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Tables of physical and morphological properties of nearby extended radio galaxies

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Abstract

It is brought the physical and morphological data of 267 nearby radio galaxies identified with elliptical galaxies brighter than 18th magnitude (sample 1) and for 280 extragalactic radio sources with known position angles between the integrated intrinsic radio polarization and radio axes (sample 2).

Keywords: *radio galaxies, extragalactic radio sources, Fanaroff-Riley classes, FRI, FRII*

1. Introduction

One of the well-known manifestations of activity of galaxies is the radiation in radio wavelength. Galaxies with more powerful radio radiation are named radio galaxies. In many cases the radio images of these extragalactic radio sources have sizes larger than optical images. They can have dimensions of hundreds kiloparsecs and sometimes of megaparsecs. These radio sources are named extended extragalactic radio sources. The main mechanism of radiation in these galaxies is the synchrotron mechanism of radiation of relativistic particles (mainly electrons) in magnetic fields of parent galaxies. Usually there are no concretization of the large-scale configuration of magnetic field, and there is no attention on the role of field configuration in the observing morphology of extragalactic radio sources. The first classification of extragalactic radio sources is the Fanaroff & Riley (1974) (FR) classification. It was done using the morphological features, the edge darkened-FRI, and edge brightened, relatively more luminous FRII types. There are found many other morphological and physical differences between the different FR classes of extragalactic radio sources: in the total luminosity, in radio core powers, in ratio of core to lobe radio power, in the relationships between emission-line luminosity and radio power (Zirbel & Baum (1995); Gopal & Wiita (2000); Gendre et al. (2011) etc.). In (Andreasyan (1984)) we have suggested a mechanism of the formation and evolution of extragalactic radio sources in framework of the cosmological conception of V.Ambartsumian (Ambartsumian (1966)). It was done a main suggestion about the magnetic field configuration of host supergiant elliptical galaxy. We conclude that the magnetic field of the host galaxy or AGN has a dipole configuration, with dipole axes parallel to the rotation axes of host galaxy. Extragalactic radio sources are formed from relativistic plasma clouds, ejected from the central part of the optical galaxy and moving in its large-scale, dipole magnetic field. It was also done a classification of extragalactic radio sources by their elongation parameters (K), where K is the ratio of the largest dimension of radio image to the perpendicular dimension. In the frame of suggested mechanism, the well-known Fanaroff-Riley Dichotomy and many other morphological fetchers finds a very simple physical explanation.

In our early works we studied correlation between different morphological and physical properties of extragalactic radio sources classified by Fanaroff-Riley and by our elongation parameters K. We find: The correlation of radio axis with the optical axis in nearby radio galaxies (Andreasyan & Sol (1999)); The ellipticity of elliptical galaxies identified with the different types of extragalactic radio

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sources (Andreasyan & Sol (2000)); The correlation of the radio polarization angle with the radio axes of extragalactic radio sources (Andreasyan et al. (2002)); The relation between FR classes and elongation K parameters (Andreasyan (2019)), et. all. Here we bring the tables of all data used in above mentioned studies.

2. Observational data

For the statistical analyses in our studies we have used data for more than 500 extragalactic radio sources. These are 267 nearby radio galaxies identified with elliptical galaxies brighter than 18th magnitude (sample1) (Andreasyan & Sol (1999)), and 280 extragalactic radio sources with known position angles between the integrated intrinsic radio polarization and radio axes (sample 2) (Andreasyan et al. (2002)). A little part of sources from sample 2 are also objects from sample 1.

In mentioned papers we has brought some data from samples 1 and 2, bat all observational data of these samples are not published, and here we bring the full samples 1 and 2.

In these samples we bring also classification of radio galaxies with their elongation parameter K using the published radio maps. In samples 1 and 2 we have 289 extragalactic radio sources with known both, FR classification and K parameters used in (Andreasyan & Sol (2000)) and (Andreasyan (2019)).

3. Tables of extragalactic radio sources from samples 1 and 2.

3.1. *Sample 1.*

Data for 267 nearby radio galaxies identified with elliptical galaxies brighter than 18th magnitude. For nearby radio sources, we have data on: radio source name (Col.1); the position angle of the major axis of optical elliptical galaxy oPA found mainly from the Palomar maps (Col.2); the position angles of radio axes (rPA) obtained from the published radio maps (Col.3); the relative position angle between optical and radio axis dPA (Col.4); the ellipticity E of the optical galaxy identified with radio sources (Col.5); the classes by elongation parameter K: K>2.5 or K<2.5 (Col.6); Fanaroff-Riley classes FR taken from the literature (Col.7); the optical magnitude M of parent galaxy (Col.8); the radio spectral index SI (Col.9); The redshift z (Col.10); the radio luminosity logP (Col.11); The parameter K (Col.12); references for radio maps and FR classes (Col.13).
The references from Column 13 we give in Appendix.

Table 1: Sample 1.

1 **Object**	2 **oPA**	3 **rPA**	4 **dPA**	5 **E**	6 **K**	7 **FR**	8 **M**	9 **SI**	10 **z**	11 **logP (WHz)**	12 **K**	13 **ref**
0005−199	5	81	76	2.8	>2.5		16.5	0.7			4.2	26
0007+124	2	21	19		>2.5	II	17.7	0.78	0.157		2.6	20 5
0013−316	39	110	71	1	>2.5		16.5	0.92			3.5	26
0018−194	17	111	86	4	<2.5	II	17	0.69	0.095		1.4	21
0023−33	34	70	36	1.7	<2.5		16.7	0.5	0.05		1.6	26
0034+254	163	83	80	2	>2.5	I	14.8	0.66	0.032	24.07	2.8	15 15
0039+211	82	0	82	2	>2.5			0.9	0.102	24.89	2.6	56
0040−06	58	165	73		<2.5		17				1.5	21
0043+201	69	172	77	2	>2.5		15.7	0.75	0.106	25.06	4	57
0043−424	159	136	23	2	<2.5	II	16	0.87	0.053	27.23	2.4	25 7
0053+261	171	146	25		<2.5	I	17.5	1.06	0.195	27.15	1.4	18 2
0055+265	152	109	43		>2.5	I	13	0.84	0.047	25.67	2.6	15 15
0055+300	42	129	87	3.1	<2.5	I	12.2	1.04	0.017	24.52	2.4	15 15
0104+321	135	147	12		<2.5	I	12.1	0.57	0.017	25.07	2	27 2
0106+130	131	20	69	1	>2.5	II	15.1	0.76	0.06		3.4	17 2
0108−142	53	100	47	1	>2.5	I	15.8		0.052	24.96	3.2	85 7
0109+492	101	13	88	1	>2.5	II	15.6	0.77	0.067	26.21	4.3	18 2
0110+152	105	170	65		>2.5		15.5	1.2	0.048	24.34	2.6	61

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0114−476	17	157	40		<2.5	II	16.5	0.6	0.146	26.86	2.2	21 3
0116+319	50	115	65		<2.5		14.5	0.42	0.059	25.1	1.6	75
0120+33	70	120	50		<2.5		13	1.4	0.016	23.35	2	15
0123−016	52	178	54		>2.5	I	12.2	0.66	0.018	25.27	2.6	29 15
0124+189	76	13	63	1	>2.5		15.5	0.56	0.043		2.8	85
0131−367	164	89	75	3.2	>2.5	II	14.2	0.51	0.03	25.76	2.6	20 7
0149+35	30	87	57		>2.5	I	14.5	0.6	0.016	23	5	15 15
0153+053	73	84	11	2	<2.5		13.2	0.5			2.2	63
0206+355	137	132	5		<2.5	I	13	0.66	0.037	25.44	1.5	16 15
0214−480	100	175	75	1	>2.5	I	14.5	1	0.064	26	3.3	54 7
0220+427	33	50	17		<2.5	I	12.5	0.5	0.022	24.69	2	17 2
0222+369	80	48	32		<2.5		15	0.24	0.033	23.7	1.6	70
0229−208	174	110	64	1.6	>2.5	II	16	0.62	0.09	25.46	4	26
0239−85	113	95	18	3.1	<2.5						2	65
0247−207	45	40	5	0.2	>2.5	I	15.4	0.97	0.087	25.35	5.5	26 7
0255+133	87	159	72	4	>2.5	II	16.8		0.075	24.07	2.6	57
0257−398	115	60	55	2	<2.5		15.3	0.64			1.5	26
0258+350	70	126	56		<2.5		13.5	0.54	0.016	24.63	2.2	22
0258+435	231	289	58	2	>2.5			0.67	0.065		2.7	86
0300+162	134	110	24	2	<2.5	I	14.5	0.77	0.032	25.45	1.8	17 2
0305+039	144	56	88	2	<2.5	I	13	0.43	0.029	25.68	1.2	20 7
0307−305	78	93	15	3.4	<2.5	II	16.5	0.54	0.068	25.15	2.4	26 7
0312−343	132	114	18	1.2	<2.5		15.6	0.62			2	26
0314+412	57	32	25	3	>2.5	I					2.6	58 7
0314+416	171	96	75	3	>2.5	I	12.5	0.62	0.026	25.43	4	45 2
0320−374	60	126	66	3.8	>2.5	I	8.9	0.52	0.005	25.46	2.6	26 7
0325+023	153	63	90	3	>2.5	II	13.5	0.52	0.03	25.58	2.6	20 7
0326+396	128	82	46	1	<2.5	II	14.9	0.6	0.024	24.68	2.4	15
0331+391	101	180	79	1	>2.5		15	0.52	0.02	24.48	2.6	15
0332−39	25	140	65	1.7	>2.5		15.3	1.05			3.5	26
0336−355	112	51	61	1.2	<2.5	I	10.9	0.8	0.005	23.52	2.4	26 7
0344−345	103	104	1	1.8	<2.5	I	17	0.73	0.054	25.4	2	25 7
0349−279	72	53	19		>2.5	II	17	0.72	0.066	26.48	2.6	20 7
0349+212	126	17	71		>2.5		16	0.7	0.133		3.5	87
0356+102	72	25	47	2	>2.5	II	14.2	0.78	0.031	26.02	3.5	18 2
0427−539		80	5		<2.5	I	13.2	0.7	0.038	25.55	2.4	54 7
0429−51	8	1	7	2.6	<2.5		12.7				2.3	63
0434−225	149	109	40	0.6	<2.5	I	14.6	0.74	0.069	25.2	2.4	26 7
0446−208	174	18	24	0.6	<2.5		16.4	1			2.2	26
0449−175	0	145	35	1.7	<2.5	I	13.7	1.1	0.031	24.34	2.4	26 7
0452−190	140	82	58	3.1	>2.5		14.5	0.54			3.3	26
0453−206	172	112	60	0.4	<2.5	I	14	0.73	0.035	25.22	1.6	26 7
0511−305	85	33	52	1.3	>2.5	II	17	0.84	0.058	25.39	2.7	20 3
0518−458	96	102	6	3	<2.5	II	15.7	1.07	0.035	26.86	2	21 7
0521−365	75	123	48	2.6	<2.5	I	15.3	0.43	0.061	26.64	1.4	26 16
0523−327	156	157	1	1.7	>2.5	II	15.4	0.94	0.076	25.3	3.5	26 7
0546−329	175	8	13	1.8	<2.5	I	14.5	0.97	0.037	24.73	2.2	26 7
0548−317	4	72	68	2.4	>2.5	II	14.5	0.66	0.033	24.53	2.7	26 7
0632+263	16	115	81	0.1	>2.5		15		0.04		3.8	14
0634−205	178	177	1	1.6	>2.5	I	16.8	0.8	0.056	26.48	3.7	21 7
0651+542	129	102	27		>2.5	II	19	0.87	0.238	27.39	2.7	31 2
0652+426	124	50	74	2	<2.5						2	13
0712−349	106	133	27	1.8	<2.5		15.9	0.55			2	26
0712+534	120	114	6	1	<2.5	I	15	0.6	0.064	24.83	2.2	13 15
0714+286	73	133	60	3	>2.5		16		0.083		2.6	13
0718−340	56	63	7	0.9	>2.5	II	16.5	0.5	0.03	24.71	2.9	26 7
0734+806	49	150	79		>2.5	II	17	0.68	0.118	26.68	3.1	17 2
0744+559	70	63	7	2	<2.5	II	15.2	0.77	0.035	25.82	2.2	76 2
0745+521	37	92	55	1	>2.5	II		0.68	0.063		3	83
0755+379	144	107	37		<2.5	I	13.2	0.59	0.041	25.63	2.2	13
0800+248	53	70	17		<2.5	I	15.7	0.68	0.043	24.41	2.3	15 7
0802+243	13	118	75	0.1	>2.5	II	15.2	0.79	0.06	26.24	3	18 2
0810+66		85	60		<2.5		15.7				1.5	57

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0818+472	103	4	81	1	>2.5	II	16.5	0.69	0.13		2.6	45 4
0819−30	44	119	75		>2.5	II	18	0.68	0.086		3.1	20
0819+061	98	38	60		>2.5	II	18	0.69	0.082	26.23	2.7	20 7
0836+299	59	30	29	2	<2.5	I	15.7	0.78	0.065	25.68	1.8	15 15
0843+316	42	45	3		>2.5		16.5	0.85	0.068	25.86	2.8	59
0844+540	45	113	68	1	>2.5		15		0.045		2.9	85
0844+319	123	170	47	1	<2.5	I	13.5	0.78	0.068	25.86	2.4	15
0908+376	80	5	75		>2.5	II	15.6	0.56	0.105	25.73	2.6	62
0913+385	30	42	12		<2.5		15.7	0.82	0.071	26.24	1.5	59
0915+320	46	31	15	1	<2.5	I	15.5	0.48	0.062	24.88	1.8	15 7
0915−119	130	24	74		>2.5	I			0.065		2.6	64 7
0916+342	30	110	80		>2.5		13	0.87	0.017	23.6	3.2	15
0922+366	130	170	40		<2.5	I	15.5	0.98	0.112	25.99	2	16
0923+330			5		<2.5		16	1.12	0.14		1.9	16
0924+302	49	55	6	1	<2.5		14.5	1.04	0.027	24.72	2	72
0936+361	118	164	46		>2.5	II	16.8	0.74	0.137		6	18 2
0938+399	45	14	31	3	>2.5	II	16.2	0.56	0.108	26.31	4	16 4
0940−304	90	21	69	5	<2.5		14.5	0.58			1.5	26
1000+201	112	7	75		>2.5	I	16.5	0.8	0.168	26.56	2.6	85 7
1002−320	52	29	23	1.9	>2.5		17.4	0.93			2.8	26
1003+351	45	123	78	3	>2.5	II	15.5	0.51	0.099	26.62	3.5	73 2
1005+007	38	71	33	1	<2.5		15.4				2.4	38
1005+282	5	150	45	2	>2.5	II	16.4	1.15	0.148	25.36	2.6	59
1014+398	115	130	15		>2.5	II	15.5	1.1	0.106		5	16
1015+491	95	10	85		>2.5	I	14.8	0.57	0.08		3.2	62
1033+003	131	8	57	2	<2.5		15.2				1.8	85
1040+317		50	21		<2.5	I	15.5	0.62	0.036	24.97	2	15 7
1053−282	48	26	22	3.3	>2.5	II	15.5	0.61	0.061	25.3	2.7	26 7
1102+304	147	70	77	2	>2.5	II	15.7	0.72	0.072	25.32	3.8	15
1107−372	30	78	48	2.3	<2.5		12.4	0.7		22.8	1.8	26
1108+272		80	5		<2.5	I	14.6	0.48	0.033	23.01	2.3	15 7
1113+295	138	71	67	2	>2.5	II	14.2	0.64	0.049	25.7	2.8	15 7
1116+281	40	113	73		>2.5		14.3	0.65	0.067	25.3	2.7	59
1122+390	35	118	83	2.1	>2.5	I	11.6	0.57	0.007	23.98	2.9	28 7
1123−351	174	120	54	1.8	<2.5		16	0.7	0.033		2.2	26
1127+012	100	12	88	3	>2.5		16.7				2.7	85
1137+123	139	12	53	2	<2.5		16.5				1.6	85
1141+374	130	52	78		>2.5	II	15.9	0.94	0.115	26.46	¿5	23
1141+466	147	40	73		>2.5	II	15.8	1.1	0.162		2.6	23
1142−341	31	150	61	2.1	>2.5		15.6	0.92			2.8	26
1146−11	79	104	25		<2.5	II	18	0.96	0.117		1.3	21
1154−038	45	109	64	2	>2.5		14.3				3.3	85
1155+266	55	130	75		>2.5						2.7	56
1204+241		166	5		<2.5		15.2	0.76	0.077	24.83	1.5	59
1209+746	60	155	85		>2.5		16.5		0.061		3.5	61
1216+061	150	83	67	3	>2.5	II	11	0.51	0.007	24.8	3	20 7
1218+296	40	152	68	0.7	<2.5		11.2	0.24	0.002	21.6	1.8	65
1222+131	116	167	51	1	<2.5	I	10	0.6	0.003	23.8	1.9	17 2
1225+265	50	70	20		<2.5	II	16.1	0.79	0.064		2.4	59
1227+83	160	70	90	1.8	<2.5		12.8				1.5	66
1228−335	164	83	81	2	<2.5		15.4	0.6			2.4	26
1228+127	157	101	56	1.4	<2.5	I	8.7	0.79	0.004	25.65	2	17 2
1240+029	166	33	47	1.9	>2.5		12.9				2.6	63
1249+035	27	146	61	2	>2.5						2.6	85
1250−102	65	162	83	1	>2.5		12	1.2	0.014	23.27	4	37
1251+278	30	169	41	0.1	<2.5	I	15.5	0.58	0.086	26.27	1.5	19 15
1254+277	51	11	40	3	<2.5	I	12.3	0.86	0.025	22.63	1.8	15 7
1256+281	171	275	76	2	>2.5	I	14.9	1.04	0.024	24.5	2.6	74 15
1257−253	37	150	67	2.4	>2.5		16	0.7			3.5	26
1257+282	17	39	22		<2.5	I	14	0.75	0.023	23.05	2.2	67
1258−321	167	125	42	3.2	<2.5		12.8	0.59			1.8	26
1313+072	40	71	31		<2.5		15.5		0.051	24.75	2	20
1316+299	67	97	30		<2.5		15	0.71	0.073	25.85	1.5	13

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1317+258	75	54	21	2	>2.5						2.6	86
1318−434	100	24	76	2	>2.5	I	14.5	0.96	0.011	25.01	3.9	21 7
1319+428	130	79	51		>2.5	II	16	0.95	0.079	26.15	3	17 2
1321+318	69	111	42		>2.5	I	13.9	0.65	0.016	24.6	3	67 15
1322−428		40	10	2	<2.5	I	7	0.79	0.002	23.8	2.4	54 8
1322+366	75	7	68	3	>2.5	II	14	0.46	0.018	24.35	3.5	13
1323−271	154	68	86	3.9	>2.5	II	12.9	0.67	0.043	24.99	4	26
1323+370	87	154	67	2	>2.5	II	15	0.7	0.08		2.7	62
1331−099	55	107	52		>2.5	II	17.5	0.9	0.081	26 26	2.8	21 16
1333−337	47	125	78	0.9	>2.5	II	11.9	0.79	0.013	25.06	3.3	26 17
1344−241	149	155	6	3.9	<2.5		14.4	1.05			2	26
1346+268	18	20	2		<2.5	I	13.8	0.92	0.063	25.73	2	13 7
1350+316	62	100	38		<2.5	I	15.6	0.7	0.045	25.4	1.5	19 2
1354−251	147	155	8	3.9	<2.5		15.4	0.64			1.5	26
1357+287	100	15	85		>2.5	II	14,8	0.8	0.063	25.06	2.6	59
1358−113	41	125	84	2	>2.5	II	15	0.7	0.037	24.89	3	29
1400−337	90	4	86	2.1	<2.5		12.4	1.28	0.014		1.4	26
1401+35	70	0	70		<2.5		12.8	0.92	0.013	23.6	1.5	62
1401−05			15		<2.5		17				1.9	21
1407+177	6	73	67	2	<2.5	I	13.4		0.016	23.68	1.8	21 15
1411+094	84	178	86		>2.5		18.3		0.162		2.8	85
1413−36	43	35	8	2.6	>2.5		17.5	0.74			3	26
1414+110	146	85	61	1	<2.5	I	13.3	0.67	0.024	25.36	1.6	20 2
1420+198	95	135	40		>2.5	II	18	0.78	0.27	27.58	3	45 2
1422+268	118	96	22	2	<2.5	I	15.6	0.74	0.037	25.07	2.4	15 7
1427+07	54	157	77		>2.5		15.6				2.6	20
1433+553	110	143	33	1	<2.5		17	0.8	0.14	25.05	2.3	87
1441+262	150	68	82		>2.5	II	14.3	0.79	0.062	25.03	3.1	59
1441+522		125	25		<2.5	II	17	0.76	0.141	26.76	2.2	19 2
1449−129	135	89	46		<2.5	I	18		0.07	25.26	2.2	20 7
1452+165	161	59	78	3	<2.5	II	14.9	0.71	0.046		1.5	21
1457+29	130	169	39		<2.5		17.2				1.3	59
1458+21A			0		<2.5						2.2	56
1459+21E			20		<2.5						2.3	56
1502+262		150	12		>2.5	I	15.2	0.92	0.054	26.46	3.3	13 2
1509+059	26	145	61	3.3	>2.5						2.7	63
1512+30	110	31	79		>2.5	II	15.4	0.75	0.093	24.99	2.8	59
1514+004	53	132	79	3	>2.5	II	16.5	0.4	0.052		3.1	20
1514+072	21	16	5	3	<2.5	I	16	1.02	0.035	26.1	1.4	29 4
1519+078			90		>2.5		15	1.93	0.046	25.09	2.6	57
1525+291	8	14	6		<2.5	I	15.4	0.73	0.065	24.89	1.5	15 7
1527+308	175	130	45		>2.5		15	0.98	0.114	25.39	2.7	59
1547+309	136	120	16		>2.5		16.5	0.96	0.111		3.2	37
1549+202	119	80	39		>2.5	II	18.5	0.88	0.09	26.5	3.8	18 2
1553+245	19	129	70	3	>2.5	I	14.4	0.28	0.043	23.36	3.5	13 7
1555+308	120	122	2		>2.5		16.1	0.58	0.075		3.2	59
1556+274	109	291	2	2	<2.5						2.4	74
1559+021	138	100	38	3	>2.5	II	15.5	0.61	0.104	27	2.9	20 4
1601+173	64	180	64	2	<2.5		13.5		0.034		1.8	91
1602+178	117	171	54	1	<2.5	I	14.6	0.15	0.032		2	85 7
1602+34			37		<2.5		15.4	0.82	0.032	23.4	2.4	15
1604+183	89	176	87	2	>2.5		15				2.8	90
1610+296	1	66	65	3	<2.5	I	14.8	0.72	0.031	24.13	1.5	15 7
1610−607	127	86	41	2	>2.5	II	12.8	1.15	0.017		3.4	54
1615+325	28	17	11		>2.5	II	16	0.61	0.152	26.69	3	19 7
1615+351	252	323	71	1	>2.5	II	14.9	0.76	0.03	25.31	3.5	60 7
1621+380	175	70	75	5	>2.5	I	14.1	0.56	0.031	24.58	2.8	60 7
1626+397	34	82	48		<2.5	I	12	1.19	0.03	25.87	2	17 2
1636+379		75	5	1	<2.5	I	16.4	0.8	0.179		2.3	56
1637−771	89	165	76	4	>2.5	II	16	0.5	0.043		2.6	25 8
1640+826	27	124	83	2	>2.5	I	14				3	76
1643+274	120	35	85		>2.5	II	15.8	0.92	0.102	25.1	2.7	59
1648+050	127	100	27		<2.5	I	19	1	0.154	28.26	2.2	20 7

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1652+39	170	135	35		<2.5		13.7	0.18	0.034	24.35	1.8	81
1655+32A			50		<2.5						2.1	56
1657+325		10	5		<2.5		16.8	0.75	0.063	25.32	1.5	56
1658+302		70	10		<2.5	I	14.7	0.66	0.035	24.91	1.5	16 15
1658+326	24	10	14	2	<2.5		16.1	0.85	0.102	25.42	1.7	56
1658+32B			68		>2.5						2.6	56
1710+156	5	169	16	4	<2.5		16.7				1.5	85
1712+641	208	150	58	1	>2.5		17.3	0.74	0.081		2.8	57
1717−009	35	89	54		>2.5	II	16.8	0.71	0.03	26.7	2.6	20 4
1726+318	78	110	32		>2.5	II	15.5	0.57	0.166	26.85	2.9	16 11
1741+390		90	75		>2.5		15		0.042		2.6	16
1744+557	10	77	67	2	>2.5		13.2		0.03		2.8	13
1747+303	70	150	80		>2.5		16.7	1.17	0.13	23.96	2.9	59
1752+325	110	41	69		>2.5		14.3	0.91	0.045	24.44	2.6	59
1759+211	60	50	10	2	<2.5		17.5				2.3	89
1820+689	133	177	44	2	<2.5		15	0.7	0.131		1.5	88
1826+743	147	161	14		>2.5	II	18	0.68	0.256		2.8	17 11
1833+326	73	48	25	2	>2.5	II	14.5	0.59	0.058	26.3	2.7	17 2
1833+653	97	19	78		>2.5		17		0.161		2.6	85
1834+197	22	142	60	1	>2.5		14	0.79	0.016		2.7	13
1842+455	51	68	17		>2.5	II	15	0.7	0.091	25.73	3.2	19 2
1845+797	60	145	85		>2.5	II	14.4	0.75	0.056	26.56	5	17 2
1855+379	55	4	51		<2.5	I	14.9	0.84	0.055	25.02	1.1	15 7
1928−340	138	9	51	1.3	>2.5	II	17	0.7	0.098	26.21	3	26 16
1929−397	130	124	6	1.2	<2.5		16	0.7	0.075		2.4	26
1939+606	8	26	18		<2.5	II	18	0.71	0.201	27.4	1.9	19 2
1940+504	34	28	6	1	<2.5	I	14	0.56	0.024	25.23	1.5	17 11
1949+023	163	92	71		>2.5	II	15	0.45	0.059	26.33	2.6	20 4
1957+405	152	109	43		>2.5	II	15	0.74	0.057	25.76	2.9	17 4
2013−308	123	64	59	1.9	>2.5	I	15.4	0.86	0.089	25.33	2.8	26 7
2014−558	11	157	34		<2.5		15.5	0.7	0.061		2.2	21
2031−359	146	170	24	1.1	<2.5		15.5	0.78			1.5	26
2040−267	68	158	90	0.1	>2.5	II	13.5	0.73	0.038	24.98	3.4	20 7
2053−201	11	52	41		<2.5	I	17.8		0.156	26.29	2.4	92 7
2058−135	29	101	72	1	<2.5	II	15.5	0.81	0.046	24.89	2	21
2058−282	55	135	80	0.8	>2.5	I	14.8	0.74	0.038	25.67	3	20 7
2059−311	24	106	82	3.7	>2.5		14.5	0.5			3.5	26
2103+124	59	138	79	2	>2.5		17.3	0.56			3	85
2104−256	138	22	64		>2.5	II	16.8	0.89	0.039	25.3	3.2	26 8
2116+262	65	22	43	5	<2.5	I	14		0.016	23.57	1.8	15 7
2117+605	106	35	71	2	>2.5	II	15	0.72	0.054		2.8	19 4
2121+248		4	85		<2.5	I	15.5	0.75	0.102	27.09	2	18 2
2128−388	106	49	57	1.3	>2.5		14.4	0.64			2.7	26
2141+279	35	173	42		>2.5	II	18.5	0.86	0.215	27.31	2.9	17 2
2152−699	130	14	64		>2.5	I	13.8	0.71	0.027	26.38	2.8	54 7
2158−380	97	50	47	2.7	>2.5		14.6	0.71			2.8	26
2225−308	145	141	4	0.3	>2.5	I	15.8	0.74	0.055	24.9	4.5	26 7
2229+391	7	9	2	2	<2.5	I	13	0.58	0.017	24.93	2.2	18 2
2236−176	94	53	41	1.3	>2.5	I	15.3	0.81	0.075	25.38	3.5	26 7
2236−364	49	132	83	4.6	<2.5		15.2	0.57			1.8	26
2236+350	5	46	41		<2.5	I	15	0.58	0.028	24.4	2.4	15 15
2244+366	131	34	83		<2.5	II	16	0.8	0.082		2.2	16
2247+113	48	31	17	1	<2.5	I	14.4	0.75	0.023	25.21	2	21 2
2318+079	2	30	28	1.7	>2.5	I	12.8		0.011	23.17	2.6	67 15
2333−327	88	132	44	1.9	<2.5		14.6	0.61			1.5	26
2335+267	60	140	80		>2.5	I	13.2	0.75	0.029	25.88	4	17 2
2350−374	25	56	31	2.4	>2.5		16	0.55			3	26
2353−184	153	140	13	0.9	<2.5		16	0.78			1.3	26
2353+56	135	115	20	4	>2.5						6	63
2354−351	162	150	12	2.4	>2.5		14.4	1.2	0.049		3	26
2354+471	52	64	12	1	<2.5	I	15	0.72	0.046	24.63	2.3	28 15
2356−611	3	134	49	2	>2.5	II	16	1.36	0.096	27.79	3	54 3

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3.2. *Sample 2.*

280 extragalactic radio sources with known position angles between the integrated intrinsic radio polarization and radio axes: In (Col.1 and 2) we bring Radio Source Name; (Col.3) dPA is a relative position angle between radio axis and integrated polarization; (Col.4) Ref. for the data of dPA; (Col.5) K is the ratio of major to minor axis of radio image; (Col.6) Ref. for the radio maps; (Col.7) FR the Fanaroff Riley classes; (Col.8): Ref. for the FR classes.

Table 2: Sample 2. (*In Col.4: Cl - Clarke et al., 1980, MNRAS,190,205; Ha - Haves,1975, MNRAS,173,553; Da - Davis et al., 1983, MNRAS,205,1267; PB - Birch, 1982, Nature, 298,451; Mi - Mitton, 1972, MNRAS,155,373*)

1 **Source**	2 **Name**	3 **dPA**	4 **Ref**	5 **K**	6 **Ref**	7 **FR**	8 **ref**
0002+12		73	Cl	3.5	20		
0003−00	3c2	39	Ha	2.2	30		
0007+12	4c12.03	83	Cl	2.6	20	II	5
0013+79	3c6.1	64	PB	3.5	19	II	2
0017+15	3c9	71	Cl	2.2	24	II	2
0020−25		79	Cl	1.7	20		
0031+39	3c13	69	Cl	5	27	II	2
0033+18	3c14	89	Cl	3	27	II	2
0034−01	3c15	85	Cl	2.6	27	II	1
0035+38	4c38.03	84	PB	3.6	28		
0038+32	3c19	88	Cl	2.8	27	II	2
0040+51	3c20	44	Cl	4	19	II	2
0043−42		0	PB	2.4	25	II	7
0048+50	3c22	79	Cl	5	27	II	2
0052+68	3c27	53	Cl	3.5	50	II	50
0104+32	3c31	51	Cl	2	27	I	2
0105+72	3c33.1	87	Cl	3.8	17	II	2
0106+13	3c33	73	Cl	3.4	17	II	2
0107+31	3c34	74	Cl	3.9	27	II	2
0114−47		32	Cl	2.2	21	II	3
0115+02	3c37	70	Ha	3	32		
0123+32	3c41	74	Cl	3.5	55	II	2
0125+28	3c42	60	PB	4	18	II	2
0128+25	4c25.07	22	PB	1.4	46		
0128+06	3c44	89	Cl	2.7	18		
0131−36		15	Ha	2.6	20	II	7
0132+37	3c46	87	Cl	5	17	II	2
0133+20	3c47	6	Cl	2.2	17	II	2
0134+32	3c48	43	Mi	1.5	33		
0145+53	3c52	50	Cl	2.1	17		
0152+43	3c54	43	Cl	4.5	55		
0154+28	3c55	83	Cl	3.7	24	II	2
0159−11	3c57	65	Ha	1.6	32		
0210+86	3c61.1	38	PB	4.5	17	II	2
0211+34	4c34.06	58	PB	3.5	22		
0213−13	3c62	20	Cl	2.7	80	II	7
0214−48		84	Cl	3.3	54	I	7
0219+08	3c64	73	Cl	2.4	20		
0220+39	3c65	69	Cl	3.5	55	II	2
0221+27	3c67	64	Cl	5	33	II	2
0222−00	4c-00.12	59	Cl	3.7	30		
0229+34	3c68.1	88	Cl	2.7	18	II	2
0229+35		79	PB	3	16		
0232−02	4c-02.12	58	Cl	4	30		

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0234+58	3c69	88	Cl	4.5	19		
0241−51		72	Cl	2.8	21		
0241+29	4c29.08	64	PB	2.5	22		
0300+16	3c76.1	3	Cl	1.8	17	I	2
0307+16	3c79	78	Cl	4.5	29	II	2
0313+34	4c34.13	80	Cl	2.8	47		
0323+55	3c86	55	Cl	5	17		
0325+02	3c88	16	Cl	2.6	20	I	7
0336−35		76	Cl	2.4	26		
0344−34		56	Cl	2	25	I	7
0349−27	OE-283	77	PB	2.6	20	II	7
0349+26	4c26.12	77	Cl	4	22		
0356+10	3c98	19	Cl	3.5	18	II	2
0403−13	OF-105	85	Ha	2.3	48		
0404+03	3c105	80	Cl	3.5	20	II	1
0404+42	3c103	86	Cl	3.2	17		
0410+11	3c109	83	Cl	3	19	II	2
0415+37	3c111	81	PB	4	18	II	1
0427−53		84	Cl	2.9	54		
0431−133		82	PB	2.8	25		
0433+29	3c123	58	Cl	2	18	II	2
0453+22	3c132	66	Cl	1.9	18	II	2
0459+25	3c133	33	Cl	2.4	18	II	2
0501+38	3c134	87	Cl	3.4	17		
0511−48		14	Cl	1.4	21		
0511−30		46	Cl	2.7	20	II	3
0511+00	3c135	1	Cl	1.5	21	II	1
0515+50	3c137	84	Cl	5	53		
0518−45	PikA	9	Cl	2	21	II	8
0518+16	3c138	80	Ha	2.2	33		
0521+28	3c139.2	65	Cl	3.5	44		
0528+06	3c142.1	72	Cl	4.2	79		
0538+49	3c147	50	Mi	1.7	33		
0605+48	3c153	20	Cl	1.7	24	II	2
0610+26	3c154	86	Cl	5	45		
0618−37		18	Cl	2	26		
0634−20		82	PB	3.7	21	II	14
0640+23	3c165	55	Cl	4.5	20		
0651+54	3c171	16	Cl	2.7	31	II	2
0656−24		81	Cl	1.1	20		
0659+25	3c172	79	Cl	3.5	18	II	2
0702+74	3c173.1	32	Cl	2.2	17	II	2
0710+11	3c175	43	Cl	3.5	50	II	2
0711+14	3c175.1	68	Cl	2.4	27	II	2
0715−36		59	Cl	1.7	21		
0723+67	3c179	81	Cl	4	40	II	12
0724−01	3c180	18	Cl	2.1	20		
0725+14	3c181	49	Cl	2	34	II	2
0733+70	3c184	64	Cl	5	24	II	2
0734+80	3c184.1	88	Cl	3.1	17	II	2
0736−06	01-161	69	Cl	3	21		
0742+02	3c187	76	Cl	2.6	20		
0755+37	4c37.21	2	Cl	2.2	13	I	
0800−09		19	Cl	2	21		
0802+10	3c191	34	Ha	2.3	34	II	2
0802+24	3c192	49	Cl	3	18	II	2
0809+48	3c196	47	Cl	1.5	24	II	2
0814+22	4c22.20	19	Cl	2	45		
0818+47	3c197.1	22	Cl	2.6	45	II	6
0819−30		55	PB	3.1	20	II	
0819+06	3c198	57	Cl	2.7	20	II	6
0824+29	3c200	57	Cl	3.5	27	II	2
0833+65	3c204	15	PB	1.7	18	II	2

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0835+58	3c205	59	Cl	2.2	18	II	2
0836+19	4c19.31	76	Cl	3	27		
0838+13	3c207	80	Cl	2.4	31	II	2
0840+29	4c29.31	48	PB	4	22		
0843−33		15	Ha	1.7	20		
0850+14	3c208	63	PB	3.5	24	II	2
0854+34	4c34.30	62	PB	1.5	22		
0855+14	3c212	85	Cl	3	18	II	2
0903+16	3c215	58	Cl	2	18	II	2
0905+38	3c217	89	Cl	2.8	27	II	2
0917+45	3c219	60	Cl	3.5	17	II	2
0927+36	3c220.2	25	Cl	2.4	27		
0931+39	4c39.26	87	PB	1.5	22		
0936+36	3c223	85	Cl	5	18	II	2
0938+39	3c223.1	30	Cl	4	16	II	4
0939+14	3c225	57	Cl	5	17	II	2
0941+10	3c226	77	Cl	4.5	18	II	2
0945+07	3c227	76	Cl	3.1	20	II	1
0947+14	3c228	81	Cl	4	18	II	2
0951+69	3c231	50	Mi	1.7	17	I	2
0958+29	3c234	68	Cl	3	17	II	2
1030+58	3c244.1	49	Cl	2.2	17	II	2
1040+12	3c245	78	Cl	3.5	27	II	2
1048−09	3c246	72	Cl	2	20		
1056+43	3c247	57	Cl	1.4	18	II	2
1059−01	3c249	81	Cl	4.5	77		
1100+77	3c249.1	88	Cl	3.5	31	II	2
1106+25	3c250	78	Cl	5	27	II	2
1107+37	4c37.29	88	PB	3.5	22	II	7
1108+35	3c252	5	Cl	1.8	17	II	2
1111+40	3c254	17	Mi	1.3	18	II	2
1136−67		76	Cl	3	21		
1136−13	OM-161	69	Cl	2.9	36		
1137+66	3c263	70	Cl	2.7	17	II	2
1140+22	3c263.1	34	Cl	2.2	24	II	2
1142+19	3c264	71	Cl	2	20	I	2
1142+31	3c265	64	Cl	3.6	50	II	2
1143−31		86	Cl	2	21		
1147+13	3c267	73	Cl	3.5	50	II	2
1157+73	3c268.1	55	Cl	4.3	19	II	2
1158+31	3c268.2	64	Cl	2.7	17	II	11
1203+64	3c268.3	83	Cl	3.2	33	II	2
1206+43	3c268.4	2	Cl	2.2	24	II	2
1211−41		6	PB	2.2	25		
1216−10		52	Cl	2.2	20		
1216+06	3c270	8	Cl	3	20	I	17,7
1218+33	3c270.1	69	Cl	2.3	27	II	2
1222+13	3c272.1	36	Cl	1.9	17	I	7
1222+21	4c21.35	43	Cl	2.8	32		
1222+42	3c272	88	Cl	4	27	II	2
1226+02	3c273	69	Cl	3	41		
1228+12	3c274	89	Cl	2	17	I	2
1232+21	3c274.1	81	Cl	2.8	17	II	2
1233+16		72	Cl	4.5	20		
1241+16	3c275.1	43	Cl	2.4	27	II	2
1249+09		82	Cl	3	51		
1251+15	3c277.2	62	PB	4	27	II	2
1251+27	3c277.3	21	Cl	1.5	19	I	15
1251−12	3c278	57	Cl	1.3	20	I	8
1253+37	4c37.35	78	PB	5	23		
1254+47	3c280	58	Cl	1.2	18	II	2
1257+38	4c38.34	77	PB	3	22		
1258+40	3c280.1	86	Cl	3.1	24	II	2

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1301+38	4c38.35	68	PB	2.8	16	II	16
1308+27	3c284	80	Cl	3	17	II	2
1313+07		7	Cl	2	20		
1317−00	4c00.50	89	Cl	2.3	21		
1318+11	4c11.45	44	Cl	1.3	27		
1319+42	3c285	4	Cl	2.2	28	II	2
1328+30	3c286	37	Mi	2	38		
1330+02	3c287.1	52	Cl	1.8	20	II	7
1335−06	4c-06.35	85	Ha	2.6	32		
1343+50	3c289	78	Cl	3	27	II	2
1350+31	3c293	53	Cl	1.5	19	I	2
1352+165	3c293.1	68	Cl	2.3	21		
1354−17	op-190.4	6	Cl	2.7	21		
1354+19	4c19.44	84	Cl	3.5	35	II	12
1358−11		4	Cl	5	29	II	
1409+52	3c295	5	PB	2	31	II	2
1413−36		57	PB	3	26		
1414+11	3c296	1	Cl	1.6	20	I	2
1420+19	3c300	36	Cl	3	45	II	2
1422+20	4c20.33	65	Cl	3.4	37		
1423+24	4c24.31	75	Cl	5	32		
1425−01	3c300.1	37	Cl	2.1	21		
1441+52	3c303	61	Cl	2.2	19	II	2
1449−12		87	Cl	2.2	20		
1458+71	3c309.1	45	Ha	2	33		
1502+26	3c310	54	Cl	3.3	13	I	2
1508+08	3c313	55	Cl	2.6	17	II	7
1511+26	3c315	72	Cl	1.4	18	I	2
1512+37	4c37.43	79	Cl	3.5	49		
1514+00	4c00.56	28	Cl	3.1	20	II	
1522+54	3c319	45	Cl	3.5	14	II	2
1529+24	3c321	64	Cl	3.2	44	II	2
1529+35	3c320	46	PB	1.5	18	II	7
1545+21	3c323.1	72	Cl	3.4	19	II	11
1547+21	3c324	80	Cl	5	39	II	2
1549+62	3c325	44	Cl	1.4	18	II	2
1549+20	3c326	88	Cl	5	18	II	2
1553+20	3c326.1	56	PB	1.5	27		
1556−21		15	Cl	1.7	21		
1559+02	3c327	70	Cl	2.9	20	II	4
1602−63		8	Cl	1.9	21		
1602−09		90	Cl	2.8	20		
1609+66	3c330	69	Cl	2.7	17	II	2
1610−608		22	PB	3.4	54	II	
1615+32	3c332	75	Cl	3	19	II	7
1618+17	3c334	81	Cl	3	27	II	2
1622+23	3c336	80	Cl	2.2	18	II	2
1626+27	3c341	86	Cl	3.7	17	II	2
1626+39	3c338	85	PB	3.2	82	I	2
1627+23	3c340	87	Cl	4	27	II	2
1627+44	3c337	36	Cl	1.8	17	II	2
1634+26	3c342	78	Cl	3	22		
1637−77		41	PB	2.6	25	II	8
1641+17	3c346	79	Cl	2	31	II	7
1641+39	3c345	76	Ha	2.2	43	II	13
1648+05	3c248,HerA	78	Ha	2.2	20		
1658+47	3c349	74	Cl	3	17	II	2
1704+61	3c351	19	PB	2.3	18	II	2
1709+46	3c352	77	Cl	2.8	27	II	2
1717−00	3c353	5	Cl	2.6	20	I	7
1723+51	3c356	30	Cl	3.5	50	II	2
1726+31	3c357	61	PB	2.9	16	II	11
1730−13		26	Cl	1.5	41		

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1733−56		83	PB	5	80	II	7
1737−60		85	PB	2.6	25		
1826+74	3c379.1	50	Cl	2.8	17	II	11
1832+47	3c381	67	Cl	3.3	19	II	2
1836+17	3c386	13	Cl	1.5	18	I	2
1842+45	3c388	63	PB	3.2	19	II	2
1845+79	3c390.3	53	Cl	5	17	II	2
1938−155	OV-164	74	Da	1.8	80		
1939+60	3c401	38	PB	1.9	19	II	2
1949+02	3c403	37	Cl	2.6	20	II	4
2014−55		47	Cl	2.2	21		
2018+29	3c410	51	Cl	1.5	44		
2019+09	3c411	60	Cl	2.6	31		
2040−26		2	Cl	3.4	20	II	7
2058−28		68	Cl	3	20		
2104−25	OX-208	39	Cl	3.2	26	I	7
2104+76	3c427.1	89	Cl	3.4	19	II	2
2106+49	3c428	83	Cl	5	50		
2117+60	3c430	55	Cl	2.8	19	II	4
2121+24	3c433	21	Cl	2	18	I	2
2130−53		53	Cl	1.1	21	I	7
2135−14	OX-158	77	Cl	1.7	20	II	8
2141+27	3c436	3	Cl	2.9	17	II	2
2145+15	3c437	69	Cl	3.5	18	II	2
2153−69		67	PB	1.5	21		
2153+37	3c438	47	PB	2.3	19	I	7
2203+29	3c441	32	Cl	2	18	II	2
2211−17	3c444	12	Cl	2.2	20	II	7
2212+13	3c442	83	Cl	3	18		
2221−02	3c445	67	Cl	2.7	21	II	1
2229+39	3c449	73	Cl	2.2	18	I	2
2239+33		74	PB	2.8	16		
2243+39	3c452	77	Cl	5	17	II	2
2247+11		24	Cl	2	21	I	2
2251+15	3c454.3	72	Ha	2.8	43		
2252+12	3c455	80	Cl	3	38	II	2
2310+05	3c458	23	Cl	2.4	20		
2314+038	3c459	85	Da	3.3	52	II	7
2317−27		85	PB	2.7	25	II	7
2318+23	3c460	65	Cl	4.5	24	II	2
2335+26	3c465	78	Cl	4	17	I	2
2345+18	3c467	45	Cl	3	31		
2352+79	3c469.1	87	Cl	3.2	17	II	2
2354−11		62	Cl	2.4	21		
2356−61		66	Cl	3	54	II	3
2356+27	4c27.54	78	PB	4	22		
2356+43	3c470	86	Cl	5	45	II	2

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Appendices

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