

A LIST OF NEW BLUE GALAXIES. III

Enrique Chavira and Angeles López

Instituto Nacional de Astrofísica, Óptica y Electrónica
Tonantzintla, Pue., México*Received 1998 April 27; accepted 1998 August 19*

RESUMEN

Se presenta una lista de 58 galaxias azules identificadas en tres placas espectroscópicas de emulsión 103aD, de imágenes triples con los filtros *UBV* que fueron obtenidas con la cámara Schmidt de 48 pulgadas en Monte Palomar. Se examinaron los campos centrados en $(00^h 00^m, +6^\circ 00')$, $(00^h 00^m, -12^\circ 00')$ y $(00^h 48^m, 00^\circ 00')$ coordenadas del 1950.0. El material fotográfico fue obtenido para el programa de estrellas débiles azules en la dirección del polo sur galáctico, por Haro y Luyten (1965).

ABSTRACT

A list of new fifty-eight blue galaxies identified in three 103aD spectroscopic plates, with 3-image *UBV* filters obtained with the 48-in Schmidt Camera of Mount Palomar is presented. The fields are centered at $(00^h 00^m, +6^\circ 00')$, $(00^h 00^m, -12^\circ 00')$, and $(00^h 48^m, 00^\circ 00')$ 1950.0 coordinates. These plates were originally taken for the observational program of faint blue stars in the regions of the South Galactic Pole, by Haro & Luyten (1965).

Key words: **GALAXIES—FUNDAMENTAL PARAMETERS — GALAXIES — STARBURST**

Fifty-eight blue extended objects were found in three plates of 48" Palomar Schmidt. The plates were centered at $(00^h 00^m +6^\circ 00')$, $(00^h 00^m -12^\circ 00')$ and $(00^h 48^m 00^\circ 00')$ 1950.0 coordinates. The 3-image *UBV* photographic technique was described by Haro & Herbig (1955) and the calibration of the three exposures was defined by Haro & Luyten (1965). It was originally applied for the observational program of faint blue stars in regions near the South Galactic Pole by Chavira (1958).

From this same photographic material, Haro & Luyten (1965) found 236 blue stars. The selection of the blue objects is carried out by comparing their three color images, that have been calibrated for normal objects. Only the galaxies with the *U* image anomalously bright are listed here to insure their blue nature.

The object listed in Table 1, in all cases, show diffuse or nebular images. The region examined has been studied by Abell (1958), Abell, Corwin, &

Olowin (1989), Zwicky, Karpowicz, & Kowal (1965), and Zwicky (1971), among other authors.

Table 1 contains: column 1, running number of object following the list by Chavira (1989, 1996); col. 2, name; cols. 3 and 4, epoch 2000 coordinates (the positional error is estimated to be $\sim 1''$); col. 5, the eye estimate of the photographic magnitude by the author with an error of ± 1 mag; col. 6, the estimated *U* – *B* color for these objects with errors of ± 0.1 mag (only galaxies bluer than 0.0 in our system are presented here). The alternate names correspond to different sources: CGCG are from Zwicky et al. (1965) and Zwicky (1971); LEDA from Vauglin & Paturel (1994); LHG93 from Lu et al. (1993); MCG from Vorontsov-Velyaminov & Archipova (1963); NPM from Klemola, Jones, & Benson (1987); PHL from Haro & Luyten (1965); Ter from Terlevich et al. (1991); and UM from MacAlpine, Smith, & Lewis (1976) and MacAlpine, Lewis, & Stephen (1977). Comments to selected ob-

TABLE 1
BLUE GALAXIES

No.	Name	R.A. (J2000)			Dec.	m_{pg}	$U-B$
65*	UM17	00 ^h	03 ^m	13.7 ^s	+03 38 32.2	16.0	-0.3
66*	LHG93-0001+0505	00	03	41.3	+05 22 16.1	16.5	0.0
67*	MGC-02-01-014	00	04	00.8	-11 10 35.1	14.5	-0.4
68*	...	00	05	10.6	+06 15 55.3	17.3	-0.2
69*	...	00	06	17.5	-13 26 46.5	15.0	-0.2
70	...	00	07	15.2	+04 55 06.8	18.5	0.1
71*	UM 20	00	11	20.1	+05 00 24.1	16.5	-0.1
72*	NPM1G+09.0007	00	12	26.0	+09 44 40.4	15.9	-0.2
73	...	00	13	04.5	-11 47 46.6	16.2	0.0
74*	...	00	13	08.9	-11 24 26.7	17.1	-0.2
75	NPM1G-12.0012	00	13	12.7	-11 54 14.3	16.3	-0.3
76	...	00	14	55.7	+05 05 13.6	21.0	-0.2
77	...	00	14	56.0	-10 58 19.6	15.7	-0.2
78*	...	00	17	19.2	+06 43 26.8	14.8	0.0
79*	CGCG384.005	00	47	59.9	+01 12 08.1	15.5	0.1
80*	UM 283	00	51	49.4	+00 33 53.1	16.1	-0.1
81*	UM 286	00	51	59.7	-00 29 13.2	15.0	-0.1
82*	UM 289	00	52	33.7	+00 19 53.3	15.6	-0.1
83	...	00	53	00.7	+01 06 33.9	15.7	-0.3
84*	...	00	53	43.4	-00 50 47.2	16.5	-0.1
85	PHL3081	00	53	49.9	-01 30 31.1	18.1	-0.2
86	...	00	53	55.4	-00 52 56.8	18.5	-0.2
87	PHL3100	00	54	36.1	-00 49 40.7	18.3	-0.2
88*	PHL895	00	54	54.8	-00 42 44.6	18.1	-0.4
89	...	00	54	57.2	-01 12 40.7	16.9	-0.3
90	...	00	54	59.7	-01 08 13.7	17.0	-0.3
91	...	00	55	13.3	-01 26 34.2	17.5	-0.2
92	PHL3112	00	55	16.4	-01 47 01.6	18.5	-0.3
93	...	00	55	20.9	-01 22 25.5	17.5	-0.2
94	CGCG384.028	00	55	24.5	-01 13 28.0	18.6	-0.1
95	LEDA73467	00	55	24.5	-01 13 19.6	18.9	0.0
96	PHL3118	00	55	25.2	-00 39 18.0	18.4	-0.2
97*	LEDA73472	00	55	38.3	-01 16 45.9	18.0	-0.2
98	LEDA73474	00	55	39.2	-01 17 06.3	18.5	-0.1
99*	LEDA73489	00	56	07.0	-01 20 36.8	15.1	0.0
100	PHL3138	00	56	14.6	-01 18 28.8	18.5	-0.3
101	LEDA73496	00	56	16.2	-01 18 49.1	16.0	-0.4
102	...	00	56	26.9	-01 20 21.8	19.1	0.0
103	...	00	56	30.3	-01 44 53.6	18.3	-0.2
104	...	00	56	45.7	-01 40 15.5	18.5	0.0
105*	PGC3385	00	56	46.3	-01 16 51.4	17.6	-0.2
106	...	00	56	52.5	-01 08 20.9	19.0	0.0
107	...	00	56	53.7	-01 49 51.2	16.7	-0.1
108	...	00	56	55.6	-00 48 39.3	17.9	-0.1
109*	LEDA73538	00	57	31.2	-00 55 39.9	16.0	-0.3
110	...	00	57	41.8	-01 54 23.2	18.1	-0.2
111	...	00	58	04.1	-01 53 40.8	18.0	0.0
112	NPM1G-02.0023	00	58	04.9	-01 50 16.7	18.0	-0.2

TABLE 1 (CONTINUED)

No.	Name	R.A.			(J2000)	Dec.	m_{pg}	$U-B$
113*	PHL6960	00	58	13.9		-01 20 10.8	18.6	-0.1
114*	...	00	58	47.4		-00 45 02.1	14.7	-0.3
115*	UM 296	00	59	04.1		+01 00 05.1	17.0	-0.1
116	...	01	02	08.8		+03 39 18.2	18.0	-0.1
117	CGCG384-069	01	05	30.2		+02 51 39.9	15.0	-0.2
118*	...	01	07	46.6		+01 03 49.3	14.8	-0.4
119	...	23	55	40.2		-10 54 16.5	15.1	0.0
120	...	23	58	05.7		+07 03 46.8	17.0	-0.1
121*	NPM1G-11.0580	23	58	48.8		-11 22 19.1	16.9	-0.2:
122*	...	23	59	11.2		-08 16 43.1	15.0	0.0

Notes to objects in Table 1: (65) Ter 0000+033, studied by Terlevich et al. 1991; (67) PGC282, IRAS F00014-1127; (68) Object is 1.8^s W, $20''$ S of UGC 35; (69) Object is 0.8^s E, $6.5''$ N of NGC 7828; (70) Object is 0.8^s E, $6''$ N of PHL6290; (71) Tol 0008-0507, studied by Terlevich et al. 1991; (74) Blue compact region and NE fragmented extension of approximately $14'' \times 14''$; (78) Blue region $8''$ S of UGC 163; studied by Lu et al. 1993; (79) Object is 0.5^s E, $3''$ S of nucleus; (84) Member of the cluster Abell 112; (88) UM 291; (97) Abell 119-54; (98) Abell 119-50; (99) CGCG384-032, A119-36; (101) CGCG384-017; (105) Abell 119-42, UCM 0054-0133, CGCG384-042, studied by Zamorano et al. 1996; (109) Abell 119-96; (114) Object is 0.8^s E, $5''$ N of CGCG384-050; (115) HS0056+0044; (117) Zwicky et al. 1965 identified it as part of a double system; (118) Condensation is 1.2^s W, $20''$ S of UGC 695 or 0105+0047, Impey et al. 1996; (121) NPM1G-11.0580. Double system, both components are blue, separated $22.5''$; (122) IRAS 23566-0833.

jects are also given in the notes to Table 1. For this purpose we consulted the NASA/IPAC Extragalactic Database (NED)¹.

Identification charts for those galaxies that have no previous identification maps are presented in Figures 1, 2, and 3; here North is up and East is to the left.

The positions were determined from the Digitized Sky Survey produced at the Space Telescope Science Institute under US Government grant NAG W-2166.

We are grateful to S. Torres-Peimbert, J. R. Valdez, M. Reyes, T. Flores, and C. Escamilla for their assistance.

¹ The NED is operated by the Jet Propulsion Laboratory, California Institute of Technology, under contract with the National Aeronautics and Space Administration.

REFERENCES

- Abell, O. G. 1958, ApJS, 3, 211
 Abell, O. G., Corwin, Jr., H. G., & Olowin, R. P. 1989, ApJS, 70, 1
 Chavira, E. 1958, Bol. Obs. Tonantzintla y Tacubaya, 2, No. 17, 31
 ———. 1989, RevMexAA, 17, 109
 ———. 1996, RevMexAA, 32, 131
 Haro, G., & Herbig, G. H. 1955, Bol. Obs. Tonantzintla y Tacubaya, 2, No. 12, 33
 Haro, G., & Luyten, W. J. 1965, Bol. Obs. Tonantzintla y Tacubaya, 3, No. 22, 37
 Impey, C. D., Sprayberry, D., Irwin, M. J., & Bothun, G. D. 1996, ApJS, 105, 209
 Klemola, A. R., Jones, B. F., & Benson, R. B. 1987, AJ, 94, 501
 Lu, N. Y., Hoffman, G. L., Groff, T., Roos, T., & Lomphier, C. 1993, ApJS, 88, 383
 MacAlpine, G. M., Lewis, D. W., & Stephen, B. S. 1977, ApJS, 35, 203
 MacAlpine, G. M., Smith, S. B., & Lewis, D. W. 1976, ApJS, 34, 95

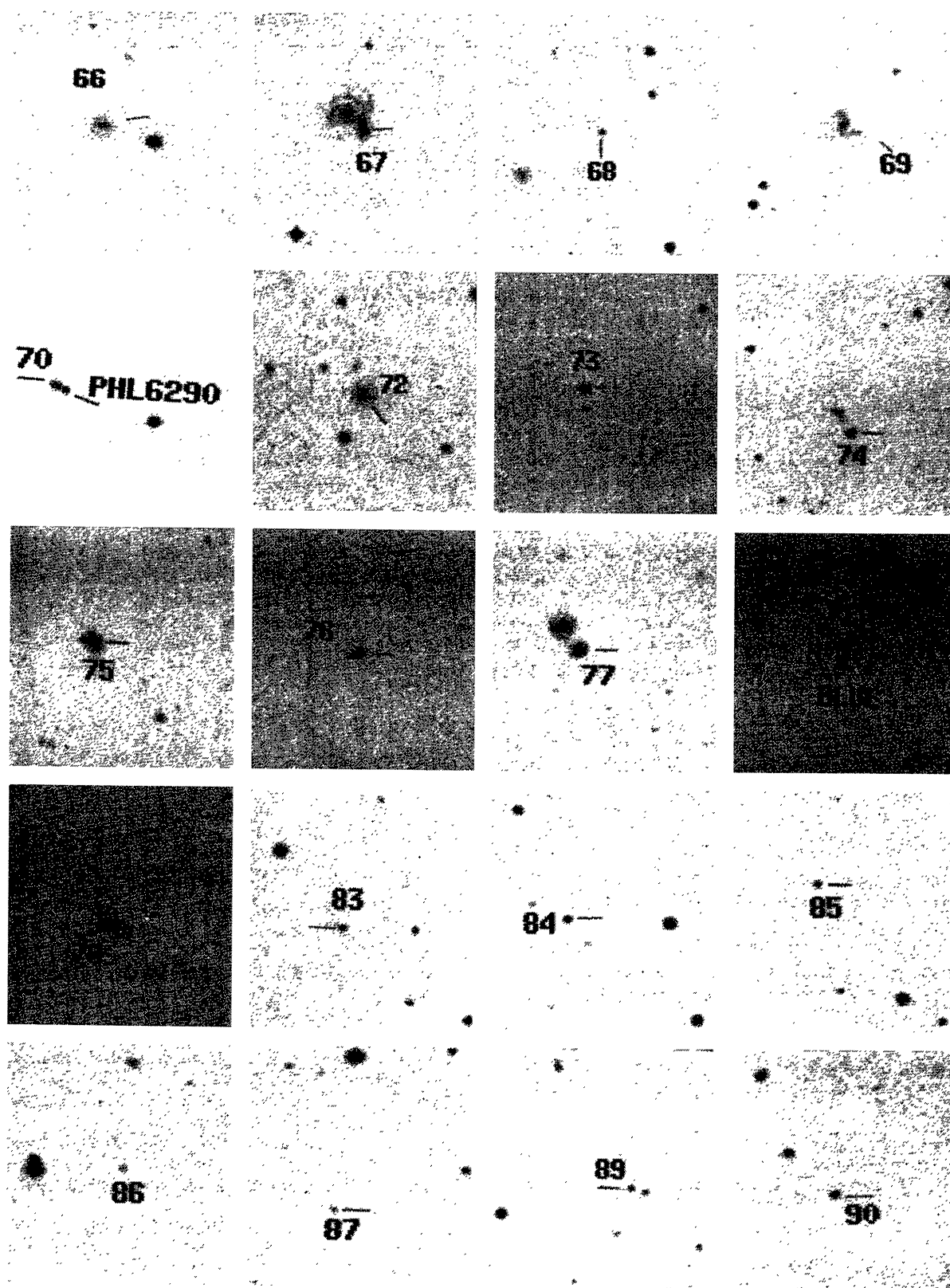


Fig. 1. Identification charts. North is up, East to the left.

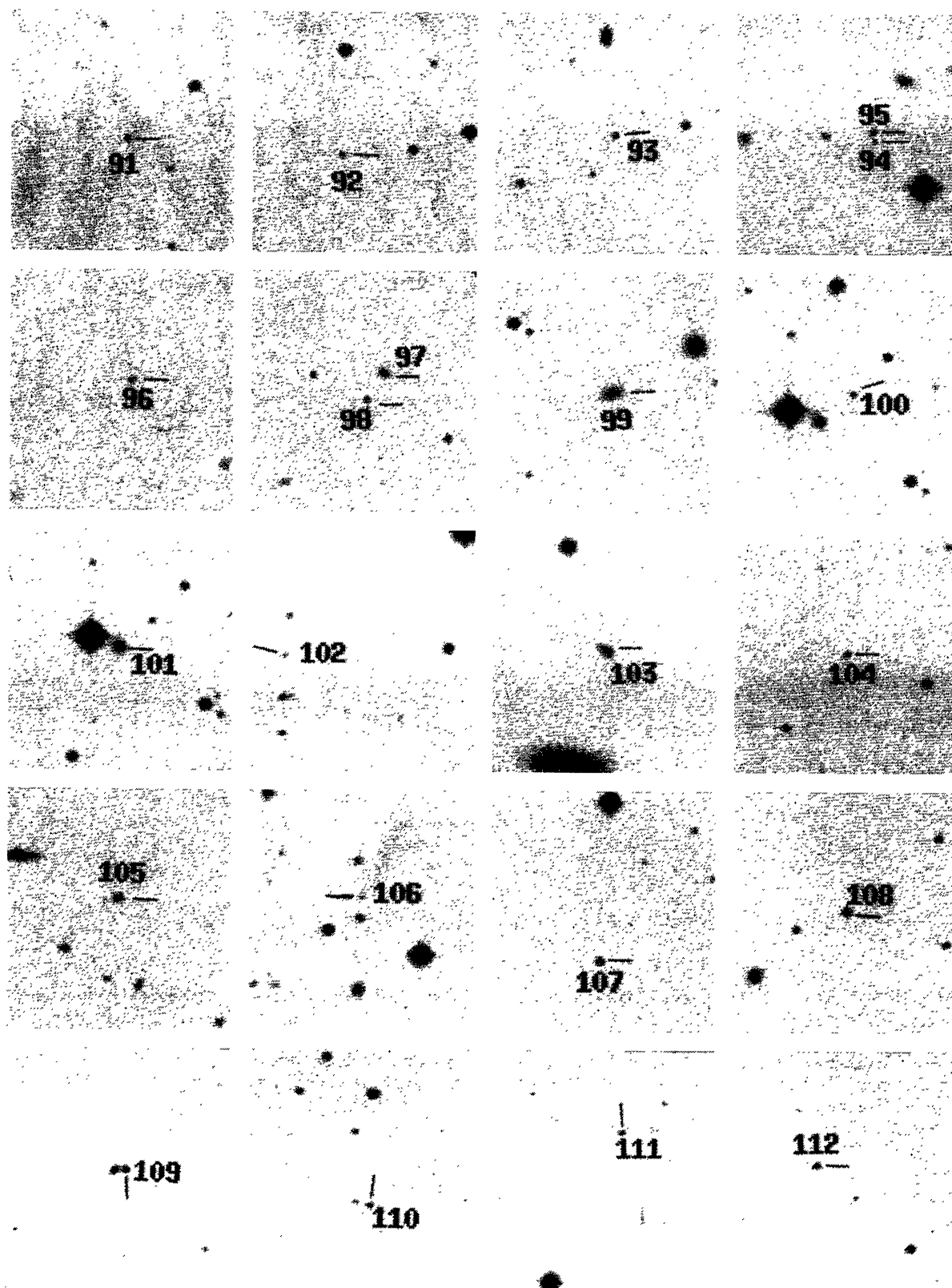


Fig. 2. Identification charts.

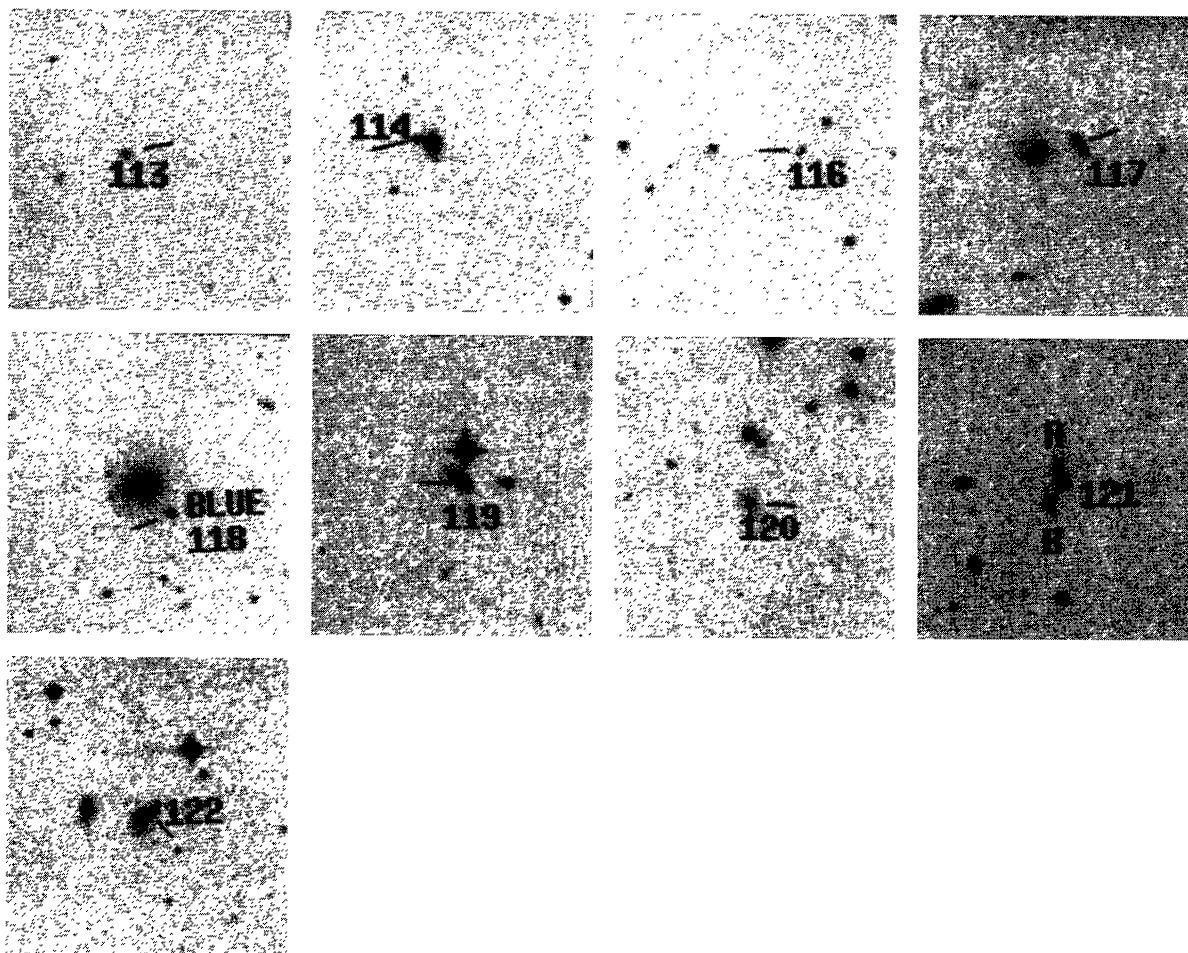


Fig. 3. Identification charts.

Terlevich, R., Melnick, J., Masegosa, J., Moles, M., & Copetti, M. V. F. 1991, A&AS, 91, 285
 Vauglin, I., & Paturel, G. 1994, A&AS, 217, 267
 Vorontsov-Velyaminov, A., & Archipova, V. P. 1963, Morphological Catalogue of Galaxies, Vol. 3 (Moscow: Univ. of Moscow)
 Zamorano, J., Gallego, J., Rego, M., Victores, A. G., & Alonso, O. 1996, ApJS, 105, 343

Zwicky, F. 1971, Catalogue of Selected Compact Galaxies and of Post-Eruptive Galaxies (Zürich: Pub. California Inst. of Technology)
 Zwicky, F., Karpowicz, M., & Kowal, C. T. 1965, Catalogue of Galaxies and Clusters of Galaxies (Zürich: Pub. California Inst. of Technology)

Enrique Chavira and Angeles López: Instituto Nacional de Astrofísica, Óptica y Electrónica, Apartado Postal 216, 72000 Puebla, Pue., México (echavira@inaoep.mx).