.503x - 0.079x ²	O	3C 319, 4C+54.34
1845	GR1522										

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	h m s . o //	h m s . o //	o	α_{365}	α_{1400}	α_{5000}			
1850	GR1525-01		152626.6-005505	152901.3-010523	42.76	-0.58	0.09	0.72	+5.045 - 3.519x + 0.573x ²		
1851	GR1527+51		152619.7+515246	152746.8+514226	51.81	-1.16	-1.16	-1.16	+3.001 - 1.156x		4C+51.32
1852	ID2		152701.1+514419	152828.4+513401	51.77	-1.22	-1.22	-1.22	+3.162 - 1.223x		
1853	ID3		152726.4+513141	152854.1+512124	51.80	-1.00	-1.00	-1.00	+2.800 - 0.997x		
1854	ID4		152754.0+514511	152921.1+513456	51.64	-1.16	-1.08	-1.00	+3.335 - 1.507x + 0.068x ²		
1855	GR1528-09		152559.6-081630	152841.1-082649	37.89	-0.84	-0.65	-0.48	+3.367 - 1.655x + 0.159x ²		PKS 1528-082
1856	GR1529+02		152822.7+013204	153055.1+012153	43.93	-1.03	-1.03	-1.03	+2.723 - 1.034x		PKS 1528+015
1857	ID2		153009.2+014531	153241.4+013526	43.71	-1.00	-0.76	-0.53	+3.774 - 2.086x + 0.211x ²		
1858	GR1529+03		152936.2+035207	153206.5+034200	45.08	-0.98	-0.71	-0.45	+3.929 - 2.193x + 0.236x ²		PKS 1529+038
1859	GR1529+52		152909.6+521149	153035.3+520138	51.28	-0.96	-0.96	-0.96	+2.563 - 0.961x		4C+52.35
1860	ID2		152922.9+522134	153048.1+521124	51.19	-1.07	-1.07	-1.07	+2.704 - 1.067x		
1861	GR1529+57		153235.2+571012	153346.3+570013	48.64	-1.04	-0.70	-0.38	+3.891 - 2.527x + 0.290x ²		
1862	ID2		153249.9+573831	153359.4+572833	48.38	-1.13	-0.84	-0.56	+3.854 - 2.404x + 0.249x ²		
1863	GR1530+16		153039.6+160609	153258.1+155606	50.99	-1.00	-1.00	-1.00	+2.589 - 1.004x		
1864	GR1530+43		153312.3+432044	153455.6+431048	53.40	-1.02	-0.81	-0.61	+3.460 - 1.947x + 0.181x ²		
1865	GR1532-08		153252.8-080953	153534.4-081949	36.74	-0.98	-0.98	-0.98	+2.806 - 0.980x		
1866	GR1534+46		153440.4+463724	153617.3+462734	52.35	-0.90	-0.79	-0.69	+2.881 - 1.362x + 0.091x ²		O
1867	ID2		153617.3+465141	153753.4+464156	52.02	-1.08	-1.08	-1.08	+2.613 - 1.082x		
1868	ID3		153709.2+464006	153845.5+463024	51.93	-0.98	-0.88	-0.78	+2.975 - 1.428x + 0.087x ²		
1869	GR1534+55		153342.2+550400	153459.3+545405	49.46	-1.23	-0.94	-0.66	+4.544 - 2.513x + 0.260x ²		
1870	GR1535+06		153636.4+054619	153904.8+053637	44.73	-0.96	-0.65	-0.36	+4.121 - 2.300x + 0.262x ²		
1871	GR1535+42		153702.9+422510	153847.1+421528	52.88	-0.94	-0.69	-0.45	+3.567 - 2.042x + 0.215x ²		
1872	GR1536+57		153616.3+572456	153725.5+571510	48.08	-0.82	-0.82	-0.82	+2.404 - 0.817x		O 4C+57.26
1873	GR1537+55		153346.3+554644	153501.3+553650	49.13	-0.86	-1.00	-1.13	+2.224 - 0.244x - 0.120x ²		O 3C 322, 4C+55.31
1874	ID2		153721.5+553523	153836.1+552541	48.76	-1.06	-0.61	-0.19	+4.859 - 3.006x + 0.380x ²		
1875	GR1538+01		153841.8+010018	154114.7+005043	41.55	-0.97	-0.84	-0.72	+3.587 - 1.530x + 0.110x ²		PKS 1538+010
1876	GR1538+46		153931.0+450606	154110.0+445632	51.91	-0.89	-0.80	-0.71	+2.900 - 1.309x + 0.081x ²		
1877	GR1539+08		153822.0+075219	154048.3+074243	45.48	-1.21	-1.05	-0.90	+3.815 - 1.899x + 0.135x ²		
1878	GR1539+53		153958.0+530928	154118.8+525955	49.40	-1.02	-0.78	-0.54	+3.802 - 2.109x + 0.212x ²		
1879	ID2		154023.7+530026	154144.8+525055	49.40	-1.24	-1.24	-1.24	+3.048 - 1.239x		
1880	GR1539-01		153906.3-010451	154141.2-011424	40.20	-1.19	-1.14	-1.10	+3.454 - 1.396x + 0.040x ²		PKS 1539-011
1881	GR1540+06		154117.8+055717	154345.9+054752	43.85	-1.07	-0.78	-0.50	+4.025 - 2.361x + 0.252x ²		
1882	ID2		154134.1+061716	154401.9+060751	43.97	-1.20	-1.01	-0.82	+3.800 - 2.075x + 0.170x ²		
1883	ID3		154001.5+060405	154229.5+055435	44.18	-1.12	-0.81	-0.51	+4.154 - 2.487x + 0.267x ²		
1884	GR1543+51		154211.0+514141	154335.1+513217	49.61	-1.10	-0.71	-0.34	+4.433 - 2.807x + 0.333x ²		
1885	ID2		154339.1+514419	154502.8+513500	49.38	-0.60	-0.02	0.53	+4.603 - 3.150x + 0.498x ²		O
1886	GR1543+54		154124.8+543214	154241.5+542247	48.67	-1.15	-0.90	-0.67	+3.783 - 2.219x + 0.209x ²		
1887	ID2		154626.5+542350	154742.4+541441	48.05	-1.03	-0.73	-0.44	+3.872 - 2.360x + 0.259x ²		
1888	GR1544+01		154304.0+015918	154535.9+014959	41.25	-0.85	-0.85	-0.85	+2.615 - 0.849x		O PKS 1543+019
1889	GR1545+07		154552.1+073508	154818.5+072558	43.75	-1.05	-1.05	-1.05	+3.124 - 1.053x		
1890	GR1545+46		154350.1+463203	154525.5+462245	50.85	-0.95	-1.15	-1.34	+1.637 - 0.066x - 0.172x ²		O 4C+46.32
1891	GR1545+48		154644.4+484409	154814.6+483502	49.82	-0.92	-0.92	-0.92	+2.900 - 0.918x		O 4C+48.39
1892	GR1545-06		154410.2-071548	154651.1-072502	35.28	-1.02	-1.02	-1.02	+2.916 - 1.021x		
1893	ID2		154351.5-070311	154632.3-071227	35.47	-1.05	-1.05	-1.05	+2.918 - 1.047x		
1894	GR1546-00		154547.5-002452	154821.8-003401	39.28	-1.08	-1.08	-1.08	+2.998 - 1.077x		PKS 1545-004
1895	ID2		154650.9-005118	154925.6-010024	38.81	-1.07	-1.07	-1.07	+2.907 - 1.067x		
1896	GR1547+03		154700.4+042030	154930.0+041126	41.78	-1.09	-1.09	-1.09	+2.796 - 1.094x		
1897	ID2		154935.5+035748	155205.5+034852	41.03	-1.11	-0.85	-0.61	+3.897 - 2.250x + 0.222x ²		
1898	GR1547+06		154745.7+060043	155013.6+055140	42.52	-1.07	-1.07	-1.07	+2.774 - 1.072x		
1899	GR1547+58		154723.7+582219	154826.8+581313	46.33	-0.80	-0.69	-0.59	+2.722 - 1.285x + 0.094x ²		
1900	GR1549+11		154821.1+112958	155043.5+112058	45.13	-0.80	-0.58	-0.36	+3.636 - 1.797x + 0.194x ²		OX 4C+11.50, PKS 1548+114
1901	ID2		155001.5+112139	155224.0+111245	44.70	-1.06	-0.75	-0.45	+4.329 - 2.453x + 0.271x ²		
1902	GR1549+20		155013.8+201355	155226.9+200502	48.16	-0.95	-0.95	-0.95	+3.257 - 0.949x		3C 326, 4C+20.37, PKS 1550+202
1903	GR1553+47		155254.1+473746	155425.7+472901	49.10	-0.88	-0.61	-0.35	+3.560 - 2.087x + 0.235x ²		
1904	GR1553+49		155344.2+493207	155511.3+492325	48.51	-1.09	-0.66	-0.25	+4.717 - 2.982x + 0.369x ²		
1905	ID2		155534.8+493929	155701.3+493054	48.19	-1.13	-0.82	-0.53	+4.291 - 2.497x + 0.266x ²		
1906	GR1553-12		154926.6-114440	155212.2-115335	31.32	-1.19	-0.71	-0.26	+5.323 - 3.261x + 0.405x ²		
1907	GR1554+43		155456.0+430546	155636.4+425709	49.54	-0.86	-0.93	-1.00	+2.496 - 0.535x - 0.063x ²		O 4C+43.35
1908	GR1555+45		155543.7+453058	155719.2+452224	49.04	-0.85	-0.62	-0.40	+3.663 - 1.840x + 0.194x ²		OX 4C+45.30
1909	GR1556+12		155645.6+121856	155906.9+121027	43.66	-0.95	-0.95	-0.95	+2.814 - 0.951x		PKS 1556+123
1910	ID2		155727.5+114758	155949.3+113932	43.28	-1.14	-0.92	-0.71	+4.038 - 2.091x + 0.188x ²		
1911	GR1557+53		155901.7+534807	160016.7+533945	46.51	-0.94	-0.94	-0.94	+2.737 - 0.937x		
1912	GR1600+02		160000.1+020604	160231.8+015748	37.84	-0.81	-0.81	-0.81	+3.414 - 0.811x		I 3C 327, 4C+02.41, PKS 1559+021
1913	GR1600+06		155927.6+061356	160155.1+060537	40.16	-1.10	-0.90	-0.72	+3.819 - 1.952x + 0.167x ²		
1914	ID2		155944.9+062323	160212.3+061506	40.18	-1.08	-1.08	-1.08	+2.968 - 1.080x		O 4C+06.54
1915	GR1600+15		155906.8+154521	160124.4+153701	44.58	-0.91	-0.91	-0.91	+2.790 - 0.909x		O 4C+15.52
1916	ID2		160020.2+155230	160237.5+154414	44.36	-0.93	-0.93	-0.93	+2.803 - 0.931x		4C+15.53
1917	GR1600+48		160103.1+481751	160231.8+480937	47.62	-0.96	-0.96	-0.96	+2.575 - 0.958x		4C+48.40
1918	GR1601+49		160201.1+493857	160326.5+493046	47.18	-1.08	-1.08	-1.08	+2.776 - 1.082x		
1919	ID2		160243.9+493536	160409.3+492728	47.08	-1.00	-1.00	-1.00	+2.562 - 1.000x		O
1920	GR1602+44		160236.0+443131	160412.6+442323	47.98	-1.00	-1.00	-1.00	+3.058 - 0.996x		O 4C+44.27
1921	GR1602+52		160129.3+525211	160246.4+524358	46.44	-0.86	-0.68	-0.52	+3.286 - 1.616x + 0.148x ²		O 4C+52.37
1922	GR1603+00		160339.0+000830	160612.7+000027	35.98	-0.83	-0.83	-0.83	+3.010 - 0.833x		O PKS 1603+001
1923	GR1603+54		160427.4+544724	160538.4+543923	45.46	-1.01	-0.80	-0.60	+3.586 - 1.936x + 0.180x ²		OX
1924	ID2		160449.9+550206	160600.0+545406	45.33	-1.02	-0.81	-0.61	+3.592 - 1.942x + 0.180x ²		
1925	GR1604+57		160332.4+573607	160434.4+572801	44.66	-0.92	-1.14	-1.34			

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	h m s + ° //	h m s + ° //	°	α ₃₆₅	α ₁₄₀₀	α ₅₀₀₀			
											PKS 1618+177
1937	GR1619+42		161904.9+422427	162043.5+421723	45.17	-1.10	-0.95	-0.81	+3.572 - 1.746x + 0.127x ²		
1938	GR1619+43		161844.7+432225	162021.5+431520	45.19	-0.89	-0.89	-0.89	+2.603 - 0.887x	O	
1939	GR1624+00		162500.2+000551	162733.9-000047	31.51	-1.09	-0.73	-0.39	+4.398 - 2.682x + 0.310x ²		
1940	ID2		162235.3-000919	162509.3-001607	31.88	-0.94	-0.63	-0.34	+4.012 - 2.303x + 0.266x ²		
1941	GR1624+41		162333.1+410537	162513.8+405851	44.36	-1.15	-1.15	-1.15	+2.974 - 1.154x		4C+41.31
1942	ID2		162418.2+414124	162557.7+413441	44.22	-0.44	-0.24	-0.14	-0.042 - 0.003x + 5.603e ^{-x}	O	
1943	GR1624+46		162436.4+463335	162605.7+462653	43.93	-0.97	-0.84	-0.71	+3.252 - 1.556x + 0.114x ²		
1944	ID2		162327.6+464807	162456.5+464121	44.11	-0.90	-0.72	-0.54	+3.373 - 1.712x + 0.158x ²		
1945	GR1625+51		162256.7+514621	162413.3+513932	43.50	-1.19	-1.19	-1.19	+2.914 - 1.186x		
1946	ID2		162624.1+514647	162740.1+514012	42.98	-0.91	-0.68	-0.46	+3.569 - 1.921x + 0.198x ²		
1947	GR1625+58		162542.5+581550	162637.4+580911	41.66	-0.76	-0.43	-0.11	+3.855 - 2.230x + 0.286x ²	OX	
1948	GR1627+44		162714.7+442550	162848.3+441919	43.61	-0.76	-0.82	-0.88	+2.552 - 0.501x - 0.051x ²		3C 337, 4C+44.28
1949	GR1629+06		162801.2+061024	163028.4+060357	33.98	-1.12	-1.12	-1.12	+3.038 - 1.120x	O	
1950	ID2 1954		163011.2+063114	163238.0+062456	33.67	-1.12	-0.78	-0.47	+4.461 - 2.581x + 0.286x ²		
1951	ID3 1953		163022.3+064852	163248.8+064235	33.77	-1.11	-0.70	-0.30	+4.801 - 2.929x + 0.355x ²		
1952	ID4 1956		163055.0+063611	163321.6+062956	33.55	-1.57	-1.57	-1.57	+3.696 - 1.570x		
1953	GR1632+06 1951		163022.3+064852	163248.8+064235	33.77	-1.18	-0.80	-0.43	+4.883 - 2.859x + 0.328x ²		
1954	ID2 1950		163011.2+063114	163238.0+062456	33.67	-1.19	-0.85	-0.53	+4.707 - 2.667x + 0.289x ²		
1955	ID3		163217.4+063704	163444.1+063055	33.26	-1.27	-0.77	-0.30	+5.456 - 3.446x + 0.425x ²		
1956	ID4 1952		163055.0+063611	163321.6+062956	33.55	-1.33	-0.80	-0.50	+5.229 - 3.183x + 0.362x ²		
1957	GR1632+50		163222.1+502018	163341.1+501406	42.26	-1.22	-0.94	-0.68	+4.258 - 2.420x + 0.235x ²		
1958	GR1632+59		163204.8+591148	163254.8+590535	40.62	-1.04	-1.04	-1.04	+2.933 - 1.040x		4C+59.24
1959	GR1635+08		163606.8+075934	163831.9+075341	33.07	-1.20	-0.80	-0.42	+4.976 - 2.954x + 0.343x ²		
1960	GR1635+15		163533.3+155513	163749.3+154916	36.56	-1.11	-1.11	-1.11	+3.263 - 1.107x	O	4C+15.56, PKS 1635+159
1961	GR1635+57		163717.2+572616	163813.3+572024	40.36	-0.43	0.10	0.59	+4.116 - 2.736x + 0.450x ²	OX	
1962	GR1636+10		163600.1+104102	163822.1+103508	34.31	-0.85	-0.64	-0.44	+3.754 - 1.754x + 0.177x ²	O	PKS 1635+106
1963	ID2		163727.1+103440	163949.2+102852	33.94	-1.07	-1.07	-1.07	+3.175 - 1.074x	O	PKS 1637+105
1964	GR1636+42		163710.3+423927	163846.5+423336	41.84	-1.09	-1.09	-1.09	+2.927 - 1.085x		4C+42.43
1965	GR1637+45		163634.0+453927	163804.0+453333	41.92	-0.99	-1.06	-1.13	+2.344 - 0.691x - 0.059x ²		4C+45.31
1966	GR1637+47		163829.8+471110	163956.0+470524	41.52	-0.93	-0.49	-0.08	+4.575 - 2.853x + 0.375x ²		
1967	ID2		163619.1+472328	163745.1+471734	41.88	-0.49	-0.27	-0.16	-0.205 + 0.001x + 6.312e ^{-x}	OX	
1968	GR1637+54		163921.3+543916	164026.7+543333	40.59	-1.08	-0.82	-0.58	+3.695 - 2.225x + 0.223x ²		
1969	GR1638+43		163722.2+434102	163856.4+433511	41.81	-1.06	-0.92	-0.78	+3.324 - 1.665x + 0.119x ²		
1970	GR1640+53		164114.3+523546	164225.9+523011	40.61	-1.00	-0.58	-0.18	+4.585 - 2.846x + 0.360x ²		3C 346, 4C+17.70, PKS 1641+173
1971	ID2		164159.5+524322	164310.7+523750	40.48	-1.27	-1.01	-0.76	+4.252 - 2.409x + 0.223x ²		
1972	GR1641+55		163848.9+555154	163950.3+554608	40.46	-0.91	-0.71	-0.52	+3.257 - 1.796x + 0.173x ²		
1973	ID2		164147.9+553456	164249.9+552923	40.10	-1.13	-0.92	-0.71	+3.601 - 2.073x + 0.184x ²		
1974	GR1642+07		164349.0+073205	164614.5+072643	31.17	-0.96	-0.96	-0.96	+2.863 - 0.965x		PKS 1643+075
1975	ID2		164150.7+072604	164416.3+072034	31.55	-0.71	-0.40	-0.23	-0.712 - 0.000x + 9.250e ^{-x}		
1976	GR1642+17		164134.6+172120	164348.7+171549	35.77	-0.63	-0.72	-0.81	+5.229 - 3.183x - 0.079x ²	OX	
1977	GR1646-01		164819.0-012511	165054.4-013014	25.76	-0.94	-0.24	0.42	+6.014 - 4.007x + 0.598x ²		
1978	GR1648+05		164835.7+050444	165103.9+045942	28.96	-0.96	-0.96	-0.96	+4.690 - 0.965x		3C 348, 4C+05.66, PKS 1648+050
1979	GR1649+16		164918.7+155120	165134.4+154620	33.49	-1.24	-0.92	-0.62	+4.619 - 2.622x + 0.270x ²		
1980	GR1649+19		164842.4+195142	165053.2+194639	35.08	-1.06	-1.06	-1.06	+2.846 - 1.063x	O	4C+19.54, PKS 1648+198
1981	GR1649+52		164959.9+522248	165111.0+521749	39.30	-1.16	-1.16	-1.16	+2.958 - 1.161x		
1982	GR1649+55		164923.9+560242	165023.3+555740	38.97	-1.13	-0.80	-0.48	+4.034 - 2.599x + 0.286x ²		
1983	GR1650+02		165027.6+022858	165258.7+022404	27.29	-1.06	-0.79	-0.54	+4.419 - 2.248x + 0.231x ²	OX	PKS 1650+024
1984	ID2		164939.9+022702	165211.1+022204	27.45	-1.26	-1.26	-1.26	+3.499 - 1.265x	I	
1985	GR1650+51		165053.2+514307	165206.2+513812	39.22	-1.02	-0.90	-0.80	+3.205 - 1.502x + 0.095x ²		4C+51.34
1986	ID2		164835.1+515136	164948.0+514632	39.57	-1.07	-0.87	-0.68	+3.637 - 1.948x + 0.172x ²		
1987	GR1650+57		165031.7+581039	165122.8+580542	38.49	-0.61	-0.34	-0.19	-0.862 + 0.004x + 8.020e ^{-x}		
1988	ID2		165200.1+575822	165252.1+575831	38.34	-1.13	-0.81	-0.50	+4.197 - 2.551x + 0.277x ²		
1989	GR1651+42		164922.7+424408	165057.7+423908	39.60	-1.01	-0.77	-0.54	+3.808 - 2.057x + 0.205x ²		
1990	ID2		164957.6+423424	165132.9+422926	39.48	-1.22	-0.94	-0.67	+4.284 - 2.478x + 0.245x ²		
1991	ID3		165212.6+430300	165346.7+425811	39.10	-1.16	-0.89	-0.65	+4.088 - 2.304x + 0.224x ²		
1992	GR1651+49		165215.4+494535	165333.8+494046	39.12	-1.00	-1.00	-1.00	+2.621 - 0.995x	O	4C+49.28
1993	GR1653+54		165422.5+540137	165528.0+535656	38.50	-1.03	-0.96	-0.90	+2.984 - 1.323x + 0.057x ²		
1994	GR1654+45		165608.5+451847	165737.4+451414	38.49	-0.85	-0.85	-0.85	+2.560 - 0.853x	O	4C+45.33
1995	GR1657+47		165803.1+470737	165927.6+470313	38.20	-0.74	-0.74	-0.74	+2.827 - 0.740x		3C 349, 4C+47.45
1996	GR1657+48		165625.0+481304	165746.9+480832	38.48	-0.47	-0.26	-0.15	-0.252 - 0.001x + 6.123e ^{-x}	O	4C+48.41
1997	ID2		165947.6+490621	170106.9+490204	37.91	-1.16	-0.81	-0.49	+4.364 - 2.657x + 0.293x ²		
1998	GR1657-06		165652.3-053106	165932.4-053533	21.78	-1.19	-1.19	-1.19	+3.060 - 1.193x		
1999	ID2		165559.9-053923	165840.0-054353	21.89	-1.04	-0.85	-0.66	+3.707 - 1.910x + 0.169x ²		
2000	GR1658+17		165853.9+170703	170107.9+170244	31.84	-1.12	-1.12	-1.12	+3.048 - 1.121x	O	4C+17.72, PKS 1658+171
2001	GR1658+57		165853.6+573554	165946.0+573132	37.48	-0.94	-1.00	-1.06	+2.307 - 0.681x - 0.051x ²	OX	
2002	ID2		165849.3+575351	165940.5+574929	37.45	-1.02	-1.02	-1.02	+2.626 - 1.020x		
2003	ID3		170334.1+571629	170427.1+571227	36.89	-1.02	-0.82	-0.64	+3.464 - 1.873x + 0.167x ²		
2004	GR1659+06		165915.5+063600	170141.9+063143	27.34	-1.07	-1.07	-1.07	+2.994 - 1.071x	O	
2005	GR1659+43		165832.8+431521	170006.0+431059	37.96	-1.15	-1.15	-1.15	+2.987 - 1.152x		
2006	GR1659+50		170010.8+505244	170125.2+504828	37.82	-1.00	-1.15	-1.30	+1.983 - 0.326x - 0.131x ²		4C+50.42
2007	GR1702+07		170105.5+073345	170330.7+072935	27.37	-1.21	-0.83	-0.47	+4.979 - 2.861x + 0.323x ²		
2008	ID2		170136.2+070735	170402.0+070327	27.06	-1.33	-0.97	-0.62	+5.087 - 2.930x + 0.312x ²		
2009	GR1704+57		170533.2+571716	170626.0+571322	36.62	-0.83	-0.83	-0.83	+2.353 - 0.830x	O	4C+57.30
2010	GR1707+07		170908.6+065018	171134.6+064643	25.27	-1.02	-0.68	-0.36	+4.291 - 2.507x + 0.290x ²		
2011	ID2		170722.6+064848	170948.7+064505	25.65</						

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	$h m s_{+0} o //$	$h m s_{+0} o //$	$^{\circ}$	α_{365}	α_{1400}	α_{5000}			
2107	ID2		182816.6+564247	182909.3+564452	25.38	-0.93	-0.73	-0.54	+3.550 - 1.815x + 0.172x ²		
2108	GR1828+48		182813.5+484241	182931.8+484446	23.50	-0.68	-0.73	-0.79	+3.020 - 0.426x - 0.049x ²	OX	3C 380, 4C+48.46
2109	GR1830+05		183205.8+052655	183433.2+052920	6.25	-1.01	-1.01	-1.01	+2.701 - 1.007x		
2110	ID2		182856.8+061206	183123.4+061417	7.29	-1.36	-1.36	-1.36	+3.129 - 1.360x		
2111	GR1831+08		183123.4+083312	183347.3+083534	7.81	-1.16	-0.92	-0.70	+4.237 - 2.205x + 0.204x ²		
2112	GR1833+41		182633.1+421402	182806.6+421601	21.94	-1.19	-0.80	-0.44	+4.655 - 2.871x + 0.329x ²		
2113	GR1836+17		183612.6+170958	183826.0+171241	10.65	-0.70	-0.79	-0.87	+2.523 - 0.297x - 0.078x ²		3C 386, 4C+17.81, PKS 1836+171
2114	GR1838+54		184003.5+545922	184103.3+550218	23.38	-1.08	-0.95	-0.82	+3.587 - 1.650x + 0.112x ²	OX	4C+54.39
2115	ID2		183940.8+544012	184041.7+544307	23.35	-1.28	-1.15	-1.03	+3.866 - 1.850x + 0.111x ²		
2116	GR1842+07		184206.2+063949	184432.2+064257	4.58	-1.00	-0.76	-0.54	+4.206 - 2.020x + 0.200x ²		4C+06.65
2117	ID2		184206.8+062204	184433.2+062512	4.45	-1.37	-1.23	-1.09	+4.275 - 1.982x + 0.120x ²		
2118	GR1843+09		184315.3+095031	184537.7+095344	5.77	-0.79	-0.79	-0.79	+3.135 - 0.788x	O	3C 390, 4C+09.62
2119	GR1845+05		184731.1+051128	184958.9+051500	2.71	-1.24	-0.94	-0.65	+4.751 - 2.562x + 0.258x ²		4C+05.70
2120	GR1854+15		185453.8+155423	185709.1+155825	5.98	-1.12	-0.98	-0.84	+3.832 - 1.743x + 0.322x ²		4C+15.62
2121	ID2		185554.1+160854	185809.1+161301	5.87	-1.11	-0.70	-0.32	+4.900 - 2.882x + 0.346x ²		
2122	GR1858+57		185731.6+564145	185826.8+564556	21.50	-0.85	-0.99	-1.12	+2.003 - 0.250x - 0.117x ²	O	4C+56.28
2123	GR1859+07		185947.4+074948	190212.3+075412	1.22	-1.30	-1.08	-0.87	+4.638 - 2.272x + 0.190x ²		
2124	GR1901+05		190136.8+052147	190404.5+052619	-0.32	-0.49	-0.49	-0.49	+2.667 - 0.493x		3C 396, 4C+05.73, PKS 1901+053
2125	ID2		190046.0+053055	190313.6+053523	-0.06					I	
2126	ID3		190116.1+054826	190343.3+055256	-0.04	-0.65	-0.36	-0.21	-0.357 - 0.005x + 8.358e ^{-x}		
2127	GR1902+15		190235.2+151713	190451.4+152148	4.05	-0.87	-0.87	-0.87	+2.764 - 0.867x		
2128	GR1908+06		190940.5+070307	191206.4+070812	-1.31	-1.41	-1.19	-0.99	+4.585 - 2.359x + 0.185x ²		
2129	GR1915+56		191757.9+571904	191853.4+572440	19.08	-1.14	-0.76	-0.40	+4.652 - 2.796x + 0.324x ²		
2130	ID2		191852.0+565117	191949.4+565507	18.80	-1.16	-0.81	-0.48	+4.567 - 2.704x + 0.301x ²		
2131	GR1921+16		191948.4+161657	192203.8+162243	0.85	-1.12	-0.70	-0.29	+5.324 - 2.995x + 0.365x ²		
2132	ID2		192259.3+161422	192514.9+162022	0.16	-0.28	-0.38	-0.47	+1.993 + 0.155x - 0.085x ²	I	
2133	GR1934+05		193317.7+055000	193545.2+055642	-7.06	-1.05	-1.05	-1.05	+3.131 - 1.052x		4C+05.75
2134	GR1939+07		193844.9+071352	194110.9+072056	-7.57	-1.07	-0.76	-0.48	+4.410 - 2.388x + 0.258x ²		
2135	ID2		194143.7+080245	194408.9+081000	-7.82	-1.21	-0.92	-0.64	+4.553 - 2.490x + 0.250x ²		
2136	GR1948+06		194723.1+060157	194950.5+060934	-10.03	-1.11	-0.61	-0.14	+5.163 - 3.292x + 0.426x ²		
2137	ID2		194659.6+061400	194926.8+062136	-9.85	-1.10	-0.75	-0.42	+4.529 - 2.621x + 0.297x ²		
2138	ID3		194817.5+064748	195044.1+065529	-9.85	-1.09	-0.61	-0.17	+5.035 - 3.169x + 0.406x ²		
2139	GR1953+08		195241.1+082040	195506.2+082838	-10.03	-1.16	-1.06	-0.97	+3.659 - 1.602x + 0.086x ²		
2140	GR1956+07		195512.1+071540	195738.4+072347	-11.11	-1.67	-1.67	-1.67	+3.995 - 1.672x		
2141	GR2003+15		200327.4+155142	200544.8+160020	-8.44	-1.03	-0.90	-0.78	+3.636 - 1.591x + 0.110x ²		PKS 2003+158
2142	ID2		200406.5+154442	200624.1+155323	-8.64	-1.25	-1.08	-0.92	+4.094 - 1.986x + 0.144x ²		
2143	GR2010+06		200806.8+062302	201034.2+063158	-14.32	-0.78	-0.44	-0.25	-0.978 + 0.002x + 10.172e ^{-x}		PKS 2008+063
2144	ID2		201147.6+062536	201415.0+063445	-15.09	-0.83	-0.46	-0.27	-1.035 + 0.001x + 10.759e ^{-x}		
2145	GR2013+16		201246.4+161316	201503.9+162229	-10.15	-0.89	-0.63	-0.38	+3.885 - 2.051x + 0.226x ²		PKS 2012+162
2146	ID2		201238.1+153819	201456.2+154731	-10.43	-1.12	-0.76	-0.41	+4.604 - 2.733x + 0.314x ²		
2147	ID3		201245.5+163033	201502.7+163946	-9.99	-1.11	-1.11	-1.11	+3.055 - 1.109x		
2148	ID4		201356.5+162318	201613.9+163235	-10.29	-0.80	-0.21	0.35	+5.122 - 3.383x + 0.504x ²		
2149	GR2018+08		202104.9+075334	202331.1+080318	-16.30	-1.12	-1.12	-1.12	+3.108 - 1.115x		PKS 2021+078
2150	GR2021+10		201944.3+095133	202208.6+100111	-14.98	-0.80	-0.92	-1.03	+2.401 - 0.290x - 0.100x ²	OX	3C 411, 4C+09.67, PKS 2019+098
2151	GR2025+15		202436.4+152711	202655.2+153706	-12.95	-0.93	-0.99	-1.06	+2.674 - 0.642x - 0.056x ²	O I	4C+15.70, PKS 2024+154
2152	GR2026+05		202807.5+052615	203036.1+053623	-19.08	-1.05	-0.84	-0.64	+3.944 - 1.968x + 0.179x ²		
2153	GR2028+08		202818.9+075205	203045.3+080214	-17.84	-1.02	-1.02	-1.02	+2.810 - 1.019x	O	4C+07.53, PKS 2028+078
2154	ID2		202922.7+082238	203148.6+083251	-17.79	-1.10	-0.83	-0.58	+4.099 - 2.267x + 0.228x ²		
2155	ID3		202610.9+080120	202837.1+081121	-17.31	-1.45	-1.45	-1.45	+3.421 - 1.452x		
2156	ID4		202725.7+083750	202951.4+084756	-17.24	-0.96	-0.65	-0.35	+4.122 - 2.333x + 0.268x ²		
2157	GR2028+18		203029.3+180539	203245.8+181555	-12.63	-1.22	-0.93	-0.65	+4.342 - 2.499x + 0.250x ²		
2158	GR2046+07		204544.3+065009	204812.1+070116	-22.03	-0.89	-0.94	-0.98	+2.919 - 0.673x - 0.042x ²	O	3C 424, 4C+06.68, PKS 2045+068
2159	GR2101+13		205940.9+140136	210202.8+141327	-20.70	-0.97	-0.86	-0.76	+3.243 - 1.466x + 0.096x ²		PKS 2059+140
2160	ID2		210113.8+135616	210335.9+140812	-21.05	-0.91	-0.91	-0.91	+2.688 - 0.907x	O	4C+13.80, PKS 2101+139
2161	GR2101-05		210157.7-051235	210435.7-050036	-31.77	-1.20	-0.97	-0.76	+4.376 - 2.201x + 0.195x ²		
2162	GR2106+08		210453.0+080955	210720.1+082202	-25.19	-1.16	-0.82	-0.49	+4.538 - 2.667x + 0.294x ²		
2163	GR2106-06		210539.5-062951	210818.5-061741	-33.19	-1.01	-1.01	-1.01	+2.848 - 1.007x		PKS 2105-064
2164	ID2		210505.9-071316	210745.5-070108	-33.41	-1.15	-1.35	-1.53	+2.295 - 0.308x - 0.165x ²		
2165	GR2110-02		210659.4-020216	210934.7-015002	-31.26	-1.00	-0.56	-0.15	+4.693 - 2.936x + 0.377x ²		
2166	ID2		210808.3-030142	211044.4-024925	-32.01	-1.27	-1.27	-1.27	+3.266 - 1.266x		
2167	GR2111+06		210923.9+062447	211152.5+063707	-27.12	-1.17	-0.85	-0.55	+4.387 - 2.581x + 0.275x ²		
2168	ID2		211106.2+064316	211334.7+065542	-27.29	-1.15	-0.92	-0.70	+3.974 - 2.163x + 0.198x ²		
2169	ID3		211225.6+060428	211454.6+061657	-27.93	-1.16	-0.87	-0.59	+4.243 - 2.436x + 0.249x ²		
2170	GR2115+08		211434.9+082809	211702.1+084045	-26.95	-1.19	-0.75	-0.33	+4.981 - 3.147x + 0.381x ²		
2171	GR2116+17		211611.6+180355	211831.1+181635	-21.28	-0.90	-0.90	-0.90	+2.979 - 0.903x	O	4C+18.62, PKS 2116+180
2172	GR2122+05		212257.1+051546	212527.0+052845	-30.53	-0.97	-0.72	-0.49	+3.897 - 2.069x + 0.214x ²	O	PKS 2122+052
2173	ID2		212152.2+054959	212421.6+060255	-29.98	-1.15	-0.66	-0.20	+5.059 - 3.284x + 0.417x ²		
2174	GR2122+16		212123.4+163556	212344.4+164851	-23.17	-1.16	-1.16	-1.16	+3.207 - 1.163x		
2175	GR2127+07		212637.7+071949	212906.1+073258	-30.02	-0.86	-0.86	-0.86	+3.003 - 0.856x	O	3C 435, 4C+07.55, PKS 2126+073
2176	GR2130+12		213026.2+124433	213250.8+125752	-27.34	-0.98	-0.98	-0.98	+2.990 - 0.975x		4C+12.73, PKS 2130+127
2177	GR2131+15		212946.5+152751	213209.1+154109	-25.44	-0.81	-0.47	-0.15	+4.045 - 2.294x + 0.290x ²	O	PKS 2129+154
2178	ID2		212910.7+145405	213133.5+150721	-25.70	-1.21	-0.97	-0.75	+4.107 - 2.226x + 0.199x ²		
2179	GR2141-05		214155.7-060835	214433.4-055446	-40.83	-1.18	-1.18	-1.18	+3.237 - 1.177x		4C-06.70
2180	GR2144+08		214239.2+074632	214507.8+080023	-32.84	-1.11	-1.11	-1.11	+3.032 - 1.106x	O	4C+07.56
2181	ID2		214304.0+08								

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	h m s + o //	h m s + o //	o	α_{365}	α_{1400}	α_{5000}			
2187	GR2152+06		215131.9+062406	215401.6+063818	-35.41	-0.98	-0.65	-0.33	+4.237 - 2.441x + 0.285x ²		
2188	ID2		215216.6+061310	215446.5+062723	-35.67	-1.19	-0.85	-0.53	+4.513 - 2.677x + 0.290x ²	O	PKS 2152+144
2189	GR2152+14		215210.2+142941	215434.9+144354	-30.06	-0.89	-0.89	-0.89	+2.843 - 0.892x		PKS 2154+034
2190	GR2154+03		215450.7+032606	215722.3+034026	-37.94	-1.12	-0.83	-0.57	+4.602 - 2.351x + 0.241x ²		PKS 2154-117
2191	GR2154-11		215403.2-114207	215644.1-112750	-46.18	-1.02	-1.02	-1.02	+3.266 - 1.018x		
2192	GR2156+18		215502.5+191527	215724.1+192947	-27.15	-1.07	-0.95	-0.85	+3.359 - 1.563x + 0.097x ²		
2193	GR2156-09		215515.7-100044	215755.5-094623	-45.63	-1.27	-1.02	-0.78	+4.597 - 2.369x + 0.215x ²		
2194	GR2157+07		215956.8+083416	220225.5+084846	-35.53	-1.16	-0.70	-0.27	+5.281 - 3.180x + 0.394x ²		
2195	GR2157-04		215646.1-042330	215922.4-040907	-43.00	-0.93	-0.93	-0.93	+2.773 - 0.930x	O	PKS 2156-043
2196	GR2200+06		220053.0+060733	220323.1+062206	-37.34	-0.93	-0.93	-0.93	+2.683 - 0.929x	O	4C+08.72
2197	GR2205-03		220441.7-032402	220717.3-030922	-44.06	-1.09	-0.94	-0.80	+3.686 - 1.727x + 0.125x ²		
2198	ID2		220534.5-032533	220810.2-031050	-44.25	-1.26	-1.18	-1.12	+3.604 - 1.575x + 0.062x ²		
2199	GR2208+05		220719.9+062109	220950.1+063555	-38.38	-1.19	-0.94	-0.70	+4.151 - 2.301x + 0.217x ²		
2200	ID2		221028.7+054825	221259.3+060317	-39.32	-1.23	-1.23	-1.23	+3.153 - 1.232x	O	
2201	GR2210+08		220932.2+080426	221201.6+081916	-37.59	-0.66	-0.57	-0.49	+2.817 - 1.040x + 0.074x ²	O	4C+08.64, PKS 2209+080
2202	GR2211-08		221204.9-082039	221443.0-080544	-48.35	-1.12	-0.85	-0.59	+4.260 - 2.311x + 0.232x ²		
2203	ID2		221241.1-091501	221519.6-090004	-48.96	-1.39	-1.39	-1.39	+3.469 - 1.393x		
2204	GR2212+13		221213.1+133457	221439.6+134953	-34.11	-0.94	-1.03	-1.11	+2.994 - 0.567x - 0.073x ²		3C 442, PKS 2212+135
2205	GR2217+05		221720.4+060341	221951.1+061847	-40.38	-1.14	-0.87	-0.60	+4.324 - 2.350x + 0.236x ²		
2206	ID2		221738.6+063218	222009.1+064724	-40.10	-1.09	-0.66	-0.26	+4.919 - 2.980x + 0.368x ²		
2207	GR2217+08		221742.2+084524	222011.6+090031	-38.54	-0.97	-0.84	-0.71	+3.364 - 1.540x + 0.112x ²	O	PKS 2217+087
2208	ID2		221831.5+083210	222101.0+084718	-38.84	-1.22	-0.88	-0.57	+4.531 - 2.681x + 0.286x ²		
2209	GR2221-02		222115.9-022216	222350.8-020703	-46.73	-0.87	-0.93	-0.99	+3.100 - 0.587x - 0.055x ²	OXI	3C 445, PKS 2221-023
2210	GR2222+05		222243.4+051153	222514.7+052708	-41.94	-0.95	-0.95	-0.95	+2.934 - 0.954x	O	PKS 2222+051
2211	GR2222-02		222406.3-022504	222641.1-020946	-47.31	-1.18	-1.18	-1.18	+3.357 - 1.184x		PKS 2224-024
2212	GR2224+16		222336.6+170756	222602.0+172312	-33.22	-1.37	-1.37	-1.37	+3.622 - 1.368x		4C+17.89
2213	GR2224-05		222311.1-051218	222547.3-045702	-48.84	-0.40	-0.40	-0.40	+2.148 - 0.399x	OXI	PKS 2223-052
2214	ID2		222550.5-053357	222826.8-051836	-49.59	-1.09	-0.96	-0.83	+3.497 - 1.654x + 0.111x ²	OX	
2215	GR2226+00		222636.2+001952	222909.8+003515	-45.99	-1.24	-0.89	-0.56	+4.787 - 2.773x + 0.299x ²		
2216	ID2		222830.7+005602	223104.0+011127	-45.94	-1.24	-0.87	-0.53	+4.858 - 2.848x + 0.314x ²		
2217	GR2227+08		222638.5+085859	222908.1+091422	-39.89	-0.99	-0.99	-0.99	+3.065 - 0.994x	O	PKS 2226+089
2218	ID2		222632.4+080833	222902.4+082355	-40.49	-1.21	-1.08	-0.96	+3.827 - 1.759x + 0.108x ²		
2219	ID3		222846.4+084441	223116.1+090007	-40.42	-1.16	-1.01	-0.86	+3.870 - 1.819x + 0.129x ²		
2220	GR2229+06		222912.8+064559	223143.5+070125	-41.95	-0.98	-0.98	-0.98	+2.762 - 0.978x		4C+06.74, PKS 2229+067
2221	GR2237-04		223657.2-044513	223932.8-042934	-51.27	-1.25	-1.45	-1.64	+2.574 - 0.363x - 0.173x ²	O	PKS 2236-047
2222	GR2238+05		223937.3+051917	224208.9+053500	-44.76	-0.80	-0.45	-0.26	-1.350 + 0.003x - 0.1465x ^{-x}		
2223	ID2		224118.3+062558	224249.5+064142	-44.04	-1.17	-0.74	-0.34	+4.907 - 3.040x + 0.365x ²		PKS 2236+068
2224	GR2238+07		223622.9+065220	223863.8+070758	-43.07	-0.83	-0.83	-0.83	+2.145 - 0.826x		
2225	ID2		223957.4+070940	224228.2+072523	-43.44	-0.99	-0.66	-0.36	+4.042 - 2.413x + 0.278x ²		
2226	ID3		223642.2+073319	223912.8+074858	-42.61	-1.06	-0.72	-0.40	+4.184 - 2.537x + 0.289x ²		
2227	GR2239-10		223912.5-103105	224150.4-101522	-55.15	-0.92	-0.92	-0.92	+2.886 - 0.922x		PKS 2239-105
2228	GR2242+16		224135.2+161711	224402.5+163257	-36.50	-0.78	-0.78	-0.78	+2.417 - 0.782x		4C+16.77, PKS 2241+162
2229	GR2243+17		224335.5+172805	224602.4+174354	-35.81	-1.04	-1.04	-1.04	+3.005 - 1.037x		4C+17.91, PKS 2243+174
2230	GR2244-03		224336.4-031625	224611.4-030036	-51.56	-0.86	-0.86	-0.86	+2.813 - 0.864x	O	4C-08.81, PKS 2243-032
2231	GR2246-06		224524.1-055709	224800.1-054118	-53.65	-0.95	-0.60	-0.26	+4.485 - 2.497x + 0.302x ²		PKS 2245-059
2232	GR2247+11		224721.8+111952	224951.4+113546	-41.33	-0.74	-0.52	-0.32	+3.770 - 1.668x + 0.182x ²		PKS 2247+113
2233	ID2		224754.4+113740	225024.0+115335	-41.17	-1.26	-1.26	-1.26	+3.532 - 1.260x		
2234	GR2248+06		225012.1+060253	225243.7+061851	-45.92	-0.79	-0.44	-0.25	-1.325 + 0.003x + 0.1344x ^{-x}		
2235	ID2		225030.1+055957	225301.8+061555	-46.01	-1.19	-1.19	-1.19	+3.071 - 1.191x		
2236	GR2248+19		224806.1+191527	225032.8+193122	-34.92	-0.90	-0.90	-0.90	+2.752 - 0.897x	O	PKS 2248+192
2237	ID2		224907.7+183244	225134.7+184840	-35.65	-0.73	-0.73	-0.73	+2.592 - 0.726x	O	3C454,4C+18.67, PKS2249+185
2238	GR2248-03		225001.6-032149	225236.5-030551	-52.80	-1.24	-0.89	-0.56	+5.102 - 2.764x + 0.298x ²		
2239	GR2251+15		225129.5+155254	225357.7+160853	-38.18	-0.18	0.07	0.31	+2.963 - 1.274x + 0.214x ²	OXI	3C454.3, 4C+15.76, PKS2251+158
2240	GR2253+13		225234.5+125733	225503.8+131333	-40.75	-0.77	-0.90	-1.02	+2.173 - 0.193x - 0.112x ²	O	3C455, PKS 2253+129
2241	GR2253-00		225313.6-003611	225547.5-002009	-51.42	-1.08	-1.08	-1.08	+2.970 - 1.083x	O	PKS 2253-005
2242	ID2		225319.1-012420	225553.2-010818	-52.01	-1.05	-0.95	-0.87	+3.298 - 1.458x + 0.080x ²		
2243	GR2253-08		225139.0-075149	225415.4-073550	-56.06	-1.19	-0.74	-0.33	+5.077 - 3.129x + 0.379x ²		
2244	ID2		225337.4-081102	225613.8-075500	-56.64	-1.18	-0.75	-0.35	+4.867 - 3.063x + 0.367x ²		
2245	GR2255+00		225521.3+001857	225755.0+003501	-51.11	-1.22	-0.97	-0.72	+4.440 - 2.357x + 0.221x ²		
2246	ID2		225418.5+004750	225652.0+010353	-50.58	-0.95	-0.53	-0.30	-1.507 + 0.004x + 12.367x ^{-x}		
2247	ID3		225523.0-000403	225756.7+001202	-51.40	-1.14	-0.86	-0.60	+4.389 - 2.342x + 0.235x ²		
2248	GR2255+16		225812.6+164034	230041.1+165641	-38.39	-0.90	-0.45	-0.20	+4.943 - 2.908x + 0.391x ²		4C+16.81
2249	GR2259+06		225749.8+063818	230021.5+065425	-46.63	-1.06	-0.63	-0.22	+4.930 - 2.970x + 0.372x ²		
2250	ID2		225823.7+062937	230055.5+064544	-46.83	-1.20	-0.93	-0.67	+4.443 - 2.407x + 0.235x ²		
2251	ID3		225748.5+070519	230020.0+072126	-46.27	-1.22	-0.77	-0.35	+5.167 - 3.174x + 0.382x ²		
2252	GR2259+19		225848.3+192358	230115.9+194006	-36.13	-0.86	-0.95	-1.04	+2.178 - 0.451x - 0.079x ²		4C+19.75, PKS 2258+194
2253	GR2304+15		230400.9+154002	230630.2+155616	-39.97	-1.04	-0.94	-0.84	+3.325 - 1.491x + 0.088x ²		
2254	GR2304-07		230442.0-080247	230717.9-074633	-58.65	-1.40	-1.40	-1.40	+3.544 - 1.404x		
2255	GR2308+07		230804.5+071911	231036.4+073529	-47.56	-0.83	-0.83	-0.83	+2.785 - 0.827x		4C+07.61, PKS 2308+073
2256	GR2309+13		230822.1+134203	231052.3+135821	-42.20	-1.03	-1.03	-1.03	+2.776 - 1.028x		PKS 2308+136
2257	GR2309+18		230935.4+182815	231204.4+184434	-38.19	-0.86	-0.86	-0.86	+2.940 - 0.863x		4C+18.70, PKS 2309+184
2258	GR2310+05		231025.5+050106	231258.0+051726	-49.78	-0.74	-0.74	-0.74	+2.731 - 0.741x		3C458,4C+05.85, PKS2310+050
2259	GR2310+08 2259		230956.7+090309	231228.1+091929	-46.36	-0.78	-0.86	-0.93	+2.408 - 0.453x - 0.064x ²	O	3C456,4C+09.73, PKS2309+090
2260	GR2310+09 2260		230956.7+090309	231228.1							

Table 1: Radio Identifications for all UTR catalogue sources (continued)

1	2	3	4	5	6	7	8	9	10	11	12
		N	h m s + o //	h m s + o //	o	α_{365}	α_{1400}	α_{5000}			
2262	GR2314+03		231402.3+034856	231635.2+040519	-51.28	-0.80	-0.93	-1.06	+2.451 - 0.197x - 0.117x ²	O I	PKS 2313+012 3C 459, 4C+03.57, PKS 2314+038
2263	GR2316+15		231629.2+160012	231859.4+161638	-41.14	-1.25	-1.07	-0.89	+3.972 - 2.080x + 0.161x ²		
2264	ID2		231634.4+162159	231904.5+163824	-40.83	-1.16	-0.88	-0.62	+4.221 - 2.371x + 0.237x ²		
2265	GR2317+19		231916.5+183906	232146.4+185533	-39.08	-0.98	-0.77	-0.58	+3.706 - 1.885x + 0.177x ²		
2266	GR2318+02		231812.9+024111	232046.1+025737	-52.81	-1.04	-0.82	-0.61	+4.277 - 2.005x + 0.188x ²		
2267	GR2318-08		231842.7-084349	232118.3-082722	-61.66	-0.93	-0.49	-0.07	+4.749 - 2.876x + 0.379x ²	O	PKS 2318-026 PKS 2318-087
2268	GR2319+08		232003.9+075533	232236.1+081201	-48.63	-0.72	-0.41	-0.12	+3.921 - 2.048x + 0.260x ²	OX	PKS 2320+079
2269	ID2		231856.4+080841	232128.5+082508	-48.30	-1.12	-1.12	-1.12	+3.172 - 1.123x		
2270	GR2322+14		232214.4+142450	232445.5+144120	-43.19	-1.05	-0.88	-0.72	+3.761 - 1.805x + 0.147x ²		
2271	GR2325+04		232646.3+053616	232919.2+055249	-51.48	-1.16	-1.03	-0.90	+3.651 - 1.751x + 0.115x ²		
2272	GR2325+06		232402.7+070817	232635.2+072448	-49.81	-1.15	-1.15	-1.15	+2.917 - 1.149x		4C+07.62
2273	GR2325-02		232512.3-025604	232746.5-023932	-58.39	-1.04	-0.85	-0.68	+3.784 - 1.852x + 0.159x ²	O	PKS 2325-029
2274	GR2326-05		232537.4-051240	232812.0-045609	-60.24	-1.04	-1.26	-1.46	+2.053 - 0.086x - 0.186x ²		4C-05.97, PKS 2325-052 4C-05.98
2275	ID2		232729.4-054121	233004.0-052448	-60.90	-1.14	-1.14	-1.14	+3.064 - 1.145x		
2276	GR2329+01		233043.2+013353	233316.7+015028	-55.45	-1.14	-1.00	-0.88	+3.957 - 1.709x + 0.112x ²	O	PKS 2330+015
2277	ID2		233136.8+005526	233410.5+011202	-56.11	-1.21	-0.91	-0.62	+4.762 - 2.523x + 0.257x ²		PKS 2331+009
2278	GR2330+17		232927.9+171221	233159.0+172855	-41.41	-0.90	-0.90	-0.90	+2.788 - 0.901x	O	4C+17.94, PKS 2329+172
2279	ID2		233243.8+172442	233515.2+174117	-41.53	-1.03	-1.03	-1.03	+2.803 - 1.030x		
2280	GR2333+05		233411.2+052727	233644.3+054404	-52.50	-1.06	-0.79	-0.54	+4.125 - 2.253x + 0.232x ²		
2281	GR2333+19		233549.4+194706	233820.7+200343	-39.60	-1.10	-0.81	-0.53	+4.421 - 2.393x + 0.252x ²		
2282	GR2334+08		233407.6+083313	233640.3+084950	-49.73	-0.86	-0.75	-0.63	+3.340 - 1.381x + 0.101x ²	O	4C+08.70, PKS 2334+085 PKS 2334+040
2283	GR2335+03		233433.7+040000	233706.9+041636	-53.83	-1.05	-0.86	-0.67	+3.813 - 1.908x + 0.167x ²		PKS 2334+040
2284	ID2		233534.3+031011	233807.6+032648	-54.68	-0.75	-0.55	-0.37	+3.458 - 1.602x + 0.167x ²	OX	4C+03.59, PKS 2335+031
2285	GR2340-08		233840.6-081617	234115.2-075939	-64.66	-1.23	-0.89	-0.56	+4.732 - 2.738x + 0.294x ²		
2286	GR2343+08		234403.8+091406	234636.8+093046	-50.13	-0.49	-0.27	-0.16	-0.029 - 0.002x + 6.285e ^{-x}	OX	PKS 2344+092
2287	ID2		234348.1+083601	234621.2+085241	-50.69	-1.20	-1.03	-0.87	+4.140 - 1.948x + 0.146x ²		
2288	GR2343+09		234403.7+091406	234636.8+093046	-50.13	-0.44	-0.25	-0.14	+0.016 - 0.001x + 5.732e ^{-x}	OX	PKS 2344+092
2289	ID2		234348.1+083601	234621.2+085241	-50.69	-1.11	-0.98	-0.85	+3.663 - 1.699x + 0.115x ²		
2290	GR2344-07		234409.6-074504	234644.0-072824	-65.07	-1.01	-1.01	-1.01	+3.085 - 1.007x		PKS 2344-077
2291	ID2		234554.0-075438	234828.2-073757	-65.45	-1.18	-1.07	-0.97	+3.855 - 1.670x + 0.095x ²		
2292	GR2345+03		234631.1+041730 ?	234905.1+043400 ?	-54.90						
2293	GR2345+11		234529.2+114042	234802.2+115722	-48.00	-0.95	-0.83	-0.72	+3.142 - 1.470x + 0.101x ²		
2294	ID2		234523.6+120154	234756.5+121835	-47.66	-0.96	-0.79	-0.62	+3.382 - 1.729x + 0.150x ²		
2295	GR2346+06		234558.4+060819	234831.7+062459	-53.16	-0.80	-0.62	-0.45	+3.275 - 1.575x + 0.152x ²	O	PKS 2345+061
2296	ID2		234731.2+064349	235004.5+070030	-52.77	-0.99	-0.99	-0.99	+2.825 - 0.988x	O	4C+06.77
2297	GR2346+18		234557.1+182724	234829.6+184405	-41.67	-0.81	-0.81	-0.81	+2.750 - 0.813x	OX	4C+18.71, PKS 2345+184
2298	GR2346-02		234429.5-020758	234703.4-015118	-60.39	-1.18	-1.00	-0.84	+4.025 - 1.942x + 0.149x ²		
2299	GR2346-10		234553.9-105846	234828.4-104205	-67.88	-1.16	-0.64	-0.14	+5.438 - 3.463x + 0.449x ²		
2300	GR2348+15		234842.0+160210	235114.9+161851	-44.17	-0.98	-0.98	-0.98	+2.916 - 0.979x	O	4C+16.84, PKS 2348+160
2301	GR2349+07		234818.4+071617	235051.8+073258	-52.35	-0.86	-0.48	-0.27	-1.678 + 0.002x + 11.168e ^{-x}		
2302	ID2		234937.0+075809	235210.4+081450	-51.82	-1.51	-1.51	-1.51	+3.579 - 1.506x		
2303	GR2349-01		234922.6-012606	235156.4-010925	-60.37	-0.80	-0.63	-0.47	+3.549 - 1.534x + 0.144x ²	O I	PKS 2349-014
2304	GR2349-04		234855.8-041847	235129.8-040206	-62.83	-0.98	-0.92	-0.86	+3.069 - 1.249x + 0.053x ²		PKS 2348-043
2305	GR2350+06		235021.1+054352	235254.7+060033	-53.96	-0.86	-0.86	-0.86	+2.734 - 0.863x	O	4C+05.86, PKS 2350+057
2306	GR2352-06		235106.6-053058	235340.6-051416	-64.14	-1.01	-0.84	-0.68	+3.671 - 1.757x + 0.145x ²		
2307	GR2355+14		235445.1+142925	235718.6+144607	-46.09	-0.89	-0.89	-0.89	+2.837 - 0.887x	O	4C+14.85, PKS 2354+144 PKS 2353+154
2308	GR2355+15		235320.2+152445	235553.5+154126	-45.11	-0.80	-0.59	-0.40	+3.590 - 1.708x + 0.177x ²		
2309	ID2		235423.8+155542	235657.2+161224	-44.69	-1.69	-1.94	-2.17	+2.825 - 0.602x - 0.212x ²		
2310	GR2355+19		235456.8+185845	235730.2+191527	-41.81	-1.04	-0.96	-0.89	+3.361 - 1.377x + 0.066x ²	O	4C+19.78
2311	ID2		235604.2+191828	235837.6+193510	-41.57	-1.08	-0.93	-0.78	+3.714 - 1.764x + 0.133x ²		
2312	ID3		235640.5+190739	235914.0+192421	-41.78	-1.02	-0.76	-0.51	+3.983 - 2.153x + 0.222x ²		
2313	GR2355-02		235431.9-024318	235705.7-022636	-62.10	-0.93	-0.93	-0.93	+2.793 - 0.930x	O	PKS 2354-027
2314	ID2		235629.7-025222	235903.5-023540	-62.45	-1.05	-0.88	-0.73	+3.655 - 1.783x + 0.143x ²	O	PKS 2356-028
2315	GR2358+08		235839.7+080306	000113.5+081949	-52.51	-1.03	-0.86	-0.69	+3.714 - 1.802x + 0.150x ²		
2316	ID2		235841.7+082956	000115.5+084638	-52.09	-1.04	-0.93	-0.81	+3.485 - 1.561x + 0.101x ²		

4. Spectra

Characteristics of the main catalogues used in the identification process are given in Table 2.

In Table 2 the following references are provided for acronyms:

6C	Hales et al., 1993a, b,
7C	McGilchrist et al., 1990,
87GB	Gregory et al., 1991,
B3	Ficarra et al., 1985,
GB6	Gregory et al., 1996,
MSL	Dixon, 1970,
MY	Zhang et al., 1997,
PMN	Wright et al., 1996,
TXS	Douglas et al., 1996,
WB92	White et al., 1992.

Table 2: Characteristics of basic catalogues used in radio identification

Name	Freq.	HPBW(')	S_{lim} (mJy)
6C	151	4.2	~200
7C	151	1.2	80
MY	232	3.8	~100
TXS	365	~0.1	~200
B3	408	3×5	100
WB92	1400	10×11	150
87GB	4850	3.7	25
GB6	4850	3.7	15
PMN	4850	4.2	30
MSL	misc.	misc.	misc.

We cleaned spectra with the programme *spg* (Verkhodanov, 1997) using the methods also described in the paper by Verkhodanov et al. (2000). For the radio-identified UTR objects we derived spectral indices at three frequencies from the spectra of best fitting. Distributions of these spectral indices at 85, 365 and 1400 MHz are shown in Fig. 3. The fraction of flat spectra clearly increases with frequency, consistent with the presence of a large number of concave spectra. The distribution of radio spectra among the different spectral types is shown in Table 3 for all 2306 radio counterparts to UTR sources.

Table 3: Distribution of spectral types

Spectral class	Fitting function	Number	%
Straight spectra	$+A + Bx$	898	39
Convex (C^+)	$+A \pm Bx - Cx^2$	184	8
Concave (C^-)	$+A - Bx + Cx^2$	1147	50
	$\pm A \pm Bx + Ce^{-x}$	77	3

From the best-fitting spectra of UTR sources we calculated spectral indices at three frequencies (see Table 1 and Fig. 3). The behaviour of integrated spectra of radio sources in the decametre range has been investigated, for instance, by Sokolov (1996), who also considered the spectra of UTR sources, though without account for blending, i.e. based on a single radio identification per UTR source. The fact that for the radio-identified UTR sources the spectral index distribution shows steeper spectra at lower frequency is likely to be due to two effects. One is the blending of various unrelated sources at decametric frequencies, and the other is the fact that the UTR instrument, working at low frequencies and low angular resolution, is more sensitive to extended regions of radio galaxies (“lobes”) which tend to have a steeper spectrum than the overall source (Miley et al., 1980).

5. Cross-identification with non-radio source catalogues

We used the “precise” coordinates of Table 1 for cross-identifications with optical and mixed catalogues like VV8AG, MCG, PGC, Dixon’s Master Source List (MSL) and other non-radio catalogues of the CATS database. The result of cross-identification within a circle of $10''$ is given in Table 4. Note that our data tables are based only on catalogue information within CATS, but do not include information contained in NED or SIMBAD. We plan to improve our identifications in future by an additional use of these databases.

 Table 4: Result of search for optical counterparts within a radius of $10''$ in the CATS optical catalogues

Name	Optical counterparts
GR0002+12	VV83 0002+12
GR0003+15	MSLO BC 4C15.01 (16.4), QSO2 (15), VV8Q PKS 0003+15
GR0003-00	MSLO BC 3C 2 (19.3)
GR0004+05	VV83 (19.5)
GR0004-05	VV83 NRAO 7 (19)
GR0010-00	VV83 PKS 0010+00
GR0010+05	VV83 OTL 0011+054 (16.5)
GR0011+11	VV83 0012+111
GR0014+06	VV83 OTL 0015+064
GR0014+13	VV83 0013+132 (20.5)
GR0014+13 (ID2)	VV83 0014+13
GR0015+17	MSLO BC PKS0015+17 (18)
GR0018+15	MSLO BC 3C 9 (18.2), VV83
GR0019+06	VV83 PKS 0019+058 (19.5)
GR0019+43	VV83 B0019+4311 (19.5)
GR0023+19	VV83 0022+192
GR0025-00	VV83 PKS 0025-007 (19.1)
GR0031+02	VV83 PKS 0029+01
GR0031+06	VV83 PKS 0030+06
GR0033+08 (ID2)	VV83 OTL 0033+079 (18.5)
GR0033+08 (ID3)	VV83 0034+077
GR0034+12	VV83 PKS 0035+121 (16.5)
GR0034+18	VV83 3C 14.0 (20)
GR0035-01	VV83 3C 15.0 (18), PGC 2213
GR0035+50	VV83 B0035+5018 (18.6)
GR0036-02	3C 17.0, QSO1 0035-024 (18.02)
GR0037+05	VV83 PKS 0037+04
GR0038+09	VV83 3C 18.0 (18.5), QSO1 4C 09
GR0039+51	VV83 3C 20.0 (19)
GR0040+12	VV83 0040+125 (19)
GR0040+46	VV83 B0040+4700 (18.9)
GR0042+13	VV83
GR0043-00	VV83 PKS 0043+000
GR0048-02	VV83 0047-029
GR0049+07	VV83 OB 081
GR0051+17 (ID2)	VV83 0051+164
GR0054+08	VV83 OTL 0054+090
GR0055+09	VV83 OTL 0054+090
GR0058+47	VV83 B0059+4732 (17.8)
GR0100+18	VV83 (20)
GR0100+46	VV83 B0059+4608
GR0101+42	VV83 B0103+4213 (21)
GR0104+06	VV83 PKS 0103+06 (17)
GR0106+01	VV83 PKS 0106+01, QSO2, LBQ56 0106+0119 (18.34)
GR0106+12	VV83 3C 33.0 (20)
GR0109+17	MSLO BC PKS0109+17 (18), QSO2
GR0109+41	VV83 (15.7)
GR0115+02	VV83 OC 024
GR0115+45	VV83 3C 36.0 (19), QSO1
GR0119+03	VV83 3C 39 (18.5), QSO2
GR0124+09	VV83 PKS 0124+099
GR0129+06	3C 44
GR0131+46	VV83 B0130+4642
GR0131-00	VV83 PKS 0131-001
GR0132+08	VV83 3C 45 (20)
GR0135-08	PGC 6004 (13.4), GSC 5277.1678 (14.33)
GR0137-01	VV83 0135-020
GR0140+09 (ID2)	VV83 0141+095A
GR0140-01	VV83 PKS 0140-015 (19.5),
GR0142-03	VV83 0140-030
GR0142-03 (ID2)	VV83 0141-039
GR0145+43 (ID2)	VV8Q 4C 43.05
GR0145+53	3C 52
GR0146+06 (ID2)	VV83 0147+062
GR0147+13	VV83 OTL 0146+133 (19.5)
GR0148+16	VV83 OTL 0147+160
GR0150-03	VV83 0150-038, MRC 0150-038
GR0152+05	MSLO IC 1751
GR0152+43	VV83 3C 54.0, QSO1 B0152+4331 (22)
GR0154+41	VV83 B0153+4147 (19.7), VV8Q 4C 41.02
GR0156+12	VV83 OTL 0156+126
GR0156-11	MSLO BC PKS0155-10 (17), QSO2
GR0158+01	VV83 PKS 0157+01 (19.4), QSO2
GR0200-11	MSLO 3C 57 (16.4), QSO2, VV83 (17.5)
GR0205-10 (ID2)	VV8Q 1WGA J0210.0-1004
GR0209+07	VV83 0209+071
GR0213+17	VV83 B0213+1752 (19.5)
GR0215+42	VV83 B0216+4219
GR0217+01	UCGC 01797, MCG+00-07-003 (15.2)
GR0218+11	VV83 0218+111
GR0219+08	VV83 3C 64 (19)
GR0220+05 (ID2)	VV83 PKS 0221+067, QSO2
GR0225+46	VV83 B0226+4646 (19.7)
GR0229+17	VV83 MC3 0228+174 (16.5)
GR0231+13	VV83 0233+138
GR0232-03	VV83 0230-035
GR0232-03 (ID2)	VV83 PKS 0232-04 (17.7), QSO2, MSLO BC 4C-04.06 (16.4), 3C 69, GAVZ1 G136.21-0.90
GR0234+58	PGC 10217 (14.5), GAVZ1 G136.50-0.33
GR0238+58	PGC 10266 (9.7), VV83 3C 71 (8.9),
GR0240-00	

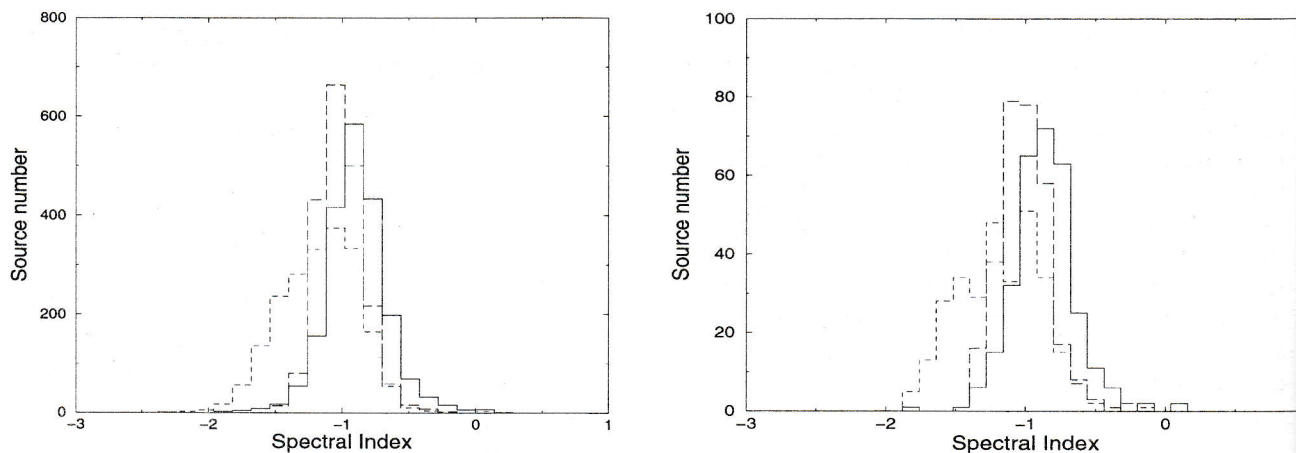


Figure 3: Distributions of spectral indices of radio-identified sources at frequencies 80 MHz (short-dashed), 365 MHz (long-dashed) and 1400 MHz (solid lines) for 2006 sources with $|b| > 10^\circ$ (left) and for 301 sources near the Galactic plane ($|b| \leq 10^\circ$).

Table 4: Result of search for optical counterparts within a radius of $10''$ in the CATS optical catalogues (continued)

Name	Optical counterparts
	QSO1 0240-002 (10.83), UCGC 2188
GR0242+00	VV8Q PKS 0243+009, QSO2
GR0247+46	UCGC 02298, PGC 10729 (13.9)
GR0249+15	VV8Q J0251+1550, QSO2
GR0251+00	VV83 0251+008
GR0254+46	VV83 0255+4604 (19.9), VV8Q 4C 46.07
GR0256+17	VV83 AO 0255+17
GR0256+13	PGC 11256, VV83 PKS 0255+13(16.2)
GR0305+03	VV83 3C 78 (14.8), NGC 1218, UCGC 2555
GR0309+43	VV83 0307+44 (19.5), VV8Q 4C 44.07
GR0307+17	VV83 3C 79 (18), QSO1 4C 16.07
GR0312+10	VV83 PKS 0312+100 (19.5)
GR0313-03	VV83 PKS 0312-034 (18.5), QSO2
GR0316+41	PERSEUS A, NGC 1275, MKN 1505 ZWG 540.103, VV83 3C 84 (13.2), QSO1, PGC 12429, UCGC 2669
GR0323+06	VV83 0323+054 (19)
GR0323-03	VV83 0322-035
GR0324+54	GA-VZ1 G143.89-1.06
GR0325+02	UCGC 2748, VV83 3C 88(13), QSO1 4C 02.10
GR0330+08	VV83 PKS 0332+078
GR0330+43	VV83 B0330+4322 (19.6), VV8Q 4C 43.10
GR0331+11	VV83 0330+115
GR0332-01	PGC 13215
GR0334+50	VV83 3C 91 (18.5)
GR0340+04	VV83 3C 93 (18.1), QSO2
GR0341+17	VV83 0339+174
GR0344+12	VV83 0344+120
GR0345+19 (ID2)	VV83 OTL 0345+195
GR0347+05	VV83 PKS 0347+05
GR0348+13	VV83 PKS 0347+13 (19)
GR0349+17	VV83 0351+172
GR0352+03	VV83 PKS 0353+027(19.1), QSO1
GR0352+12	QSO2 0352+123 (19.31), 4C 12.17, VV8Q PKS 0353+12
GR0356+14	VV83 0356+144
GR0356+51	VV83 0355+508
GR0356-02	VV83 PKS 0357-022
GR0400+06	VV83 0359+055
GR0405+03	VV83 3C 105
GR0409+16	VV83 PKS 0408+171 (17.5; 19)
GR0410-01	VV83 3C 107, QSO1 0409-011 (22)
GR0415-06	VV83 3C 110(16), QSO2 MSLO PKS0414-06,
GR0417+17	VV83 3C 114, QSO1 0417+177 (22)
GR0419+15	VV83 0418+15
GR0420+41	VV83 0420+41
GR0420+41 (ID2)	VV83 B0422+4120
GR0421+00 (ID2)	VV83 0421+004
GR0421+00 (ID2)	VV83 PKS 0422+00 (17), QSO2
GR0428+01	VV83 0428+011

Table 4: Result of search for optical counterparts within a radius of $10''$ in the CATS optical catalogues (continued)

Name	Optical counterparts
GR0430+19	VV83 0430+188
GR0430+05	PGC 15504 (15), VV8AG 3C 120, QSO1 4C 05.20, ZW 14, MKN 1506, UCGC 03087, MCG1-12-9
GR0432+03	VV83 0432+034
GR0432+03 (ID2)	VV83 0433+034
GR0442+02	VV83 PKS 0442+027 (20.4)
GR0443+05	VV83 0443+058
GR0443+15	VV83 0442+150
GR0444+17 (ID2)	VV83 0446+176
GR0448-04	VV83 0448-046
GR0453-00	VV83 PKS 0453-00 (20.2)
GR0455+51	VV83 OF 594 (15)
GR0458+01	VV83 PKS 0458+014 (18.5)
GR0507-07	VV83 PKS 0508-076
GR0510+11	VV83 0510+123
GR0515+50	VV83 3C 137
GR0518+19	VV83 OTL 0519+196
GR0522+07	VV83 PKS 0521+07
GR0523+11	VV83 0523+116
GR0526+15	VV83 0526+152
GR0529+06	QSO1 0528+064 (21), 3C 142.1 (19.4)
GR0531+04	VV83 0531+050
GR0532+51	VV83 0533+512
GR0534-02	VV83 PKS 0534-03 (20.9)
GR0538+49	VV83 3C 147 (17.8), QSO2
GR0557+52	VV83 B0556+5226
GR0603+54	VV83 B0603+5423
GR0604+48	VV83 3C 153 (18.5), QSO1
GR0608+46	VV83 B0609+4644 (18.7)
GR0613+45	VV83 OH 425
GR0613+52	VV83 B0615+5257 (19.9)
GR0614+54	VV83 3C 155
GR0615+57	VV83 0615+578 (18)
GR0619+14	VV83 3C 158
GR0627+50	VV83 OH 548.3 (15.5)
GR0627+50 (ID2)	VV83 OH 542 (20.5)
GR0628+42	VV83 B0628+4216
GR0628+58	VV83 B0628+5855 (19.6)
GR0629+46	VV83 B0630+4656
GR0631+44	VV83 0631+444 (17.9)
GR0634+51	VV83 B0635+5108
GR0634+54	VV83 B0632+5504 (19.9)
GR0636+49	VV83 0635+496
GR0639+59	VV83 B0639+5958
GR0644+17	VV83 0643+173
GR0646+41	VV83 0647+415
GR0647+45	VV83 3C 169.1(20.9), QSO1 4C+45.12
GR0648+48	VV83 B0649+4835 (18)
GR0656+17	VV83 0657+172 (18.5)
GR0656+54	VV83 B0656+5419 (18.8)
GR0700+50	VV83 B0700+5034
GR0704+50	VV83 B0703+5005
GR0705+19	VV83 0706+199
GR0711+45	VV83 B0710+4545

Table 4: Result of search for optical counterparts within a radius of 10'' in the CATS optical catalogues (continued)

Name	Optical counterparts
GR0712+14	VV83 3C 175.1(18.21), QSO1 0711+1441 (21.5)
GR0711+53	VV83 OI 521 (14), PGC 20561
GR0717+19	VV83 OTL 0717+195 (18)
GR0719+54	VV83 B0719+5401
GR0721+15	VV83 B0721+1519
GR0722+12	VV83 0721+128
GR0722+12 (ID2)	VV83 0722+127
GR0725+04	VV83 0725+043
GR0725+14	VV83 3C 181.0 (18.9), QSO2
GR0726+43	VV83 0726+431 (18.5), QSO2
GR0727+17	VV83 0727+177
GR0728+15	VV83 PKS 0727+15 (19.5)
GR0729+52	VV83 B0729+5200
GR0732+43	VV83 B0731+4350
GR0735+51	VV83 B0736+5132
GR0739-00	VV83 0738-009
GR0746+11	VV83 0745+118
GR0740+47	VV83 B0740+4725
GR0746-00	VV83 0745-007
GR0747+16	VV83 OTL 0748+164 (21)
GR0750+45	VV83 0749+460 (14.4)
GR0755+03	VV83 0755+029
GR0758+14	VV83 3C 190 (19.5), QSO2
GR0758+50	VV83 0757+503
GR0801+46	VV83 B0800+4713 (20)
GR0802+10	VV83 3C 191 (18.4), QSO2
GR0803+16	VV83 PKS 0802+163
GR0803-00	VV83 3C 193 (15.9)
GR0805+04	MSLO BC 4C05.34 (18.1), QSO2
GR0805+42	VV83 3C 194 (20), QSO1
GR0809+48	VV83 3C 196 (17.6), QSO2
GR0810-05	VV83 PKS 0809-057
GR0812+59	VV83 B0812+5859
GR0813+01	VV83 PKS 0812+02 (18.5), QSO2
GR0813+18	VV83 0812+178 (19)
GR0813-02	VV83 3C 196.1 (18.5; 17.5), QSO1
GR0815+52	VV83 B0816+5241 (19.3)
GR0818+10	VV83 0818+099 (20)
GR0818+47	VV83 3C 197.1 (16.5), PGC 23450
GR0821+44	VV83 B0821+4446 (18.1), QSO2
GR0822+15	VV83 0822+151
GR0823+56	VV83 OJ 535 (18)
GR0827+08	VV83 PKS 0827+079
GR0827+19	MSLO 4C19.30 (17), VV83, QSO2
GR0827+45	VV83 B0827+4553
GR0828-02	VV83 PKS 0828-035
GR0829+51	VV83 B0829+5113 (20)
GR0830+14	VV83 OTL 0832+143 (20), VV8AG 4C 14.27
GR0830+42 (ID2)	VV8Q B3 0829+425
GR0835+55	VV83 0831+5544(19), QSO1, VV8AG 4C 55.16
GR0835+58	MSLO 3C 205 (17.6), VV83, QSO2
GR0837+50	VV83 B0835+5034
GR0840+07	VV83 0840+075
GR0847+10	VV8AG PKS 0846+10
GR0848+42	VV83 0849+4226 (18.5), VV8Q 4C 42.27
GR0850+58	VV83 0850+581A (18), QSO2, VV8Q 4C 58.17
GR0851+14	MSLO BC 3C 208 (17.4)
GR0851+14 (ID2)	QSO1 0851+1417 (20.85), QSO2, VV8Q 3C 208.1
GR0851-03	VV83 PKS 0850-034
GR0852+07	VV83 PKS 0851+071 (18.5)
GR0853+12	VV83 OTL 0852+124
GR0855+10	VV83 0854+100
GR0855-03	VV83 PKS 0854-034 (19.1)
GR0858+45	VV83 B0858+4512
GR0859+50	VV83 B0900+5024
GR0901+47	VV83 OJ 499 (19.5), QSO2 VV8Q 4C 47.29,
GR0901+47	VV83 0901+474
GR0903+41	VV83 B0904+4147 (20.6)
GR0904+17	MSLO 3C 215 (18.2), QSO2, VV83 3C 215 (18.3),
GR0905+42	MSLO BC 3C 216 (18.4), QSO2 VV83 3C 216.0 (18.5),
GR0907+54	VV83 B0906+5439(17.5), QSO2
GR0909+52	VV83 B0908+5253
GR0911+17	VV83 PKS 0911+17 (18)
GR0912+10 (ID2)	VV83 OTL 0912+105
GR0913+58	VV83 B0913+5851
GR0915+49	VV83 B0914+5016
GR0915-02	VV83 PKS 0913-025 (18.5), QSO2
GR0915-11	VV83 3C 218 (14.8)
GR0919+08	VV83 0919+086
GR0919+53	VV83 0919+532
GR0922+14	VV83 PKS 0922+14 (17.9), QSO2

Table 4: Result of search for optical counterparts within a radius of 10'' in the CATS optical catalogues (continued)

Name	Optical counterparts
GR0922+42	VV8Q 4C 42.29
GR0922+42 (ID2)	VV8Q B3 0922+422
GR0926+11	VV8Q 4C 11.32, QSO2 0926+117
GR0927+59	VV83 B0927+5908
GR0928+06	VV83 0927+064
GR0928+10	VV83 0928+101
GR0932+54	VV83 B0932+5453
GR0933+02	VV83 PKS 0932+022
GR0939-01	VV83 PKS 0938-01 (21.1), QSO1 0938-014 (20.7)
GR0940+14	QSO1 3C 225.0B (20.5), QSO1
GR0942+10	QSO1 B0941+1000 (19.5), QSO1, VV8AG 3C 226,
GR0942+12	VV83 OTL 0943+123 (20), VV8Q 4C 12.35
GR0945+42	VV83 B0945+4155
GR0947+12	VV83 0948+124
GR0947+14	VV83 3C 228 (20.5), QSO1
GR0949+53	VV83 B0949+5327 (20)
GR0950-00	3C 230, QSO1
GR0951+09	VV8Q 4C 09.35, QSO2
GR0953+55	VV83 B0954+5506
GR0954+16	VV83 B0954+1621 (20)
GR0956+47	VV83 B0956+4735
GR1000+20	VV83 PKS 1000+20 (16.5)
GR1000+55	PGC 29050 (11.5), UCGC 05387, VV8AG NGC 3079
GR1004+59	VV83 B1004+5922 (19.6)
GR1005+07	VV83 3C 237
GR1007+41	VV83 B1007+4147 (16.5)
GR1008-07	VV83 PKS 1007-07 (18.5)
GR1009+06	VV83 3C 238 (22.5), QSO1
GR1011+54	VV83 B1011+5413 (19.9)
GR1014+10	VV83 PKS 1013+099 (18)
GR1021+02	VV83 PKS 1021+028 (19)
GR1022+19	VV83 3C 242 (22.5)
GR1023+06	VV83 3C 243 (18), QSO2
GR1022+43	VV83 B1022+4312
GR1025+07	VV83 OTL 1024+078 (19)
GR1028+52	VV83 B1028+5241 (17.2)
GR1030+58	VV83 3C 244.1 (19), QSO1
GR1032+11	VV83 PKS 1031+114
GR1038+50	VV83 B1039+5029
GR1039+03	VV83 PKS 1039+029
GR1040+12	VV83 3C 245(18), MSLO(17.2), QSO2
GR1041+06	VV83 OTL 1041+058 (19.5)
GR1042+53	VV8Q RXS 110456+52
GR1046+15	VV83 1046+157 (16)
GR1048+08	VV83 1047+084
GR1048+09	VV8Q 4C 09.37, QSO2
GR1048+55 (ID2)	PGC 32587 (15.2)
GR1053+02	VV83 OTL 1052+023 (16)
GR1053+03	VV83 PKS 1051+035 (20.2)
GR1055+43	VV83 3C 247 (18.8; 19.7), QSO1 1056+432 (21.5)
GR1055+58	VV83 OL 592 (19.8)
GR1059-00	3C 249.0
GR1100+11	VV83 1101+113
GR1101+59	VV83 B1101+5940
GR1103+56	VV83 1104+56W1 (22.5)
GR1104+05	VV8Q 4C 05.48
GR1105+16	QSO2 1104+167 (16), VV8Q MC 1104+167
GR1105-03	VV83 PKS 1105-028 (19.5)
GR1112-01	VV83 PKS 1110-01 (20.1)
GR1112-03	VV83 PKS 1110-01 (20.1)
GR1112-03 (ID2)	VV83 PKS 1115-023 (20.6)
GR1113+59	VV83 OM 522.3
GR1123+19	VV83 3C 258 (19.5), PGC 35065, QSO1 4C 19.38
GR1126+10	VV83 1126+104
GR1126+58	MARK 171 (11.8), UCGC 06472, PGC 35325,35326 (12.1)
GR1126-06	VV83 PKS 1126-067
GR1127-04	VV83 PKS 1128-047 (20)
GR1130+50	VV83 OM 551 (19)
GR1136+46	VV83 B1135+4624
GR1139+05	VV83 PKS 1138+05
GR1139+58	VV83 B1140+5824 (19.6)
GR1141+46	VV83 B1141+4638 (14.9)
GR1142+19	VV83 3C 264 (13.3)
GR1142+59	VV83 3C 266
GR1149+47	QSO2 1148+477, VV8Q 4C 47.33
GR1149-05	VV83 OTL 1148-050 (19)
GR1150+49	VV83 OM 184, VV8Q LB 2136, QSO2 1150+497,
GR1150+51	VV83 3C 268
GR1152+04	VV83 PKS 1152+046 (19)
GR1152+55	VV83 1156+54W1
GR1152+58	VV83 B1153+5903 (18.4)

Table 4: Result of search for optical counterparts within a radius of 10" in the CATS optical catalogues (continued)

Name	Optical counterparts
GR1155+19	VV83 OM 191 (20)
GR1158+57	PGC 37981
GR1200-10	VV83 PKS 1159-10 (18.5), QSO1 1159-104 (17)
GR1202+48 (ID2)	VV83 4CP 48.33.A (19.9)
GR1202+52	VV83 4C 52.25
GR1206+43	VV83 3C 268.4 (18.4), QSO2
GR1207+46	VV83 B1207+4634 (18;20.9)
GR1208+51	VV83 1208+51W1 (19)
GR1210+19	VV83 PKS 1210+197 (18.5), QSO2
GR1212+53	VV83 B1213+5352 (18), QSO2, VV83 4C 53.24
GR1214-03	LCRS B1215-0320 (18.35)
GR1219+50 (ID2)	VV83 4CP 50.33A (16)
GR1224-08	VV83 OTL 1224-085
GR1226+02	MSLO 3C 273 (12.8), PGC 41121
GR1228+12	UCGC 07654, VV83 3C 274(8.7), LBQS6 1229-0207, PGC 41361(9.6), MCG+02-32-105 (10.4), QSO2, ZWG 070.139
GR1228-02	MSLO PKS1229-02 (17.2), NGC 4486
GR1231-07	VV83 OTL 1230-083
GR1235+53 (ID2)	VV83 B1234+5310
GR1245+19	VV83 ON 176 (18), QSO2 1245+189
GR1245+41 (ID2)	VV83 1247+41W1
GR1248+50	3CR 277, QSO1
GR1249+52	VV83 B1249+5301
GR1250+03	VV83 PKS 1249+035 (16.8)
GR1251-11	LCRS B1249-1141 (17.82)
GR1254-05	VV83 3C 279 (16.8; 17.8), QSO2
GR1256+44	VV83 B1255+4451 (18.5)
GR1302+19	VV83 PKS 1303+192 (20)
GR1303+53	VV83 B1302+5406 (19.6)
GR1304+46	VV83 WKB1304/46.8
GR1305+06	VV83 3C 281 (17), QSO2
GR1305-09	VV83 PKS 1306-09 (19)
GR1307+00	VV83 PKS 1307+000 (20.8)
GR1316-00	VV83 QPKS 1317-005, QSO2 LBQS6 1317-0033 (18.21),
GR1316+51	MSLO 4C 52.27 (17), VV83 OP 530
GR1317+01	VV83 PKS 1317+019 (20.7)
GR1319+11	VV83 PKS 1318+113 (19.2), QSO2, MSLO 4C11.45 (19.1)
GR1322+59	VV83 B1322+5923
GR1325-01	VV83 PKS 1325-01 (18.3)
GR1325-02 (ID2)	VV83 PKS 1325-01 (18.3)
GR1328+47	PGC 47404(8.9), UCGC 08493, VV8AG NGC 5194
GR1328+50	VV83 1329+5023
GR1330+02	VV83 3C 287.1
GR1336-05	VV83 PKS 1335-06 (17.7), QSO2
GR1338+47	VV83 B1339+4712 (19.2), VV8AG 4C 47.38
GR1339+12	VV83 OP 167
GR1342+49	3C 289, QSO1 1343+500 (23)
GR1344-07	VV83 1344-078
GR1351+57	MSLO BC 4C 58.29 (13), QSO2, VV83 OP 594 (16)
GR1352+16	VV83 3C 293.1 (19), QSO1
GR1355+03	VV83 1353+036 (19)
GR1355+19	VV83 PKS 1354+195 (16.2), QSO2
GR1358+43	VV83 1358+433
GR1359+53	VV83 B1358+5351 (19.9)
GR1400+12	VV83 1359+125
GR1405+10	VV83 PKS 1405+10
GR1405-01	VV83 PKS 1404-01 (19.5)
GR1408+17	VV83 1407+178
GR1409+15	VV83 MC3 1408+155 (18.5)
GR1409+15 (ID2)	VV83 MC3 1410+154
GR1409+52	VV83 3C 295(21.5), QSO1 4C 52.30(20.2)
GR1410+52	VV83 3C 295(21.5), QSO1 4C 52.30(20.2)
GR1411+08	VV83 OQ 020
GR1414-03	VV83 3C 297, QSO1 1414-0346(21.9)
GR1417+06	VV83 3C 298 (16.8), QSO2
GR1424+54	VV83 B1426+5437
GR1425+03	VV83 PKS 1426+030 (18.9)
GR1426-01	3C 300.1, QSO1 1425-011 (23)
GR1427+54	VV83 B1426+5437
GR1427+54 (ID2)	VV83 OQ 546 (19.8)
GR1429+45	VV83 OQ 446
GR1429+52	VV83 B1428+5230 (19.6)
GR1429+57 (ID2)	UCGC 09358
GR1433+17	VV83 MC3 1433+177 (17.5), QSO2
GR1434-07	VV83 QPKS 1434-076
GR1435+03	VV83 PKS 1434+036
GR1437+42	VV83 1437+427
GR1437+46	MSLO REIZ 4270 (14.4)
GR1440+52	VV83 Q NEAR 3C 303, QSO2

Table 4: Result of search for optical counterparts within a radius of 10" in the CATS optical catalogues (continued)

Name	Optical counterparts
GR1441+52	VV83 Q NEAR 3C 303, QSO2
GR1443+41	VV83 4C 41.28
GR1445+17	VV83 PKS 1444+17
GR1445+17 (ID2)	VV83 MC3 1446+177 (18)
GR1451+53	VV83 B1448+5332
GR1452+05	VV83 1453+051 (20)
GR1452+50	VV83 3C 308
GR1453-10	VV83 PKS 1453-109 (18)
GR1454+42	VV83 1455+421 (20)
GR1454-05B	VV83 PKS 1454-060 (18.6), QSO2
GR1501-00	VV83 PKS 1503-001 (19.5)
GR1502+57	VV83 B1500+5709
GR1506+01	VV83 PKS 1505+012 (17.5)
GR1508+05	VV83 PKS 1508+059(14), UCGC 9752
GR1510+15	VV83 PKS 1509+158 (18; 17), QSO2
GR1510+15 (ID2)	VV83 B1511+1553
GR1510+44	VV83 1509+446 (19.5)
GR1511-08	VV83 PKS 1510-089 (16.7), QSO2
GR1512+04	VV83 1511+045 (20)
GR1514+00	VV83 PKS 1514+004 (15.6), QSO1 1514+004 (16.5)
GR1515+07	VV83 3C 317 (13.5), MCG1-39-12, UCGC 09799
GR1517+46	VV83 B1517+4629 (20)
GR1519+07	VV83 3C 318.1
GR1521+04	VV83 1520+041 (19)
GR1521+54	VV83 3C 319 (18.5; 18.9)
GR1522+42	VV83 1521+421 (17)
GR1534+46	VV83 AG *Q 1534+4637
GR1536+57	VV83 B1536+5724 (19.2)
GR1537+55	VV83 3C 322 (20.9), QSO1 1533+557 (23)
GR1543+51 (ID2)	VV83 Q S4 1543+51
GR1544+01	VV83 PKS 1543+01 (18.5)
GR1545+46	VV83 B1543+4632 (20)
GR1545+48	VV83 B1546+4844 (19.7)
GR1549+11	VV83 1548+118A (16.9)
GR1554+43	VV83 B1554+4305
GR1555+45	VV83 B1555+4531
GR1600+15	VV83 OR 198.5 (18; 20), PGC 56705
GR1600+06 (ID2)	VV83 B1559+0623 (17.5)
GR1602+44	VV83 B1602+4431
GR1602+52	VV83 1601+528A (15.5)
GR1601+49 (ID2)	VV83 B1602+4935 (18)
GR1603+00	VV83 PKS 1603+001 (16.5)
GR1608+41	VV83 1606+412 (19.5)
GR1611+04	VV83 1611+042 (20)
GR1613+12	VV83 OS 124
GR1617+17	VV83 3C 334 (16.4), QSO2
GR1619+43	VV83 B1618+4322 (19.9)
GR1624+41 (ID2)	VV83 OS 440, VV83 4C 41.32, QSO2
GR1625+58	VV83 Q 87GB 16257+58
GR1629+06	VV83 1628+061
GR1635+15	VV83 MC3 1635+159 (19), QSO2
GR1635+57	VV83 OS 562 (17)
GR1636+10	VV83 PKS 1635+106
GR1636+10 (ID2)	VV83 OS 162
GR1637+47 (ID2)	VV83 1636+473 (17.5), QSO2 VV83 4C 47.44,
GR1642+17	VV83 3C 346, PGC 58857
GR1649+19	QSO1 B1641+1721 (17.2), VV83 OS 181.2 (19.5)
GR1650+02	PGC 59186 (13.8), NGC 6240, UCGC 10592
GR1651+49	VV83 1652+497
GR1654+45	VV83 B1656+4518 (19.9)
GR1657+48	VV83 B1656+4813 (19.8)
GR1658+17	VV83 MC3 1658+171
GR1658+57	VV83 B1658+5735 (17.9), QSO2 VV83 4C 57.29,
GR1659+06	VV83 1659+065
GR1659+50	VV83 B1700+5052
GR1704+57	VV83 B1705+5717
GR1709+46	VV83 3C 352 (20; 21), QSO1 1709+460 (22.8)
GR1717+06	VV83 B1718+0624
GR1719+18	VV83 3C 354
GR1720+07	VV83 1720+073 (20)
GR1724+47	VV83 B1723+4708 (19.8)
GR1728+49	VV83 B1729+5009 (17.7)
GR1732+16	VV83 MC3 1732+160 (18.5), QSO2, VV83 QPKS 1732+160
GR1737+42	VV83 B1737+4249
GR1738+06	VV83 1739+060 (18)
GR1738+50 (ID2)	VV83 OT 463 (19), QSO2
GR1739+17	VV83 PKS 1739+173 (18)
GR1739+41	VV83 B1738+4137
GR1742+59	VV83 B1742+5918 (18.4)
GR1744+07	VV83 1745+088
GR1747+16	VV83 MC3 1745+163 (17.6), QSO2

Table 4: Result of search for optical counterparts within a radius of $10''$ in the CATS optical catalogues (continued)

Name	Optical counterparts
GR1747+59	VV83 3C 363 (18.8)
GR1750+43 (ID3)	VV83 1751+44 (19.5), QSO2
GR1752+44	VV83 B1752+4506
GR1752+51	VV8Q TEX 1750+509
GR1754+16	VV83 OT 192 (20)
GR1803+10	VV83 3C 368 (22; 21.6), QSO1
GR1805+48	VV83 B1806+4828
GR1805+57	VV83 B1807+5720
GR1812+42	UCGC 11185b
GR1812+43	VV83 OU 420 (19.6;20.5), VV8Q 4C 43.48
GR1817+50	VV83 B1817+5029 (18.6)
GR1820+12 (ID3)	VV83 OU 139 (17)
GR1820+17	VV83 PKS 1820+17 (18.5)
GR1823+57	VV83 3C 378
GR1828+48	VV83, MSLO BC 3C 380 (16.8), QSO2
GR1843+09	VV83 3C 390
GR1858+57	VV83 B1857+5641 (17.3), QSO2, VV8Q 4C 56.28
GR2021+10	VV83 3C 411 (20), QSO1 (19.7)
GR2025+15	VV83 PKS 2024+154 (19.5)
GR2028+08	VV83 2029+078
GR2046+07	PGC 65411, VV83 3C 424 (18.4), QSO1
GR2101+13 (ID2)	VV83 2101+139 (19)
GR2116+17	VV83 2116+180
GR2122+05	VV83 B2122+0515 (20)
GR2127+07	VV83 3C 435 (19.5)
GR2131+15	VV83 PKS 2129+154
GR2144+08	VV83 OX 071
GR2146+15	VV83 3C 437, QSO1 2145+1506 (23)
GR2151+17	VV8Q TEX 2152+172
GR2152+14	VV83 2152+144
GR2157-04	VV83 2156-043
GR2200+06	VV83 OY 001.5
GR2208+05 (ID2)	VV83 2210+058
GR2210+08	VV83 PKS 2209+08 (18.5), QSO2
GR2217+08	QSO2 2217+087, VV8Q TEX 2217+087
GR2222+05	VV8Q PKS 2222+051, QSO2
GR2224-05	VV83 3C 446 (18.4), QSO2
GR2224-05 (ID2)	VV83 OTL 2225-055 (19.5)
GR2227+08	VV83 PKS 2226+08 (18.5)
GR2237-04	VV83 2236-047
GR2244-03	VV83 PKS 2243-032 (19), QSO2
GR2248+19	QSO2 2248+192 (19), VV8Q 4C 19.74
GR2248+19 (ID2)	VV83 3C 454 (18.4), QSO2
GR2251+15	VV83 3C 454.3 (16.1), QSO2
GR2253+13	VV83 3C 455 (19), QSO2
GR2253-00	VV83 OY-087
GR2310+08	VV83 3C 456(19), QSO1 2309+090(18.54)
GR2310+09	VV83 3C 456(19), QSO1 2309+090(18.54)
GR2314+01	VV83 PKS 2313+011
GR2314+03	PGC 70899, VV8Q 3C 459 QSO1 2314+038 (17.55), VV83 PKS 2318-087 (19)
GR2318-08	VV83 PKS 2319+079
GR2319+08	VV83 PKS 2325-029 (19.5)
GR2325-02	VV83 OZ 051.2 (18.5)
GR2329+01	VV83 B2329+1712
GR2330+17	VV83 PKS 2334+085 (18)
GR2334+08	VV83 PKS 2335+031 (19.3), QSO2
GR2335+03 (ID2)	VV83 PKS 2344+092 (16.5; 17.5), MSLO BC PKS2344+09 (15.9)
GR2343+08	VV83 PKS 2344+092 (16.5; 17.5), MSLO BC PKS2344+09 (15.9)
GR2343+09	VV83 OZ 076 (17.5), QSO2, PKS 2345+061,
GR2346+06	VV83 OZ 079
GR2346+06 (ID2)	VV83 3C 467 (19.5), QSO1 2345+184 (20.6)
GR2346+18	VV83 2348+160
GR2348+15	VV83 PKS 2349-014 (17.5)
GR2349-01	VV83 PKS 2350+057
GR2350+06	VV83 PKS 2354+14 (18), QSO2
GR2355+14	VV83 PKS 2353+154 (18), QSO2
GR2355+15	VV83 B2354+1858
GR2355+19	VV83 2354-027
GR2355-02	VV83 2356-028

Table 4 lists information on one or more optical counterparts for 575 different UTR sources. This makes 32% of the entire UTR catalogue, as compared to 19% both in the printed and electronic version of the UTR catalogue. Table 4 lists 635 different radio counterparts from Table 1, or 27% of all 2316 radio counterparts. Note that for a small percentage of sources, especially very extended sources near the Galactic plane, like SNRs and H II regions, discrete source catalogues tend to be affected by dynamic range limitation, and the positions listed in Table 1 for these sources may be misleading. One such ex-

ample is GR 1901+05 which corresponds to the very extended SNR 3C 396. For such sources one needs to extend the optical search radius, study the large-scale radio emission of the region (typically from single-dish maps of the Galactic Plane) in order to pick up the correct optical identification. We hope to do this in future for more detailed analyses.

In the first column of the table are given the names of the UTR objects with their appended ID number from Table 1, in the second column are the names of the catalogues and the objects for which information is available in these catalogues accessible in CATS. If stellar magnitudes are indicated in the catalogues, they are given in brackets. Unfortunately, the publications presented are compilations, and data on the filters used to obtain stellar magnitudes are lacking. However, they can be found in the original references quoted in the individual compilation. This paper does not seek to give complete information on the presence of optical identifications, we have just made cross-identification with the catalogues available in CATS. Three points should be borne in mind:

1. The presence of a name in column 2 of Table 4 does not imply the existence of a candidate optical identification. In some cases our entry refers to an "empty field" ("EF"), or to a lower limit of the stellar magnitude.

2. Not all the lists of optical objects, including the ones identified with radio sources, are available in CATS.

3. 138 sources of the 3C catalogue are identified with the UTR objects, but for all 3C sources optical identifications presently exist.

In column 2 of Table 4 the following references are tabulated:

3C	Spinrad et al., 1985,
DENIS	Vauglin et al., 1999,
GA v Z1	Weinberger et al., 1995,
GCS	da Costa et al., 1998,
LBQS6	Hewett et al., 1995,
LCRS	Shectman et al., 1996,
MKN	Markarian et al., 1989,
MCG	Kogashvili, 1982,
MRC	Large et al., 1991,
MSLO	Dixon and Sonneborn, 1980,
NBG	Tully, 1988,
PGC	Paturel et al., 1989,
QSO1	Hewitt & Burbidge, 1991,
QSO2	Hewitt & Burbidge, 1993,
UCGC	Cotton et al., 1999,
VV83	Véron-Cetty & Véron, 1983,
VV8AG & VV8Q	Véron-Cetty & Véron, 1998.

Given that positional errors for IR sources are significantly larger than for optical sources, we have chosen a search radius of $60''$ for the radio — IR corre-

Table 5: *UTR sources with an infrared counterpart within a radius of 60"*

GR0238+58	ISSC 023715+592255, ISSC 023715+592255, HILH 02381+5923
GR0240-00	IPSC 02401-0013, IFSC F02401-0013, ISSC 024018-001254
GR0316+41	IPSC 03164+4119, IFSC F03164+4119, ISSC 031551+412220
GR0327+55	IPSC 03261+5516
GR0405+03	IPSC 04047+0332
GR0411+11	ISSC 041037+114453
GR0430+05	IPSC 04305+0514, IFSC F04305+0514
GR0438+50	IPSC 04368+5021, ISSC 043550+501908
GR0545+46	IPSC 05457+4635
GR0629+02	IPSC 06306+0248
GR0640+52	IPSC 06401+5320, IFSC F06401+5320
GR0653+58	IFSC F06540+5847
GR0704-12	IPSC 07029-1215, ISSC 070359-121320, HILI 07029-1215
GR0707+47	IPSC 07075+4715, IFSC F07075+4715
GR0723-09	IPSC 07225-0933
GR0807-10	IPSC 08065-1018, IFSC F08064-1018
GR1000+55	IPSC 09585+5555, IFSC F09585+5555, ISSC 095816+560631, IRSSS X0958+559,
GR1126+58	IPSC 11257+5850, IFSC F11257+5850, ISSC 112544+584327
GR1219+50(ID2)	IFSC F12163+5042
GR1226+02	IPSC 12265+0219, IFSC F12265+0219, ISSC 122623+022029
GR1228+12	IPSC 12282+1240, IFSC F12282+1240
GR1254-05	IFSC F12535-0530
GR1319+42	IFSC F13190+4251
GR1320+43(ID2)	IFSC F13190+4251
GR1328+47	IPSC 13277+4727, IFSC F13277+4727, ISSC 132742+473356, IRSSS X1327+474
GR1429+57(ID2)	IPSC 14306+5808, IFSC F14306+5808, IRSSS X1430+581
GR1507+53	IPSC 15080+5329
GR1510+49	IPSC 15099+5005
GR1600+02	IPSC 15599+0206, IRSSS B1600+0205
GR1650+02(ID2)	IFSC F16504+0228, IPSC 16504+0228
GR1812+42	IPSC 18146+4238, IFSC F18146+4238
GR1901+05	HILI 19008+0530, IPSC 19008+0530, HILH 19008+0530
GR1921+16(ID2)	IPSC 19229+1614
GR2025+15	IPSC 20245+1527, IFSC F20245+1527
GR2221-02	IFSC F22212-0221, ISSC 222140-022325
GR2224-05	IFSC F22231-0512, IPSC 22231-0512, ISSC 222300-051409
GR2251+15	ISSC 225156+155037
GR2314+03	IFSC F23140+0348, IPSC 23140+0348
GR2349-01	IFSC F23493-0126

lation. All sources within this distance from the positions quoted in Table 1 are listed in Table 5.

In Table 5 the following references are provided:

HILH	Hughes & MacLeod, 1989,
HILI	Codella et al., 1994
IFSC	IRAS Faint source catalogue by Moshir, 1989
IPSC	IRAS Point source catalogue by IRAS group, 1987
IRSSS	IRAS Small Scale Structure Catalog by Helou and Walker, 1985
ISSC	IRAS Serendipitous Survey catalogue by Kleinmann et al., 1986.

Some decametric sources with infrared emission are

identified with HII regions, and some with AGN (see Table 4).

Some of the UTR sources in Table 5 have also been found in a cross-identification of the IRAS and TXS catalogues, (cf. Trushkin and Verkhodanov, 1995, 1997). The full list of these sources will appear in the Bulletin of the Special Astrophysical Observatory.

We searched for the presence of any X-ray source registered in the X-ray catalogues available in CATS within a circle of radius 90" around the positions listed in Table 1. If such a source was found, an "X" is given in column 11 of Table 1. The following X-ray catalogues were searched by us:

1WGA White et al., 1994

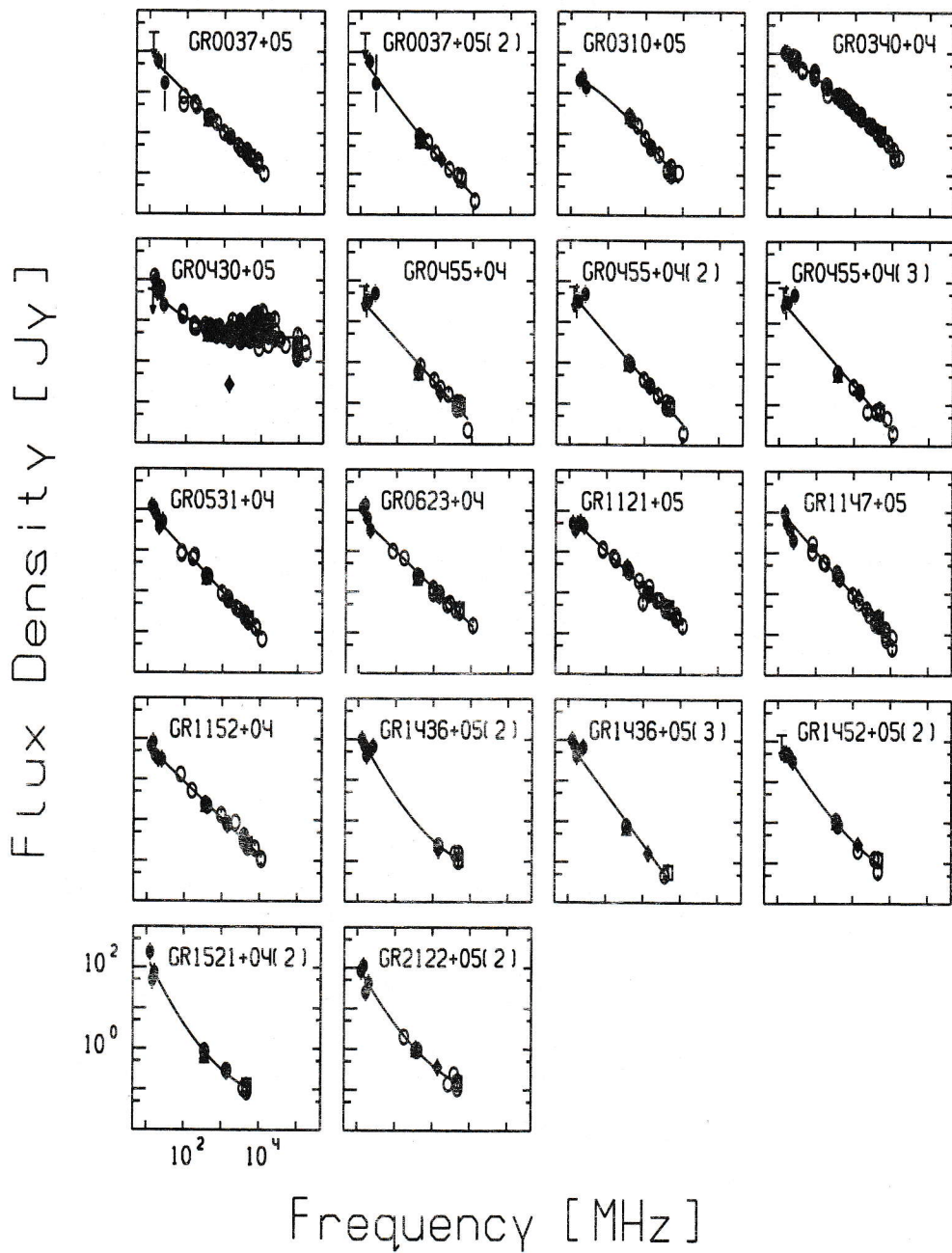


Figure 4: Radio spectra of RC objects with decametric data. UTR points are shown with filled ellipses, Texas data are shown with filled triangles and NVSS data are shown with diamonds.

EIN2S Moran et al., 1996
 EMSS Gioia et al., 1990
 Stoeke et al., 1991
 RGN Neumann et al., 1994

ROSAT Voges et al., 1994

Tables 1 and 4 show that all X-ray identified UTR sources are well-known AGNs.

Table 1: Multifrequency data for 18 RC radio sources (continued)

α	δ	σ_{α}	σ_{δ}	ν	S	σ_S	Jy	σ_{Jy}	8
h	m	s	σ	''	MHz				
RC J0038+0449, GR 0037+05(C2)									
00 38 59	76	05 57 36		12.6	<288		32		UTR
00 39 30	22	05 00 36		16.7	59		70		UTR
00 39 40	37	04 52 48		25	17		0.061		UTR
00 39 04.3	0.06	04 34 21.54	0.48	365	0.838		0.6		TXS
00 39 02		04 34 30		408	0.75		0.06		MRC
00 39 58.7	4.0	04 34 14	78	611	0.627		1.03		NAIC
00 39 00.6		04 34 20.2		960	0.331		0.65		COLDB
00 39 59.986	0.03	04 34 20.81	0.56	1400	0.2280		0.005		NVSS
00 39 00.6		04 34 20.2		2300	0.131		0.83		COLDB
00 39 59.94	0.8	04 34 12.19	13	4850	0.072		0.008		GB6
00 39 58.34		04 34 16.17		4850	0.086		0.011		PMN
00 39 01.1	1.1	04 34 20	18	4850	0.090		0.011		87GB
00 39 00.06		04 34 20.2		11200	0.022		0.004		COLDB
RC J0039+0454, GR 0037+05									
00 39 59	76	05 57 36		12.6	<288		32		UTR
00 39 30	22	05 00 36		16.7	59		70		UTR
00 39 40	37	04 52 48		25	17		0.073		UTR
00 39 16.6		04 38 45		80	8		0.154		NAIC
00 39 16.6		04 38 45		160	4.6		12		MRC
00 39 17.2	0.023	04 39 04.06	0.21	365	2.402		0.073		PKS90
00 39 17.4		04 39 07		408	2.54		0.12		TXS
00 39 18.3	1.8	04 39 19	36	611	1.807		0.154		NAIC
00 39 17.59		04 38 22.0		960	1.016		1.03		COLDB
00 39 17.282	0.03	04 39 03.12	0.56	1400	0.8205		0.0287		NVSS
00 39 17.2		04 39 06		2300	0.483		0.053		COLDB
00 39 17.39		04 39 06		2700	0.39		0.029		PKS90
00 39 17.1		04 39 07.4		3900	0.314		0.15		Z2A
00 39 17.1		04 39 07.4		3900	0.365		0.024		COLDB
00 39 17.59		04 39 07.4		4800	0.247		0.008		GB6
00 39 16.695	0.5	04 38 51.11	9	4850	0.255		0.021		87GB
00 39 17.194	0.8	04 38 29	12	4850	0.245		0.030		PMN
00 39 16.87		04 39 02.12		4850	0.265		0.017		MITG1
00 39 17.2		04 39 04		4850	0.256		0.017		MGVLA
00 39 17.2		04 39 09.0		4885	0.226		0.026		PKS90
00 39 17.1		04 39 07		5000	0.26		0.026		Z2-95
00 39 17.1		04 39 07.4		7500	0.165		0.026		Z2A
00 39 17.59		04 38 22.0		7700	0.208		0.051		COLDB
00 39 17.1		04 39 07.4		11200	0.098		0.023		Z2A
RC J0311+0507, GR 0310+05									
03 10 48	21	05 21 00		16.7	21		12.6		UTR
03 10 38	27	05 19 48		396	20		25		UTR
03 09 18	37	04 55 12	1080	25	14		9.8		UTR
03 09 09.908	0.024	04 56 47.69	0.2	365	2.814		0.048		TXS
03 09 09.8		04 56 41		408	2.26		0.08		MRC
03 09 09.5	1.0	04 56 23	20	611	1.598		0.094		NAIC
03 09 09.3		04 56 46.8		960	0.792		0.116		COLDB
03 09 09.3		04 57 08		1400	0.473		0.008		WB92
03 09 09.846	0.03	04 56 47.01	0.56	1400	0.5005		0.008		NVSS
03 09 09.89		04 56 47.3		1400	0.451		0.049		UCC-R
03 09 09.80		04 56 46.8		2300	0.312		0.132		COLDB
03 09 09.68		04 56 42		3900	0.122		0.097		Z2
03 09 09.80		04 56 46.8		4850	0.133		0.012		COLDB
03 09 07.091		04 56 38.43		4850	0.097		0.012		PMN
03 09 08.987	0.6	04 56 51.53	10	4850	0.109		0.011		GB6
03 09 09.2	0.8	04 57 02	13	4850	0.158		0.020		87GB
03 09 10.4		04 56 14		4850	0.113		0.113		MITG1
03 09 09.80		04 56 46.8		7700	0.113		0.113		COLDB
RC J0343+0458, GR 0340+04, 3C 93, 4C+04.13, XIO (18.1), AGN									
03 40 51	54	04 27 36		12.6	104		24.96		UTR
03 40 46	74	06 21 36		2700	12.6		<59		UTR
03 40 57	22	04 56 24		14.7	96		28.8		UTR

Table 1: Multifrequency data for 18 RC radio sources

α	δ	σ_{α}	σ_{δ}	ν	S	σ_S	Jy	σ_{Jy}	8
h	m	s	σ	''	MHz				
RC J0433+0520, GR 0430+05, 3C 120, PGC 15504, XIO (15), AGN									
04 30 46	74	06 21 36		2700	12.6		<59		UTR
04 30 57	22	04 56 24		14.7	96		28.8		UTR

Table 1: Multifrequency data for 18 RC radio sources (continued)

h	m	s	°	'	"	'''	MHz	Jy	Jy	Jy	8
1	2	3	4	5	6	7	5	6	7	8	
04 30 31.60			05 14 59.6				5000	4.198	3.74		RGB1
04 30 31.621			05 14 59.61				5000	3.78			SSRC
04 30 31.600			05 14 59.50				5000	3.5			VLA4
04 30 31.6			05 14 59				5000	5.09			VVSAG
04 30 31.60		0.01	05 14 59.5		0.1		5009	8.86	.27		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		5009	10.15	.08		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		5009	10.33	.32		Ku81r
04 30 31.6		0.01	05 14 59		0.1		5009	9.85	.08		PKSW
04 30 31.60		0.01	05 14 59.5		0.1		6600	14.3	.29		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		7500	5.695	.113		ZZA
04 30 31.5			05 15 00				7500	3.912			ZZ.95
04 30 31.60		0.01	05 14 59.5		0.1		7875	15.1	.24		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		7875	9.41	.27		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		8085	4.82	.24		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		8085	8.07	.3		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		8085	14.41	.51		Ku81r
04 30 31.595			05 14 59.66				8400	2.093			JVAS
04 30 31.602			05 14 59.6				8400	3.68			PKS8G
04 30 31.60		0.01	05 14 59.62				8400	3.3			VLA3
04 30 31.60		0.01	05 14 59.5		0.1		8870	11.69	.49		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		10500	16.8	.23		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		10500	6.88	.13		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		10695	9.7	.29		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		10695	15.44	.14		Ku81r
04 30 31.5			05 14 59.6				11200	4.747	.163		ZZA
04 30 31.60		0.01	05 14 59.5		0.1		14900	10.15	.05		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		15000	4.23	.21		Ku81r
04 30 31.602			05 14 59.62				15000	2.5			VLA3
04 30 31.60		0.01	05 14 59.5		0.1		15064	4.3			VLAU3
04 30 31.60		0.01	05 14 59.5		0.1		15064	6.14	.31		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		22000	3.59	.19		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		22000	10.95	.17		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		22185	5.68	.86		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		31400	3.46	.25		Ku81r
04 30 31.602			05 14 59.62				43000	2.5			VLA3
04 30 31.6			05 14 59.50				87740	1.4	.152		QSOmm
04 30 31.6			05 14 59.50				87740	2.09	.183		QSOmm
04 30 31.6			05 14 59.50				87740	2.28	.185		QSOmm
04 30 31.6			05 14 59.50				87740	2.33	.175		QSOmm
04 30 31.6			05 14 59.50				87740	2.34	.164		QSOmm
04 30 31.6			05 14 59.50				87740	2.67	.239		QSOmm
04 30 31.6			05 14 59.50				87740	1.485	.153		QSOmm
04 30 31.6			05 14 59.50				87740	2.055	.186		QSOmm
04 30 31.6			05 14 59.50				87740	2.285	.274		QSOmm
04 30 31.6			05 14 59.50				87740	2.285	.177		QSOmm
04 30 31.6			05 14 59.50				87740	2.325	.285		QSOmm
04 30 31.6			05 14 59.50				87740	2.445	.222		QSOmm
04 30 31.6			05 14 59.50				87740	2.455	.213		QSOmm
04 30 31.60		0.01	05 14 59.5		0.1		90000	1.2	.3		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		90000	1.9	.5		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		90000	2.77	.34		Ku81r
04 30 31.60		0.01	05 14 59.5		0.1		90000	4.42	.44		Ku81r
04 30 31.6		0.01	05 14 59.50				139290	2.87	.692		QSOmm
04 30 31.6			05 14 59.50				139290	2.89	.7		QSOmm
04 30 31.6			05 14 59.50				154000	1.605	.43		QSOmm
RC J0457+0452, GR 0455+04(C3)											
04 52 58.54		54	03 55 48				12.6	<74			UTR
04 54 27		21	04 34 48				14.7	33	54		UTR
04 55 08		8	04 20 24				16.7	32	21		UTR
04 52 58.62		14	04 23 24				25	49	29		UTR
04 55 16.562		0.137	04 49 03.67				365	0.578	0.047		TXS
04 55 15.01		0.032	04 49 31.9				960	0.277	.049		COLDB
04 55 16.2			04 49 23				1400	0.201	.0070		NVSS
04 55 15.472			04 49 23				2300	0.067	.016		COLDB
04 55 15.01			04 49 31.9				3900	0.068	.007		COLDB
04 55 16.42		0.59	04 48 01.9				3900	.069			COLD1
04 55 13.391			04 48 54.09				4850	0.064	0.011		PMN

Table 1: Multifrequency data for 18 RC radio sources (continued)

h	m	s	°	'	"	'''	MHz	Jy	Jy	Jy	8
1	2	3	4	5	6	7	5	6	7	8	
04 29 17		16	05 33 00				396	16.7	49	13.23	UTR
04 30 24		11	05 36 00				216	20	51	9.69	UTR
04 30 47		31	05 21 36				25	24	24	14.16	UTR
04 30 31.5			05 14 06				80	13			CUL
04 30 31.6			05 15 00				80	15			PKS90
04 30 31.60		0.01	05 14 59.0				160	6.8			CUL
04 30 31.60		0.01	05 14 59.5				178	7.4	.8		Ku79
04 30 31.6		0.01	05 15 00				178	6.7			PKS90
04 30 31.60		0.01	05 14 59.5				318	6.74	.29		Ku81r
04 30 31.60		0.01	05 14 59.5				318	7.97	.35		Ku81r
04 30 31.584		0.013	05 15 00.06				365	4.798	0.05		TXS
04 30 31.60		0.01	05 14 59.5				408	5.67	.24		Ku81r
04 30 31.6		0.01	05 15 00				408	6.08	.19		MRC
04 30 31.60		0.01	05 14 59.5				430	7.36	.3		PKSW
04 30 31.6		0.01	05 14 59.5				465	4.82	.23		PKSW
04 30 31.60		0.01	05 14 59.5				468	5.04	.24		Ku81r
04 30 31.60		0.01	05 14 59.5				606	5.35	.35		Ku81r
04 30 32.3		1.2	05 14 31			13	611	6.709	.349		NAIC
04 30 31.6			05 14 59				635	4.27	.21		PKSW
04 30 31.60		0.01	05 14 59.5				750	5.8	.13		Ku81r
04 30 31.60		0.01	05 14 59.5				750	7.13	.17		Ku81r
04 30 31.60		0.01	05 14 59.5				960	4.673	.6		COLDB
04 30 31.52			05 14 59.6				960	4.25	.21		PKSW
04 30 31.60		0.01	05 14 59.5				1379	6.16	.31		Ku81r
04 30 31.60		0.01	05 14 59.5				1400	4.67	.14		NVSS
04 30 28.07		0.04	05 14 49.04			0.57	1400	0.2745	.0091		NVSS
04 30 31.534		0.03	05 14 59.35			0.56	1400	3.4395	.0005		WB92
04 30 31.2			05 14 52				1400	3.848			WB92
04 30 31.60		0.01	05 14 59.0				1410	4.39	.11		Ku79
04 30 31.60		0.01	05 14 59.5				1410	4.39	.11		Ku81r
04 30 31.6			05 15 00				1410	3.8			PKS90
04 30 31.6			05 14 59				1410	4.32	.11		PKSW
04 30 31.602			05 14 59.62				1450	3.37			VLA4
04 30 31.60		0.01	05 14 59.5				1450	3.4			VLA3
04 30 31.60		0.01	05 14 59.5				1480	6.7	.34		Ku81r
04 30 31.60		0.01	05 14 59.5				1484	5.67	.28		Ku81r
04 30 31.60		0.01	05 14 59.5				1670	4.62	.19		Ku81r
04 30 31.6			05 15 00				2290	3.989			PKSFL
04 30 31.6			05 14 58				2290	6.4	.3		VLBIS
04 30 31.52			05 14 59.6				2300	4.542			COLDB
04 30 31.60		0.01	05 14 59.5				2650	3.7	.64		Ku81r
04 30 31.60		0.01	05 14 59.5				2695	6.6	.53		Ku81r
04 30 31.60		0.01	05 14 59.5				2695	4.86	.3		Ku81r
04 30 31.60		0.01	05 14 59.5				2695	5.92	.3		Ku81r
04 30 31.60		0.01	05 14 59.5				2695	6.52	.23		Ku81r
04 30 31.60		0.01	05 14 59.5				2695	8.09	.09		Ku81r
04 30 31.60		0.01	05 14 59.5				2695	9.39	.34		Ku81r
04 30 31.60		0.01	05 14 59.5				2700	8.4	.25		Ku81r
04 30 31.60		0.01	05 14 59.5				2700	9.7	.1		Ku81r
04 30 31.60		0.01	05 14 59.5				2700	3.3			PKS05
04 30 31.6			05 14 18				2700	6.68	.1		PKSW
04 30 32.00		0.50	05 14 59.6			27	3900	>3.977			COLD1
04 30 31.5			05 14 59.6				3900	4.15	.9		COLDB
04 30 31.5			05 15 00				3900	5.363	.332		ZZA
04 30 31.60		0.									

6. Decametric Data for “Cold” Sources

One of the UTR observational strips (Braude et al., 1979) overlaps the “Cold” experiment survey carried out at RATAN-600 (Parijskij et al., 1991, 1992).

The results of a cross-identification with 18 “Cold” objects within 60'' from the positions in Table 1, together with the data from other catalogues for these sources, are presented in Table 6.

Columns 1 and 3 of Table 6 give equatorial coordinates for B1950.0; columns 2 and 4 list the corresponding errors, column 5 presents the frequency in MHz, the flux density and its error (in Jy) are in columns 6 and 7, and column 8 gives references to the catalogues. First we give the name of a source in the RC and UTR catalogues. For some UTR names we give the ID number next to the UTR name as listed in Table 1. In some cases the names from the 3C and 4C catalogues are also presented, and stellar magnitudes (see also Table 4) according to the list VV83 (Véron-Cetty and Véron, 1983) are given.

The following references of catalogue names are used in Table 6:

11CMA	Wall and Peacock, 1985,
11CMB	Fürst et al., 1990,
21CMB	Reich et al., 1990,
87GB	Gregory and Condon, 1991,
87GBM	Mingaliyev and Khabrakhmanov, 1995,
COLD1	Parijskij et al., 1991,
COLDB	Bursov, 1996,
CUL	Slee and Higgins, 1973,
FSC2R	Condon et al., 1995,
GB6	Gregory et al., 1996,
JVAS	Patnaik et al., 1992,
Ku79	Kühr et al., 1979,
Ku81r	Kühr et al., 1981,
MGVLA	Lawrence et al., 1986,
MITG1	Bennett et al., 1986,
MRC	Large et al., 1991,
MSL	Dixon, 1981,
NAIC	Durbin et al., 1975,
NVSS	Condon et al., 1998,
PKS05	Drinkwater et al., 1997,
PKS8G	Wright et al., 1991,
PKS90	Otrupcek and Write, 1990,
PKSFL	Duncan et al., 1993,
PKSW	Wills, 1975,
PMN	Wright et al., 1996,
POL_T	Tabara and Inoue, 1980,
QS0mm	Reuter et al., 1997,
RCS86	Roger et al., 1986,
RGB1	Laurent-Muehleisen et al., 1997,
RH74	Readhead and Hewish, 1974,
SRC_N	Niell, 1972,
SoSRC	White, 1992,
TXS	Douglas et al., 1996,

UCGC	Cotton et al., 1999,
VLA4	Perley, 1982,
VLAC	Taylor, 1993,
VLAU3	Ulvestad et al., 1981,
VLBIS	Preston et al., 1985,
WB92	White and Becker, 1992,
Z2	Amirkhanyan et al. 1989,
Z2A	Amirkhanyan et al., 1992,
Z2_95	Gorshkov and Konnikova, 1995.

Radio spectra of these objects are shown in Fig. 4. We do not present in the figure spectral data for the whole radio wavelength range, restricting ourselves to centimetre data, because not for all the objects mm data are available. Among the 18 “Cold” survey sources 7 objects have optical identifications. One of these objects (RC J1148+0455 or GR 1147+05) was investigated in the “Big Trio” project and identified with a group of 8 galaxies having stellar magnitudes of about 23^m.5 (Parijskij et al., 2000). The other six objects are identified with AGN.

7. Ultra-steep spectrum UTR sources from FIRST

For the majority of UTR sources (97%) identifications with NVSS sources are available (Condon et al., 1998) (altogether 2253 identifications), and for all UTR sources with $\delta > 30^\circ$ (1143 objects) we searched for counterparts in the FIRST survey (White et al., 1997). Among the FIRST and NVSS sources within 60'' from the positions in Table 1, 552 from NVSS (with a beam size of 45'') and 988 from FIRST (with a beam size of 5'') are resolved. It would require more detailed observations to find out whether these sources are merely complex in structure or consist of physically independent components.

As mentioned earlier, the identifications with NVSS and FIRST have been used to refine coordinates of the decametric sources. On the basis of these coordinates, we extracted source samples for further investigation, for instance, a sample of sources with ultra-steep spectra ($\alpha < -1.2$).

8. Ultra-steep spectrum sources

It is seen from the distribution of spectral indices (Fig. 1) that rather a large proportion of objects have steep spectra at all of the three frequencies. To establish a list of sources which are candidates for distant objects, we selected objects with ultra-steep ($\alpha \leq -1.2$) and straight spectra, which show an extent in the FIRST catalogue.

Generally, in the catalogue of 2314 radio counterparts to UTR sources there are 422 S-type sources with “very steep spectrum” (VSS) ($\alpha \leq -1.0$), and

Table 7: The 38 FIRST counterparts to 23 USS sources ($\alpha \leq -1.2$) from the UTR catalogue. We list the UTR name, the size of the source complex (or deconvolved size if a single component) from NVSS and FIRST, respectively, the FIRST RA and Dec, the peak and integrated component flux at 1.4 GHz from FIRST, their deconvolved major and minor axes, and major axis position angle (N through E) from FIRST

UTR name (B1950)	α	NVSS size (")	FIRST size (")	RA (J2000)	Dec	S_p (mJy)	S_i (mJy)	Maj (")	Min (")	PA ($^\circ$)
GR0002+00(ID2)	-1.52	16.	7.4	000650.56+003648.4		47.6	75.9	7.4	1.1	154
GR0135-08	-1.34	28.	20.	013714.87-091155.4		5.2	44.3	30.8	7.5	98
				013715.08-091203.3		10.2	36.9	15.6	4.3	90
				013715.45-091155.8		8.2	25.7	13.0	5.4	148
				013716.22-091149.5		10.0	39.3	11.3	9.3	119
GR0257-08	-1.20	<18.	4.5	025919.15-074501.2		162.5	211.9	4.5	1.3	59
GR0257-08(ID2)	-1.23	80.	83.	030040.22-075302.2		18.4	52.8	15.6	3.0	174
				030040.56-075259.6		10.1	122.8	30.7	13.1	163
				030042.99-075413.8		7.0	34.2	16.2	8.4	32
				030042.99-075358.0		13.6	47.8	12.3	7.4	152
				030043.60-075418.3		6.4	22.0	11.2	7.6	75
				030043.75-075407.2		6.6	22.4	15.6	4.8	170
GR0723+48(ID2)	-1.26	47.	3.1	072651.18+474041.5		23.8	29.1	3.1	2.0	175
				072655.00+474051.0		51.8	75.7	5.6	1.1	85
GR0818+18	-1.28	24.	22.	082032.48+192731.3		31.1	49.2	6.1	1.7	174
				082032.73+192709.0		76.4	98.5	3.9	1.6	8
GR0858-02(ID2)	-1.54	70.	55.	085935.06-015842.1		11.7	27.2	10.2	3.2	122
				085936.10-015851.8		9.8	15.9	6.2	2.8	128
				085938.21-015908.1		20.2	43.6	8.1	4.5	133
GR0910+48	-1.22	36.	29.	091359.00+482738.0		26.9	88.6	11.6	5.2	100
				091401.83+482729.2		39.6	110.2	10.9	3.9	106
GR0922+42(ID2)	-1.21	<19.	2.7	092559.66+420335.3		199.7	244.1	2.7	2.4	98
GR0942+54	-1.24	14.	8.	094618.12+543003.8		51.1	57.1	2.5	0.9	36
				094618.53+543010.1		75.3	80.6	1.7	1.1	16
GR1149+42	-1.24	<17.	5.0	115213.58+415344.9		83.7	115.4	5.0	1.0	18
GR1214-03	-1.26	70.?	3.2	121755.30-033722.0		176.9	208.9	3.2	1.2	111
GR1223-00	-1.79	25.	25.	122722.97-000813.8		5.8	13.6	8.4	5.0	100
				122724.54-000821.1		8.4	16.9	7.1	4.6	116
GR1243+04	-1.25	<18.	6.8	124538.38+032320.1		249.4	379.9	6.8	1.3	158
GR1318+54		25.	23.	132202.81+545758.1		30.3	90.3	9.5	5.9	82
				132205.33+545805.3		8.6	35.9	10.7	8.6	55
GR1320+43	-1.32	<19.	3.3	132232.32+425726.5		129.3	154.6	3.3	1.0	81
GR1355+01(ID3)	-1.26	<19.	10.	135821.64+011442.0		77.0	88.4	2.9	1.4	42
				135822.08+011449.4		169.9	180.9	1.6	1.3	32
GR1447+57	-1.26	<19.	4.5	144630.04+565146.8		75.2	99.2	4.5	0.7	148
GR1527+51(ID2)	-1.22	<19.	1.4	152828.36+513401.4		203.9	212.8	<2.	<2.	140
GR1539+53(ID2)	-1.24	<18.	6.4	154144.69+525054.5		87.0	136.7	6.4	0.8	66
GR1613+49	-1.24	<19.	3.0	161631.16+491908.2		56.1	66.2	3.0	1.3	10
GR1731+43	-1.56	42.	40.	173333.87+434318.6		32.9	57.9	6.3	3.0	164
				173334.26+434300.8		22.8	27.3	3.1	1.5	173
				173334.41+434251.4		12.3	15.8	3.3	2.4	159
				173334.58+434239.8		27.3	51.0	7.5	2.3	150
GR2211-08(ID2)	-1.39	<19.	8.6	221519.65-090005.8		75.2	125.0	8.6	1.4	176

for the present work we selected from these a sub-sample of 102 "ultra-steep spectrum" (USS) objects ($\alpha \leq -1.2$). To further increase the radio-positional accuracy, we searched for radio counterparts of USS

sources in the February 1998 version of the FIRST catalogue (White et al. 1997), which resulted in 38 FIRST counterparts for 23 UTR sources (see Table 7). If an UTR source has more than one accept-

able counterpart in FIRST, we label these components with symbols ID1, ID2, ID3, etc. Only one of the FIRST components (labeled GR1527+51 (ID2)) is truly unresolved by the FIRST beam of $\sim 5''$ (i.e. it has the major and minor axes $< 2''$), while all other objects have a multi-component or extended structure. We checked the sources also in the lower resolution NVSS at 1.4 GHz (Condon et al. 1998). Usually, the greater the source complexity, the larger the NVSS/FIRST flux ratio. According to the NASA Extragalactic Database (NED), the complex source GR0135-08 is identified with the $z = 0.041$ galaxy MCG-02-05-020, GR1214-03 is a LCRS QSO at $z = 0.184$, and GR1243+04 is a radio galaxy (4C+03.24) at $z = 3.57$. Our investigation of the Digital Sky Survey (DSS 2) images, accessible via the Web-page of the Space Telescope Science Institute (<http://archive.stsci.edu/dss/>) for the unidentified sources, is in progress.

9. Conclusion

We have shown that our iterative method of radio identification and cross-identification with existing catalogue material serves as a first step for an optical identification of radio sources observed with a large antenna beam.

We present a catalogue of 2316 radio counterparts to 1822 UTR sources. This is due to the fact that 395 UTR sources have more than one counterpart contributing significantly to the decametric flux. We found radio counterparts at non-decametric frequencies for all but three UTR sources, compared to a fraction of 93% radio-identified sources in the original UTR publication and 89% in the electronic version of UTR.

Through a cross-identification with optical catalogues we increased the optical identification rate from 19% in the original publications of the UTR catalogue to presently 32%.

We also mention the presence of likely counterparts for UTR sources in the infrared and X-ray regimes, and construct a subsample of 38 ultra-steep spectrum sources having counterparts in the FIRST catalogue.

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