Revista Mexicana de Astronomía y Astrofísica, **32**, 131–134 (1996)

A LIST OF NEW BLUE GALAXIES. II

Enrique Chavira

Instituto Nacional de Astrofísica, Optica y Electrónica
Tonantzintla, Pue., México

Received 1995 July 6; accepted 1996 June 17

RESUMEN

Se presenta una lista de 39 galaxias azules identificadas en una placa espectroscópica de emulsión 103aD, bajo los filtros *UBV*. Esta placa está centrada en A.R. 0^h 48^m, Dec. +0° 30′, (1950.0) y fue obtenida con la cámara Schmidt de 48″ en Monte Palomar. El material fotográfico fue obtenido para el programa de estrellas débiles azules en la dirección del polo sur galáctico, por Haro & Luyten (1965).

ABSTRACT

A new list of thirty-nine blue galaxies identified in spectroscopic emulsion 103aD, with filters *UBV* centered at R.A. 0^h 48^m and Dec. +0° 30′ (1950) obtained with the 48″ Schmidt Camera of Mount Palomar is presented. 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**

Thirty-nine blue extended objects were found in a plate of 48″ Palomar Schmidt. The plate was centered at A.R. = 0^h 48^m and Dec. = 0° 30′ (1950). This photographic technique was originally applied for the observational program of faint blue stars in regions near the South Galactic Pole by Chavira (1958) and Haro & Luyten (1965). It was described by Haro & Herbig (1955) and the calibration of the three exposures was defined by Haro & Luyten (1965).

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

The material exhibited in Table 1, in all cases, shows diffuse or nebular images. The region examined overlaps with Area 384 (0^h 53^m +0° 31′) studied by Zwicky (1965) and contains 24 clusters of galaxies and 79 galaxies with photographic *V* magnitudes from 13.2 to 19.5.

Table 1 contains: column 1 running number of object following the list by Chavira (1989); cols. 2 and 3 the coordinates (2000); (the positional error is estimated to be $\sim 1''$); col. 4, the eye estimate of the photographic magnitude by the author with an error of ± 1 mag; col. 5, the estimated *U–B* color for these objects, (only galaxies bluer than –0.1 in our system are presented here). Comments to selected objects also given in the notes to Table 1.

Identification charts for the galaxies are presented in Figures 1 and 2; here North is up, East is to left and they were obtained from a copy of 103a-E Palomar Observatory Sky Survey plate.

The positions were determined from the Digitized Sky Survey produced at the Space Telescope Science Institute under US Government grant NAG W-2166. This research has made use of the SIMBAD database, operated at CDS, Strasburg, France.

I extend my thanks to L.F. Rodríguez, A. López, S. Curiel, and L. Corral for helpful comments and to C. Escamilla for the photographic copies.

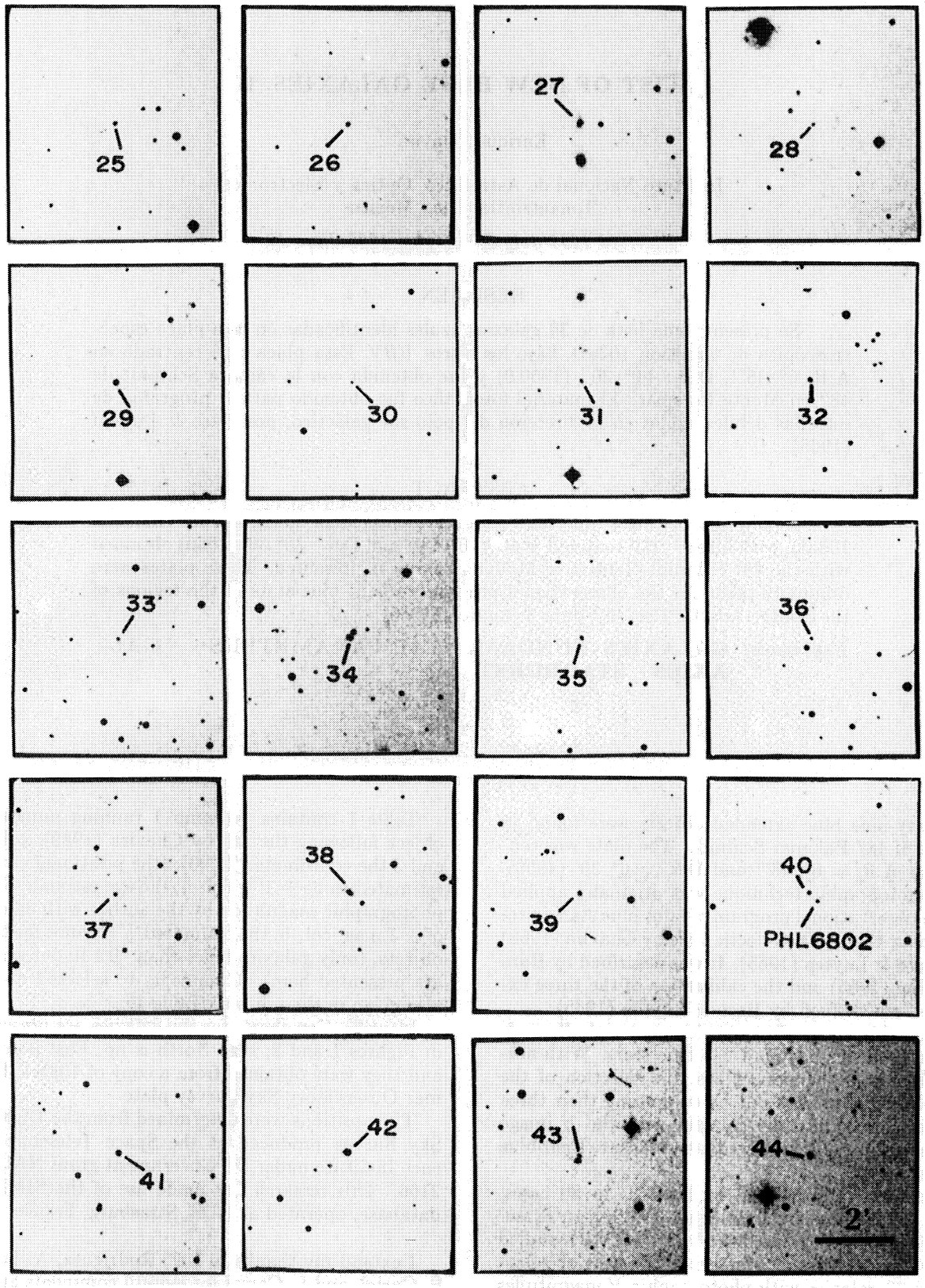

Fig. 1. Identification charts. North is up, East to the left.

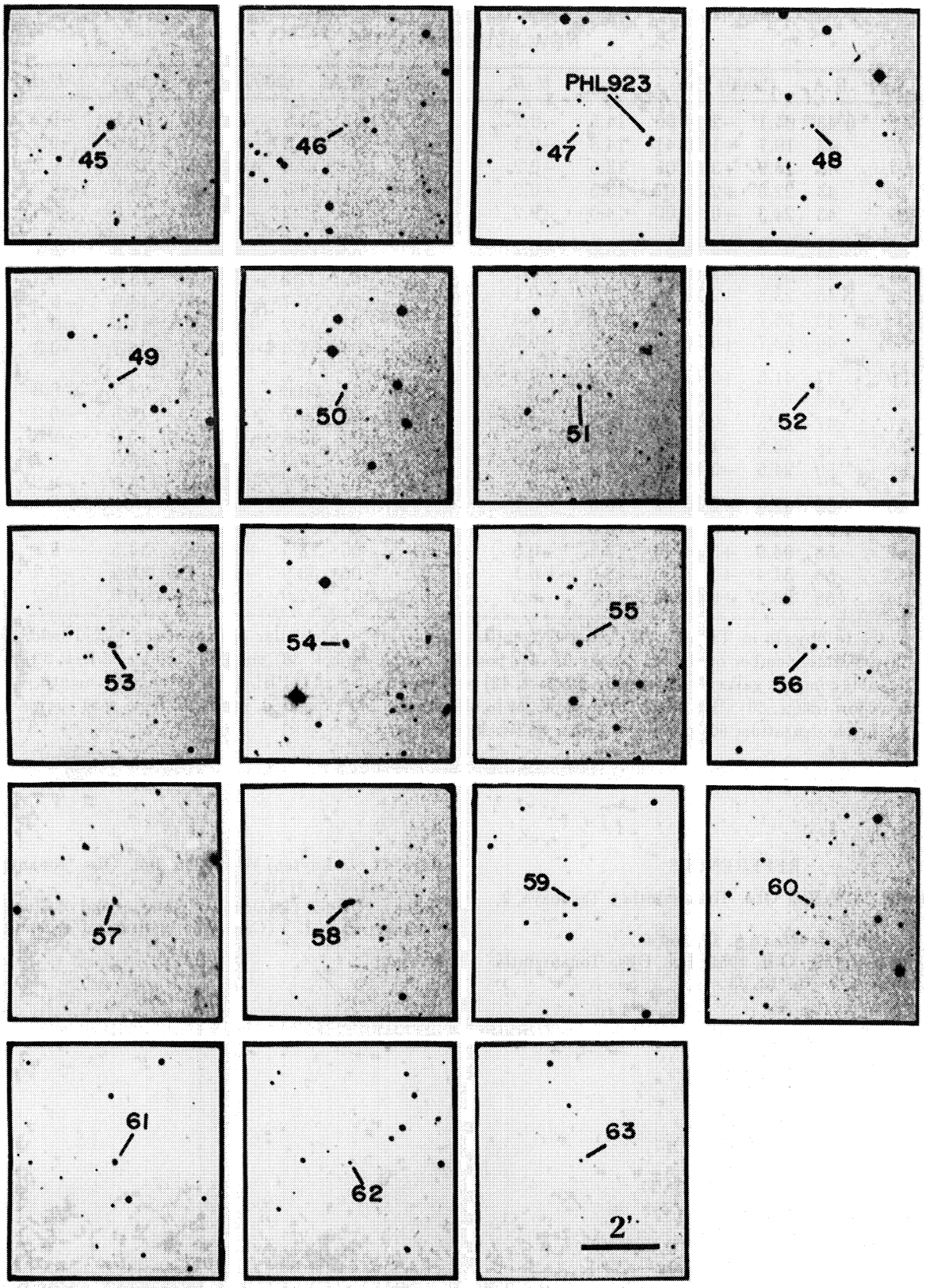

Fig. 2. Identification charts.

TABLE 1

NEW BLUE GALAXIES

No.	R.A. (2000)	Dec.	m_{pg}	$U-B$	No.	R.A. (2000)	Dec.	m_{pg}	$U-B$
25	$0^h43^m04.1^s$	−2 14 06	14.5	−0.2	45	58 24.5	−1 23 40	14.8	−0.2
26	43 19.7	+1 05 41	14.5	−0.3	46	58 42.3	−0 56 57	19.5	−0.2
27	43 18.9	+3 01 05	13.5	−0.2	47	59 12.6	+0 10 23	18.5	−0.2
28	43 22.0	+2 55 07	15.5	−0.2	48	59 18.5	+2 57 28	18.5	−0.2
29	43 24.3	+0 01 00	14.9	−0.2	49	1^h00 12.2	+1 12 57	17.0	−0.3
30	44 03.3	+3 48 37	15.8	−0.2	50	00 18.3	−0 38 18	15.9	−0.1
31	45 54.7	+1 33 26	18.5	−0.2	51	00 32.2	−2 00 46	15.6	−0.3
32	46 23.8	+2 35 59	15.8	−0.1	52	00 56.7	−1 55 38	14.9	−0.2
33	46 26.7	+0 51 57	18.0	−0.3	53	01 38.2	+3 13 30	14.5	−0.4
34	46 53.7	+0 36 47	14.9	−0.2	54	01 57.4	+2 15 11	14.7	−0.3
35	47 41.5	+0 41 30	16.5	−0.4	55	01 59.6	+0 29 16	14.5	−0.3
36	47 56.0	+3 17 39	15.8	−0.1	56	03 59.7	+3 27 03	15.5	−0.2
37	47 58.3	−0 35 03	15.3	−0.2	57	04 43.6	−0 20 19	15.9	−0.3
38	48 56.5	−1 18 31	14.9	−0.4	58	05 19.3	−1 00 43	13.2	−0.3
39	50 24.6	−0 48 50	16.0	−0.4	59	05 19.7	+3 25 11	16.0	−0.2
40	52 42.4	−2 13 22	16.3	−0.1	60	05 59.6	+0 16 10	15.9	−0.1
41	52 52.3	−0 04 26	14.5	−0.3	61	06 23.4	+0 20 43	14.5	−0.2
42	53 04.9	+3 19 10	13.5	−0.3	62	06 53.9	−2 04 43	15.9	−0.2
43	56 51.4	+1 56 35	18.0	−0.1	63	07 02.0	−1 26 04	16.0	−0.2
44	58 03.2	+0 06 35	14.6	−0.3					

Notes to objects in Table 1: 25) possibly compact; 29) there is a nebular object in the visual field; 33) possible member of cluster Zwicky 23; 34) possible double object; 38) possible variable object; 39) possible compact galaxy; 41) possibly compact; 42) possibly compact; 43) PHL 3181; 44) very filamentary in yellow image; 50) PHL 3249; 55) possible jet in blue image; 58) elongated, in the extreme west shows a blue condensation; 60) possible member of Zwicky 6 cluster.

REFERENCES

Chavira, E. 1958, Bol. Obs. Tonantzintla y Tacubaya, 2, 17
_____. 1989, RevMexAA, 17, 109
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
Zwicky, F. 1965, Catalogue of Galaxies and of Clusters of Galaxies, Vol. 5 (California Institute of Technology)

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