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GALAXIES NEAR THE NORTHERN GALACTIC PLANE

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Summary. — A survey on the POSS of the northern galactic plane in the interval ℓ = 33°-213°, b = ± 2° has led to the detection of 207 galaxies, 200 of them being new. Six may possibly be identified with listed radio sources. Infrared photographs were taken of two galaxies, one lying 1°.6 distant from the Maffei objects, the other in the vicinity of the Rosette nebula ; for the latter a radio flux density of 11 mJy was found at 6 cm.

The galaxies are far from being uniformly distributed : There is a strong preponderance in number towards the galactic anticentre and the objects here tend to lie above the galactic equator. Since each galaxy implies a relatively transparent region, investigations of galactic structure may be fruitful in the areas of these galactic windows.

Key words : Low latitude galaxies — Finding list — Galactic windows.

1. **Introduction.** — Dedicated searches for galaxies near the galactic plane are few in number and have been restricted to selected areas (e.g. Böhm-Vitense, 1956 ; Fitz-Gerald, 1974 ; Dodd and Brand, 1976). They are severely hampered by the interstellar extinction : Firstly, nearly all of the larger surveys have been based on blue exposures, which are rather unsuitable for work in obscured regions. Secondly, the obscuration changes the appearance of galaxies, thus impairing their identification ; likewise, other types of objects such as small reflection nebulae, dense distant star clusters, etc. can easily be mistaken for extragalactic nebulae at low latitudes. Search conditions can be improved by a very deep photographic survey at a wavelength as long as possible. The Palomar Observatory Sky Survey (POSS) E prints (m_{lim} for stars = 20.0, $\lambda_{\text{eff}} \sim$ 6 400 Å) meet these criteria rather well and have therefore been used for my search. Incidentally, the E and O prints have already been utilized for large galaxy surveys in all galactic latitudes, but never down to or near the limiting magnitude (e.g. Vorontsov-Vel'jaminov *et al.*, 1962-1968 ; Nilson, 1973). Thus few galaxies close to the galactic equator are known.

The purpose of the present survey is twofold : (i) Detection of hitherto unknown, relatively transparent regions in the plane of our galaxy. These galactic windows around every galaxy would be important for investigations of the galactic structure, e.g. for a search for distant spiral arm tracers. (ii) A tabulation of new galaxies, including those near the limiting magnitude. This list would facilitate optical identifications of unidentified low latitude sources of possible extragalactic origin.

2. **Search procedure.** — The region within ℓ = 33°-213°, b = ± 2° was searched on the POSS E prints by the aid of a binocular microscope and using a 16-fold magnification. Overlapping zones within these boundaries were always included in order to reduce the number of overlooked objects and to estimate the completeness of the survey. The POSS O charts were used for comparison purposes only. Usually, the prints were illuminated from above, but in case of dubious images and extended luminous nebulae, an illumination from below was often of great help. The average, pure search time amounted to about 1 hour per 10 □°.

Since a number of prints were not yet at my institute's disposal, I carried out part of the survey at other institutes (Landessternwarte Königstuhl, Heidelberg ; Institut für Astronomie, Vienna).

3. **Results and discussion.** — It is difficult to make clear statements about the completeness of the present survey. The galaxies with a diameter of ∅ ≧ 1′ were ostensibly recorded in earlier surveys ; actually, I discovered only 6 extragalactic nebulae with ∅ ≧ 1′ on the E prints. On the other hand, stars and galaxies at the limiting magnitude are not distinguishable. In addition, there are several reasons for a necessarily uncomplete registration. Two characteristic reasons : Very compact, roundish looking galaxies (or central regions of spirals where the arms are already hidden by obscuration) are hardly discernible from stars. Furthermore, the densely packed star images in the galactic plane will hide several galaxies. Insufficiencies during the search are added. Comparisons of overlapping zones in the rather galaxy-rich anticentre indicate that I seem to have overlooked approximately one quarter of the recognizable galaxies.

In table I the 207 galaxies found within ℓ = 33°-213°, b = ± 2° are listed in order of increasing galactic longitude. *Running N^{os}* are given in the first column ; when supplied with a letter, it denotes an already known galaxy, with is cited at the end of the table. The *galactic coordinates* follow. The subsequent *equatorial coordinates* were measured with an accuracy of about ± 1′ in both α and δ on the *POSS* prints, whose numbers are given in the next column. From the lower left field corner of the just quoted POSS prints, *x* and *y*, the *rectangular coordinates* (in mm) are measured. A + sign in the column denoted with *E & O* means that the galaxy is visible on the O print too. Finally, the *diameters* of the objects on the E prints are listed. — Classification of the galaxy type seemed to be feasible only in 20 cases : Spiral galaxies are N^{os} 4, 10, 17, 27, 35, 40, 69, 79, 87, 91, 93, 112, 114, 128, 152, 157, 171, 175, 180 and 182.

The overall distribution of the galaxies is displayed in figure 1. The longitude interval of 180° was divided into 4 segments of each 45° length ; not shown in the figure is the region betwen ℓ = 33° and 78°, since no galaxies were detected there. In this figure the asymmetrical distribution of the galaxies with longitude is apparent. Up to $\ell \sim 160°$, only occasionally regions transparent enough so that galaxies can shine through are found. The clustering around $\ell \sim 87°$ moreover possibly belongs to the new close cluster of galaxies which was reported by Huchra *et al.* (1977). Maffei 1 and 2, the famous nearby systems at $\ell \sim 136°$, $b \sim -0°.5$ do not define a transparent region in the usual sense, since both are reddened by $A_V \gtrsim 5^m$. Striking is the conglomerate at $\ell \sim 160°$. Beginning with $\ell \sim 175°$, an asymmetric latitude distribution is evident : The galaxies tend to lie above the equator, i.e. the main dust obscuration obviously lies to the south of the galactic equator ; possibly, this special dust location continues up to the transparent region in Puppis ($\ell \sim 250°$), where a comparable arrangement has been found by FitzGerald (1974) and Dodd & Brand (1976). — Generally, clusterings in figure 1 up to a few degrees in diameter do not necessarily define large, *very* transparent areas, but may also represent somewhat less transparent regions through which real galaxy clusters are dimly visible.

In his figure 1, Steinlin (1962) plotted the Lick observatory counts (to m_{pg} = 18) within 25° of the old galactic equator. In the same region as that one I surveyed there are five galactic windows, at $\ell \sim 57°$ (∅ ~ 2°, south of the galactic equator), 89° (2°, north), 103° (4°, north), 112° (4°, north), and 112° (5°, south). Curiously enough, none of the Lick windows shows up in my figure 1, though the red prints have a fainter limiting magnitude and the interstellar extinction is reduced (a red extinction coefficient of 0.82 compared to 1.34 in the blue, according to the normal interstellar reddening law. However, two small adjacent Lick windows at $\ell \sim 161°$ and 181°, both commencing at $b \sim +2°$, suit well the galaxy distribution of the present figure 1 near these locations.

3.1 Individual Galaxies. — Because of their positions, two objects in table I particularly raised my interest : N° 20 is the nearest in angular distance to the Maffei galaxies ; N° 205 is near to the Rosette nebula and rather bright. For both objects a confirmation of their extragalactic nature seemed desirable. Photographs at 0.7 μ (*R*) and 0.9 μ (*I*) were taken with a cooled image tube camera at the 1.2 m telescope on the Calar Alto in Spain ; details of the camera system, which has an S1 cathode and a P11 phosphor, are given by Beetz *et al.* (1974). The limiting magnitudes of the plates for stars are $20^m \pm 0^m.5$ in *R*, $16^m.5 \pm 1^m$ in *I*.

N° 20, 1°.6 distant from the Maffei galaxies, was visible on the POSS E print only, as a very weak object, and could therefore possibly be mistaken for a plate flaw. In figure 2a, b however, its reality and nonstellar nature is confirmed. N° 20 is not coincident with any known radio source.

N° 205 lies only 2° distant to the north from the centre of the Rosette nebula and may be strongly reddened. It was originally noticed during a survey for heavily obscured galaxies (Weinberger *et al.*, 1978). N° 205 looks quite like a distant galaxy in figure 3a, b. Additionally, we carried out radio observations : The radio flux density at 6 cm as observed with the 100 m Effelsberg telescope is $S = 11 \pm 3$ mJy.

A few galaxies of table I are possibly or certainly related to known radio sources, among them the already cited Maffei 2 (N° 21), N° 45 and N° 51.

Furthermore, B2 0537 33 (Colla *et al.*, 1970) = OG 362 (Ehmann *et al.*, 1974) seems to be associated with N° 135 (perhaps N° 134).

BG 0444 + 44 (Fanti *et al.*, 1974) may possibly be N° 49.

Finally, within the positional uncertainties, LHE 132 (Dixon, 1970) coincides with N° 63.

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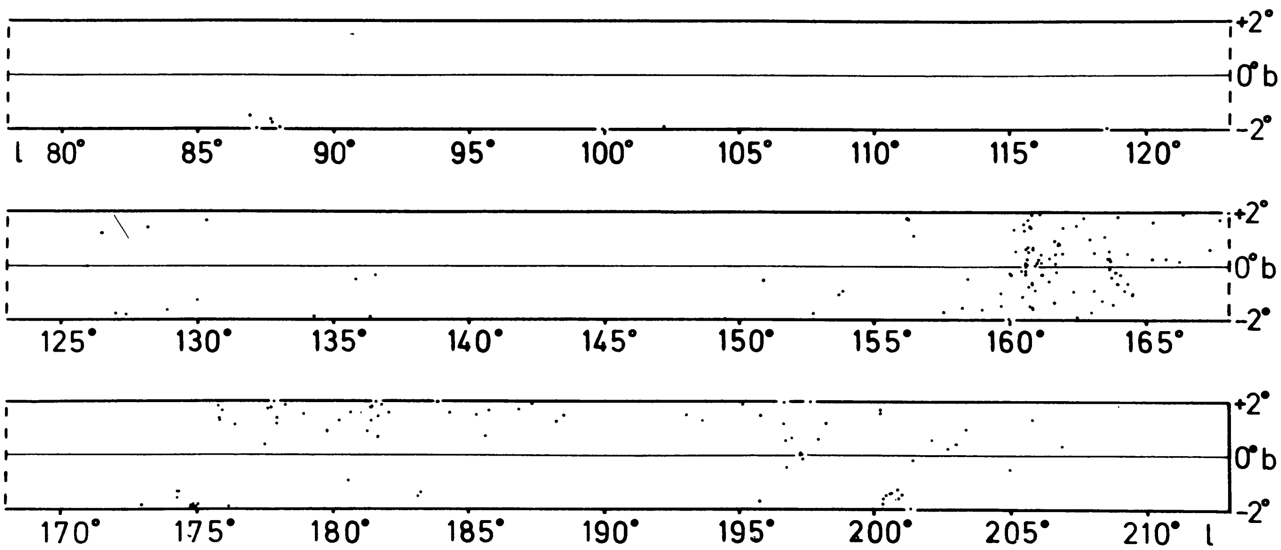
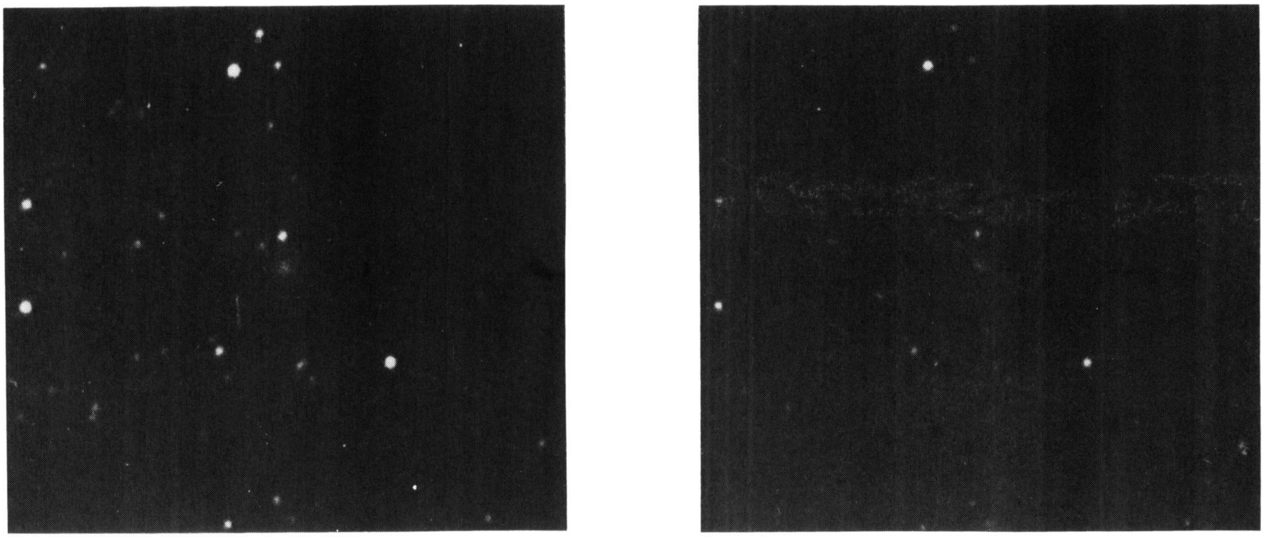
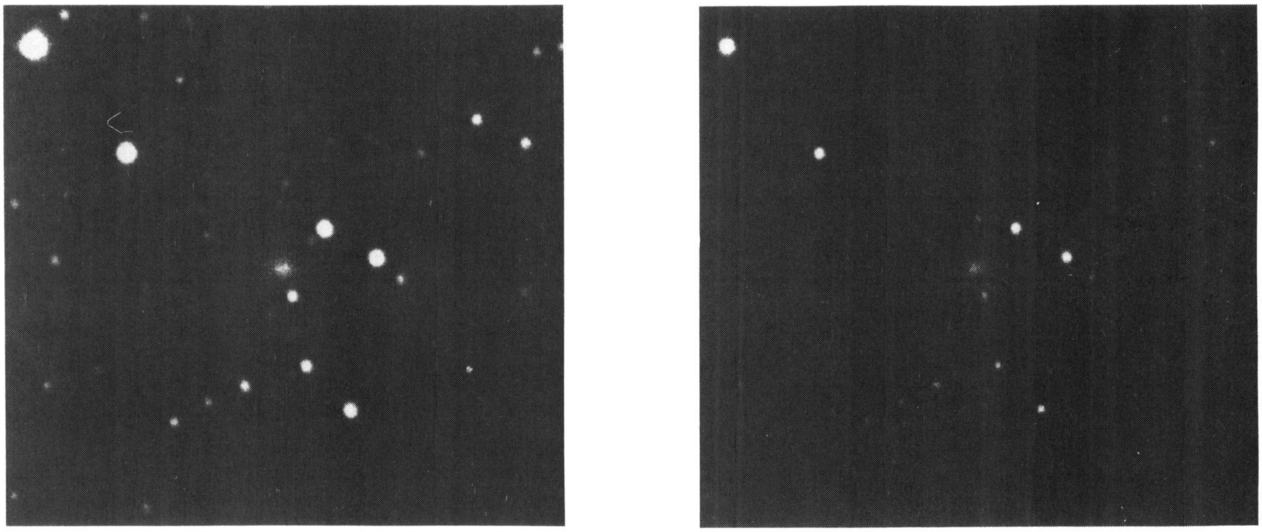


FIGURE 1. — Distribution of 207 galaxies in the northern galactic plane. Since no galaxies were detected in the section l = 33°-78°, it has been omitted.



a) b)

FIGURE 2a, b. — *R* (2a) and *I* (2b) photographs of N° 20 (1.2 m telescope, exposure time 45 min). North is at the top, east at left. The pictures cover an area of 147″ × 138″.



a) b)

FIGURE 3a, b. — *R* (3a) and *I* (3b) photographs of N° 205 (1.2 m telescope, exposure time 45 min). North is at the top, east at left. The scale is as above.

TABLE I. — *Galaxies on the POSS E prints within* ℓ = 33°-213°, b = ± 2°.

NO.	ℓ	b	α (1950)	δ (1950)	POSS	x	y	E&O	∅ E
1	86°.88	-1°.52	21h04m23s	+44°48'.2	1133	165	305	+	0'.2
2	87.10	-1.98	21 07 09	44 39.1	1133	138	297		0.3
3	87.61	-1.64	21 07 40	45 15.8	533	105	6	+	0.2
4	87.68	-1.77	21 08 28	45 13.1	533	98	4	+	0.7
5	87.99	-1.95	21 10 28	45 19.1	533	79	9	+	0.3
6	99.93	-1.99	22 05 50	53 09.8	588	236	104	+	0.2
7	102.25	-1.89	22 18 29	54 32.7	588	136	177	+	0.4
8	116.77	+1.55	23 52 48	63 28.3	555	242	8	+	0.2
9	118.44	+1.26	00 07 59	63 30.0	555	151	8	+	0.2
10	118.48	-1.95	00 12 25	60 19.8	1233	120	161	+	0.8
11	126.27	+1.21	01 18 30	63 37.2	1240	266	340		0.1
12	126.80	-1.77	01 20 00	60 36.0	1240	266	178	+	0.3
13	127.19	-1.79	01 23 10	60 31.7	1240	246	174	+	0.4
14	128.15	+1.42	01 35 28	63 33.5	1240	165	337	+	0.2
15	128.70	-1.62	01 35 29	60 28.0	1240	164	171	+	0.6
16	129.85	-1.24	01 45 14	60 36.6	1240	100	179	+	0.3
17	130.29	+1.65	01 54 40	63 19.4	597	321	337	+	0.6
18	134.27	-1.90	02 17 32	58 45.4	597	185	85	+	0.3
19[a]	135.84	-0.57	02 32 36	59 25.8	597	80	124	+	2.8
20	136.27	-1.91	02 31 42	58 01.7	597	85	48		0.2
21[b]	136.50	-0.33	02 38 09	59 23.4	597	44	124	+	6.7
22	150.86	-0.59	04 02 18	51 16.1	1253	195	335	+	0.3
23	152.68	-1.75	04 05 56	49 11.3	1253	164	224	+	0.2
24	153.72	-1.05	04 13 28	48 59.6	1253	98	214		0.1
25	153.79	-0.94	04 14 14	49 01.5	1253	91	216		0.1
26	156.14	+1.78	04 36 10	49 13.7	848	196	230	+	0.4
27	156.17	+1.76	04 36 15	49 11.7	848	195	228	+	0.8
28	156.44	+1.14	04 34 32	48 34.6	848	211	195	+	0.2
29	157.57	-1.70	04 26 51	45 48.5	848	284	47	+	0.2
30	158.27	-1.59	04 30 02	45 22.8	848	255	24		0.6
31	158.44	-0.48	04 35 24	46 00.3	848	204	58	+	0.4
32	158.94	-1.58	04 32 40	44 53.8	644	209	318	+	0.3
33	159.58	-0.96	04 37 41	44 50.3	644	161	315		0.4
34	159.62	-1.40	04 36 02	44 30.9	644	177	297	+	0.2
35[c]	159.92	-1.93	04 34 58	43 56.4	644	188	267	+	1.1
36	160.02	-0.25	04 42 19	44 58.7	644	117	323	+	0.1
37	160.05	-0.27	04 42 21	44 56.5	644	117	321	+	0.3
38	160.10	+1.37	04 49 41	45 57.8	848	71	57	+	0.4
39	160.17	+0.58	04 46 29	45 24.3	848	100	26	+	0.2
40	160.24	-0.11	04 43 46	44 54.3	644	104	319	+	0.6
41	160.24	-0.85	04 40 39	44 25.1	644	133	293	+	0.1
42	160.33	+1.58	04 51 27	45 55.2	848	54	54	+	0.2
43	160.37	+0.04	04 44 52	44 54.3	644	93	320	+	0.3
44	160.41	+1.33	04 50 39	45 41.9	848	61	43		0.1
45[d]	160.42	+0.14	04 45 30	44 55.7	644	87	321	+	0.3
46	160°.45	+0°.65	04h47m49s	+45°13'.9	644	66	338		0'.2
47	160.46	+0.08	04 45 24	44 51.5	644	88	317	+	0.3
48	160.48	+0.08	04 45 30	44 50.6	644	87	316	+	0.6
49	160.48	-0.14	04 44 32	44 42.1	644	96	309	+	0.3
50	160.48	-0.22	04 44 10	44 39.3	644	99	306		0.2
51[e]	160.51	+0.30	04 46 32	44 57.5	848	99	2	+	0.2
52	160.52	+1.72	04 52 47	45 52.0	848	42	52	+	0.4
53	160.58	+0.73	04 48 39	45 11.0	644	58	336	+	0.1
54	160.62	-0.76	04 42 24	44 11.3	644	116	281	+	0.2
55	160.66	-1.40	04 39 52	43 44.2	644	140	256	+	0.3
56	160.70	+1.49	04 52 24	45 34.6	848	45	36	+	0.1
57	160.70	+0.54	04 48 16	44 58.5	644	61	324		0.3
58	160.72	-0.66	04 43 11	44 11.2	644	108	281	+	0.3
59	160.74	+1.41	04 52 11	45 29.8	848	46	32	+	0.3
60	160.75	+1.91	04 54 27	45 48.0	848	26	49	+	0.1
61	160.77	-0.57	04 43 44	44 11.9	644	103	281	+	0.4
62	160.79	-1.47	04 40 02	43 35.9	644	138	248		0.3
63	160.80	-1.53	04 39 51	43 32.9	644	140	246		0.3
64	160.81	+0.65	04 49 08	44 57.4	668	339	327	+	0.1
65	160.82	+0.63	04 49 05	44 56.5	644	53	323	+	0.3
66	160.91	+0.04	04 46 51	44 29.2	644	73	298	+	0.3
67	160.91	-0.83	04 43 07	43 55.6	644	109	267	+	0.2
68	160.96	+0.14	04 47 27	44 31.0	644	68	299	+	0.2
69	161.03	+0.23	04 48 07	44 31.4	644	61	300	+	0.6
70	161.08	+1.94	04 55 46	45 33.6	848	13	36	+	0.2
71	161.09	+0.44	04 49 12	44 36.8	644	51	305	+	0.2
72	161.10	+0.13	04 47 55	44 24.5	644	63	294	+	0.3
73	161.14	-0.33	04 46 05	44 04.6	644	80	275	+	0.4
74	161.41	-0.57	04 46 04	43 43.0	644	80	256	+	0.3
75	161.44	+0.29	04 49 50	44 14.5	644	44	286	+	0.3
76	161.56	-1.33	04 43 25	43 06.2	644	105	222	+	0.3
77	161.62	+0.94	04 53 16	44 30.9	668	301	303	+	0.2
78	161.63	+0.09	04 49 39	43 57.9	668	337	275	+	0.3
79	161.68	-0.20	04 48 34	43 44.9	644	55	258	+	0.3
80	161.69	+0.48	04 51 30	44 10.1	668	319	285	+	0.2
81	161.69	+0.48	04 51 30	44 10.4	668	319	285	+	0.1
82	161.74	+0.86	04 53 22	44 22.4	668	300	295	+	0.2
83	161.74	+0.80	04 53 06	44 19.8	668	303	293	+	0.2
84	161.85	+0.82	04 53 33	44 15.6	644	9	288	+	0.3
85[f]	161.92	+0.43	04 52 07	43 57.9	668	313	274	+	0.4
86	161.93	+1.41	04 56 26	44 33.9	668	271	305	+	0.1
87	162.28	-0.92	04 47 39	42 49.6	644	63	209	+	1.0
88	162.38	+1.49	04 58 19	44 15.8	668	253	288		0.1
89	162.40	-1.84	04 44 18	42 08.3	644	95	172	+	0.4
90	162.66	+1.78	05 00 35	44 13.2	668	231	285	+	0.1
91	162°.90	+1°.02	04h58m04s	+43°34'.3	668	257	250	+	0'.8
92	162.95	-1.68	04 46 50	41 49.4	644	69	155	+	0.3
93	163.04	-0.92	04 50 16	42 14.2	668	336	182	+	0.9
94	163.05	+0.50	04 56 20	43 07.6	668	274	228	+	0.3
95	163.34	-1.25	04 49 59	41 47.8	668	340	158	+	0.2
96	163.42	+1.06	05 00 00	43 10.7	668	238	229	+	0.2
97	163.58	+0.26	04 57 08	42 33.8	668	267	197	+	0.2
98	163.61	+0.56	04 58 28	42 43.5	668	254	206	+	0.2
99	163.62	+0.28	04 57 21	42 32.4	668	265	196	+	0.2
100	163.64	-0.06	04 55 56	42 18.9	668	279	184	+	0.4
101	163.66	+0.19	04 57 04	42 27.1	668	268	191	+	0.2
102	163.69	-0.41	04 54 37	42 03.6	668	293	172	+	0.6
103	163.75	-1.40	04 50 43	41 23.2	668	333	136	+	0.2
104	163.88	-0.23	04 56 03	42 01.0	668	279	168	+	0.3
105	163.92	+1.80	05 04 52	43 14.2	668	191	232		0.1
106	163.93	-0.70	04 54 16	41 41.4	668	297	152	+	0.2
107	164.08	-0.31	04 56 22	41 49.0	668	276	157	+	0.1
108	164.19	-0.90	04 54 18	41 21.4	668	297	134	+	0.1
109	164.24	+0.65	05 00 58	42 16.9	668	229	182	+	0.2
110	164.26	-0.64	04 55 36	41 28.0	668	284	138	+	0.2
111	164.43	-1.07	04 54 24	41 03.9	668	297	118	+	0.2
112	164.45	-1.02	04 54 37	41 05.1	668	295	119		0.4
113	165.19	+1.61	05 08 10	42 06.3	668	158	171		0.1
114	165.19	+0.25	05 02 23	41 16.9	668	216	128		0.4
115	165.69	+0.57	05 05 20	41 04.6	668	186	116	+	0.3
116	165.91	+0.27	05 04 48	40 43.5	668	192	97		0.2
117	166.13	+0.16	05 05 00	40 29.0	668	190	84	+	0.2
118	166.27	+1.93	05 12 59	41 25.1	668	109	135	+	0.3
119	167.28	+0.58	05 10 23	39 48.7	668	135	48	+	0.2
120	167.65	+1.73	05 16 24	40 10.7	668	73	69	+	0.2
121	167.98	+2.00	05 18 31	40 04.0	668	51	63	+	0.3
122	172.59	-1.81	05 16 11	34 06.3	1315	150	66	+	0.2
123	174.23	-1.58	05 21 37	32 53.6	1455	134	329	+	0.2
124	174.24	-1.36	05 22 29	33 00.3	1455	124	335	+	0.2
125	174.29	-1.35	05 22 39	32 58.4	1455	122	333	+	0.1
126	174.75	-1.87	05 21 52	32 17.8	1455	131	297	+	0.1
127	174.76	-1.89	05 21 49	32 16.8	1455	131	296		0.1
128	174.78	-1.87	05 21 56	32 16.8	1455	130	296	+	0.6
129	174.82	-1.78	05 22 23	32 17.2	1455	125	296	+	0.3
130	174.91	-1.91	05 22 07	32 08.4	1455	128	288	+	0.2
131	175.05	-1.78	05 23 00	32 06.4	1455	118	286		0.3
132	175.73	+1.82	05 39 06	33 30.1	1290	207	38	+	0.1
133	175.76	+1.36	05 37 20	33 13.8	1290	227	23	+	0.1
134	175.77	+1.32	05 37 11	33 11.9	1290	228	21	+	0.2
135	175.79	+1.29	05 37 06	33 10.0	1290	229	20	+	0.2
136	175°.89	+1°.62	05h38m43s	+33°16'.0	1290	211	25	+	0'.1
137	176.10	-1.91	05 25 16	31 09.7	1455	91	236		0.2
138	176.23	+1.14	05 37 39	32 42.8	1459	245	321		0.1
139	177.37	+0.36	05 37 23	31 20.2	1459	249	247		0.3
140	177.53	+1.69	05 43 06	31 54.0	1459	184	278	+	0.1
141	177.65	+1.76	05 43 41	31 50.8	1459	177	275	+	0.2
142	177.77	+2.00	05 44 56	31 51.9	1459	163	276	+	0.2
143	177.80	+1.37	05 42 28	31 30.4	1459	191	256		0.3
144	177.84	+1.18	05 41 50	31 22.5	1459	198	249	+	0.1
145	178.15	+1.82	05 45 09	31 26.7	1459	161	253	+	0.1
146	178.87	+1.50	05 45 36	30 39.9	1459	155	211	+	0.3
147	179.72	+0.91	05 45 19	29 37.9	1459	159	155	+	0.2
148	180.16	+1.28	05 47 49	29 26.5	1459	130	145	+	0.3
149	180.48	-0.95	05 39 56	28 00.6	1459	222	68		0.2
150	180.56	+1.60	05 50 01	29 16.1	1459	104	135	+	0.3
151	181.17	+0.88	05 48 37	28 22.5	1459	120	87	+	0.2
152	181.30	+1.76	05 52 23	28 42.8	1459	76	105	+	0.4
153	181.33	+1.25	05 50 28	28 25.5	1459	98	90	+	0.1
154	181.38	+1.81	05 52 46	28 40.2	1459	72	103	+	0.2
155	181.56	+1.96	05 53 46	28 35.6	1459	60	99	+	0.3
156	181.60	+0.67	05 48 50	27 53.8	1459	117	62	+	0.1
157	181.62	+1.42	05 51 48	28 15.7	1459	83	81	+	0.3
158	181.74	+1.86	05 53 49	28 23.0	1459	59	88	+	0.1
159	182.04	+1.59	05 53 24	27 59.5	1459	63	67	+	0.2
160	183.09	-1.50	05 43 59	25 30.2	416	169	250	+	0.3
161	183.21	-1.37	05 44 45	25 28.1	416	159	248	+	0.3
162	183.82	+2.00	05 59 02	26 39.3	1278	302	318	+	0.2
163	184.25	+1.58	05 58 23	26 04.4	1278	311	287	+	0.2
164	185.23	+1.50	06 00 15	25 11.0	1278	289	239	+	0.2
165	185.56	+0.72	05 57 58	24 30.7	1278	318	203	+	0.1
166	185.71	+1.65	06 01 50	24 50.5	1278	270	221	+	0.2
167	186.84	+1.72	06 04 35	23 53.8	1278	237	170	+	0.2
168	187.28	+1.90	06 06 11	23 35.8	1278	218	154	+	0.2
169	188.18	+1.26	06 05 42	22 30.0	1278	224	95	+	0.2
170	188.44	+1.45	06 06 55	22 22.0	1278	209	88	+	0.1
171	192.97	+1.52	06 16 31	18 26.2	1494	35	200	+	0.8
172	193.60	+1.27	06 16 51	17 45.5	1494	31	164	+	0.2
173	195.08	+1.92	06 22 11	16 46.0	1470	266	112	+	0.1
174	195.72	+1.50	06 21 54	16 00.4	1470	270	71	+	0.3
175	185.72	+1.49	06 21 53	15 59.7	1470	270	71	+	1.0
176	195.74	-1.68	06 10 21	14 28.1	1502	108	311		0.2
177	196.55	+1.18	06 22 21	15 07.4	1470	265	24	+	0.1
178	196.56	-0.04	06 17 56	14 32.0	1502	9	261	+	0.1
179	196.65	+0.57	06 20 19	14 44.6	445	288	326	+	0.3
180	196.68	-0.42	06 16 48	14 14.8	1502	24	299		0.6
181	196°.93	+0°.63	06h21m05s	+14°31'.7	445	279	315	+	0'.6
182	197.18	+0.02	06 19 22	14 01.0	445	301	287	+	0.7
183	197.22	+0.06	06 19 36	13 59.9	445	298	286	+	0.3
184	197.25	+0.04	06 19 33	13 57.8	445	299	284	+	0.2
185	197.28	-0.13	06 19 00	13 51.1	445	306	278		0.1
186	197.55	+2.00	06 27 17	14 37.0	445	198	319		0.2
187	197.86	+0.61	06 22 49	13 41.9	445	256	270	+	0.2
188	198.11	+1.19	06 25 24	13 44.8	445	223	273	+	0.1
189	200.15	+1.68	06 31 07	12 10.4	445	148	188	+	0.2
190[g]	200.17	+1.54	06 30 38	12 05.6	445	154	184	+	0.8
191	200.27	-1.64	06 19 23	10 30.5	445	303	99	+	0.3
192	200.28	-1.77	06 18 54	10 26.4	445	309	95	+	0.3
193	200.40	-1.49	06 20 09	10 27.7	445	293	96		0.1
194	200.53	-1.40	06 20 44	10 23.6	445	285	93	+	0.2
195	200.57	-1.35	06 21 00	10 23.2	445	281	92	+	0.1
196	200.83	-1.25	06 21 51	10 12.1	445	270	82	+	0.3
197	200.92	-1.58	06 20 49	09 58.0	445	284	70	+	1.3
198	200.97	-1.45	06 21 24	09 59.2	445	276	71	+	0.2
199	201.29	-1.97	06 20 10	09 27.4	445	293	42		0.2
200	201.36	-0.18	06 26 42	10 14.0	445	206	84	+	0.2
201	202.09	+0.57	06 30 47	09 56.5	445	152	68		0.2
202	202.68	+0.25	06 30 45	09 16.2	445	153	32	+	0.3
203	202.94	+0.41	06 31 48	09 06.9	445	139	24	+	0.9
204	203.36	+0.99	06 34 39	09 00.6	445	101	18		0.2
205	204.93	-0.50	06 32 18	06 55.8	923	130	228	+	0.6
206	205.80	+1.34	06 40 30	07 00.4	923	21	234	+	0.2
207	206.88	+0.37	06 39 01	05 36.0	923	40	157	+	0.3

a) Maffei 1

b) Maffei 2

c) No. 03108 in the *Uppsala General Catalogue of Galaxies* (Nilson, 1973) = = No. 20 in Table IV of Böhm-Vitense (1956)

d) Optical counterpart of 3C129 (Hill & Longair, 1971)

e) Optical counterpart of 3C129.1 (Hill & Longair, 1971)

f) No. 21 in Table IV of Böhm-Vitense (1956)

g) No. 03490 in the *Uppsala General Catalogue of Galaxies* (Nilson, 1973)