Table 1. Observational data

HCG No.	RA DEC (1950.0)	optical redshift z	Type $N_S N$	blue luminosity $[10^{10} L_\odot]$	HI-flux $[Jy\,km\,s^{-1}]$	S_{max} [mJy]	H I velocity $[km\,s^{-1}]$	H I linewidth $[km\,s^{-1}]$	M_{HI}/L_B
1	00 23 23 +25 26 29	0.0339	2 4	8.57	7.74	28±1.7	10166±20	466 513 547	0.40
3	00 31 00 -07 52 00	0.0255	2 4	3.63	6.15	15.4±2.3	7907±13	403 1029 1057	0.450
4	00 31 44 -21 42 30	0.0280	1 5	6.82	2.12	20.1±3	7507±8	1241	0.254
b		0.0236		1.4	2.12	20.1±3	6996±8	248 277 280	1.24
a		0.0270		5.42	4.77	44.5±3	8044±11	67 113 144	0.18
5	00 36 19 +06 47 00	0.0410	1 4	7.75	0.92	9.2±2	12276±20	154 166:	0.076
6	00 36 40 -08 40 20	0.0379	0 4	5.55	0.88	6.8±1.5	11376±36	224 252:	0.086
7	00 36 45 +00 37 00	0.0141	2 4	8.83	4.58	22±2.1	4272±30	457 484 495	0.041
8	00 46 56 +23 19 00	0.0545	0 4	15.8		±2.3			≤0.077
14	01 57 20 -07 17 00	0.0183	3 4	1.24	1.23	5.5±1.1	5448±30	1217 1231:	0.331
c		0.0172		0.20	1.98	8.1±1.1	5146±30	460 484 520	1.284
a		0.0198		1.04	1.23	5.5±1.1	5849±30	420 444 450	0.151
15	02 05 20 +01 54 00	0.0228	3 6	3.99	1.29	3.8±0.9	6584±40	1048:	0.065
19	02 40 20 -12 37 30	0.0143	3 4	1.28	2.60	16.5±1.6	4293±21	153 173 181:	0.155
20	02 41 20 +25 53 50	0.0484	2 6	2.2		±2.5			≤0.515
21	02 43 05 -17 53 00	0.0251	2 5	8.12	9.61	21±2.5	7621±24	535 1017	0.284
22	03 01 18 -15 48 31	0.0251	2 5	0.77	4.4	48.6±2.8	2570±5	124 142	0.152
24	03 17 55 -11 02 40	0.0305	0 4	1.23		±2.2			≤0.273
25	03 18 10 -01 13 00	0.0212	3 7	5.43	4.68	19.9±2.8	6318±25	243 338 369	0.143
26	03 19 32 -13 49 30	0.0316	1 4	2.42	6.86	25.5±3.6	9474±17	402 487:	1.05
30	04 33 50 -02 57 00	0.0156	4 4	6.67	0.46	2.3±0.8	4665±50	534	0.006
33	05 07 50 +17 58 00	0.0260	1 4	0.46	6.6	20.1±2.5	7795±16	505 561	3.67
34	05 19 06 +06 37 45	0.0307	2 4	1.34	14.03	22.2±2.9	8969±30	979	3.32
35	08 41 56 +44 42 00	0.0542	2 6	6.87		±2.4			≤0.19
37	09 10 38 +30 12 23	0.0223	1 5	3.44	0.81	3.3±1.0	6809±25	966:	0.047
38	09 25 01 +12 30 19	0.0292	4 4	5.62	1.5	10±2.2	8722±20	207 262 265	0.083
40	09 36 23 -04 37 22	0.0223	2 6	2.99	0.47:	5.6±1.8	6582±30	73 86 89	0.027
41	09 54 30 +45 29 00	0.0133	3 4	2.43	3.44	18±3.0	7257±11	348 363 366	0.314
42	09 57 52 -19 23 46	0.0133	1 4	0.83	3.7	20±4.6	3964±10	201 307	0.263
43	10 08 41 +00 11 43	0.0330	3 5	5.16	3.11	11.5±2.0	9996±26	352 426:	0.245
46	10 19 30 +18 06 45	0.0270	0 4	0.64		±1.7			≤0.25
47	10 23 07 +14 00 12	0.0317	2 4	5.0	2.21	8.4±1.6	9689±25	459 482:	0.168
48	10 35 26 -26 49 13	0.0094	1 4	0.20	1.0	11±1.9	2448±19	138	0.108
49	10 53 19 +67 26 55	0.0332	0 4	2.49	8.66	39±3.3	9988±16	197 271 352	1.48
51	11 19 48 +24 34 23	0.0258	1 6	6.22		±3.3			≤0.089
54	11 26 36 +20 51 30	0.0049	0 4	0.18	5.58	70±3.2	1407±3.2	86 113 129	0.243
56	11 29 51 +53 13 30	0.0270	2 5	5.84	0.83	8.4±1.5	8194±40	431	0.041
57	11 35 14 +22 15 34	0.0304	3 8	15.1	1.46	9±1.8	9088±30	209	0.033
58	11 39 37 +10 35 40	0.0207	4 5	10.5	4.14	17.2±1.7	6156±10	166 495	0.061
62	12 50 30 -08 55 40	0.0137	1 4	1.63		±1.5			≤0.018
67	13 46 30 -06 57 00	0.0245	2 4	7.1	4.71	11.6±1.9	7587±30	544 612:	0.158
68	15 19 20 +21 21 43	0.0080	2 5	5.9	17.0	140±6.4	2310±5	301 305 308	0.069
69	13 53 10 +25 18 30	0.0294	2 4	5.65	5.63	17.4±2.6	8669±34	438 547:	0.316
74	15 17 12 +21 04 10	0.0399	0 5	1.77		±3.6			≤0.67
76	15 29 15 +07 29 00	0.0340	2 5	4.1		±2.5			≤0.14
78	15 48 00 +68 22 00	0.0303	4 4	6.94	7.20	28±3.3	8609±8	423 454 458:	0.335
80	15 58 44 +65 21 58	0.0310	4 4	6.18	7.67	20±2.1	9323±20	538 598 604:	0.47
82	16 28 28 +32 55 59	0.0362	2 4	10.3		±1.9			≤0.036
85	18 51 30 +73 17 30	0.0393	0 4	0.64		±2.4			≤1.09
87	20 45 20 -20 01 33	0.0296	2 4	10.0	1.2	8.2±1.7	8849±28	424:	0.041
91	22 06 22 -28 01 18	0.0238	3 4	18.6	9.65	25.8±2.8	7141±28	483 538 634:	0.112
93	23 12 55 +18 41 00	0.0168	2 4	6.6	2.28	7.7±1.6	4842±30	417 676	0.036
94	23 14 47 +18 26 47	0.0417	2 7	3.62	2.48	7.9±2.8	12176±25	280 303:	0.51
95	23 17 00 +09 13 20	0.0396	3 4	7.62	2.59	13.5±2.1	11774±30	278 317:	0.205
96	23 25 30 +08 30 00	0.0292	1 4	10.2	4.57	21.7±2.8	8756±8	219 232 251:	0.149
97	23 44 53 -02 35 00	0.0218	1 5	3.83	0.69	6.9±1.3	6691±35	386:	0.035
98	23 51 39 +00 05 42	0.0266	0 4	7.14		±1.5			≤0.018
99	23 58 10 +28 07 00	0.0290	2 4	8.48		±2.0			≤0.028

HCG 4 b and a : HI-data for the profiles at the optical velocities of components b and a.
HCG 14 c and a : HI-data for the profiles at the optical velocities of components c and a.
HCG 22, HCG 42, and HCG 68 : data from Huchtmeier 1994
HCG 41, HCG 78 : HI data correspond to individual galaxies in the velocity range searched.

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Table 2. a: Global parameters of Hickson compact groups of galaxies

HCG No.	RA DEC (1950.0)	optical redshift z	H I velocity $[km\,s^{-1}]$	assumed distance [Mpc]	blue luminosity $[10^{10}M_\odot]$	HI-mass $[10^{9}M_\odot]$	M_{HI}/L_B
1	00 23 23 +25 26 29	0.0339	10166	138	8.57	33.8	0.40
2	00 28 55 +08 09 19	0.0144	4377	60	4.75	13.3	0.28
3	00 31 00 -07 52 00	0.0255	7907	106	3.63	16.4	0.45
4	00 31 44 -21 42 30	0.0280	7507	94	6.82	14.2	0.25
5	00 36 19 +06 47 00	0.0410	12276	165	7.75	5.91	0.076
6	00 36 40 -08 40 20	0.0379	11376	152	5.55	4.82	0.086
7	00 36 45 +00 37 00	0.0141	4742	58	8.83	3.65	0.041
8	00 46 56 +23 19 00	0.0545		220	15.8	$\leq$ 12.2	$\leq$ 0.077
10	01 23 17 +34 25 53	0.0161		66	8.57	13.2	0.15
14	01 57 20 -07 17 00	0.0183	5448	74	1.24	4.09	0.33
15	02 05 20 +01 54 00	0.0228	6584	92	3.99	2.57	0.065
16	02 07 06 -10 23 56	0.0132	3897	52	9.59	14.4	0.15
18	02 36 19 +18 10 05	0.0136	4077	56	1.26	9.21	0.73
19	02 40 20 -12 37 30	0.0143	4293	57	1.28	1.98	0.16
20	02 41 20 +25 53 50	0.0484		195	2.2	$\leq$ 11.3	$\leq$0.52
21	02 43 05 -17 53 00	0.0251	7621	101	8.12	23.1	0.28
22	03 01 18 -15 48 31	0.009	2570	34	0.77	1.17	0.15
23	03 04 41 -09 46 38	0.0161	4767	63	2.84	13.5	0.47
24	03 17 55 -11 02 40	0.0305		121	1.23	$\leq$ 3.38	$\leq$0.27
25	03 18 10 -01 13 00	0.0212	6318	84	5.43	7.77	0.14
26	03 19 32 -13 49 30	0.0316	9474	126	2.42	25.5	1.05
30	04 33 50 -02 57 00	0.0156	4665	64	7.35	0.44	0.006
31	04 59 08 -04 19 42	0.0137	4077	53	5.73	15.0	0.26
33	05 07 50 +17 58 00	0.0260	7795	104	0.46	16.7	3.63
34	05 19 06 +06 37 45	0.0307	8969	122	1.34	49.2	3.32
35	08 41 56 +44 42 00	0.0542		217	6.87	$\leq$ 12.9	$\leq$0.19
36	09 06 37 +15 59 57	0.0127	3781	49	0.59	2.42	0.41
37	09 10 38 +30 12 23	0.0223	6809	89	3.44	1.51	0.047
38	09 25 01 +12 30 19	0.0292	8722	115	5.62	4.65	0.083
40	09 36 23 -04 37 22	0.0223	6582	86	2.99	0.81	0.027
41	09 54 30 +45 29 00	0.0133	7257	97	2.43	7.62	0.31
42	09 57 52 -19 23 46	0.0133	3964	50	0.83	2.20	0.26
43	10 08 41 +00 11 43	0.0330	9996	131	5.16	12.6	0.24
44	10 15 15 +22 03 46	0.0046	1390	18	1.92	1.49	0.078
46	10 19 30 +18 06 45	0.0270		107	0.64	$\leq$ 1.58	$\leq$0.25
47	10 23 07 +14 00 12	0.0317	9689	128	5.0	8.51	0.17
48	10 35 26 -26 49 13	0.0094	2448	30	0.20	0.21	0.11
49	10 53 19 +67 26 55	0.0332	9988	135	2.49	36.9	1.48
51	11 19 48 +24 34 23	0.0258		103	6.22	$\leq$ 5.51	$\leq$0.088
53	11 26 21 +21 03 07	0.0206	6266	83	9.96	11.0	0.11
54	11 26 36 +20 51 30	0.0049	1407	18	0.18	0.43	0.24
56	11 29 51 +53 13 30	0.0270	8194	110	5.84	2.37	0.041
57	11 35 14 +22 15 34	0.0304	9088	121	15.1	5.0	0.033
58	11 39 37 +10 35 40	0.0207	6156	81	10.5	6.39	0.061
59	11 45 51 +13 00 15	0.0135	3822	50	1.47	2.65	0.18
61	12 09 52 +29 27 21	0.0139	3867	51	5.6	8.87	0.16
62	12 50 30 -08 55 40	0.0137		53	1.63	$\leq$ 0.3	$\leq$0.018
64	13 23 08 -03 35 53	0.036		143	6.09	$\leq$ 24.4	$\leq$ 0.40
67	13 46 30 -06 57 00	0.0245	7585	100	7.1	11.1	0.16
68	15 19 20 +21 21 43	0.0080	2310	32	5.9	4.06	0.069
69	13 53 10 +25 18 30	0.0294	8669	116	5.65	17.9	0.32
70	14 02 02 +33 34 01	0.0636	8094	109	7.03	3.34	0.048
71	14 08 48 +25 43 11	0.0301	9380	126	12.4	23.8	0.192
72	14 45 37 +19 16 02	0.0421		169	18.3	$\leq$ 21.8	$\leq$ 0.12
73	15 00 27 +23 32 57	0.0449	5696	77	4.41	12.5	0.28

Table 2. b: Global parameters of Hickson compact groups of galaxies

HCG No.	RA DEC (1950.0)	optical redshift z	H I velocity $[km\,s^{-1}]$	assumed distance [Mpc]	blue luminosity $[10^{10} M_\odot]$	HI-mass $[10^9 M_\odot]$	M_{HI}/L_B
74	15 17 12 +21 04 10	0.0399		161	1.77	$\leq$ 11.9	$\leq$0.67
76	15 29 15 +07 29 00	0.0340		137	4.1	$\leq$ 5.59	$\leq$0.14
78	15 48 00 +68 22 00	0.0303	8609	117	6.94	23.2	0.34
79	15 57 01 +20 53 34	0.0145	4557	62	2.89	2.27	0.079
80	15 58 44 +65 21 58	0.0310	9323	127	6.18	29.0	0.47
82	16 28 28 +32 55 59	0.0362		147	10.3	$\leq$ 3.72	$\leq$0.036
85	18 51 30 +73 17 30	0.0393		160	0.64	$\leq$ 7.03	$\leq$1.09
87	20 45 20 -20 01 33	0.0296	8849	119	10.0	4.0	0.041
88	20 49 44 -05 56 49	0.0201	6026	82	13.9	10.3	0.074
89	21 17 34 -04 07 17	0.0297	8874	120	9.76	28.6	0.29
91	22 06 22 -28 01 18	0.0238	7141	96	18.6	20.9	0.11
92	22 33 43 +33 42 23	0.0215	6316	87	18.9	10.5	0.056
93	23 12 55 +18 41 00	0.0168	4842	67	6.10	2.61	0.036
94	23 14 47 +18 26 47	0.0417	12201	165	3.10	18.0	0.58
95	23 17 00 +09 13 20	0.0396	11774	159	7.62	15.4	0.20
96	23 25 30 +08 30 00	0.0292	8852	120	10.2	11.1	0.11
97	23 44 53 -02 35 00	0.0218	6691	91	3.83	1.34	0.035
98	23 51 39 +00 05 42	0.0266		108	7.14	$\leq$ 1.25	$\leq$0.018
99	23 58 10 +28 07 00	0.0290	8694	118	8.48	1.65	0.019
100	23 58 47 +12 51 15	0.0178	5336	73	4.78	5.78	0.121

HCG 22, HCG 42, and HCG 68 : data from Huchtmeier 1994
HCG 41, HCG 78 : HI data correspond to individual galaxies in the velocity range searched.