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Compact Groups of Galaxies in the Las Campanas Redshift Survey

S. S. Allam,* Helwan, Cairo, Egypt

National Research Institute of Astronomy and Geophysics

D. L. Tucker, Batavia, Illinois, USA

Fermi National Accelerator Laboratory

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We have recently extracted a catalog of compact groups of galaxies (CGs) from the Las Campanas Redshift Survey. This catalog of Las Campanas Compact Groups (LCCGs) contains 76 CGs with a median redshift of $z_{\rm med} \approx 0.08$. The physical properties of these CGs are similar to those from the Hickson (1982) and the Barton et al. (1996) catalogs. Here, we present an atlas of our catalog and briefly describe its general properties.

Key words: catalogs – surveys – galaxies: galaxies

1. Introduction

Perhaps over half of all galaxies lie within groups containing 3 – 20 members (Tully 1987); yet, due to the difficulty of discerning them from the field, groups of galaxies are, as a whole, not as well studied as larger galaxy systems. Compact groups (CGs), however, defined by their small number of members (< 10), their compactness (typical intra-group separations of a galaxy diameter or less), and their relative isolation (intra-group separations $\ll$ group-field separations) are more readily identifiable; Stephan's Quintet is a beautiful and noteworthy example.

The best known catalog of such systems is that of the Hickson Compact Groups (HCGs; Hickson 1982), a sample comprising 100 groups selected from the red prints of the Palomar Observatory Sky Survey (POSS). Due to their high densities (equivalent to those at the centers of rich clusters) and low velocity dispersions (~ 200 km s^{-1}), HCGs represent an environment where interactions, tidally triggered activity, and galaxy mergers are expected to be more frequent than in most other surroundings. Therefore, the HCG catalog has served as an excellent laboratory for the study of the effects of immediate environment on a galaxy's morphology and stellar composition.

Nonetheless, it is necessary to compare and extend the results gleaned from the HCG catalog using more modern catalogs. The Las Campanas Compact Group (LCCG) catalog, which we extracted from the Las Campanas Redshift Survey (LCRS; Shectman et al. 1996), contains 76 CGs and is among the small handful of new catalogs which is extending our knowledge of CG environments. Since it is based upon a modern galaxy redshift survey which in turn is based upon CCD photometry, the LCCG catalog enjoys certain advantages over the HCG, one of the most important being the homogeneity of the sample: e.g., one can compare the properties of compact group galaxies *from the LCRS* with those of loose group galaxies *from the LCRS* with those of field galaxies *from the LCRS*. Systematic errors obtained from comparing heterogeneous samples are thus eliminated [see, for example, the results of Allam et al. (1999)].

Here, we present both the LCCG catalog itself and a "postage stamp" atlas of its member groups. We have organized the paper as follows: in Sec. (2.) we overview the LCRS, in Sec. (3.) we describe the "friends-of-friends" percolation algorithm used in extracting the CG catalog from the LCRS, in Sec. (4.) we present the Las Campanas Compact Group (LCCG) catalog and atlas, and in Sec. (5.) we analyze the properties of the LCCGs and compare them to the properties of two other catalogs. Finally, we summarize our results in Sec. (6.).

2. The Data

The LCRS is an R-band selected survey; it extends to a redshift of 0.2 and contains 26,418 galaxy redshifts of which 23,697 lie within the official geometric and photometric limits of the survey. Accurate photometry and sky positions for program objects were extracted from CCD drift scans obtained on the Las Campanas Swope 1-m

*Visiting Scientist, Fermi National Accelerator Laboratory telescope; spectroscopy was performed at the Las Campanas Du Pont 2.5-m telescope, originally via a 50-fiber Multi-Object Spectrograph (MOS), and later via a 112-fiber MOS.

For observing efficiency, all the fibers were used, but each MOS field was observed only once. Hence, the LCRS is a collection of 50-fiber fields (with nominal apparent magnitude limits of $16.0 \leq R < 17.3$) and 112-fiber fields (with nominal apparent magnitude limits of $15.0 \leq R < 17.7$). Observing each field only once, however, creates a problem for finding compact groups: the protective tubing of the individual fibers prevented the spectroscopic observation of both members of galaxy pairs within 55 arcsec of each other. Therefore, many galaxies in CG environments are missing from the LCRS redshift catalog. We have partially circumvented this problem by assigning each of the $\sim$ 1,000 "missing" LCRS galaxies the redshift of its nearest neighbor (convolved with a gaussian of σ=200 km s^{-1}). Hence, on the small angular scales necessary for compact group selection, the LCRS falls somewhere between a 2D sky survey and a fully 3D redshift survey.

3. Compact Group Selection

We have selected CGs based on physical extent rather than angular size. We applied a friends-of-friends algorithm (Ramella et al. 1989) to extract a sample of CGs systems in the LCRS (hereafter, LCCGs). In constructing the LCCG catalog, we have considered only those LCRS galaxies within the official geometric and photometric borders of the survey; furthermore, we have limited this sample to galaxies having redshifts in the range $7,500$ km s^{-1} $\leq cz_{\rm cmb} < 50,000$ km s^{-1} and luminosities in the range $-22.5 \leq M_R - 5\log h < -17.5$. To avoid CG member incompleteness at the extremal distances of the sample, only groups within the range $10,000$ km s^{-1} $\leq cz_{\rm cmb} <$ $45,000$ km s^{-1} were admitted into the final LCCG catalog.

We identify CGs as linked sets of neighboring galaxies. A seed galaxy i is selected which has not yet been classified as either a CG member or an isolated galaxy. Every other non-classified galaxy j in the survey sample is then tested to see if it lies within a projected separation $D_{\rm L}$ and a velocity difference $V_{\rm L}$ of the seed galaxy:

$$D_{ij} = 2D_{\rm ave}\sin(\Theta_{ij}/2) \leq D_{\rm L} \text{ and} \tag{1}$$

$$V_{ij} = c \times |z_i - z_j| \leq V_{\rm L}, \tag{2}$$

where $D_{\rm ave} \equiv (D(z_i) + D(z_j))/2$ and Θ_{ij} is the angular separation between the two galaxies. The comoving distances $D(z)$ are calculated assuming $q_0 = 0.5$ and $H_0 = h \times 100$ km s^{-1} Mpc^{-1} ($h \equiv H_0/100$ km s^{-1} Mpc^{-1}), and the redshifts z are corrected for motion relative to the dipole moment of the cosmic microwave background (CMB; Lineweaver et al. 1996).

If no companions are found within $D_{\rm L}$ and $V_{\rm L}$ of the seed galaxy, it is assigned "isolated" status and another seed galaxy is sought. If companions are found, they are added along with the seed galaxy to a list of CG members forming a new group. In turn, the surroundings of each of these companions are combed for the next level of "friends." This loop is repeated until no further companions are located, and the process is begun again by pursuing another seed galaxy. The CG catalog is complete only once every galaxy in the redshift sample has been classified as either "isolated" or "grouped." Only those groups containing three or more members are included in the final catalog.

Following Barton et al. (1996), we chose values of $D_{\rm L}$ and $V_{\rm L}$ which would produce a catalog of LCRS compact groups which had physical properties similar to those of the HCGs. Our definition was as follows:

- low membership: number of group members $N_{\rm tot} \geq 3$ galaxies,
- compact: projected inter–galaxy separation of $D_{ij} \leq D_{\rm L} = 50h^{-1}$ kpc ($\sim$ 1 galaxy diameter), and
- isolated: inter–galaxy velocity difference $V_{ij} \leq V_{\rm L} = 1000$ km s^{-1}

Using these criteria a total of 76 CGs were identified by a systematic search of the LCRS, each CG having three or more member galaxies. The total number of galaxies contained witin the set of LCCGs is 253.

4. Compact Group Catalog

We list the properties of all the LCCGs in Table (2). Tabulated are the following:

Column (1): a running identification number.

Columns (2 & 3): the group's right ascension and declination (1950 coordinates).

Column (4): $z_{\rm cmb}$, the group's redshift.

Column (5): $N_{\rm tot}$, the number of galaxies in the group.

Column (6): $R_{\rm p}$, the group's mean pairwise separation.

Column (7): $R_{\rm h}$, the group's harmonic radius.

Column (8): $L_{\rm tot}$, the group's LCRS R-band total luminosity, corrected for galaxies outside the LCRS's photometric limits. (Since several other group catalogs have photometry in the de Vaucouleurs B_0 band, it is useful to note this rough conversion relation: $L_{\rm LCRS} \approx 1.1 L_{B_0}$.)

Column (9): $L_{\rm rat}$, the ratio by which the observed group members' summed luminosities must be multiplied to obtain $L_{\rm tot}$.

Column (10): $\Theta_{\rm G}$, the angular radius of the smallest circle which includes all the group's members.

Column (11): $R_{\rm G}$, the physical radius of the smallest circle which includes all the group's members.

Column (11): the type of field in which the group sits ("1" = a 50-fiber field, "2" = a 112-fiber field).

Column (12): A column to reference any applicable notes for the group:

a: the group's barycenter is closer than $2R_{\rm p}$ to a slice edge.
b: the group contains at least one 55 arcsec "orphan" with a mock redshift.

Further details in how these properties were measured can be found in Tucker et al. (2000), which describes a catalog of LCRS *loose* groups.

4.1. Group Members

Table 3 lists the members of each group. Column (1) provides a group member identification, where the letter "a" represents the brightest group member, the letter "b" the second brightest group member, and so on. Columns (2 & 3) list the group member's right ascension and declination in 1950.0 coordinates. The LCRS R-band isophotal magnitude for the group member is given in Column (4), and its velocity is listed in Col. (5). As noted earlier, in generating the LCLG catalog, each 55-arcsec "orphan" was assigned a mock velocity equal to the gaussian-convolved velocity of its nearest neighbor (a gaussian of σ=200 km s^{-1} was used); this mock velocity is listed in this column for 55-arcsec "orphan" group members.

Using the R-band magnitude of the LCRS (m_R) and the measured spectroscopic redshift, a photometric redshift relation was also derived. A first order least square fit was made to the data ($0.03\pm0.001 \times m_R$ - 0.43 ± 0.028; see Fig. 1). This magnitude–redshift relation was then re–applied to each CG member with a mock velocity; the resulting photometric redshift, $z_{\rm photo}$, is listed in Col. (6).

Finally, in Col. (7), we provide a qualitative description of the group member's spectrum:

c: a "continuum" spectrum (i.e., a spectrum with no strong emission line features),

e: a spectrum containing strong emission lines,

b: a spectrum which shows both absorption lines (as in a continuum spectrum) and weak emission lines, and

m: a 55-arcsec "orphan" with a mock redshift.

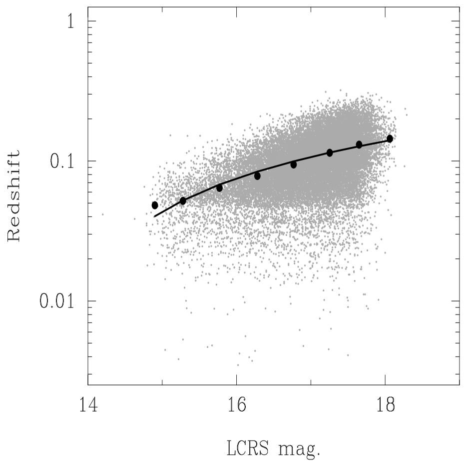

Fig. 1: R-band magnitude vs. measured (i.e., spectroscopic) redshift for galaxies in the LCRS spectroscopic sample. The solid line represents the linear fit. The filled circles denote the median redshift for a given magnitude bin.

4.2. The LCCG Atlas

For each of the 76 LCCGs, we have created an atlas image with the following characteristics (see Fig. 4):

- Each atlas image is a 100 pixel×100 pixel "postage stamp" with a resolution of 1.7 arcsec pixel^{-1} (obtained from the Digitized Sky Survey, courtesy of SkyView).
- Within each atlas image, the identified group members are labelled by their lowercase letter designation (a, b, c, ...; see Table 3).
- Within each atlas image, the group barycenter is marked by a "×".

Note that in many of these fields there are galaxies which are *not* identified as group members. These galaxies are either outside the photometric limits of the LCRS redshift catalog, and/or members of a loose group or rich cluster in which the LCCG is embedded, and/or 55 arcsec "orphans" which have been accidentally excluded from the LCCG.

5. Properties of LCCGs

5.1. Compact Groups and Large–Scale Structure

The cone diagrams in Figures (2A–D) show the positions of the LCCGs and their individual group members for the LCRS Northern and Southern Galactic Cap regions. Note that the distribution of LCCGs is non-random: from comparison with cone diagrams of all LCRS galaxies (Shectman et al. 1996), it is clear that the LCCGs (and the LCCG members) trace many of the same large-scale structures, albeit much more sparsely. This is not too surprising, since one would not expect to find CGs where where there are no galaxies. On the other hand, this adds fuel to the arguments that CGs are not truly isolated, and that many of them may just be chance alignments along the line-of-sight of large-scale filamentary structures and/or that they may form continuously within loose groups or rich clusters of galaxies (Mamon 1986, Hernquist et al. 1995, Diaferio et al. 1994). [Due to the significant differences between the star formation properties of loose group galaxies and compact group galaxies (e.g., Allam et al. 1999), the latter scenario – in which CGs are real substructures within loose groups and rich clusters and not merely chance alignments – is the more likely.]

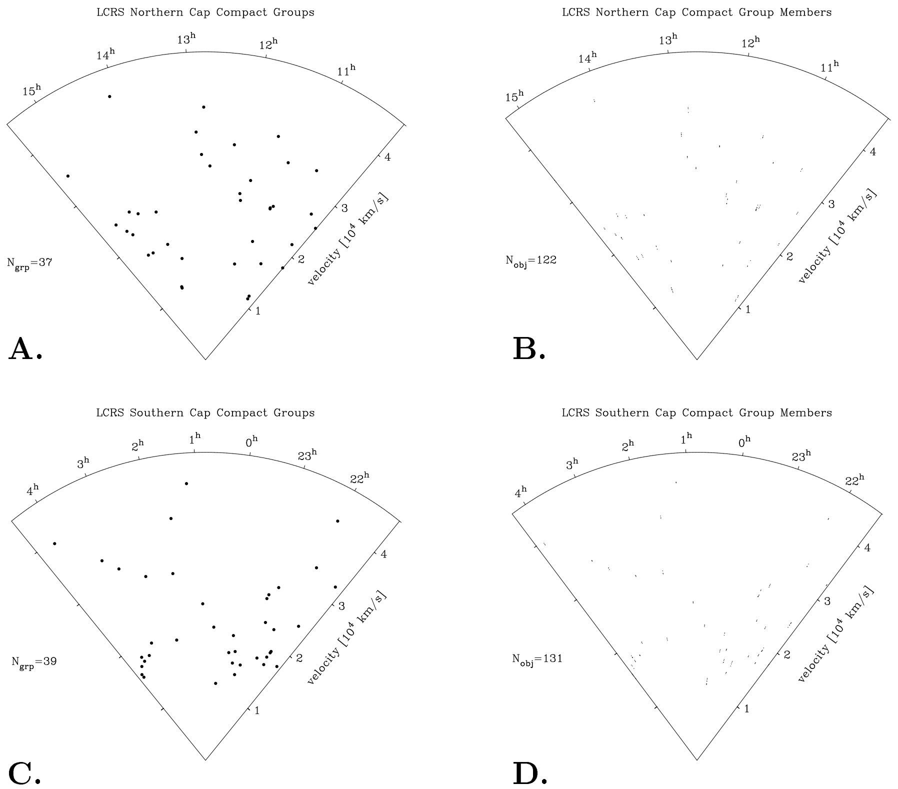

Fig. 2: The cone diagrams of LCCGs in the Northern (top), and Southern (bottom) Galactic Cap.

5.2. Environments of Compact Groups

We have examined the regions around the LCCGs visually using images from the Digitized Sky Survey and by using the NED database. We have also correlated the positions of these CGs with the catalog of loose groups of galaxies by Tucker et al. (2000). From these investigations, we have found the following:

- $\sim 1/3$ of LCCGs are "isolated," lying outside group or cluster environments,
- $\sim 1/3$ of LCCGs are embedded within poor loose groups of galaxies, and
- $\sim 1/3$ of LCCGs are embedded within rich, Abell-class clusters.

5.3. Comparison with Other Compact Group Catalogs

It is instructive to compare the LCCG catalog with CG catalogs derived from other galaxy redshift surveys, like that by Barton et al. (1996) (the RSCG catalog), and those based upon sky surveys (e.g., the HCG catalog). Table 1 and Figure 3 summarize the properties of the 76 LCCGs, the 92 HCGs, and the 89 RSCGs. Note that, for the most part, all three catalogs contain systems with very similar physical properties. There are, however, two areas in which the catalogs differ. First, the HCG catalog contains a smaller fraction of triplets than do either the LCCG or the RSCG catalogs, a result of a different population threshold originally for the HCG catalog. (Groups were only admitted to the HCG catalog from the POSS plates if they contained at least four galaxies; groups were only admitted to the LCLG and the RSCG samples if they contained at least three galaxies.) Second, the LCCG catalog is much deeper on average than either of the other two CG catalogs, which is due to the depth of the LCRS itself.

Table 1: Compact Groups Physical Parameters

Parameter	LCCGs		HCGs		RSCGs	
	mean	median	mean	median	mean	median
$N_{\rm tot}$	3.28±0.069	3	4.15±0.10	4	3.65±0.14	3
$z_{\rm cmb}$	0.08±0.003	0.079	0.03±0.002	0.03	0.013±0.001	0.014
$\theta_{\rm G}$ [deg]	0.016±0.0009	0.0131	0.0601±0.0005	0.0483	...	...
$R_{\rm G}$ [h^{-1} kpc]	26.31±1.00	26.0	24.69±1.53	21.76	29.99±1.63	26.90
$R_{\rm p}$ [h^{-1} Mpc]	0.05±0.002	0.05	0.05±0.02	0.05	...	...
$R_{\rm h}$ [h^{-1} Mpc]	0.05±0.002	0.05	0.06±0.004	0.05	...	...
L [$10^{10} L_\odot h^{-2}$]	7.24±1.08	7.4*	7.4±0.54*	6.5	...	...

* The HCG total luminosities were converted to the LCRS R-band assuming $L_{\rm LCRS} \approx 1.1 L_{B_0}$.

6. Conclusions

We have applied a "friends-of-friends" group identification algorithm (Huchra & Geller 1982) to the Las Campanas Redshift Survey (LCRS) in order to produce a catalog of compact groups (CGs) physically similar to those of the Hickson (1982) catalog. We defined these Las Campanas Compact Groups (LCCGs) by the following criteria: $N_{\rm tot} \geq 3$ galaxies, with projected separations of $D \leq D_{\rm L} = 50h^{-1}$ kpc (~ 1 galaxy diameter) and velocity differences of $V \leq V_{\rm L} = 1000$ km s^{-1}. As a result, we extracted a catalog of 76 LCCGs, each containing 3 or more galaxies. The total number of galaxies in the LCCG sample is 253. All the LCCGs contain at least 1 spectroscopically determined redshift; 23 contain 2 or more. The mean redshift of LCCGs is $z_{\rm cmb} \sim 0.08$.

We have evaluated the physical characteristics of the LCCGs and have found the following:

- The main physical properties of the LCCGs (membership, linear size, total group luminosity) are similar to those of HCGs.
- The median redshift is $\sim$0.08, more than twice that of either the HCG or the Barton et al. (1996) catalogs.
- Only about one-third of LCCGs are isolated; the remaining two-thirds are embedded within loose groups or clusters.

We therefore conclude that the catalog of LCCGs is a useful addition to the study of compact groups. We further conclude that, although a significant minority of compact groups appear to be truly isolated, the majority of these systems are in reality dense substructures within larger galaxy associations (e.g., loose groups and rich clusters).

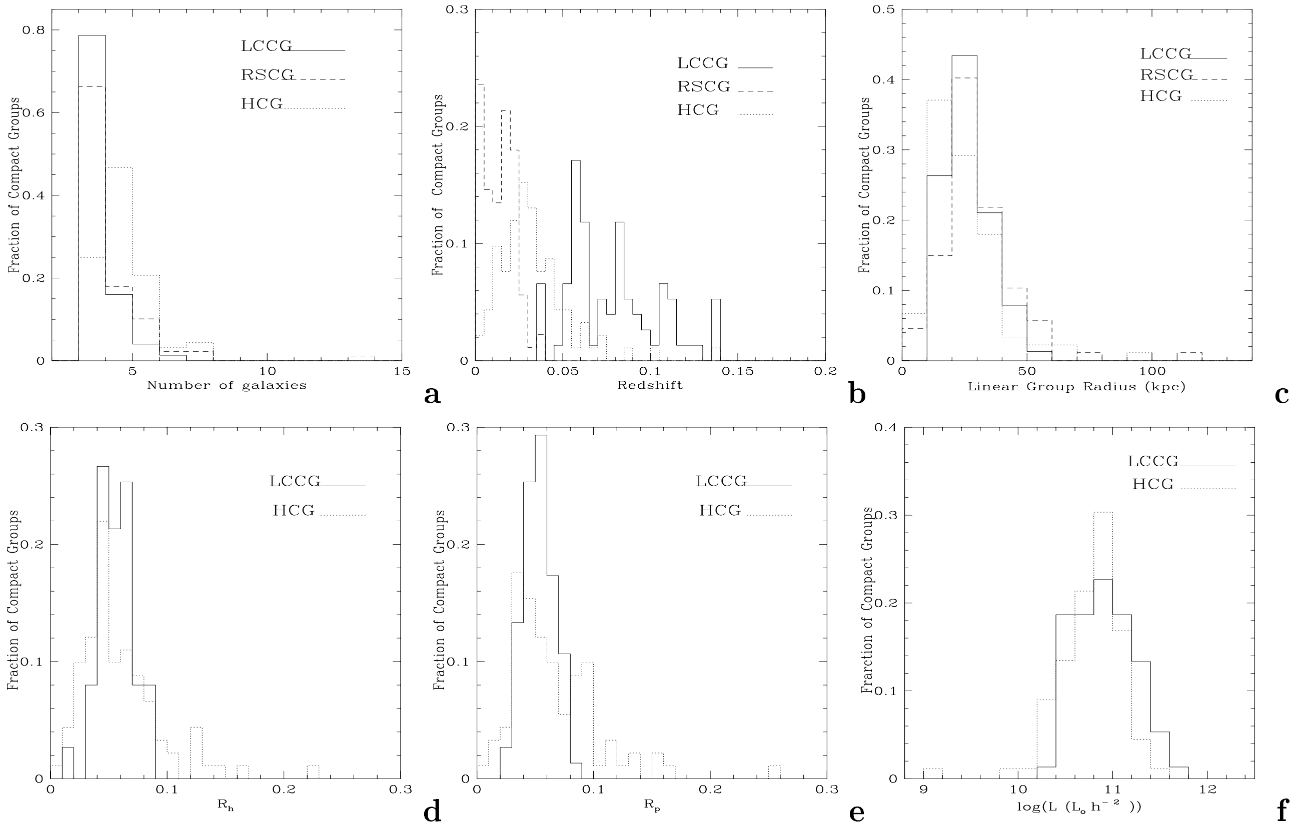

Fig. 3: (a) The distribution of group populations, $N_{\rm tot}$, (b) the distribution of group redshifts, $z_{\rm cmb}$, (c) the distribution of linear group radii, $R_{\rm G}$, (d) the distribution of harmonic radii, $R_{\rm h}$, (e) the distribution of mean pairwise separations, $R_{\rm p}$, and (f) the distribution of total group luminosities, $L_{\rm tot}$, for LCCGs (solid line), RSCGs (dashed line), and HCGs (dotted line). Each distribution is normalized to the total number of CGs in each sample. For (f), the luminosities of the HCGs were converted to LCRS R-band luminosities assuming $L_{\rm LCRS} \approx 1.1 L_{B_0}$.

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Addresses of the authors:

Allam, S., Helwan, Cairo, Egypt, sallam@fnal.gov
Tucker, D., Batavia, Illinois, USA, dtucker@fnal.gov

Table 2: The main properties of the Las Campanas Compact Groups (LCCGs).

N	RA	DEC	z_{cmb}	N_{tot}	R_P	R_h	L	L_{rat}	θ_G	R_G	Type	Notes
	(1950)				Mpc h^{-1}		$L_\odot\ h^{-2}$			Mpc h^{-1}		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
01	00 22 04.59	-45 34 16.0	0.0666	3	0.04	0.05	0.63E11	1.91	0.0132	0.0411	2	b
02	00 45 49.54	-42 17 07.0	0.0780	4	0.07	0.08	0.18E12	6.12	0.0245	0.0875	1	b
03	01 04 07.90	-44 35 11.9	0.1384	3	0.04	0.05	0.15E12	3.01	0.0064	0.0370	2	b
04	01 21 20.48	-39 29 51.7	0.1217	3	0.06	0.06	0.18E12	4.64	0.0112	0.0585	2	b
05	01 39 07.37	-44 51 02.5	0.0948	3	0.05	0.05	0.55E11	2.17	0.0121	0.0511	2	b
06	02 00 24.78	-45 01 18.8	0.0620	3	0.04	0.04	0.29E11	1.98	0.0114	0.0332	2	b
07	02 27 01.50	-44 40 42.5	0.0972	3	0.06	0.08	0.16E12	4.34	0.0142	0.0615	1	b
08	02 50 11.91	-39 06 40.7	0.1050	3	0.04	0.05	0.12E12	2.46	0.0095	0.0436	2	b
09	02 53 17.43	-39 26 33.2	0.0646	3	0.05	0.06	0.71E11	1.79	0.0185	0.0561	2	b
10	03 18 32.39	-42 26 33.9	0.1138	3	0.06	0.07	0.16E12	5.02	0.0131	0.0646	2	b
11	03 20 27.75	-41 32 01.7	0.0601	4	0.05	0.04	0.38E11	4.31	0.0261	0.0741	2	b
12	03 30 26.56	-38 18 06.3	0.0585	3	0.02	0.03	0.63E11	2.72	0.0092	0.0256	2	b
13	03 33 22.62	-38 50 10.9	0.0611	4	0.07	0.08	0.89E11	3.43	0.0294	0.0846	2	b
14	03 57 48.08	-41 28 00.8	0.0581	3	0.07	0.08	0.67E11	1.72	0.0293	0.0808	2	ab
15	04 17 01.69	-42 17 12.5	0.0554	3	0.05	0.05	0.28E11	1.86	0.0197	0.0520	2	b
16	04 17 08.65	-42 19 16.7	0.0537	3	0.07	0.07	0.60E11	1.92	0.0281	0.0720	2	b
17	04 19 34.59	-45 22 10.0	0.1391	3	0.03	0.04	0.24E12	4.67	0.0049	0.0283	2	b
18	10 04 30.11	-05 22 43.2	0.0598	3	0.03	0.03	0.67E11	2.37	0.0085	0.0241	2	b
19	10 04 52.96	-05 26 35.4	0.0854	3	0.04	0.05	0.12E12	2.53	0.0120	0.0465	2	b
20	10 17 28.72	-03 37 33.5	0.0718	3	0.04	0.04	0.57E11	2.33	0.0109	0.0364	2	b
21	10 20 42.80	-05 37 23.6	0.0897	3	0.04	0.04	0.25E12	7.17	0.0094	0.0380	1	b
22	10 26 21.32	-02 59 02.0	0.0370	3	0.05	0.04	0.23E11	3.41	0.0306	0.0555	2	b
23	10 27 38.03	-02 54 40.0	0.0385	3	0.06	0.06	0.34E11	3.42	0.0296	0.0557	2	
24	10 43 30.75	-02 18 43.3	0.1095	3	0.05	0.06	0.86E11	2.78	0.0105	0.0502	2	b
25	10 44 05.36	-11 22 00.7	0.0555	3	0.04	0.04	0.30E11	2.01	0.0158	0.0418	2	b
26	11 09 48.15	-02 53 10.1	0.0837	3	0.04	0.04	0.11E12	2.56	0.0105	0.0399	2	b
27	11 12 14.34	-06 05 40.1	0.0818	4	0.05	0.06	0.32E12	6.10	0.0158	0.0588	1	b
28	11 12 49.75	-03 38 04.0	0.0824	5	0.08	0.07	0.91E11	2.62	0.0299	0.1123	2	b
29	11 13 19.86	-11 17 30.0	0.1069	3	0.05	0.05	0.13E12	2.85	0.0124	0.0581	2	ab
30	11 18 31.24	-02 28 30.8	0.0636	3	0.03	0.03	0.29E11	1.52	0.0088	0.0263	2	b
31	11 32 18.84	-12 21 49.7	0.1177	3	0.07	0.08	0.20E12	3.81	0.0142	0.0718	2	b
32	11 37 36.45	-03 04 56.0	0.0500	3	0.03	0.01	0.32E11	2.73	0.0120	0.0289	2	b
33	11 48 38.04	-02 45 01.6	0.0923	3	0.04	0.04	0.14E12	3.49	0.0089	0.0367	2	b
34	11 55 36.56	-02 16 40.4	0.0815	5	0.07	0.06	0.91E11	1.58	0.0226	0.0838	2	ab
35	11 58 19.59	-11 24 12.0	0.0849	3	0.05	0.06	0.41E11	1.79	0.0136	0.0523	2	b
36	12 14 29.53	-02 55 20.5	0.1083	5	0.06	0.06	0.19E12	3.11	0.0165	0.0781	2	b
37	12 40 35.33	-11 57 26.3	0.0971	3	0.03	0.04	0.11E12	2.86	0.0067	0.0288	2	b
38	12 47 00.38	-06 04 39.3	0.1259	3	0.06	0.06	0.51E12	8.04	0.0124	0.0661	1	b
39	12 50 23.74	-11 48 44.0	0.1028	3	0.04	0.05	0.66E11	2.72	0.0098	0.0443	2	b
40	12 55 27.92	-11 52 54.3	0.1141	4	0.05	0.06	0.15E12	4.01	0.0136	0.0674	2	b
41	13 38 56.05	-11 50 54.0	0.0521	3	0.03	0.04	0.61E11	2.55	0.0134	0.0335	2	b
42	13 59 03.99	-11 24 02.2	0.0378	3	0.05	0.06	0.24E11	2.62	0.0303	0.0561	2	b
43	13 59 07.57	-11 19 48.3	0.0385	4	0.06	0.04	0.38E11	2.62	0.0424	0.0801	2	ab
44	13 59 09.10	-03 30 16.2	0.0777	3	0.04	0.04	0.57E11	1.66	0.0118	0.0420	2	b
45	13 59 39.23	-12 00 37.5	0.0609	3	0.04	0.05	0.25E11	1.74	0.0146	0.0421	2	b
46	14 05 02.25	-02 21 21.1	0.1398	3	0.05	0.05	0.22E12	3.84	0.0087	0.0506	2	b
47	14 24 18.60	-03 16 20.8	0.0802	3	0.04	0.04	0.37E11	1.48	0.0100	0.0367	2	b
48	14 32 03.24	-11 36 40.3	0.0597	3	0.05	0.06	0.40E11	1.58	0.0189	0.0533	2	b
49	14 34 34.73	-03 33 09.2	0.0829	3	0.05	0.05	0.90E11	3.49	0.0118	0.0447	1	b
50	14 39 54.52	-03 43 10.0	0.0594	4	0.04	0.04	0.56E11	1.88	0.0154	0.0434	2	ab

Table 2: The main properties of LCCGs (continued)

N	RA	DEC	z_{cmb}	N_{tot}	R_P	R_h	L	L_{rat}	θ_G	R_G	Type	Notes
	(1950)				Mpc h^{-1}		$L_\odot$ h^{-2}			Mpc h^{-1}		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(l2)	(13)
51	14 45 53.00	-03 02 52.0	0.0721	4	0.05	0.05	0.38E11	1.43	0.0153	0.0512	2	b
52	14 50 56.82	-02 42 21.6	0.0751	3	0.04	0.04	0.32E11	1.42	0.0114	0.0395	2	b
53	15 02 13.21	-11 17 40.0	0.0812	3	0.03	0.04	0.50E11	1.66	0.0092	0.0339	2	b
54	15 12 28.56	-02 35 25.1	0.1144	3	0.06	0.06	0.18E12	2.89	0.0110	0.0545	2	b
55	21 15 47.19	-42 01 53.5	0.1086	3	0.07	0.07	0.71E11	2.38	0.0141	0.0668	2	b
56	21 18 31.69	-45 42 08.5	0.0825	6	0.04	0.04	0.11E12	1.94	0.0143	0.0536	2	b
57	21 19 32.20	-39 44 04.4	0.0589	3	0.06	0.07	0.50E11	1.96	0.0242	0.0674	2	ab
58	21 40 03.50	-45 41 58.0	0.0564	3	0.04	0.05	0.19E11	2.54	0.0173	0.0465	2	b
59	21 49 26.48	-42 09 48.6	0.0635	3	0.07	0.08	0.32E11	1.73	0.0270	0.0806	2	b
60	21 49 47.88	-42 10 19.3	0.0627	3	0.04	0.04	0.26E11	1.76	0.0146	0.0431	2	b
61	21 57 06.40	-44 29 56.7	0.1369	3	0.05	0.05	0.24E12	5.06	0.0087	0.0499	2	b
62	21 57 18.48	-39 24 51.9	0.0598	3	0.05	0.05	0.31E11	2.10	0.0206	0.0583	2	b
63	22 03 03.62	-38 20 38.4	0.1107	3	0.05	0.06	0.73E11	2.77	0.0113	0.0546	2	b
64	22 05 17.85	-44 19 43.5	0.0738	3	0.03	0.04	0.61E11	2.42	0.0103	0.0352	2	b
65	22 08 10.33	-45 41 43.2	0.0574	3	0.06	0.06	0.38E11	2.49	0.0225	0.0611	2	ab
66	22 32 51.14	-41 45 22.2	0.0749	3	0.05	0.06	0.97E11	2.24	0.0134	0.0462	2	b
67	22 35 58.12	-41 41 01.0	0.0935	4	0.05	0.01	0.91E11	2.77	0.0124	0.0520	2	b
68	22 42 37.18	-45 19 55.3	0.0886	4	0.06	0.06	0.14E12	3.60	0.0163	0.0651	2	b
69	22 47 20.97	-42 12 13.0	0.0862	3	0.05	0.05	0.60E11	2.33	0.0138	0.0540	2	b
70	22 47 45.66	-45 37 41.4	0.0507	4	0.05	0.06	0.69E11	3.82	0.0263	0.0640	2	b
71	22 59 13.84	-41 33 06.9	0.0451	3	0.06	0.06	0.31E11	2.40	0.0282	0.0617	2	b
72	23 16 37.14	-42 15 28.2	0.0503	4	0.03	0.03	0.73E11	4.85	0.0124	0.0299	2	b
73	23 17 50.01	-42 04 11.4	0.0562	3	0.03	0.03	0.13E12	4.44	0.0116	0.0310	2	b
74	23 33 22.26	-38 51 26.5	0.0638	3	0.02	0.03	0.49E11	2.55	0.0080	0.0239	2	b
75	23 35 36.46	-38 44 48.7	0.0550	3	0.06	0.07	0.55E11	2.73	0.0259	0.0678	2	b
76	23 59 44.84	-44 16 49.3	0.0387	7	0.06	0.06	0.81E11	3.07	0.0375	0.0711	2	ab

(1)	Running group ID number.	(8)	Luminosity in the LCRS R-band
(2)	Right ascension	(9)	Observed-to-total luminosity correction factor
(3)	Declination	(10)	Radius of the smallest circle including all members (in deg)
(4)	Redshift	(11)	Radius of the smallest circle including all members (in Mpc)
(5)	Number of group member galaxies	(12)	The type of CG (see text)
(6)	Mean pairwise separation	(13)	Comments
(7)	Harmonic radius		

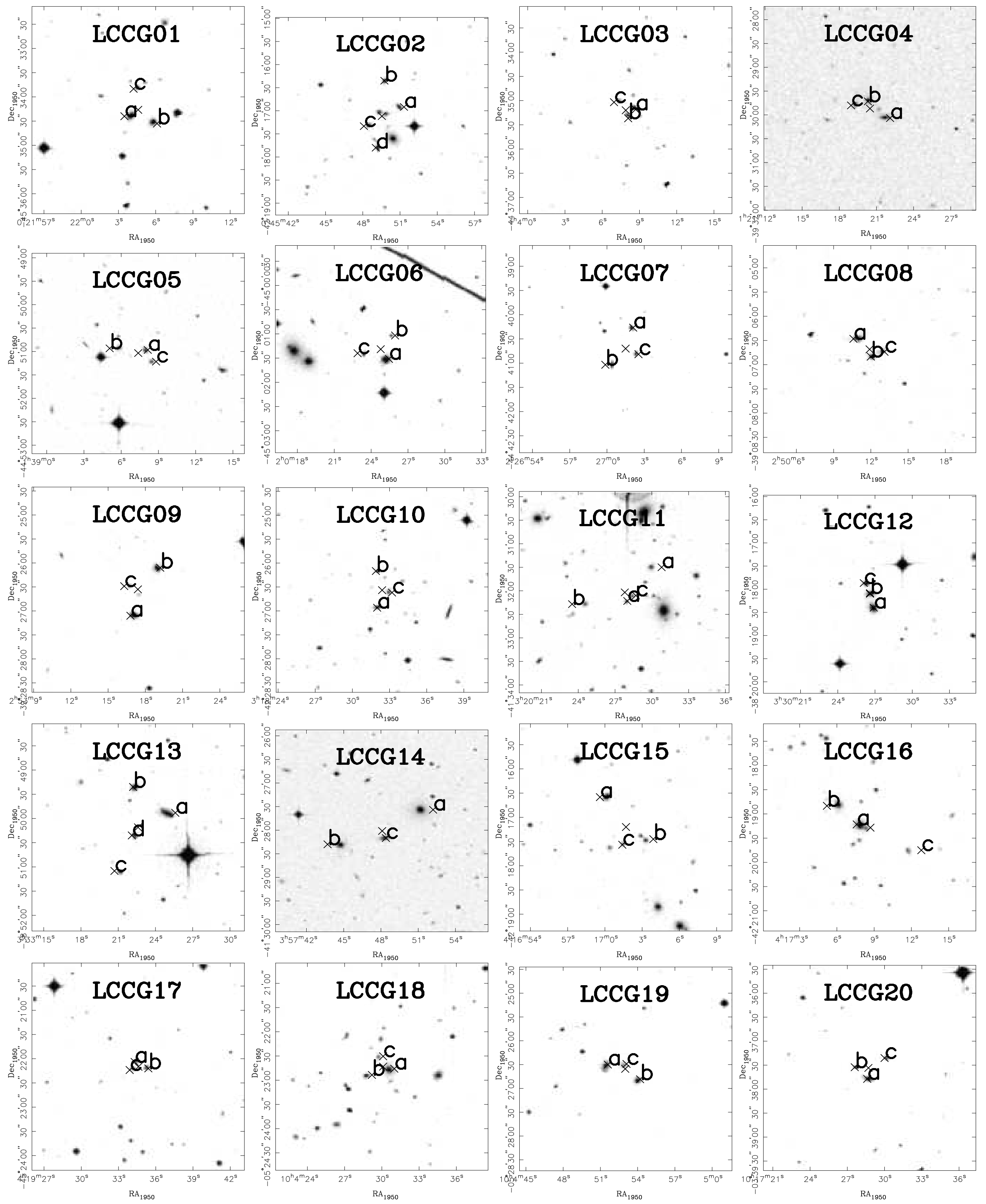

Fig. 4: Galaxy identification for the Las Campanas Compact Groups (LCCGs).

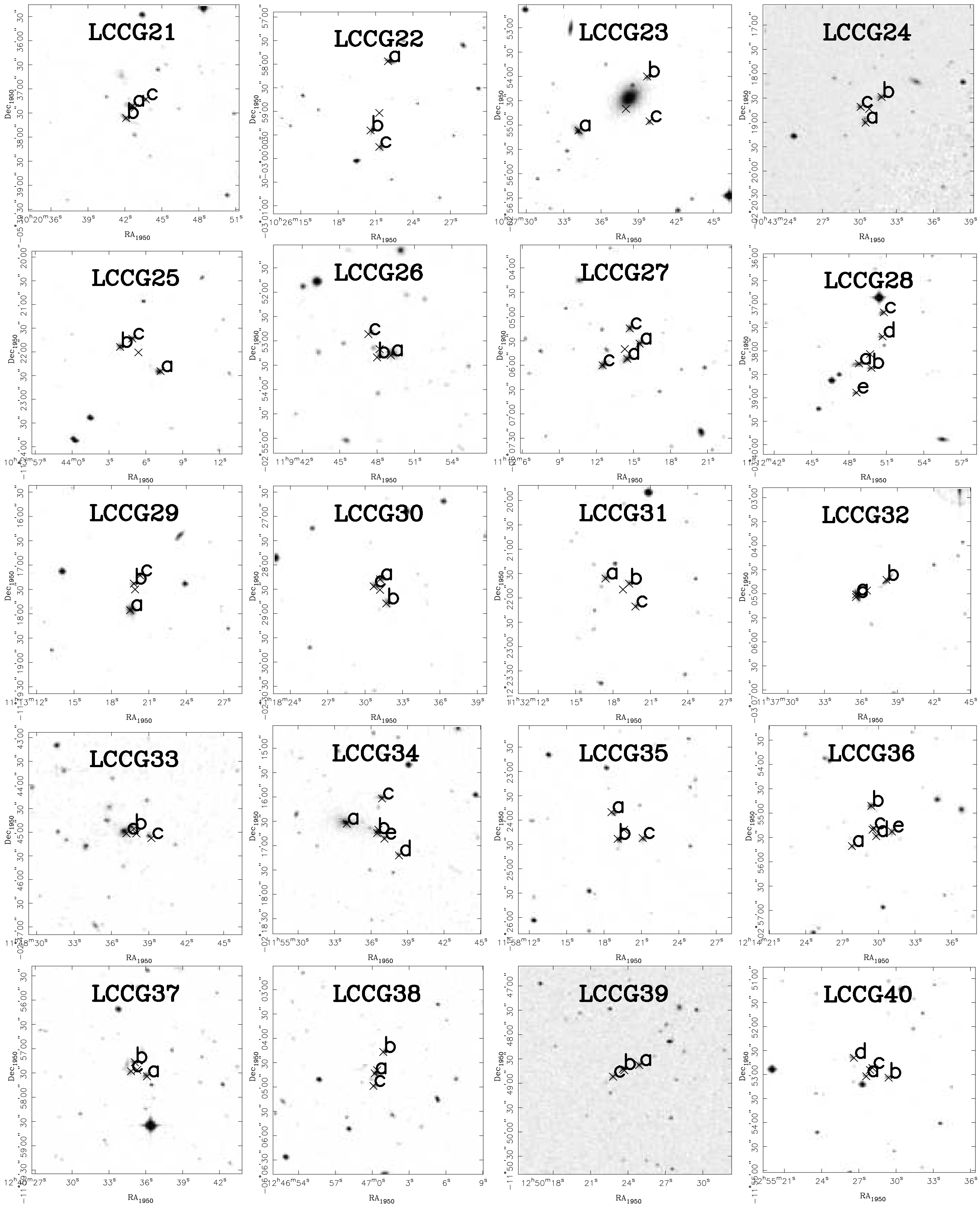

Fig. 4: Continued

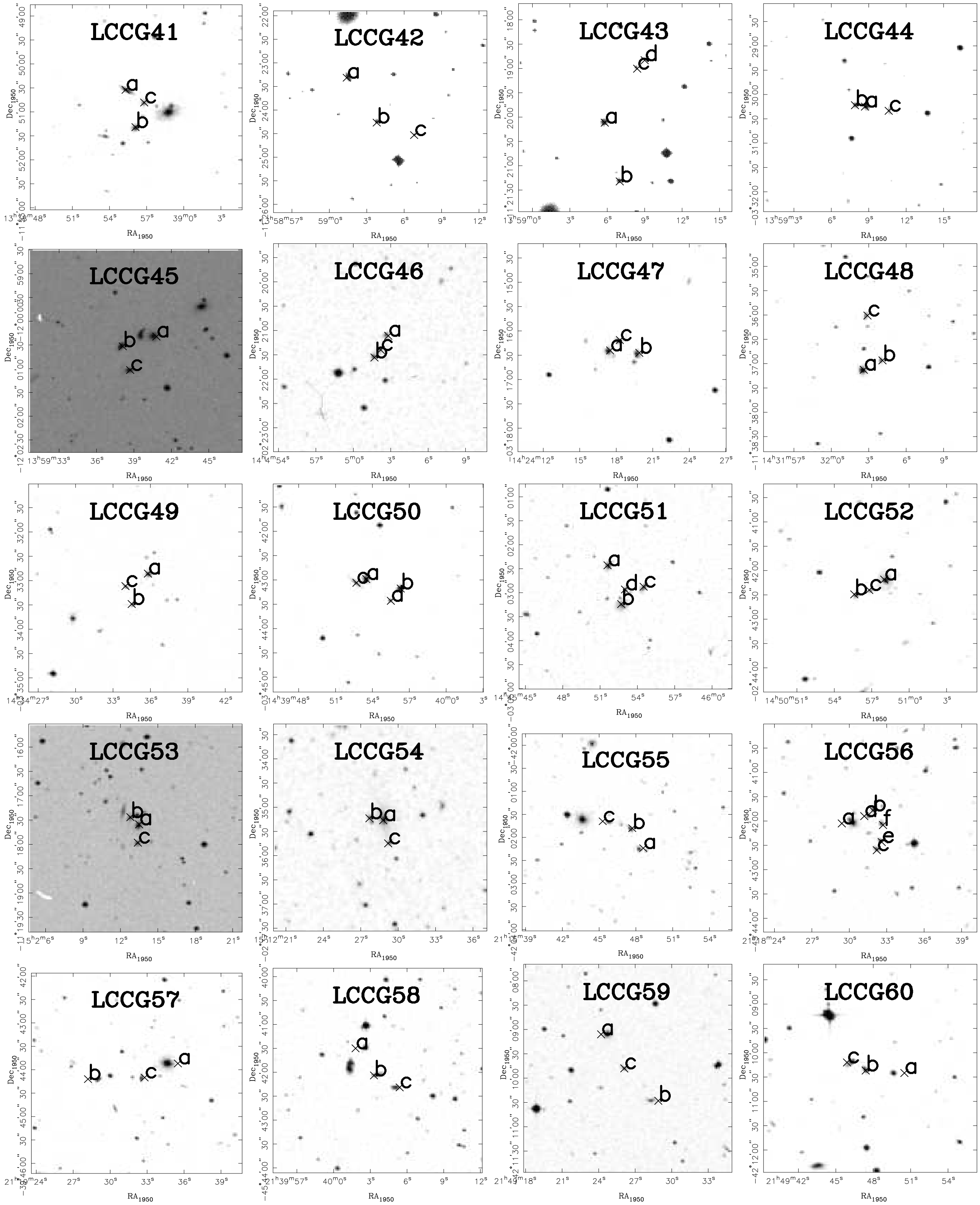

Fig. 4: Continued

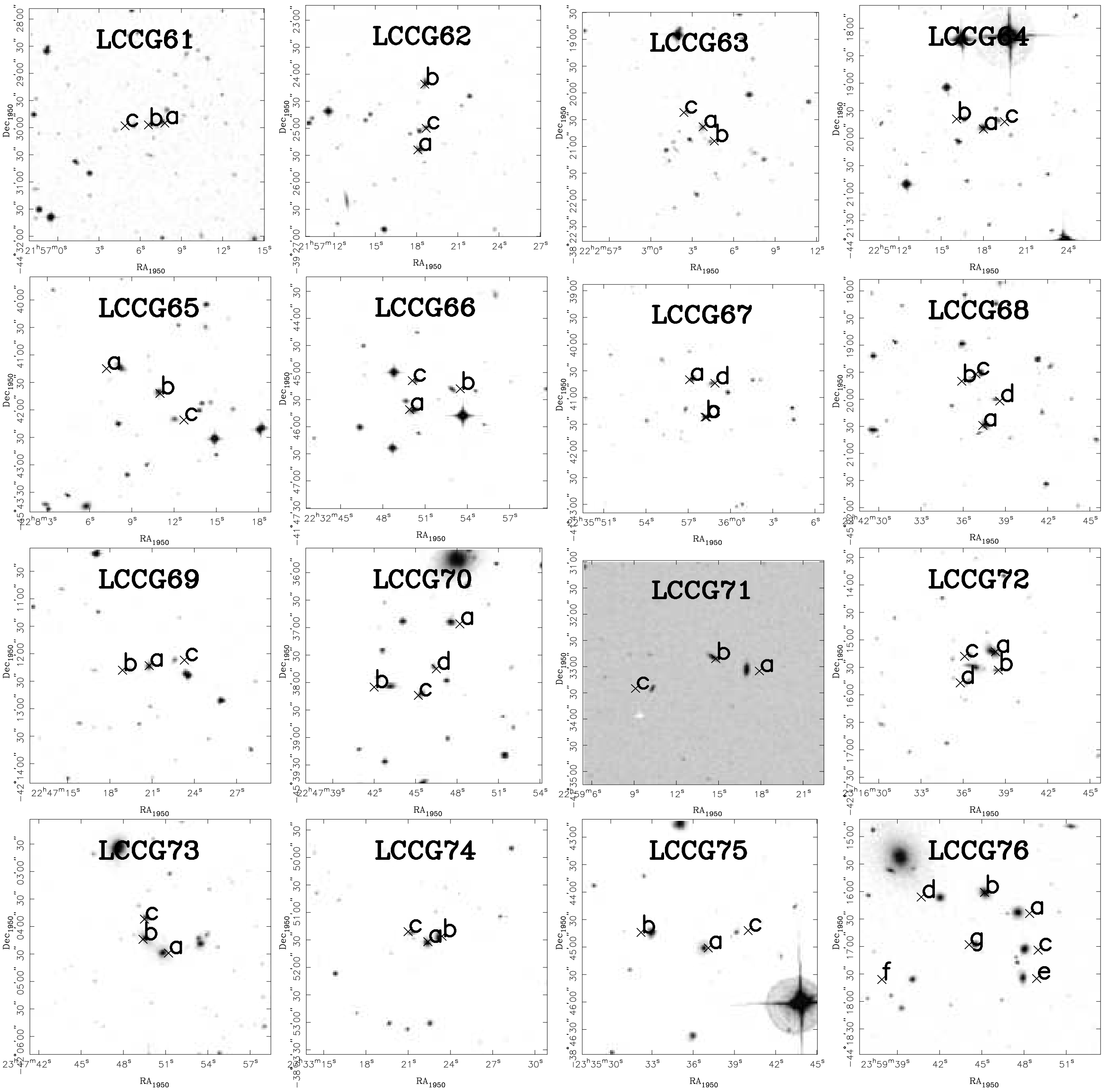

Fig. 4: Continued

Table 3: Compact Group Members

ID	RA	Dec	mag	velocity		
				vel	z_{photo}	Notes
(1)	(2)	(3)	(4)	(5)	(6)	(7)
01a	00 22 03.48	-45 34 24.2	15.57	20298	0.06	m
01b	00 22 06.11	-45 34 32.8	15.90	20039	0.07	c
01c	00 22 04.22	-45 33 50.3	17.18	20202	0.11	m
02a	00 45 51.32	-42 16 55.0	16.40	23516	0.09	m
02b	00 45 49.74	-42 16 20.7	16.85	23670	0.10	c
02c	00 45 48.09	-42 17 19.6	16.86	23690	0.10	c
02d	00 45 49.05	-42 17 48.1	17.41	23528	0.12	m
03a	01 04 08.69	-44 35 11.2	17.01	41687	0.11	m
03b	01 04 08.09	-44 35 21.6	17.31	41731	0.12	b
03c	01 04 06.95	-44 35 02.5	17.66	41621	0.13	m
04a	01 21 22.10	-39 30 04.0	16.93	36618	0.10	c
04b	01 21 20.31	-39 29 42.7	17.34	36894	0.12	m
04c	01 21 18.95	-39 29 47.9	17.63	36597	0.13	m
05a	01 39 08.14	-44 50 57.9	16.80	28497	0.10	c
05b	01 39 05.07	-44 50 56.1	17.15	28395	0.11	m
05c	01 39 08.81	-44 51 13.0	17.51	28861	0.12	m
06a	02 00 25.45	-45 01 31.2	15.99	18933	0.07	m
06b	02 00 25.95	-45 01 01.7	17.48	18548	0.12	m
06c	02 00 22.90	-45 01 24.4	17.52	18748	0.12	c
07a	02 27 02.11	-44 40 16.4	16.60	29379	0.09	m
07b	02 26 59.87	-44 41 01.5	16.63	29180	0.10	c
07c	02 27 02.54	-44 40 48.9	17.07	29287	0.11	m
08a	02 50 10.57	-39 06 27.8	16.35	31433	0.09	m
08b	02 50 12.01	-39 06 49.9	16.44	31723	0.09	b
08c	02 50 13.10	-39 06 43.7	17.44	31723	0.12	m
09a	02 53 16.75	-39 27 05.7	15.18	19585	0.05	m
09b	02 53 19.25	-39 26 06.0	15.64	19373	0.06	m
09c	02 53 16.34	-39 26 28.8	17.54	19533	0.12	c
10a	03 18 31.98	-42 26 55.5	16.92	34266	0.10	m
10b	03 18 31.94	-42 26 09.9	17.37	34195	0.12	m
10c	03 18 33.25	-42 26 36.6	17.62	34138	0.13	c
11a	03 20 30.80	-41 31 30.1	17.11	18030	0.11	m
11b	03 20 23.54	-41 32 16.9	17.58	18153	0.13	m
11c	03 20 28.66	-41 32 06.2	17.76	18131	0.13	m
11d	03 20 28.03	-41 32 13.3	17.80	18097	0.13	c
12a	03 30 26.94	-38 18 23.7	15.65	17780	0.06	m
12b	03 30 26.64	-38 18 04.8	16.12	17624	0.08	c
12c	03 30 26.15	-38 17 51.8	16.93	17507	0.10	m
13a	03 33 25.61	-38 49 53.2	15.68	18299	0.07	m
13b	03 33 22.19	-38 49 21.4	16.30	18632	0.08	c
13c	03 33 20.68	-38 51 04.7	16.99	18394	0.11	m
13d	03 33 22.15	-38 50 21.1	17.50	18319	0.12	b
14a	03 57 52.19	-41 27 33.9	15.05	17749	0.05	c
14b	03 57 43.66	-41 28 18.1	15.80	17096	0.07	m
14c	03 57 48.40	-41 28 10.4	16.04	17567	0.08	c
15a	04 16 59.59	-42 16 35.1	15.84	16686	0.07	c
15b	04 17 03.90	-42 17 26.9	16.83	16836	0.10	c
15c	04 17 01.45	-42 17 33.6	17.32	16401	0.12	m
16a	04 17 07.56	-42 19 13.2	15.01	15854	0.04	c
16b	04 17 05.22	-42 18 49.8	15.44	15976	0.06	m
16c	04 17 12.78	-42 19 44.8	17.30	16571	0.12	c
17a	04 19 34.35	-45 22 03.7	17.07	41712	0.11	b
17b	04 19 35.42	-45 22 12.1	17.21	41921	0.11	m
17c	04 19 33.92	-45 22 14.1	17.51	41569	0.12	m
18a	10 04 30.99	-05 22 45.8	15.18	17827	0.05	m
18b	10 04 29.17	-05 22 53.5	16.52	17486	0.09	c
18c	10 04 30.15	-05 22 30.4	17.19	17452	0.11	m
19a	10 04 51.61	-05 26 30.0	15.84	25449	0.07	m
19b	10 04 54.19	-05 26 48.5	15.85	25154	0.07	b
19c	10 04 53.07	-05 26 29.2	17.62	25102	0.13	m
20a	10 17 28.57	-03 37 47.2	16.05	20997	0.08	m
20b	10 17 27.59	-03 37 32.6	16.77	21241	0.10	e
20c	10 17 29.99	-03 37 21.1	16.94	21245	0.10	m
21a	10 20 42.59	-05 37 21.1	16.29	26360	0.08	c
21b	10 20 42.12	-05 37 36.2	16.69	26532	0.10	m
21c	10 20 43.71	-05 37 12.9	17.00	26709	0.11	m
22a	10 26 22.02	-02 57 56.3	15.89	11157	0.07	c
22b	10 26 20.61	-02 59 24.3	16.88	10509	0.10	b
22c	10 26 21.34	-02 59 45.3	16.91	10526	0.10	m
23a	10 27 34.21	-02 55 06.7	15.17	10741	0.05	c
23b	10 27 39.72	-02 54 00.1	16.93	11419	0.10	c
23c	10 27 39.91	-02 54 55.3	17.15	11342	0.11	c
24a	10 43 30.45	-02 19 00.3	17.00	32500	0.11	c
24b	10 43 31.75	-02 18 28.7	17.17	32202	0.11	m
24c	10 43 30.06	-02 18 40.9	17.61	32658	0.13	m
25a	10 44 07.17	-11 22 24.4	16.08	16911	0.08	c
25b	10 44 03.95	-11 21 53.7	16.56	15996	0.09	c
25c	10 44 04.90	-11 21 43.2	17.03	15926	0.11	m
26a	11 09 49.08	-02 53 17.9	15.59	24652	0.06	c
26b	11 09 48.04	-02 53 20.4	16.85	25006	0.10	m
26c	11 09 47.34	-02 52 51.7	16.99	24475	0.11	m
27a	11 12 15.49	-06 05 33.4	16.15	24411	0.08	m
27c	11 12 12.52	-06 06 00.1	16.24	24236	0.08	m
27c	11 12 14.70	-06 05 14.6	16.61	23980	0.09	m
27d	11 12 14.50	-06 05 52.2	16.22	24010	0.08	c
28a	11 12 48.85	-03 38 16.2	16.38	24016	0.09	m
28b	11 12 49.80	-03 38 21.7	17.06	24161	0.11	m
28c	11 12 50.76	-03 37 10.6	17.14	24480	0.11	c
28d	11 12 50.65	-03 37 41.6	17.31	24849	0.12	m
28e	11 12 48.61	-03 38 53.3	17.43	24122	0.12	c

Table 3: Continued

ID	RA	Dec	mag	velocity		
				vel	z_{photo}	Notes
(1)	(2)	(3)	(4)	(5)	(6)	(7)
29a	11 13 19.49	-11 17 55.6	16.07	31626	0.08	m
29b	11 13 19.78	-11 17 22.9	17.18	31646	0.11	b
29c	11 13 20.28	-11 17 12.7	17.58	31735	0.13	m
30a	11 18 31.25	-02 28 17.8	16.35	18710	0.09	c
30b	11 18 31.74	-02 28 47.6	16.45	18825	0.09	m
30c	11 18 30.71	-02 28 26.5	16.80	18546	0.10	m
31a	11 32 17.36	-12 21 36.1	16.54	34885	0.09	m
31b	11 32 19.30	-12 21 42.5	17.04	35091	0.11	m
31c	11 32 19.84	-12 22 10.6	17.07	34772	0.11	c
32a	11 37 35.59	-03 05 00.9	16.45	14637	0.09	m
32b	11 37 38.13	-03 04 42.7	16.46	14709	0.09	b
32c	11 37 35.64	-03 05 04.1	16.62	14557	0.09	m
33a	11 48 37.18	-02 45 01.6	16.03	27412	0.08	c
33b	11 48 37.75	-02 44 55.5	16.83	27166	0.10	m
33c	11 48 39.18	-02 45 07.5	17.23	27388	0.11	m
34a	11 55 33.97	-02 16 33.0	15.53	24410	0.06	c
34b	11 55 36.55	-02 16 44.5	16.25	23776	0.09	m
34c	11 55 36.89	-02 16 01.9	16.70	24522	0.10	m
34d	11 55 38.26	-02 17 12.1	17.52	23803	0.12	c
34e	11 55 37.09	-02 16 51.4	17.62	23846	0.13	m
35a	11 58 18.63	-11 23 50.2	17.08	24863	0.11	m
35b	11 58 19.06	-11 24 23.1	16.66	25131	0.10	c
35c	11 58 21.05	-11 24 22.1	17.23	25298	0.11	m
36a	12 14 27.80	-02 55 40.6	17.46	32019	0.12	m
36b	12 14 29.36	-02 54 51.1	16.46	32100	0.09	m
36c	12 14 29.59	-02 55 18.7	16.99	32183	0.11	m
36d	12 14 29.77	-02 55 28.4	17.59	32171	0.13	c
36e	12 14 31.09	-02 55 22.7	17.00	32154	0.11	m
37a	12 40 36.11	-11 57 34.2	16.34	28878	0.09	c
37b	12 40 35.08	-11 57 16.8	16.83	28684	0.10	m
37c	12 40 34.79	-11 57 27.9	17.01	28789	0.11	m
38a	12 47 00.17	-06 04 43.2	16.15	37525	0.08	m
38b	12 47 00.88	-06 04 16.8	17.29	37710	0.12	c
38c	12 47 00.08	-06 04 58.7	17.34	36970	0.12	m
39a	12 50 24.92	-11 48 37.6	17.22	30575	0.11	c
39b	12 50 23.55	-11 48 42.5	17.31	30500	0.12	m
39c	12 50 22.76	-11 48 51.9	17.58	30368	0.13	m
40a	12 55 27.61	-11 53 02.2	17.28	34141	0.12	m
40b	12 55 29.41	-11 53 04.0	17.35	33629	0.12	m
40c	12 55 28.09	-11 52 51.7	17.59	33942	0.13	m
40d	12 55 26.57	-11 52 39.2	17.67	33835	0.13	b
41a	13 38 55.33	-11 50 32.4	15.34	15201	0.05	m
41b	13 38 56.05	-11 51 19.1	15.64	15300	0.06	m
41c	13 38 56.76	-11 50 48.3	17.08	15453	0.11	c
42a	13 59 01.37	-11 23 18.9	15.59	11506	0.06	c
42b	13 59 03.76	-11 24 16.0	16.27	10744	0.08	m
42c	13 59 06.83	-11 24 31.9	17.13	10911	0.11	c
43a	13 59 05.80	-11 20 06.9	15.02	11137	0.04	c
43b	13 59 07.03	-11 21 19.4	16.04	11243	0.08	c
43c	13 59 08.39	-11 19 00.3	16.85	11267	0.10	c
43d	13 59 08.97	-11 18 49.9	17.62	11475	0.13	m
44a	13 59 08.70	-03 30 14.9	15.71	23093	0.07	m
44b	13 59 07.86	-03 30 13.2	16.48	22942	0.09	m
44c	13 59 10.61	-03 30 20.1	17.41	23037	0.12	c
45a	13 59 40.77	-12 00 19.4	16.27	18175	0.08	m
45b	13 59 38.13	-12 00 31.7	17.05	17673	0.11	m
45c	13 59 38.74	-12 01 01.7	17.07	18101	0.11	b
46a	14 05 02.75	-02 21 06.5	16.93	41583	0.10	b
46b	14 05 01.74	-02 21 33.3	17.12	41551	0.11	m
46c	14 05 02.24	-02 21 24.0	17.43	41821	0.12	m
47a	14 24 17.51	-03 16 24.1	16.21	23672	0.08	m
47b	14 24 19.88	-03 16 27.1	17.07	24068	0.11	m
47c	14 24 18.34	-03 16 11.3	17.29	23695	0.12	c
48a	14 32 02.64	-11 37 07.6	15.20	17666	0.05	c
48b	14 32 04.14	-11 36 56.0	17.01	17427	0.11	m
48c	14 32 02.95	-11 36 00.7	17.26	17882	0.12	b
49a	14 34 35.75	-03 32 51.4	16.23	24460	0.08	c
49b	14 34 34.53	-03 33 28.9	17.10	24539	0.11	m
49c	14 34 33.96	-03 33 06.8	17.36	24895	0.12	m
50a	14 39 53.54	-03 42 58.9	15.60	17406	0.06	m
50b	14 39 56.26	-03 43 10.6	15.92	17663	0.07	c
50c	14 39 52.67	-03 43 03.5	16.56	17326	0.09	c
50d	14 39 55.49	-03 43 25.8	17.41	17908	0.12	m
51a	14 45 51.64	-03 02 25.7	16.48	21510	0.09	m
51b	14 45 52.70	-03 03 14.2	16.49	21202	0.09	m
51c	14 45 54.51	-03 02 52.5	16.93	21399	0.10	m
51d	14 45 53.00	-03 02 56.0	17.23	21427	0.11	c
52a	14 50 58.04	-02 42 11.1	16.00	22262	0.08	m
52b	14 50 55.64	-02 42 29.4	17.09	22441	0.11	c
52c	14 50 56.80	-02 42 24.0	17.68	22174	0.13	m
53a	15 02 13.47	-11 17 35.4	15.87	24269	0.07	m
53b	15 02 12.77	-11 17 26.5	17.21	24068	0.11	m
53c	15 02 13.41	-11 17 57.9	17.34	24064	0.12	c
54a	15 12 28.76	-02 35 16.2	15.85	34247	0.07	c
54b	15 12 27.66	-02 35 13.7	17.36	33904	0.12	m
54c	15 12 29.24	-02 35 44.8	17.36	34189	0.12	m
55a	21 15 48.63	-42 02 13.6	17.18	32756	0.11	m
55b	21 15 47.67	-42 01 48.0	17.19	32867	0.11	b
55c	21 15 45.31	-42 01 39.2	17.40	32672	0.12	m
56a	21 18 29.42	-45 42 02.8	15.60	24415	0.06	m
56b	21 18 31.86	-45 41 46.6	16.59	25101	0.09	m
56c	21 18 32.20	-45 42 36.2	17.12	24805	0.11	m
56d	21 18 31.18	-45 41 54.5	17.43	25278	0.12	m
56e	21 18 32.64	-45 42 25.8	17.69	24827	0.13	c

Table 3: Continued

ID	RA	Dec	mag	velocity		
				vel	z_{photo}	Notes
(1)	(2)	(3)	(4)	(5)	(6)	(7)
56f	21 18 32.68	-45 42 05.0	17.30	25189	0.12	m
57a	21 19 35.50	-39 43 51.7	15.11	17949	0.05	c
57b	21 19 28.20	-39 44 12.1	17.02	17945	0.11	c
57c	21 19 32.80	-39 44 09.7	17.56	17754	0.12	m
58a	21 40 01.77	-45 41 30.3	16.99	17126	0.11	b
58b	21 40 03.28	-45 42 04.0	17.25	16997	0.11	m
58c	21 40 05.42	-45 42 18.9	17.57	17185	0.12	e
59a	21 49 24.19	-42 09 06.1	15.79	19209	0.07	m
59b	21 49 28.94	-42 10 27.5	17.15	19573	0.11	m
59c	21 49 26.06	-42 09 48.2	17.41	19042	0.12	c
60a	21 49 50.48	-42 10 25.0	16.55	19122	0.09	b
60b	21 49 47.44	-42 10 22.2	16.72	18965	0.10	m
60c	21 49 45.95	-42 10 11.5	17.11	18982	0.11	m
61a	21 57 07.77	-44 29 55.0	17.07	41262	0.11	m
61b	21 57 06.65	-44 29 57.4	17.33	41173	0.12	c
61c	21 57 04.86	-44 29 57.6	17.52	41332	0.12	m
62a	21 57 18.12	-39 25 23.7	16.42	18309	0.09	c
62b	21 57 18.65	-39 24 10.6	16.70	18172	0.10	b
62c	21 57 18.69	-39 24 59.7	16.96	18055	0.11	m
63a	22 03 03.83	-38 20 38.3	17.30	33284	0.12	c
63b	22 03 04.58	-38 20 54.2	17.49	33719	0.12	m
63c	22 03 02.44	-38 20 22.2	17.50	33303	0.12	m
64a	22 05 18.01	-44 19 49.6	15.85	22193	0.07	m
64b	22 05 16.11	-44 19 39.3	16.90	22510	0.10	m
64c	22 05 19.46	-44 19 41.7	17.59	22327	0.13	c
65a	22 08 07.18	-45 41 15.1	16.13	17521	0.08	b
65b	22 08 10.97	-45 41 42.0	16.49	17371	0.09	m
65c	22 08 12.72	-45 42 10.9	17.16	17361	0.11	c
66a	22 32 49.87	-41 45 41.3	15.48	22652	0.06	m
66b	22 32 53.52	-41 45 18.0	16.28	22605	0.08	c
66c	22 32 50.09	-41 45 08.6	16.49	22807	0.09	m
67a	22 35 57.07	-41 40 39.6	16.99	28506	0.11	m
67b	22 35 58.24	-41 41 22.0	17.04	27996	0.11	m
67c	22 35 58.27	-41 41 21.7	17.09	28332	0.11	c
67d	22 35 58.94	-41 40 44.0	17.37	28199	0.12	m
68a	22 42 37.40	-45 20 29.4	16.13	26456	0.08	c
68b	22 42 35.90	-45 19 39.9	17.02	27258	0.11	m
68c	22 42 36.91	-45 19 32.1	17.27	27142	0.12	b
68d	22 42 38.57	-45 20 01.7	17.28	26310	0.12	m
69a	22 47 20.78	-42 12 13.2	16.24	26066	0.08	c
69b	22 47 18.92	-42 12 18.3	17.25	26112	0.11	m
69c	22 47 23.25	-42 12 07.3	17.69	26080	0.13	m
70a	22 47 48.16	-45 36 56.0	15.89	14997	0.07	c
70b	22 47 41.97	-45 38 04.6	16.05	15564	0.08	c
70c	22 47 45.18	-45 38 13.8	16.60	15328	0.10	m
70d	22 47 46.53	-45 37 45.0	17.57	15752	0.12	m
71a	22 59 17.92	-41 33 04.7	15.74	13656	0.07	m
71b	22 59 14.75	-41 32 50.8	15.94	13812	0.07	b
71c	22 59 09.07	-41 33 25.3	17.29	13856	0.12	b
72a	23 16 38.27	-42 15 13.3	15.54	15420	0.06	c
72b	23 16 38.51	-42 15 32.7	17.31	15600	0.12	m
72c	23 16 36.09	-42 15 17.7	17.32	15152	0.12	m
72d	23 16 35.77	-42 15 47.4	17.40	15154	0.12	m
73a	23 17 51.20	-42 04 28.8	15.44	16989	0.06	m
73b	23 17 49.36	-42 04 14.1	15.84	17193	0.07	m
73c	23 17 49.51	-42 03 51.8	16.23	17103	0.08	c
74a	23 33 22.41	-38 51 32.3	16.13	19484	0.08	m
74b	23 33 23.39	-38 51 26.3	16.36	19470	0.09	c
74c	23 33 21.00	-38 51 21.2	17.46	19156	0.12	m
75a	23 35 37.06	-38 45 00.8	15.50	16560	0.06	m
75b	23 35 32.17	-38 44 43.5	16.15	16928	0.08	b
75c	23 35 40.02	-38 44 42.2	17.60	16747	0.13	b
76a	23 59 48.45	-44 16 23.8	15.51	11935	0.06	c
76b	23 59 45.15	-44 16 00.7	15.54	11916	0.06	m
76c	23 59 49.00	-44 17 03.8	15.56	11563	0.06	m
76d	23 59 40.74	-44 16 06.5	16.11	12356	0.08	c
76e	23 59 48.85	-44 17 35.1	16.36	11415	0.09	c
76f	23 59 37.93	-44 17 35.9	16.63	12203	0.10	c
76g	23 59 44.08	-44 16 57.5	16.91	11485	0.10	c

(1) Compact group member
(2) Right ascension
(3) Declination
(4) R-band magnitude
(5) Velocity
(6) $z_{\rm photo}$
(7) Notes