

DECAMETRIC SURVEY OF DISCRETE SOURCES IN THE NORTHERN SKY

V. *Source Catalogue in the Range of Declinations 0° to $+10^\circ$*

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Abstract. Results of measurements of discrete sources with the UTR-2 radio-telescope are presented, namely coordinates and flux densities of 364 sources in the range of declinations 0° to $+10^\circ$. Sixteen sources had not been observed earlier. The coordinates of the sources observed are compared with respective coordinates in the 4C survey.

1. Introduction

The present paper is the fifth in a series of publications on a survey of the northern sky at decametric wavelengths. Results are given of flux density and coordinate measurements for discrete sources lying at declinations 0° to $+10^\circ$. The measurements were carried out during the period from March 1974 to April 1977 on the UTR-2 radio-telescope (Braude *et al.*, 1971; Braude *et al.*, 1978a, further referred to as Paper I) at frequencies of 10, 12.6, 14.7, 16.7, 20 and 25 MHz.

The observation methods, experimental equipment and the data processing techniques were the same as described in Papers I and II (i.e., Braude *et al.*, 1978b). Figure 1 is a map of the celestial sphere showing the region covered by the present survey.

The densely hatched areas represent regions of right ascensions, α , and declinations, δ , where ten or more measurements were carried out with two or more hour-angle positions of the antenna beam. Spaced-out hatches represent the regions with less than ten measurements. The areas where no satisfactory data have been obtained are not hatched.

As the figure shows, the catalogue is complete only for right ascensions between 0 and 17 h and 22–24 h.

2. Results

The measured flux densities and source coordinates from the range of declinations 0° to $+10^\circ$ (reduced to the 1950 epoch), as well as the measurement errors, are presented in Table I of the catalogue. The sources were included in the catalogue according

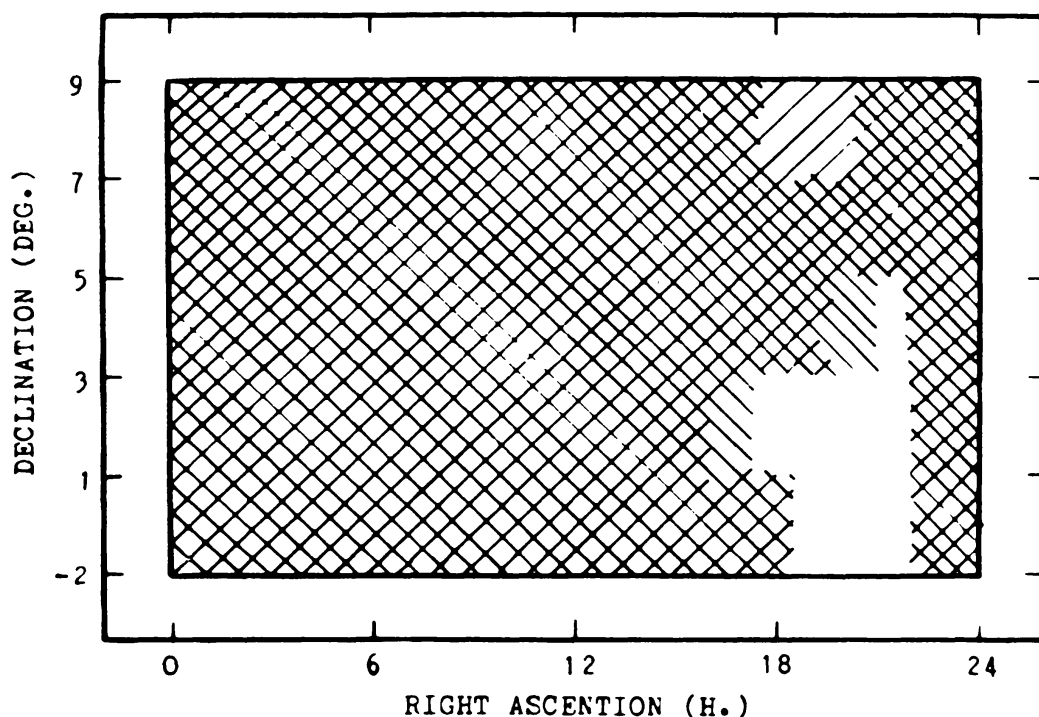


Fig. 1. A map showing the area covered in the decametric Grakovo survey.

to the criteria of Paper II. The catalogue contains the data on 364 sources. According to the classification adopted in Paper II the sources measured with high reliability are marked A, the results which can be used without an additional analysis are marked B, and the data requiring additional analysis, up to an examination of the original analogue records, are marked C.

Almost all the designations used in the catalogue are conventional and employed in other catalogues at higher frequencies too, save the eleventh and the fourteenth columns of Table 1 which are specific for the present measurements. They contain, respectively, the number of angular positions of the reception pattern (NRA) and the integrated estimate of reliability W (see Paper II). It should be noted that the spectral index listed in the twelfth column has been obtained exclusively from the data of our measurements in the range 10–25 MHz, on the assumption of a power law for the flux density versus frequency dependence.

As in Paper II, given first are the average values of the coordinates for all sources, the interpolated flux densities at 16.7 MHz (as read from the spectrum), the low frequency spectral indices and the reliability estimate W , as well as optical identifications. Then follow the data on the coordinates and flux densities measured at respective individual frequencies for each source. To identify the sources we used data available at higher frequencies, first of all those of the 4C catalogue (Gower *et al.*, 1967), the Ohio III survey (Fitch *et al.*, 1969), the Ohio IV (Ehman *et al.*, 1970), Ohio VI (Ehman *et al.*, 1974) and Ohio VII (Rinsland *et al.*, 1974), the new NAIC survey (Durdin *et al.*, 1975), and the Master List of Sources (Dixon, 1970).

The source coordinates obtained from measurements at decametric wavelengths

TABLE I

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHz	FLUX F.U.	ERR. PC	N	NHA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
1	GR 0003-00	0 3 56	15	-28	.03	16.7	44	25			-1.97	1.08	B	3C 2 QSO
		0 4 20	58	-42	.21	14.7	< 77		6	2				
		0 3 30	18	-34	.10	16.7	48	30	6	2				
		0 4 10	19	-25	.05	20.0	43	31	7	2				
		0 4 10	19	-28	.04	25.0	73	37	6	2				
2	GR 0004+05	0 4 57	8	5.74	.21	16.7	60	20			2.88	.79	C	4C05.02 G
		0 4 45	49	6.38	.15	12.6	78	56	6	2				
		0 4 30	17	6.24	.03	14.7	118	21	10	2				
		0 5 10	27	5.85	.09	16.7	32	29	11	2				
		0 4 50	8	5.57	.04	20.0	37	16	10	2				
		0 5 10	8	5.30	.03	25.0	19	18	7	2				
3	GR 0010+00	0 10 47	20	.72	.04	16.7	59	25			-1.07	.88	B	3C 5
		0 11 50	46	1.07	.49	12.6	95	69	5	2				
		0 12 40	62	1.75	.64	14.7	< 46		2	1				
		0 10 20	9	.77	.08	20.0	56	17	7	2				
		0 11 20	11	.71	.03	25.0	65	22	4	2				
4	GR 0014+06	0 14 28	10	6.45	.11	16.7	26	22			-1.29	.90	C	NAIC0015+06
		0 14 40	62	5.64	.58	14.7	< 67		2	1				
		0 14 50	13	5.97	.11	16.7	24	38	6	2				
		0 14 20	9	6.36	.08	20.0	28	17	7	2				
		0 14 20	15	6.55	.04	25.0	28	30	5	2				
5	GR 0025-00	0 25 58	28	-15	.13	16.7	49	17			2.59	.74	C	4C-00.02
		0 24 30	32	-.24	.17	12.6	104	47	3	1				
		0 25 0	59	-.03	.25	14.7	< 87		3	1				
		0 26 0	43	-.11	.11	16.7	< 63		3	1				
		0 26 30	19	-.44	.12	20.0	30	31	4	2				
		0 26 40	56	-.08	.17	25.0	24	88	3	1				
6	GR 0031+06	0 31 34	14	6.15	.05	16.7	76	18			3.01	.82	B	4C06.02
		0 31 20	50	6.24	.17	12.6	141	62	6	2				
		0 32 40	11	5.85	.06	14.7	139	15	11	2				
		0 31 30	11	6.03	.06	16.7	40	22	10	2				
		0 31 20	7	6.20	.03	20.0	44	14	13	2				
		0 31 20	8	6.18	.02	25.0	25	19	8	2				
7	GR 0031+02	0 31 38	16	2.19	.08	16.7	87	10			1.36	.49	B	4C02.01
		0 30 30	28	2.09	.06	12.6	159	35	8	2				
		0 30 10	19	2.05	.03	14.7	110	25	17	2				
		0 31 10	10	1.76	.19	16.7	86	16	13	2				
		0 32 0	5	2.00	.15	20.0	60	13	16	2				
		0 31 10	10	2.37	.03	25.0	62	21	9	2				
8	GR 0033+08	0 33 29	15	8.10	.07								C	4C08.04 QSO
		0 33 59	64	7.45	.58	14.7	<106		2	1				
		0 33 9	19	8.15	.06	16.7	116	26	4	2				
		0 33 39	14	8.04	.06	20.0	49	23	6	1				
9	GR 0035-01	0 35 4	12	-1.65	.02	16.7	91	11			1.01	.59	A	3C 15 G
		0 36 40	22	-1.61	.24	12.6	107	32	5	2				
		0 35 0	16	-1.45	.15	14.7	130	21	14	2				
		0 34 40	9	-1.42	.13	16.7	90	15	9	2				
		0 35 10	6	-1.44	.06	20.0	65	14	15	2				
		0 35 0	12	-1.65	.01	25.0	80	25	14	2				
10	GR 0037+03	0 37 42	13	3.15	.06	16.7	50	12			1.43	.43	B	4C03.01 G
		0 38 50	77	3.71	.75	12.6	<203		2	1				
		0 37 40	60	3.72	.64	14.7	65	68	3	1				
		0 38 20	15	3.59	.08	16.7	49	24	8	2				
		0 37 10	14	3.00	.06	20.0	38	23	5	2				
		0 37 40	9	3.14	.02	25.0	28	20	4	1				
11	GR 0038+08	0 38 46	8	8.62	.04	16.7	99	19			2.37	.63	A	4C08.05 G
		0 36 49	50	8.27	.46	12.6	153	59	5	2				
		0 39 29	18	8.72	.09	14.7	143	22	10	2				
		0 37 9	21	8.42	.05	16.7	160	29	12	2				
		0 38 39	6	8.42	.03	20.0	51	14	15	2				
		0 38 49	3	8.65	.01	25.0	41	12	19	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
12	GR 0043-00	0 43 2	16	-1.28	.07	16.7	37	21			1.24	.81	C	4C-00.05
		0 42 30	22	-1.56	.21	14.7	55	39	2	1				
		0 42 40	20	-1.42	.19	16.7	32	41	3	1				
		0 43 20	13	-1.27	.06	20.0	27	23	7	2				
		0 43 32	55	-1.23	.08	25.0	25	27	6	1				
13	GR 0049+07	0 49 26	18	7.35	.14	16.7	36	24			2.09	.73	B	4C07.02
		0 48 29	70	6.18	.58	12.6	<148		3	1				
		0 50 17	67	6.84	.18	14.7	48	46	9	2				
		0 50 30	91	7.13	.38	16.7	66	47	18	2				
		0 49 44	35	7.15	.42	20.0	21	18	18	2				
		0 49 19	18	7.46	.06	25.0	16	14	10	2				
14	GR 0054-01	0 54 32	8	-1.68	.03	16.7	158	5			1.56	.23	A	3C 29 G
		0 55 0	12	-1.36	.15	12.6	248	16	12	2				
		0 54 40	8	-1.53	.15	14.7	204	13	14	2				
		0 54 10	7	-1.72	.02	16.7	150	13	15	2				
		0 54 40	7	-1.28	.08	20.0	110	14	18	2				
		0 54 30	7	-1.68	.01	25.0	91	16	18	2				
15	GR 0100+01	1 0 6	10	1.44	.23	16.7	189	15			2.31	.69	C	4C01.01
		1 1 0	31	1.00	.05	14.7	244	36	8	2				
		1 0 50	23	1.97	.20	16.7	187	31	5	2				
		1 0 20	23	1.83	.11	20.0	139	36	14	2				
		1 0 0	6	1.76	.05	25.0	70	35	8	2				
16	GR 0104+06	1 4 2	20	6.24	.05	16.7	48	20			2.22	.78	B	4C06.06
		1 5 29	15	6.05	.13	16.7	51	24	7	2				
		1 3 49	6	6.27	.04	20.0	31	12	14	2				
		1 3 59	8	6.21	.05	25.0	20	18	11	2				
17	GR 0115+02	1 15 58	20	2.23	.13	16.7	84	19			.77	.96	B	3C 37 QSO
		1 17 40	20	2.23	.26	14.7	57	34	15	2				
		1 15 20	10	1.77	.18	16.7	101	16	14	2				
		1 16 10	7	2.15	.12	20.0	66	15	15	2				
		1 15 40	12	2.38	.09	25.0	64	24	12	2				
18	GR 0119+03	1 19 11	9	3.62	.04	16.7	81	8			1.72	.35	A	3C 39 QSO
		1 17 49	54	3.06	.46	12.6	<147		5	2				
		1 18 49	9	3.47	.06	14.7	88	16	10	2				
		1 19 49	9	3.72	.05	16.7	91	15	12	2				
		1 19 9	4	3.62	.02	20.0	62	12	20	2				
		1 17 57	56	3.44	.12	25.0	38	14	20	2				
19	GR 0122+08	1 22 50	5	8.38	.06	16.7	151	25			4.70	.78	B	
		1 23 18	79	8.23	.75	12.6	<129		2	1				
		1 23 48	46	8.39	.13	14.7	85	60	4	2				
		1 23 5	20	8.12	.05	16.7	179	27	13	2				
		1 22 48	12	8.37	.03	20.0	69	21	19	2				
		1 22 48	5	8.46	.03	25.0	22	14	17	2				
20	GR 0123-01	1 23 37	3	-1.67	.02	16.7	212	4			.82	.17	A	3C 40 QGA
		1 25 31	27	-2.04	.20	10.0	283	34	2	1				
		1 23 30	8	-1.31	.13	12.6	266	13	16	2				
		1 23 40	2	-1.54	.06	14.7	243	10	22	2				
		1 23 30	4	-1.52	.06	16.7	222	12	17	2				
		1 23 30	3	-1.57	.06	20.0	164	11	23	2				
		1 23 40	3	-1.69	.01	25.0	160	12	23	2				
21	GR 0129+06	1 29 0	3	6.07	.04	16.7	78	9			1.19	.34	A	3C 44
		1 28 49	22	5.92	.06	14.7	106	28	7	2				
		1 29 9	6	5.98	.03	16.7	74	11	11	2				
		1 28 59	4	6.02	.01	20.0	66	12	17	2				
		1 28 59	3	6.15	.01	25.0	48	12	17	2				
22	GR 0132+08	1 32 56	17	8.15	.11	16.7	81	31			3.24	1.10	B	4C07.05
		1 34 58	14	8.69	.13	14.7	68	24	5	2				
		1 32 58	13	8.50	.05	16.7	130	19	12	2				
		1 32 48	7	8.17	.03	20.0	44	14	15	2				
		1 32 48	4	7.99	.03	25.0	21	13	14	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.	
23	GR 0137-01	1 37 0	26	-1.77	.08	16.7	60	18			1.47	1.31	C	4C-02.07	QSO
		1 35 31	46	-1.79	.42	14.7	79	62	5	2					
		1 37 30	15	-1.61	.22	16.7	57	24	6	2					
		1 36 51	20	-1.77	.08	20.0	53	32	2	1					
		1 35 31	36	-2.00	.30	25.0	23	70	2	1					
24	GR 0138+07	1 38 49	19	7.45	.06	16.7	80	26			3.79	.87	B	4C07.05A	
		1 38 18	40	7.37	.24	12.6	263	42	5	1					
		1 39 58	49	7.22	.36	14.7	166	56	4	1					
		1 41 38	66	6.97	.46	16.7	173	84	2	1					
		1 38 48	18	7.47	.13	20.0	25	32	3	1					
		1 38 38	15	7.47	.06	25.0	22	30	7	2					
25	GR 0140-01	1 40 59	15	-1.71	.04	16.7	127	94			2.59	4.79	B	4C-01.09	
		1 41 20	12	-1.27	.18	16.7	172	18	3	1					
		1 40 50	12	-1.64	.04	20.0	38	21	6	2					
		1 40 31	19	-1.73	.02	25.0	135	37	6	2					
26	GR 0145-00	1 45 60	21	-.76	.03	16.7	63	18			2.62	.54	B	NAIC0144-01	
		1 45 10	51	.15	.58	12.6	< 70		5	2					
		1 45 47	110	-.77	.01	14.7	101	60	14	2					
		1 46 13	70	-.28	.17	16.7	60	43	10	2					
		1 45 57	45	-.19	.18	20.0	38	30	10	2					
		1 46 11	24	-.19	.12	25.0	22	19	7	2					
27	GR 0146+06	1 46 46	9	6.18	.07	16.7	92	12			2.30	.49	B	4C06.08	
		1 47 8	8	6.57	.03	14.7	107	15	18	2					
		1 46 58	5	6.24	.02	16.7	95	12	20	2					
		1 46 58	6	6.15	.01	20.0	73	13	24	2					
		1 46 28	4	6.06	.02	25.0	33	12	20	2					
28	GR 0148+07	1 48 27	17	7.76	.06	16.7	51	31			1.23	1.03	B	4C08.2	
		1 49 28	74	7.40	.75	12.6	< 85		2	1					
		1 48 58	47	7.68	.30	14.7	105	58	5	1					
		1 49 38	20	7.55	.13	16.7	70	62	3	1					
		1 48 18	13	7.86	.06	20.0	33	22	5	1					
		1 48 8	11	7.73	.05	25.0	35	23	5	1					
29	GR 0152+04	1 52 50	5	4.14	.02	16.7	74	8			1.74	.35	A	4C03.04	
		1 52 59	12	4.30	.05	12.6	101	21	8	2					
		1 52 59	8	4.05	.03	14.7	91	14	18	2					
		1 52 39	5	4.13	.03	16.7	76	12	16	2					
		1 52 49	7	4.15	.01	20.0	64	15	19	2					
		1 52 59	6	4.08	.02	25.0	32	15	14	2					
30	GR 0157-01	1 57 0	15	-1.41	.09	16.7	96	16			5.22	1.10	C	NAIC0155-00	
		1 57 0	63	-1.06	.72	12.6	< 94		3	1					
		1 57 0	34	-1.32	.03	14.7	180	39	9	2					
		1 56 31	27	-1.52	.24	16.7	101	35	7	2					
		1 57 11	16	-1.65	.05	20.0	37	27	5	1					
31	GR 0158+01	1 58 41	14	1.38	.10	16.7	58	8			2.43	.39	B	4C01.05	QSO
		1 59 10	41	1.03	.27	12.6	< 97		5	1					
		1 59 0	13	1.17	.13	14.7	78	21	8	2					
		1 59 0	12	1.49	.06	16.7	55	21	8	2					
		1 58 7	64	1.54	.16	20.0	40	15	11	2					
		1 58 10	11	1.12	.11	25.0	20	24	7	2					
32	GR 0209+07	2 9 31	11	7.23	.02	16.7	77	7			2.01	.31	A	4C07.08	
		2 9 21	78	7.40	.12	12.6	150	43	20	2					
		2 9 51	34	7.50	.10	14.7	89	17	32	2					
		2 9 30	27	7.41	.10	16.7	80	15	26	2					
		2 9 30	17	7.24	.12	20.0	57	11	30	2					
		2 9 28	19	7.22	.01	25.0	32	15	19	2					
33	GR 0217+01	2 17 40	15	1.60	.15	16.7	60	15			1.35	1.00	C	PKS0217+01	G
		2 16 39	50	2.04	.17	10.0	<144		2	1					
		2 17 20	27	1.32	.10	12.6	110	39	8	1					
		2 17 49	16	1.71	.18	14.7	74	26	8	1					
		2 17 19	13	1.92	.16	16.7	46	23	8	1					
		2 18 20	17	1.54	.15	20.0	58	28	11	2					

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DBQ.	ERR. DBQ.	FREQ. MHz	FLUX F.U.	ERR. PC	N	NHA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
34	GR 0219-01	2 19 12	14	-1.71	.14	15.7	117	10			1.23	.48	B	3C 63 G
		2 18 10	147	-.34	.05	12.6	283	37	18	2				
		2 19 50	12	-.86	.20	14.7	131	17	11	1				
		2 19 21	9	-1.54	.09	16.7	107	15	13	2				
		2 19 21	75	-1.66	.26	20.0	88	37	14	2				
		2 18 41	9	-1.77	.01	25.0	78	20	17	2				
35	GR 0219+08	2 19 22	6	8.35	.03	16.7	73	8			1.26	.31	A	4C08.08 G
		2 19 37	23	8.48	.13	12.6	67	44	7	2				
		2 19 47	10	8.51	.05	14.7	83	17	17	2				
		2 19 47	7	8.35	.02	16.7	77	13	16	2				
		2 19 7	9	8.45	.02	20.0	65	17	14	2				
		2 19 17	3	8.31	.01	25.0	42	12	16	2				
36	GR 0220+05	2 20 60	20	5.87	.16	16.7	64	17			.10	.82	C	4C06.10
		2 20 2	175	6.42	.49	12.6	108	67	6	2				
		2 20 21	112	6.19	.27	14.7	46	53	10	2				
		2 22 53	99	6.57	.09	16.7	70	27	8	2				
		2 20 53	63	5.85	.06	20.0	55	23	8	2				
		2 20 58	19	5.65	.05	25.0	75	38	2	1				
37	GR 0224+03	2 24 2	11	3.67	.06	16.7	71	21			3.05	1.18	B	OD038
		2 23 59	21	3.39	.13	12.6	51	51	7	2				
		2 24 19	14	3.72	.03	14.7	143	18	9	2				
		2 24 19	13	3.88	.06	16.7	56	21	11	2				
		2 23 39	14	3.56	.06	20.0	37	23	6	2				
		2 23 39	19	3.59	.04	25.0	25	37	4	2				
38	GR 0226+07	2 26 10	33	7.69	.14	16.7	56	23			1.78	1.20	C	NAIC0226+07
		2 28 17	79	7.97	.75	12.6	<116		2	1				
		2 27 47	34	7.49	.06	14.7	96	44	6	1				
		2 26 47	14	7.86	.08	16.7	42	26	10	2				
		2 24 57	13	7.62	.11	20.0	50	21	3	1				
		2 27 17	22	8.54	.17	25.0	20	42	3	1				
39	GR 0235+01	2 35 8	21	1.82	.10								C	PKS0235+017 G
		2 34 0	64	1.41	.70	12.6	< 96		3	1				
		2 33 59	49	1.55	.55	14.7	< 83		4	2				
		2 34 49	12	1.87	.15	16.7	60	19	10	2				
		2 35 52	16	1.81	.12	20.0	64	27	11	2				
40	GR 0238+08	2 38 41	6	8.59	.06	16.7	34	9			.69	.39	B	4C08.11 G
		2 39 47	52	8.61	.36	12.6	< 83		5	2				
		2 37 53	60	8.29	.13	14.7	40	34	11	2				
		2 38 27	11	8.39	.06	16.7	35	24	13	2				
		2 38 47	6	8.48	.03	20.0	30	14	13	2				
		2 38 37	10	8.67	.02	25.0	27	21	10	2				
41	GR 0240-00	2 40 29	8	-.32	.03	16.7	73	16			1.66	.59	A	3C 71 G
		2 39 50	48	-.83	.49	10.0	<203		4	2				
		2 40 20	26	-.24	.08	12.6	76	45	11	2				
		2 41 20	16	-.30	.08	14.7	68	27	12	2				
		2 40 20	20	-.40	.05	16.7	118	27	14	2				
		2 40 30	8	-.28	.04	20.0	57	16	16	2				
		2 40 20	7	-.32	.04	25.0	34	16	14	2				
42	GR 0241+03	2 41 55	12	3.15	.11	16.7	83	12			-.60	.85	C	NAIC0242+02
		2 41 39	35	3.72	.08	12.6	97	52	2	1				
		2 42 39	26	3.12	.05	14.7	67	39	2	1				
		2 41 39	14	3.83	.36	16.7	80	20	5	2				
		2 41 59	11	3.08	.03	20.0	96	19	3	1				
43	GR 0242+00	2 42 57	12	.95	.11	16.7	43	17			1.67	.71	B	4C00.09
		2 42 50	91	.67	.78	10.0	<137		2	1				
		2 44 20	74	1.28	.96	12.6	< 92		2	1				
		2 42 40	19	.57	.18	14.7	58	32	9	2				
		2 43 10	21	1.38	.23	16.7	46	36	9	2				
		2 42 40	19	1.00	.12	20.0	19	41	8	2				
		2 43 10	17	.96	.11	25.0	26	34	3	1				

(continued)

Table 1 (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHz	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
44	GR 0251+00	2 51 43	7	.91	.07	16.7	65	24			1.79	1.00	B	4C00.10
		2 51 30	23	.84	.22	14.7	102	29	7	1				
		2 52 0	15	.89	.17	16.7	42	28	11	2				
		2 51 40	9	.79	.10	20.0	53	17	8	2				
		2 51 40	12	.98	.06	25.0	30	24	6	2				
45	GR 0251-01	2 51 47	10	-1.31	.18	16.7	43	18			3.32	1.10	C	NAIC0253-01
		2 52 1	24	-1.33	.15	12.6	75	42	7	2				
		2 51 51	18	-1.63	.13	14.7	74	28	7	2				
		2 51 21	20	-1.13	.20	16.7	53	30	7	2				
		2 51 50	11	-.92	.16	20.0	21	25	4	1				
46	GR 0255+05	2 55 17	2	5.94	.01	16.7	183	3			1.09	.13	A	3C 75 GGA
		2 55 18	9	5.89	.03	12.6	239	14	21	2				
		2 55 28	4	5.97	.01	14.7	212	11	31	2				
		2 55 8	3	5.97	.01	16.7	187	11	31	2				
		2 55 8	3	5.91	.01	20.0	152	11	32	2				
		2 55 18	1	5.94	.01	25.0	116	10	32	2				
47	GR 0259+01	2 59 39	5	1.80	.01	16.7	127	8			1.12	.31	A	4C01.06
		3 1 9	34	1.66	.32	10.0	132	57	9	2				
		2 59 49	11	1.87	.11	12.6	157	18	17	2				
		2 59 49	9	1.54	.11	14.7	187	14	18	2				
		2 59 49	6	1.83	.02	16.7	116	12	20	2				
		2 59 39	5	1.79	.01	20.0	98	12	20	2				
		2 59 29	4	1.81	.01	25.0	83	12	20	2				
48	GR 0300+07	3 0 31	11	7.97	.05	16.7	48	46			1.59	2.06	B	4C07.11
		3 1 47	55	7.85	.30	14.7	118	64	7	2				
		3 1 56	43	7.86	.11	16.7	27	30	10	2				
		3 0 27	7	7.99	.03	20.0	44	15	11	2				
		3 0 45	40	7.69	.13	25.0	18	31	9	2				
49	GR 0303+05	3 3 27	12	5.16	.13	16.7	63	8			3.34	.48	B	4C05.13
		3 4 8	44	5.17	.24	12.6	< 99		2	1				
		3 3 48	11	5.68	.08	14.7	91	18	5	2				
		3 3 38	12	4.98	.04	16.7	69	19	10	2				
		3 2 58	10	5.28	.06	20.0	35	18	13	2				
		3 3 38	23	5.26	.17	25.0	14	45	3	1				
50	GR 0305+03	3 5 59	3	3.90	.04	16.7	93	9			1.03	.36	A	3C 78 G
		3 5 8	109	4.00	.75	10.0	<216		2	1				
		3 5 48	14	4.22	.05	12.6	113	23	16	2				
		3 5 58	5	3.89	.04	14.7	96	12	18	2				
		3 6 18	9	3.77	.01	16.7	127	15	21	2				
		3 5 58	4	3.93	.01	20.0	73	12	24	2				
		3 5 58	4	3.98	.01	25.0	60	13	24	2				
51	GR 0310+05	3 10 30	27	5.30	.12	16.7	25	72			.89	3.07	C	4C04.11
		3 10 48	21	5.35	.17	16.7	21	60	5	2				
		3 10 38	27	5.33	.11	20.0	25	46	7	2				
		3 9 18	37	4.92	.30	25.0	14	70	2	1				
52	GR 0311+07	3 11 50	34	7.68	.14	16.7	55	32			3.40	1.22	C	NAIC0311+0756 NAIC0311+0707
		3 13 27	25	7.53	.05	14.7	112	30	2	1				
		3 10 16	28	8.00	.13	16.7	40	49	9	2				
		3 11 6	14	8.03	.08	20.0	19	30	8	2				
		3 12 27	14	7.45	.11	25.0	18	29	4	1				
53	GR 0316+04	3 16 8	9	4.52	.10	16.7	52	16			1.45	.56	B	4C04.12
		3 15 38	19	4.44	.15	14.7	50	37	9	2				
		3 16 38	26	4.96	.06	16.7	59	37	3	1				
		3 16 8	7	4.38	.03	20.0	42	15	21	2				
		3 16 26	21	4.59	.03	25.0	28	16	17	2				
54	GR 0323+06	3 23 22	17	6.02	.10	16.7	56	29			3.94	1.83	C	4C05.15
		3 23 17	28	5.81	.24	12.6	127	38	6	2				
		3 23 57	38	6.27	.30	14.7	< 50		7	2				
		3 23 47	18	5.97	.08	16.7	75	25	9	2				
		3 22 57	16	6.20	.15	20.0	16	40	4	1				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.	
55	GR 0325+02	3 25 48	9	2.40	.01	16.7	96	6			.86	.23	A	3C 88	G
		3 25 19	43	1.90	.54	10.0	137	67	3	1					
		3 26 49	10	2.44	.06	12.6	126	17	11	2					
		3 26 39	9	2.15	.13	14.7	116	14	13	2					
		3 25 39	6	2.40	.13	16.7	82	13	14	2					
		3 25 49	5	2.41	.01	20.0	92	13	17	2					
		3 25 39	3	2.39	.01	25.0	67	11	16	2					
56	GR 0328+06	3 28 25	29	6.12	.09								C	NAIC0328+06	
		3 29 57	57	5.99	.58	12.6	<130		4	2					
		3 29 27	22	6.32	.15	16.7	< 30		5	2					
		3 29 7	13	5.93	.06	20.0	22	27	4	2					
		3 27 37	11	6.20	.05	25.0	24	23	4	2					
57	GR 0332-01	3 32 5	4	-1.49	.05	16.7	155	4			1.09	.17	A	3C 89	G
		3 31 50	22	-.64	.11	10.0	230	30	11	2					
		3 32 21	6	-1.09	.08	12.6	202	12	23	2					
		3 32 11	8	-1.10	.08	14.7	202	13	24	2					
		3 32 11	4	-1.41	.08	16.7	157	11	24	2					
		3 31 51	5	-1.43	.01	20.0	122	12	26	2					
		3 32 1	4	-1.57	.01	25.0	99	13	24	2					
58	GR 0333+01	3 33 23	8	1.12	.06	16.7	45	27			1.80	1.36	B	08055	
		3 33 19	20	1.51	.24	12.6	46	50	6	2					
		3 33 40	12	1.14	.06	16.7	59	19	7	2					
		3 33 20	8	1.06	.06	20.0	25	17	9	2					
		3 33 10	16	1.15	.12	25.0	29	32	6	2					
59	GR 0335+07	3 35 53	21	7.66	.05	16.7	49	9			2.44	.37	B	4C07.12	
		3 35 16	8	7.67	.05	14.7	72	17	11	2					
		3 36 6	9	7.79	.05	16.7	46	18	9	2					
		3 36 46	12	7.58	.04	20.0	30	20	6	1					
		3 36 32	24	7.63	.09	25.0	19	17	9	2					
60	GR 0340+04	3 40 50	10	4.79	.15	16.7	82	7			1.24	.34	A	3C 93	QSO
		3 40 51	54	4.46	.13	12.6	104	24	30	2					
		3 40 43	32	5.10	.33	14.7	99	9	40	2					
		3 40 55	23	4.95	.27	16.7	92	12	42	2					
		3 40 48	15	4.94	.20	20.0	57	9	49	2					
		3 40 57	32	4.98	.15	25.0	55	12	49	2					
61	GR 0342+08	3 42 8	25	8.06	.16	16.7	71	58			1.14	2.23	C	NAIC0343+07	
		3 41 6	57	7.94	.46	12.6	<103		4	1					
		3 41 6	19	7.65	.15	16.7	27	46	9	2					
		3 42 43	9	8.42	.05	20.0	69	16	9	2					
		3 41 26	13	7.87	.04	25.0	35	27	6	2					
62	GR 0346+00	3 46 5	27	.69	.15	16.7	49	18			3.67	1.70	C	4C00.13	
		3 44 39	105	.92	.96	10.0	<300		2	1					
		3 46 11	38	.92	.22	12.6	< 96		8	2					
		3 45 40	80	.41	.27	14.7	49	54	11	2					
		3 45 45	42	.65	.22	16.7	57	26	15	2					
		3 46 45	46	.65	.25	20.0	22	36	8	1					
63	GR 0347+05	3 47 37	7	5.72	.06	16.7	59	14			1.88	.57	B	4C05.16	
		3 47 47	22	5.39	.17	12.6	45	59	13	2					
		3 47 57	7	5.52	.03	16.7	63	14	12	2					
		3 47 27	5	5.72	.02	20.0	42	13	21	2					
		3 47 37	6	5.82	.02	25.0	27	16	20	2					
64	GR 0352+03	3 52 49	20	3.00	.16	16.7	46	10			1.96	.38	B	4C02.11	
		3 53 53	13	3.55	.23	12.6	64	27	21	2					
		3 53 29	14	2.78	.03	14.7	58	27	29	2					
		3 53 19	8	3.42	.09	16.7	54	20	29	2					
		3 52 8	6	3.42	.06	20.0	34	15	25	2					
		3 53 2	12	3.47	.08	25.0	19	17	15	2					
65	GR 0400+06	4 0 1	26	6.12	.12	16.7	54	18			1.52	.85	C	4C05.17	
		4 0 57	33	5.91	.24	14.7	46	61	9	2					
		4 0 45	14	5.99	.06	16.7	61	22	11	2					
		3 59 27	12	6.12	.06	20.0	37	21	8	2					
		3 58 20	55	6.66	.13	25.0	32	30	5	1					

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. FC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
66	GR 0400+08	4 0 7	40	8.39	.16	16.7	64	13			2.94	.60	C	OEO98.6
		3 58 30	20	8.86	.20	12.6	153	25	7	1				
		3 58 25	29	8.84	.24	14.7	36	66	5	2				
		3 59 46	22	8.47	.11	16.7	70	29	5	2				
		4 1 26	14	8.11	.11	20.0	37	24	7	2				
		4 0 43	90	7.78	.47	25.0	20	45	7	2				
67	GR 0401+02	4 1 1	17	2.51	.18	16.7	34	39			1.67	1.64	C	4C02.13
		4 0 35	74	1.79	.64	12.6	< 65		2	1				
		4 1 19	43	2.27	.35	14.7	< 67		6	2				
		4 0 59	32	2.45	.24	16.7	33	63	5	2				
		4 0 59	34	2.71	.30	20.0	25	59	4	2				
		4 0 59	36	2.74	.30	25.0	17	70	2	1				
68	GR 0405+03	4 5 5	5	3.66	.05	16.7	81	6			.84	.24	A	3C105 G
		4 5 28	79	3.45	.58	10.0	<246		3	1				
		4 4 38	12	3.40	.04	12.6	116	20	14	2				
		4 5 28	10	3.85	.04	14.7	94	16	16	2				
		4 5 6	7	3.81	.04	16.7	75	14	20	2				
		4 5 8	4	3.75	.01	20.0	65	12	19	2				
		4 4 58	5	3.57	.01	25.0	63	14	18	2				
69	GR 0405+07	4 5 52	17	7.62	.09	16.7	98	21			1.68	1.24	B	NAIC0404+07 NAIC0405+07
		4 6 6	27	7.37	.24	12.6	127	35	3	1				
		4 6 6	19	7.43	.11	14.7	133	23	2	1				
		4 6 16	17	7.31	.09	16.7	83	23	7	2				
		4 5 46	14	7.72	.04	20.0	104	23	7	2				
		4 4 26	28	7.41	.20	25.0	14	54	2	1				
70	GR 0410-01	4 10 24	5	-1.07	.03	16.7	87	6			1.70	.22	A	3C107
		4 10 11	25	-1.10	.27	10.0	129	45	11	2				
		4 10 21	18	-1.01	.12	12.6	144	25	17	2				
		4 10 51	9	-1.43	.06	14.7	117	15	22	2				
		4 10 11	10	-1.19	.06	16.7	86	16	21	2				
		4 10 21	10	-1.07	.04	20.0	63	18	23	2				
		4 10 21	4	-1.06	.01	25.0	43	13	19	2				
71	GR 0412+06	4 12 25	23	6.04	.19	16.7	84	13			1.88	.91	C	4C05.19
		4 13 7	17	5.75	.11	14.7	114	22	4	1				
		4 11 56	21	6.59	.06	16.7	69	28	6	1				
		4 11 57	15	5.88	.04	20.0	63	25	7	2				
		4 13 36	41	6.99	.30	25.0	42	78	2	1				
72	GR 0417+07	4 17 51	7	7.55	.08	16.7	62	21			2.01	.90	B	4CPO7.14A
		4 18 17	17	7.98	.15	12.6	32	63	9	2				
		4 17 36	22	7.64	.13	14.7	48	43	9	2				
		4 18 6	12	7.59	.04	16.7	80	19	13	2				
		4 17 46	7	7.79	.03	20.0	43	15	13	2				
		4 17 46	9	7.43	.02	25.0	25	20	11	2				
73	GR 0419-01	4 19 38	29	-1.04	.07	16.7	100	12			.53	.68	C	PKS0420-01 QSO
		4 20 56	18	-1.06	.06	12.6	130	26	12	2				
		4 19 41	11	-1.01	.27	14.7	102	17	10	2				
		4 20 1	23	-.91	.27	16.7	89	31	7	1				
		4 18 21	16	-.93	.26	20.0	100	27	4	1				
74	GR 0423+05	4 23 18	33	5.38	.12	16.7	32	16			.70	.73	C	4C04.15
		4 21 47	27	6.00	.15	12.6	46	52	7	2				
		4 24 17	19	5.35	.06	14.7	38	43	8	2				
		4 22 37	23	5.65	.17	16.7	25	57	6	2				
		4 24 28	39	5.24	.04	20.0	25	27	10	2				
		4 23 1	48	5.85	.09	25.0	33	48	5	1				
75	GR 0424+08	4 24 3	10	8.70	.10	16.7	50	14			1.39	.58	B	4C08.15 QSO
		4 23 45	22	8.41	.11	14.7	55	37	5	2				
		4 24 5	26	8.54	.05	16.7	53	38	8	2				
		4 24 15	9	8.85	.04	20.0	40	16	9	2				
		4 23 45	12	8.62	.08	25.0	28	24	7	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX P.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
76	GR 0424+03	4 24 37	13	3.31	.04	16.7	65	8			.43	.65	B	4C02.14
		4 24 48	42	3.51	.24	12.6	< 84		7	2				
		4 24 58	12	3.37	.06	14.7	70	21	14	2				
		4 24 48	9	3.49	.17	16.7	64	15	19	2				
		4 24 8	10	3.29	.03	20.0	61	18	13	2				
77	GR 0426-01	4 26 14	10	-1.18	.09	16.7	65	36			2.27	3.25	C	4C-00.17
		4 26 21	20	-1.01	.22	14.7	33	52	9	2				
		4 26 21	12	-1.25	.09	16.7	76	18	12	2				
		4 26 1	14	-1.11	.12	20.0	38	24	8	2				
78	GR 0428+01	4 28 53	4	1.26	.06	16.7	65	6			1.46	.26	B	4C01.10
		4 28 59	23	1.27	.19	12.6	83	40	10	2				
		4 28 49	11	1.87	.11	14.7	81	19	13	2				
		4 28 49	7	1.36	.09	16.7	64	13	12	2				
		4 28 59	5	1.24	.02	20.0	52	13	13	2				
		4 28 49	6	1.09	.09	25.0	35	16	9	2				
79	GR 0430+05	4 30 13	19	5.27	.17	16.7	65	15			1.84	.91	C	3C120 G
		4 30 46	74	6.36	.75	12.6	< 59		2	1				
		4 30 57	22	4.94	.06	14.7	96	30	9	2				
		4 29 17	16	5.55	.11	16.7	49	27	6	2				
		4 30 24	11	5.60	.06	20.0	51	19	10	2				
		4 30 47	31	5.36	.20	25.0	24	59	2	1				
80	GR 0432+07	4 32 42	23	7.97	.08	16.7	92	19			1.41	.85	B	4C07.15
		4 30 36	29	7.22	.20	12.6	131	37	3	1				
		4 31 56	19	7.40	.13	14.7	132	23	6	2				
		4 31 46	16	7.83	.06	16.7	104	23	6	2				
		4 33 15	10	8.23	.04	20.0	49	18	10	2				
		4 33 6	12	7.94	.02	25.0	74	24	6	2				
81	GR 0432+03	4 32 49	18	3.80	.07	16.7	67	14			2.23	.68	B	4C03.09
		4 31 48	24	3.52	.20	12.6	143	31	10	2				
		4 33 28	12	3.79	.05	14.7	83	20	14	2				
		4 33 18	13	3.80	.03	16.7	79	19	16	2				
		4 32 8	10	4.03	.05	20.0	34	18	14	2				
		4 32 59	13	3.57	.06	25.0	37	27	11	2				
82	GR 0436+06	4 36 9	23	6.21	.13	16.7	82	21			3.46	1.53	C	OF062
		4 36 36	39	6.98	.20	12.6	77	65	2	1				
		4 37 17	31	6.13	.15	14.7	135	36	3	1				
		4 35 24	15	6.32	.11	16.7	98	22	13	2				
		4 36 27	13	6.12	.06	20.0	39	22	7	2				
83	GR 0438+08	4 38 57	18	8.21	.07	16.7	69	14			.63	.60	B	4C08.16 GGA
		4 40 55	30	8.49	.24	12.6	93	45	8	2				
		4 39 25	31	8.12	.06	14.7	77	44	7	2				
		4 38 56	11	7.97	.05	16.7	72	18	9	2				
		4 39 15	17	8.25	.03	20.0	43	28	11	2				
		4 38 25	12	8.33	.04	25.0	61	24	8	2				
84	GR 0439-00	4 39 59	12	-3.31	.10	16.7	65	12			2.75	.60	B	4C-00.18
		4 40 40	19	-3.64	.11	12.6	155	25	10	2				
		4 41 20	28	-3.57	.19	14.7	109	35	6	1				
		4 39 50	16	-3.47	.10	16.7	56	25	11	2				
		4 39 50	7	-3.63	.06	20.0	37	14	13	2				
		4 40 0	75	-3.19	.03	25.0	38	42	12	2				
85	GR 0442+02	4 42 10	14	2.59	.05	16.7	60	8			.99	.36	A	3C126
		4 40 59	67	1.74	.58	10.0	<222		4	2				
		4 42 8	22	2.84	.15	12.6	87	30	25	2				
		4 41 57	15	2.50	.04	14.7	76	36	34	2				
		4 42 28	9	2.61	.05	16.7	59	18	38	2				
		4 42 28	6	2.63	.02	20.0	46	15	37	2				
		4 41 8	10	2.00	.10	25.0	48	25	29	2				

(continued)

Table 1 (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	PAR. "	W	IDENTIFICATION RADIO OPTIC.
86	GR 0443+05	4 43 28	7	5.69	.05	16.7	58	15			2.32	.65	A	4C05.22
		4 43 47	20	5.49	.08	12.6	99	30	13	2				
		4 43 37	31	5.76	.02	14.7	178	36	14	2				
		4 43 47	8	5.71	.03	16.7	51	16	18	2				
		4 43 17	4	5.48	.02	20.0	38	11	18	2				
		4 43 47	8	5.72	.01	25.0	24	18	14	2				
87	GR 0452+00	4 52 37	17	.58	.06	16.7	77	17			4.71	1.41	B	4C00.16
		4 52 50	49	.61	.47	12.6	< 70		6	2				
		4 52 50	37	.66	.32	14.7	< 59		6	2				
		4 53 0	13	.55	.06	16.7	80	20	11	2				
		4 52 0	18	.68	.11	20.0	27	31	6	2				
		4 51 40	39	.53	.30	25.0	25	74	2	1				
88	GR 0453-00	4 53 16	9	-.16	.07	16.7	65	23			1.05	.75	B	4C-00.19 QSO
		4 53 30	95	-.18	.75	10.0	<134		3	1				
		4 53 0	151	-.31	.11	12.6	< 93		14	2				
		4 52 21	30	-.96	.21	14.7	54	51	14	2				
		4 53 30	94	-.04	.05	16.7	53	44	14	2				
		4 53 20	16	-.22	.05	20.0	73	27	11	2				
		4 53 20	9	-.14	.06	25.0	39	21	4	2				
89	GR 0454+06	4 54 9	6	6.49	.09	16.7	64	14			2.80	.52	B	4C06.21
		4 54 27	41	6.02	.30	12.6	< 87		7	2				
		4 53 34	70	6.62	.18	14.7	119	26	18	2				
		4 54 13	37	6.07	.12	16.7	53	22	20	2				
		4 54 16	10	6.30	.04	20.0	34	19	10	2				
		4 54 6	7	6.62	.03	25.0	22	16	9	2				
90	GR 0454+04	4 54 29	36	4.37	.06	16.7	33	15			-.97	.62	C	NAIC0456+03 NAIC0455+04 NAIC0456+04
		4 52 58	54	3.93	.70	12.6	< 74		4	2				
		4 54 27	21	4.58	.15	14.7	33	54	16	2				
		4 55 8	8	4.34	.05	16.7	32	21	22	2				
		4 52 38	14	4.39	.09	25.0	49	29	2	1				
91	GR 0456+08	4 56 5	17	8.68	.04	16.7	47	40			1.51	1.93	C	NAIC0456+08 NAIC0455+09
		4 56 35	15	8.58	.11	16.7	39	28	6	2				
		4 55 45	11	8.70	.03	20.0	41	19	10	2				
		4 56 15	20	8.58	.09	25.0	19	39	2	1				
92	GR 0458+01	4 58 50	6	1.43	.03	16.7	58	9			1.85	.37	A	4C01.12 G
		4 59 29	66	1.59	.58	12.6	<108		3	1				
		4 58 59	14	1.41	.12	14.7	69	24	11	2				
		4 58 49	14	1.39	.11	16.7	64	21	9	2				
		4 58 39	8	1.71	.15	20.0	39	16	12	2				
		4 58 59	8	1.42	.02	25.0	28	19	8	2				
93	GR 0501+05	5 1 50	11	5.98	.16	16.7	77	12			.88	.57	C	NAIC0500+06 NAIC0502+00
		5 2 56	33	6.96	.20	12.6	116	45	4	1				
		5 1 47	17	5.58	.04	14.7	90	24	8	1				
		5 1 57	16	5.94	.06	16.7	76	22	10	1				
		5 1 37	14	5.61	.03	20.0	53	23	15	2				
		5 1 46	15	6.23	.02	25.0	68	30	7	2				
94	GR 0507+03	5 7 18	20	3.59	.11	16.7	43	17			2.18	.77	B	0C011
		5 5 58	17	3.58	.11	12.6	87	29	7	2				
		5 7 38	13	3.68	.05	14.7	74	22	13	2				
		5 7 48	13	3.40	.18	16.7	31	27	16	2				
		5 6 58	9	3.66	.05	20.0	24	18	17	2				
		5 9 15	35	2.86	.12	25.0	26	27	16	2				
95	GR 0511+01	5 11 51	6	1.49	.10	16.7	89	4			1.60	.19	B	4C01.13 4C00.18 G
		5 10 49	42	1.97	.29	10.0	196	57	6	2				
		5 12 19	8	1.89	.09	12.6	133	16	19	2				
		5 11 49	5	1.53	.06	14.7	115	11	22	2				
		5 11 29	6	1.40	.06	16.7	82	12	22	2				
		5 11 49	5	1.26	.08	20.0	71	12	21	2				
		5 11 59	5	1.34	.13	25.0	45	14	14	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
96	GR 0516+03	5 16 45	21	3.49	.08	16.7	47	15			2.56	.94	B	00026+00028
		5 14 58	32	3.76	.17	12.6	114	44	9	2				
		5 16 8	21	3.11	.15	14.7	45	43	8	2				
		5 17 8	17	3.38	.06	16.7	52	27	4	1				
		5 16 58	11	3.55	.04	20.0	30	20	7	2				
97	GR 0522+07	5 22 5	14	7.67	.07	16.7	49	8			2.57	.41	B	4C07.16 G
		5 23 15	34	7.62	.17	12.6	113	45	6	2				
		5 22 55	14	7.98	.11	14.7	65	25	9	2				
		5 22 5	10	7.81	.05	16.7	47	19	11	2				
		5 21 46	10	7.57	.03	20.0	34	18	10	2				
		5 21 45	13	7.81	.06	25.0	16	27	8	2				
98	GR 0528+01	5 28 16	9	1.00	.03	16.7	68	9			2.08	.44	A	4C01.14
		5 28 59	16	1.49	.22	12.6	89	28	12	2				
		5 28 29	12	1.03	.10	14.7	97	18	13	2				
		5 28 9	11	1.13	.08	16.7	74	16	12	2				
		5 28 10	9	.97	.06	20.0	49	17	11	2				
		5 27 59	11	.99	.02	25.0	26	22	11	2				
99	GR 0529+06	5 29 5	3	6.40	.01	16.7	121	5			1.37	.18	A	3C142.1
		5 30 6	11	6.27	.08	12.6	178	14	18	2				
		5 28 0	22	6.41	.02	14.7	168	21	20	2				
		5 28 56	3	6.34	.02	16.7	116	11	14	1				
		5 28 56	5	6.40	.01	20.0	91	12	20	2				
		5 29 6	1	6.41	.01	25.0	71	10	21	2				
100	GR 0531+04	5 31 41	13	4.33	.16	16.7	75	14			1.73	.64	B	4C04.18
		5 32 8	13	4.08	.05	12.6	118	21	10	2				
		5 32 8	14	3.94	.03	14.7	109	19	16	2				
		5 31 57	10	4.77	.05	16.7	76	17	12	2				
		5 31 17	10	4.65	.06	20.0	38	19	18	2				
		5 31 7	12	4.55	.03	25.0	51	24	19	2				
101	GR 0531-00	5 31 48	9	-7.1	.11	16.7	48	9			2.32	.34	B	4C-01.16
		5 31 0	28	-7.30	.11	12.6	99	41	8	1				
		5 32 11	18	-1.02	.17	14.7	69	28	9	2				
		5 31 51	14	-1.11	.13	16.7	42	26	7	2				
		5 32 1	12	-7.78	.13	20.0	33	21	7	2				
		5 31 41	8	-7.1	.05	25.0	19	18	3	1				
102	GR 0539+04	5 39 16	16	4.37	.05	16.7	71	10			3.21	.46	B	4C04.20
		5 41 48	83	4.08	.75	10.0	<304		3	1				
		5 38 17	22	4.57	.06	12.6	180	28	12	2				
		5 38 17	16	4.46	.06	14.7	86	24	11	2				
		5 39 27	10	4.31	.03	16.7	86	16	17	2				
		5 39 37	10	4.39	.05	20.0	33	18	9	2				
		5 40 7	51	4.01	.16	25.0	21	21	5	1				
103	GR 0541+07	5 41 46	9	7.94	.07	16.7	191	41			3.27	1.80	B	MAIC0539+07
		5 41 36	23	7.41	.08	12.6	377	25	2	1				
		5 41 56	13	7.40	.05	16.7	326	19	4	1				
		5 41 35	12	7.91	.03	20.0	53	21	8	2				
		5 41 55	15	7.98	.01	25.0	77	30	9	2				
104	GR 0542-01	5 42 52	11	-1.27	.07	16.7	50	16			2.09	.56	B	PKS0542-01
		5 43 1	91	-1.90	1.00	10.0	<327		2	1				
		5 42 51	14	-1.26	.13	16.7	52	23	10	2				
		5 43 21	13	-1.15	.13	20.0	32	22	9	2				
		5 42 41	8	-1.30	.08	25.0	22	19	5	1				
105	GR 0545+03	5 45 23	20	3.45	.12	16.7	55	14			2.09	.85	C	00075
		5 46 28	18	3.36	.15	12.6	70	35	7	2				
		5 45 8	12	3.06	.08	14.7	86	19	12	2				
		5 46 8	17	3.58	.06	16.7	49	28	10	2				
		5 44 58	10	3.56	.06	20.0	37	18	11	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
106	GR 0545+02	5 45 47	26	2.53	.04	16.7	48	16			.32	.79	B	NAIC0546+02
		5 46 59	50	2.17	.60	12.6	< 75		5	1				
		5 46 9	30	2.54	.20	14.7	57	50	8	2				
		5 45 29	10	2.57	.08	16.7	52	18	7	2				
		5 47 9	14	2.28	.16	20.0	35	23	9	2				
		5 44 49	14	2.53	.03	25.0	52	29	2	1				
107	GR 0550+08	5 50 33	18	8.26	.13	16.7	61	15			2.93	.75	C	WKB052
		5 50 36	34	7.29	.30	12.6	109	47	4	2				
		5 50 45	23	7.83	.13	14.7	90	32	5	2				
		5 51 5	17	8.33	.13	16.7	59	26	7	2				
		5 49 45	17	8.31	.06	20.0	46	27	4	1				
		5 50 45	21	8.67	.17	25.0	13	40	2	1				
108	GR 0553+06	5 53 25	10	6.50	.04	16.7	45	17			2.02	.64	B	4C06.25
		5 53 36	10	6.52	.06	16.7	46	21	9	2				
		5 53 36	5	6.53	.04	20.0	31	11	10	2				
		5 53 6	6	6.45	.05	25.0	20	16	6	1				
109	GR 0602-00	6 2 9	17	-6.68	.17	16.7	73	21			2.11	1.65	C	
		6 1 1	73	-1.50	.65	12.6	<142		3	1				
		6 2 41	22	-1.12	.26	14.7	77	33	4	1				
		6 2 10	21	-6.63	.17	16.7	97	29	8	2				
		6 1 50	19	-5.53	.15	20.0	44	30	7	2				
110	GR 0604+04	6 4 12	9	4.44	.05	16.7	32	24			2.21	.71	B	4C04.21
		6 5 27	72	4.67	.75	12.6	< 70		2	1				
		6 4 47	55	4.77	.46	14.7	< 46		3	1				
		6 4 27	25	4.46	.17	16.7	28	58	3	1				
		6 3 57	12	4.45	.09	20.0	22	25	5	1				
		6 4 17	9	4.43	.05	25.0	13	19	3	1				
111	GR 0605+08	6 5 20	12	8.77	.07	16.7	53	14			1.64	.73	B	4C08.19
		6 5 55	76	8.86	.75	12.6	< 85		2	1				
		6 5 45	12	8.64	.04	16.7	53	20	10	2				
		6 5 5	9	8.89	.04	20.0	39	17	7	2				
		6 5 25	20	8.76	.05	25.0	28	38	2	1				
112	GR 0613+07	6 13 58	26	7.46	.05	16.7	24	21			-1.69	.98	B	OH023
		6 11 5	30	7.63	.30	12.6	< 69		6	2				
		6 13 5	53	7.92	.46	14.7	< 46		3	1				
		6 13 46	14	7.47	.09	16.7	21	43	4	2				
		6 14 15	11	7.59	.05	20.0	34	19	9	2				
		6 14 56	21	7.41	.03	25.0	43	41	5	2				
113	GR 0617+01	6 17 22	47	1.18	.09	16.7	52	10			.93	.50	B	OH032.2
		6 18 49	91	1.71	.75	10.0	<289		2	1				
		6 17 59	39	1.23	.40	12.6	< 72		4	1				
		6 17 9	14	1.13	.06	14.7	62	26	13	2				
		6 18 12	60	1.17	.20	16.7	55	18	15	2				
		6 17 52	74	1.67	.27	20.0	38	17	26	2				
		6 18 46	77	1.72	.42	25.0	44	29	12	2				
114	GR 0623+04	6 23 50	12	4.45	.03	16.7	65	16			3.32	1.07	B	4C04.24
		6 24 7	18	4.65	.13	12.6	115	27	14	2				
		6 23 57	15	4.46	.02	14.7	135	20	19	2				
		6 23 27	10	4.42	.06	16.7	64	16	14	2				
		6 24 7	11	4.36	.08	20.0	33	19	10	2				
115	GR 0623+08	6 23 53	14	8.91	.07	16.7	64	30			-.09	1.14	C	4C08.20
		6 24 35	55	8.28	.46	14.7	< 53		3	1				
		6 23 55	32	8.38	.20	16.7	75	41	3	1				
		6 23 35	18	9.00	.05	20.0	57	28	2	1				
		6 24 5	17	8.89	.04	25.0	72	34	2	1				
116	GR 0624+02	6 24 28	15	2.55	.03	16.7	96	21			1.66	.93	B	4C02.18
		6 25 19	35	2.45	.27	12.6	73	61	5	2				
		6 24 49	18	1.83	.31	14.7	159	22	3	1				
		6 24 49	42	2.45	.16	16.7	84	24	10	2				
		6 25 21	61	2.43	.34	20.0	43	31	7	2				
		6 24 9	12	2.56	.02	25.0	61	26	2	1				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	RHR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	FRR.	W	IDENTIFICATION RADIO OPTIC.
117	GR 0625+05	6 25 46	9	5.67	.13	16.7	68	11			2.33	.49	B	OH041.5
		6 25 57	30	5.43	.06	12.6	201	35	10	2				
		6 25 36	12	6.29	.05	14.7	81	20	11	2				
		6 26 7	15	5.54	.05	16.7	63	22	9	2				
		6 25 57	10	5.60	.03	20.0	44	18	14	2				
		6 25 27	11	5.62	.04	25.0	29	24	12	2				
118	GR 0629+00	6 29 6	22	.04	.10	16.7	59	13			2.11	.50	B	4000.22
		6 29 30	110	.22	1.00	10.0	<221		2	1				
		6 28 50	268	.19	.46	12.6	< 92		5	2				
		6 30 10	28	.19	.25	14.7	81	39	2	1				
		6 30 0	87	.18	.16	16.7	52	41	7	2				
		6 28 50	86	.06	.08	20.0	43	42	11	2				
		6 28 40	17	-.44	.20	25.0	25	33	4	1				
119	GR 0630+08	6 30 3	25	8.22	.09	16.7	48	14			2.22	.82	B	4008.21
		6 30 55	22	7.67	.15	12.6	62	46	4	2				
		6 30 45	14	8.16	.09	14.7	49	28	8	2				
		6 28 55	10	8.21	.06	16.7	59	17	8	2				
		6 30 35	10	8.31	.06	20.0	32	18	4	1				
		6 30 15	20	8.46	.15	25.0	14	39	2	1				
120	GR 0631+01	6 31 18	9	1.17	.06	16.7	55	8			2.08	.32	B	4000.23
		6 31 59	93	2.03	.94	10.0	<384		2	1				
		6 30 59	18	1.14	.06	12.6	68	36	5	2				
		6 30 59	11	1.31	.13	14.7	79	19	10	2				
		6 31 9	13	1.36	.17	16.7	57	22	9	2				
		6 31 9	11	1.36	.10	20.0	37	19	9	2				
		6 31 39	8	1.08	.06	25.0	23	18	4	1				
121	GR 0639+03	6 39 0	31	3.39	.06	16.7	41	13			2.92	.80	C	OH063.2
		6 38 18	32	3.27	.08	12.6	93	50	8	2				
		6 39 48	31	3.38	.15	14.7	53	53	11	2				
		6 38 38	78	3.47	.09	16.7	43	33	10	1				
		6 38 39	67	3.42	.06	20.0	24	20	10	2				
122	GR 0639+01	6 39 52	15	1.05	.09	16.7	76	30			1.45	1.51	B	4000.24
		6 40 32	124	1.38	.39	12.6	69	54	7	1				
		6 40 39	26	1.32	.30	14.7	65	41	8	2				
		6 40 9	14	1.30	.16	16.7	117	20	10	2				
		6 39 20	12	.87	.09	20.0	37	21	10	2				
		6 40 9	17	1.10	.06	25.0	61	33	2	1				
123	GR 0642+05	6 42 50	8	5.46	.07	16.7	45	21			.62	.75	B	4005.29
		6 44 46	47	6.73	.46	14.7	< 52		4	2				
		6 42 57	13	5.97	.09	16.7	37	26	6	1				
		6 42 47	8	5.43	.04	20.0	45	16	12	2				
		6 42 47	7	5.44	.02	25.0	33	17	13	2				
124	GR 0646-01	6 46 22	26	-1.37	.08	16.7	51	11			1.37	.66	B	NAIC0647-01 NAIC0648-01
		6 45 31	100	-1.54	1.02	10.0	<388		2	1				
		6 45 11	22	-1.25	.09	12.6	61	47	10	2				
		6 46 31	27	-1.35	.05	14.7	77	38	12	2				
		6 47 25	16	-1.14	.27	16.7	51	27	19	2				
		6 45 41	25	-1.85	.20	20.0	36	39	8	2				
		6 45 41	32	-1.85	.20	25.0	32	62	4	2				
125	GR 0647+07	6 47 10	16	7.45	.17	16.7	59	11			1.78	.54	C	4007.18
		6 48 26	64	7.08	.58	12.6	< 82		3	1				
		6 47 45	25	8.27	.09	14.7	90	34	7	2				
		6 48 43	41	7.19	.12	16.7	60	17	5	1				
		6 47 1	23	7.12	.18	20.0	38	16	6	1				
		6 46 56	11	7.34	.04	25.0	33	23	2	1				
126	GR 0651+06	6 51 12	13	6.31	.18	16.7	49	12			1.78	.46	C	4006.26
		6 50 56	19	6.92	.06	14.7	67	30	4	1				
		6 51 6	13	6.27	.05	16.7	46	23	6	1				
		6 51 47	11	6.07	.05	20.0	35	19	9	2				
		6 50 56	9	6.17	.05	25.0	24	20	8	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHz	FLUX F.U.	ERR. FC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
127	GR 0651+00	6 51 28	12	.01	.09	16.7	39	15			1.44	.62	B	4C00.26
		6 51 50	54	-.08	.36	12.6	<104		7	2				
		6 51 10	23	.21	.18	14.7	39	51	5	2				
		6 51 59	27	.40	.20	16.7	37	22	4	1				
		6 50 36	39	.28	.35	20.0	38	27	16	2				
		6 51 30	11	-.06	.06	25.0	20	24	5	2				
128	GR 0653+04	6 53 11	10	4.36	.06	16.7	37	31			1.61	.95	B	4C04.26
		6 54 58	22	3.44	.22	12.6	56	47	17	2				
		6 53 8	9	4.38	.06	16.7	21	32	11	2				
		6 53 18	8	4.27	.02	20.0	34	15	14	2				
		6 53 7	4	4.44	.02	25.0	18	12	17	2				
129	GR 0653+08	6 53 54	10	8.69	.04	16.7	36	21			1.46	.78	B	4C08.23
		6 53 55	73	8.87	.75	12.6	< 77		2	1				
		6 53 15	23	8.77	.20	14.7	63	36	2	1				
		6 53 45	11	8.67	.06	16.7	35	24	11	3				
		6 53 45	11	8.72	.06	20.0	19	26	10	3				
		6 54 15	10	8.66	.06	25.0	23	21	6	3				
130	GR 0655+02	6 55 12	8	2.34	.04	16.7	65	12			3.08	.47	A	NAIC0654+02 NAIC0655+02
		6 55 39	72	2.30	.75	12.6	< 67		2	1				
		6 54 39	16	2.40	.03	14.7	95	34	12	2				
		6 55 9	15	2.41	.06	16.7	74	21	13	2				
		6 55 9	23	2.26	.06	20.0	33	16	16	2				
		6 55 19	7	2.29	.03	25.0	20	17	10	2				
131	GR 0705+02	7 5 14	21	2.38	.16	16.7	64	18			2.19	.59	B	NAIC0705+0202 NAIC0705+0231
		7 5 12	206	2.53	.88	10.0	226	59	10	2				
		7 5 16	88	2.51	.30	12.6	98	42	8	2				
		7 4 38	47	2.79	.36	14.7	< 57		4	1				
		7 5 25	43	2.21	.26	16.7	56	26	15	2				
		7 5 27	51	2.24	.19	20.0	78	35	16	2				
		7 5 20	31	3.15	.73	25.0	23	24	4	1				
132	GR 0706-00	7 6 26	12	-.34	.06	16.7	74	13			1.66	.53	A	4C-00.23
		7 6 10	31	.18	.21	10.0	207	42	2	1				
		7 6 30	18	-.27	.06	12.6	119	27	21	2				
		7 7 10	16	-.64	.05	14.7	109	22	26	2				
		7 7 30	63	-.29	.08	16.7	60	28	23	2				
		7 6 30	8	-.58	.06	20.0	44	16	22	2				
		7 5 50	12	-.28	.02	25.0	58	26	10	2				
133	GR 0718+00	7 18 12	20	.39	.03	16.7	76	6			.76	.29	A	4C00.28
		7 18 46	94	.38	.32	10.0	<349		5	1				
		7 17 46	44	.33	.27	12.6	98	26	21	2				
		7 18 56	44	.24	.26	14.7	81	22	27	2				
		7 18 26	36	.28	.20	16.7	78	18	34	2				
		7 17 50	36	.40	.03	20.0	62	24	40	2				
		7 18 0	42	.36	.18	25.0	60	30	18	2				
134	GR 0725-01	7 25 31	17	-1.67	.06	16.7	113	10			.53	.48	B	3C180 0
		7 25 31	54	-.89	.53	10.0	<218		6	2				
		7 26 31	12	-1.06	.16	12.6	108	21	14	2				
		7 25 41	9	-1.66	.09	14.7	120	14	19	2				
		7 24 51	7	-1.76	.02	16.7	143	14	22	2				
		7 25 11	9	-1.57	.03	20.0	82	16	25	2				
		7 26 21	10	-1.52	.04	25.0	95	21	16	2				
135	GR 0725+04	7 25 44	9	4.13	.11	16.7	44	13			.90	.58	B	4C04.28
		7 25 47	25	5.02	.13	12.6	80	43	5	2				
		7 24 48	19	3.89	.13	14.7	58	32	6	2				
		7 25 38	9	4.31	.05	16.7	33	22	12	2				
		7 25 48	7	4.04	.20	20.0	39	15	16	2				
		7 25 58	10	4.03	.03	25.0	32	22	10	2				
136	GR 0731+02	7 31 11	24	2.13	.10	16.7	40	22			1.89	1.00	B	4C02.20
		7 29 9	56	1.83	.68	12.6	< 64		4	2				
		7 29 29	17	1.54	.26	14.7	55	30	6	2				
		7 30 49	15	1.83	.11	16.7	49	26	6	1				
		7 31 39	9	2.19	.06	20.0	19	22	11	2				
		7 31 39	14	2.25	.06	25.0	25	28	2	1				

(continued)

Table I (Continued)

NO.	SOURCE NAME	HA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.	
137	GR 0732+08	7 32 47	27	8.05	.15	16.7	67	13			2.60	.50	C	4C07.19	
		7 34 16	37	7.95	.06	12.6	131	48	4	1					
		7 33 56	26	7.89	.06	14.7	86	34	5	1					
		7 33 46	26	7.77	.05	16.7	86	34	5	1					
		7 31 25	18	8.49	.05	20.0	36	29	4	1					
		7 32 46	12	8.12	.09	25.0	24	25	3	1					
138	GR 0739-00	7 39 58	11	- .70	.09	16.7	62	7			1.06	.43	B	4C-00.27	
		7 39 20	53	-.46	.48	10.0	204	69	6	1					
		7 39 11	16	-.98	.20	12.6	80	65	15	2					
		7 39 21	9	-1.01	.10	14.7	65	19	23	2					
		7 39 41	9	-.82	.09	16.7	65	15	25	2					
		7 40 10	5	-.56	.06	20.0	48	13	21	2					
		7 40 30	9	-.62	.08	25.0	52	35	13	2					
139	GR 0742+02	7 42 55	3	2.09	.02	16.7	104	7			.93	.31	A	3C187	G
		7 42 39	33	2.48	.35	10.0	287	40	7	2					
		7 43 19	14	2.13	.05	12.6	112	23	15	2					
		7 43 9	7	1.65	.12	14.7	129	13	21	2					
		7 42 49	3	2.03	.01	16.7	99	10	24	2					
		7 42 59	3	2.10	.01	20.0	82	11	26	2					
		7 42 49	5	2.14	.01	25.0	80	14	24	2					
140	GR 0743+04	7 43 28	21	4.23	.14	16.7	53	39			.15	1.44	B	NAIC0743+04	
		7 43 28	31	3.27	.30	12.6	70	55	13	2					
		7 43 28	15	4.42	.03	14.7	75	23	19	2					
		7 43 8	17	3.35	.11	16.7	35	35	14	2					
		7 42 38	12	3.28	.11	20.0	16	31	10	2					
		7 44 18	11	4.18	.03	25.0	73	23	3	1					
141	GR 0746-00	7 46 49	13	-.57	.08	16.7	53	123			.25	4.35	C	4C-00.29	
		7 48 20	37	-.71	.31	14.7	< 50		6	2					
		7 47 10	26	-.70	.15	16.7	187	34	5	1					
		7 46 40	9	-.59	.09	20.0	28	17	13	2					
		7 46 50	14	-.45	.10	25.0	99	29	8	2					
142	GR 0752-01	7 52 46	33	-1.56	.08	16.7	52	9			1.16	.41	B		
		7 52 31	19	-1.61	.17	12.6	77	35	6	2					
		7 54 1	14	-1.55	.11	14.7	57	32	6	1					
		7 53 41	24	-1.18	.21	16.7	50	32	9	2					
		7 51 21	18	-1.53	.06	20.0	43	29	8	2					
		7 51 51	18	-1.81	.13	25.0	33	36	10	2					
143	GR 0753+02	7 53 34	8	2.28	.06	16.7	50	13			1.09	.43	A	3C188	
		7 53 19	46	2.71	.43	10.0	<166		3	1					
		7 54 9	23	2.42	.20	12.6	51	55	11	2					
		7 54 9	23	2.23	.09	14.7	78	34	11	2					
		7 53 29	15	1.98	.11	16.7	39	30	12	2					
		7 53 9	10	1.91	.13	20.0	43	18	19	2					
		7 53 39	6	2.32	.03	25.0	32	15	13	2					
144	GR 0755+03	7 55 15	13	3.25	.15	16.7	32	21			1.93	.57	B	NAIC0754+03 NAIC0755+02 NAIC0756+03	
		7 55 38	24	3.38	.32	12.6	45	61	11	2					
		7 55 27	37	3.00	.16	14.7	52	24	15	2					
		7 55 8	11	3.26	.19	16.7	24	33	13	2					
		7 53 20	58	3.77	.23	20.0	13	41	10	2					
		7 55 28	18	3.19	.17	25.0	20	36	3	1					
145	GR 0757+08	7 57 46	4	8.58	.07	16.7	59	10			1.39	.48	B	NAIC0756+08 NAIC0757+08	
		7 57 36	19	8.64	.06	12.6	100	30	9	2					
		7 57 36	15	8.28	.04	14.7	80	22	8	2					
		7 57 46	6	8.51	.03	16.7	57	13	15	3					
		7 57 46	6	8.52	.02	20.0	40	14	19	3					
		7 57 55	10	8.75	.02	25.0	42	21	9	3					
146	GR 0803-00	8 3 26	5	-.61	.10	16.7	100	10			.62	.46	B	4C-00.32	GGA
		8 3 0	59	-.02	.25	10.0	<268		5	1					
		8 2 50	16	-.52	.05	12.6	142	22	20	2					
		8 3 50	75	-.39	.05	14.7	130	25	29	2					
		8 3 31	5	-.86	.06	16.7	94	12	29	2					
		8 3 20	7	-.70	.06	20.0	75	14	30	2					
		8 3 31	8	-.99	.09	25.0	101	19	28	2					

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA H M S	1950 ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHz	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
147	GR 0805+04	8 5 15	26	4.23	.04	16.7	18	20			-4.02	.68	B	NAIC0805+04
		8 4 38	95	4.45	.75	10.0	<229		2	1				
		8 4 38	57	4.61	.46	12.6	< 71		4	1				
		8 5 38	33	4.77	.32	14.7	< 70		4	1				
		8 4 28	16	4.53	.15	16.7	15	66	6	1				
		8 6 28	12	4.16	.04	20.0	37	21	11	1				
		8 4 28	12	4.26	.03	25.0	88	25	6	1				
148	GR 0813+01	8 13 25	5	1.91	.03	16.7	47	9			.32	.65	A	4C02.23 QSO
		8 13 39	69	2.31	.62	10.0	<257		4	2				
		8 13 19	14	1.65	.13	14.7	48	30	14	2				
		8 13 19	8	1.90	.12	16.7	47	17	10	2				
		8 13 29	6	1.92	.02	20.0	44	14	15	2				
149	GR 0817-01	8 17 20	22	-1.63	.07	16.7	72	6			2.13	.32	B	NAIC0816-02
		8 16 51	13	-1.51	.04	12.6	123	21	17	2				
		8 16 31	10	-1.73	.03	14.7	97	16	18	2				
		8 16 46	48	-1.60	.09	16.7	79	20	24	2				
		8 18 1	7	-1.25	.10	20.0	48	15	24	2				
		8 16 11	21	-1.81	.17	25.0	29	42	7	1				
150	GR 0820+05	8 20 14	11	5.95	.02	16.7	115	4			.98	.19	A	3C198 G
		8 20 27	8	6.08	.05	12.6	157	15	17	3				
		8 21 7	8	5.90	.02	14.7	126	14	12	2				
		8 20 7	6	5.97	.01	16.7	110	13	17	3				
		8 19 55	6	5.83	.02	20.0	102	13	19	3				
		8 20 7	5	5.97	.01	25.0	76	14	13	3				
151	GR 0820+08	8 20 23	13	8.51	.07	16.7	45	18			2.14	.90	B	3C132.3
		8 20 16	54	8.39	.30	12.6	<109		4	2				
		8 20 36	11	8.30	.06	14.7	54	23	6	2				
		8 20 56	14	8.59	.06	16.7	40	28	3	1				
		8 20 6	12	8.59	.05	20.0	42	21	6	2				
		8 19 46	16	8.57	.13	25.0	13	32	2	1				
152	GR 0827+08	8 27 16	34	8.27	.11	16.7	41	13			-0.44	.61	B	4C07.25 QSO
		8 24 46	59	7.88	.46	12.6	< 88		4	1				
		8 27 36	25	8.68	.06	14.7	50	46	6	2				
		8 25 53	11	8.19	.06	16.7	39	24	12	3				
		8 28 26	10	8.27	.03	20.0	43	18	13	3				
		8 27 16	16	7.82	.06	25.0	53	32	6	3				
153	GR 0830+03	8 30 21	20	3.46	.07								C	QJ052
		8 28 49	74	3.09	.75	12.6	< 98		2	1				
		8 31 18	34	3.47	.17	14.7	< 54		6	2				
		8 30 8	12	3.47	.08	16.7	44	22	6	2				
		8 31 8	28	3.43	.17	20.0	21	55	4	2				
154	GR 0838+03	8 38 43	5	3.63	.06	16.7	45	46			2.97	1.50	B	NAIC0837+03 NAIC0838+03
		8 38 39	16	3.43	.13	14.7	19	67	7	2				
		8 38 38	10	3.58	.04	16.7	32	24	12	2				
		8 38 58	8	3.69	.02	20.0	38	16	11	2				
		8 38 39	5	3.45	.04	25.0	12	14	3	1				
155	GR 0840+07	8 40 37	6	7.54	.05	16.7	52	9			.70	.48	A	4C07.26
		8 40 17	20	7.62	.20	12.6	82	35	6	2				
		8 40 56	12	7.89	.09	14.7	54	25	8	2				
		8 40 36	10	7.79	.03	16.7	47	19	14	3				
		8 40 37	7	7.64	.02	20.0	46	15	13	3				
		8 40 27	13	7.48	.01	25.0	46	40	4	2				
156	GR 0846+06	8 46 6	7	6.18	.10	16.7	60	14			1.38	.56	B	4C06.32
		8 45 27	24	5.91	.06	12.6	77	42	8	2				
		8 46 27	16	6.52	.06	14.7	50	30	7	2				
		8 46 7	13	6.36	.03	16.7	66	19	11	3				
		8 45 57	7	6.33	.02	20.0	54	15	14	3				
		8 46 17	8	5.97	.02	25.0	30	18	9	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 Dxi.	ERR. Dxi.	FREQ. MHz	FLUX P.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
157	GR 0851+01	8 51 6	22	1.08	.06	16.7	49	41			.04	2.08	B	4C01.23
		8 51 0	27	.69	.20	12.6	51	62	5	1				
		8 52 10	34	1.03	.27	14.7	52	59	10	2				
		8 50 40	10	.95	.06	16.7	61	17	14	2				
		8 50 50	9	1.12	.06	20.0	16	27	9	1				
		8 52 50	16	1.16	.05	25.0	92	31	7	1				
158	GR 0852+07	8 52 26	16	7.53	.06	16.7	65	22			1.27	1.07	B	4C07.27
		8 53 17	36	7.46	.36	12.6	87	55	2	1				
		8 52 37	19	7.32	.13	14.7	52	34	5	2				
		8 51 2	77	7.56	.11	16.7	89	21	10	2				
		8 52 22	65	7.36	.11	20.0	34	28	8	1				
		8 52 13	16	7.59	.05	25.0	44	31	7	3				
159	GR 0853+06	8 53 19	9	6.26	.06	16.7	31	29			1.34	.98	B	4C06.33
		8 54 7	73	6.10	.75	12.6	< 42		2	1				
		8 54 47	42	6.48	.36	14.7	< 46		5	2				
		8 53 17	15	6.17	.13	16.7	17	55	7	2				
		8 53 17	9	6.33	.06	20.0	27	18	10	3				
		8 53 17	10	6.15	.09	25.0	17	21	2	1				
160	GR 0854+03	8 54 35	13	3.98	.07	16.7	27	33			.30	1.38	C	4C03.15
		8 55 58	90	3.93	.75	12.6	<163		2	1				
		8 55 28	36	3.95	.30	14.7	< 39		6	2				
		8 54 38	21	4.09	.06	16.7	37	40	5	2				
		8 54 38	11	3.96	.05	20.0	21	25	9	2				
		8 53 59	21	3.59	.17	25.0	31	40	3	1				
161	GR 0859+01	8 59 47	13	-1.23	.04	16.7	48	13			1.54	.70	B	NAIC0859-01 NAIC0901-01
		8 59 31	62	-1.30	.65	10.0	<250		5	2				
		8 59 30	19	-.88	.15	12.6	84	33	14	2				
		8 59 51	13	-1.23	.02	14.7	72	22	20	2				
		9 0 11	7	-1.00	.12	16.7	43	16	21	2				
		8 59 11	12	-1.39	.13	20.0	28	20	8	2				
		8 58 51	16	-1.51	.13	25.0	42	32	9	2				
162	GR 0900+07	9 0 59	18	7.49	.12	16.7	93	23			2.41	1.29	C	NAIC0901+07
		8 59 37	77	7.43	.75	12.6	<162		2	1				
		9 0 57	24	6.96	.11	16.7	95	33	2	1				
		9 1 17	21	7.56	.04	20.0	58	33	4	1				
		9 0 37	32	7.55	.24	25.0	38	62	2	1				
163	GR 0903+08	9 3 41	14	8.84	.07	16.7	54	110			.80	3.76	C	4C08.27
		9 3 26	21	8.75	.13	16.7	25	51	5	1				
		9 3 56	18	8.90	.06	20.0	68	29	4	2				
		9 3 36	21	8.75	.09	25.0	28	40	4	2				
164	GR 0909+08	9 9 1	10	8.07	.03	16.7	40	11			.85	.43	B	4C08.28
		9 8 37	73	7.79	.75	12.6	<179		2	1				
		9 8 37	17	8.06	.15	14.7	40	37	8	2				
		9 8 57	11	8.09	.06	16.7	44	21	6	2				
		9 9 17	11	8.07	.04	20.0	31	19	6	1				
		9 8 49	57	8.04	.09	25.0	29	18	7	1				
165	GR 0910+06	9 10 37	21	6.67	.04	16.7	40	27			4.20	1.74	C	OK018.1
		9 11 57	20	6.66	.04	14.7	77	29	6	2				
		9 10 27	16	6.71	.11	16.7	27	39	4	2				
		9 10 27	8	6.6	.06	20.0	19	21	3	1				
166	GR 0912+02	9 12 29	17	2.41	.08	16.7	60	15			1.99	.83	B	NAIC0912+02
		9 12 39	52	2.05	.17	10.0	303	59	2	1				
		9 13 59	25	2.87	.11	12.6	78	43	7	2				
		9 12 39	12	2.35	.03	14.7	84	20	12	2				
		9 12 49	15	2.25	.18	16.7	37	30	10	1				
		9 11 59	10	2.54	.05	20.0	46	18	2	1				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
167	GR 0919+08	9 19 52	11	8.88	.03	16.7	31	13			.23	.48	B	4C08.29
		9 17 47	54	8.80	.46	12.6	< 85		4	1				
		9 18 47	65	8.24	.58	14.7	< 46		2	1				
		9 20 17	12	8.84	.06	16.7	31	28	8	2				
		9 19 57	8	8.81	.05	20.0	30	15	11	3				
		9 19 37	9	8.90	.02	25.0	28	20	12	3				
168	GR 0924+08	9 24 35	17	8.40	.18	16.7	49	20			1.60	.65	C	4C07.28
		9 24 17	77	8.52	.75	12.6	< 77		2	1				
		9 23 37	26	8.73	.04	14.7	79	36	4	2				
		9 23 57	22	7.93	.09	16.7	46	37	4	1				
		9 23 47	16	7.95	.06	20.0	28	27	4	1				
		9 24 57	8	8.27	.06	25.0	28	19	2	1				
169	GR 0928+06	9 28 22	11	6.45	.04	16.7	123	14			.80	.53	A	4C06.35
		9 28 58	104	5.91	.75	10.0	< 164		2	1				
		9 28 38	11	6.45	.11	12.6	105	20	11	3				
		9 28 58	24	6.60	.02	14.7	236	28	11	2				
		9 28 56	12	6.26	.02	16.7	158	18	16	3				
		9 28 38	8	6.51	.01	20.0	105	15	20	3				
		9 27 58	6	6.39	.01	25.0	82	14	17	3				
170	GR 0929+07	9 29 60	10	7.45	.06	16.7	70	21			1.68	1.15	B	NAIC0930+07 NAIC0931+07
		9 29 57	13	7.58	.06	12.6	75	27	4	1				
		9 29 47	12	7.38	.09	14.7	96	19	3	1				
		9 30 17	14	7.37	.05	16.7	107	21	7	2				
		9 30 52	59	7.46	.06	20.0	35	22	10	3				
		9 29 59	70	7.71	.35	25.0	44	47	7	2				
171	GR 0930-00	9 30 58	29	-3.9	.17	16.7	48	36			.60	1.32	C	NAIC0931-00
		9 30 10	32	-5.7	.05	14.7	101	40	6	2				
		9 30 40	16	-7.7	.27	16.7	37	30	5	2				
		9 32 30	17	.05	.13	20.0	31	27	3	1				
		9 30 30	12	.04	.09	25.0	45	24	3	1				
172	GR 0933+02	9 33 29	29	2.61	.15	16.7	31	16			2.18	.81	C	4C02.27 QSO
		9 34 19	93	2.59	.75	10.0	< 324		2	1				
		9 35 20	82	2.88	.18	12.6	67	47	4	1				
		9 34 2	42	2.78	.39	16.7	21	51	6	2				
		9 33 38	27	2.42	.12	20.0	21	20	8	2				
		9 32 19	36	2.94	.30	25.0	16	70	2	1				
173	GR 0937+02	9 37 25	12	2.49	.10	16.7	53	33			1.72	1.25	B	4C02.28
		9 38 39	31	2.52	.06	12.6	164	38	6	2				
		9 36 49	29	1.75	.08	14.7	100	37	5	1				
		9 37 49	17	2.01	.23	16.7	40	32	9	2				
		9 37 9	8	2.08	.13	20.0	25	17	11	2				
		9 37 39	10	2.55	.02	25.0	41	21	8	2				
174	GR 0939-01	9 39 9	11	-1.21	.05	16.7	79	20			2.17	1.09	B	4C-01.19
		9 38 41	77	-1.16	.75	12.6	< 147		2	1				
		9 38 31	17	-1.40	.15	14.7	91	46	6	2				
		9 38 51	28	-1.23	.06	16.7	102	48	9	2				
		9 39 31	13	-1.18	.06	20.0	50	46	8	2				
		9 39 11	9	-1.16	.08	25.0	32	70	2	1				
175	GR 0945+07	9 45 33	15	7.48	.13	16.7	209	3			1.19	.14	A	3C227 G
		9 43 27	41	7.78	.36	10.0	429	43	2	1				
		9 45 47	35	7.21	.47	12.6	291	10	35	3				
		9 45 51	23	7.46	.22	14.7	230	11	27	2				
		9 45 37	17	7.64	.25	16.7	219	9	42	3				
		9 45 47	20	7.50	.24	20.0	170	11	35	3				
		9 45 28	17	7.30	.23	25.0	127	13	33	3				
176	GR 0950+00	9 50 24	4	.29	.03	16.7	96	7			-.15	.26	A	3C230
		9 50 20	84	.42	.06	12.6	74	34	17	2				
		9 50 10	54	.33	.04	14.7	91	20	28	2				
		9 50 10	41	.22	.02	16.7	106	17	36	2				
		9 50 30	2	.33	.02	20.0	99	11	41	2				
		9 50 10	3	.28	.02	25.0	100	11	39	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	DEC. 1950 D DEG.	HR. SEC.	HR. DEG.	FREQ. MHz	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	HR.	W	IDENTIFICATION RADIO OPTIC.
177	GR 0951+00	9 51 5	13	.85	.04	16.7	99	8			2.80	.46	A	4C00.33
		9 51 10	107	1.26	.85	10.0	<214		2	1				
		9 50 20	55	.75	.47	12.6	< 64			4	1			
		9 52 10	15	1.21	.10	14.7	159	20	16	2				
		9 51 30	9	1.11	.13	16.7	85	15	17	2				
		9 51 0	5	.83	.02	20.0	64	12	16	2				
		9 50 0	13	.66	.13	25.0	29	27	13	2				
178	GR 0956+03	9 56 5	3	3.84	.03	16.7	71	5			.88	.22	A	4C03.17
		9 56 19	10	4.09	.04	12.6	81	22	12	2				
		9 55 59	8	3.82	.03	14.7	79	15	14	2				
		9 56 9	5	3.90	.02	16.7	75	12	15	3				
		9 55 59	4	3.88	.01	20.0	62	12	15	3				
		9 56 9	4	3.77	.01	25.0	48	13	13	2				
179	GR 0958-00	9 58 59	4	-.19	.02	16.7	90	5			1.08	.19	A	4C-00.37
		9 58 40	19	-.24	.20	10.0	205	29	8	2				
		9 59 10	11	-.24	.06	12.6	106	19	25	2				
		9 59 10	9	-.17	.05	14.7	103	15	34	2				
		9 58 50	41	-.11	.04	16.7	88	17	36	2				
		9 58 50	7	-.19	.02	20.0	76	14	38	2				
		9 59 0	5	-.20	.02	25.0	59	13	38	2				
180	GR 1000+08	10 0 34	8	8.77	.09	16.7	48	68			1.12	1.86	B	
		9 58 38	68	7.97	.58	14.7	< 51		2	1				
		10 0 17	12	8.82	.06	16.7	19	43	10	2				
		10 0 47	14	9.00	.03	20.0	58	23	9	3				
		10 0 37	6	8.67	.02	25.0	28	15	8	2				
181	GR 1005+07	10 5 40	14	7.90	.15	16.7	44	20			.44	.76	C	3C237
		10 6 58	37	7.67	.36	12.6	< 61		7	1				
		10 7 8	31	8.01	.24	14.7	< 50		4	1				
		10 5 44	12	8.01	.06	16.7	37	25	8	2				
		10 5 28	42	7.75	.02	20.0	49	21	8	2				
		10 5 28	11	8.50	.04	25.0	33	23	6	1				
182	GR 1008-01	10 8 34	14	-1.60	.05	16.7	46	12			-.15	.87	B	4C-01.21 G
		10 8 40	46	-1.24	.48	12.6	< 52		6	2				
		10 9 0	82	-1.01	.35	14.7	43	27	8	2				
		10 8 58	31	-1.06	.42	16.7	46	22	10	2				
		10 8 31	16	-1.61	.03	20.0	52	26	12	2				
		10 8 1	38	-1.76	.30	25.0	23	73	2	1				
183	GR 1009+06	10 9 9	7	6.68	.05	16.7	87	12			1.13	.49	A	3C238
		10 9 18	25	7.03	.03	12.6	204	29	16	3				
		10 9 58	11	6.48	.03	14.7	75	19	12	2				
		10 8 58	6	6.60	.02	16.7	88	13	19	3				
		10 9 8	5	6.64	.01	20.0	68	12	19	3				
		10 9 8	5	6.73	.01	25.0	58	13	19	3				
184	GR 1011+07	10 11 40	25	7.83	.13	16.7	26	23			.51	.96	C	
		10 11 18	73	7.45	.75	12.6	< 64		2	1				
		10 11 18	25	7.33	.17	14.7	29	67	2	1				
		10 12 28	27	7.80	.15	16.7	27	62	2	1				
		10 12 8	18	7.98	.08	20.0	24	32	5	2				
		10 10 18	27	7.68	.17	25.0	22	51	2	1				
185	GR 1019+07	10 19 12	14	7.95	.11	16.7	28	46			-.93	1.86	C	GL032
		10 19 38	24	8.08	.13	16.7	37	44	2	1				
		10 19 18	12	8.41	.06	20.0	30	20	7	3				
		10 18 48	17	7.90	.02	25.0	46	34	7	3				
186	GR 1021+02	10 21 7	20	2.97	.15	16.7	34	10			1.27	.46	B	HAIC1020+02 HAIC1021+02
		10 20 0	91	2.33	.87	10.0	<215		2	1				
		10 20 0	90	2.36	.87	12.6	<139		2	1				
		10 20 49	36	3.26	.45	14.7	< 40		7	2				
		10 20 56	32	2.87	.31	16.7	35	21	9	2				
		10 21 40	28	3.16	.16	20.0	27	20	9	2				
		10 21 3	39	2.74	.20	25.0	21	29	10	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	RHR. DEG.	FREQ. MHz	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	RHR.	W	IDENTIFICATION RADIO OPTIC.
187	GR 1023+06	10 23 51	4	6.55	.02	16.7	85	4			-0.50	.20	A	3C243 QSO
		10 24 48	109	6.70	.75	10.0	<238		2	1				
		10 23 59	10	6.37	.05	12.6	75	24	13	2				
		10 23 39	9	6.43	.04	14.7	77	17	13	2				
		10 23 59	6	6.52	.02	16.7	89	12	18	2				
		10 23 48	5	6.57	.01	20.0	88	13	20	3				
		10 23 49	23	7.11	.29	25.0	107	15	30	3				
188	GR 1023-01	10 23 57	9	-1.65	.03	16.7	53	10			1.01	.44	A	4C-01.22
		10 24 21	29	-1.85	.17	10.0	106	56	9	2				
		10 24 0	12	-1.53	.13	12.6	67	27	12	2				
		10 23 50	12	-1.60	.06	14.7	60	23	24	2				
		10 24 31	18	-1.64	.13	16.7	43	32	26	2				
		10 23 51	15	-1.66	.03	20.0	55	24	29	2				
		10 23 31	19	-1.76	.17	25.0	28	37	8	1				
189	GR 1025+07	10 25 18	11	7.54	.04	16.7	64	14			1.45	.85	B	4C07.31 G
		10 26 13	17	7.22	.20	12.6	119	25	10	2				
		10 25 38	10	7.38	.06	14.7	79	18	10	2				
		10 25 8	9	7.60	.04	16.7	48	18	14	3				
		10 25 8	6	7.54	.02	20.0	55	14	14	3				
190	GR 1027+03	10 27 39	13	3.95	.11	16.7	26	16			.90	.93	C	NAIC1025+04 NAIC1028+03
		10 30 49	100	4.03	1.08	10.0	<549		2	1				
		10 27 29	59	4.41	.58	12.6	<107		4	2				
		10 28 19	63	4.21	.82	14.7	<39		2	1				
		10 27 49	12	4.10	.09	16.7	27	33	7	2				
		10 27 27	8	3.83	.06	20.0	<2	19	11	2				
		10 29 39	37	5.08	.30	25.0	19	70	2	1				
191	GR 1030+08	10 30 47	34	8.77	.19	16.7	47	17			.58	.88	C	NAIC1029+09 NAIC1031+05
		10 29 8	22	9.17	.06	14.7	33	56	2	1				
		10 31 18	13	8.48	.06	16.7	53	22	4	2				
		10 31 56	62	8.70	.16	20.0	41	17	6	2				
		10 30 45	56	8.55	.10	25.0	39	34	5	1				
192	GR 1033+00	10 33 20	16	.11	.06	16.7	42	15			1.42	.83	B	4C00.37 G
		10 33 50	30	.27	.25	12.6	55	63	4	2				
		10 33 20	17	.29	.15	14.7	53	31	2	1				
		10 32 50	118	.14	.06	16.7	42	64	9	2				
		10 32 40	37	.05	.06	20.0	31	56	6	2				
		10 33 30	131	-.12	.18	25.0	4	74	3	1				
193	GR 1037+05	10 37 53	19	5.71	.08	16.7	45	13			3.04	.44	B	4C05.44 G
		10 39 9	18	5.81	.17	12.6	<69		6	2				
		10 38 59	14	5.97	.08	14.7	73	22	4	1				
		10 37 49	15	5.57	.06	16.7	44	27	5	2				
		10 37 39	15	5.77	.11	20.0	18	33	3	1				
		10 37 29	7	5.66	.06	25.0	14	16	2	1				
194	GR 1039+03	10 39 55	17	3.06	.10	16.7	41	15			-.02	.52	B	4C03.18
		10 39 14	90	2.90	.15	12.6	50	63	10	2				
		10 41 28	69	2.54	.54	14.7	49	45	12	2				
		10 39 58	30	3.13	.17	16.7	33	22	15	2				
		10 40 0	29	3.06	.21	20.0	47	17	21	3				
		10 39 45	21	3.14	.12	25.0	40	16	14	2				
195	GR 1041+06	10 41 51	17	6.09	.05	16.7	42	29			1.62	.98	C	4C05.45 G
		10 42 19	15	6.05	.06	16.7	37	30	5	2				
		10 41 39	12	6.12	.04	20.0	34	21	6	2				
		10 41 17	30	5.93	.15	25.0	21	19	4	1				
196	GR 1045+07	10 45 15	19	7.58	.07	16.7	77	9			.73	.53	B	OL076.5
		10 46 38	86	8.90	.58	10.0	<251		3	1				
		10 45 29	21	7.80	.06	12.6	114	63	6	2				
		10 46 4	32	7.46	.54	16.7	75	15	17	2				
		10 44 49	50	7.36	.18	20.0	72	34	4	1				
		10 44 49	18	7.53	.03	25.0	57	36	2	1				

(continued)

Table 1 (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
197	GR 1045-00	10 45 10	10	-0.75	.04	16.7	81	25			3.02	1.28	B	4C-00.39
		10 44 40	16	-1.04	.09	14.7	193	20	17	2				
		10 45 0	7	-0.81	.05	16.7	60	15	19	2				
		10 45 30	7	-0.72	.05	20.0	43	14	23	2				
		10 45 0	10	-0.73	.02	25.0	32	22	13	2				
198	GR 1048+00	10 48 32	12	.11	.07	16.7	42	11			.89	.40	B	4C00.38
		10 47 10	82	.26	.58	10.0	<117		3	1				
		10 47 10	20	-0.14	.08	12.6	51	46	19	2				
		10 48 40	35	.11	.11	14.7	< 63		11	2				
		10 48 50	20	.01	.06	16.7	35	39	10	2				
		10 48 50	7	-0.27	.04	20.0	38	15	11	1				
		10 48 20	8	.04	.05	25.0	28	19	11	2				
199	GR 1048+08	10 48 46	10	8.48	.08	16.7	69	44			1.76	1.94	C	4C08.33
		10 48 59	25	7.45	.17	14.7	112	30	3	1				
		10 48 49	10	8.58	.03	20.0	41	18	8	2				
		10 48 29	18	8.45	.02	25.0	56	36	5	2				
200	GR 1053+03	10 53 1	21	3.26	.10	16.7	50	22			1.93	1.06	B	4C03.19 G
		10 53 20	14	3.29	.13	12.6	63	32	8	3				
		10 54 0	13	2.97	.05	14.7	57	24	11	3				
		10 52 10	20	3.43	.03	16.7	101	27	10	3				
		10 52 30	12	3.12	.05	20.0	31	20	9	3				
		10 52 20	19	2.91	.15	25.0	19	37	8	3				
201	GR 1053+02	10 53 13	6	2.29	.02	16.7	63	11			2.02	.43	A	4C 2.31 QSO
		10 55 10	116	1.77	.75	10.0	<676		2	1				
		10 53 40	21	2.57	.13	12.6	84	35	17	2				
		10 53 40	15	2.47	.12	14.7	114	21	15	2				
		10 53 30	8	2.26	.02	16.7	59	15	18	2				
		10 53 0	6	2.29	.02	20.0	39	13	19	2				
		10 53 10	5	2.35	.03	25.0	30	14	14	2				
202	GR 1059-00	10 59 48	5	-0.98	.05	16.7	73	12			.84	.48	A	3C249
		11 0 0	17	-0.71	.10	12.6	42	49	16	2				
		10 59 40	63	-0.92	.13	14.7	80	25	16	2				
		10 59 50	10	-0.99	.08	16.7	81	16	28	2				
		10 59 40	9	-1.08	.05	20.0	66	17	25	2				
		10 59 50	6	-0.96	.04	25.0	49	15	25	2				
203	GR 1100+03	11 0 31	9	3.46	.05	16.7	30	18			1.72	.62	B	4C03.20
		11 1 50	62	3.50	.58	14.7	< 52		2	1				
		11 0 50	12	3.50	.06	16.7	31	28	8	2				
		11 0 30	10	3.46	.06	20.0	21	22	10	3				
		11 0 20	9	3.41	.08	25.0	15	20	2	1				
204	GR 1104+08	11 4 43	22	8.32	.11	16.7	69	7			.76	.44	B	4C08.34
		11 4 9	55	8.49	.58	10.0	<256		2	1				
		11 5 19	28	9.36	.08	12.6	113	38	5	1				
		11 2 22	60	7.78	.27	14.7	73	18	6	2				
		11 3 59	9	8.28	.03	16.7	65	16	17	3				
		11 5 9	15	8.36	.03	20.0	70	25	17	3				
		11 5 44	12	8.19	.03	25.0	49	37	11	3				
205	GR 1104+05	11 4 56	6	5.85	.03	16.7	48	14			1.18	.52	A	4C05.48 G
		11 4 49	20	5.68	.08	12.6	< 63		7	2				
		11 5 29	12	5.65	.06	14.7	52	25	8	2				
		11 4 49	7	5.88	.03	16.7	42	18	15	3				
		11 4 49	6	5.81	.02	20.0	46	13	13	3				
		11 4 59	5	5.90	.02	25.0	27	14	9	2				
206	GR 1108+03	11 8 55	6	3.44	.03	16.7	49	8			1.17	.35	A	4C03.21
		11 8 30	20	3.53	.09	12.6	42	57	11	4				
		11 9 0	8	3.57	.05	14.7	52	19	15	4				
		11 8 50	6	3.50	.03	16.7	53	14	16	4				
		11 8 42	5	3.59	.04	20.0	42	13	20	4				
		11 9 10	5	3.42	.01	25.0	29	14	16	3				
207	GR 1112-01	11 12 4	10	-1.41	.09								C	3C253
		11 10 40	62	-1.73	.58	14.7	< 61		2	1				
		11 12 20	12	-1.48	.11	16.7	57	21	14	2				
		11 12 0	7	-1.35	.09	20.0	41	15	14	2				

(continued)

Table 1 (Continued)

NO.	SOURCE NAME	RA 1950 H M S	DEC. 1950 D M S	FREQ. MHz	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR. PC	W	IDENTIFICATION RADIO OPTIC.
208	GR 1113+02	11 13 50	6	2.07	.22	16.7	30	13	.89	.46	C	
		11 13 30	17	2.50	.17	12.6	41	50	7	2		
		11 13 50	13	2.80	.06	14.7	41	31	8	2		
		11 13 50	9	2.04	.20	16.7	25	29	8	2		
		11 13 40	10	1.81	.06	20.0	22	21	9	2		
		11 14 0	8	1.79	.05	25.0	22	18	6	2		
209	GR 1114+08	11 14 5	25	8.24	.07	16.7	49	21	1.23	1.32	C	NAIC1112+08
		11 14 29	38	8.35	.20	12.6	95	55	8	2		
		11 13 19	37	8.21	.06	14.7	46	68	3	1		
		11 14 49	20	8.44	.09	16.7	40	36	11	2		
		11 13 29	20	8.16	.06	20.0	44	32	7	2		
210	GR 1117+17	11 17 41	15	7.61	.10	16.7	47	50	.27	1.76	C	CMR30
		11 17 49	72	7.25	.58	14.7	161	81	2	1		
		11 18 9	28	8.79	.24	16.7	23	6	6	2		
		11 17 19	14	7.78	.05	20.0	40	23	10	2		
		11 17 59	16	7.53	.03	25.0	49	32	4	1		
211	GR 1121+05	11 21 48	5	5.42	.03	16.7	46	9	.10	.33	A	4C05.50
		11 22 3	17	5.47	.15	12.6	49	42	12	2		
		11 22 0	14	5.27	.06	14.7	35	36	13	2		
		11 22 0	7	5.53	.13	16.7	47	14	20	3		
		11 21 54	7	5.55	.02	20.0	51	18	23	3		
		11 21 40	4	5.39	.01	25.0	43	13	17	3		
212	GR 1138+01	11 38 38	16	1.54	.17	16.7	61	11	2.69	.50	C	4C01.32
		11 37 10	25	.81	.15	14.7	101	31	3	1		
		11 38 10	10	1.22	.09	16.7	60	17	7	2		
		11 38 50	9	1.66	.06	20.0	35	17	7	2		
		11 39 0	9	1.77	.08	25.0	22	20	2	1		
213	GR 1139+05	11 39 27	14	5.94	.04	16.7	68	9	1.52	.40	B	4C06.42 GGA
		11 40 10	12	5.95	.06	12.6	92	22	8	2		
		11 40 30	20	5.60	.05	14.7	109	25	7	2		
		11 39 20	11	5.83	.03	16.7	63	19	16	3		
		11 39 10	9	6.00	.02	20.0	54	16	13	3		
		11 39 10	10	5.95	.01	25.0	35	22	9	2		
214	GR 1142+00	11 42 42	12	.07	.04	16.7	51	13	1.00	.54	A	4C00.46
		11 41 50	69	-.77	.63	10.0	<268	5	1			
		11 42 50	14	-.31	.08	12.6	67	31	14	2		
		11 42 50	75	-.03	.06	14.7	69	32	19	2		
		11 42 50	77	.05	.04	16.7	48	38	20	2		
		11 42 30	17	.05	.03	20.0	32	28	15	2		
		11 43 20	64	.11	.02	25.0	45	36	17	2		
215	GR 1147+05	11 47 19	12	5.57	.08	16.7	62	12	2.83	.53	B	4C05.53
		11 47 0	17	5.66	.11	14.7	95	23	2	1		
		11 47 10	18	5.71	.06	16.7	53	28	6	2		
		11 47 10	10	5.45	.05	20.0	38	18	7	2		
		11 47 50	13	5.58	.11	25.0	20	27	6	2		
216	GR 1150+08	11 50 28	8	8.45	.08	16.7	43	10	2.36	.41	B	4C08.35
		11 51 10	17	8.03	.15	12.6	51	42	10	2		
		11 50 40	12	8.16	.06	14.7	67	22	8	2		
		11 50 40	7	8.31	.05	16.7	43	18	12	2		
		11 50 20	8	8.47	.03	20.0	28	16	10	1		
		11 50 10	7	8.65	.04	25.0	16	17	5	1		
217	GR 1152+04	11 52 35	19	4.67	.08	16.7	46	14	1.66	.74	B	4C04.37 QSO
		11 54 20	21	4.83	.11	12.6	67	42	5	2		
		11 52 0	18	4.02	.26	14.7	83	27	9	4		
		11 52 51	39	4.72	.13	16.7	39	20	13	3		
		11 52 20	8	4.56	.04	20.0	32	16	8	3		
		11 53 0	16	4.80	.05	25.0	31	33	3	1		
218	GR 1155-01	11 55 38	13	-1.12	.09	16.7	26	22	.87	.82	C	MSH11-018
		11 56 40	34	-1.17	.11	12.6	58	68	4	1		
		11 55 50	29	-1.28	.31	14.7	<49	9	2			
		11 55 30	14	-.90	.22	16.7	21	43	9	2		
		11 55 20	13	-1.17	.11	20.0	21	27	6	1		
		11 56 0	16	-.88	.25	25.0	20	32	2	1		

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DHU.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
219	GR 1156+06	11 56 35	11	6.34	.16	16.7	42	18			2.10	.61	B	
		11 57 10	18	6.39	.15	12.6	89	31	11	3				
		11 56 48	18	6.80	.09	14.7	49	34	11	2				
		11 57 30	12	6.74	.04	16.7	52	22	11	2				
		11 56 40	7	6.03	.04	20.0	19	19	16	3				
		11 56 20	5	6.14	.04	25.0	20	14	8	2				
220	GR 1204+04	12 4 22	11	4.55	.04	16.7	73	9			1.50	.66	A	4C04.40
		12 4 20	16	4.58	.15	12.6	85	28	8	2				
		12 5 0	10	4.65	.06	14.7	99	16	7	2				
		12 4 10	6	4.58	.03	16.7	73	13	14	4				
		12 4 20	8	4.50	.03	20.0	53	16	15	4				
221	GR 1215+04	12 15 25	4	4.10	.01	16.7	103	11			.93	.51	A	4C04.41 G
		12 15 20	58	3.88	.30	10.0	<336		2	1				
		12 15 30	13	3.93	.11	12.6	76	27	10	3				
		12 15 40	9	4.02	.04	14.7	113	14	12	3				
		12 15 30	3	4.16	.02	16.7	110	11	20	4				
		12 15 10	4	4.10	.01	20.0	103	11	20	4				
		12 15 30	5	4.08	.01	25.0	56	14	19	4				
222	GR 1216+06	12 16 55	6	6.06	.02	16.7	237	8			1.51	.34	A	3C270 G
		12 15 50	44	6.04	.30	10.0	204	58	8	2				
		12 16 40	10	5.81	.04	12.6	315	14	19	3				
		12 17 10	6	6.03	.02	14.7	350	12	12	2				
		12 17 10	5	6.02	.01	16.7	239	12	22	3				
		12 16 50	5	6.12	.01	20.0	167	12	25	3				
		12 16 40	5	6.04	.01	25.0	127	14	25	3				
223	GR 1225+08	12 25 53	20	8.35	.03	16.7	161	21			3.69	1.20	B	0N045
		12 25 41	26	8.56	.20	12.6	163	31	10	2				
		12 25 11	11	8.35	.03	14.7	354	15	9	2				
		12 26 11	12	8.30	.05	16.7	166	18	11	2				
		12 26 41	11	8.38	.05	20.0	70	19	8	2				
		12 25 11	16	8.23	.11	25.0	35	33	2	1				
224	GR 1226+02	12 26 59	6	2.39	.09	16.7	330	4			.93	.15	A	3C273 QSO
		12 26 30	9	2.22	.11	12.6	418	13	32	3				
		12 27 20	8	2.71	.01	14.7	357	13	13	2				
		12 27 10	6	2.34	.01	16.7	326	15	30	3				
		12 26 50	5	2.25	.01	20.0	276	13	14	2				
		12 27 0	5	2.32	.01	25.0	238	15	27	3				
225	GR 1229-01	12 29 24	23	-1.43	.02	16.7	82	31			-.02	1.16	B	4C-01.26
		12 31 0	28	-1.55	.27	16.7	89	37	9	2				
		12 29 10	12	-1.42	.05	20.0	78	21	13	2				
		12 29 20	13	-1.43	.02	25.0	85	26	16	2				
226	GR 1235+05	12 35 44	17	5.66	.05	16.7	169	25			4.29	1.26	B	4C05.54
		12 37 51	28	5.66	.13	12.6	211	31	5	1				
		12 35 41	11	5.67	.05	14.7	426	16	1	1				
		12 35 41	14	5.54	.04	16.7	183	26	7	2				
		12 35 21	10	5.76	.04	20.0	60	18	11	2				
		12 36 11	16	5.67	.04	25.0	36	32	7	2				
227	GR 1236+00	12 36 34	17	.14	.15	16.7	66	17			1.54	.73	C	4C00.43
		12 37 10	172	.27	.10	12.6	131	53	5	1				
		12 37 20	33	.31	.22	14.7	78	47	4	1				
		12 36 20	20	-.25	.19	16.7	60	29	6	2				
		12 36 30	19	-.22	.25	25.0	38	38	2	1				
228	GR 1243+04	12 43 24	11	4.00	.10	16.7	73	13			.90	.68	B	4C03.24
		12 43 31	19	4.66	.15	14.7	88	27	11	3				
		12 43 1	12	4.01	.19	16.7	66	18	17	4				
		12 43 32	13	3.59	.05	20.0	73	22	19	4				
		12 43 41	14	4.05	.02	25.0	46	29	10	3				
229	GR 1248+08	12 48 0	15	8.87	.13	16.7	46	16			-.08	.69	B	4C09.44
		12 49 1	39	8.87	.30	12.6	< 54		8	3				
		12 48 21	28	9.27	.11	14.7	53	47	2	1				
		12 48 19	77	9.01	.13	16.7	49	28	12	2				
		12 47 51	13	8.92	.06	20.0	40	22	12	3				
		12 47 21	49	8.52	.08	25.0	54	29	5	1				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHz	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
230	GR 1250+03	12 50 36	8	3.56	.12	16.7	65	35			3.09	1.46	C	4C02.34
		12 50 58	14	3.42	.13	14.7	44	32	10	3				
		12 50 41	13	3.38	.06	16.7	75	20	5	2				
		12 50 22	8	3.50	.06	20.0	49	16	14	4				
		12 50 41	9	3.84	.06	25.0	14	20	4	2				
231	GR 1250+05	12 50 41	13	5.82	.22	16.7	67	19			2.15	.77	B	4C05.56
		12 50 31	21	5.71	.13	14.7	41	45	6	2				
		12 50 41	11	5.85	.04	16.7	74	16	20	4				
		12 51 35	33	6.41	.05	20.0	46	17	25	4				
		12 49 57	42	5.43	.04	25.0	27	17	12	4				
232	GR 1253+02	12 53 58	10	2.44	.07	16.7	30	11			.68	.43	B	4C02.35 QSO
		12 53 20	72	1.58	.78	12.6	< 78		2	1				
		12 52 20	51	2.04	.50	14.7	40	62	5	2				
		12 54 0	8	2.24	.16	16.7	29	23	9	2				
		12 53 58	40	2.50	.06	20.0	27	18	8	2				
		12 54 21	52	2.37	.10	25.0	23	20	6	2				
233	GR 1256+03	12 56 36	16	3.38	.11	16.7	36	54			-1.47	2.68	C	4C03.25
		12 54 41	72	3.74	.75	12.6	< 166		2	1				
		12 56 21	62	2.96	.58	14.7	< 50		2	1				
		12 56 31	20	3.77	.13	16.7	21	58	9	4				
		12 56 51	15	3.32	.06	20.0	54	25	6	2				
		12 56 1	38	2.96	.30	25.0	28	73	2	1				
234	GR 1257-00	12 57 36	9	-3.36	.10	16.7	59	21			1.95	.88	B	4C-00.49
		12 59 0	31	-2.20	.32	12.6	122	41	4	2				
		12 57 40	12	-3.94	.09	14.7	106	18	14	2				
		12 57 30	9	-3.60	.08	16.7	47	18	16	2				
		12 57 20	7	-3.32	.06	20.0	30	15	18	2				
		12 57 50	7	-3.27	.03	25.0	36	17	15	2				
235	GR 1258+05	12 58 38	36	5.90	.19	16.7	41	25			1.95	.86	C	ON099
		13 0 11	63	6.44	.58	12.6	< 72		3	1				
		12 57 31	26	5.42	.17	14.7	65	41	7	3				
		12 57 37	16	6.41	.36	16.7	47	28	7	2				
		12 59 31	11	5.83	.08	20.0	18	28	6	2				
		12 55 12	41	6.69	.19	25.0	21	20	10	4				
236	GR 1300+08	13 0 16	22	8.16	.09	16.7	128	22			.83	1.12	C	4C08.37
		13 1 31	28	8.50	.13	12.6	69	52	8	2				
		13 0 31	16	8.15	.02	14.7	204	20	10	2				
		13 0 42	15	8.34	.11	16.7	98	22	10	3				
		13 0 22	21	8.92	.08	20.0	74	34	3	1				
		12 59 11	15	8.03	.03	25.0	116	30	2	1				
237	GR 1302+04	13 2 35	14	4.09	.05								C	4C03.26
		13 4 21	56	3.88	.59	12.6	< 79		4	1				
		13 2 11	62	4.23	.58	14.7	< 32		2	1				
		13 2 51	12	4.05	.05	20.0	31	20	6	2				
		13 2 21	10	4.15	.06	25.0	16	22	4	1				
238	GR 1305+06	13 5 43	14	6.80	.08	16.7	75	7			1.44	.29	A	3C281 QSO
		13 6 11	39	7.24	.24	10.0	137	61	5	1				
		13 6 39	50	6.78	.30	12.6	91	23	23	4				
		13 6 28	44	6.47	.04	14.7	109	19	20	4				
		13 5 28	30	7.03	.15	16.7	81	15	20	3				
		13 5 43	23	6.97	.16	20.0	54	11	29	4				
		13 5 30	17	6.87	.02	25.0	43	14	24	3				
239	GR 1307+00	13 7 31	12	.00	.04	16.7	82	9			1.61	.38	A	4C00.46
		13 7 30	121	-3.16	.06	12.6	109	40	16	2				
		13 8 0	75	-3.18	.06	14.7	108	26	16	2				
		13 7 30	63	-3.03	.02	16.7	84	26	17	2				
		13 7 40	51	-3.01	.03	20.0	61	25	19	2				
		13 7 30	13	-3.07	.02	25.0	42	27	16	2				
240	GR 1309+06	13 9 48	22	6.17	.04	16.7	53	15			1.13	.74	B	4C06.46
		13 11 1	19	6.01	.15	14.7	41	40	5	2				
		13 9 51	7	6.23	.04	16.7	59	15	14	4				
		13 10 11	9	6.14	.03	20.0	39	17	6	2				
		13 8 31	12	6.20	.08	25.0	35	24	3	1				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
241	GR 1314+07	13 14 25	42	7.38	±.27	16.7	61	17			1.61	.69	C	4C07.32 G
		13 13 28	103	8.03	±.18	12.6	83	46	14	2				
		13 14 20	97	7.61	±.36	14.7	40	61	11	1				
		13 14 3	79	7.44	±.45	16.7	77	28	27	4				
		13 15 3	82	6.91	±.26	20.0	44	33	31	3				
		13 14 49	82	6.94	±.17	25.0	30	30	25	4				
242	GR 1316-00	13 16 52	5	-5.54	±.07	16.7	51	13			1.34	.62	B	4C-00.50 QSO
		13 17 10	15	-5.56	±.15	14.7	67	26	9	2				
		13 16 50	9	-4.0	±.08	16.7	53	17	17	2				
		13 16 50	7	-5.3	±.06	20.0	36	14	17	2				
		13 16 50	11	-6.4	±.06	25.0	35	23	11	2				
243	GR 1317+01	13 17 53	10	1.91	±.05	16.7	36	13			1.90	.43	B	4C01.37
		13 18 41	93	2.15	±.94	10.0	<308		2	1				
		13 19 40	60	1.96	±.51	12.6	<106		5	1				
		13 18 40	28	1.99	±.25	14.7	40	59	6	2				
		13 17 40	20	2.06	±.08	16.7	40	36	5	2				
		13 18 10	11	1.93	±.06	20.0	25	21	8	2				
		13 17 40	8	1.82	±.06	25.0	17	18	6	2				
244	GR 1321+03	13 21 25	13	3.63	±.04	16.7	52	6			1.29	.29	A	4C03.27
		13 21 51	99	4.03	±.75	10.0	<146		2	1				
		13 22 51	12	4.01	±.06	12.6	77	25	17	4				
		13 21 51	8	3.69	±.04	14.7	53	19	18	4				
		13 21 21	7	3.67	±.03	16.7	55	15	19	4				
		13 21 11	5	3.62	±.02	20.0	44	13	20	4				
		13 21 1	8	3.59	±.02	25.0	28	19	13	3				
245	GR 1325-01	13 25 32	14	-1.45	±.02	16.7	65	11			1.39	.64	B	4C-01.29 G
		13 26 0	11	-1.46	±.12	12.6	71	24	14	2				
		13 26 0	11	-1.48	±.05	14.7	89	18	12	2				
		13 25 40	11	-1.46	±.04	16.7	76	18	13	2				
		13 25 0	8	-1.45	±.02	20.0	48	15	15	2				
		13 25 0	32	-1.76	±.24	25.0	22	62	3	1				
246	GR 1326+06	13 26 46	11	6.37	±.04	16.7	48	15			-0.27	.54	B	4C06.47
		13 25 41	106	6.18	±.75	10.0	<164		2	1				
		13 25 1	41	6.28	±.30	14.7	<56		5	1				
		13 26 11	18	5.92	±.06	16.7	55	28	11	4				
		13 26 52	9	6.38	±.03	20.0	47	17	14	4				
		13 26 52	8	6.38	±.01	25.0	56	18	10	3				
247	GR 1330+02	13 30 43	6	2.34	±.06	16.7	65	11			1.69	.43	A	3C287.1 G
		13 29 48	209	1.95	±.27	10.0	171	66	6	2				
		13 30 20	58	2.10	±.17	12.6	123	25	14	2				
		13 30 39	49	1.94	±.11	14.7	70	28	11	2				
		13 30 53	28	2.40	±.15	16.7	46	22	17	2				
		13 30 41	6	2.38	±.03	20.0	55	13	12	2				
		13 31 1	21	2.29	±.06	25.0	31	16	12	2				
248	GR 1332+06	13 32 13	11	6.68	±.10	16.7	28	21			-0.03	.81	B	4C06.48
		13 33 42	62	5.94	±.58	14.7	<28		2	1				
		13 31 52	10	6.31	±.06	16.7	24	31	9	3				
		13 32 12	8	6.77	±.03	20.0	31	15	10	3				
		13 32 32	10	6.65	±.06	25.0	27	21	8	3				
249	GR 1333+03	13 33 52	22	3.33	±.15	16.7	44	21			.20	1.73	C	
		13 34 1	14	3.05	±.13	14.7	36	37	8	3				
		13 34 21	12	3.22	±.06	16.7	49	21	4	2				
		13 33 11	13	3.57	±.08	20.0	40	23	8	3				
250	GR 1339+01	13 39 19	10	1.41	±.15	16.7	38	13			1.27	.69	B	0P065
		13 39 0	97	.99	±.78	10.0	<479		2	1				
		13 41 1	41	1.84	±.44	12.6	<62		2	1				
		13 39 10	14	1.09	±.15	14.7	35	38	7	2				
		13 39 0	8	1.14	±.11	16.7	44	17	11	2				
		13 39 30	8	1.63	±.13	20.0	25	17	12	2				
		13 39 41	15	1.79	±.13	25.0	27	30	7	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
251	GR 1340+08	13 40 37	7	8.95	.07	16.7	38	17			.31	.83	B	4C08.39
		13 40 42	68	7.57	.58	12.6	< 80		3	1				
		13 40 42	12	8.66	.06	16.7	36	25	7	2				
		13 40 32	10	9.01	.04	20.0	37	18	6	1				
		13 40 42	19	8.97	.03	25.0	31	36	4	1				
252	GR 1349+07	13 49 5	10	7.79	.04	16.7	52	6			-.13	.34	A	4C07.33
		13 49 52	96	7.75	.75	10.0	<256		2	1				
		13 49 22	14	7.37	.11	12.6	54	36	8	1				
		13 49 12	11	7.66	.05	14.7	49	25	7	1				
		13 48 42	7	7.51	.03	16.7	55	14	12	1				
		13 49 32	8	7.69	.02	20.0	49	16	14	2				
		13 48 52	13	7.65	.01	25.0	62	27	9	2				
253	GR 1349-01	13 49 35	21	-1.17	.08	16.7	28	22			-1.17	1.47	C	4C-01.30 G
		13 50 0	38	-1.02	.41	12.6	< 84		9	2				
		13 49 0	29	-1.26	.24	14.7	35	68	8	2				
		13 50 10	13	-1.15	.21	16.7	27	33	6	2				
		13 49 0	14	-1.16	.09	20.0	30	24	4	1				
254	GR 1350+06	13 50 47	15	6.42	.07	16.7	57	21			1.83	1.11	B	MSH13+011
		13 50 32	71	6.23	.84	10.0	<107		4	1				
		13 49 22	27	6.48	.03	12.6	221	30	12	3				
		13 51 2	9	6.17	.06	14.7	53	20	11	3				
		13 50 8	24	6.19	.53	16.7	51	19	13	3				
		13 50 37	39	6.16	.47	20.0	35	17	18	3				
		13 50 57	45	6.94	.21	25.0	63	35	5	1				
255	GR 1354-00	13 54 3	14	-.84	.03	16.7	52	40			.02	1.78	C	4C-00.52
		13 53 10	54	-1.34	.49	14.7	< 36		3	1				
		13 54 10	16	-.82	.08	16.7	65	24	2	1				
		13 54 20	15	-.86	.11	20.0	32	26	4	2				
		13 53 40	16	-.83	.03	25.0	72	32	2	1				
256	GR 1355+03	13 55 34	12	3.53	.23	16.7	41	40			.70	1.69	C	0P093
		13 55 21	27	3.48	.11	12.6	< 70		5	2				
		13 55 51	16	4.50	.13	14.7	72	26	7	3				
		13 55 51	16	3.93	.31	16.7	21	49	7	3				
		13 55 41	9	4.01	.05	20.0	22	20	9	3				
		13 54 51	15	3.14	.04	25.0	60	30	2	1				
257	GR 1355+01	13 55 36	6	1.52	.02	16.7	67	9			1.19	.42	A	4C01.39 4C01.40
		13 56 0	11	1.32	.16	12.6	73	26	11	2				
		13 55 50	7	1.42	.03	14.7	89	13	14	2				
		13 55 40	7	1.40	.06	16.7	59	15	13	2				
		13 55 31	6	1.52	.08	20.0	61	13	14	2				
		13 55 21	6	1.54	.01	25.0	38	16	12	2				
258	GR 1355+08	13 55 37	14	8.02	.20	16.7	105	15			1.61	.75	C	0P095
		13 54 33	30	8.86	.24	12.6	157	36	2	1				
		13 55 52	20	7.80	.02	14.7	160	25	4	1				
		13 55 33	17	8.41	.06	16.7	79	24	6	2				
		13 55 33	19	8.77	.04	20.0	97	31	5	2				
		13 56 2	20	7.70	.15	25.0	54	39	2	1				
259	GR 1405-01	14 5 40	12	-1.41	.02	16.7	58	14			1.56	.72	A	4C-01.31 QSO
		14 4 30	21	-1.42	.15	12.6	42	57	10	2				
		14 6 10	10	-1.38	.11	14.7	70	19	13	2				
		14 5 57	9	-1.49	.10	16.7	55	16	16	2				
		14 5 40	6	-1.41	.02	20.0	52	13	14	2				
		14 5 0	11	-1.47	.13	25.0	22	24	13	2				
260	GR 1411+08	14 11 58	8	8.18	.07	16.7	76	14			2.72	.53	B	4C08.41 G
		14 10 13	76	8.09	.46	12.6	<229		5	2				
		14 11 53	23	7.82	.06	14.7	144	28	10	2				
		14 12 3	12	8.13	.06	16.7	73	18	11	2				
		14 11 43	7	8.24	.04	20.0	40	15	15	3				
		14 12 13	7	8.25	.03	25.0	28	16	15	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
261	GR 1417+06	14 17 6	5	6.76	.03	16.7	56	7			.26	.28	A	3C298 QSO
		14 18 12	30	6.89	.24	10.0	<128		4	1				
		14 16 52	13	6.71	.06	12.6	68	29	14	3				
		14 17 22	7	6.77	.05	14.7	50	20	14	3				
		14 17 2	6	6.80	.03	16.7	57	18	23	3				
		14 17 2	6	6.68	.01	20.0	59	17	22	3				
		14 17 2	6	6.83	.01	25.0	48	17	18	2				
262	GR 1420-00	14 20 54	7	-56	.05	16.7	23	27			.20	.78	B	4C-00.55
		14 20 10	54	-42	.59	12.6	< 57		4	2				
		14 21 10	55	-56	.46	14.7	< 41		3	1				
		14 20 50	13	-51	.13	16.7	28	34	6	2				
		14 20 40	12	-56	.11	20.0	16	31	2	1				
		14 21 0	7	-57	.06	25.0	22	17	8	2				
263	GR 1426-01	14 26 18	8	-1.18	.07	16.7	60	11			1.06	.43	B	3C300.1
		14 25 39	21	-1.58	.17	12.6	39	64	8	2				
		14 25 40	8	-1.13	.13	14.7	58	19	13	2				
		14 26 40	7	-1.30	.03	16.7	69	14	13	2				
		14 26 10	4	-1.29	.02	20.0	52	12	16	2				
		14 26 30	4	-1.01	.02	25.0	37	13	15	2				
264	GR 1428+07	14 28 31	15	7.63	.07	16.7	60	8			1.31	.32	B	4C07.36 G
		14 26 53	46	7.03	.36	12.6	< 87		6	1				
		14 27 32	41	6.24	.36	14.7	< 56		5	1				
		14 28 43	9	7.66	.03	16.7	59	16	14	2				
		14 28 19	19	7.33	.24	20.0	49	13	18	2				
		14 27 28	40	7.39	.21	25.0	35	14	14	2				
265	GR 1431+06	14 31 46	12	6.63	.08	16.7	33	17			1.25	.89	B	4C06.50
		14 31 33	19	7.01	.13	14.7	24	64	3	1				
		14 31 23	8	6.63	.06	16.7	33	21	9	3				
		14 32 3	7	6.55	.05	20.0	28	15	9	3				
		14 32 3	18	6.67	.11	25.0	17	36	2	1				
266	GR 1435+03	14 35 46	11	3.76	.04	16.7	59	5			1.86	.19	A	4C03.30
		14 36 11	66	3.69	.54	10.0	<366		6	2				
		14 35 41	10	3.63	.04	12.6	96	20	22	4				
		14 36 32	8	3.95	.02	14.7	79	15	22	4				
		14 36 13	5	3.73	.02	16.7	56	13	24	4				
		14 35 21	4	3.67	.02	20.0	45	12	23	4				
		14 35 42	5	3.74	.01	25.0	27	14	13	3				
267	GR 1437+00	14 37 5	11	.20	.07	16.7	31	24			-2.08	.81	B	4C00.50 G
		14 39 20	73	-48	.58	12.6	< 82		3	1				
		14 37 10	17	.31	.13	14.7	35	44	5	1				
		14 37 20	22	.21	.11	16.7	29	49	5	1				
		14 36 29	38	.01	.08	20.0	36	23	9	2				
		14 37 0	10	.25	.05	25.0	79	22	3	1				
268	GR 1444+07	14 44 24	5	7.75	.02	16.7	56	8			1.85	.33	A	4C07.38
		14 44 3	92	7.73	.75	10.0	<204		2	1				
		14 44 33	22	7.64	.13	12.6	76	40	8	2				
		14 44 23	15	7.64	.08	14.7	64	25	4	1				
		14 44 13	9	7.79	.04	16.7	59	16	12	3				
		14 44 33	8	7.76	.02	20.0	44	15	13	3				
		14 44 23	8	7.73	.03	25.0	24	18	8	2				
269	GR 1445+06	14 45 37	22	6.71	.07	16.7	58	31			2.59	1.24	C	0Q076
		14 44 23	24	6.75	.03	14.7	95	32	2	1				
		14 45 43	16	6.38	.17	16.7	15	66	5	2				
		14 45 40	62	6.30	.19	20.0	38	26	10	2				
		14 46 3	16	6.37	.13	25.0	21	32	2	1				
270	GR 1449+00	14 49 54	17	.95	.19	16.7	71	10			1.60	.41	A	4C00.53
		14 49 31	31	1.48	.18	10.0	132	53	6	2				
		14 50 23	64	.61	.39	12.6	63	36	12	2				
		14 49 16	39	.84	.45	14.7	95	17	20	2				
		14 49 25	28	.60	.18	16.7	83	16	18	2				
		14 50 4	21	.76	.19	20.0	47	19	20	2				
		14 50 38	28	1.26	.35	25.0	36	17	15	2				

(continued)

Table 1 (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. 1/DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.	
271	GR 1452+05	14 52 28	8	5.34	.11	16.7	49	10			.86	.48	B	4C05.61	QSO
		14 51 22	70	5.09	.67	12.6	<142		5	1					
		14 52 33	20	4.86	.75	14.7	49	39	15	4					
		14 52 32	16	4.90	.36	16.7	49	20	28	4					
		14 52 25	11	5.12	.29	20.0	44	17	17	3					
		14 52 30	15	5.40	.09	25.0	32	29	3	1					
272	GR 1500+05	15 0 39	12	5.39	.08	16.7	41	30			.56	.78	C	4C05.62	
		15 1 23	97	6.93	.75	10.0	<107		2	1					
		15 1 43	64	5.63	.58	12.6	< 71		3	1					
		14 59 33	40	5.91	.15	14.7	57	66	6	2					
		14 58 43	34	6.71	.24	16.7	< 25		2	1					
		15 1 13	29	6.79	.24	20.0	28	48	2	1					
		15 0 42	6	5.36	.02	25.0	33	15	2	1					
273	GR 1502+03	15 2 1	9	3.90	.13	16.7	68	20			2.66	1.46	C	4C03.31	
		15 1 42	49	4.42	.20	12.6	109	67	2	1					
		15 2 2	15	3.66	.13	16.7	72	21	4	2					
		15 2 2	12	3.90	.06	20.0	41	21	3	1					
274	GR 1506+01	15 6 13	4	1.21	.04	16.7	57	13			2.49	.43	A	4C01.41	
		15 6 51	91	1.74	.85	10.0	<144		2	1					
		15 6 0	35	.68	.23	12.6	125	46	4	2					
		15 6 31	14	1.44	.20	14.7	80	21	9	2					
		15 6 11	12	1.31	.13	16.7	44	22	5	2					
		15 6 21	13	1.15	.11	20.0	51	22	8	2					
		15 6 11	4	1.21	.03	25.0	20	13	8	2					
275	GR 1507+03	15 7 48	17	3.71	.04								C	4C03.32	G
		15 8 52	81	3.80	.84	10.0	<233		3	1					
		15 5 52	48	3.52	.30	12.6	< 80		2	1					
		15 7 52	47	3.43	.46	14.7	< 49		4	2					
		15 7 22	13	3.66	.06	16.7	46	23	12	4					
		15 8 12	11	3.74	.04	20.0	41	19	7	3					
276	GR 1508+08	15 8 38	6	8.03	.03	16.7	159	20			1.16	.61	B	3C313	G
		15 8 24	33	8.14	.15	12.6	152	40	4	1					
		15 8 44	23	7.82	.06	16.7	166	30	2	1					
		15 9 4	10	7.95	.02	20.0	153	18	4	2					
		15 8 34	4	8.05	.01	25.0	94	12	13	3					
277	GR 1508+05	15 8 40	9	5.82	.06	16.7	88	9			1.34	.53	B	4C06.53	GGA
		15 8 23	12	5.74	.05	14.7	114	17	7	3					
		15 8 53	10	6.08	.05	16.7	80	16	8	2					
		15 8 33	10	5.91	.05	20.0	68	18	5	1					
		15 8 53	14	5.78	.02	25.0	56	29	11	3					
278	GR 1510+02	15 10 26	6	2.06	.16	16.7	47	37			1.55	1.33	C	4C01.42	
		15 10 21	13	2.11	.18	16.7	36	27	6	2					
		15 10 31	7	2.24	.04	20.0	41	15	5	2					
		15 10 21	8	1.77	.05	25.0	23	18	4	2					
279	GR 1512+04	15 12 32	17	4.72	.05	16.7	57	7			1.20	.28	B	4C04.50	QSO
		15 14 8	18	4.46	.75	12.6	73	34	13	4					
		15 13 12	10	4.89	.05	14.7	65	19	13	3					
		15 12 42	10	4.47	.06	16.7	57	17	10	3					
		15 12 2	8	4.78	.03	20.0	49	15	10	2					
		15 12 12	8	4.70	.02	25.0	33	18	13	3					
280	GR 1514+00	15 14 31	25	.38	.09	16.7	81	11			1.51	.69	B	4C00.56	G
		15 15 10	25	.57	.13	12.6	95	39	8	2					
		15 15 10	36	.20	.06	14.7	91	19	21	2					
		15 14 47	27	.52	.02	16.7	99	16	21	2					
		15 13 26	25	.29	.06	20.0	55	17	21	2					
		15 13 55	65	.11	.03	25.0	45	49	20	2					
281	GR 1515+07	15 15 2	12	7.01	.02	16.7	261	7			.47	.29	A	3C317	GGA
		15 16 23	26	6.31	.20	10.0	197	37	4	2					
		15 15 3	8	6.78	.06	12.6	359	13	17	3					
		15 14 58	35	7.04	.03	14.7	263	14	16	3					
		15 14 38	23	6.99	.02	16.7	236	13	22	3					
		15 14 42	29	7.00	.01	20.0	236	15	26	3					
		15 14 42	18	7.04	.01	25.0	227	14	30	3					

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHz	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
282	GR 1519+07	15 19 23	6	7.91	.02	16.7	337	5			1.79	.18	A	3C318.1 G
		15 20 34	92	8.71	.75	10.0	<269		2	1				
		15 19 24	9	7.88	.04	12.6	539	13	10	2				
		15 20 4	14	7.88	.05	14.7	500	19	2	1				
		15 19 4	8	7.91	.03	16.7	319	14	6	2				
		15 19 24	11	7.97	.02	20.0	253	19	9	3				
		15 19 24	5	7.90	.01	25.0	162	13	7	2				
283	GR 1521+05	15 21 40	38	5.62	.11	16.7	65	22			1.67	.83	C	4C05.63
		15 21 43	32	5.38	.06	12.6	186	38	2	1				
		15 21 43	29	5.73	.17	14.7	39	63	5	2				
		15 22 23	15	5.62	.06	16.7	48	25	6	2				
		15 23 33	16	6.00	.11	20.0	49	26	5	2				
		15 20 23	11	5.76	.06	25.0	37	24	4	1				
284	GR 1525-01	15 25 22	32	-1.27	.09	16.7	35	18			1.28	.67	C	4C-01.37
		15 26 20	78	-1.19	.75	12.6	<115		2	1				
		15 26 50	29	-1.00	.24	14.7	< 50		5	2				
		15 26 0	15	-1.13	.11	16.7	37	30	8	2				
		15 24 9	16	-1.44	.09	20.0	25	30	4	1				
		15 25 26	69	-1.22	.12	25.0	22	29	4	1				
285	GR 1529+03	15 29 59	19	3.80	.13	16.7	40	8			1.95	.41	B	4C03.34
		15 31 22	91	4.21	.95	10.0	<160		2	1				
		15 29 32	46	3.30	.53	12.6	< 54		6	2				
		15 30 52	13	3.90	.24	14.7	49	26	10	3				
		15 29 32	12	3.76	.06	16.7	39	24	11	3				
		15 29 32	8	3.68	.04	20.0	30	16	11	4				
		15 31 12	16	4.52	.09	25.0	16	33	2	1				
286	GR 1538+01	15 38 60	14	1.99	.04	16.7	74	14			.45	.68	B	
		15 38 52	39	2.03	.15	12.6	145	49	2	1				
		15 40 1	22	.92	.16	14.7	92	29	5	2				
		15 38 41	11	1.30	.23	16.7	61	18	7	2				
		15 39 21	16	1.36	.13	20.0	74	26	8	3				
		15 38 51	13	2.00	.01	25.0	69	27	6	2				
287	GR 1539+08	15 39 26	28	8.02	.07	16.7	63	11			1.17	.94	C	4C08.45
		15 39 14	39	7.76	.24	12.6	78	63	6	2				
		15 39 44	49	7.95	.46	14.7	< 59		4	2				
		15 40 4	11	8.13	.05	16.7	64	17	10	3				
		15 38 24	14	7.91	.05	20.0	50	23	2	1				
288	GR 1539-01	15 39 31	19	-1.26	.12	16.7	61	14			1.62	.57	B	4C-00.60
		15 39 59	23	-1.32	.18	12.6	61	49	8	2				
		15 37 49	17	-1.64	.08	14.7	85	25	10	2				
		15 39 19	9	-1.37	.05	16.7	57	16	9	2				
		15 39 30	16	-1.05	.06	20.0	66	26	11	2				
		15 40 0	8	-.97	.06	25.0	29	18	10	2				
289	GR 1544+01	15 44 23	22	1.86	.07	16.7	33	28			1.47	.93	C	4C01.45
		15 42 31	16	1.39	.20	16.7	39	31	3	1				
		15 44 41	6	1.95	.06	20.0	24	16	6	2				
		15 44 21	6	1.84	.04	25.0	19	16	8	2				
290	GR 1545+07	15 45 44	10	7.53	.11	16.7	51	38			.36	1.60	C	4CPO7.41A
		15 45 34	47	6.93	.27	16.7	60	19	5	1				
		15 45 34	11	7.89	.08	20.0	36	19	7	3				
		15 45 54	11	7.49	.03	25.0	53	23	6	3				
291	GR 1546-00	15 46 35	19	-.60	.09	16.7	47	15			.42	.58	C	4C-00.61
		15 46 40	27	-.46	.23	14.7	46	52	3	1				
		15 46 50	17	-.49	.17	16.7	49	28	5	2				
		15 45 50	12	-.70	.11	20.0	42	21	7	2				
		15 47 0	10	-.57	.12	25.0	40	22	7	2				
292	GR 1547+06	15 47 49	20	6.04	.05	16.7	29	15			1.60	.56	B	4C05.64 QSO
		15 50 13	97	6.12	.75	10.0	<303		2	1				
		15 50 33	41	5.47	.36	12.6	< 55		2	1				
		15 49 33	37	5.91	.36	14.7	< 42		6	3				
		15 48 13	13	5.97	.06	16.7	32	29	10	2				
		15 47 53	9	6.05	.05	20.0	19	22	15	3				
		15 46 53	12	6.10	.06	25.0	16	24	6	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHz	FLUX F.U.	ERR. FC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
293	GR 1547+03	15 47 60	15	3.28	.14	16.7	35	24			-1.53	.95	C	MSH15+014
		15 48 22	22	3.97	.36	14.7	40	48	6	3				
		15 48 22	16	4.27	.08	16.7	28	39	5	2				
		15 47 52	19	3.28	.05	20.0	46	31	5	2				
		15 47 32	16	3.22	.02	25.0	69	33	2	1				
294	GR 1600+06	16 0 30	17	6.38	.07	16.7	53	15			1.95	.75	B	4C06.54 QSO
		16 0 43	12	6.44	.08	12.6	92	22	8	2				
		16 1 13	11	6.16	.06	14.7	75	19	6	2				
		16 0 23	10	6.20	.06	16.7	33	24	12	2				
		15 59 53	8	6.47	.03	20.0	46	15	13	2				
		16 1 23	16	6.41	.08	25.0	17	32	7	2				
295	GR 1600+02	16 0 53	6	2.08	.06	16.7	256	5			.80	.18	A	3C327 G
		16 0 31	14	2.63	.15	10.0	445	25	7	1				
		16 1 31	11	1.86	.01	12.6	315	14	14	3				
		16 1 1	13	2.09	.10	14.7	281	17	16	3				
		16 1 1	5	2.26	.01	16.7	259	12	16	3				
		16 0 41	5	2.12	.01	20.0	200	13	16	3				
		16 0 51	5	2.07	.01	25.0	203	14	13	2				
296	GR 1603+00	16 3 11	16	.14	.10	16.7	101	8			.61	.38	B	4C00.58
		16 3 50	14	.30	.11	12.6	118	23	8	2				
		16 3 40	9	-.32	.04	14.7	125	14	10	2				
		16 2 30	7	.21	.05	16.7	90	13	12	2				
		16 3 20	55	.13	.03	20.0	77	26	11	2				
		16 3 30	8	.25	.02	25.0	87	18	11	2				
297	GR 1611+04	16 11 47	20	4.22	.22	16.7	50	24			2.12	.96	C	4C04.56
		16 12 52	48	4.25	.46	12.6	63		5	2				
		16 12 42	32	3.11	.13	14.7	69	47	6	2				
		16 12 52	15	4.05	.08	16.7	35	32	8	3				
		16 11 23	11	4.50	.06	20.0	42	19	3	1				
		16 11 23	12	4.50	.09	25.0	18	26	2	1				
298	GR 1632+06	16 32 21	17	6.44	.10	16.7	85	24			2.10	1.06	B	OS055
		16 31 24	21	6.75	.09	12.6	130	30	7	2				
		16 32 4	17	6.15	.08	14.7	109	23	6	2				
		16 33 4	23	6.27	.11	16.7	63	31	3	1				
		16 32 34	12	6.49	.05	20.0	96	21	5	1				
		16 33 7	64	6.15	.29	25.0	20	30	5	1				
299	GR 1635+08	16 35 54	15	8.43	.10	16.7	77	18			.79	.85	C	OS056
		16 36 5	25	8.37	.20	14.7	79	35	3	1				
		16 35 35	15	7.92	.11	16.7	72	21	3	1				
		16 36 25	14	8.73	.06	20.0	85	23	3	1				
		16 35 35	14	8.41	.03	25.0	47	28	3	1				
300	GR 1646-01	16 46 1	21	-1.50	.05	16.7	101	22			.73	1.24	B	
		16 45 40	65	-.66	.64	12.6	114		3	1				
		16 44 49	29	-1.49	.30	14.7	132	34	6	1				
		16 46 19	58	-1.25	.15	16.7	105	24	8	2				
		16 46 19	20	-1.50	.09	20.0	54	32	3	1				
		16 46 19	22	-1.52	.04	25.0	126	43	2	1				
301	GR 1648+05	16 48 45	6	5.07	.05	16.7	3010	3			.94	.11	A	3C348 G
		16 48 44	10	5.00	.12	10.0	4834	11	7	2				
		16 48 50	8	5.13	.06	12.6	3780	10	15	2				
		16 48 16	8	5.11	.04	14.7	3722	10	14	2				
		16 48 42	6	5.08	.02	16.7	2911	10	10	2				
		16 48 33	5	4.95	.01	20.0	2471	10	10	2				
		16 48 59	4	5.19	.01	25.0	2084	10	14	2				
302	GR 1650+02	16 50 51	21	2.35	.20	16.7	113	24			1.98	1.02	C	4C02.44 G
		16 52 2	70	2.85	.58	14.7	181	80	2	1				
		16 50 1	29	1.88	.23	16.7	114	38	4	2				
		16 51 1	23	2.39	.24	20.0	73	36	2	1				
		16 51 2	21	2.54	.17	25.0	54	42	4	2				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX P.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
303	GR 1659+06	16 59 52	11	6.45	.04	16.7	68	19			1.98	.96	B	4C06.58 QSO
		17 0 14	36	6.57	.30	12.6	< 72		2	1				
		17 0 14	17	6.39	.13	14.7	50	32	4	1				
		16 59 34	13	6.43	.06	16.7	87	19	4	1				
		17 0 4	9	6.52	.05	20.0	48	17	5	1				
		16 59 24	14	6.42	.05	25.0	27	28	5	1				
304	GR 1717+06	17 17 39	33	6.71	.08	16.7	65	8			1.64	.37	B	4C06.61 G
		17 20 44	42	6.77	.36	12.6	< 92		7	2				
		17 19 44	17	6.98	.09	14.7	83	24	8	2				
		17 16 24	13	6.61	.06	16.7	65	19	6	2				
		17 17 44	12	6.53	.08	20.0	46	21	5	2				
		17 17 24	11	6.76	.05	25.0	35	24	5	2				
305	GR 1717-00	17 17 56	7	-97	.01	16.7	989	4			.53	.15	A	3C353 G
		17 18 10	10	-98	.06	12.6	1178	14	10	2				
		17 18 10	10	-96	.01	14.7	1095	11	12	2				
		17 18 0	6	-92	.02	14.7	997	12	12	2				
		17 18 9	7	-99	.02	20.0	890	11	10	2				
		17 17 40	5	-98	.01	25.0	810	12	12	2				
306	GR 1720+07	17 20 29	12	7.40	.01	16.7	80	9			.56	.36	A	4C07.45
		17 19 14	22	7.26	.20	12.6	90	35	5	2				
		17 19 54	14	7.33	.11	14.7	72	24	5	1				
		17 20 35	9	7.38	.05	16.7	84	15	10	2				
		17 20 55	9	7.36	.02	20.0	81	17	11	2				
		17 20 25	7	7.40	.01	25.0	59	16	10	2				
307	GR 1733+08	17 33 34	12	8.40	.10	16.7	72	10			2.77	.59	C	4C08.48
		17 34 25	70	7.94	.58	12.6	<116		3	1				
		17 33 5	32	8.28	.06	14.7	100	40	4	1				
		17 33 15	15	8.81	.09	16.7	73	21	3	1				
		17 33 45	12	8.39	.06	20.0	44	20	2	1				
		17 33 55	26	8.15	.17	25.0	23	50	2	1				
308	GR 1738+06	17 38 15	30	6.04	.14								C	4C06.62
		17 39 34	93	6.33	.75	10.0	<287		2	1				
		17 37 14	48	6.22	.46	12.6	< 81		5	2				
		17 37 34	20	5.88	.17	16.7	60	29	3	1				
		17 39 4	20	6.15	.17	20.0	35	32	3	1				
309	GR 1738-01	17 38 33	18	-1.34	.07	16.7	93	31			3.40	1.32	C	MSH17-011
		17 37 20	72	-96	.86	12.6	<107		2	1				
		17 37 59	22	-1.60	.29	14.7	168	27	2	1				
		17 37 29	28	-1.36	.08	16.7	115	38	2	1				
		17 38 49	16	-1.26	.15	20.0	24	31	2	1				
		17 38 59	16	-1.32	.15	25.0	36	32	2	1				
310	GR 1744+07	17 44 52	13	7.89	.29	16.7	72	8			1.96	.37	C	4C08.50
		17 44 15	27	8.37	.20	12.6	119	36	3	1				
		17 45 15	19	8.16	.05	14.7	101	25	5	1				
		17 44 15	17	8.27	.09	16.7	65	24	5	1				
		17 45 15	12	8.85	.06	20.0	53	20	5	1				
		17 44 45	13	7.31	.04	25.0	32	27	3	1				
311	GR 1748-01	17 48 44	22	-1.57	.04	16.7	55	46			-1.38	1.83	C	MSH17-012
		17 48 9	33	-1.86	.30	16.7	75	44	6	1				
		17 49 9	12	-1.71	.06	20.0	63	20	7	1				
		17 48 9	16	-1.55	.02	25.0	108	32	4	1				
312	GR 1756+08	17 56 32	20	8.32	.11	16.7	109	14			1.48	.61	C	4C08.51
		17 54 45	24	7.61	.20	12.6	123	33	2	1				
		17 56 55	31	8.15	.15	14.7	123	36	2	1				
		17 56 35	17	8.38	.09	16.7	138	24	2	1				
		17 56 35	14	8.30	.06	20.0	92	24	4	1				
		17 56 55	13	8.59	.11	25.0	49	27	2	1				
313	GR 1815+04	18 15 59	28	4.03	.07	16.7	38	19			.21	.69	C	4C03.40
		18 17 52	74	3.32	.89	12.6	< 99		2	1				
		18 17 2	46	3.27	.36	14.7	< 66		4	1				
		18 14 52	20	3.75	.17	16.7	39	36	3	1				
		18 17 2	16	3.81	.15	20.0	35	27	5	1				
		18 15 33	14	4.07	.04	25.0	35	29	4	1				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
314	GR 1831+08	18 31 7	15	8.18	.09	16.7	80	14			1.28	.64	B	4C07.48
		18 31 15	60	8.53	.46	12.6	<126		4	1				
		18 31 45	15	8.53	.11	14.7	75	23	7	1				
		18 31 45	15	8.54	.06	16.7	88	22	5	1				
		18 30 35	9	7.85	.04	20.0	74	17	5	1				
		18 31 15	11	8.22	.02	25.0	39	23	8	1				
315	GR 1842+07	18 42 2	22	7.23	.16	16.7	114	23			1.44	1.02	C	3C390.1
		18 42 24	29	7.30	.11	14.7	84	40	3	1				
		18 42 54	20	6.21	.13	16.7	148	27	3	1				
		18 42 18	36	7.76	.09	20.0	89	18	5	1				
		18 41 34	13	7.22	.03	25.0	59	27	2	1				
316	GR 1845+05	18 45 13	22	5.29	.03	16.7	87	15			1.53	.55	B	4C05.70
		18 43 53	99	5.24	.75	10.0	<181		2	1				
		18 43 53	27	5.59	.17	12.6	131	36	6	2				
		18 44 13	32	5.48	.30	14.7	78	45	8	2				
		18 46 23	55	4.98	.46	16.7	100	70	2	1				
		18 45 13	16	5.44	.06	20.0	84	26	3	1				
		18 45 53	16	5.27	.02	25.0	38	31	3	1				
317	GR 1859+07	18 59 3	11	7.56	.12	16.7	132	9			1.65	.47	C	
		18 59 45	19	8.18	.08	12.6	274	22	5	1				
		18 58 55	8	7.92	.04	14.7	156	13	8	1				
		18 59 15	8	7.70	.06	16.7	124	14	8	1				
		18 58 25	11	7.72	.05	20.0	87	19	5	1				
		18 59 24	12	7.38	.02	25.0	87	24	8	1				
318	GR 1901+05	19 1 16	19	5.74	.09	16.7	128	9			3.50	.47	C	3C396
		19 1 0	65	5.73	.22	12.6	275	18	7	1				
		19 1 5	28	5.79	.06	14.7	216	13	9	2				
		19 1 33	28	5.37	.23	16.7	148	16	7	1				
		19 1 37	79	4.98	.54	20.0	68	17	9	1				
		19 0 47	58	5.79	.50	25.0	25	26	5	1				
319	GR 1908+06	19 8 33	17	6.69	.11	16.7	93	26			1.92	.90	C	
		19 7 14	92	6.77	.75	10.0	<262		2	1				
		19 8 24	67	6.76	.58	14.7	150	76	2	1				
		19 8 4	58	7.01	.46	16.7	108	74	2	1				
		19 8 44	17	6.41	.11	20.0	61	28	5	2				
		19 8 1	42	6.79	.06	25.0	45	32	9	1				
320	GR 1934+05	19 34 29	10	5.79	.07	16.7	73	18			1.77	1.30	B	4C05.75
		19 34 33	74	5.23	.75	12.6	< 98		2	1				
		19 34 43	19	5.81	.13	14.7	67	35	4	1				
		19 34 13	15	5.72	.09	16.7	88	22	5	2				
		19 34 33	10	5.84	.08	20.0	50	18	6	2				
321	GR 1939+07	19 39 49	11	7.82	.03	16.7	77	14			1.04	.78	B	4C07.52
		19 40 4	31	7.64	.20	14.7	63	48	3	1				
		19 39 34	13	7.85	.06	16.7	81	19	2	1				
		19 40 4	17	7.76	.06	20.0	67	27	3	1				
		19 39 54	17	7.84	.03	25.0	47	34	3	1				
322	GR 1953+08	19 53 45	34	8.35	.11	16.7	89	20			2.33	1.16	C	4C08.56
		19 52 25	39	8.36	.11	12.6	96	58	6	1				
		19 52 15	23	8.59	.04	14.7	175	27	4	2				
		19 54 34	12	7.97	.06	16.7	77	18	8	2				
		19 53 5	18	8.28	.03	25.0	38	35	6	2				
323	GR 2010+06	20 10 28	14	6.14	.10	16.7	143	25			4.36	1.31	B	PKS2008+06
		20 10 0	64	6.57	.38	14.7	165	29	7	2				
		20 10 23	13	6.10	.08	16.7	169	20	6	2				
		20 10 58	37	6.12	.17	20.0	84	25	12	3				
		20 10 56	50	6.48	.27	25.0	17	33	8	2				
324	GR 2018+08	20 18 41	18	8.04	.12	16.7	107	28			1.92	1.56	B	OW029
		20 18 54	63	7.85	.58	12.6	< 86		3	1				
		20 18 4	33	8.00	.24	14.7	60	52	10	2				
		20 19 24	14	8.14	.05	16.7	102	20	14	2				
		20 18 39	10	7.79	.20	20.0	98	18	12	3				
		20 17 34	20	7.48	.13	25.0	24	39	3	1				

(continued)

Table I (Continued)

Nº.	SOURCE NAME	RA H M S	1950 ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHz	FLUX F.U.	ERR. PC	N	NRA	SP. INL.	ERR.	W	IDENTIFICATION RADIO OPTIC.	
325	GR 2026+05	20 26 23	15	5.46	.07	16.7	70	37			4.99	3.12	B	OW049	
		20 27 43	73	5.73	.75	12.6	< 86		2	1					
		20 27 3	22	5.88	.17	14.7	69	33	7	3					
		20 26 13	15	5.43	.02	16.7	110	22	5	2					
		20 26 13	13	5.85	.08	20.0	21	27	4	2					
326	GR 2046+07	20 46 57	23	7.13	.09	16.7	114	9			.94	.37	B	3C424 G	
		20 48 44	103	6.55	.25	12.6	130	38	8	1					
		20 48 4	66	6.63	.13	14.7	121	28	19	4					
		20 47 39	30	7.05	.24	16.7	133	17	21	3					
		20 45 58	31	7.05	.13	20.0	91	11	17	3					
		20 46 53	19	7.20	.04	25.0	81	15	24	3					
327	GR 2106+08	21 6 23	20	8.24	.09	16.7	49	27			2.11	1.50	C	OX009	
		21 5 34	36	8.31	.09	12.6	113	49	4	1					
		21 5 23	61	7.98	.46	14.7	<105		3	1					
		21 6 44	20	8.09	.17	16.7	32	41	5	1					
		21 6 24	22	8.15	.17	20.0	39	34	3	1					
328	GR 2111+06	21 11 24	12	6.29	.15	16.7	56	55			3.14	2.07	C		
		21 11 13	16	6.41	.08	16.7	44	27	4	1					
		21 11 11	45	6.45	.19	20.0	47	25	5	1					
		21 11 33	13	6.00	.11	25.0	13	27	2	1					
329	GR 2115+08	21 15 35	10	8.04	.11	16.7	119	19			5.83	.90	B		
		21 14 53	41	8.30	.30	14.7	< 49		6	2					
		21 15 43	14	7.94	.03	16.7	130	21	11	3					
		21 15 43	13	8.24	.06	20.0	35	22	6	1					
		21 15 24	14	8.67	.11	25.0	13	29	8	2					
330	GR 2122+05	21 22 46	32	5.68	.11	16.7	55	43			3.05	2.77	C	4C05.80	
		21 20 53	36	6.28	.20	12.6	84	56	2	1					
		21 22 22	23	5.63	.06	14.7	111	28	7	2					
		21 23 32	18	5.66	.13	16.7	25	46	2	1					
		21 22 32	35	5.71	.30	20.0	42	54	2	1					
331	GR 2127+07	21 27 34	4	7.37	.09	16.7	85	5			1.40	.30	B	3C435	
		21 27 3	38	7.82	.30	12.6	153	45	11	2					
		21 28 13	10	7.88	.05	14.7	103	16	11	3					
		21 27 33	5	7.69	.02	16.7	83	12	20	3					
		21 27 33	2	7.46	.01	20.0	64	11	21	3					
		21 27 13	11	7.18	.01	25.0	53	23	21	3					
332	GR 2144+08	21 44 39	12	8.02	.09	16.7	53	25			2.46	1.05	B	4C07.56 QSO	
		21 44 33	23	8.48	.15	14.7	67	35	6	2					
		21 44 43	15	8.15	.05	16.7	42	28	8	2					
		21 44 29	77	7.83	.06	20.0	43	18	9	2					
		21 44 28	74	7.98	.04	25.0	16	25	10	2					
333	GR 2151+07	21 51 54	23	7.87	.12	16.7	66	20			2.86	.87	B	4CP07.56A	
		21 51 43	24	8.14	.06	12.6	148	31	5	2					
		21 52 33	12	7.58	.03	14.7	131	17	11	3					
		21 51 33	11	7.93	.05	16.7	46	21	15	3					
		21 51 3	8	8.02	.04	20.0	30	16	14	3					
		21 52 53	9	8.10	.04	25.0	29	20	2	1					
334	GR 2152+06	21 52 38	8	6.29	.13	16.7	47	9			2.38	.40	B	OX086	
		21 52 22	28	5.57	.13	12.6	84	44	5	1					
		21 52 29	16	6.06	.30	14.7	63	27	10	2					
		21 52 23	90	6.05	.36	16.7	46	32	10	2					
		21 52 42	7	6.38	.03	20.0	32	15	12	2					
		21 51 12	48	5.44	.13	25.0	16	30	9	2					
335	GR 2154+03	21 54 49	15	3.61	.11	16.7	123	12			1.42	.51	C	4C03.52 G	
		21 56 21	72	3.24	.75	12.6	<101		2	1					
		21 55 11	18	3.65	.11	14.7	163	23	3	1					
		21 54 41	19	3.91	.06	16.7	116	26	4	1					
		21 54 1	17	3.90	.03	20.0	74	28	5	1					
		21 55 1	11	3.46	.02	25.0	77	23	3	1					

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
336	GR 2157+07	21 57 42	10	7.40	.20	16.7	106	21			1.69	.98	C	4C06.71 G
		21 58 13	32	7.88	.08	12.6	265	34	2	1				
		21 57 33	26	8.37	.06	14.7	100	33	2	1				
		21 57 43	16	8.24	.11	16.7	105	23	2	1				
		21 57 33	19	7.89	.08	20.0	49	31	4	2				
		21 57 42	17	7.21	.02	25.0	83	33	4	2				
337	GR 2200+06	22 0 37	14	6.13	.05	16.7	41	29			1.62	1.20	B	4C06.72
		21 59 2	41	5.96	.36	14.7	< 62		5	2				
		22 0 12	10	6.06	.06	16.7	49	20	8	2				
		22 0 52	9	5.99	.06	20.0	22	20	8	2				
		22 0 52	11	6.18	.03	25.0	26	23	6	2				
338	GR 2208+05	22 8 6	23	5.90	.08	16.7	86	23			2.17	.83	C	4C05.83
		22 8 52	57	5.70	.46	14.7	< 52		3	1				
		22 7 52	16	5.95	.06	16.7	94	23	7	2				
		22 8 2	20	5.83	.11	20.0	42	31	3	1				
		22 10 34	55	5.50	.29	25.0	38	21	4	1				
339	GR 2210+08	22 10 58	6	8.00	.10	16.7	55	12			2.26	.42	B	4C08.64 QSO
		22 11 42	26	8.55	.15	12.6	70	46	10	3				
		22 10 42	15	7.31	.06	14.7	84	23	11	3				
		22 10 52	7	7.98	.03	16.7	49	15	18	3				
		22 11 2	6	8.08	.02	20.0	43	14	19	3				
		22 11 2	57	7.72	.26	25.0	21	12	17	3				
340	GR 2217+08	22 17 55	11	8.67	.03								C	4C08.66
		22 18 12	44	8.48	.36	14.7	< 63		5	2				
		22 19 12	41	8.57	.36	16.7	< 41		2	1				
		22 17 52	15	8.72	.09	20.0	25	26	7	2				
		22 17 52	9	8.67	.03	25.0	34	19	6	1				
341	GR 2222-02	22 22 7	24	-2.05	.14	16.7	105	20			2.92	1.12	C	3C445 G
		22 22 40	13	-2.12	.06	14.7	163	18	3	1				
		22 21 20	34	-1.16	.43	16.7	81	45	3	1				
		22 21 40	24	-1.24	.24	20.0	40	38	8	2				
		22 21 10	23	-2.01	.17	25.0	50	45	6	2				
342	GR 2222+05	22 22 11	17	5.48	.23	16.7	62	7			1.62	.39	C	4C05.84 QSO
		22 21 11	21	5.18	.20	12.6	81	37	8	2				
		22 21 42	11	6.30	.03	14.7	81	19	11	2				
		22 23 2	13	5.73	.06	16.7	60	20	9	2				
		22 22 21	11	5.28	.03	20.0	48	19	10	2				
		22 22 11	15	5.19	.02	25.0	30	31	10	2				
343	GR 2226+00	22 26 32	31	.72	.03	16.7	61	35			.68	1.77	C	4C00.81
		22 27 50	18	.81	.16	16.7	53	28	4	1				
		22 26 20	10	.69	.05	20.0	59	19	3	1				
		22 25 30	23	.73	.03	25.0	35	45	3	1				
344	GR 2227+08	22 27 4	13	8.46	.09	16.7	76	16			3.88	.79	B	4C08.67 G
		22 28 12	41	9.16	.08	12.6	219	44	6	2				
		22 27 42	17	8.35	.03	14.7	171	21	10	3				
		22 27 22	9	8.37	.03	16.7	55	16	15	3				
		22 26 52	9	8.56	.03	20.0	43	17	10	3				
		22 26 32	11	8.49	.06	25.0	16	23	7	2				
345	GR 2229+06	22 29 40	20	6.52	.20	16.7	46	57			1.93	1.98	C	4C06.74 G
		22 30 22	74	6.11	.75	12.6	<124		2	1				
		22 28 22	50	6.14	.36	14.7	< 58		4	1				
		22 29 52	17	6.23	.11	16.7	29	39	7	2				
		22 29 15	58	6.88	.40	20.0	71	39	16	2				
		22 29 14	46	6.96	.13	25.0	16	35	9	2				
346	GR 2238+05	22 38 49	32	5.99	.09	16.7	57	18			3.10	.81	C	
		22 37 11	32	5.96	.09	12.6	132	41	5	2				
		22 40 31	25	5.82	.13	14.7	84	35	5	1				
		22 39 41	22	5.93	.05	16.7	70	30	5	2				
		22 38 31	18	6.20	.17	20.0	19	38	2	1				
		22 38 1	20	6.42	.13	25.0	20	38	2	1				

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA H M S	1950 ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.	
347	GR 2248+06	22 48 40	11	6.04	.13	16.7	38	27			.38	.90	B		
		22 48 54	99	6.88	.43	12.6	83	53	12	2					
		22 49 22	59	6.77	.33	14.7	45	38	13	2					
		22 48 31	11	5.96	.06	16.7	40	22	13	2					
		22 48 59	40	6.65	.29	20.0	19	25	16	2					
		22 48 59	20	6.65	.42	25.0	38	16	10	2					
348	GR 2253-00	22 53 0	25	- .88	.17	16.7	44	31			1.78	1.25	C	4C-00.82	
		22 52 50	28	- .64	.18	14.7	62	45	4	2					
		22 53 40	22	-1.03	.18	16.7	39	40	3	1					
		22 52 30	21	-1.03	.22	25.0	22	42	2	1					
349	GR 2259+06	22 59 14	24	6.70	.13	16.7	72	21			3.66	.86	B	4C07.60	G
		22 59 41	16	6.66	.15	12.6	270	19	4	2					
		22 58 35	54	7.75	.33	14.7	72	31	11	2					
		22 58 45	34	6.85	.39	16.7	52	22	11	1					
		22 57 46	57	6.87	.15	20.0	36	38	12	2					
		22 57 36	49	6.60	.08	25.0	24	30	9	1					
350	GR 2308+07	23 8 32	8	7.36	.04	16.7	86	8			2.21	.36	A	4C07.61	GGA
		23 9 1	74	7.99	.75	12.6	< 59		2	1					
		23 8 11	16	7.38	.09	14.7	112	21	14	2					
		23 8 51	13	7.40	.03	16.7	95	19	10	2					
		23 8 41	8	7.53	.02	20.0	53	16	11	2					
		23 8 21	8	7.32	.01	25.0	37	18	11	2					
351	GR 2310+05	23 10 51	3	5.09	.04	16.7	84	5			1.45	.25	A	3C458	G
		23 11 8	99	4.41	.11	12.6	162	36	11	1					
		23 10 48	40	5.48	.05	14.7	102	14	23	2					
		23 10 51	4	5.17	.02	16.7	81	11	18	2					
		23 10 51	19	5.07	.01	20.0	63	13	23	2					
		23 10 40	20	5.08	.02	25.0	49	15	21	2					
352	GR 2314+01	23 14 22	6	1.23	.04	16.7	96	18			2.39	.83	A	4C01.74	
		23 14 40	18	1.20	.27	12.6	68	36	7	2					
		23 14 40	15	1.03	.05	14.7	188	19	7	2					
		23 14 30	9	1.33	.10	16.7	99	15	10	2					
		23 14 10	6	1.29	.02	20.0	57	14	10	2					
		23 14 30	8	1.25	.02	25.0	37	18	7	2					
353	GR 2314+03	23 14 46	18	3.81	.04	16.7	115	7			.91	.33	B	3C459	G
		23 18 10	72	2.97	.75	12.6	<127		2	1					
		23 16 11	10	3.52	.27	14.7	117	15	8	2					
		23 14 41	7	3.66	.02	16.7	125	14	10	2					
		23 14 21	7	3.78	.01	20.0	103	15	10	2					
		23 14 31	7	3.88	.01	25.0	75	16	11	2					
354	GR 2318+02	23 18 43	6	2.41	.04								C	4C02.58	
		23 18 10	98	2.67	.75	10.0	<561		2	1					
		23 19 0	10	2.16	.05	20.0	53	18	5	2					
		23 18 40	4	2.42	.01	25.0	73	13	4	1					
355	GR 2319+08	23 19 34	25	8.37	.04	16.7	90	20			2.70	.84	B	4C08.69	
		23 21 31	21	8.27	.06	12.6	310	23	4	1					
		23 21 21	12	8.31	.06	14.7	65	22	10	2					
		23 18 51	14	8.50	.04	16.7	90	20	9	2					
		23 19 11	6	8.43	.02	20.0	59	14	14	2					
		23 19 21	9	8.29	.02	25.0	31	20	8	2					
356	GR 2325+04	23 25 50	17	4.92	.14	16.7	63	26			3.53	1.28	C	4C04.79	
		23 25 31	38	4.59	.36	12.6	< 74		3	1					
		23 26 11	28	5.01	.17	14.7	46	52	2	1					
		23 26 34	48	5.05	.08	16.7	79	27	9	2					
		23 26 1	39	4.81	.30	20.0	< 16		3	1					
		23 25 30	22	4.38	.17	25.0	13	43	2	1					
357	GR 2329+01	23 29 23	20	1.63	.09	16.7	92	26			2.59	1.24	B	4C01.75	
		23 29 0	26	1.65	.06	12.6	224	30	6	2					
		23 29 40	15	2.03	.19	14.7	168	20	10	2					
		23 30 50	18	1.38	.27	16.7	70	25	10	2					
		23 29 20	9	1.73	.13	20.0	38	17	10	2					
		23 28 30	14	1.32	.13	25.0	76	29	5	2					

(continued)

Table I (Continued)

NO.	SOURCE NAME	RA 1950 H M S	ERR. SEC.	D 1950 DEG.	ERR. DEG.	FREQ. MHZ	FLUX F.U.	ERR. PC	N	NRA	SP. IND.	ERR.	W	IDENTIFICATION RADIO OPTIC.
358	GR 2333+05	23 33 58	21	5.52	.11								C	OZ057
		23 31 51	68	5.74	.58	12.6	<127		3	1				
		23 34 50	66	5.91	.58	14.7	< 93		2	1				
		23 33 40	24	5.61	.11	16.7	37	44	5	2				
		23 34 10	16	5.38	.13	20.0	19	34	3	1				
359	GR 2334+08	23 34 34	28	8.38	.16	16.7	89	9			3.81	.42	C	4C08.70 G
		23 35 51	56	8.09	.46	12.6	< 73		4	1				
		23 36 31	26	7.94	.05	14.7	153	31	6	2				
		23 35 41	15	8.45	.06	16.7	88	21	9	2				
		23 34 11	11	8.71	.05	20.0	43	19	11	2				
		23 33 41	13	8.51	.06	25.0	20	26	7	2				
360	GR 2346+06	23 46 42	25	6.17	.03	16.7	37	24			.84	.97	C	4C06.76 QSO
		23 47 30	13	6.13	.06	16.7	36	27	6	2				
		23 46 10	12	6.22	.06	20.0	33	21	7	2				
		23 46 30	13	6.17	.03	25.0	26	26	7	1				
361	GR 2349+07	23 49 17	30	7.55	.14	16.7	82	18			3.11	1.36	C	OZ081
		23 49 0	56	7.63	.46	12.6	<133		4	1				
		23 49 0	55	7.45	.46	14.7	< 57		3	1				
		23 48 20	20	7.51	.15	16.7	85	27	3	1				
		23 50 20	21	7.70	.13	20.0	42	34	3	1				
		23 49 40	44	6.96	.30	25.0	40	83	2	1				
362	GR 2349-01	23 49 52	6	-1.20	.14	16.7	70	15			2.49	.56	B	4C-01.61
		23 49 30	37	-1.41	.39	12.6	115	50	4	2				
		23 49 50	28	-.94	.03	14.7	159	33	7	2				
		23 49 40	10	-1.55	.18	16.7	60	17	8	2				
		23 49 50	11	-1.54	.04	20.0	46	20	5	1				
		23 50 0	7	-1.42	.06	25.0	26	16	4	1				
363	GR 2350+06	23 50 43	16	6.17	.06	16.7	68	28			1.94	1.05	B	4C05.86
		23 52 10	32	6.42	.20	12.6	85	50	8	2				
		23 50 0	25	5.78	.13	14.7	142	29	8	2				
		23 50 50	16	5.94	.09	16.7	27	39	4	2				
		23 51 10	14	6.25	.03	20.0	47	23	9	2				
		23 50 20	11	6.13	.03	25.0	33	23	4	1				
364	GR 2358+08	23 58 38	27	8.42	.24	16.7	49	17			2.31	1.20	C	4C08.72
		23 59 59	32	8.41	.53	14.7	43	60	10	2				
		23 57 40	41	7.98	.50	16.7	53	19	11	2				
		23 58 34	56	8.91	.36	20.0	27	34	13	2				
		23 58 25	17	8.36	.24	25.0	22	52	8	2				

were compared with the data from higher frequency surveys, mainly the 4C catalogue, and were identified by the ‘nearest neighbour’ method (Richter, 1975). To identify the observed sources with optical objects we made use of the following papers (Veron and Veron, 1974; McEwan *et al.*, 1975; Wills, 1976; Smith *et al.*, 1976; Barbieri and Zambon, 1977). The following notation has been adopted in the catalogue: G–galaxy, CGA–cluster of Abel’s galaxies, and QSO–quasar.

The methods for calculating average magnitudes of the values (e.g., coordinates, fluxes, etc.) and errors thereof have been described in Paper II.

To estimate the accuracy of coordinate measurements at decametric wavelengths (catalogue GR) we have compared the source coordinates of our catalogue and those of the 4C (where the survey was made at 178 MHz with approximately the same resolution as of UTR-2*). The results of the comparison are given in Figure 2 showing

* At the middle frequency 16.7 MHz the width of the reception pattern is 40' × 40' while the synthesized reception pattern used in the 4C survey is 23' × 18'.

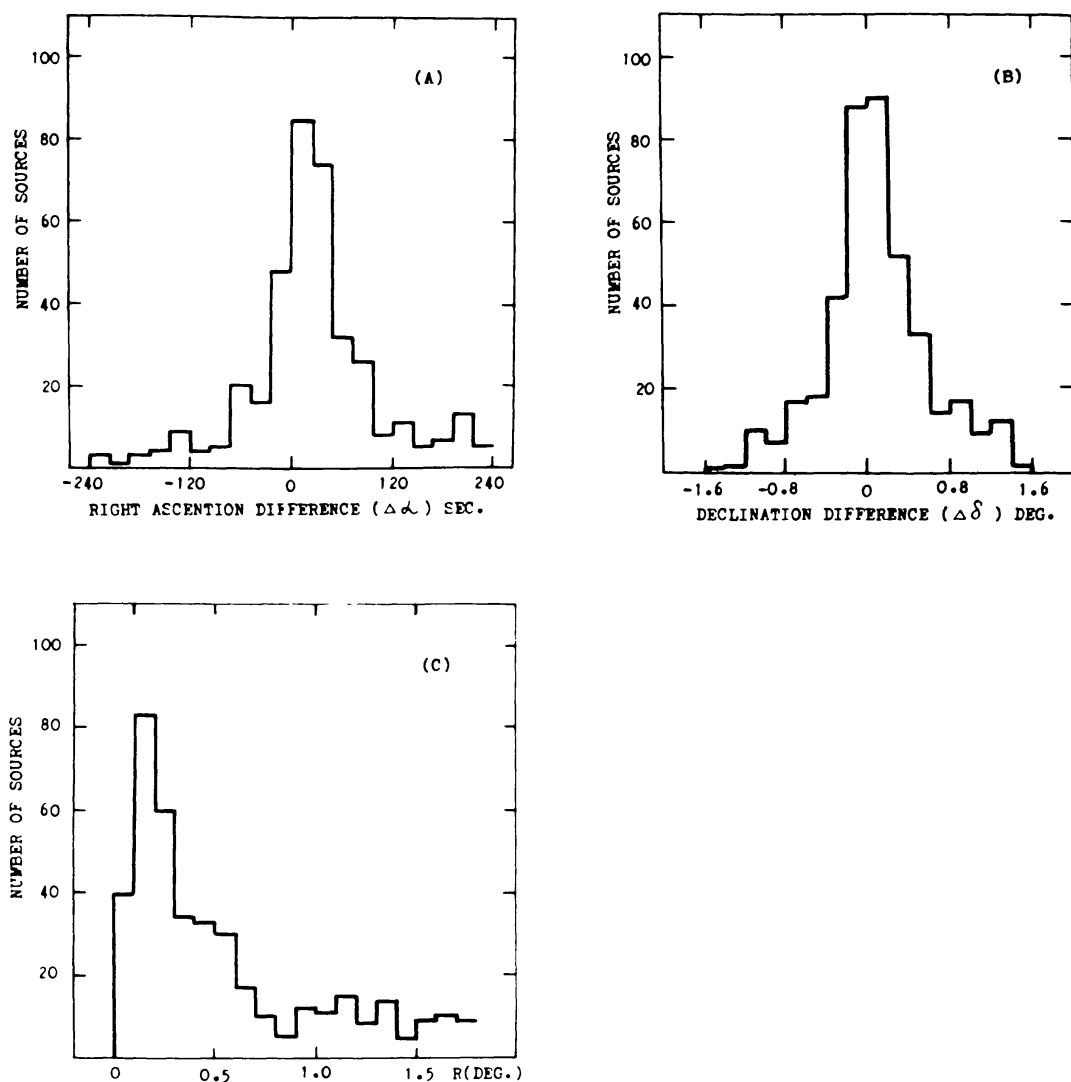


Fig. 2. Histograms of source position differences (GR minus 4C) in right ascension, declination and R .

histograms of the coordinate difference distribution ($\Delta\alpha$ and $\Delta\delta$) and of the identification radius R for the GR and 4C surveys. Here $\Delta\alpha = \alpha_{\text{GR}} - \alpha_{4\text{C}}$; $\Delta\delta = \delta_{\text{GR}} - \delta_{4\text{C}}$; $R = [(\Delta\alpha)^2 + (\Delta\delta)^2]^{1/2}$, where α_{GR} and $\alpha_{4\text{C}}$ are right ascensions and δ_{GR} and $\delta_{4\text{C}}$ declinations, respectively, for sources listed in the GR and 4C catalogues.

The figures give along the vertical the number of sources with a given coordinate difference or value of the radius, while the abscissa is the difference of right ascensions in seconds (Fig. 2a), that of declinations (Fig. 2b) or the radius in degrees (Fig. 2c). The data of the histograms were used to determine, with the account of correspondent weights, the mean and mean-square values of $\Delta\alpha$, $\Delta\delta$ and R_λ . They are listed in Table II, where the first and the second columns are for the $\Delta\alpha$ in seconds of time, while the values in the other columns are in degrees. These values differ little from the similar data described in Paper II. Figures 3a and 3b carry the same distributions for $\Delta\alpha$ and $\Delta\delta$, however, the axis of ordinates is for the integrated probability and the scale is

TABLE II

$\langle \Delta\alpha \rangle$	$\sigma_{\Delta\alpha}$	$\langle \Delta\delta \rangle$	$\sigma_{\Delta\delta}$	$\langle R_\lambda \rangle$	σ_R	$\langle R \rangle_p$	σ_p
17.4 ± 2	35.3	0.28 ± 0.15	0.26	0.22 ± 0.01	0.17	0.28	0.15

chosen so that the normal distribution should be represented by a straight line. The experimental values are indicated by circles. As follows from the figures, the distributions of $\Delta\alpha$ and $\Delta\delta$ are close to normal, with the mean value about zero. In this connexion one should expect the distribution of the magnitude R to be close to Rayleigh's. Figure 4a shows histograms of a differential distribution for the radius R . The axes carry the values of R (degrees) and the probability density $P(R)$. A Rayleigh distribution curve of $P(R)$ is also given:

$$P(R) = P(R_0) \frac{R}{R_0} \exp\{\frac{1}{2}[1 - R^2/R_0^2]\}, \tag{1}$$

where R_0 is the maximum probability radius. For the Rayleigh distribution the following relations are known:

$$\begin{aligned} \langle R \rangle &= R_0 \sqrt{\pi/2}; & \langle R^2 \rangle &= 2R_0^2; \\ \sigma_R &= [\langle R^2 \rangle - (\langle R \rangle)^2]^{1/2} = R_0[2 - \pi/2]^{1/2} \simeq 0.655R_0. \end{aligned} \tag{2}^*$$

As seen from Figure 4a, the histogram of $P(R)$ can be well approximated to by Equation (1) with $R_0 = 0.22$ and $P(R_0) = 0.3$. Proceeding from these values we obtain from Equation (2) the values of $\langle R \rangle$ and σ_R listed in Table II. The experimental values $\langle R \rangle$ and σ_R and the predicted ones $\langle R \rangle_p$ and σ_p agree quite satisfactorily.

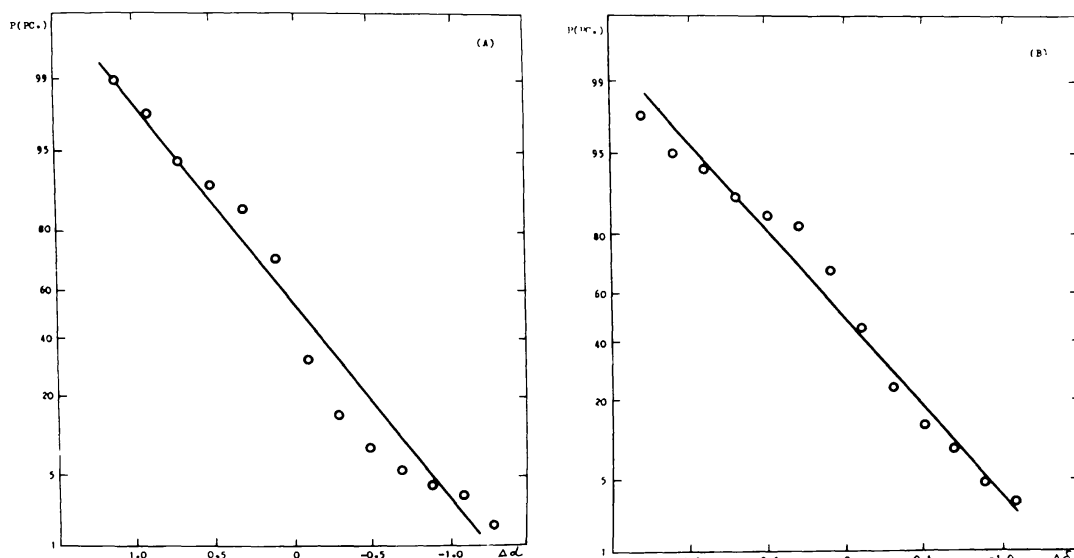


Fig. 3. Probability distribution of sources in right ascensions (A) and declinations (B).

* The sign $\langle \rangle$ denotes an ensemble average.

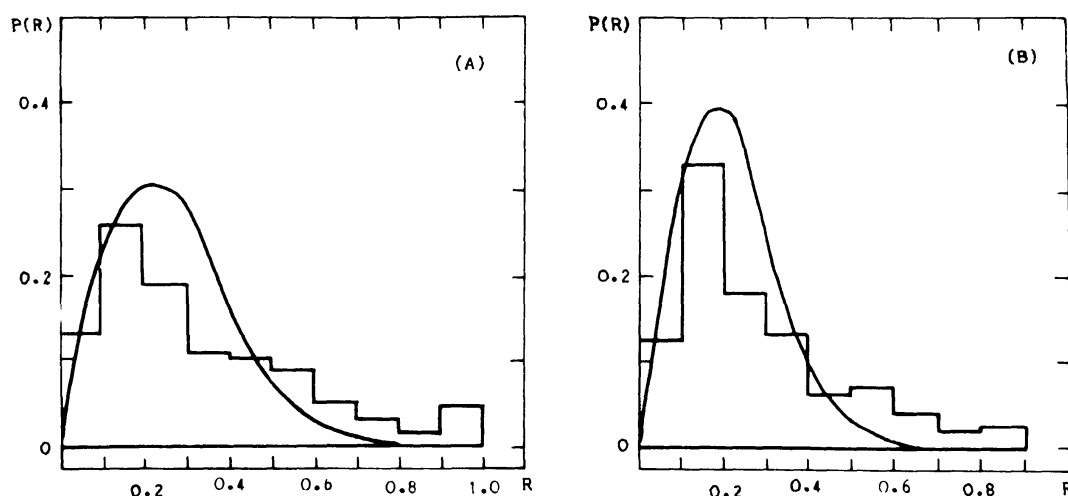


Fig. 4. Density probability of radius for declinations from 0° to 10° (A) and from 10° to 20° (B).

Along with the data obtained for the declination range $0^\circ < \delta < 10^\circ$, Figure 4b gives similar values for the declination range $10^\circ < \delta < 20^\circ$.^{*} As can be seen, here again a Rayleigh distribution with the parameters $R_0 = 0.175$, $\langle R \rangle = 0.22$ and $P(R_0) = 0.4$ agrees with the experimental data.

To make use of the above results for source identification we have chosen a criterion according to which the probability of finding a source beyond a circle of radius R should not exceed 1%. This condition is met in the declination range $0^\circ < \delta < 10^\circ$ if $R = 0.65^\circ$. With this value of the radius 99% of all the sources lie within the circle.

The source coordinates of the GR catalogue were compared with the catalogues 3CR, 4C, WKB (Williams *et al.*, 1966), as well as with the data of Dixon (1970), Durdin *et al.* (1975) and Ehman *et al.* (1970, 1974).

3. Discussion

Comparison of the GR data with other catalogues has permitted some new sources to be detected which are listed in Table III (sixteen in number). The first column of the Table contains serial numbers of the sources, the second one carries a source name from the GR catalogue (see Table I), columns 3 to 6 give the coordinates with errors. The seventh and the eighth columns contain the low frequency spectral index with errors, the ninth carries the flux density at 16.7 MHz in flux units and the tenth column contains the estimate of reliability W . As follows from the Table, the new sources are characterized by unusually high spectral indices (up to 5.8) which, however, in a number of cases have not been determined accurately enough. The error in $\Delta\alpha$ is also high. To determine whether a source is new we investigated its immediate vicinity within an area of radius 0.65° . Some of the new sources are described in Figure 5. The axes are right ascension in minutes of time and declination in degrees.

The circle centre is a source from the GR catalogue. As follows from Figure 5, no

^{*} The authors have mistakenly repeated Figure 4a instead of Figure 4c in Paper II. Here the mistake is remedied by giving Figure 4b for Figure 4c of Paper II.

TABLE III

No.	Source name	Ra 1950			Err. sec.	D 1950 deg.	Err. deg.	Sp. ind.	Err.	S16.7 (Jy)	<i>W</i>
		h	min	s							
1	0122 + 08	01	22	50	5	8.38	0.005	4.7	0.78	151	B
2	0602 - 00	06	02	09	17	-0.68	0.02	2.11	1.65	73	C
3	0752 - 01	07	52	46	33	-1.58	0.01	1.16	0.41	52	B
4	1000 + 08	10	00	34	8	8.77	0.01	1.12	1.86	48	B
5	1011 + 07	10	11	40	25	7.83	0.01	0.51	0.96	26	C
6	1113 + 02	11	13	50	6	2.07	0.03	0.89	0.46	30	C
7	1156 + 06	11	56	35	11	6.34	0.02	2.10	0.61	42	B
8	1333 + 03	13	33	52	22	3.33	0.02	0.20	1.73	44	C
9	1538 + 01	15	38	60	14	1.99	0.005	0.45	0.68	74	B
10	1646 - 01	16	46	01	21	-1.5	0.005	0.73	1.24	101	B
11	1859 + 07	18	59	03	11	7.56	0.01	1.65	0.47	132	C
12	1908 + 06	19	08	33	17	6.69	0.01	1.92	0.90	93	C
13	2111 + 06	21	11	24	12	6.29	0.02	3.14	2.07	56	C
14	2115 + 08	21	15	35	10	8.04	0.01	5.83	0.90	119	B
15	2238 + 05	22	38	49	32	5.99	0.01	3.10	0.81	57	C
16	2248 + 06	22	48	40	11	6.04	0.01	0.38	0.90	38	B

source from other catalogues falls within the $R = 0.65^\circ$ circle. This allows us to assume a 0.99 probability for the GR source shown in the figure to be a new one.

As mentioned above, the majority of the sources were identified by the 4C catalogue. The sources not listed in the 4C catalogue were compared with those of other high frequency catalogues and have been partly identified. A total of 44 objects have been identified. Figure 6 gives the most characteristic sources of this group. Apparently, all these objects have been identified with a high degree of certainty. The following are examples of identification.

(1) GR 0138 + 07 (Fig. 6a). Identified with the source 4C P0705A at 178 MHz. The identification is confirmed by the data of the NAIC and Ohio III surveys at 611 and 1415 MHz, respectively.

(2) GR 0226 + 07 (Fig. 6b). Identified with NAIC 0226 + 07. Has not been detected in the Ohio survey at 1415 MHz because of the steep spectrum. The spectral index in the decametre wave-band is 1.78.

(3) GR 0241 + 03 (Fig. 6c). Identified with NAIC 0242 + 02. The identification is confirmed by the data of the Ohio III survey.

(4) GR 0436 + 06 (Fig. 6d). Identified with NAIC 0436 + 06 and confirmed in the Ohio III survey as OF 062.

(5) GR 0550 + 08 (Fig. 6e). Identified with a source of the Cambridge survey at 38 MHz, viz. WKB 052.

(6) GR 0805 + 04 (Fig. 6f). Identified with NAIC 0805 + 04 and confirmed in the Ohio VI survey.

Apart from the new sources reliably identified with the 4C and other catalogues, there were sources which could not be identified with known objects as there were two

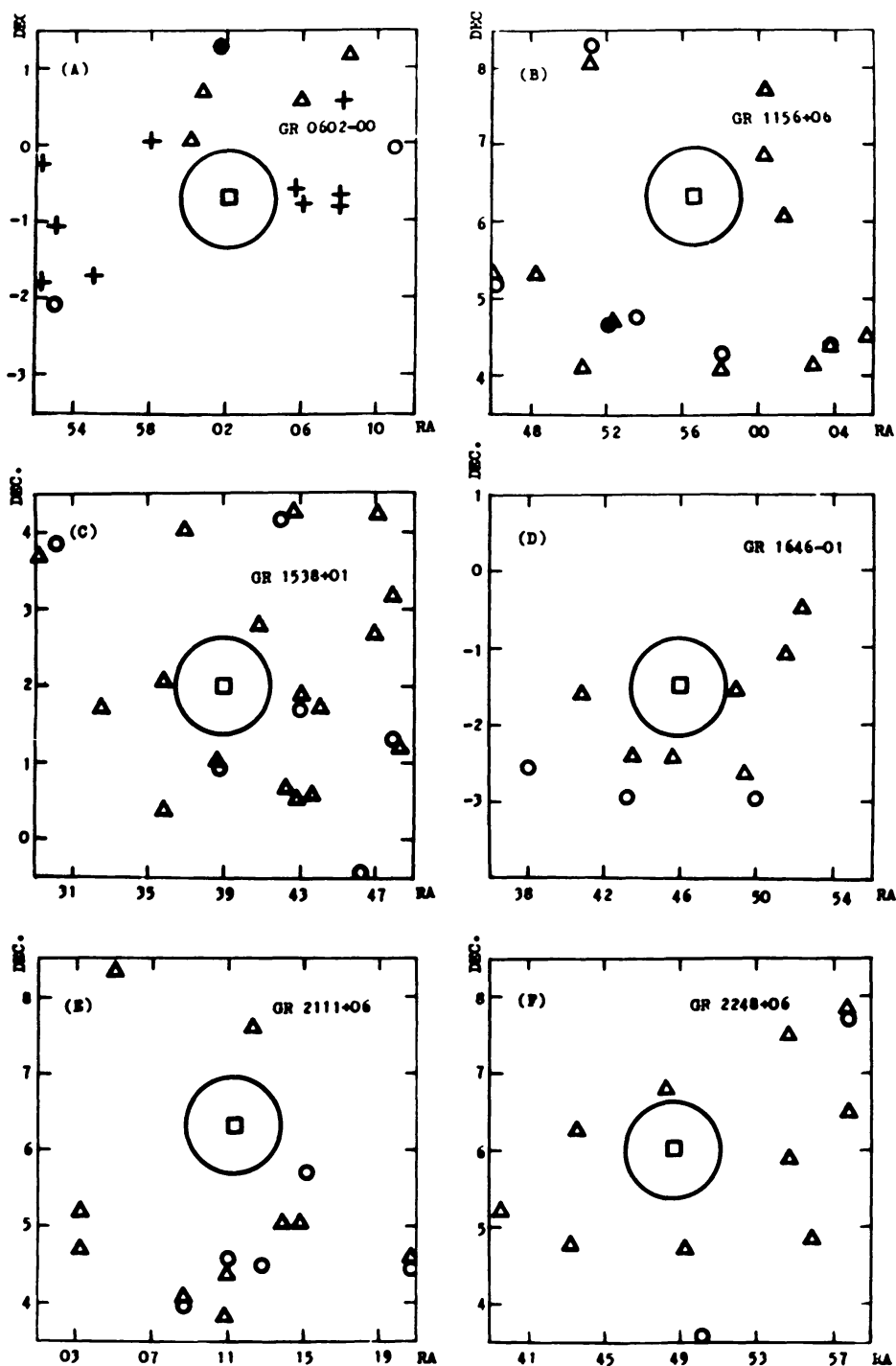


Fig. 5.

Figs. 5-12. Radio fields of the sources near the reference radio sources from the Grakovo survey. $\square$ = GR; $\circ$ = 4C; $\triangle$ = Ohio; + = NAIC; $\diamond$ = Parkes; $\star$ = MSH.

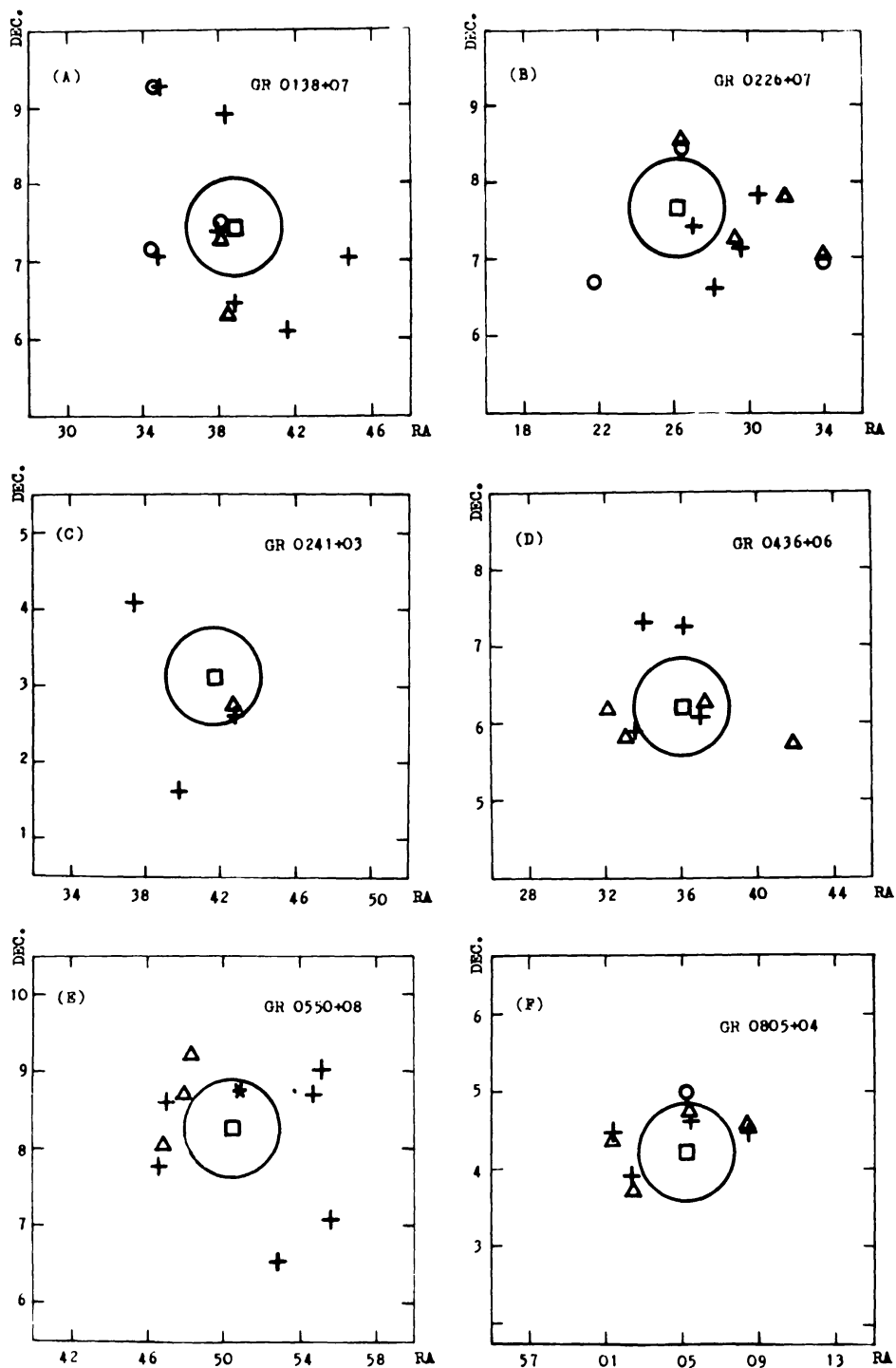


Fig. 6.

or more sources within the circle of radius 0.65° . The following are the data on such sources.

(7) GR 0014 + 06. One can see in Figure 7a that three sources from the NAIC catalogue (0014 + 05, 0014 + 06 and 0015 + 06 with respective fluxes 0.43, 0.409 and 0.631 Jy at 611 MHz) and MSH 00 + 003 with a flux 18 Jy at 85 MHz fall within the circle. The NAIC 0015 + 06 source has been confirmed in Ohio III as OB 024, that survey sensitivity being 0.18 Jy. The source flux is 0.32 Jy at 1415 MHz. The MSH 00 + 003 source has not been confirmed by the NAIC survey whose sensitivity is 0.35 Jy at 611 MHz. Hence, the source GR 0014 + 06 may coincide either with OB 024 or with MSH 00 + 003, in the latter case it should possess a steep spectrum. But the spectral index of GR 0014 + 06 at decametric wavelengths ($S \sim \nu^{-\alpha}$) is 0.29. Therefore the probability of GR 0014 + 06 and MSH 00 + 003 representing the same object is low.

(8) GR 0145 + 00. It follows from Figure 7b that the sources NAIC 0144 - 01 and 0148 - 00 with fluxes 0.367 and 0.354 Jy get inside the circle. The GR 0145 - 00 source is probably related to both objects.

(9) GR 0311 + 07. It follows from Figure 7c that two sources from the NAIC catalogue, viz. 0311 + 0756 and 0311 + 0707, get within the circle, which are not confirmed in the Ohio surveys. Therefore, no identification is possible.

(10) GR 0333 + 01. Figure 7d shows two NAIC sources within the circle, viz. 0332 + 01 and 0334 + 01, both confirmed in the Ohio III survey as OE 055 and OE 058. Identification with one of them is not possible with the data available.

(11) GR 0405 + 07. It follows from Figure 7e that two sources from the NAIC survey (0404 + 07 and 0405 + 07 with respective fluxes 0.437 and 0.558 Jy) are within the circle. The source NAIC 0404 + 07 is confirmed in the Ohio III survey (OF 008, flux 0.3 Jy). Besides, there is another source within the circle, viz. OF 010 with a flux of 0.4 Jy, which is not confirmed in the NAIC survey, probably because of its flat spectrum. This kind of source could not be detected with the UTR-2. The GR 0405 + 07 might be a sum of the NAIC 0404 + 07 and 0405 + 07 sources.

(12) GR 0454 + 04. As follows from Figure 7f, there are three sources from the NAIC survey which fall within the circle, viz. 0454 + 03, 0455 + 04 and 0456 + 04 with fluxes of 0.37, 0.66 and 0.70 Jy, respectively. The source 0454 + 03 has been confirmed in the Parkes survey at 408 MHz, i.e., PKS 0454 + 039, and in Ohio III at 1415 MHz, i.e., OF 092. Judging by the position and fluxes of the sources, there is a probability that GR 0454 + 04 is a sum of the two objects.

(13) GR 0456 + 08. Figure 8a shows two sources within the circle, viz. NAIC 0456 + 08 and 0455 + 09 with fluxes 0.43 and 0.38 Jy. The sources have not been detected in the Ohio survey. Their position and fluxes lead to a belief that the flux of the GR 0456 + 08 is a sum of the two.

(14) GR 0501 + 05. As follows from Figure 8b, there are the sources NAIC 0500 + 06 and 0502 + 05, approximately equally separated from the GR source. The Ohio surveys do not contain these sources. No positive identification is possible here.

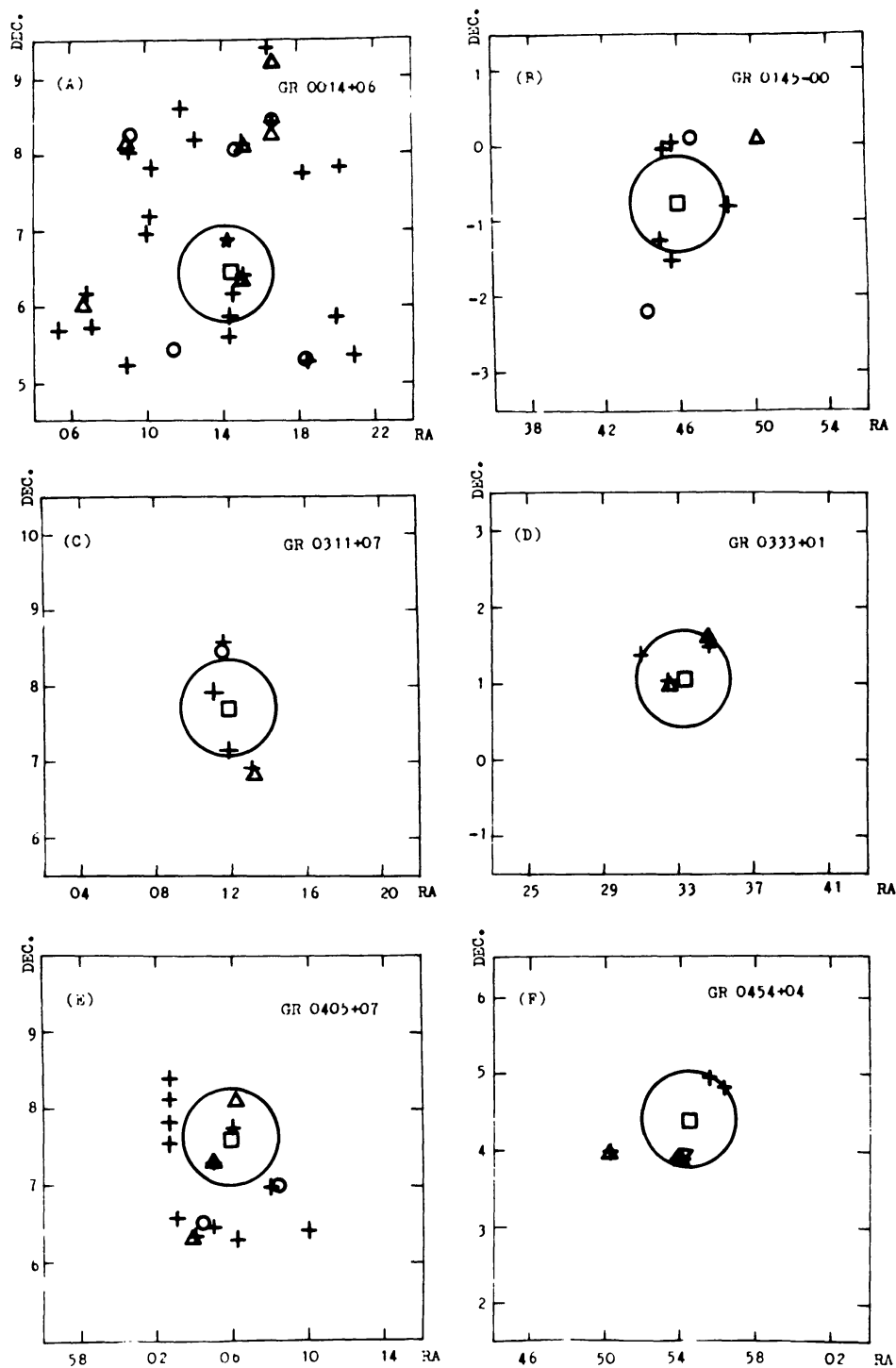


Fig. 7.

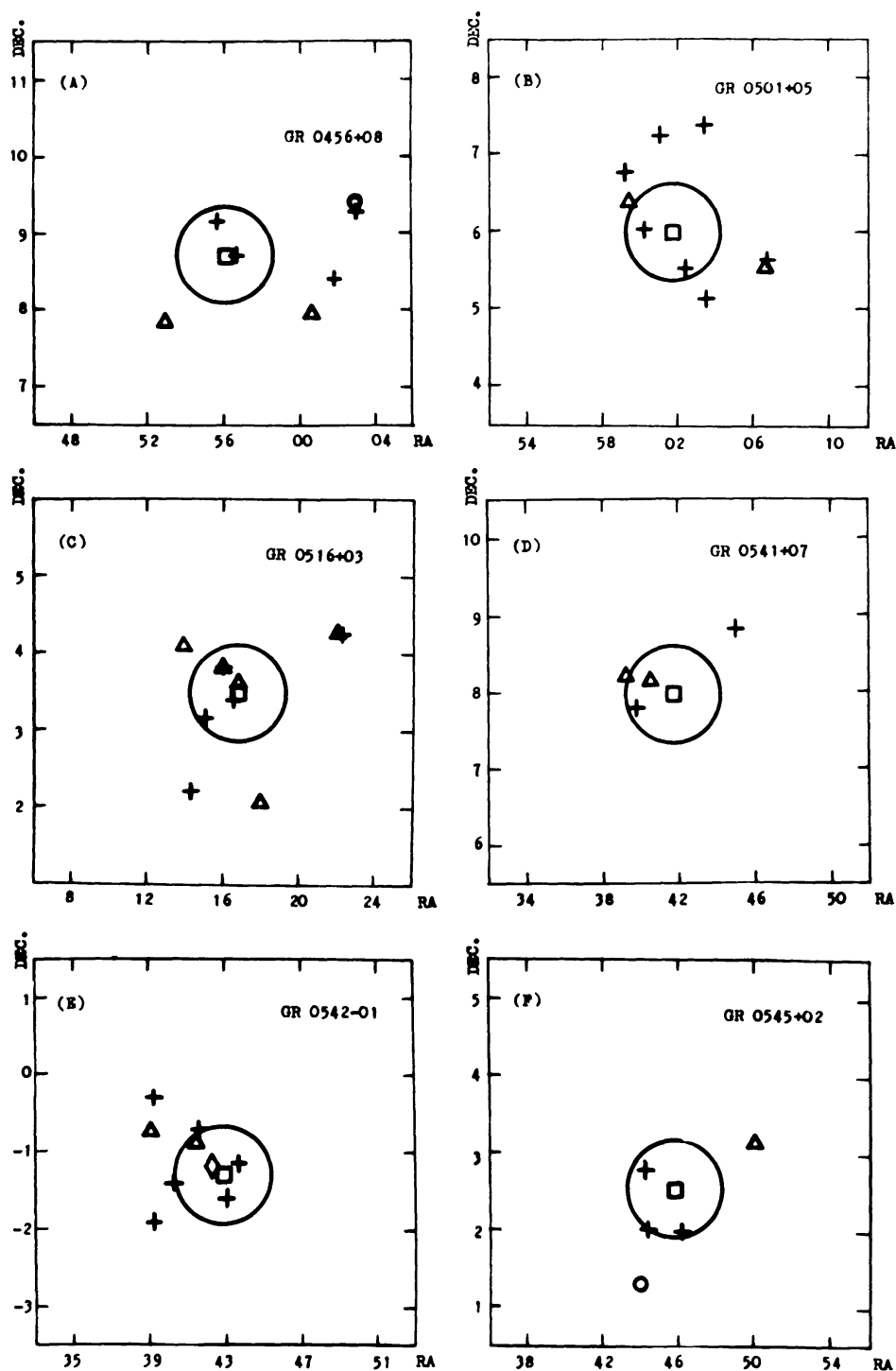


Fig. 8.

(15) GR 0516 + 03. Figure 8c shows three NAIC sources within the circle, viz. 0516 + 03, 0516 + 0325 and 0516 + 0312 with fluxes of 0.3, 0.995 and 0.57 Jy. The sources 0516 + 0312 and 0516 + 0325 have been confirmed in the Ohio III survey as OG 026 and OG 028. The 0516 + 03 source has not been found in the Ohio survey. The data available do not allow certain identification.

(16) GR 0541 + 07. The circle of Figure 8d contains the source NAIC 0539 + 07 with a flux of 0.37 Jy not observed in Ohio, apparently because of a steep spectrum, and two sources from the Ohio III catalogue, viz. OG 065 and OG 069 with fluxes 0.33 and 0.3 Jy. The latter sources were not observed in the NAIC survey, probably due to their flat spectra. Therefore, the GR 0541 + 07 source is probably related to NAIC 0539 + 07.

(17) GR 0542 - 01. It follows from Figure 8e that within the circle are NAIC 0542 - 01 and 0543 - 01 (fluxes 0.46 and 0.485 Jy) not observed in the Ohio survey, possibly because the spectra are too steep. There are also sources from Ohio III (OG 069, flux 0.49 Jy) and Parkes (PKS 0542 - 01, flux 0.4 Jy at 1400 MHz). None of the objects has been observed at 611 MHz, therefore the flux of GR 0542 - 01 is possibly a sum of the fluxes of NAIC 0542 - 01 and 0543 - 01.

(18) GR 0545 + 02. According to Figure 8f, there are two sources within the circle, viz. NAIC 0544 + 02 and 0546 + 02 with fluxes of 0.43 and 0.49 Jy. No identification is possible.

(19) GR 0613 + 07. Figure 9a shows within the circle around the Grakovo source the Ohio VI sources OH 023 and OH 024 with fluxes of 0.33 and 0.2 Jy. The OH 023 source has been confirmed in the NAIC survey where at 611 MHz the flux was 0.96 Jy. If the absence in the NAIC of the OH 024 source is due to its flat spectrum, then it should not be observable with the UTR-2. In this case GR 0613 + 07 can be identified with OH 023.

(20) GR 0646 - 01. Figure 9b shows three sources within the circle, viz. NAIC 0644 - 01, 0647 - 01 and 0648 - 01 with fluxes 0.46, 0.89 and 0.4 Jy. It follows from the figure that GR 0646 - 01 is possibly related to all the three sources.

(21) GR 0655 + 02. Figure 9c shows the circle to include two sources of the NAIC catalogue, viz. 0654 + 02 and 0655 + 02 with fluxes 0.47 and 0.79 Jy, the former absent from the Ohio survey, probably due to its steep spectrum, and the latter is confirmed in Ohio VI. Apparently, the flux of GR 0655 + 02 is a sum of the NAIC 0655 + 02 and 0654 + 02 fluxes.

(22) GR 0705 + 02. Figure 9d shows two NAIC sources within the circle, viz. 0705 + 0231 and 0705 + 0202 with fluxes 1.218 and 0.36 Jy. The first source coincides with OI 069 of the Ohio catalogue, the other has not been confirmed by that catalogue. The GR 0705 + 02 flux is probably a sum of the two sources.

(23) GR 0755 + 03. Figure 9e shows three sources inside the circle, viz. NAIC 0754 + 03, 0755 + 02 and 0756 + 03 with fluxes of 0.39, 1.4 and 0.4 Jy. These sources are absent from the Ohio survey. The GR 0755 + 03 flux is probably a sum of the three.

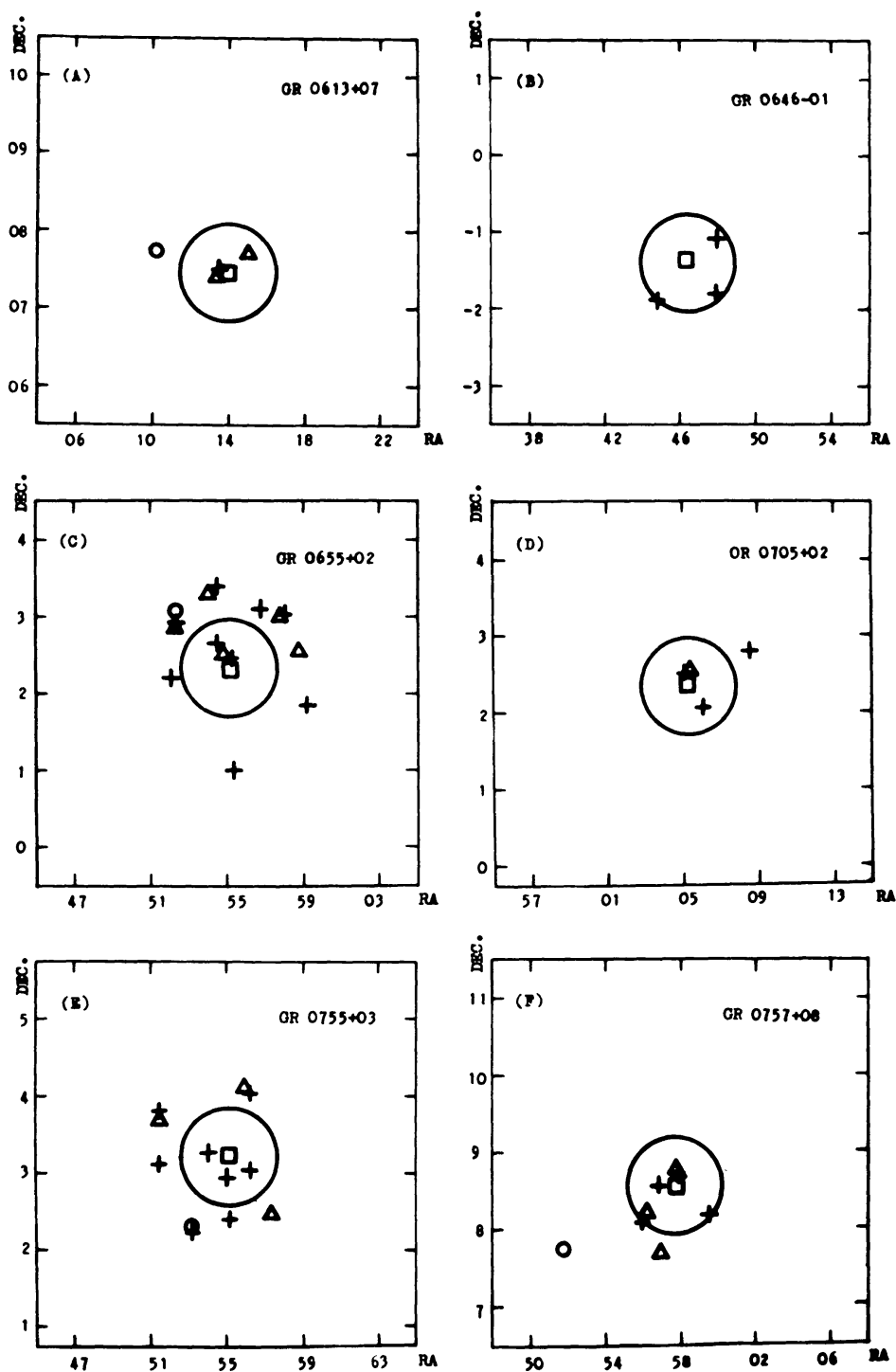


Fig. 9.

(24) GR 0757 + 08. The circle in Figure 9f has four sources inside, viz. NAIC 0755 + 08, 0756 + 08, 0757 + 08 and 0759 + 08 with fluxes 0.78, 0.62, 0.95 and 0.5 Jy, respectively. The sources NAIC 0755 + 08 and 0757 + 08 were confirmed in the Ohio VI survey as OI 092 and OI 096 with fluxes 0.44 and 0.35 Jy. The other two sources were not detected at 1415 MHz, probably because their spectra are too steep. It is possible that the GR 0757 + 08 flux is determined by the nearest lying sources ($R \simeq 0^\circ 15$) NAIC 0756 + 08 and 0757 + 08.

(25) GR 0817 - 01. Figure 10a shows two sources inside the circle, viz. NAIC 0816 - 02 with a flux of 0.68 Jy (confirmed in the Parkes survey at 1410 MHz as PKS 815 - 02 with a flux of 0.4 Jy), and Ohio VI OI 030 with a flux of 0.28 Jy. The OI 030 source was not detected at 611 MHz (NAIC), therefore GR 0817 - 01 possibly coincides with NAIC 0816 - 02.

(26) GR 0838 + 03. According to Figure 10b, there are four sources inside the circle, viz. NAIC 0837 + 03, 0838 + 0328, 0838 + 0310 and Ohio VI OI 063 with fluxes 0.63, 0.57 and 0.45 Jy at 611 MHz, and 0.39 Jy at 1415 MHz. The NAIC sources are absent from the Ohio survey possibly due to their steep spectra. The OI 063 source was not detected in the NAIC survey possibly due to the negative curvature of the spectrum. It is probable that the GR 0838 + 03 flux is mainly a sum of the fluxes of rather close sources ($R \simeq 0^\circ 2$), viz. NAIC 0837 + 03 and 0838 + 0328.

(27) GR 0859 - 01. The circle in Figure 10c has two sources inside, viz. NAIC 0859 - 01 and 0901 - 01 with equal fluxes of 0.36 Jy, the NAIC 0901 - 01 source being confirmed in the Ohio VI survey as OK 003 with a flux of 0.16 Jy. The flux of GR 0859 - 01 should evidently be viewed as a sum of the fluxes from NAIC 0859 - 01 and 0901 - 01.

(28) GR 0900 + 07. The following sources are inside the circle in Figure 10d, viz. NAIC 0900 + 08 and 0901 + 07 with fluxes of 0.45 and 0.64 Jy, and Ohio VI OK 001 with a flux of 0.3 Jy. The sources have been detected in only one survey. GR 0900 + 07 might be related to the NAIC sources but both of them are near the boundary of the circle which makes identification with one of them impossible.

(29) GR 0912 + 02. As follows from Figure 10e, two NAIC sources, viz. 0912 + 03 and 0912 + 02 (fluxes 0.7 and 0.77 Jy) are within the circle. The first one is confirmed in the Ohio VI survey as OK 020 with a flux of 0.42 Jy and the other is absent from Ohio VI, which indicates a steep spectrum. It is very close to GR 0912 + 02 ($R \simeq 0^\circ 2$). It might be probable that the two sources represent the same object.

(30) GR 0929 + 07. Figure 10f shows the following sources inside the circle: NAIC 0930 + 07 and 0931 + 07 with fluxes 0.54 and 0.72 Jy, and OK 052 from the Ohio survey with a flux of 0.23 Jy. The sources of the NAIC survey were not detected in Ohio, apparently due to steep spectra. The OK 052 source is absent from the NAIC survey, possibly due to a negative curvature of its spectrum. It is therefore probable that the GR 0929 + 07 flux is a sum of the NAIC 0930 + 07 and 0931 + 07 fluxes.

(31) GR 1021 + 02. Figure 11a shows two sources, viz. NAIC 1020 + 02 and 1021 + 02, inside the circle (fluxes 0.65 and 0.716 Jy). The latter source has been

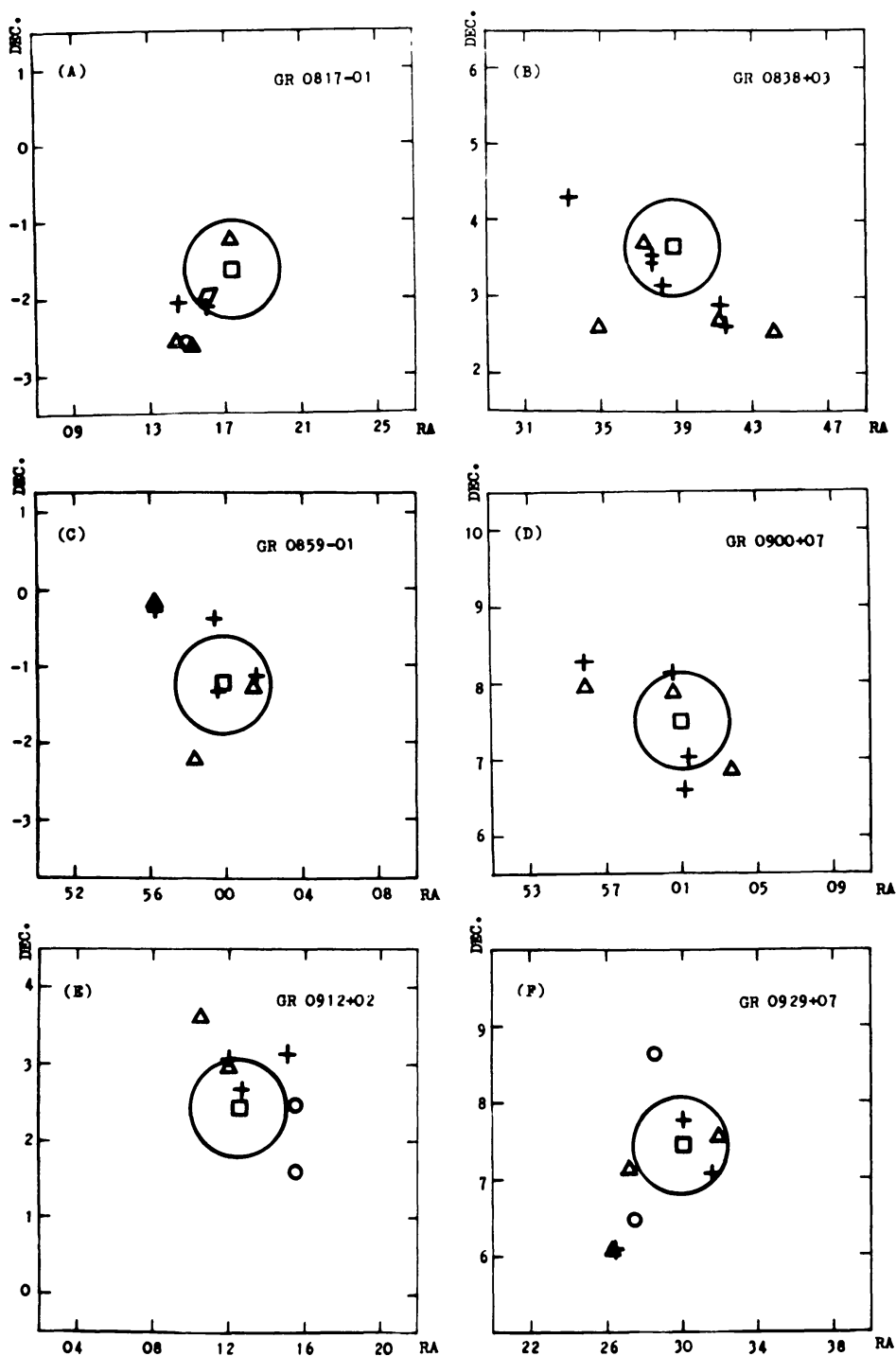


Fig. 10.

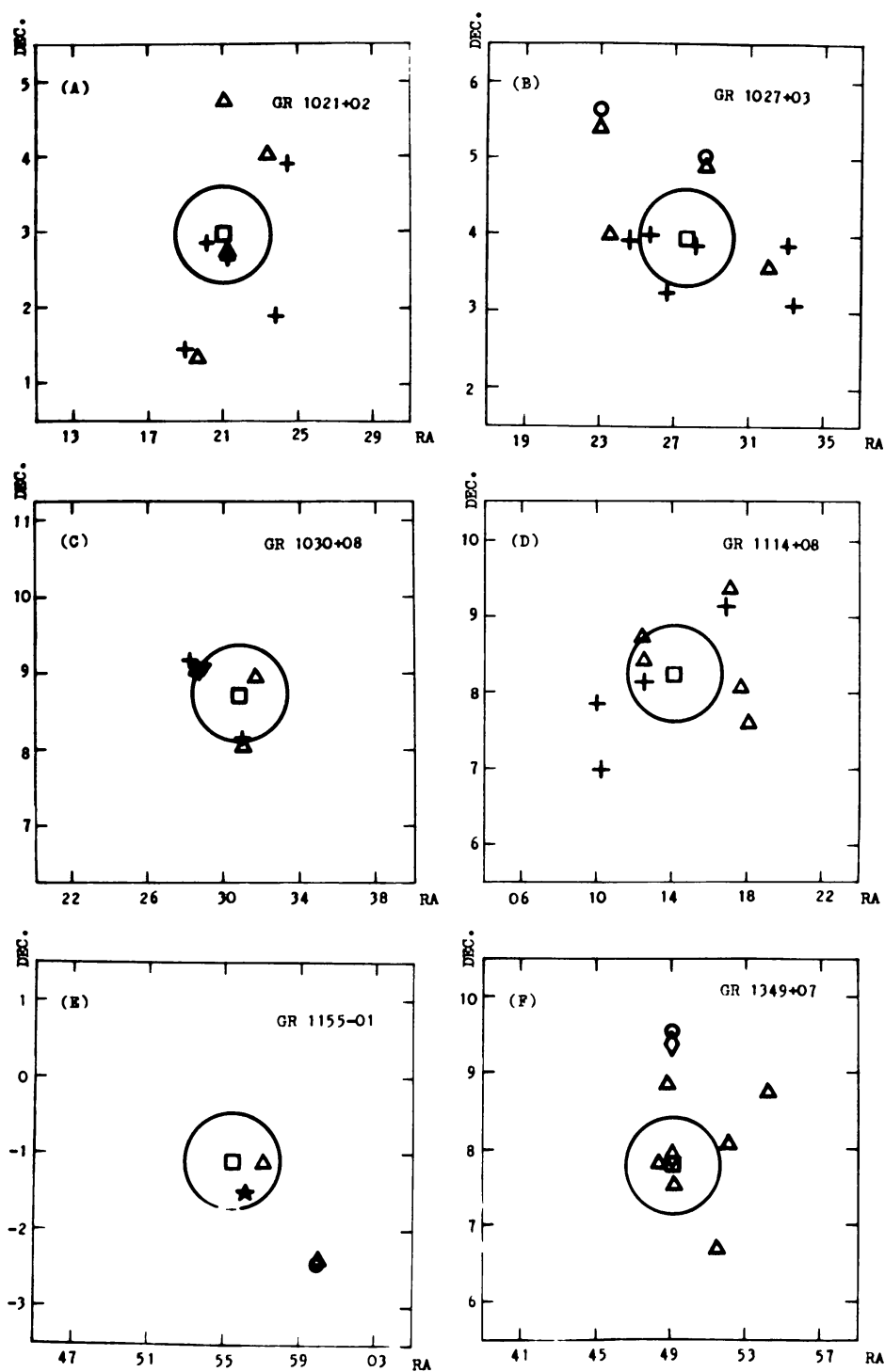


Fig. 11.

confirmed in the Ohio VI survey as OI 036 with a flux of 0.32 Jy. The GR 1021 + 02 source flux apparently is a sum of both NAIC fluxes.

(32) GR 1027 + 03. Figure 11b shows two sources within the circle, viz. NAIC 1025 + 04 and 1028 + 03 with fluxes of 0.49 and 0.36 Jy. The fluxes and the positions of the sources suggest that GR 1027 + 03 is a sum of these sources.

(33) GR 1030 + 08. Figure 11c has three sources inside the circle: NAIC 1028 + 09 (flux 0.556 Jy) confirmed in the Ohio VI survey as OL 047 (flux 0.32 Jy) and in Parkes as PKS 1028 + 09 at 408 MHz (flux 1.6 Jy). The second source, i.e., NAIC 1031 + 08 with a flux of 0.4 Jy, is confirmed in Ohio VI as OL 0519, the third one, an Ohio VI source OL 053 (flux 0.23 Jy), was not detected at either 408 or 611 MHz, apparently due to a flat spectrum. Hence, the GR 1030 + 08 flux is a sum of the NAIC 1028 + 09 and 1031 + 08 fluxes.

(34) GR 1114 + 08. It follows from Figure 11d that the sources NAIC 1112 + 08 (flux 0.45 Jy) and Ohio VI OH 021 (flux 0.24 Jy) are inside the circle. Each of the sources has been observed in only one of the surveys. This means that the OH 021 spectrum might be flat while that of NAIC 1112 + 08 is steep. Hence, GR 1114 + 08 and NAIC 1112 + 08 represent the same object.

(35) GR 1155 – 01. The circle in Figure 11e has two sources inside: OM 095 (flux 0.17 Jy, a limit value for the Ohio VI survey), not confirmed at lower frequencies, and MSH 11 – 018 with a flux of 16 Jy at 85 MHz. This source can be identified with GR 1155 – 01.

(36) GR 1349 + 07. According to Figure 11f the following sources are within the circle: 4C P0733 (flux 2.4 Jy at 178 MHz) confirmed in the Ohio VI survey as OP 081 with a flux of 0.3 Jy, and OP 0821 with a flux of 0.21 Jy. The latter source was not observed at lower frequencies. Therefore, GR 1349 + 07 should be considered as identified with 4C P0733.

(37) GR 1350 + 06. Figure 12a shows two sources within the circle. The source OP 086 (flux 0.18 Jy) from the Ohio VI catalogue (maximum sensitivity of the survey) has not been confirmed at lower frequencies. The other source is MSH 13 + 011 with a flux of 54 Jy at 85 MHz. Taking into account that the spectral index of GR 1350 + 06 is, according to the data obtained on the UTR-2 radio-telescope, $\alpha = 1.83$, the sources MSH 13 + 011 and GR 1350 + 06 should be considered identical.

(38) GR 1445 + 06. Figure 12b shows two Ohio VI sources inside the circle, viz. OQ 076 and OQ 0735 with fluxes of 0.23 and 0.32 Jy. The data available do not allow these sources to be identified with GR 1445 + 06.

(39) GR 1545 + 07. Figure 12c shows two Ohio III sources within the circle: 4C P0741A with a flux of 3.7 Jy at 178 MHz and OR 076 with a flux of 1.48 Jy. The latter has not been detected at lower frequencies, but one should not exclude the possibility that, despite the difference in coordinates ($\alpha = 15^{\text{h}}45^{\text{m}}49^{\text{s}}$ and $\delta = 07^{\circ}38'06''$ for 4C P0741A, and $\alpha = 15^{\text{h}}45^{\text{m}}47^{\text{s}}$ and $\delta = 07^{\circ}50'$ for OR 076), the two sources actually represent the same object which can be identified with GR 1545 + 07.

(40) GR 1748 – 01. Figure 12d shows three sources inside the circle, viz. MSH 17 –

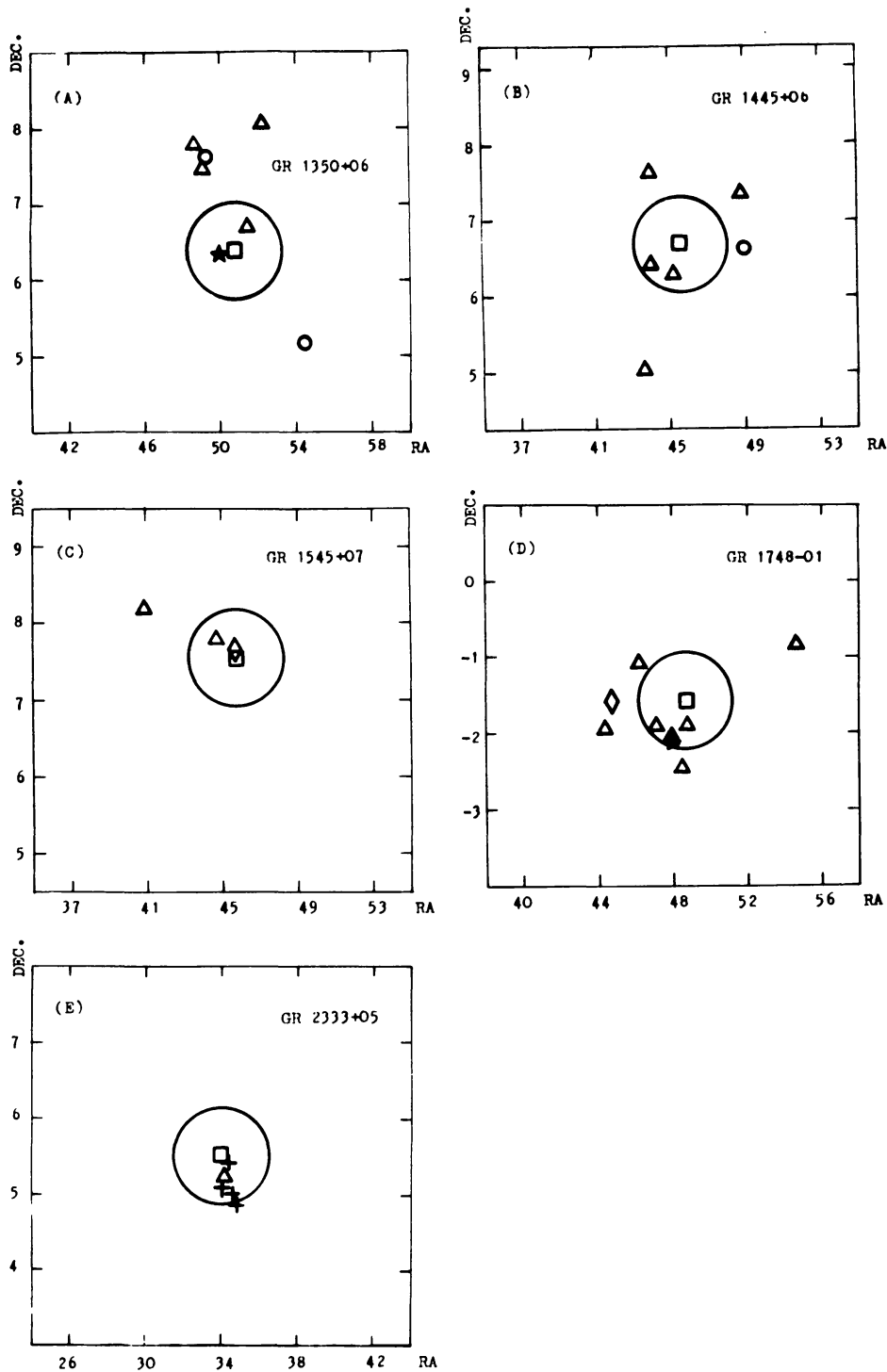


Fig. 12.

012 with a flux of 53 Jy at 85 MHz, confirmed in the Ohio VII survey as OT 0801 (flux 0.4 Jy), and OT 0788 and OT 0814 with fluxes of 0.3 and 0.4 Jy. The latter have not been observed at lower frequencies. Thus, the sources GR 1748 – 01 and MSH 17 – 012 may be considered as the same object.

(41) GR 2333 + 05. According to Figure 12e, within the circle lies the source OZ 057 from the Ohio survey with a flux of 0.38 Jy. The NAIC survey shows three nearby sources, viz. 2334 + 0527, 2333 + 0502 and 2334 + 0502 with fluxes of 0.65, 0.45 and 0.35 Jy. The flux of GR 2333 + 05 possibly is a sum of the fluxes of the three NAIC objects.

References

- Barbieri, C. and Zambon, M.: 1977, *Catalogue of Quasi Stellar Objects*, Institute of Astronomy of the University of PADOVA.
- Braude, S. Ya., Bruck, Yu. M., Melyakovski, P. A., Sodin, L. G., and Sharykin, N. K.: 1971, *The UTR-2 Decametric Radio-telescope (Basic Parameters)*, Preprint No. 7, Kharkov, IRE, Acad. Ukr. SSR.
- Braude, S. Ya., Megn, A. V., Ryabov, B. P., Sharykin, N. K., and Zhouck, I. N.: 1978a, *Astrophys. Space Sci.* **54**, 3.
- Braude, S. Ya., Megn, A. V., Rashkovski, S. L., Ryabov, B. P., Sharykin, N. K., Sokolov, K. P., Tkatchenko, A. P., and Zhouck, I. N.: 1978b, *Astrophys. Space Sci.* **54**, 37.
- Dixon, R. S.: 1970, *Astrophys. J. Suppl.* **20**, I.
- Durbin, J. M., Pleticha, D., Condon, J. J., Yerbury, M. J., Jauncey, D. L., and Hazard, C.: 1975, *The NAIC 611 MHz Multibeam Sky Survey Source List*, NAIC Report, March 1975, Naic 45, Arecibo, Puerto Rico, Ithaca, New York.
- Ehman, J. R., Dixon, R. S., and Kraus, J. D.: 1970, *Astron. J.* **75**, 351.
- Ehman, J. R., Dixon, R. S., Ramakrishna, J. D., and Kraus, J. D.: 1974, *Astron. J.* **79**, 114.
- Fitch, L. T., Dixon, R. S., and Kraus, J. D.: 1969, *Astron. J.* **74**, 612.
- Gower, J. F. R., Scott, P. F., and Wills, D.: 1967, *Mem. Roy. Astron. Soc.* **71**, 49.
- McEwan, N. J., Browne, I. W. A., and Growther, J. H.: 1975, *Mem. Roy. Astron. Soc.* **80**, I.
- Richter, G. A.: 1975, *Astron. Nachr.* **296**, 65.
- Rinsland, C. P., Dixon, R. S., Gearhart, M. R., and Kraus, J. D.: 1974, *Astron. J.* **79**, 1129.
- Smith, H. E., Spinrad, H., and Smith, E. O.: 1976, *Publ. Astron. Soc. Pacif.* **88**, 621.
- Veron, V. P. and Veron, P.: 1974, *Astron. Astrophys. Suppl.* **18**, 309.
- Williams, P. J. S., Kenderdine, S., and Baldwin, J. E.: 1966, *Mem. Roy. Astron. Soc.* **70**, 53.
- Wills, B. J.: 1976, *Astron. J.* **12**, 1031.