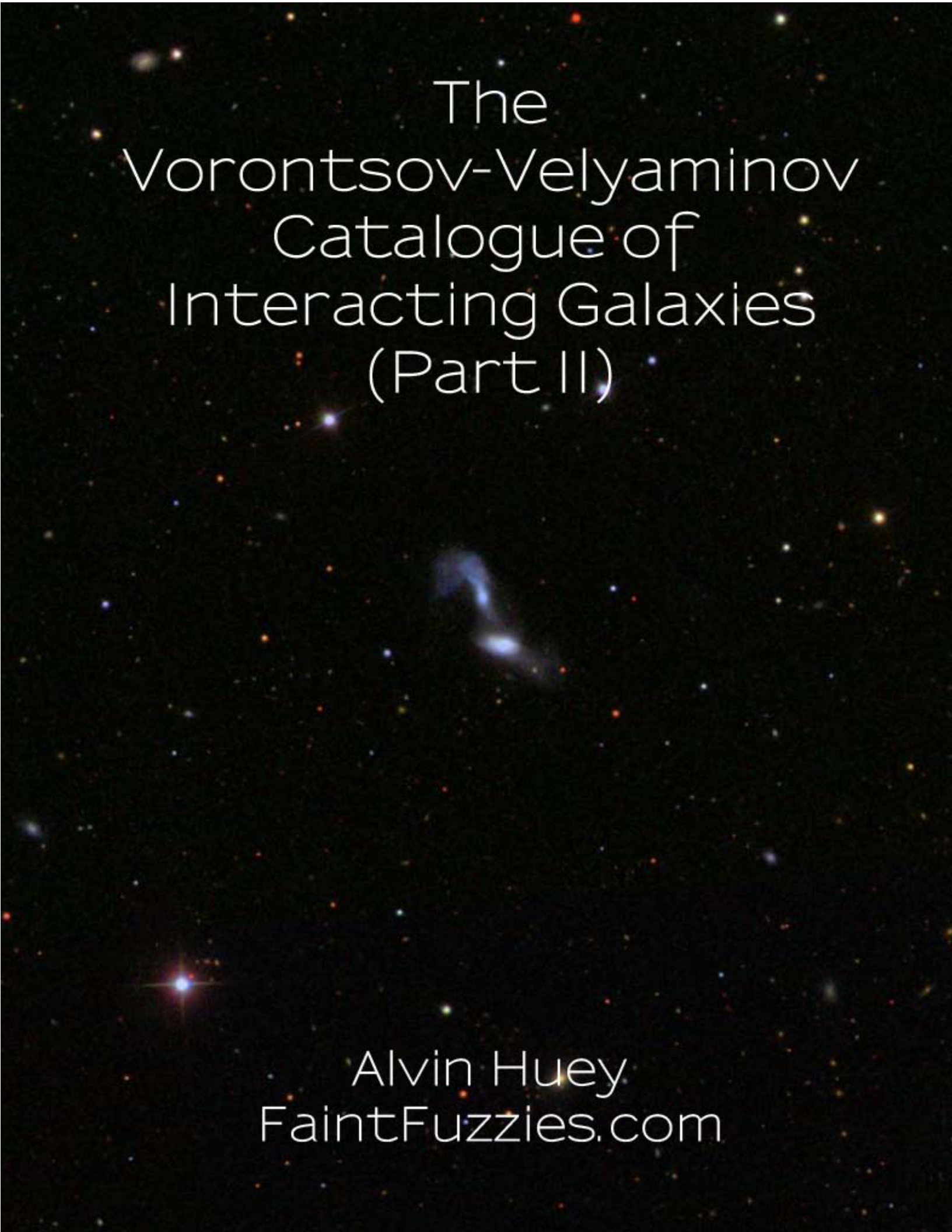


The Vorontsov-Velyaminov Catalogue of Interacting Galaxies (Part II)

Alvin Huey
FaintFuzzies.com

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The Local Group

Flat Galaxies

Abell Galaxy Clusters

Voronstov-Velyaminov Catalogue – Part I and II

Rose Catalogue of Compact Galaxies

Variable Galaxies

Selected Shakhbazian Groups

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Palomar Compact Galaxy Catalogue

Object of the Week 2012 and 2013 – Deep Sky Forum

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The Vorontsov-Velyaminov Catalogue

Dr. Boris Vorontsov-Velyaminov (1904–1994), affiliated with the Sternberg Astronomical Institute at Moscow University, compiled a series of catalogues of interacting galaxies starting in 1959. In 1966, Boris Vorontsov-Velyaminov released Part I of his catalog, which introduced 355 interacting galaxy systems, designated VV1 through VV355. This foundational work established a systematic approach to identifying and classifying interacting galaxies, paving the way for subsequent research in the field. His meticulous methodology and attention to morphological details set a new standard for cataloging extragalactic phenomena and provided astronomers with an invaluable resource for studying galactic interactions.

Most of the systems were identified on POSS plates taken with the Palomar 48-inch Schmidt astrograph. Part I of the original list included 355 systems and preceded the better-known Arp Peculiar Galaxies catalog, which Arp compiled after being inspired by Boris Vorontsov-Velyaminov's work. About half of Boris's entries also appear in Arp's list. With access to the 200-inch reflector, Arp obtained deeper and clearer images of these galaxies' structures. As noted by Steve Gottlieb, some of Vorontsov-Velyaminov's "nests" and "chains" were later found to be single dwarf irregular galaxies, not multiple systems, due to their active star-forming regions. Visually through the eyepiece of a large reflector, you may see some "nests" and "chains" as stars on the galaxy or part of a chain.

In 1977, Boris Vorontsov-Velyaminov (VV) added 497 interacting systems (VV356–VV852) to his list, which is Part II. In 2001, 1162 more objects (VV853–VV2014) from the Morphological Catalogue of Galaxies were included.

Boris systematically classified each interacting galaxy into several categories, noting unique details for most objects. The classification scheme includes M51 types, nested galaxies, pairs of galaxies, chains of galaxies, ring galaxies, and enigmatic galaxies. Specific features identified encompass tails, bridges, and various disruptions. A comprehensive table outlining these categories and their respective characteristics can be found on page 14. Some of these features are fun and challenging to advanced observers with large telescopes. Some may be too faint to see, but knowing what you are looking at is fun too.

Boris maintained a particular research focus on M51 type systems, interactions involving multiple systems (nests and chains), and the tidal theory related to bridges and tails. His contributions are likely to significantly influence future work within these areas of study. For reference, a list of his published papers is provided on page 186. Appreciation extended to Steve Gottlieb for providing several of Boris's authored works.

This observing guide covers only **Part II**. Part I is available.

Background information of this very interesting Russian astronomer

Boris didn't just do work on interacting galaxies; he wrote some articles on planetary nebulae. He compiled the *General Catalogue of Planetary Nebulae* and developed a classification system for planetary nebulae (see the table below), which continues to be utilized in contemporary research.

Table 1: Vorontsov-Velyaminov Planetary Nebula Types

Type	Description
1	Stellar
2a	Smooth disc – brighter towards the center
2b	Smooth disc – uniform brightness
2c	Smooth disc – traces of ring structure
3a	Irregular disc – very irregular brightness distribution
3b	Irregular disc – traces of ring structure
4	Ring structure
5	Irregular form
6	Anomalous form

Boris was the lead architect of the Morphological Catalogue of Galaxies (MCG), listing 30,642 galaxies to magnitude 15, published in five parts from 1962 to 1974. He often noted[1] that his MCG and "Catalogue of Interacting Galaxies" were overlooked by other astronomers, likely because he published mainly in less accessible Soviet journals. Boris also expressed frustration[2] that his Ring Galaxies paper[3] received little recognition.

Thanks to my observing friends

I'm grateful to my observing group—late Gregg Blandin, Shneor Sherman, late Bill Porte, and Marsha Robinson-Porte—for their camaraderie at remote sites over the past three plus decades.

[1] Vorontsov-Velyaminov, B.A. *Correspondence – Morphological Catalogue of Galaxies Discriminated Against*. The Observatory, Vol. **94**, 1974, 319-320.

[2] Vorontsov-Velyaminov, B.A. *Ring Galaxies*. The Observatory, vol. 103, 1983, 259-260.

[3] Vorontsov-Velyaminov, B.A. *Ring Galaxies*. Soviet Astronomy, Vol. 4, 365

The Vorontsov-Velyaminov Catalogue - Part II

Page	VV	RA	Dec	NED Type	Int. Type	Const	Other ID
24	405	22 09 42.9	+38 11 50	G	MMM	Lac	MCG +06-48-010
25	748	21 12 14.8	+13 01 02	GPair	PK	Peg	UGC 11698
26	589	21 58 34.0	+14 07 22	G	N	Peg	UGC 11866
27	812	22 00 41.9	+10 32 59	GPair	PDbt	Peg	UGC 11871
28	572	22 02 23.0	+18 19 08	GPair	PC	Peg	UGC 11878
29	409	22 11 34.3	+11 47 45	G	M	Peg	IC 5177
30	483	22 24 23.3	+18 04 17	G	M	Peg	MCG +03-57-002
31	479	23 02 33.1	+32 35 41	G	MM	Peg	UGC 12323
32	738	23 04 53.4	+16 40 42	G	PC	Peg	UGC 12342
33	635	23 10 10.5	+29 54 50	GPair	N	Peg	MGC+05-54-(041a)
34	649	23 23 21.8	+29 25 45	G	NN	Peg	MCG +05-55-009
35	503	23 23 22.7	+13 19 08	G	Ch	Peg	UGC 12571
36	619	23 27 53.7	+23 33 39	GPair	N	Peg	NGC 7673
37	579	23 32 22.9	+23 30 42	GPair	N	Peg	MCG +04-55-024
38	400	23 34 01.6	+24 56 41	G	MMM	Peg	NGC 7698
39	598	23 36 40.9	+17 30 52	G	N	Peg	UGC 12707
40	697	23 55 50.1	+25 30 03	GTrpl	NNN	Peg	MCG +04-01-002
41	806	00 03 09.6	+21 57 37	G	Enf	Peg	UGC 6
42	502	00 07 44.0	+40 52 32	G	Ch	And	UGC 64
43	819	00 21 11.9	+34 21 01	G	Enat	And	PGC 1354
44	527	00 46 35.3	+36 19 43	GPair	NP	And	UGC 480
45	441	00 46 56.0	+32 40 31	G	M	And	UGC 484
46	554	00 51 26.8	+40 43 31	G	N	And	UGC 522
47	566	00 54 35.8	+42 16 34	G	N	And	MCG +07-03-005
48	769	01 16 18.5	+46 44 38	GPair	PDdf	And	UGC 813, 816
49	597	01 29 40.4	+33 49 52	G*	N	And	MCG +06-04-032
50	428	02 03 26.3	+38 06 52	GPair	M	And	NGC 797
51	634	00 20 02.6	+06 27 56	GPair	N	Psc	MCG +01-02-001
52	837	00 26 00.8	-02 55 55	GPair	Enat	Psc	MCG -01-02-013
53	433	00 39 19.8	+13 06 22	GPair	PDdf	Psc	UGC 403, 404
54	613	23 24 23.1	-00 06 29	G	N	Psc	NGC 7667
54	492	23 25 01.6	+00 00 01	GPair	Ch	Psc	UGC 12589
55	470	23 35 26.1	+07 19 20	G	MM	Psc	UGC 12688
56	407	23 48 45.5	+04 10 16	G	M	Psc	NGC 7757
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58	382	01 12 59.8	+15 29 29	GPair	MMM	Psc	MCG +02-04-010

Page	VV	RA	Dec	NED Type	Int. Type	Const	Other ID
58	377	01 13 15.8	+15 30 59	GGroup	MMM	Psc	MCG +02-04-011
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74	486	01 03 07.1	-06 59 19	G	PC	Cet	NGC 356
75	386	01 03 23.8	-10 51 26	GTrpl	MMM	Cet	MCG -02-03-068
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79	398	01 20 09.3	-22 22 39	G	MMM	Cet	NGC 478
80	781	01 20 35.5	-17 23 32	GPair	PDdf	Cet	MCG -03-04-052
81	509	01 23 26.4	+01 42 21	G	Ch	Cet	MCG 00-04-111
82	375	01 39 20.3	-20 27 11	G	MMM	Cet	MCG -04-05-004
83	733	01 59 44.5	-07 50 21	G	PC	Cet	MCG -01-06-018
84	583	02 02 16.7	-21 45 47	G	N	Cet	MCG -04-06-001
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86	683	02 17 16.5	-06 04 15	GTrpl	N	Cet	MCG -01-06-081
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88	449	02 28 11.2	-05 50 21	G	M	Cet	MCG -01-07-015
89	817	02 31 35.2	-13 25 28	G	PC	Cet	MCG -02-07-027
90	648	02 38 53.4	+00 30 25	GGroup	N	Cet	MCG 00-07-070
91	423	02 41 17.7	-09 55 59	G	M	Cet	MCG -02-07-066
92	652	02 41 50.8	-20 48 41	GPair	N	Cet	MCG -04-07-021
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97	784	00 37 41.7	-33 43 00	G	R	Scl	MCG -06-02-022a
98	484	00 52 41.7	-31 12 28	G	M	Scl	NGC 289
99	770	01 25 13.9	-35 48 52	GPair	PD	Scl	MCG -06-04-030
100	577	01 25 50.8	-37 20 01	GTrpl	N	Scl	MCG -06-04-034
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102	419	01 39 02.5	-29 55 19	GPair*	M	Scl	NGC 639, 642
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105	578	01 19 56.8	-41 14 12	GPair	N	Phe	MCG -07-03-016
106	443	01 37 25.5	-64 53 47	GPair	M	Hyi	NGC 646
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108	425	01 57 49.6	+33 22 39	G	M	Tri	NGC 761
109	650	02 10 41.4	+35 11 57	GGroup	N	Tri	UGC 1668
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111	535	01 48 46.7	+20 15 46	G	N	Ari	UGC 1265
112	751	02 00 23.8	+21 06 30	G	PC	Ari	UGC 1485
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114	658	02 25 01.3	+26 22 18	GTrpl	N	Ari	V Zw 235
115	391	02 27 26.0	+23 05 38	G	MMM	Ari	MCG +04-06-044
116	516	02 39 26.1	+12 40 48	GPair	-	Ari	UGC 2148
117	606	02 53 11.9	+13 01 53	G	N	Ari	UGC 2362
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122	610	03 42 11.2	-27 51 51	G	N	For	MCG -05-09-022
123	436	03 18 16.0	-66 29 54	G	M	Ret	NGC 1313
124	826	04 45 42.1	-59 14 57	G	Enat	Dor	NGC 1672
125	833	03 10 10.0	+31 55 16	GPair	Enat	Per	UGC 2565
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128	690	03 29 31.9	-17 46 42	G	N	Eri	NGC 1345
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136	725	04 50 07.7	-23 53 30	G	PC	Eri	MCG -04-12-017
137	699	04 59 22.5	-11 07 32	GTrpl	NNN	Eri	NGC 1721, 25, 28
138	729	03 41 10.6	-01 18 03	GPair	PC	Tau	NGC 1409, 10
139	777	04 04 10.3	+22 07 47	GPair	PK	Tau	UGC 2942
140	555	04 30 10.9	+06 56 38	GGroup	N	Tau	UGC 3061
141	793	04 02 39.6	+78 16 44	G	N	Cam	UGC 2907
142	551	06 52 19.6	+63 05 26	GGroup	N	Cam	UGC 3563
143	640	07 13 47.9	+67 02 36	GPair	N	Cam	VII Zw 130
144	644	07 29 25.4	+72 07 44	GGroup	PC	Cam	IC 2184
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148	365	13 00 22.0	+80 07 18	G	MMM	Cam	UGC 8148
149	706	17 19 53.0	+86 44 15	GPair	NNNP	UMi	UGC 10923
150	601	05 56 16.5	+48 32 37	G	N	Aur	MCG +08-11-012
151	596	06 08 10.9	+34 15 49	G*	N	Aur	MCG +06-14-002
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153	790B	05 01 42.0	+03 34 28	G	R	Ori	MCG +01-13-(013a)
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158	576	06 26 37.8	-29 56 02	G	N	CMa	MCG -05-16-004
159	785	06 43 05.0	-74 14 34	GPair	R	Vol	ESO 34-11
160	528	07 23 44.1	+33 26 41	GPair	PDbt	Gem	UGC 3829
161	643	07 32 14.0	+25 54 23	G	N	Gem	NGC 2405
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166	387	07 29 34.1	+57 07 01	G	MMM	Lyn	UGC 3867
167	662	07 39 28.6	+55 32 59	GPair	PK	Lyn	MCG +09-13-024
168	654	07 47 09.3	+54 56 51	Gpair?	NN	Lyn	MCG +09-13-055
169	646	07 49 48.3	+48 07 46	G	N	Lyn	MCG +08-15-003
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Page	VV	RA	Dec	NED Type	Int. Type	Const	Other ID
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177	645	09 04 35.4	+14 35 39	GGroup	N	Cnc	IC 2431
178	612	09 04 38.8	+18 27 37	GPair	M	Cnc	NGC 2744
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182	810	08 34 32.7	+01 40 06	GPair	PDbt	Hya	UGC 4480
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185	549	09 15 36.6	-13 37 55	GGroup	N	Hya	MCG -02-24-004
186	741	09 53 35.7	-12 28 50	GPair	PKbt	Hya	NGC 3058
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192	631	13 32 38.2	-27 10 11	G	N	Hya	IC 4281
193	392	13 43 51.1	-27 21 43	G	MMM	Hya	MCG -04-32-052
194	666	14 00 24.8	-23 18 25	GGroup	NNN	Hya	MCG -04-33-024
195	768	09 25 18.4	-34 06 12	G	PK	Pyx	NGC 2883
196	586	09 28 26.0	-36 07 49	G	N	Ant	MCG -06-21-008
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199	796	10 14 42.1	-28 52 20	G	K	Ant	NGC 3175
200	499	08 34 07.2	+66 10 54	G	Ch	UMa	MCG +11-11-013
201	703	08 47 51.8	+53 52 40	GPair	NNNP	UMa	NGC 2656
202	388	08 54 47.0	+52 28 31	GPair	MMM	UMa	MCG +09-15-046
203	765	08 54 57.2	+49 09 33	GGroup	NPNP	UMa	NGC 2684
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Page	VV	RA	Dec	NED Type	Int. Type	Const	Other ID
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212	533	10 10 13.3*	+54 30 04*	GPair	N	UMa	UGC 5479
213	834	10 18 43.0	+46 02 53	GPair	Enat	UMa	MCG +08-19-016
214	675	10 25 01.6	+47 50 30	G	NNN	UMa	MCG +08-19-026
215	845	10 33 32.2	+56 16 22	G	Ent	UMa	MCG +09-17-071
216	639	10 34 03.6	+59 24 08	GTrpl	N	UMa	MCG +10-15-103
217	628	10 55 31.2*	+57 54 08*	GTrpl	N	UMa	MCG +10-16-025
218	627	11 00 59.3	+57 47 04	GPair	N	UMa	MCG +10-16-044
219	747	10 57 47.4	+36 15 39	Gpair?	PC	UMa	MCG +06-24-038
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221	686	11 17 57.9	+32 00 32	G	N	UMa	MCG +05-27-046
222	402	11 18 19.0	+53 45 04	GPair	MMM	UMa	UGC 6315
223	660	11 27 35.0	+47 22 43	G	N	UMa	MCG +08-21-037
224	653	11 37 56.4	+47 28 06	GPair	NN	UMa	MCG +08-21-078
225	459	11 35 01.8	+54 51 02	G	M	UMa	NGC 3733
226	455	11 47 34.4	+55 58 02	G	M	UMa	NGC 3888
227	696	11 49 12.2	+55 42 00	GPair	PDbt	UMa	MCG +09-19-201
228	575	11 39 26.8	+31 51 16	G	N	UMa	MCG +05-28-005
229	673	11 48 06.4	+37 26 54	GTrpl	NPNP	UMa	MCG +06-26-038
230	523	11 57 31.1	+32 20 16	GPair	Ch	UMa	NGC 3991
231	385	11 57 58.1	+52 44 11	G	M	UMa	MCG +09-20-047
232	656	12 02 15.3	+59 08 18	GGroup	N	UMa	MCG +10-17-130
233	708	12 43 48.7	+54 54 01	GPair	PKbt	UMa	UGC 7905
234	417	13 13 39.6	+54 49 47	GPair	M	UMa	MCG +09-22-032
235	851	13 44 42.1	+55 53 13	G	Ent	UMa	UGC 8696
236	792	13 57 41.1	+57 00 06	GTrpl?	En?	UMa	UGC 8892
237	456	14 03 12.5	+54 20 55	G	M	UMa	M 101
237	394	14 04 29.0	+54 23 49	HII	MMM	UMa	NGC 5471
237	561	14 05 33.2	+54 27 39	G	N	UMa	NGC 5477
238	573	10 14 01.6	-35 08 23	GPair	NNN	LMi	MCG -06-23-016
239	794	10 42 41.9	+34 26 56	G	Enf	LMi	UGC 5829
240	727	10 47 02.6	+26 32 34	G	PC	LMi	UGC 5884
241	538	10 49 25.1	+32 46 21	G	N	LMi	IC 2604
242	515	11 00 44.4	+29 06 45	G	Ch	LMi	MCG +05-26-034
243	553	09 33 16.3	+23 08 06	G	N	Leo	MCG +04-23-010
244	659	09 39 21.0	+23 34 21	GPair	N	Leo	PGC 27536

Page	VV	RA	Dec	NED Type	Int. Type	Const	Other ID
245	808	09 37 55.5*	+17 01 14*	GPair	PK	Leo	NGC 2933
246	547	09 42 54.7	+09 29 01	GGroup	N	Leo	UGC 5189
247	373	09 55 29.7	+08 23 28	G	MMM	Leo	UGCA 188
248	542	09 56 45.8	+28 49 35	G	N	Leo	UGC 5340
249	689	10 01 39.4	+19 47 36	GPair	N	Leo	MCG +03-26-016
250	396	10 31 11.1	+06 52 30	GTrpl	N	Leo	MCG +01-27-015
251	393	10 35 48.7	+20 02 27	GGroup	NPNP	Leo	MCG +03-27-064
252	514	10 43 51.7	+06 45 35	GTrpl	Ch	Leo	NGC 3349
253	529	10 44 12.2	+06 45 32	G	N	Leo	NGC 3356
254	801	10 50 30.0	+19 38 42	G	K	Leo	UGC 5947
255	463	11 02 30.7	+02 37 06	G	MM	Leo	MCG +01-28-029
256	664	11 06 59.0	+23 00 23	G	N	Leo	UGC 6164
257	401	11 07 31.8	+23 22 42	GGroup	N	Leo	MCG +04-26-032
258	429	11 09 08.9	+08 11 03	GPair	M	Leo	UGC 6197
259	795	11 20 15.6	+02 31 32	G	Enf	Leo	UGC 6345
260	510	11 21 10.2	+05 21 48	G	Ch	Leo	MCG +01-29-035
261	594	11 28 12.2	+21 59 49	G	N	Leo	UGC 6465
262	638	11 33 59.0	-03 36 20	GTrpl	NNN	Leo	MCG 00-30-012
263	381	11 36 03.6	-06 40 16	G	MMM	Leo	MCG -01-30-010
264	754	11 37 08.2	+02 50 33	GGroup	NPNP	Leo	UGC 6587
265	367	11 50 05.9	+24 55 12	G	MMM	Leo	NGC 3920
266	620	09 49 53.3	+00 37 02	GGroup	N	Sex	NGC 3023
267	637	10 03 26.9	-01 32 48	GPair	N	Sex	MCG 00-26-013
268	722	10 10 27.8	+02 13 43	G	PC	Sex	UGC 5487
269	466	10 55 49.4	-09 51 36	G	MM	Crt	MCG -01-28-007
270	724	11 20 30.8	-09 00 48	GPair	PC	Crt	NGC 3634, 3635
271	758	11 39 35.3	-09 37 51	GPair	NPNP	Crt	NGC 3789
272	477	11 43 29.8	-16 47 44	GPair	M	Crt	NGC 3836
273	446	14 24 20.3	-16 44 34	GPair	M	Crt	NGC 5595, 5597
274	454	12 09 15.8*	+44 05 22*	GPair	MM	CVn	NGC 4137
275	814	12 10 54.1	+39 45 14	GPair*	M	CVn	NGC 4145A
276	497	12 12 56.5	+52 15 55	G	Ch	CVn	UGC 7218
277	448	12 18 57.5	+47 18 14	G	MM	CVn	M 106
278	737	12 28 14.8	+44 27 07	GPair	PC	CVn	UGC 7593
279	493	12 44 06.9	+45 00 20	GGroup	Ch	CVn	UGC 7910
280	465	12 46 00.1	+45 12 00	GTrpl	MM	CVn	UGC 7936
281	789	12 53 06.2	+36 49 22	GPair	R	CVn	NGC 4774
282	418	13 00 44.3	+39 45 15	G	M	CVn	IC 4056

Page	VV	RA	Dec	NED Type	Int. Type	Const	Other ID
283	704	13 11 59.2	+44 48 42	GTrpl	NNNP	CVn	UGC 8281
284	450	13 12 38.8	+34 03 59	G	MM	CVn	MCG +06-29-059
285	451	13 13 13.3	+33 59 04	G	MM	CVn	UGC 8299
286	438	13 14 30.5	+35 23 12	G	M	CVn	UGC 8318
287	616	13 14 48.3	+34 52 51	G	N	CVn	UGC 8323
288	633	13 20 08.5	+33 05 22	GTrpl	N	CVn	NGC 5906
289	828	13 34 42.5	+51 36 50	G	Enat	CVn	NGC 5238
290	543	13 42 23.5	+29 49 30	G	N	CVn	NGC 5275
291	607	13 50 54.2	+38 14 29	G	N	CVn	NGC 5325
292	369	13 52 17.8	+31 26 46	G	MMM	CVn	UGC 8782
293	688	13 57 20.7	+28 47 34	GPair	NNNP	CVn	MCG +05-33-028
294	384	12 02 50.3	+18 00 55	GGroup	MMM	Com	NGC 4048
295	735	12 15 55.3	+26 39 45	G	PC	Com	MCG +05-29-045
296	563	12 32 41.9	+14 02 57	G	N	Com	UGC 7695
297	571	12 36 08.2	+19 19 22	G	N	Com	UGC 7768
298	609	13 01 24.6	+29 18 39	GPair	N	Com	NGC 4922
299	841	13 06 38.1	+28 50 54	G	Enat	Com	MCG +05-31-133
300	460	13 09 47.5	+28 54 25	G	MM	Com	NGC 5000
301	559	13 12 41.7	+22 49 47	G	N	Com	NGC 5012A
302	474	13 12 59.5	+27 08 28	GPair	MM	Com	MCG +05-31-154
303	831	13 26 51.3	+26 35 28	GPair	Enat	Com	MCG +05-32-020
304	544	11 41 22.5	-06 28 53	G	N	Vir	UGCA 242
305	457	11 52 59.4	-04 25 37	G	MM	Vir	MCG -01-30-043
306	462	12 01 44.3	+05 49 17	G	MM	Vir	MCG +01-31-009
307	378	12 06 57.4	+10 17 01	GPair	MMM	Vir	MCG +02-31-029
308	520	12 14 38.5	+05 48 18	G	Ch	Vir	NGC 4197
309	431	12 17 59.9	+06 39 13	G	M	Vir	NGC 4241
310	432	12 17 33.7	+12 23 17	G	M	Vir	IC 3105
311	614	12 19 02.9	+08 51 23	G	N	Vir	IC 776
312	759	12 21 32.9	-05 38 15	GPair*	NPNP	Vir	MCG -01-32-005
313	511	12 26 51.1	+13 10 33	G	Ch	Vir	IC 3355
314	655	12 27 04.5	-00 54 23	GPair	N	Vir	MCG 00-32-013
315	844	12 39 20.3	-03 48 30	GPair	Ent	Vir	MCG -01-32-031
316	505	12 43 07.3	+11 12 43	G	Ch	Vir	IC 3694
317	366	12 53 14.4	+04 27 47	G	MMM	Vir	NGC 4765
318	434	12 57 39.5	-10 43 36	G	M	Vir	MCG -02-33-073
319	558	12 58 40.4	+14 13 02	G	N	Vir	UGC 8091
320	676	13 02 55.3	+05 31 21	GGroup	NNN	Vir	MCG +01-33-038

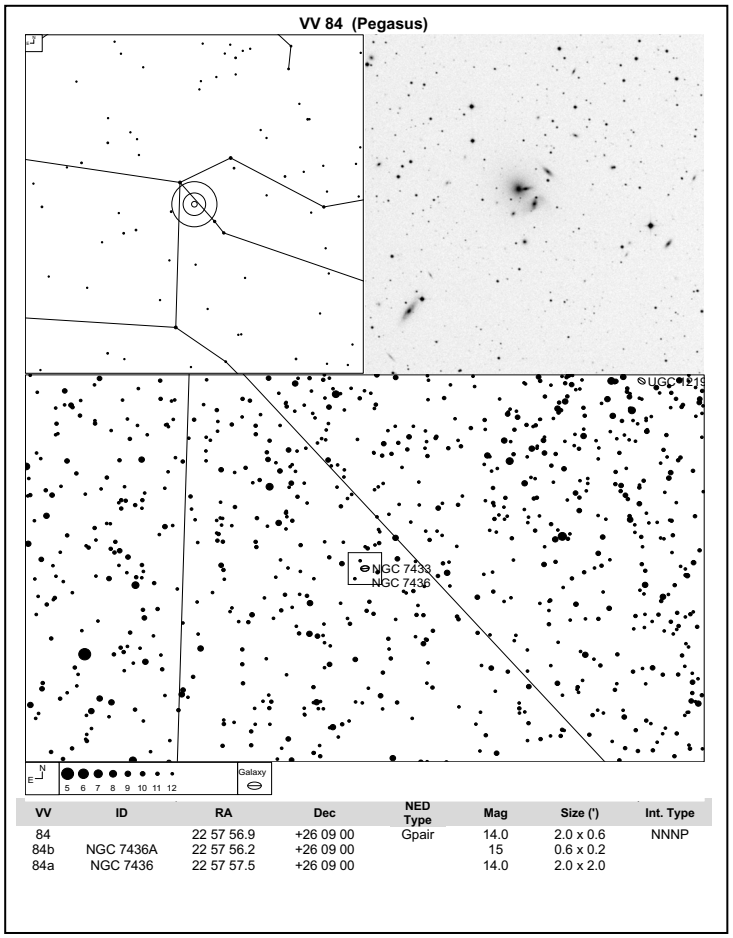
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321	802	13 20 05.5	-17 07 12	GPair	PKb	Vir	MCG -03-34-048
322	513	13 24 14.2	+13 56 00	GPair	Ch	Vir	MCG +02-34-013
323	485	13 25 08.0	-19 46 07	GPair	M	Vir	MCG -03-34-070
324	691	14 04 43.2	-09 42 39	G	N	Vir	NGC 5442
325	567	14 15 12.3	+04 49 27	G	N	Vir	UGC 9120
326	615	14 17 40.2	-07 25 03	G	N	Vir	NGC 5534
327	408	14 27 18.2	+04 48 10	G	M	Vir	NGC 5619
328	416	12 21 42.9	-39 46 10	G	M	Cen	MCG -06-27-018
329	415	12 21 57.9	-43 20 14	GPair	N	Cen	MCG -07-26-001
330	580	12 43 49.8	-40 42 57	GPair	N	Cen	NGC 4622A/B
331	671	13 06 04.3	-37 35 57	GGroup	Ch	Cen	NGC 4953
332	693	13 35 08.2	-33 29 02	GPair	PDbt	Cen	NGC 5215A/B
333	743	14 12 10.2	-34 16 09	GPair	PK	Cen	IC 4378, 79
334	422	13 39 18.1	+12 43 27	G	M	Boo	MCG +02-35-016
335	799	13 45 45.6	+22 05 20	G	K	Boo	UGC 8701
336	719	13 53 59.8	+17 09 28	GPair	PC	Boo	UGC 8701
337	782	14 04 52.5	+10 48 18	GPair	PD?	Boo	UGC 9000
338	744	14 15 42.5	+16 12 02	GPair	PK	Boo	MCG +03-36-097
339	557	14 18 43.4	+21 49 03	G	N	Boo	UGC 9164
340	739	14 24 09.2	+27 42 40	G	PC	Boo	MCG +05-34-030
341	371	14 28 03.3	+21 18 24	GPair	MMM	Boo	UGC 9274
342	717	14 28 19.1	+15 25 12	GGroup	PC	Boo	IC 1015
343	775	14 31 55.5	+33 38 24	GPair	PK	Boo	MCG +06-32-058
344	839	14 32 15.2	+26 19 36	G	Enat	Boo	MCG +05-34-064
345	762	14 36 00.1	+24 43 13	GGroup	NPNP	Boo	UGC 9396
346	732	14 37 54.2	+15 51 43	GGroup	N	Boo	IC 4473
347	752	14 42 30.0	+22 21 04	GPair	PK	Boo	MGC+04-35-004
348	517	14 44 52.7	+51 20 45	G	Ch	Boo	UGC 9511
349	842	14 45 27.8	+31 25 57	GPair	Enat	Boo	UGC 9504
350	713	14 45 45.1	+51 34 51	G	PC	Boo	MCG +09-24-035
351	803	14 54 11.9	+30 12 32	Gpair?	K	Boo	UGC 9588
352	766	14 54 31.5	+18 38 32	G	NPNP	Boo	NGC 5778
353	469	14 54 44.8	+24 05 49	G	MM	Boo	UGC 9594
354	374	14 58 41.2	+07 59 14	GPair	MMM	Boo	MCG +01-38-025
355	836	15 05 27.2	+23 41 20	G	Enat	Boo	UGC 9698
356	397	15 05 58.5	+20 50 57	G	N	Boo	MCG +04-36-009
357	786	15 15 56.3	+43 10 00	G	En	Boo	UGC 9796
358	705	15 18 06.3	+42 44 37	GPair	NNNP	Boo	I Zw 107

Page	VV	RA	Dec	NED Type	Int. Type	Const	Other ID
359	427	15 26 41.5	+40 33 52	G	M	Boo	UGC 9858
360	720	15 32 57.3	+46 27 10	G	PC	Boo	UGC 9893
361	815	14 52 34.8	-03 33 42	G	NN	Lib	UGCA 396
362	585	14 56 33.7	-24 30 10	Gpair?	N	Lib	MCG -04-35-017
363	780	14 57 42.9	-43 07 54	GPair	NNN	Lup	IC 4518A/B
364	574	11 28 00.4	+78 59 42	G	N	Dra	UGC 6456
365	788	12 32 05.2*	+66 24 13*	G	R	Dra	VII Zw 466, UGC 7683
366	605	13 01 16.9	+65 00 20	GPair	N	Dra	MCG +11-16-008
367	487	15 38 10.0	+57 36 13	G	M	Dra	MCG +10-22-028
368	816	15 51 31.6	+52 05 30	GPair	M	Dra	MCG +09-26-021
369	626	16 11 40.6	+52 27 26	GPair	N	Dra	NGC 6090
370	629	16 11 45.8	+60 34 56	GPair	N	Dra	UGC 10279
371	726	17 08 11.1	+63 37 47	GPair	PC	Dra	UGC 10731
372	507	17 00 41.5	+53 21 33	G	Ch	Dra	MCG +09-28-014
373	672	18 33 33.2	+67 07 42	GTrpl	NNNP	Dra	NGC 6679
374	681	18 45 36.3*	+49 45 43*	GTrpl	NN	Dra	MCG +08-34-017
375	414	19 10 59.1	+73 25 06	GPair	PD	Dra	NGC 6786
376	368=679	18 22 03.5	+66 37 13	GPair	NN	Dra	NGC 6636
377	838	16 00 30.8	+30 22 52	GPair	Enat	CrB	UGC 10128
378	611	16 03 01.5	+39 38 44	G	N	CrB	UGC 10155
379	506	16 12 06.1	+28 29 56	G	N	CrB	MCG +05-38-031
379	489	16 12 45.0	+28 18 05	GTrpl	NNN	CrB	UGC 10273
380	624	16 06 40.2	+30 05 57	G	N	CrB	UGC 10205
381	692	15 13 44.6	+04 05 20	GPair	N	Ser	MCG +01-39-008
382	847	15 23 01.6	-01 20 50	G	Ent	Ser	UGC 9829
383	745	15 25 44.3	-03 39 23	GPair	PK	Ser	IC 1119
384	723	15 33 05.3	-01 37 48	GPair?	PC	Ser	IC 1125
385	536	15 49 28.1	+00 13 49	GPair	PK	Ser	UGC 10046
386	702	16 03 16.2	+05 38 40	GPair*	NNNP	Ser	UGC 10147
387	370	16 13 29.0	-00 53 01	G	MMM	Ser	MCG 00-41-008
388	452	16 01 16.2	+17 40 42	G	M	Her	IC 1162
389	380	16 11 22.6	+23 57 53	G	MMM	Her	NGC 6075
390	562	16 26 18.9	+13 11 00	GGroup	N	Her	MCG +02-42-004
391	560	16 28 41.0	+12 45 57	GGroup	N	Her	UGC 10402
392	657	16 27 16.8	+48 08 00	G	NN	Her	UGC 10399
393	364	16 28 38.5	+39 33 06	G	NNN	Her	NGC 6166
394	807	16 29 52.8	+24 26 38	G	Enat	Her	MCG +04-39-008
395	687	16 31 42.6*	+50 14 16*	GPair	N	Her	MCG +08-30-021

Page	VV	RA	Dec	NED Type	Int. Type	Const	Other ID
396	667	16 33 06.7	+50 23 47	GGroup	NNNP	Her	MCG +08-30-025
397	625	16 33 47.6	+28 59 06	G	N	Her	UGC 10445
398	811	16 35 44.5	+27 29 13	GPair	PCt	Her	MCG +05-39-006
399	791B	16 48 02.7	+26 12 34	G	R	Her	NGC 6228
400	852	16 55 09.6	+26 39 46	G	Ent	Her	IC 4630
401	442	16 58 29.6	+20 02 29	G	M	Her	IC 1236
402	805	17 03 15.7	+31 27 29	G	Ent	Her	UGC 10675
403	829	17 15 32.4	+49 06 41	G	Enat	Her	MCG +08-31-038
404	404	17 25 18.4	+23 19 00	G	MMM	Her	UGC 10847
405	389	17 27 47.2	+26 51 21	G	MMM	Her	MCG +04-41-014
406	426	17 46 29.8	+30 42 06	GPair	PD	Her	UGC 10976, 77
407	623	17 51 22.3	+18 44 50	GGroup	N	Her	MCG +03-45-037
408	534	17 53 16.0	+24 34 20	G	N	Her	UGC 11027
409	532	17 54 07.0	+30 42 02	G	N	Her	UGC 11031
410	556	17 55 34.7	+18 55 37	GTrpl	NNN	Her	UGC 11044
411	447	18 04 24.7	+47 35 44	G	M	Her	MCG +08-33-014
412	712	18 07 38.0	+28 29 15	G	PC	Her	UGC 11123
413	718	18 08 39.5	+28 03 37	G	PC	Her	UGC 11127
414	818	18 11 03.5	+49 54 38	GPair	Enat	Her	NGC 6582
415	711	18 16 02.2	+28 42 23	GPair	PC	Her	MCG +05-43-013
416	820	16 51 42.2	-02 36 47	GPair	PK	Oph	MCG 00-43-003
417	617	16 52 58.9	+02 24 03	G	N	Oph	NGC 6240
418	778	17 28 59.5	+06 19 20	GPair	PDb	Oph	UGC 10868
419	537	18 11 07.4	+14 05 36	G	N	Oph	NGC 6570
420	734	17 16 59.2	-62 49 11	G	PC	Ara	NGC 6300
421	569	18 17 56.8	+30 39 01	GPair	N	Lyr	UGC 11195
422	682	18 22 17.5	-85 24 07	G	N	Oct	NGC 6438
423	604	19 32 19.6	-29 23 09	GPair	N	Sgr	MCG -05-46-002
424	411	19 37 05.0	-42 17 47	G	M	Sgr	NGC 6806
425	621	20 33 06.1	-02 01 39	G	N	Aql	NGC 6926
426	773	20 27 38.0	+10 45 31	GPair	PDb	Del	UGC 11564
427	591	21 00 26.2	+16 51 37	G	N	Del	UGC 11661
428	767	20 30 51.8	-25 21 52	GPair	PD	Cap	MCG -04-48-011
429	750	20 42 09.0	-24 12 50	GPair	PDbt	Cap	MCG -04-48-029
430	764	21 07 35.7	-25 24 52	GGroup	N	Cap	NGC 7018
431	677	21 10 54.7	-42 38 10	GTrpl	NNNP	Mic	MCG -07-43-028
432	476	21 07 43.6	+03 52 30	GPair	M	Equ	UGC 11680
433	508	21 13 55.9	+02 33 55	GGroup	Ch	Equ	NGC 1365*

Page	VV	RA	Dec	NED Type	Int. Type	Const	Other ID
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435	546	20 45 02.4	-11 06 23	GPair	N	Aqr	NGC 6985A
436	668	20 59 47.6	-01 52 50	GPair	Ch	Aqr	UGC 11657 , 11658
437	390	22 12 10.2	-12 45 55	GTrpl	N	Aqr	IC 1433
438	494	22 16 50.8	-21 15 00	G	Ch	Aqr	UGCA 427
439	372	22 30 34.7	-17 34 26	G	MMM	Aqr	NGC 7301
440	488	22 56 49.9	-08 58 09	GPair	Ch	Aqr	MCG -02-58-011
441	490	23 10 21.2	-08 41 32	GPair	PD/Ch	Aqr	MCG -02-59-004
442	731	23 18 22.2	-04 25 01	GTrpl	PC	Aqr	NGC 7592
443	461	23 23 38.5	-08 17 44	G	MM	Aqr	MCG -02-59-014
444	669	23 24 31.4	-19 03 33	G	NN	Aqr	NGC 7656
445	480	23 42 01.0	-04 13 00	G	M	Aqr	MCG -01-60-023
446	376	21 41 58.5	-34 26 45	G	MMM	PsA	NGC 7109
447	800	21 43 38.5	-25 21 05	G	K	PsA	NGC 7115
448	685	22 06 54.3	-31 03 04	GPair	N	PsA	NGC 7204
449	832	22 33 16.6	-27 14 46	G	Enat	PsA	NGC 7306
450	496	22 39 13.9	-25 50 33	G	Ch	PsA	MCG -04-53-028
451	714	21 36 11.0	-38 32 37	GPair	PC	Gru	MCG -07-44-026
452	581	21 57 01.5	-36 59 44	GTrpl	NNNP	Gru	MCG -06-48-008
453	771	23 09 47.3	-43 25 40	G	PKbt	Gru	NGC 7496
454	440	23 16 10.9	-42 35 05	G	M	Gru	NGC 7552

How to Use the Atlas



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
84		22 57 56.9	+26 09 00	Gpair	14.0	2.0 x 0.6	NNNP
84b	NGC 7436A	22 57 56.2	+26 09 00		15	0.6 x 0.2	
84a	NGC 7436	22 57 57.5	+26 09 00		14.0	2.0 x 2.0	

The top left panel contains the naked eye field with the Telrad™ superimposed on the center of the galaxy trio or triple system. The top right panel contains the inverted labeled DSS image. The image is 15' square for consistent scale from one object to another.

The bottom panel is a finder field of about 5.0º across and 3.0º high. The finder field is wide enough for the finder scope and detailed enough for those who choose to use a low-power eyepiece as a "finder". The limiting magnitude of the field stars is set to 12.0 (or 11.0 in star-rich regions). The field of the DSS image is superimposed on the finder chart. All charts and images are oriented north pointed up and west to the right.

Most VV objects have an inset showing detail and labeled components. Most inset images are from PanSTARRS and Sloan Digital Sky Survey.

A table provided at the bottom of each page includes:

VV – The first row contains the main catalogue item. The remaining rows contain details of components of the VV object as listed by Dr. Vorontsov-Velyaminov. The primary source used is www.sai.msu.su/sn/vv/ Italized rows are extra rows not included in VV's catalog from the website hosted by Sternberg Astronomical Institute.

ID – Major catalog ID

RA and **Dec** are in Epoch 2000.0. For the main catalogue item, the coordinates listed is the center of the group as provided by NASA Extragalactic Database (NED).

NED Type – Type as provided by NED

G – Galaxy	GPair – Galaxy Pair	GTrpl – Triple Galaxy
GGroup – Galaxy Group	PofG – Part of Galaxy	Star Cl – star cluster
Star – a star	Dbl star – double star	

Magnitude as listed by Simbad or NED. I prioritize the listed magnitude by **v**, then **g**, then **b** based on available data. I feel that the **v**isual magnitude is closest to what we see through the eyepiece, followed by **g**reen, then **b**lue.

Size as provided by the original VV Catalogue, NED or RC3.

Interaction **Type** – The Interaction Type as listed by Vorontsov-Velyaminov. See table below:

Table 2: Vorontsov-Velyaminov Interaction Type

Type	Description
HII-regions	
H	large inner subsystems, the galaxies with vast HII-regions
M-51 type[4]	the satellite on the spiral branch of primary component
M	one satellite
MM	two satellites on the spirals
MMM	satellite lies on the bridge connecting the components
Nests[5]	
N	three or more members in a tight group
NN	disrupted nest
NNN	separated triples
NNNP	triples with a tight pair
NPNP	the pair of tight pairs
NP	nest with clear pair
Ch	chain
Pairs	
PC	pair of coalescents
PK	pair in contact
PD	distant pair
b	bridge
t	tail
df	disruption of the facade
Pseudo-Rings	
R	a ring without a nucleus together the non-elliptic galaxy
"Comets"	
K	comet-like single galaxy
Enigmatic	
En	including
Ent	a single galaxy with a tail
Enf	a single with breaking of inner structure
Enat	not tidal phenomena

Any asterisks noted are modifications or additions from the RC3 or SDSS mag estimates; otherwise the data is from Simbad or NED.

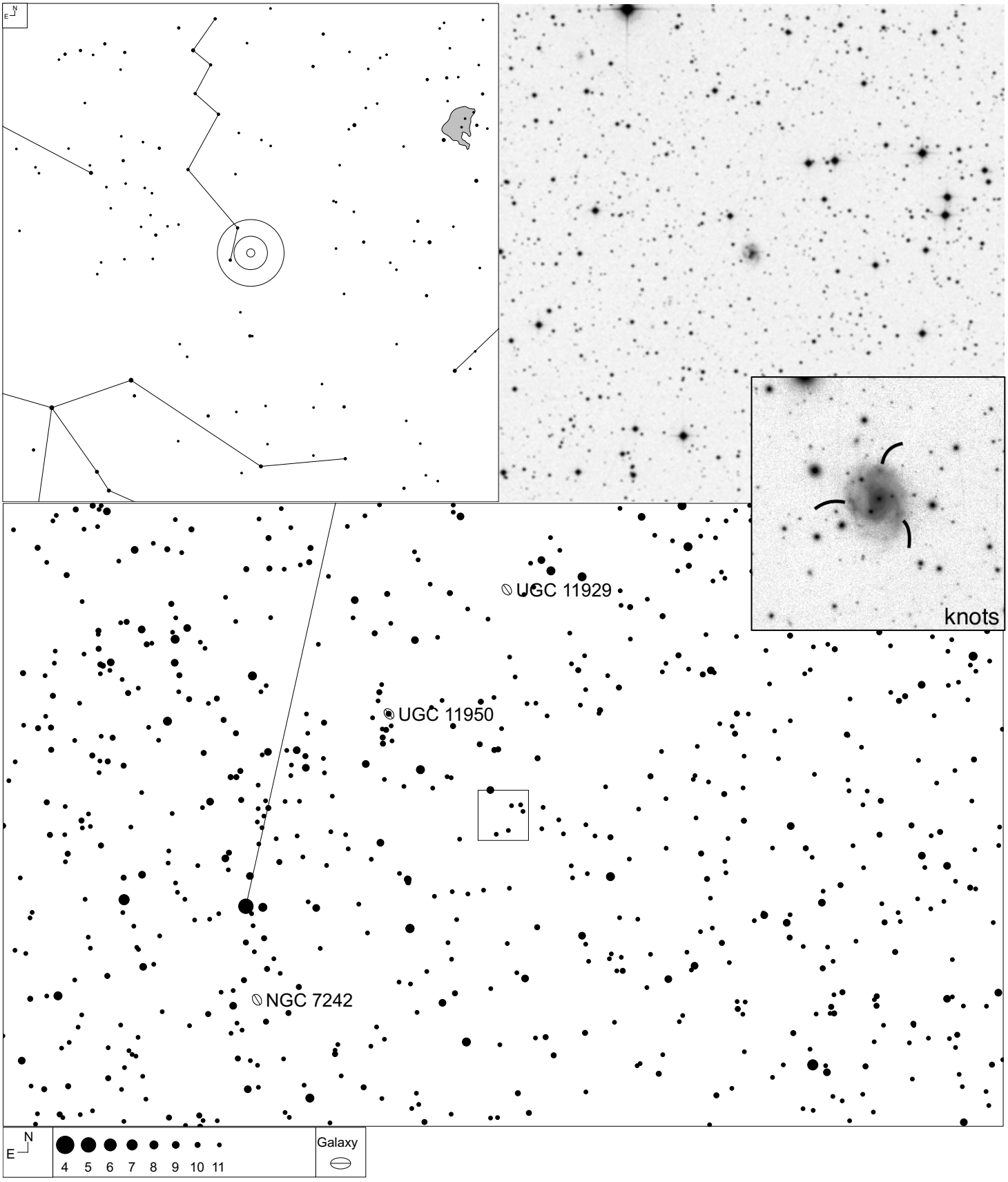
Any comments or to share any observations, send them to Alvin.Huey@FaintFuzzies.com.
Any feedback or suggestions would be greatly appreciated. I hope to keep this resource updated and made available to all of you, the deep sky observer.

[4] Jokimäki, A et al "A Catalogue of M51 type Galaxy Associations". *Astrophysics and Space Science*, **315**(1), 249-283

[5] Zasov, A. V. & Arkhipova, V. P. "Vorontsov-Velyaminov' nests: what are they?" *Small Galaxy Groups: IAU Colloquium* 174, ASP Conference Series, Volume 209

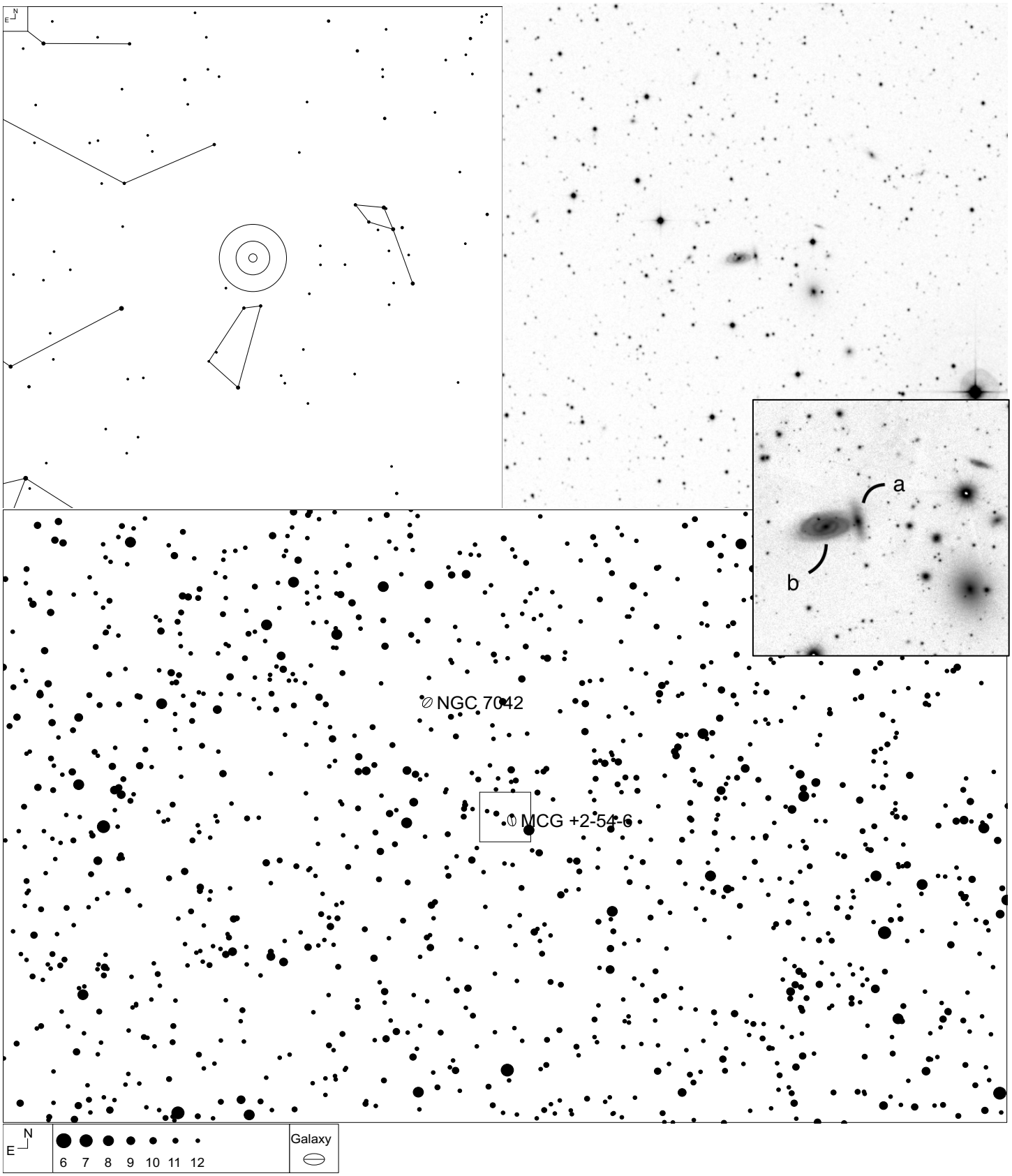
The Vorontsov-Velyaminov Interacting Galaxies Atlas (Part II)

VV 405 (Lacerta)



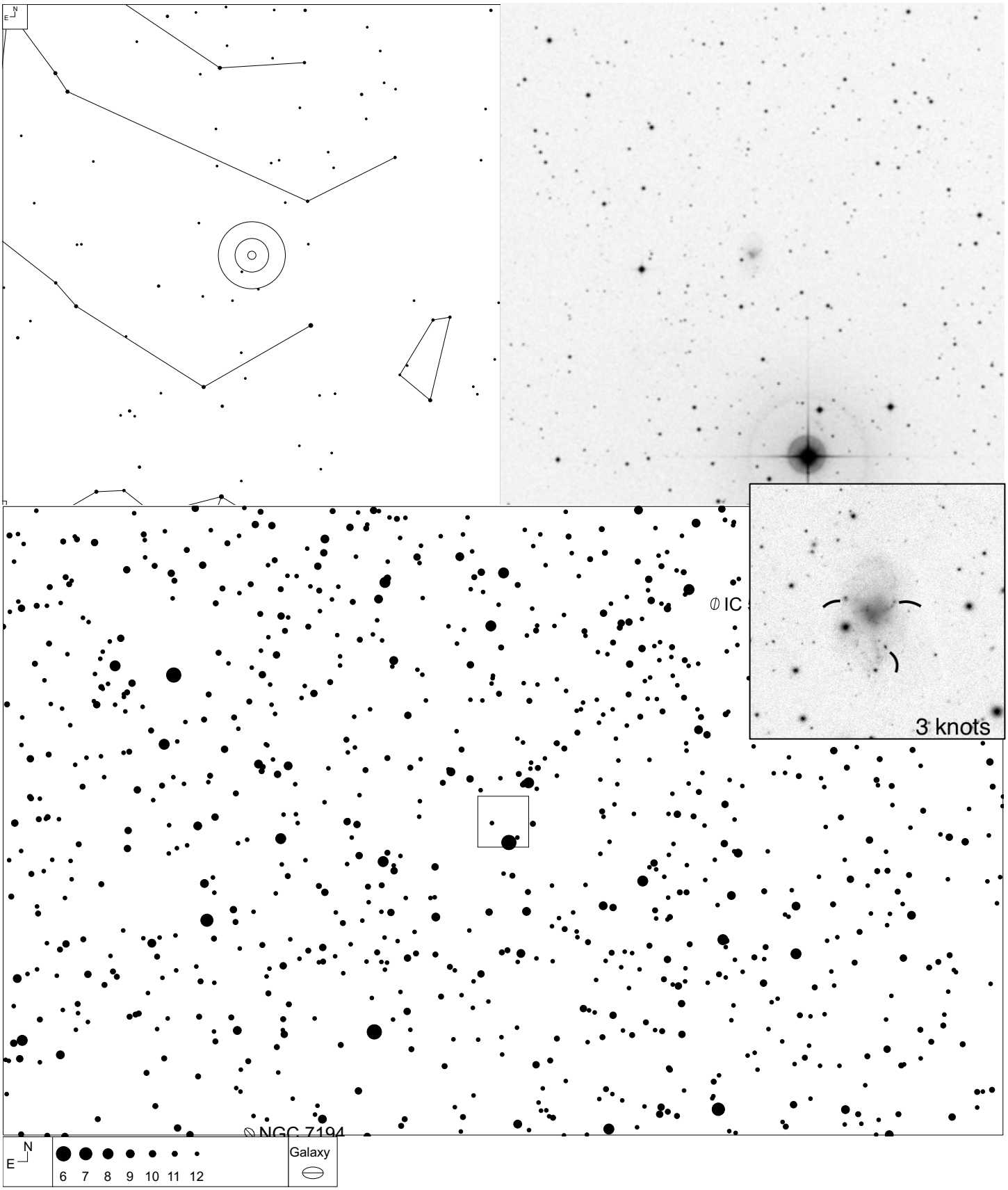
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
405	MCG +06-48-010	22 09 42.8	+38 11 50	G	14.9b	0.7 x 0.7	MMM

VV 748 (Pegasus)



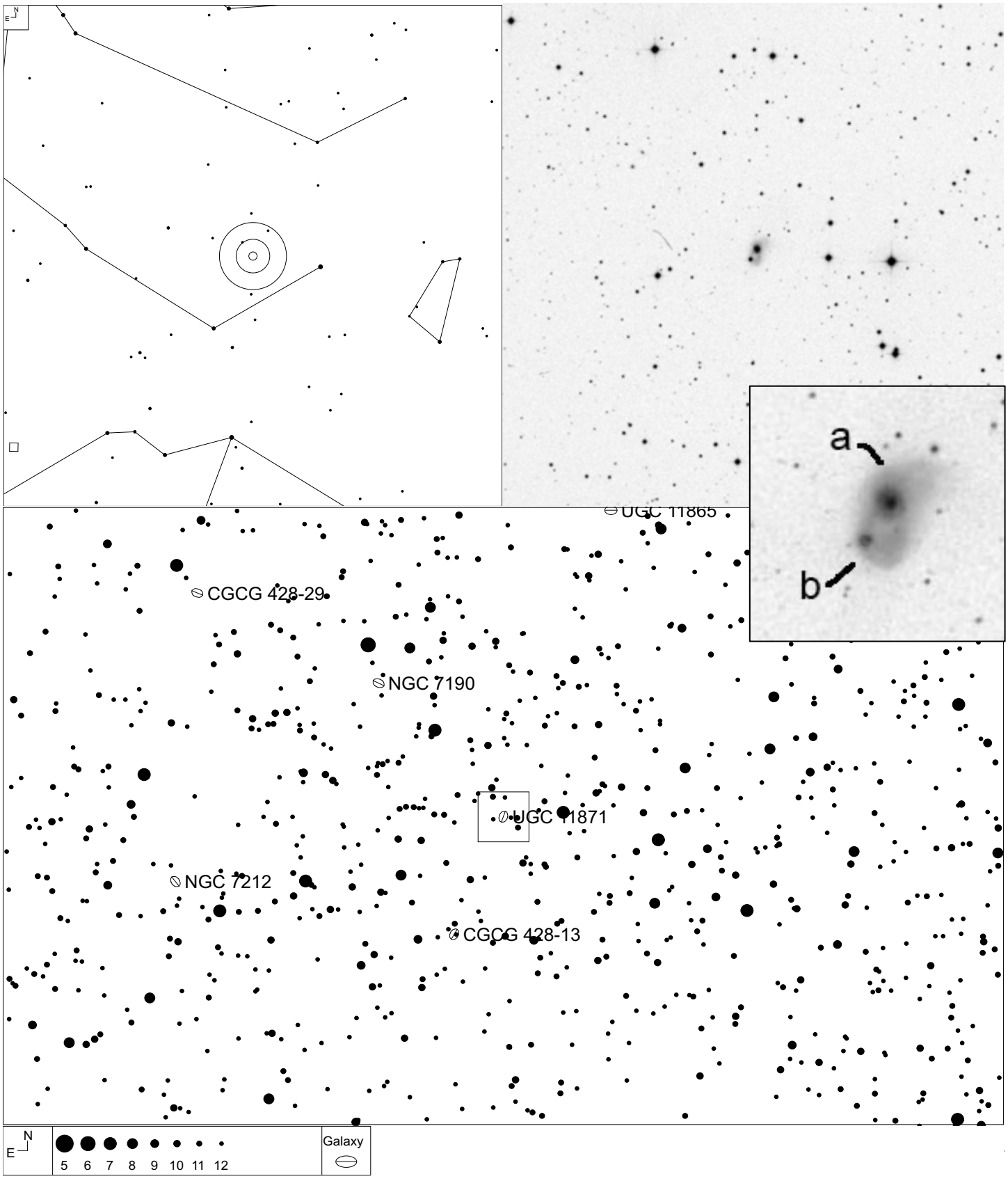
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
748	UGC 11698	21 12 14.8	+13 01 02	GPair			PK
748a	MCG +02-54-008	21 12 13.9	+13 01 05	G	14.6b	0.6 x 0.2	
748b	MCG +02-54-009	21 12 15.9	+13 01 00	G	14.3g	0.8 x 0.4	

VV 589 (Pegasus)



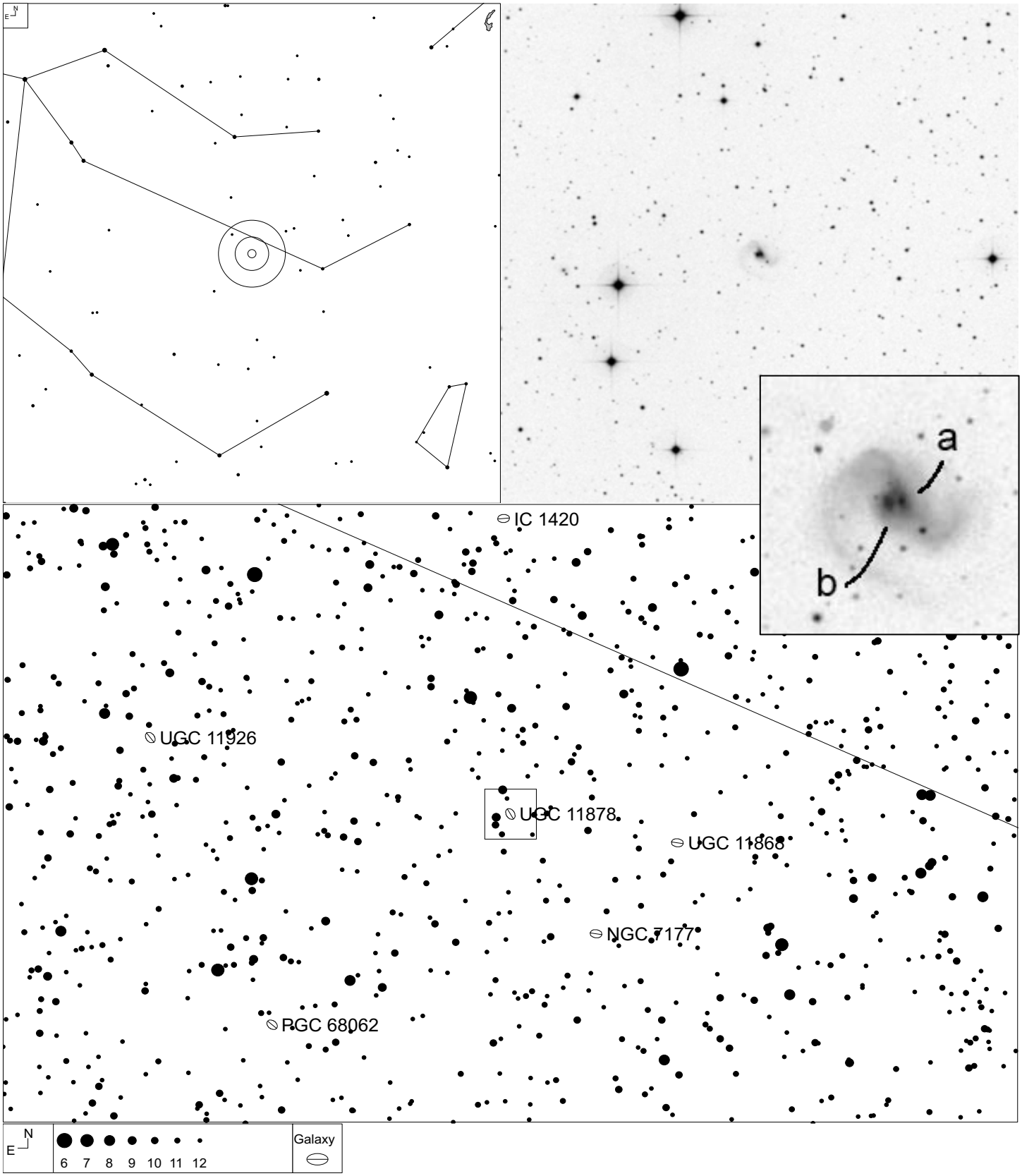
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
589	UGC 11866	21 58 34.0	+14 07 22	G	15.4g	1.3 x 0.9	N

VV 812 (Pegasus)



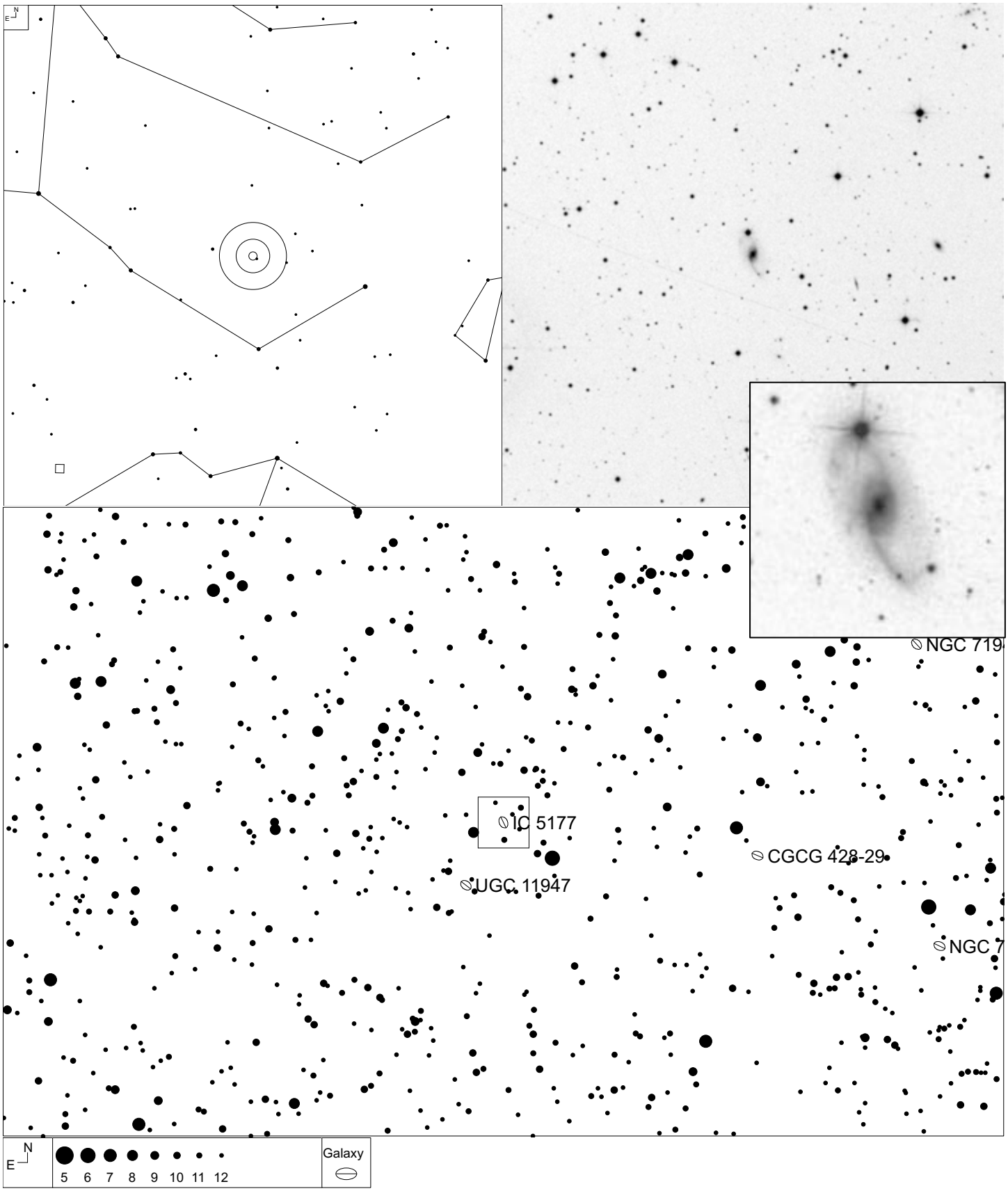
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
812	UGC 11871	22 00 41.9	+10 32 59	GPair	14.3g	1.1 x 0.7	PDbt
812b	*PGC 200376*	*22 00 42.3*	*+10 32 49*	*G*	*15.8**		

VV 572 (Pegasus)



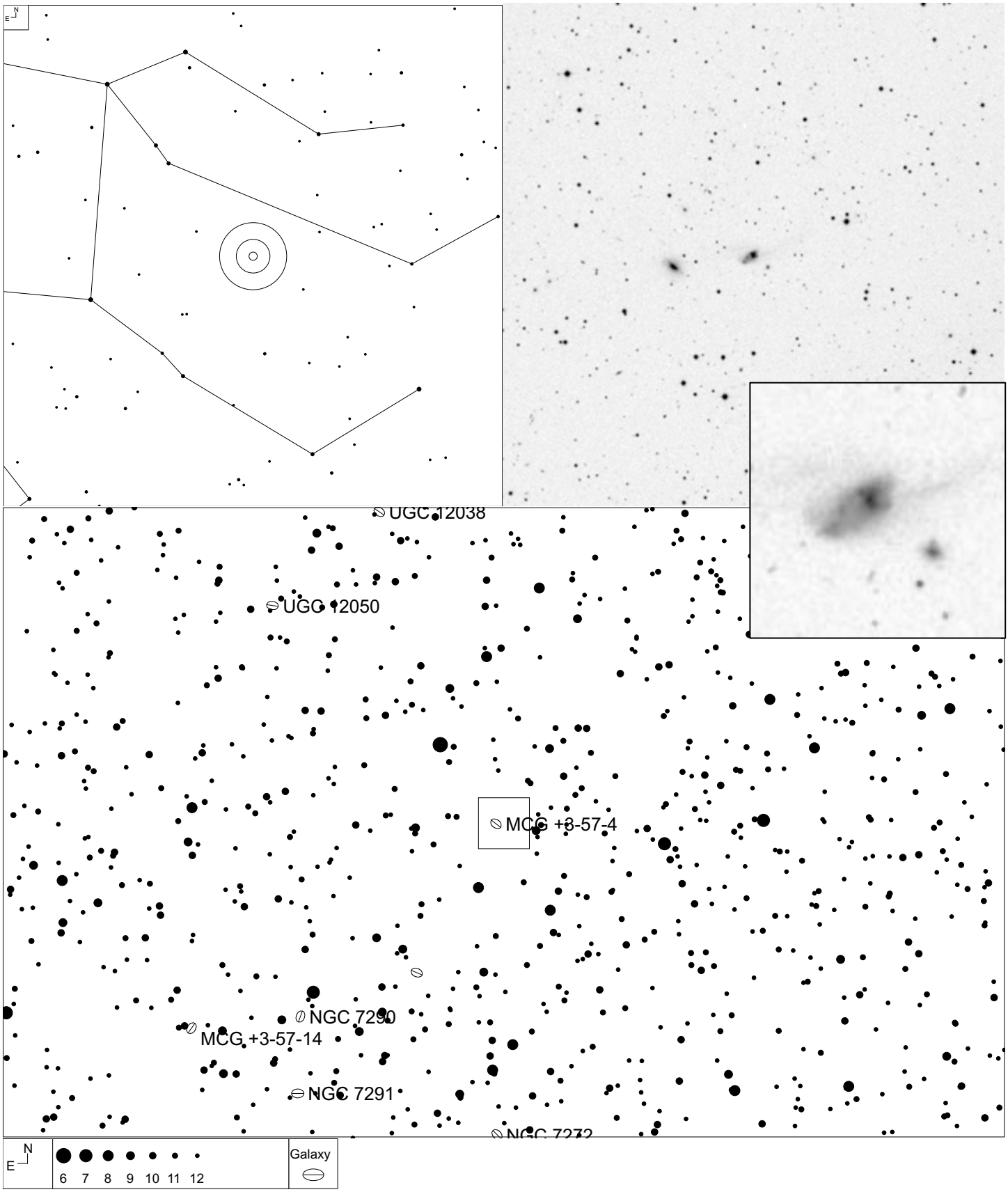
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
572	UGC 11878	22 02 23.0	+18 19 08	GPair	15.1g	0.6 x 0.3	PC

VV 409 (Pegasus)



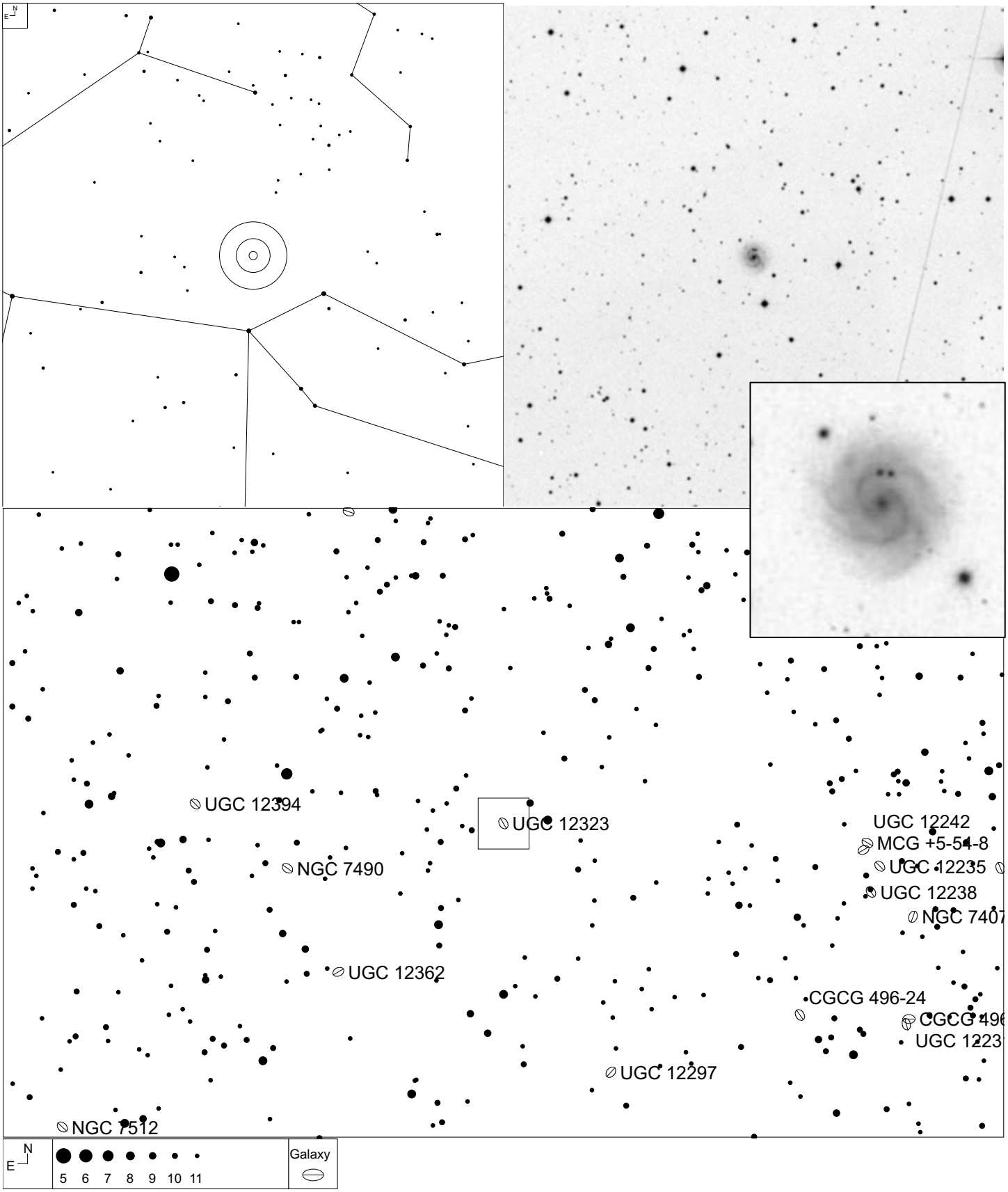
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
409	IC 5177	22 11 34.3	+11 47 45	G	14.7g	1.6 x 0.8	M

VV 483 (Pegasus)



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
483	MCG +03-57-002	22 24 23.3	+18 04 17	G	15.5g	0.6 x 0.3	M

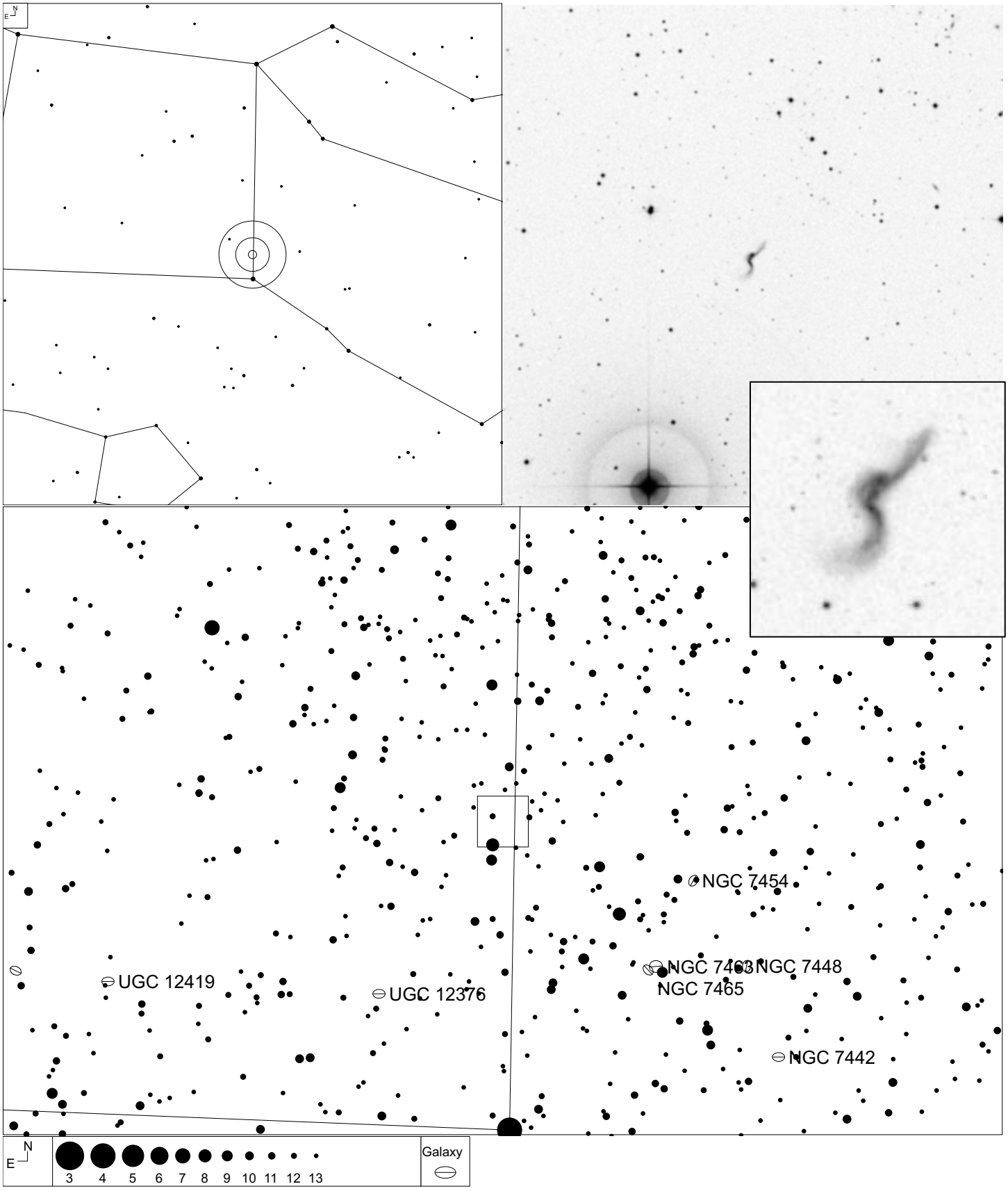
VV 479 (Pegasus)



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
479	UGC 12323	23 02 33.1	+32 35 41	G	14.5g	1.0 x 1.0	MM

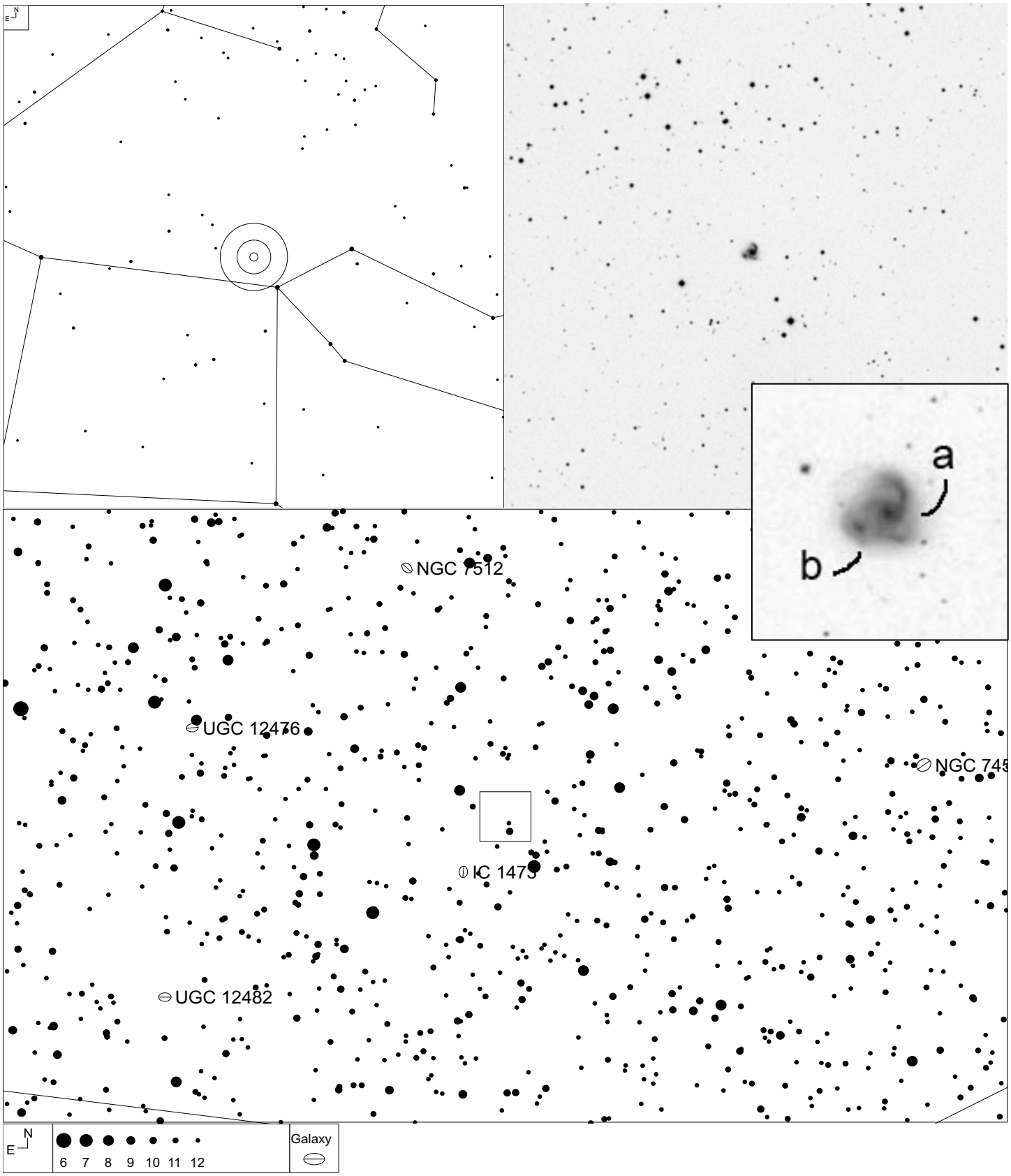
The two "knots" on the northern arm are likely stars.

VV 738 (Pegasus)



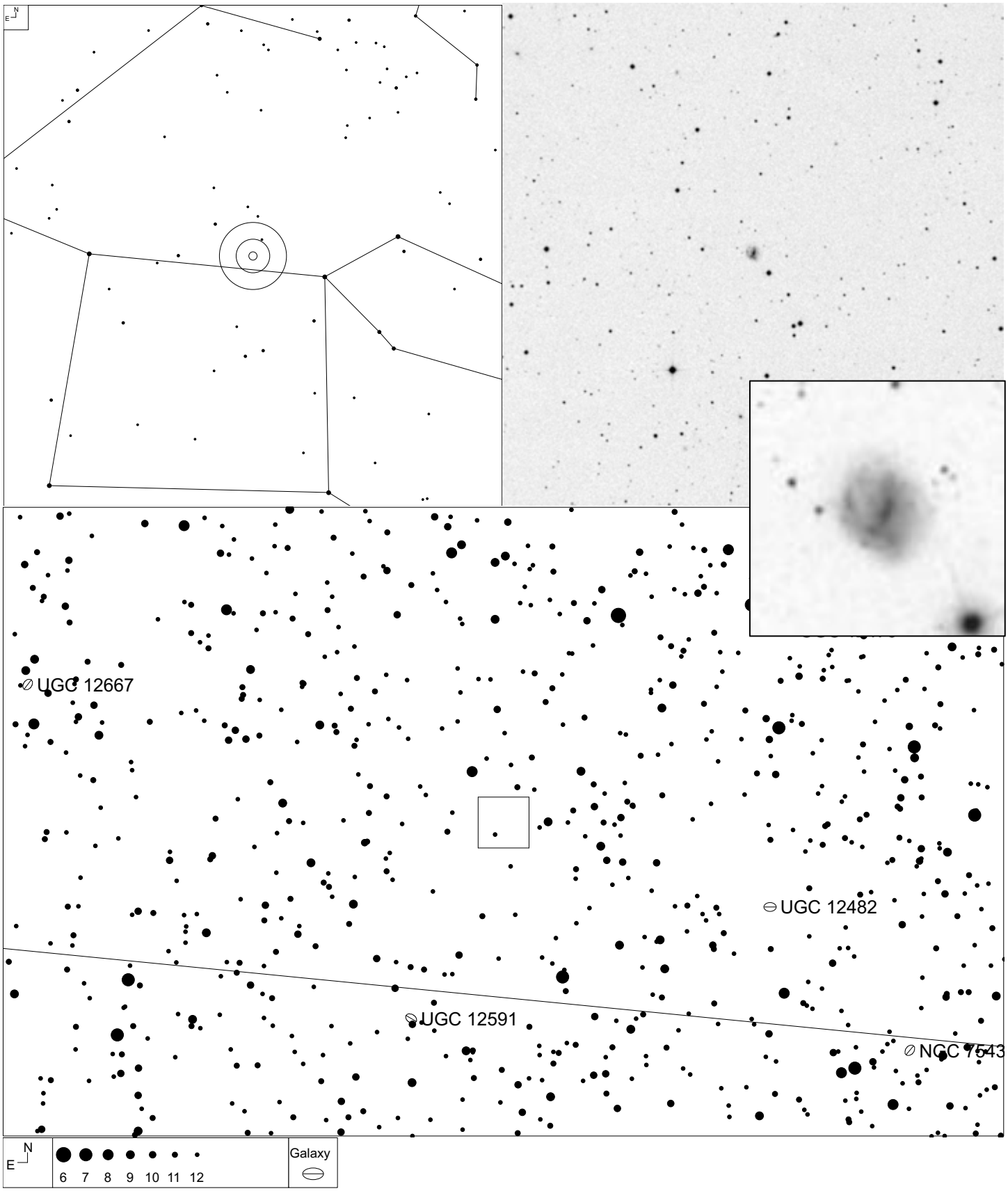
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
738	UGC 12342	23 04 53.4	+16 40 42	G	16.0g	1.3 x 0.5	PC

VV 635 (Pegasus)



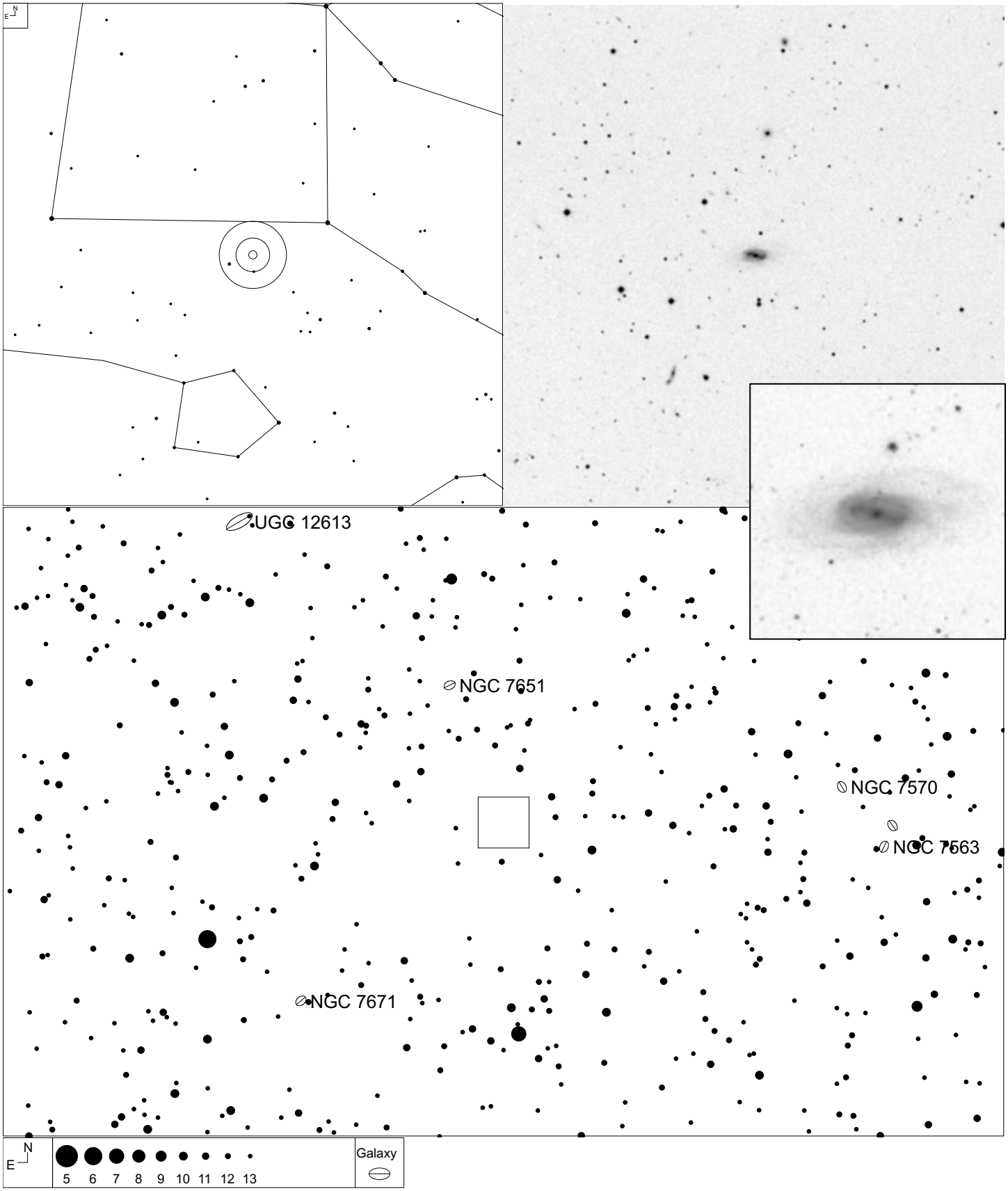
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
635	IV Zw 134 MGC+05-54-(041a)	23 10 10.5	+29 54 50	GPair	14.9g	0.5 x 0.5	N

VV 649 (Pegasus)



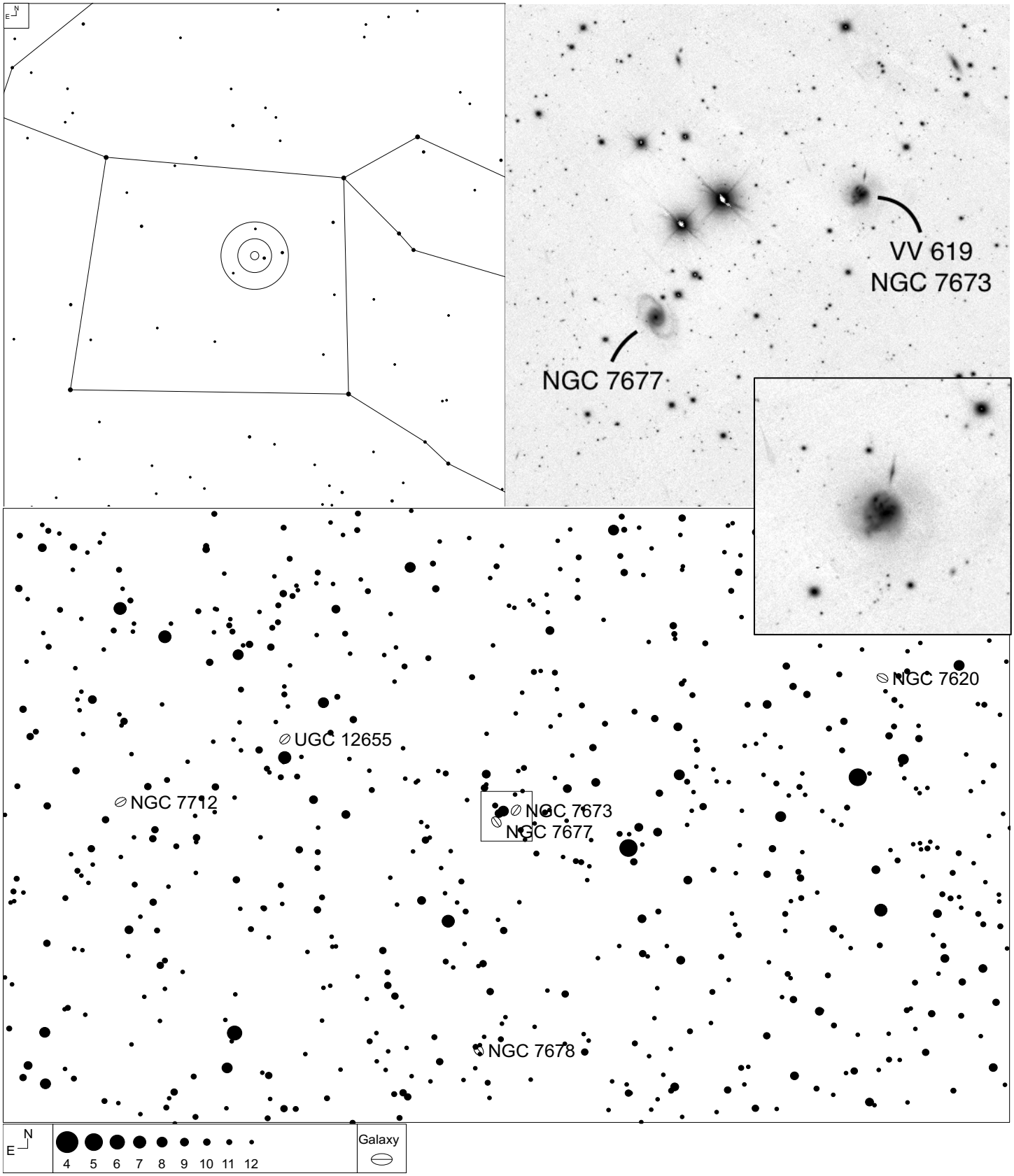
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
649	MCG +05-55-009	23 23 21.8	+29 25 45	G	15.8g	0.4 x 0.4	NN

VV 503 (Pegasus)



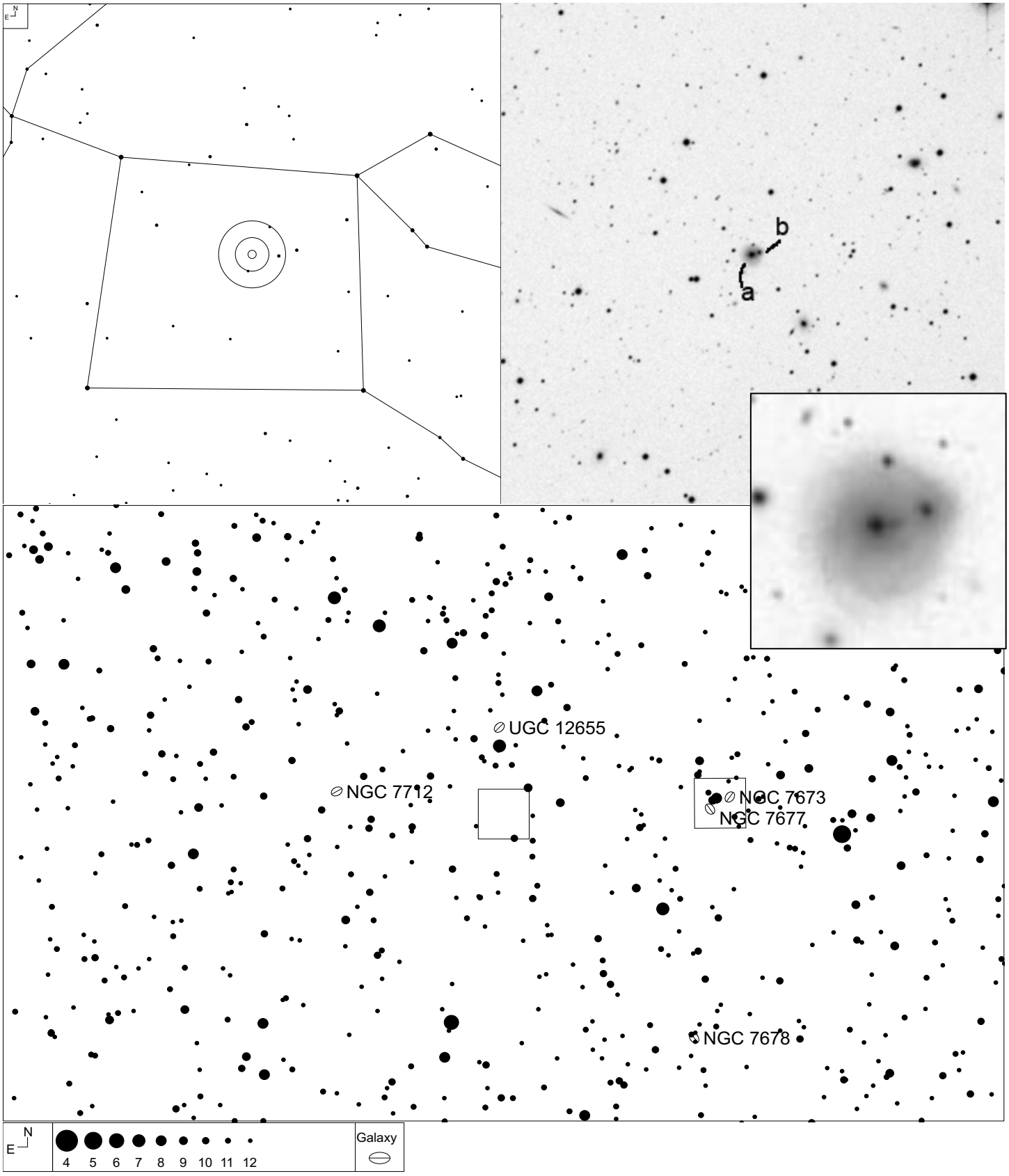
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
503	UGC 12571	23 23 22.7	+13 19 08	G	14.6g	1.1 x 0.6	Ch

VV 619 (Pegasus)



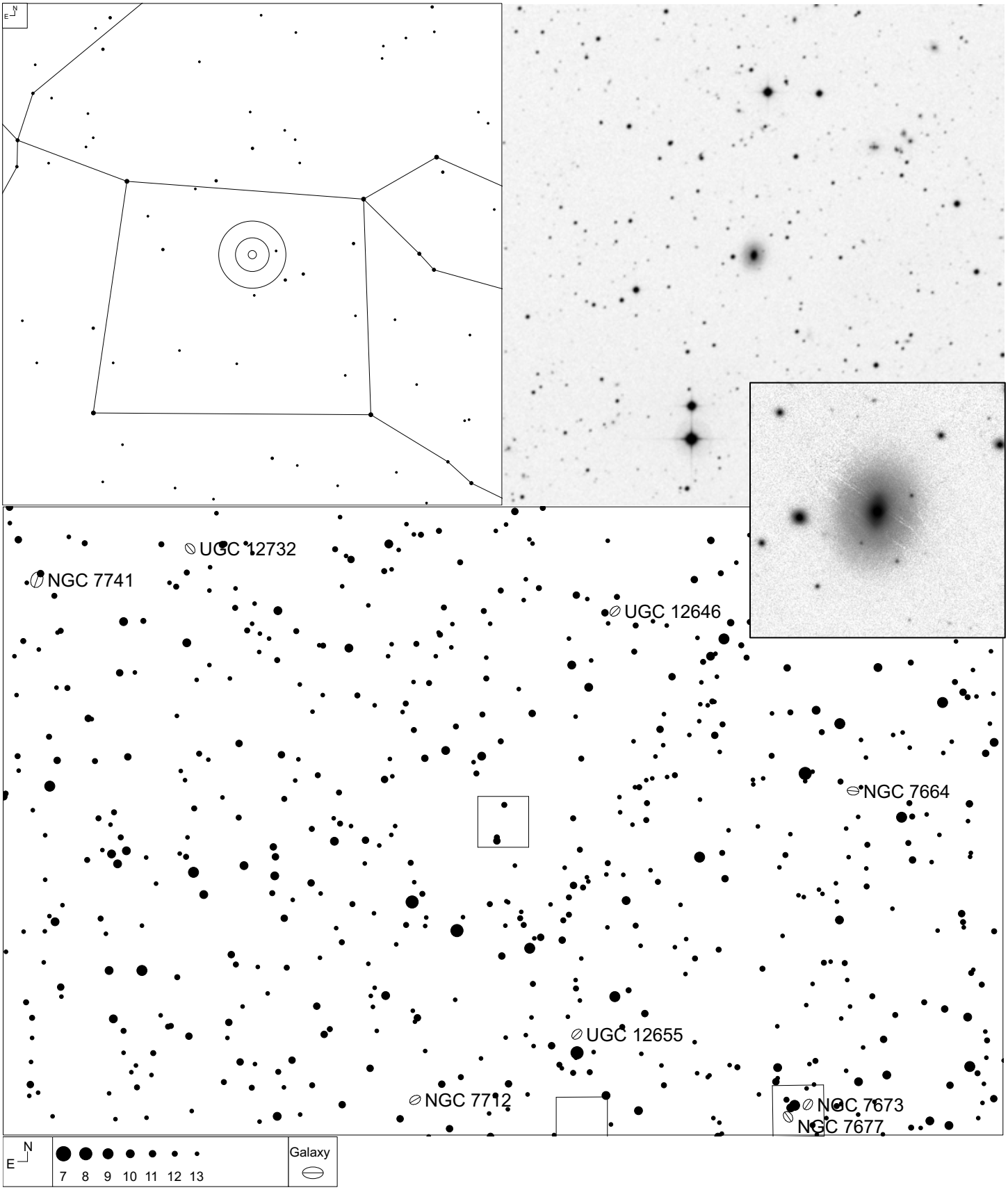
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
619	NGC 7673	23 27 53.7	+23 33 39	GPair	12.8v	1.3 x 1.2	N

VV 579 (Pegasus)



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
579	MCG +04-55-024	23 32 16.6	+23 28 39	GPair	15.1g	0.7 x 0.7	

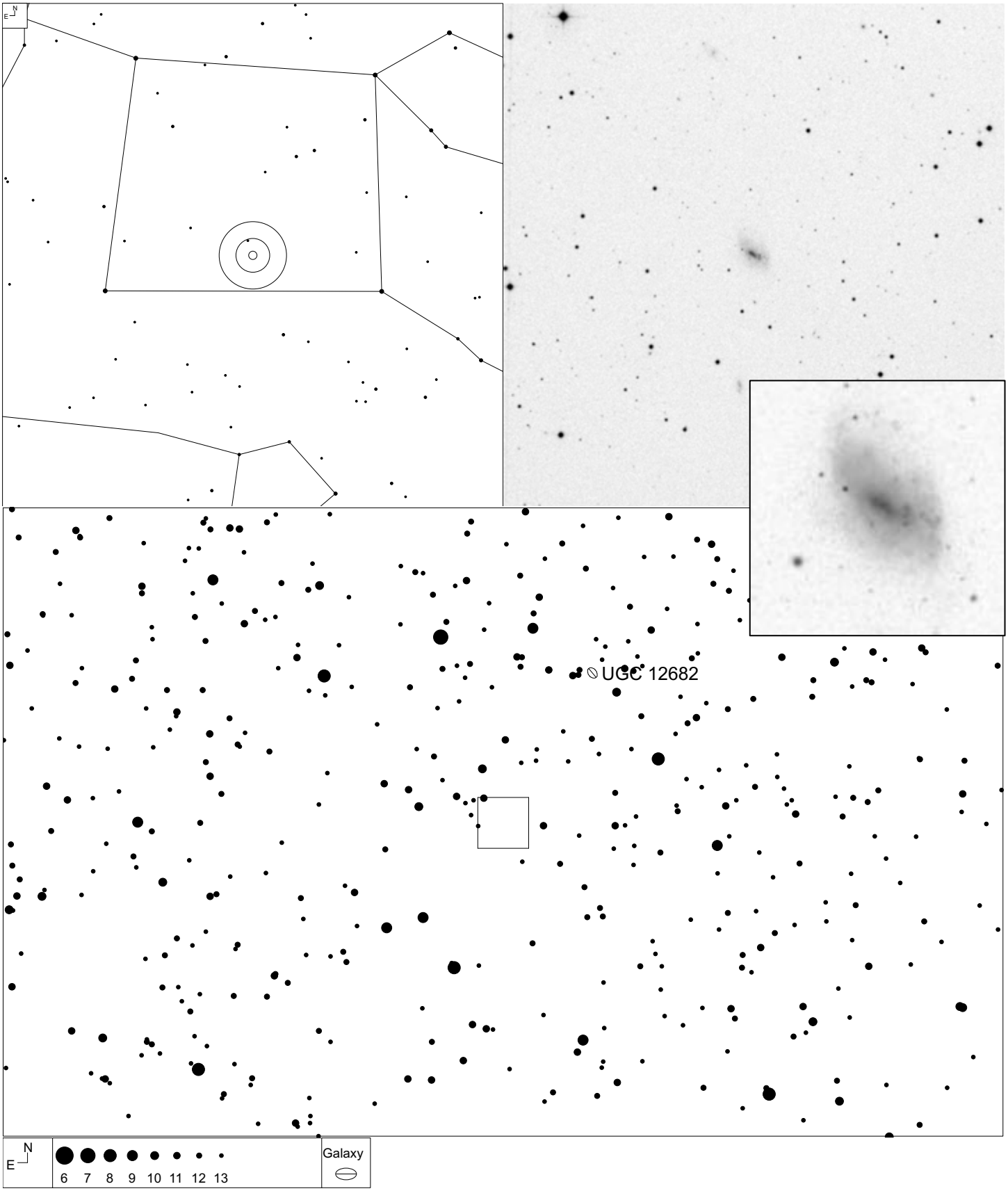
VV 400 (Pegasus)



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
400	NGC 7698	23 34 01.6	+24 56 41	G	14.0g	1.0 x 0.9	MMM

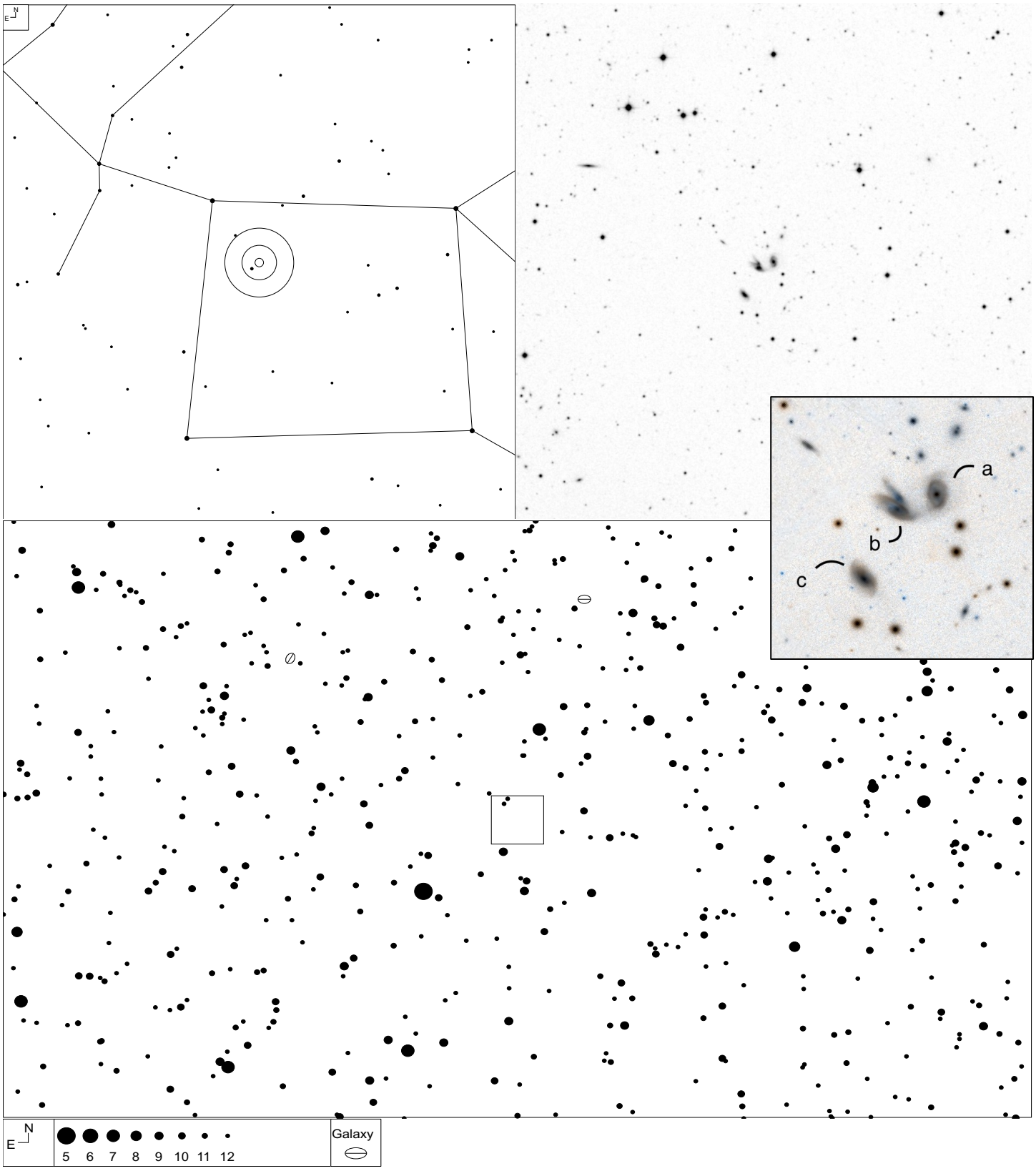
Three "stars" on the disk

VV 598 (Pegasus)



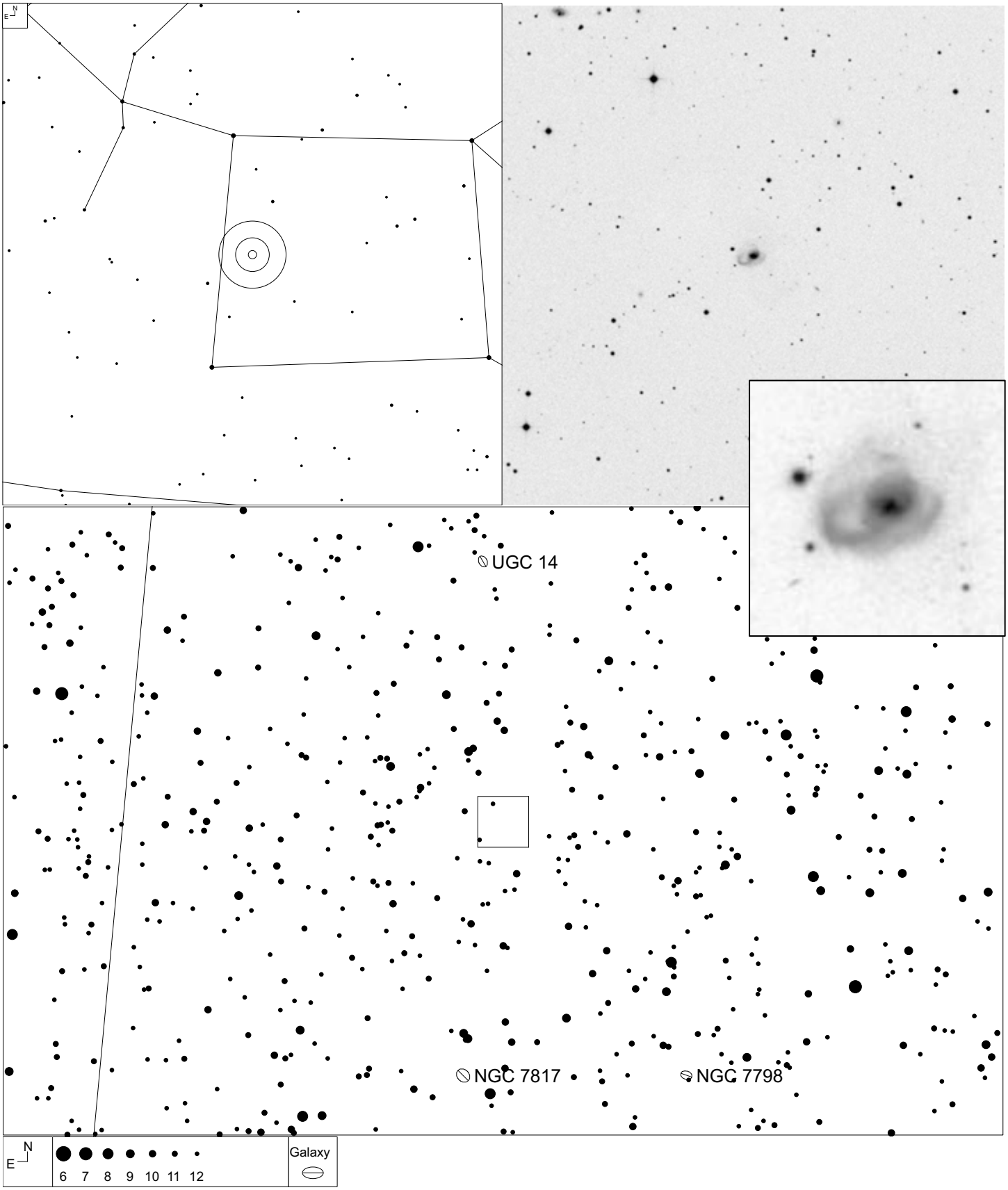
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
598	UGC 12707	23 36 40.9	+17 30 52	G	14.6g	1.5 x 1.0	N

VV 697 (Pegasus)



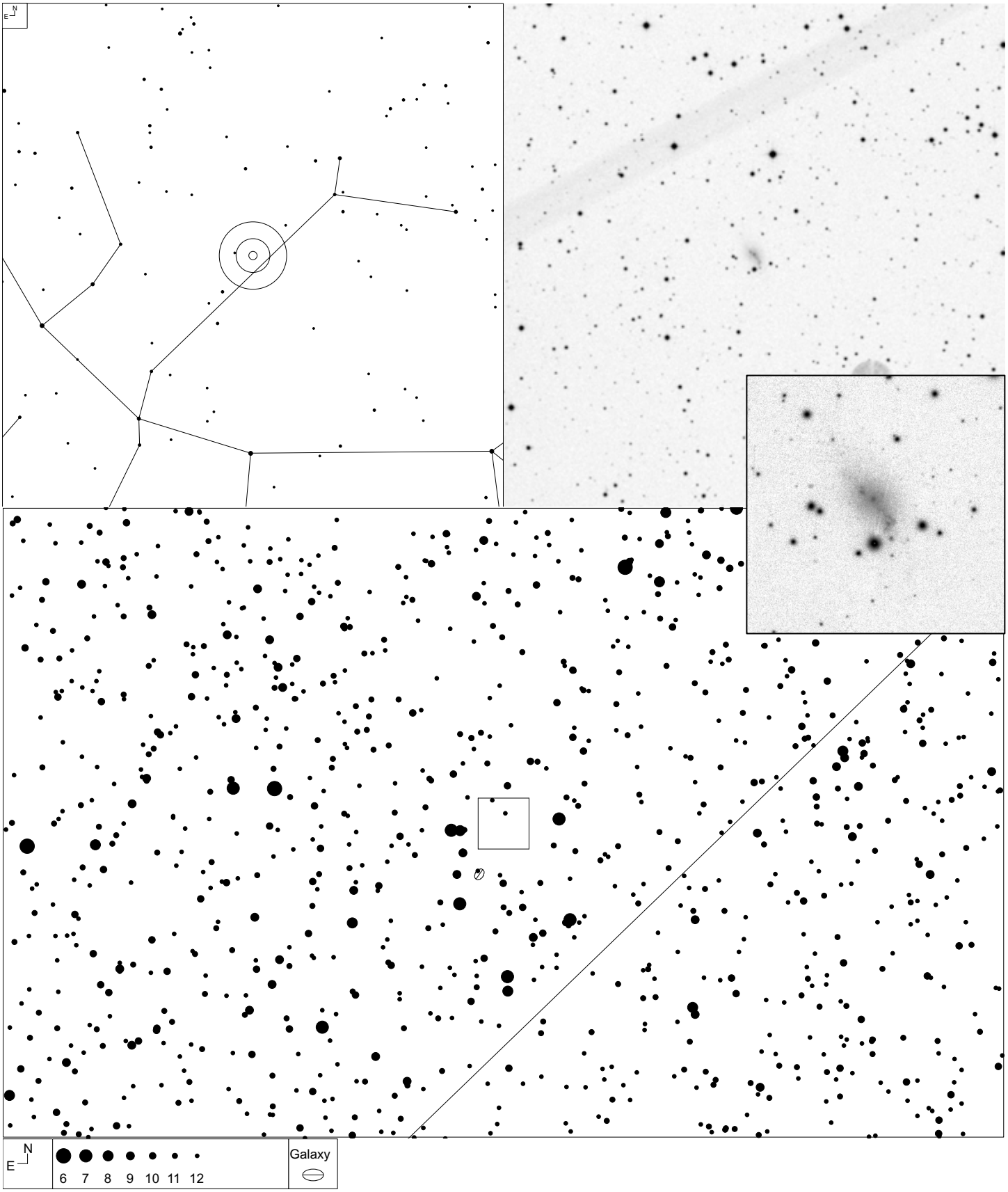
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
697		23 55 50.1	+25 30 03	GTrpl			NNN
697a	MCG +04-01-002	23 55 48.2	+25 30 32	G	16.6g	0.4 x 0.2	
697b	MCG +04-01-003	23 55 50.2	+25 30 22	G	16.2g	0.6 x 0.3	
697c	MCG +04-01-004	23 55 51.9	+25 29 34	G	15.6g	0.4 x 0.2	

VV 806 (Pegasus)



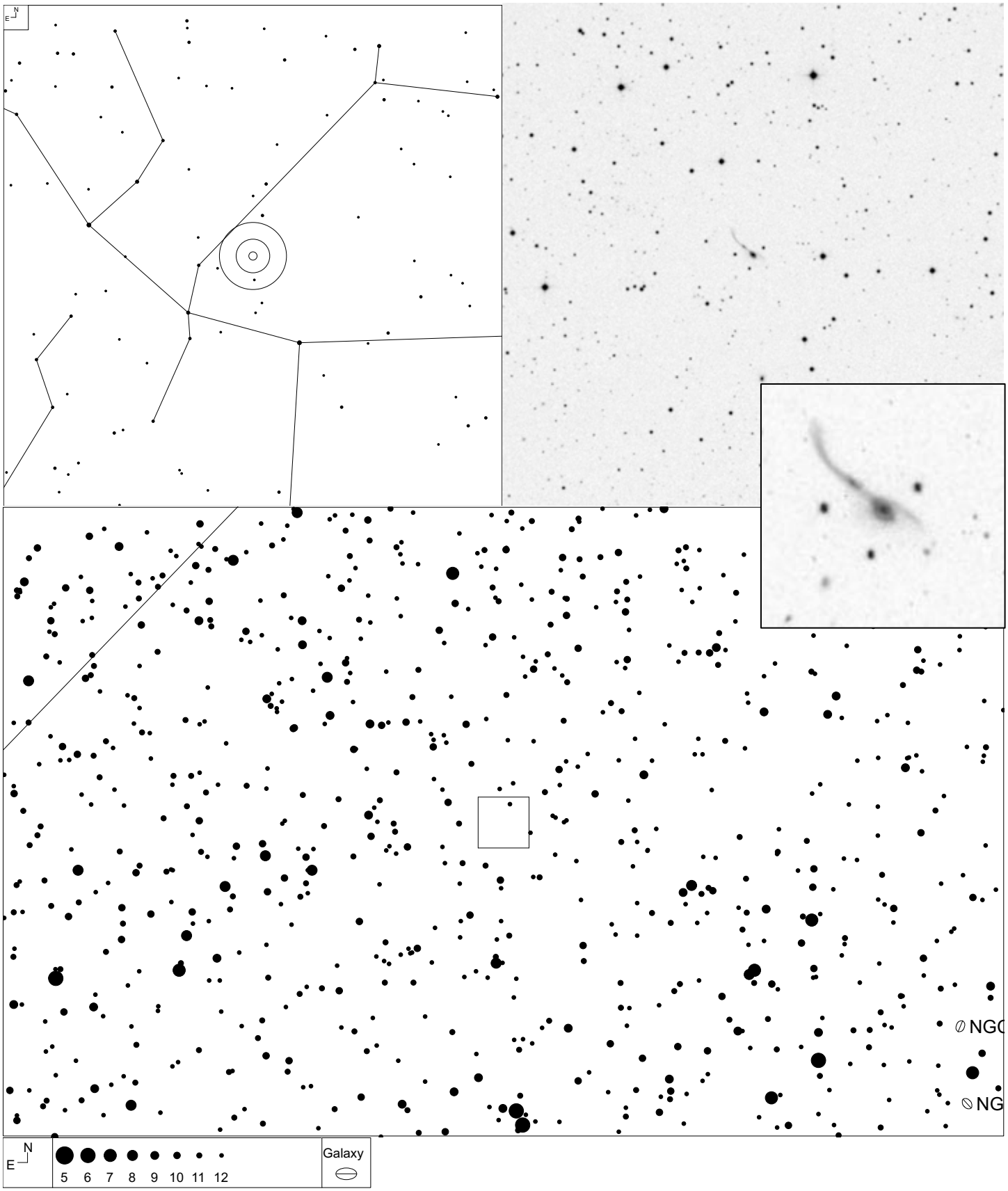
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
806	UGC 6	00 03 09.6	+21 57 37	G	14.6v	1.0 x 0.7	Enf

VV 502 (Andromeda)



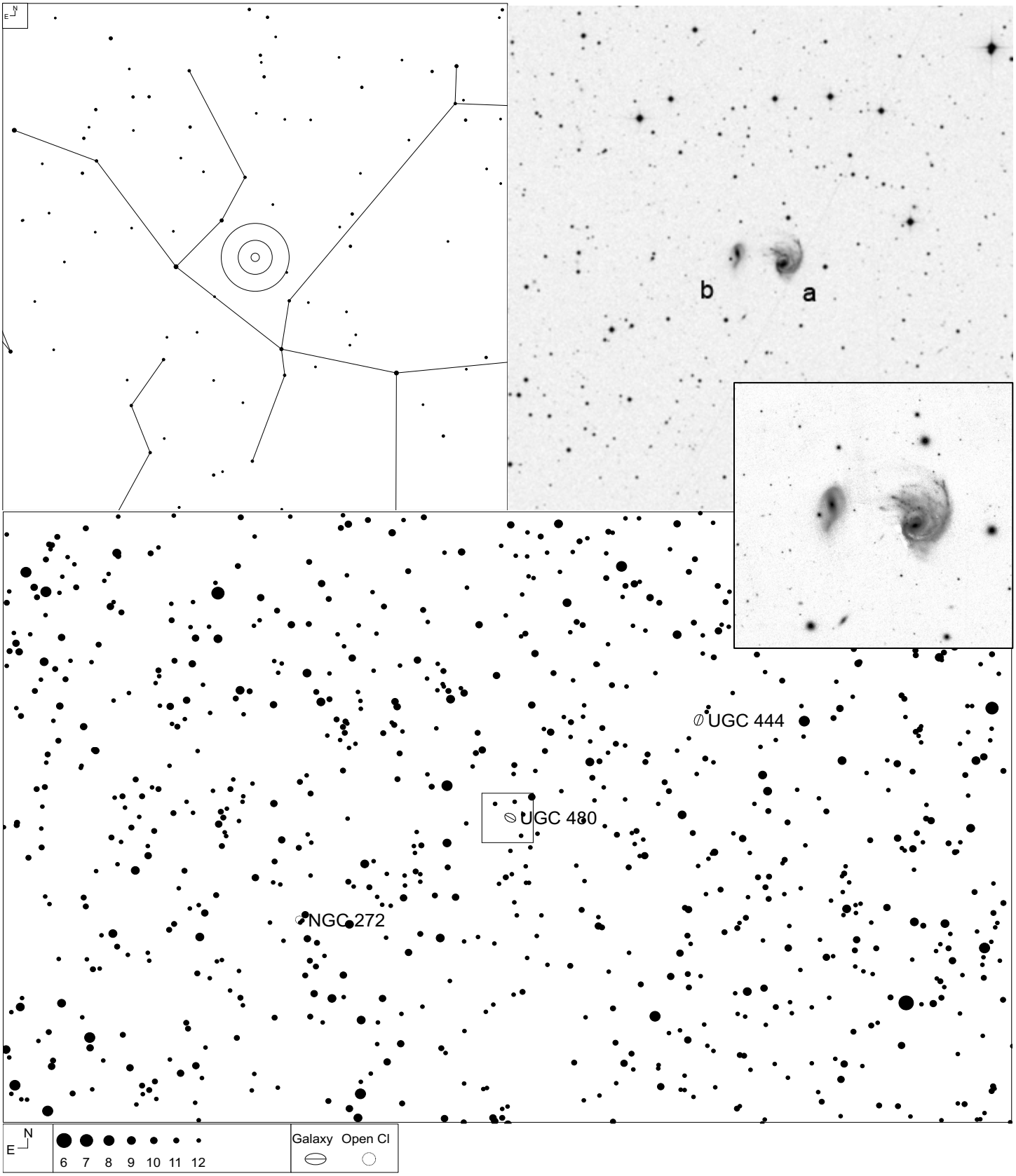
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
502	UGC 64	00 07 44.0	+40 52 32	G	15.5b	0.8 x 0.4	Ch

VV 819 (Andromeda)



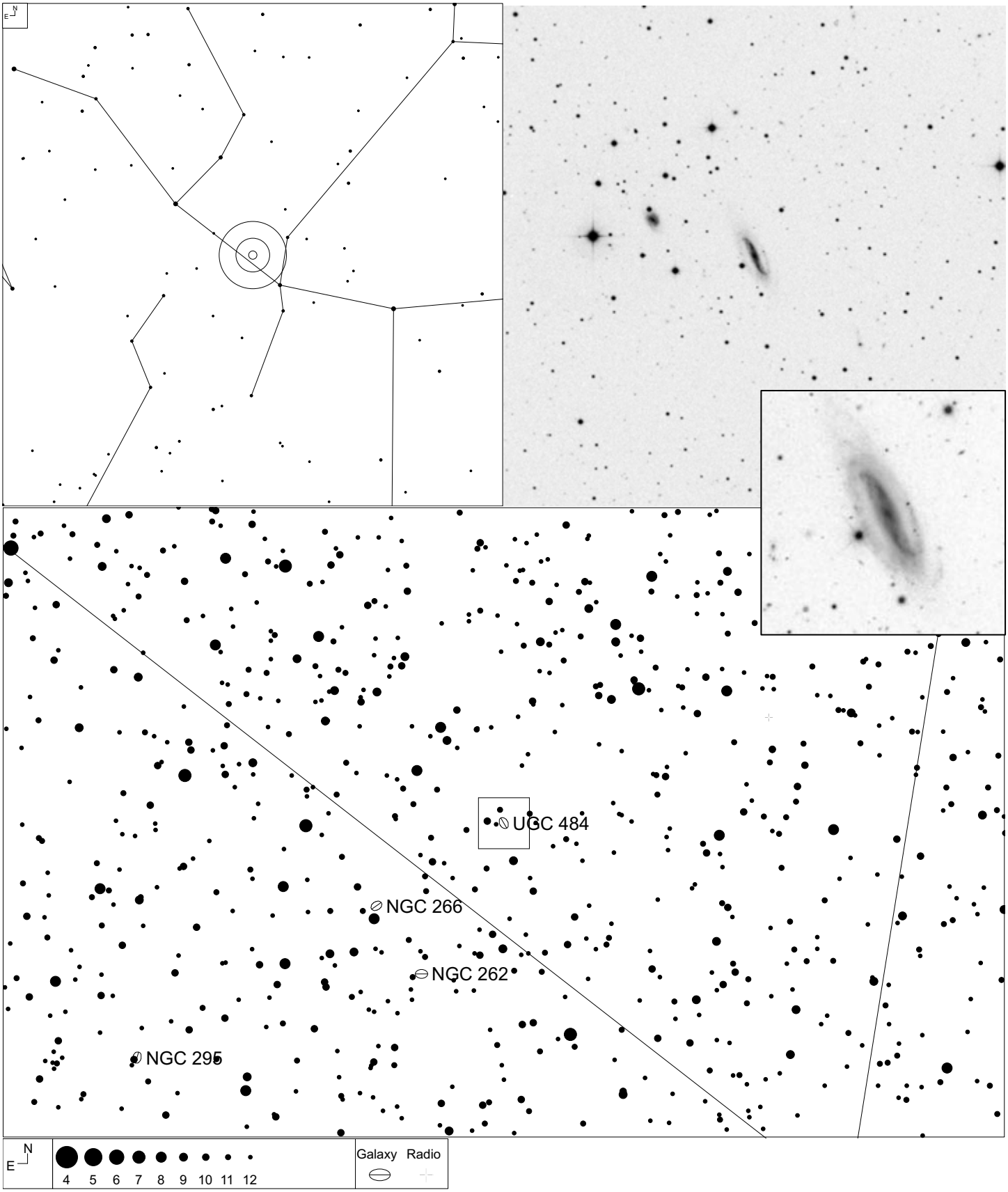
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
819	IV Zw 014 PGC 1354	00 21 11.9	+34 21 01	G	16.2b	1.0 x 0.2	Enat

VV 527 (Andromeda)



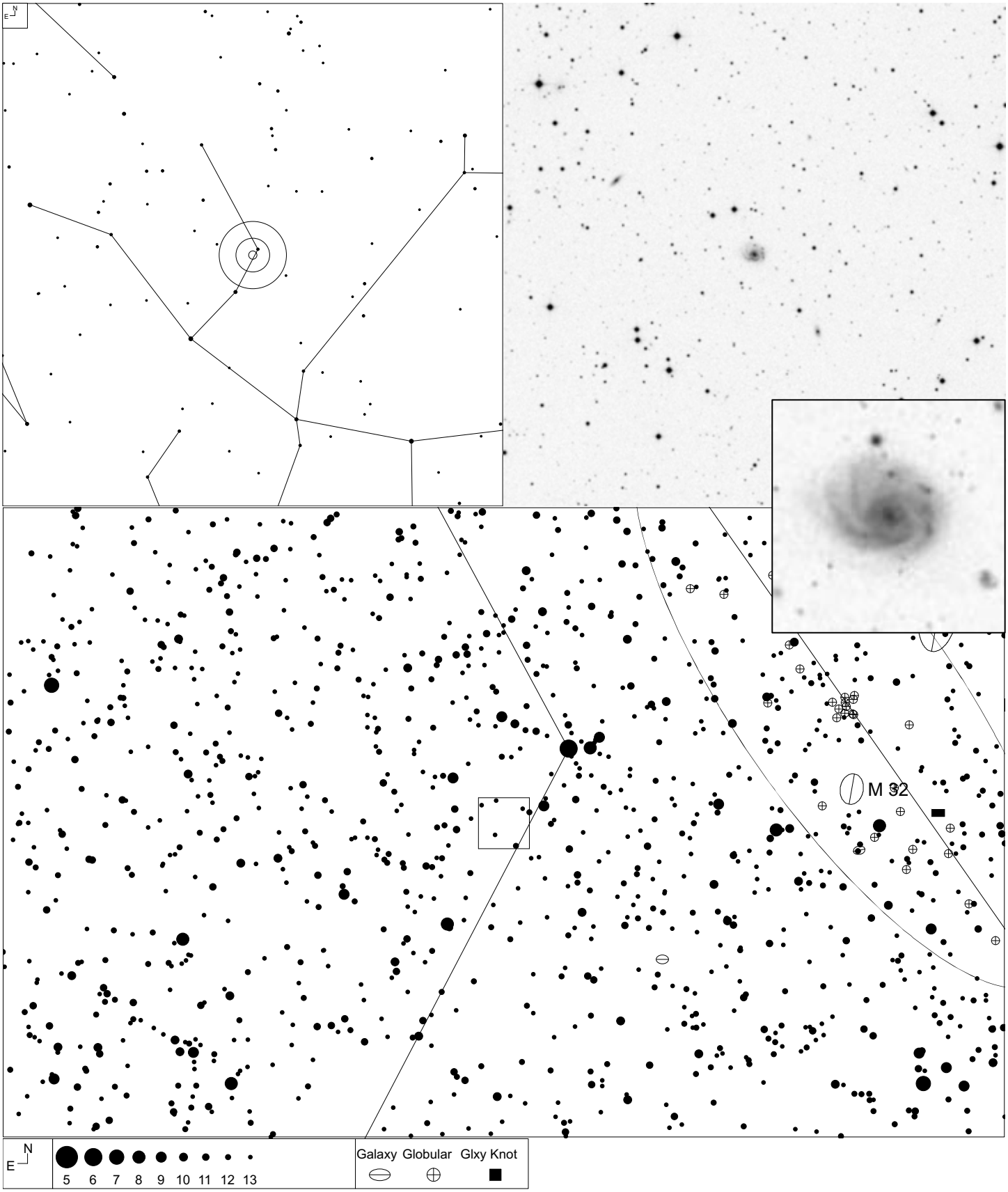
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
527		00 46 35.3	+36 19 43	GPair			NP
527a	UGC 480	00 46 32.0	+36 19 33	G	13.6b	1.5 x 1.2	
527b	MCG +06-02-017	00 46 38.7	+36 19 53	G	14.9g	0.8 x 0.4	

VV 441 (Andromeda)



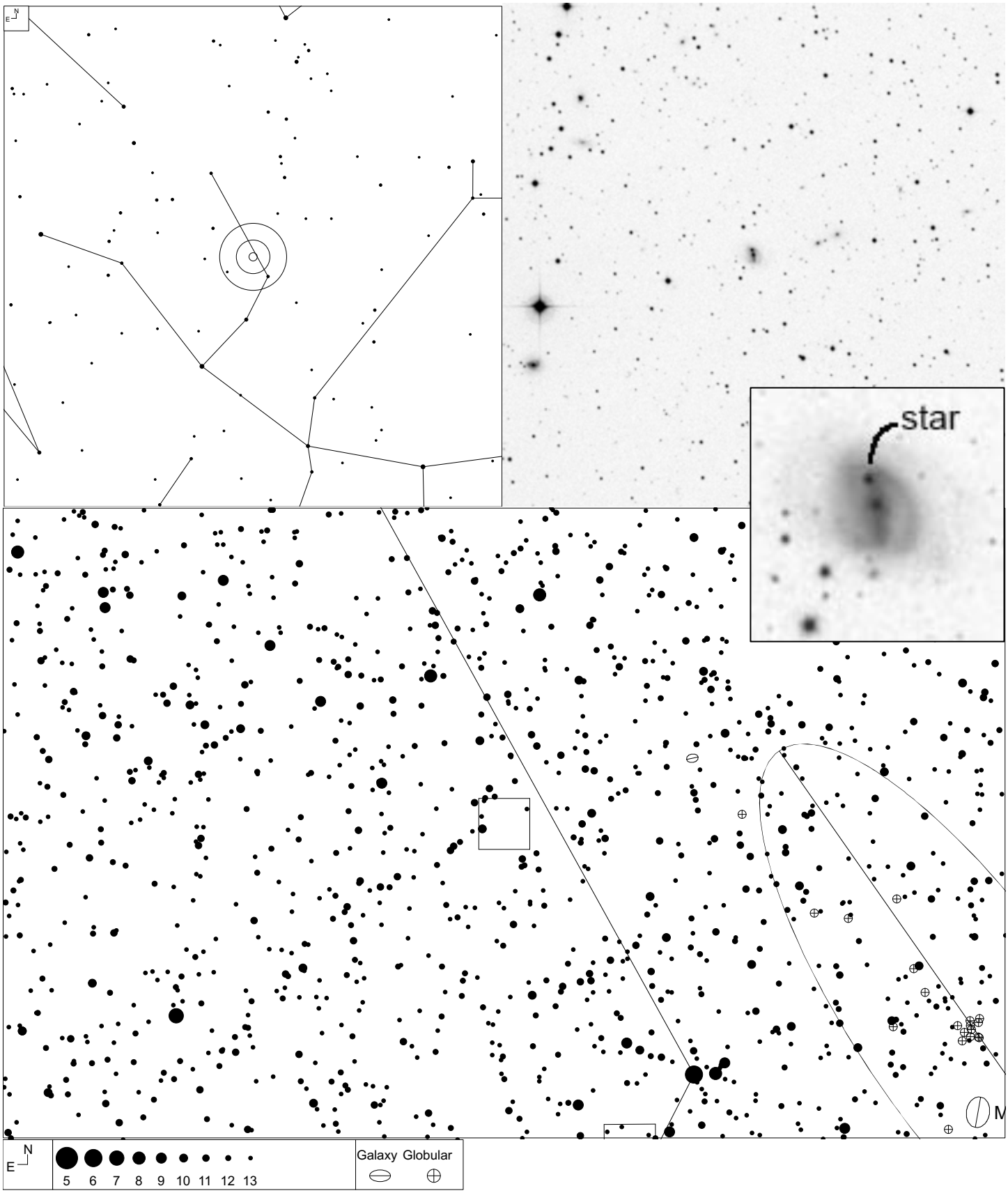
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
441	UGC 484	00 46 56.0	+32 40 31	G	13.6g	2.4 x 0.8	M

VV 554 (Andromeda)



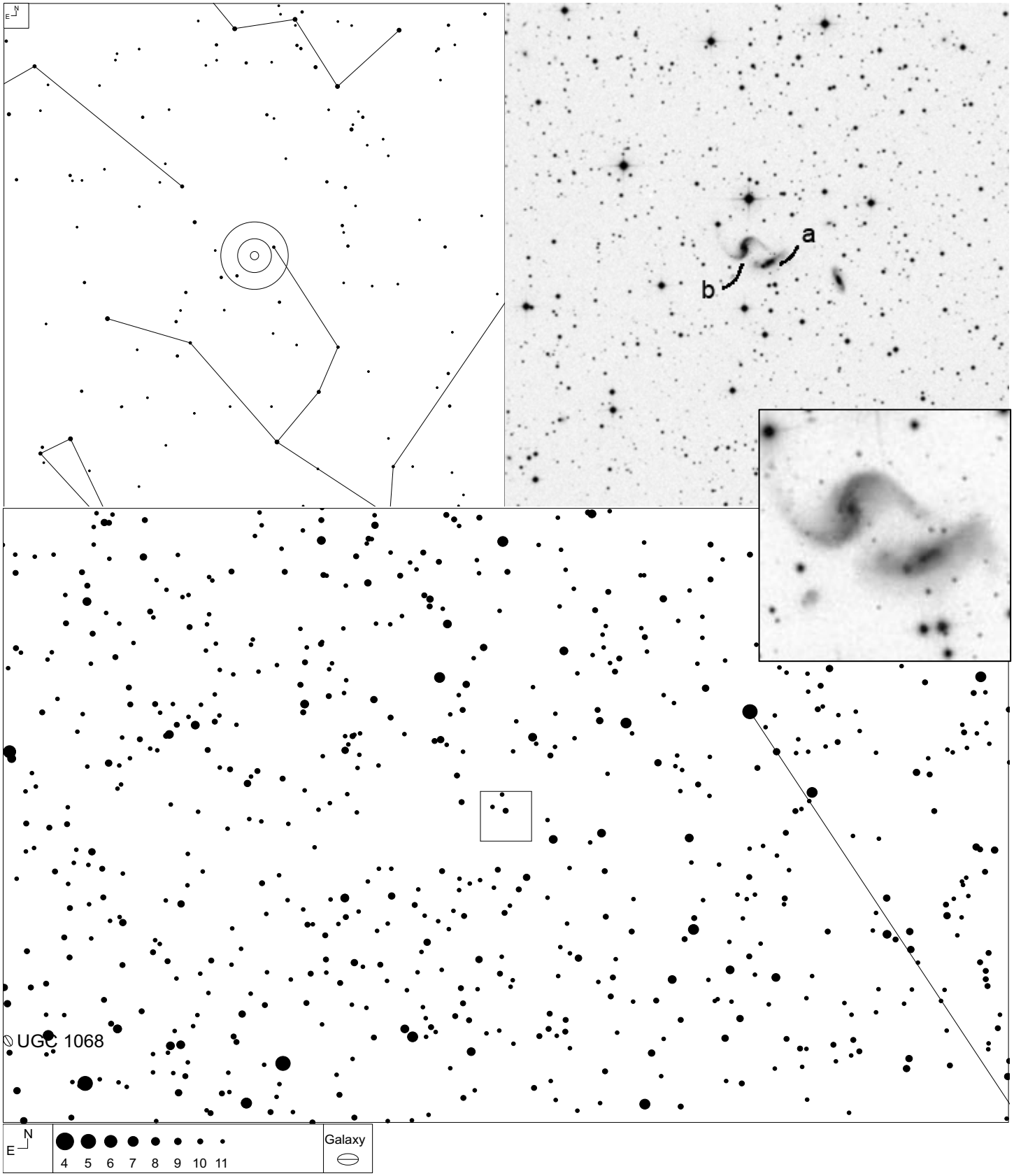
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
554	UGC 522	00 51 26.8	+40 43 31	G	14.6b	1.0 x 0.7	N

VV 566 (Andromeda)



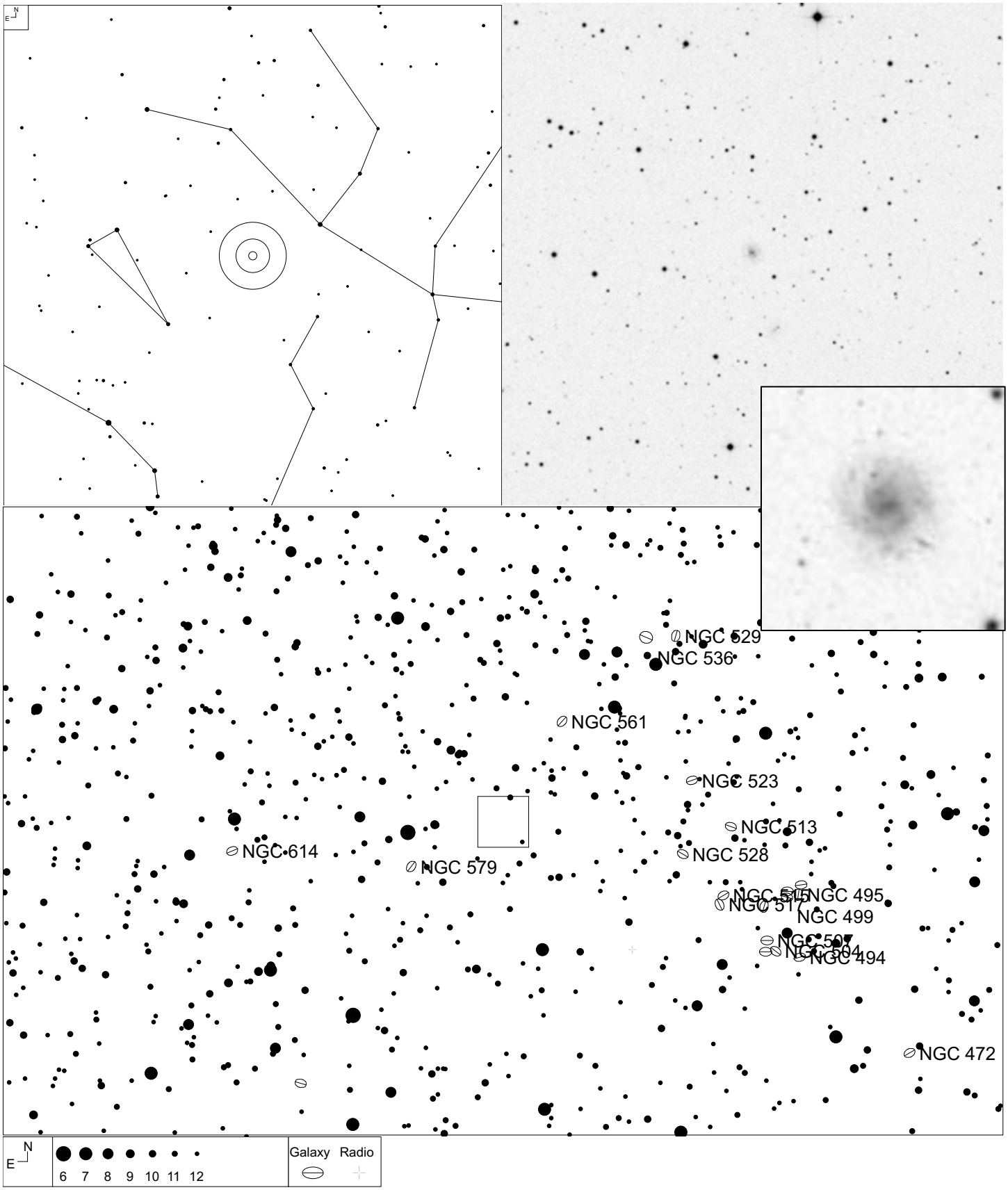
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
566	MCG +07-03-005	00 54 35.8	+42 16 34	G	15.6b	0.7 x 0.7	N

VV 769 (Andromeda)



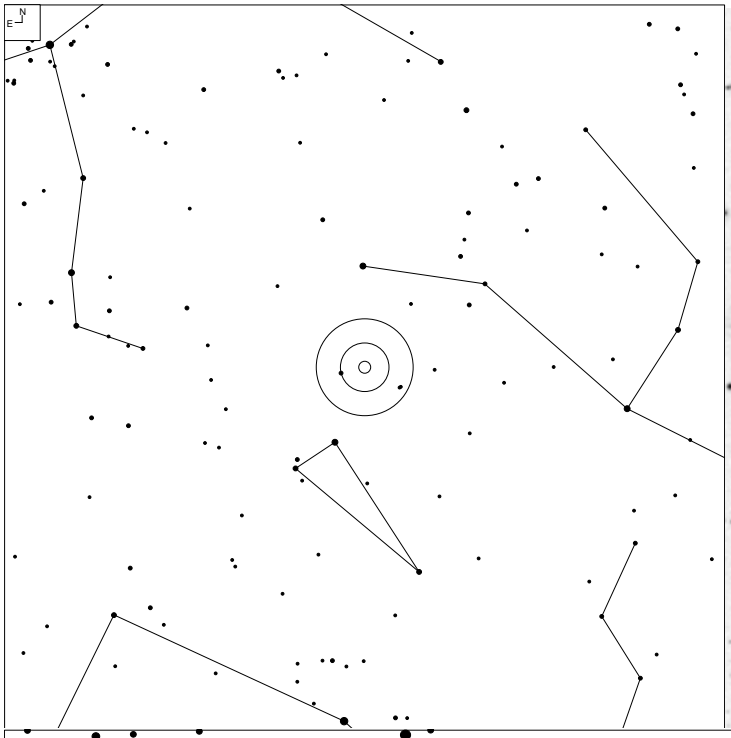
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
769		01 16 18.5	+46 44 38	GPair			PDdf
769a	UGC 813	01 16 16.4	+46 44 24	G	14.2g	1.2 x 0.5	
769b	UGC 816	01 16 20.5	+46 44 53	G	13.7v	1.9 x 1.0	

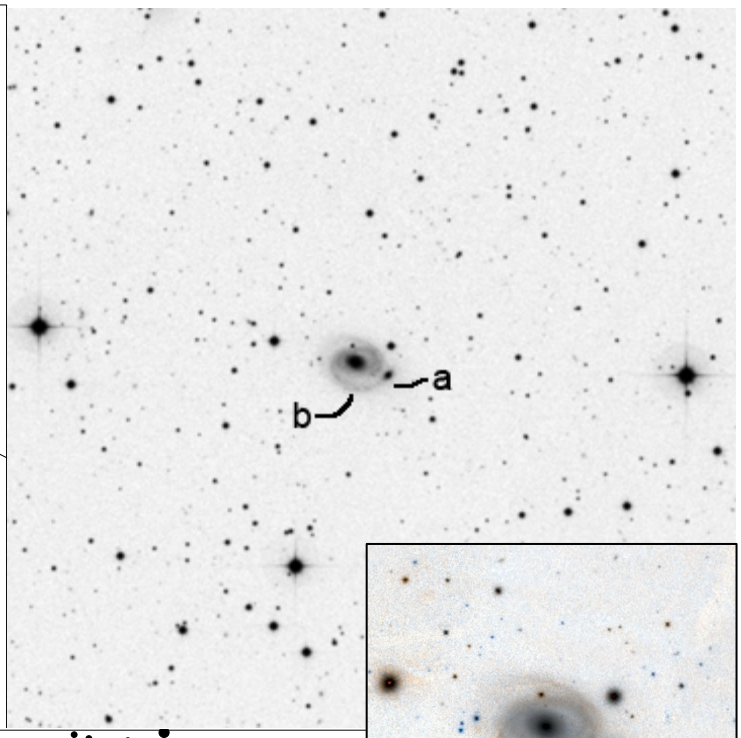
VV 597 (Andromeda)

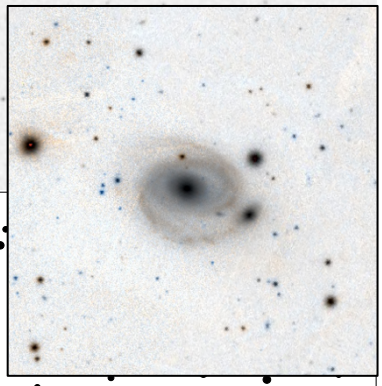


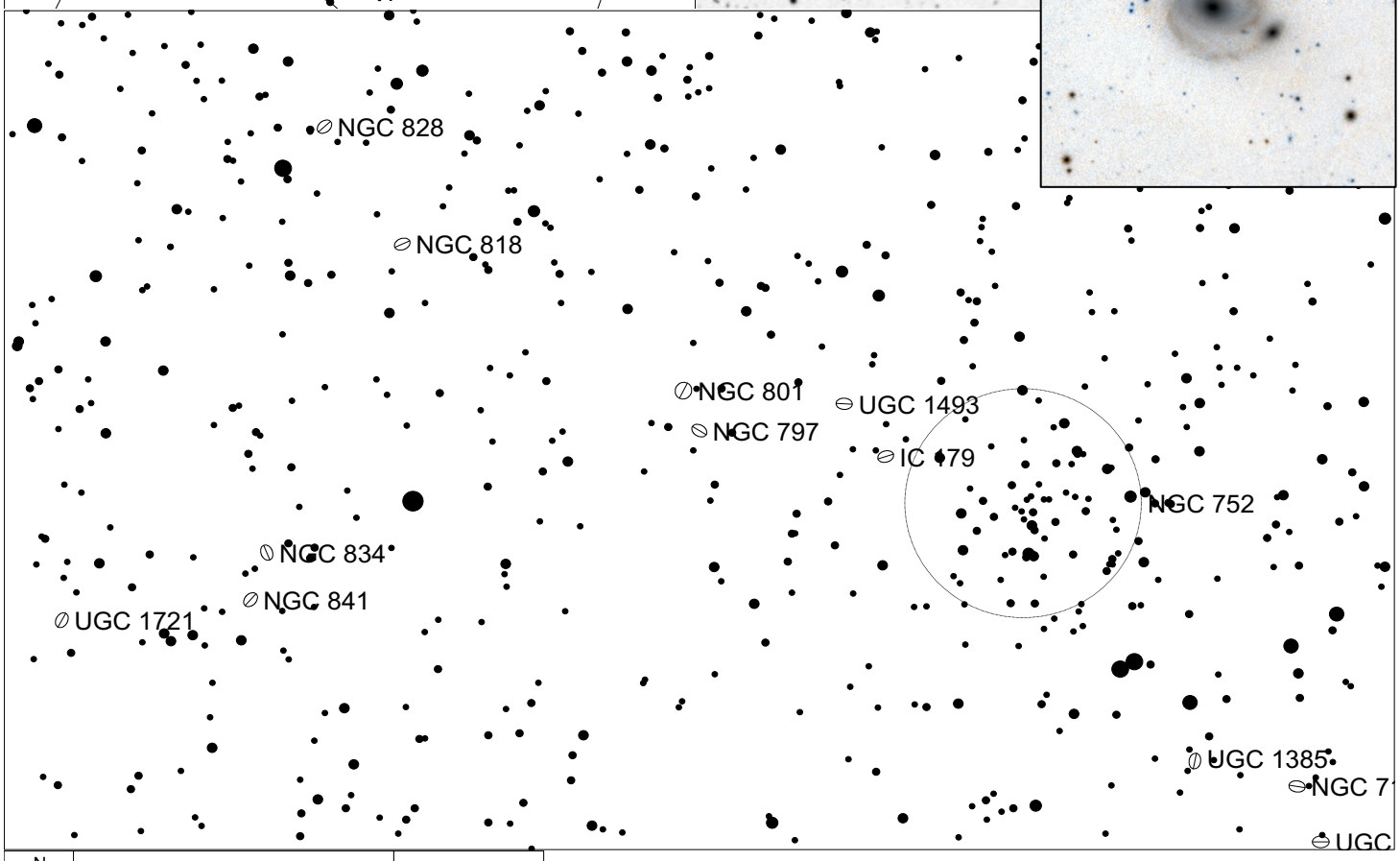
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
597	MCG +06-04-032	01 29 40.4	+33 49 52	G	16.2g	0.6 x 0.6	N

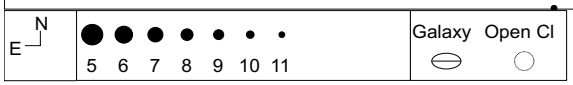
VV 428 (Andromeda)





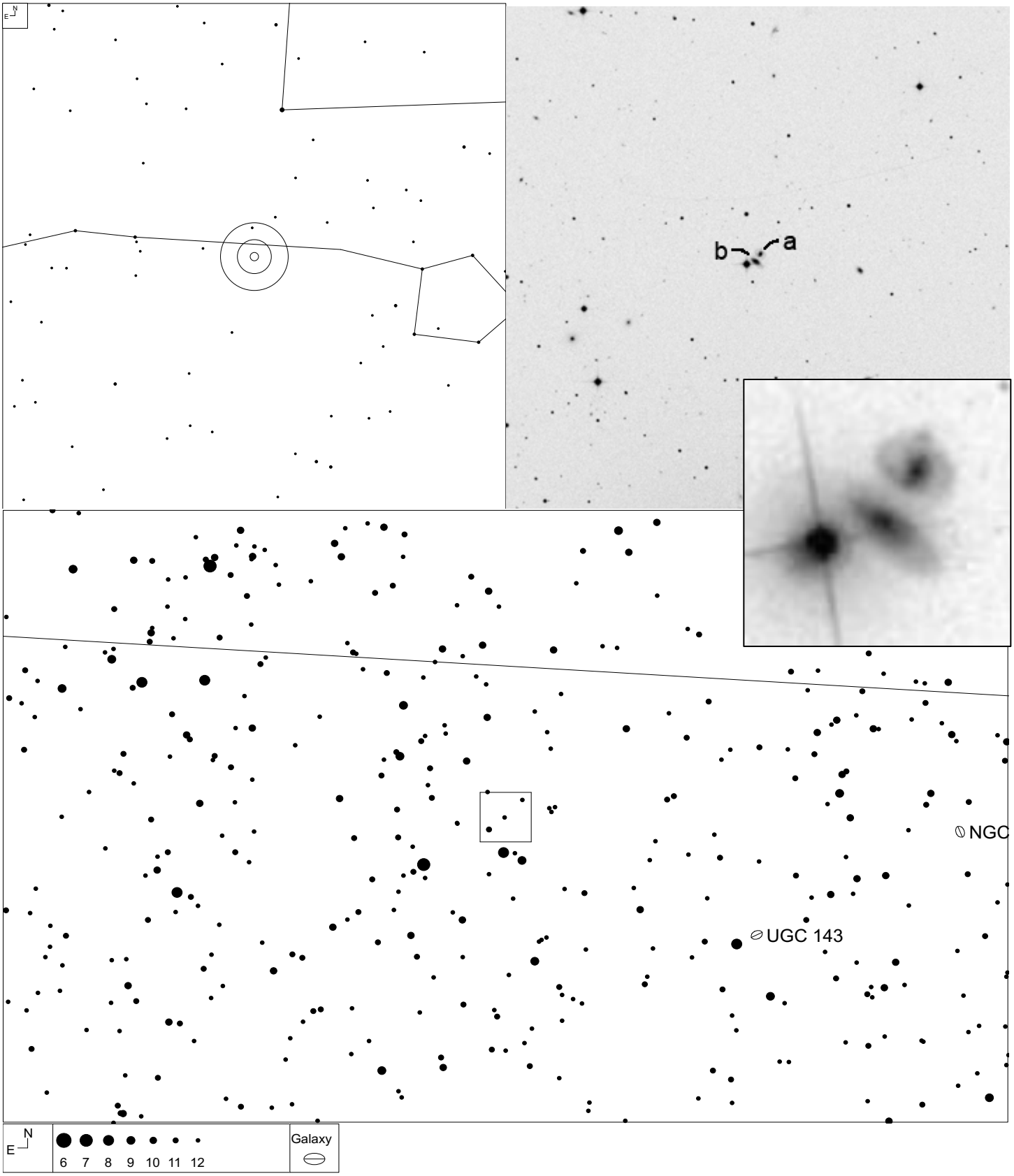






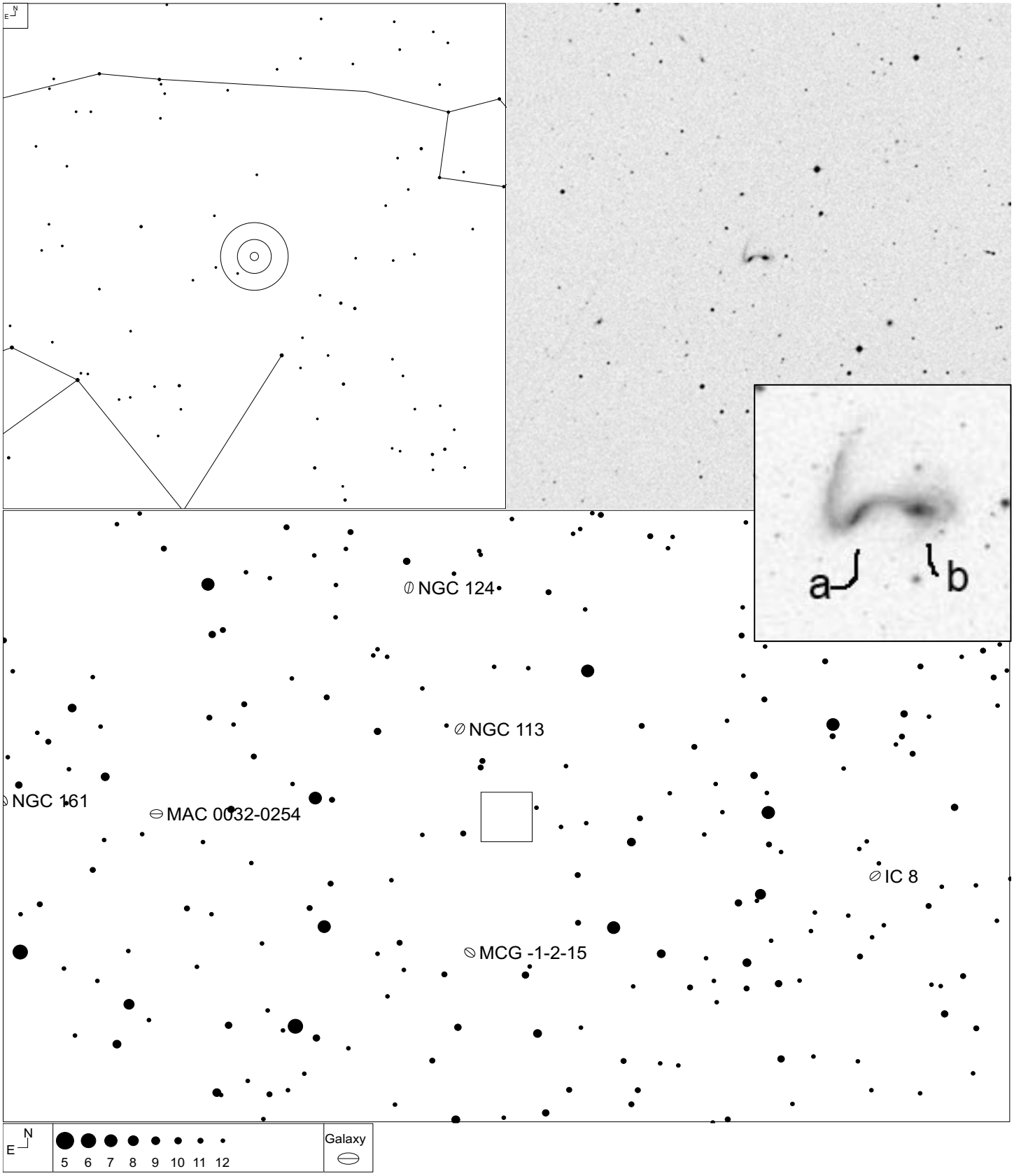
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
428		02 03 26.3	+38 06 52	GPair			M
428a	NGC 797B	02 03 24.5	+38 06 44	G	16.9	0.2 x 0.2	
428b	NGC 797	02 03 27.9	+38 07 01	G	13.1v	1.9 x 1.4	

VV 634 (Pisces)



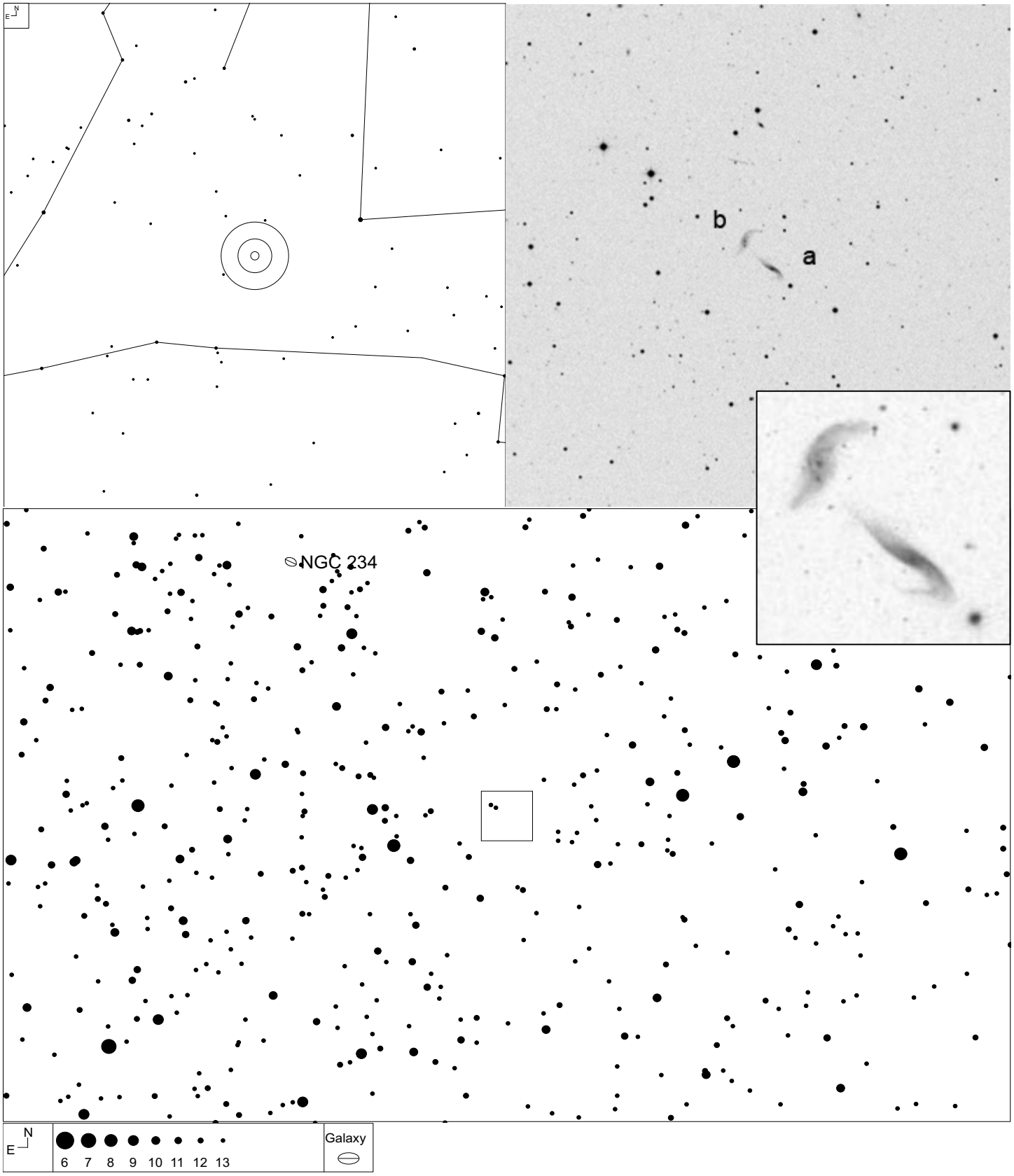
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
634		00 20 02.6	+06 27 56	GPair			N
634a	MCG +01-02-001	00 20 02.3	+06 28 03	G	16.1g	0.4 x 0.4	
634b	MCG +01-02-002	00 20 02.7	+06 27 48	G	15.5b	0.6 x 0.3	

VV 837 (Pisces)



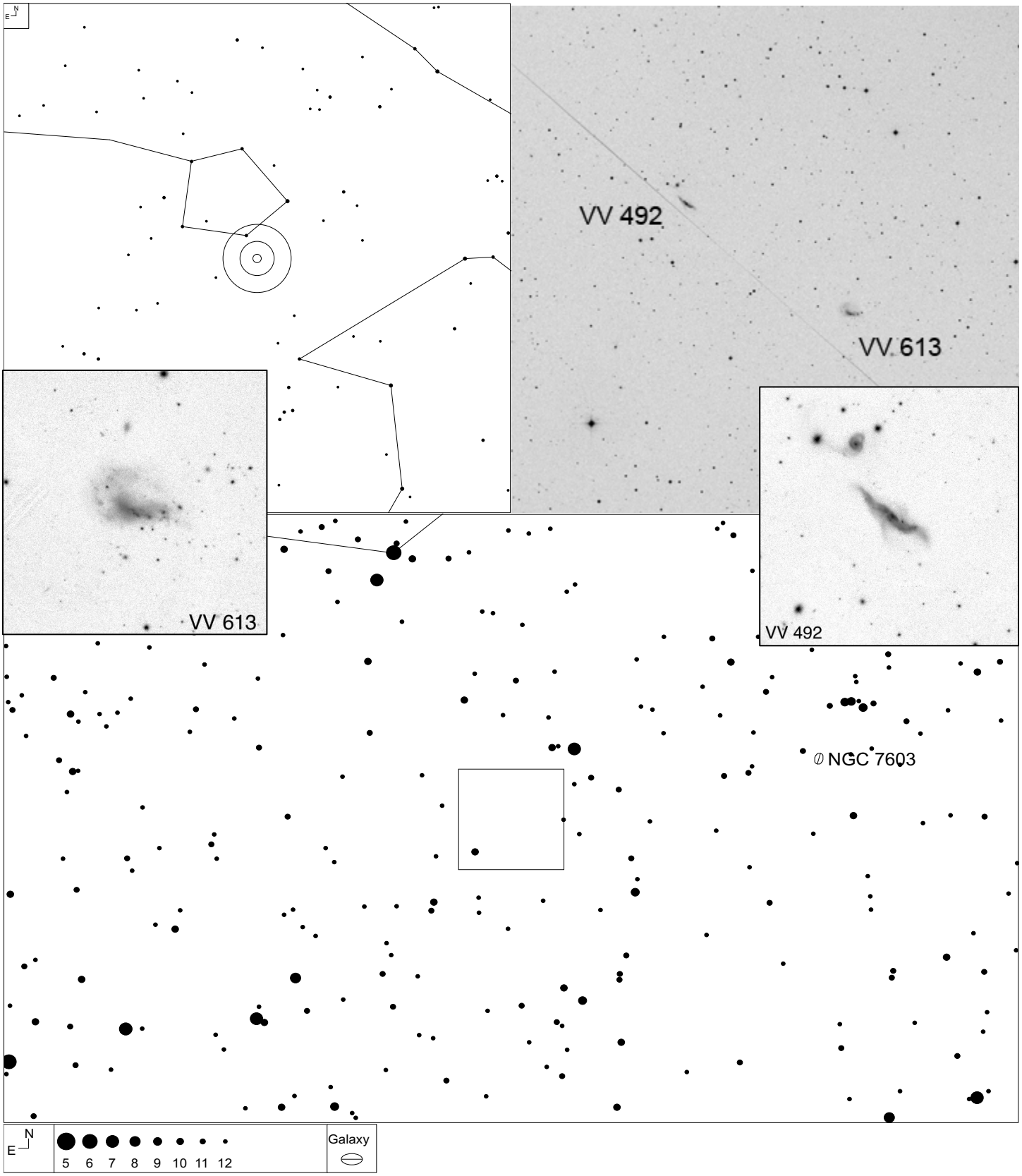
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
837		00 26 00.8	-02 55 55	GPair			Enat
837a	MCG -01-02-013	00 26 01.8	-02 56 00	G	15.5v	0.9 x 0.9	
837b	*MAC 0026-0255*	*00 26 00.0*	*-02 55 59*	*G*	*16.8g*	*0.4 x 0.2*	

VV 433 (Pisces)



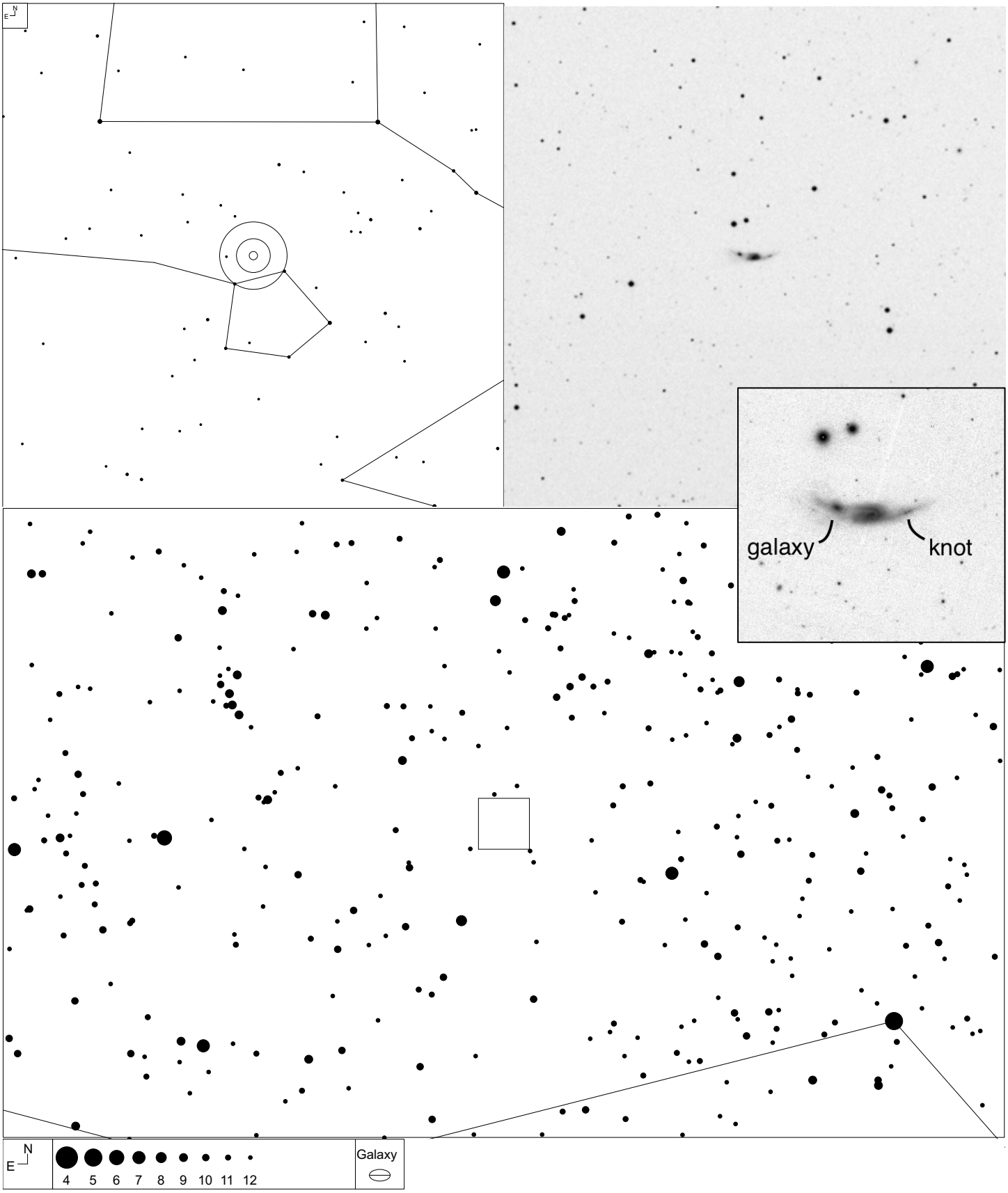
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
433		00 39 19.8	+13 06 22	GPair			
433a	UGC 403	00 39 18.0	+13 05 58	G	15.3b	1.2 x 06	PDdf
433b	UGC 404	00 39 21.4	+13 06 46	G	15.3b	1.1 x 0.5	M

VV 613 and VV 492 (Pisces)



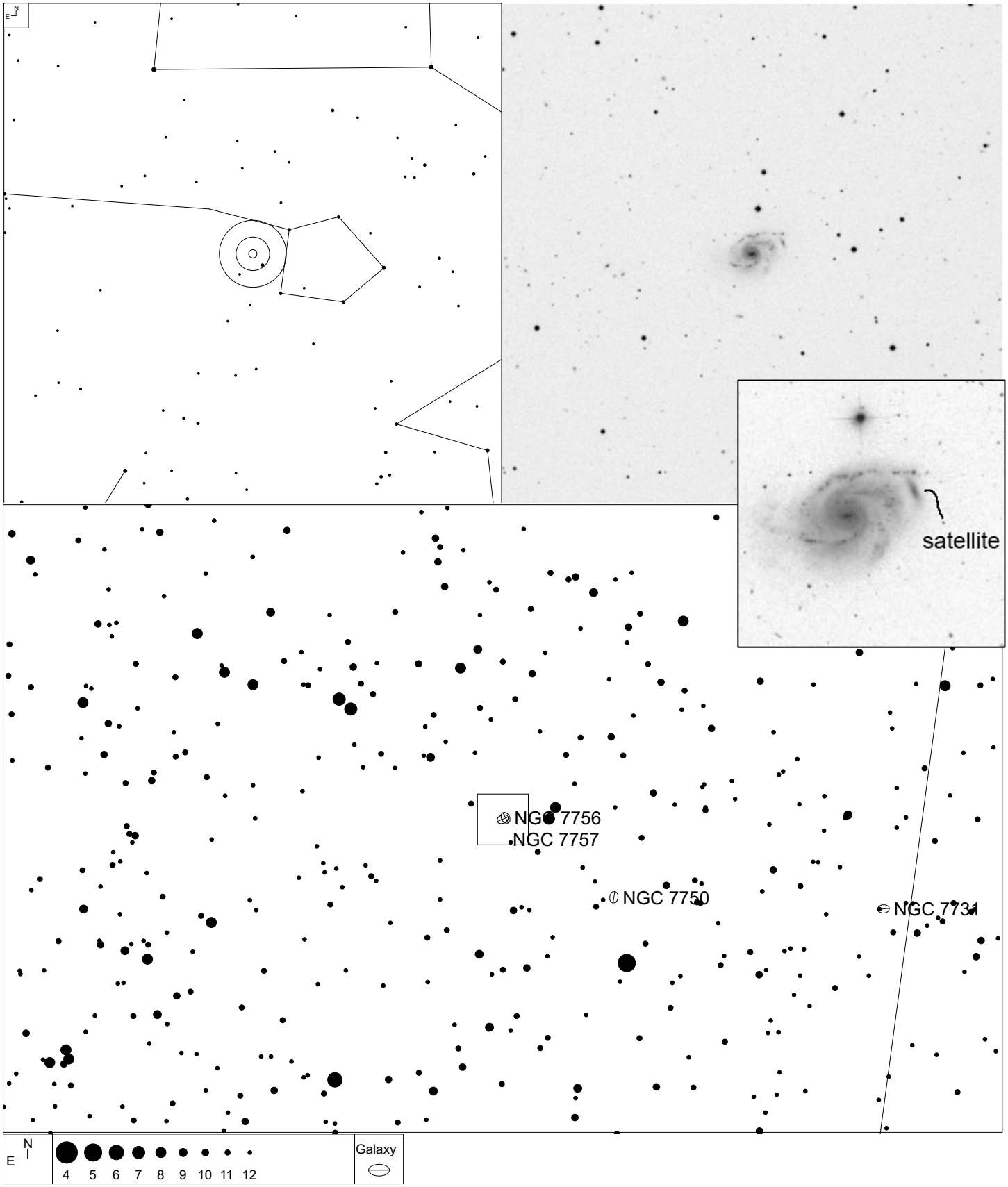
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
613	NGC 7667	23 24 23.1	-00 06 29	G	14.1v	1.6 x 1.1	N
492	UGC 12589	23 25 02.0	-00 00 01	GPair	15.5g	1.4 x 0.4	Ch

VV 470 (Pisces)



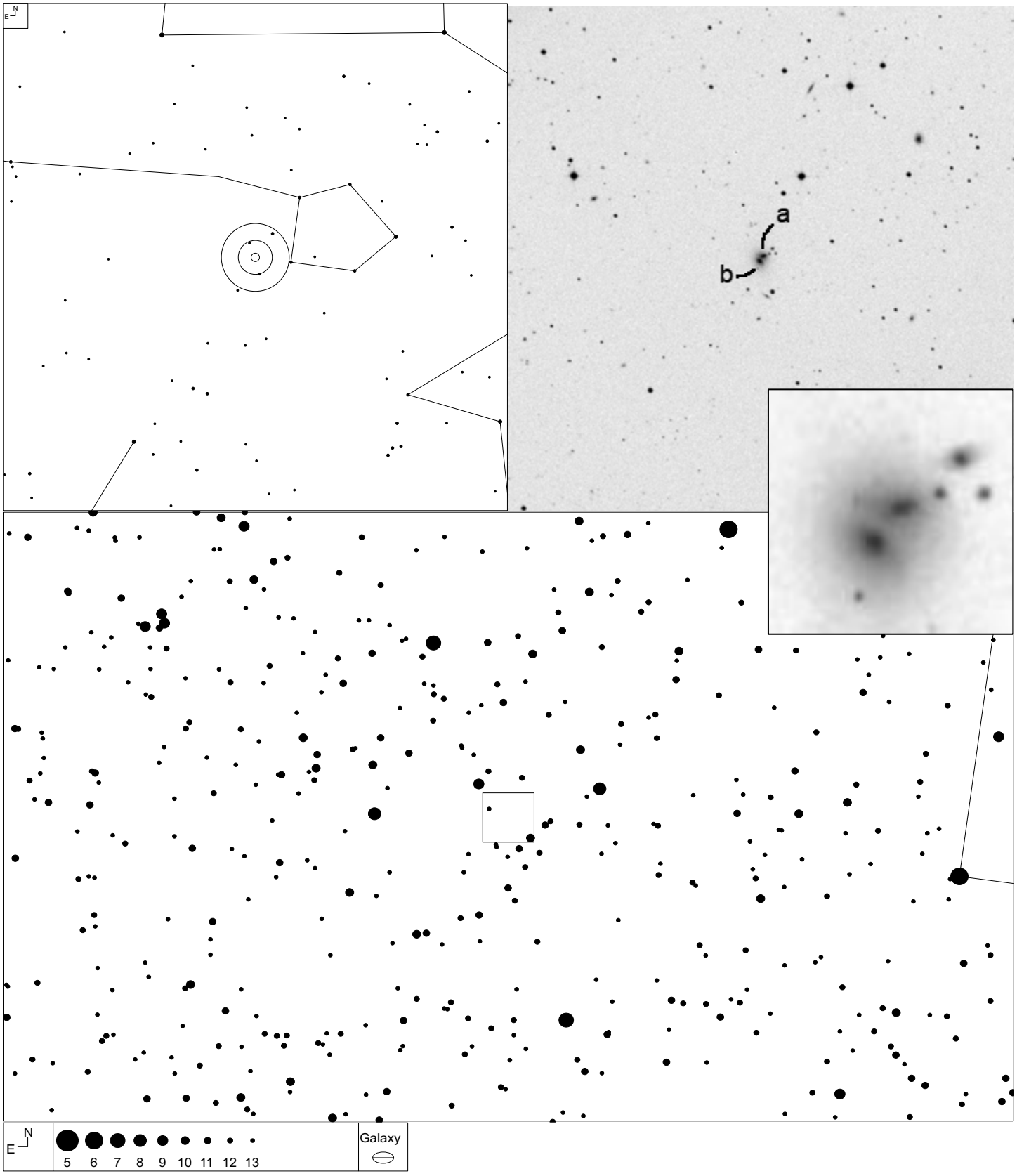
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
470	UGC 12688	23 35 26.1	+07 19 20	G	15.1g	1.7 x 0.4	MM

VV 407 (Pisces)



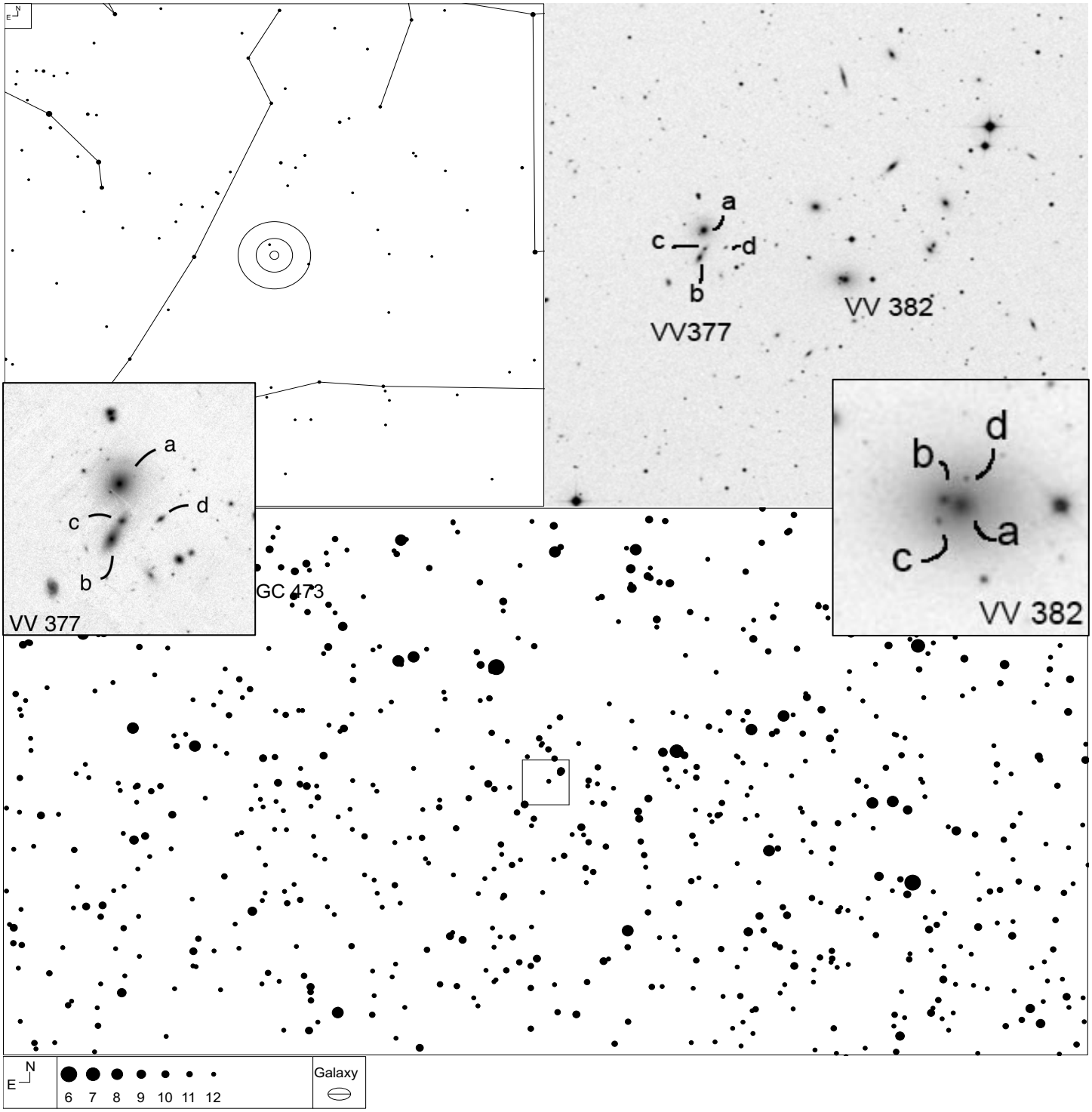
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
407	NGC 7757	23 48 45.5	+04 10 16	G	13.5g	2.5 x 1.8	M

VV 641 (Pisces)



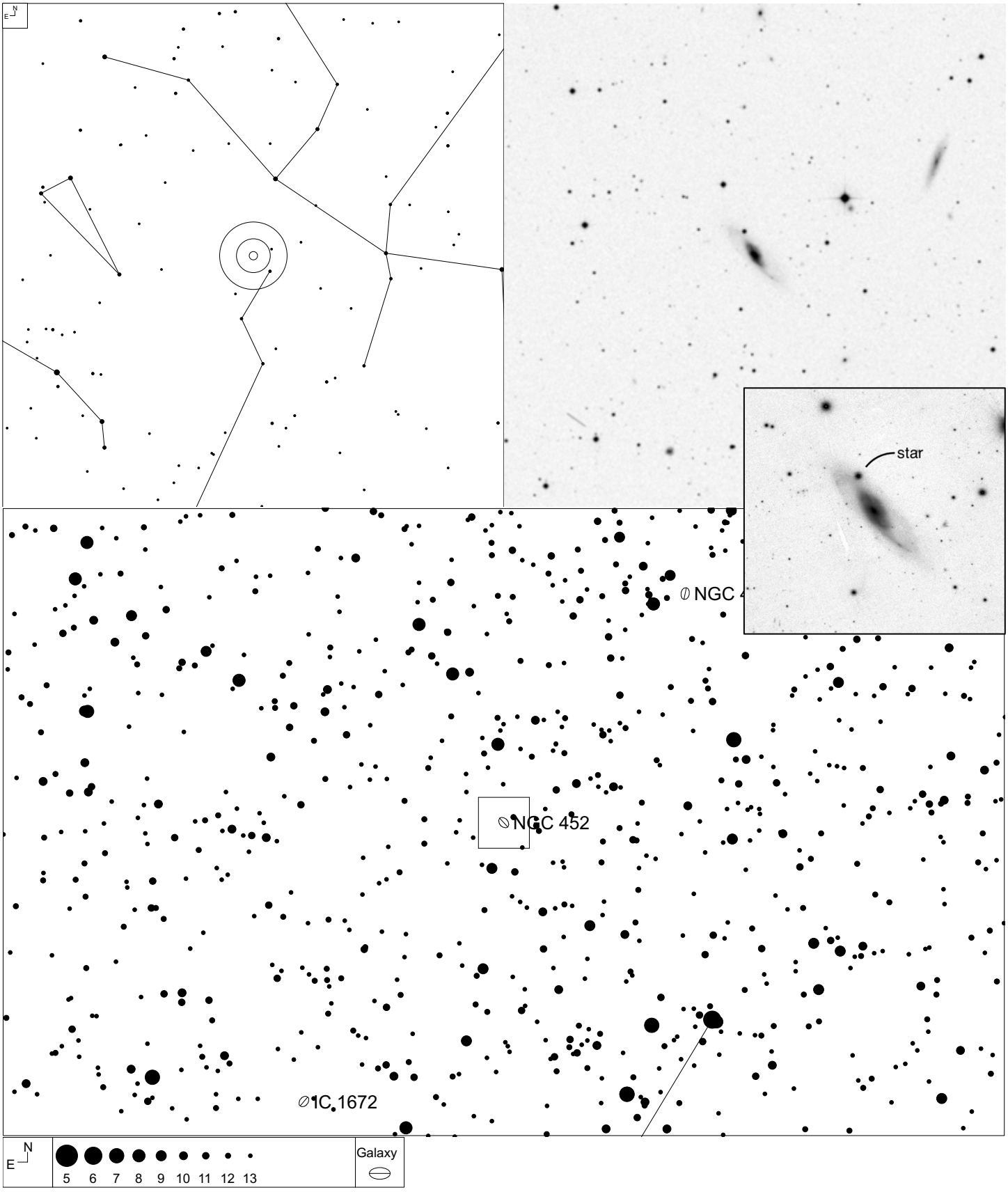
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
641	IC 1510	23 50 31.9	+02 04 12	GGroup	15.5g	0.4 x 0.3	N
641a	*PGC 1215207*	*23 50 32.5*	*+02 04 29*	*G*	*16.4g*	*0.4 x 0.3*	

VV 382 and VV 377 (Pisces)



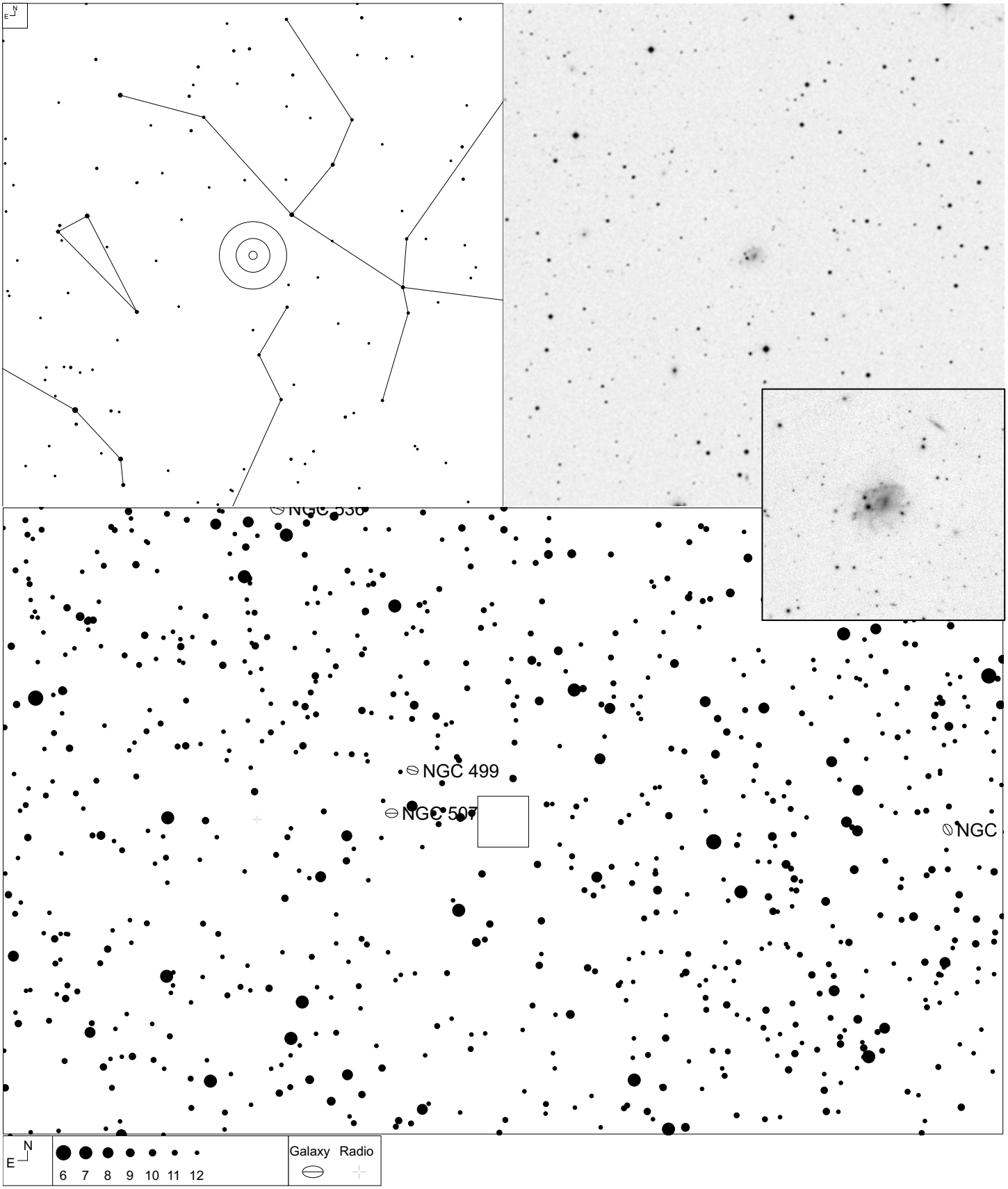
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
382	MCG +02-04-010	01 12 59.8	+15 29 29	GPair	15.7v	0.6 x 0.6	MMM
382b		01 13 00.1	+15 29 31	G	16.4g		
377		01 13 15.8	+15 30 59	GGroup			MMM
377a	MCG +02-04-011	01 13 15.7	+15 30 59	G	14.8g	0.6 x 0.6	
377b		*01 13 16.2*	*+15 30 10*	*G*	*16.0g*	*0.7 x 0.2*	
377c		*01 13 15.6*	*+15 30 25*	*G*	*16.5g*	*0.1 x 0.1*	
*377d**		*01 13 13.1*	*+15 30 25*	*G*	*17.4*	*0.2 x 0.1*	

VV 430 (Pisces)



VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
430	NGC 452	01 16 14.8	+31 02 01	G	13.9g	2.5 x 0.8	M

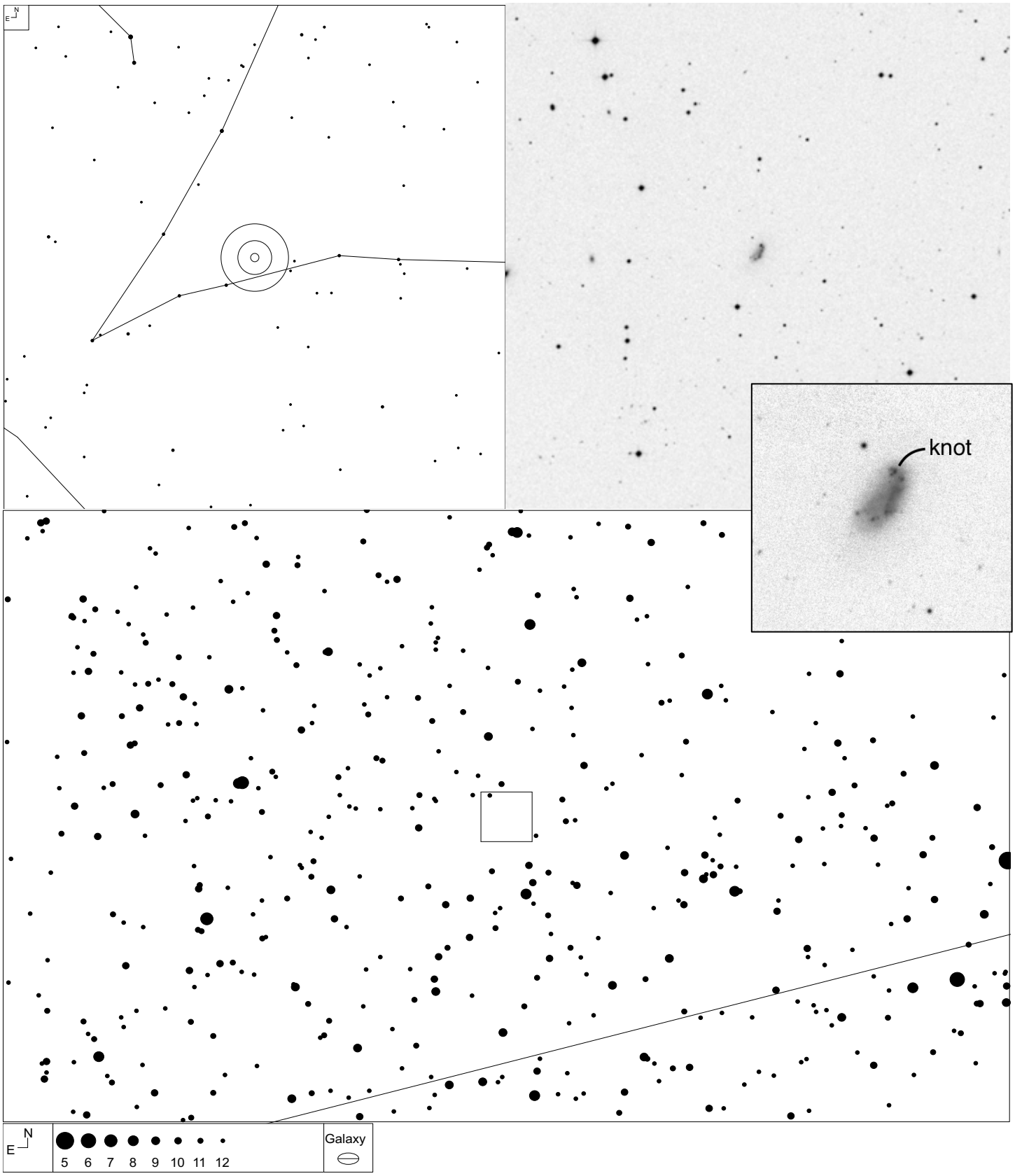
VV 600 (Pisces)



VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
600	IC 1677	01 21 07.1	+33 13 00	GGroup	15.9g	1.0 x 0.7	N

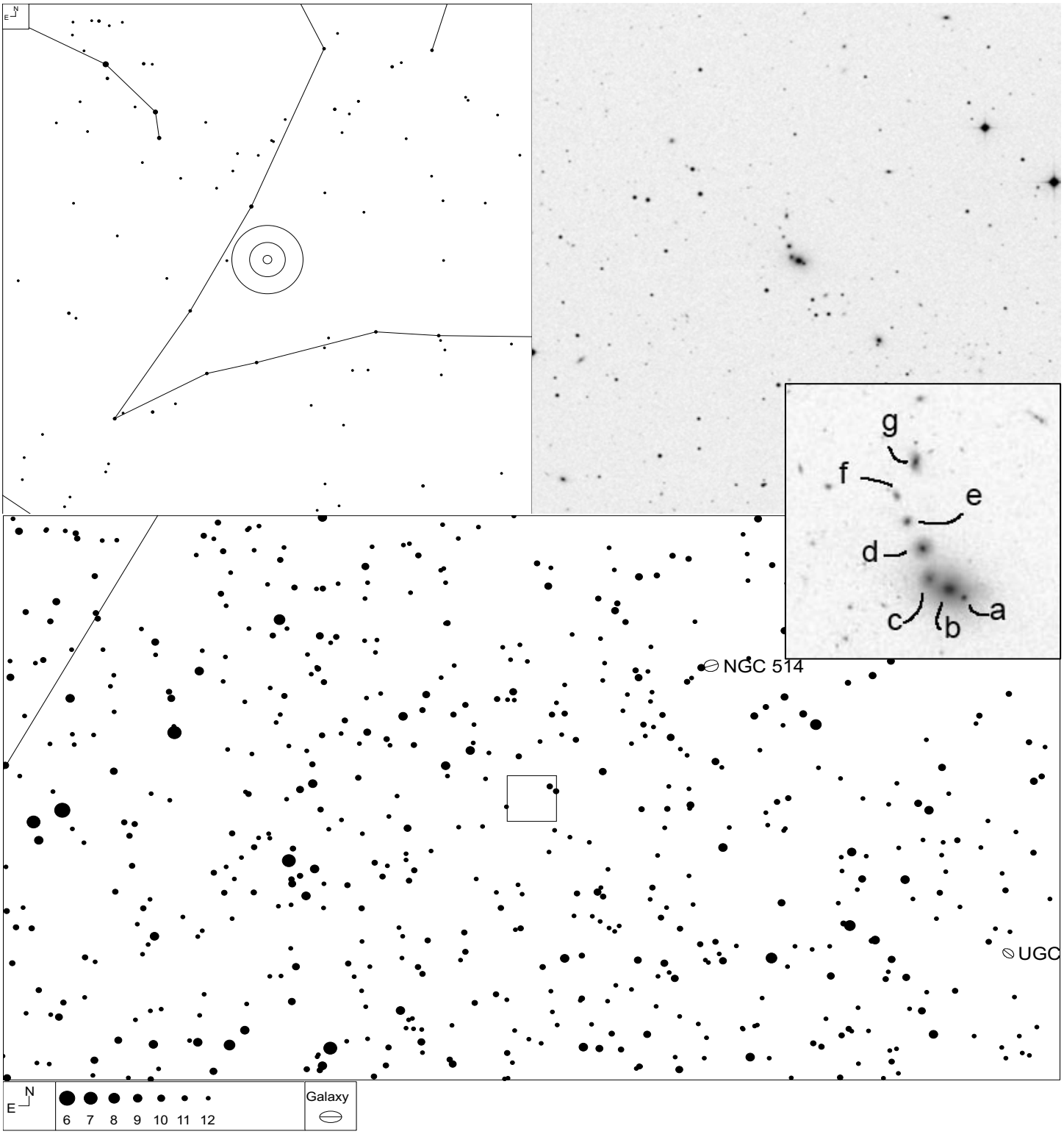
Several stars on the disk of the galaxy.

VV 730 (Pisces)



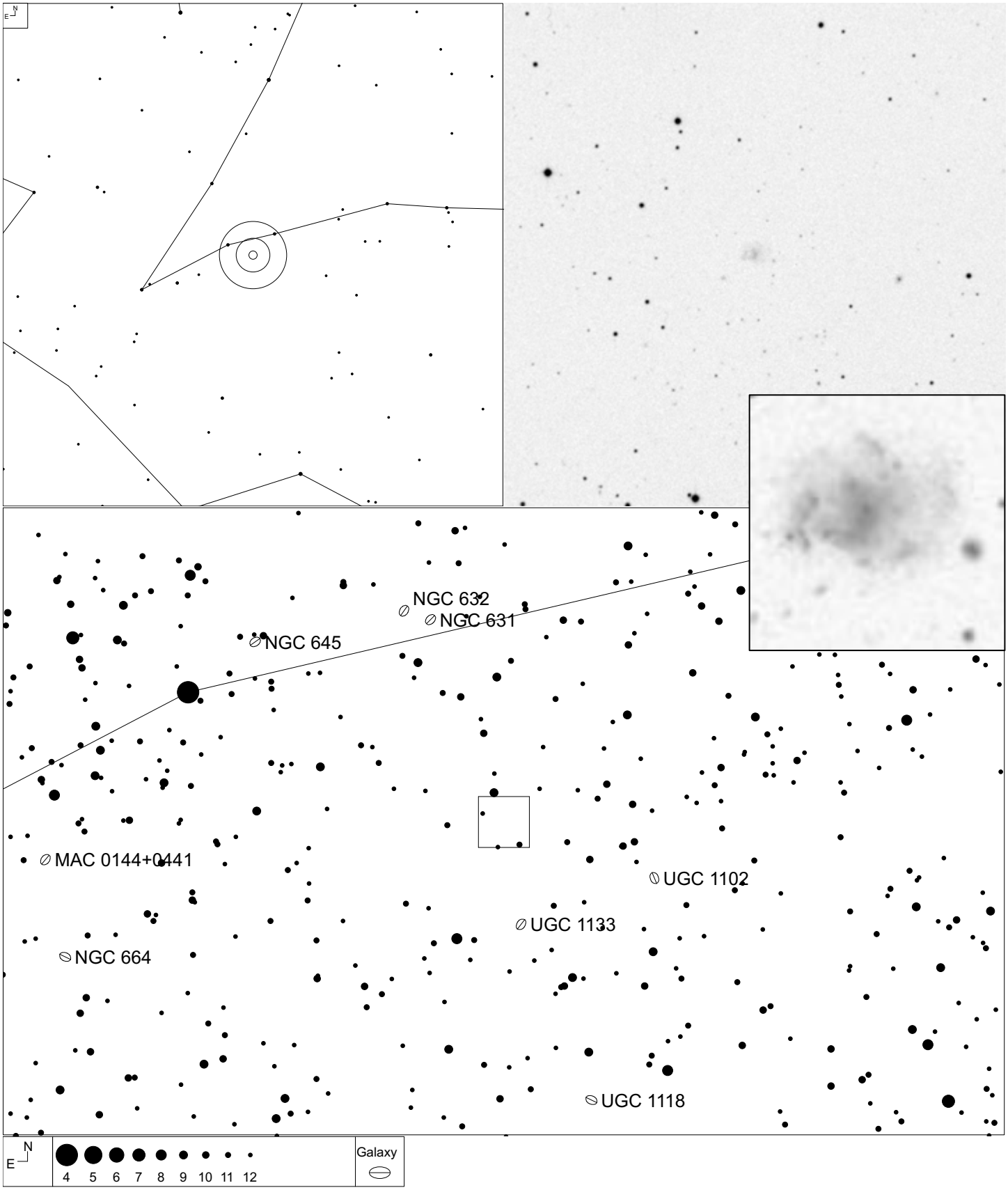
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
730	MCG +01-04-044	01 23 19.5	+07 47 42	GPair	16.3g	0.7 x 0.4	PC

VV 512 (Pisces)



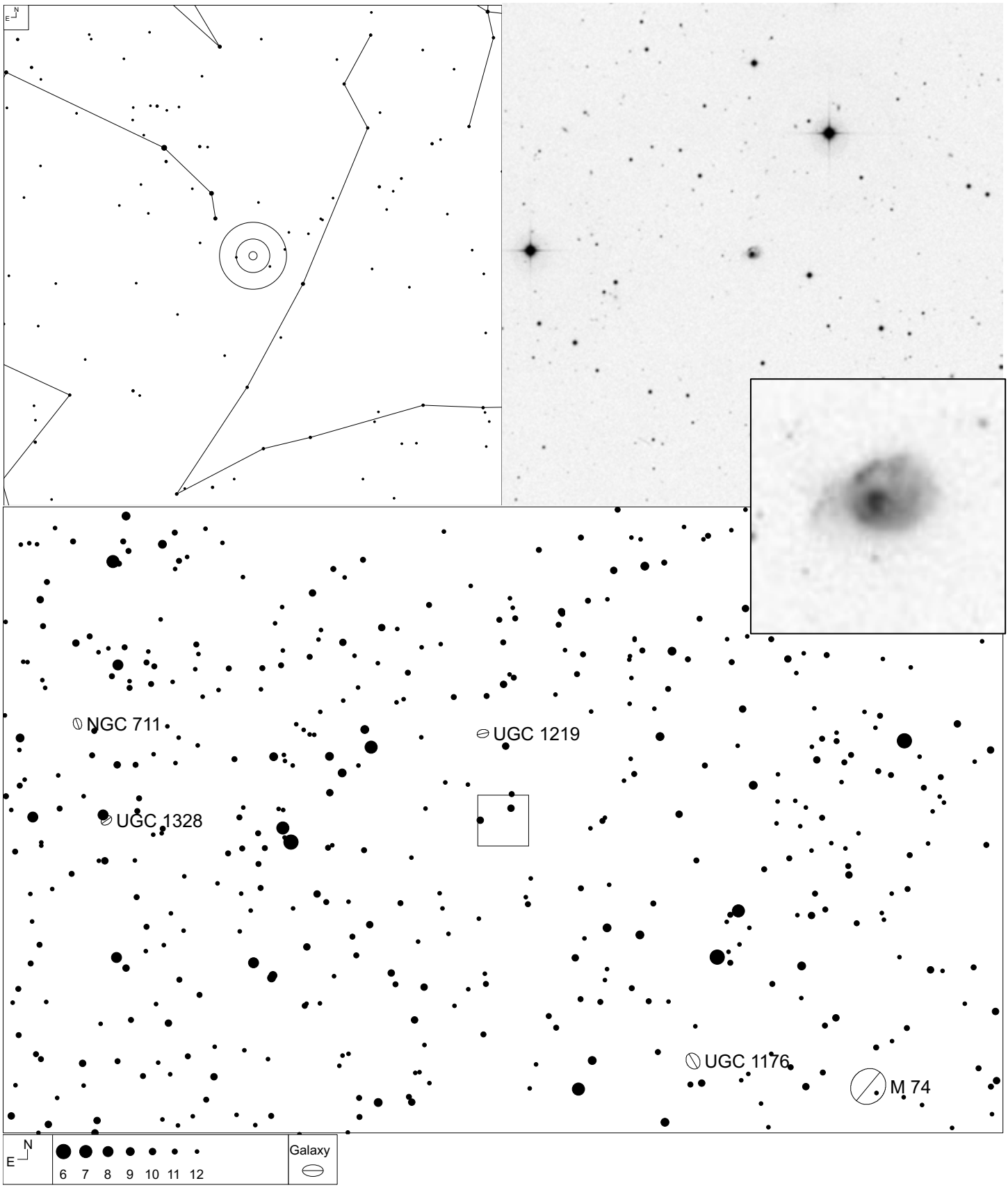
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
512		01 27 41.3	+12 12 57	GGroup			Ch
512a		*01 27 40.5*	*+12 12 48*	*G*	*17.7**	*0.1 x 0.1*	
512b	UGC 1041	01 27 41.0	+12 12 55	G	15.2g	0.2 x 0.2	
512c		*01 27 42.0*	*+12 13 00*	*G*	*16.4**	*0.1 x 0.1*	
*512d**		*01 27 42.2*	*+12 13 20*	*G*	*16.8**	*0.1 x 0.1*	
*512e**		*01 27 42.8*	*+12 13 38*	*G*	*18.2**	*0.1 x 0.1*	
*512f**		*01 27 43.5*	*+12 13 53*	*G*	*19.4**	*0.1 x 0.1*	
*512g**		*01 27 42.5*	*+12 14 14*	*G*	*17.2**	*0.2 x 0.1*	

VV 590 (Pisces)



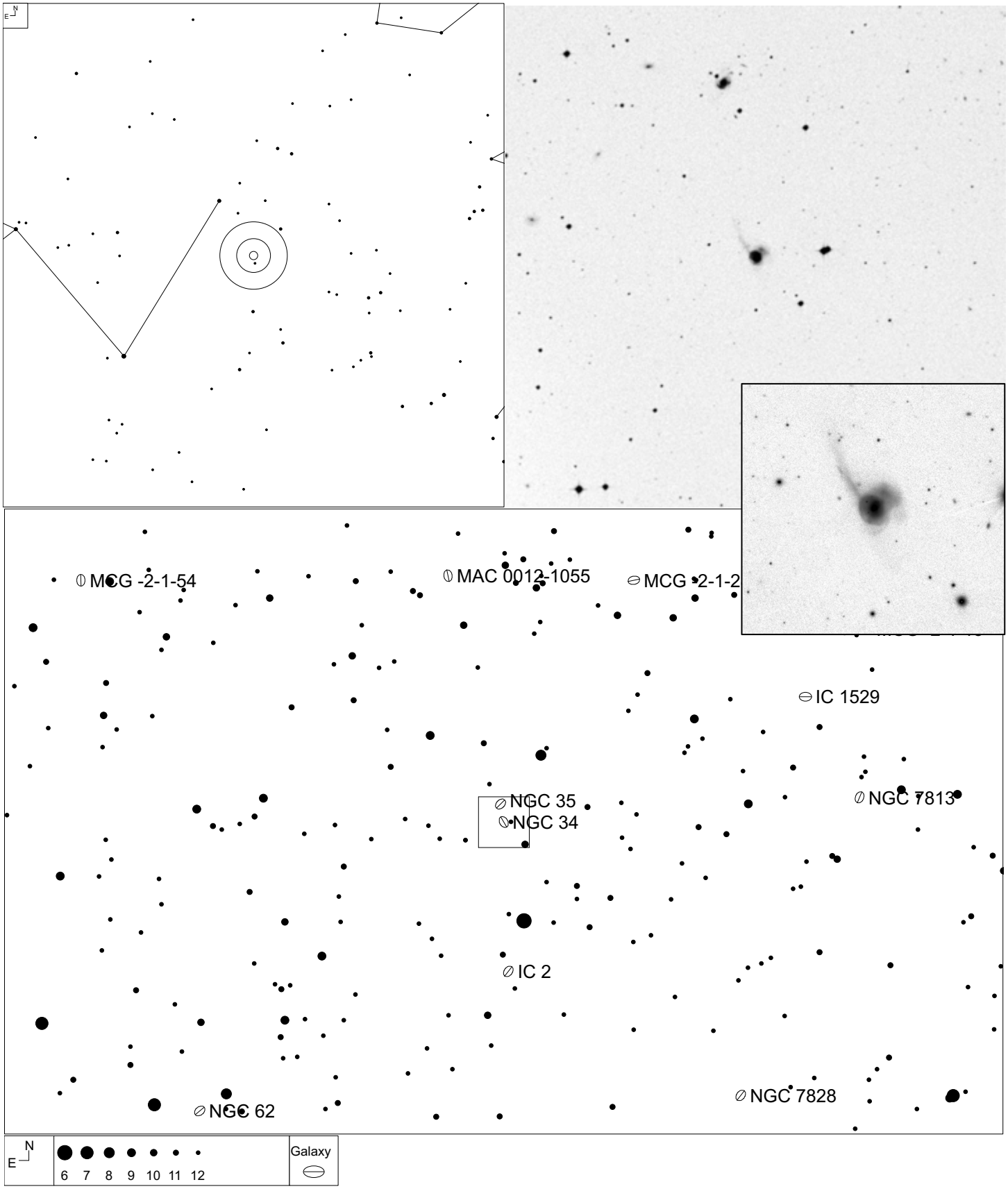
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
590	UGC 1138	01 35 22.8	+04 52 14	G	16.6g	1.2 x 1.0	N

VV 790A (Pisces)



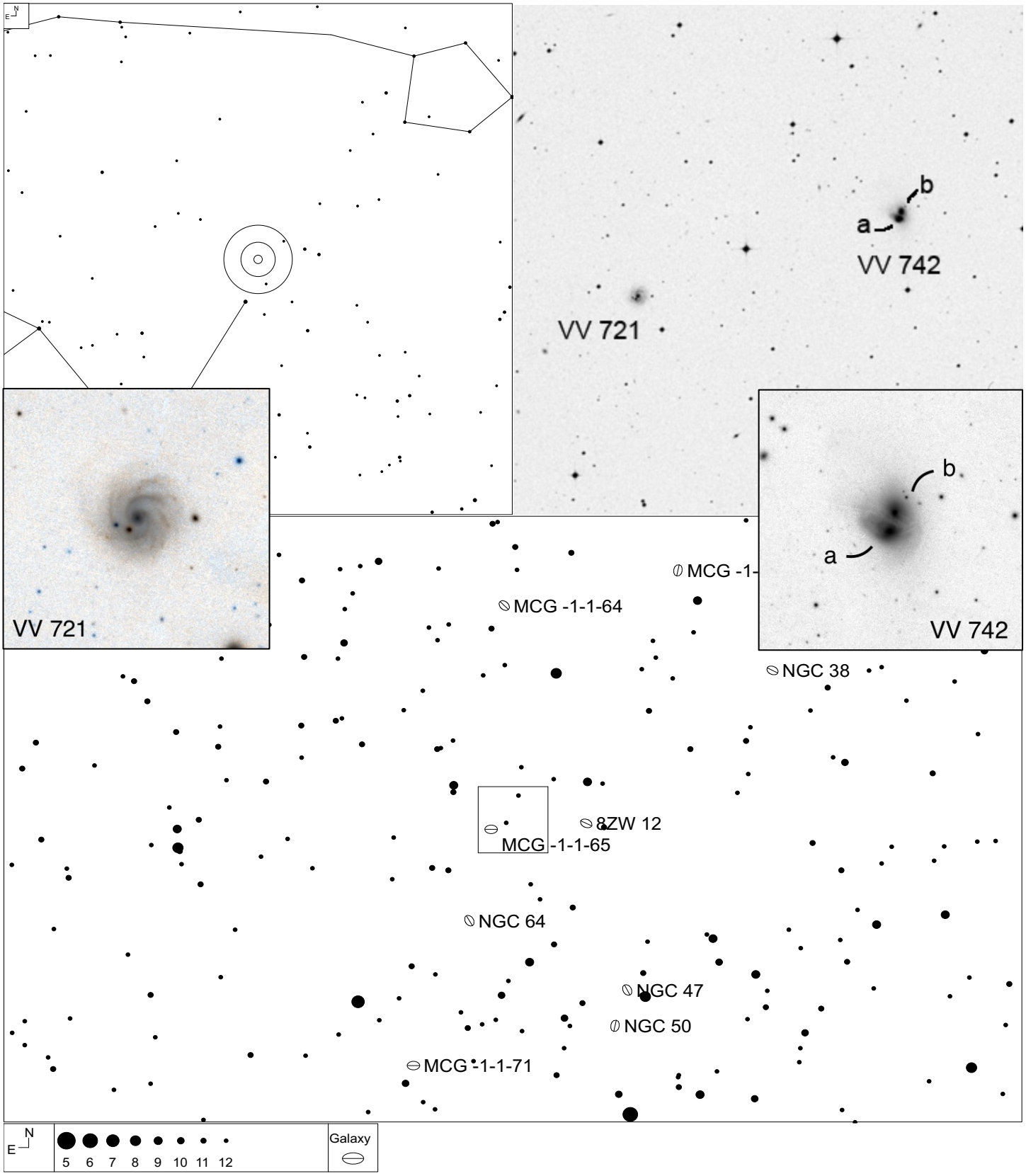
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
790A	MCG +03-05-013	01 43 56.5	+17 03 43	G	15.1g	0.4 x 0.4	R

VV 850 (Cetus)



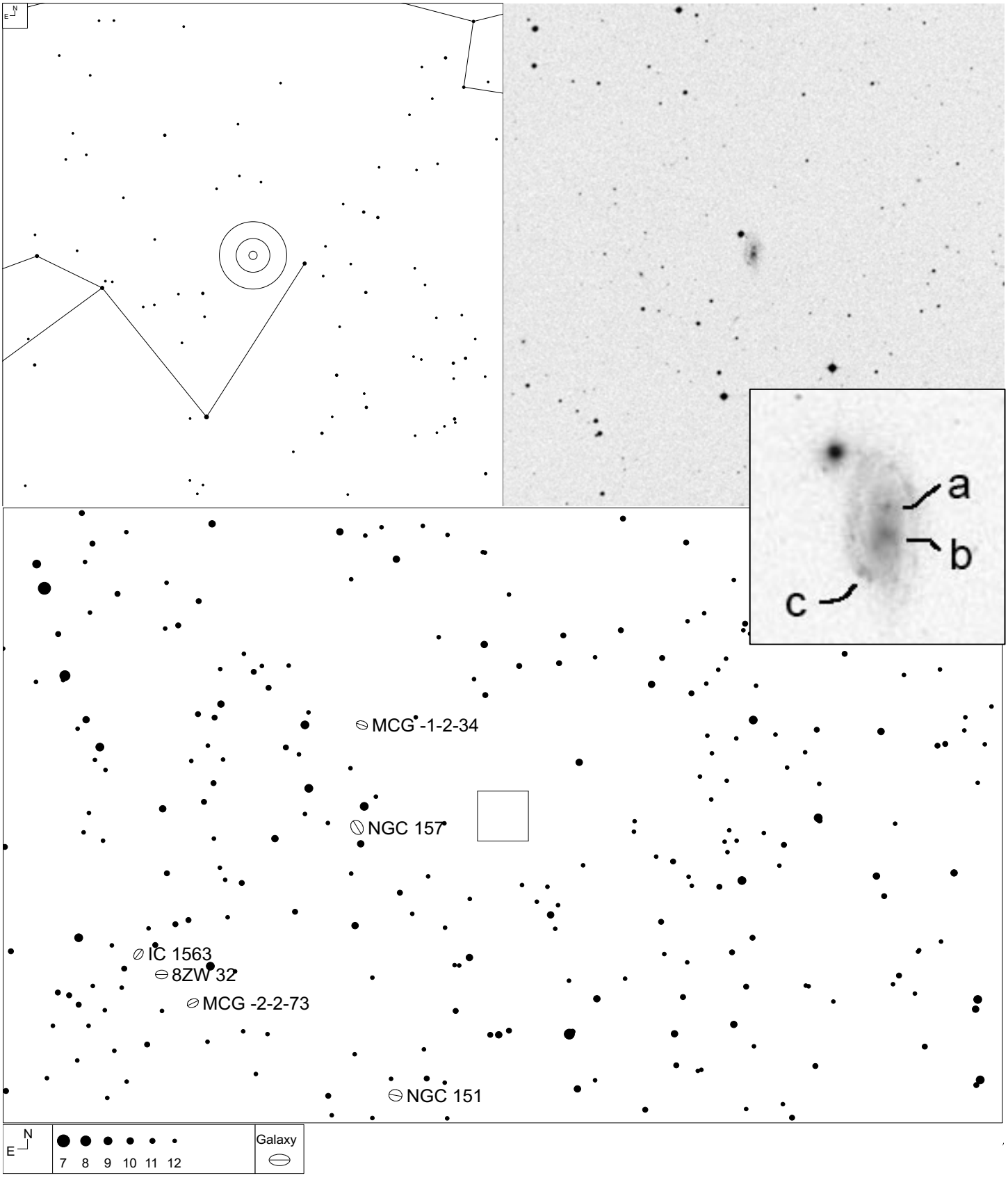
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
850	NGC 17 = NGC 34	00 11 06.6	-12 06 26	G	13.5v	2.2 x 0.8	Ent

VV 742 and VV 721 (Cetus)



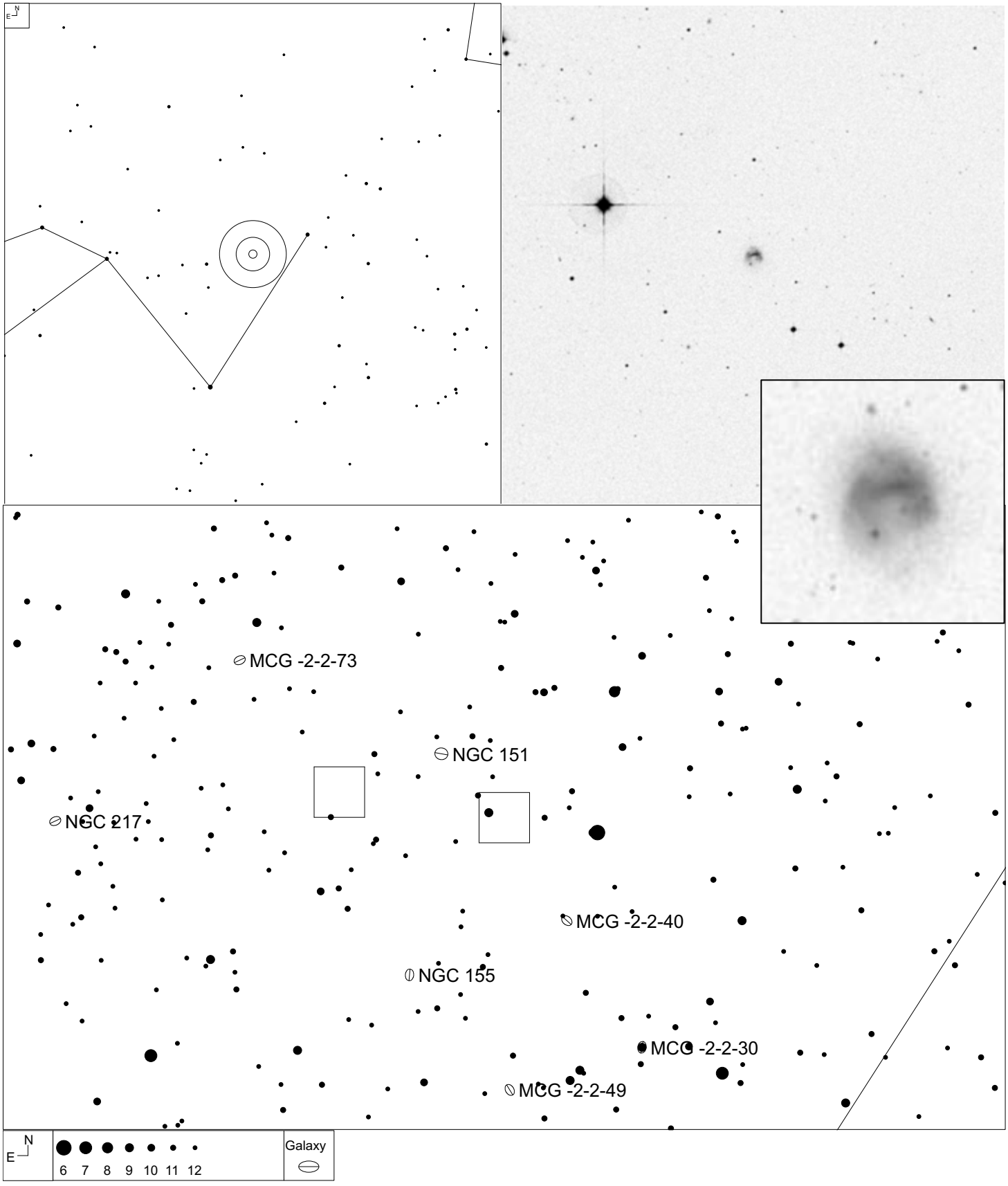
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
742		00 16 24.2	-06 19 10	GPair			PK
742a	NGC 61B	00 16 24.1	-06 19 08	G	14.3g	0.8 x 0.4	
742b	NGC 61A	00 16 24.3	-06 19 19	G	14.7g	1.1 x 0.7	
721	MCG -01-01-065	00 17 05.5	-06 22 21	G	14.6g	1.2 x 1.1	PC

VV 570 (Cetus)



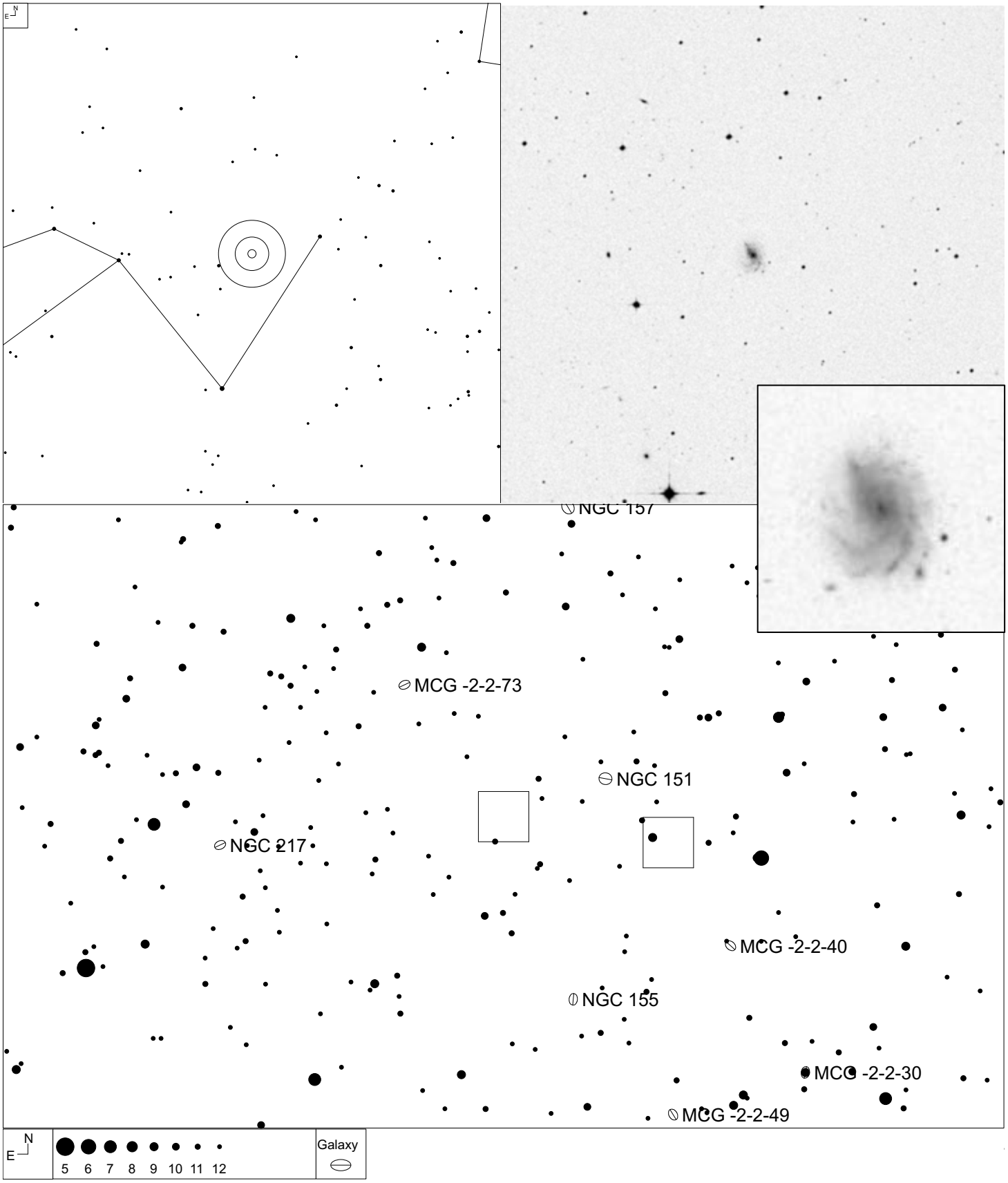
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
570	MCG -02-02-043	00 31 57.5	-08 20 41	G	16.1g	1.3 x 0.7	N

VV 661 (Cetus)



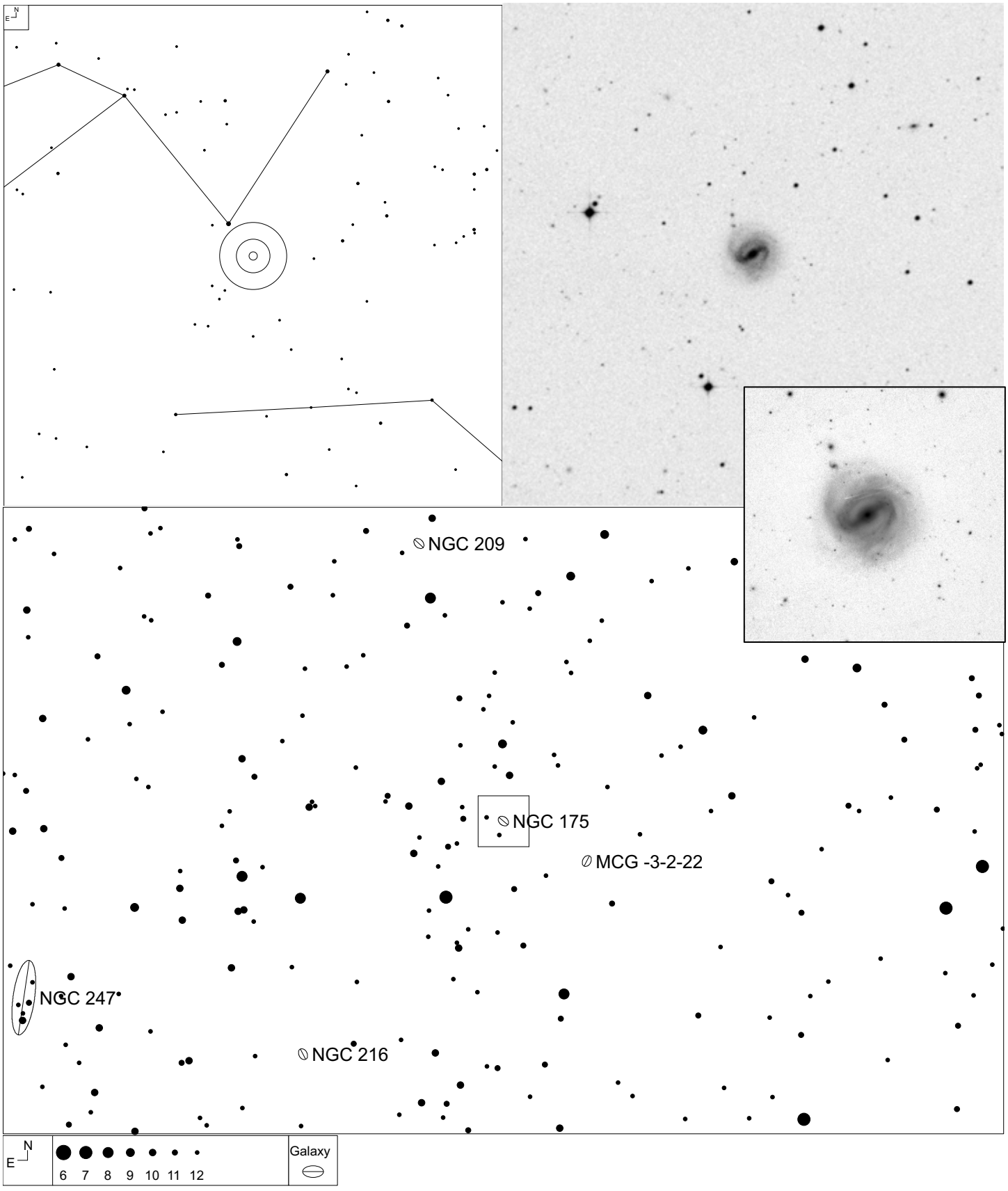
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
661	MCG -02-02-048	00 32 49.3	-10 00 46	G	14.7g	0.8 x 0.8	N

VV 548 (Cetus)



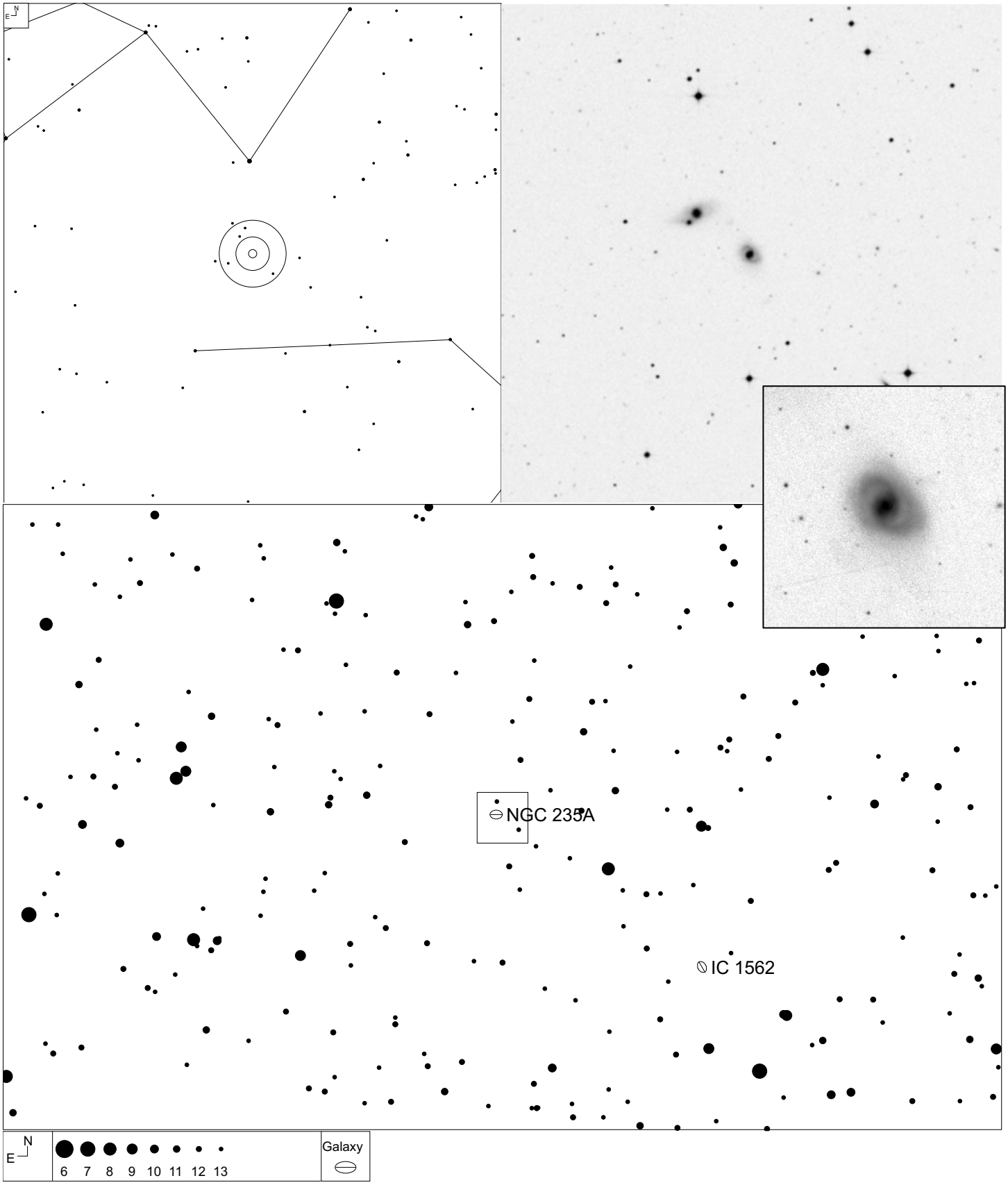
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
548	MCG -02-02-064	00 36 02.0	-09 53 19	G	14.6g	1.2 x 1.0	N

VV 791A (Cetus)



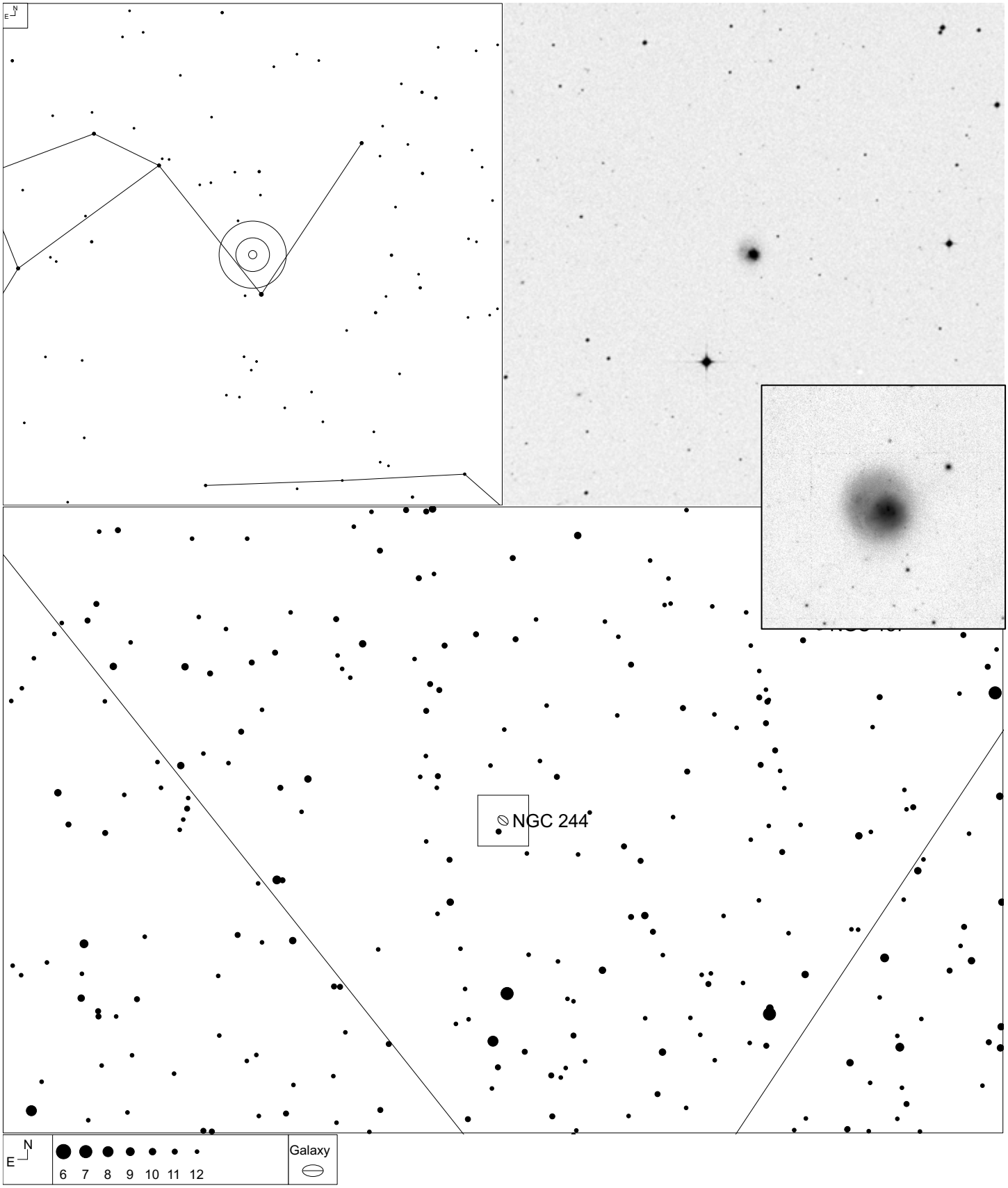
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
791A	NGC 175	00 37 21.5	-19 56 03	G	12.90	2.1 x 1.9	R

VV 830 (Cetus)



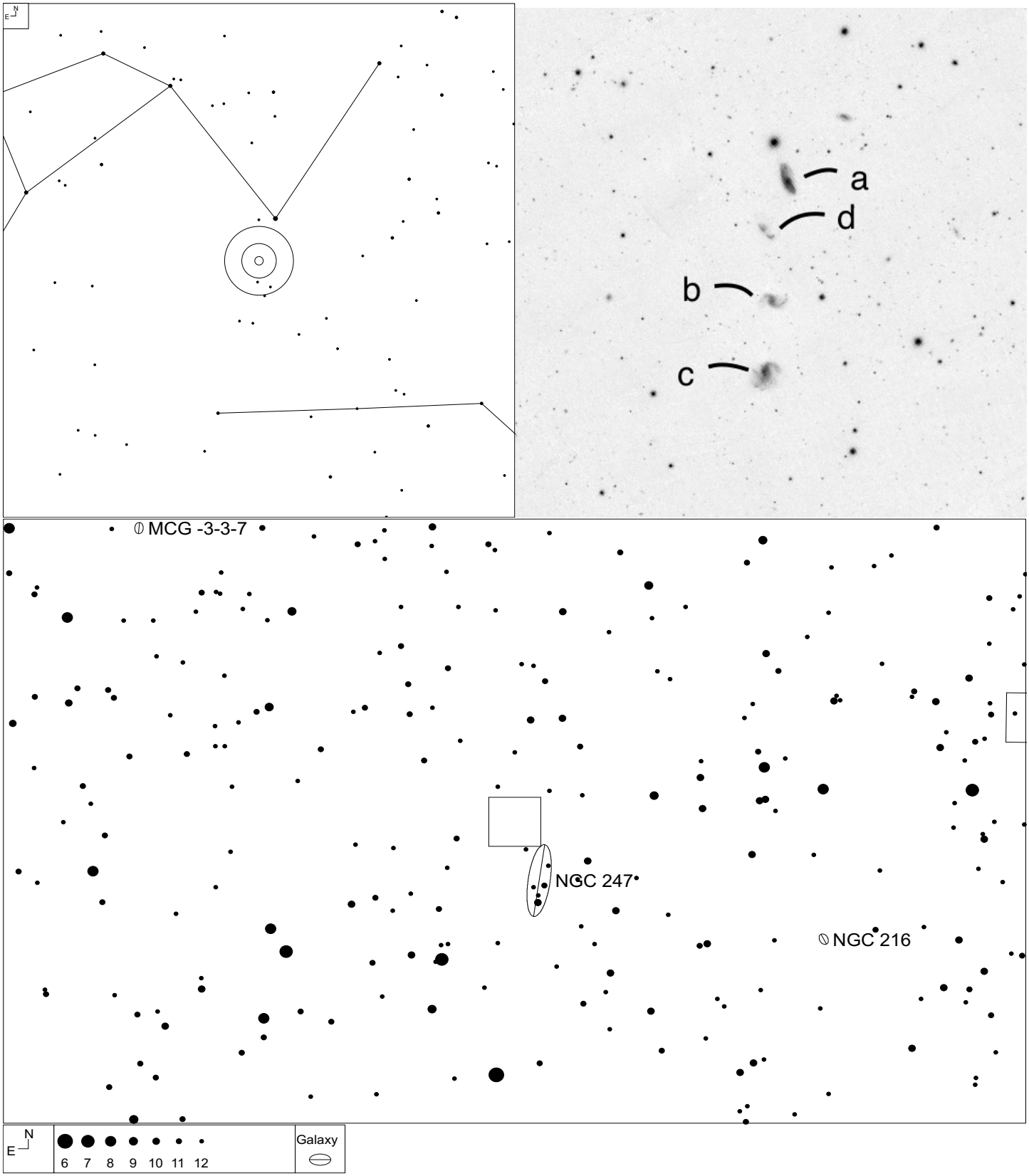
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
830	NGC 232	00 42 45.6	-23 33 41	G	14.4b	1.0 x 0.8	Enat

VV 728 (Cetus)



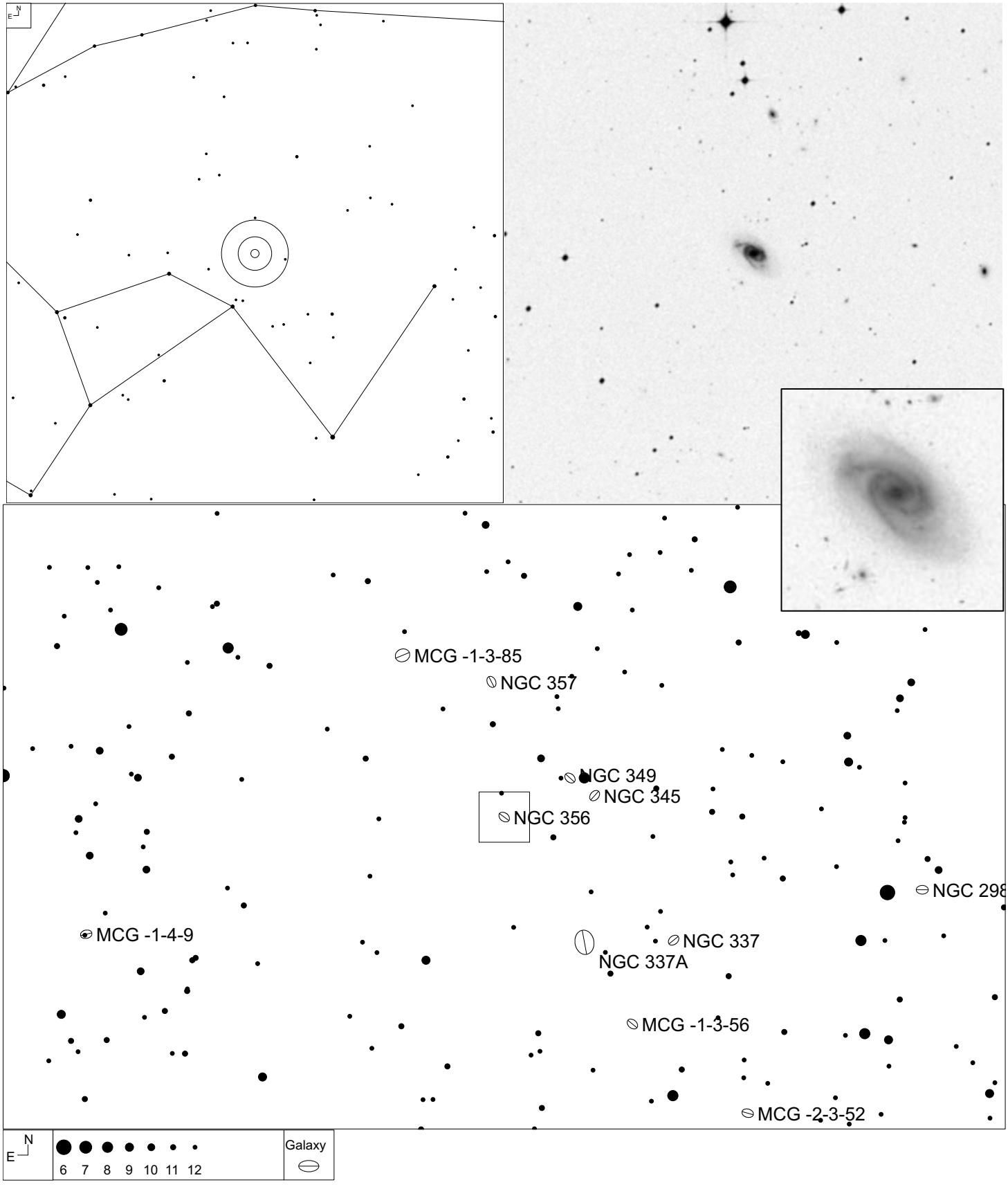
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
728	NGC 244	00 45 46.4	-15 35 49	G	13.5g	0.9 x 0.9	PC

VV 518 (Cetus)



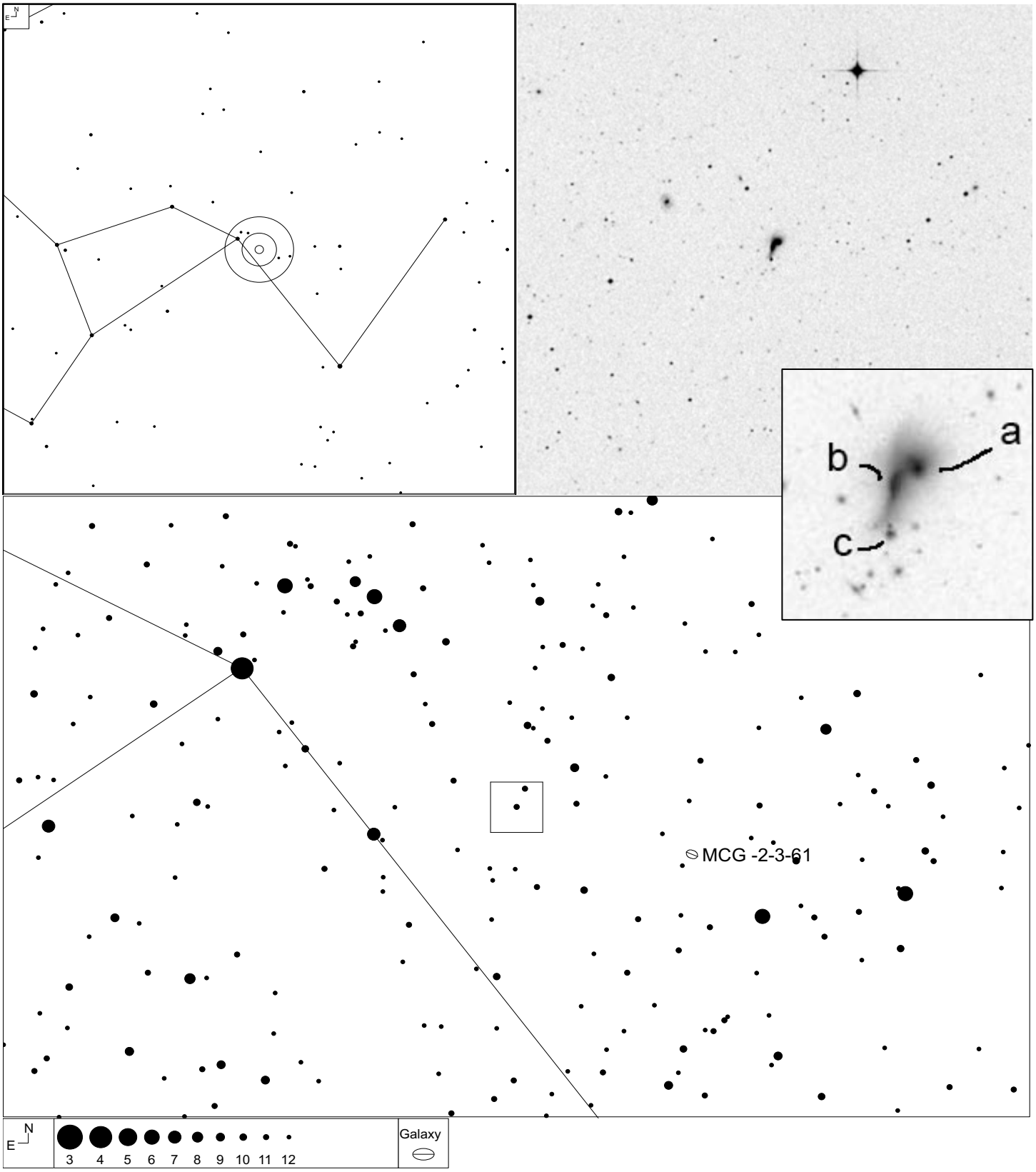
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
518	Burbidge chain	00 47 38.5	-20 28 08	GGroup			Ch
518a	MCG -04-03-010	00 47 35.1	-20 25 43	G	14.3g	1.0 x 0.4	
518b	MCG -04-03-011	00 47 37.0	-20 29 10	G	16.2g	2.1 x 1.8	
518c	MCG -04-03-013	00 47 37.9	-20 31 10	G	14.7g	1.0 x 0.9	
518d	MCG -04-03-012	00 47 37.7	-20 27 10	GPair	17.8g	0.8 x 0.2	

VV 486 (Cetus)



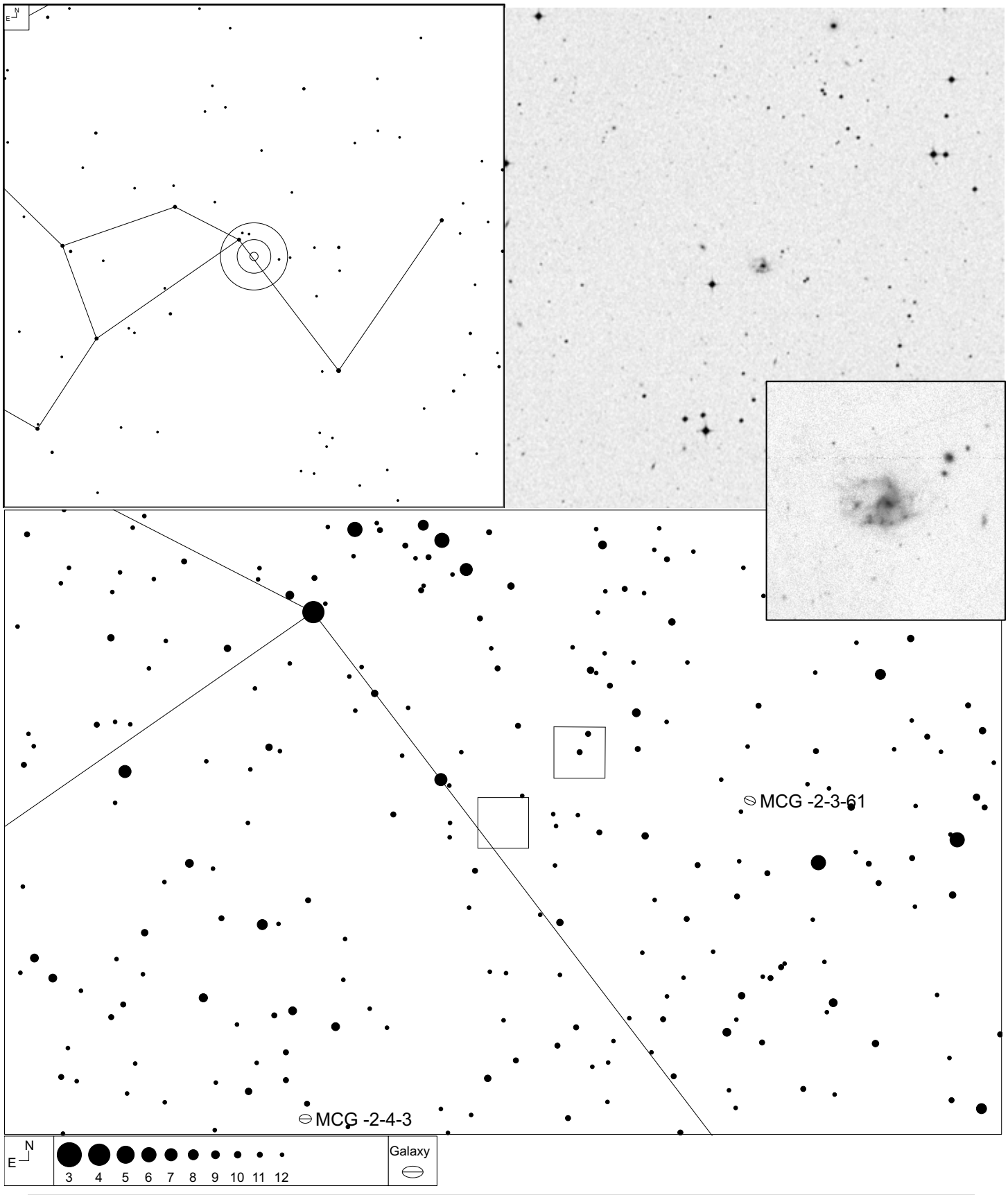
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
486	NGC 356	01 03 07.1	-06 59 19	G	13.6g	1.5 x 0.8	PC

VV 386 (Cetus)



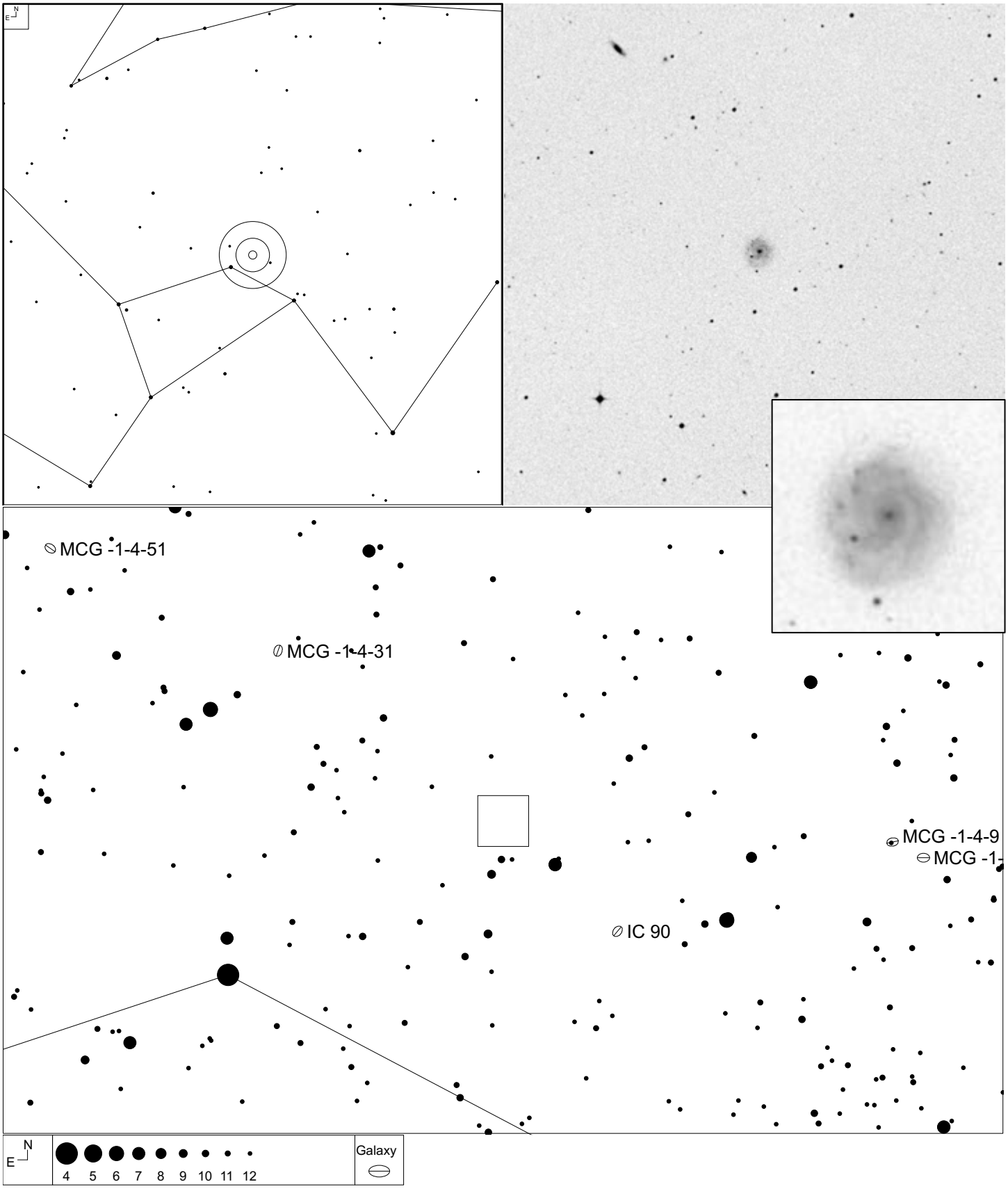
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
386	MCG -02-03-068	01 03 23.8	-10 51 26	GTrpl	15.7g	0.8 x 0.2	MMM

VV 602/395 (Cetus)



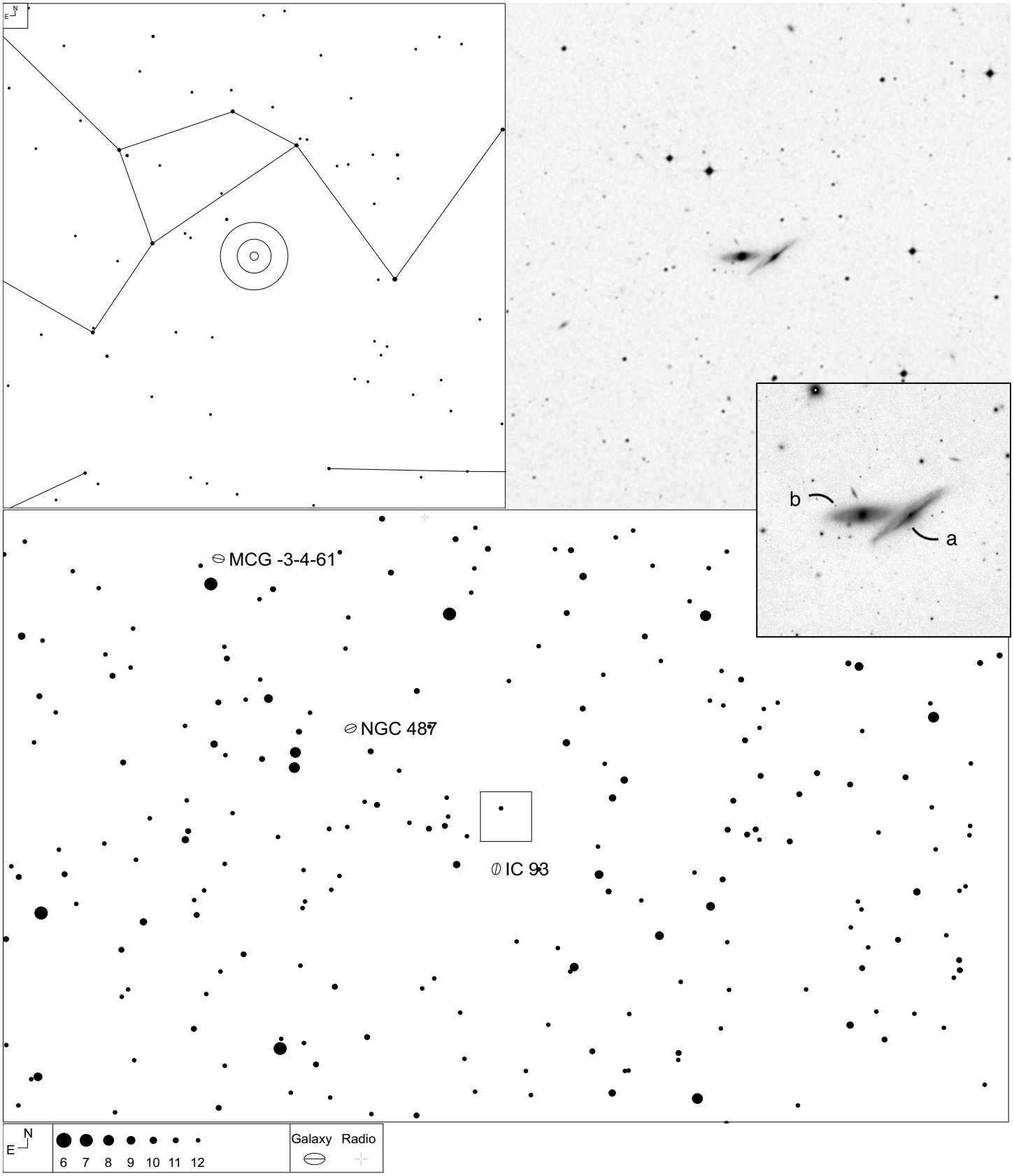
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
602/395	MCG -02-03-070	01 04 54.3	-11 11 19	GGroup	16.4g	0.8 x 0.5	N

VV 478 (Cetus)



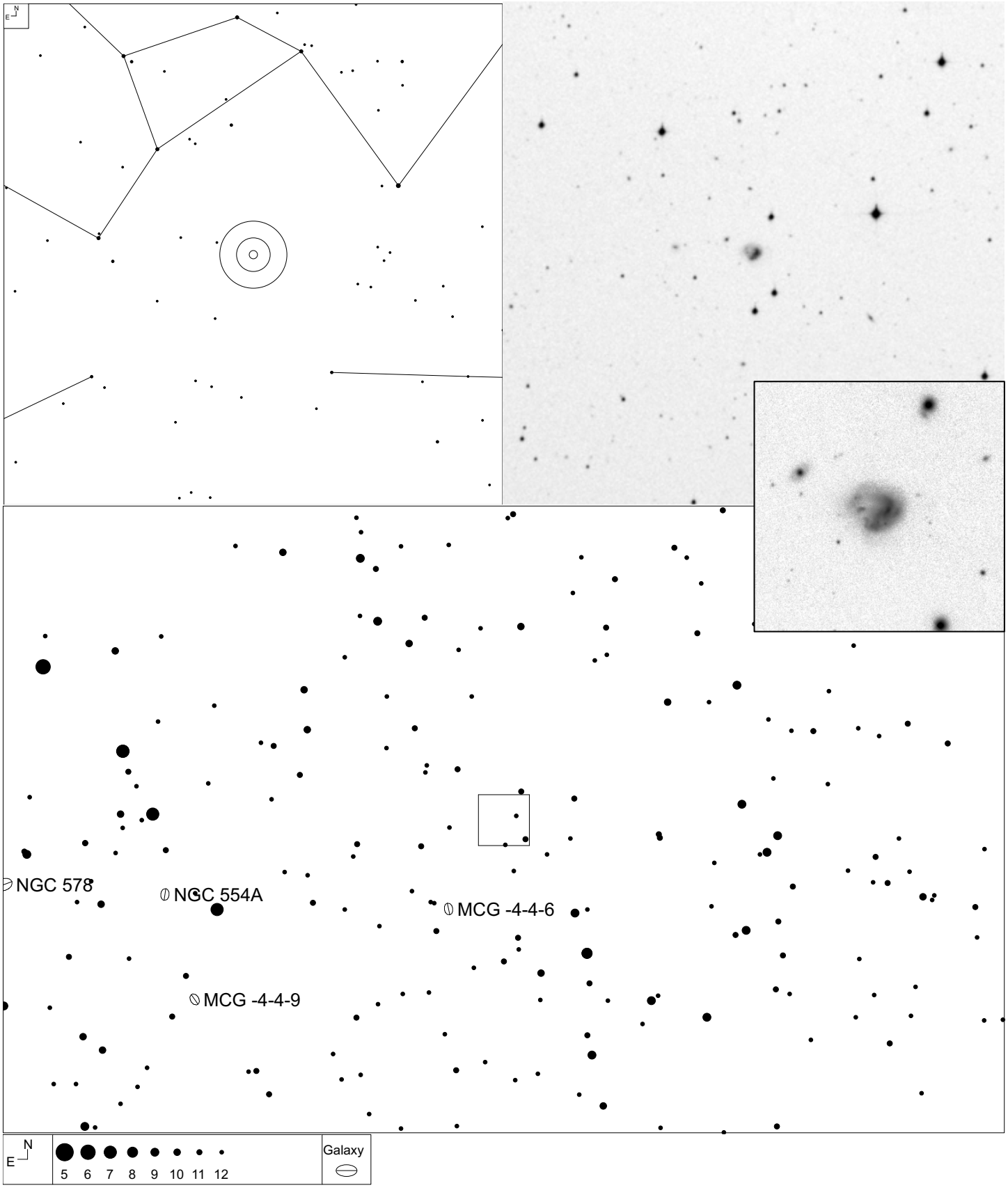
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
478	MCG -01-04-025	01 18 43.2	-07 27 05	G*	15.4g	1.3 x 1.0	PK

VV 779 (Cetus)



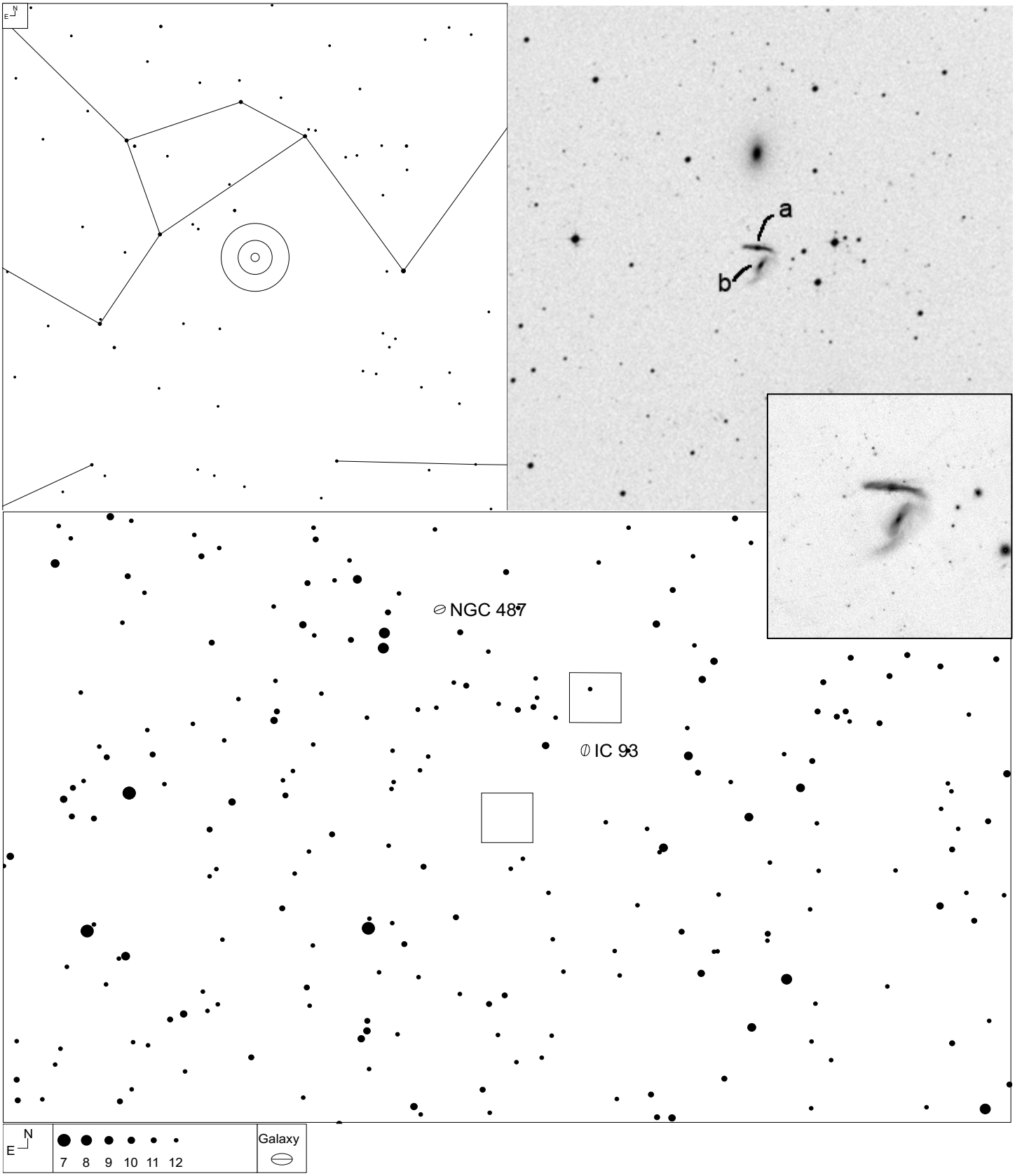
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
779		01 18 50.8	-16 48 10	GPair			PDbt
779a	IC 1670A	01 18 48.8	-16 48 12	G	14.0b	1.9 x 0.4	
779b	IC 1670B	01 18 52.9	-16 48 12	G	14.0b	1.4 x 0.4	

VV 398 (Cetus)



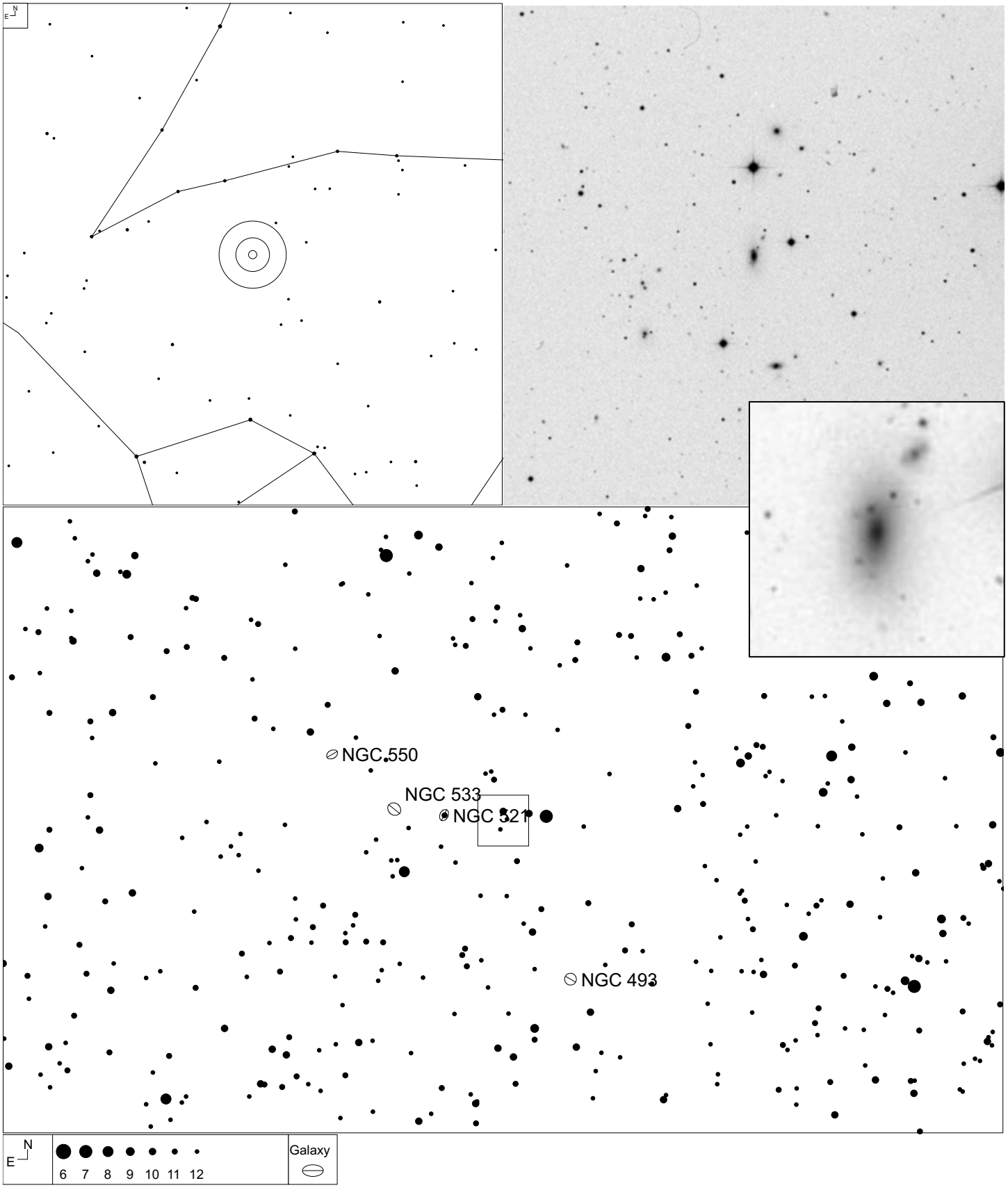
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
398	NGC 478	01 20 09.3	-22 22 39	G	14.8g	2.0 x 1.5	MMM

VV 781 (Cetus)



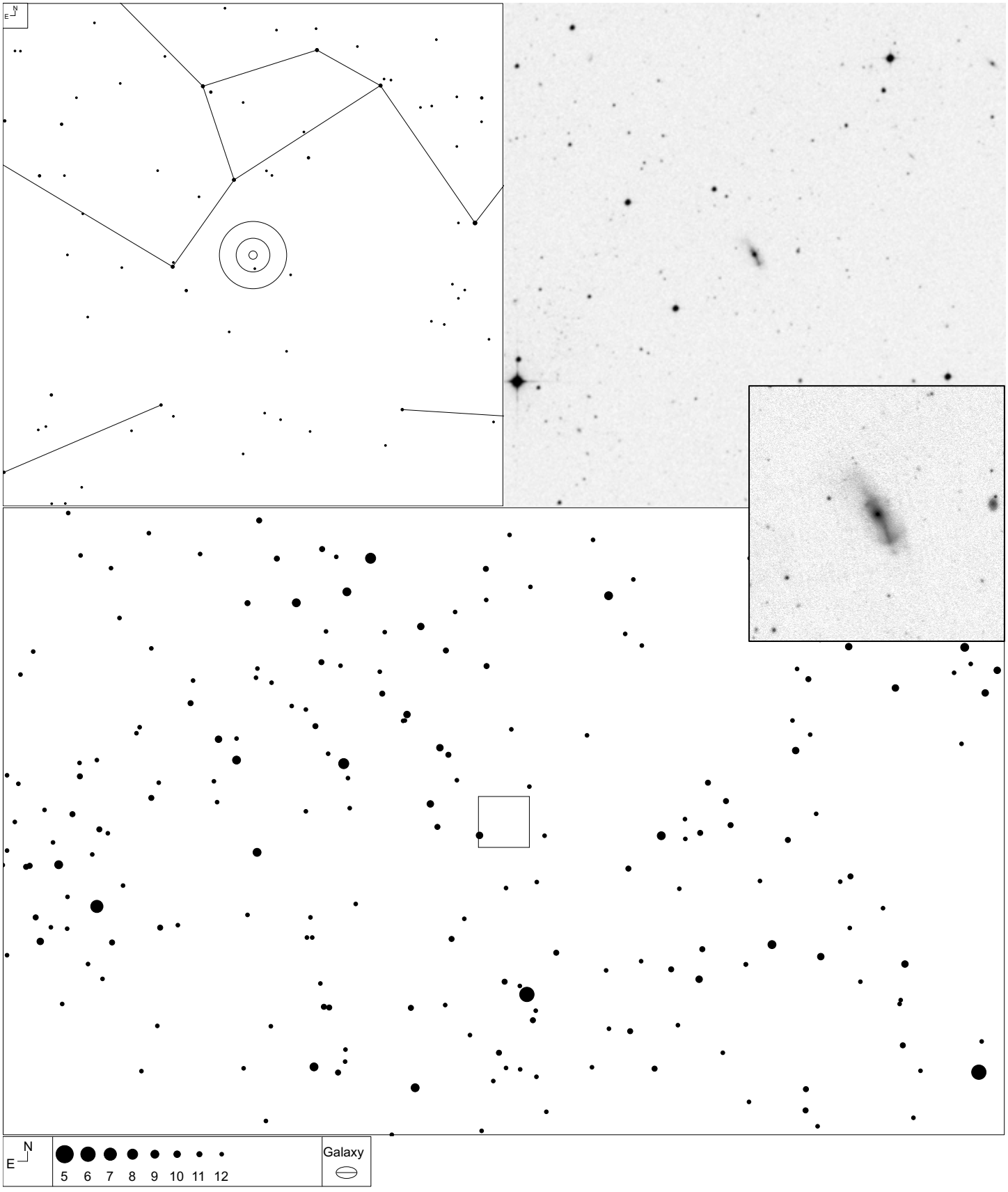
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
781		01 20 35.5	-17 23 32	GPair			PDdf
781b	MCG -03-04-052	01 20 35.4	-17 23 44	G	14.6b	1.3 x 0.6	
781a	MCG -03-04-053	01 20 35.8	-17 23 13	G	15.2g	1.4 x 0.5	

VV 509 (Cetus)



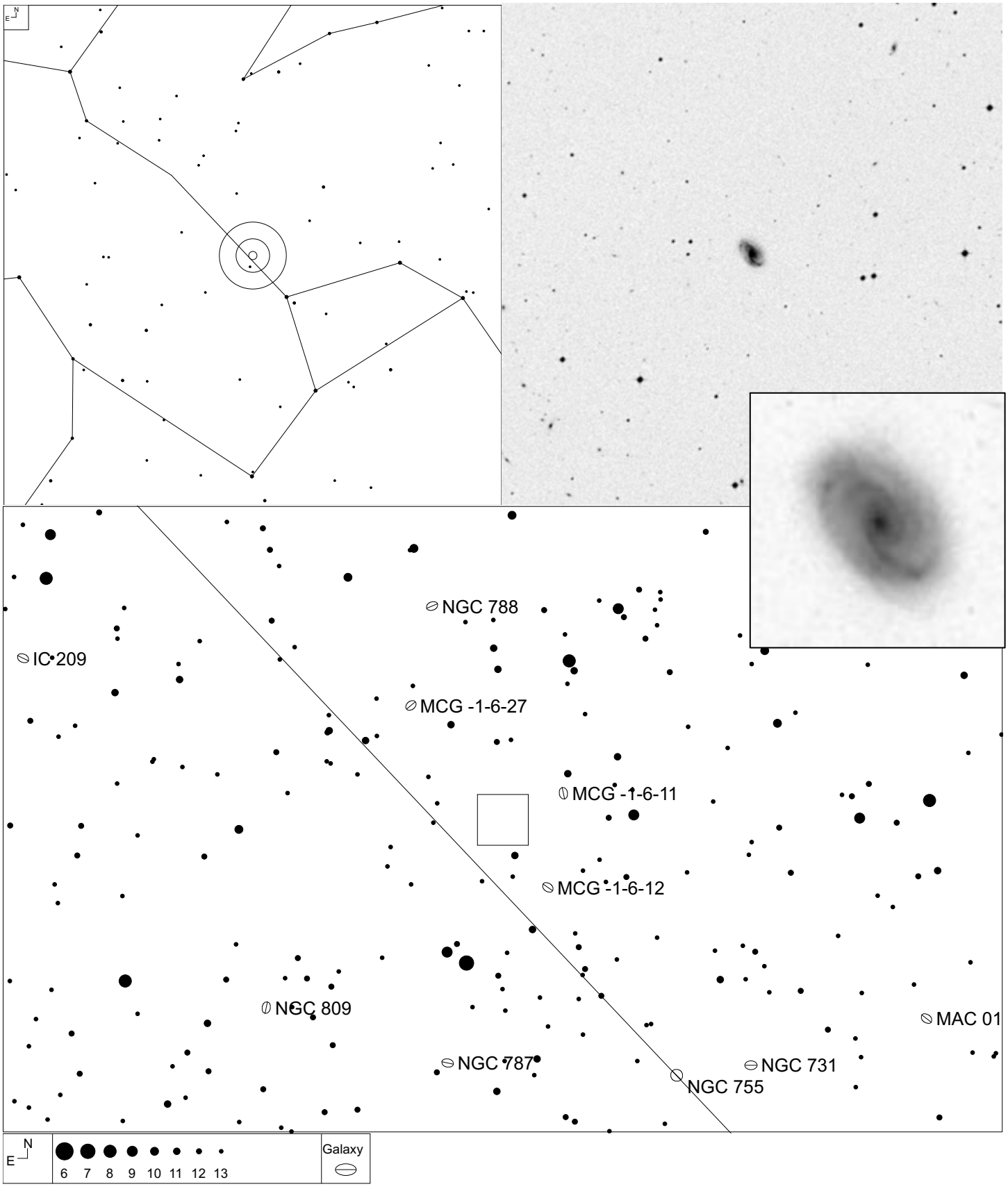
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
509	MCG 00-04-111	01 23 26.4	+01 42 21	G	14.7g	0.4 x 0.2	Ch

VV 375 (Cetus)



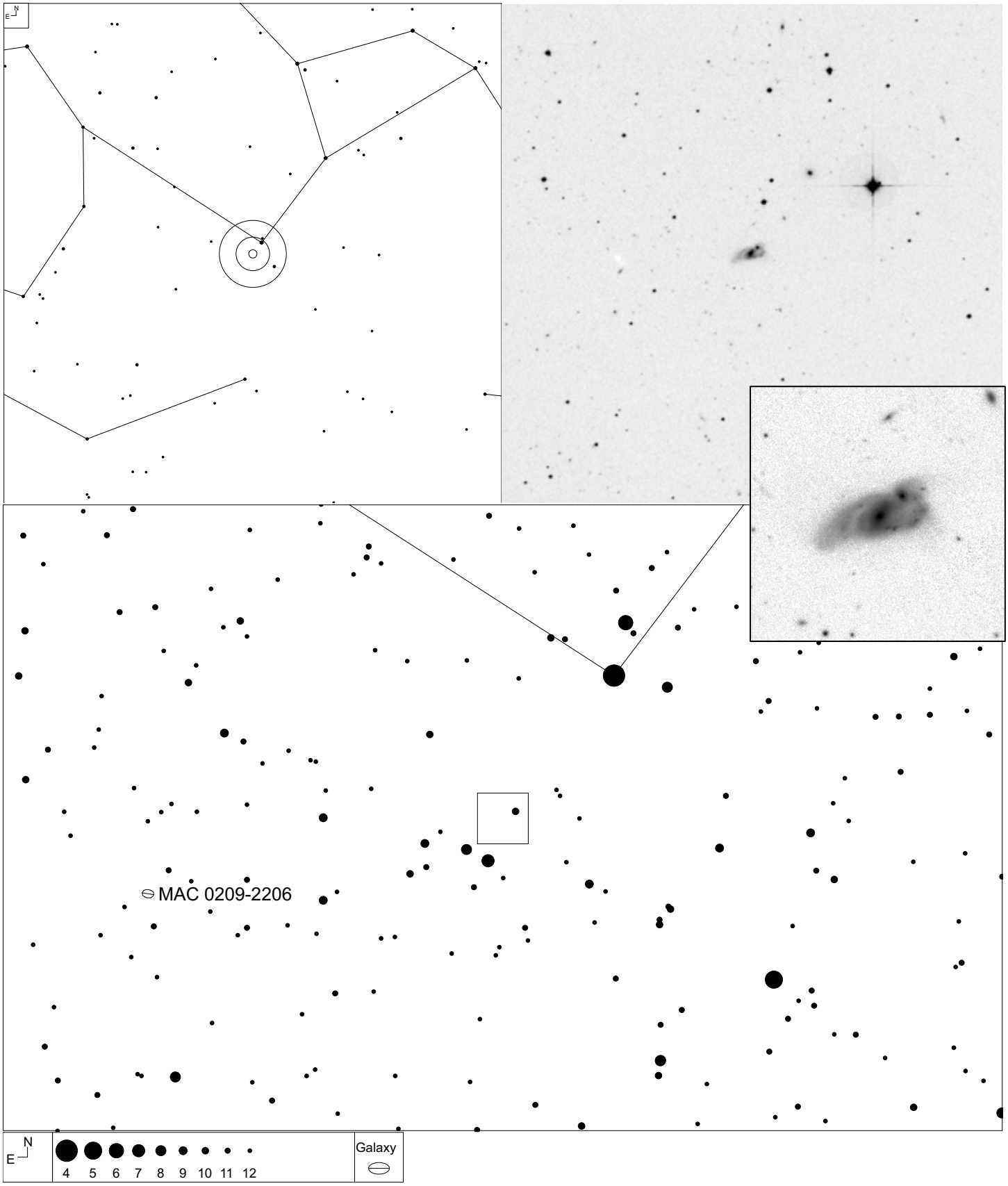
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
375	MCG -04-05-004	01 39 20.3	-20 27 11	G	15.2g	1.1 x 0.4	MMM

VV 733 (Cetus)



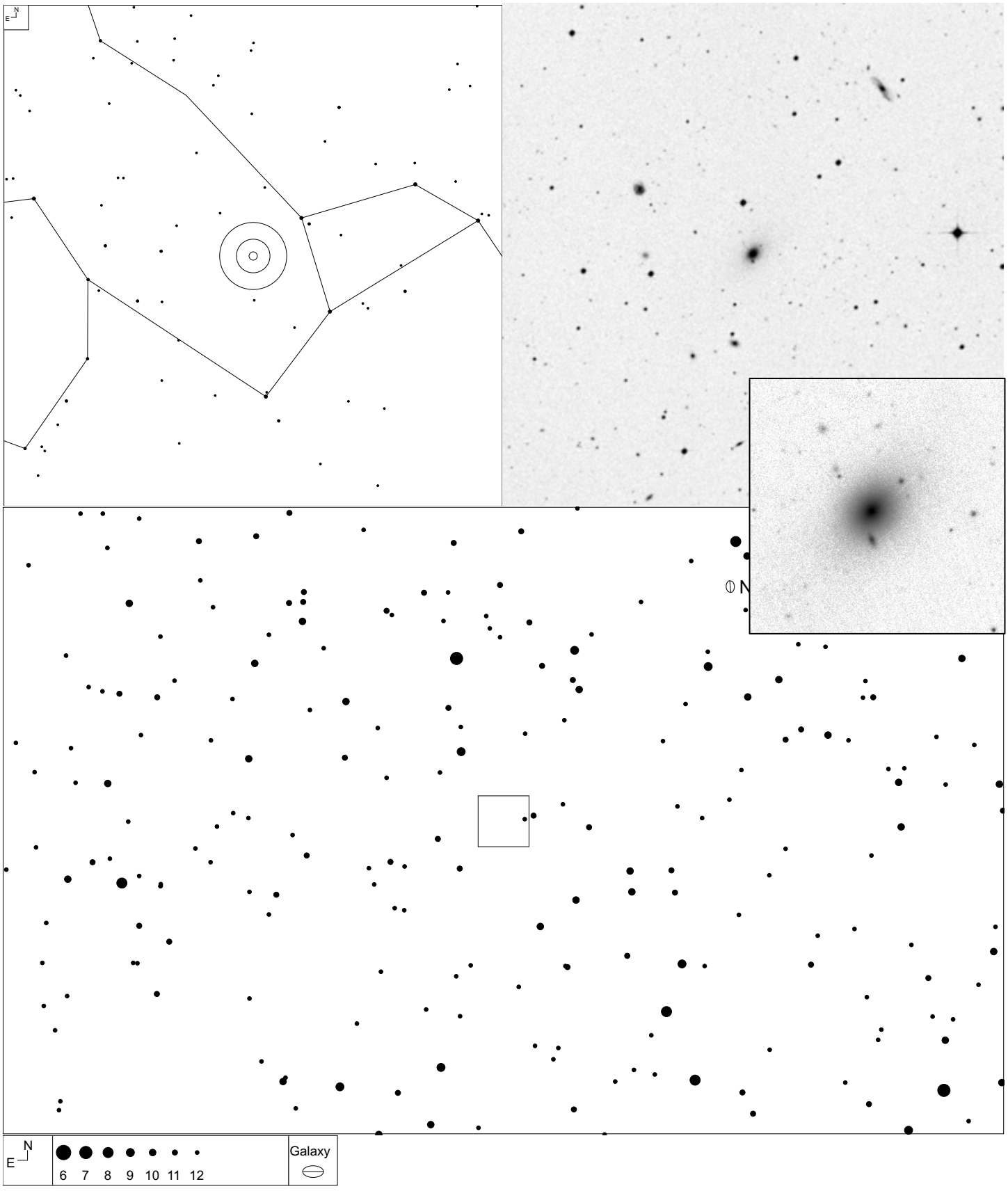
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
733	MCG -01-06-018	01 59 44.5	-07 50 21	G	15.1g	1.3 X 0.8	PC

VV 583 (Cetus)



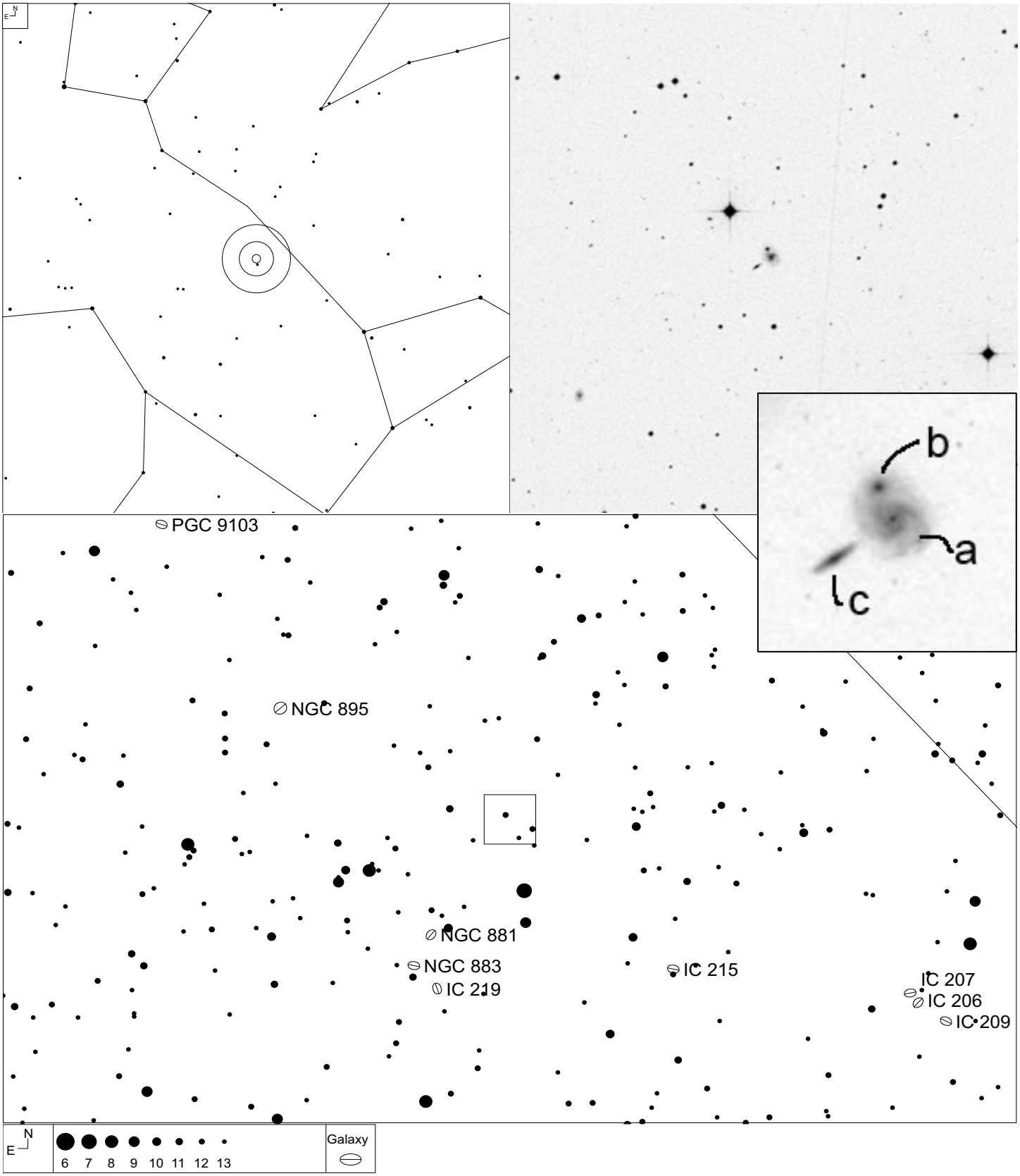
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
583	MCG -04-06-001	02 02 16.7	-21 45 47	G	14.6g	1.2 x 0.5	N

VV 379 (Cetus)



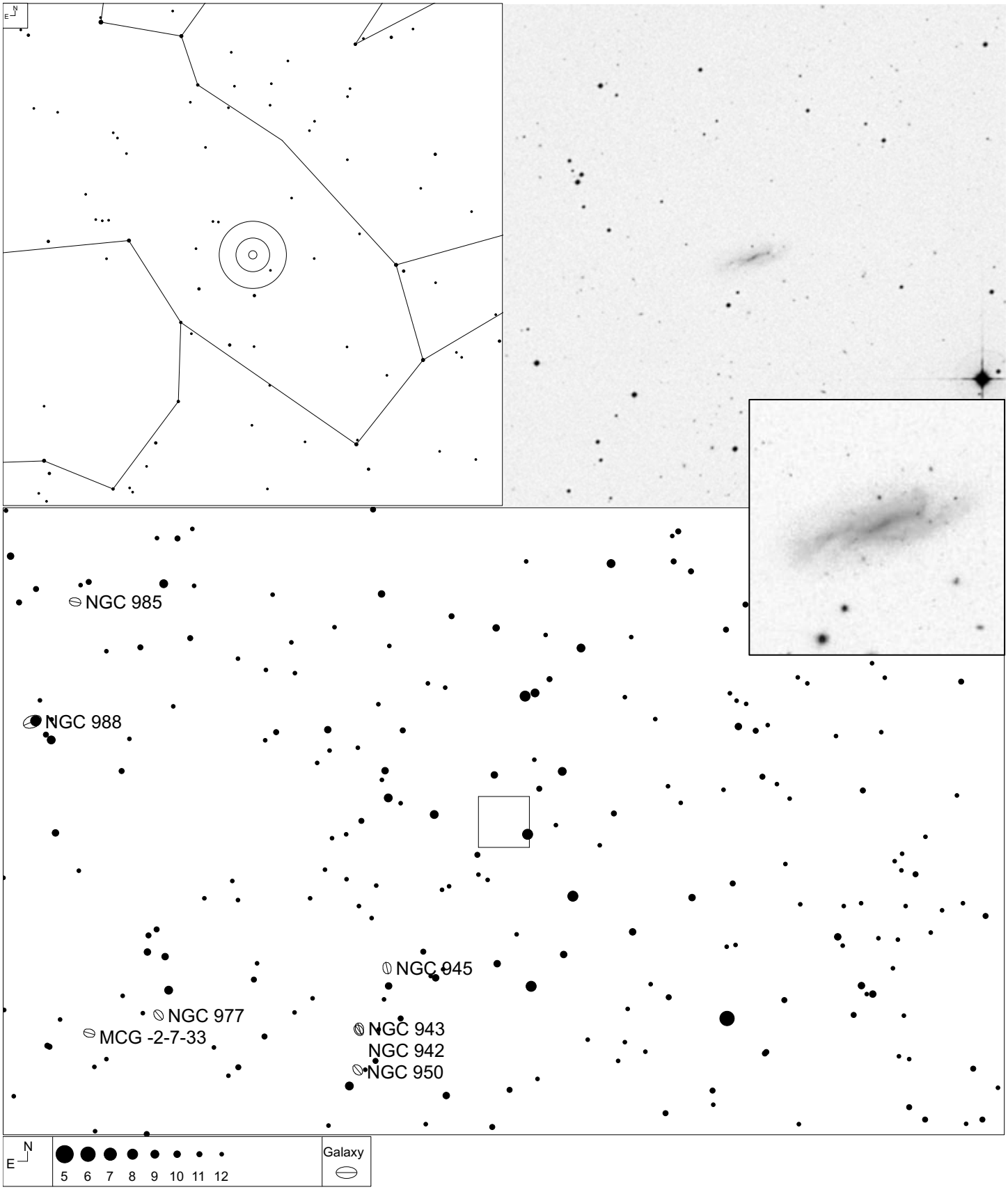
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
379	MCG -02-06-020	02 03 17.2	-12 38 17	G	14.7g	0.8 x 0.5	MMM

VV 683 (Cetus)



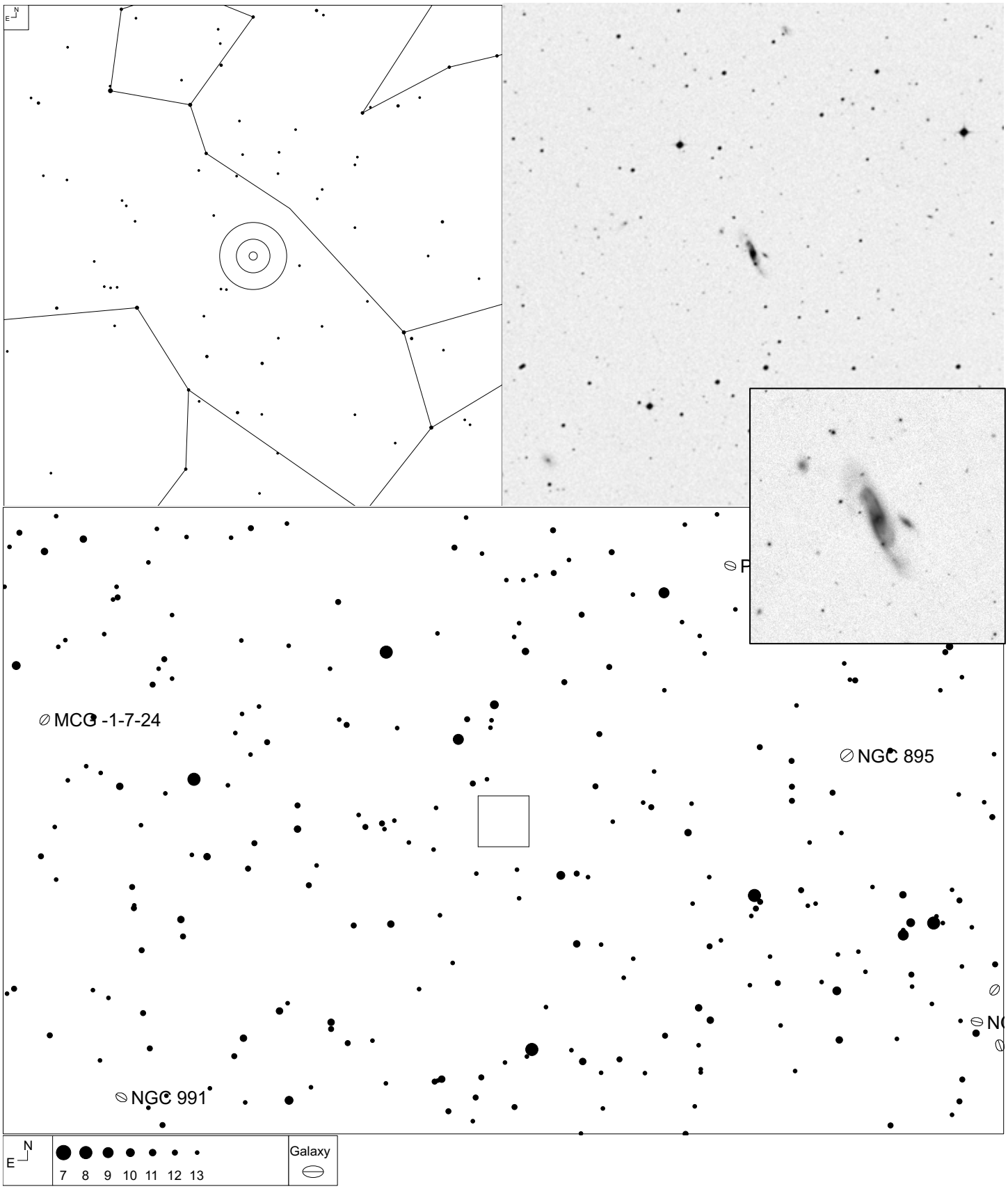
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
683	MCG -01-06-081	02 17 16.5	-06 04 15	GTrpl	15.7g	0.7 x 0.5	N
683c	*PGC 1037057*	*02 17 17.4*	*-06 04 30*	*G*	*17.2g*	*0.4 x 0.1*	

VV 525 (Cetus)



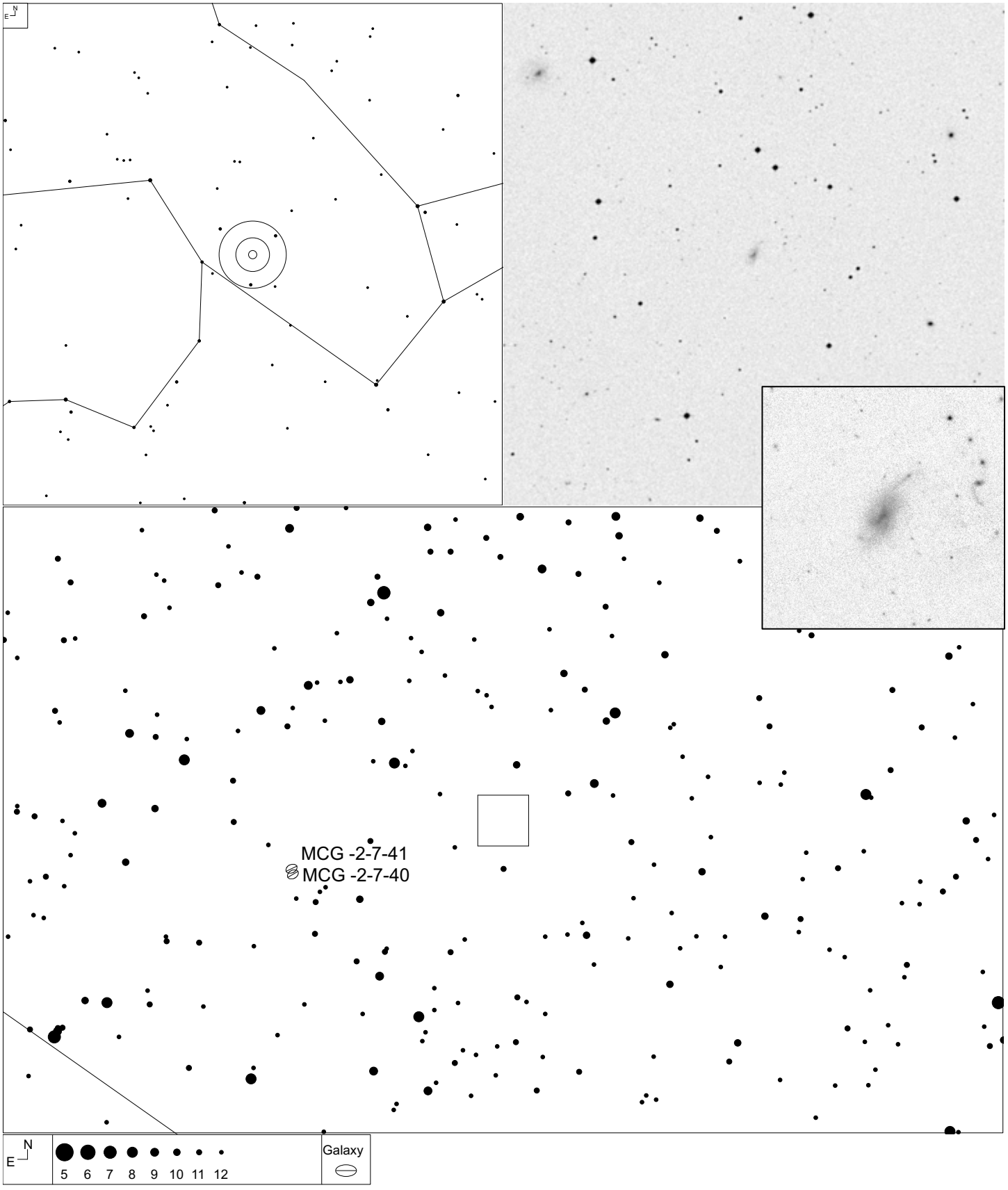
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
525	MCG -02-07-007	02 26 21.3	-09 50 27	G	15.1g	30x11	Ch

VV 449 (Cetus)



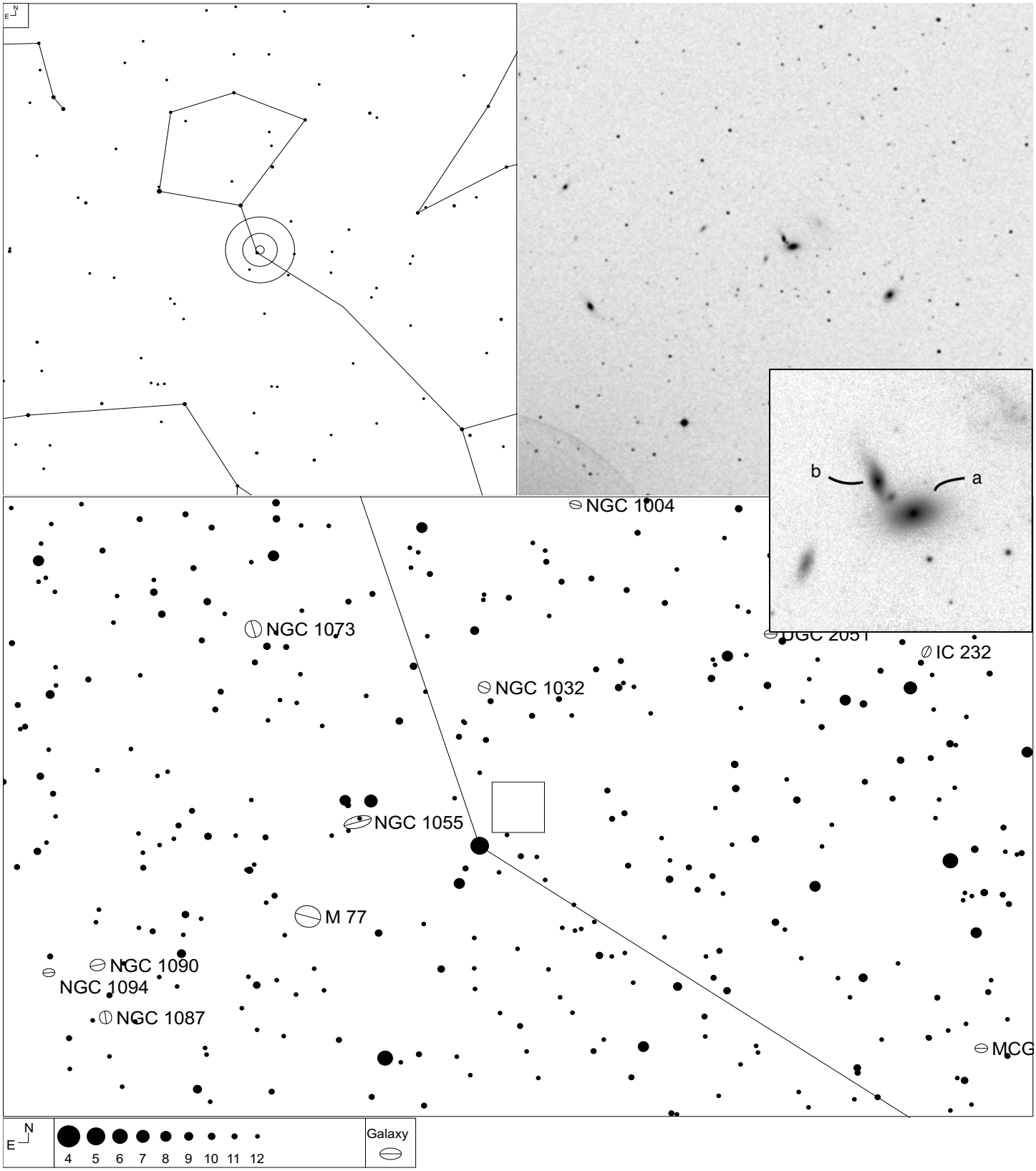
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
449	MCG -01-07-015	02 28 11.2	-05 50 21	G	15.3g	1.3 x 0.3	M

VV 817 (Cetus)



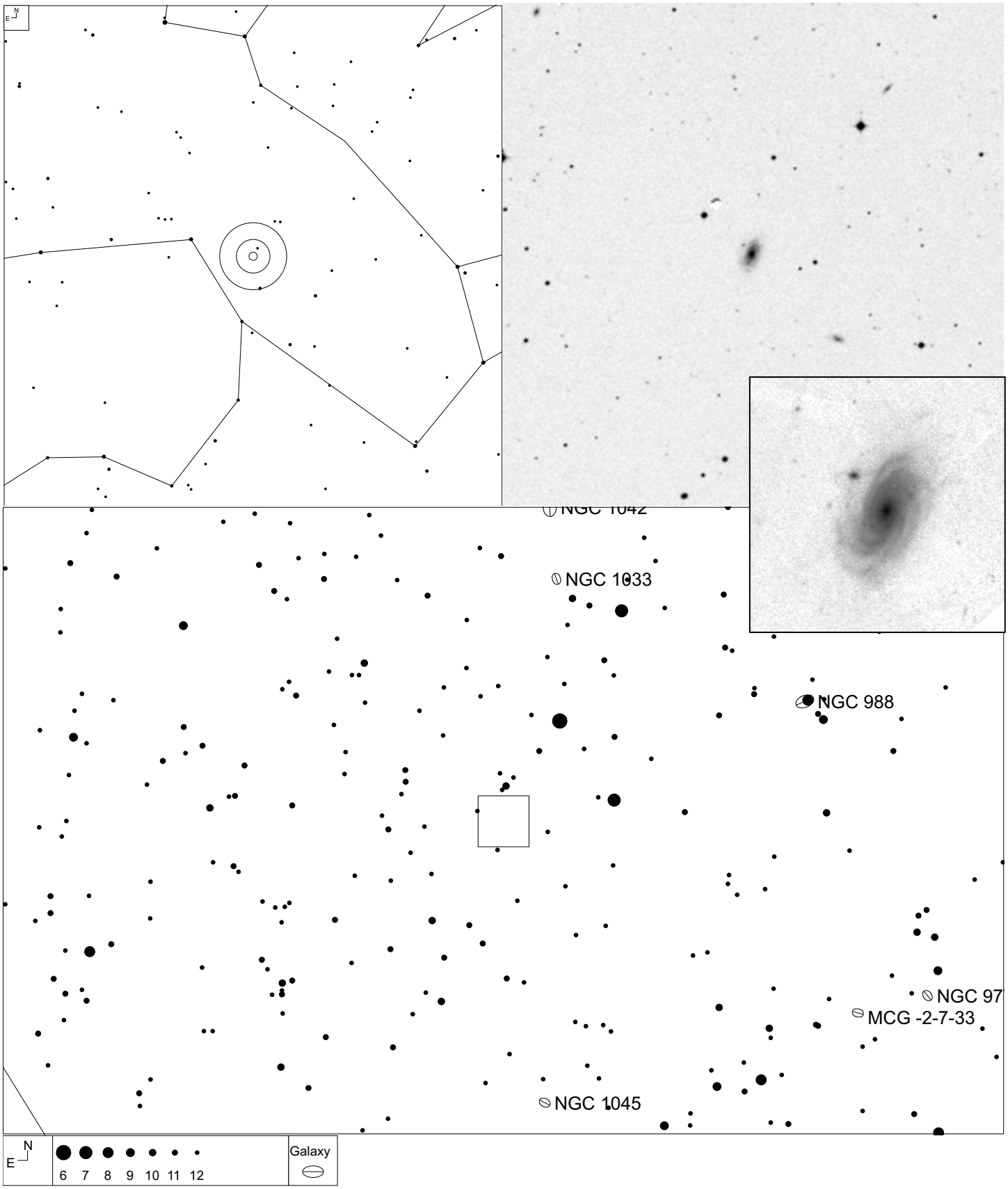
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
817	MCG -02-07-027	02 31 35.2	-13 25 28	G	16.5g	0.8 x 0.4	PC

VV 648 (Cetus)



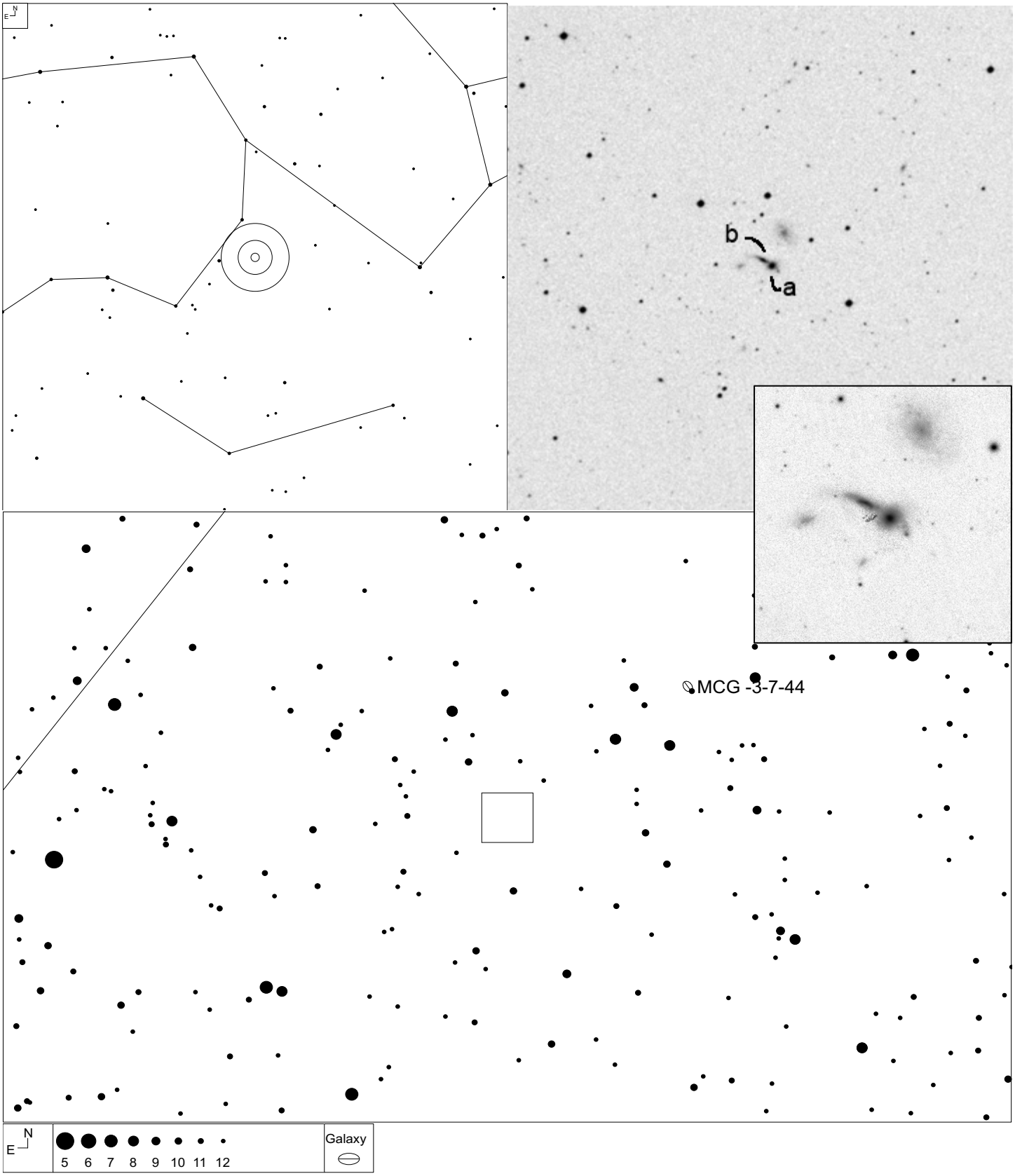
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
648		02 38 53.4	+00 30 25	GGroup			N
648a	MCG 00-07-071	02 38 52.5	+00 30 46	G	15.5g	0.6 x 0.2	
648b	MCG 00-07-070	02 38 51.4	+00 30 31	G	16.6g	0.7 x 0.4	

VV 423 (Cetus)



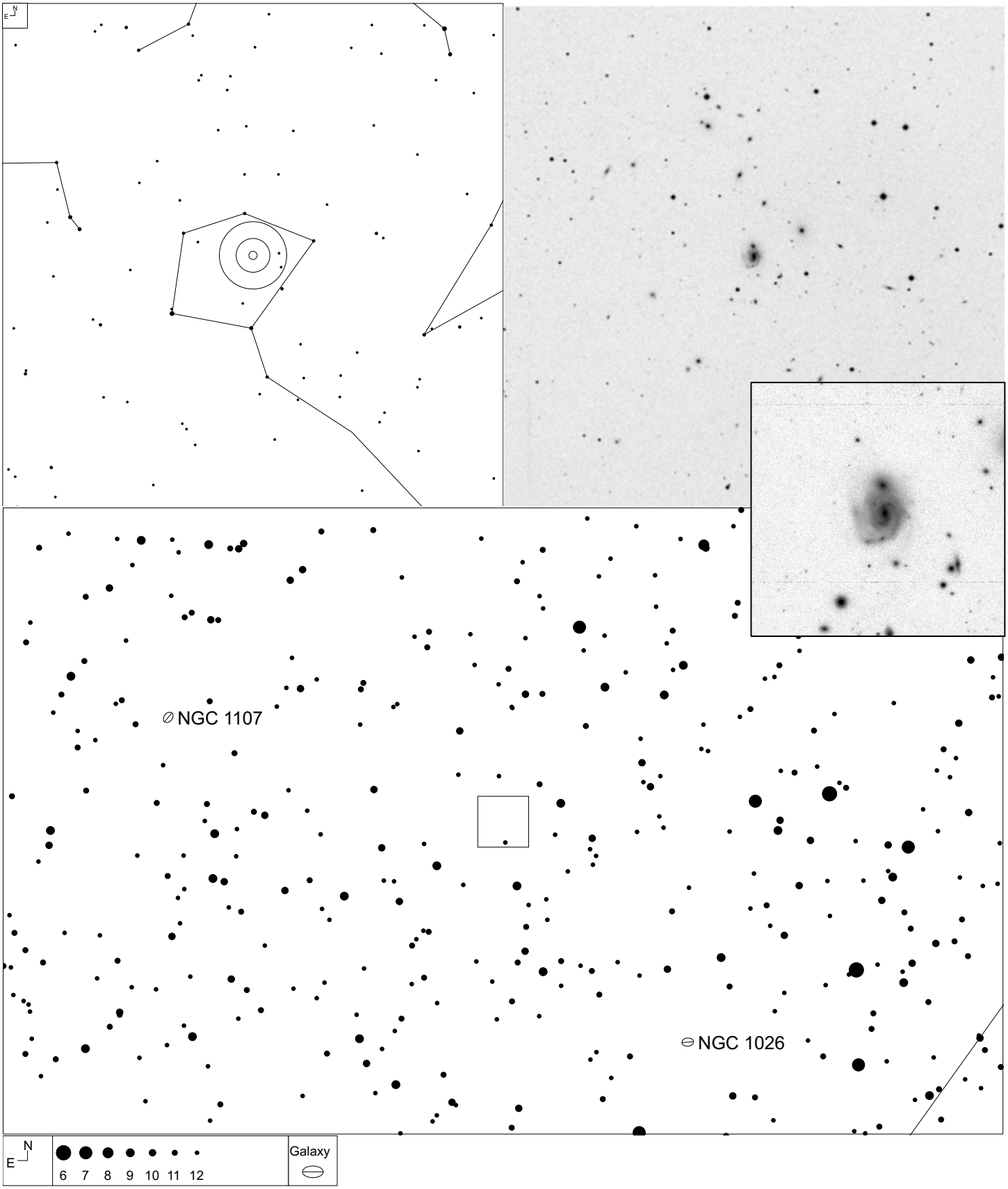
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
423	MCG -02-07-066	02 41 17.7	-09 55 59	G	14.3g	1.1 x 0.8	M

VV 652 (Cetus)



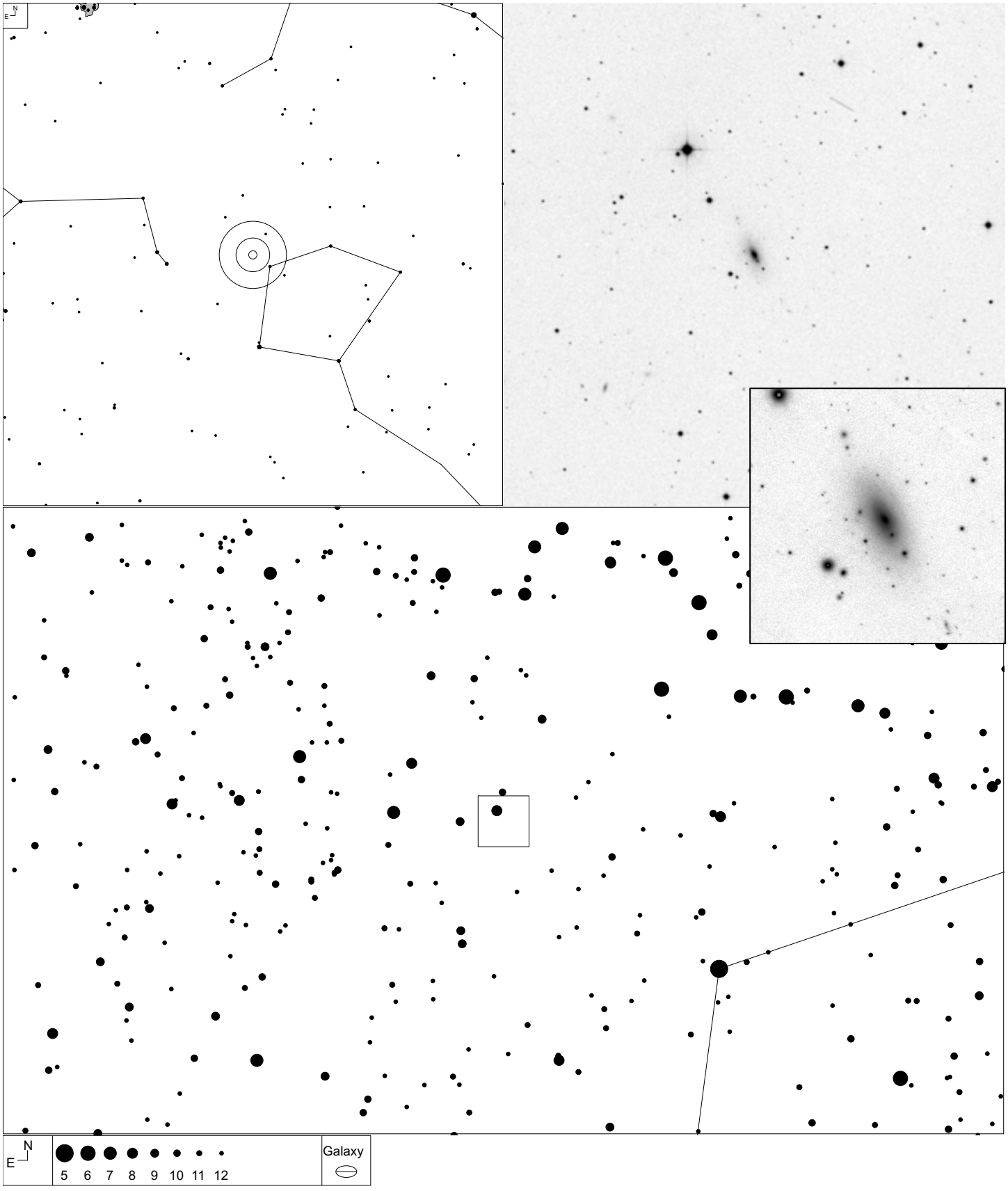
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
652		02 41 50.8	-20 48 41	GPair			N
652a	*PGC 836599*	*02 41 49.3*	*-20 48 53*	*G*	*15.3g*	*0.3 x 0.2*	
652b	MCG -04-07-021	02 41 50.4	-20 48 43	G	16.3g	1.1 x 0.3	

VV 588 (Cetus)



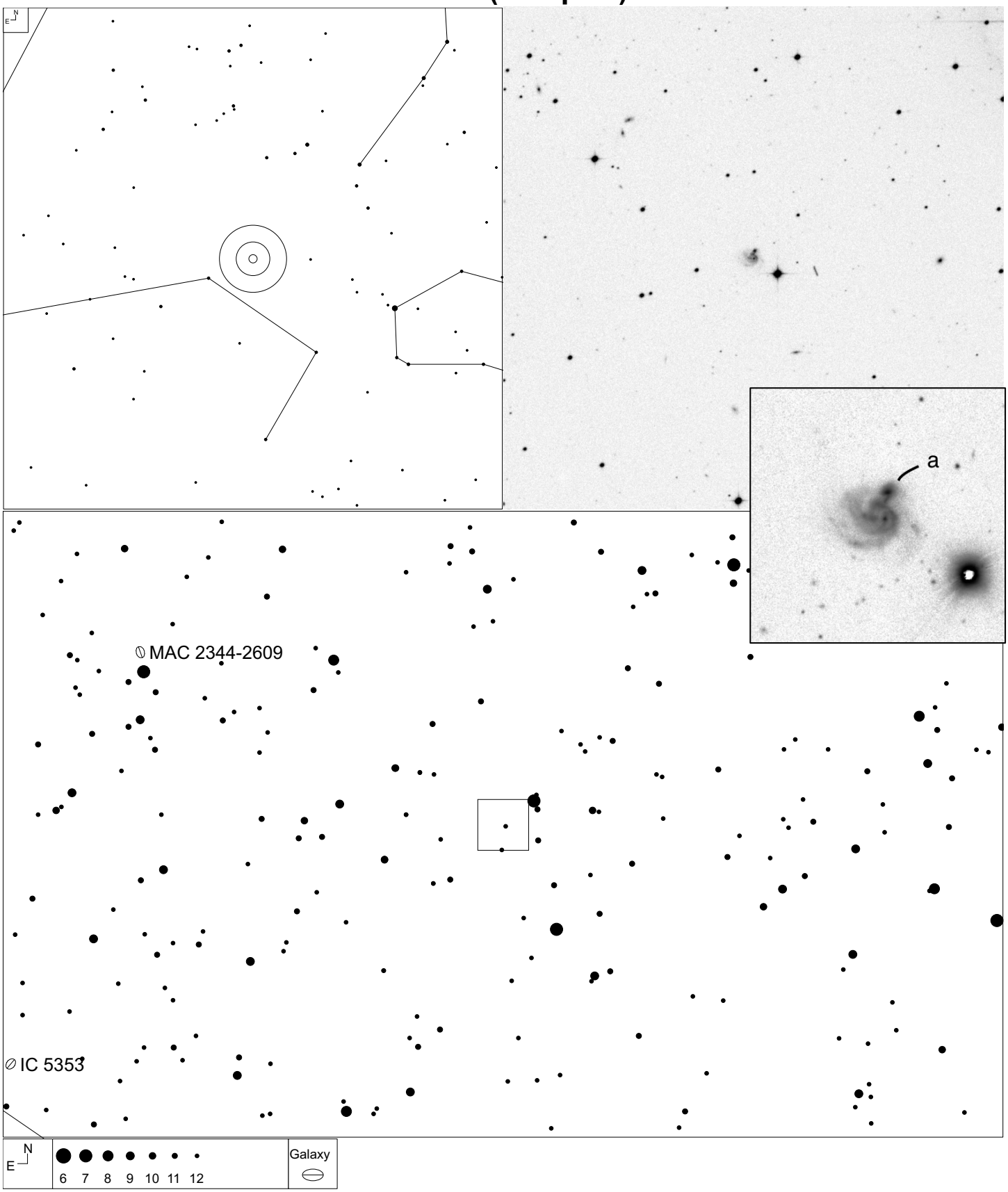
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
588	MCG +01-07-025	02 42 52.1	+07 35 52	G	14.8g	0.8 x 0.7	N

VV 383 (Cetus)



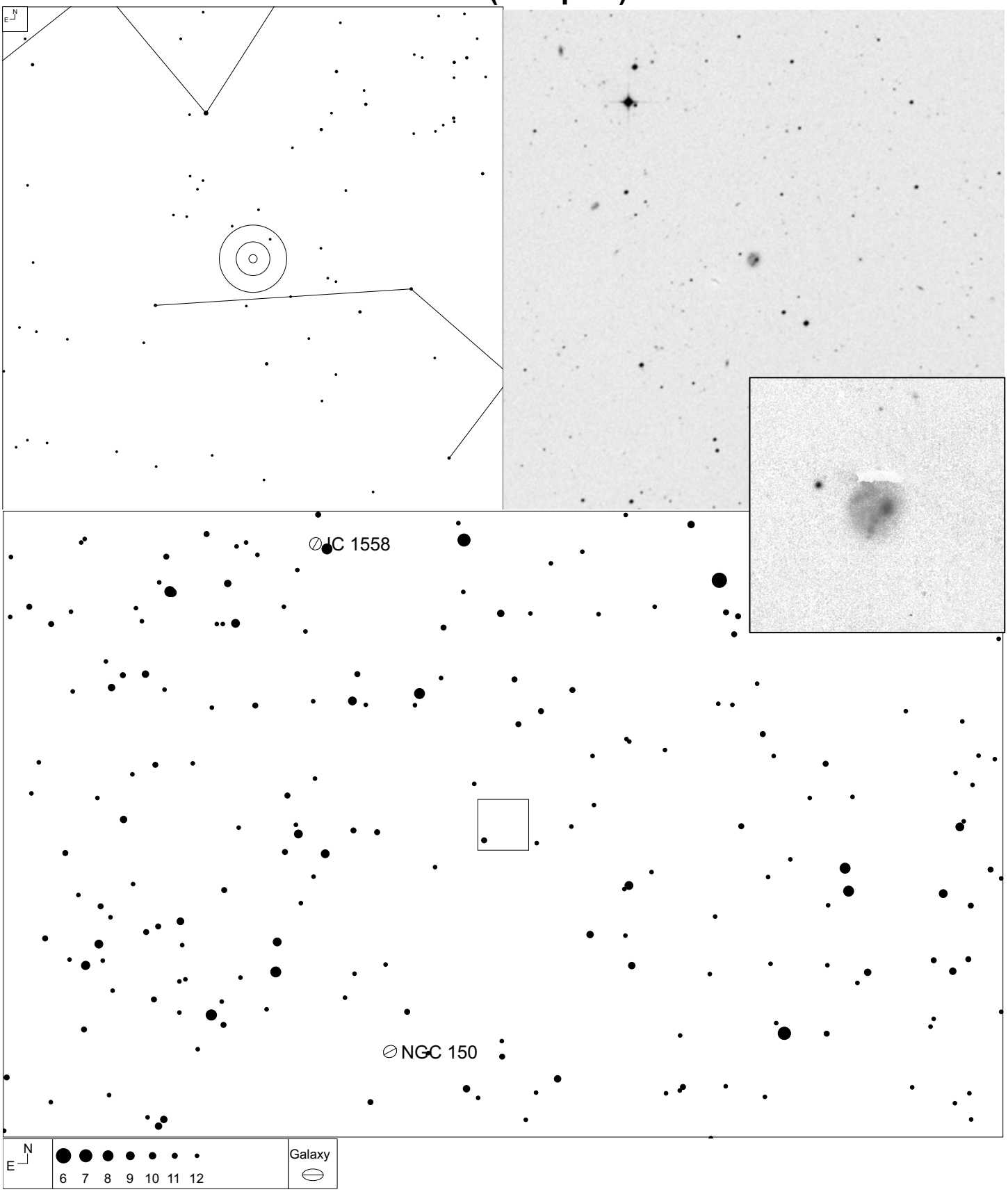
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
383	IC 1873	03 03 52.9	+09 36 48	G	15.3b	0.5 x 0.4	MMM

VV 694 (Sculptor)



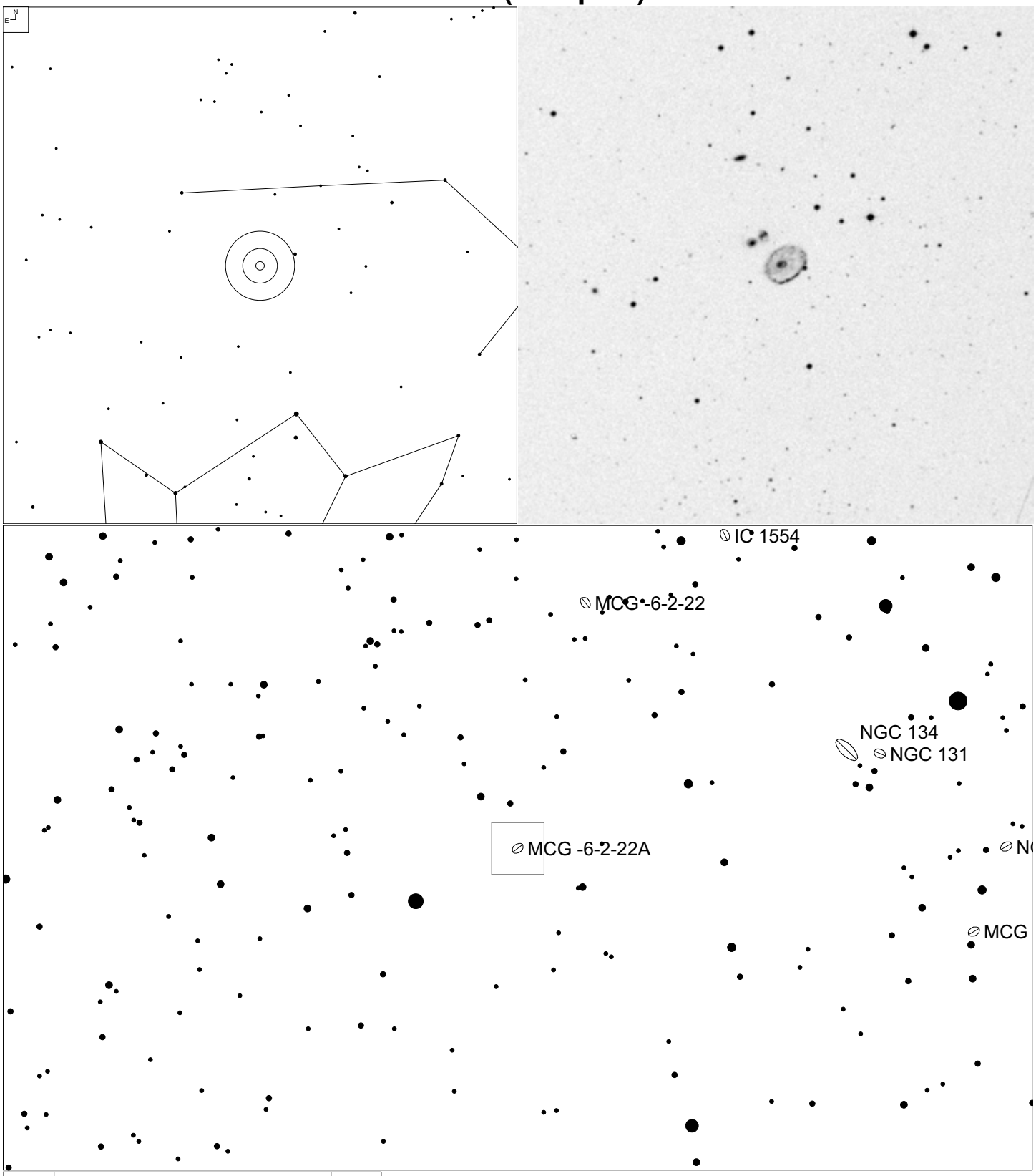
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
694	MCG -05-55-027	23 36 49.4	-26 59 26	GPair	15.5g	1.0 x 1.0	PC

VV 582 (Sculptor)



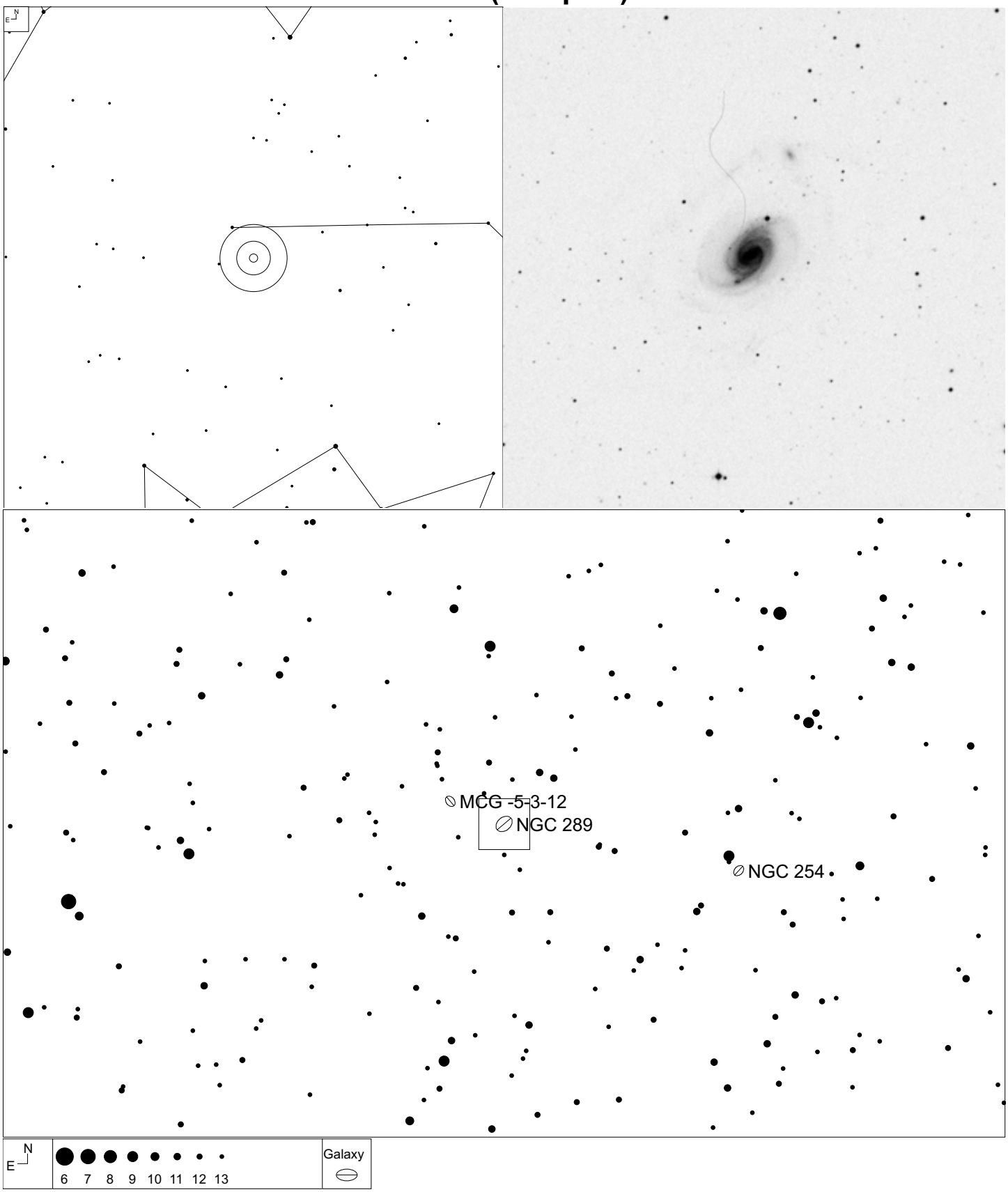
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
582	MCG -05-52-004	00 26 38.7	-30 33 00	G	15.6g	0.5 x 0.4	N

VV 784 (Sculptor)



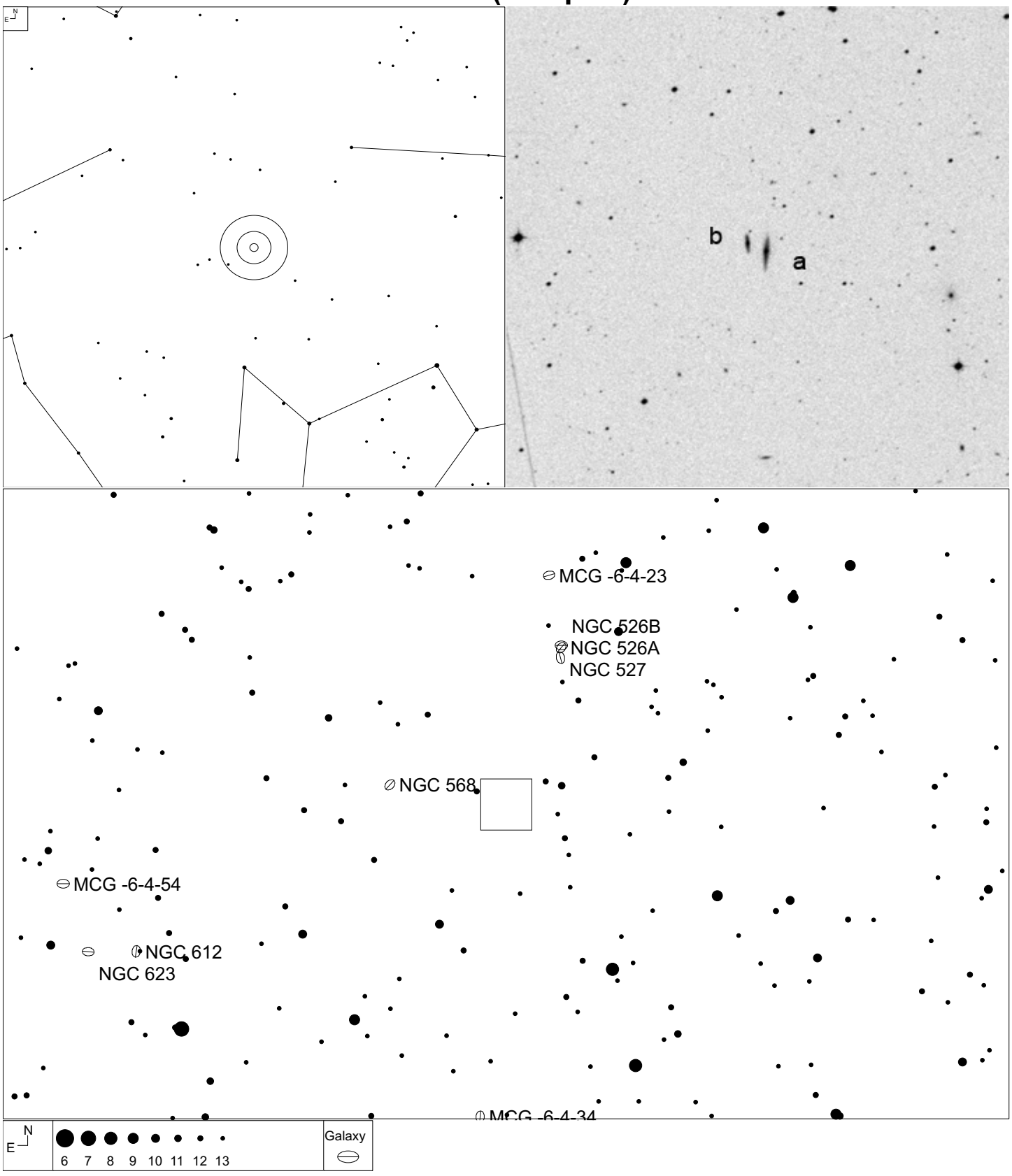
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
784	MCG -06-02-022a Cartwheel Galaxy	00 37 41.7	-33 43 00	G	16.2g	1.1 x 0.9	R

VV 484 (Sculptor)



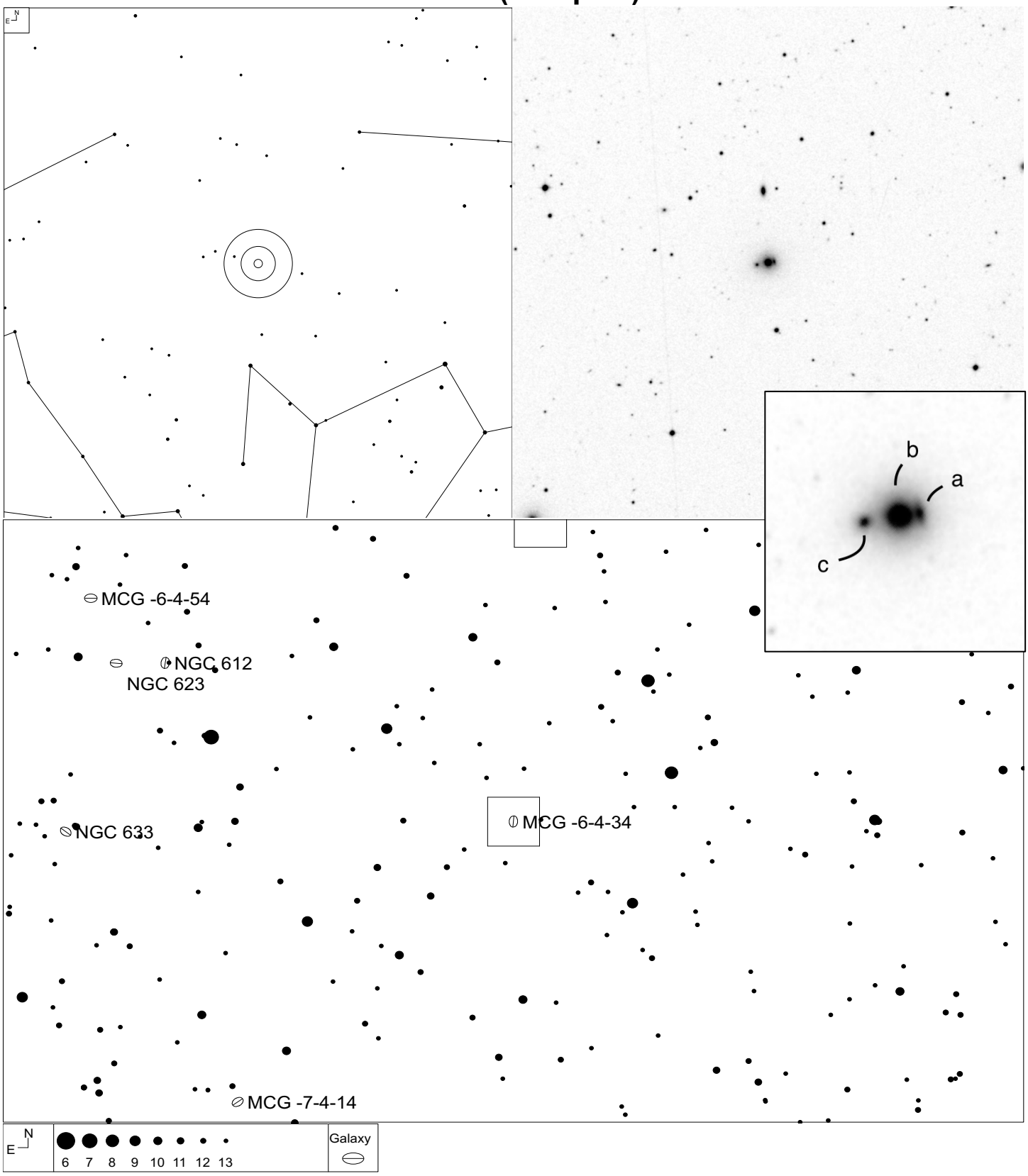
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
484	NGC 289	00 52 41.7	-31 12 28	G	13.4v	5.1 x 3.6	M

VV 770 (Sculptor)



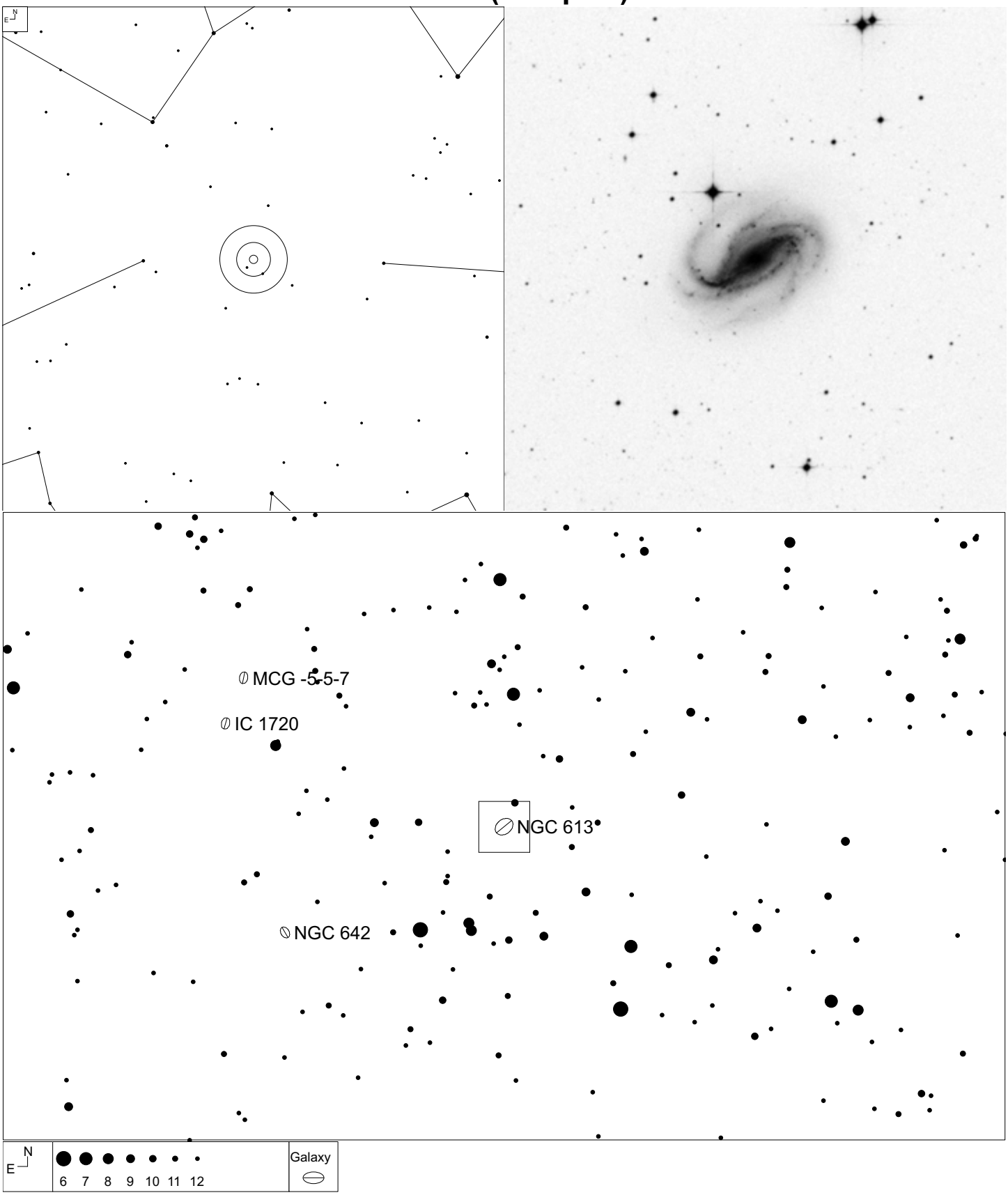
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
770		01 25 13.9	-35 48 52	GPair			PD
770a	MCG -06-04-030	01 25 12.7	-35 48 59	G	14.9g	1.4 x 0.3	
770b	MCG -06-04-031	01 25 15.4	-35 48 44	G	16.3b	0.8 x 0.2	

VV 577 (Sculptor)



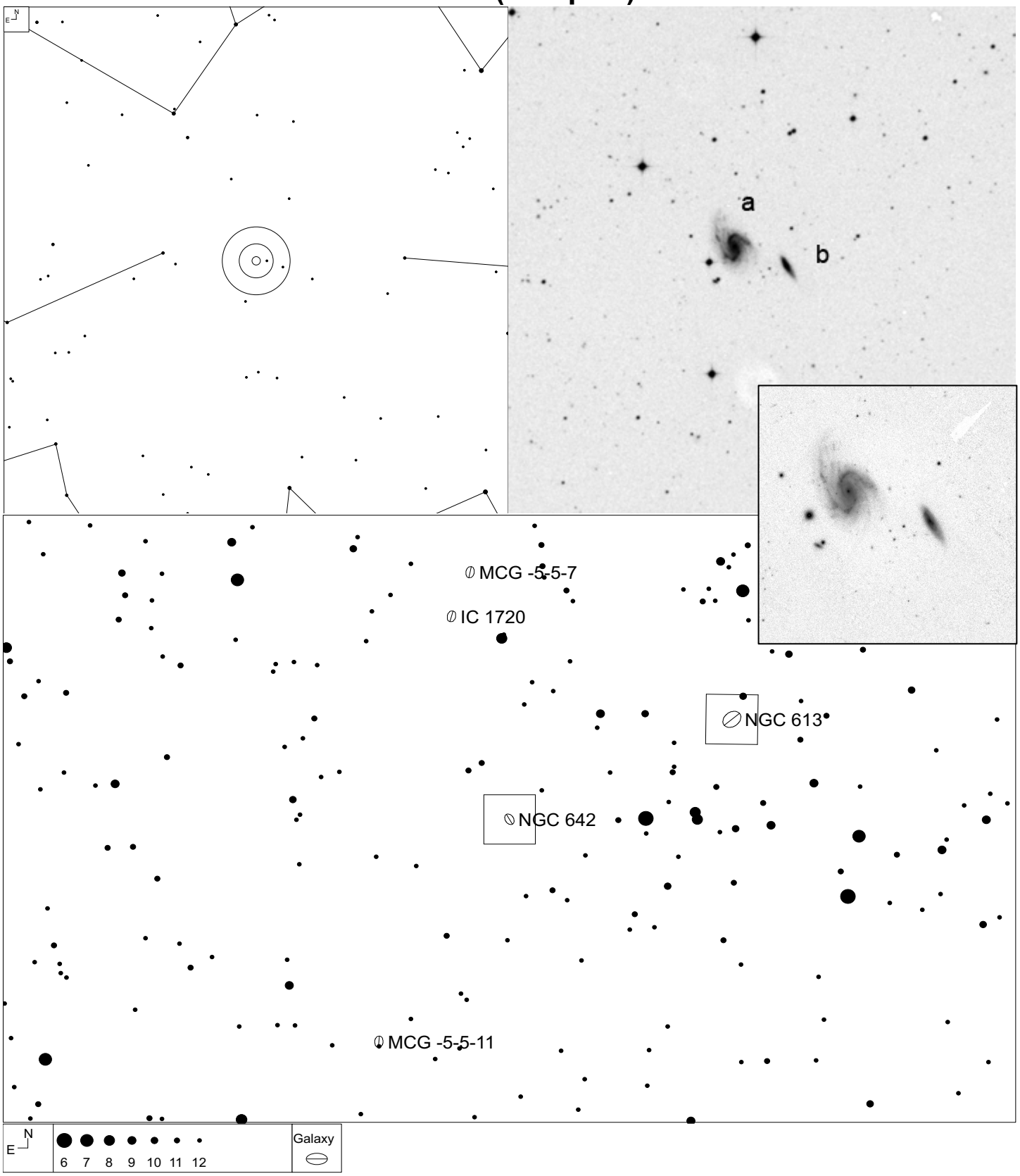
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
577	MCG -06-04-034	01 25 50.8	-37 20 01	GTrpl	14.3g	0.9 x 0.8	N

VV 824 (Sculptor)



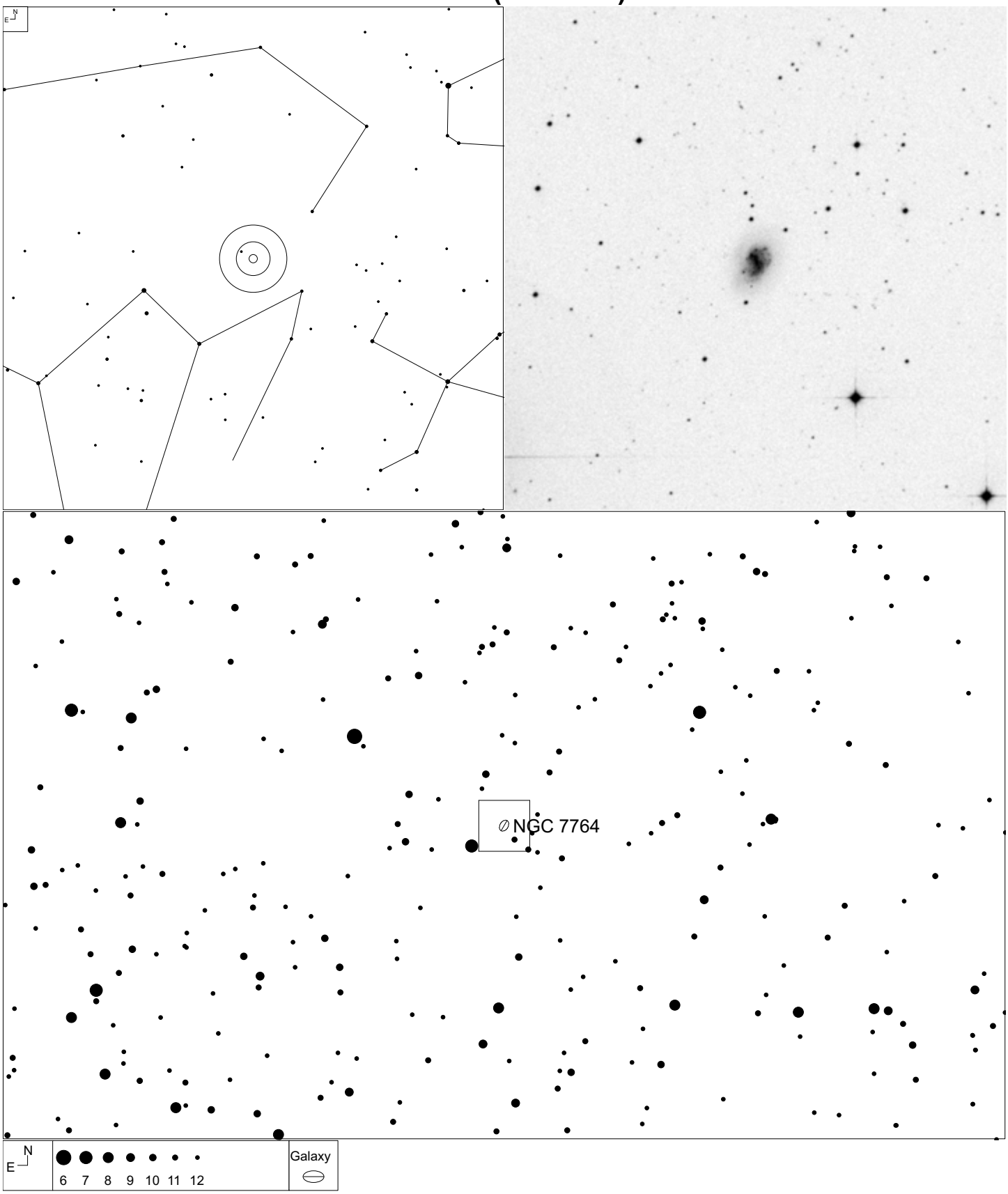
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
824	NGC 613	01 34 18.2	-29 25 06	G	10.8b	5.5 x 4.2	Enat

VV 419 (Sculptor)



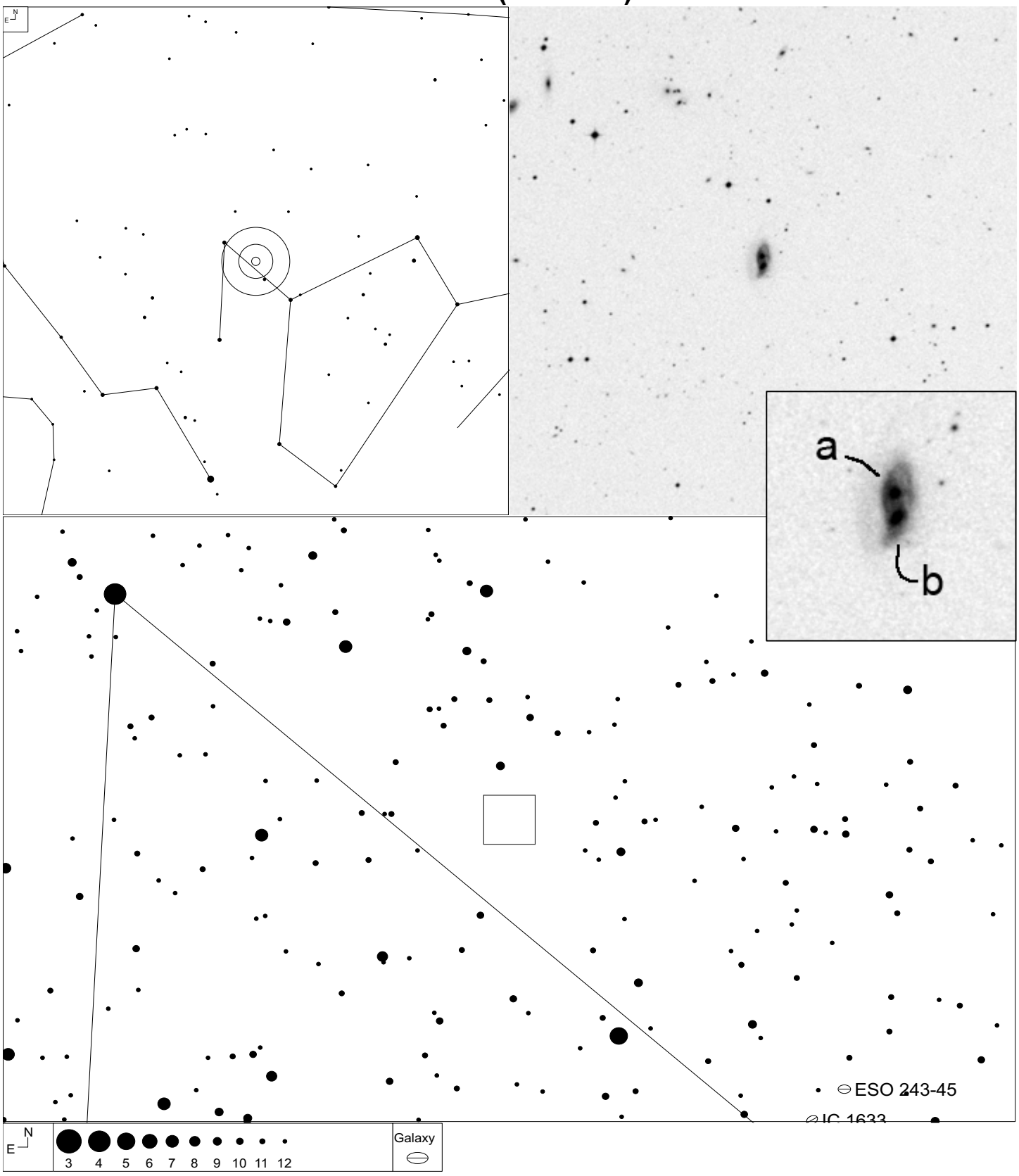
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
419		01 39 02.5	-29 55 19	GPair*			M
419a	NGC 642	01 39 06.4	-29 54 55	G	13.8g	2.0 x 1.1	
419b	NGC 639	01 38 59.0	-29 55 31	G	14.7b	1.0 x 0.2	

VV 715 (Phoenix)



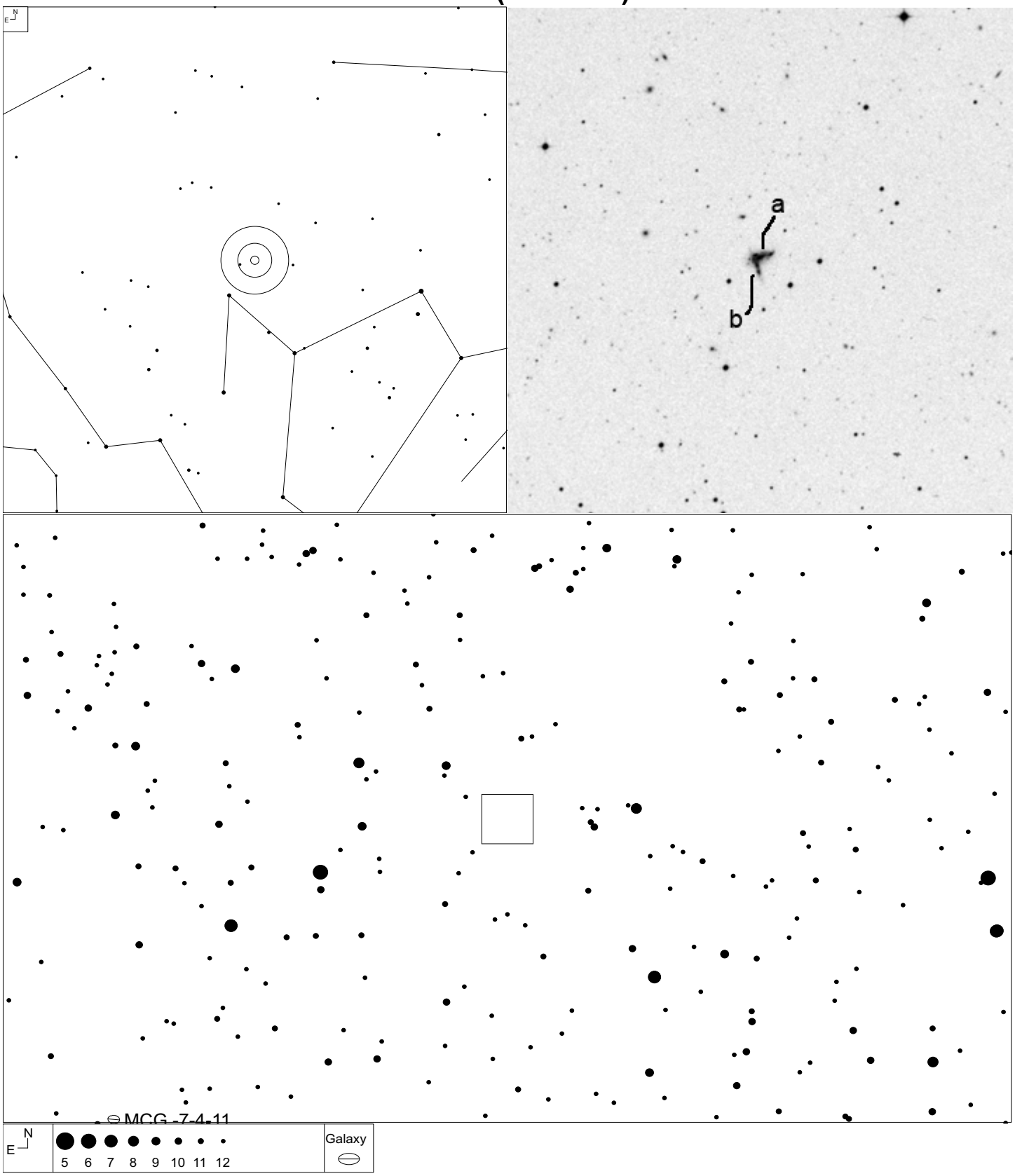
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
715	NGC 7764	23 50 54.0	-40 43 42	G	12.3v	19x14	PC

VV 827 (Phoenix)



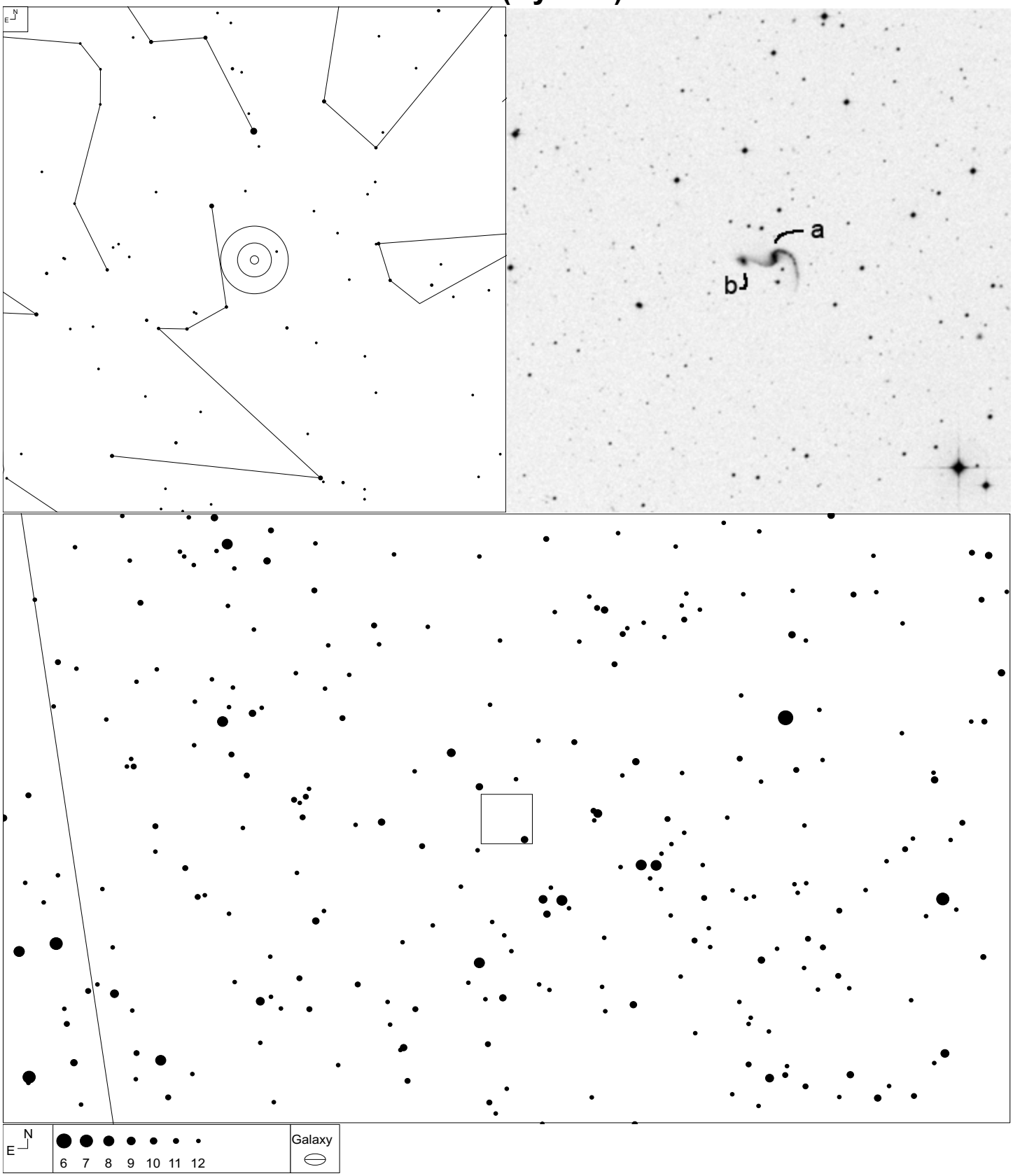
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
827		01 18 08.2	-44 27 51	GPair*			Enat
827a	MCG -07-03-014	01 18 08.6	-44 28 13	G	14.4b	1.0 x 0.5	
827b	MCG -07-03-013	01 18 08.0	-44 27 46	G	15.6b	1.0 x 0.5	

VV 578 (Phoenix)



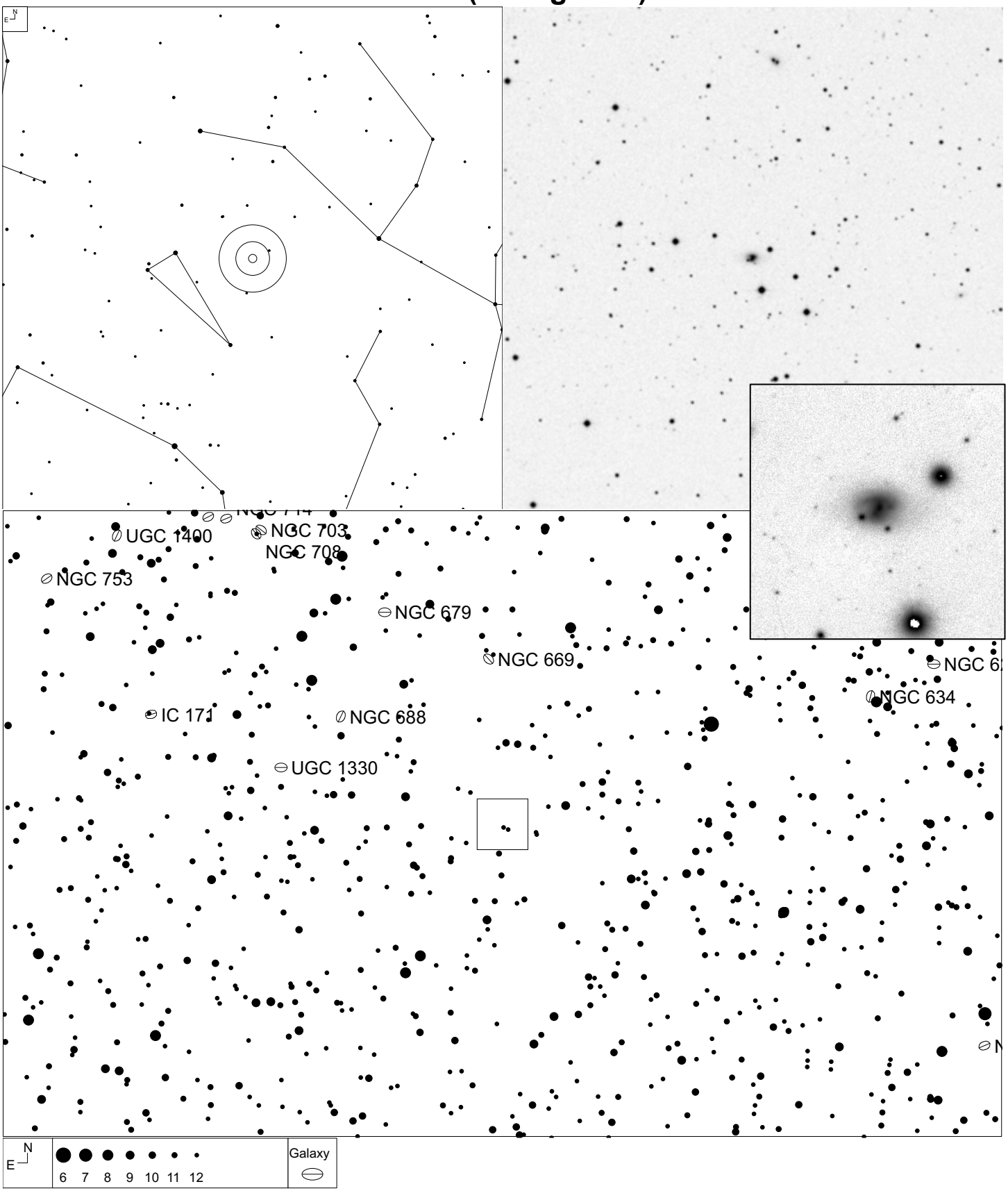
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
578	MCG -07-03-016	01 19 56.8	-41 14 12	GPair	15.1g	1.0 x 0.9	N

VV 443 (Hydrus)



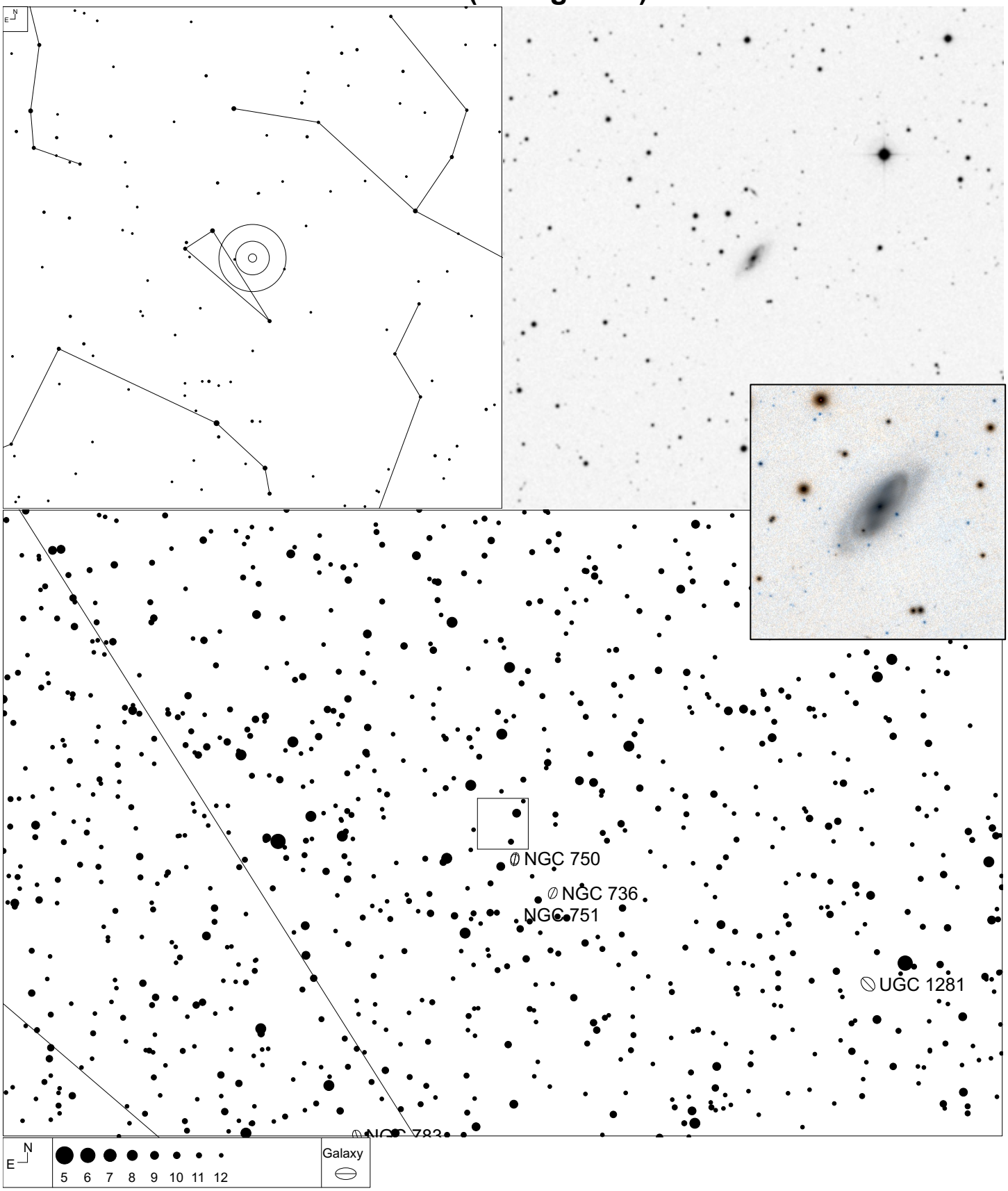
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
443		01 37 25.5	-64 53 47	GPair			M
443a	NGC 646	01 37 21.1	-64 53 41	G	14.4b	1.7 x 0.6	
443b	NGC 646b	01 37 29.9	-64 53 47	G	15.7b	0.3 x 0.3	

VV 701 (Triangulum)



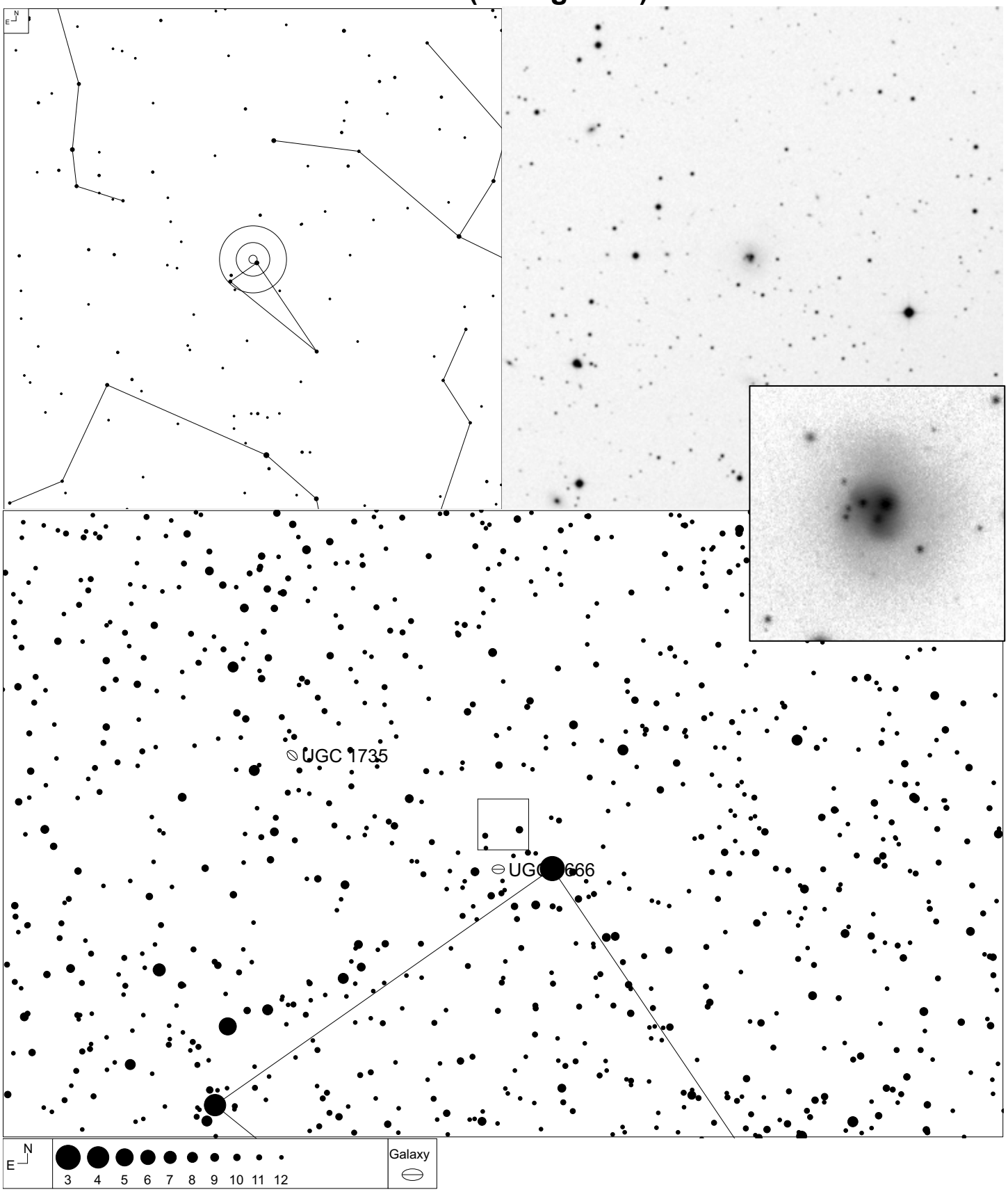
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
701	UGC 1251	01 46 56.8	+34 46 21	G	15.2b	0.6 x 0.4	NNNP

VV 425 (Triangulum)



VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
425	NGC 761	01 57 49.6	+33 22 39	G	14.2g	1.5 x 0.5	M

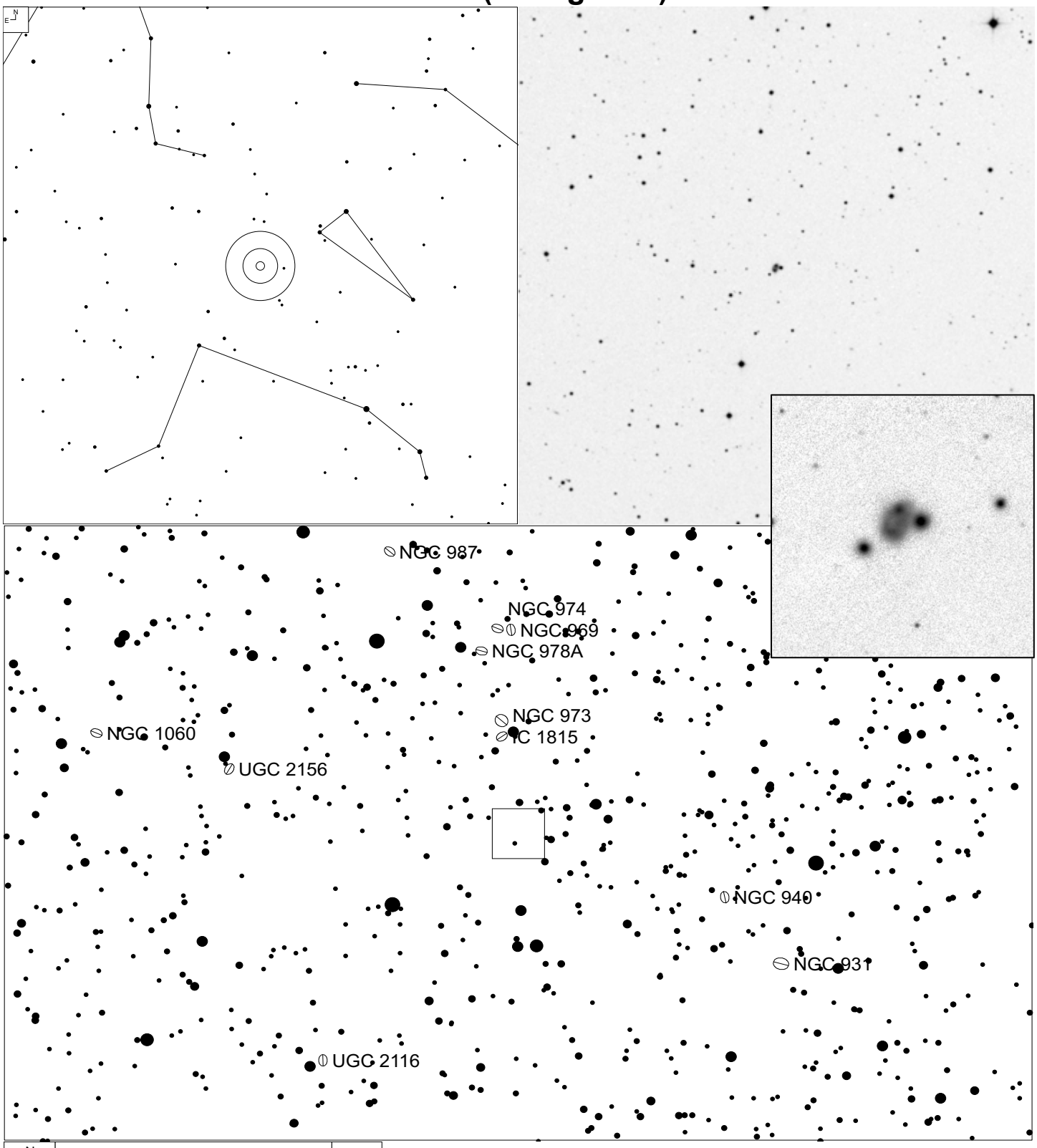
VV 650 (Triangulum)



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
650	UGC 1668	02 10 41.4	+35 11 57	GGroup	15.7b	1.1 x 1.0	N

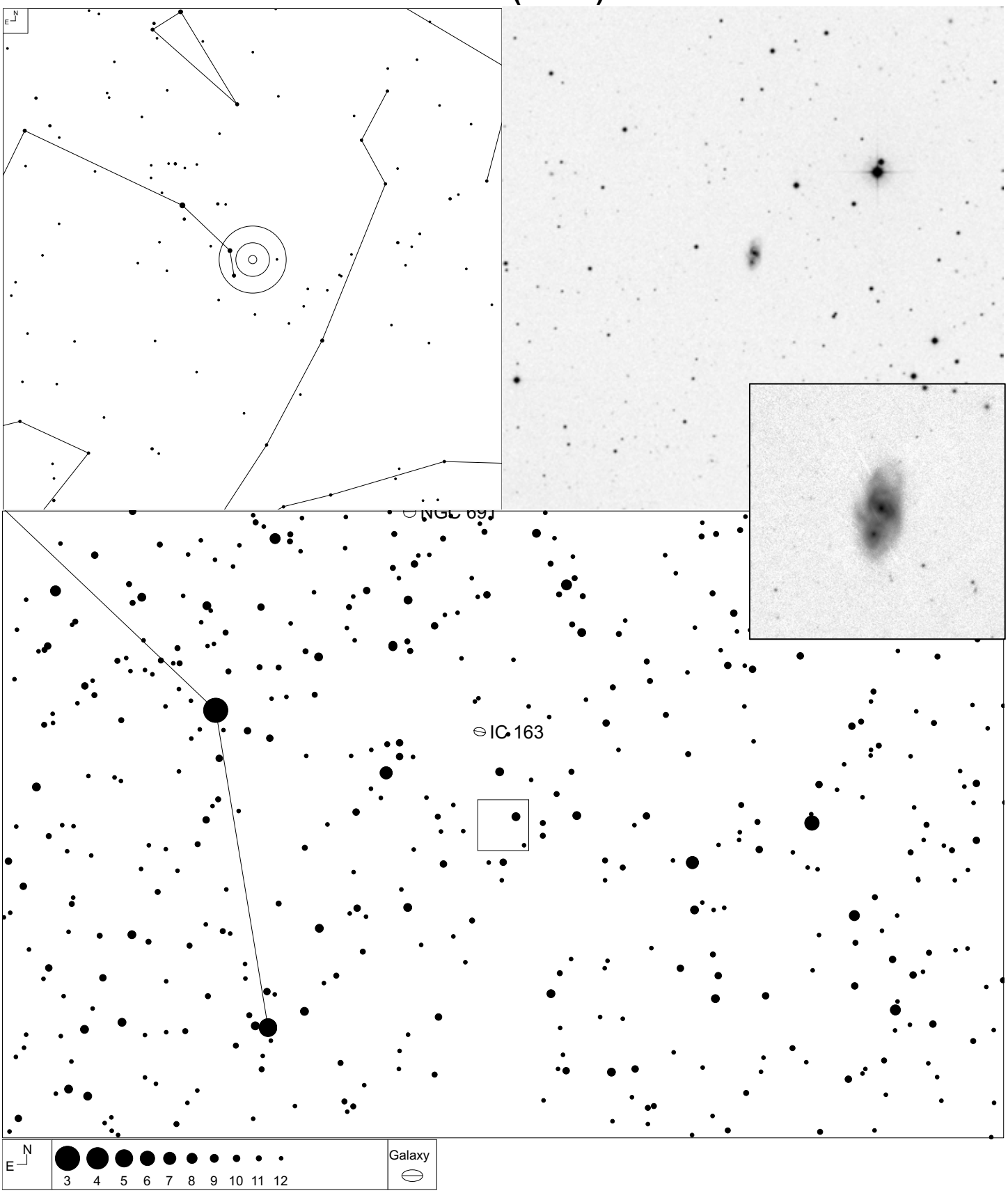
Three stellar-like cores in the center. Two stars on the eastern edge.

VV 636 (Triangulum)



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
636	V Zw 255	02 33 58.1	+31 57 22	GPair	15.5b	-	N

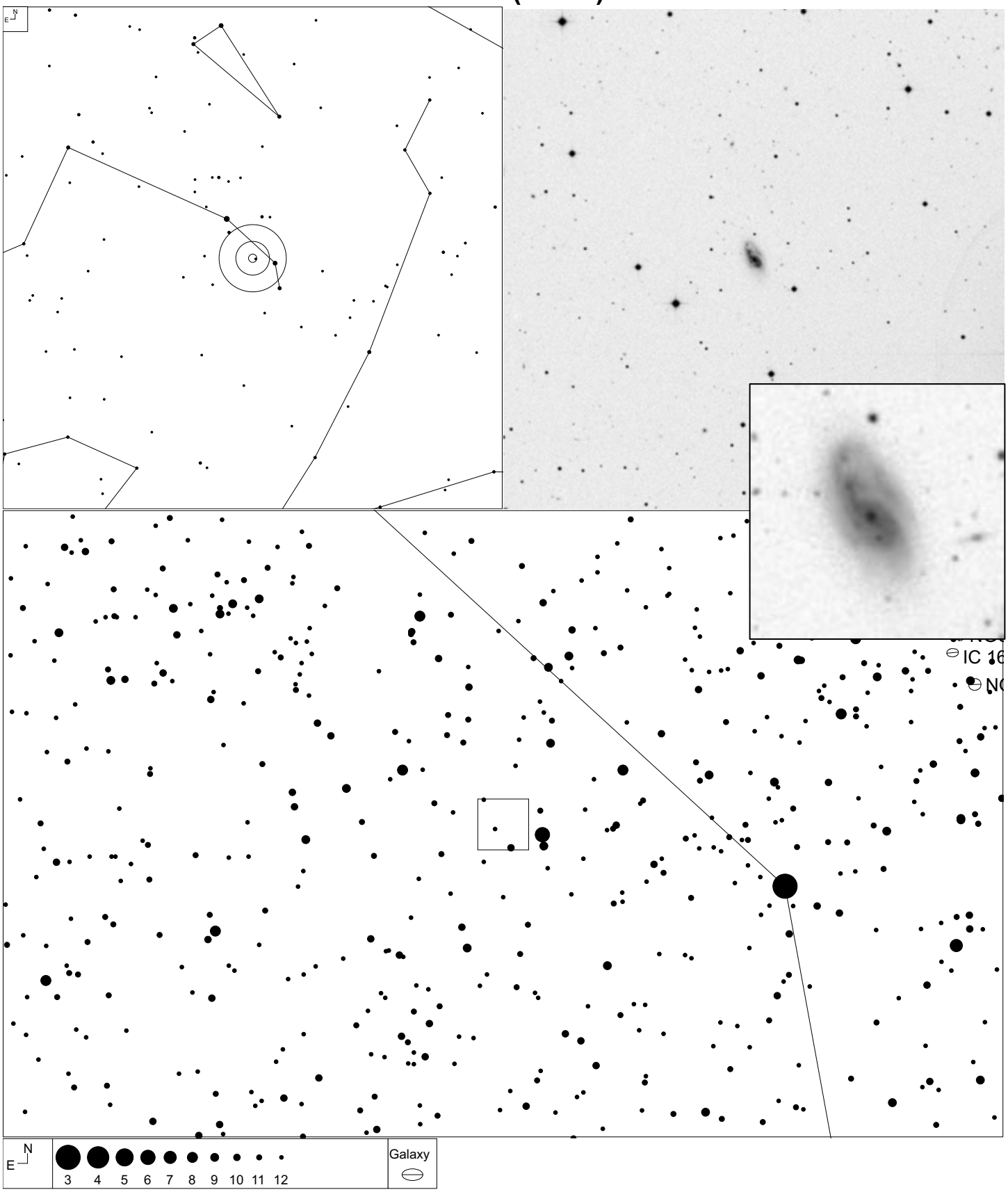
VV 535 (Aries)



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
535	UGC 1265	01 48 46.7	+20 15 46	G	14.5b	1.1 x 0.5	N

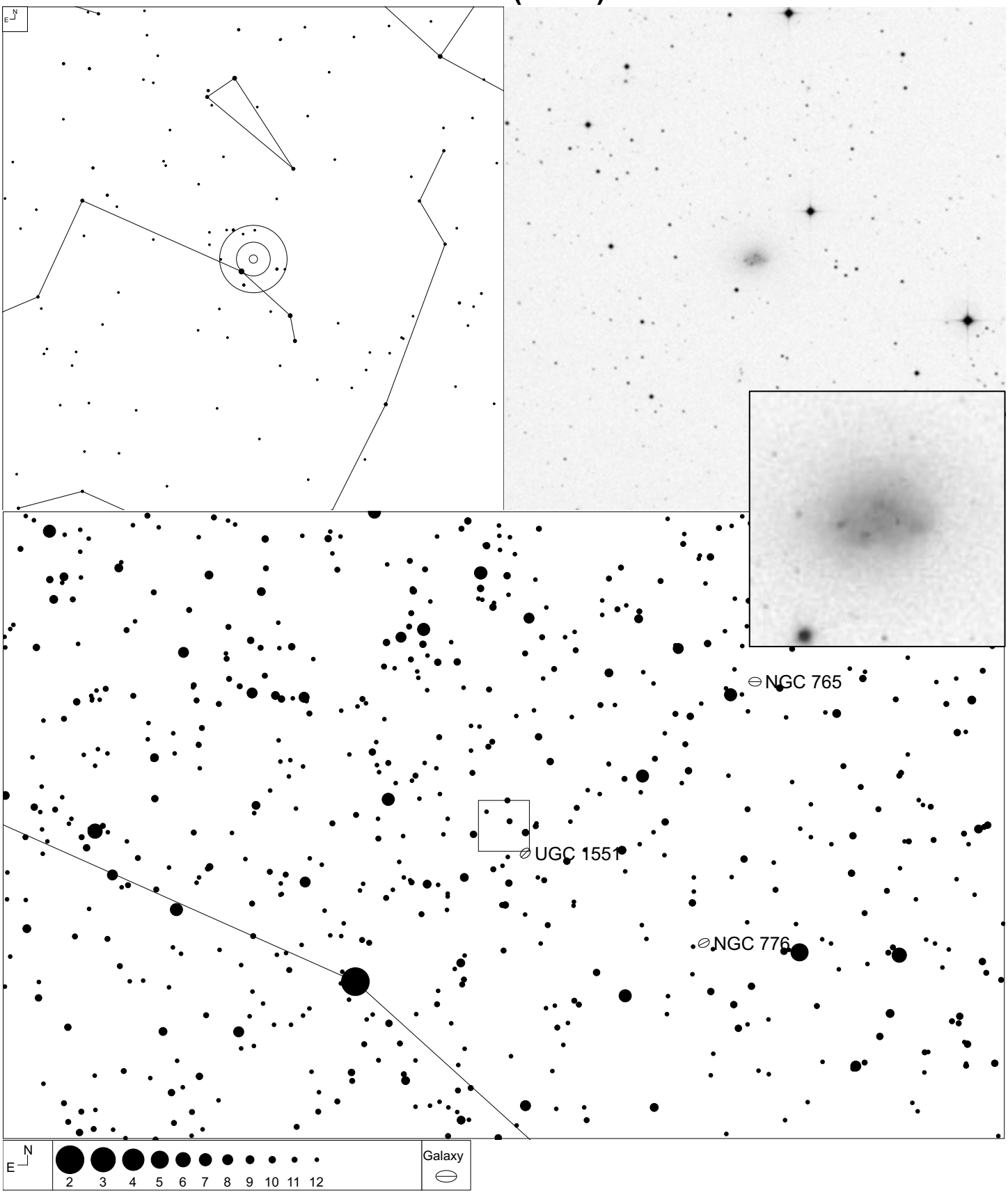
Double galaxy

VV 751 (Aries)



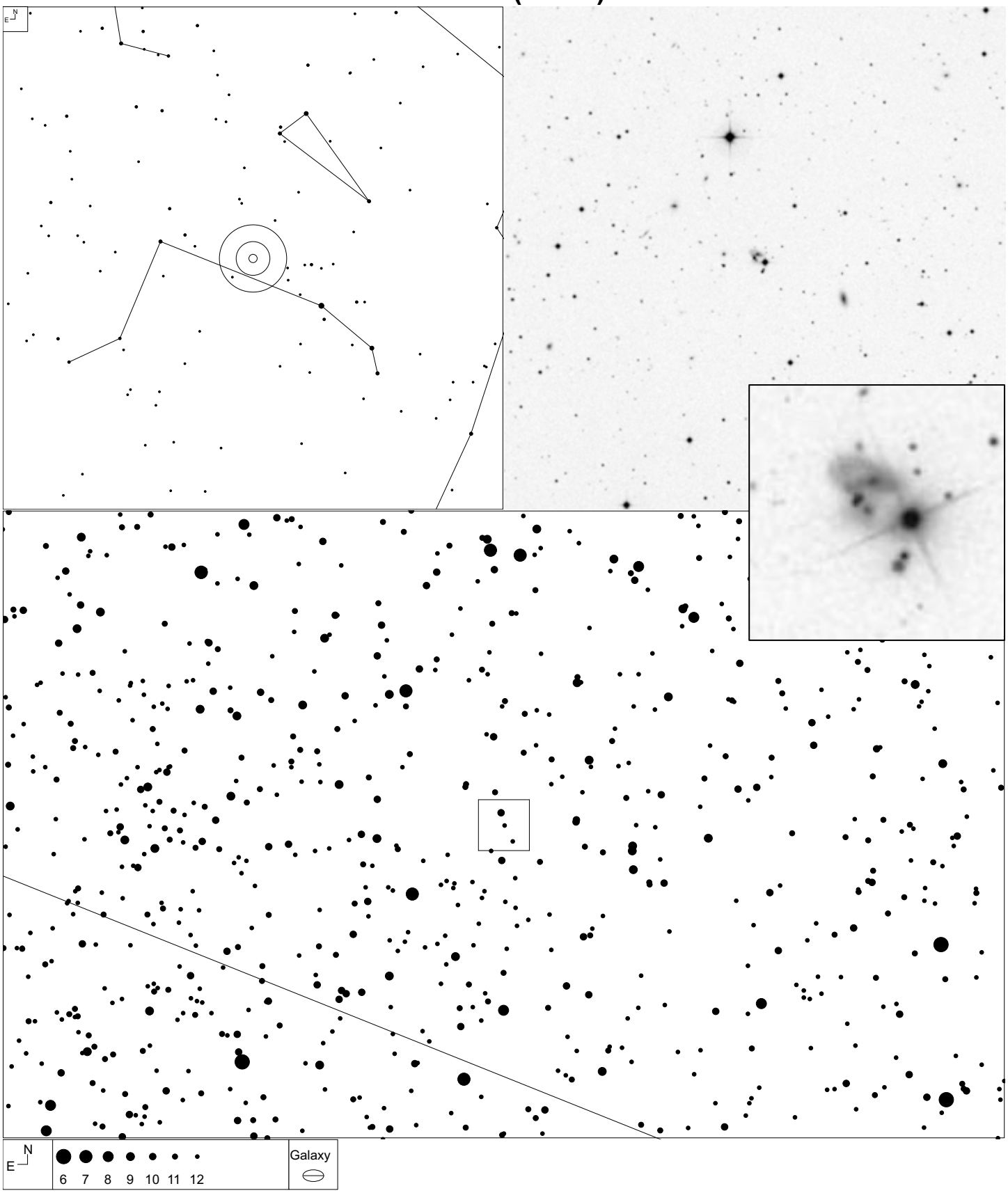
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
751	UGC 1485	02 00 23.8	+21 06 30	G	14.3g	1.1 x 0.7	PC

VV 568 (Aries)



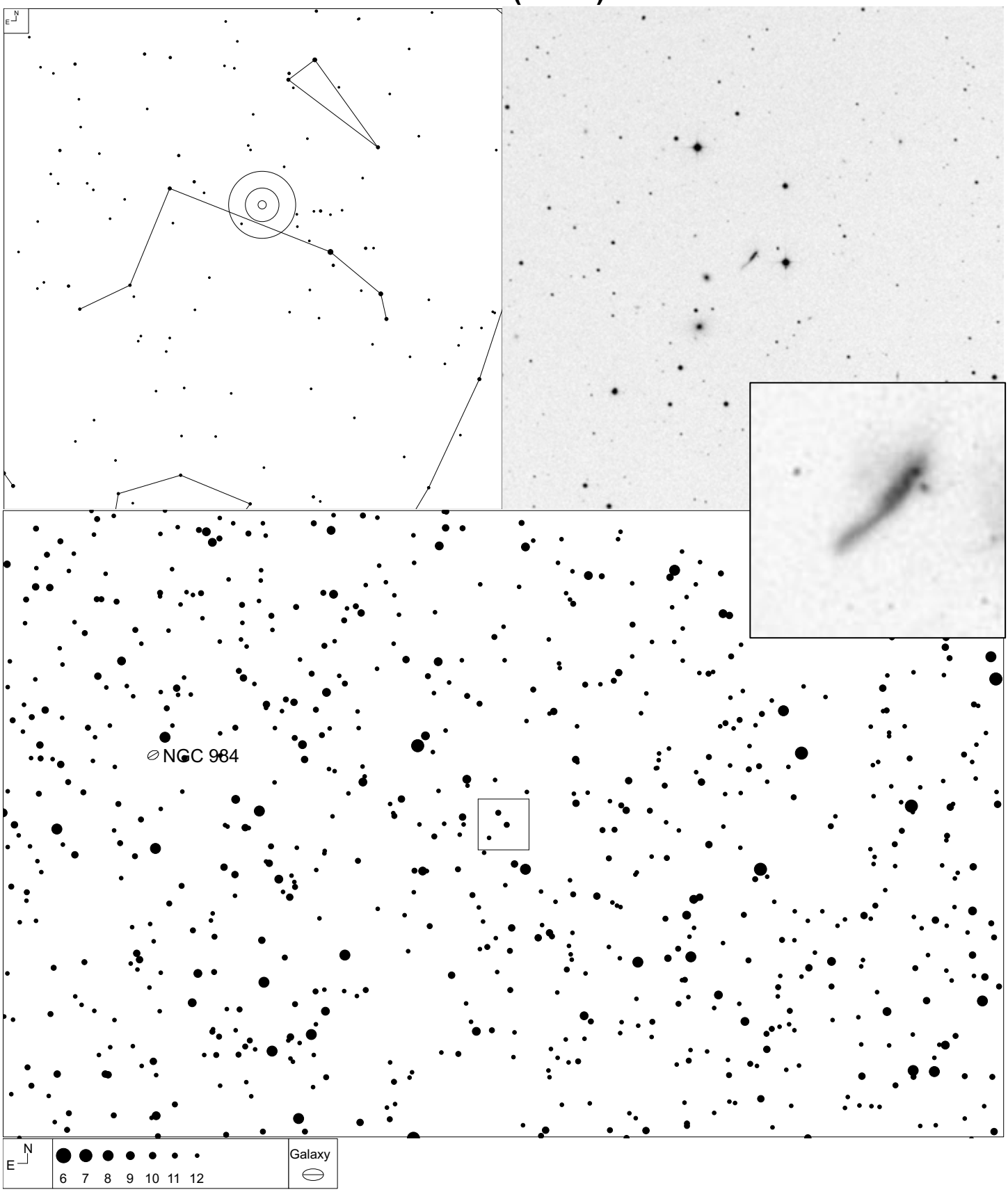
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
568	UGC 1561	02 04 05.1	+24 12 30	G	14.8g	1.0 x 0.9	N

VV 658 (Aries)



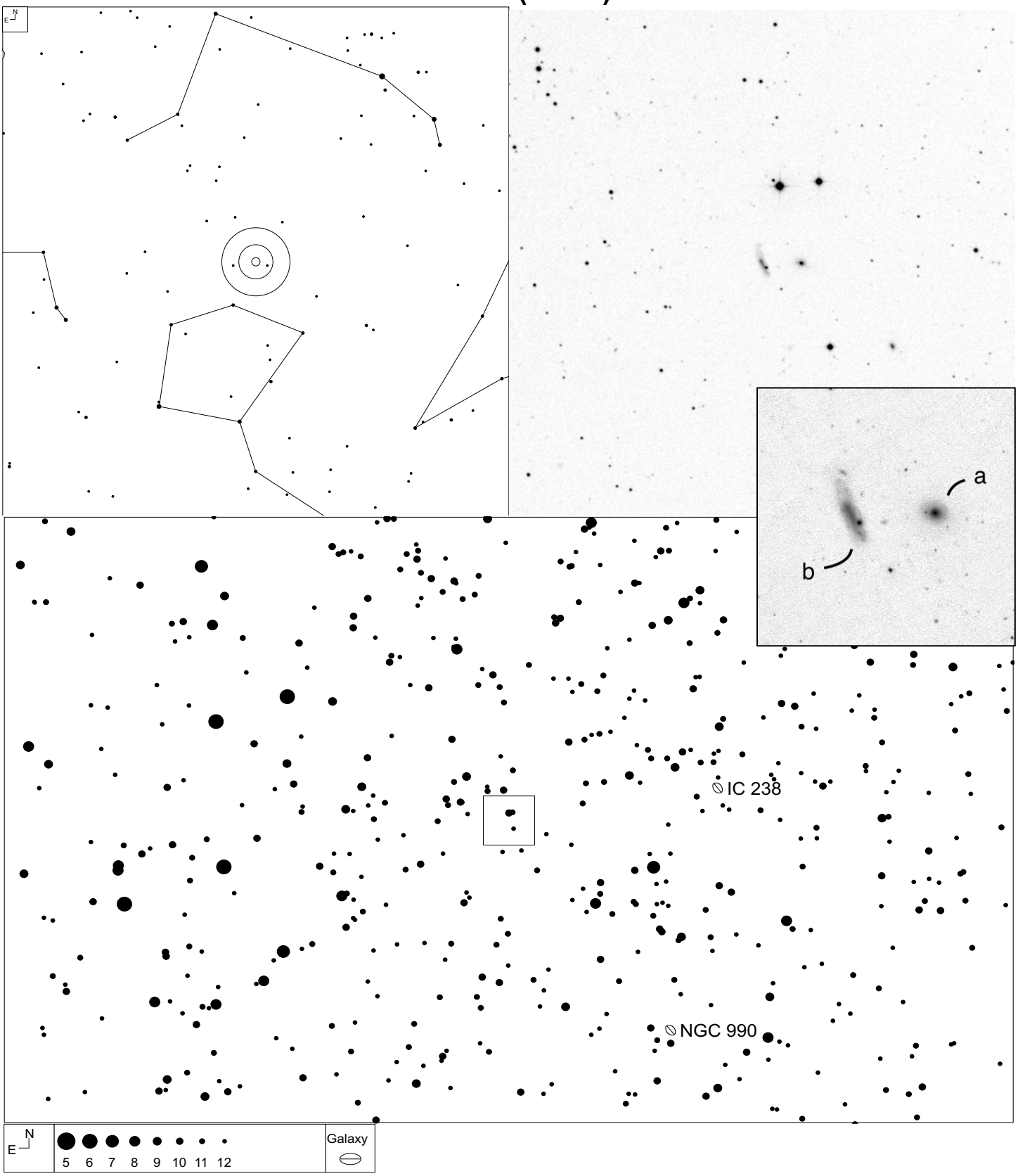
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
658	V Zw 235	02 25 01.3	+26 22 18	GTrpl	14.8g	-	N

VV 391 (Aries)



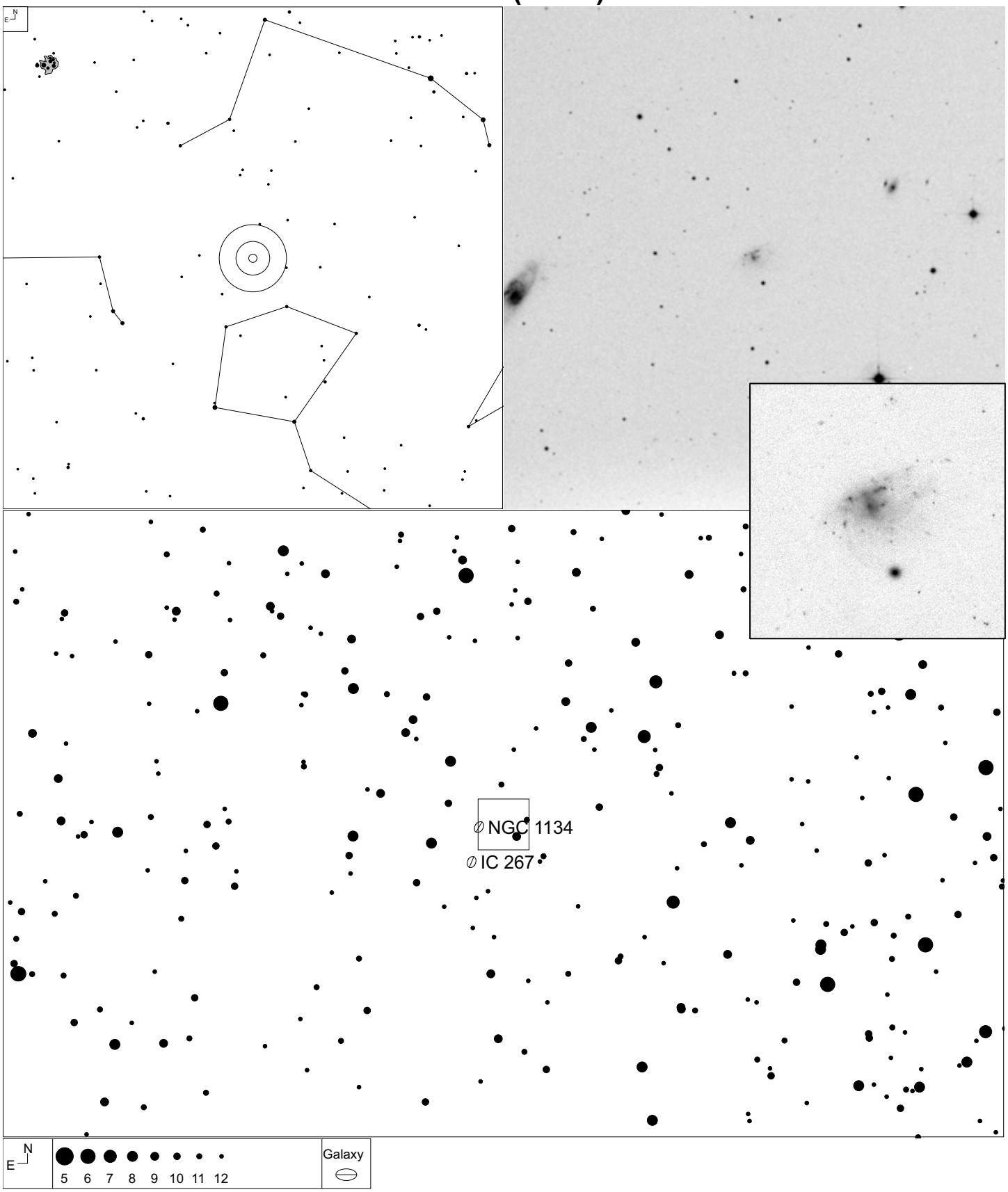
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
391	MCG +04-06-044	02 27 26.0	+23 05 38	G	15.7b	0.8 x 0.1	MMM

VV 516 (Aries)



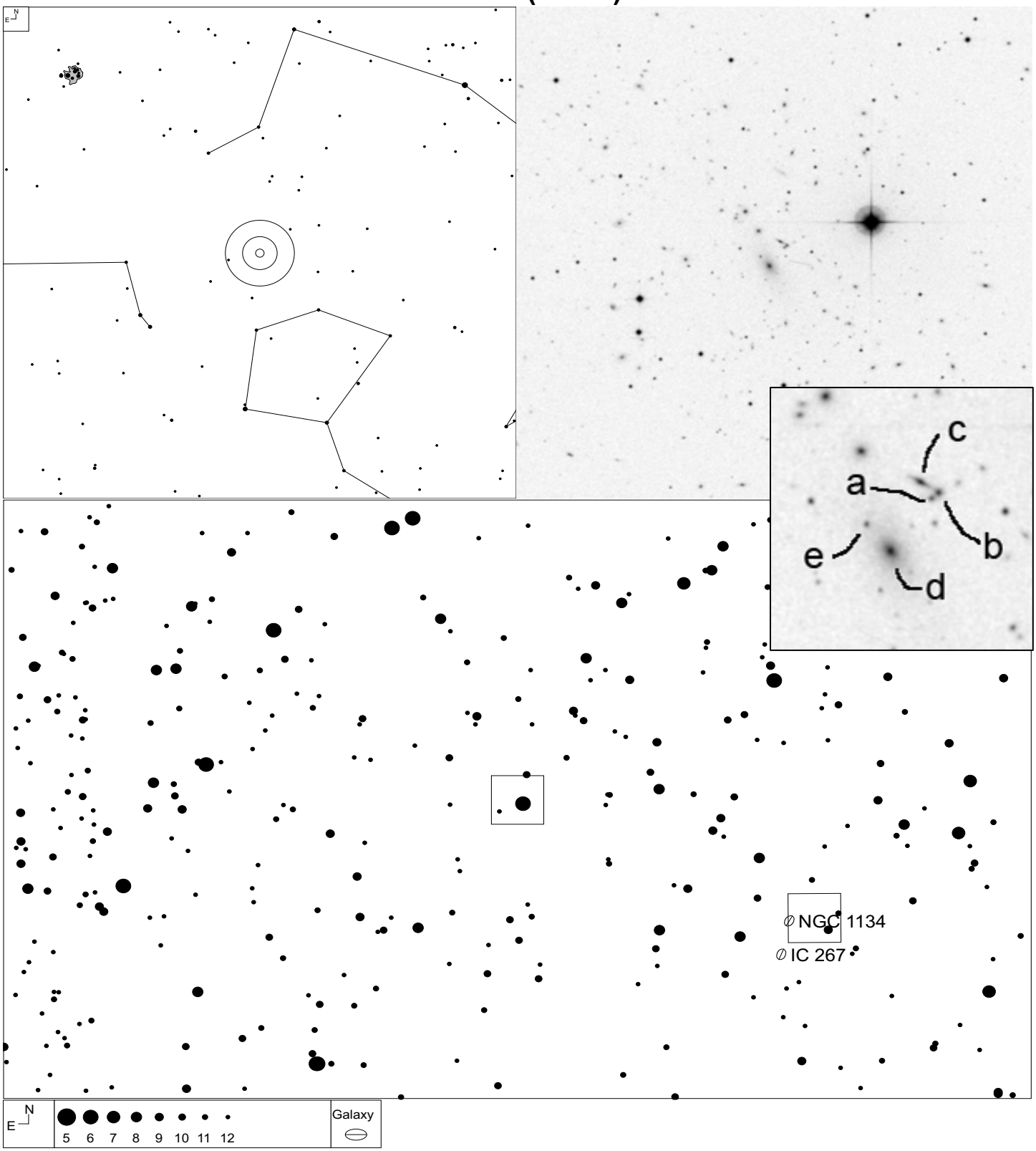
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
516		02 39 26.1	+12 40 48	GPair			
516a	MCG +02-07-021	02 39 23.8	+12 40 50	G	16.0g	0.3 x 0.3	
516b	UGC 2148	02 39 28.5	+12 40 47	G	16.0g	1.1 x 0.3	

VV 606 (Aries)



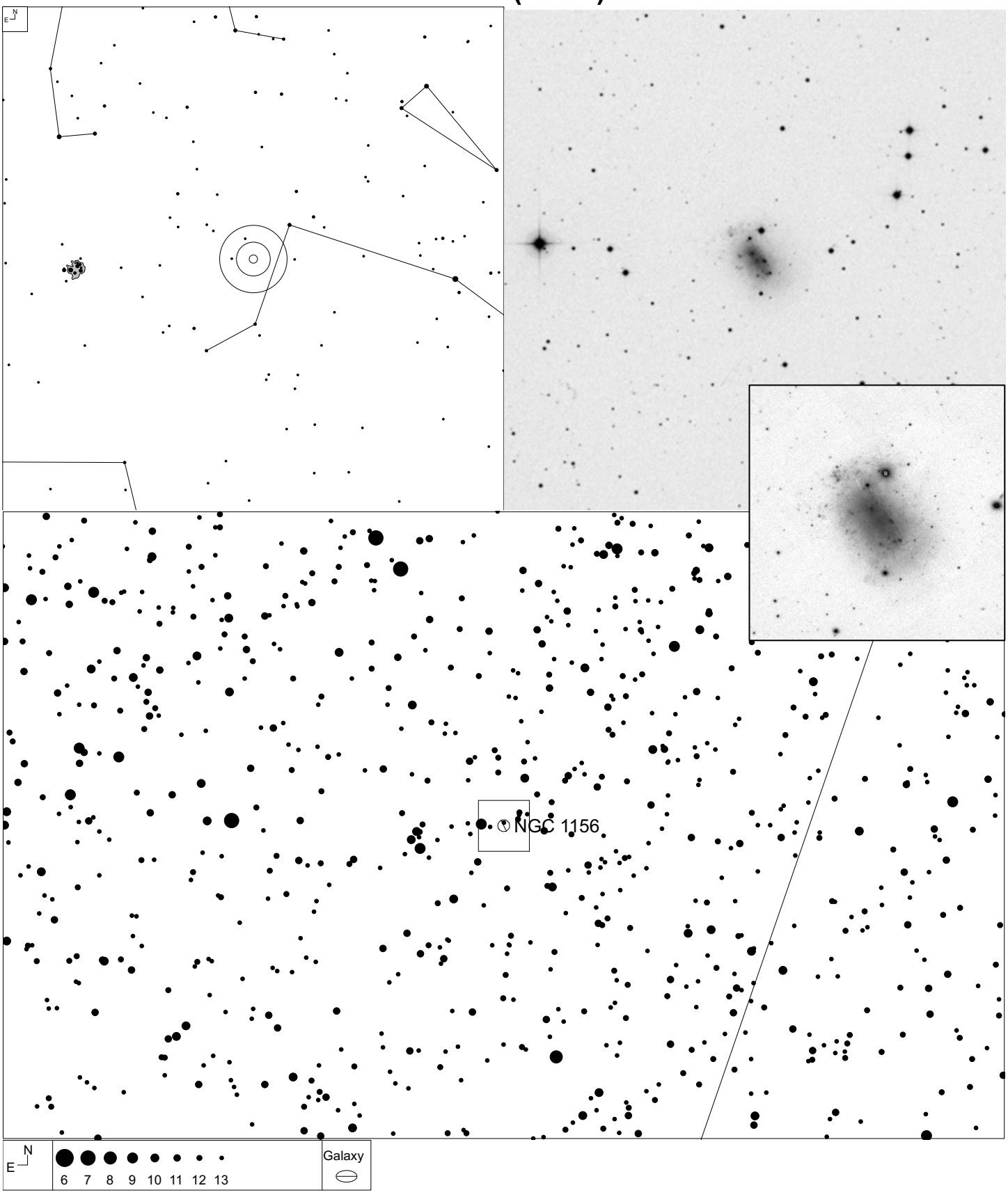
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
606	UGC 2362	02 53 11.9	+13 01 53	G	15.4g	1.2 x 1.1	N

VV 763 (Aries)



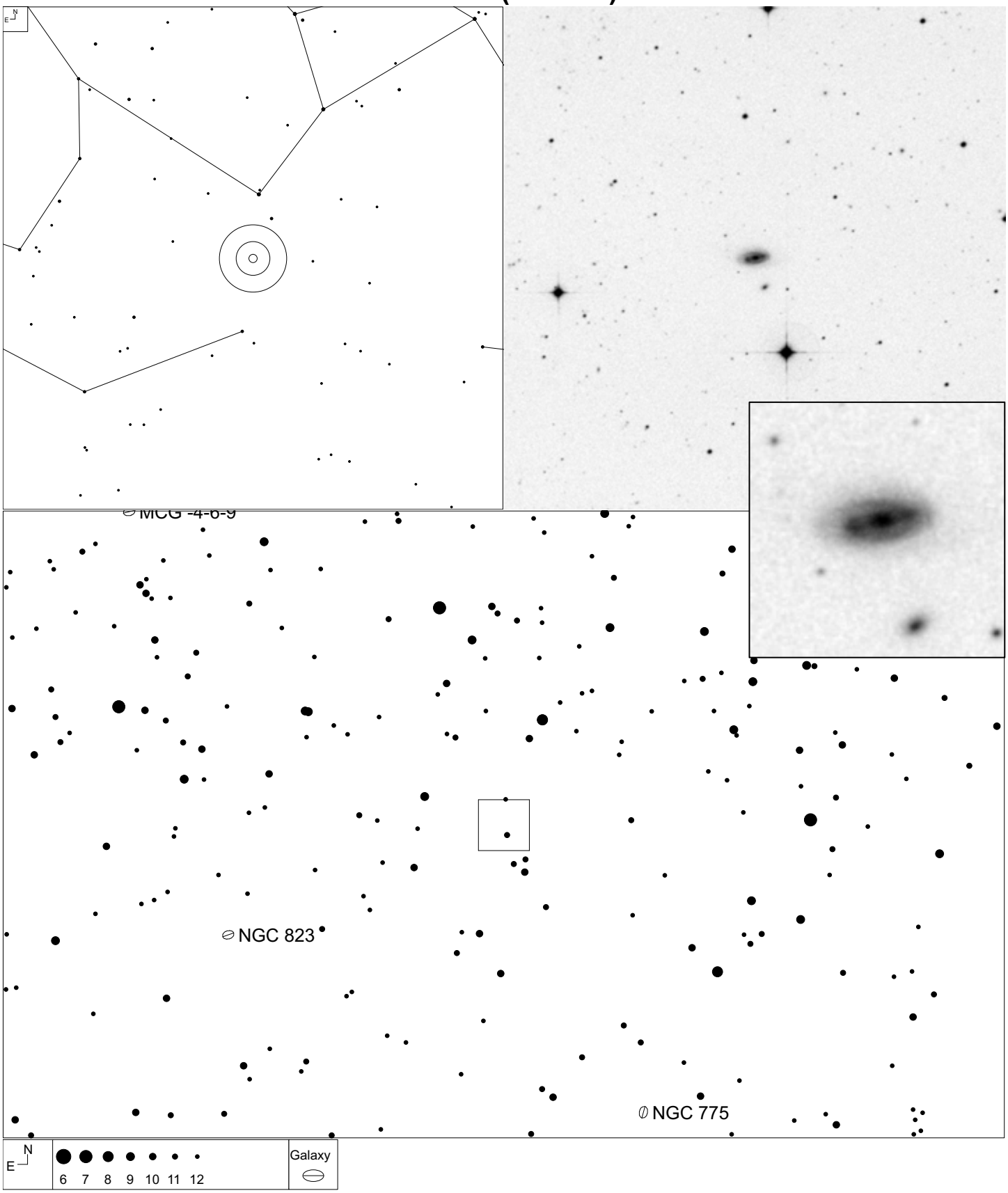
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
763		02 58 57.2	+13 35 23	GGroup			NPNP
763a		*02 58 55.7*	*+13 35 36*	*G*	*17.0b*		
763b		*02 58 55.7*	*+13 35 35*	*G*	*17.70*		
763c	MCG +02-08-044	02 58 56.4	+13 35 42	G	17.1b	0.3 x 0.2	PDb
763d	MCG +02-08-043	02 58 57.8	+13 34 58	G	15.2b	1.1 x 0.9	PDb
763e		*02 58 58.9*	*+13 35 15*	*G*	*19*		

VV 531 (Aries)



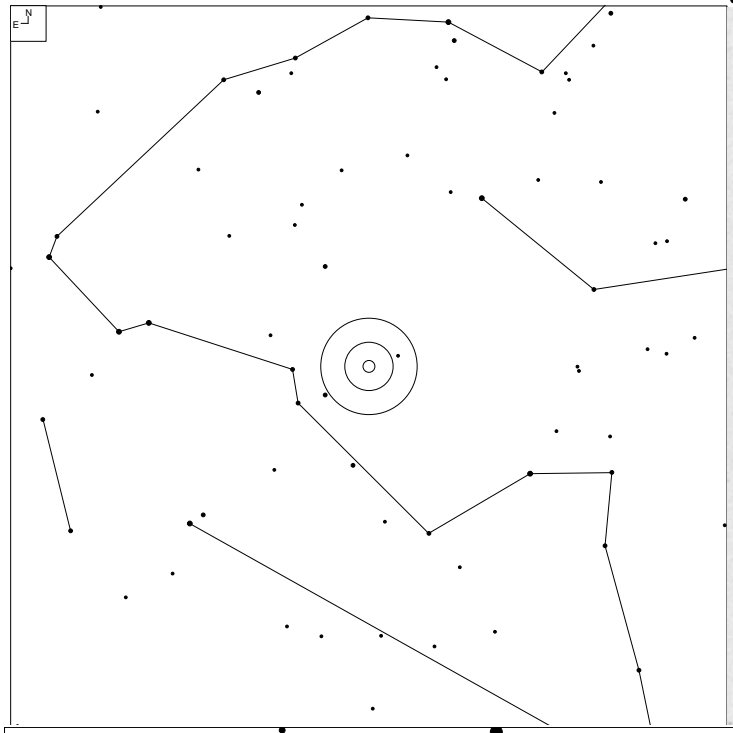
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
531	NGC 1156	02 59 42.5	+25 14 15	G	11.7v	3.3 x 2.5	N

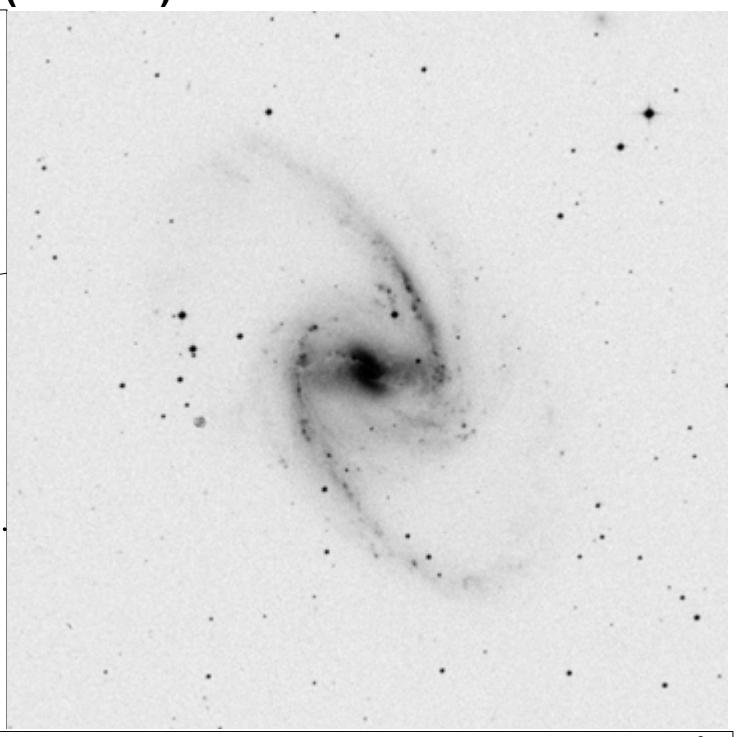
VV 467 (Fornax)

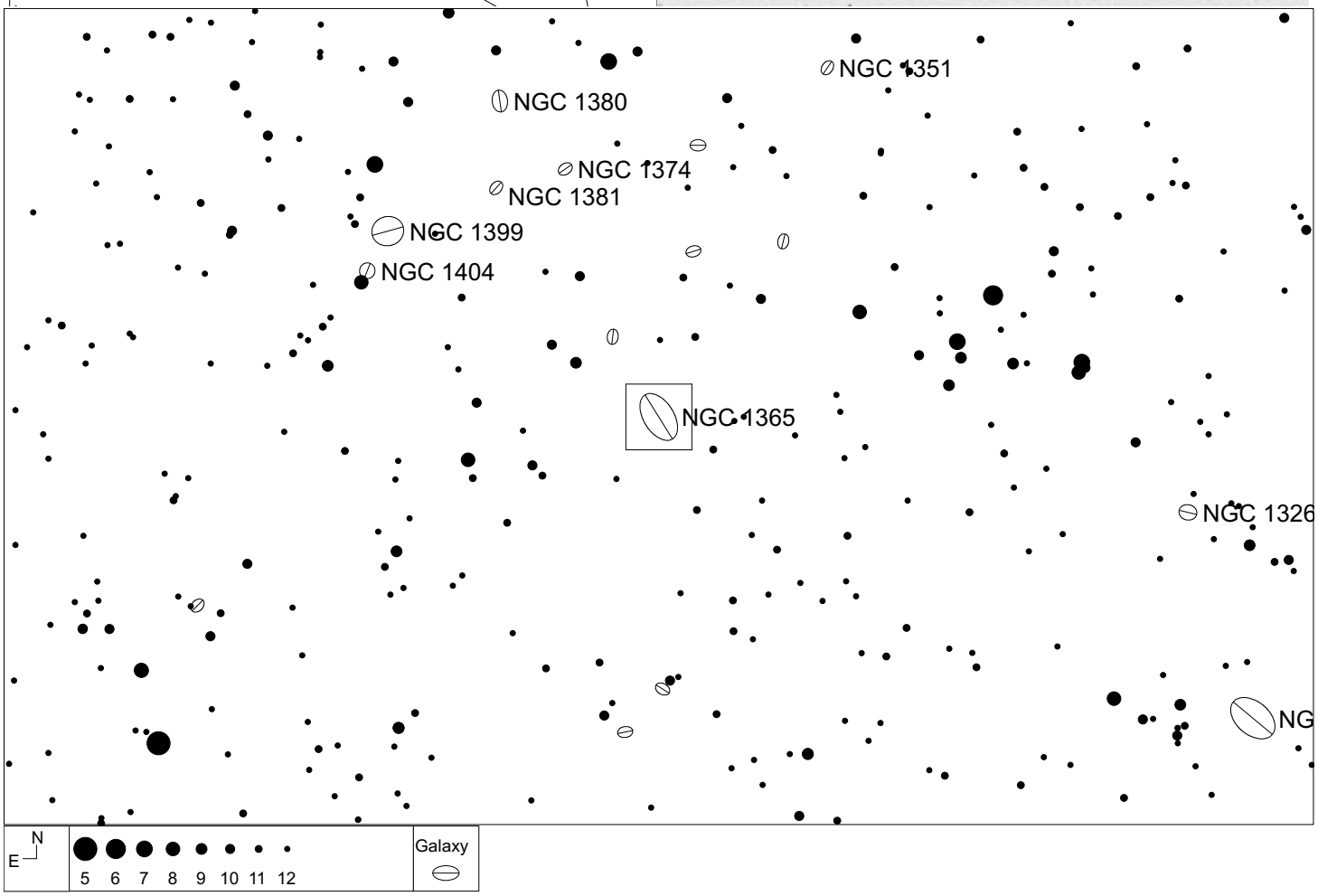


VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
467	MCG -04-05-027	02 01 31.0	-24 55 30	G*	14.3g	1.2 x 0.6	MM

VV 825 (Fornax)

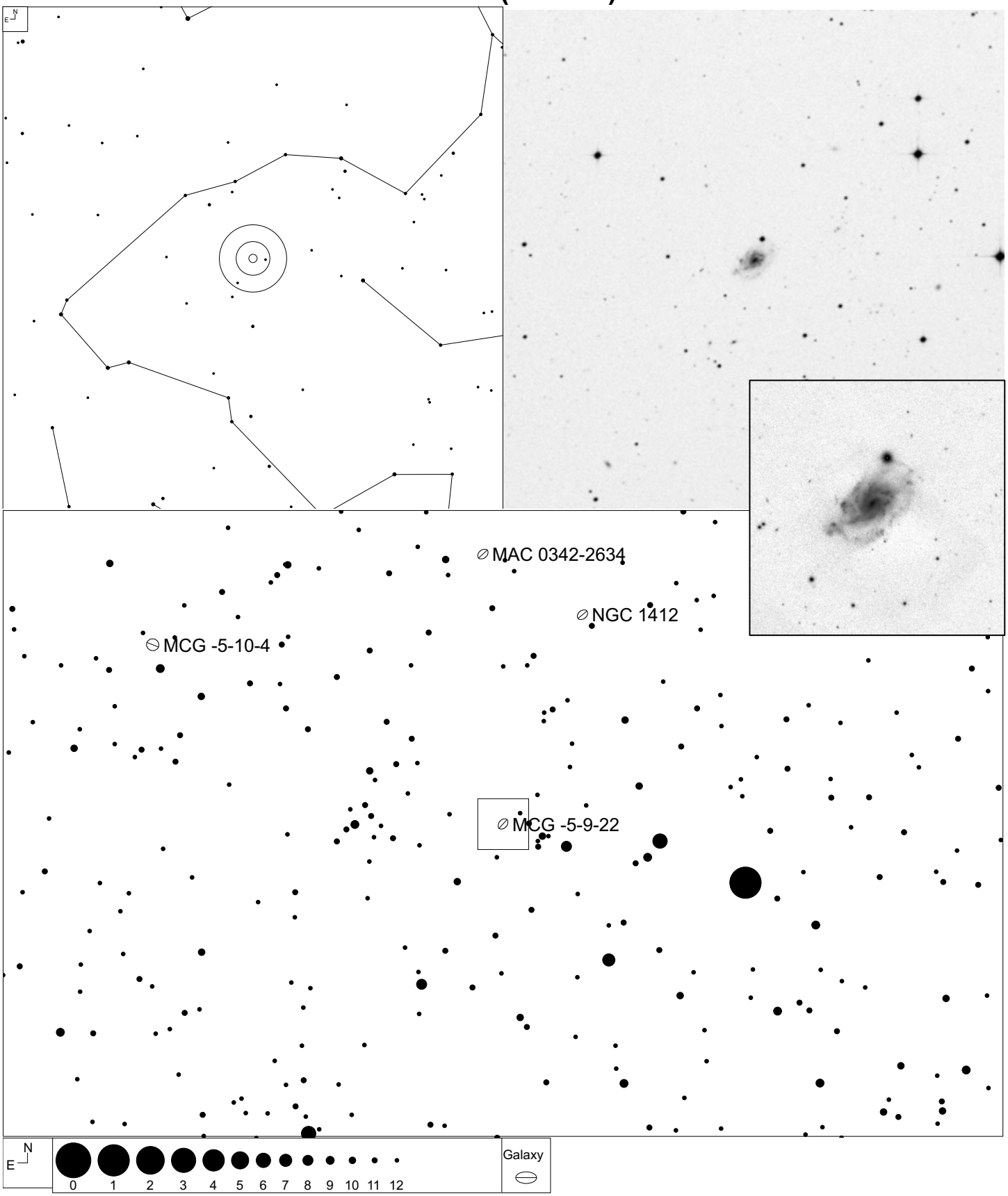






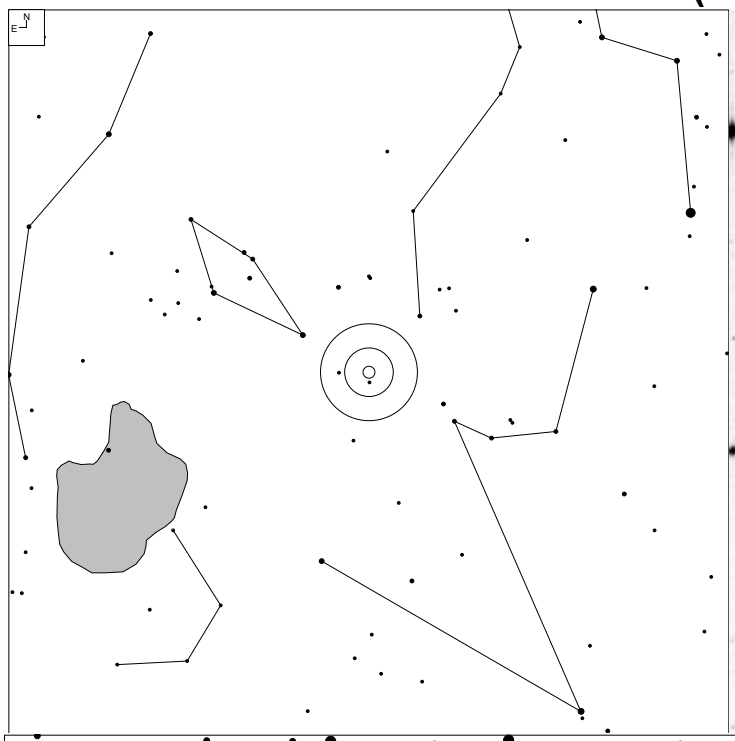
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
825	NGC 1365	03 33 36.4	-36 08 25	G	9.6v	11.2 x 6.2	Enat

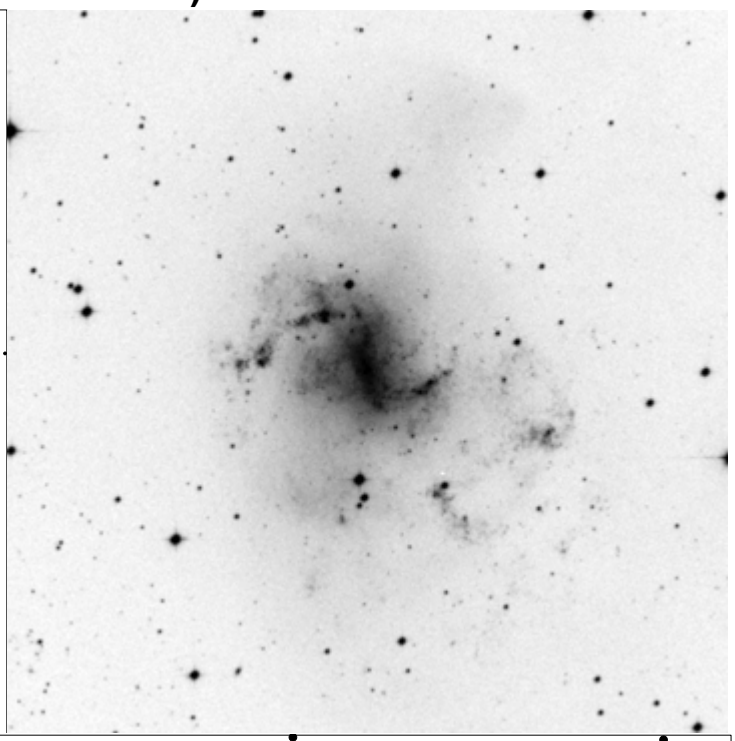
VV 610 (Fornax)

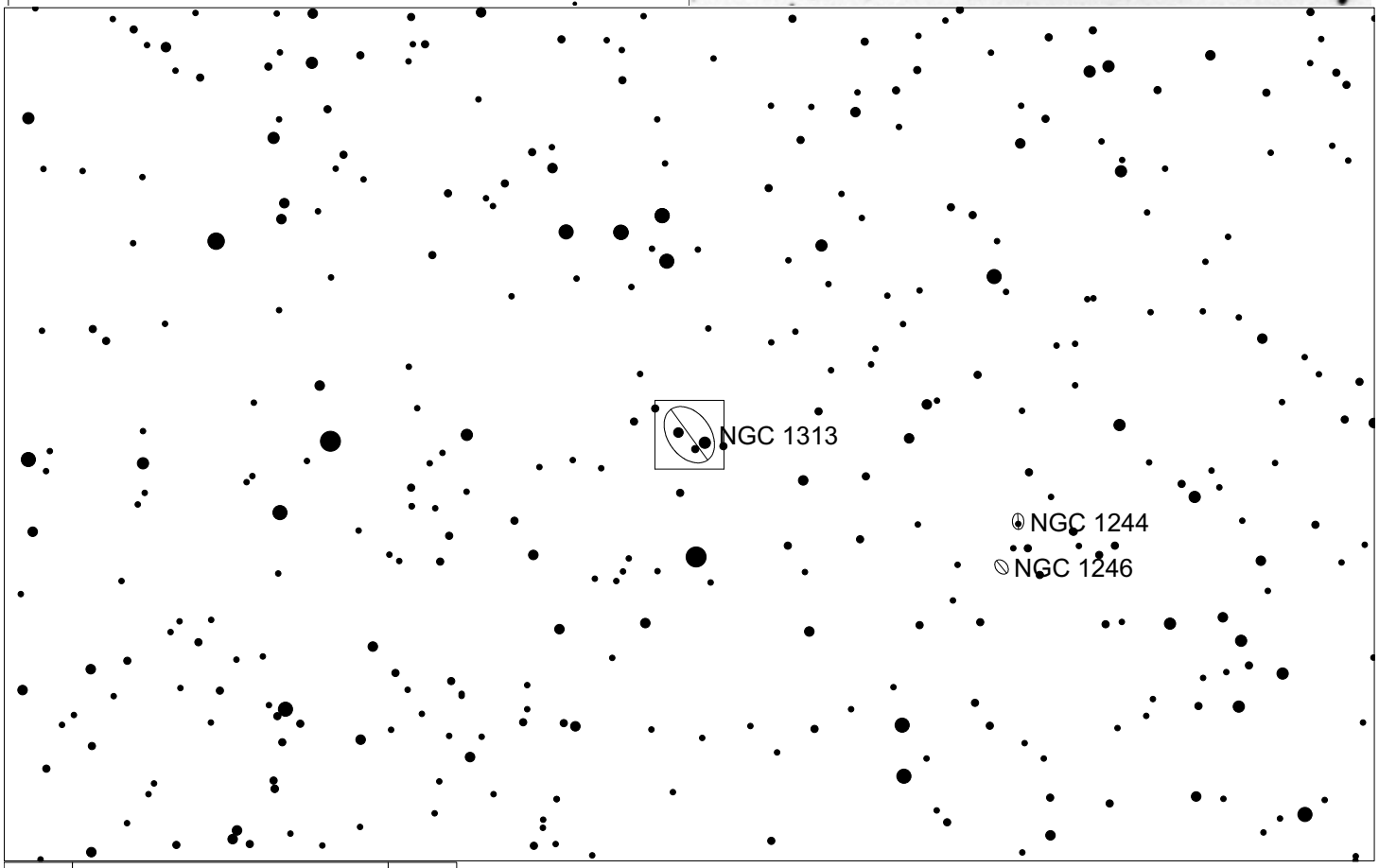


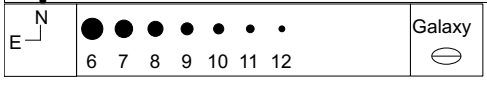
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
610	MCG -05-09-022	03 42 11.2	-27 51 51	G	13.8g	1.7 x 1.0	N

VV 436 (Reticulum)



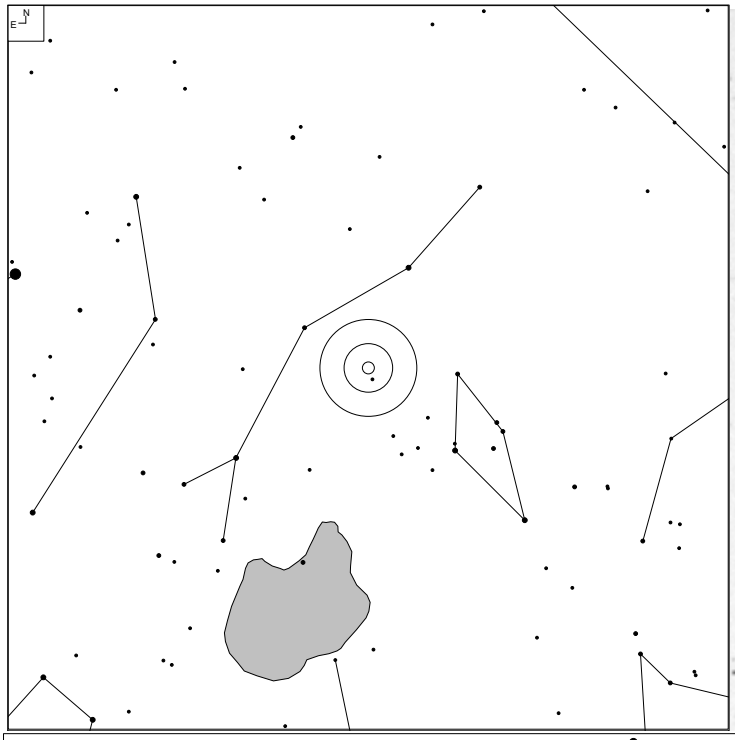


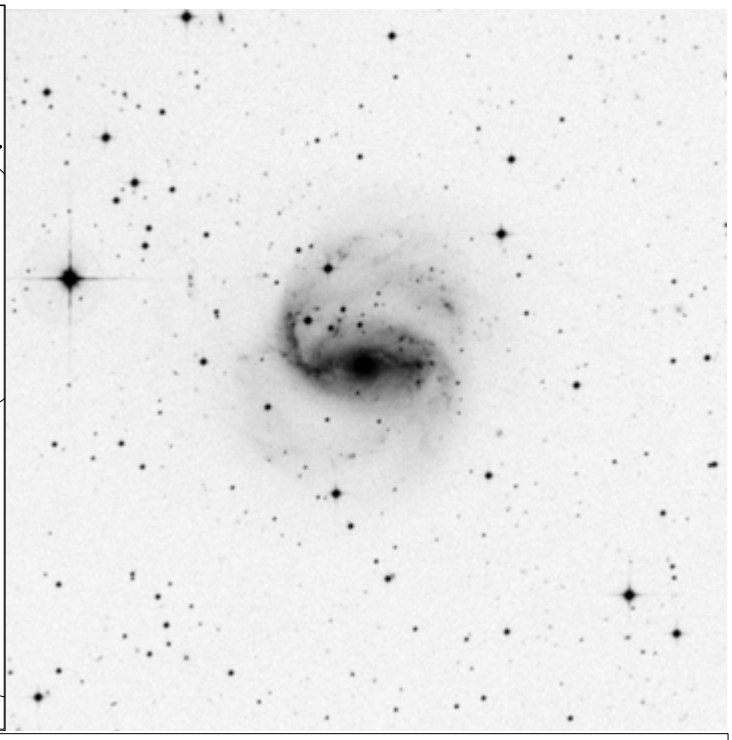


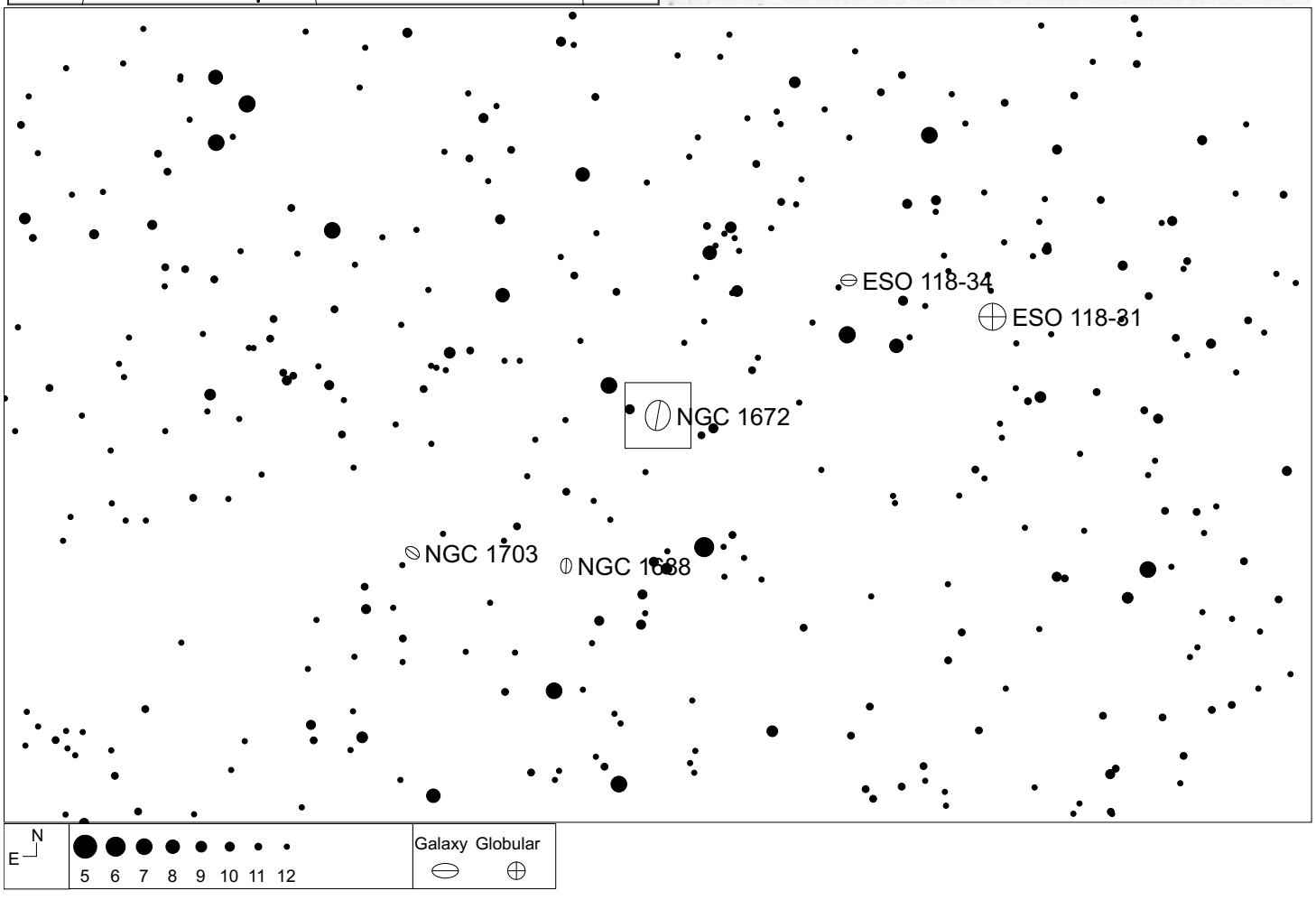


VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
436	NGC 1313	03 18 16.0	-66 29 54	G	10.0v	13.1 x 8.9	M

VV 826 (Dorado)

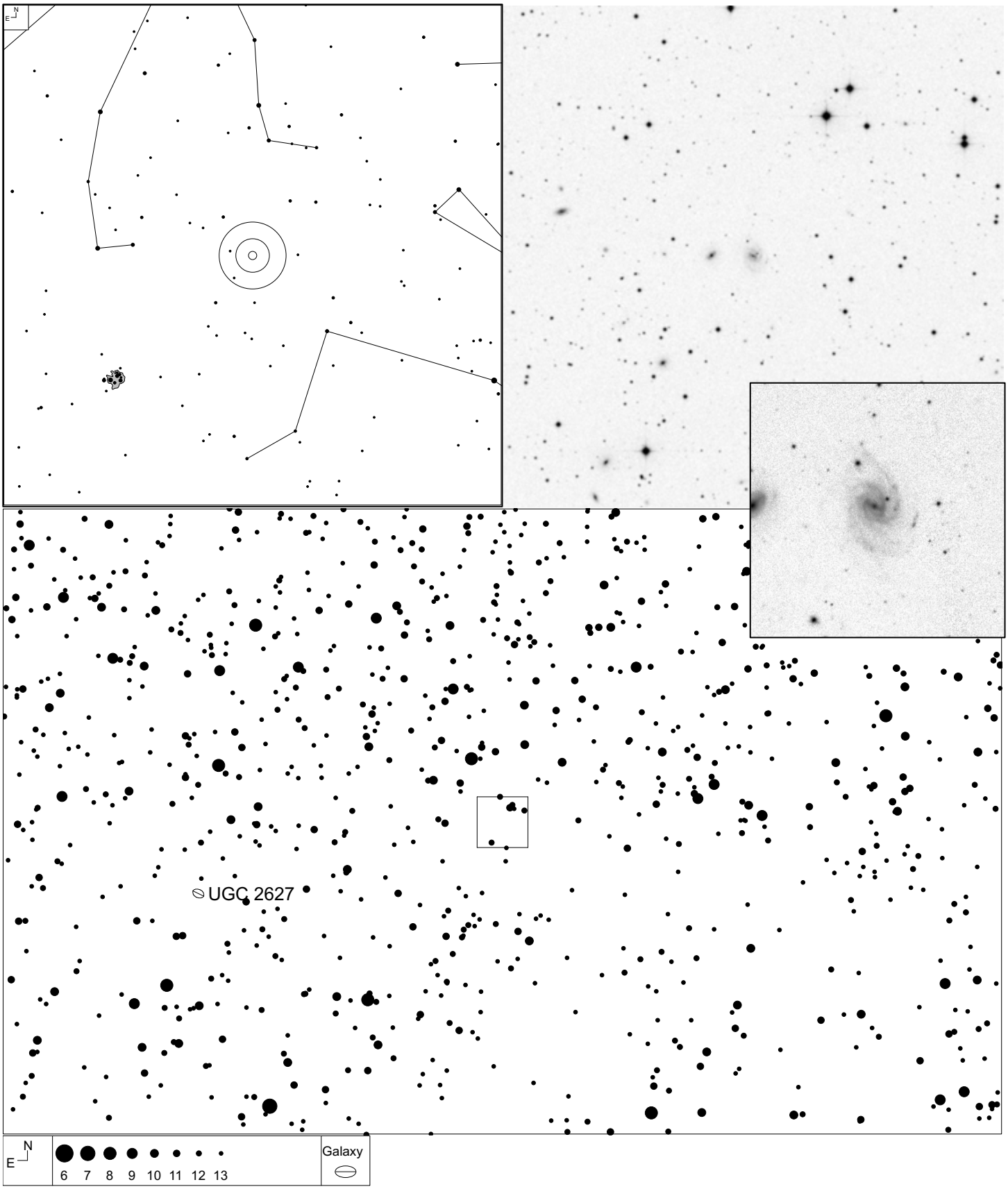






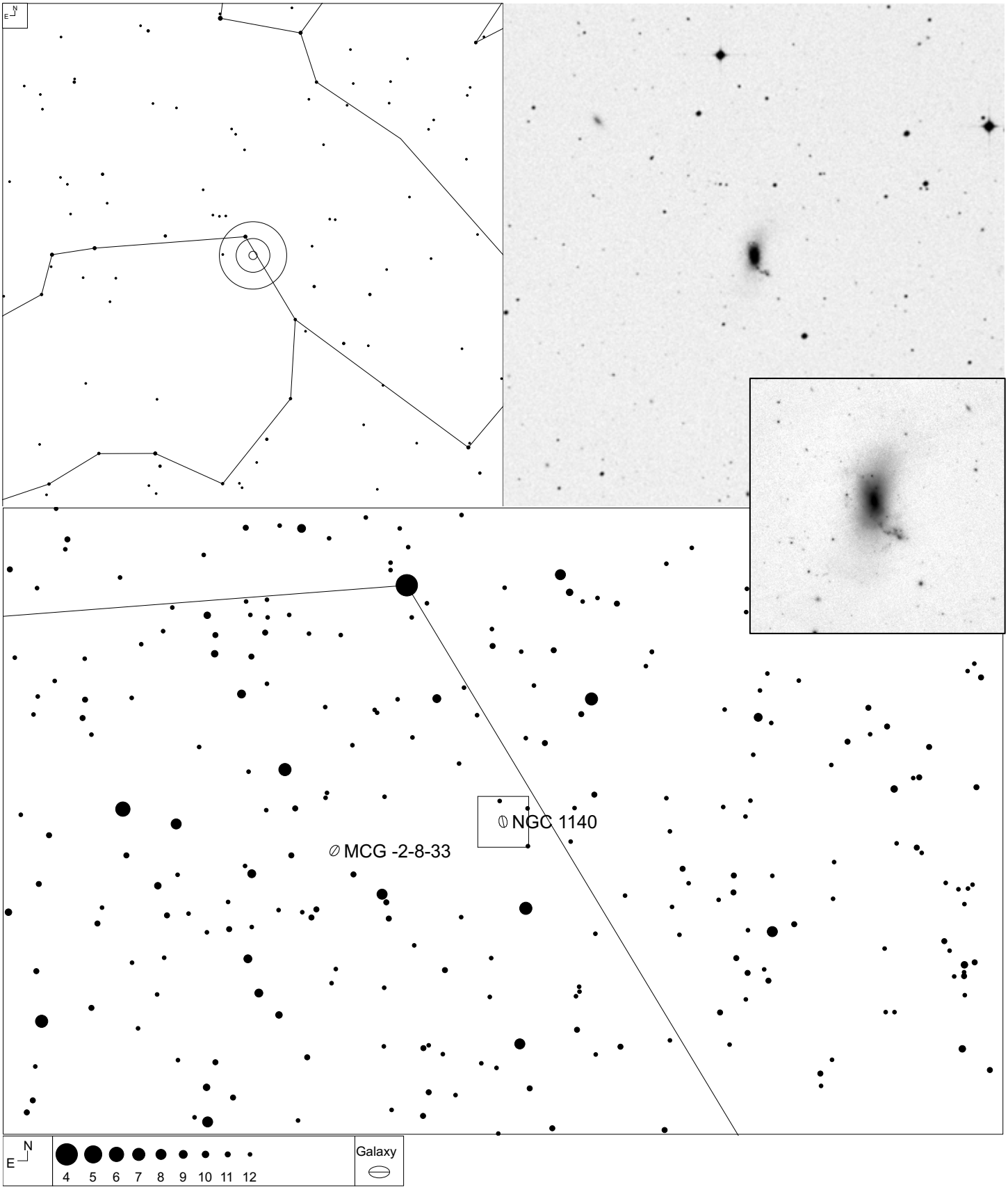
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
826	NGC 1672	04 45 42.1	-59 14 57	G	9.7v	6.6 x 5.5	Enat

VV 833 (Perseus)



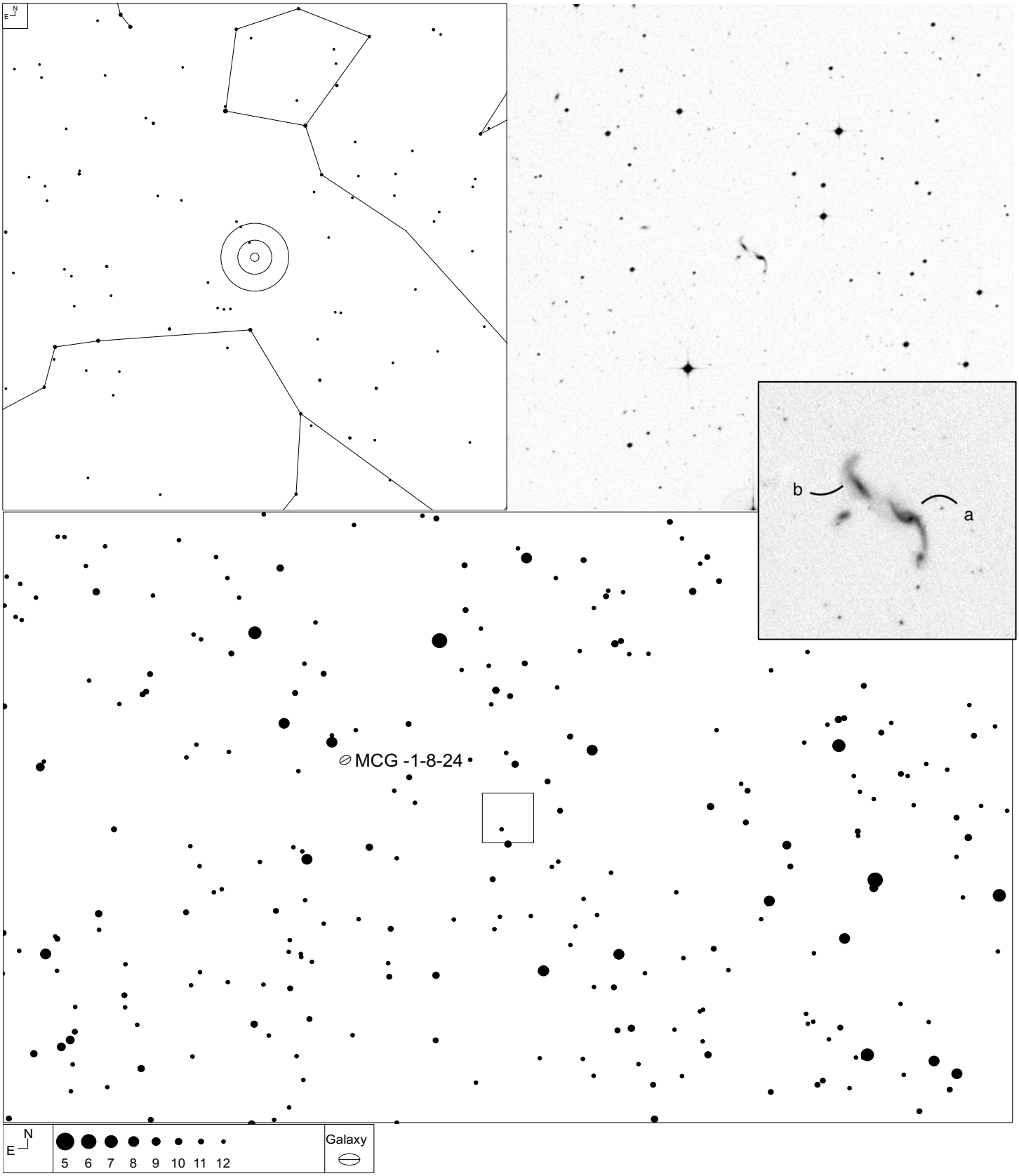
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
833	UGC 2565	03 10 10.0	+31 55 16	GPair	16.5b	1.1 x 0.9	Enat

VV 482 (Eridanus)



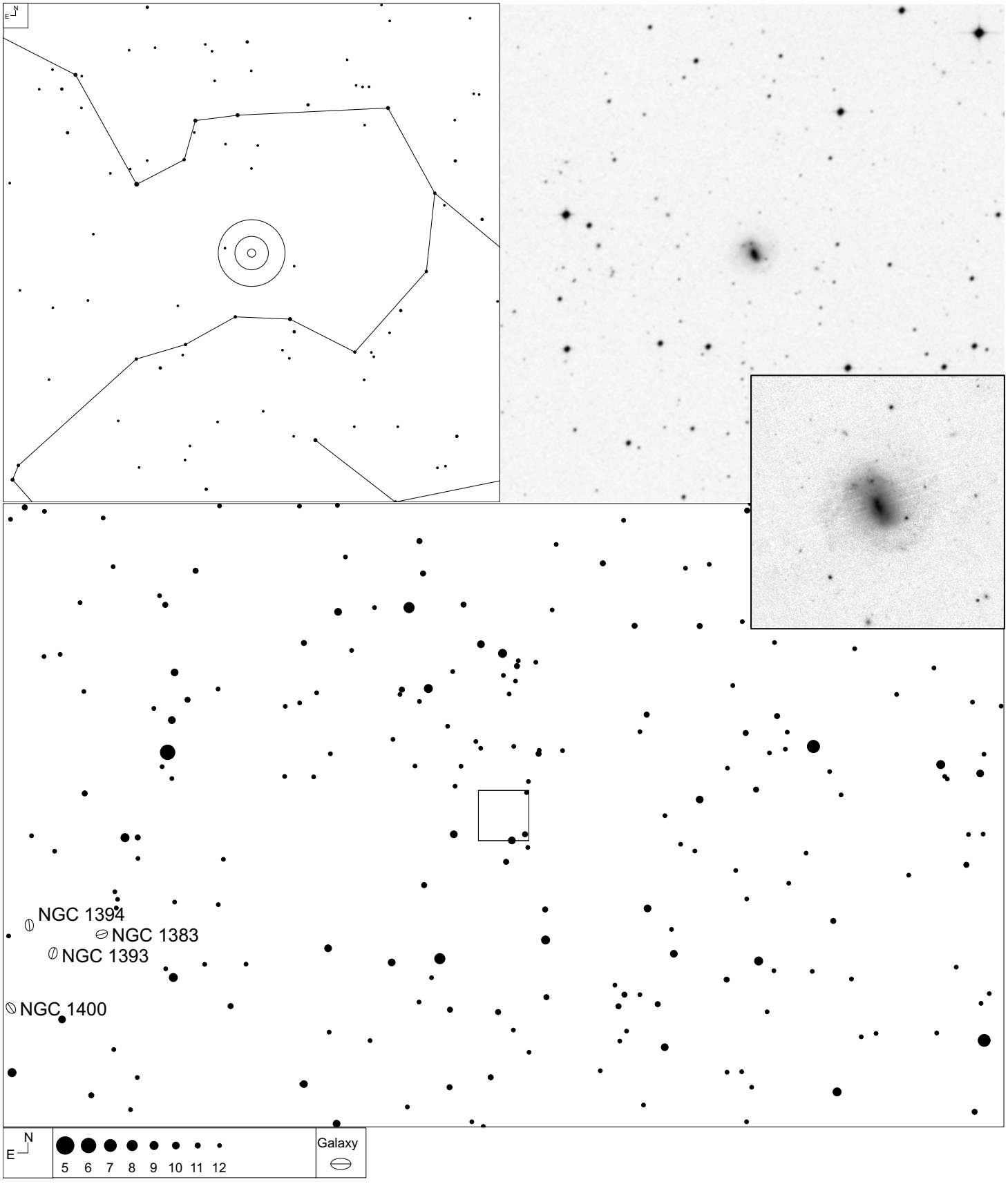
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
482	NGC 1140	02 54 33.6	-10 01 40	G	12.5v	1.7 x 0.9	M

VV 772 (Eridanus)



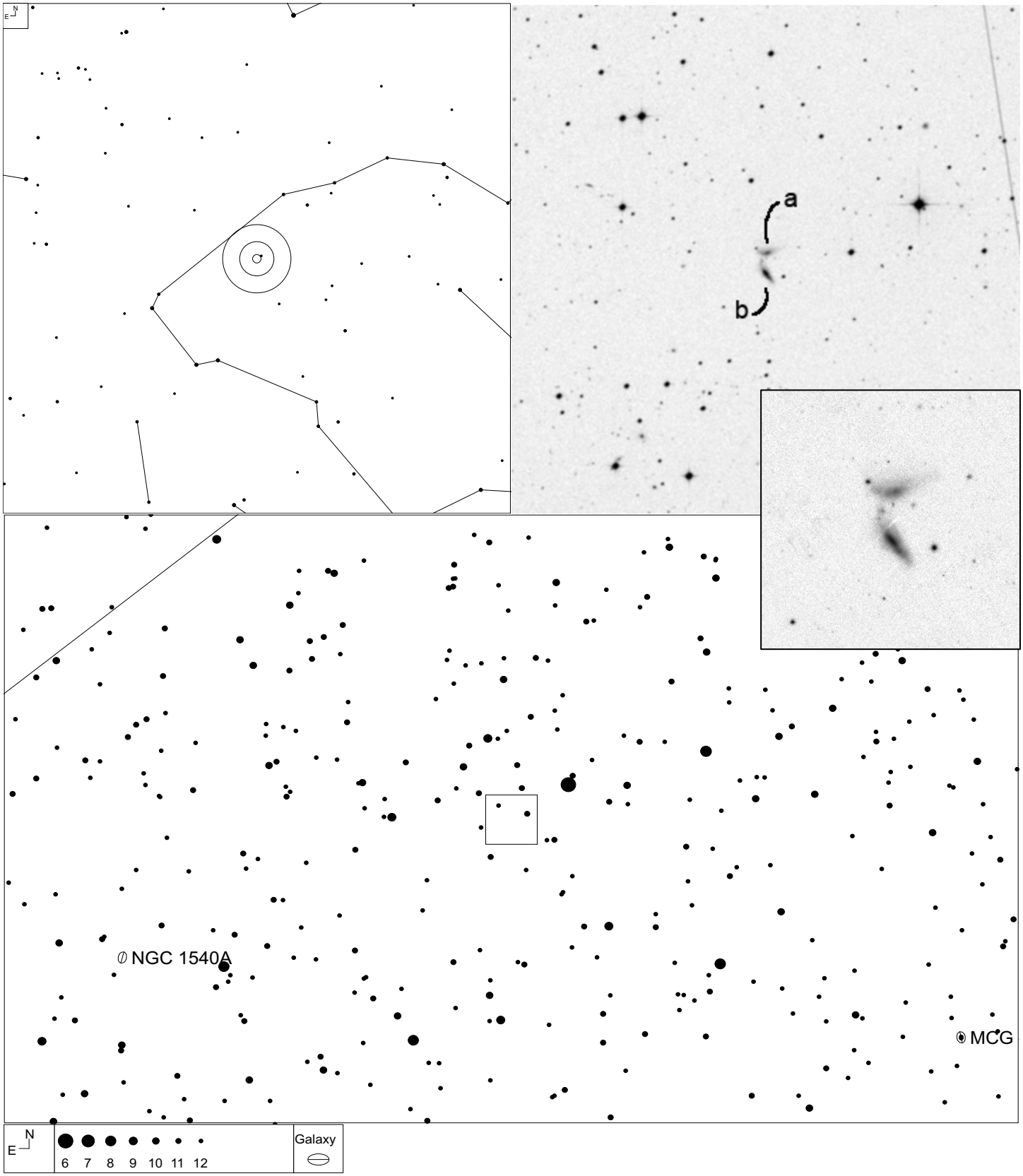
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
772		02 55 19.2	-04 34 50	GPair			PD
772a	MCG -01-08-016	02 55 18.1	-04 34 59	G	15.7g	0.8 x 0.4	
772b	MCG -01-08-017	02 55 20.3	-04 34 38	G	17.0b	0.4 x 0.2	

VV 690 (Eridanus)



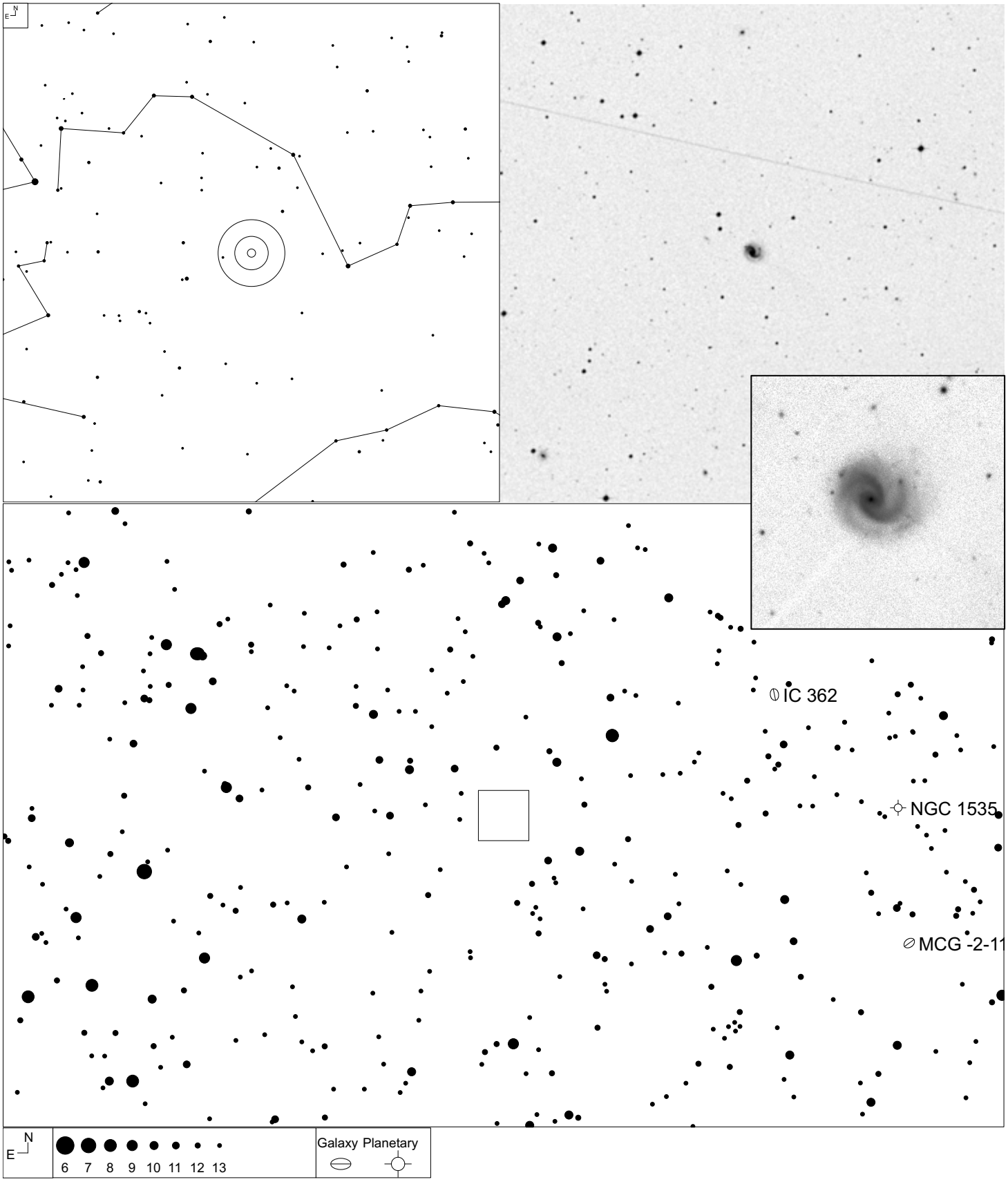
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
690	NGC 1345	03 29 31.9	-17 46 42	G	13.9g	1.5 x 1.1	N

VV 776 (Eridanus)



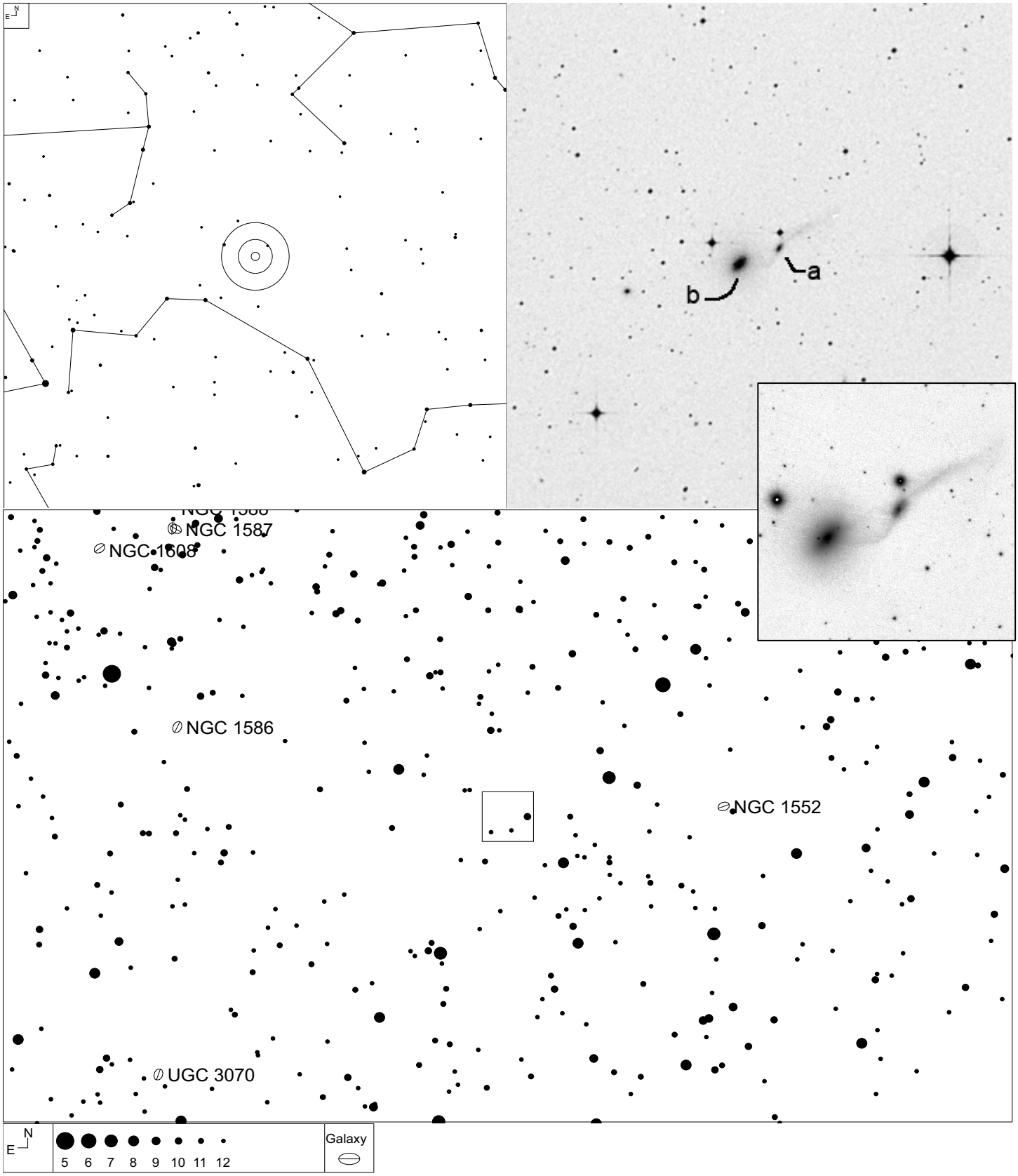
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
776		04 06 50.5	-27 49 28	GPair			PDb
776a	MCG -05-10-010	04 06 50.5	-27 49 14	G	16.3g	1.1 x 0.3	
776b	MCG -05-10-011	04 06 50.5	-27 49 51	G	15.4g	1.0 x 0.3	

VV 420 (Eridanus)



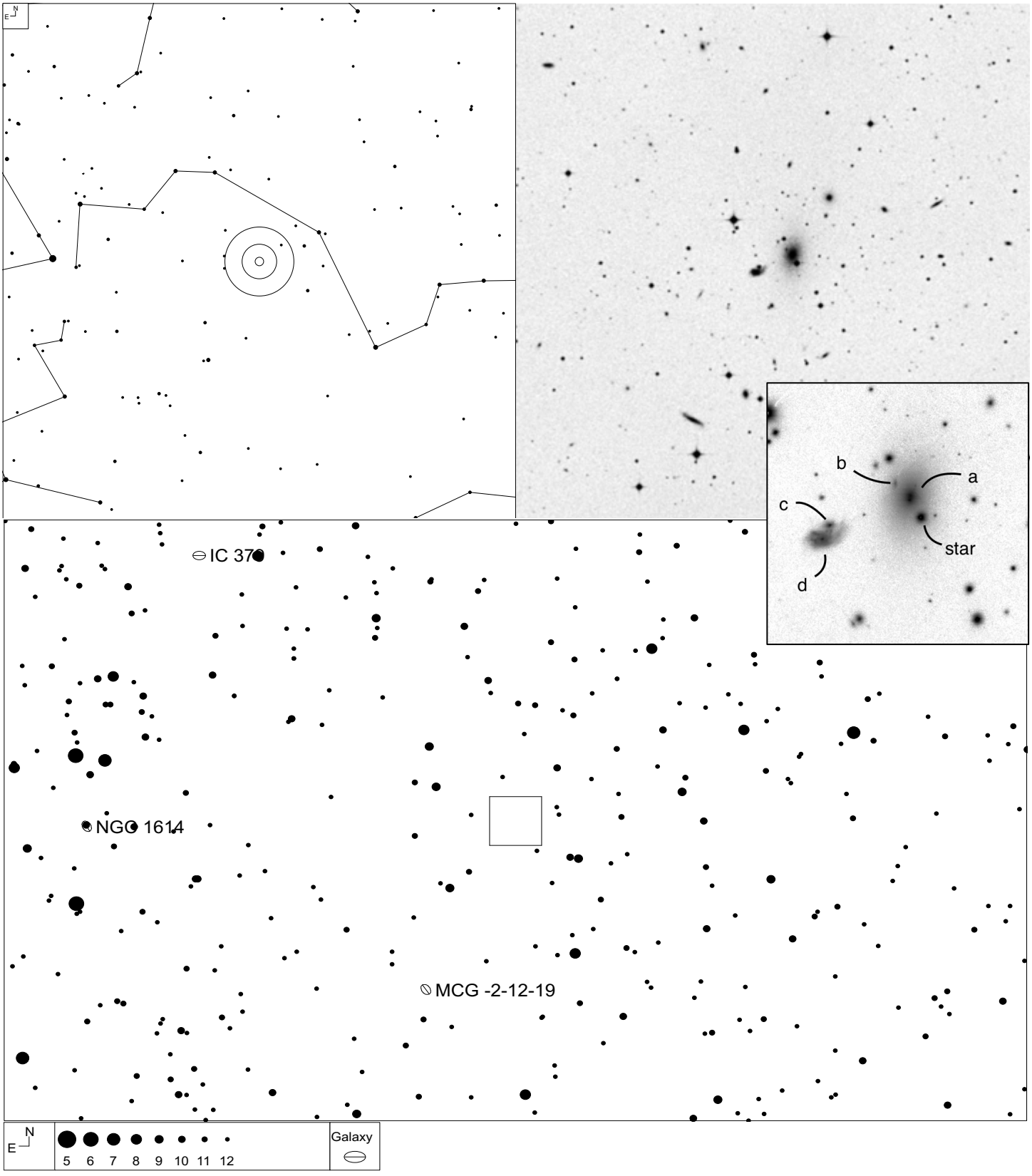
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
420	MCG -02-12-006	04 22 02.0	-12 47 09	G	14.5g	0.7 x 0.4	M

VV 809 (Eridanus)



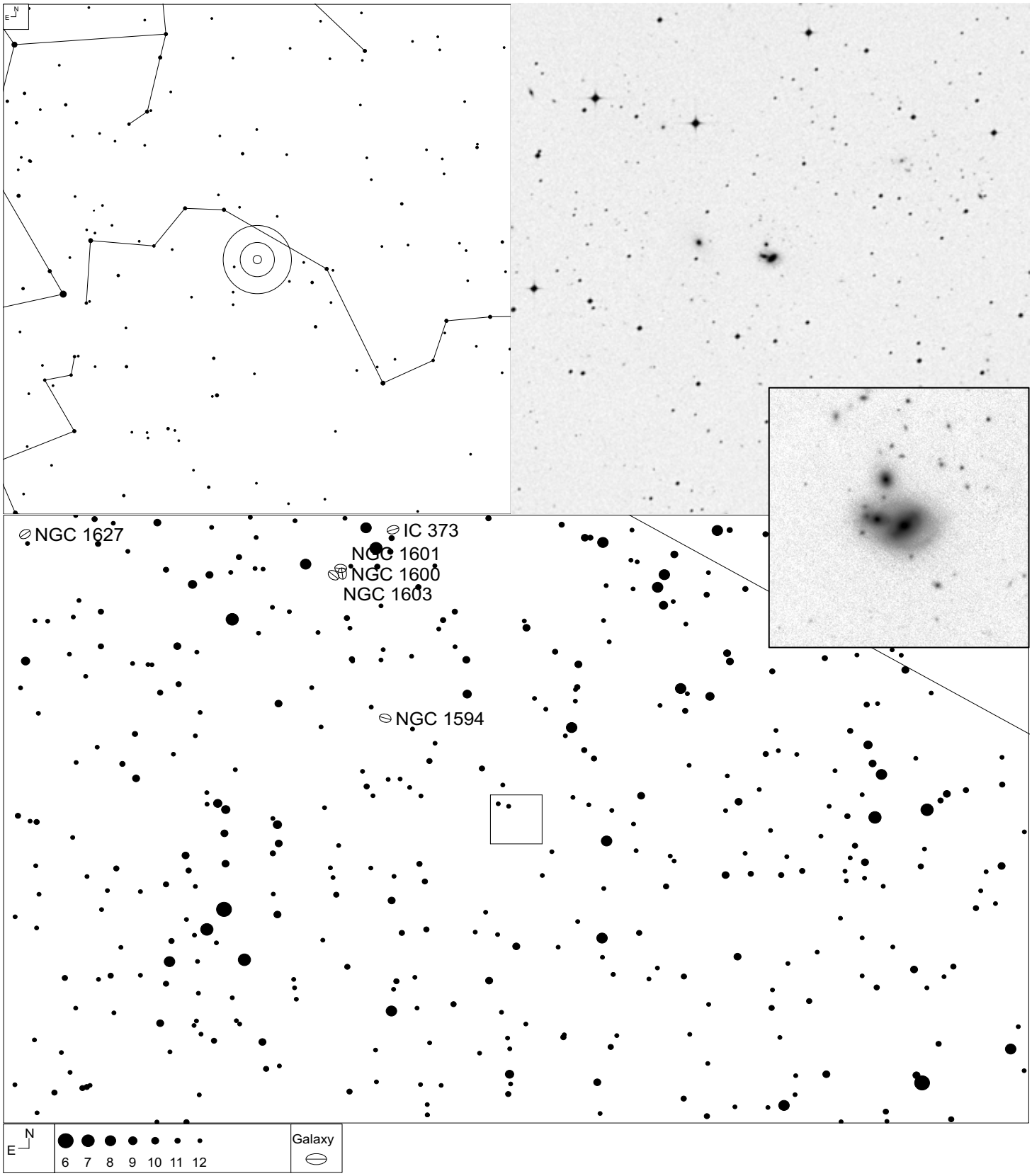
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
809		04 24 23.0	-00 44 33	GPair			PDbt
809a	NGC 1568A	04 24 20.6	-00 44 19	G	16.3g	1.6 x 0.5	
809b	NGC 1568	04 24 25.3	-00 44 47	G	13.9g	1.1 x 0.8	

VV 760 (Eridanus)



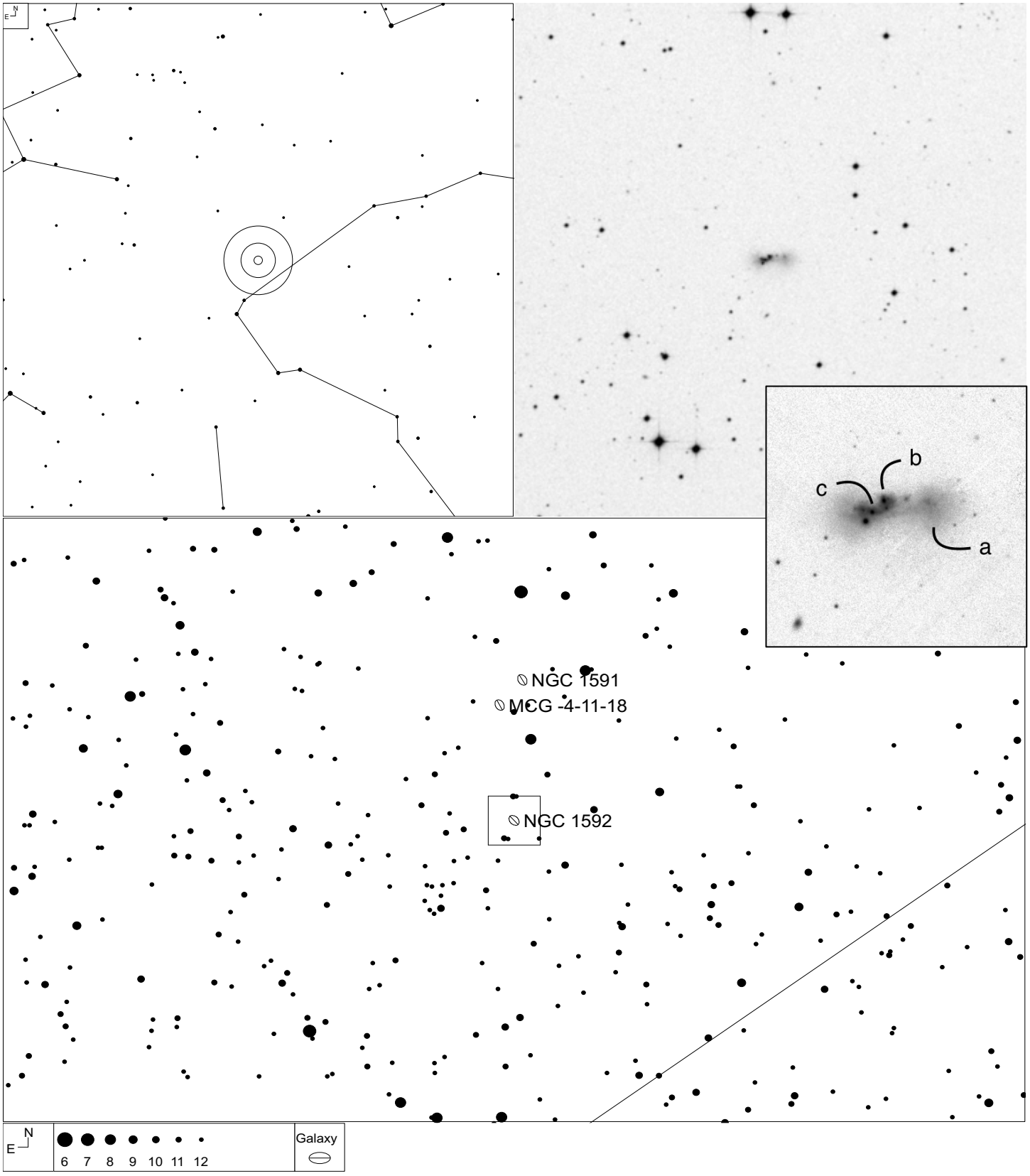
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
760		04 25 53.6	-08 33 49	GGroup			
760a	MCG -01-12-005	04 25 51.3	-08 33 39	G	14.5g	0.4 x 0.3	PK
760b		04 25 52.0	-08 33 29	G		-	
760c	MCG -01-12-006	04 25 55.2	-08 34 00	G	17.1g	0.7 x 0.4	PC
760d		04 25 55.8	-08 34 09	G			

VV 684 (Eridanus)



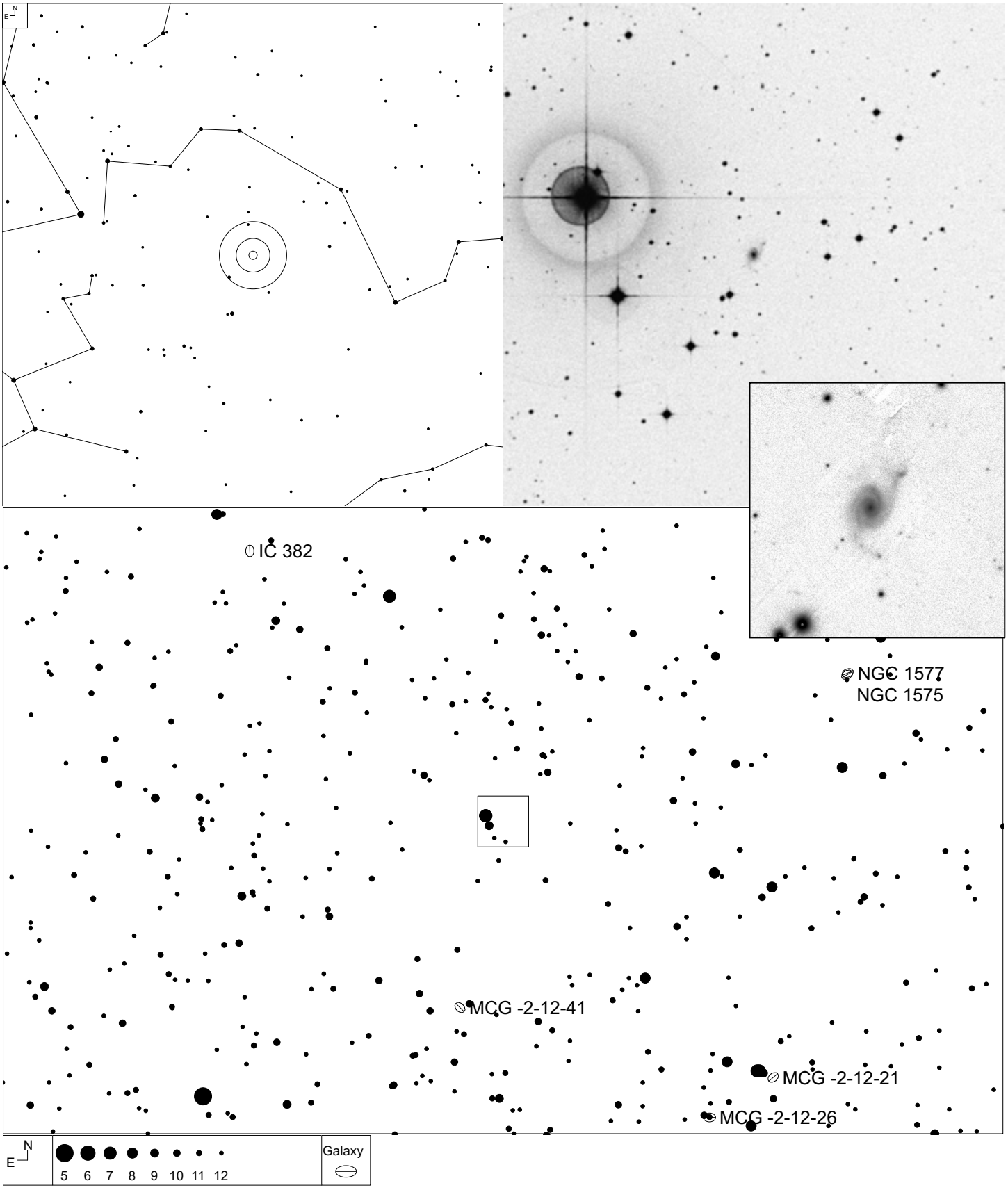
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
684	MCG -01-12-012	04 28 23.7	-06 17 53	GPair	14.6g	0.6 x 0.4	NNN

VV 647 (Eridanus)



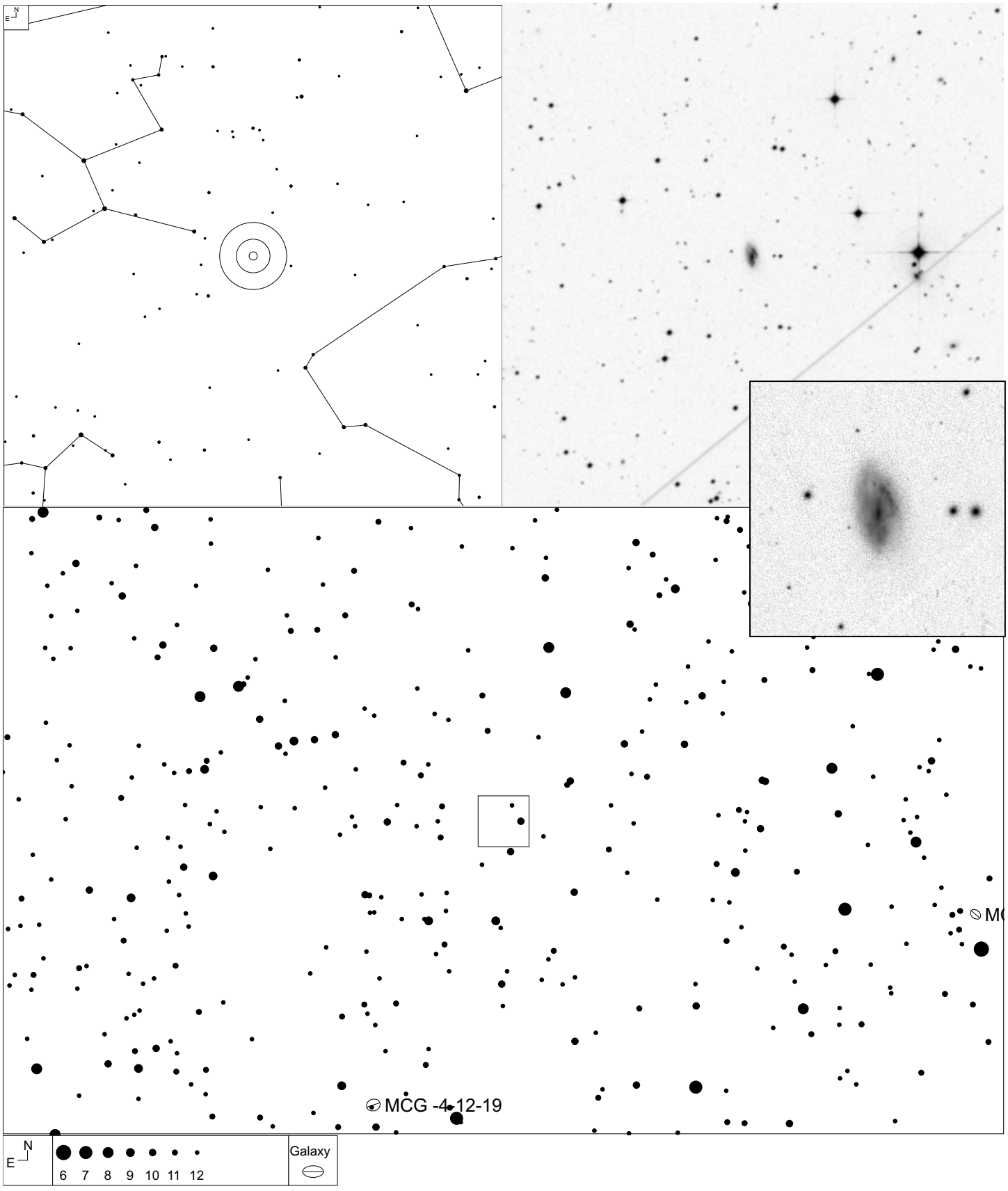
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
647		04 29 40.1	-27 24 31	G			N
647a	PGC 15285	04 29 37.7	-27 24 25	G	16.0g		
647b	NGC 1592	04 29 40.7	-27 24 25	G	14.1v	1.4 x 0.7	
647c		04 29 41.0	-27 24 32	G	14.5		

VV 468 (Eridanus)



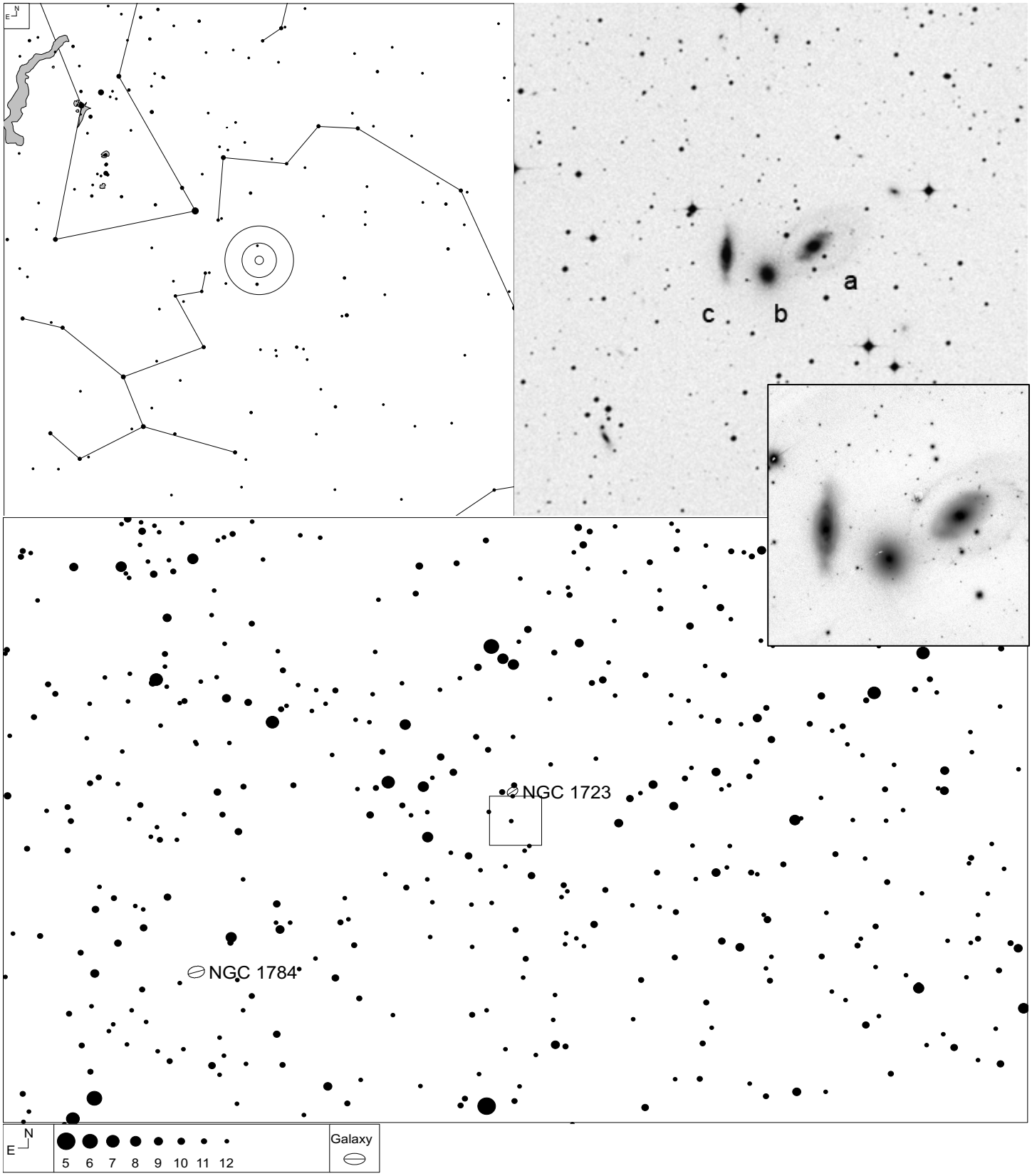
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
468	MCG -02-12-038	04 33 01.6	-10 48 46	G	15.5g	1.0 x 0.6	M

VV 725 (Eridanus)



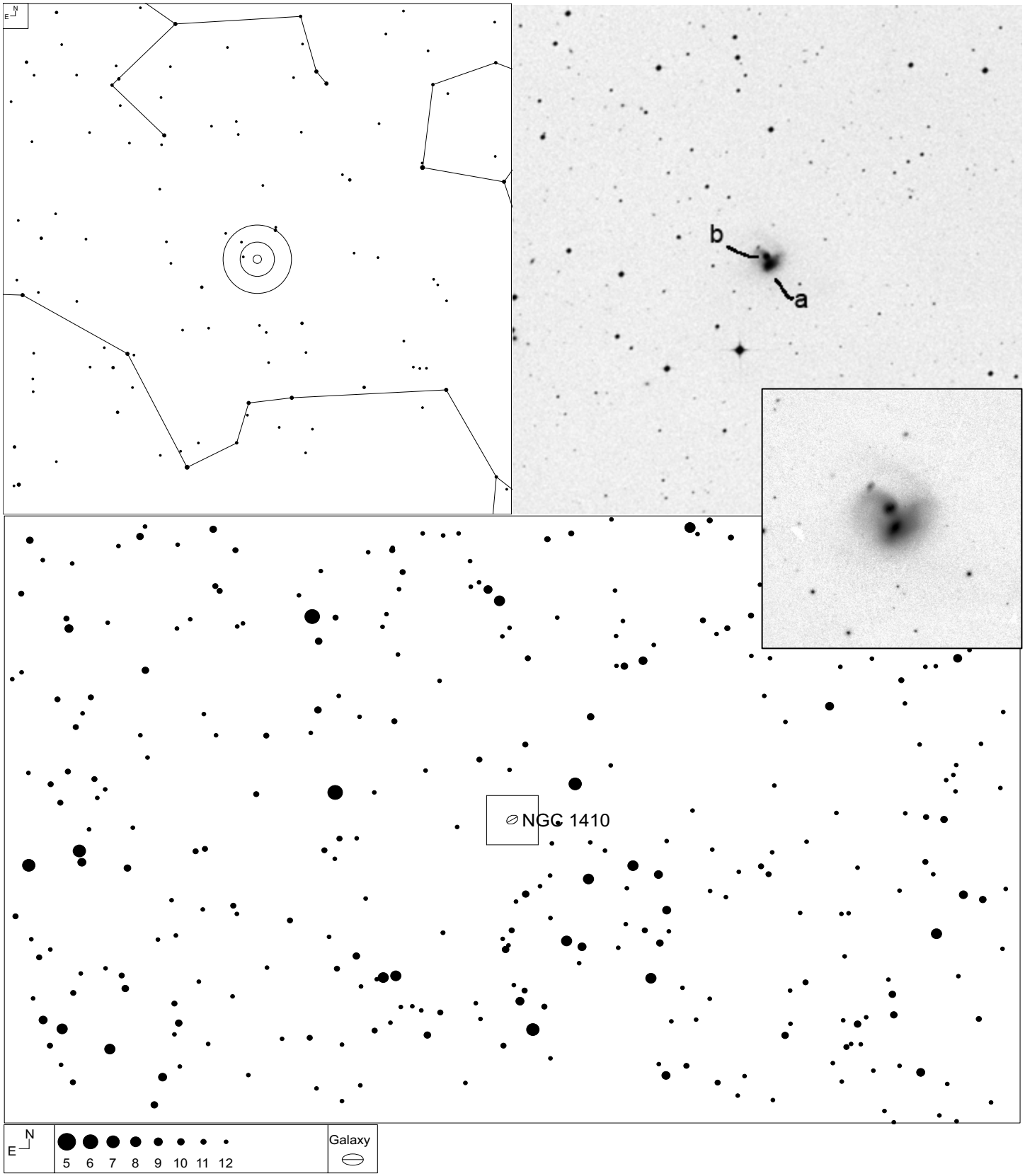
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
725	MCG -04-12-017	04 50 07.7	-23 53 30	G	14.8g	1.0 x 0.5	PC

VV 699 (Eridanus)



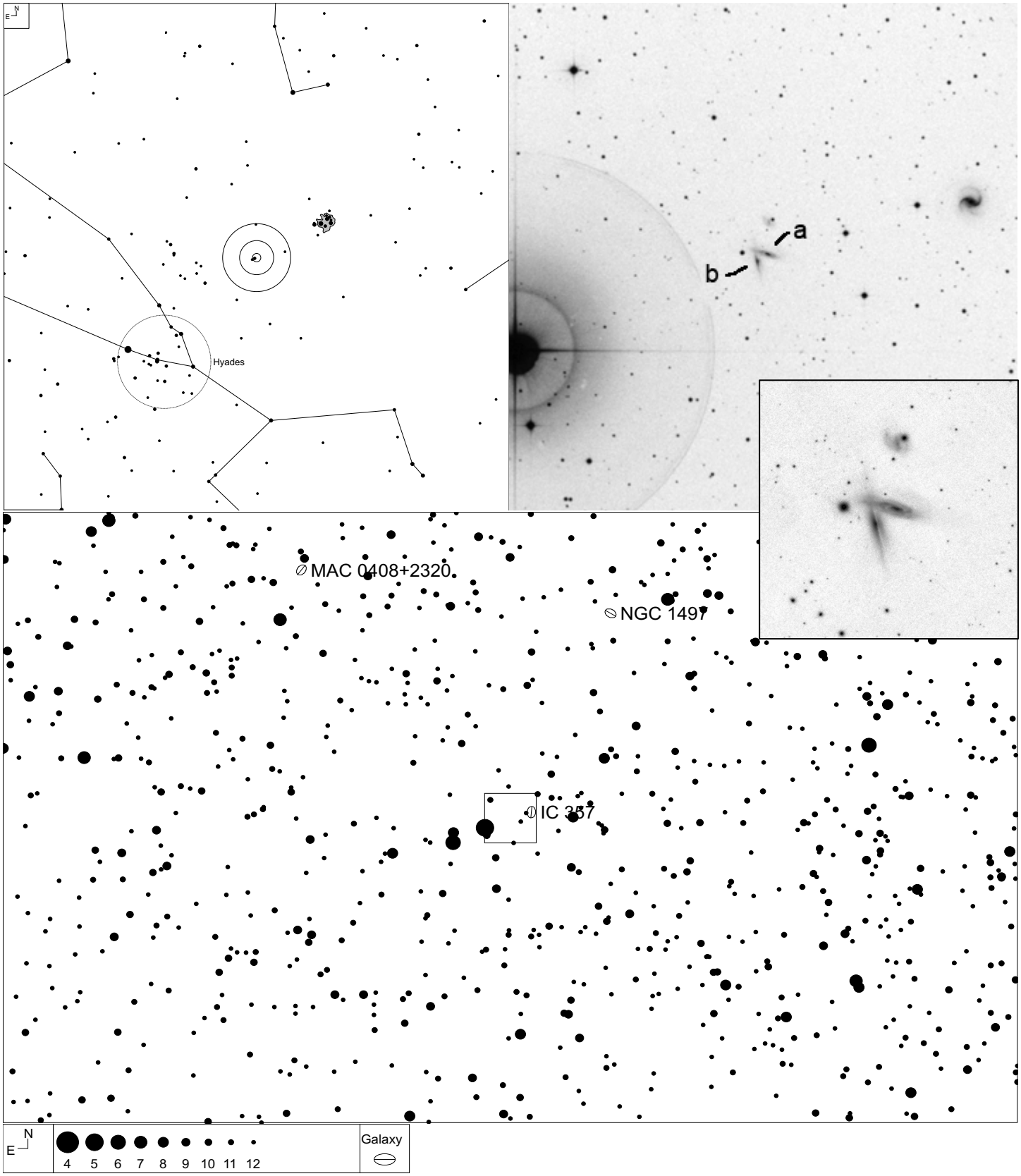
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
699		04 59 22.5	-11 07 32	GTrpl			NNN
699a	NGC 1721	04 59 17.6	-11 07 07	G	13.1g	2.1 x 1.0	
699b	NGC 1725	04 59 22.9	-11 07 58	G	13.4g	1.2 x 1.0	
699c	NGC 1728	04 59 27.7	-11 07 23	G	12.5g	2.0 x 0.7	

VV 729 (Taurus)



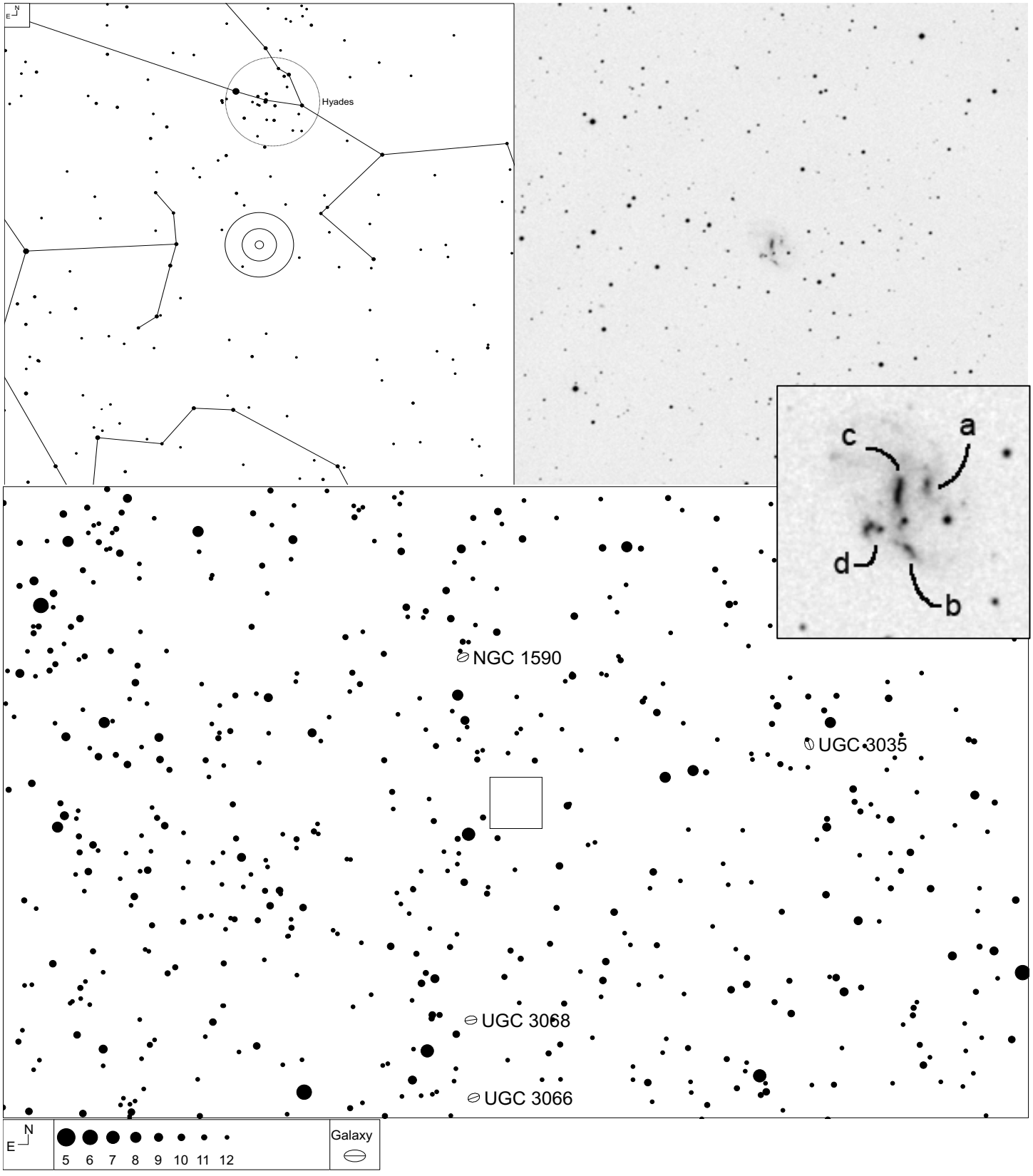
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
729		03 41 10.6	-01 18 03	GPair			PC
729a	NGC 1409	03 41 10.4	-01 18 09	G	14.7b	1.0 x 0.8	
729b	NGC 1410	03 41 10.8	-01 17 57	G	15.2v	1.2 x 1.2	

VV 777 (Taurus)



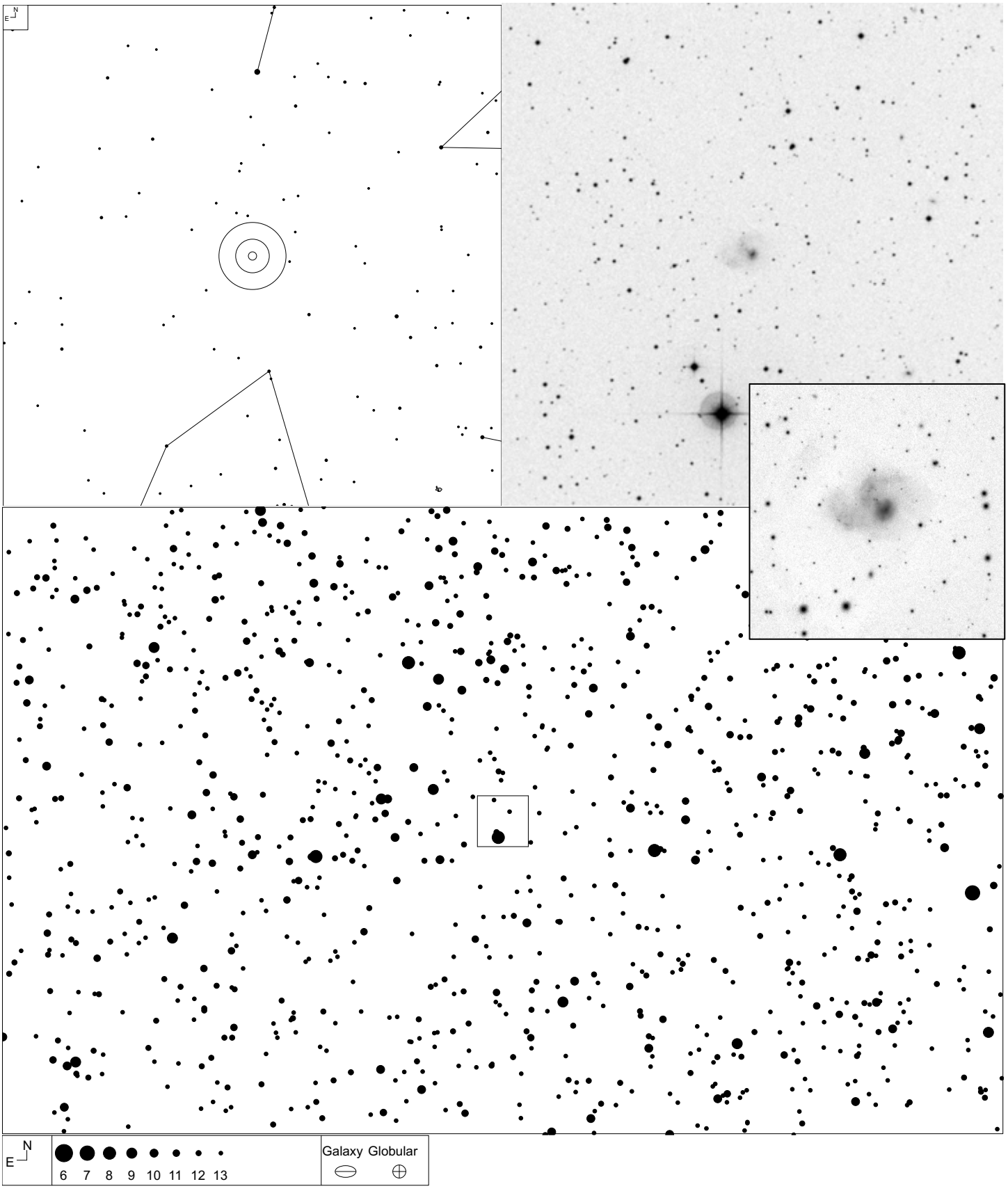
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
777		04 04 10.3	+22 07 47	GPair		1.3 x 1.1	PK
777a	UGC 2942	04 04 09.8	+22 07 54	G	15.7b		
777b	UGC 2943	04 04 11.1	+22 07 41	G	15.7b	1.1 x 0.1	

VV 555 (Taurus)



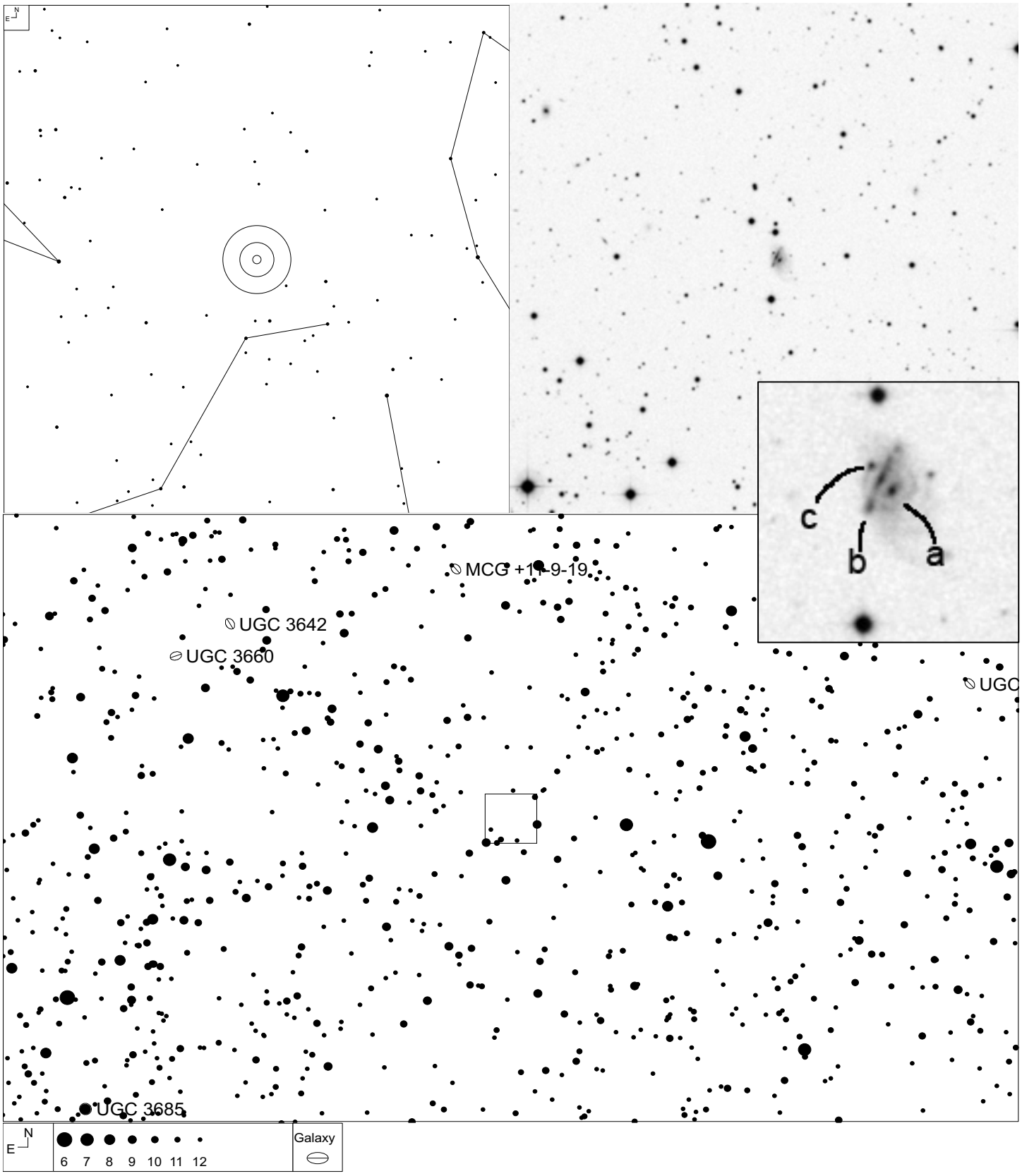
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
555	UGC 3061	04 30 10.9	+06 56 38	GGroup	15.5b	2.0 x 2.0	N

VV 793 (Camelopardalis)



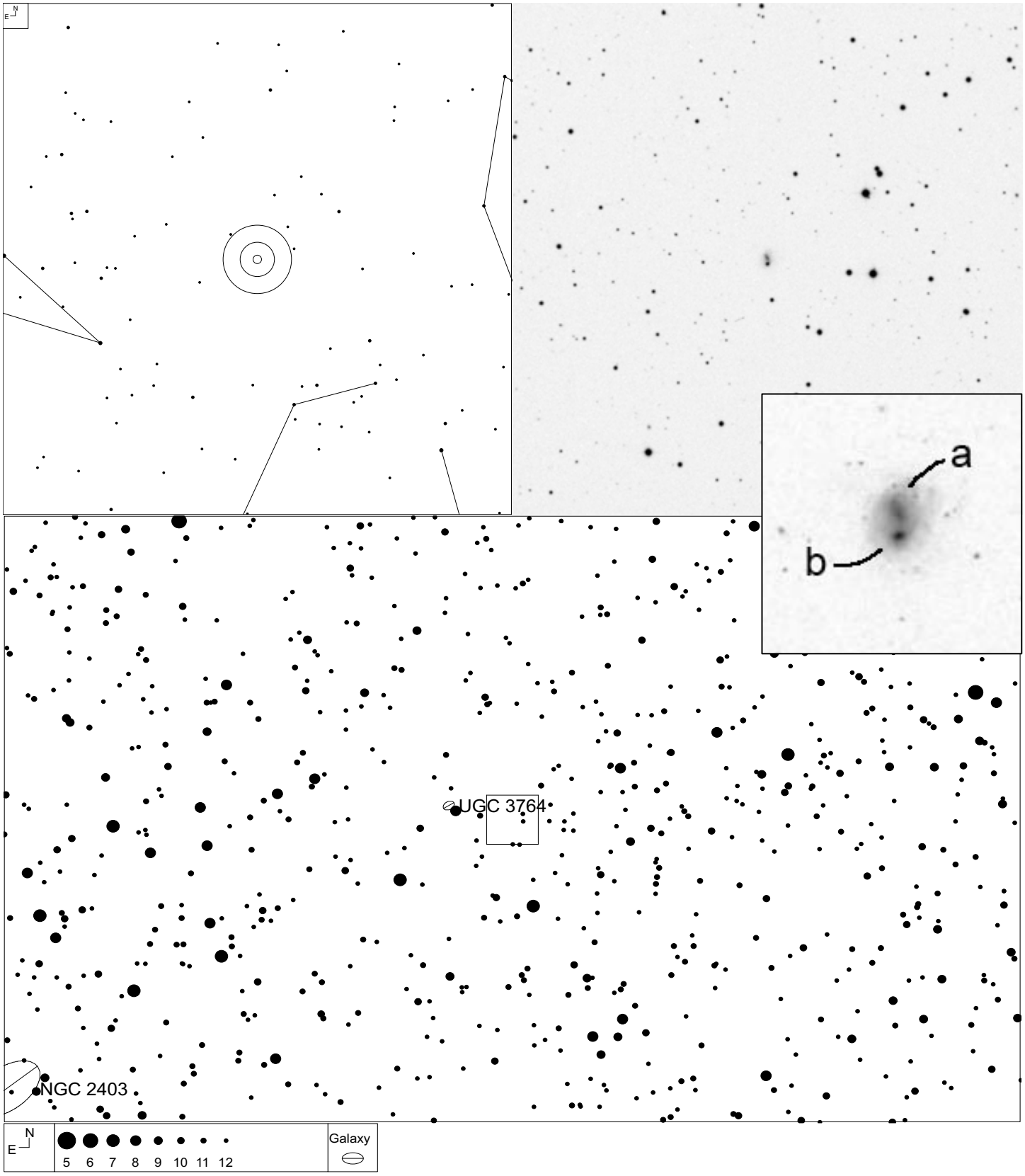
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
793	UGC 2907	04 02 39.6	+78 16 44	G	15.2b	2.1 x 1.2	N

VV 551 (Camelopardalis)



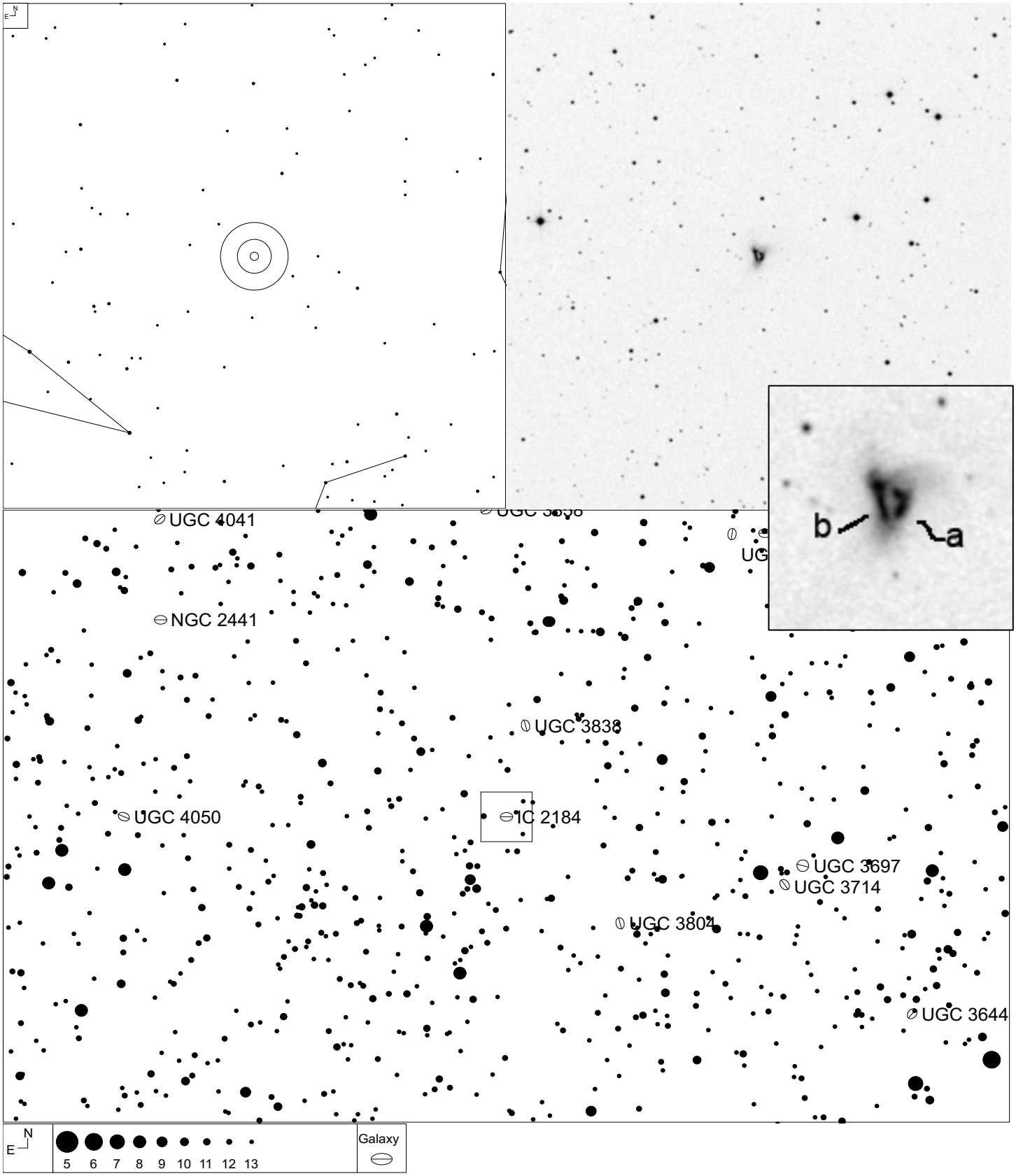
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
551		06 52 19.6	+63 05 26	GGroup			N
551a	*PGC 200227*	*06 52 15.8*	*+63 05 21*	*G*	*18.2g*		
551b	UGC 3563	06 52 16.6	+63 05 27	G	15.6b	1.2 x 0.7	
551c	*PGC 200228*	*06 52 17.4*	*+63 05 34*	*G*	*18.0g*		

VV 640 (Camelopardalis)



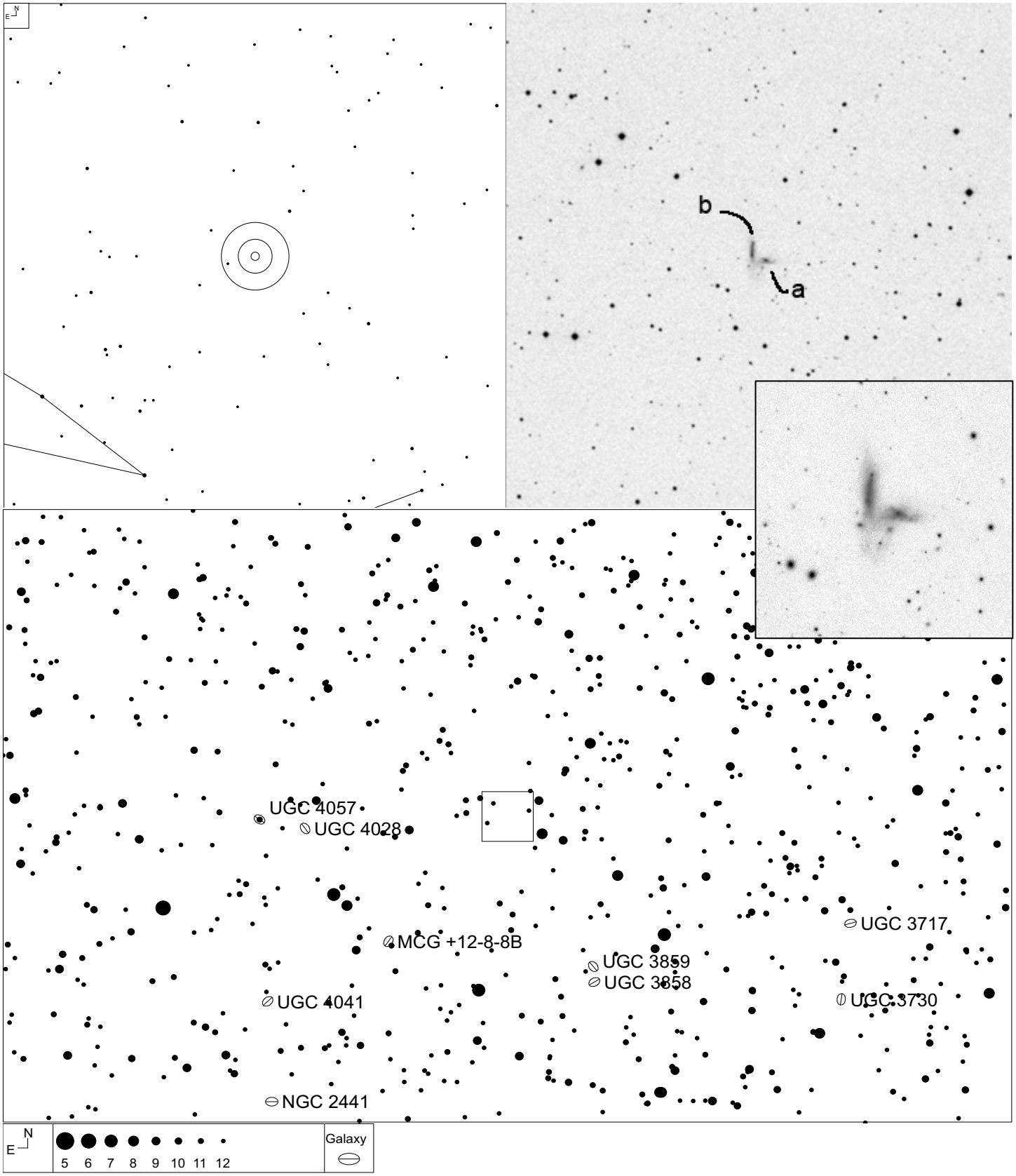
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
640	VV Zw 130 PGC 20442	07 13 47.9	+67 02 36	GPair	15.8g	0.6 x 0.3	N

VV 644 (Camelopardalis)



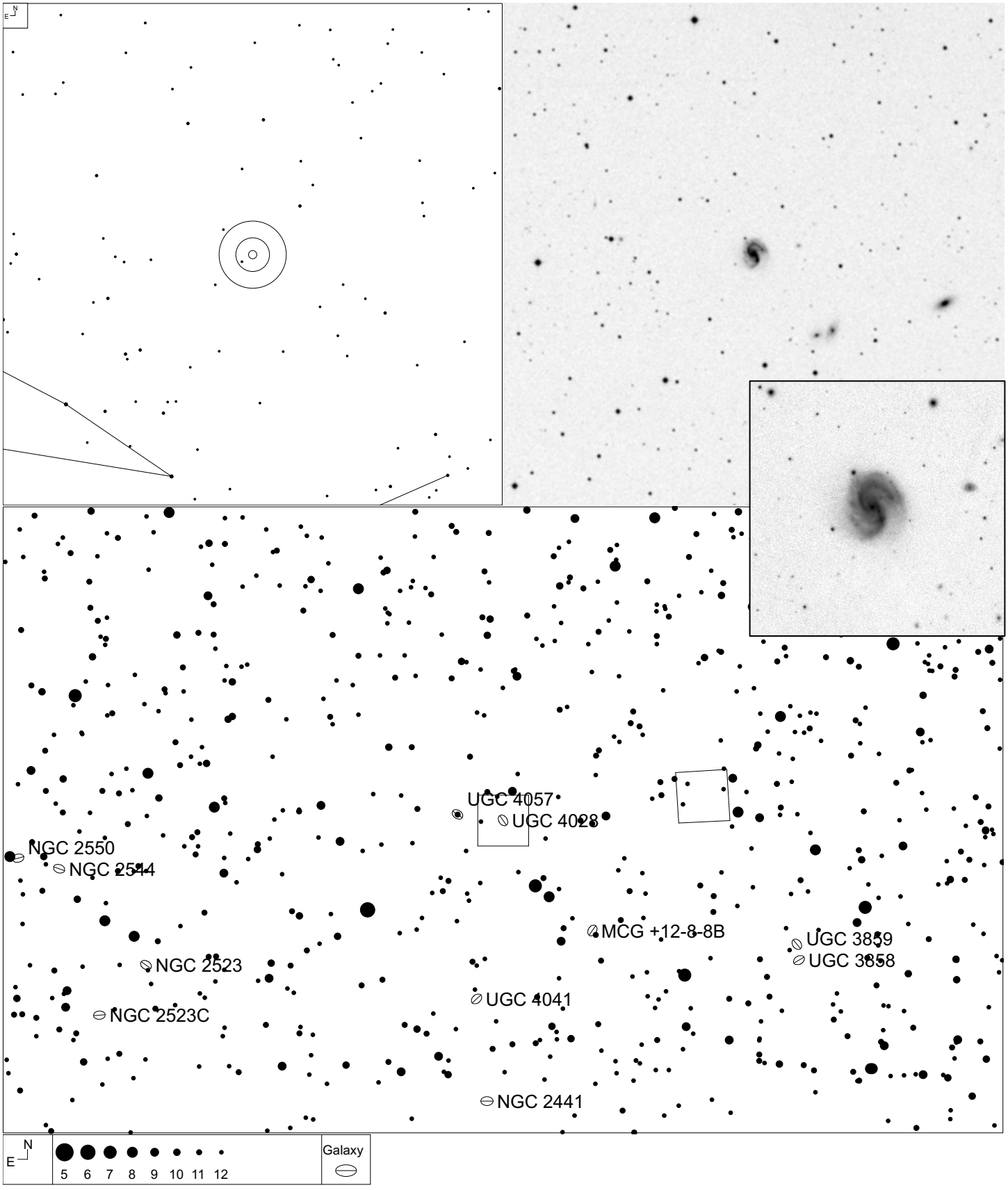
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
644	IC 2184	07 29 25.4	+72 07 44	GGroup	14.9g	0.8 x 0.6	PC

VV 539 (Camelopardalis)



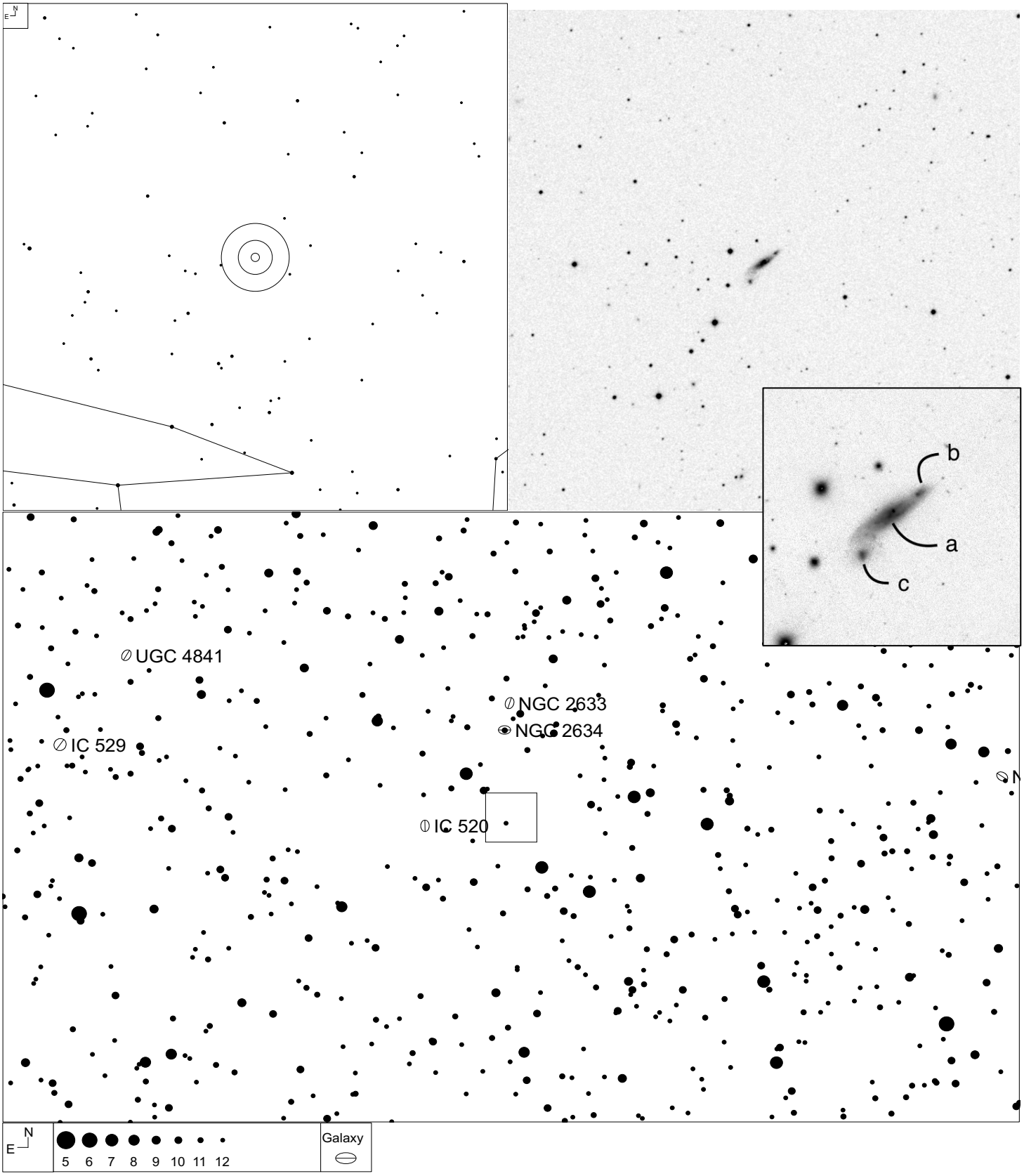
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
539		07 36 40.4	+74 26 54	GPair			PK
539a	UGC 3906	07 36 37.3	+74 26 46	G	14.8b	0.7 x 0.3	
539b	PGC 21386	07 36 43.4	+74 27 03	G	15.4g	0.9 x 0.2	

VV 439 (Camelopardalis)



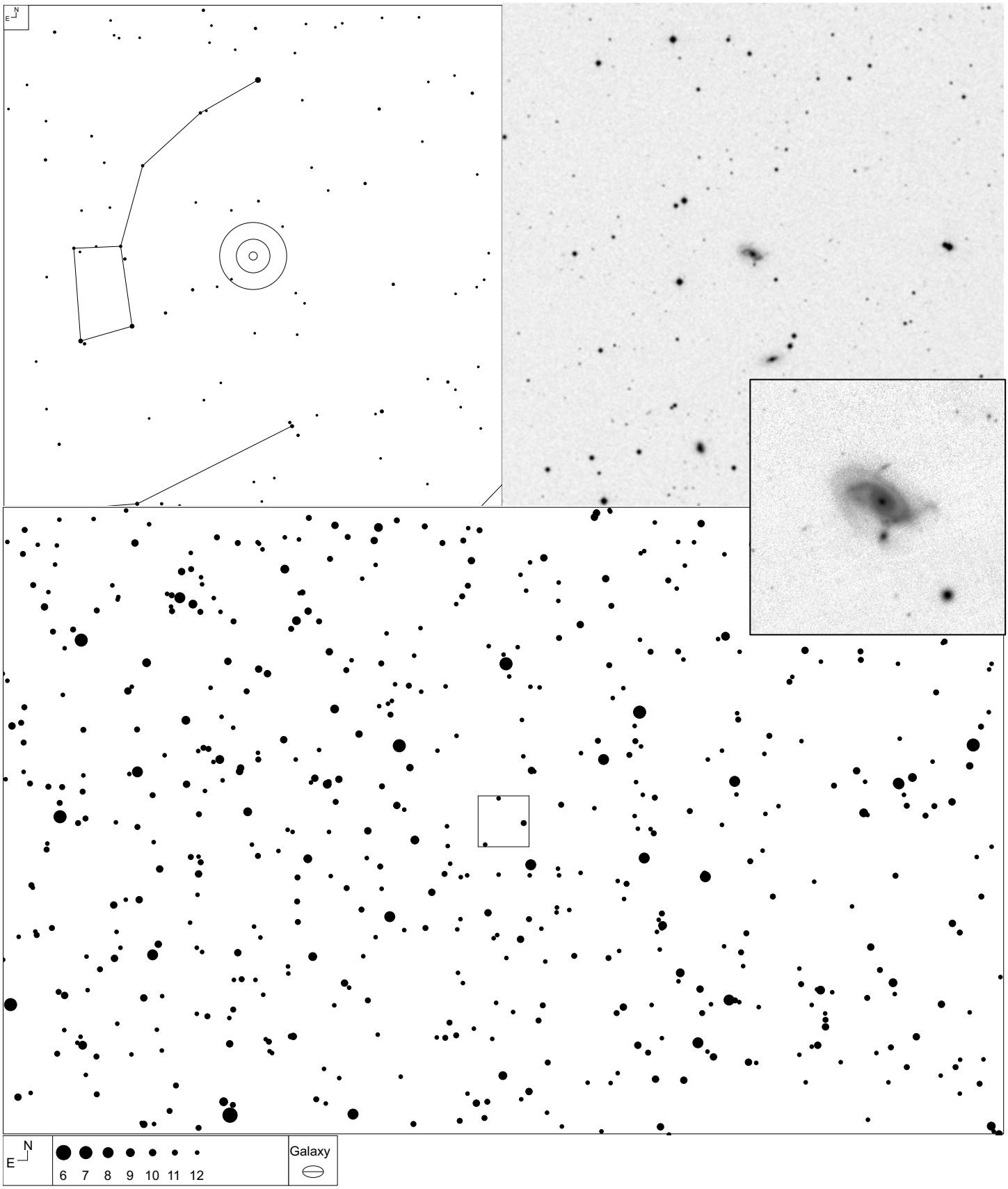
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
439	UGC 4028	07 50 49.9	+74 21 28	G	13.2g	1.1 x 0.9	M

VV 798 (Camelopardalis)



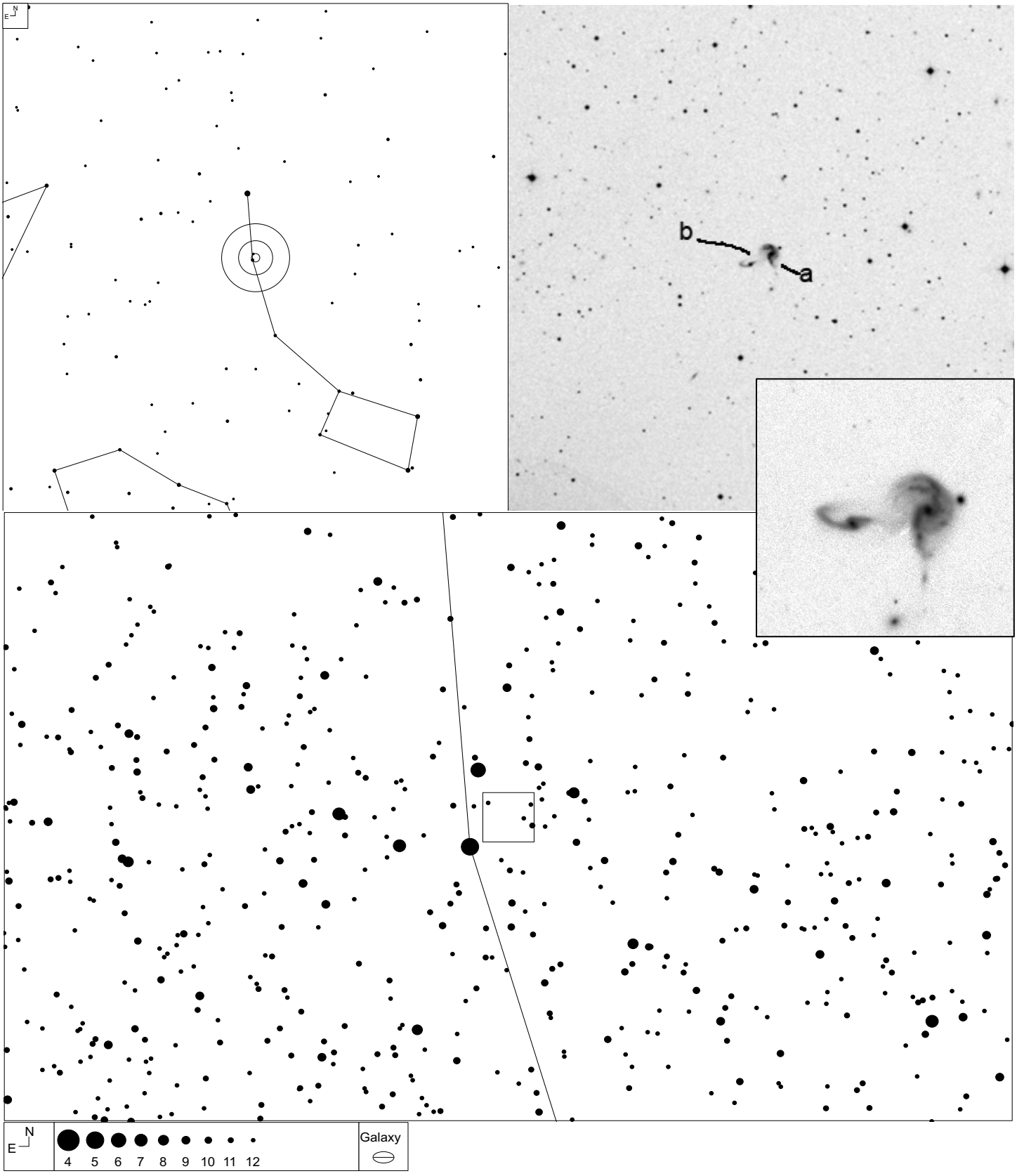
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
798	IC 2389	08 47 56.3	+73 32 16	GPair	14.1g	0.9 x 0.3	K

VV 365 (Camelopardalis)



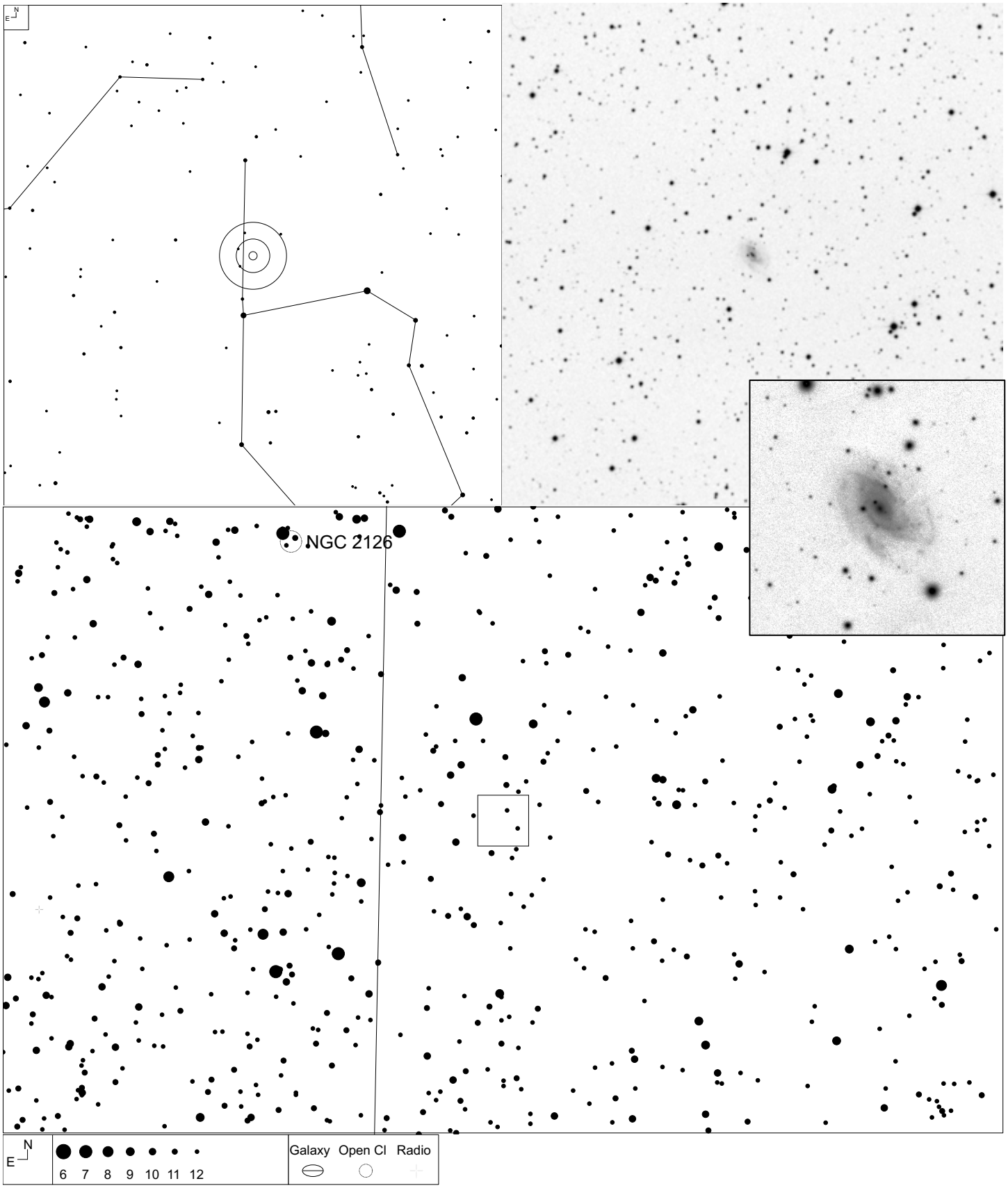
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
365	UGC 8148	13 00 22.0	+80 07 18	G	14.5g	1.1 x 0.6	MMM

VV 706 (Ursa Minor)



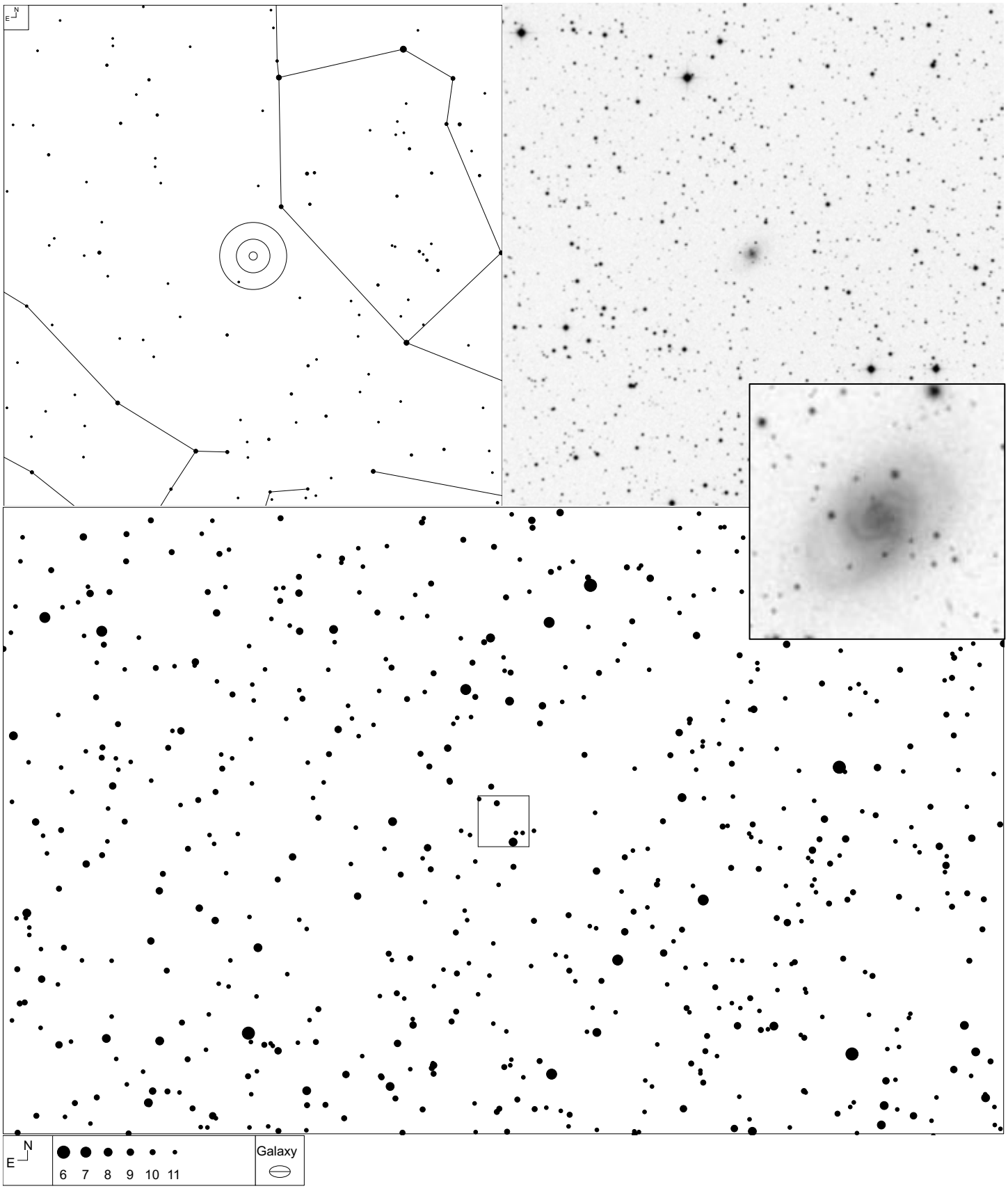
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
706		17 19 53.0	+86 44 15	GPair			NNNP
706a	UGC 10923	17 19 31.4	+86 44 18	G	14.3b	1.2 x 0.7	
706b	MCG+14-08-025	17 20 17.5	+86 44 11	G	17.0b	0.5 x 0.3	

VV 601 (Auriga)



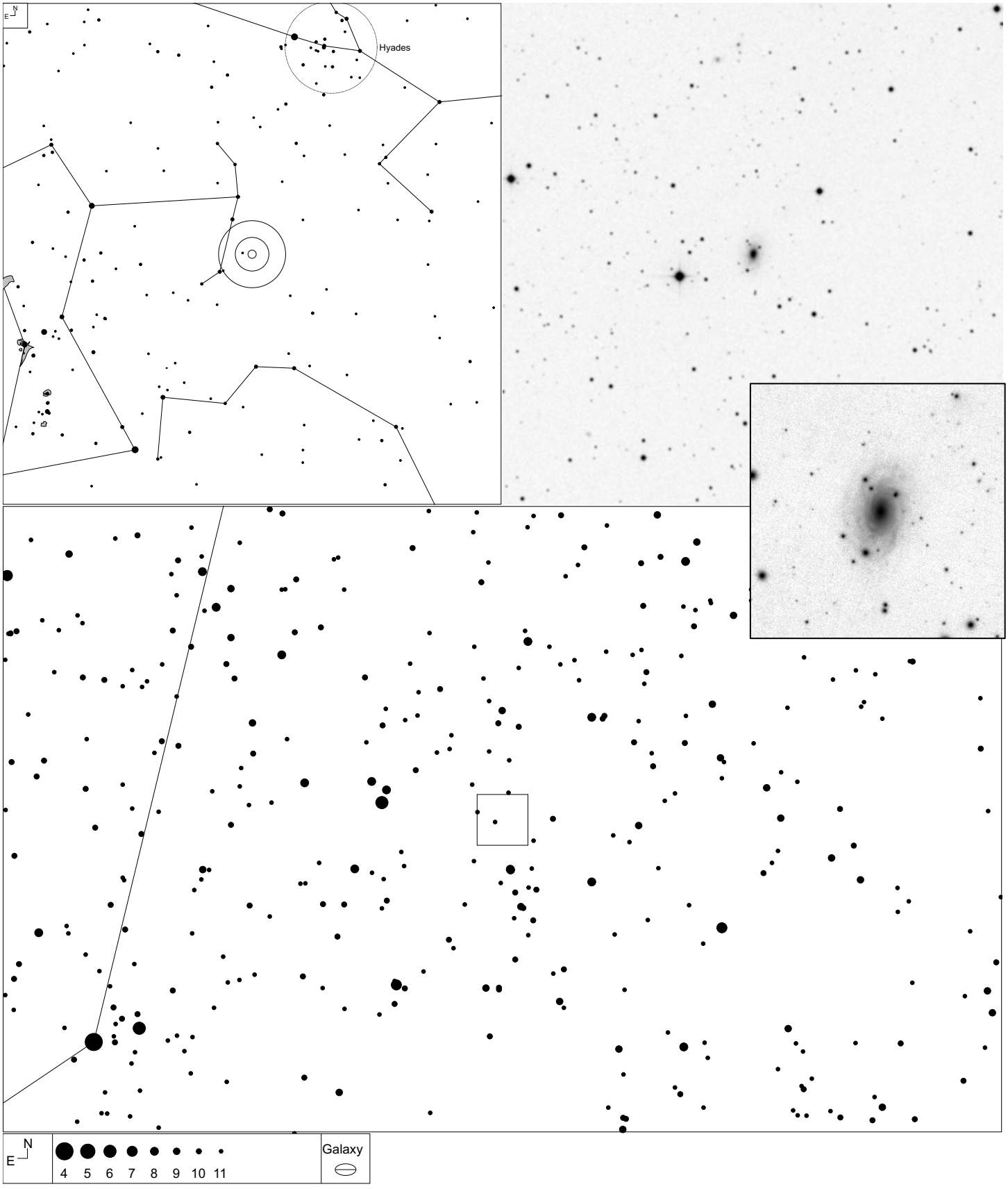
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
601	MCG +08-11-012	05 56 16.5	+48 32 37	G	15.7b	1.0 x 1.0	N

VV 596 (Auriga)



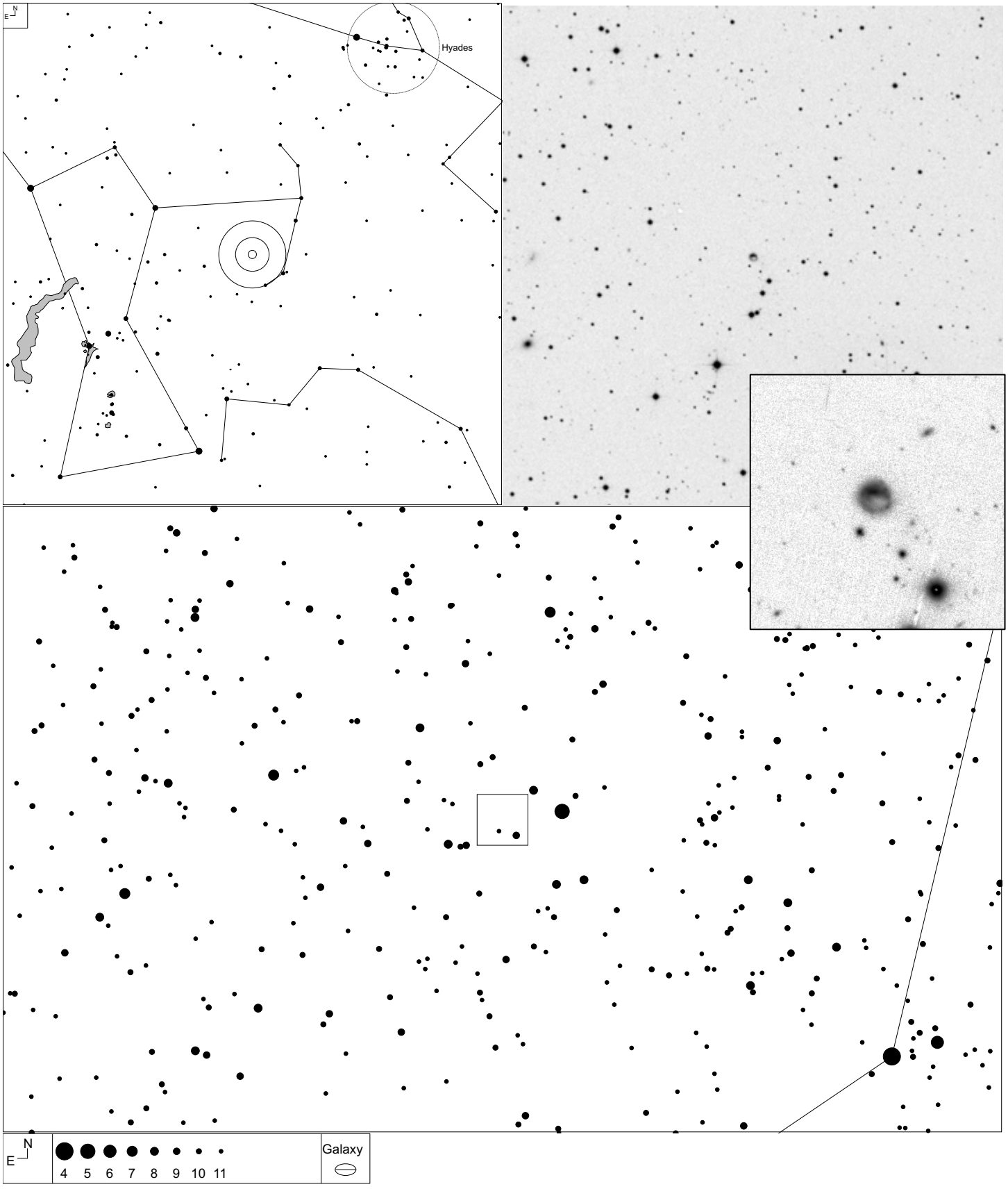
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
596	MCG +06-14-002	06 08 10.9	+34 15 49	G*	17.0b	0.5 x 0.5	N

VV 665 (Orion)



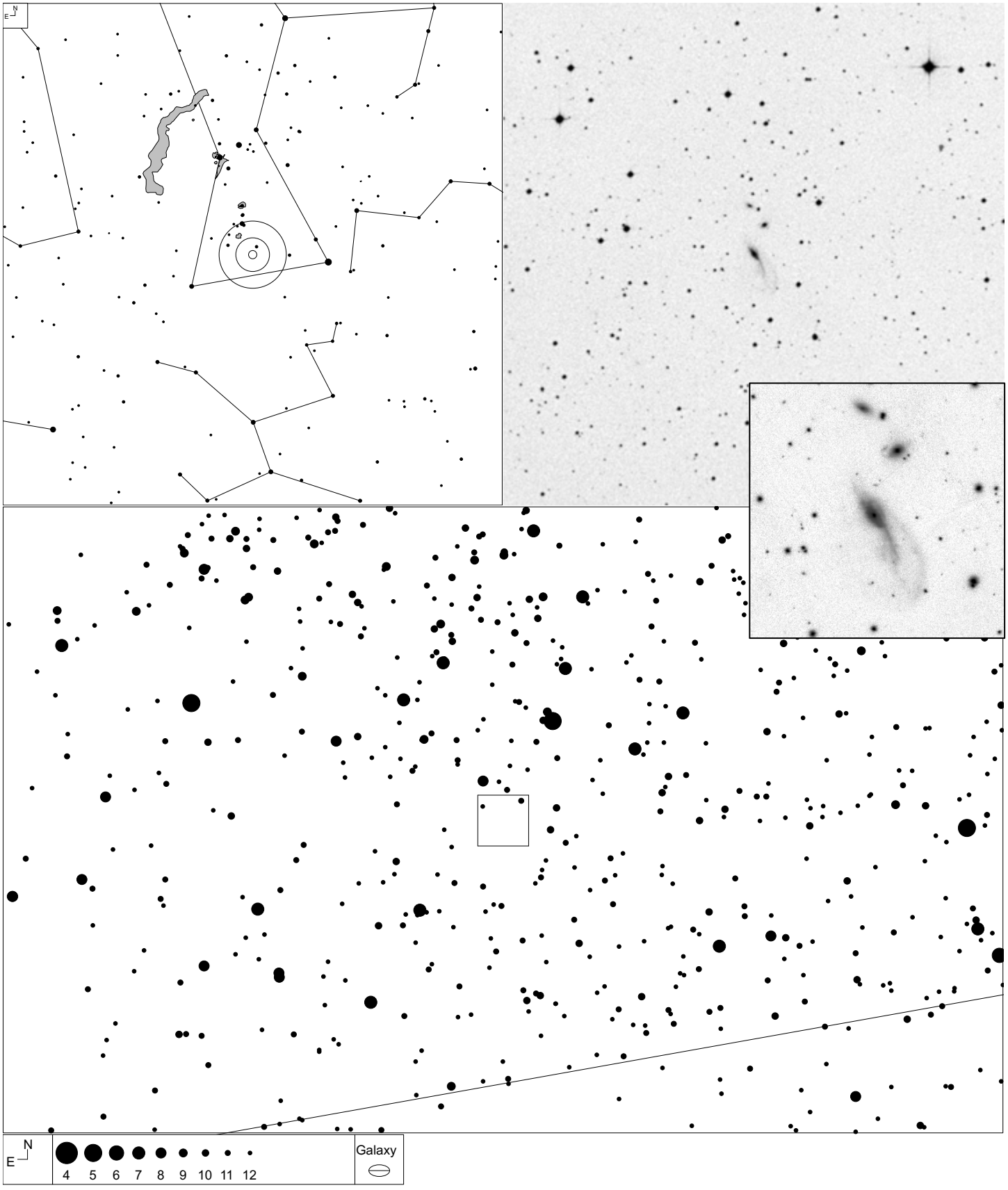
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
665	IC 392	04 46 25.8	+03 30 20	G	14.8	1.6 x 1.2	NN

VV 790B (Orion)



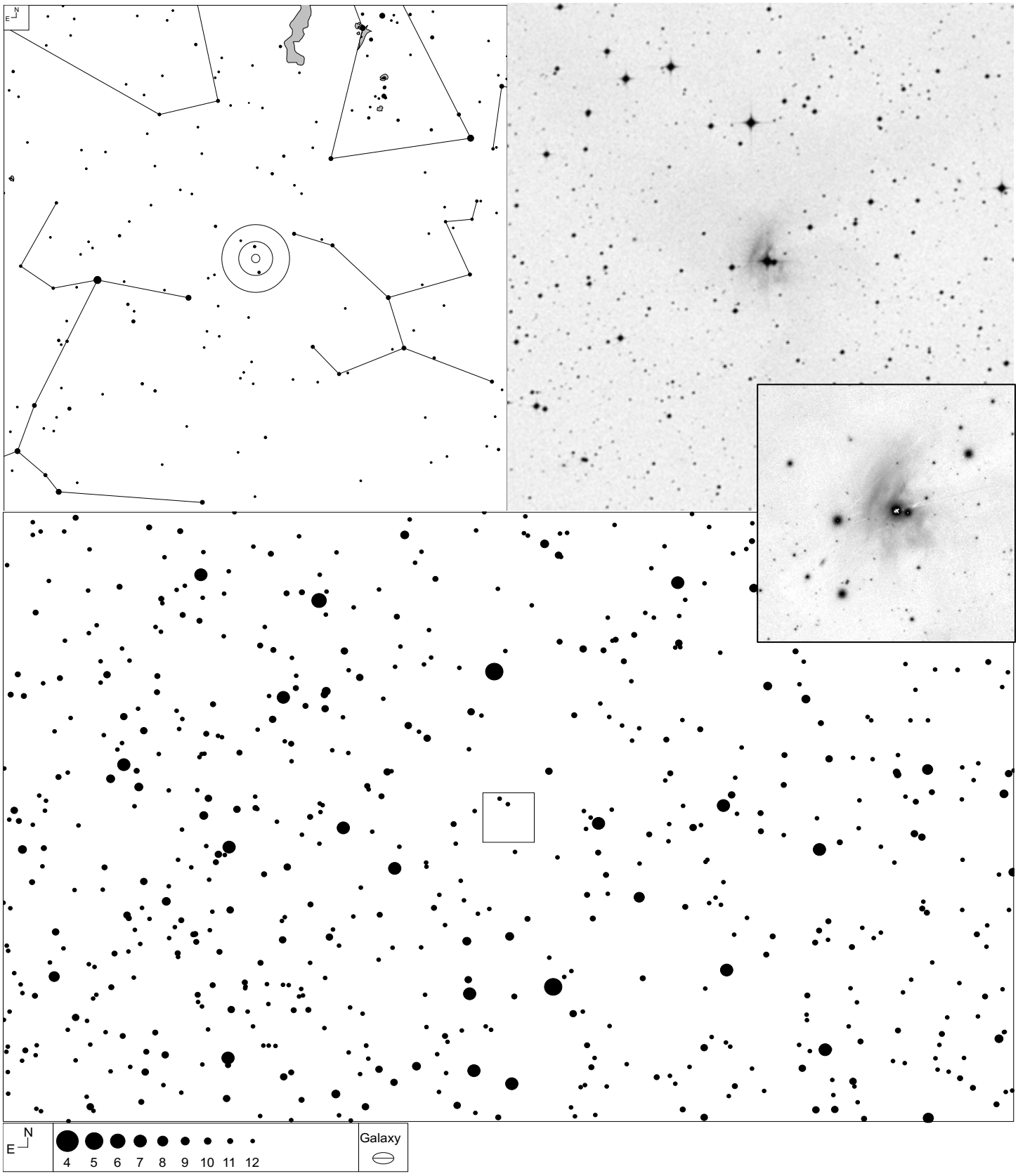
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
790B	MCG +01-13-(013a)	05 01 42.0	+03 34 28	G	14.9b	0.3 x 0.3	R

VV 848 (Orion)



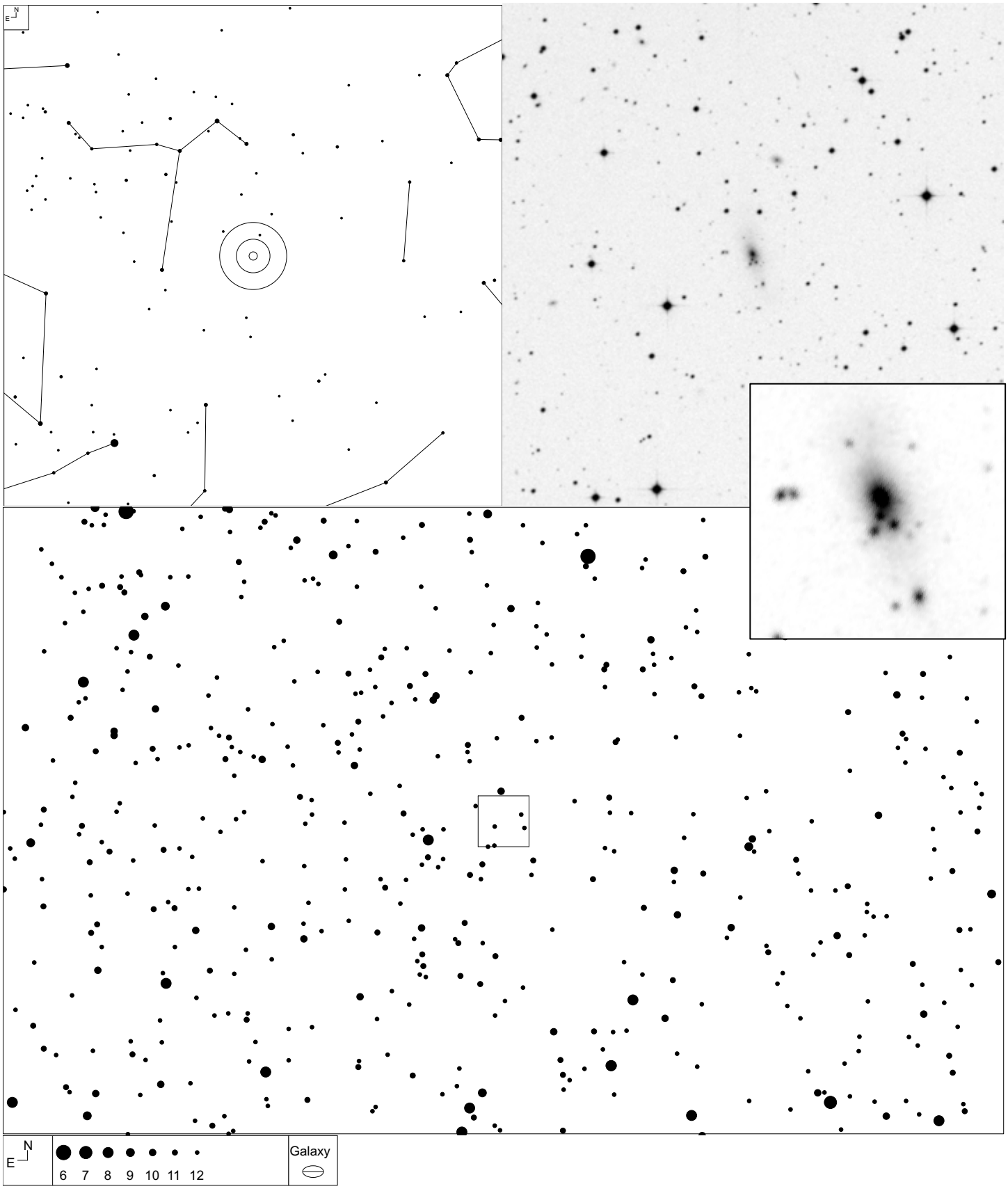
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
848	MCG -01-15-002	05 32 53.2	-07 46 33	G	17.0b	1.1 x 0.6	Ent

VV 545 (Lepus)



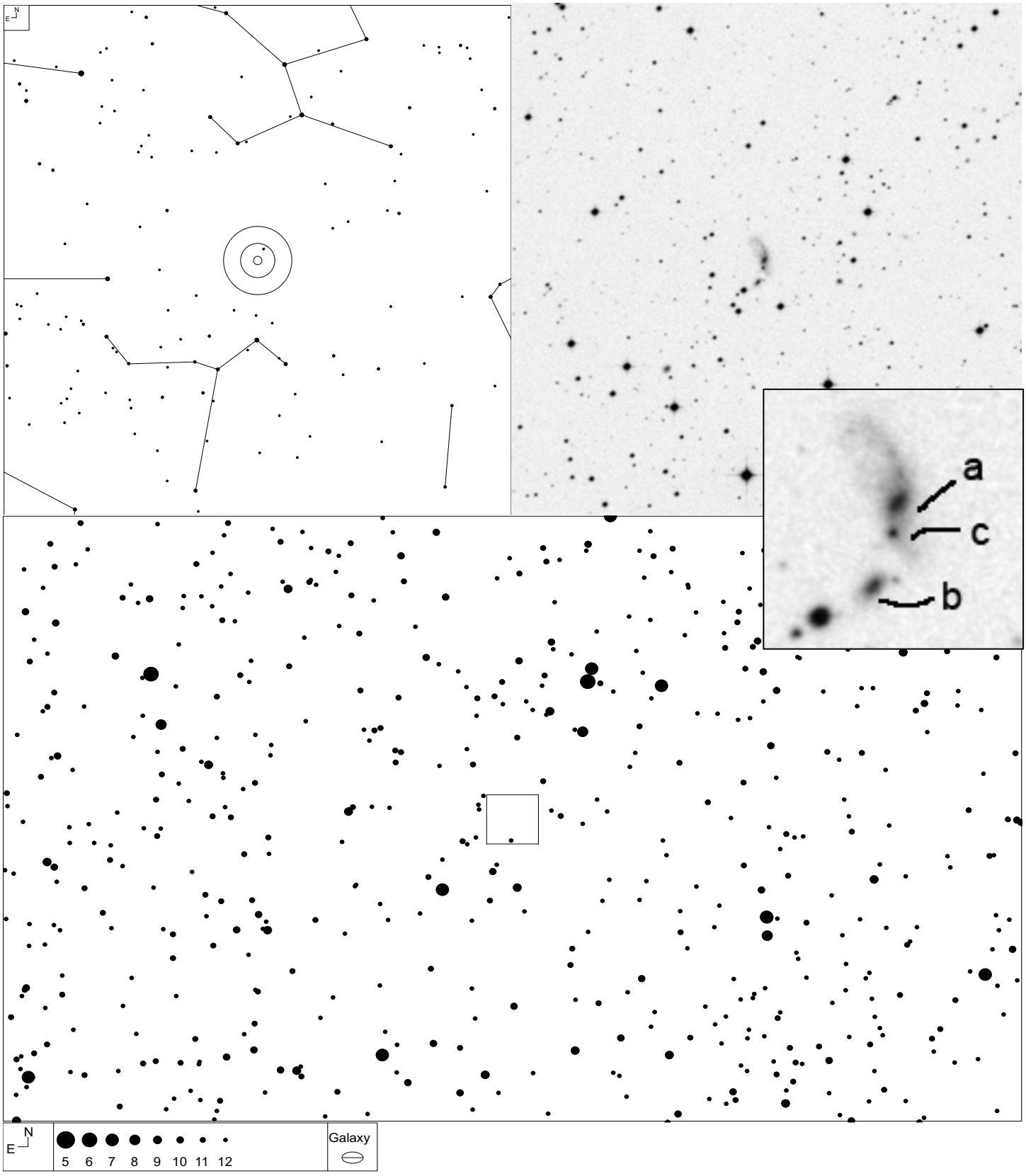
VV	ID	RA	Dec	Type	Mag	Size (')	Int. Type
545		06 05 52.2	-15 39 07	GPair			N
545a	MCG -03-16-014	06 05 51.5	-15 39 14	Reflection Nebula	13.5	2.5 x 2.5	
545b	MCG -03-16-015	06 05 52.9	-15 38 59	Star	15		

VV 599 (Columba)



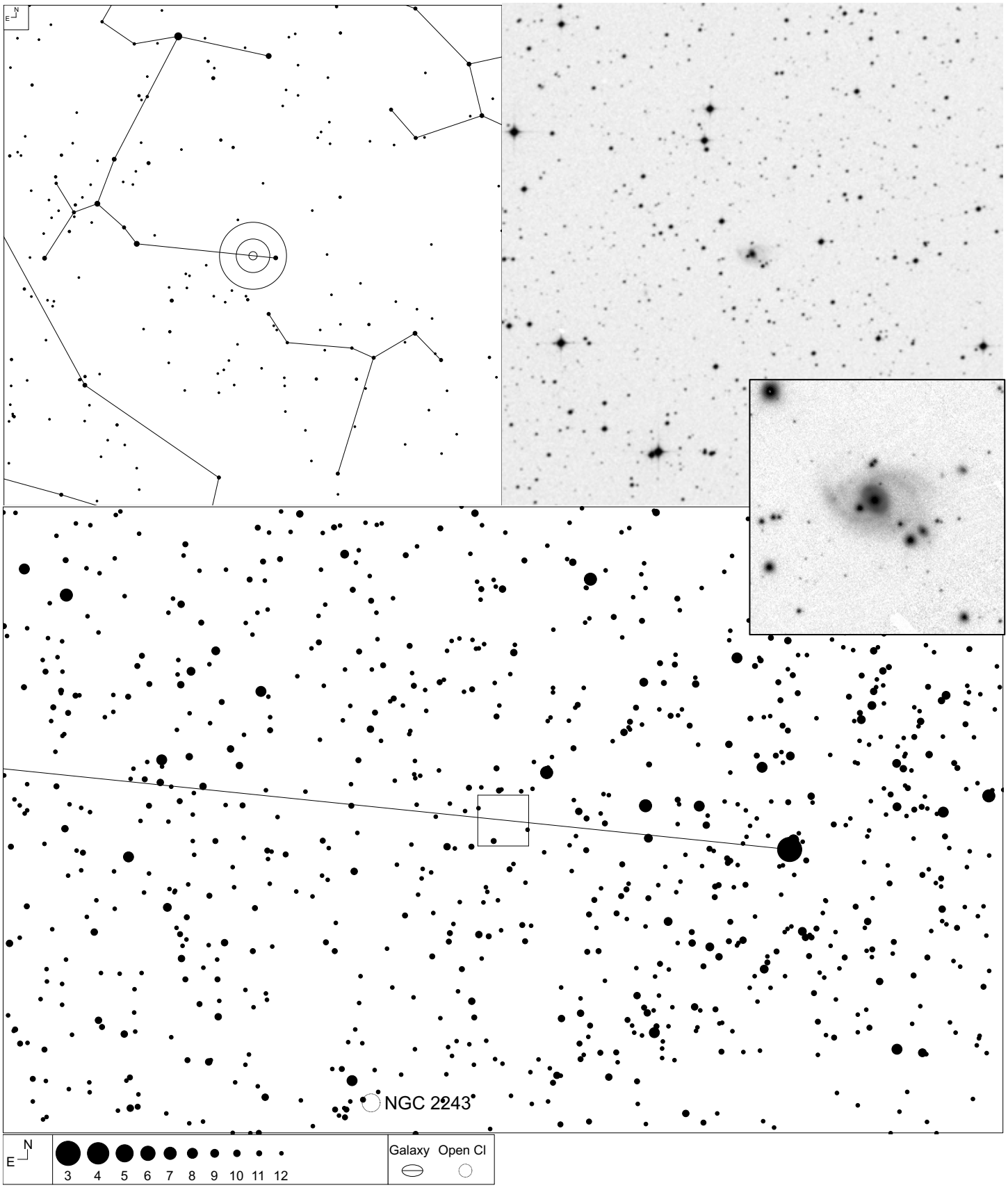
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
599	MCG -07-12-004	05 29 13.7	-42 12 36	G	14.7g	1.3 x 0.6	N

VV 522 (Columba)



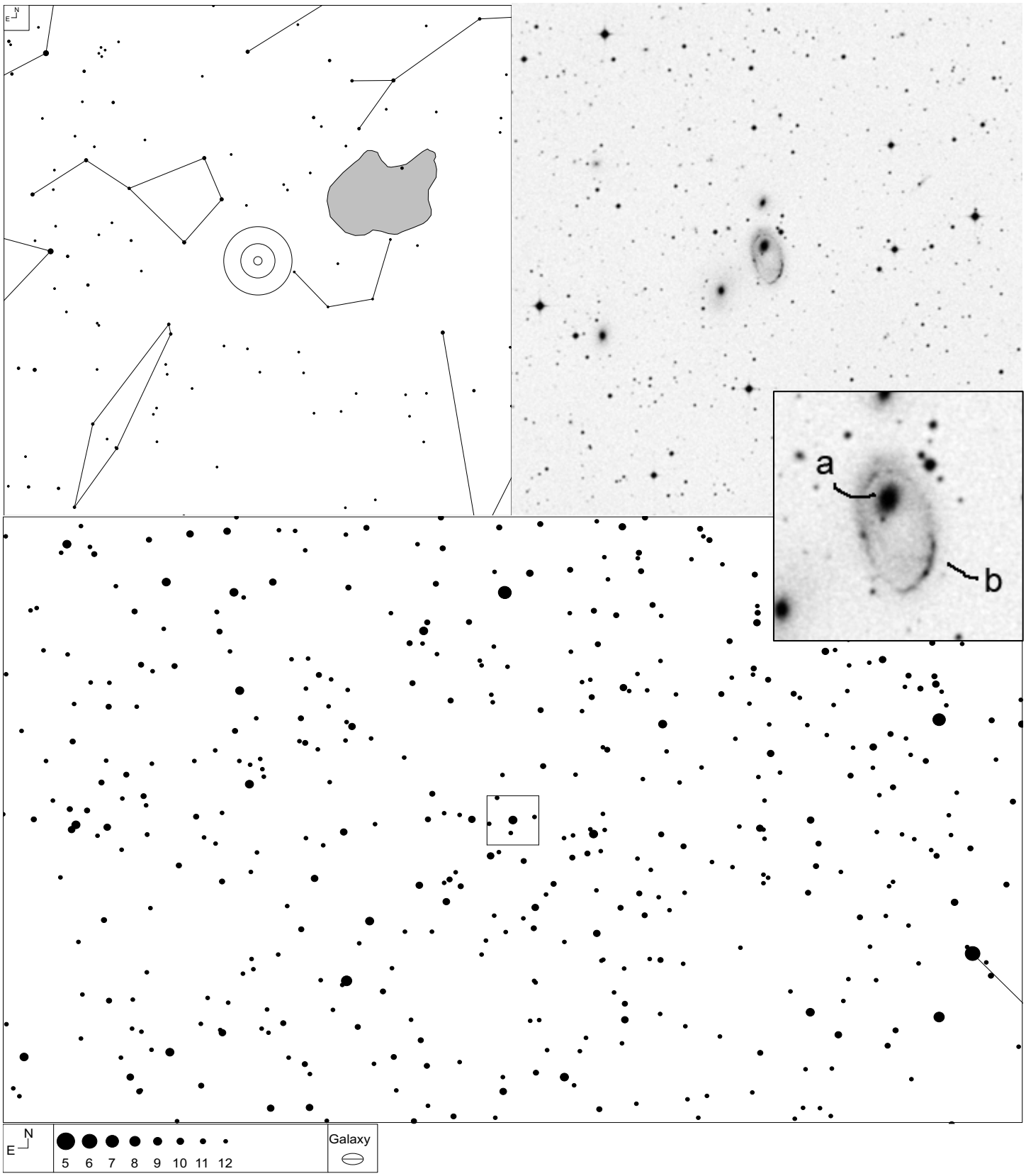
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
522	MCG -05-14-009	05 39 21.3	-29 22 21	GGroup	15.2g	1.3 x 0.4	Ch

VV 576 (Canis Major)



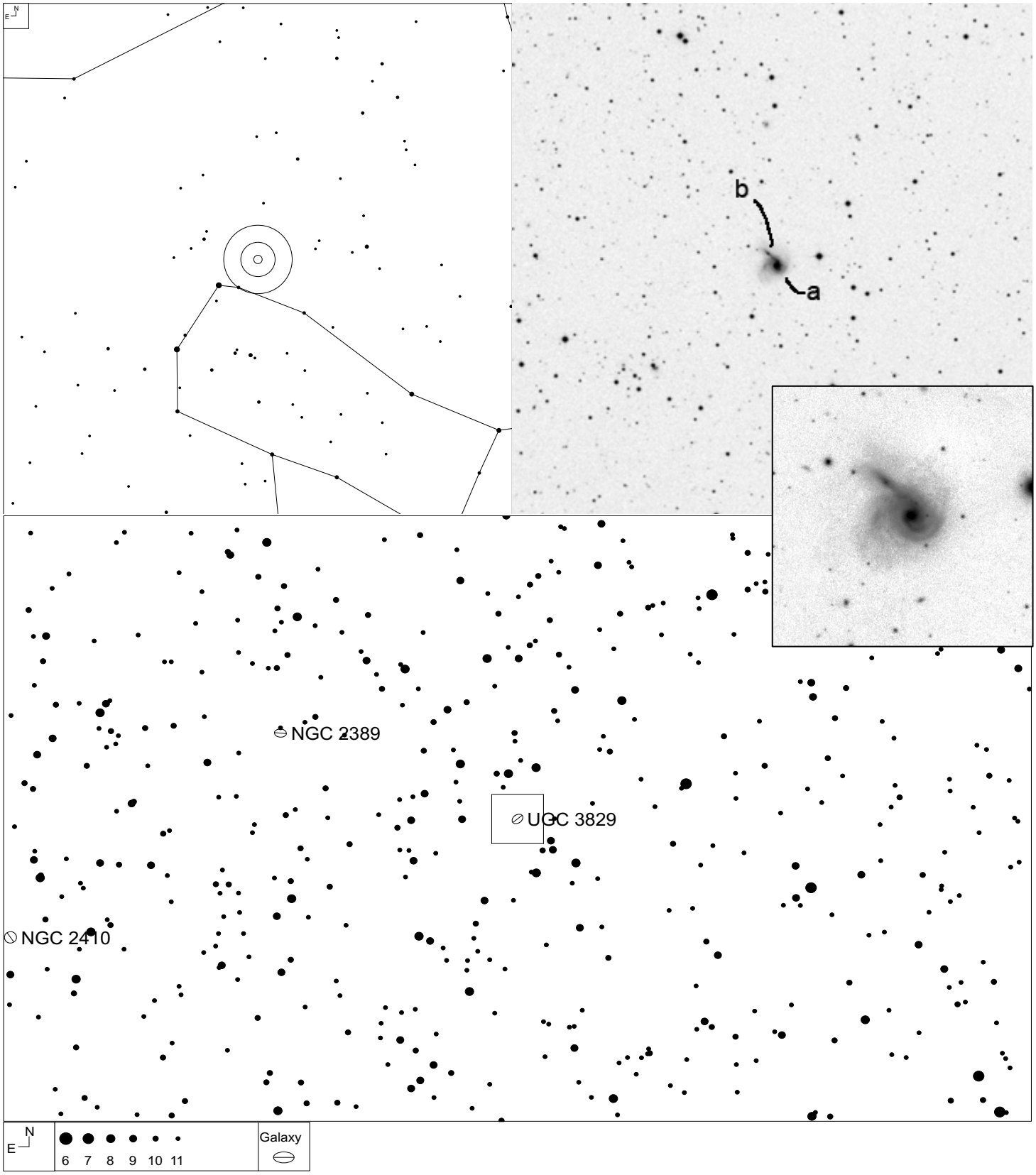
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
576	MCG -05-16-004	06 26 37.8	-29 56 02	G	14.6b	1.2 x 0.8	N

VV 785 (Volans)



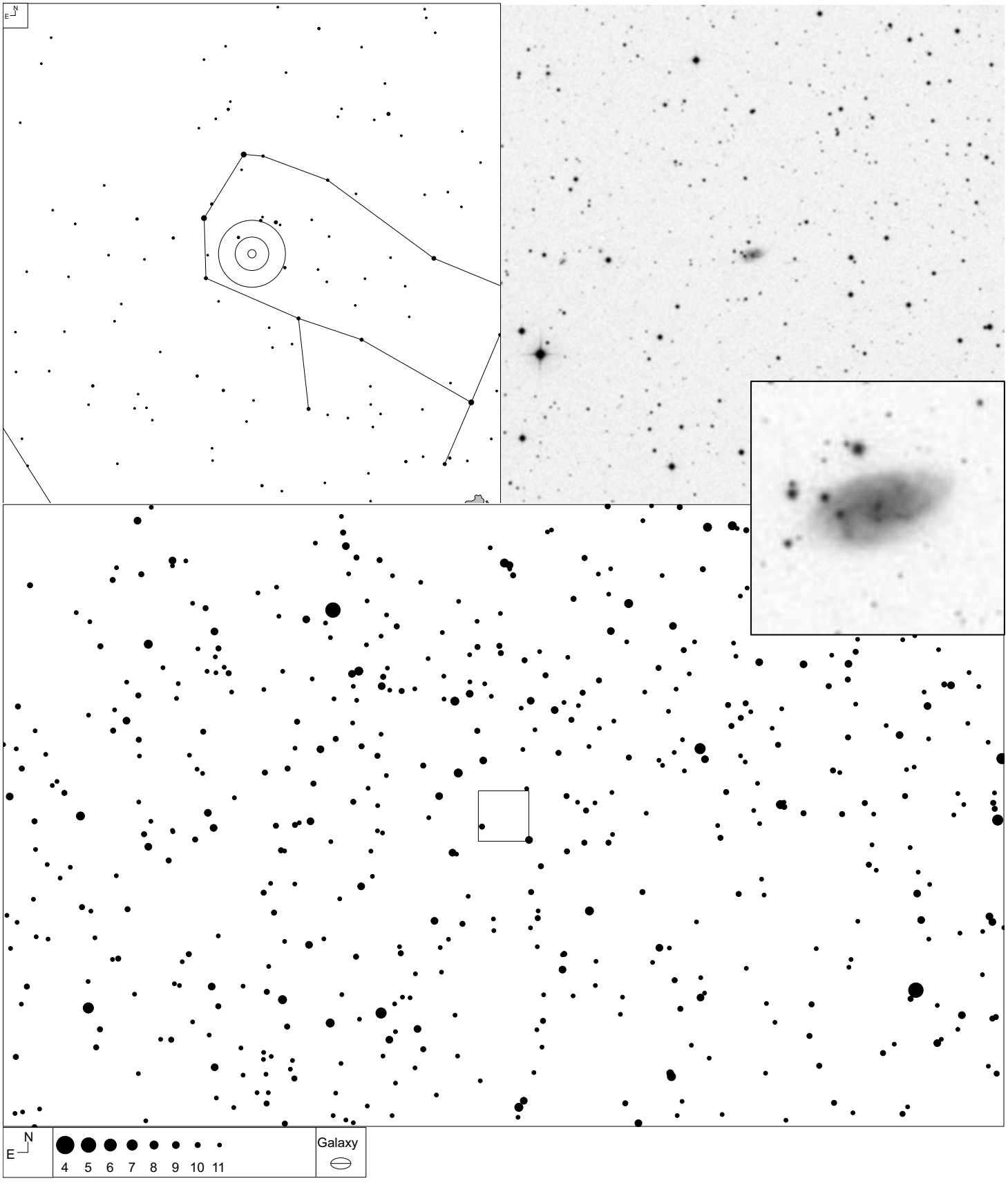
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
785	EOS 34-11	06 43 05.0	-74 14 34	GPair	12.9v	2.0 x 1.2	R

VV 528 (Gemini)



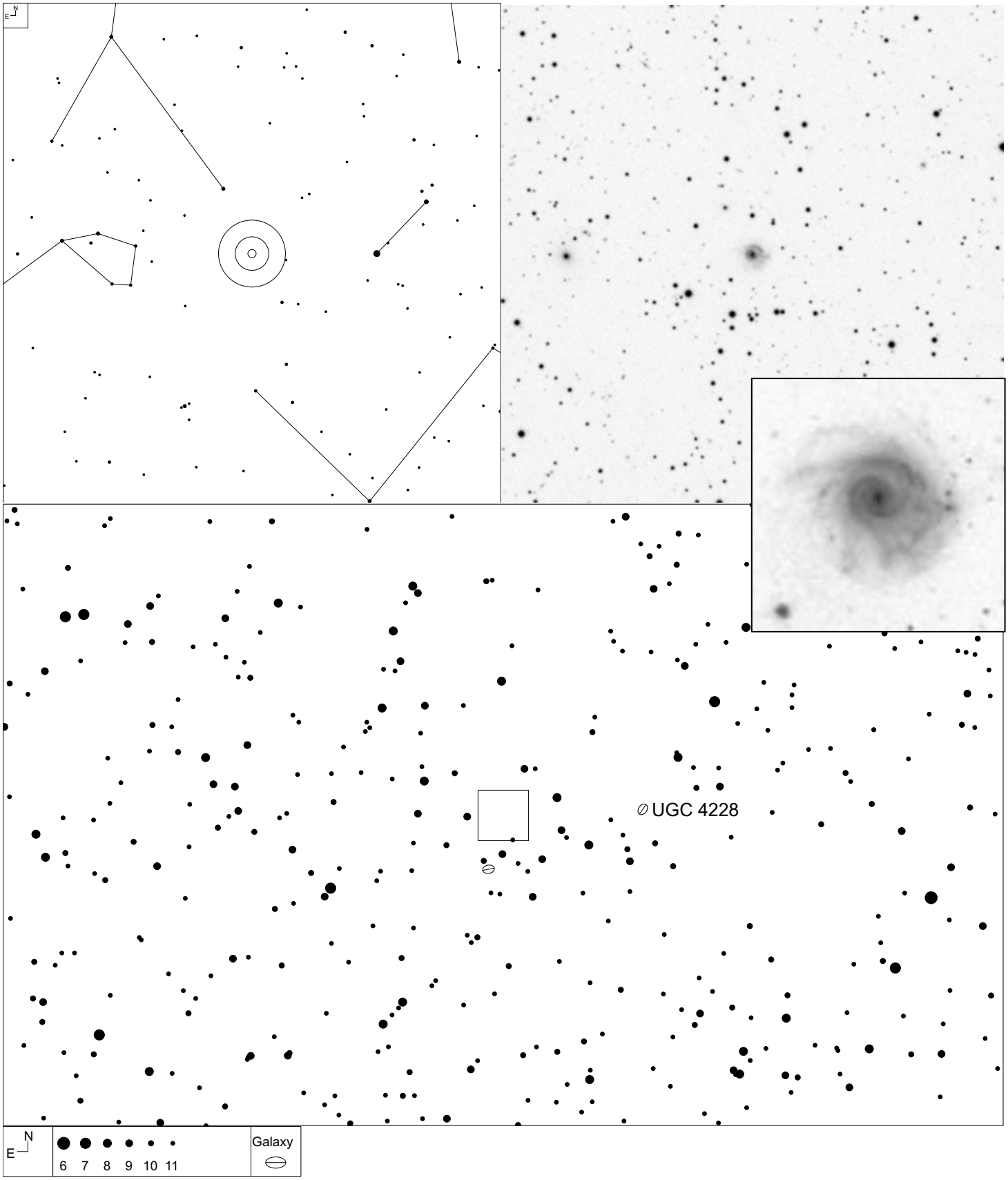
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
528		07 23 44.1	+33 26 41	GPair			PDbt
528a	UGC 3829	07 23 43.6	+33 26 31	G	13.1v	0.5 x 0.5	
528b	PGC 200234	07 23 45.0	+33 26 54	G	16.0g	0.4 x 0.1	

VV 643 (Gemini)



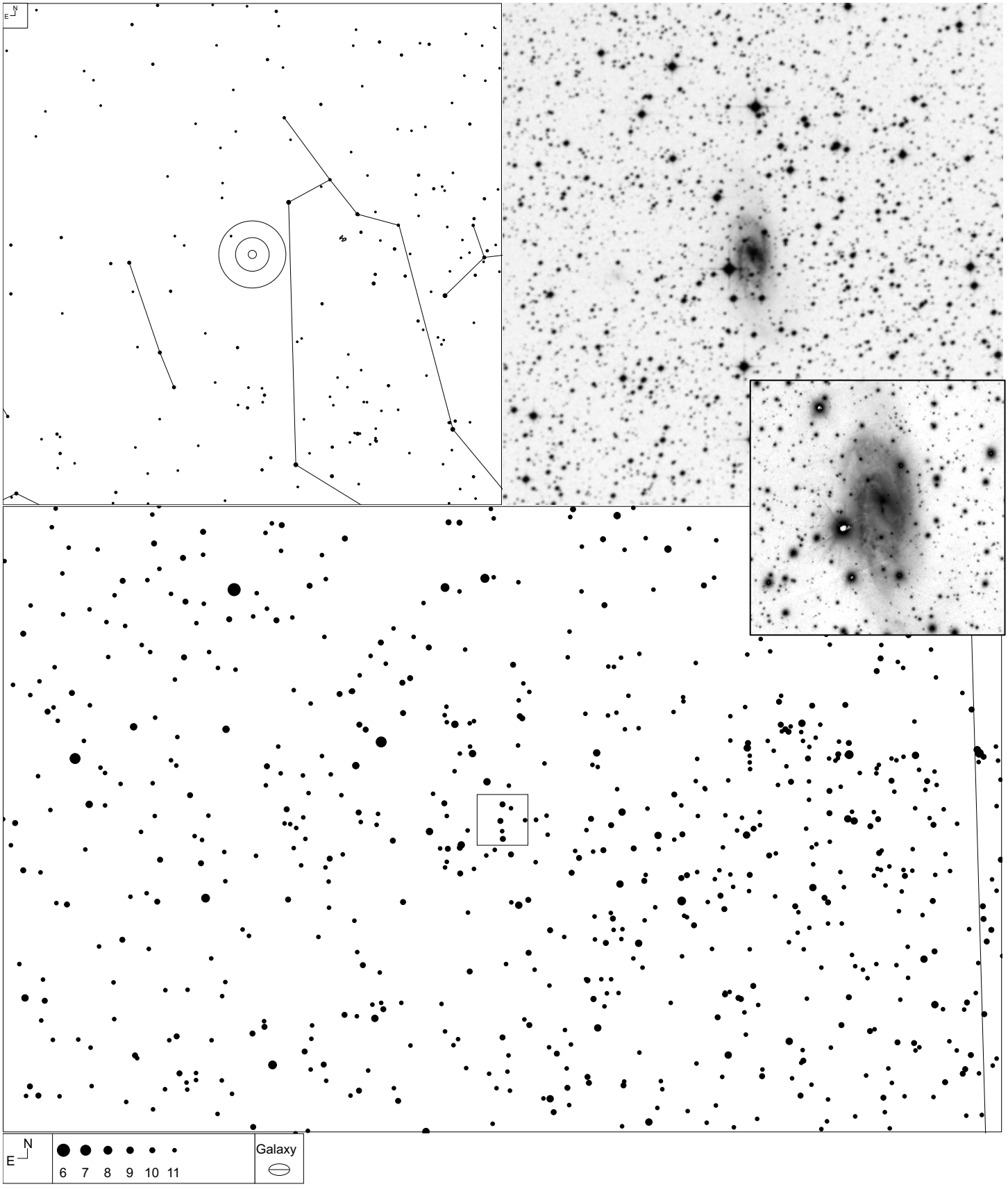
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
643	NGC 2405	07 32 14.0	+25 54 23	G	14.9g	0.6 x 0.4	N

VV 526 (Canis Minor)



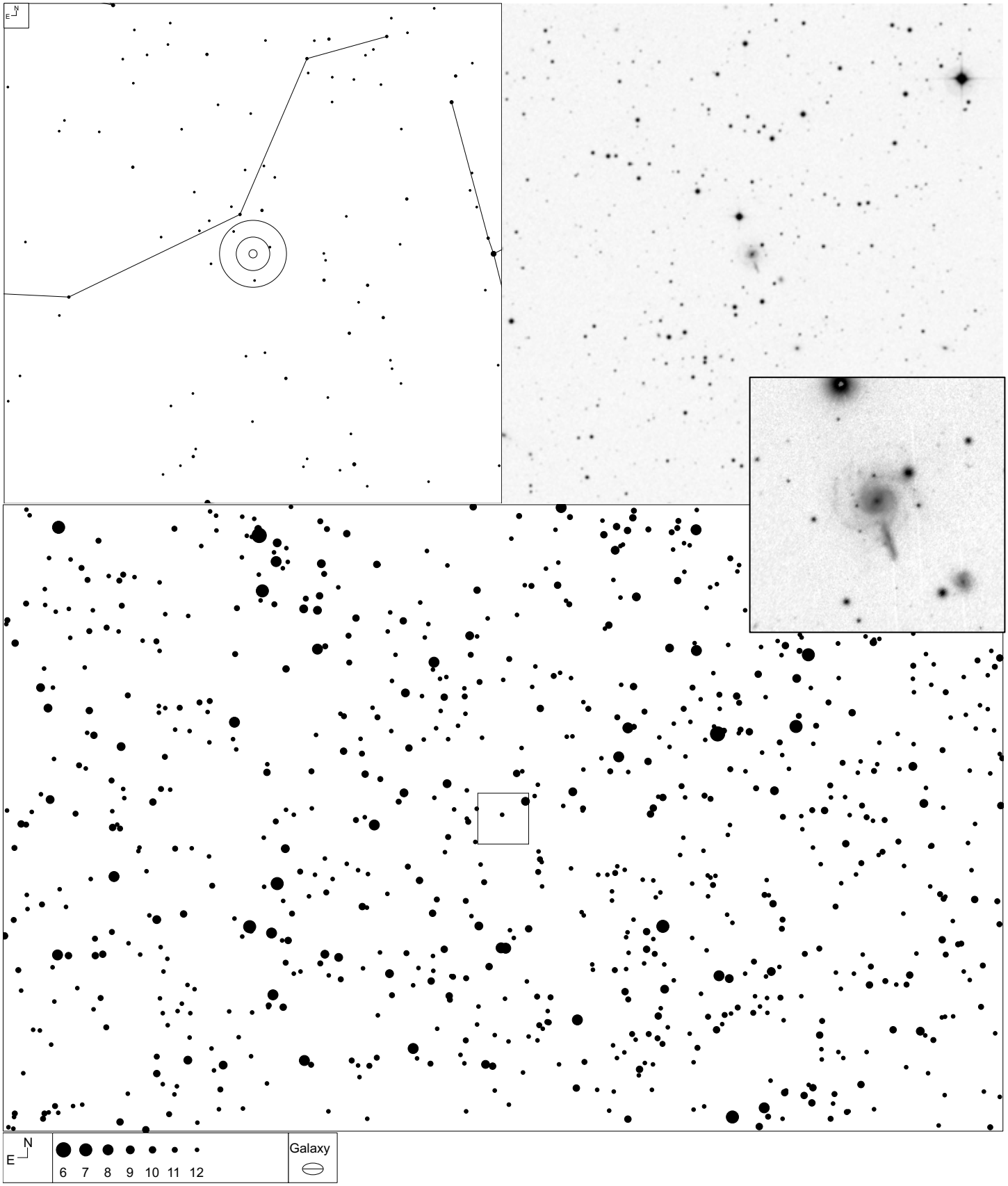
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
526	IC 498	08 09 30.3	+05 16 51	G	14.6b	1.4 x 1.3	N

VV 475 (Puppis)



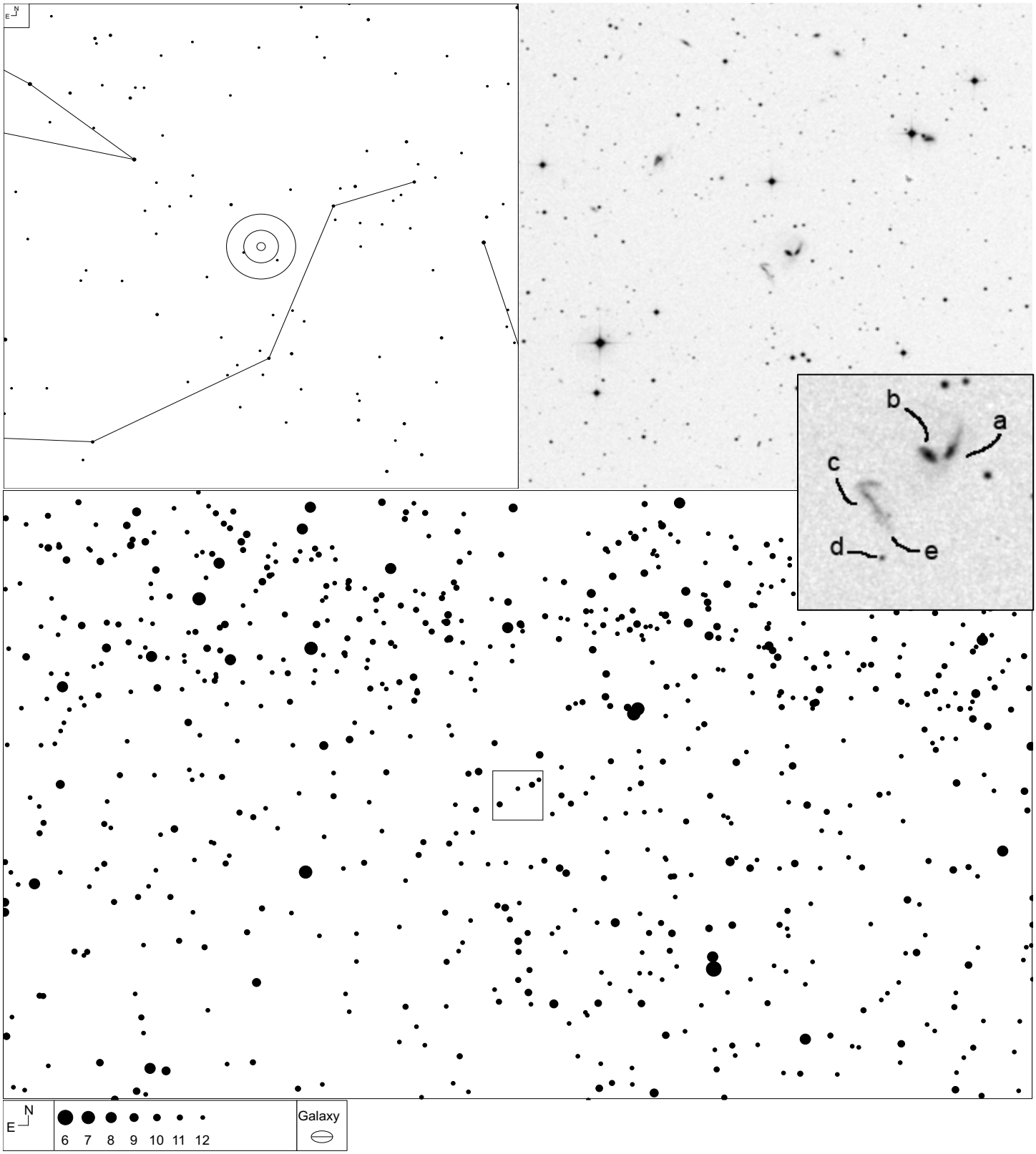
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
475	NGC 2559	08 17 06.1	-27 27 21	G	11.7b	4.2 x 2.1	MM

VV 552A (Lynx)



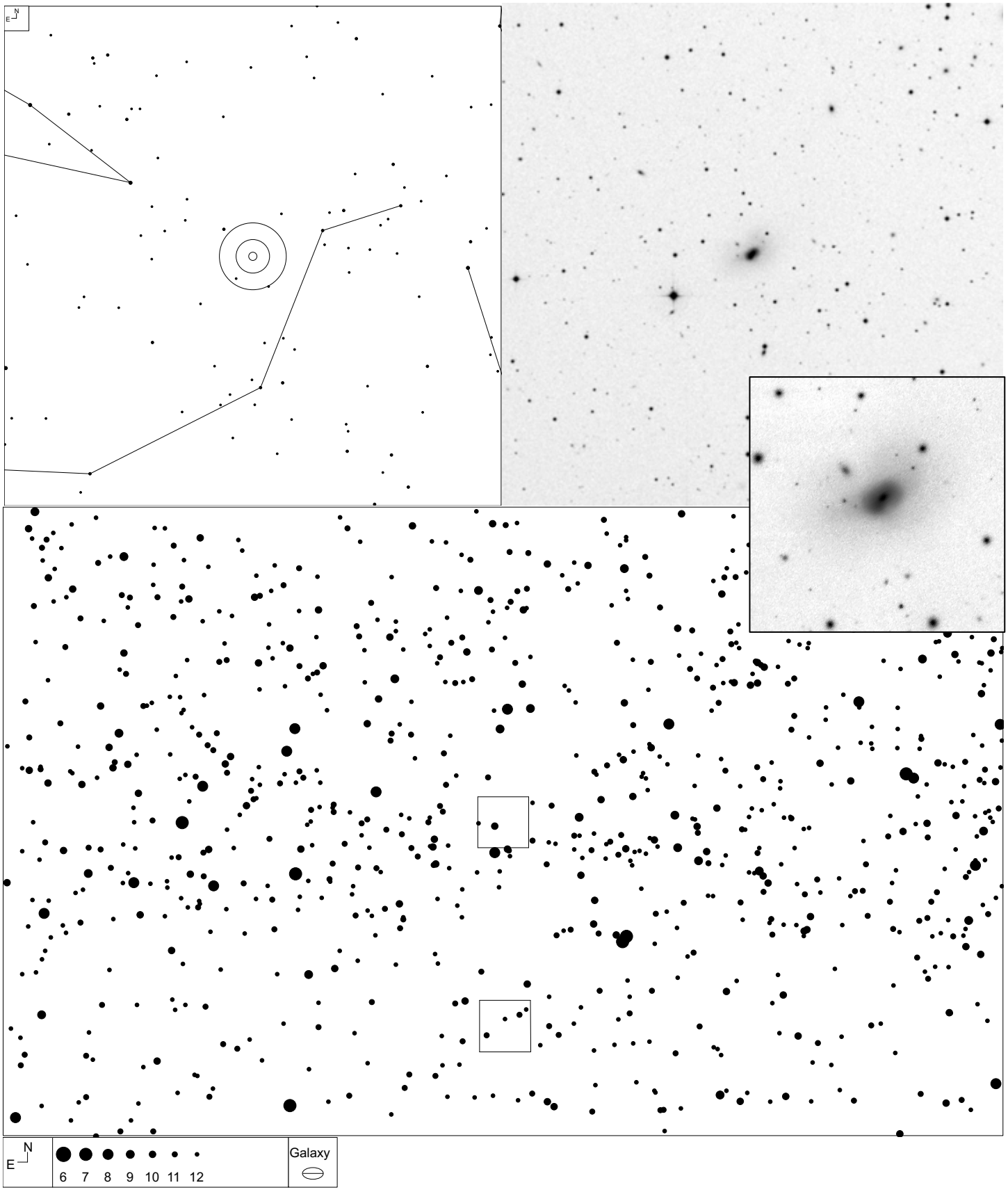
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
552A	UGC 3810	07 21 51.8	+46 50 39	G	15.4g	1.0 x 0.8	N

VV 757 (Lynx)



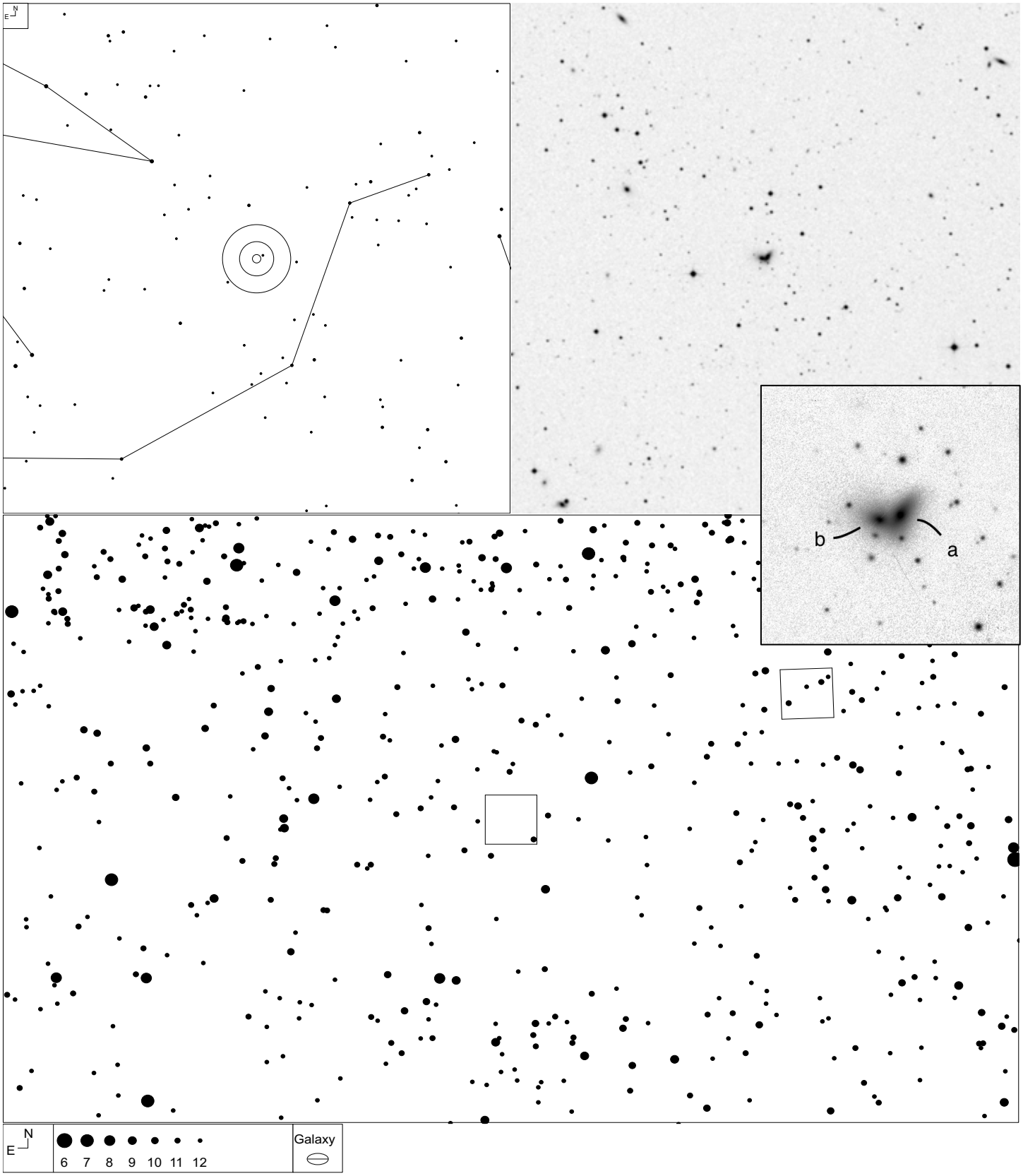
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
757		07 29 30.3	+56 08 47	GGroup			NNNP
757a	MCG +09-13-005a	07 29 25.8	+56 08 36	G	16.3g	0.5 x 0.2	
757b	MCG +09-13-005b	07 29 27.7	+56 08 34	G	16.0b	0.2 x 0.1	
757c	MCG +09-13-006	07 29 33.2	+56 08 07	G	16.0b		

VV 387 (Lynx)



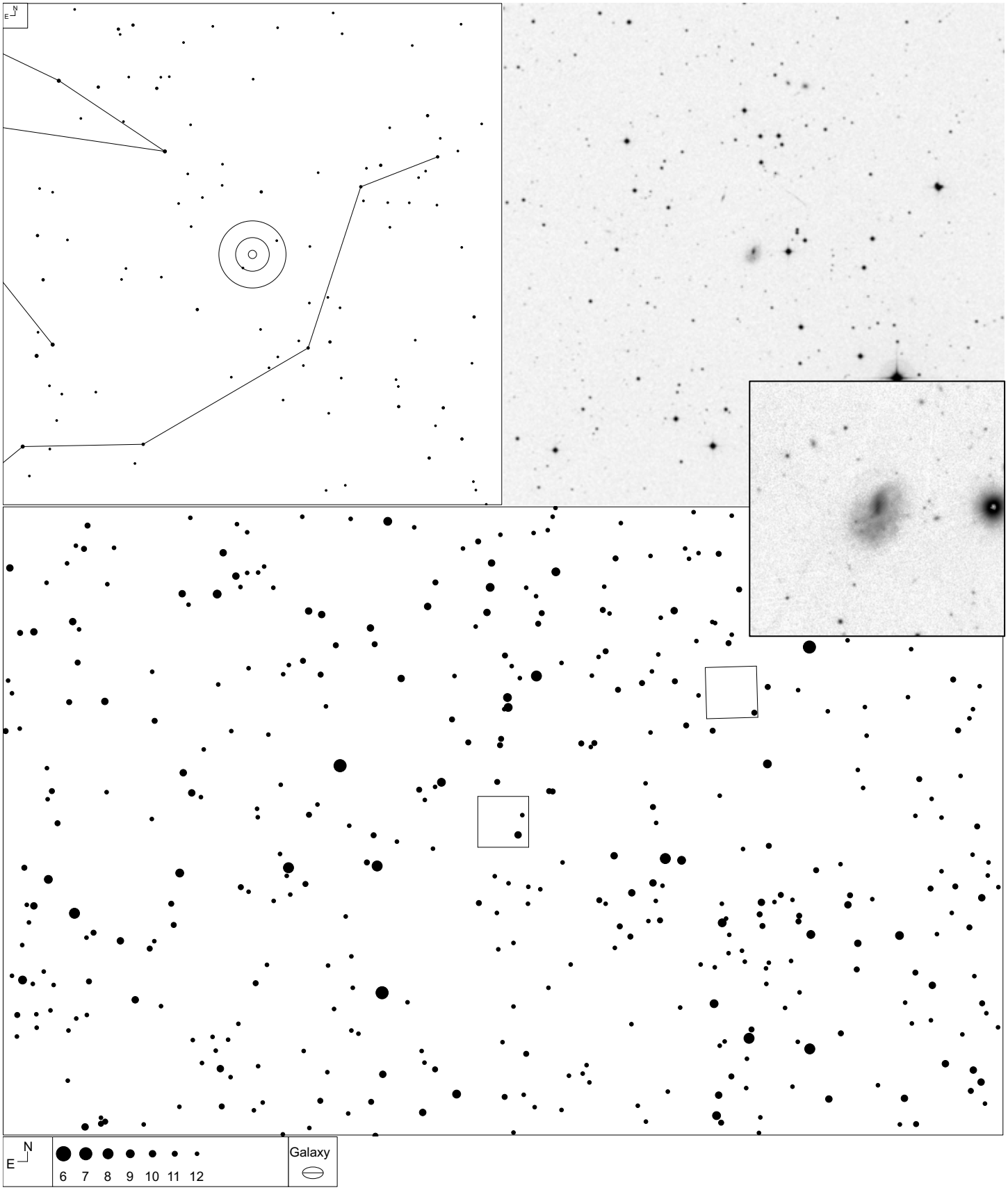
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
387	UGC 3867	07 29 34.1	+57 07 01	G	14.5g	1.0 x 0.8	MMM

VV 662 (Lynx)



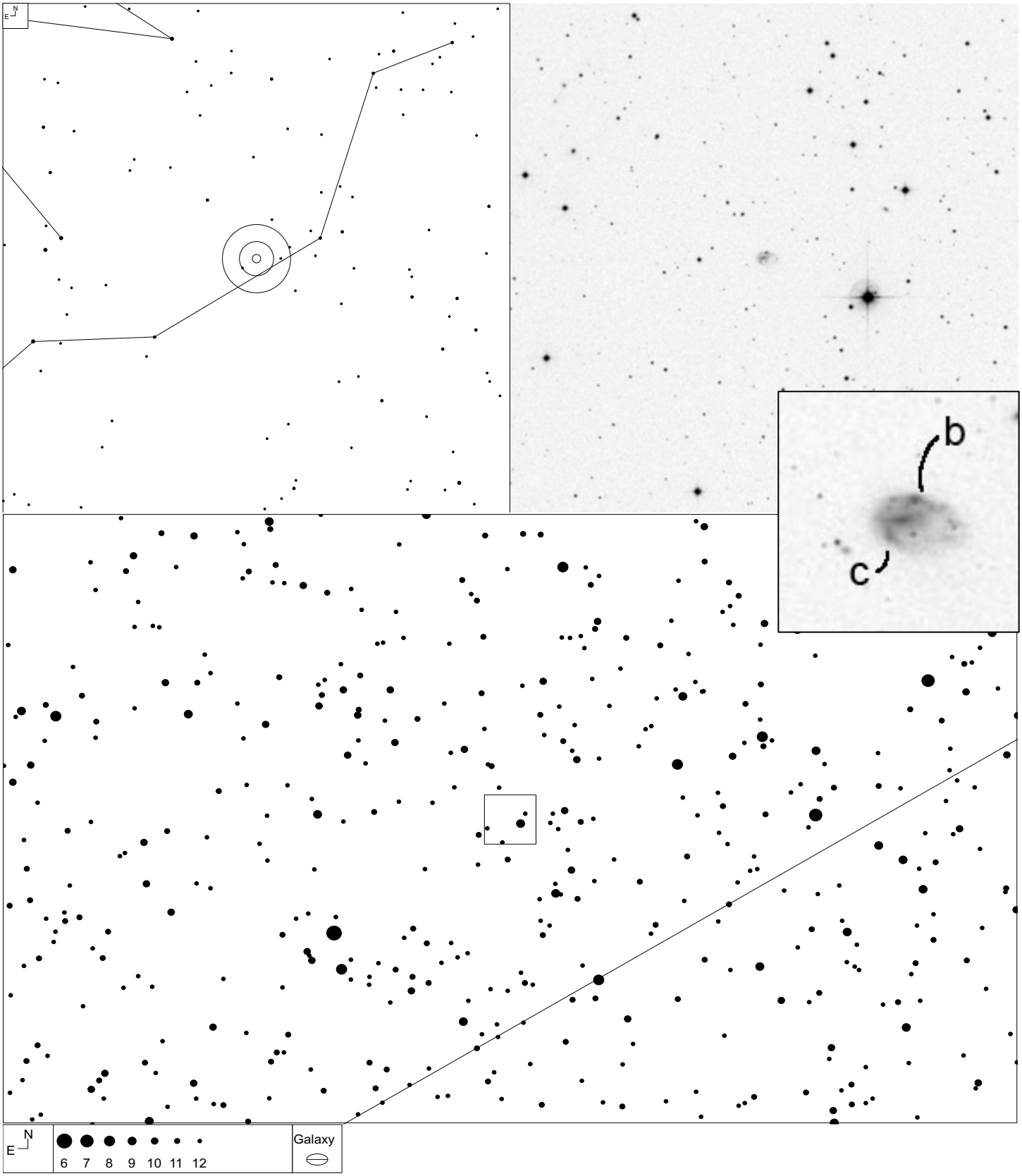
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
662	MCG +09-13-024	07 39 28.6	+55 32 59	GPair	15.4g	0.4 x 0.4	PK

VV 654 (Lynx)



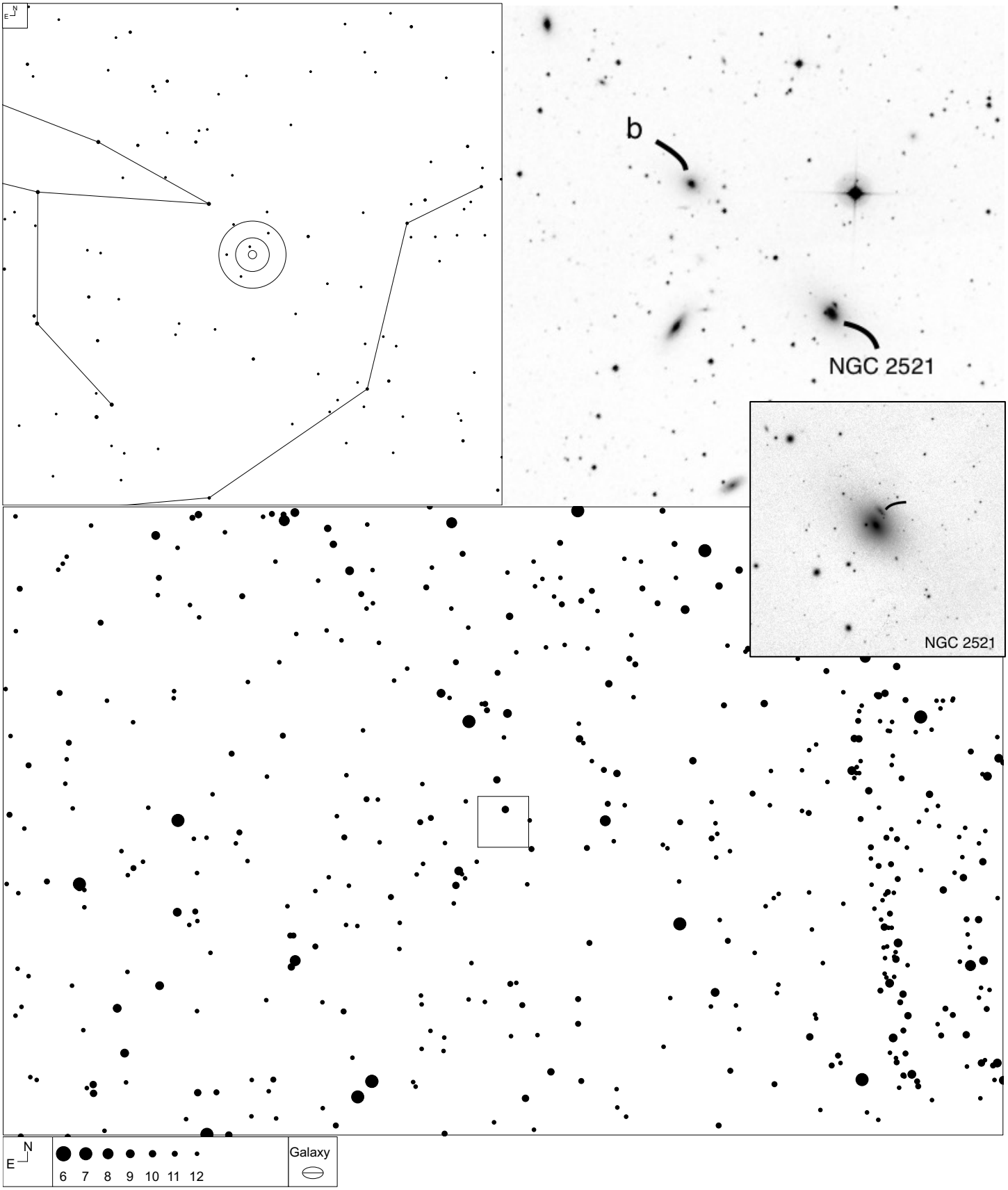
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
654	MCG +09-13-055	07 47 09.3	+54 56 51	GPair?	15.7g	0.7 x 0.5	NN

VV 646 (Lynx)



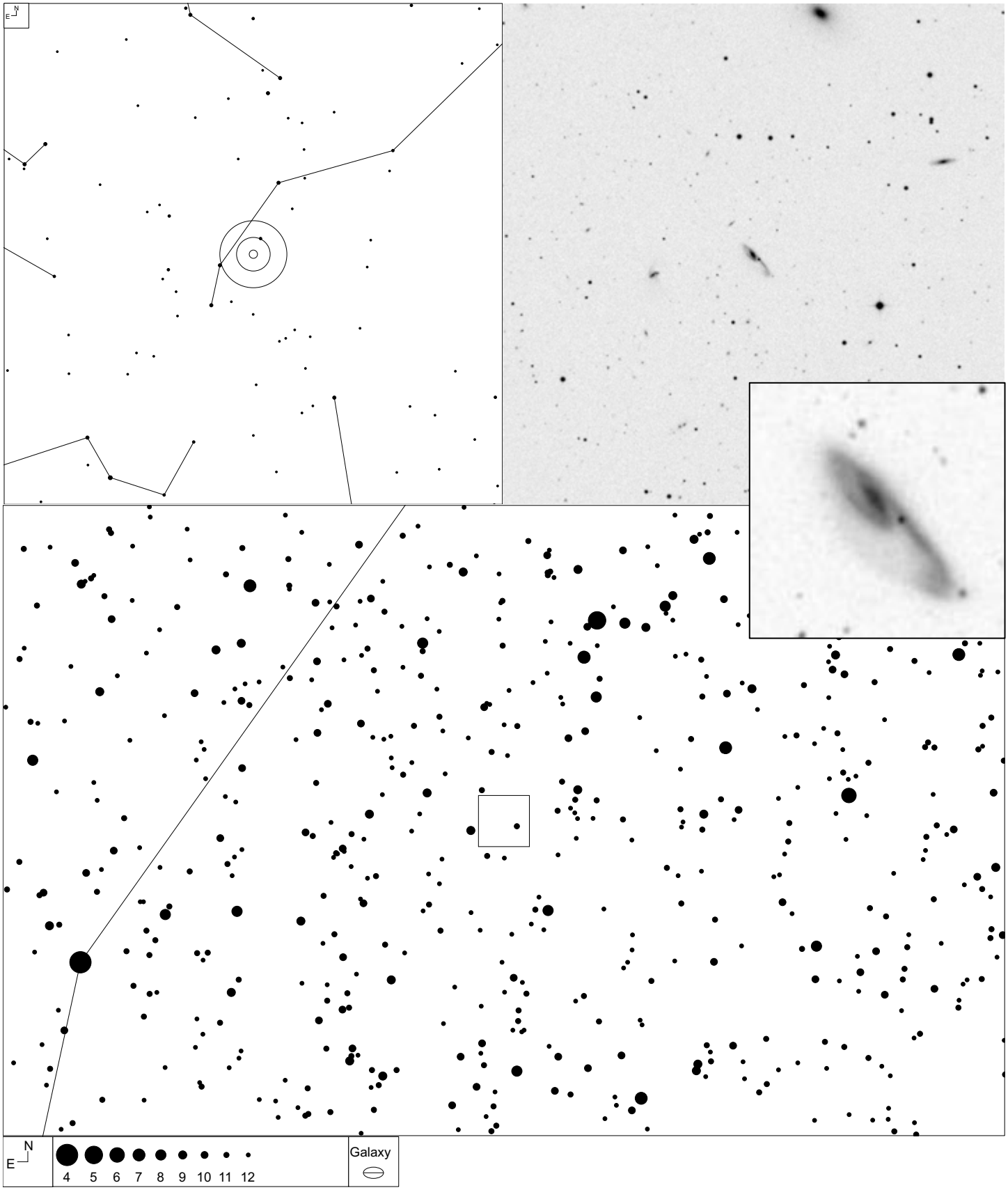
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
646	MCG +08-15-003	07 49 48.3	+48 07 46	G	15.9g	0.7 x 0.5	N

VV 632 (Lynx)



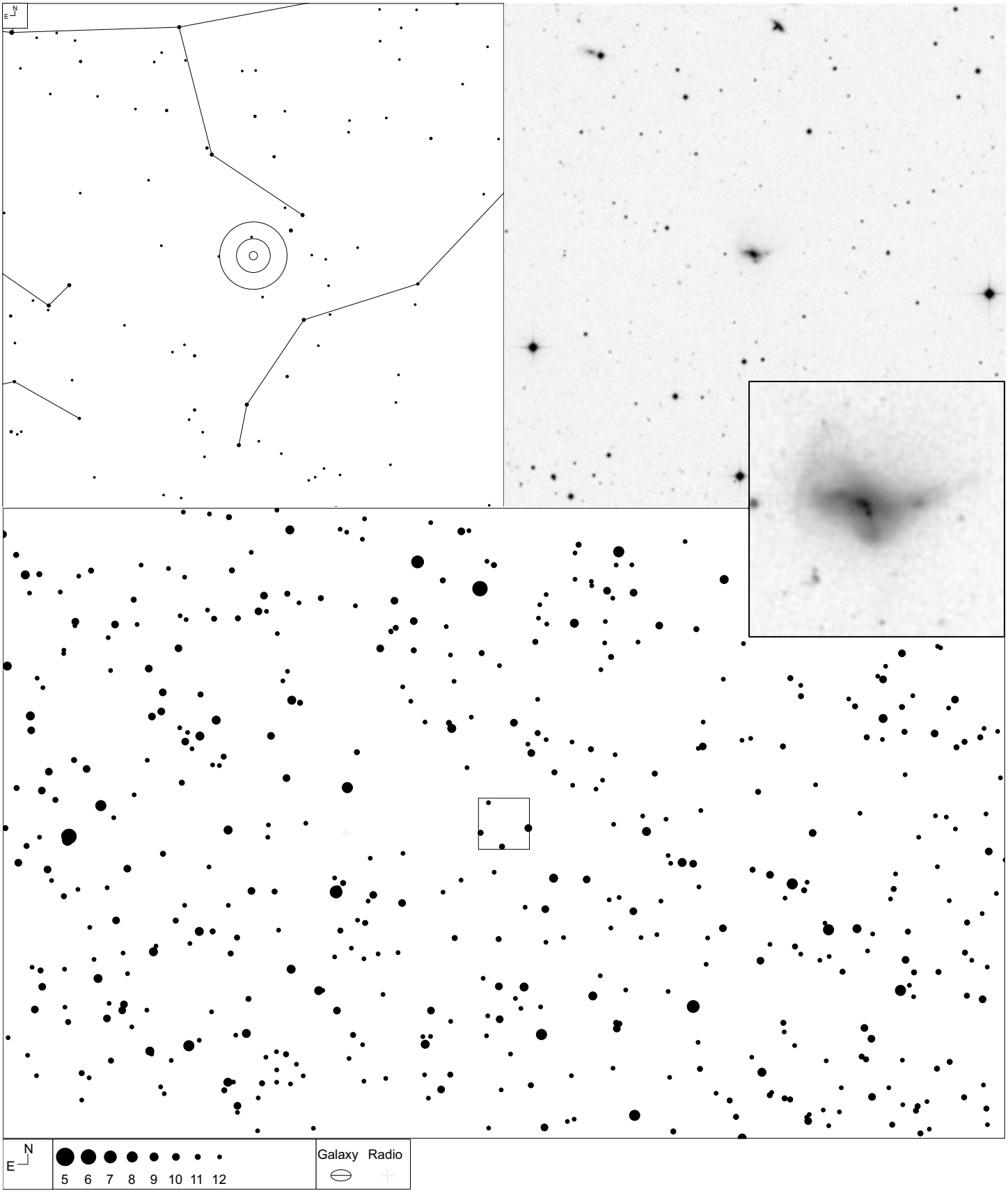
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
632	NGC 2521	08 08 50.0	+57 46 12	GPair	13.6g	1.2 x 0.7	N
632b	MCG+10-12-079	08 09 20.4	+ 57 50 03	G	14.5g	0.3	PDb

VV 849 (Lynx)



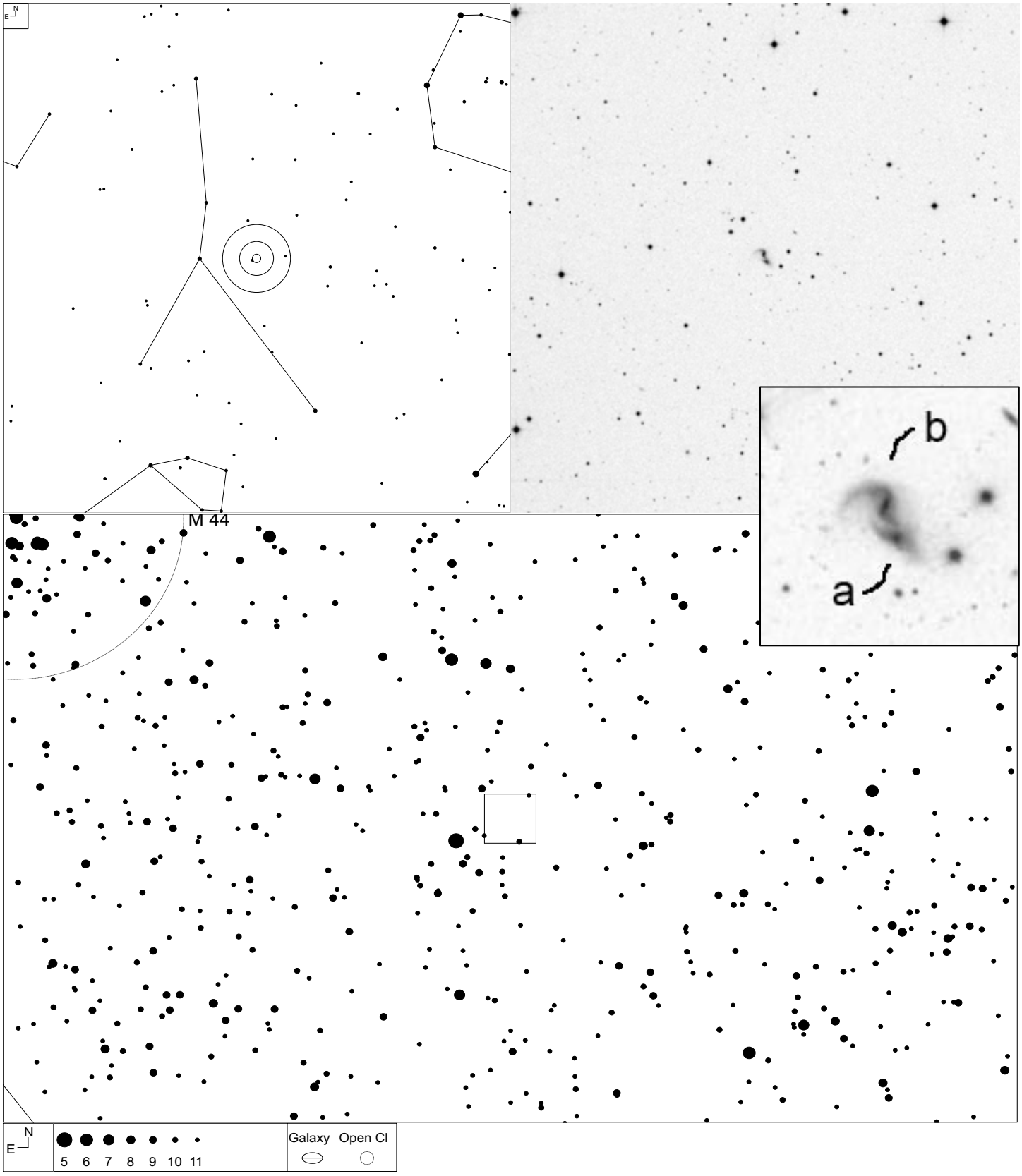
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
849	UGC 4799	09 08 47.5	+37 30 06	G	15.2g	1.2 x 0.4	Ent

VV 593 (Lynx)



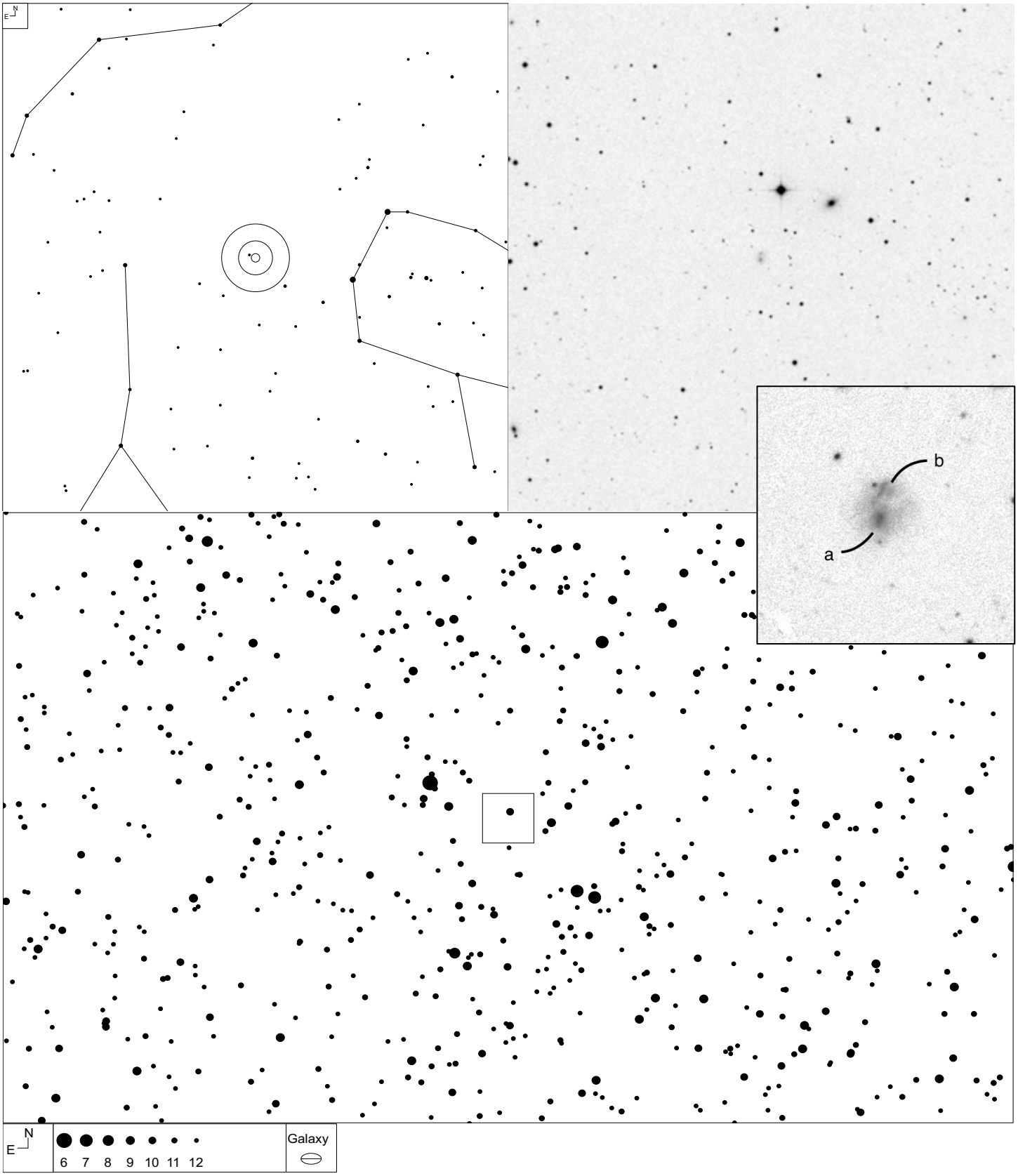
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
593	UGC 4892	09 16 50.9	+45 42 00	G	14.1g	1.1 x 0.7	N

VV 736 (Cancer)



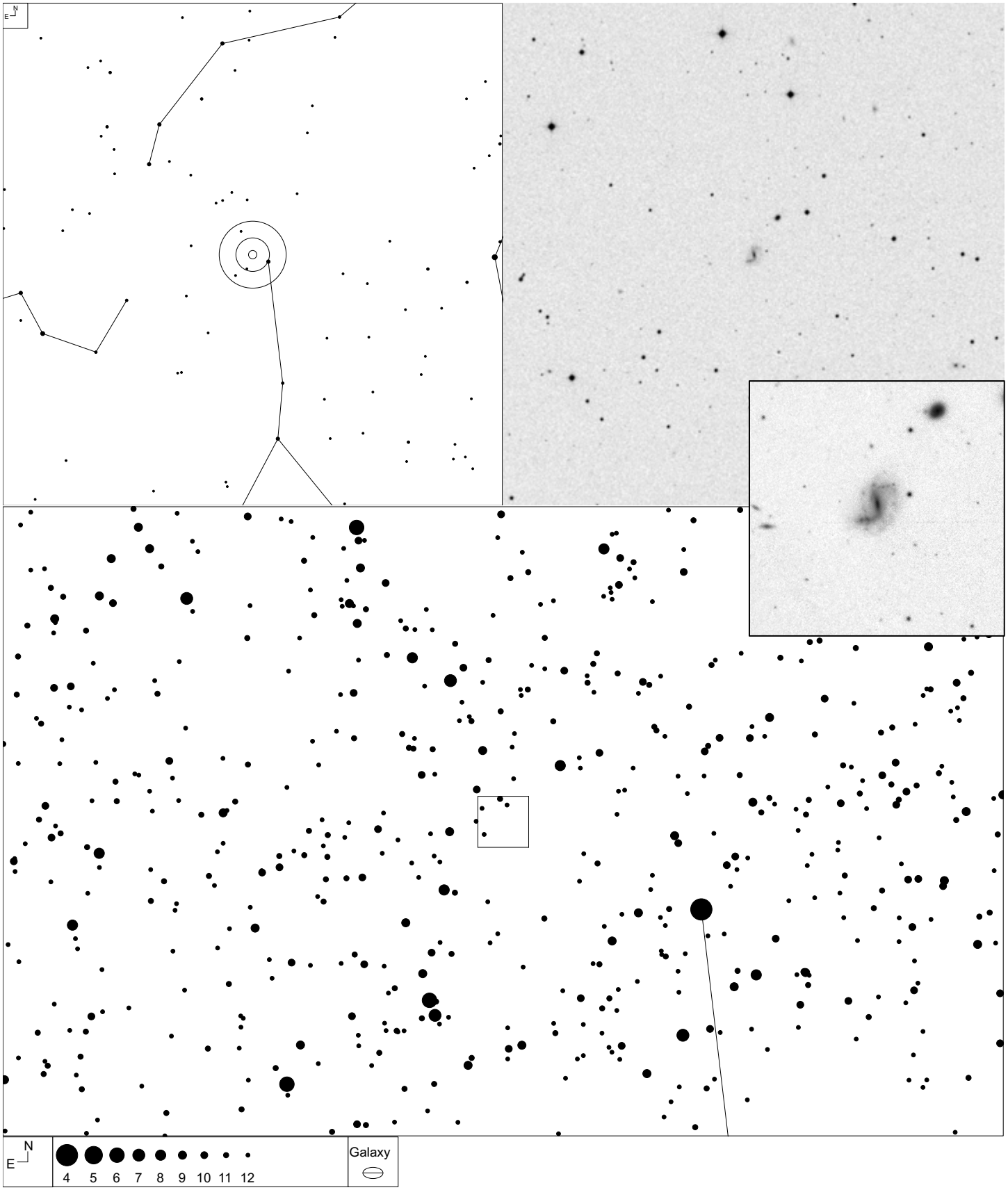
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
736	CGCG 89-37	08 30 31.5	+18 12 15	GPair	16.3g	0.9 x 0.7	PC

VV 843 (Cancer)



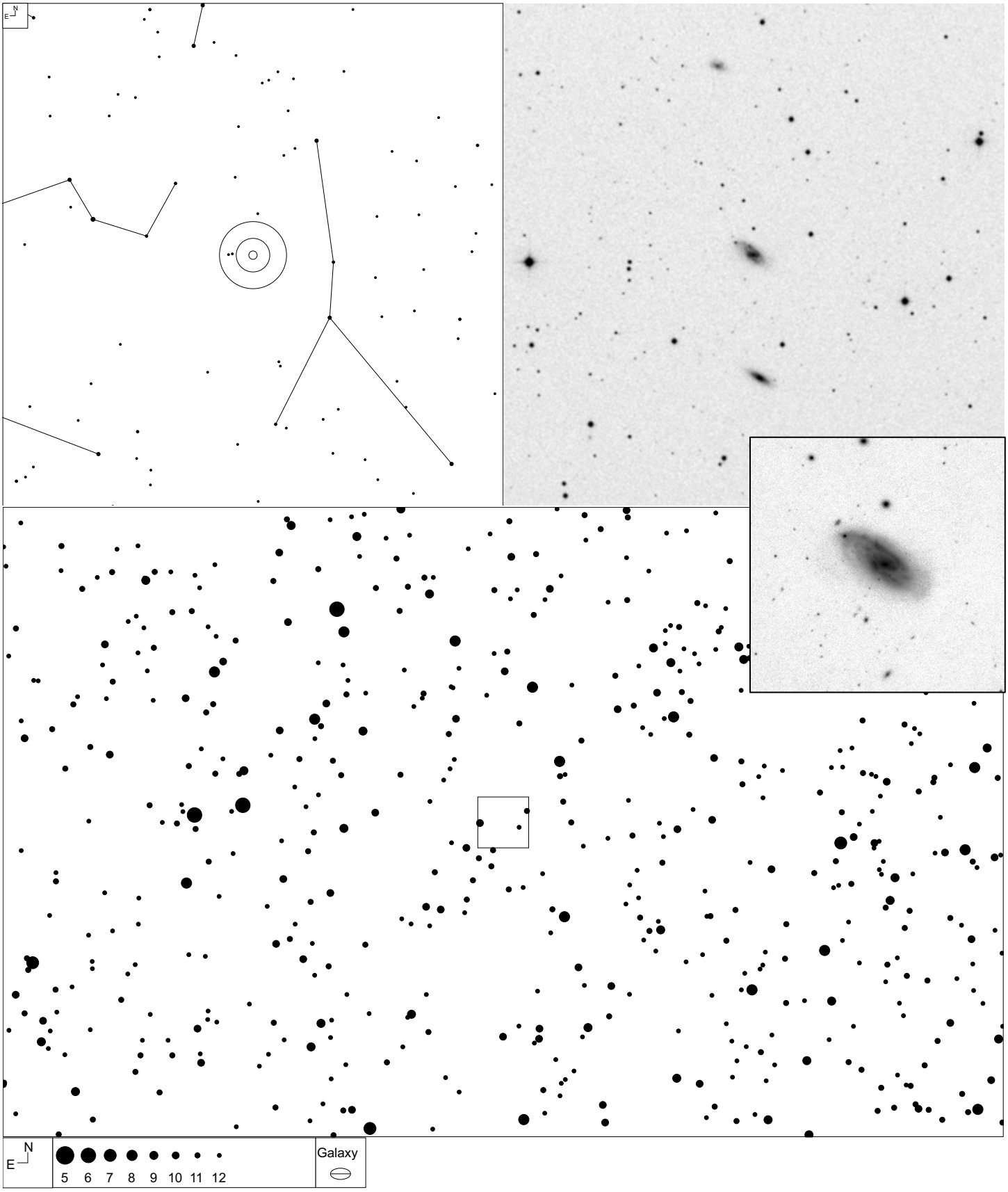
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
843	MCG +05-20-002	08 11 27.0	+29 28 55	GPair	16.7g	0.4 x 0.4	PKb

VV 473 (Cancer)



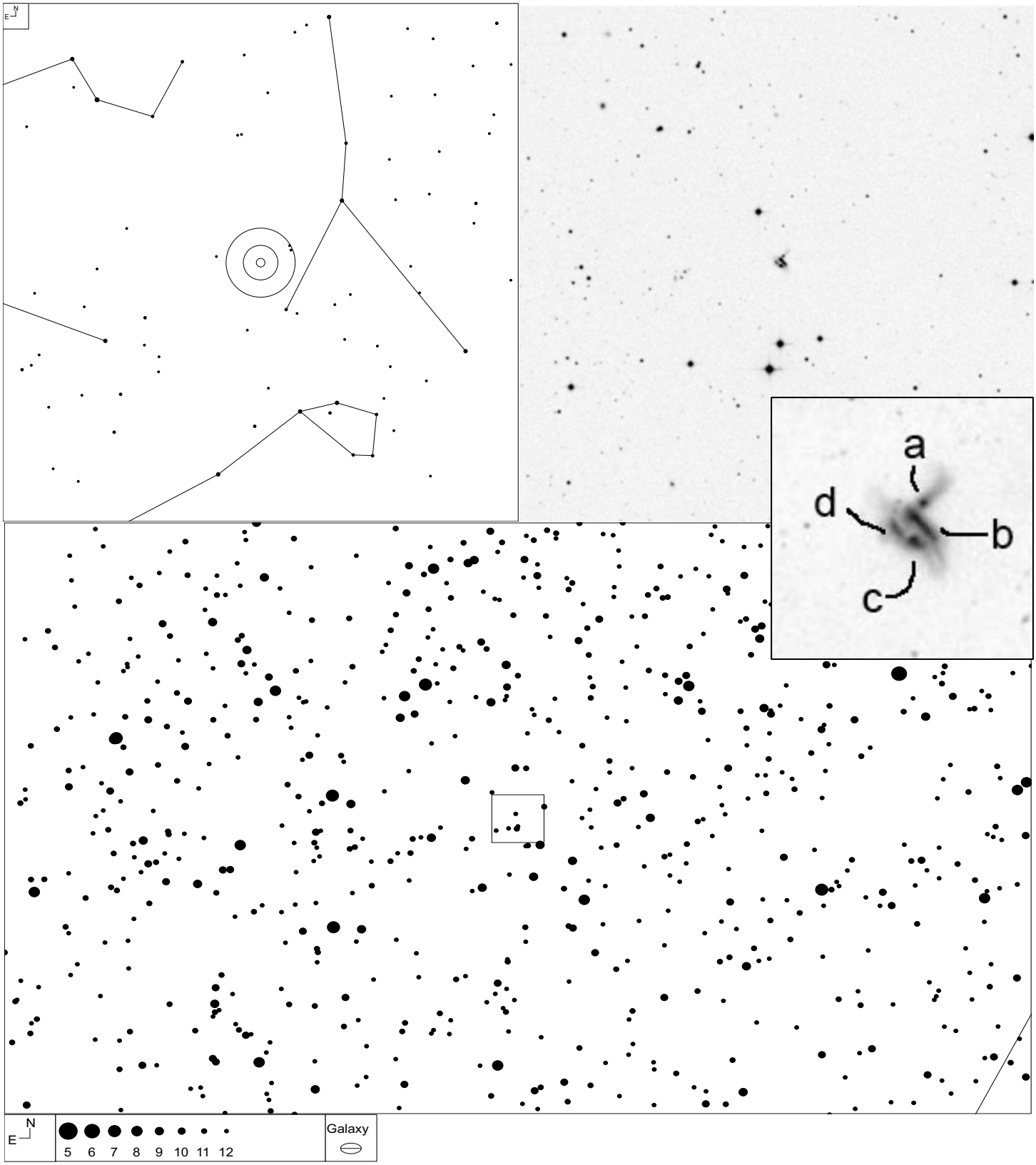
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
473	MCG +05-21-013	08 51 00.1	+29 10 55	G	15.0v	0.8 x 0.6	MM

VV 481 (Cancer)



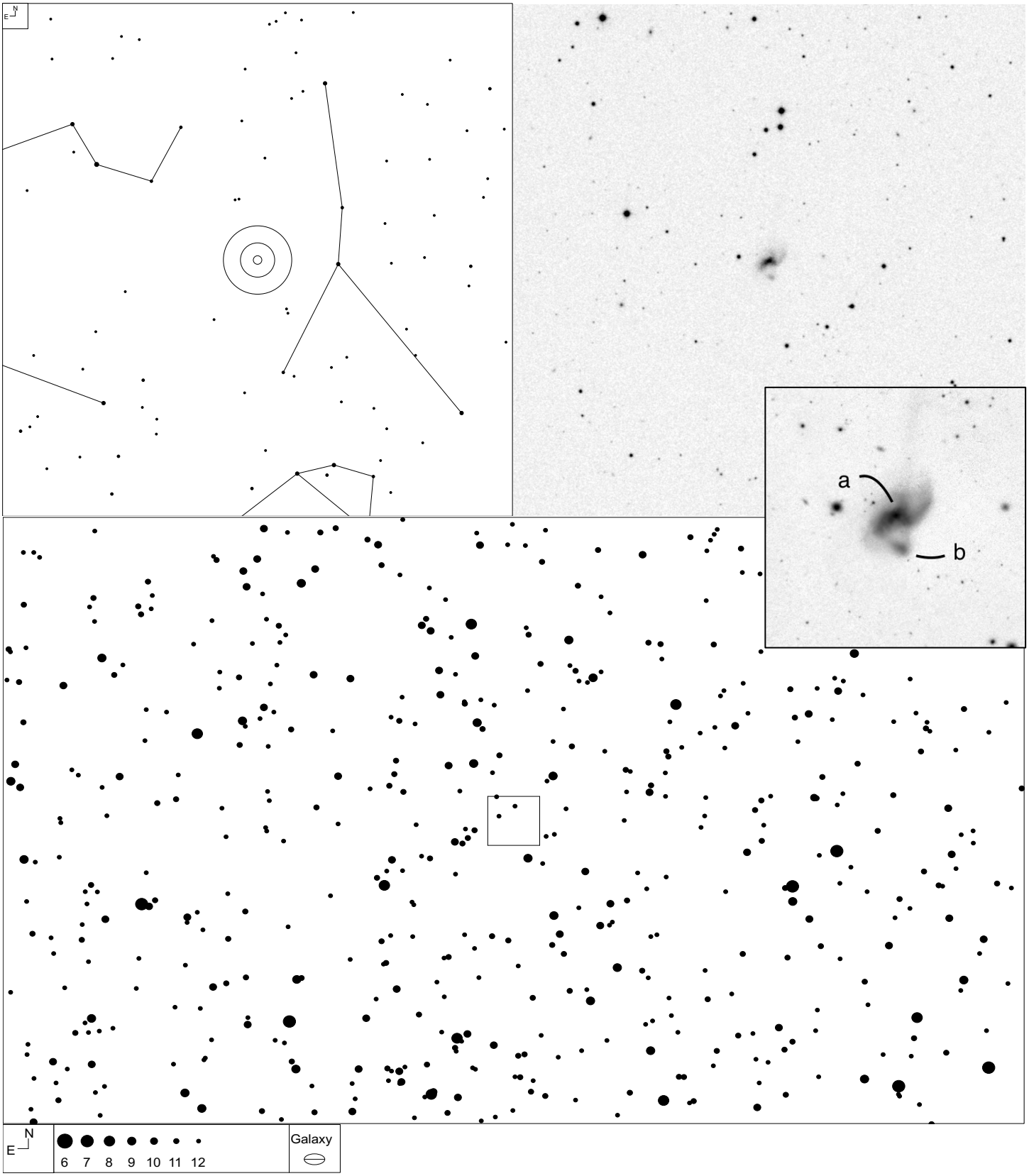
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
481	NGC 2738	09 04 00.4	+21 58 03	G	13.7g	1.8 x 0.7	PK

VV 645 (Cancer)



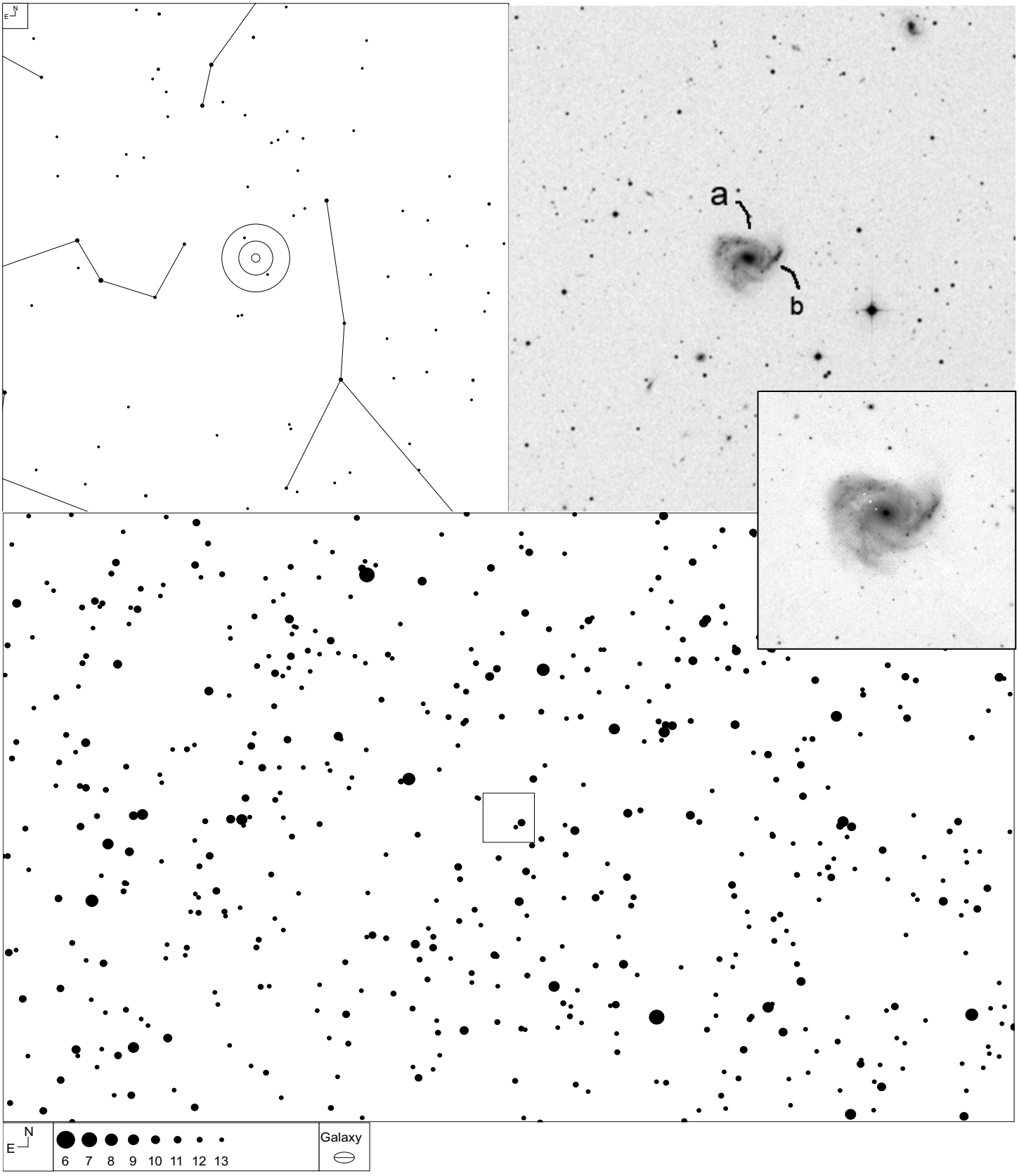
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
645	IC 2431	09 04 35.4	+14 35 39	GGroup	14.6	0.5 x 0.4	N

VV 612 (Cancer)



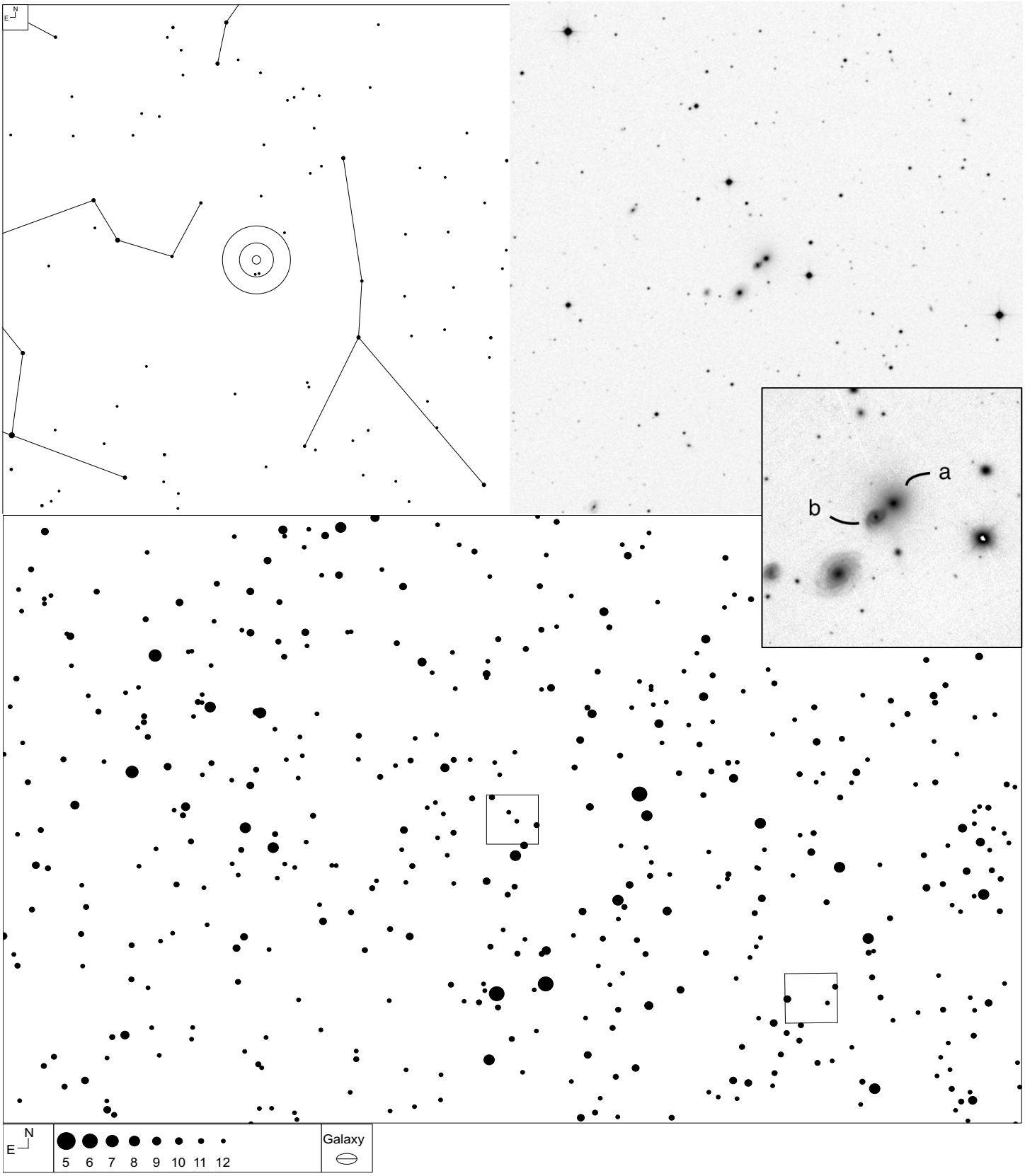
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
612	NGC 2744	09 04 38.8	+18 27 37	GPair	13.8g	1.7 x 1.1	M

VV 541 (Cancer)



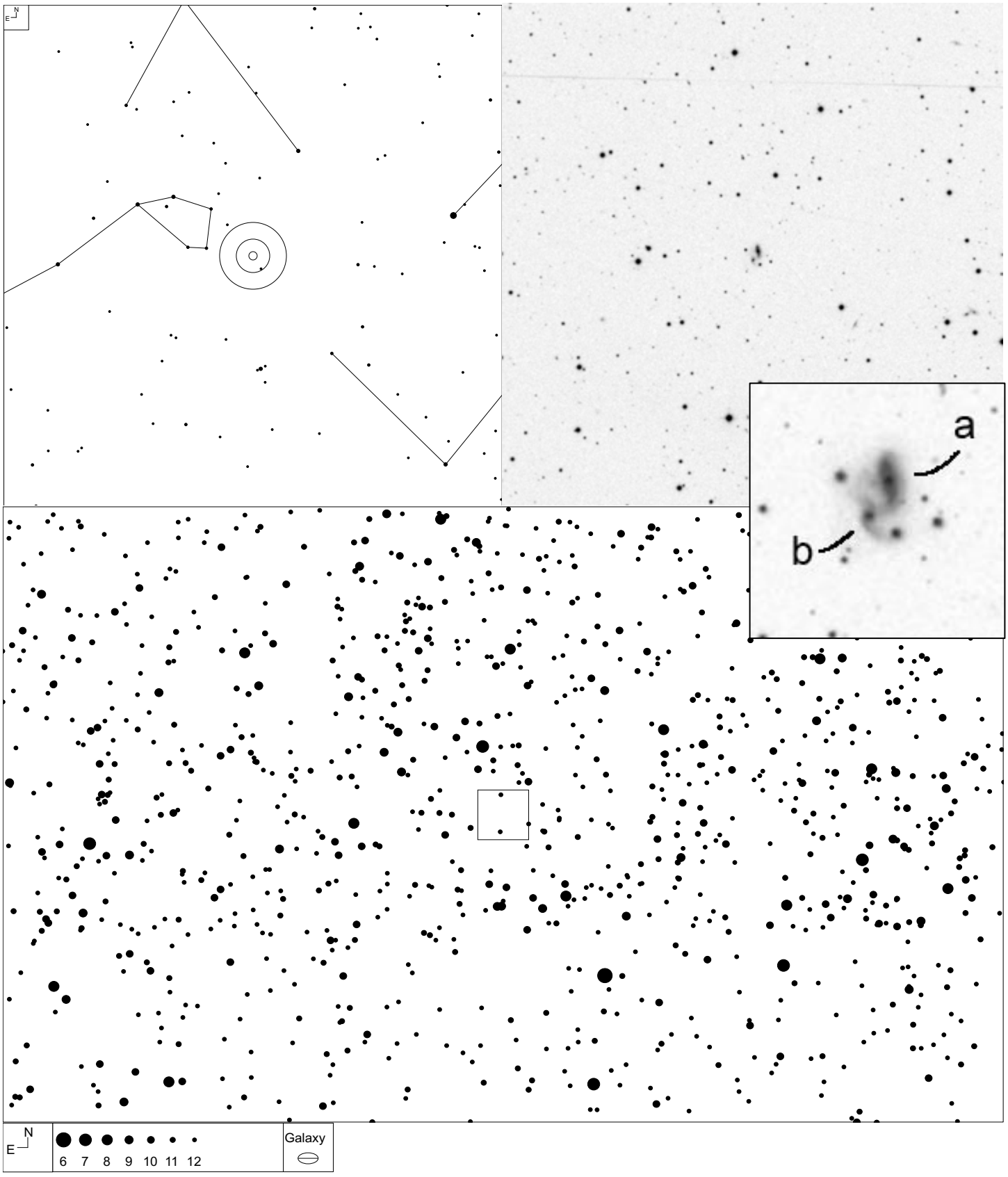
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
541	NGC 2750	09 05 46.2	+25 26 13	GPair	13.0g	2.2 x 1.9	N

VV 707 (Cancer)



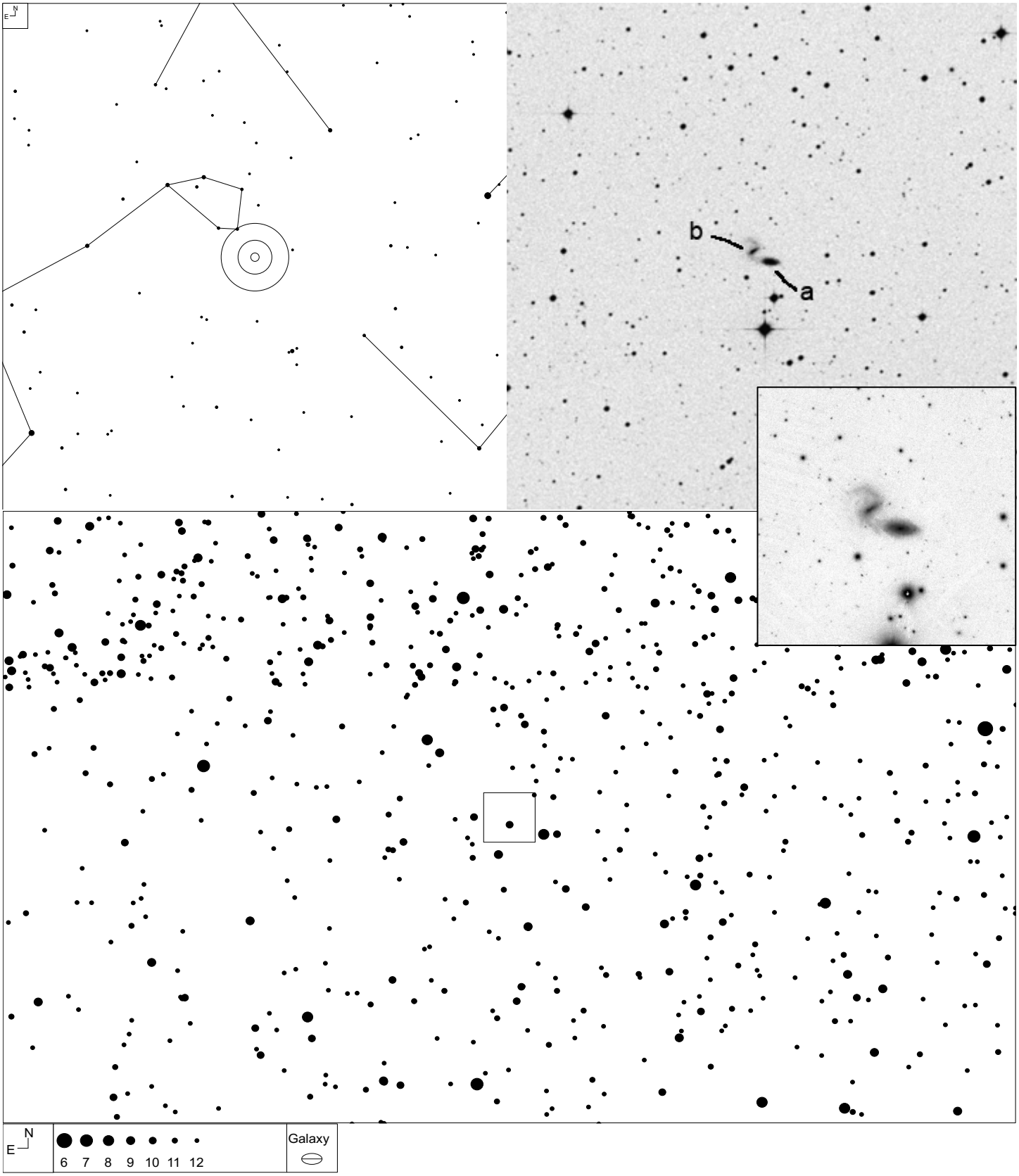
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
707		09 10 02.3	+22 51 12	GPair			NNNP
707a	IC 2441	09 10 01.6	+22 51 19*	G	15.2g	0.3 x 0.3	
707b	IC 2441C	09 10 03.0	+22 51 06	G	15.4g	0.5 x 0.4	

VV 749 (Hydra)



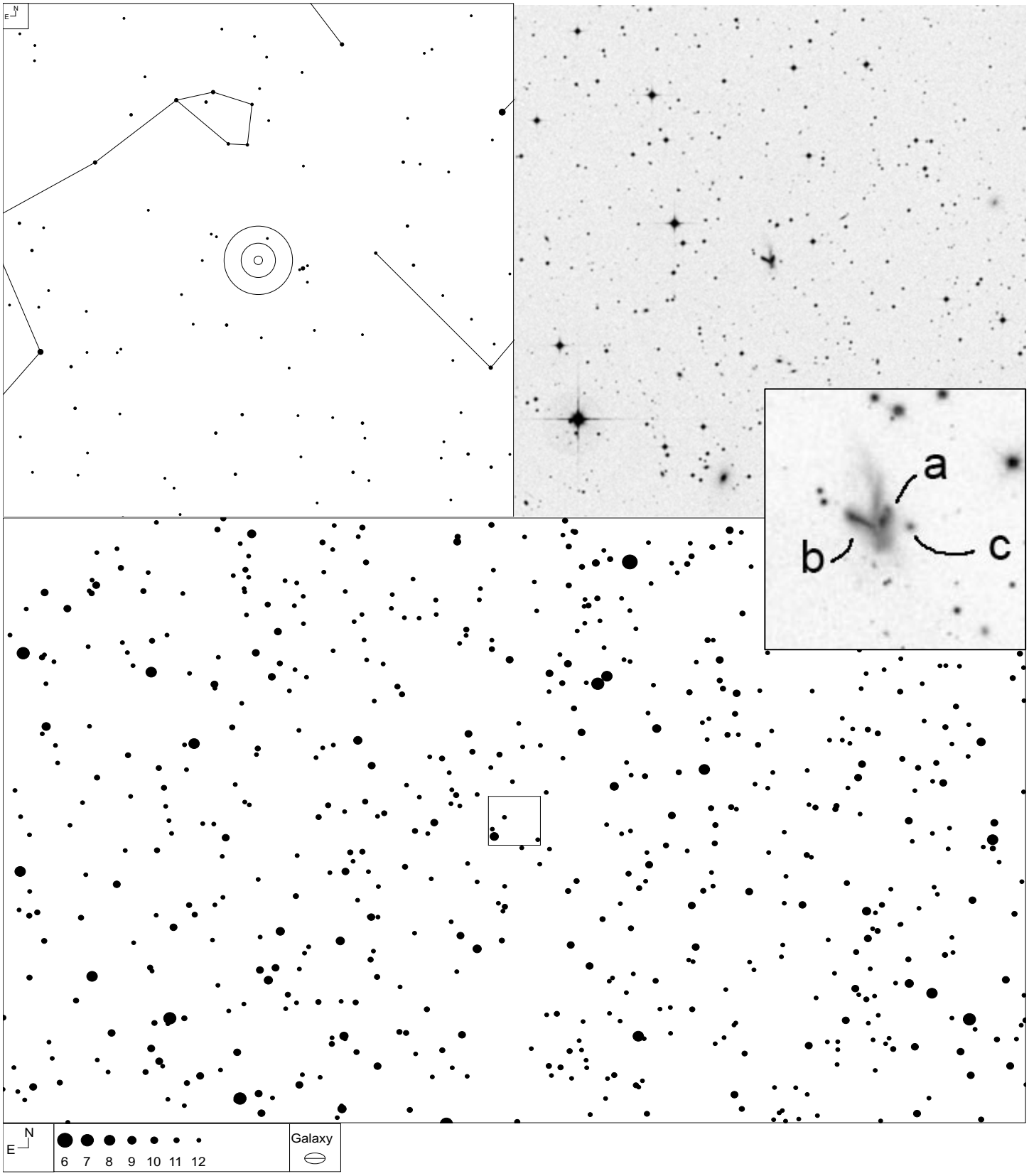
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
749	MCG+01-22-011	08 27 32.6	+02 53 02	GPair	15.1g	0.7 x 0.4	PKb

VV 810 (Hydra)here



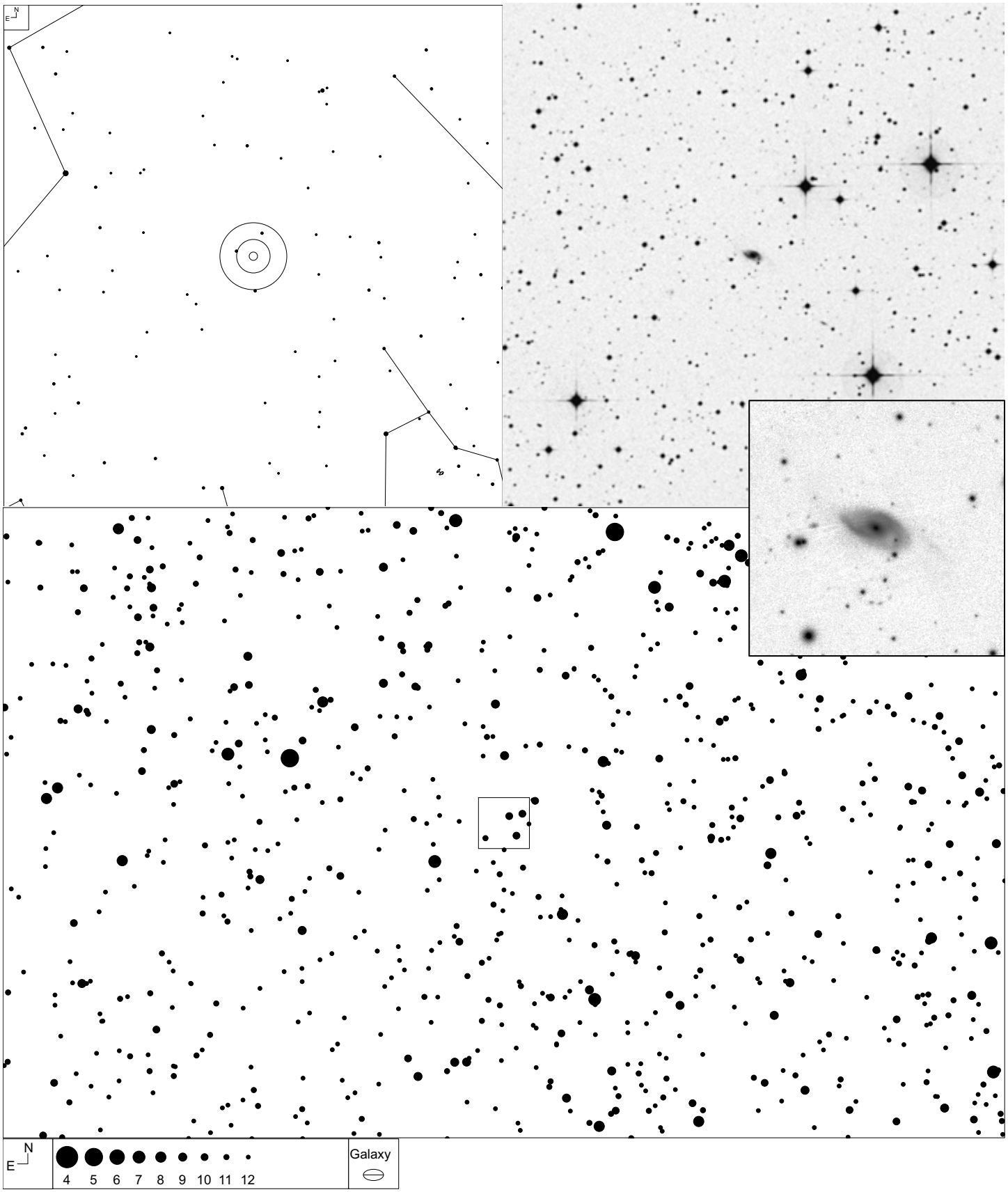
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
810		08 34 32.7	+01 40 06	GPair			PDbt
810a	UGC 4480	08 34 31.8	+01 39 58	G	14.6g	0.9 x 0.8	
810b	MCG+00-22-018	08 34 33.7	+01 40 15	G	14.7	0.3 x 0.3	

VV 663 (Hydra)



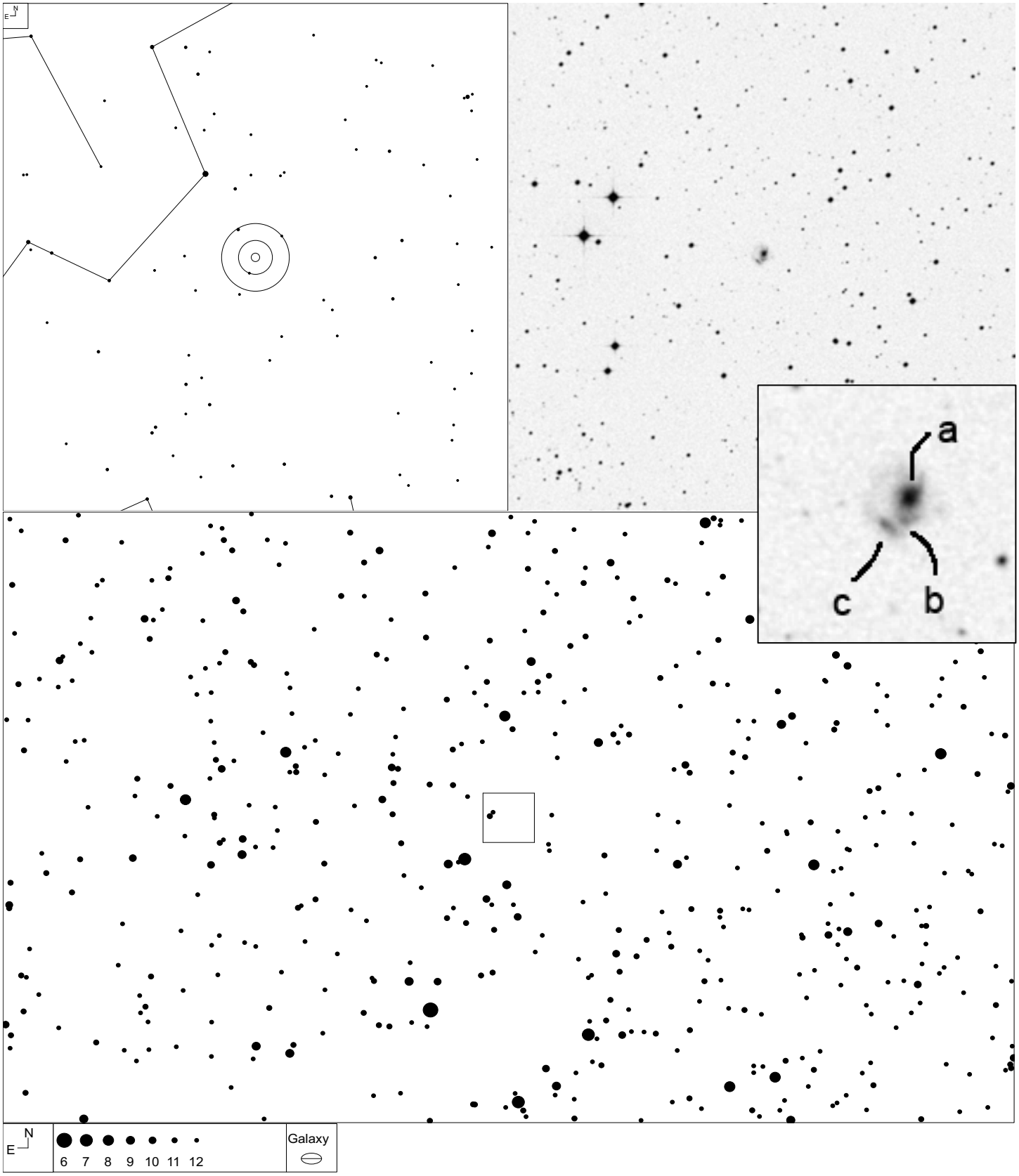
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
663	MCG+00-22-024	08 36 11.1	-03 26 05	GTrpl	16.2g	0.5 x 0.4	NN

VV 421 (Hydra)



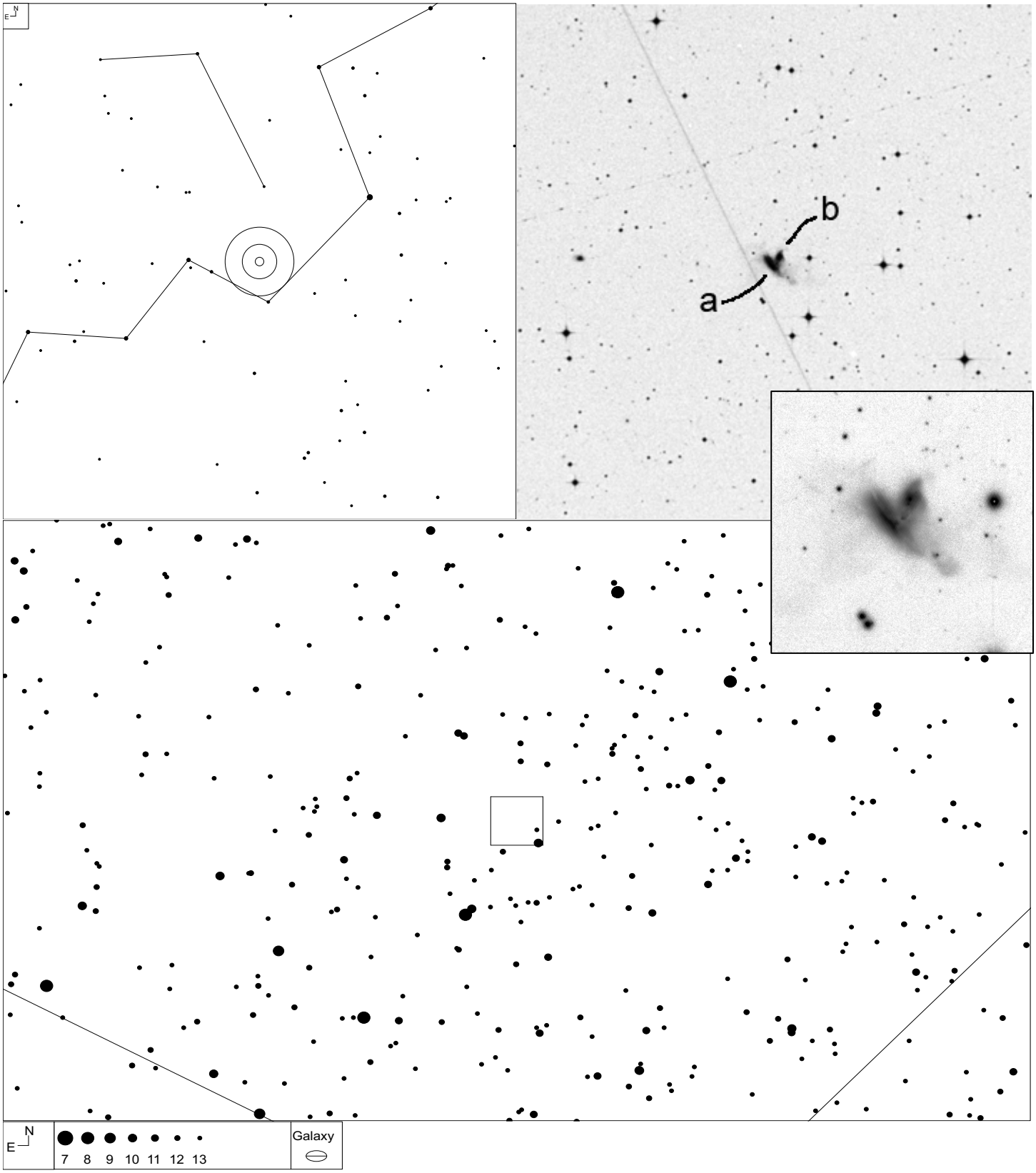
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
421	MCG -02-22-026	08 42 11.2	-13 51 33	G	15.0b	0.6 x 0.4	M

VV 549 (Hydra)



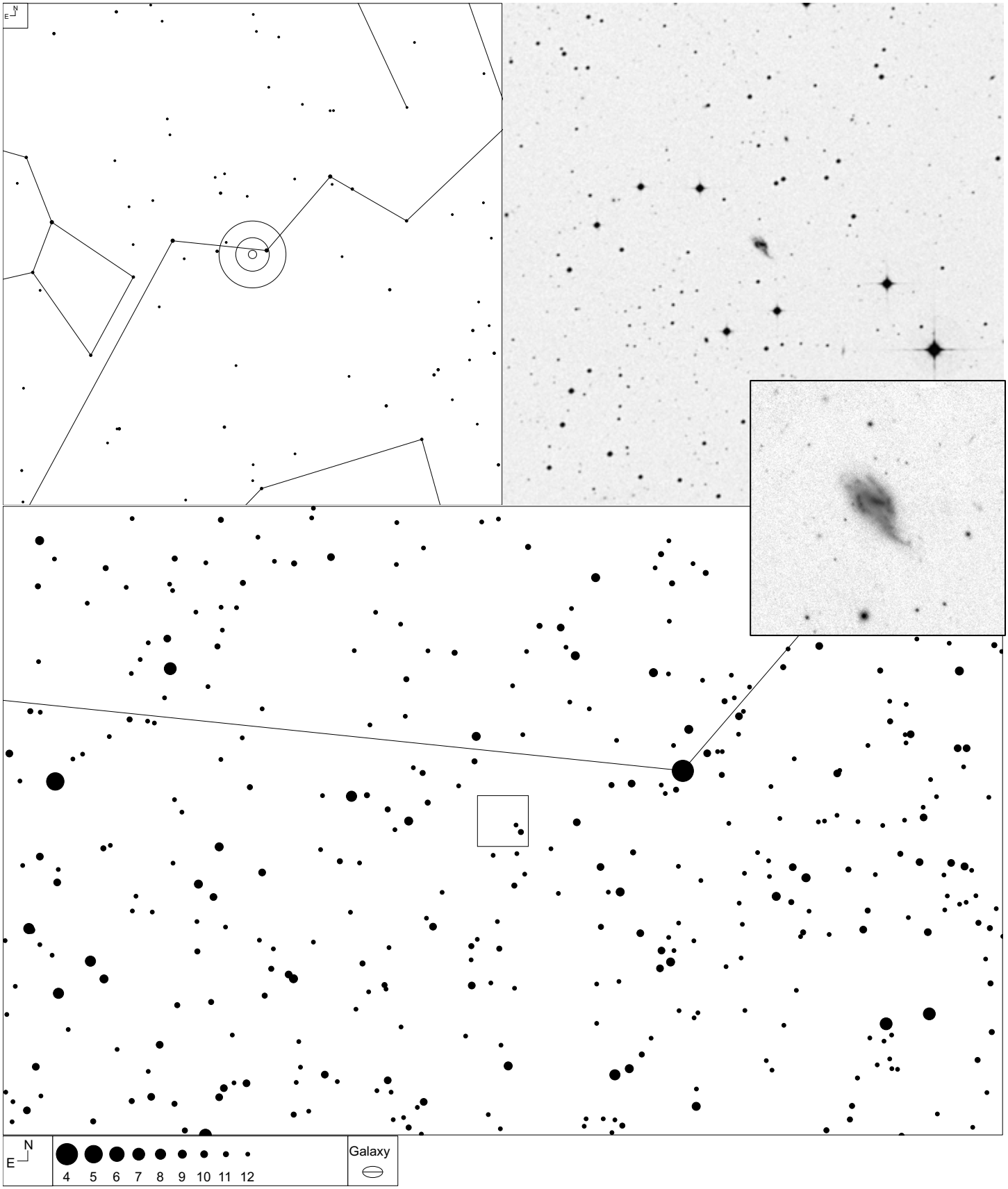
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
549	MCG -02-24-004	09 15 36.4	-13 37 50	GGroup	15.0b	0.7 x 0.7	N

VV 741 (Hydra)



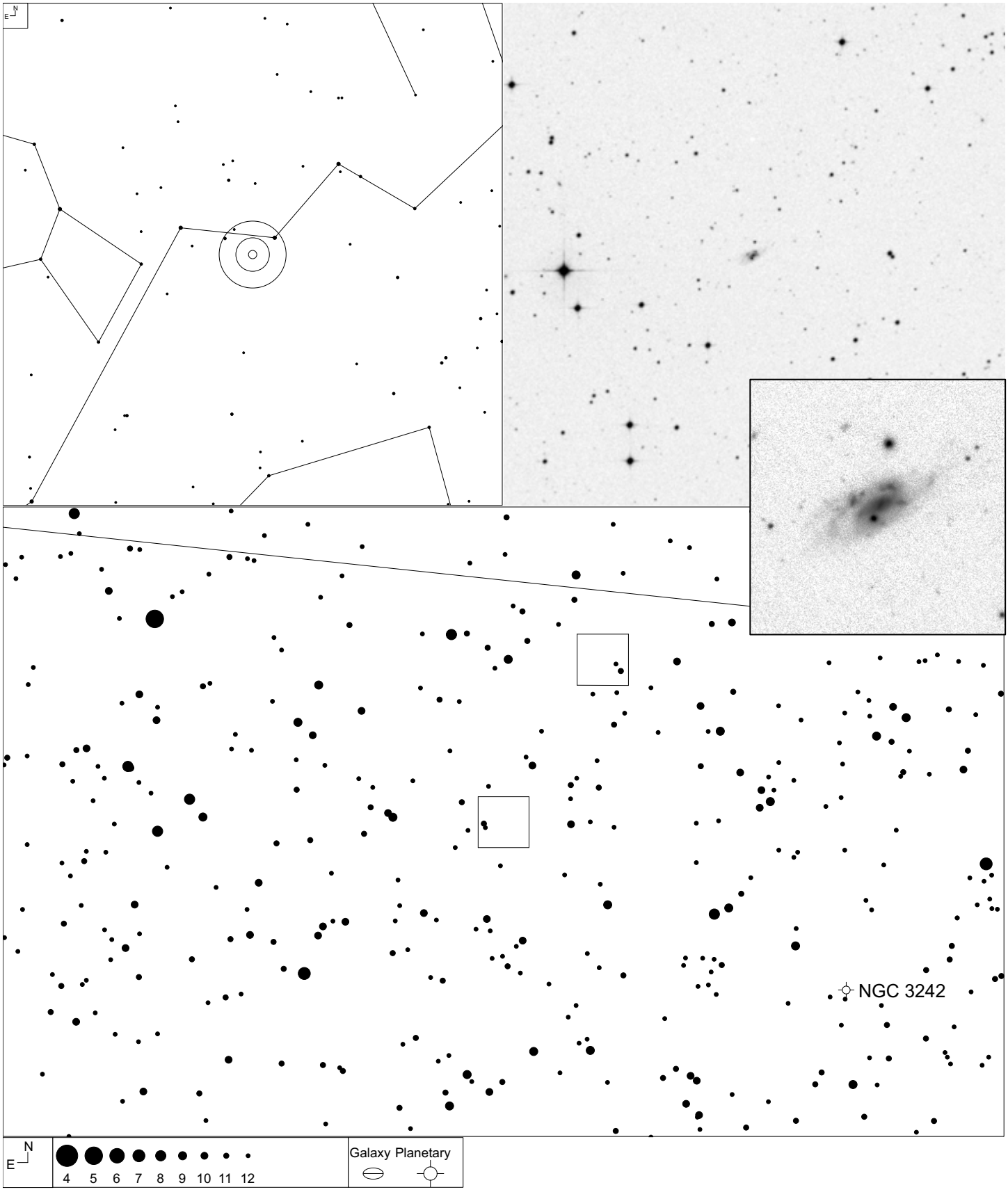
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
741	NGC 3058	09 53 35.7	-12 28 50	GPair	13.8b	1.3 x 0.7	PKbt

VV 651 (Hydra)



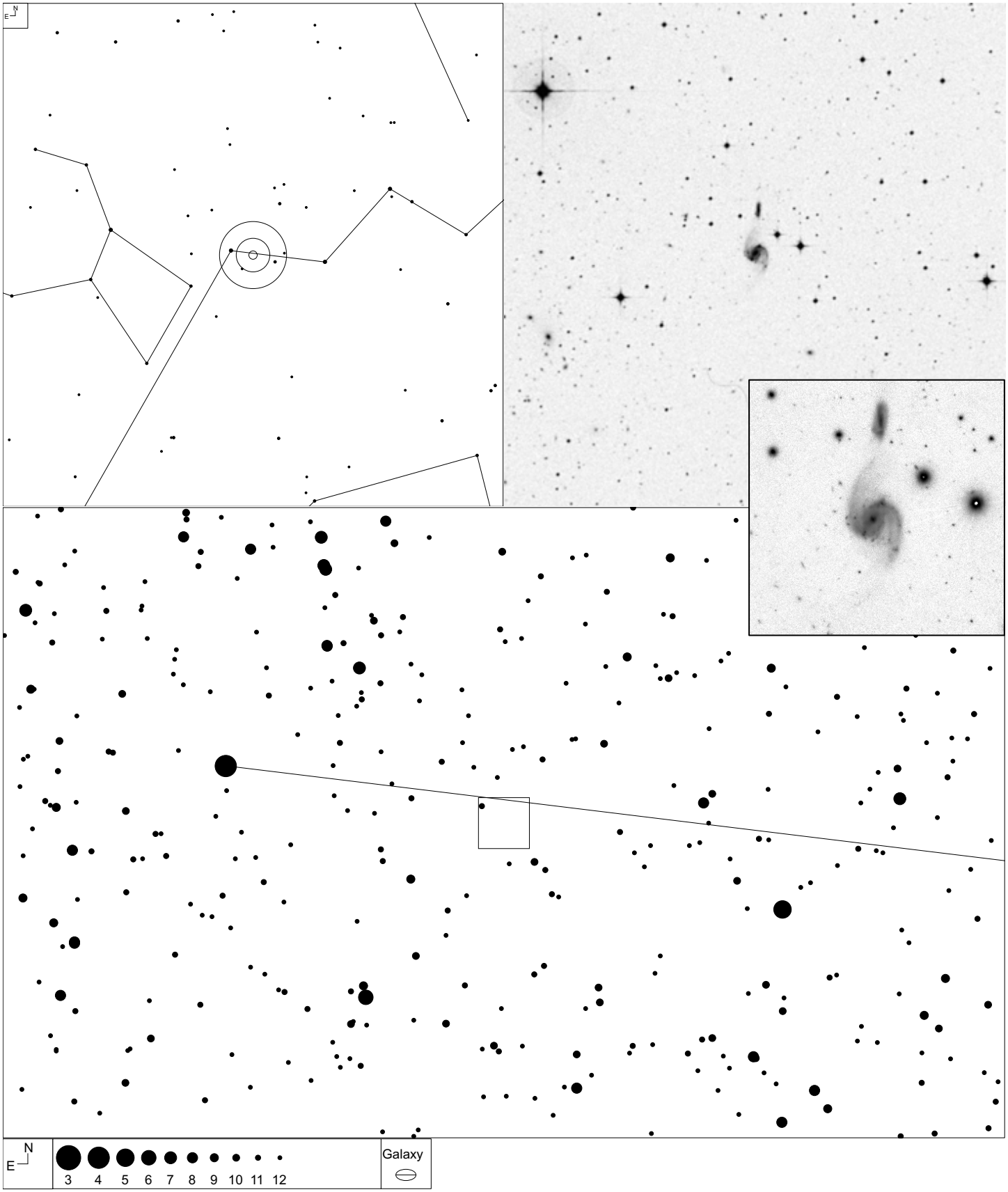
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
651	MCG -03-27-017	10 29 41.3	-17 04 55	GGroup	15.0b	0.9 x 0.4	N

VV 595 (Hydra)



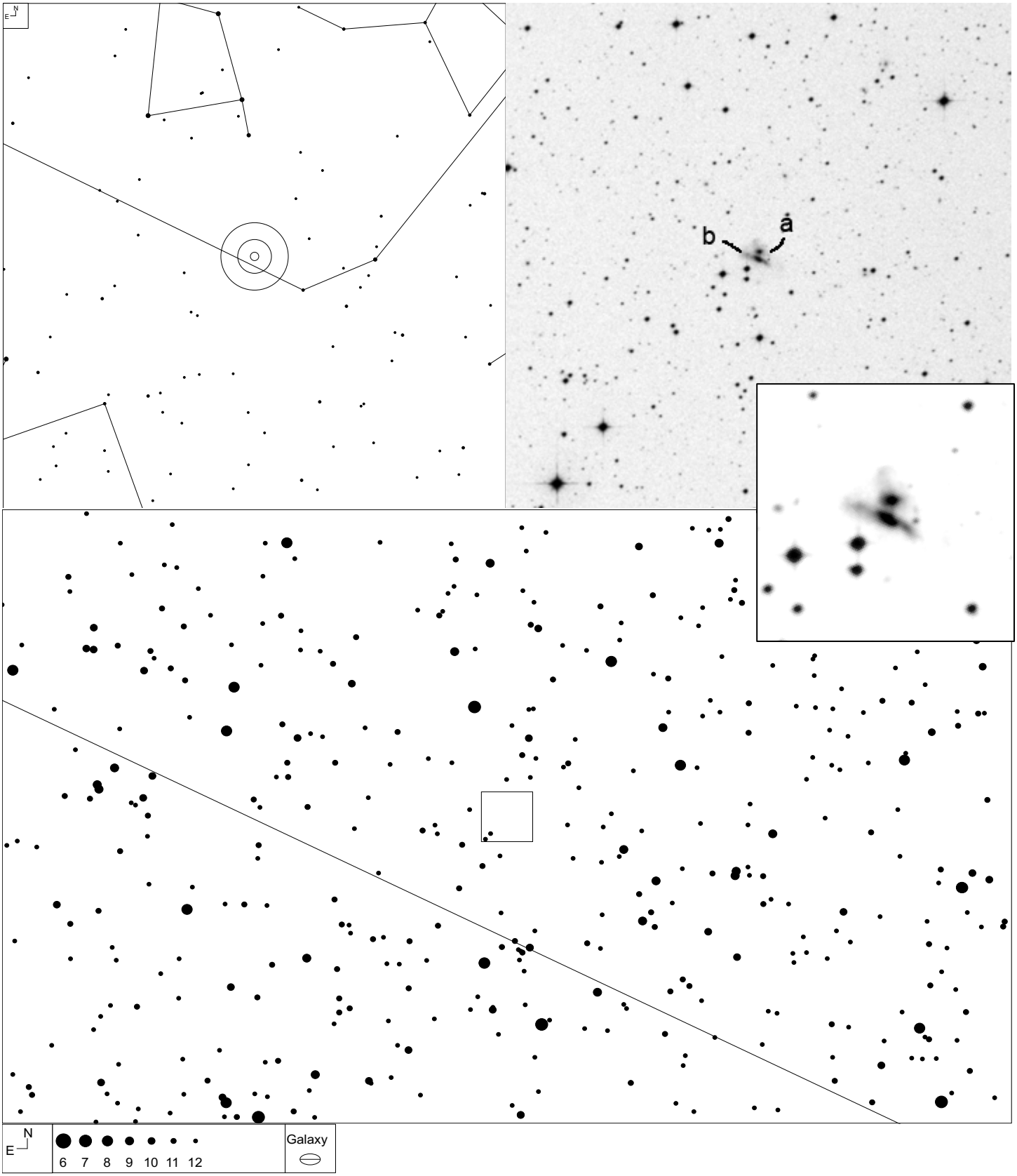
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
595	MCG -03-27-018	10 31 38.6	-17 51 03	GGroup	15.4b	0.7 x 0.4	N

VV 410 (Hydra)



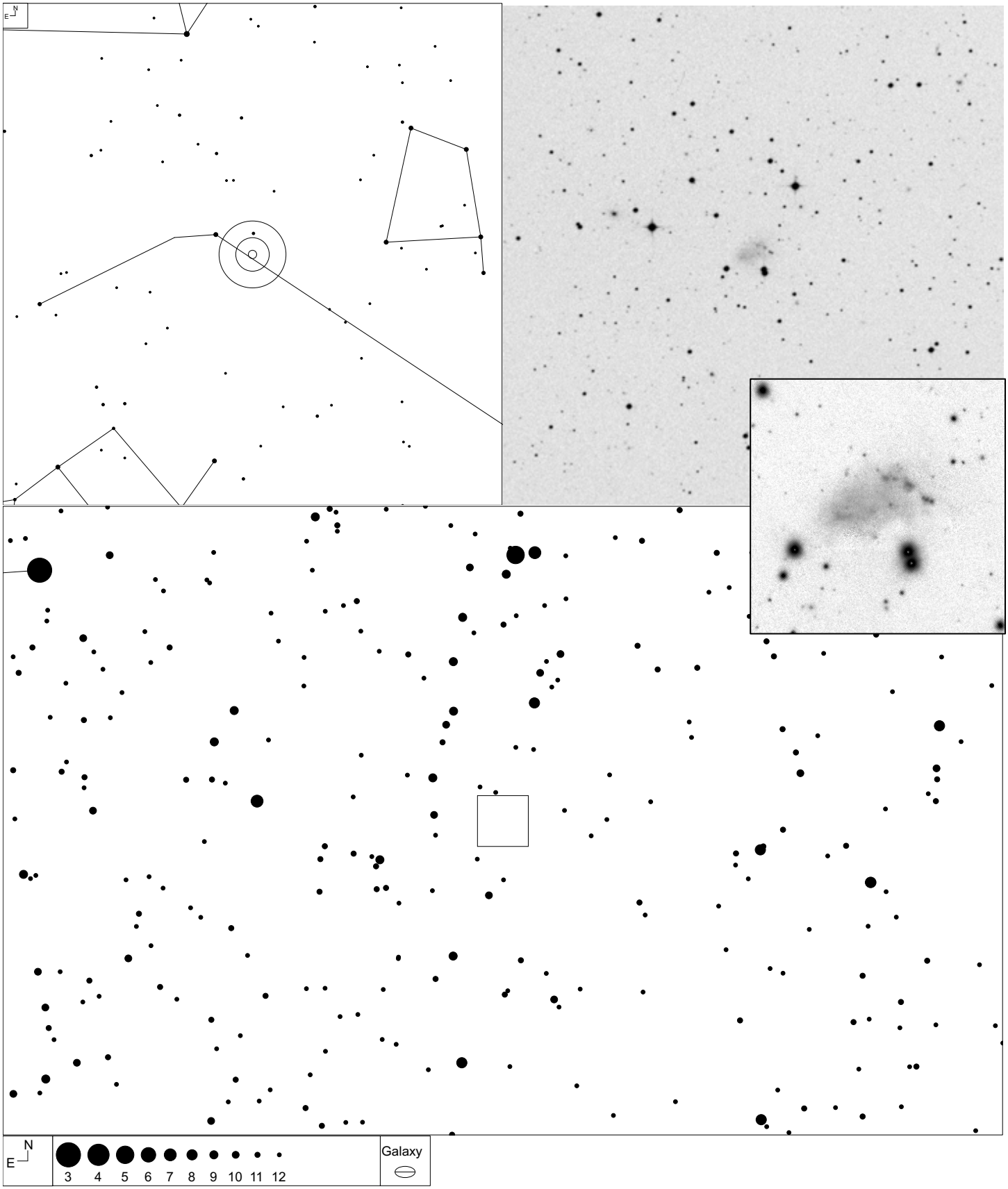
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
410	MCG -03-28-001	10 44 07.1	-16 28 14	G	14.0b	1.1 x 0.8	M

VV 835 (Hydra)



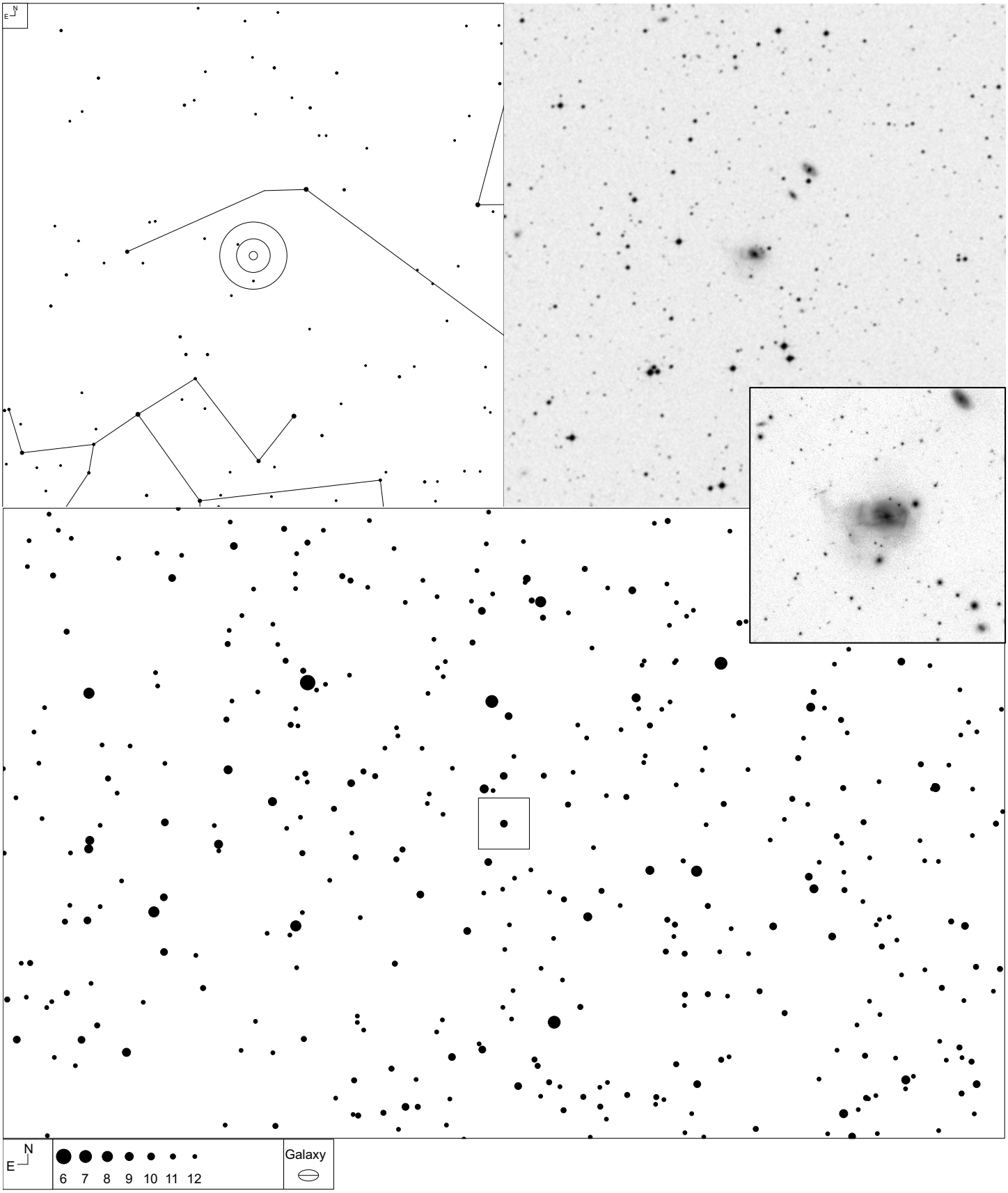
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
835		12 06 51.9	-31 56 54	GPair			Enat
835a	MCG -05-29-016	12 06 51.7	-31 56 47	G	15.4b	0.2 x 0.2	
835b	MCG -05-29-017	12 06 51.9	-31 56 58	G	14.7b	1.0 x 0.2	

VV 504 (Hydra)



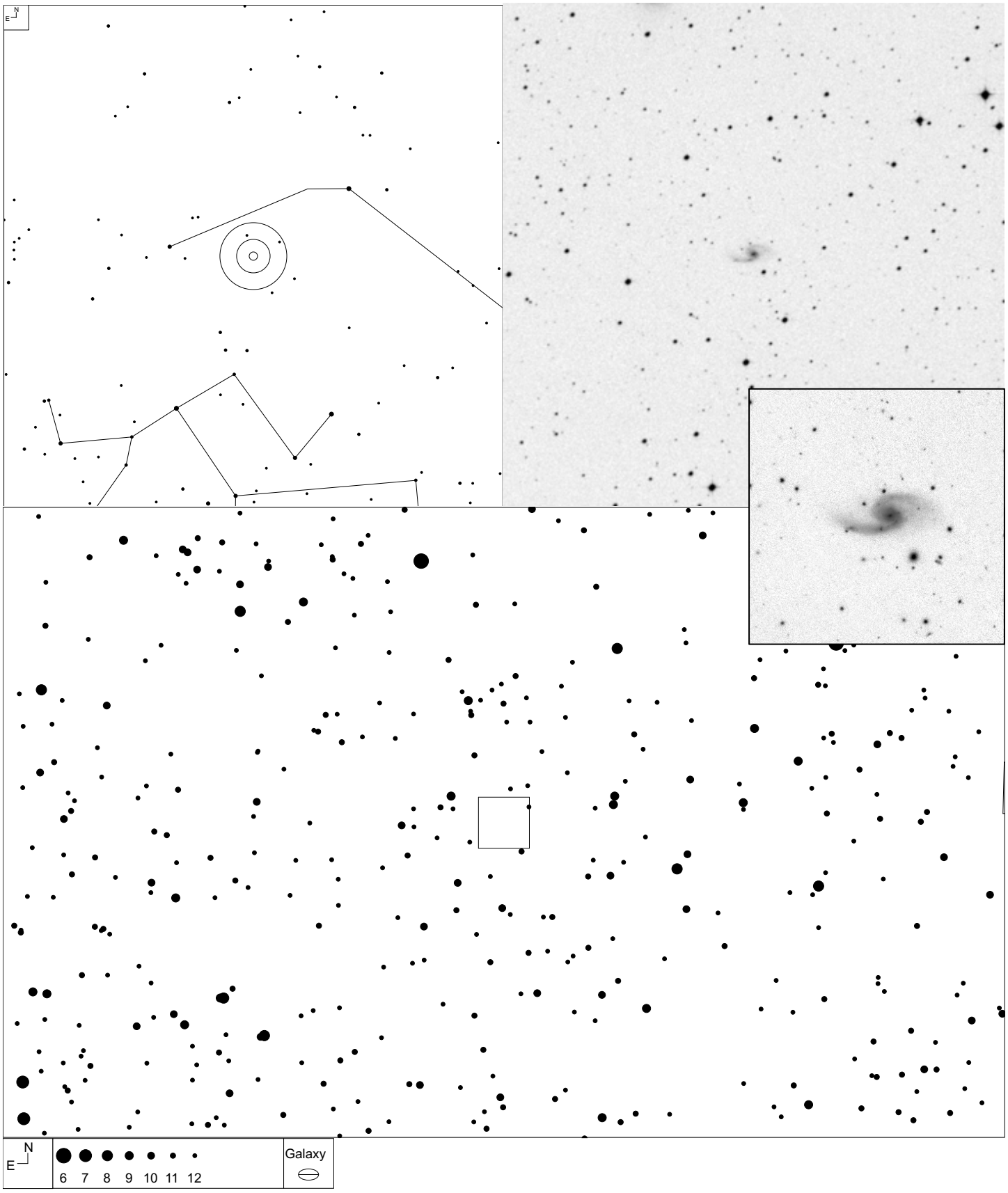
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
504	UGCA 328	13 09 19.1	-24 23 12	G	14.9b	1.3 x 0.9	Ch

VV 631 (Hydra)



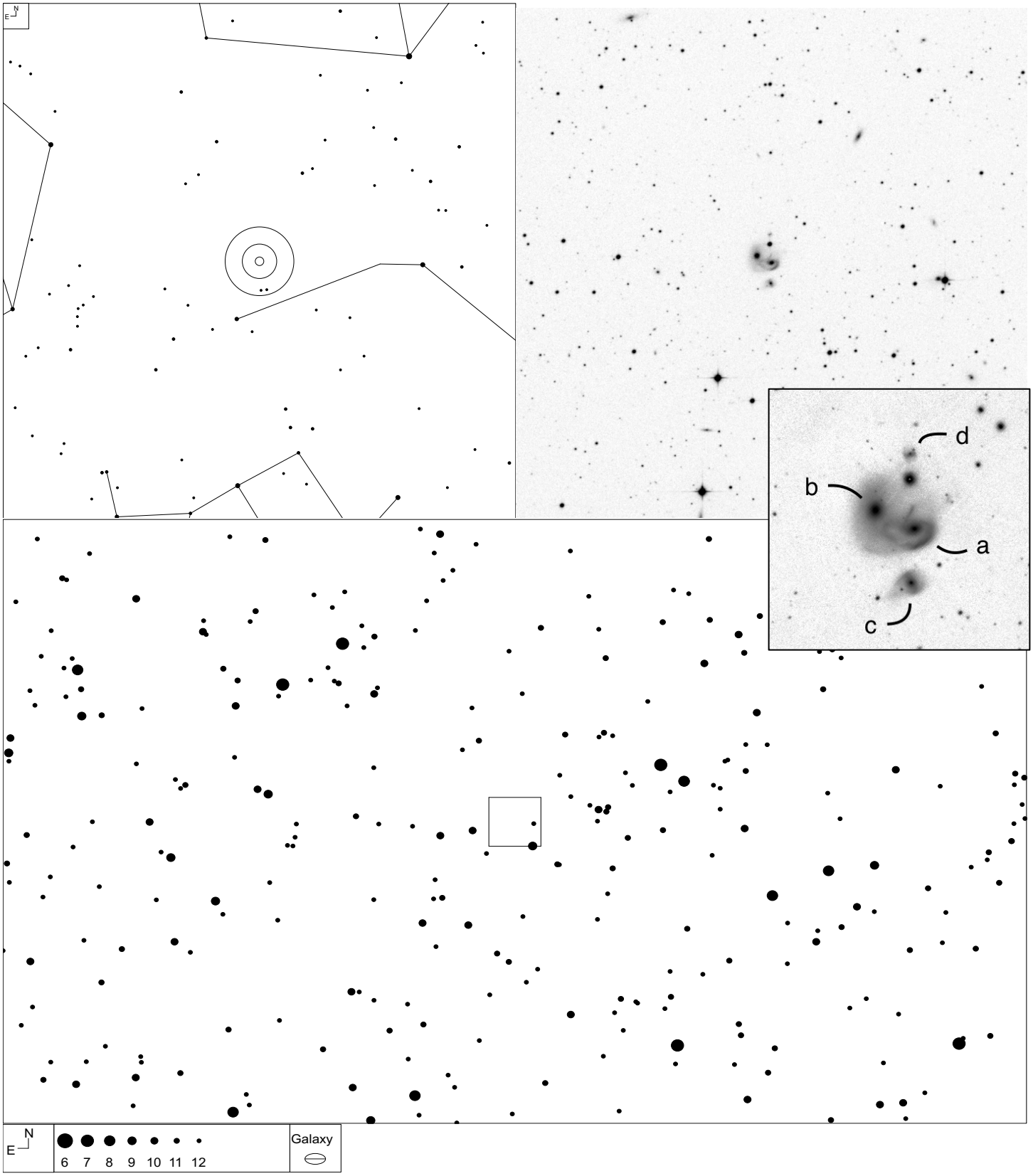
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
631	IC 4281	13 32 38.2	-27 10 11	G	14.5b	1.4 x 0.9	N

VV 392 (Hydra)



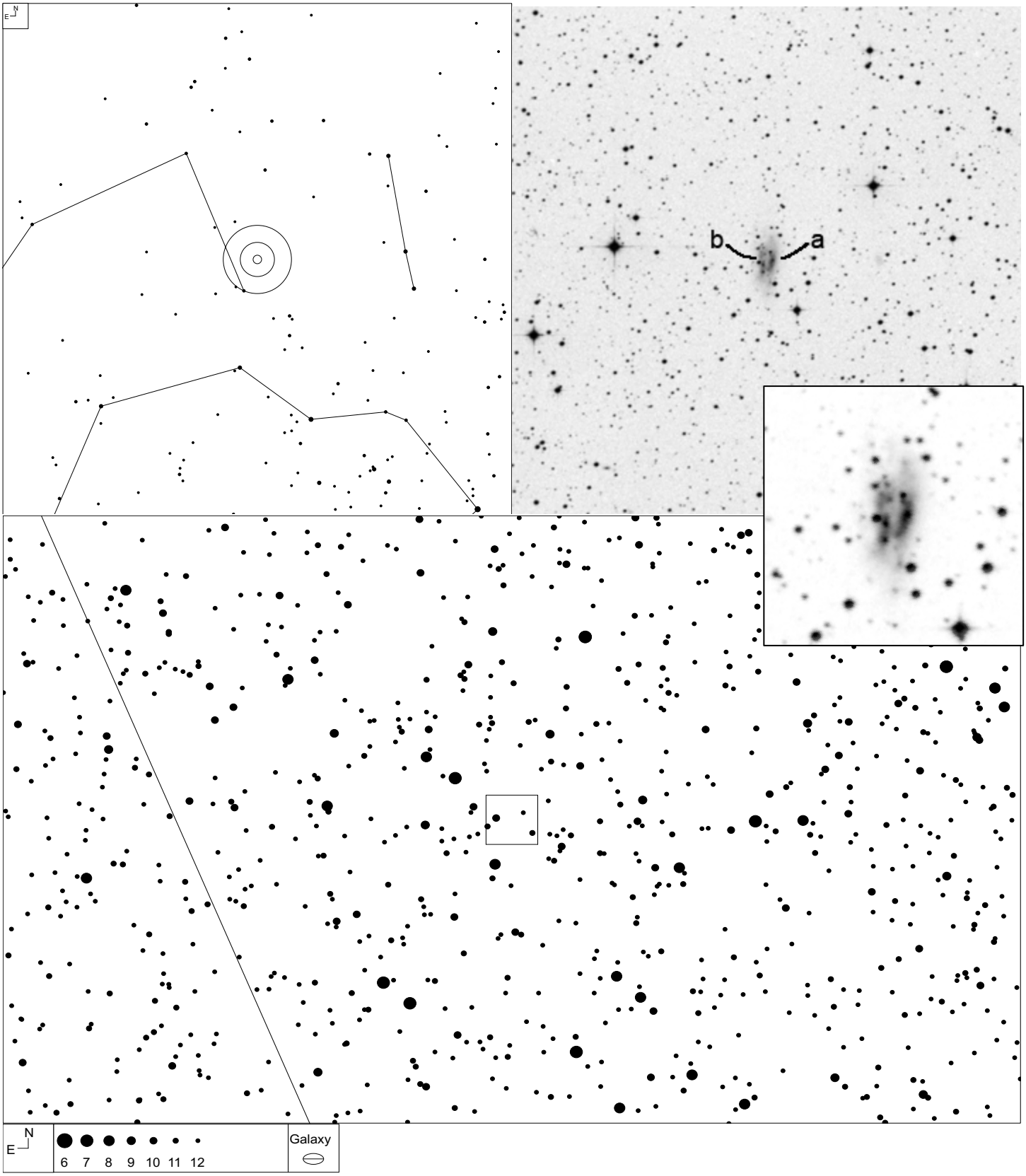
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
392	MCG -04-32-052	13 43 51.1	-27 21 43	G	15.1b	1.0 x 0.8	MMM

VV 666 (Hydra)



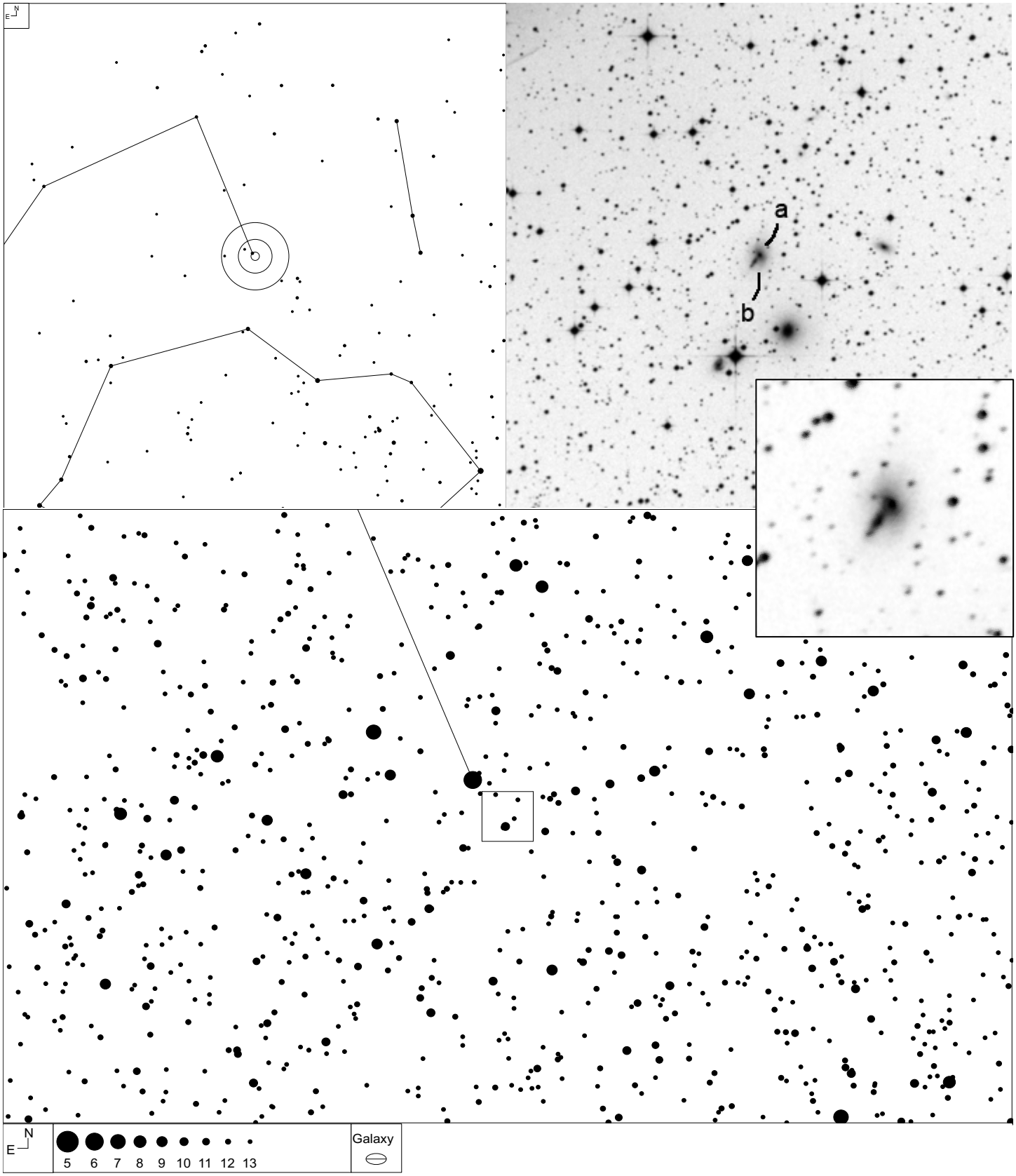
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
666		14 00 24.8	-23 18 25	GGroup			NNN
666a	MCG -04-33-025	14 00 23.7	-23 18 29	G	15.2b	0.3 x 0.3	
666b	MCG -04-33-026	14 00 25.6	-23 18 18	G	15.0b	0.6 x 0.6	
666c	MCG -04-33-024	14 00 23.9	-23 19 06	G	15.5b	4x4	

VV 768 (Pyxis)



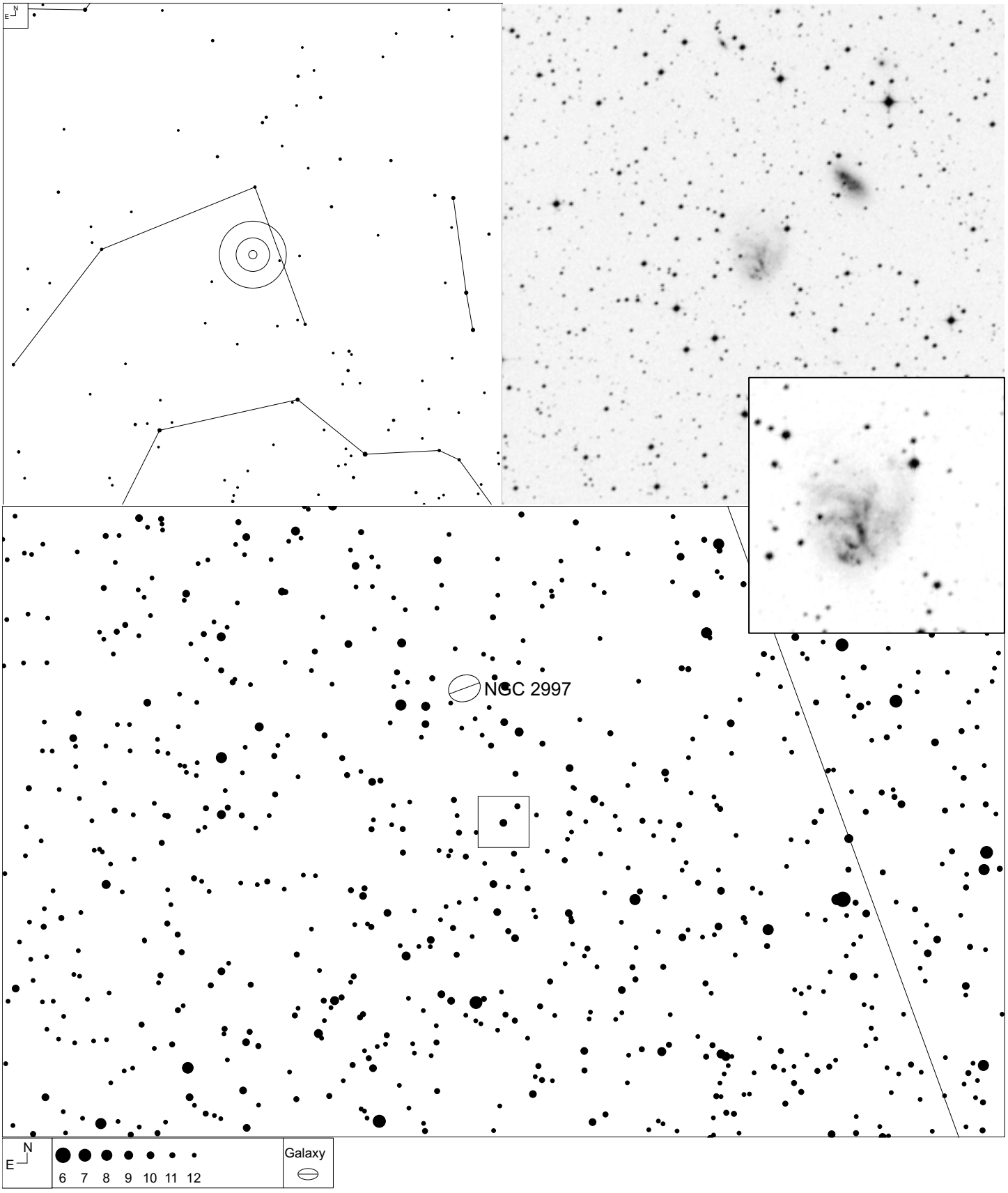
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
768		09 25 18.4	-34 06 12	G			PK
768a	NGC 2883	09 25 17.9	-34 05 57	G	13.1b	2.8 x 0.9	
768b	NGC 2883B	09 25 18.9	-34 06 13	G	17.0v		

VV 586 (Antlia)



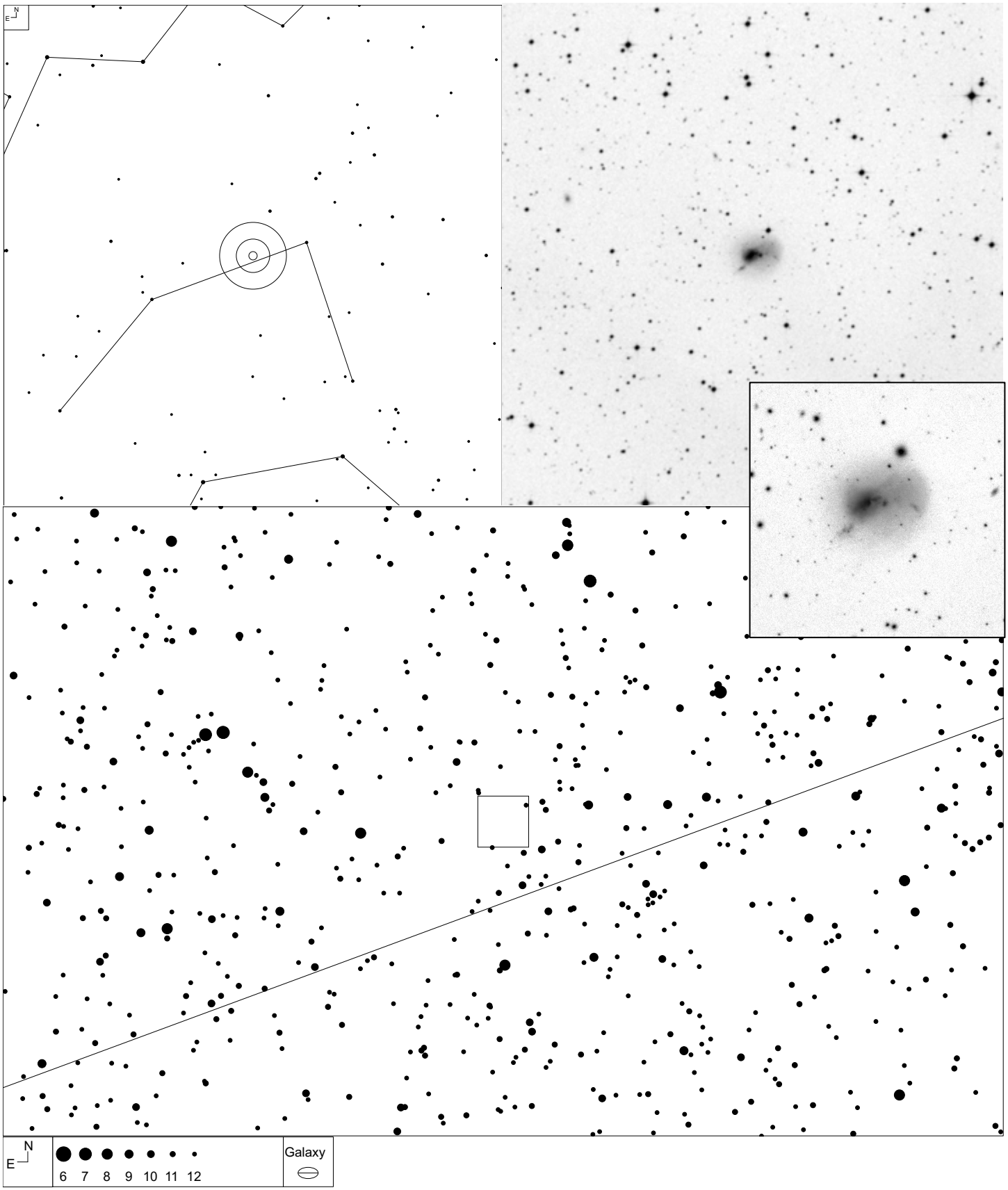
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
586		09 28 26.0	-36 07 49	G			N
586a	MCG -06-21-008	09 28 25.9	-36 07 46	G	16.0b	0.5 x 0.4	
586b	MCG -06-21-009	09 28 26.6	-36 07 59	G	16.5b	0.4 x 0.1	

VV 608 (Antlia)



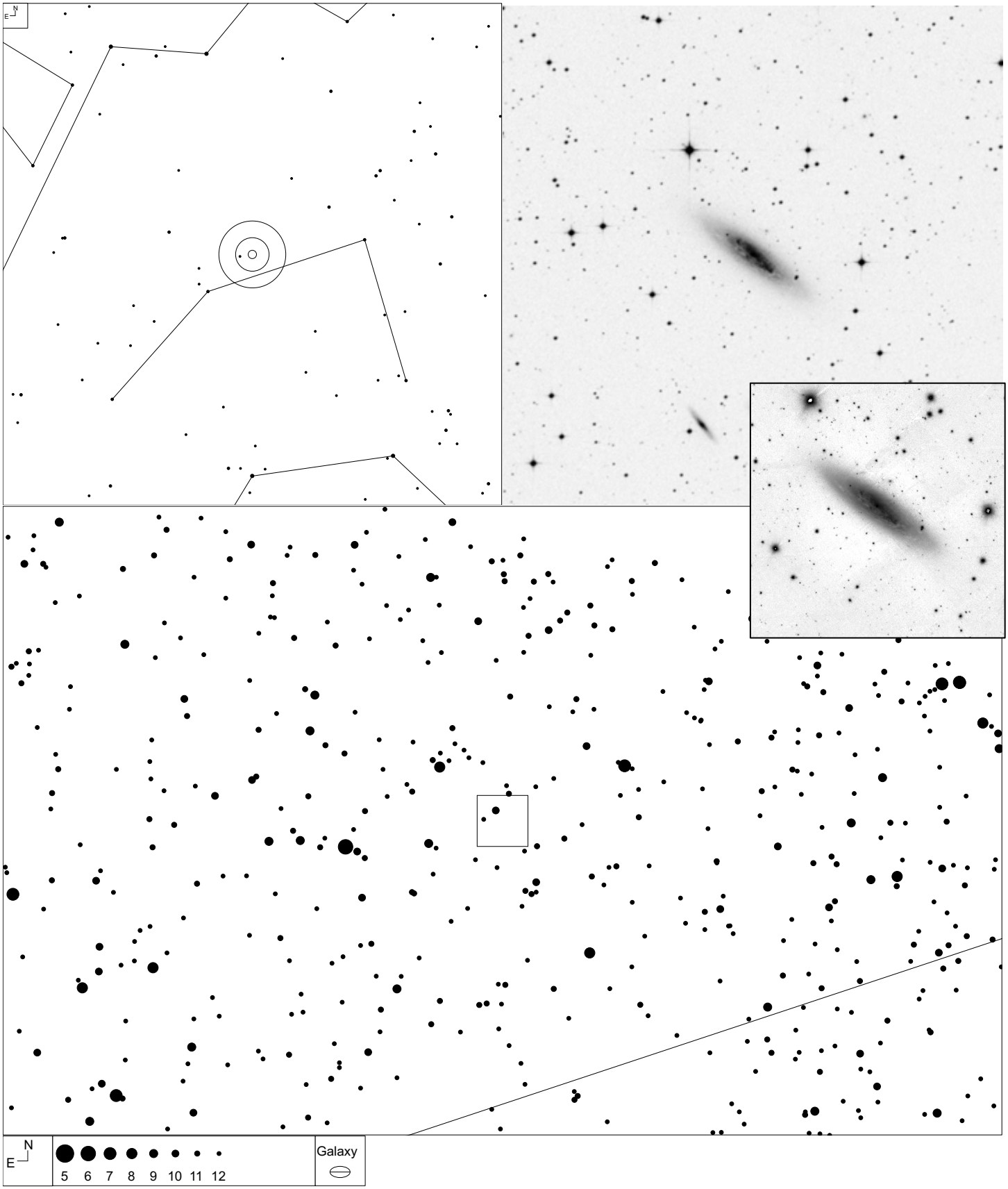
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
608	UGCA 180	09 44 47.6	-31 49 32	G	13.0v	2.1 x 1.7	N

VV 592 (Antlia)



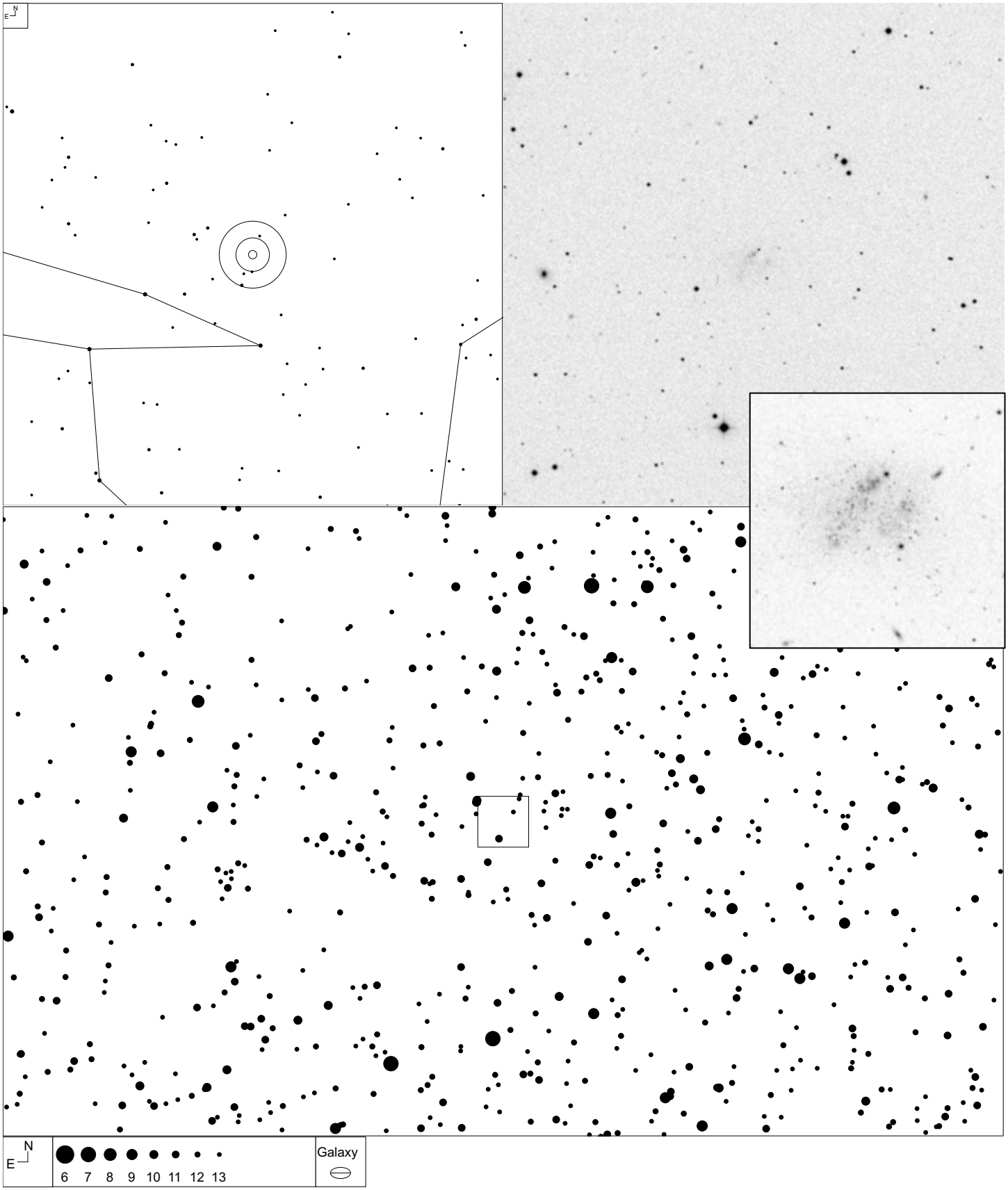
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
592	MCG -05-24-010	09 58 46.2	-28 37 17	G	13.4b	1.7 x 1.1	N

VV 796 (Antlia)



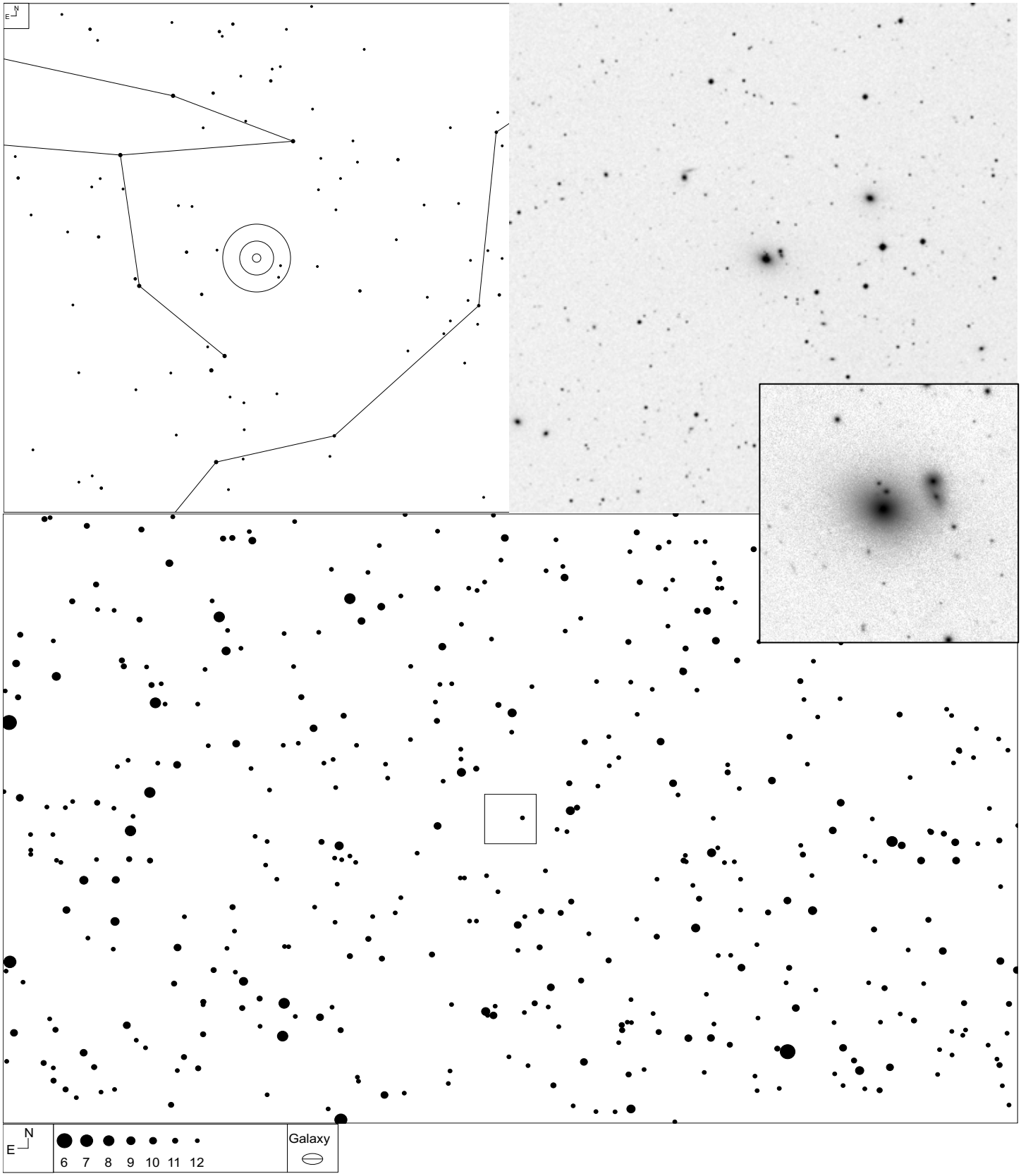
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
796	NGC 3175	10 14 42.1	-28 52 20	G	12.1b	5.0 x 1.3	K

VV 499 (Ursa Major)



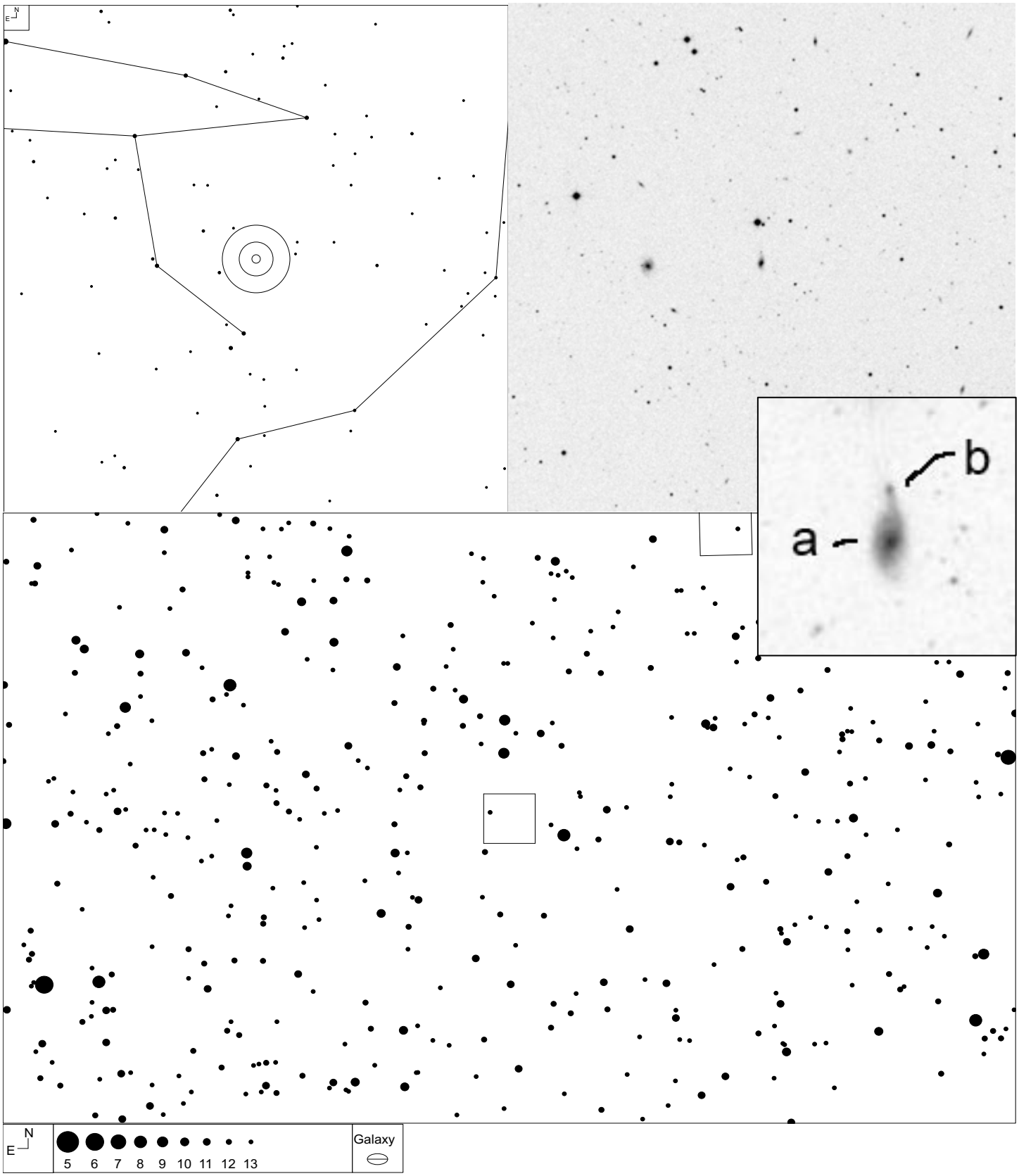
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
499	MCG +11-11-013	08 34 07.2	+66 10 54	G	14.7v	1.5 x 1.3	Ch

VV 703 (Ursa Major)



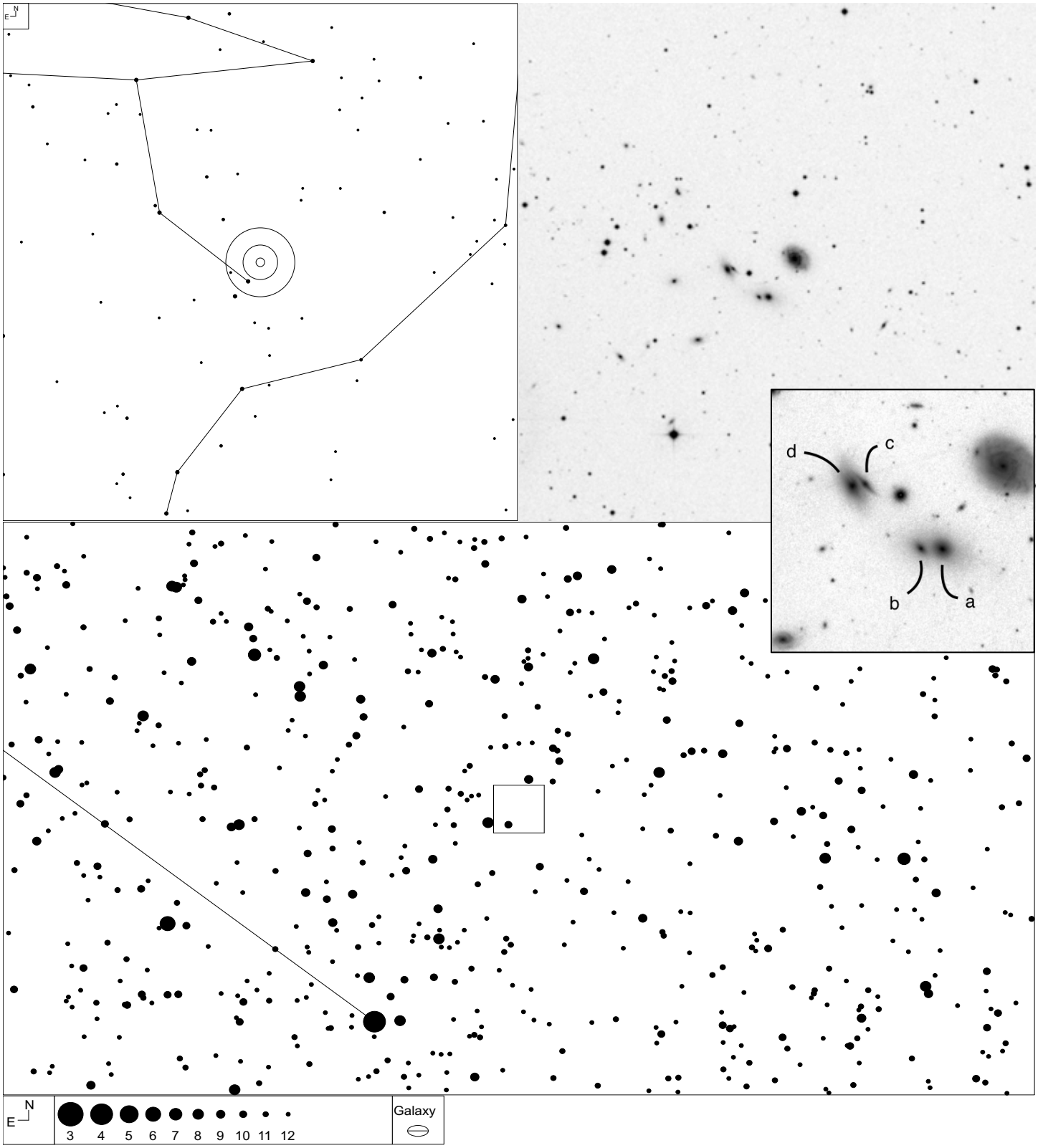
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
703		08 47 51.8	+53 52 40	GPair			NNNP
703a	NGC 2656	08 47 53.3	+53 52 34	G	15.0b	1.3 x 1.3	

VV 388 (Ursa Major)



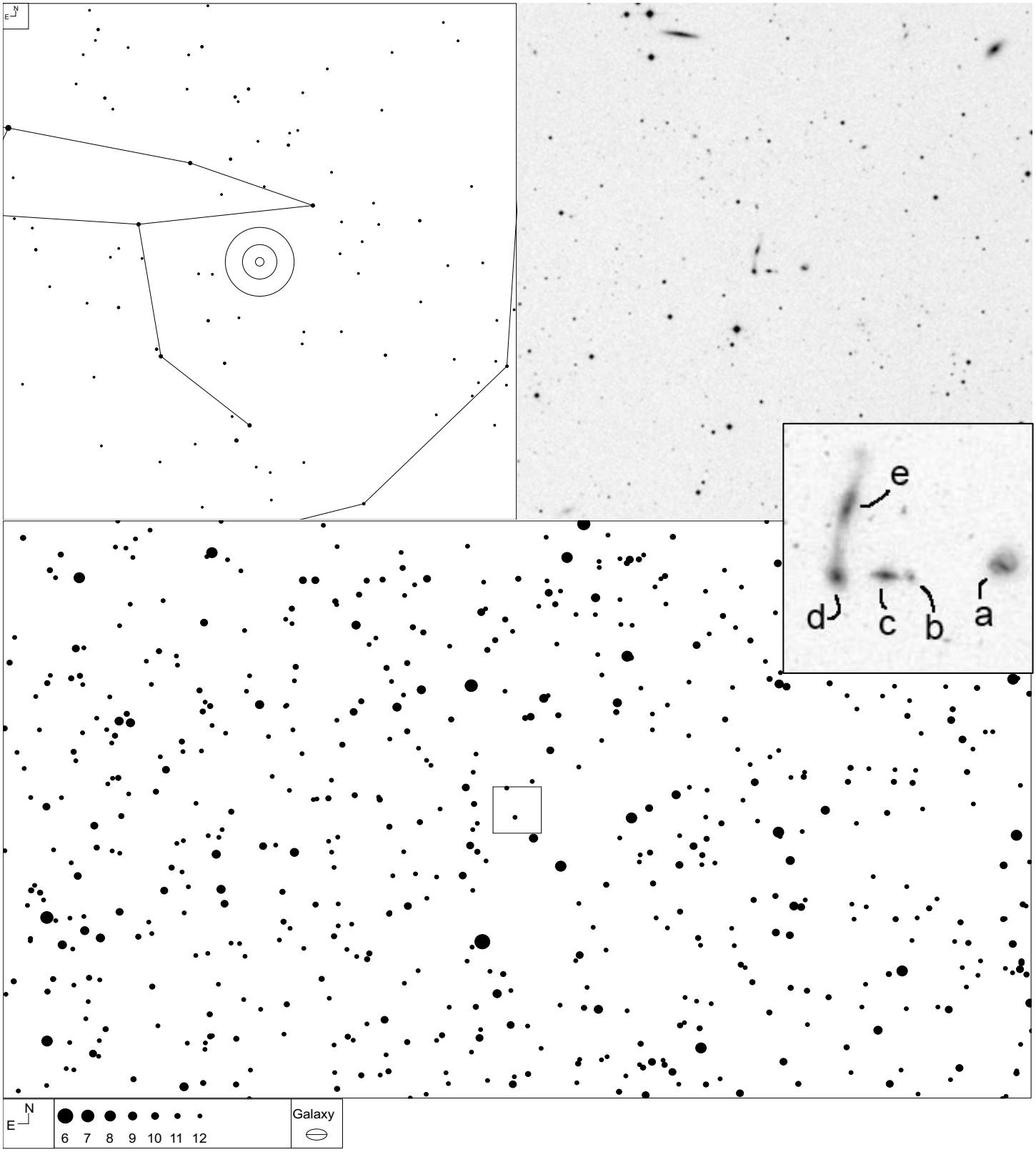
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
388	MCG +09-15-046	08 54 47.0	+52 28 31	GPair	16.2g	0.5 x 0.3	MMM

VV 765 (Ursa Major)



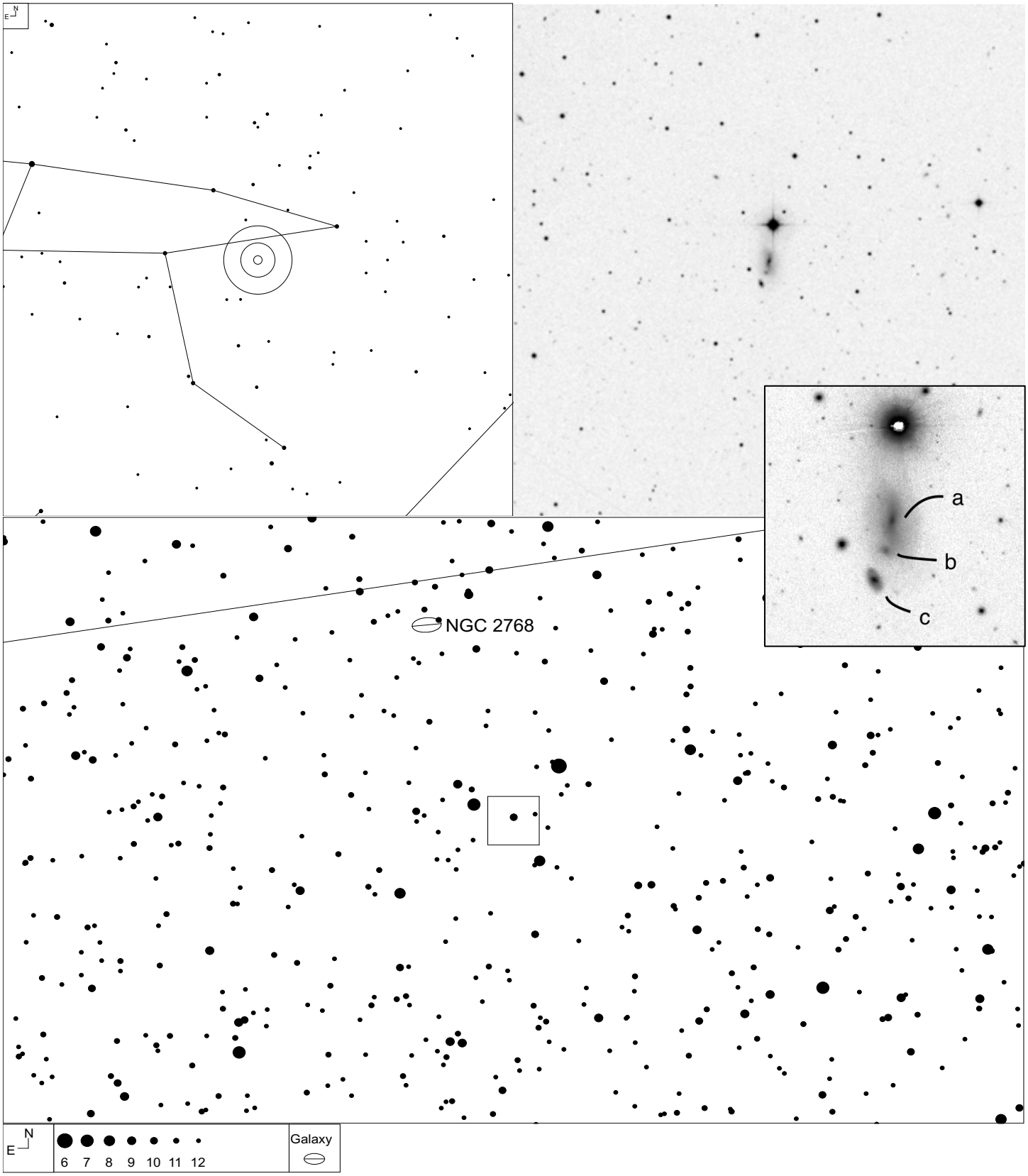
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
765		08 54 57.2	+49 09 33	GGroup			NPNP
765a	NGC 2686	08 54 58.9	+49 08 32	G	15.5g	0.8 x 0.5	
765b	NGC 2686B	08 55 00.6	+49 08 33	G	16.4g	0.7 x 0.4	
765c	NGC 2687	08 55 05.0	+49 09 23	G	16.8g	0.5 x 0.2	
765d	NGC 2687B	08 55 06.0	+49 09 21	G	15.3g	0.8 x 0.4	

VV 761 (Ursa Major)



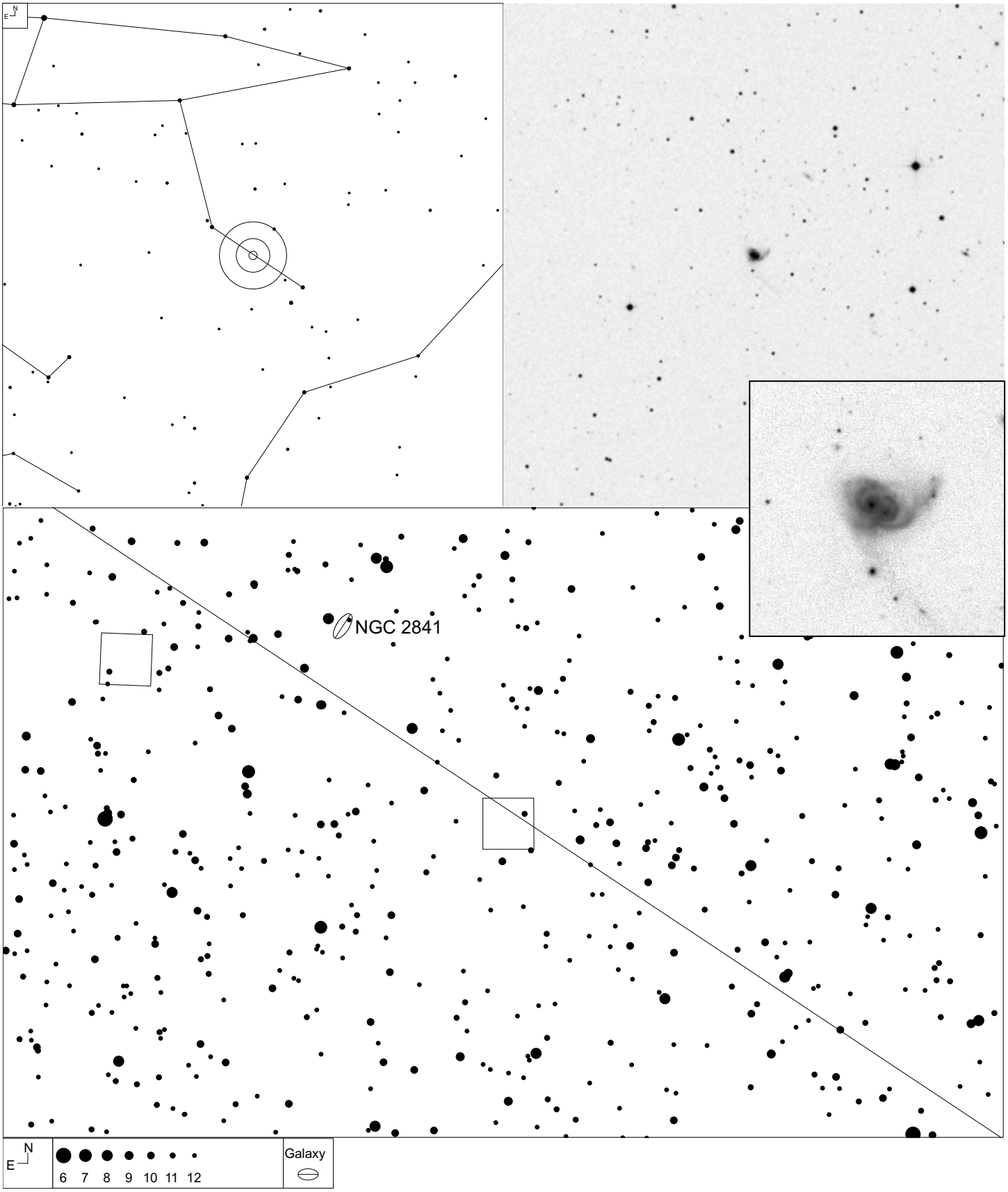
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
761		08 55 37.2	+57 34 05	GGroup			NNN
*761a**	*PGC 2567971*	*08 55 30.8*	*+57 33 52*	*G*	*16.8g*	*0.3 x 0.3*	
*761b**		*08 55 37.1*	*+57 33 47*	*G*	*19.8g*	*0.1 x 0.1*	
*761c**		*08 55 38.6*	*+57 33 48*	*G*	*17.1g*	*0.3 x 0.2*	
*761d**	*PGC 3097458*	*08 55 40.8*	*+57 34.24*	*G*	*16.3g*	*0.5 x 0.2*	
761e	MCG +10-13-038	08 55 41.6	+57 33 49	G	16.4g	0.3 x 0.2	

VV 709 (Ursa Major)



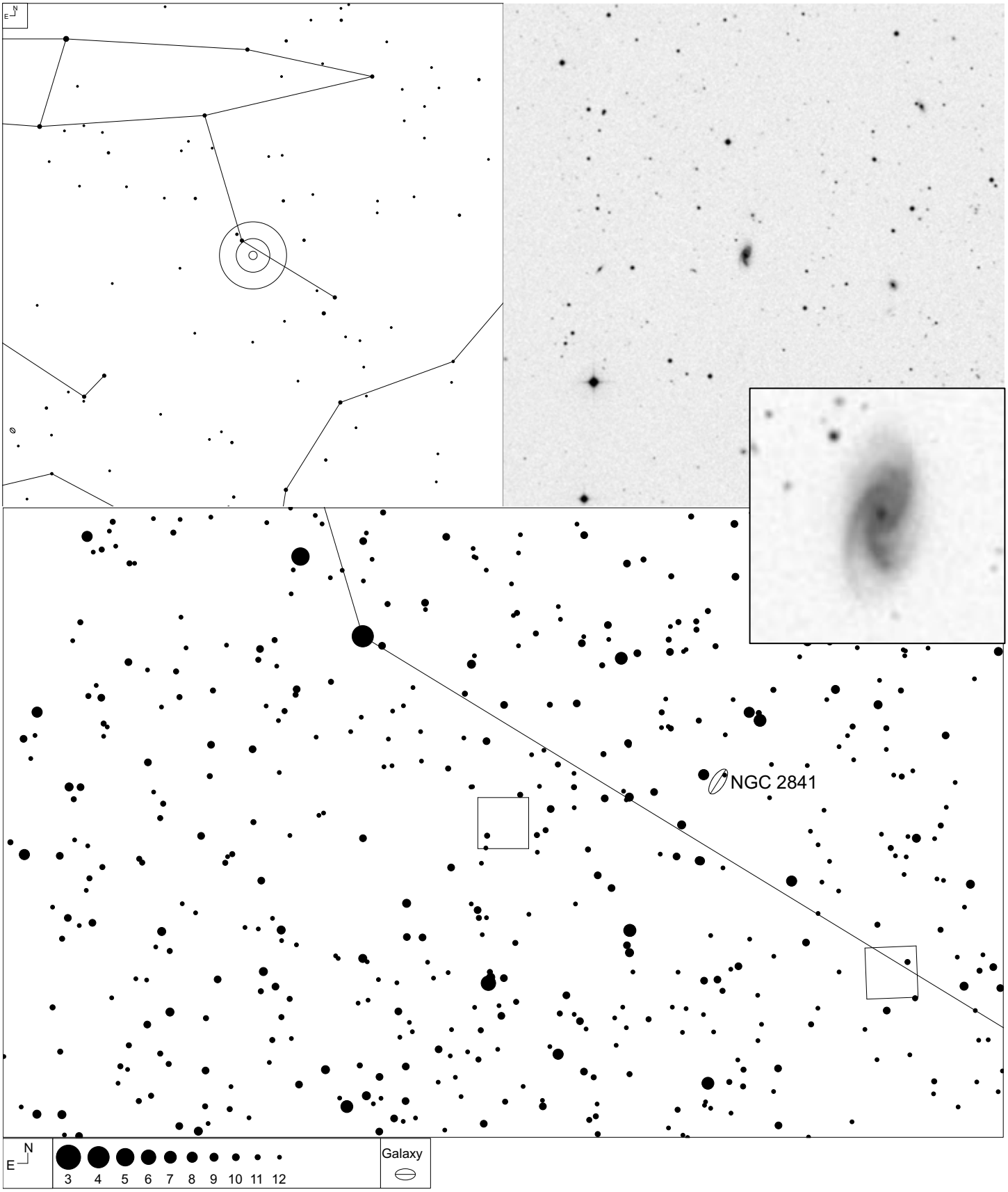
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
709	UGC 4788	09 08 24.3	+59 04 04	GPair	15.1g	1.4 x 0.8	NNNP

VV 360 (Ursa Major)



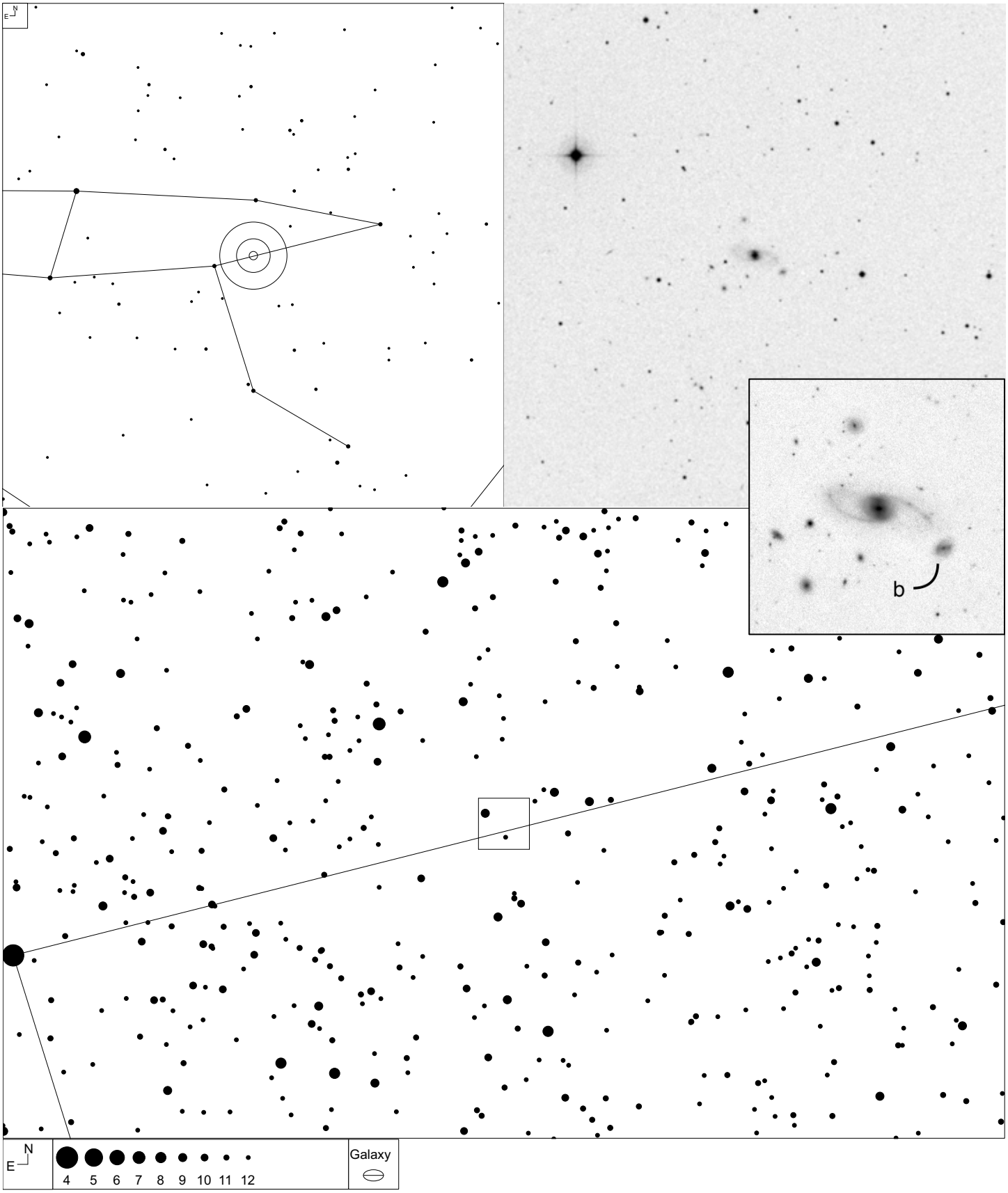
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
360	MCG +08-17-070	09 17 01.9	+50 02 44	G	14.8g	0.6 x 0.4	PC

VV 716 (Ursa Major)



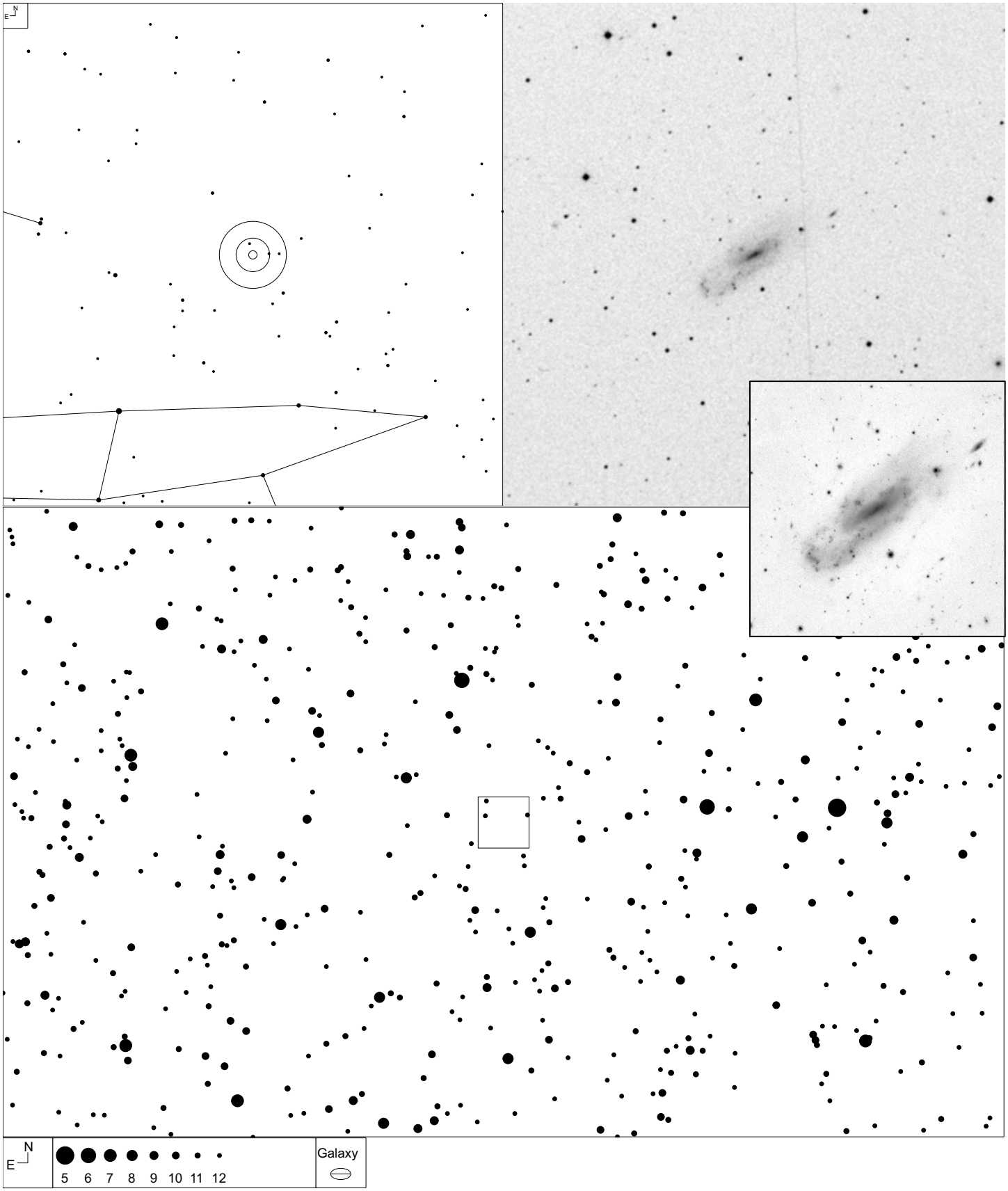
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
716	MCG +09-16-022	09 28 31.0	+50 47 37	GPair	15.1g	0.9 x 0.4	PC

VV 464 (Ursa Major)



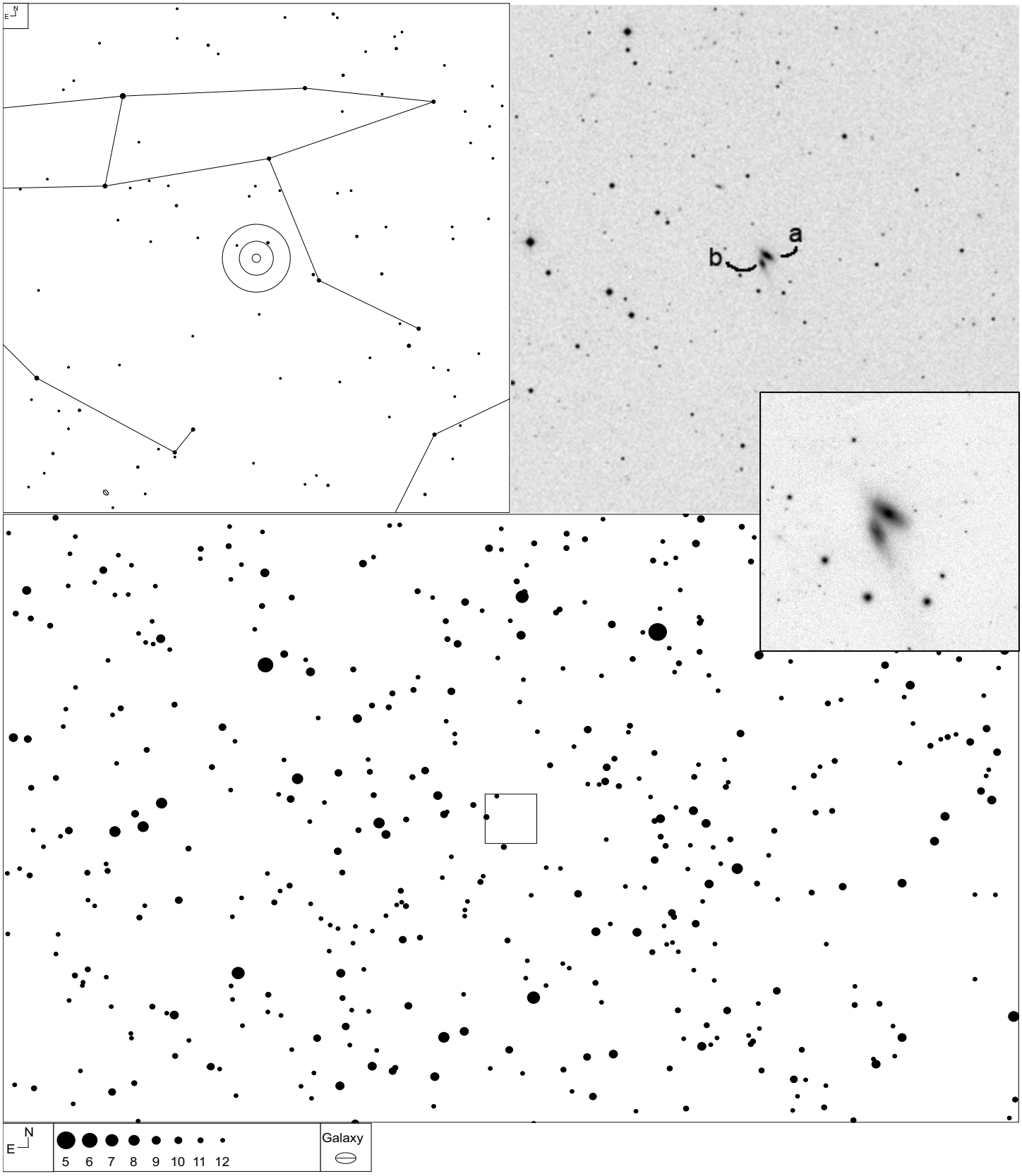
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
464	UGC 5077	09 32 50.7	+59 44 41	G	14.7g	1.4 x 0.5	M
464b	*PGC 213607*	*09 32 44.0*	*+59 44 10*	*G*	*17.3g*	*0.3 x 0.3*	

VV 358 (Ursa Major)



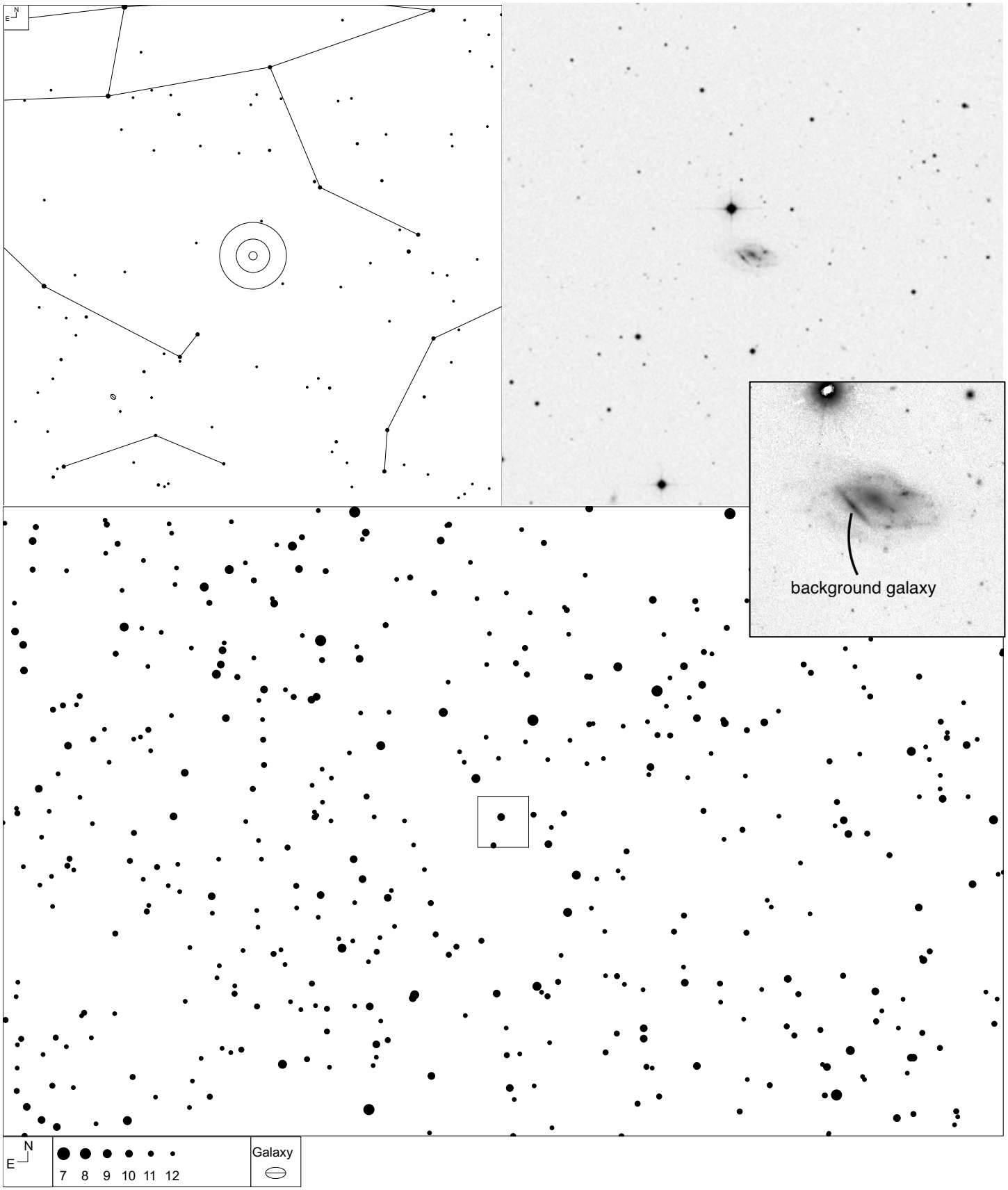
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
358	NGC 3027	09 55 40.6	+72 12 13	G	12.9g	4.3 x 2.0	H

VV 740 (Ursa Major)



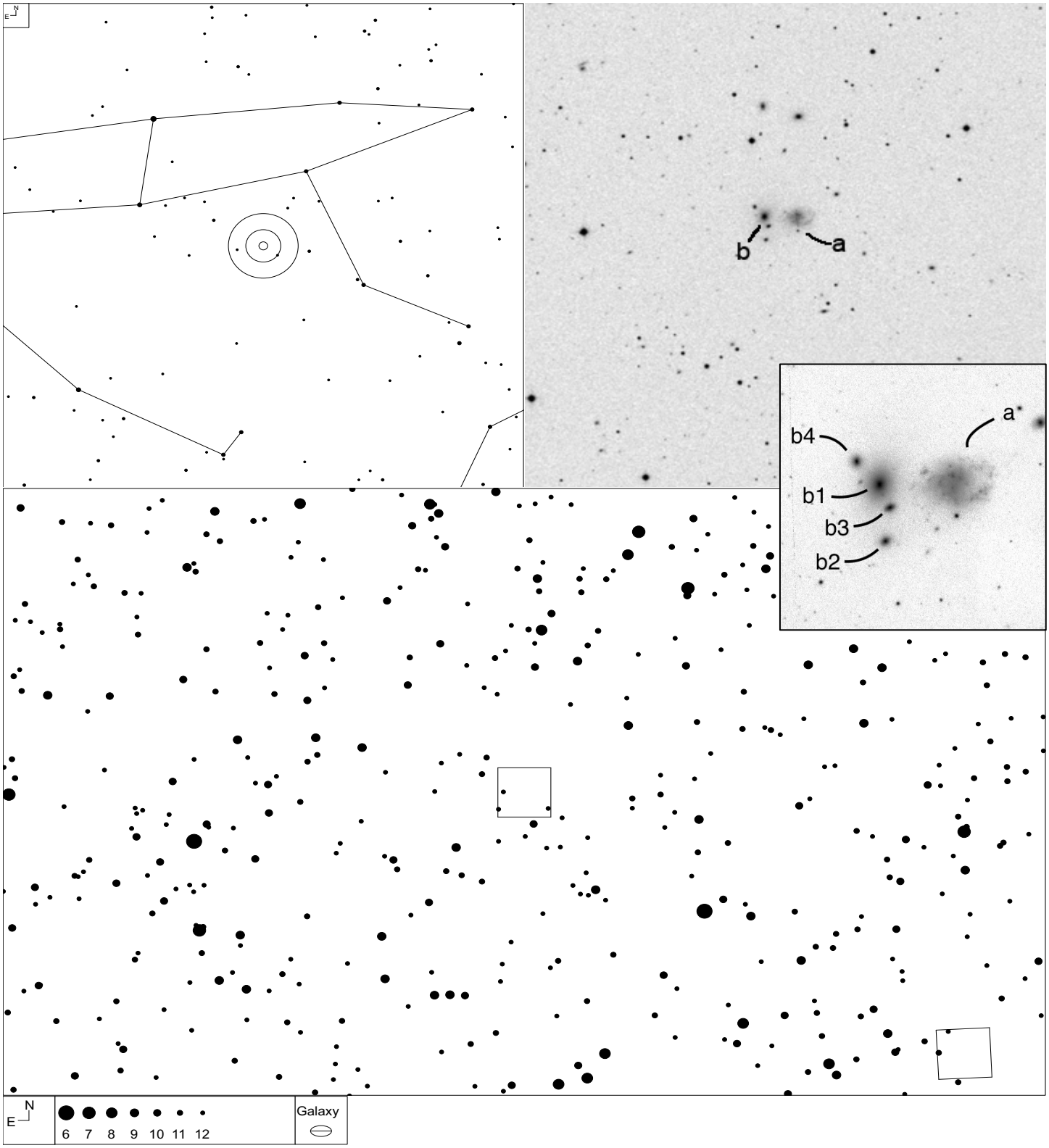
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
740		09 56 47.8	+53 09 01	GPair			PK
740a	MCG +09-16-060	09 56 47.4	+53 09 08	G	14.7g	0.7 x 0.5	
740b	MCG +09-16-061	09 56 48.4	+53 08 54	G	15.9g	0.9 x 0.3	

VV 618 (Ursa Major)



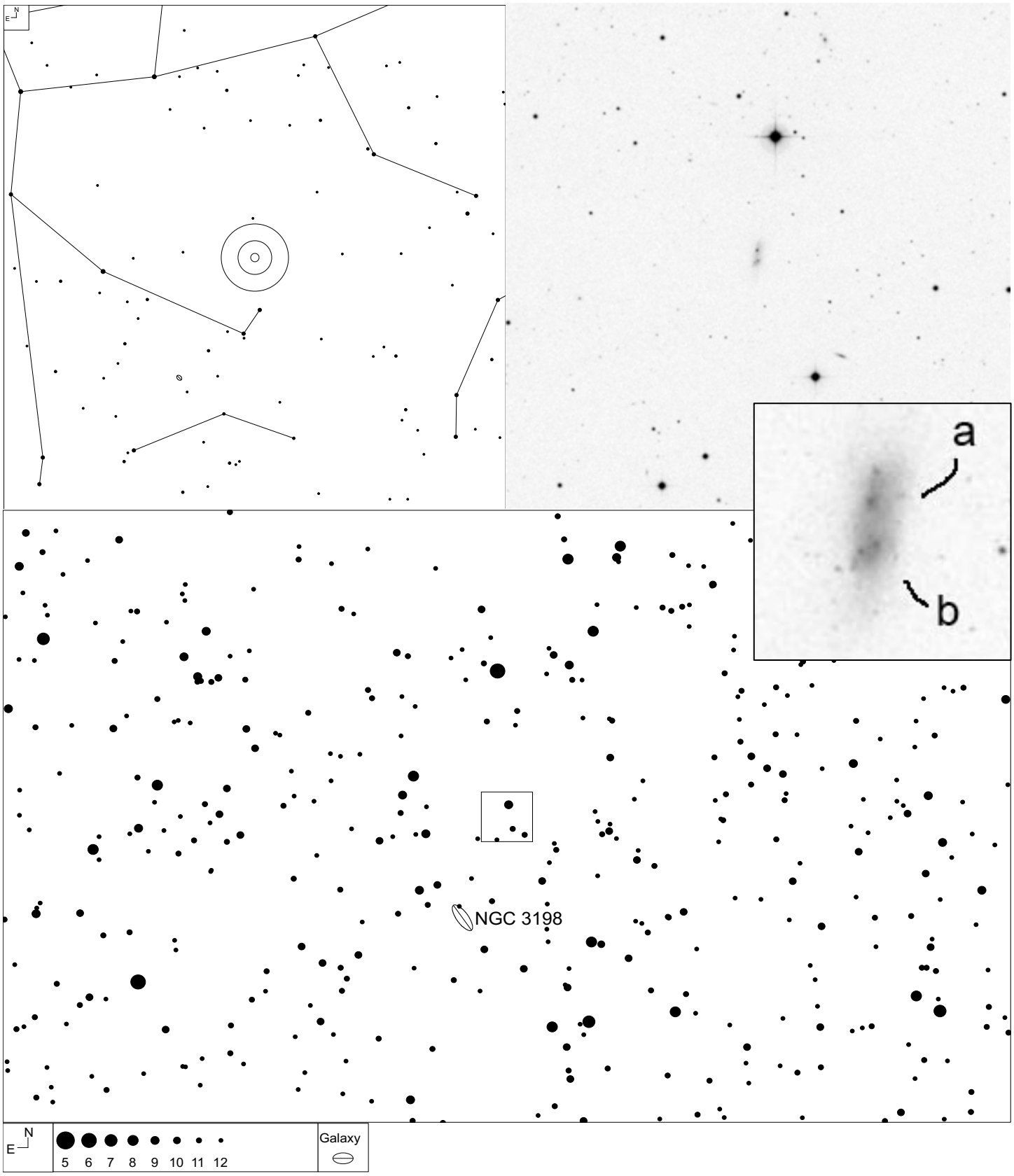
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
618	UGC 5354	09 58 53.4	+47 44 13	G	14.4g	2.1 x 1.1	N

VV 533 (Ursa Major)



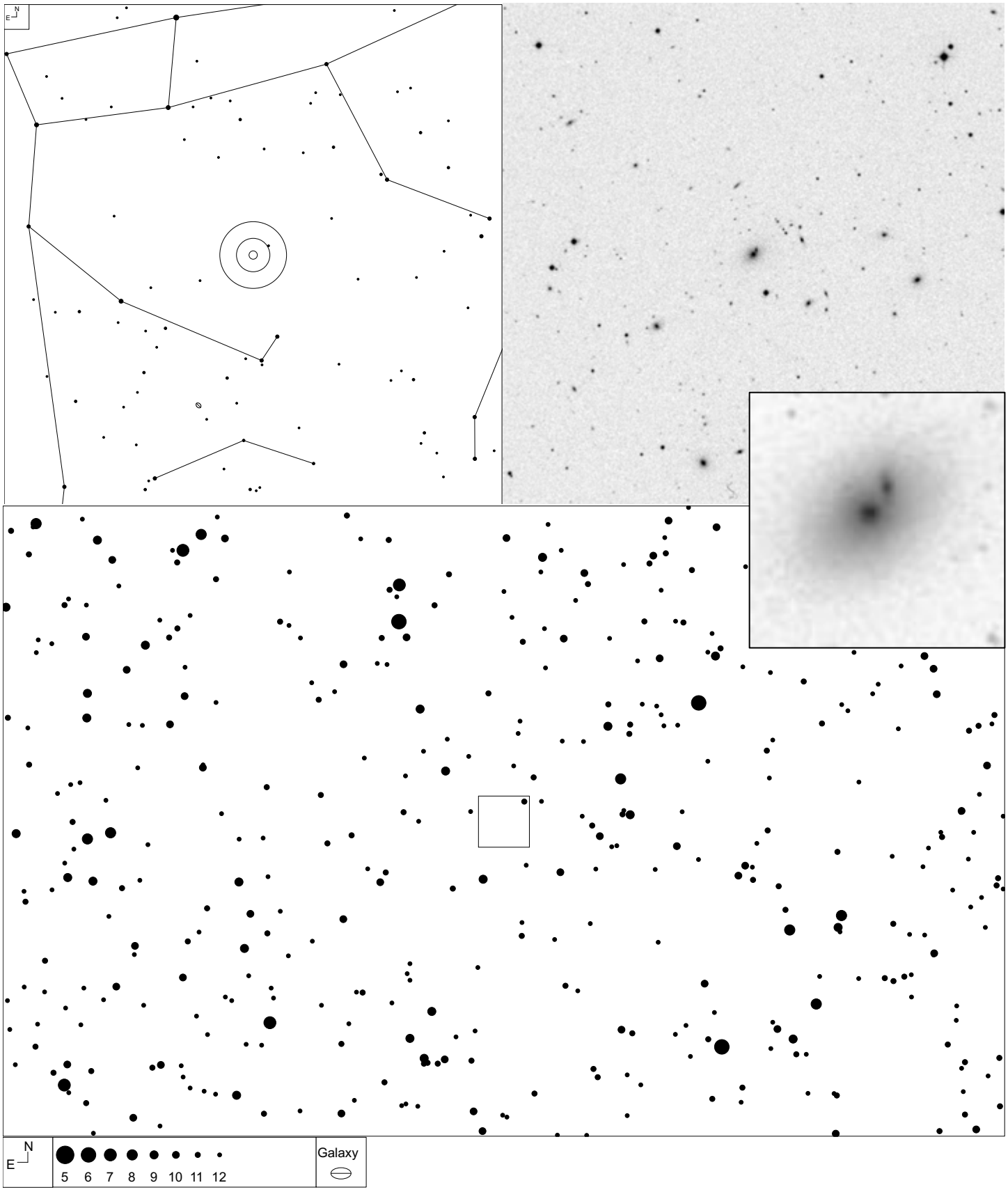
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
533		10 10 13.3	+54 30 04	GPair			N
533a	UGC 5479	10 10 09.6	+54 30 07	G	16.1g	1.4 x 0.9	
533b1*	MCG +09-17-036	10 10 16.1	+54 30 06	G	15.1g	1.0 x 0.5	
*533b2**	*PGC 2471156*	*10 10 15.9*	*+54 29 22*	*G*	*17.2g*	*0.2 x 0.2*	
*533b3**		*10 10 15.3*	*+54 29 47*	*G*	*17.0g*	*0.1 x 0.1*	
*533b4**		*10 10 18.1*	*+54 30 24*	*G*	*17.2g*	*0.2 x 0.2*	

VV 834 (Ursa Major)



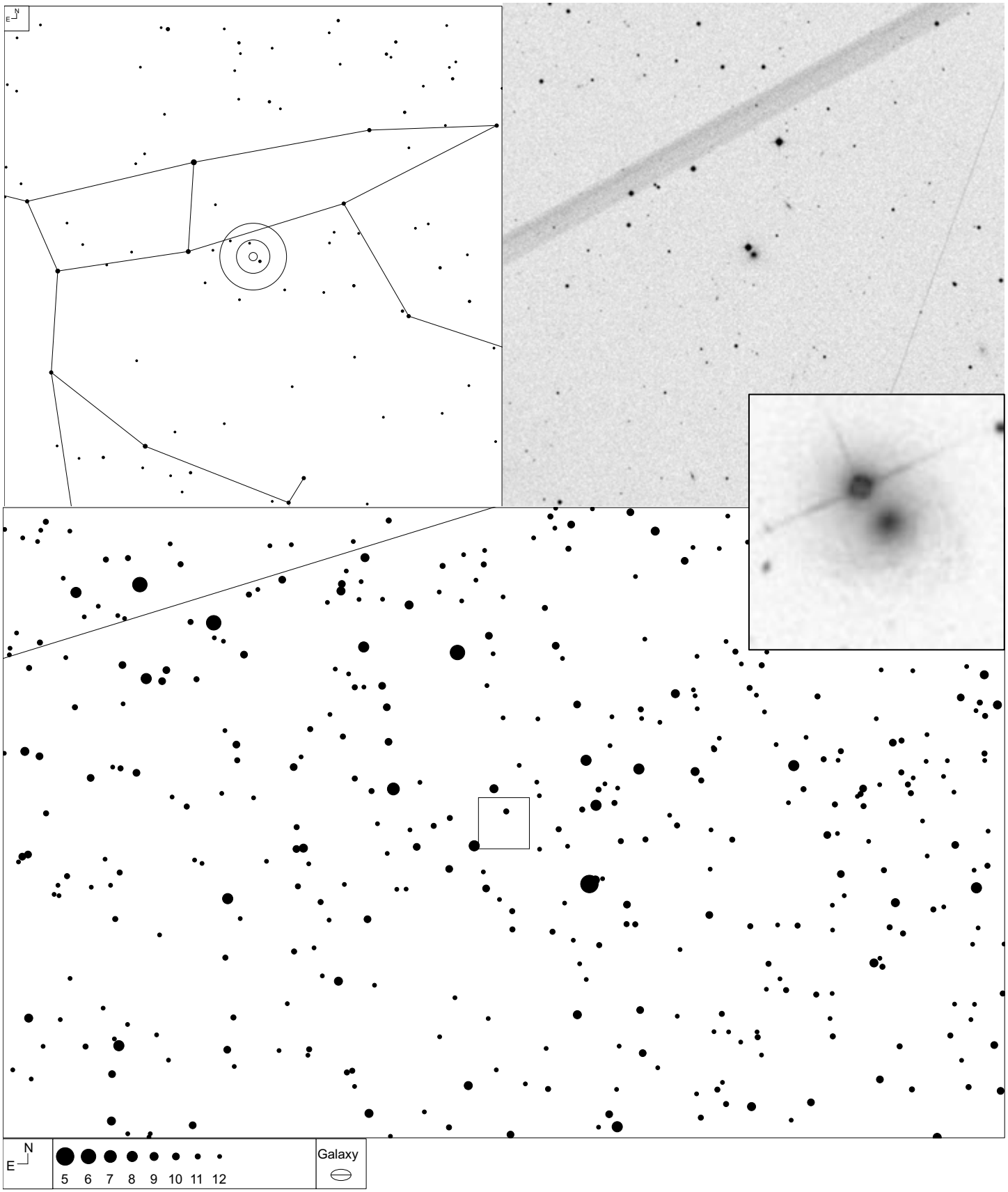
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
834		10 18 43.0	+46 02 53	GPair			Enat
834a	MCG +08-19-016a	10 18 43.1	+46 03 03	G	16.6g	0.9 x 0.3	
834b	MCG +08-19-016b	10 18 43.0	+46 02 44	G	15.5g	0.9 x 0.3	

VV 675 (Ursa Major)



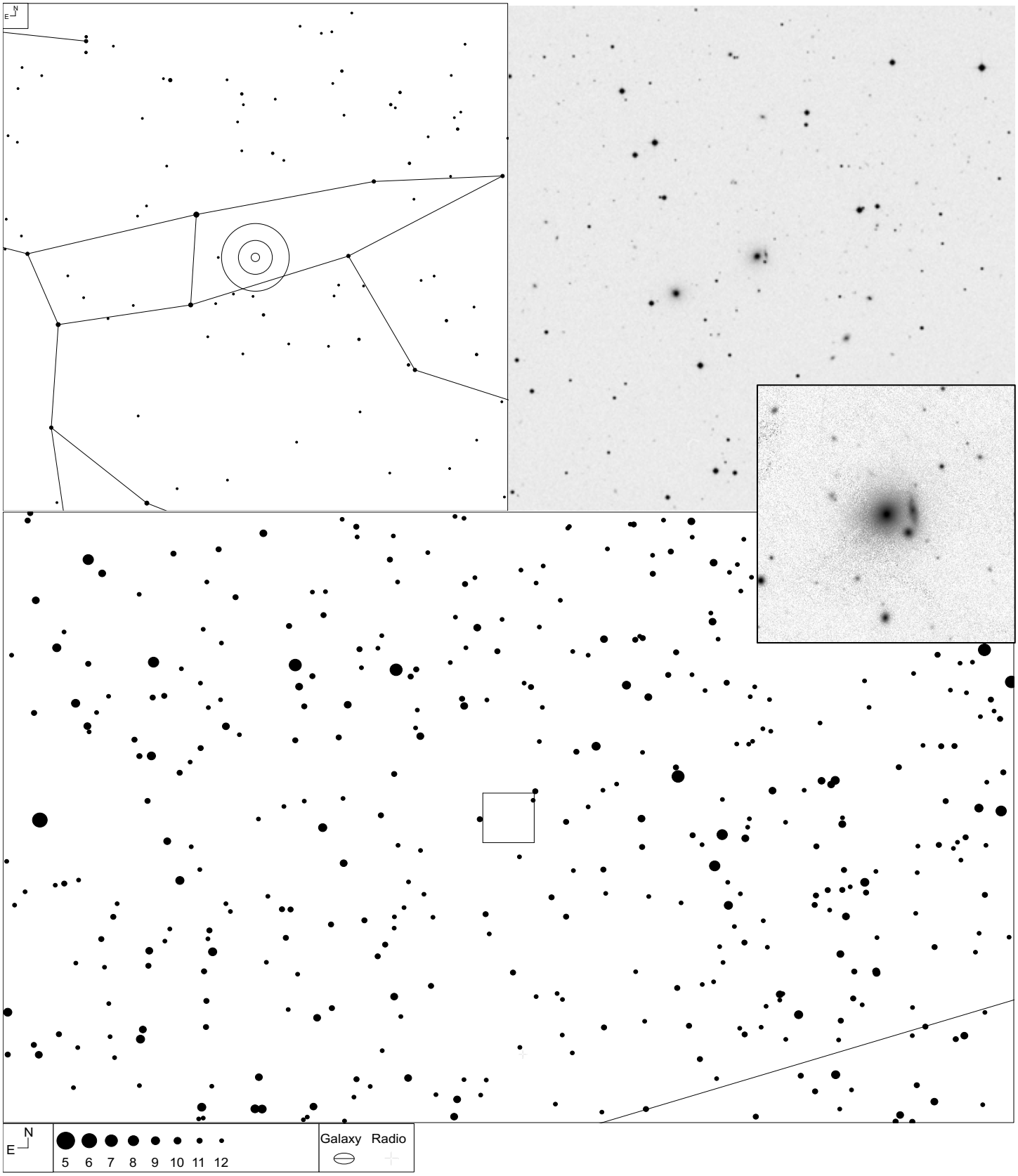
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
675	MCG +08-19-026	10 25 01.6	+47 50 30	G	15.4g	0.7 x 0.5	NNN

VV 845 (Ursa Major)



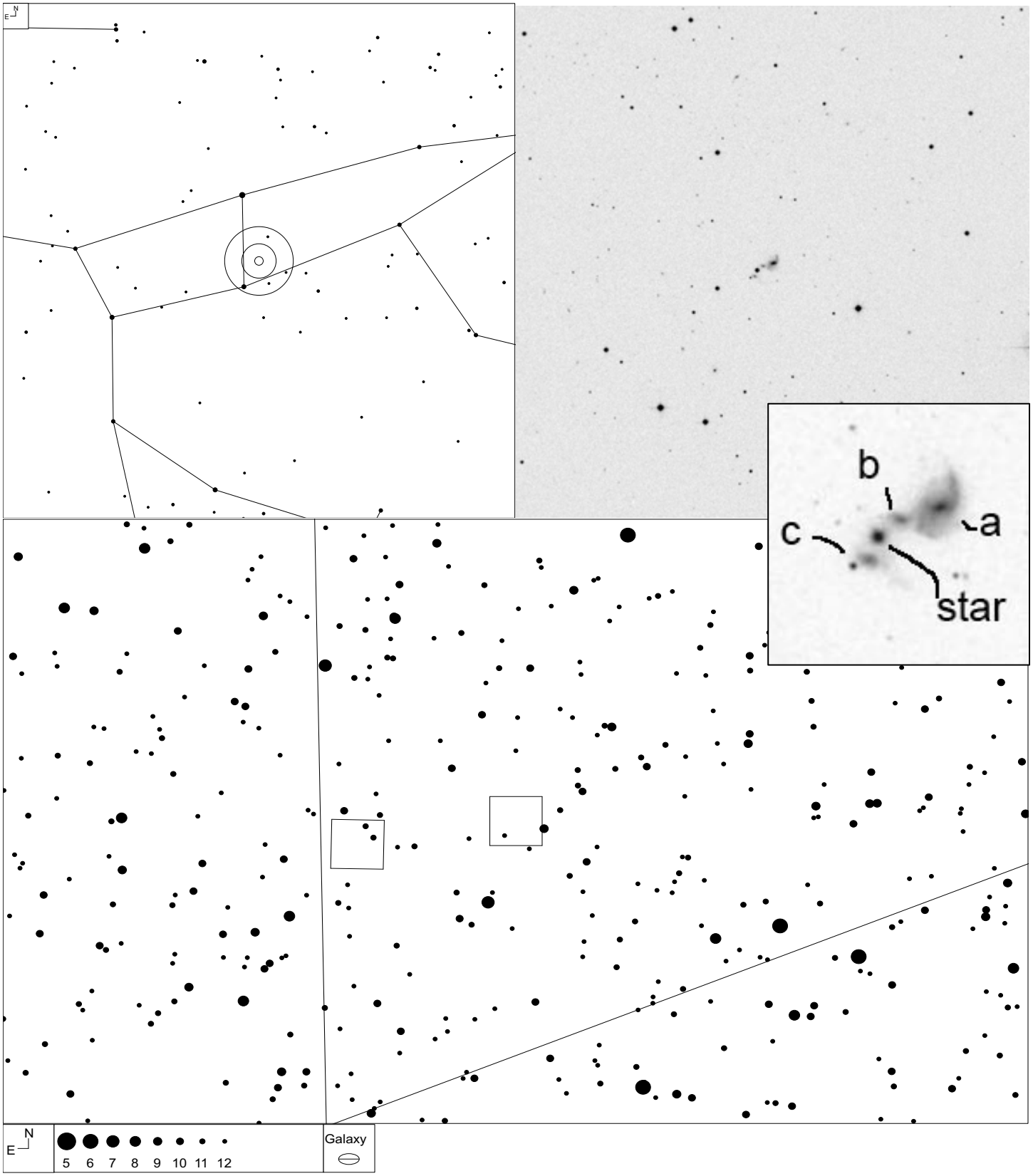
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
845	MCG +09-17-071	10 33 32.2	+56 16 22	G	15.6b	0.4 x 0.4	Ent

VV 639 (Ursa Major)



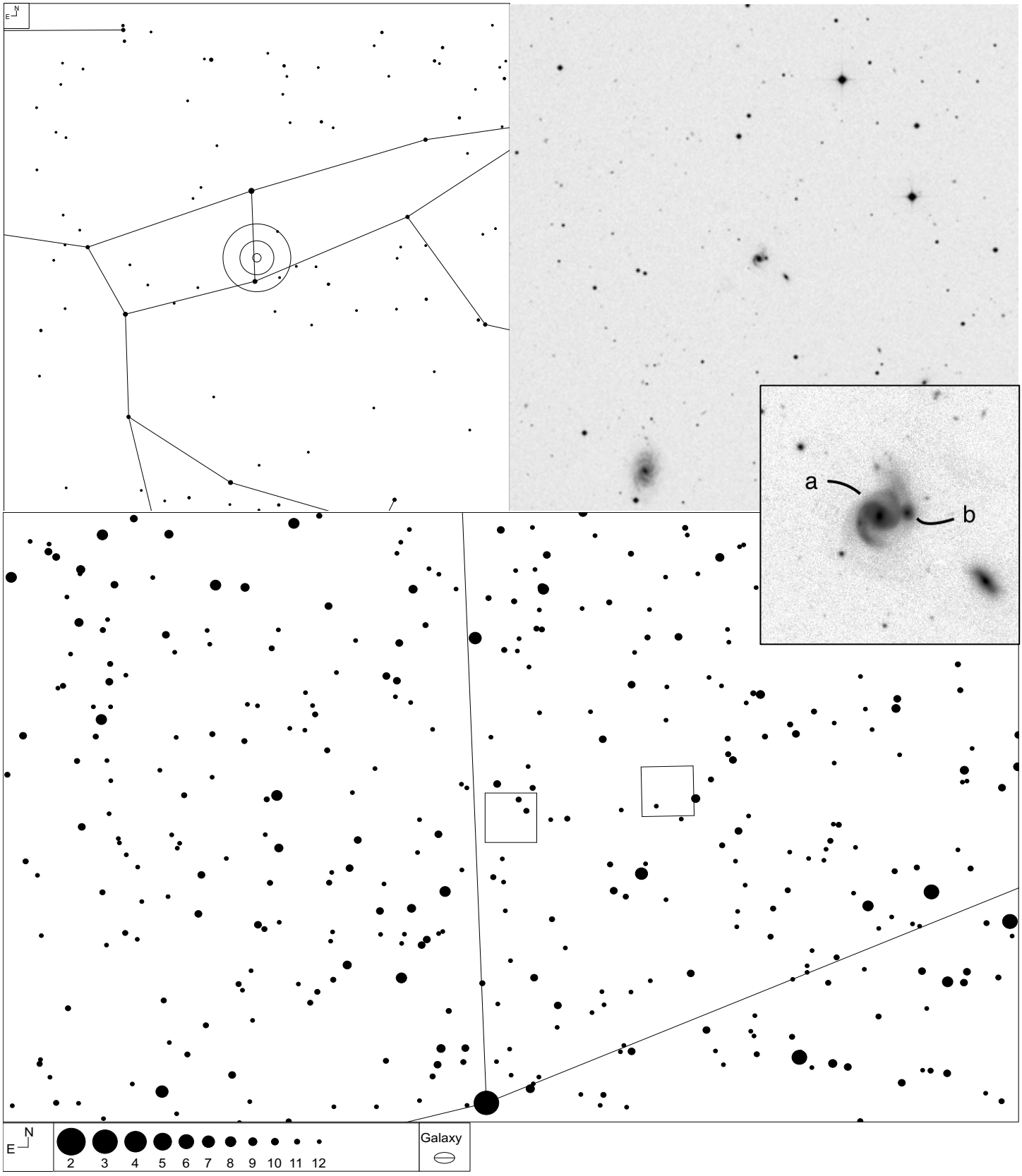
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
639	MCG +10-15-103	10 34 03.6	+59 24 08	GTrpl	14.8g	0.3 x 0.3	N

VV 628 (Ursa Major)



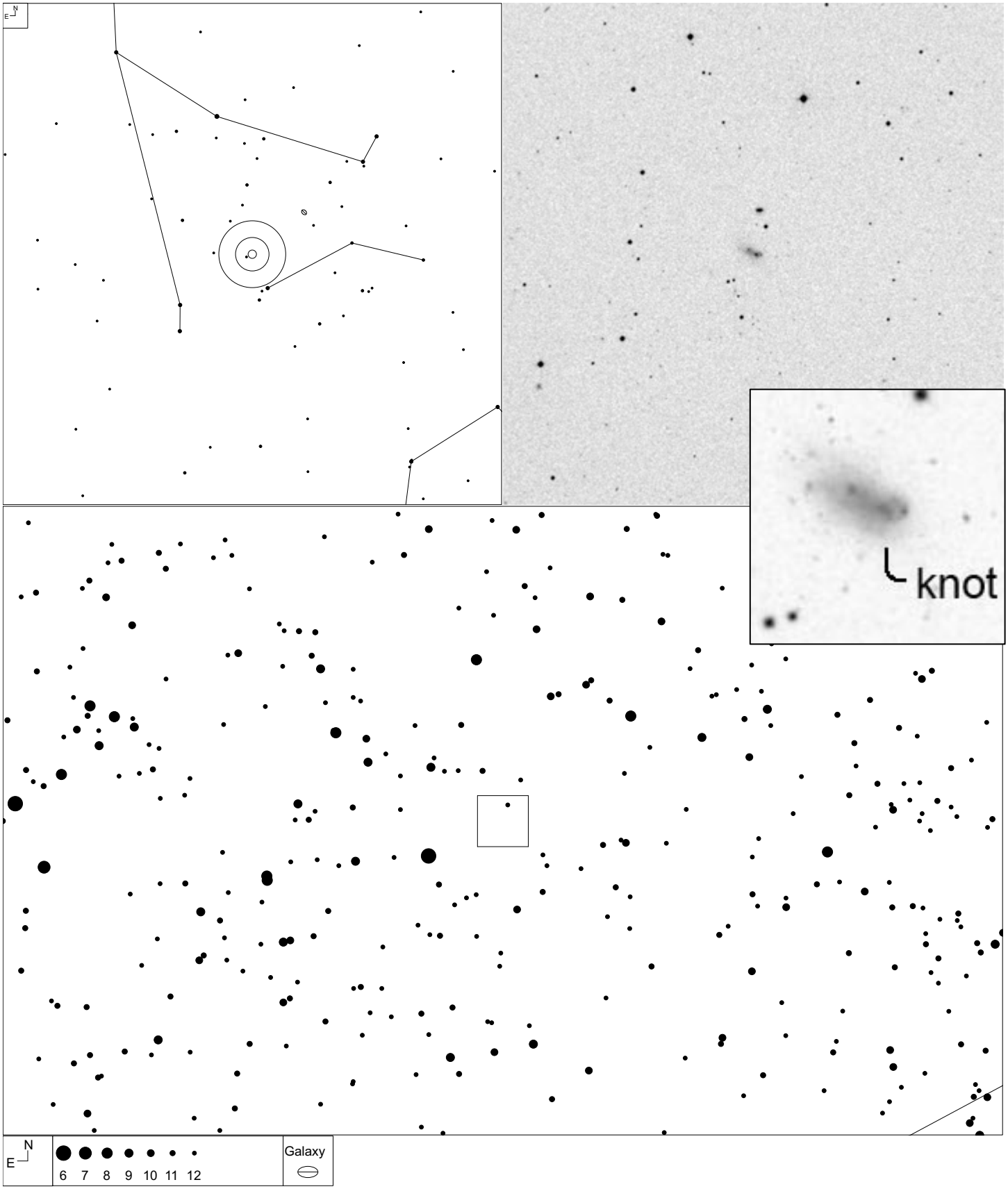
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
628	MCG +10-16-025	10 55 31.2	+57 54 08	GTrpl	15.5g	0.5 x 0.3	N

VV 627 (Ursa Major)



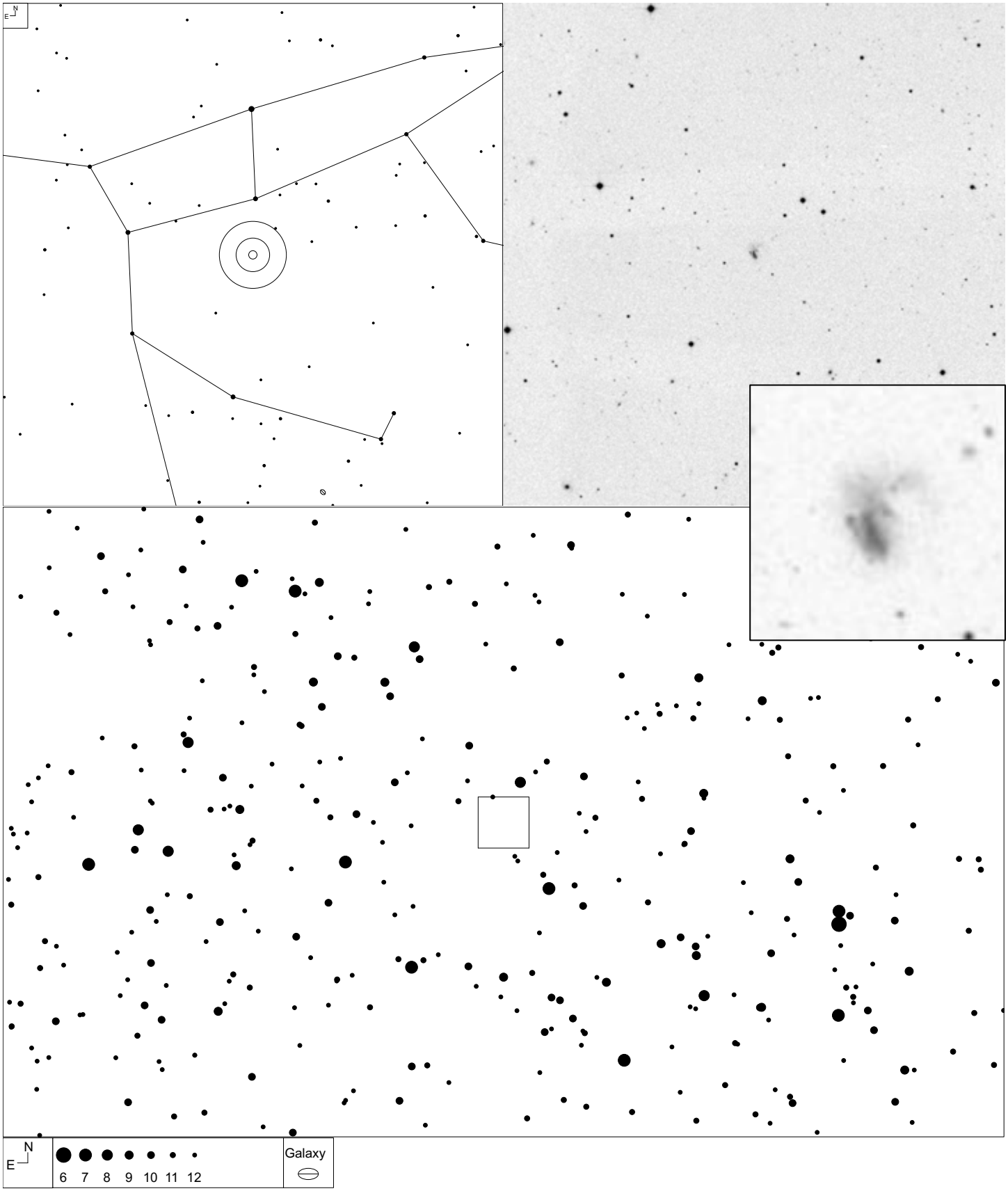
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
627	MCG +10-16-044	11 00 59.3	+57 47 04	GPair	15.0g	0.8 x 0.5	N

VV 747 (Ursa Major)



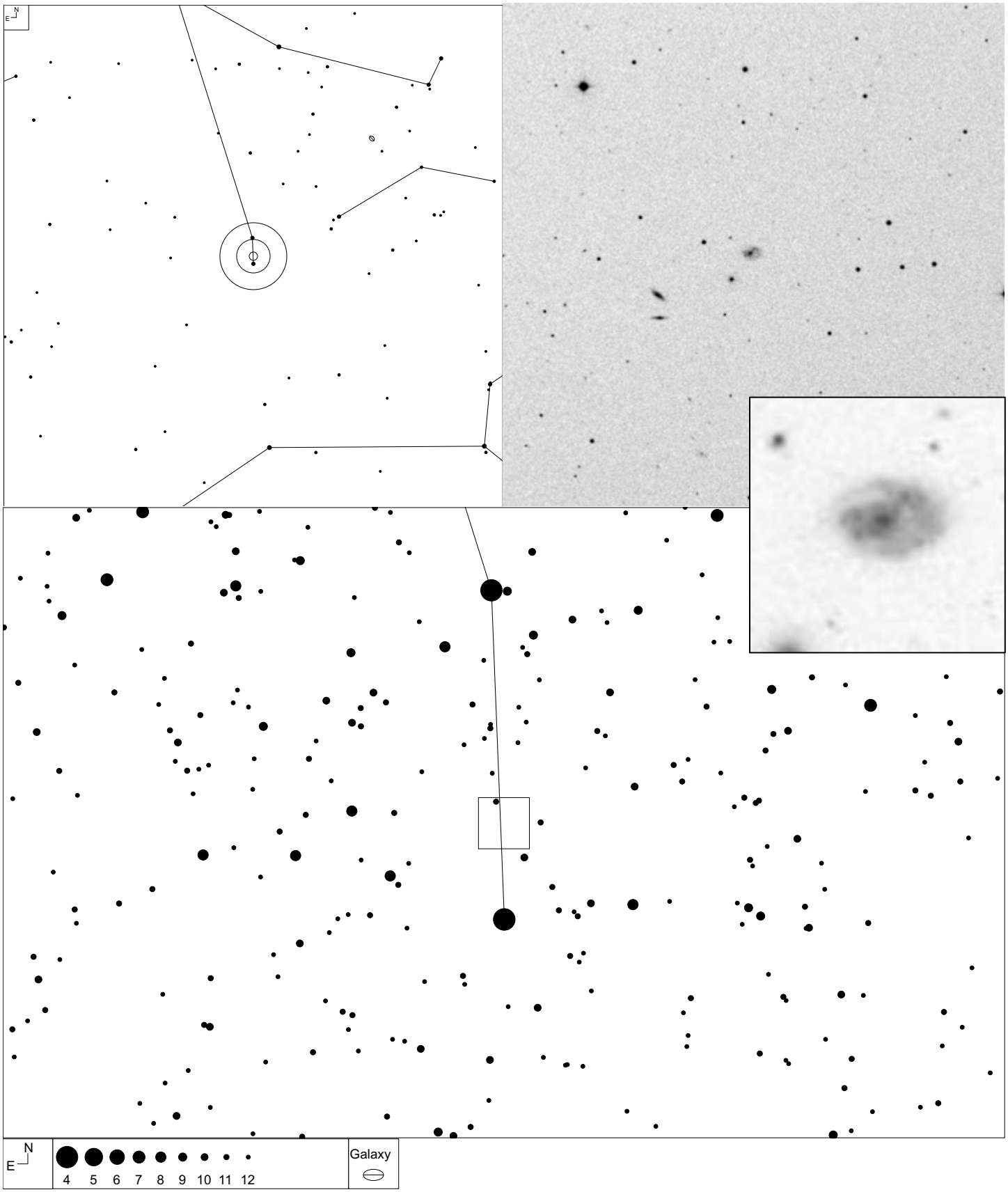
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
747	MCG +06-24-038	10 57 47.4	+36 15 39	GPair	15.5	0.8 x 0.4	PC

VV 603 (Ursa Major)



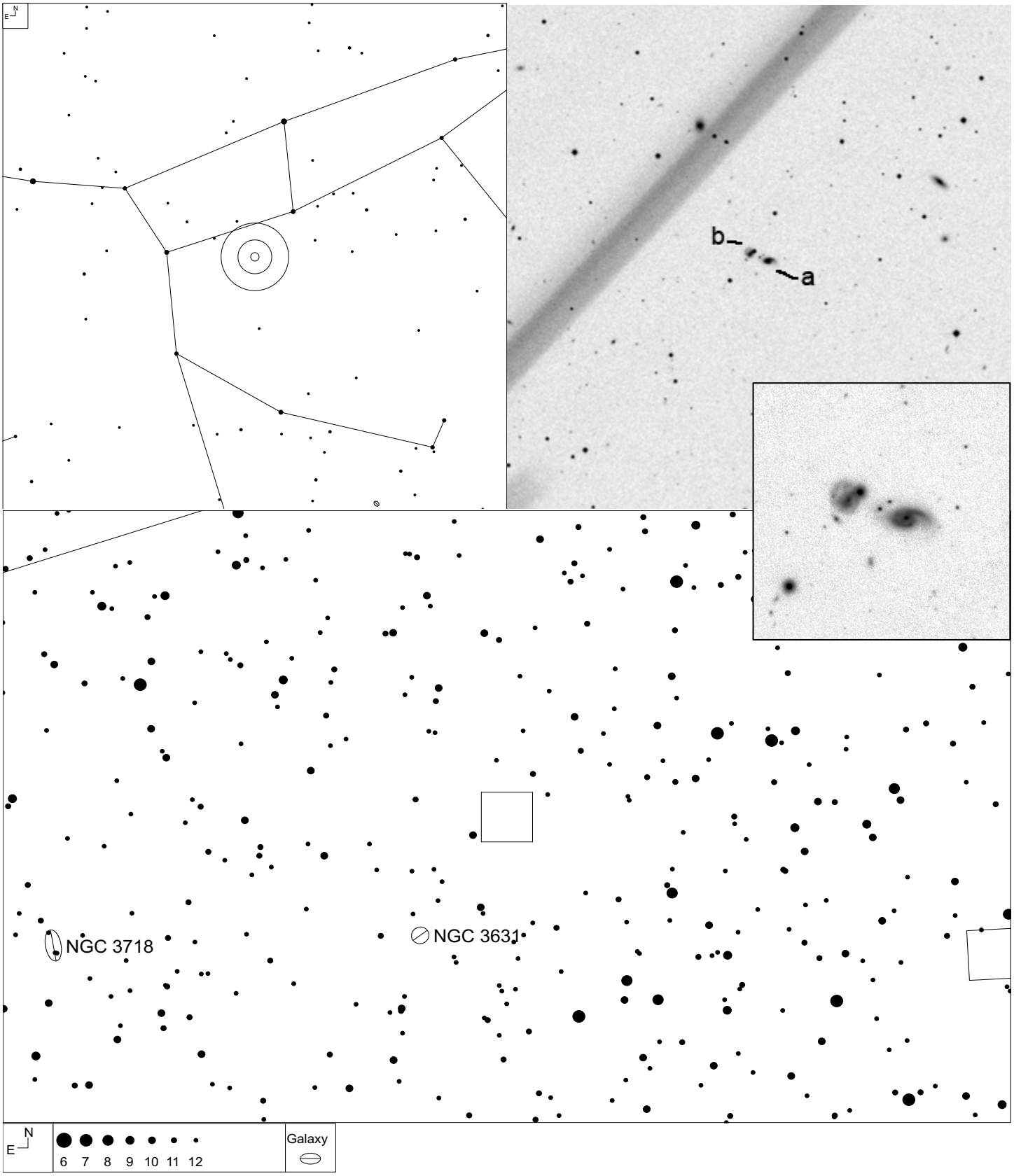
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
603	MCG +09-18-078	11 03 01.0	+53 01 04	G	16.6g	0.5 x 0.3	N

VV 686 (Ursa Major)



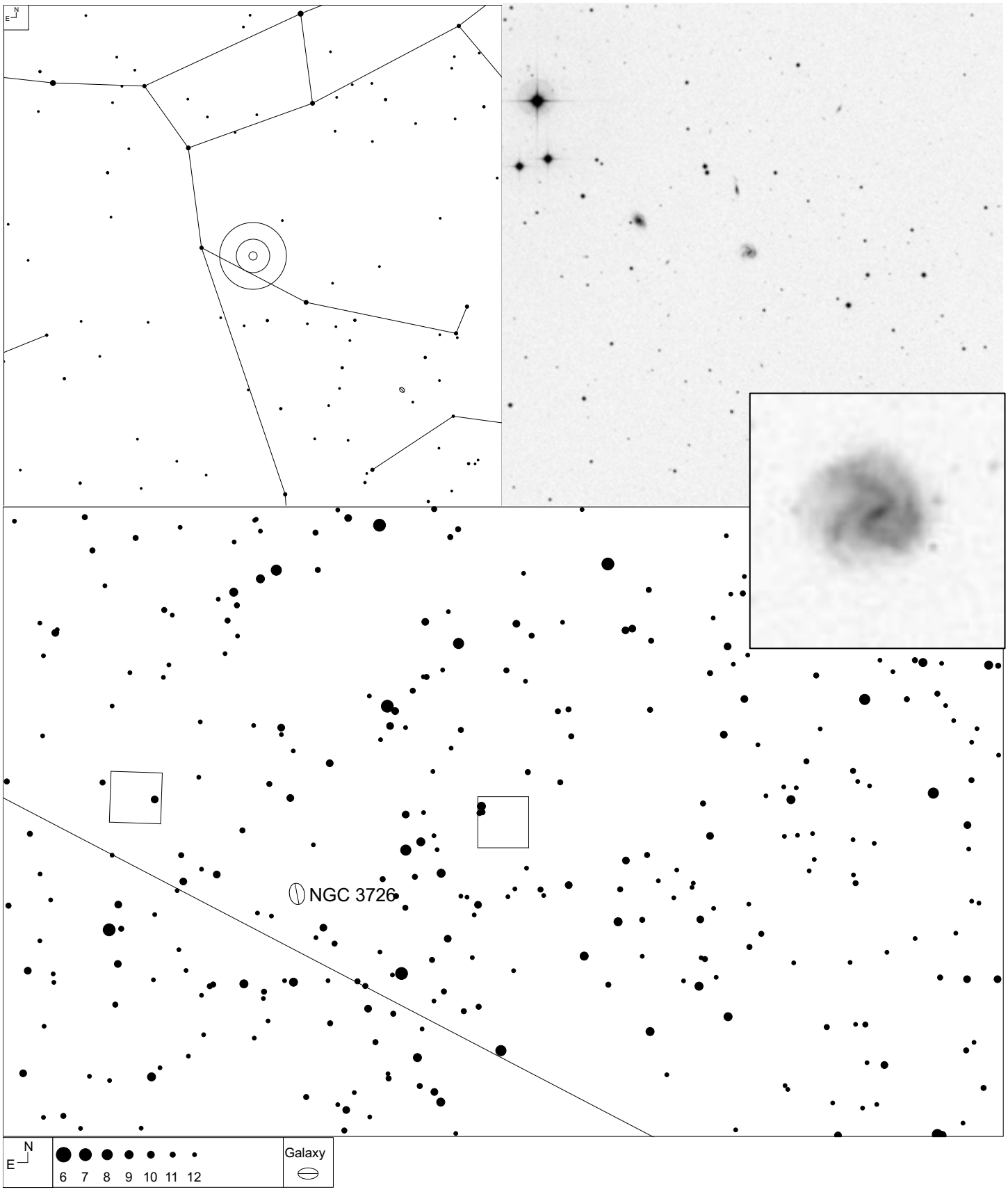
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
686	MCG +05-27-046	11 17 57.9	+32 00 32	G	15.9g	0.6 x 0.2	N

VV 402 (Ursa Major)



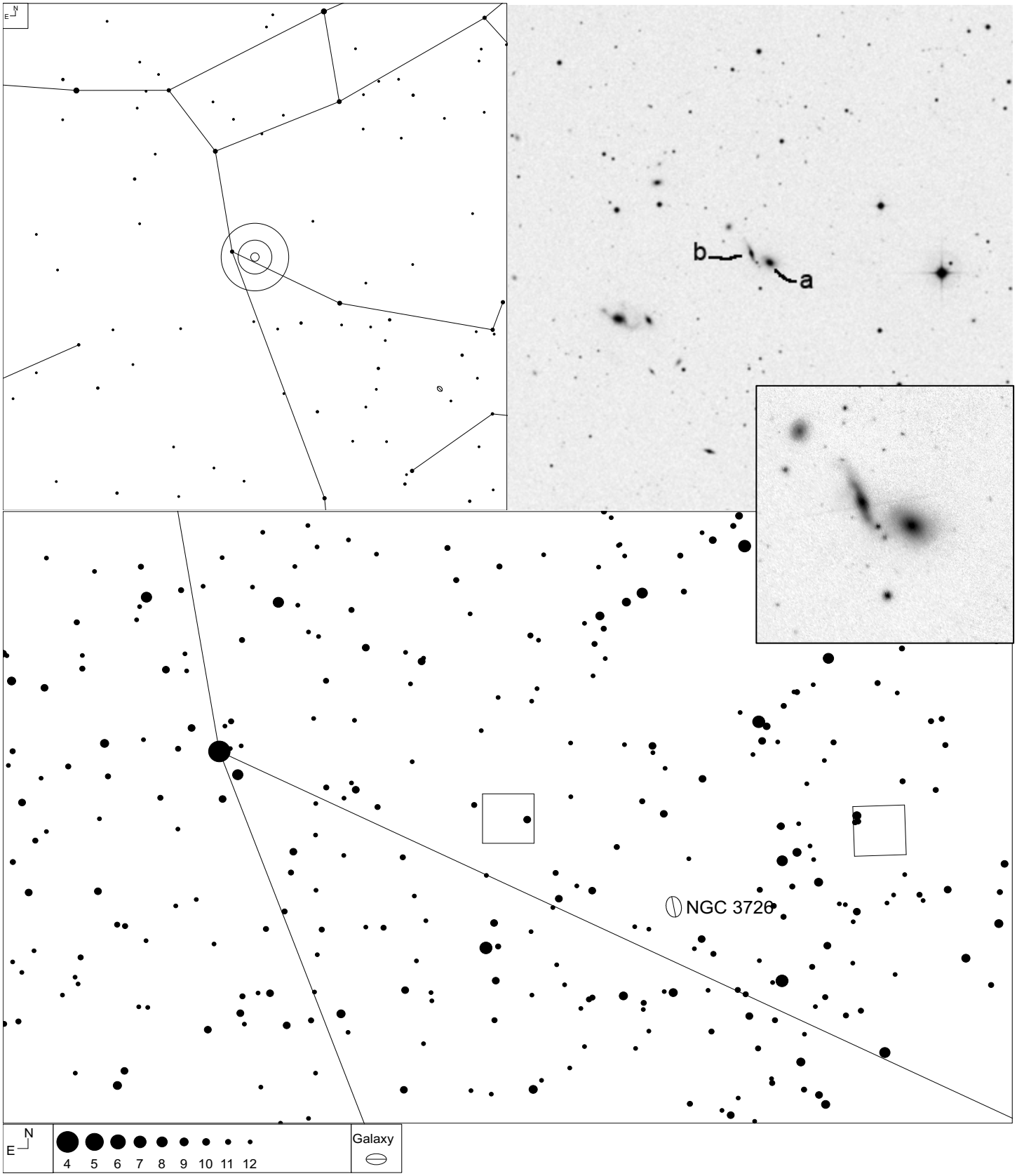
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
402		11 18 19.0	+53 45 04	GPair			MMM
402a	UGC 6315	11 18 17.0	+53 45 00	G	15.7g	0.6 x 0.4	
402b	*MCG +09-19-035*	*11 18 20.7*	*+53 45 10*	*G*	*15.9g*	*0.4 x 0.3*	

VV 660 (Ursa Major)



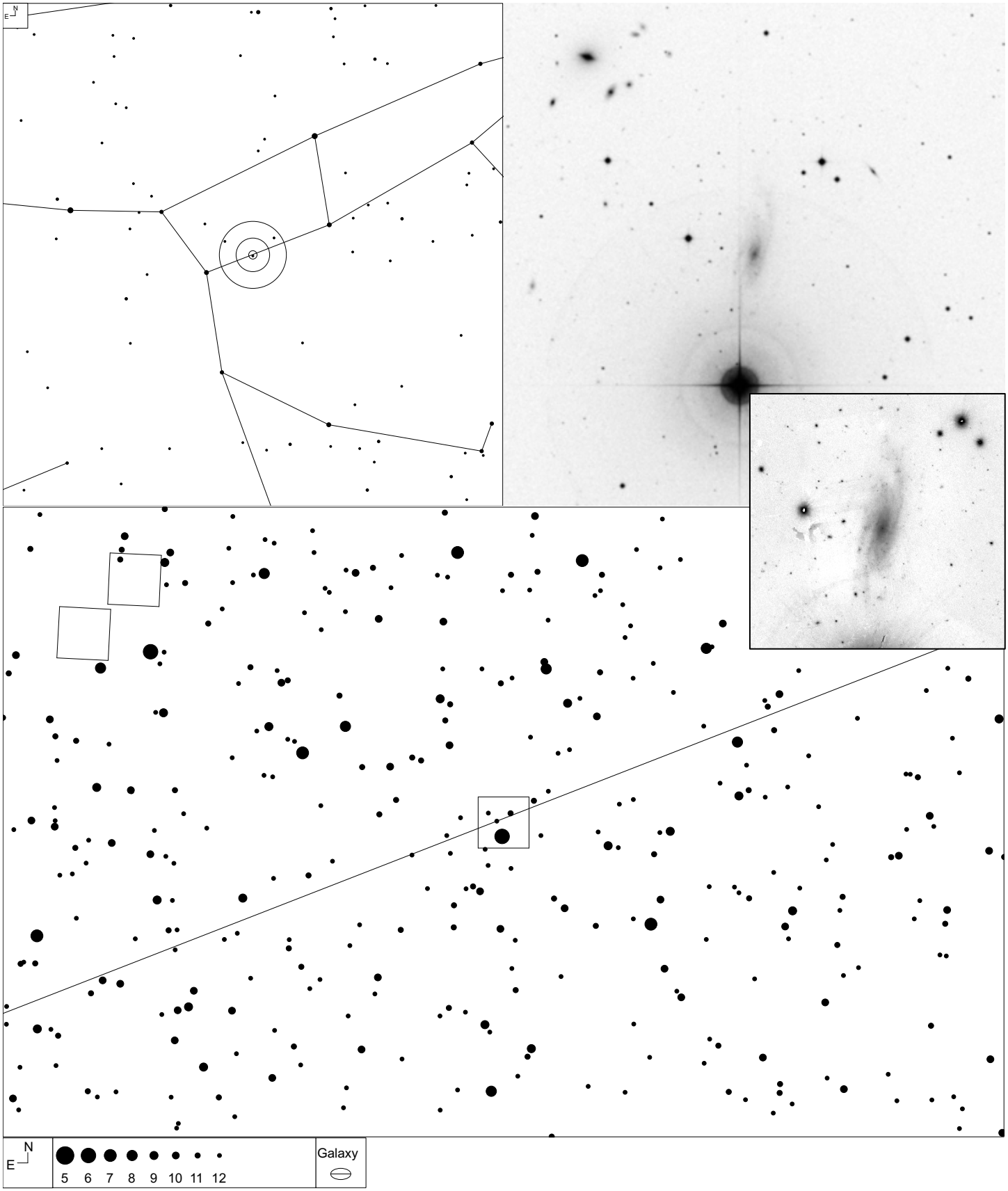
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
660	MCG +08-21-037	11 27 35.0	+47 22 43	G	15.4g	0.6 x 0.5	N

VV 653 (Ursa Major)



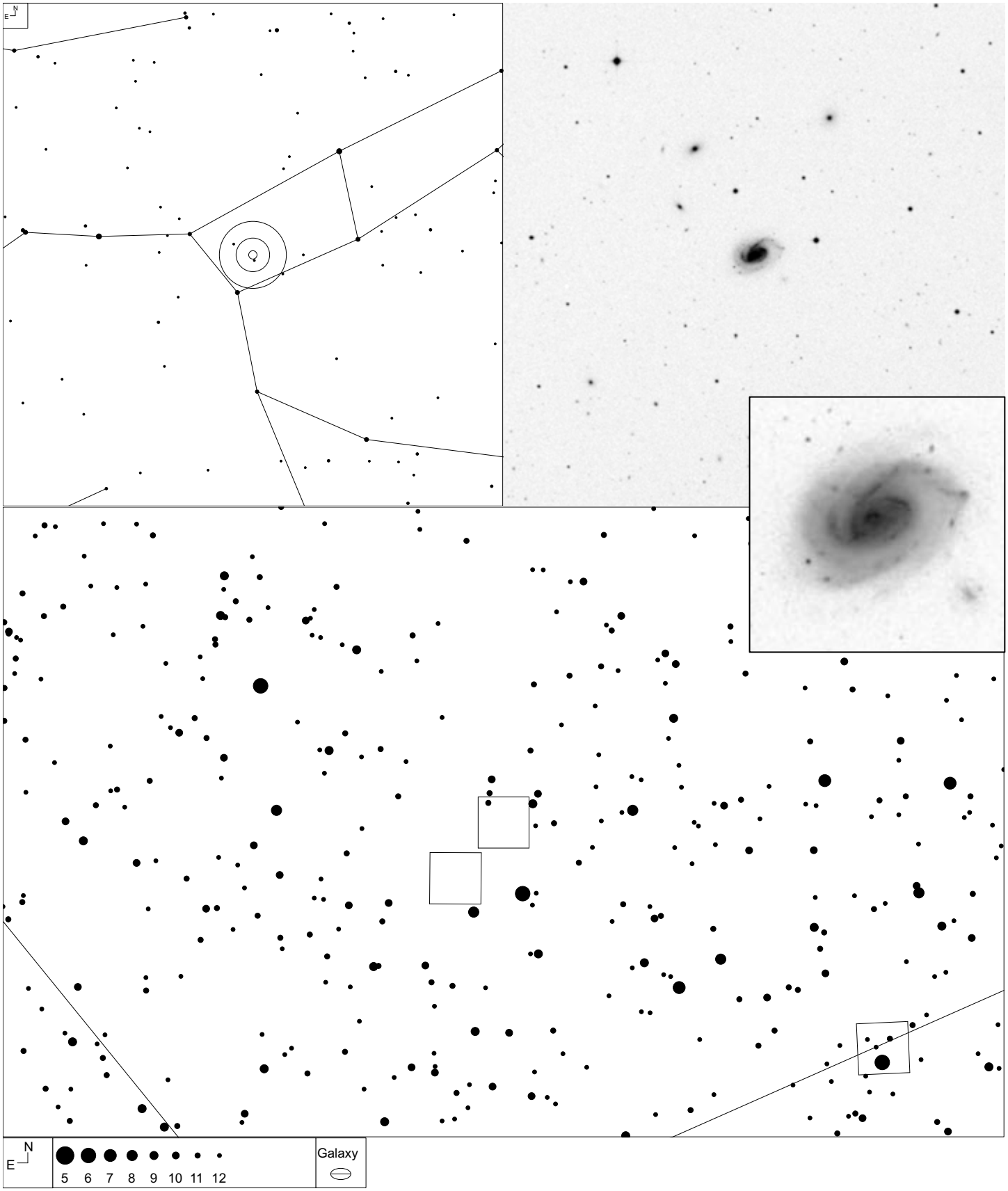
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
653	VV 653 = VV 756	11 37 56.4	+47 28 06	GPair			NN
653a	MCG +08-21-078	11 37 54.8	+47 27 59	G	15.1g	0.7 x 0.5	
653b	MCG +08-21-079	11 37 58.0	+47 28 13	G	15.5g	0.7 x 0.3	

VV 459 (Ursa Major)



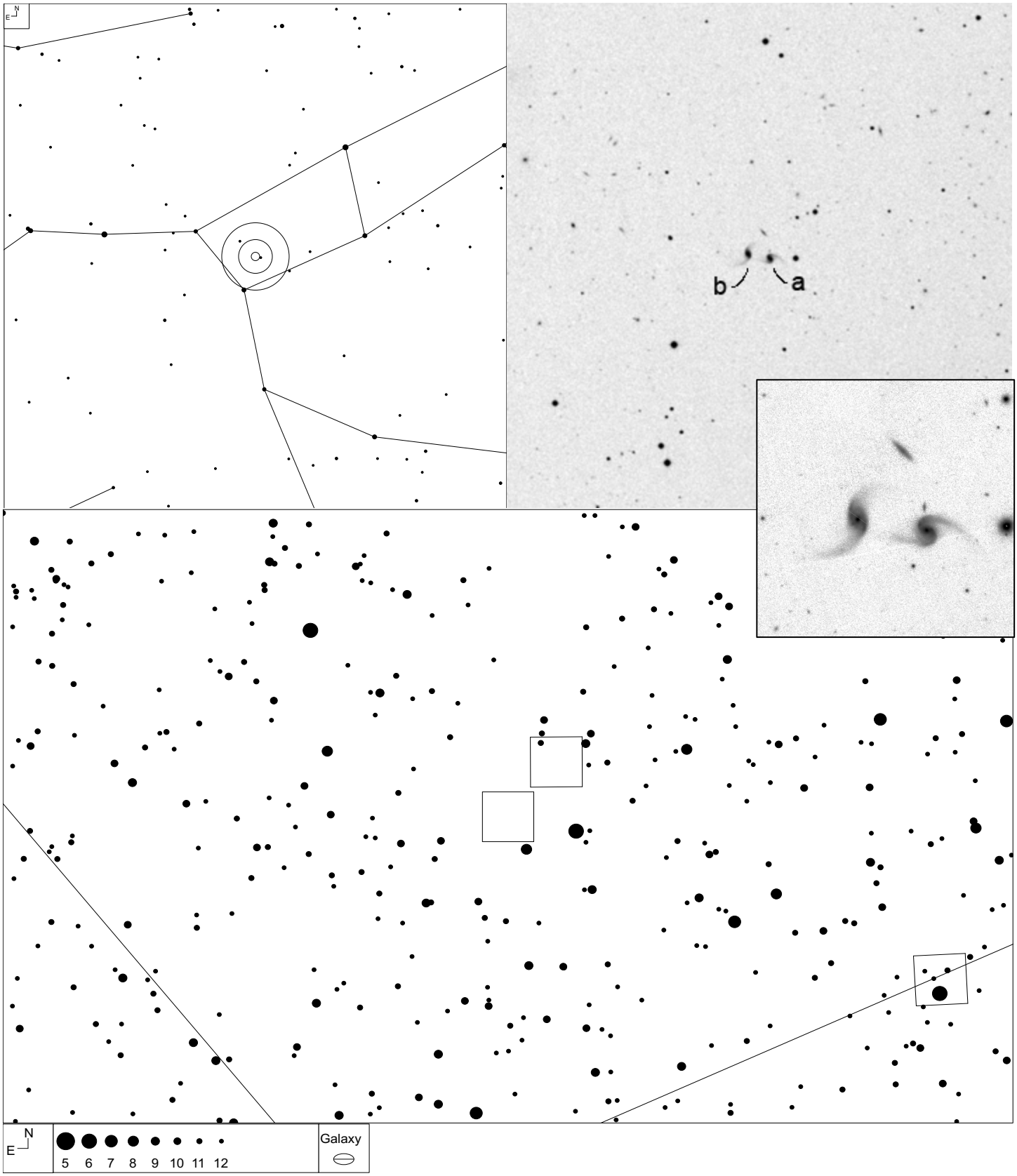
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
459	NGC 3733	11 35 01.8	+54 51 02	G	12.8g	4.8 x 2.2	M

VV 455 (Ursa Major)



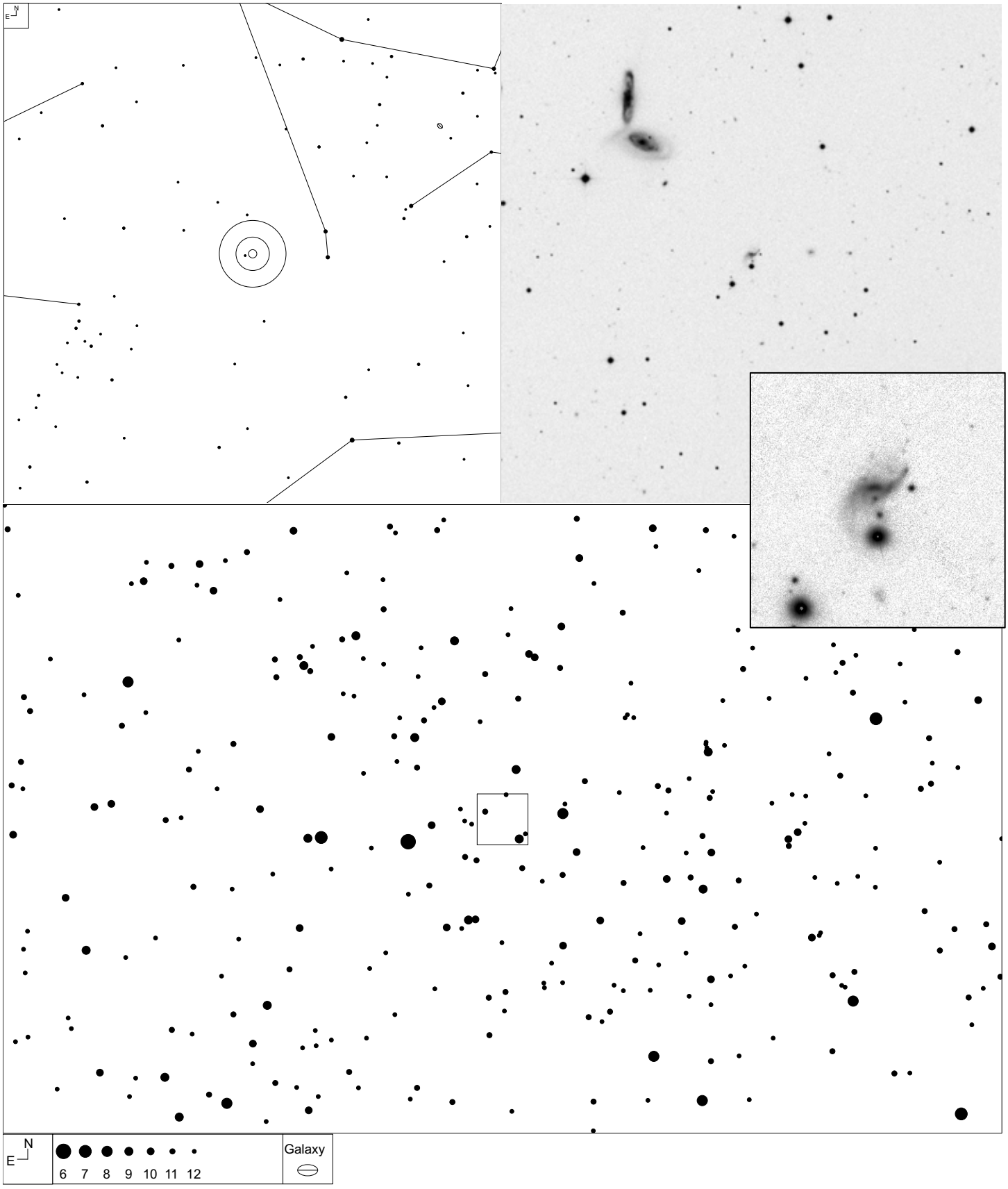
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
455	NGC 3888	11 47 34.4	+55 58 02	G	12.7g	1.7 x 1.3	M

VV 696 (Ursa Major)



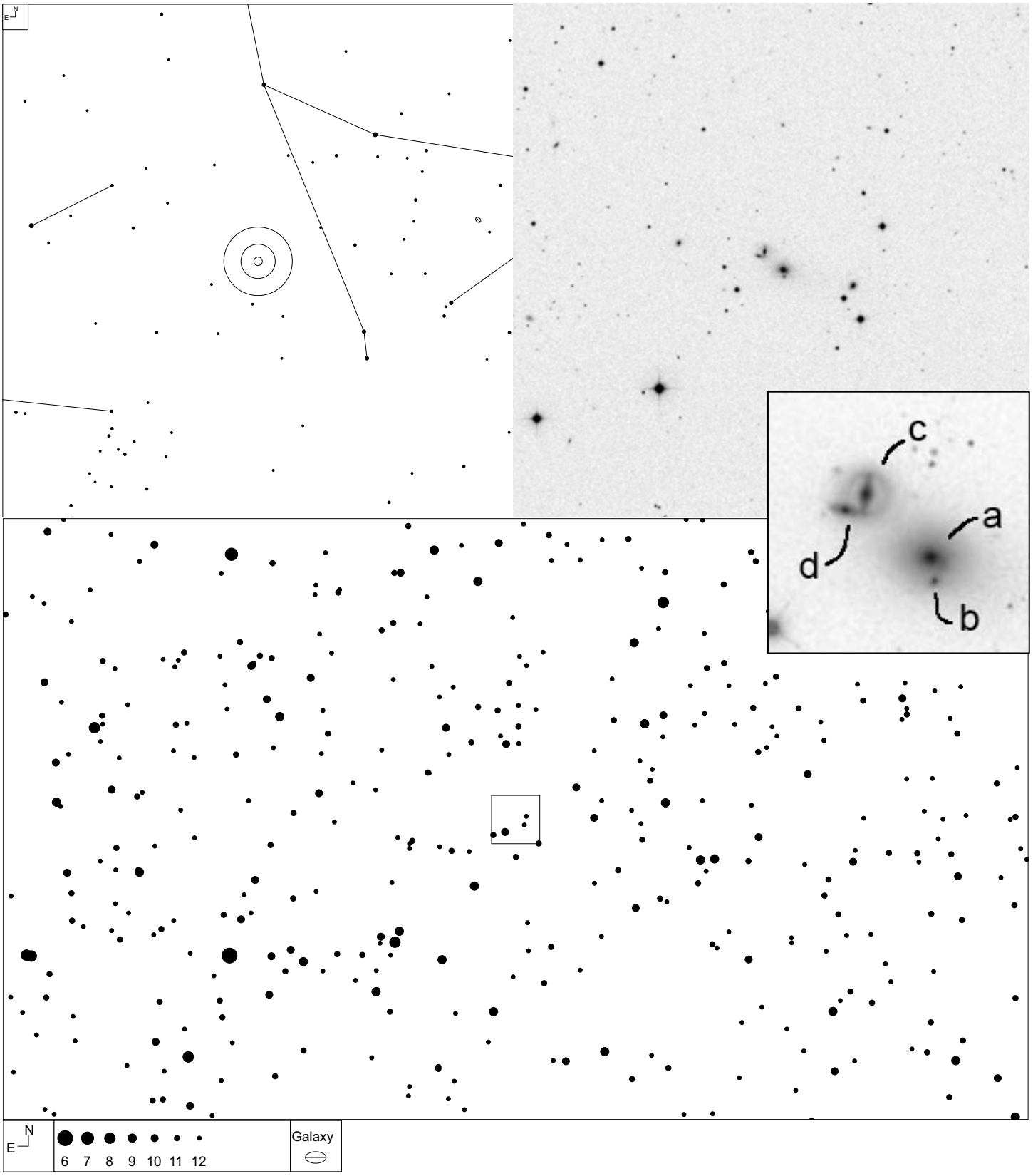
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
696		11 49 12.2	+55 42 00	GPair			PDbt
696a	MCG +09-19-201	11 49 09.9	+55 41 56	G	16.6g	0.6 x 0.3	
696b	MCG +09-19-202	11 49 14.6	+55 42 03	G	15.9g	0.6 x 0.2	

VV 575 (Ursa Major)



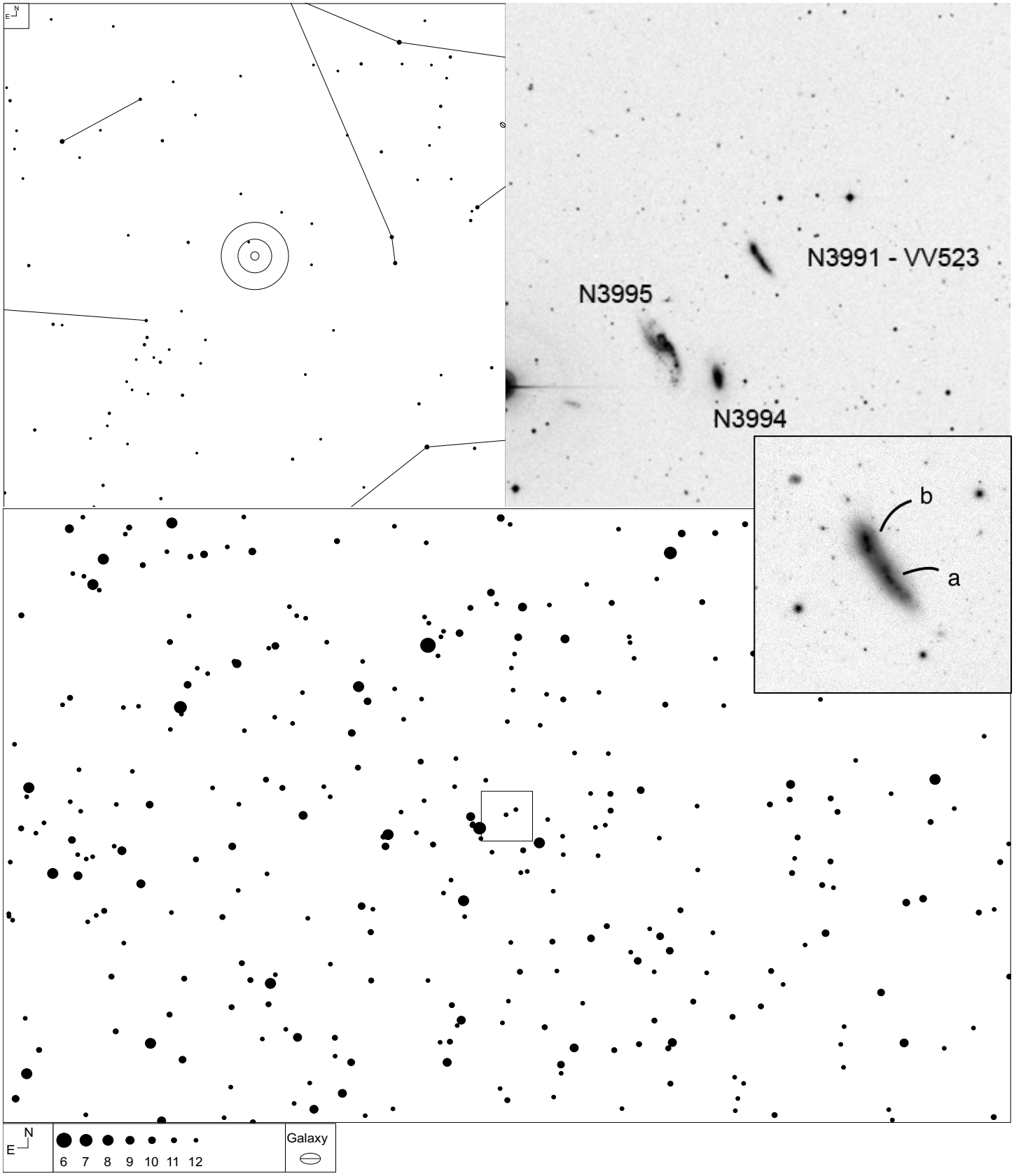
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
575	MCG +05-28-005	11 39 26.9	+31 51 15	G	16.2g	0.7 x 0.3	N

VV 673 (Ursa Major)



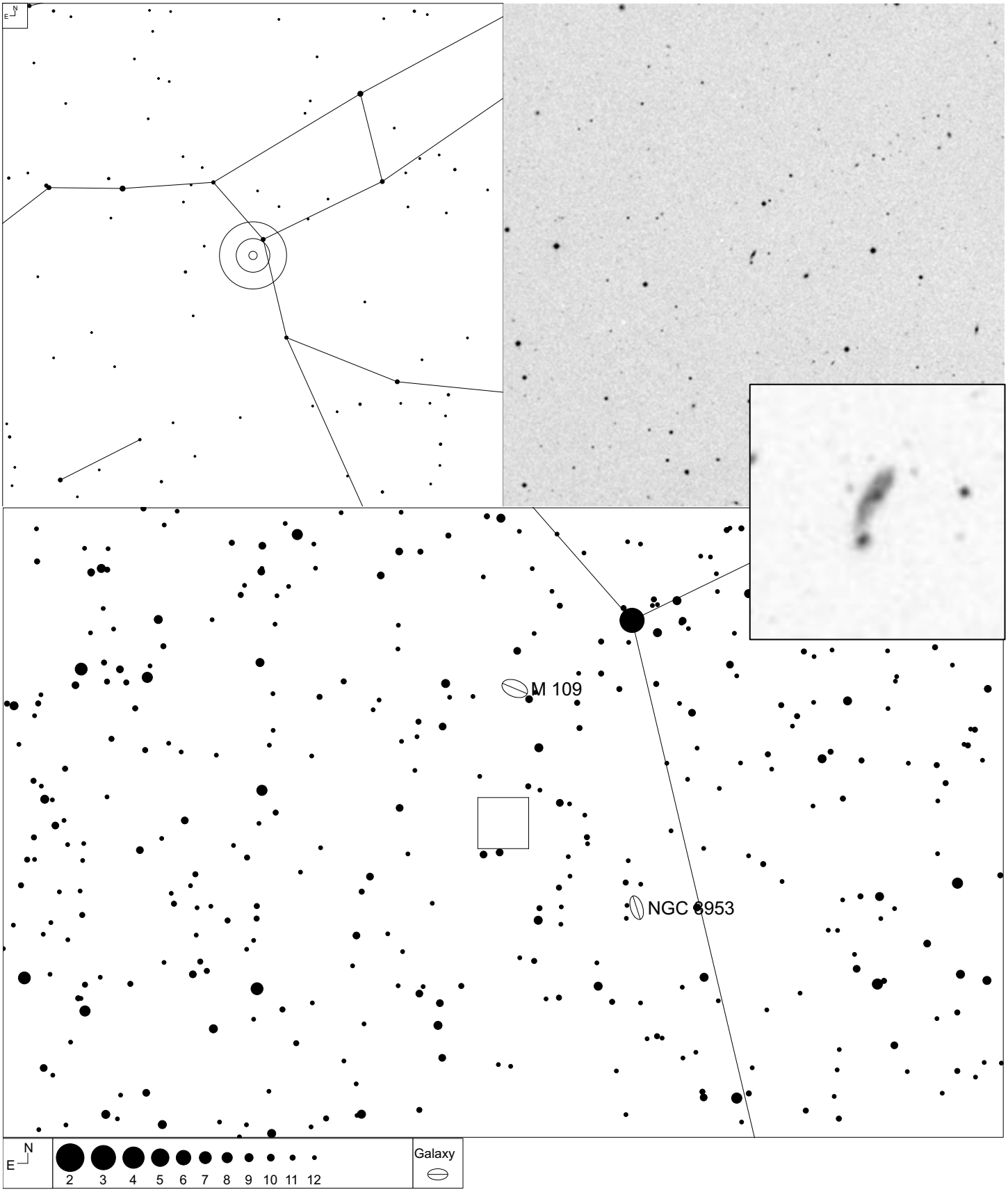
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
673	VV 673 = VV 753	11 48 06.4	+37 26 54	GTrpl	15.4		NPNP
673a	MCG +06-26-038	11 48 04.6	+37 26 37	G	14.7g	0.6 x 0.5	
673b	MCG +06-26-038	11 48 04.4	+37 26 26	G	17.3g		
673c	MCG +06-26-039	11 48 07.3	+37 27 09	G	15.8g	0.4 x 0.3	
673d	MCG +06-26-039	11 48 08.2	+37 27 02	G	16.0		

VV 523 (Ursa Major)



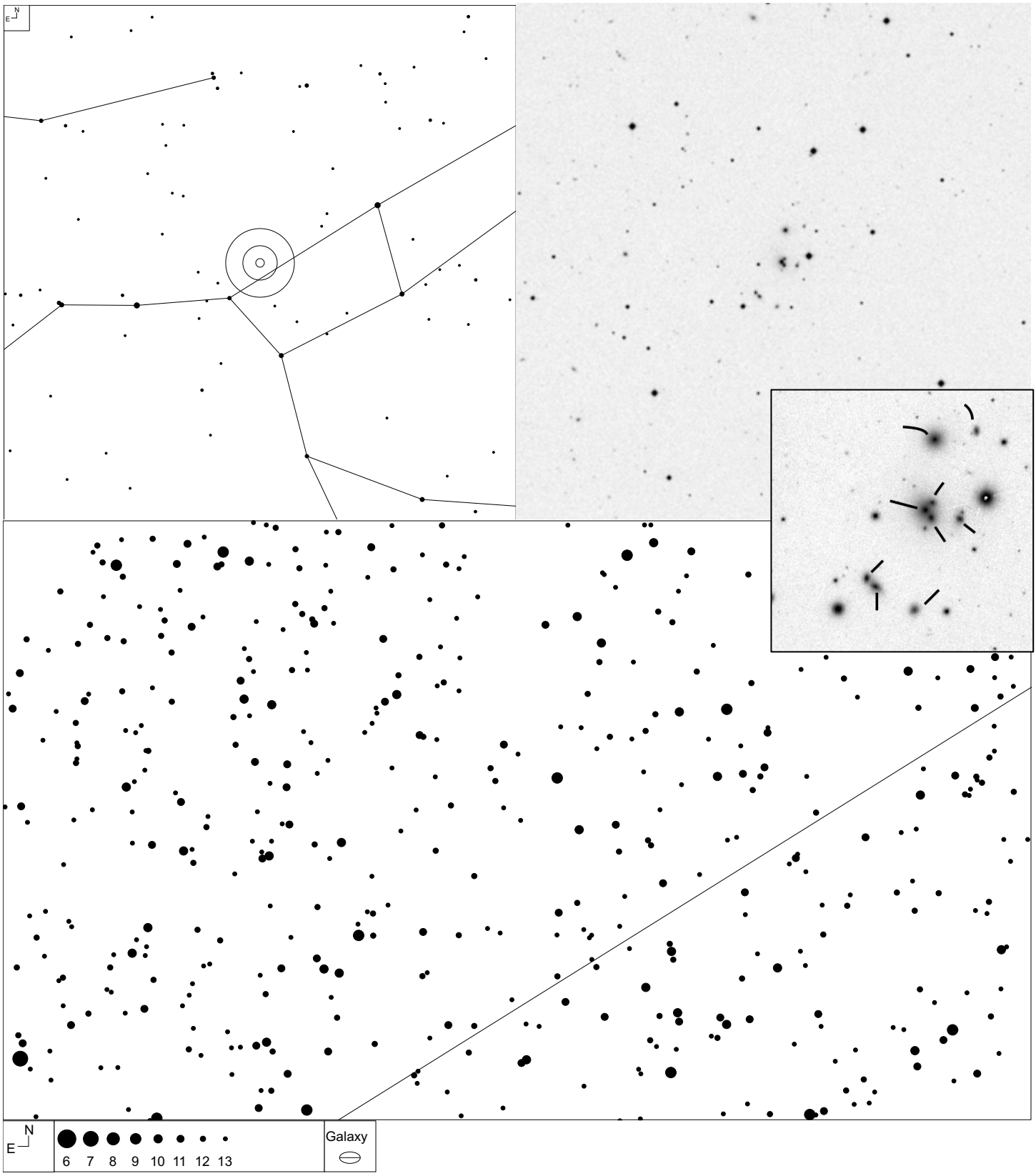
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
523	NGC 3991	11 57 31.1	+32 20 16	GPair	13.8g	1.4 x 0.4	Ch
*523b**	*NGC 3991N*	*11 57 31.7*	*+32 20 30*	*G*	*14.6g*	*0.7 x 0.4*	

VV 385 (Ursa Major)



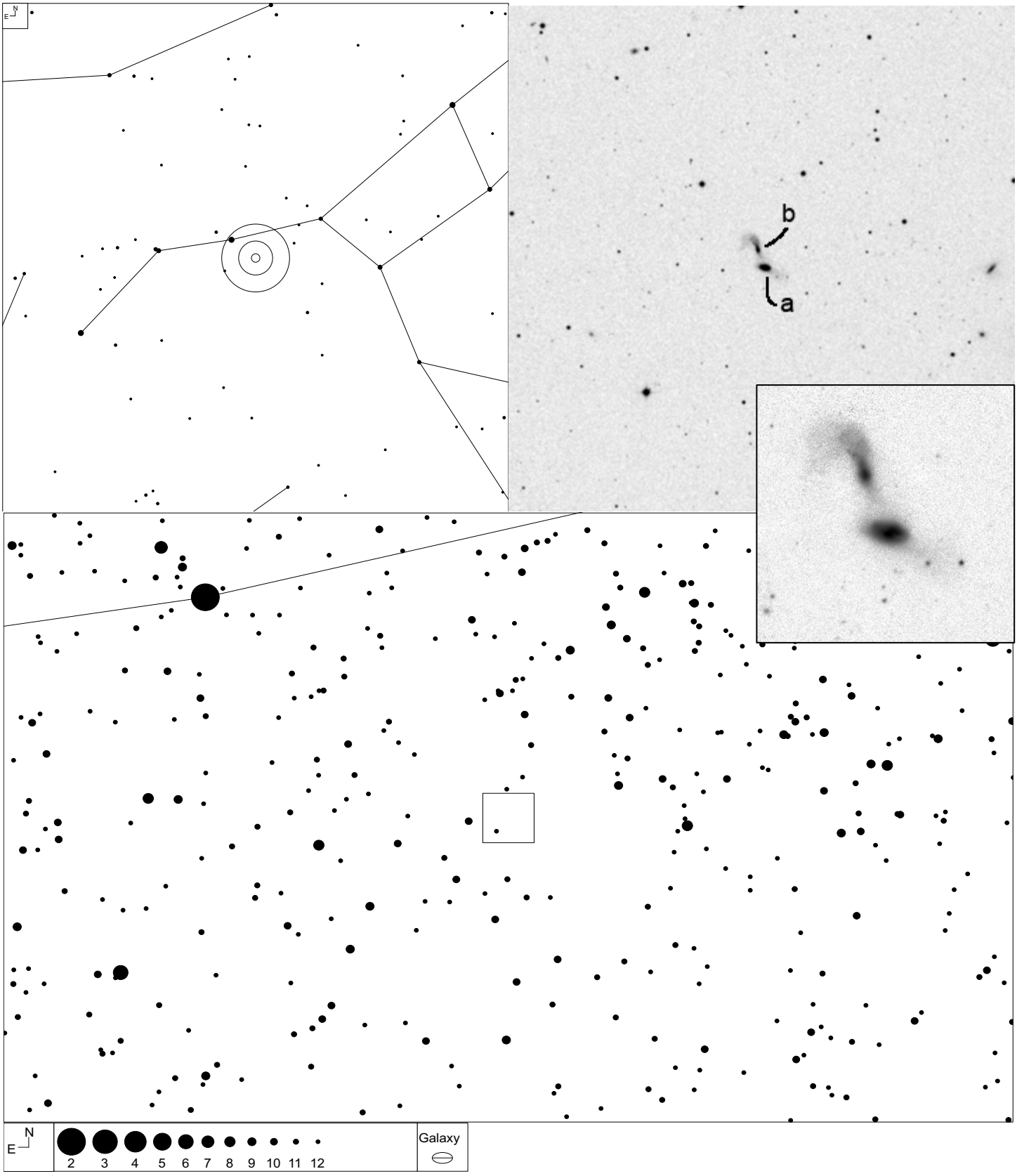
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
385	MCG +09-20-047	11 57 58.1	+52 44 11	G	16.5g	0.4 x 0.2	M

VV 656 (Ursa Major)



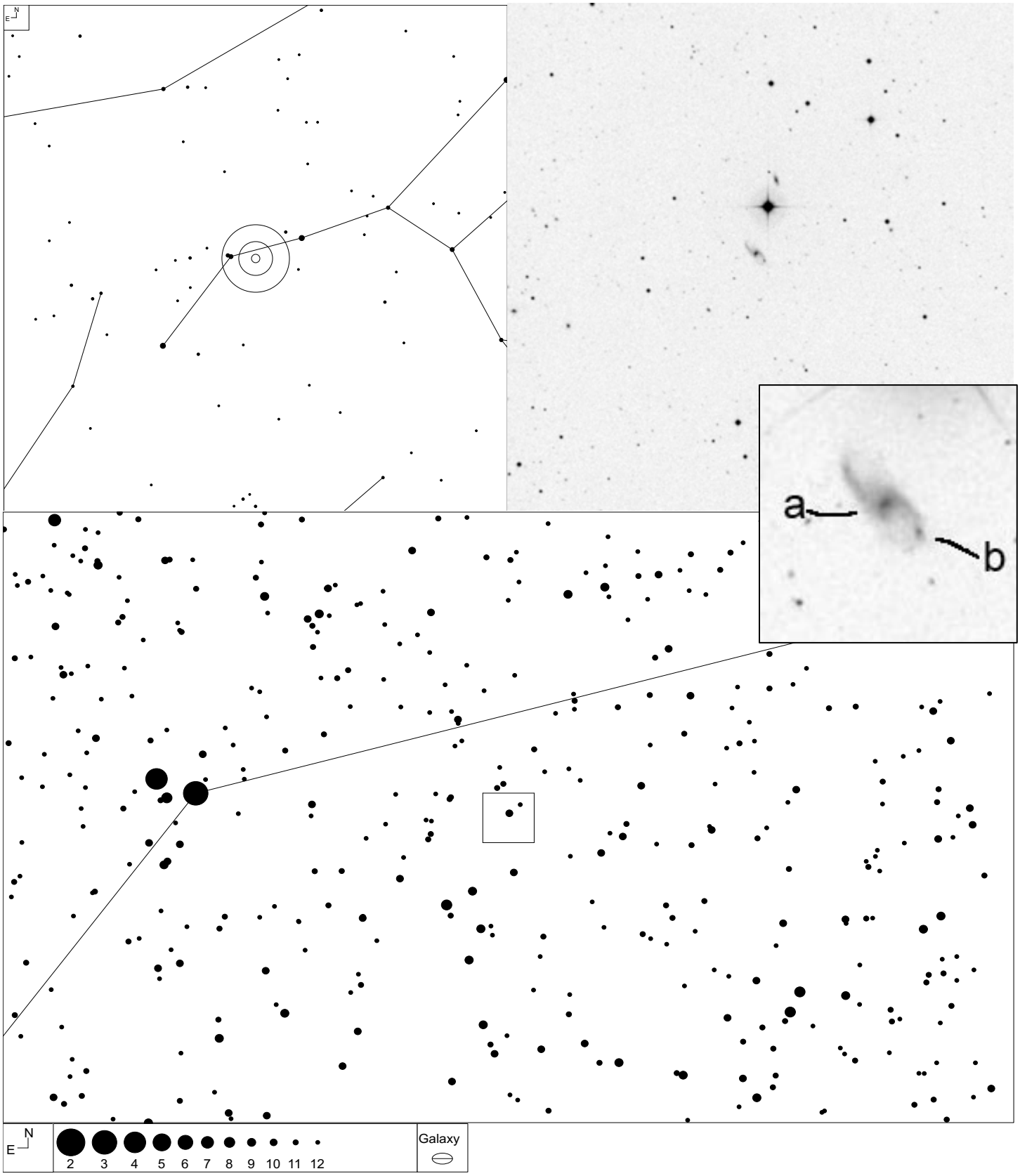
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
656	MCG +10-17-130	12 02 15.3	+59 08 18	GGroup	17.0b	0.3 x 0.2	N

VV 708 (Ursa Major)



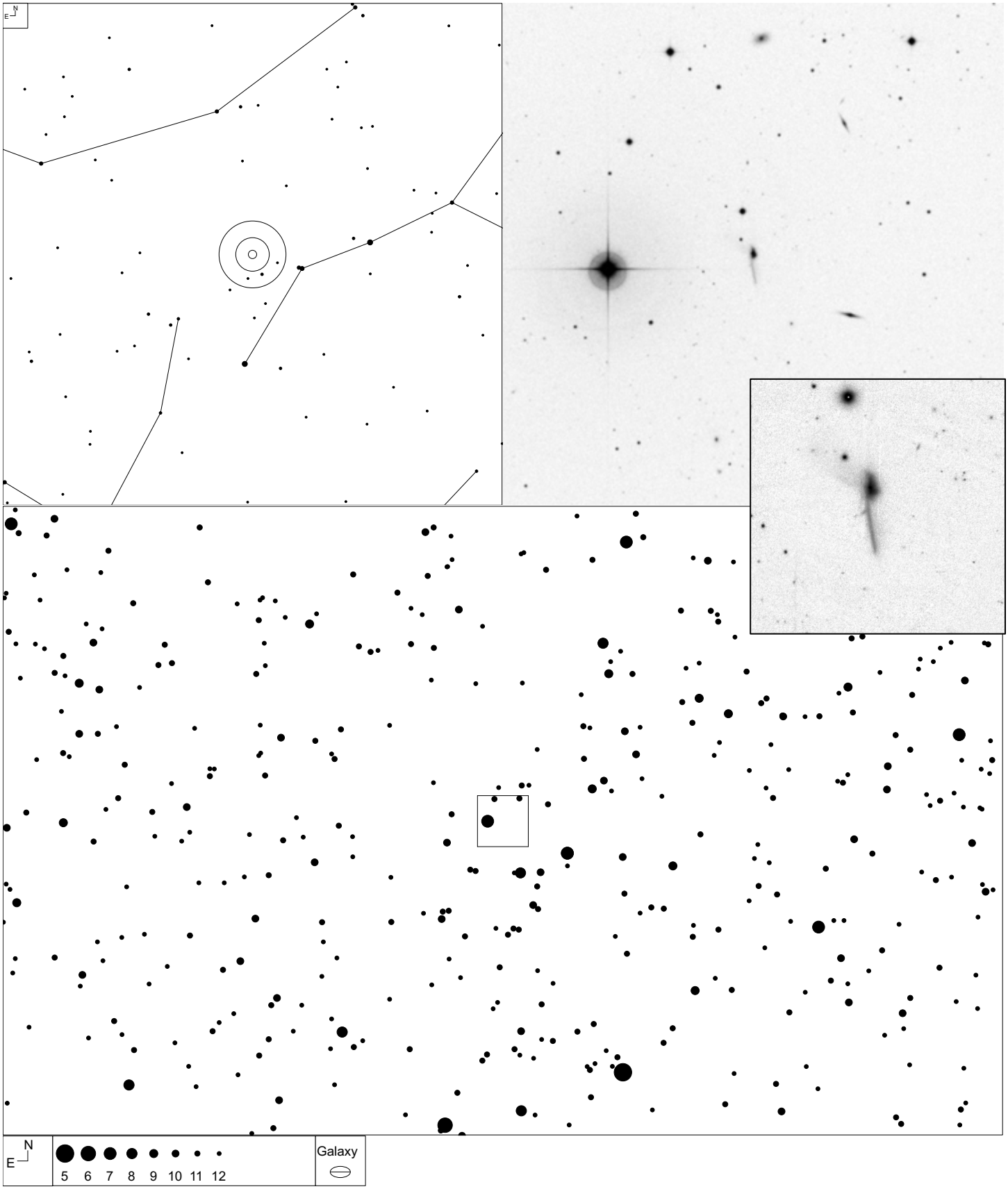
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
708		12 43 48.7	+54 54 01	GPair	14.1		PKbt
708a	UGC 7905	12 43 46.1	+54 54 07	G	14.1	1.9 x 1.0	
708b	MCG +09-21-034	12 43 49.4	+54 54 18	G	15.5g	2.2 x 0.2	

VV 417 (Ursa Major)



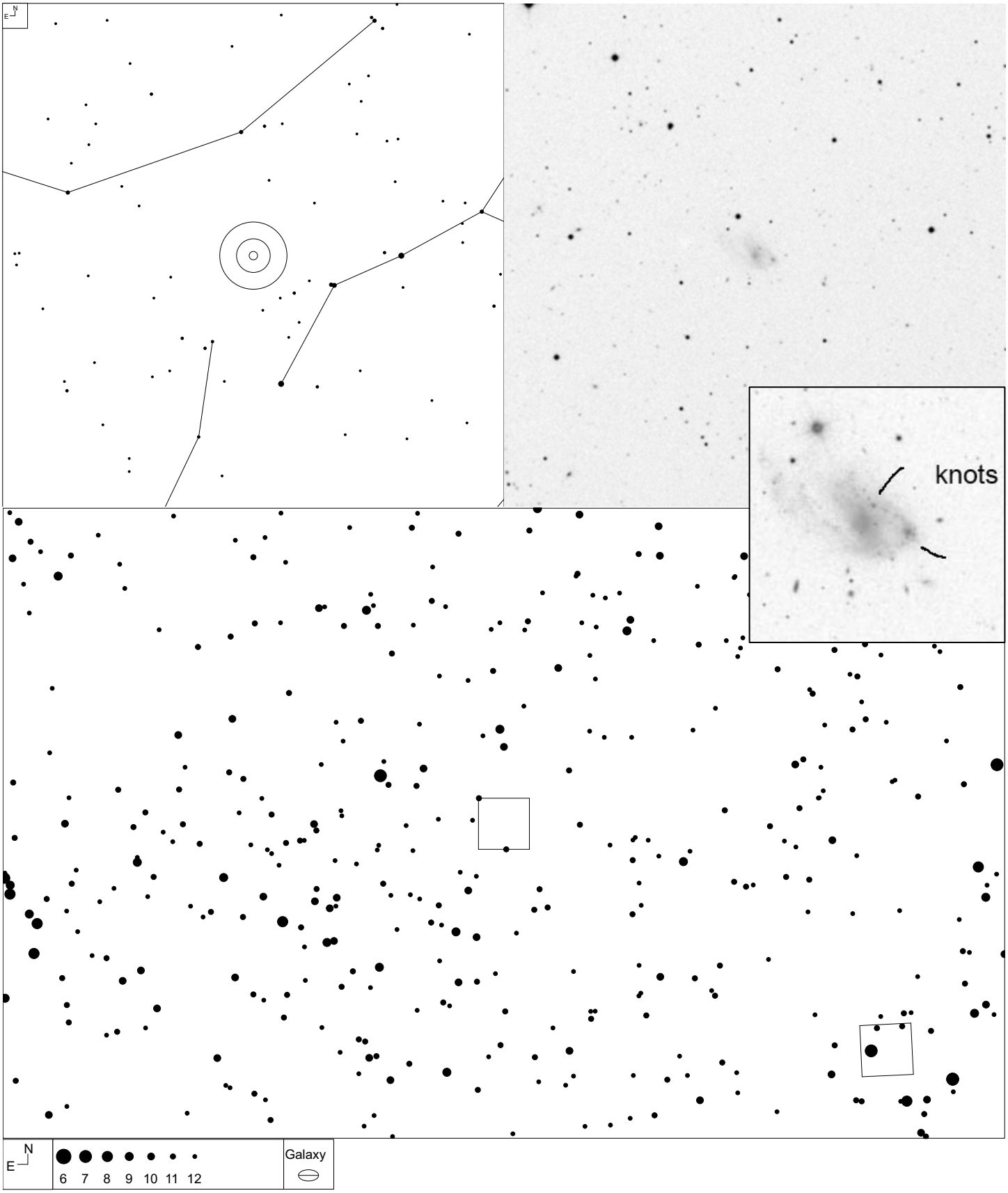
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
417	MCG +09-22-032	13 13 39.6	+54 49 47	GPair	15.6g	0.8 x 0.3	M

VV 851 (Ursa Major)



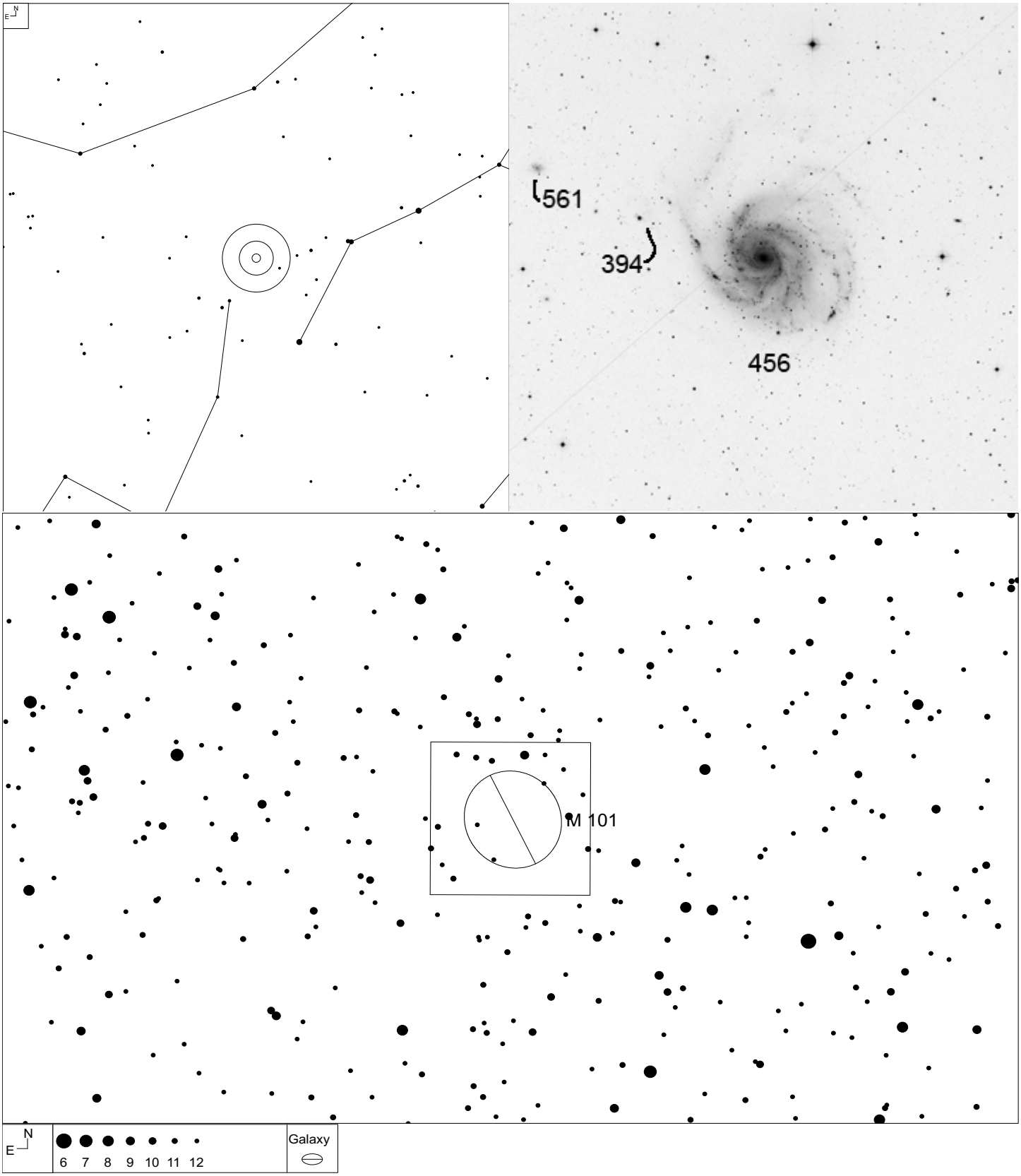
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
851	UGC 8696	13 44 42.1	+55 53 13	G	14.9v	0.7 x 0.4	Ent

VV 792 (Ursa Major)



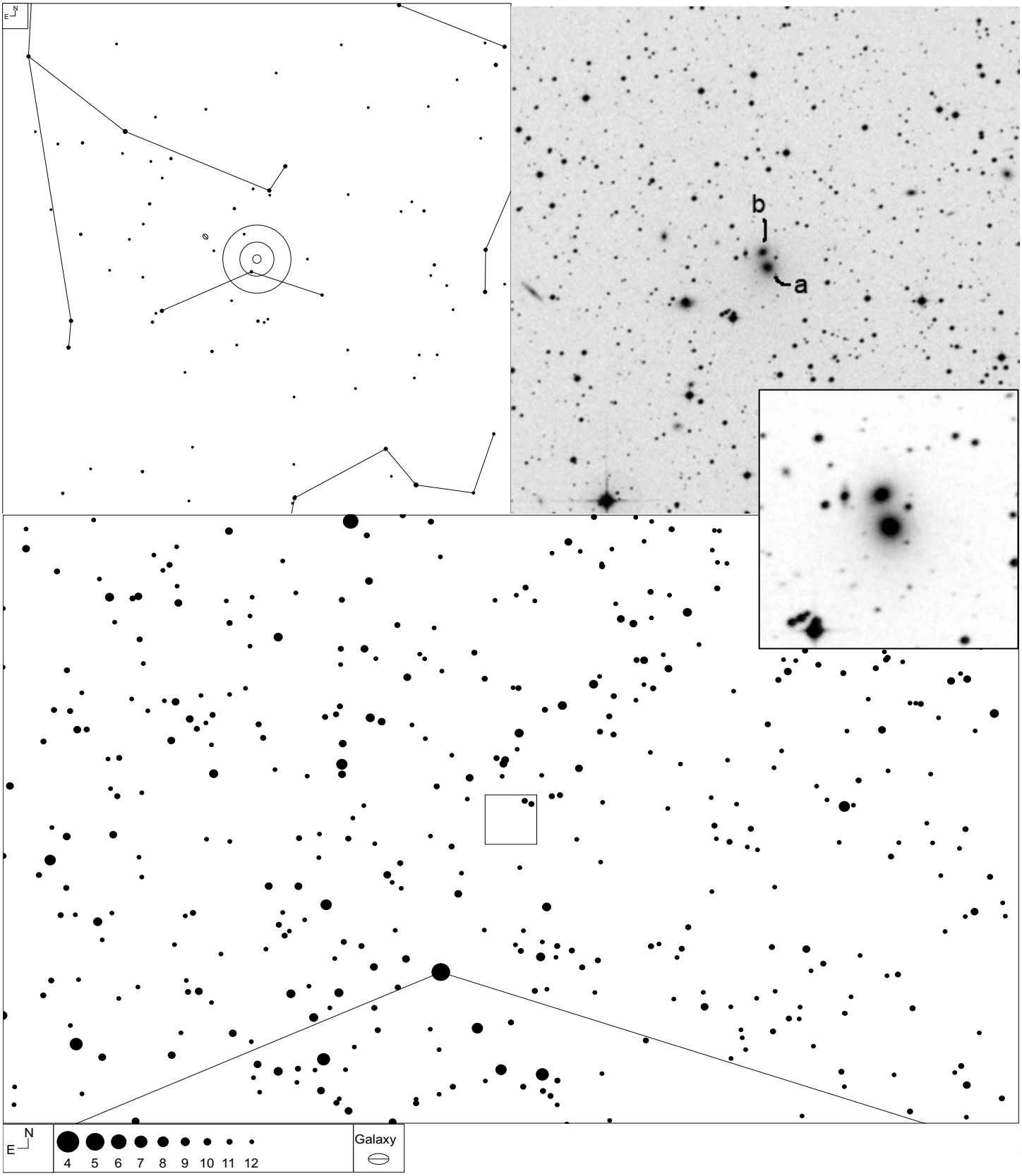
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
792	UGC 8892	13 57 41.1	+57 00 06	GTrpl	15.6g	1.9 x 1.0	En?

VV 456, VV 394 and VV 561 (Ursa Major)



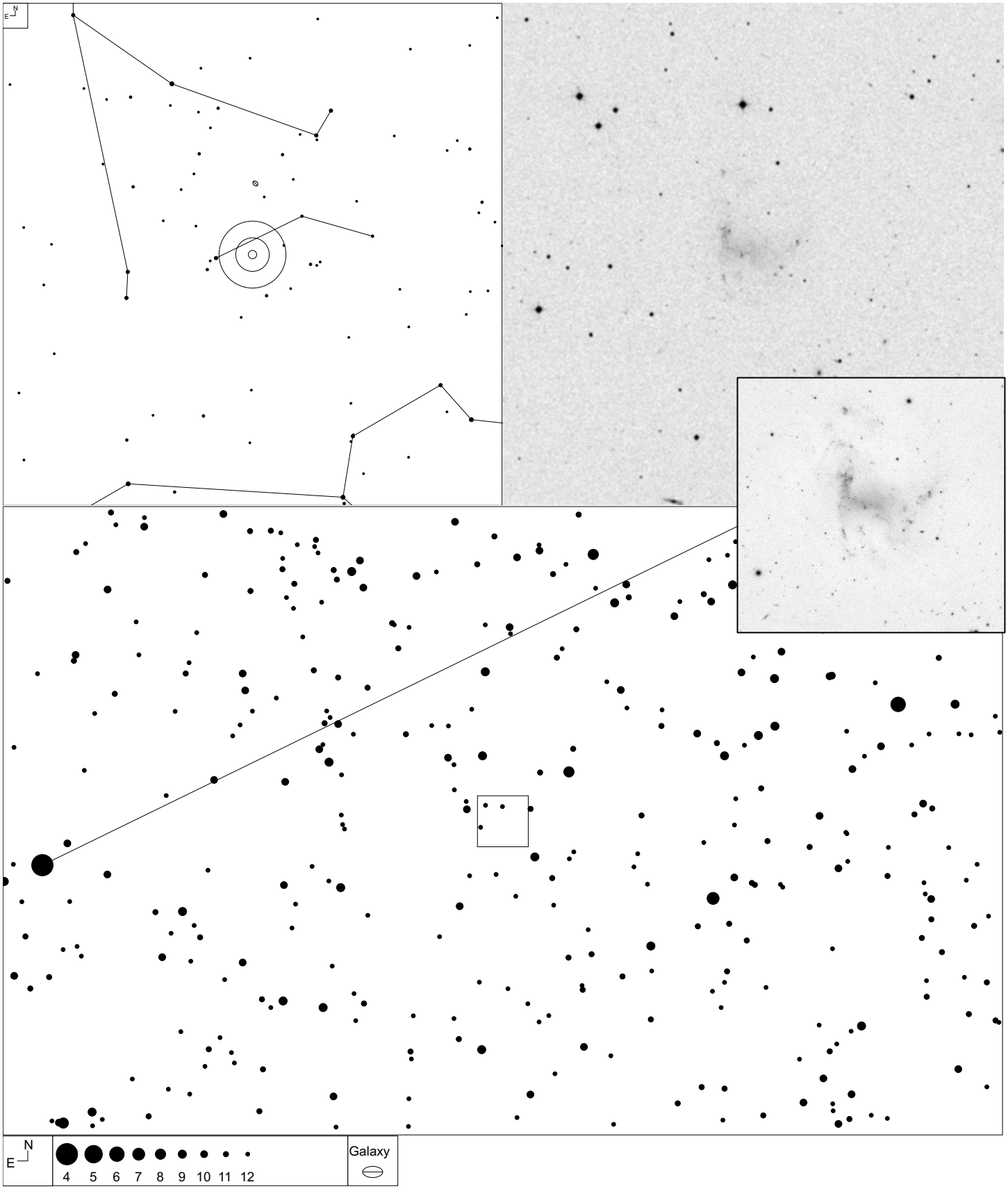
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
456	M 101	14 03 12.5	+54 20 55	G	7.9v	28.8 x 26.0	M
394	NGC 5471	14 04 29.0	+54 23 49	HII	14.3g	0.9 x 0.7	MMM
561	NGC 5477	14 05 33.2	+54 27 39	G	14.0v	1.7 x 1.3	N

VV 573 (Leo Minor)



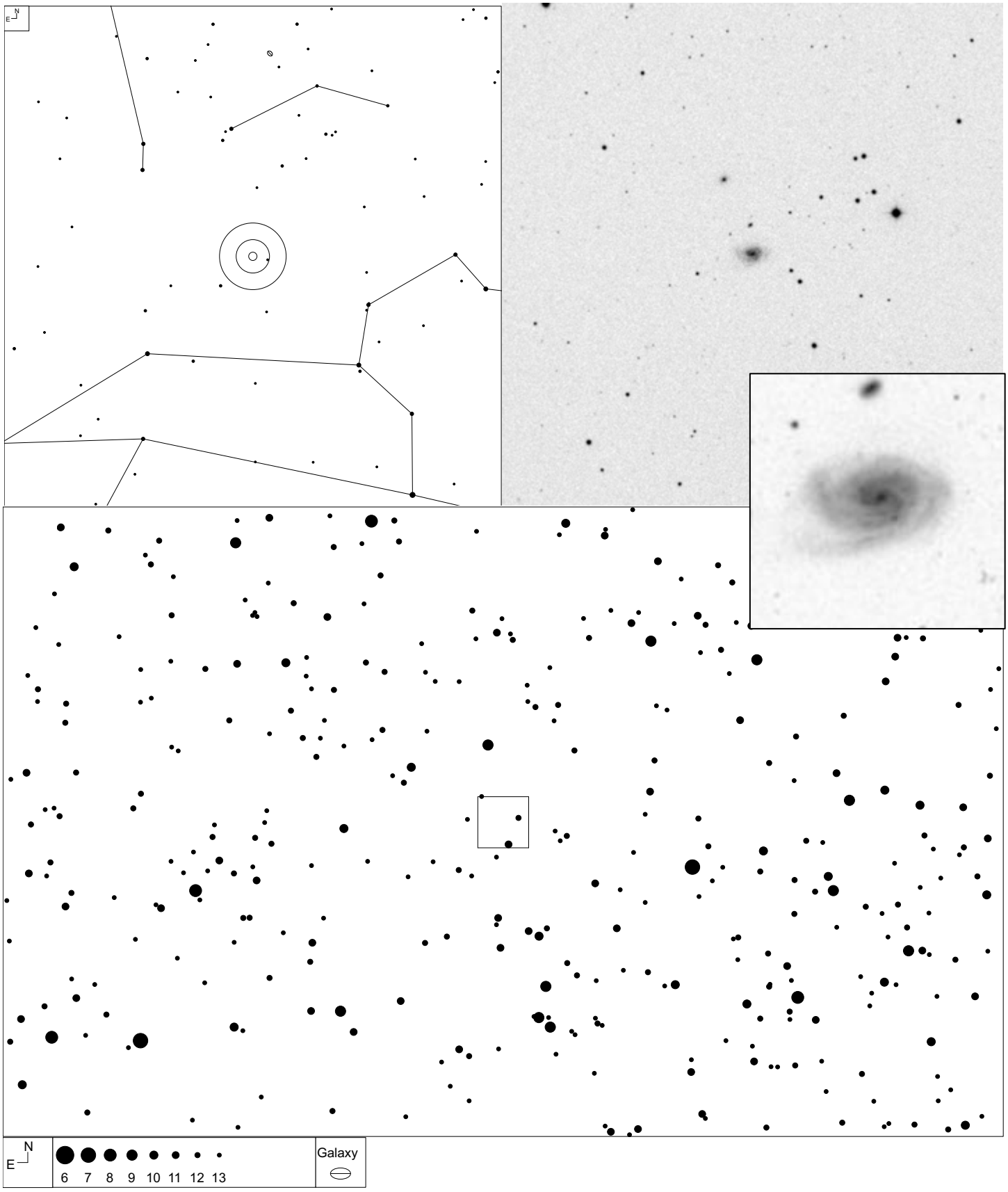
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
573		10 14 01.6	-35 08 23	GPair			NNN
573a	MCG -06-23-016	10 14 01.3	-35 08 35	G	14.4g	0.8 x 0.6	
573b	MCG -06-23-017	10 14 02.0	-35 08 08	G	15.5g	0.4 x 0.4	

VV 794 (Leo Minor)



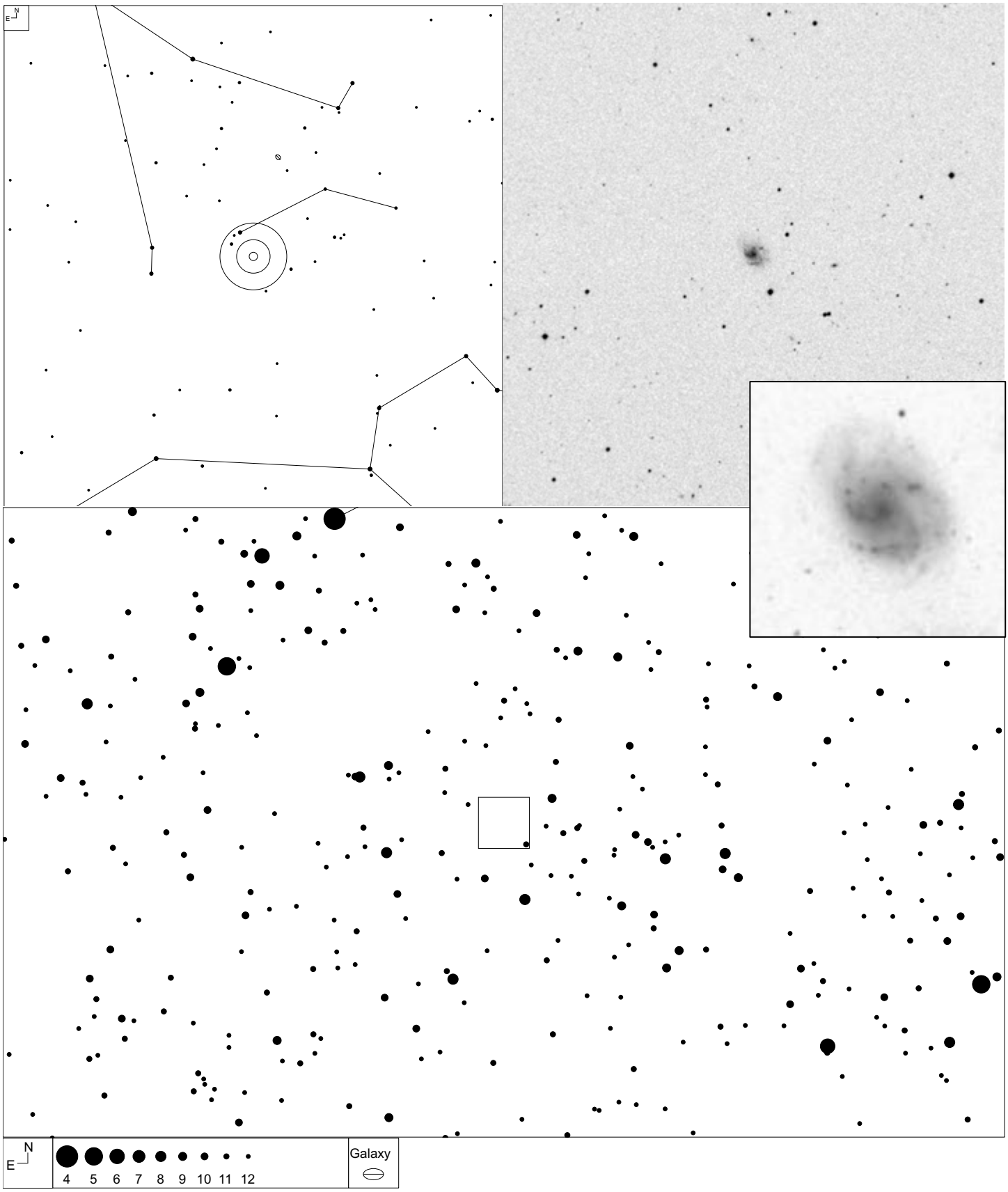
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
794	UGC 5829	10 42 41.9	+34 26 56	G	13.1v	4.7 x 4.2	Enf

VV 727 (Leo Minor)



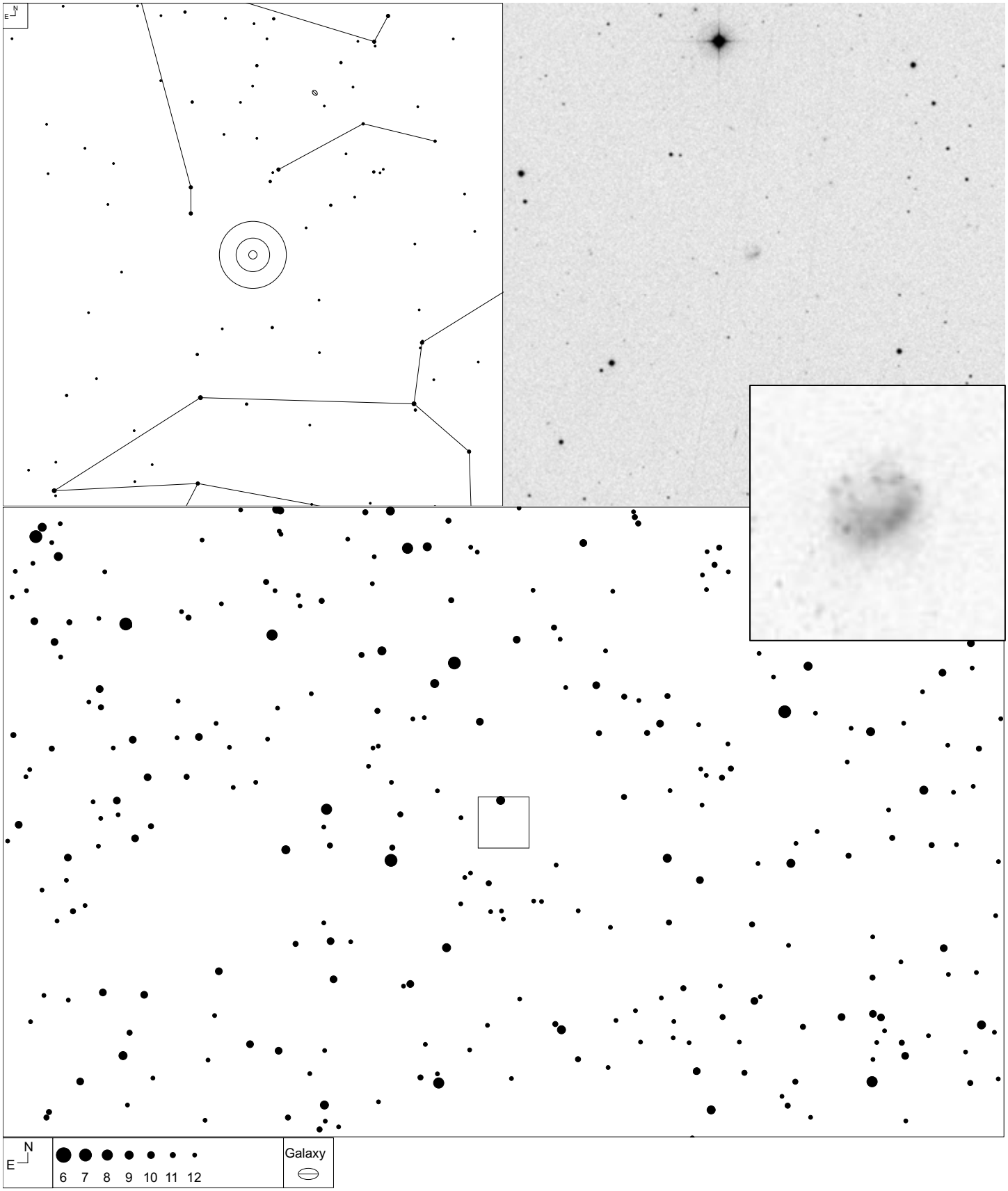
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
727	UGC 5884	10 47 02.6	+26 32 34	G	14.2g	1.2 x 0.8	PC

VV 538 (Leo Minor)



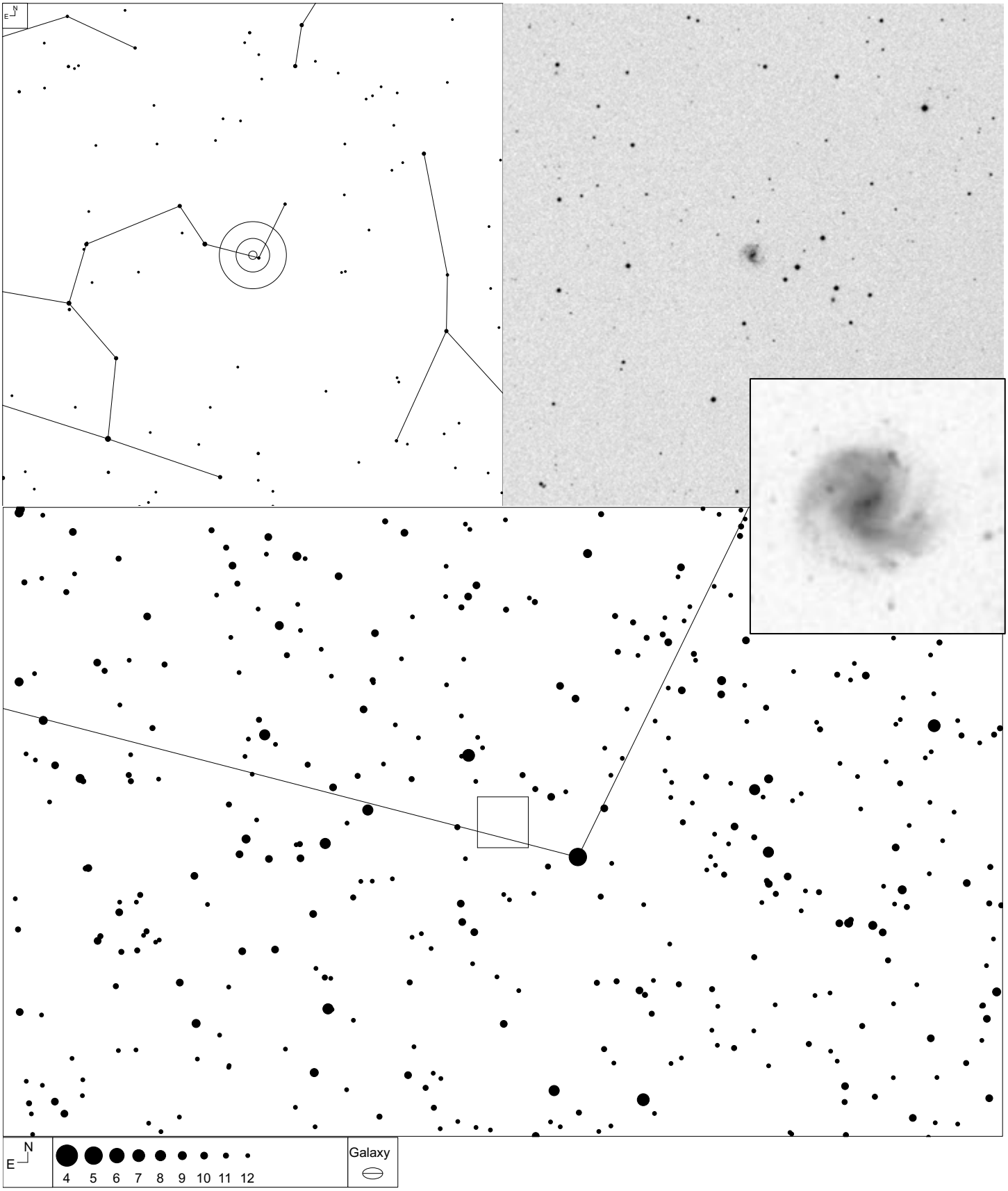
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
538	IC 2604	10 49 25.1	+32 46 21	G	14.4g	1.2 x 0.9	N

VV 515 (Leo Minor)



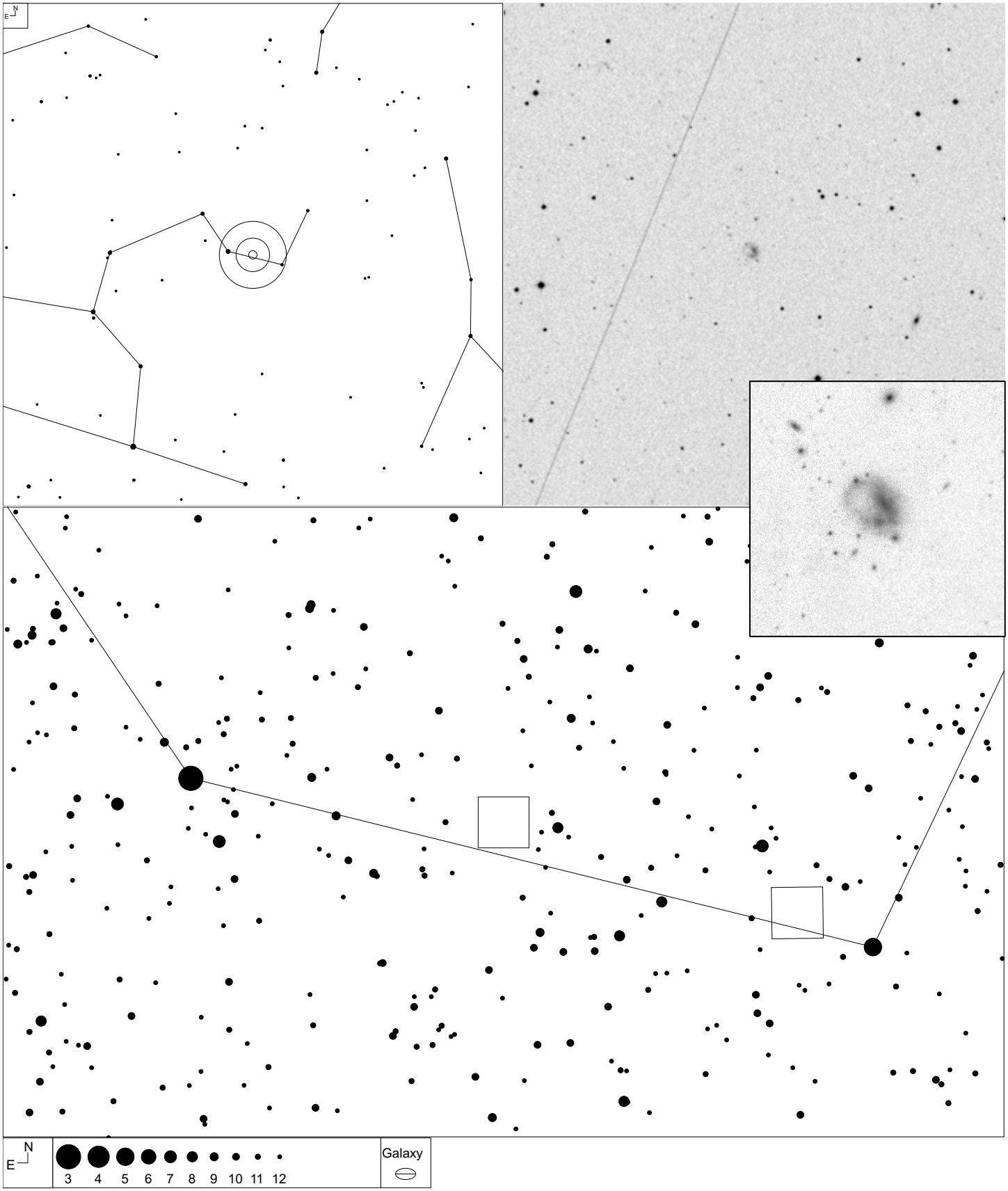
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
515	MCG +05-26-034	11 00 44.4	+29 06 45	G	16.1v	0.5 x 0.5	Ch

VV 553 (Leo)



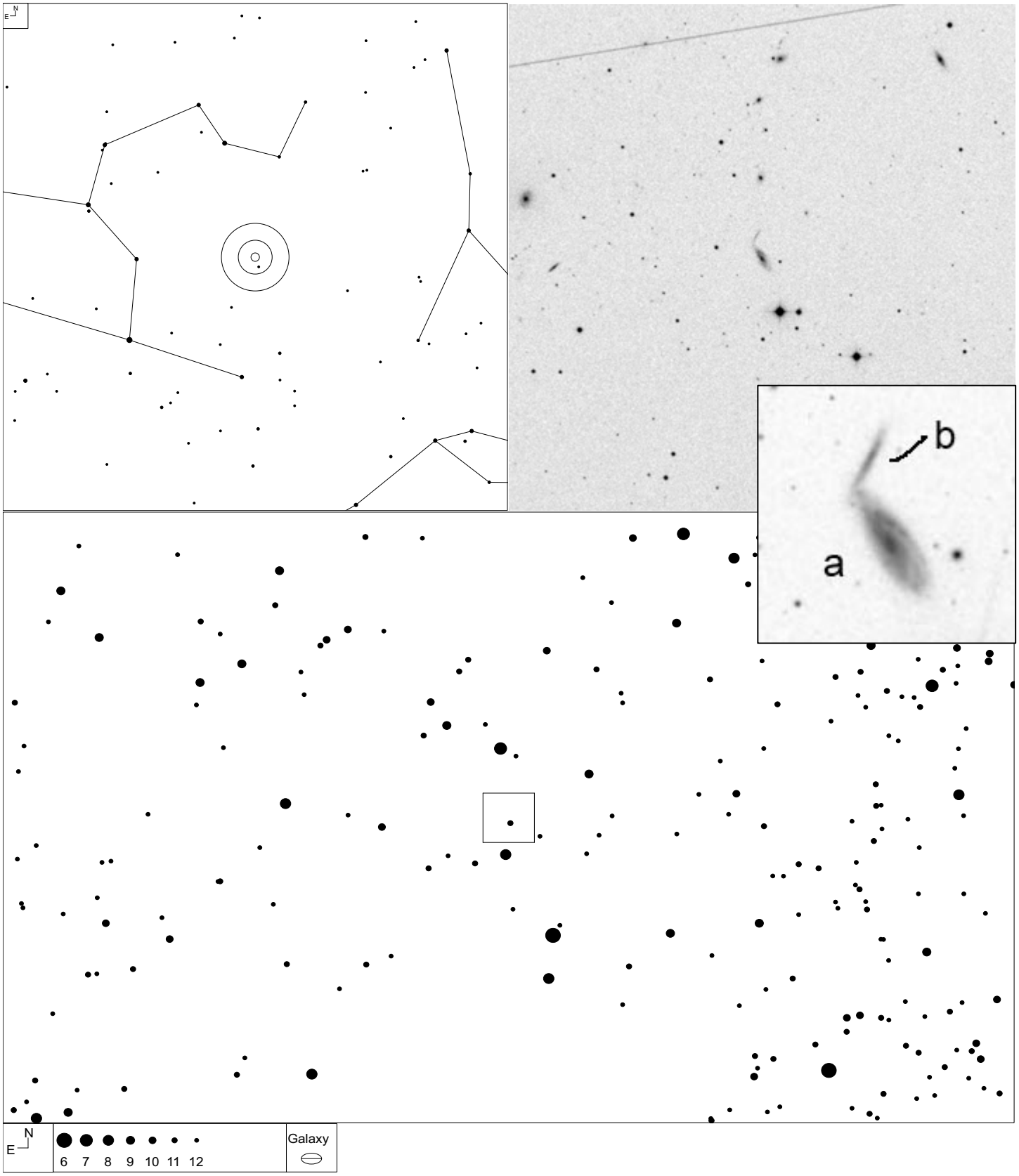
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
553	MCG +04-23-010	09 33 16.3	+23 08 06	G	14.8g	1.0 x 0.6	N

VV 659 (Leo)



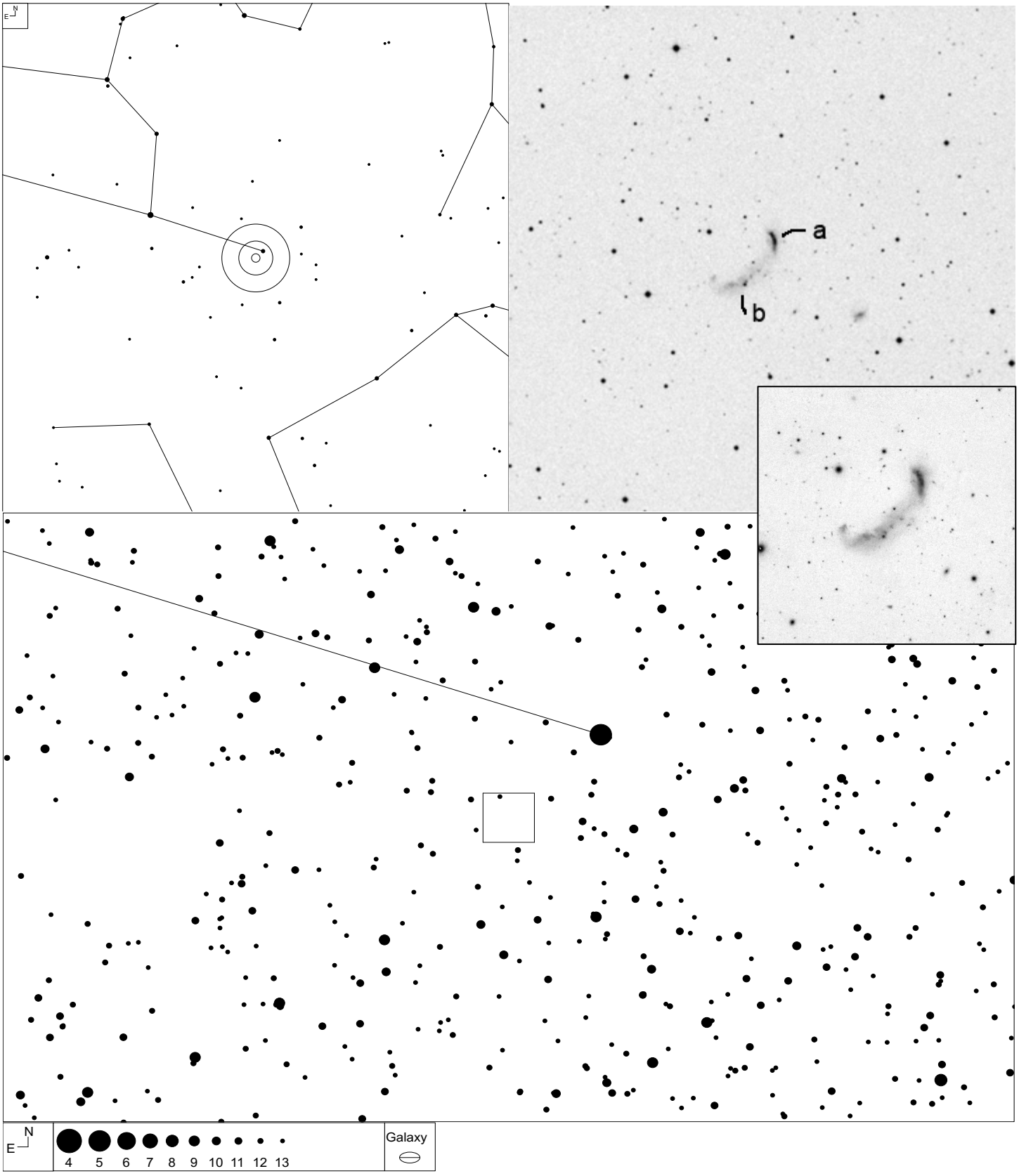
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
659	PGC 27536	09 39 21.0	+23 34 21	GPair	16.2g	0.7 x 0.7	N

VV 808 (Leo)



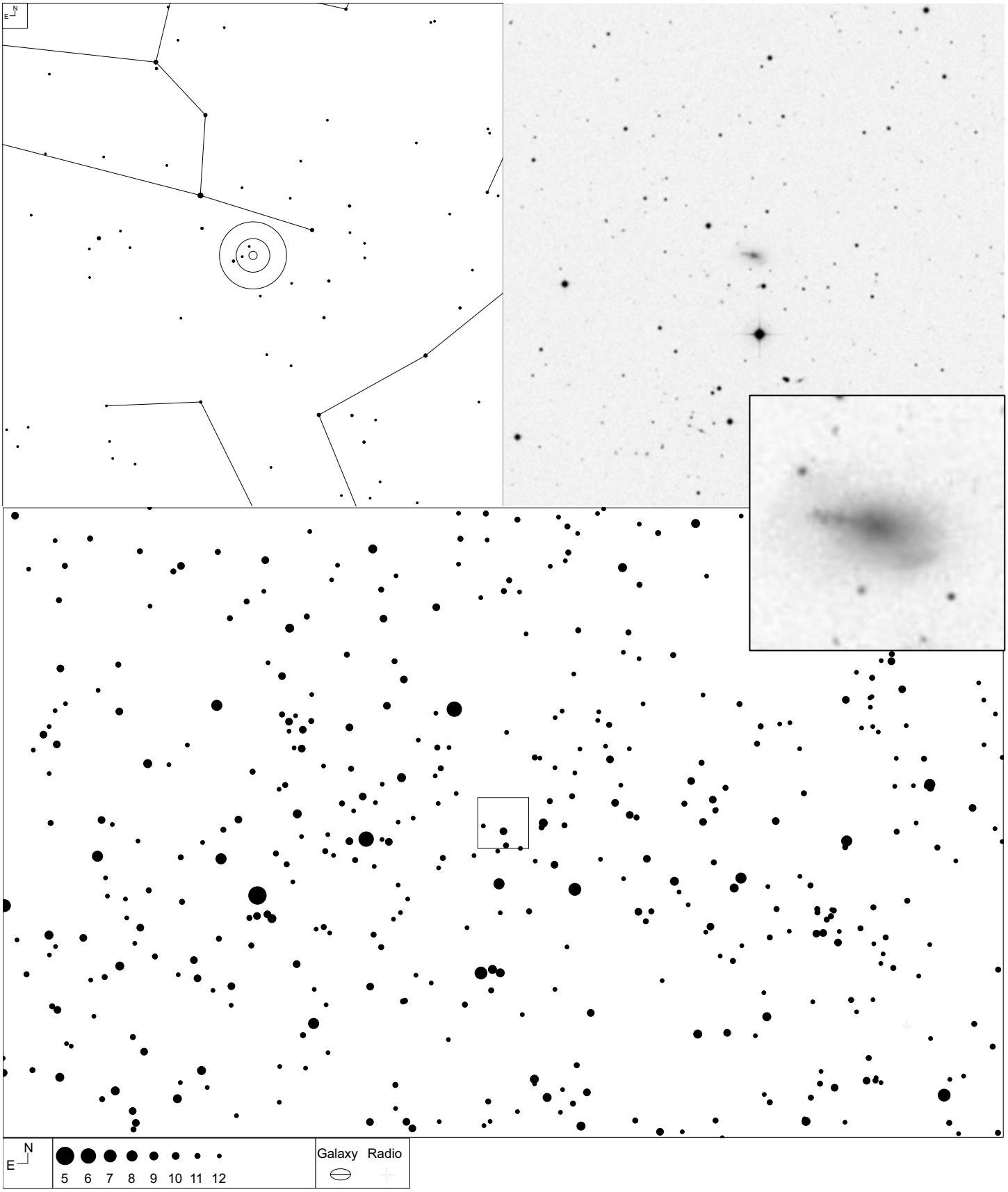
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
808		09 37 55.5	+17 01 14	GPair			PK
808a	NGC 2933	09 37 54.9	+17 00 55	G	15.2g	1.2 x 0.4	
808b	*PGC 4207339*	*09 37 55.7*	*+17 01 28*	*G*	*17.7g*	*0.6 x 0.1*	

VV 547 (Leo)



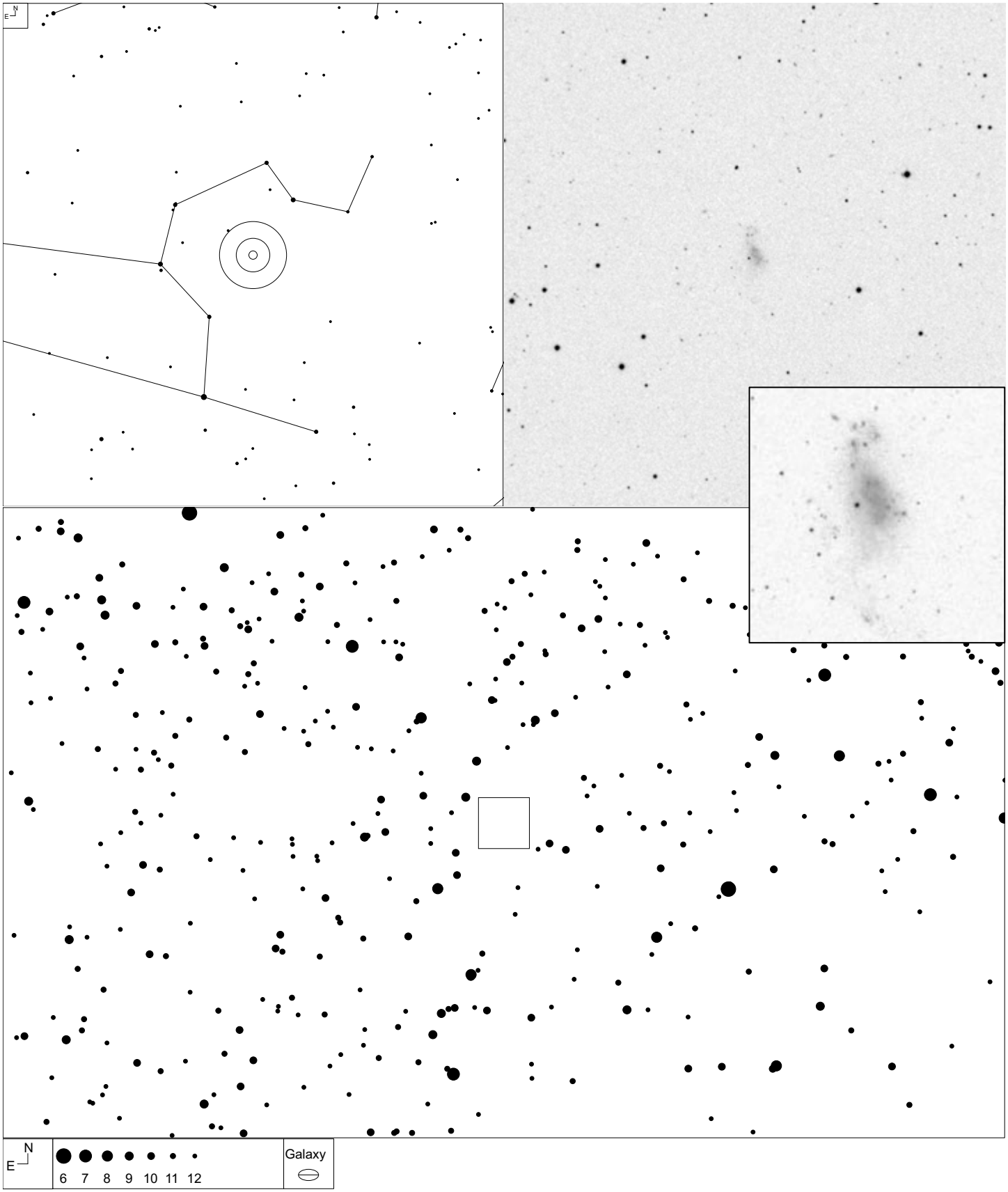
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
547		09 42 54.7	+09 29 01	GGroup			N
547a	MCG +02-25-021	09 42 53.4	+09 29 42	G	15.1g	0.8 x 0.6	
547b	UGC 5189	09 42 56.8	+09 28 22	G	15.7g	2.0 x 0.8	

VV 373 (Leo)



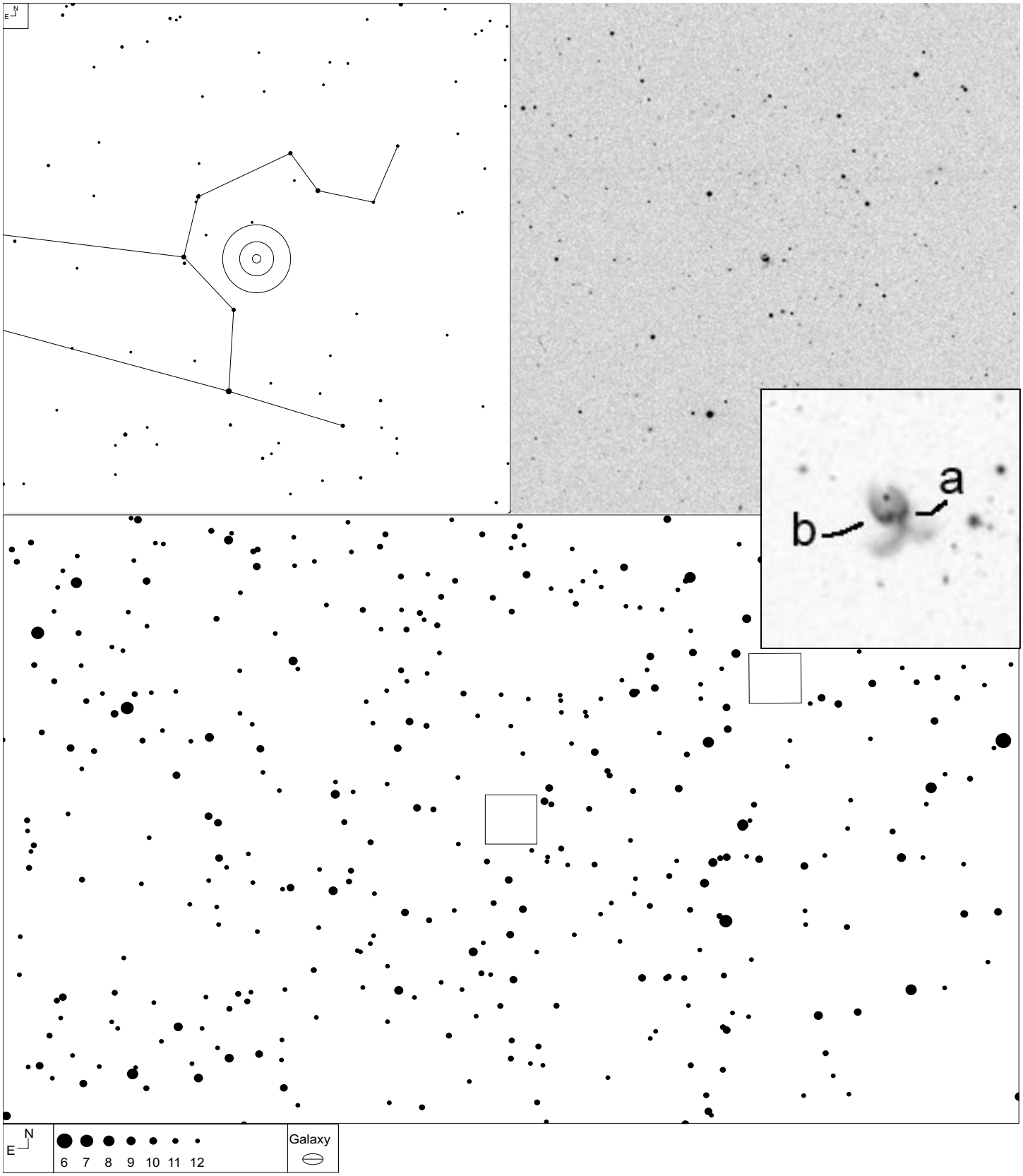
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
373	UGCA 188	09 55 29.7	+08 23 28	G	15.3g	1.0 x 0.5	MMM

VV 542 (Leo)



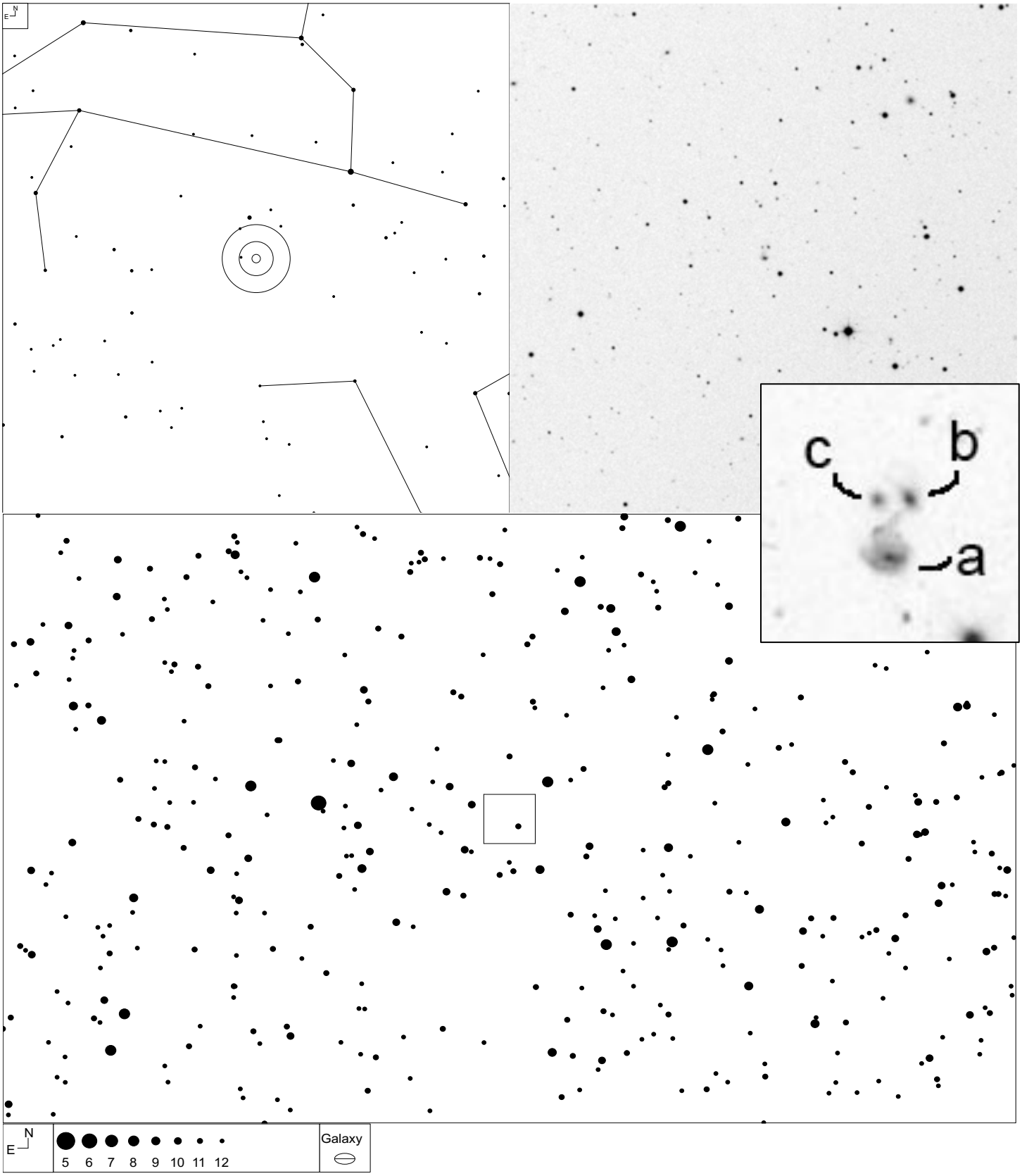
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
542	UGC 5340	09 56 45.8	+28 49 35	G	14.6v	2.7 x 1.0	N

VV 689 (Leo)



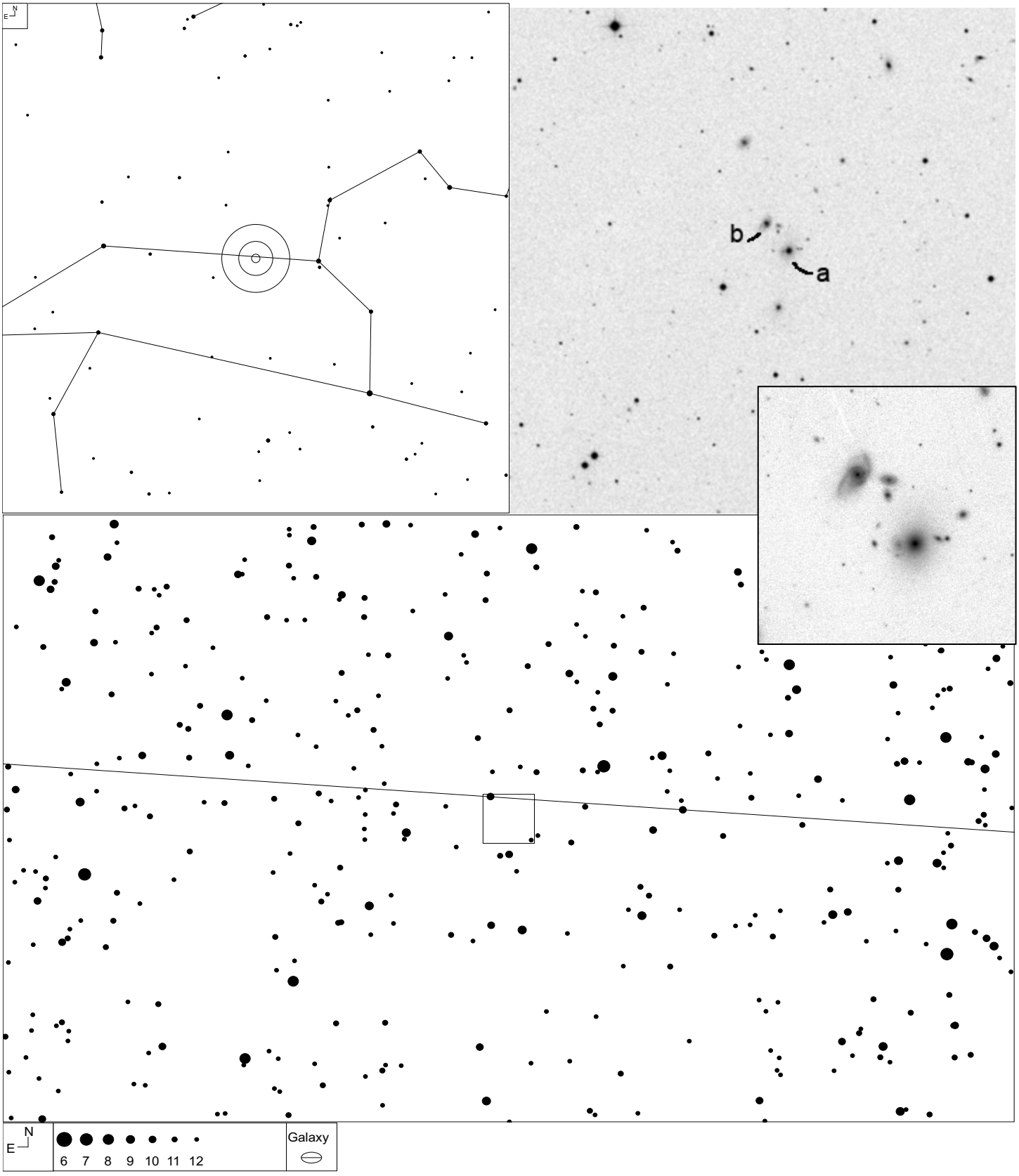
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
689	MCG +03-26-016	10 01 39.4	+19 47 36	GPair	16.3g	0.5 x 0.5	N

VV 396 (Leo)



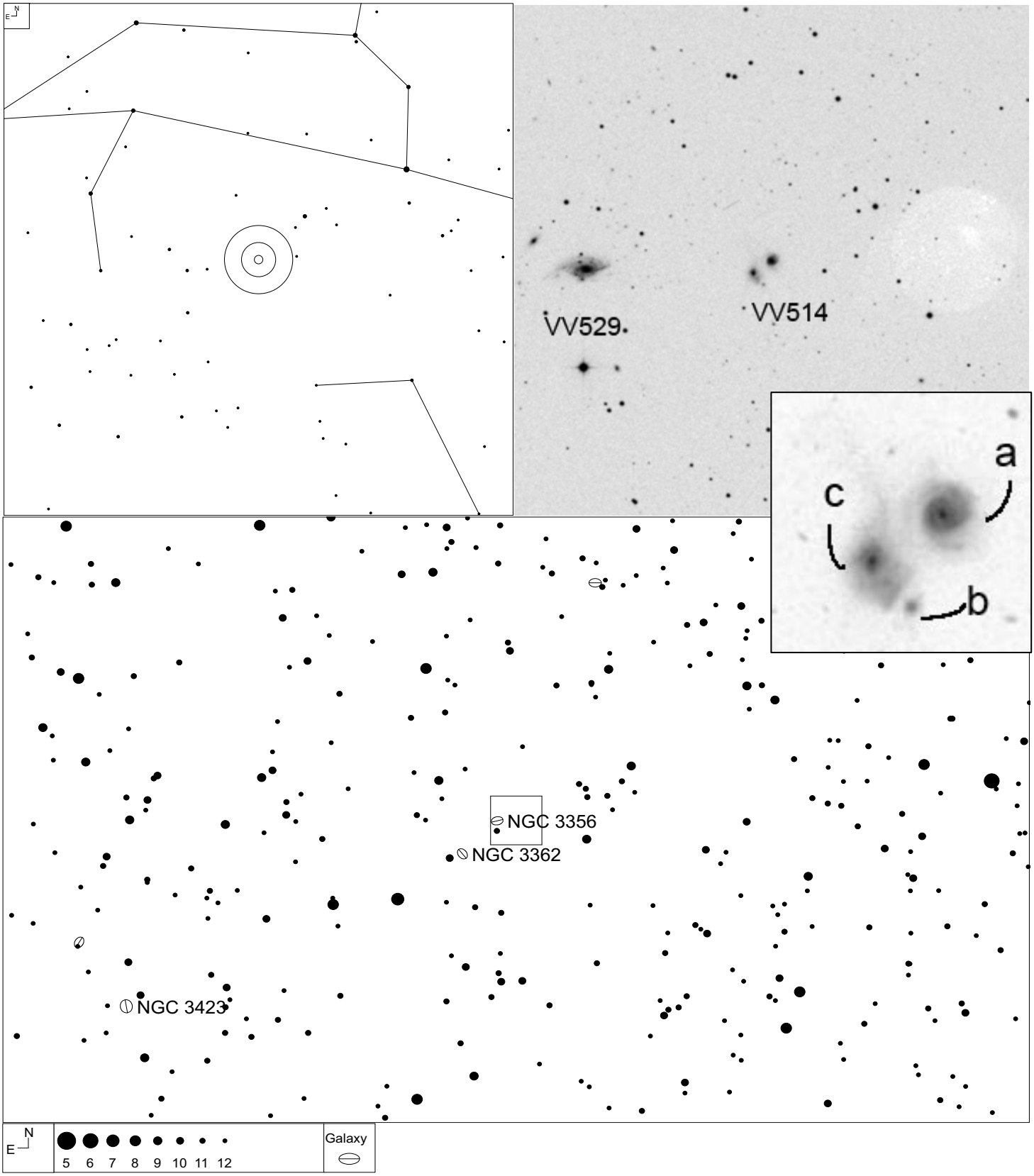
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
396	MCG +01-27-015	10 31 11.1	+06 52 30	GTrpl	16.4g	0.3 x 0.2	N

VV 393 (Leo)



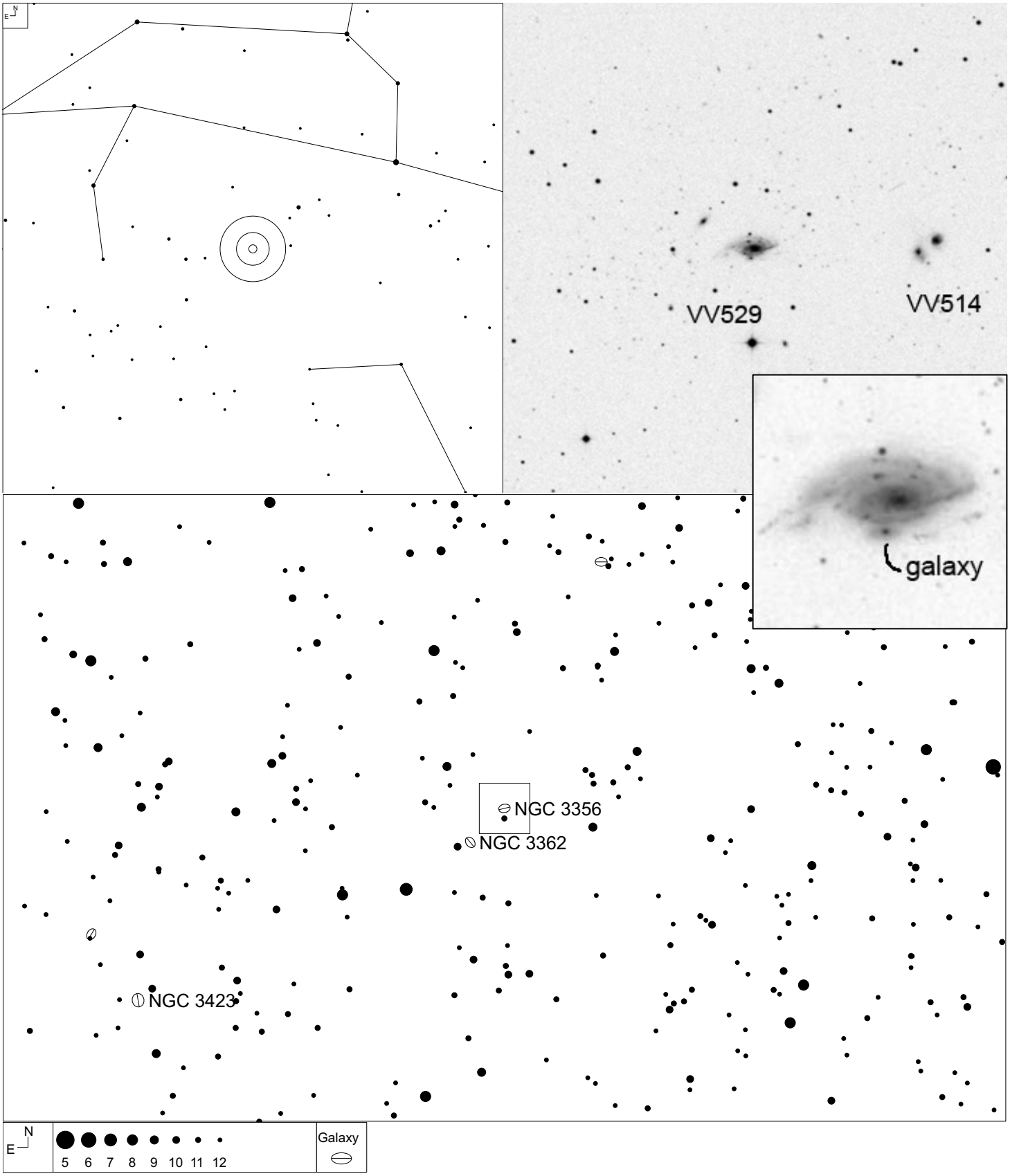
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
393	VV 393 = VV 755	10 35 48.7	+20 02 27	GGroup			NPNP
393a	MCG +03-27-064	10 35 45.4	+20 02 46	G	15.5b	0.7 x 0.5	
393b	PGC 1614912	10 35 48.2	+20 03 34	G	15.7g	0.5	

VV 514 (Leo)



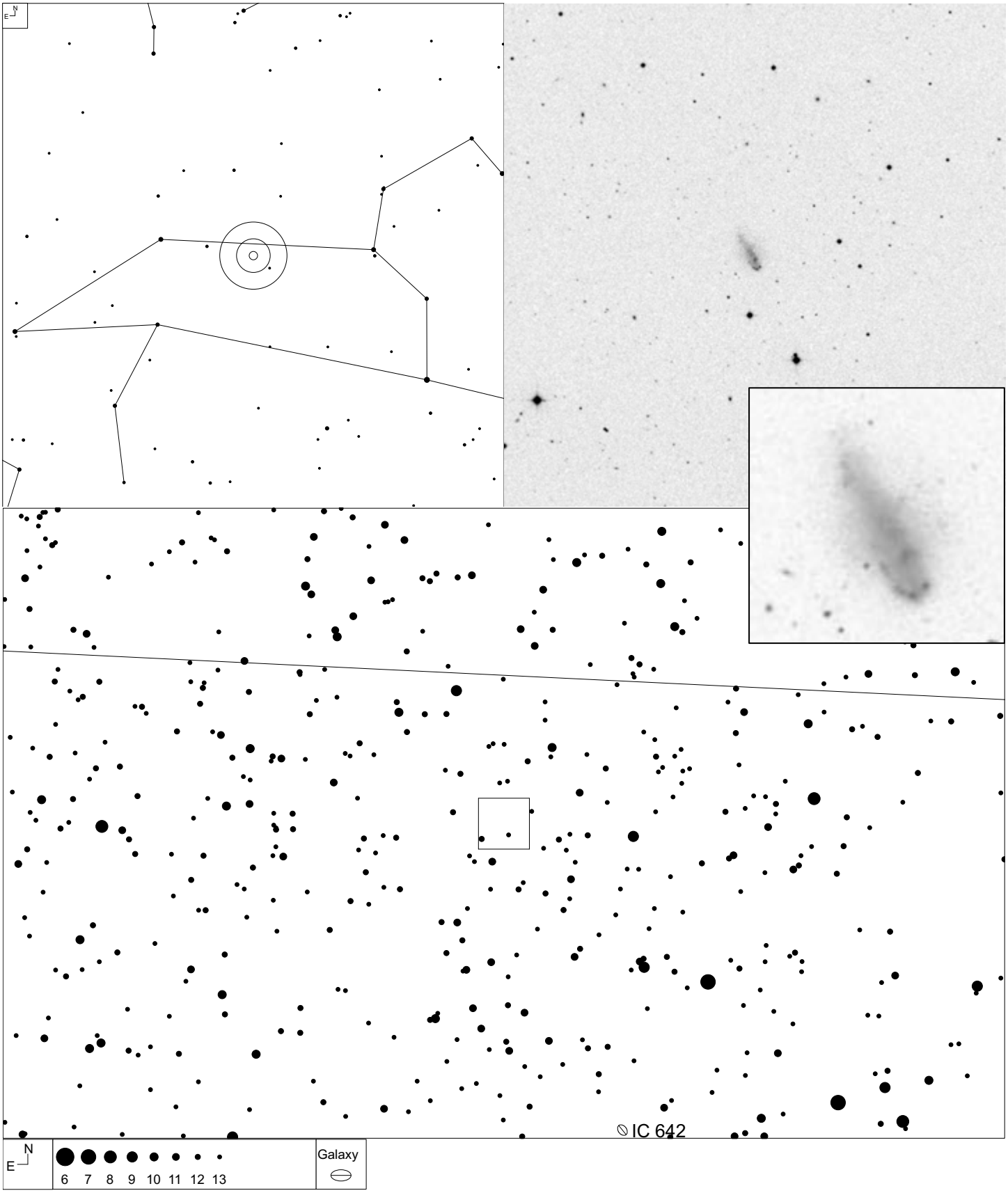
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
514	NGC 3349	10 43 51.7	+06 45 35	GTrpl	14.7g	0.7 x 0.6	Ch

VV 529 (Leo)



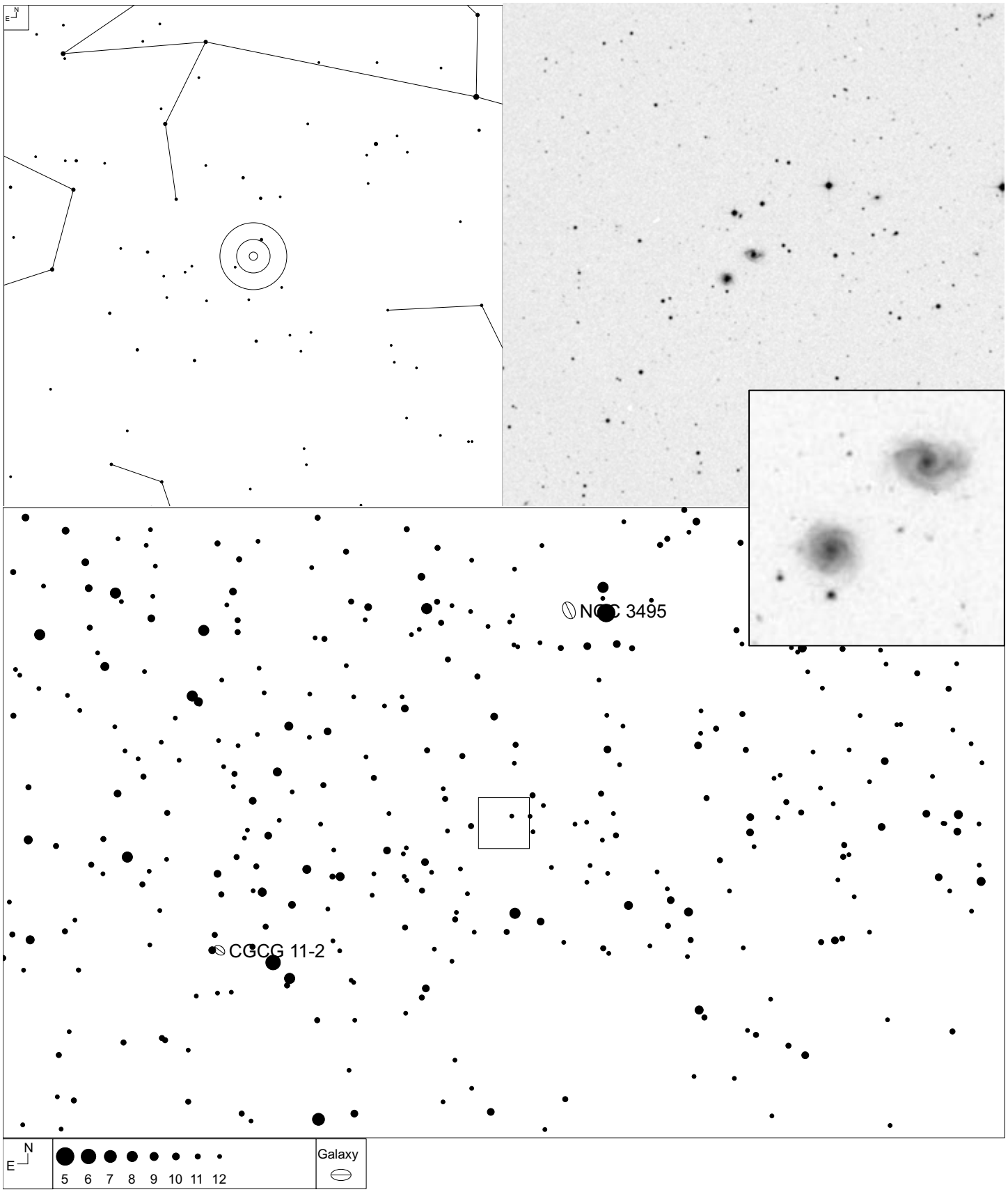
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
529	NGC 3356	10 44 12.2	+06 45 32	G	13.6g	1.7 x 0.8	N

VV 801 (Leo)



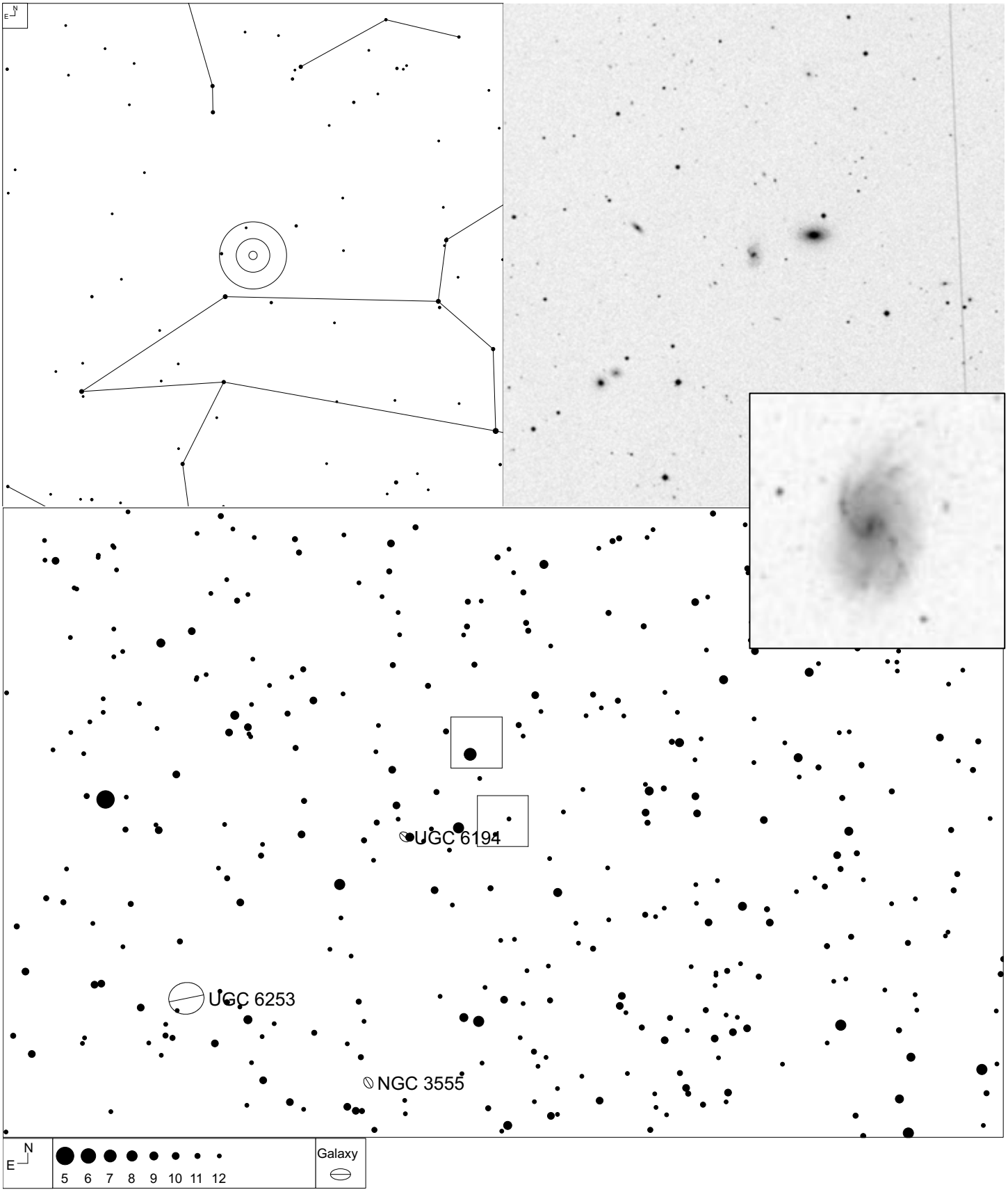
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
801	UGC 5947	10 50 30.0	+19 38 42	G	15.5g	1.3 x 0.5	K

VV 463 (Leo)



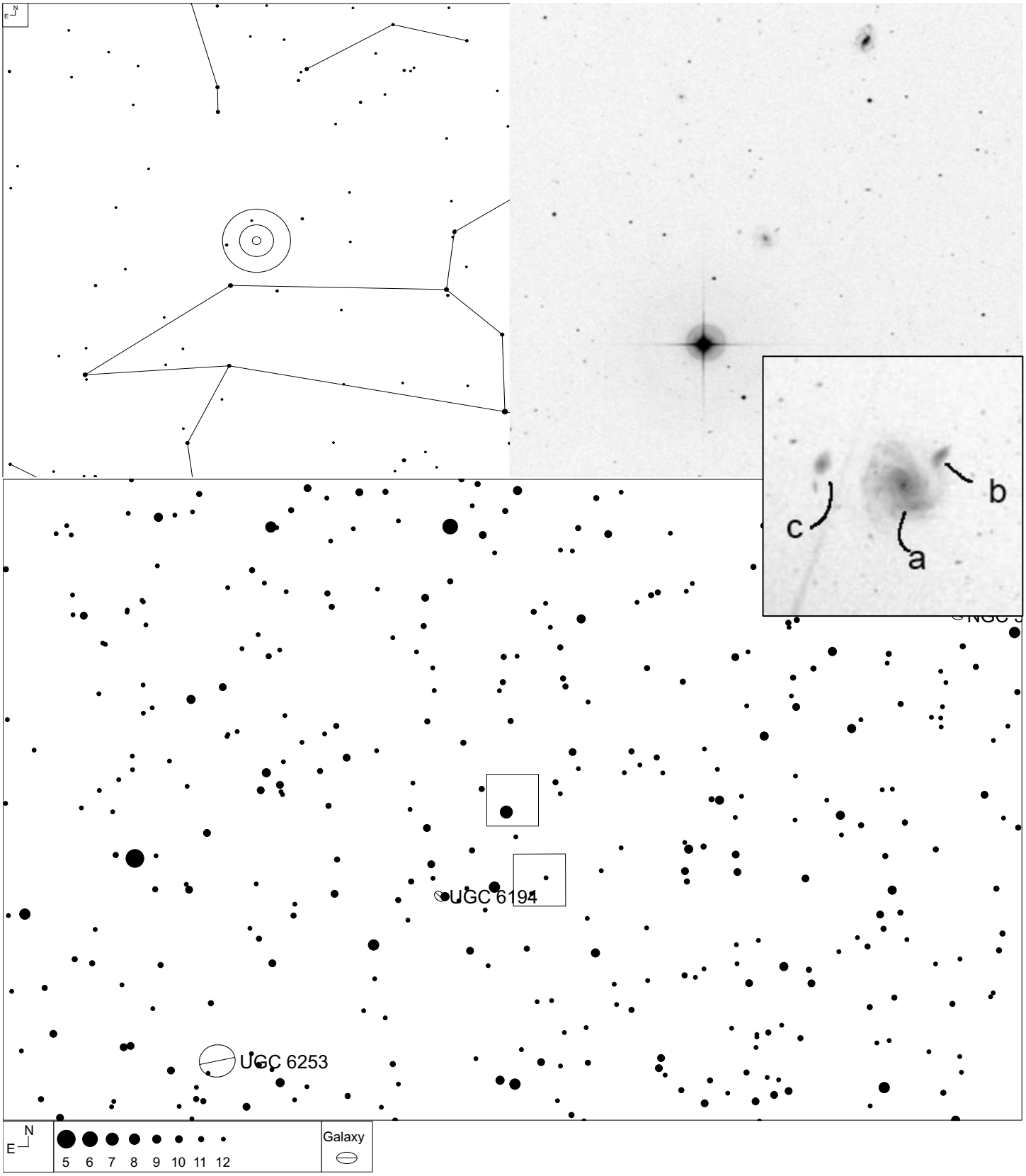
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
463	MCG +01-28-029	11 02 30.7	+02 37 06	G	15.3g	0.7 x 0.4	MM

VV 664 (Leo)



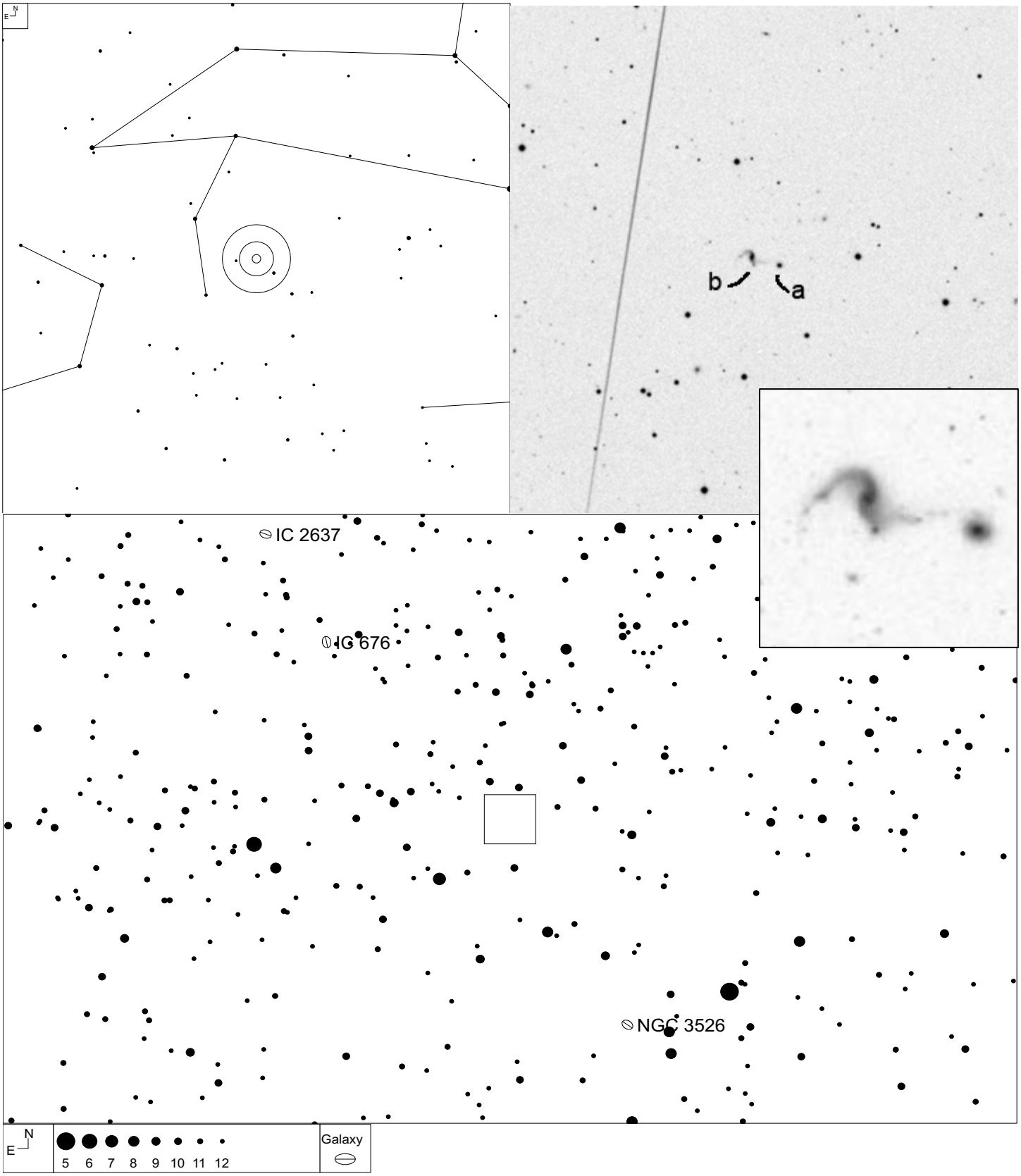
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
664	UGC 6164	11 06 59.0	+23 00 23	G	15.3g	0.9 x 0.5	N

VV 401 (Leo)



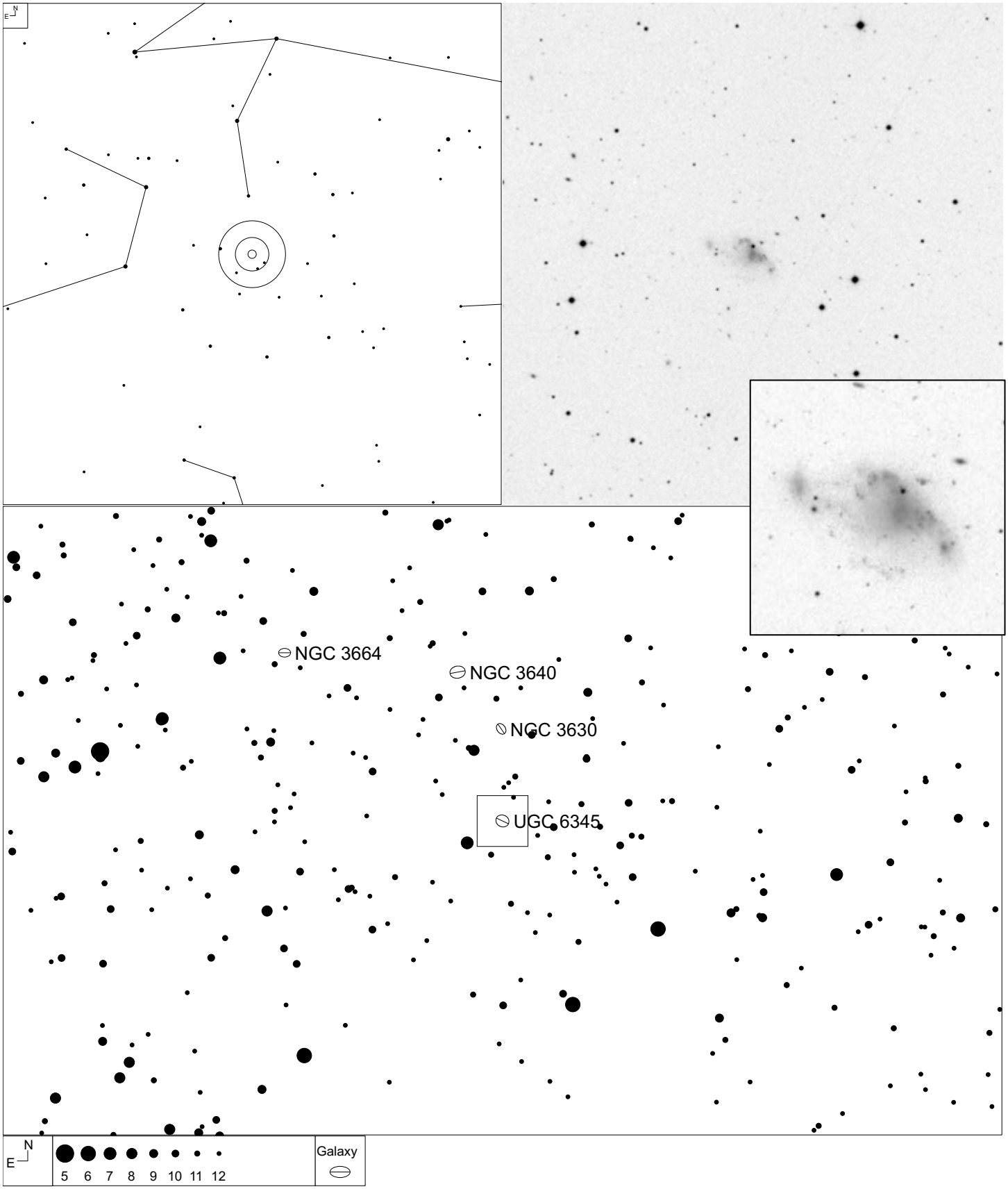
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
401	MCG +04-26-032	11 07 31.8	+23 22 42	GGroup	15.6g	0.6 x 0.6	N

VV 429 (Leo)



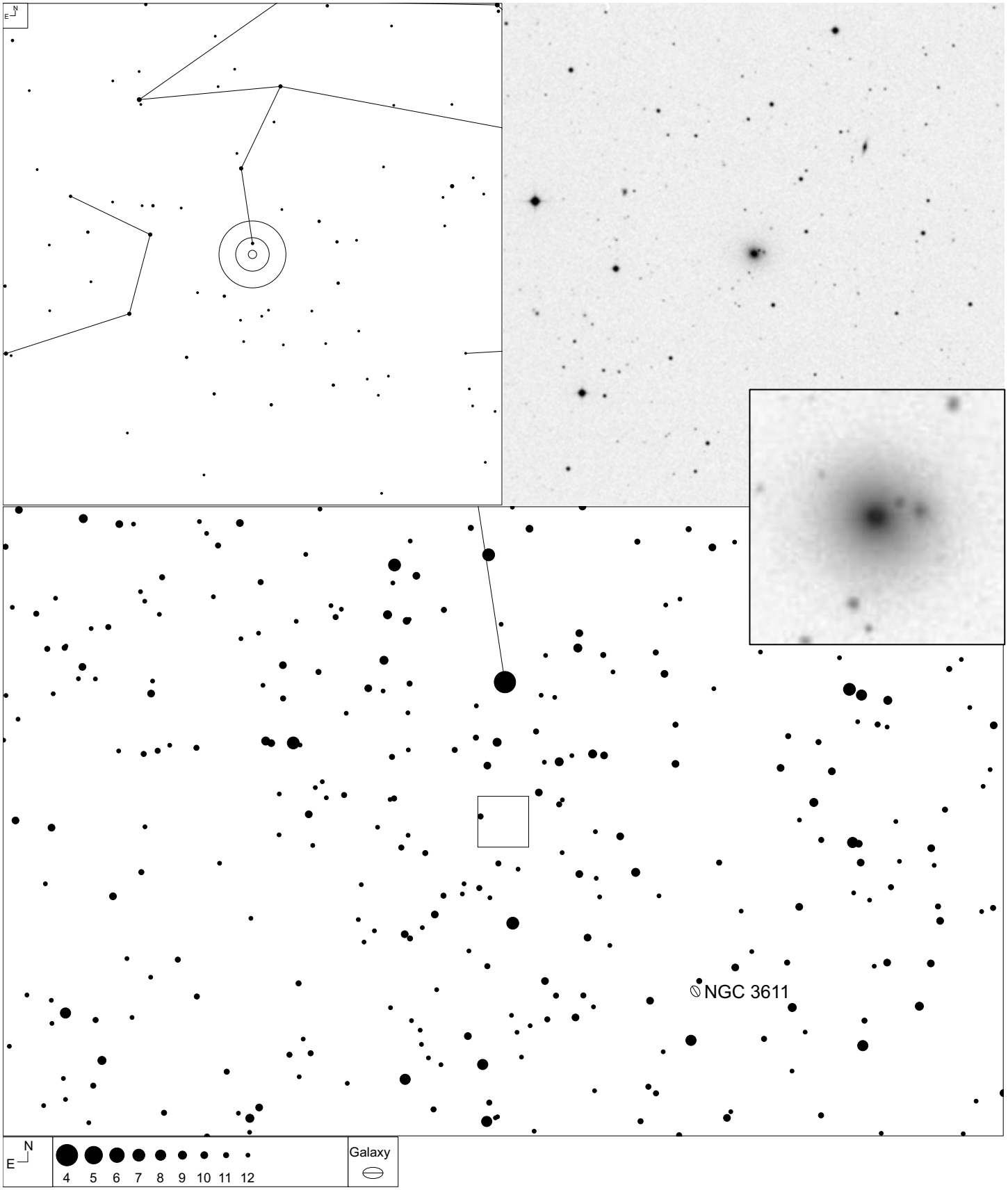
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
429	UGC 6197	11 09 10.4	+08 11 21	GPair	15.6g	1.4 x 0.5	M

VV 795 (Leo)



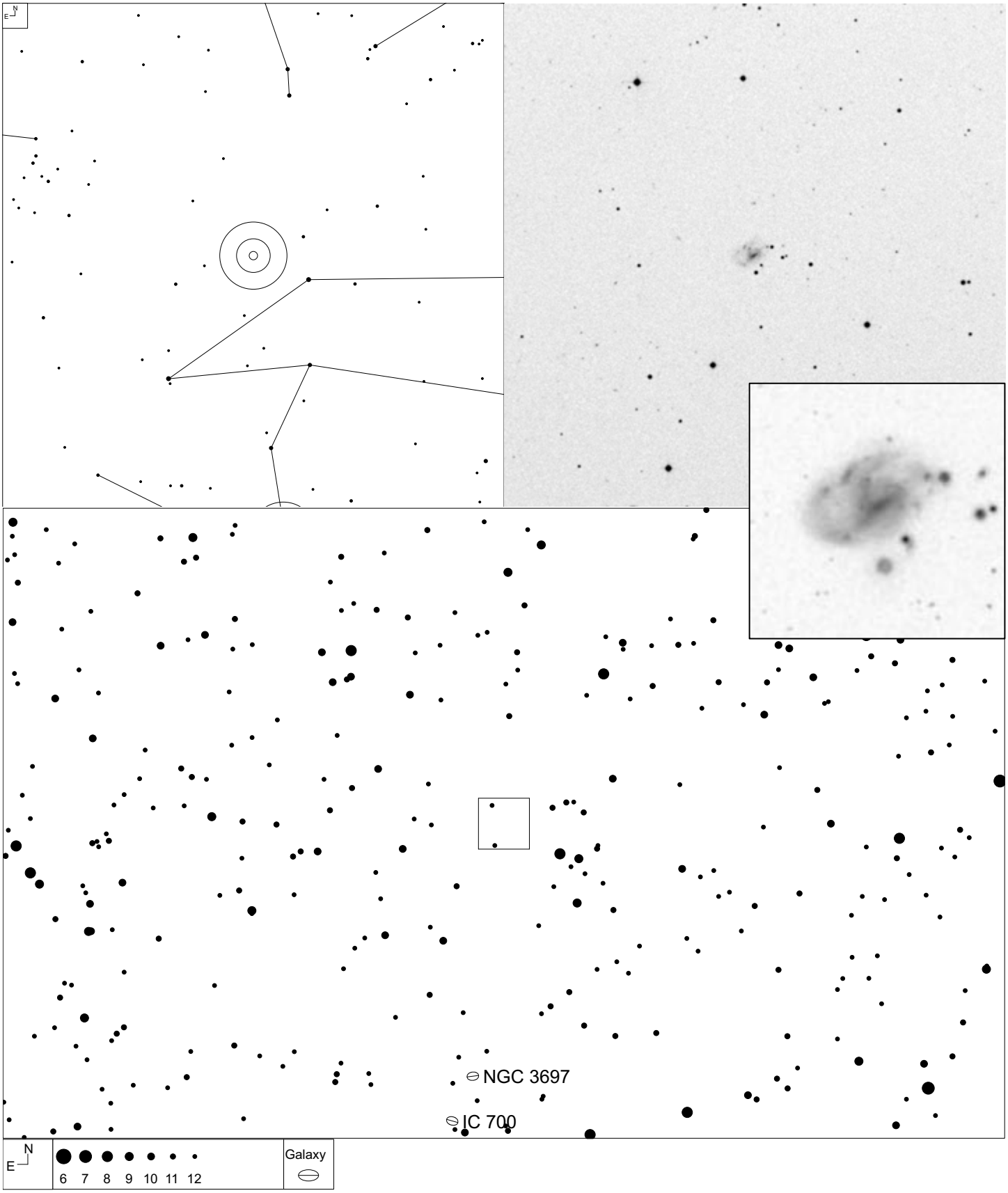
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
795	UGC 6345	11 20 15.6	+02 31 32	G	14.6g	2.3 x 1.3	Enf

VV 510 (Leo)



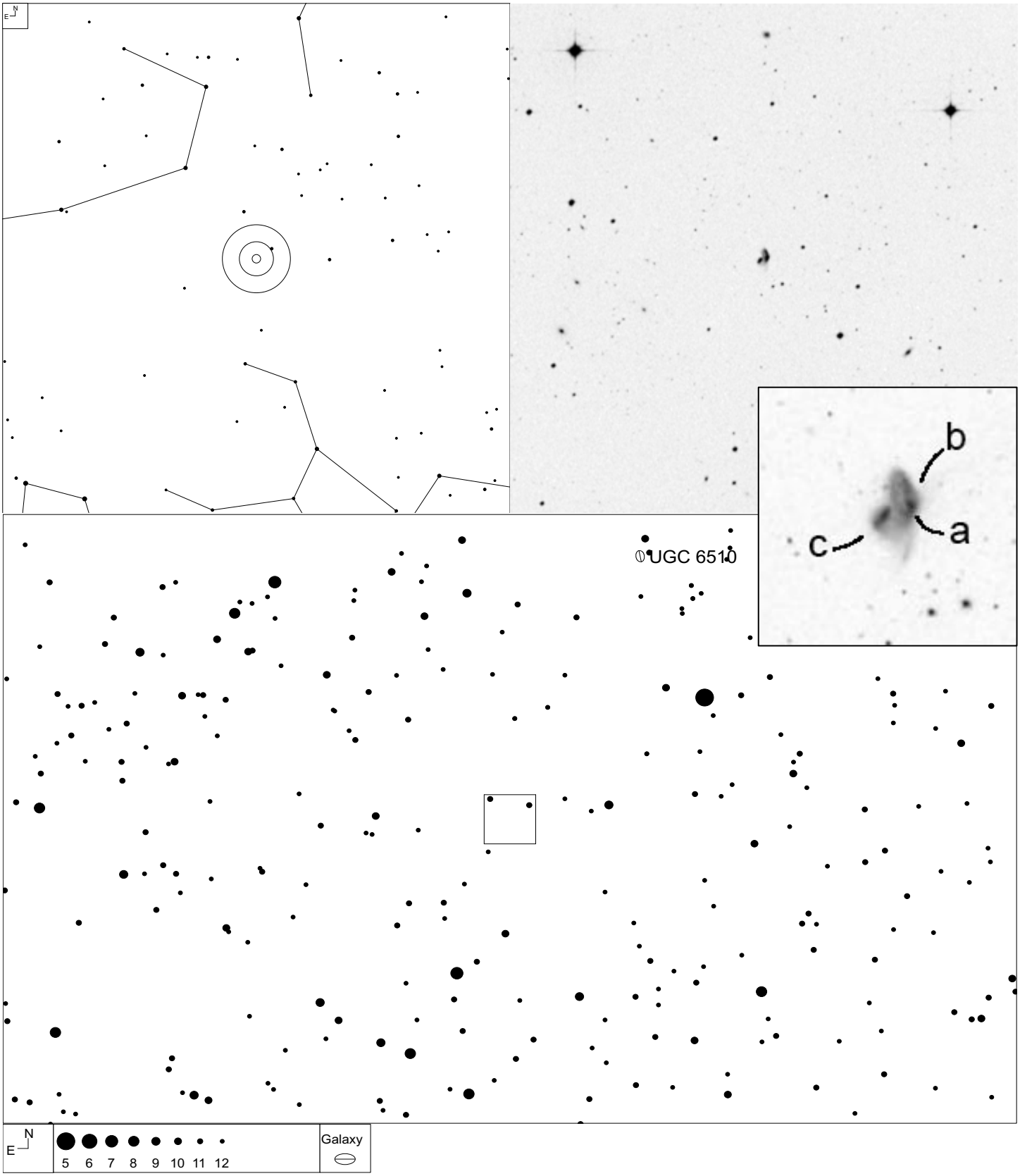
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
510	MCG +01-29-035	11 21 10.2	+05 21 48	G	14.4g	0.8 x 0.8	Ch

VV 594 (Leo)



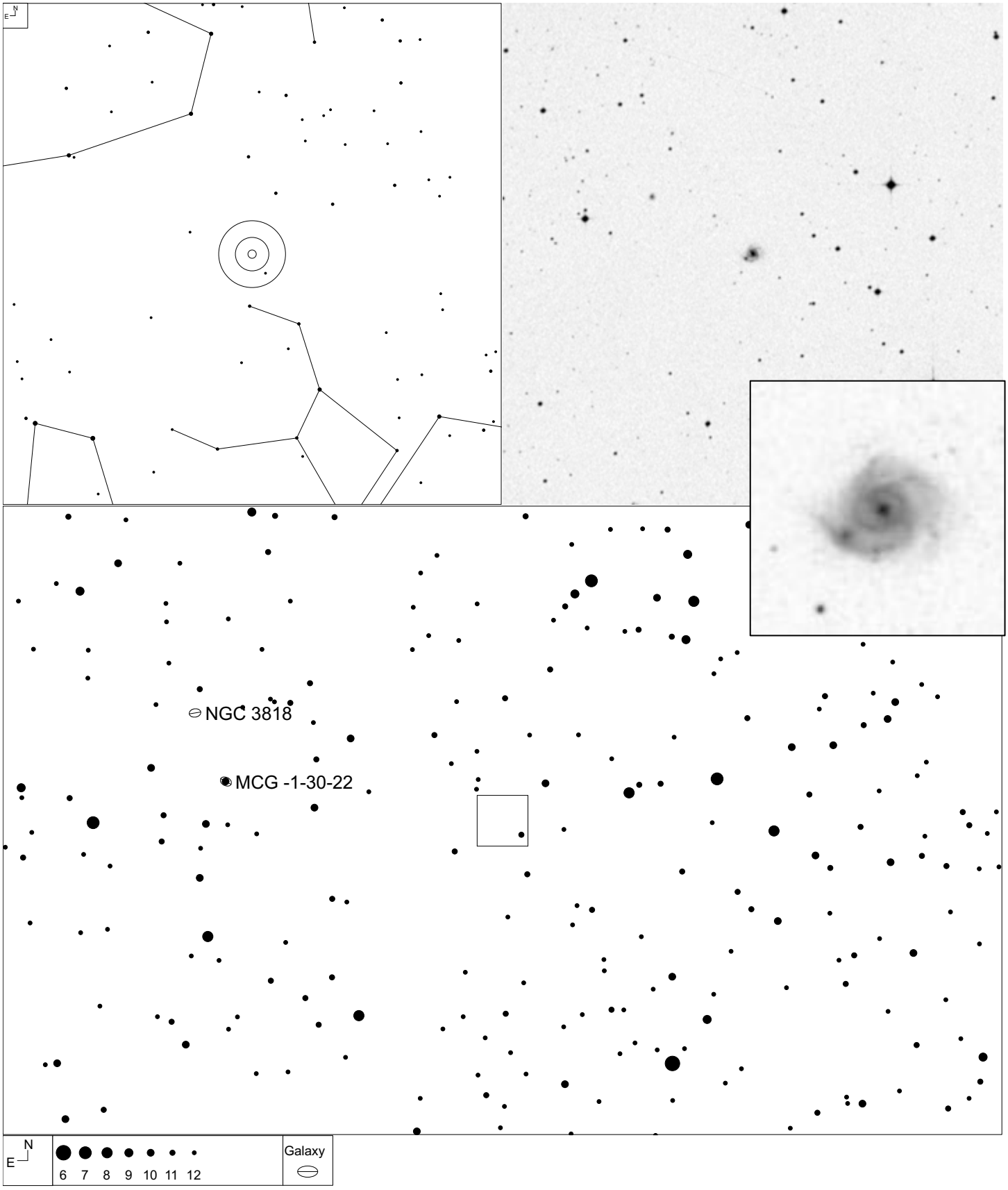
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
594	UGC 6465	11 28 12.2	+21 59 49	G	14.9g	1.0 x 0.9	N

VV 638 (Leo)



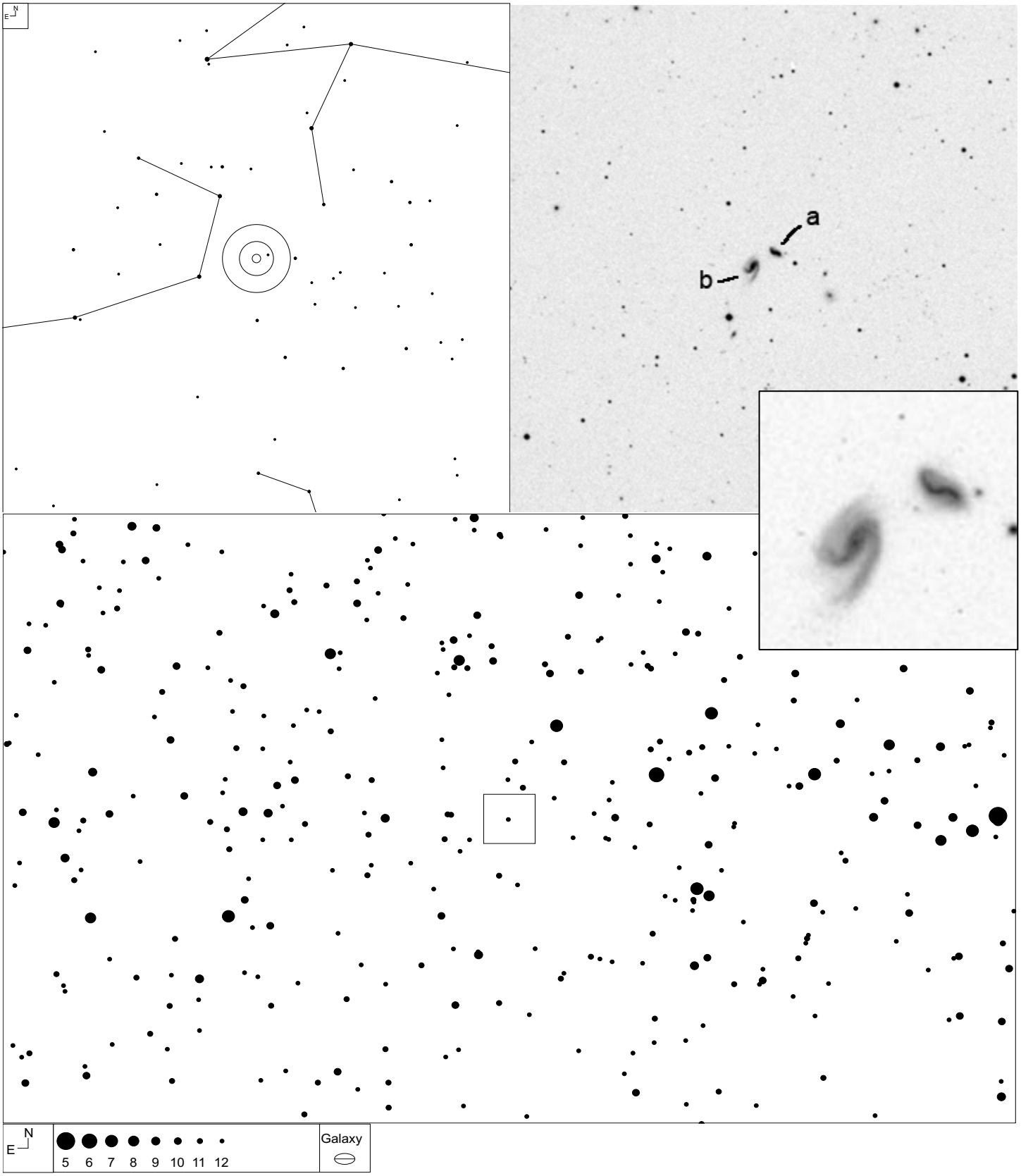
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
638	MCG 00-30-012	11 33 59.0	-03 36 20	GTrpl	15.9g	0.6 x 0.4	NNN

VV 381 (Leo)



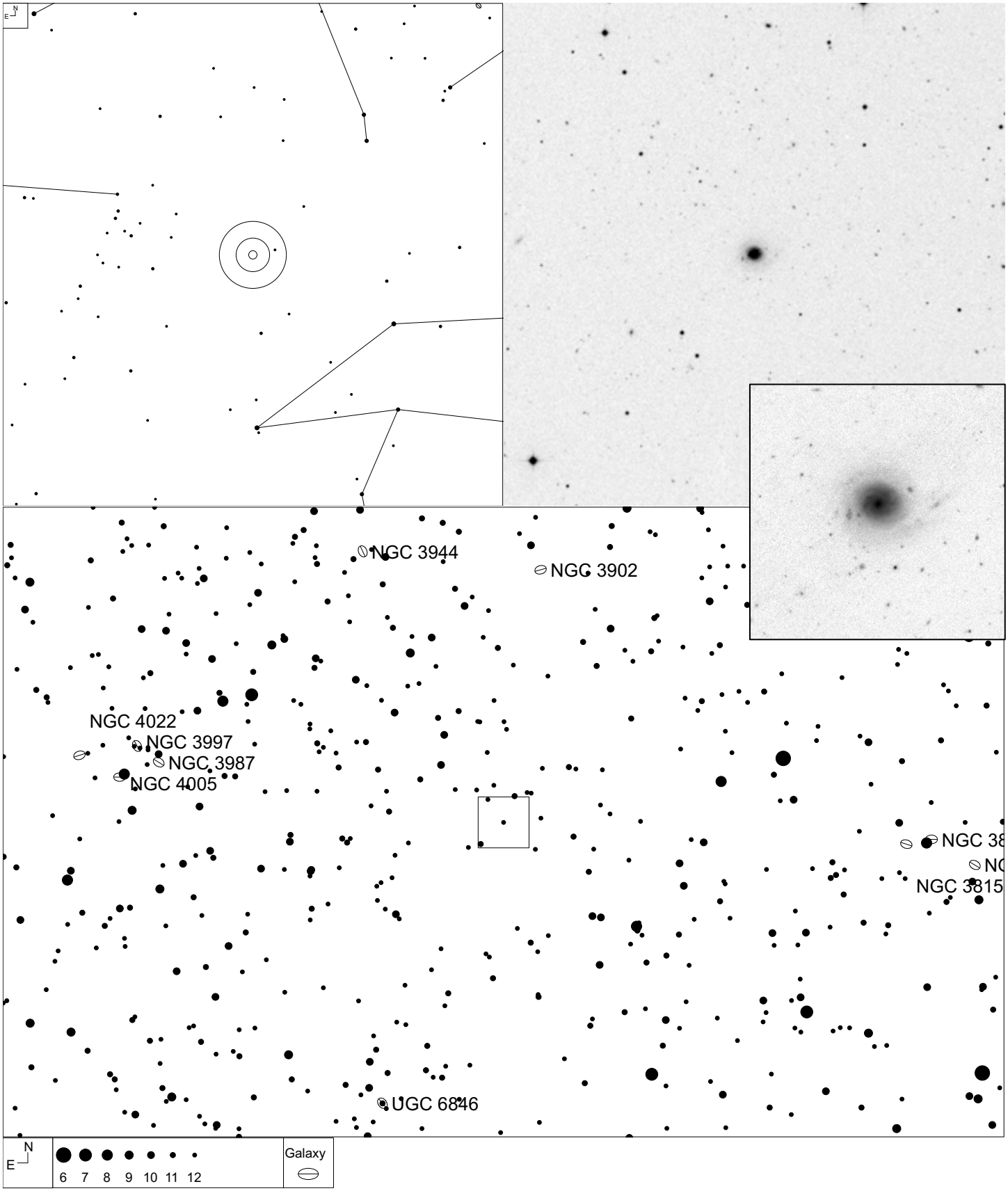
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
381	MCG -01-30-010	11 36 03.6	-06 40 16	G	15.4g	0.6 x 0.5	MMM

VV 754 (Leo)



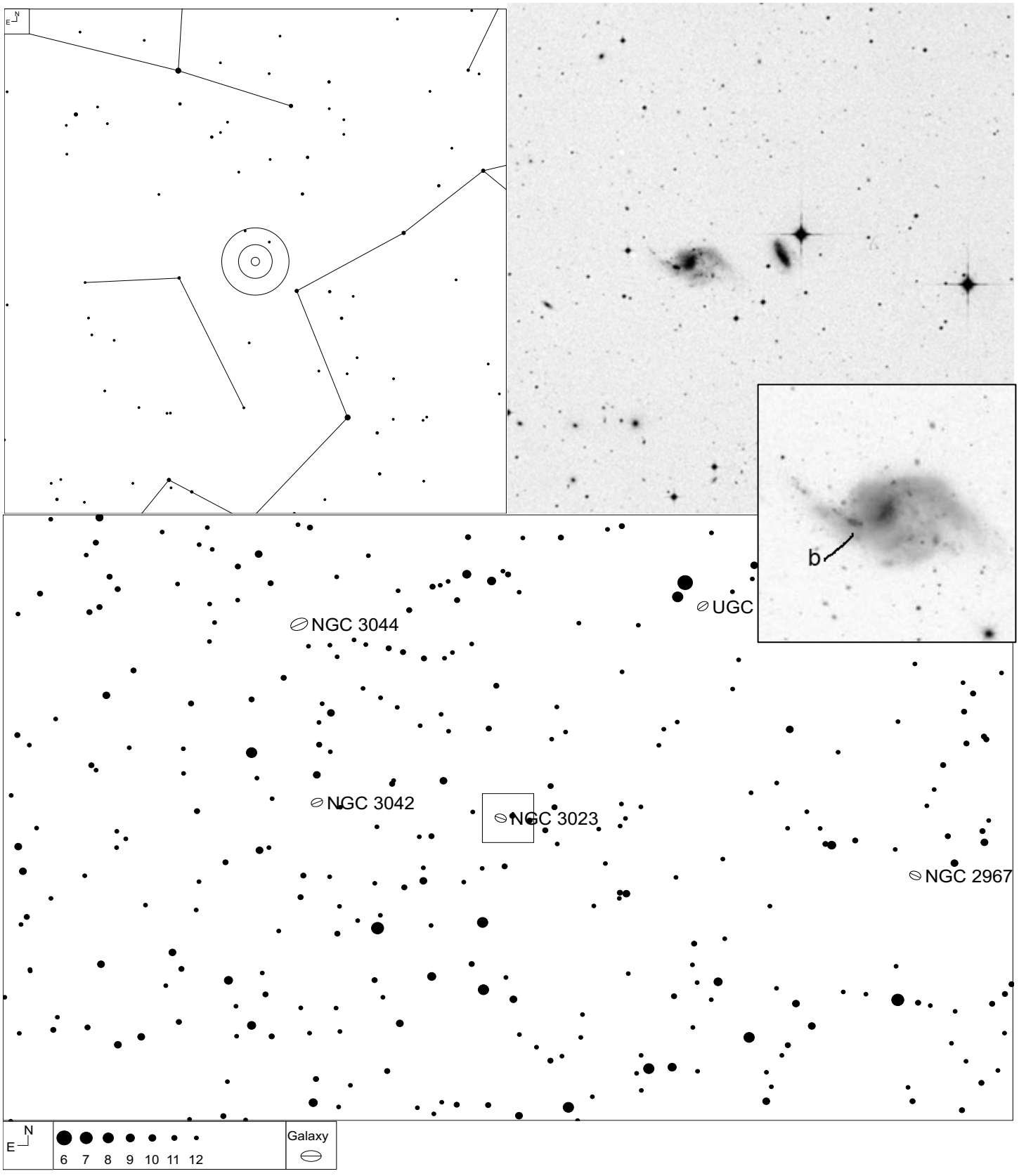
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
754		11 37 08.2	+02 50 33	GGroup			NPNP
754a	MCG +01-30-003	11 37 06.8	+02 50 45	G	16.1g	0.1 x 0.1	
754b	UGC 6587	11 37 09.5	+02 50 20	G	15.1g	0.9 x 0.5	

VV 367 (Leo)



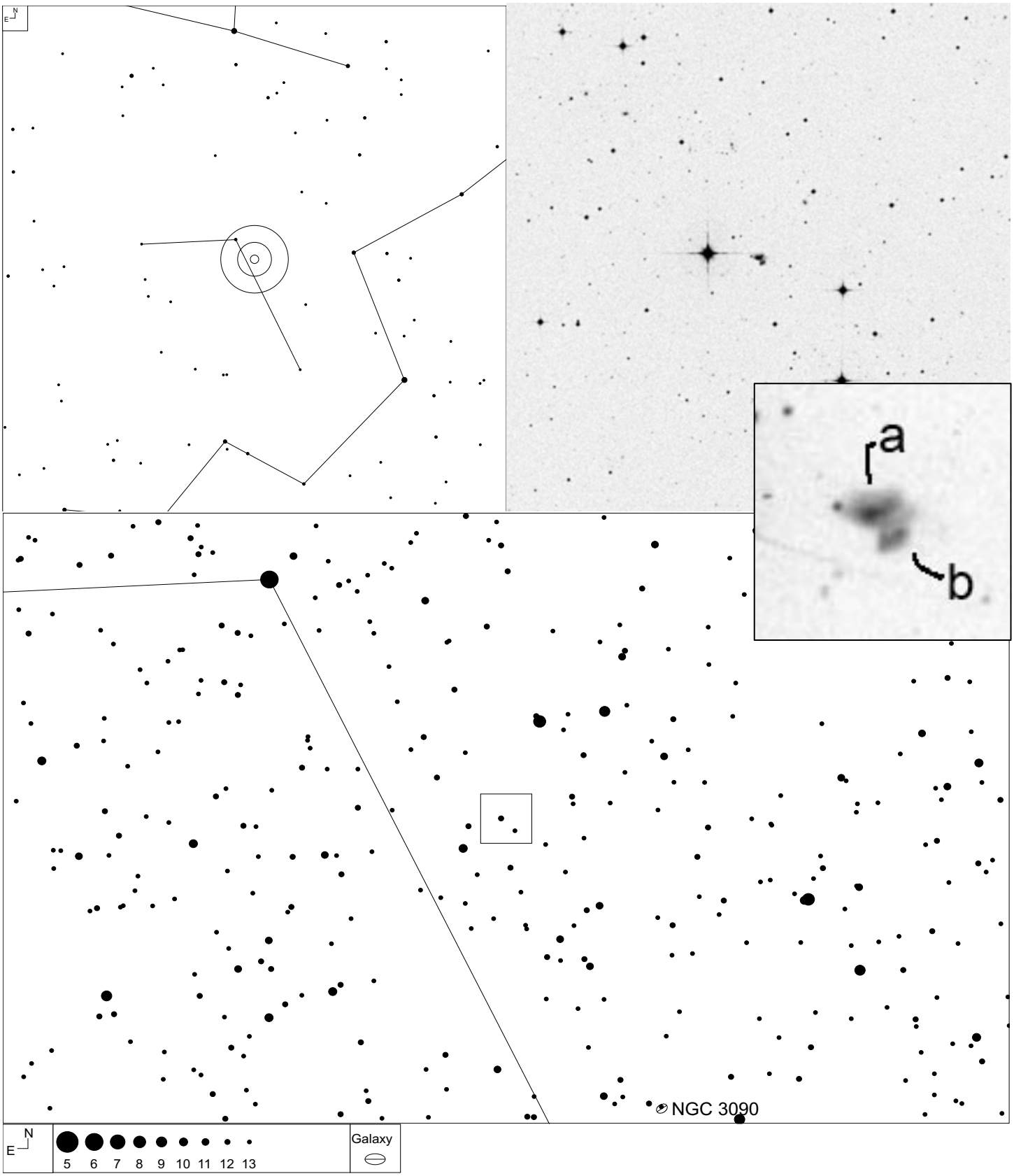
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
367	NGC 3920	11 50 05.9	+24 55 12	G	13.8g	1.0 x 1.0	MMM

VV 620 (Sextans)



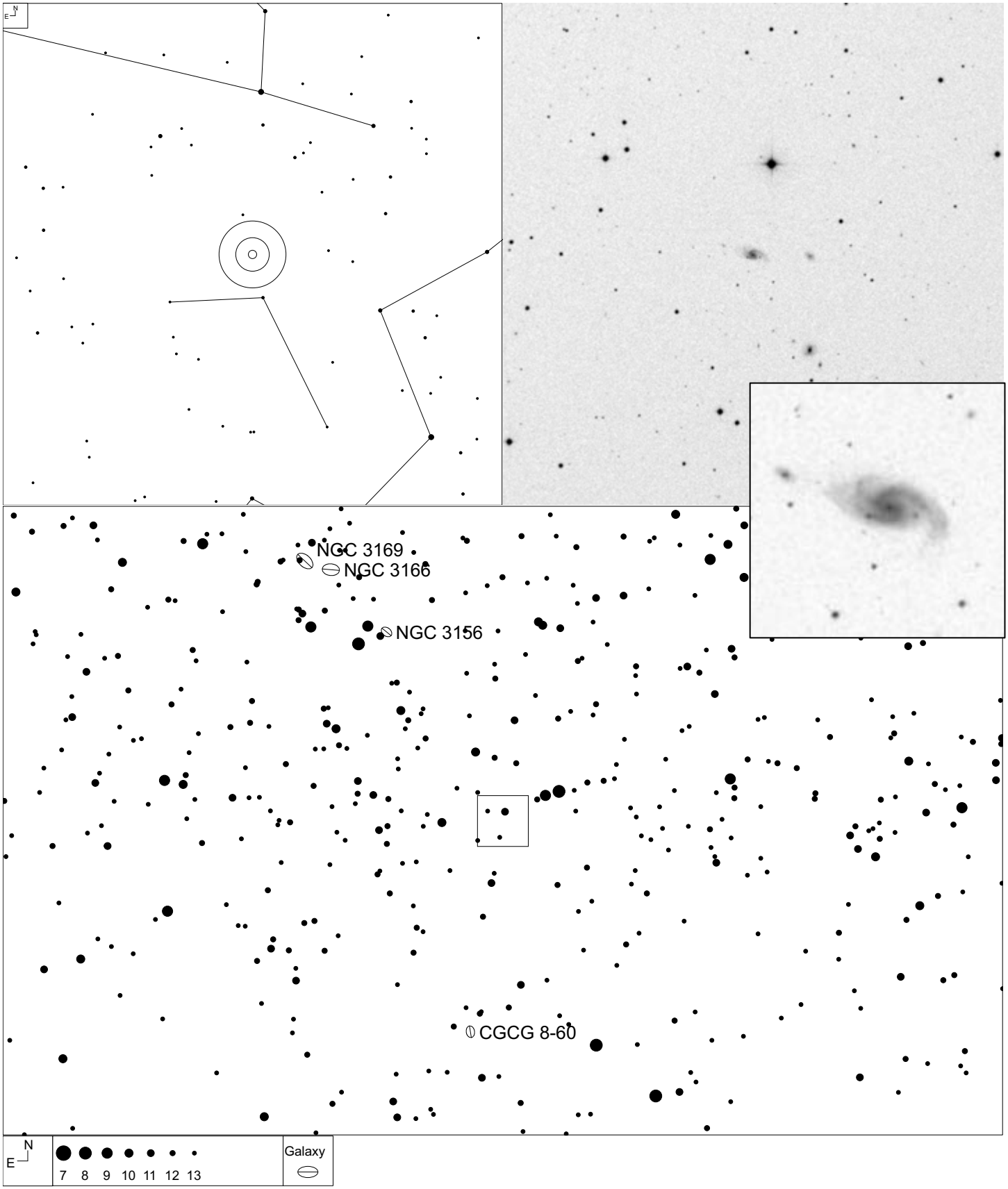
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
620	NGC 3023	09 49 53.3	+00 37 02	GGroup	12.7v	1.6 x 0.9	N

VV 637 (Sextans)



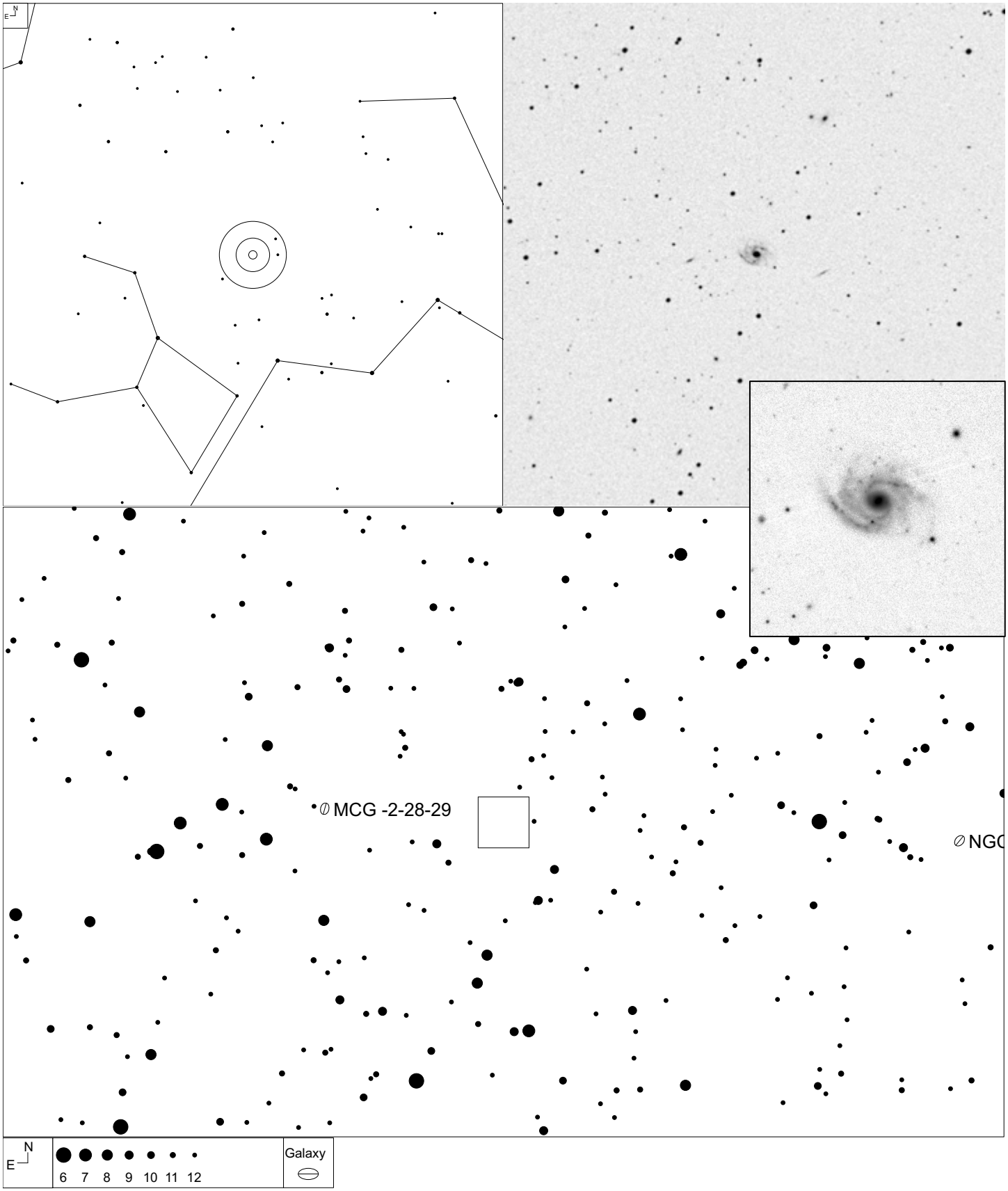
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
637	MCG 00-26-013	10 03 26.9	-01 32 48	GPair	16.0g	0.5 x 0.4	N

VV 722 (Sextans)



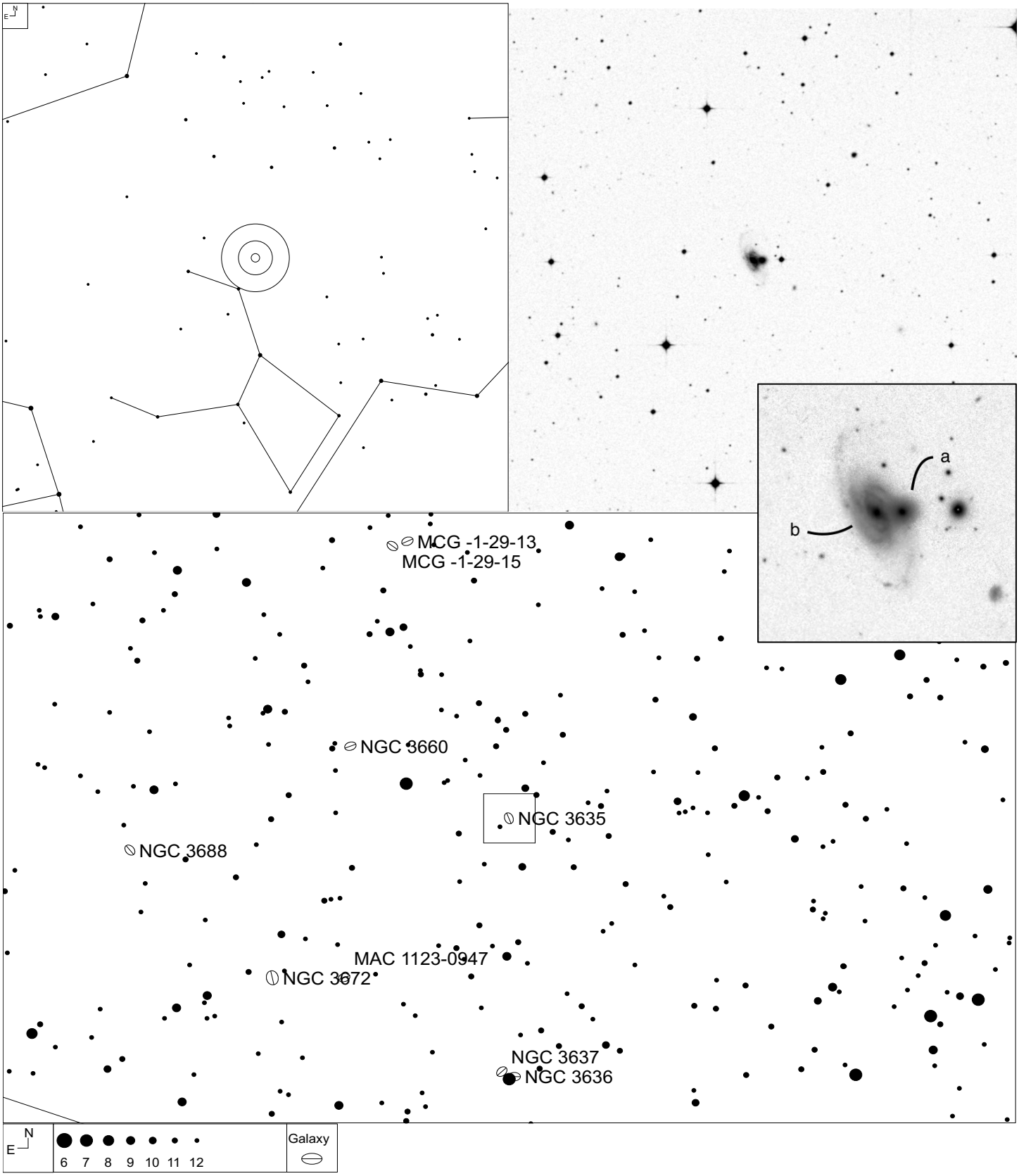
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
722	UGC 5487	10 10 27.8	+02 13 43	G	15.2g	1.2 x 0.4	PC

VV 466 (Crater)



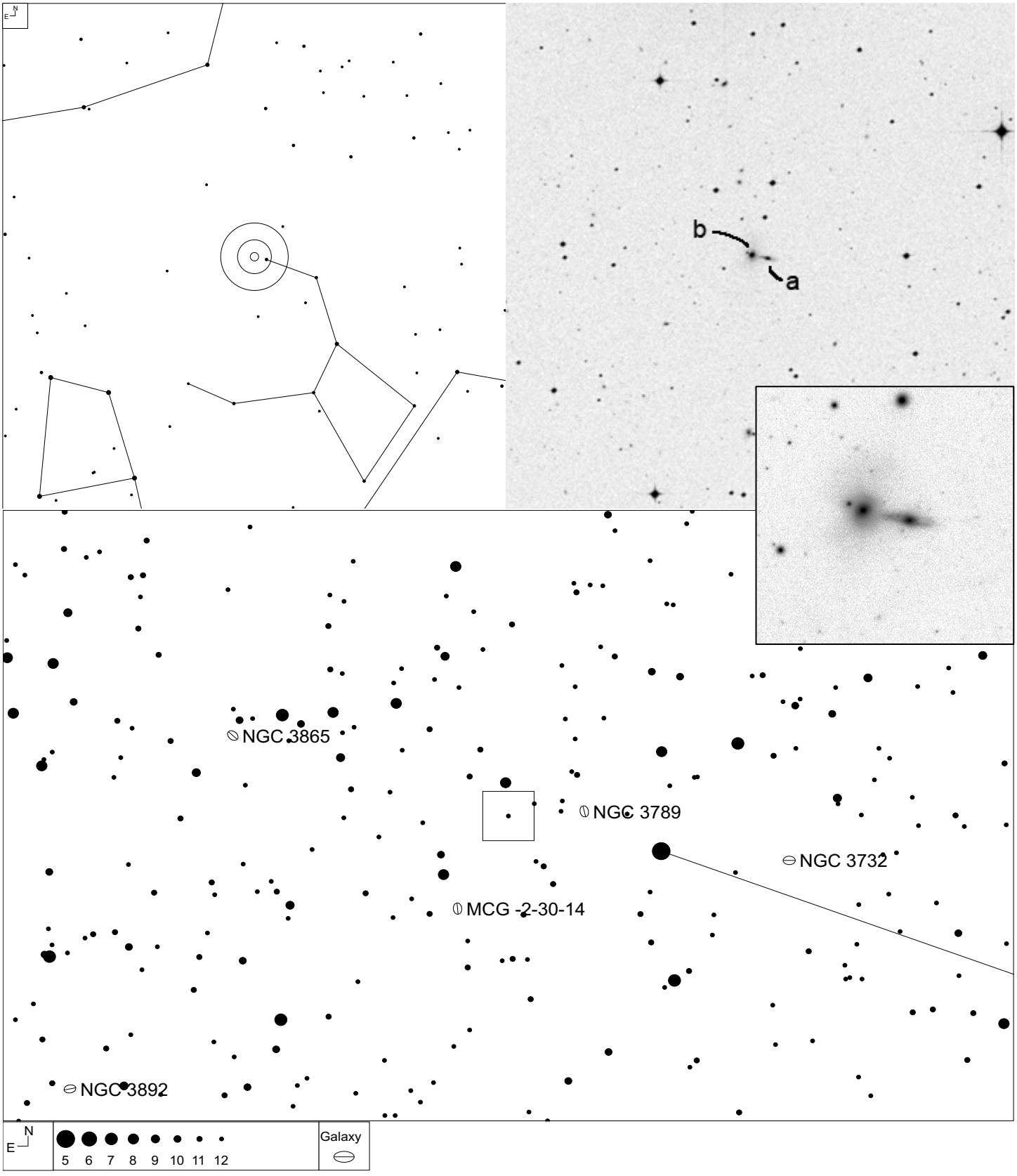
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
466	MCG-01-28-007	10 55 49.4	-09 51 36	G	14.7b	1.3 x 0.9	MM

VV 724 (Crater)



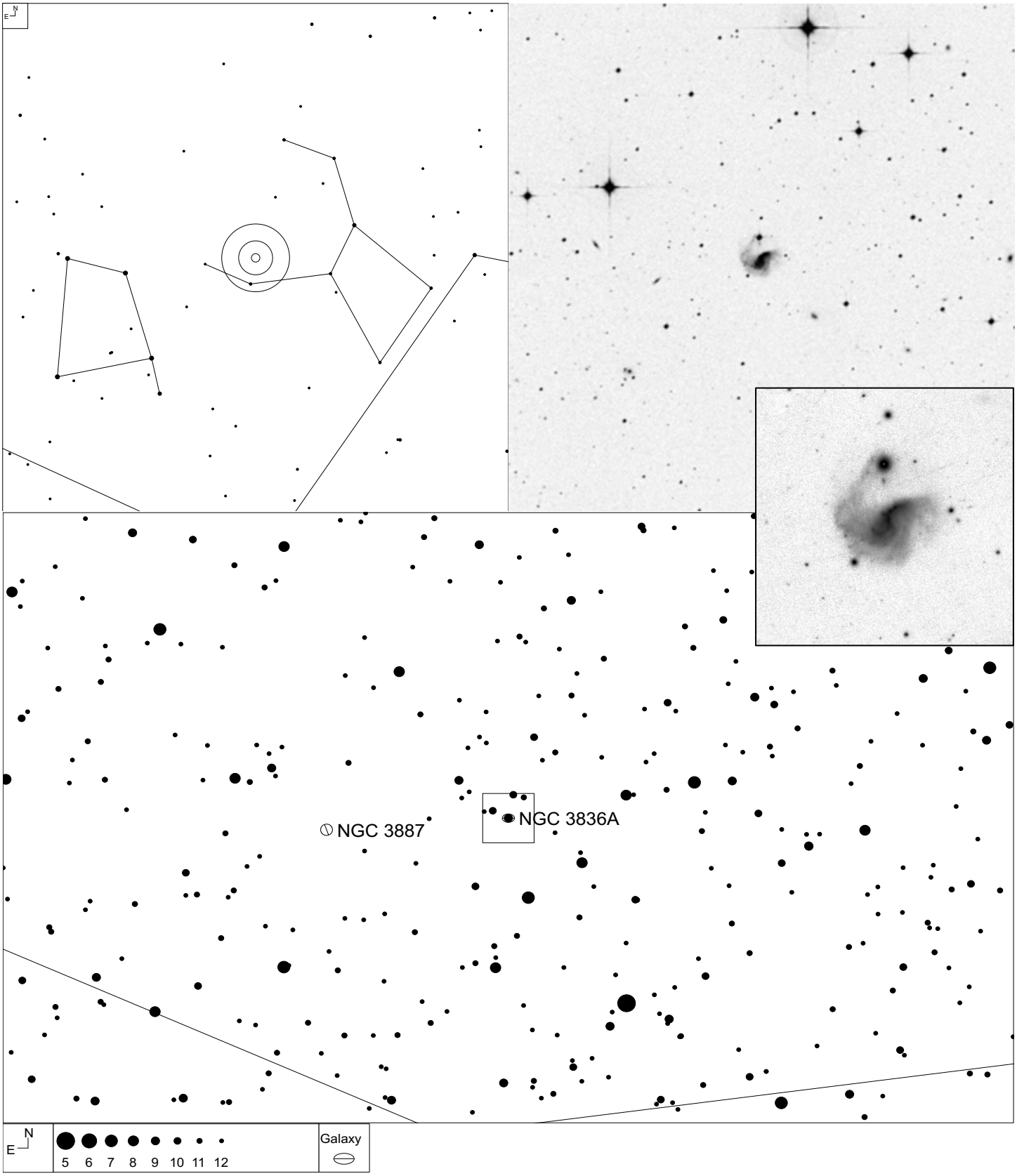
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
724		11 20 30.8	-09 00 48	GPair			PC
724a	NGC 3634	11 20 30.3	-09 00 49	G	15.5b	0.8 x 0.5	
724b	NGC 3635	11 20 31.4	-09 00 49	G	14.3g	1.3 x 0.9	

VV 758 (Crater)



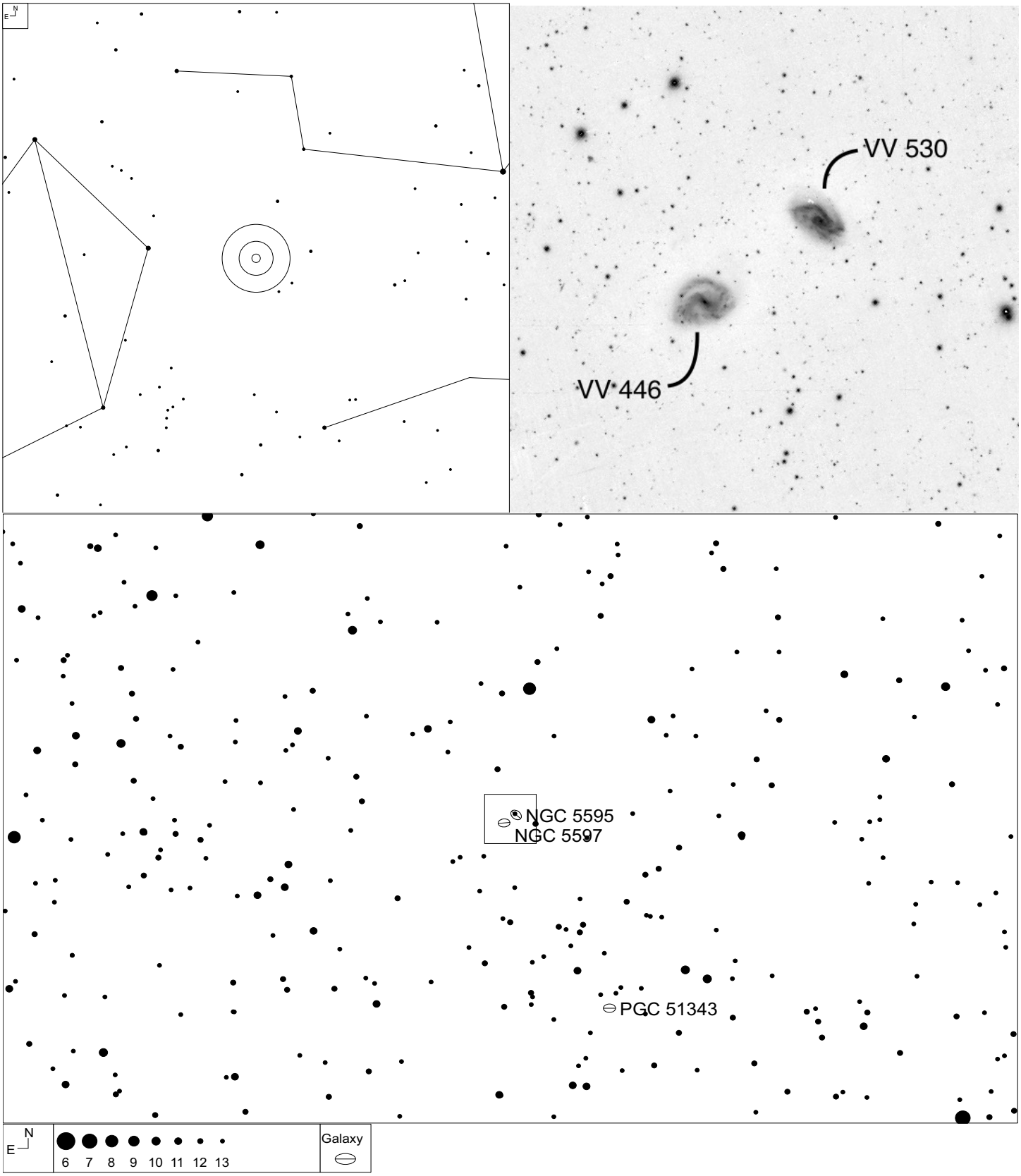
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
758		11 39 35.3	-09 37 51	GPair	16		NPNP
758a	PGC 36152	11 39 34.4	-09 37 54	G	16.6g		
758b	NGC 3789	11 39 36.2	-09 37 48	G	16.0b	0.3 x 0.3	

VV 477 (Crater)



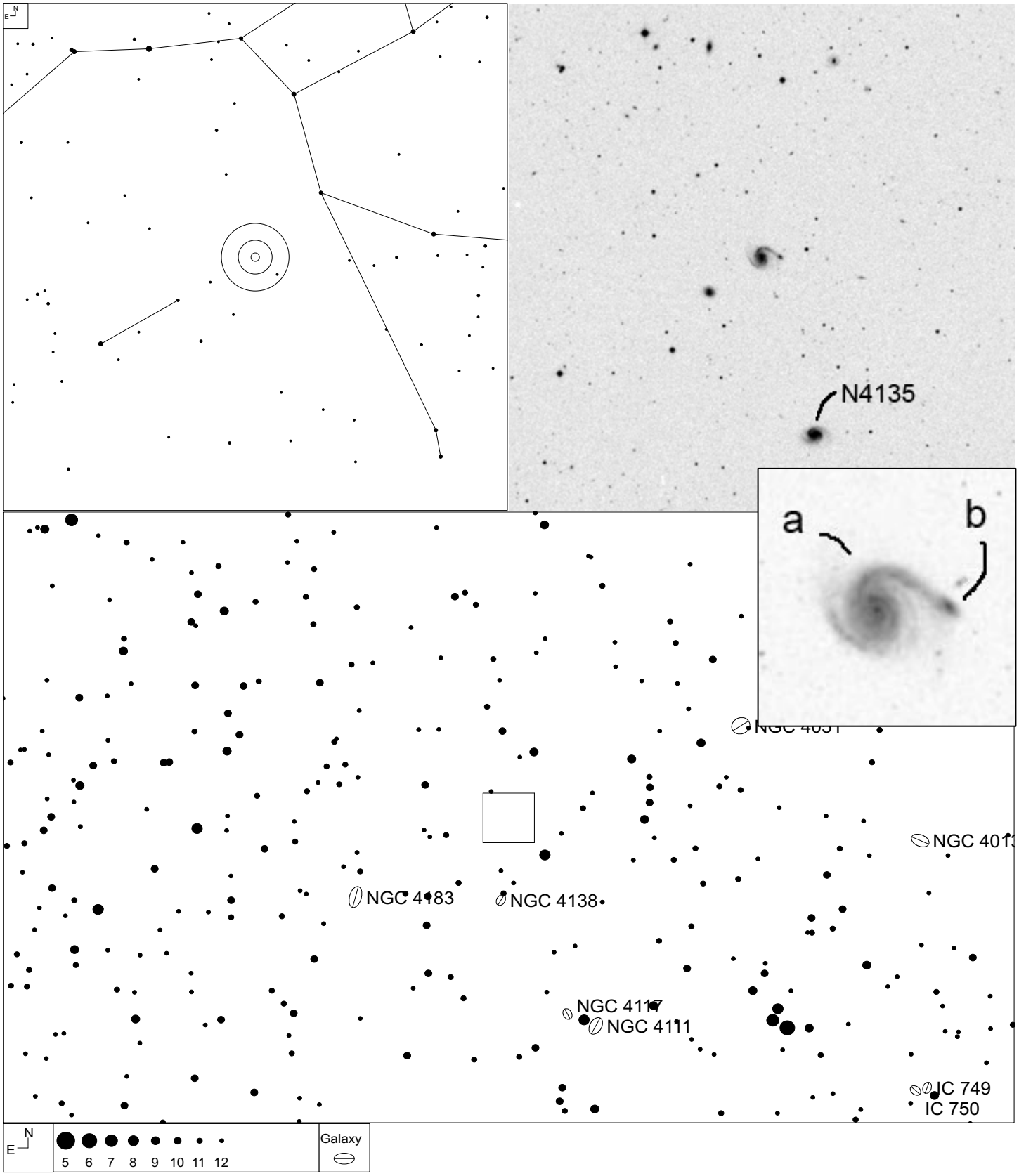
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
477	NGC 3836	11 43 29.8	-16 47 44	GPair	13.0b	1.4 x 1.3	M

VV 446 and VV 530 (Crater)



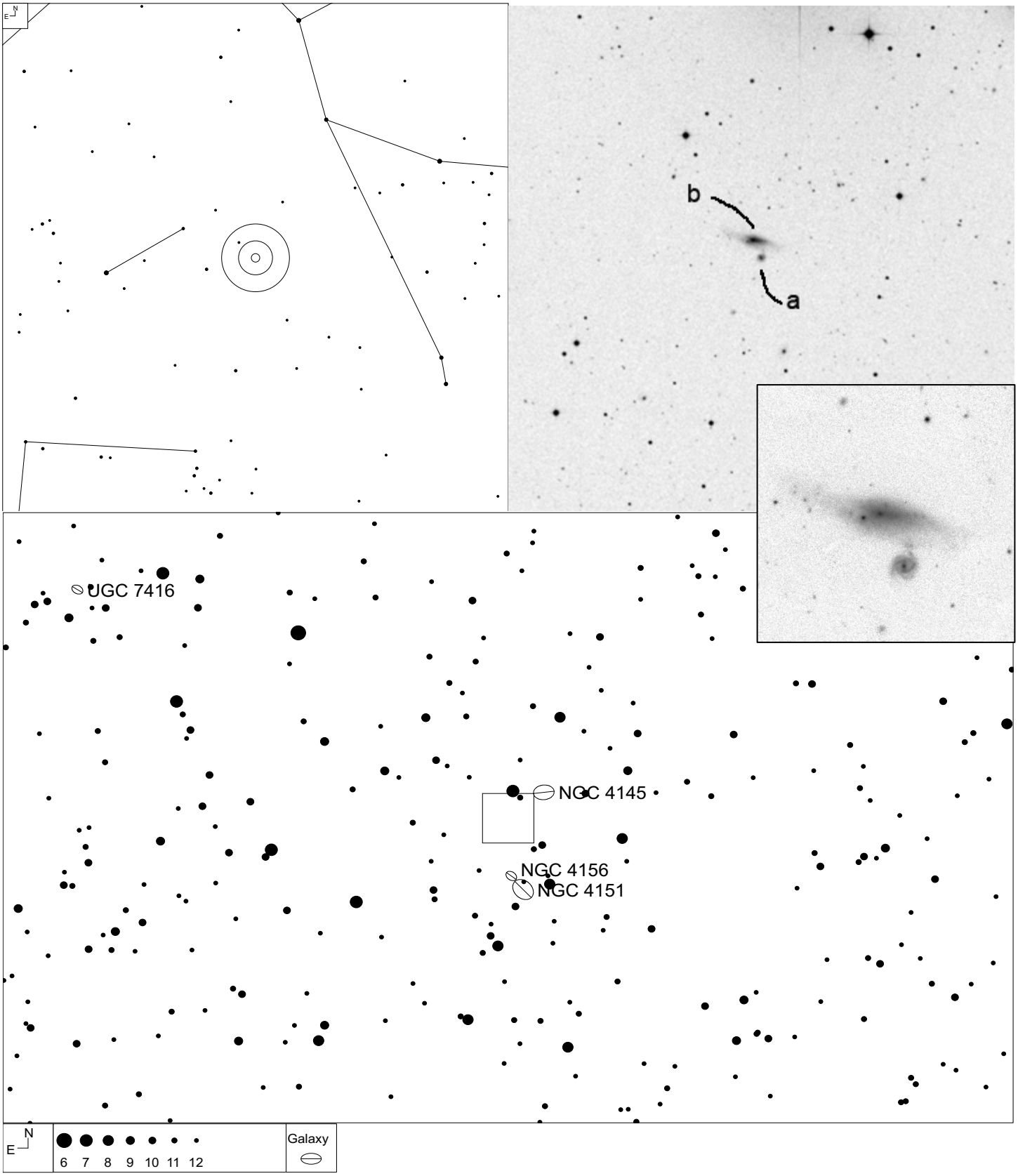
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
530	NGC 5595	14 24 13.2	-16 43 23	G	12.0b	2.2 x 1.2	N
446	NGC 5597	14 24 27.5	-16 45 47	G	14.1v	2.1 x 1.7	M

VV 454 (Canes Venatici)



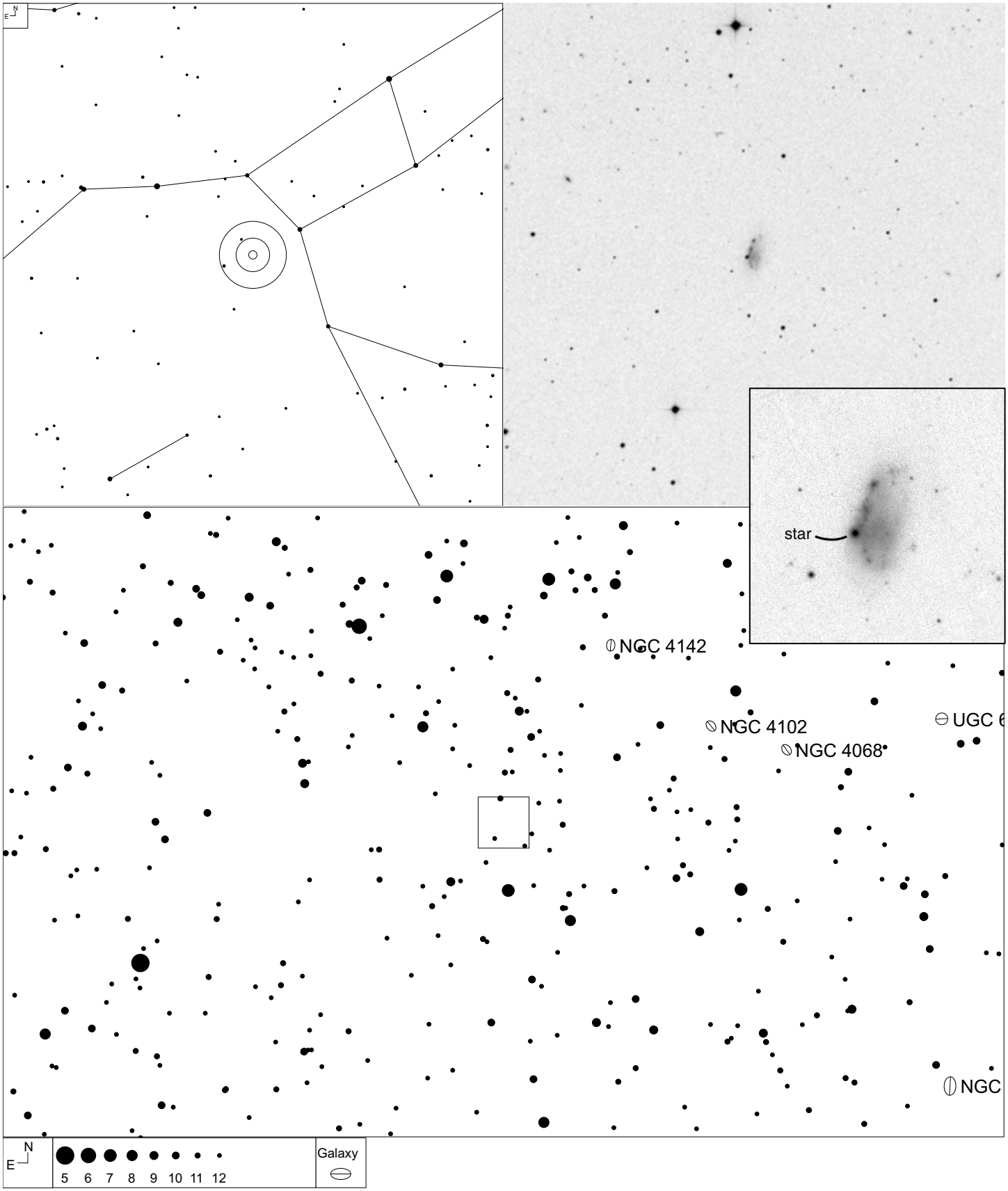
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
454	NGC 4137	12 09 15.8*	+44 05 22*	GPair	13.8b	1.0 x 0.7	MM

VV 814 (Canes Venatici)



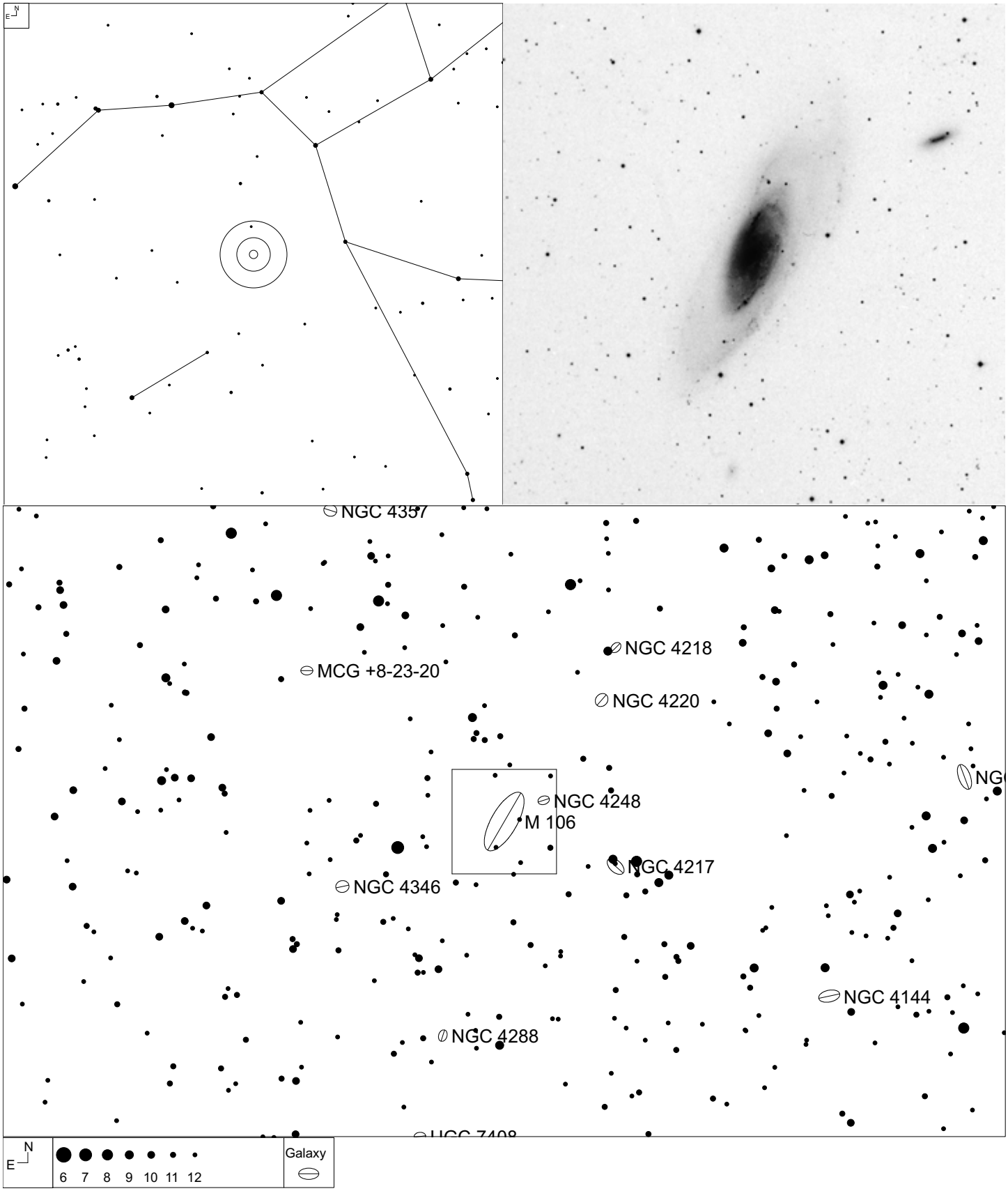
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
814		12 10 54.1	+39 45 14	GPair*			M
814a	NGC 4145A	12 10 53.3	+39 44 53	G	15.2g	1.3 x 0.5	
814b	PGC 213942	12 10 54.5	+39 45 26	G	14.7g		

VV 497 (Canes Venatici)



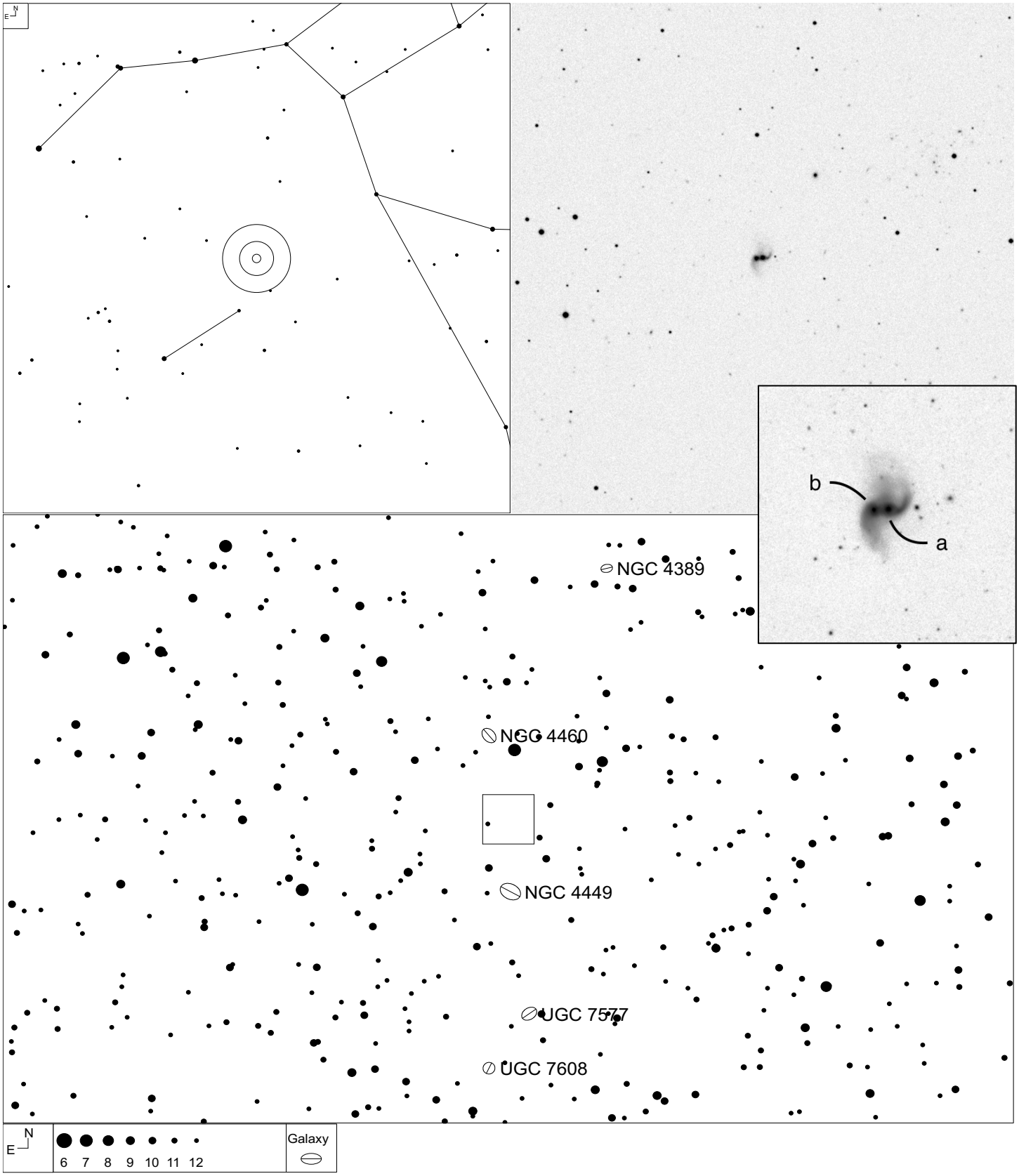
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
497	UGC 7218	12 12 56.5	+52 15 55	G	15.1g	1.2 x 0.6	Ch

VV 448 (Canes Venatici)



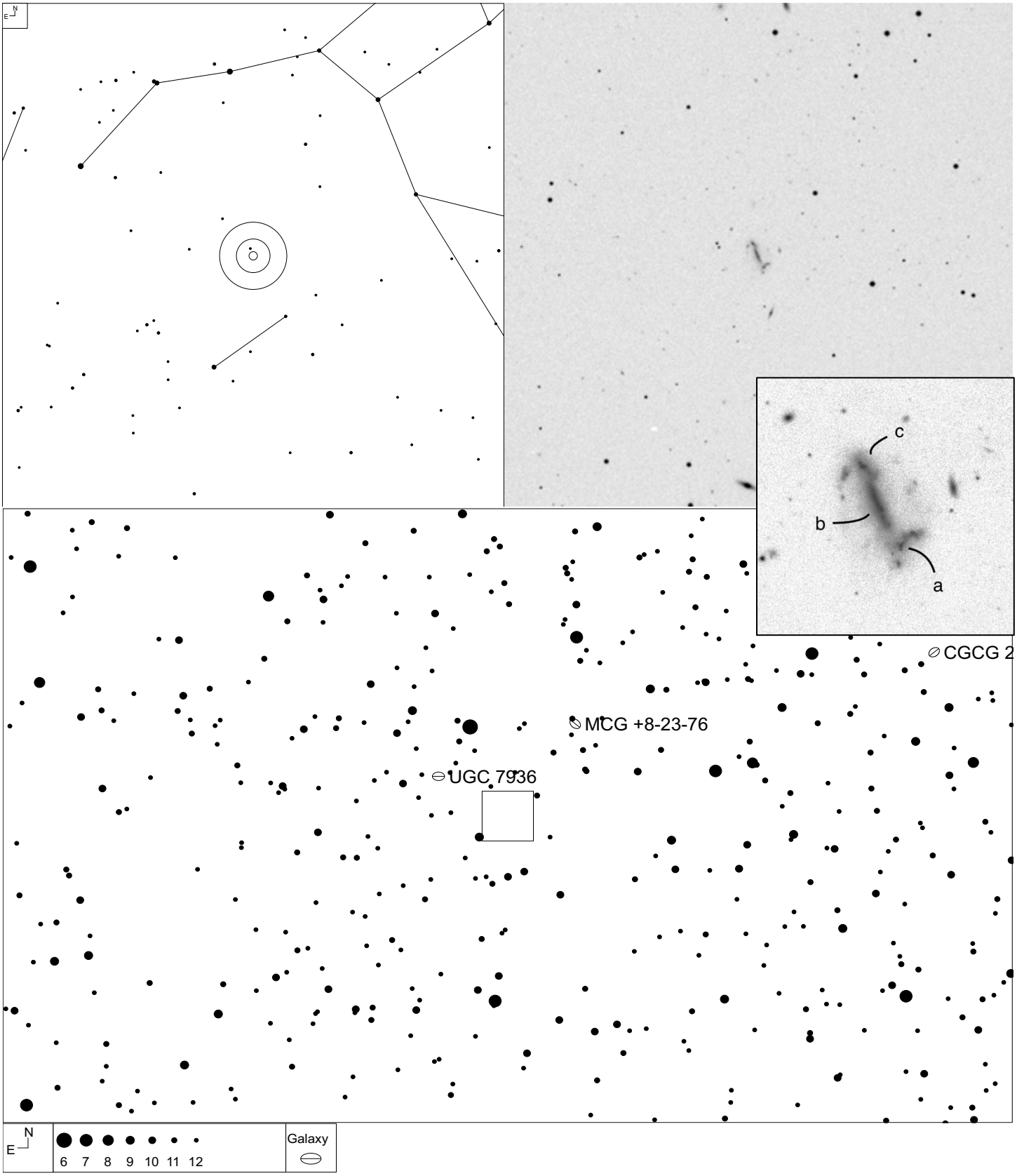
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
448	M 106	12 18 57.5	+47 18 14	G	8.4v	18.6 x 7.2	MM

VV 737 (Canes Venatici)



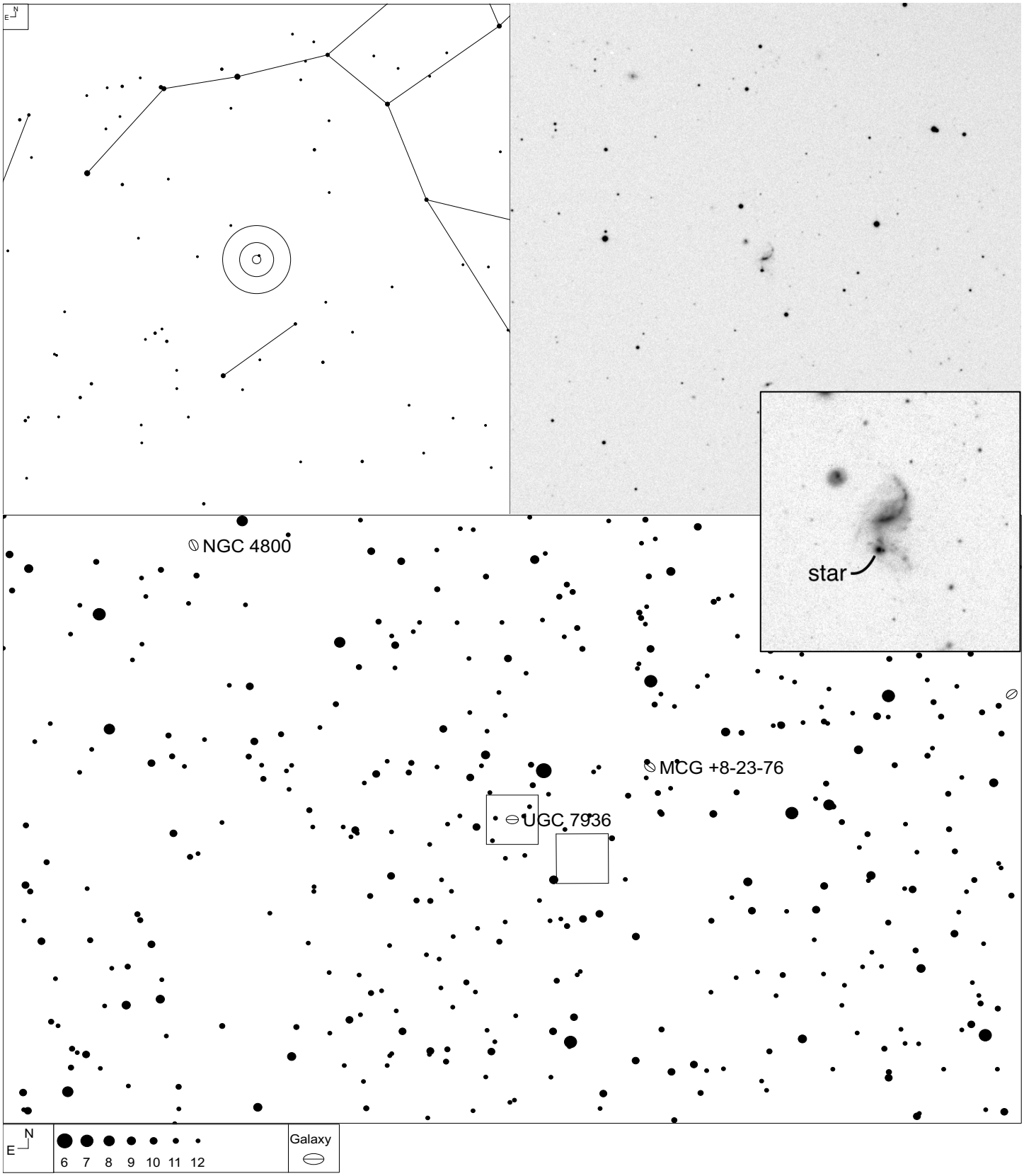
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
737	I Zw 37	12 28 14.8	+44 27 07	GPair			PC
737a	UGC 7593	12 28 14.5	+44 27 09	G	14.9g	1.2 x 0.9	
737b	MCG+08-23-039	12 28 15.2	+44 27 11	G	15.2g	0.9 x 0.3	

VV 493 (Canes Venatici)



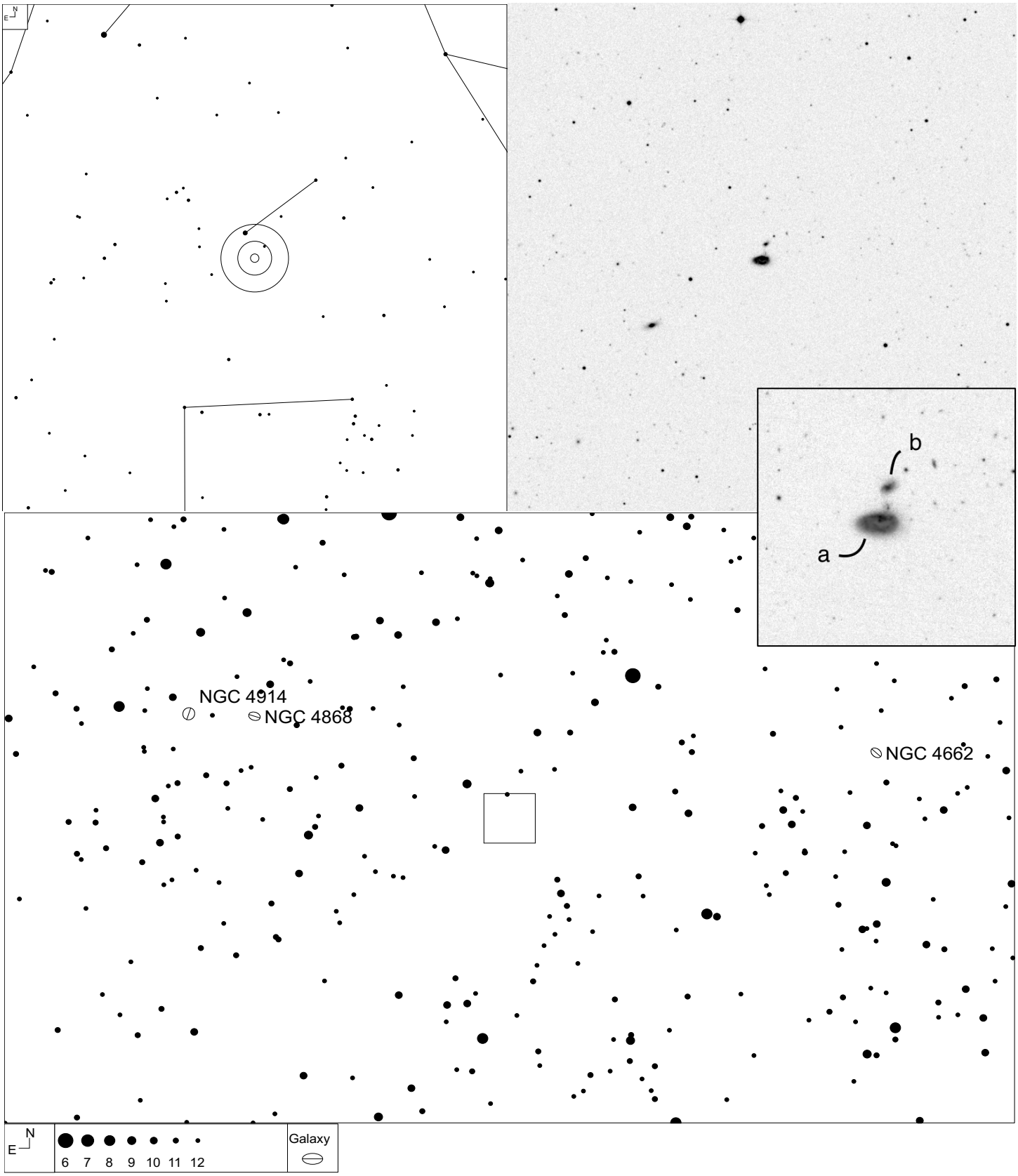
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
493	UGC 7910	12 44 06.9	+45 00 20	GGroup	15.4g	1.1 x 0.8	Ch

VV 465 (Canes Venatici)



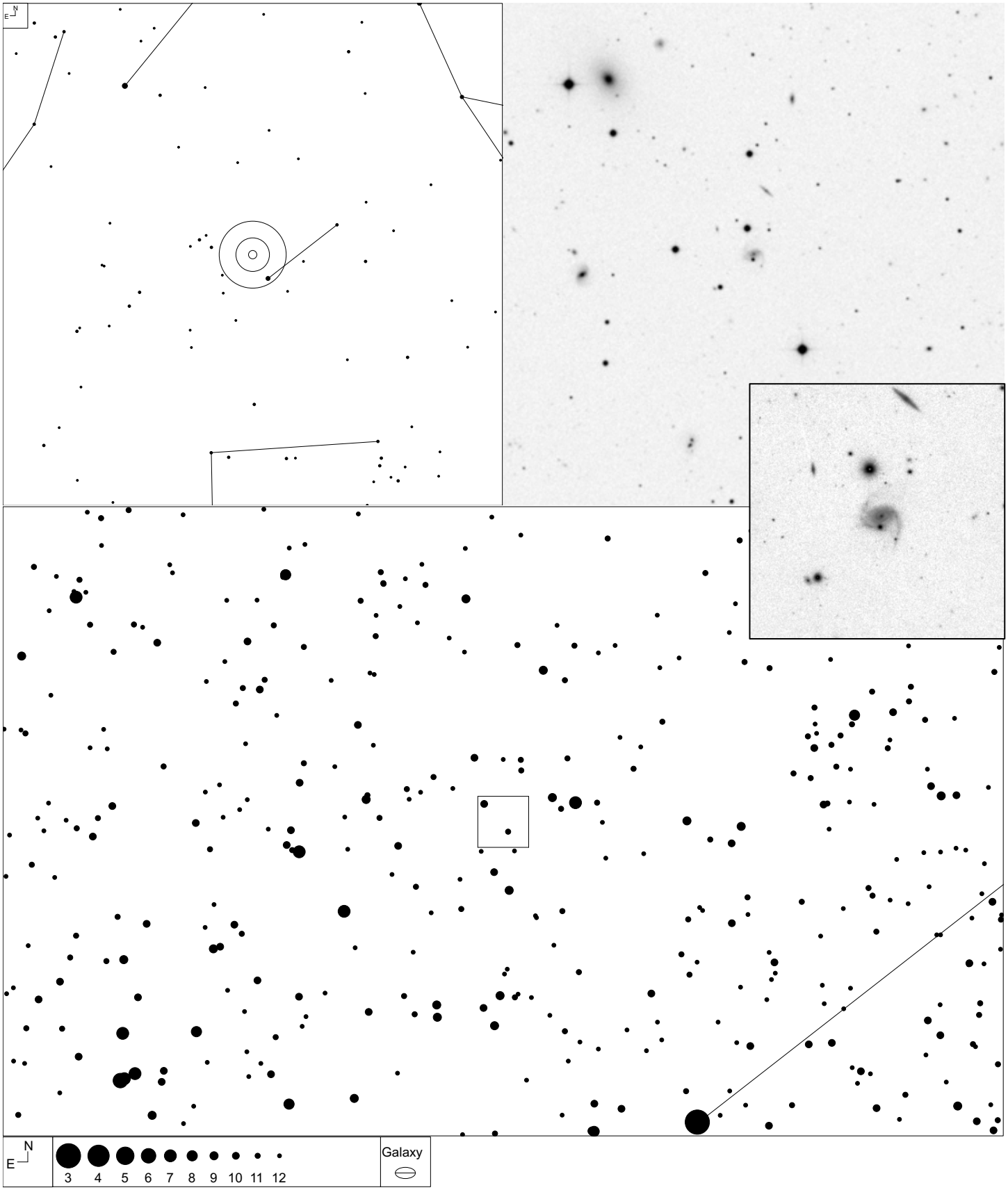
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
465	UGC 7936	12 46 00.1	+45 12 00	GTrpl	15.1g	1.1 x 1.1	MM

VV 789 (Canes Venatici)



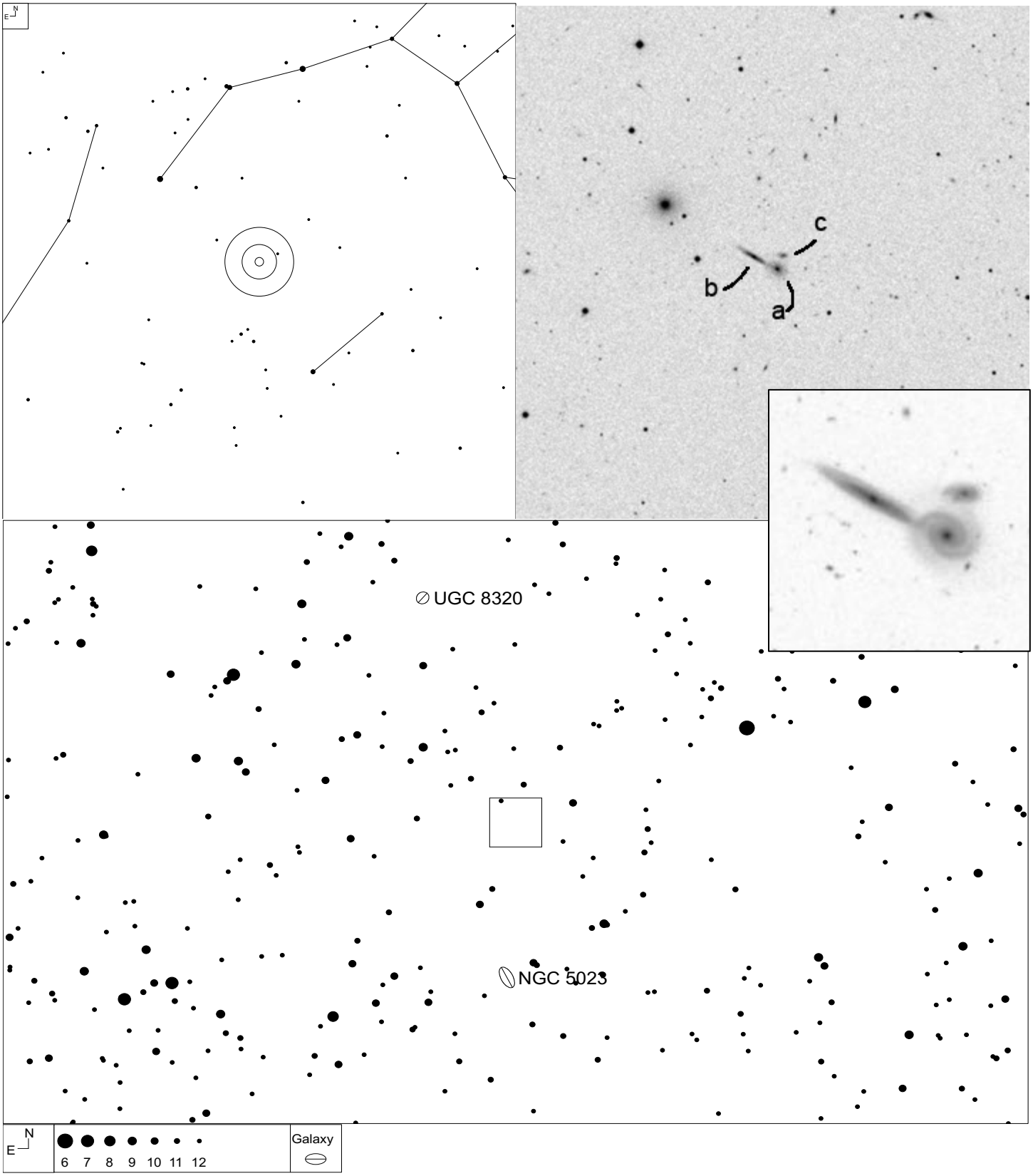
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
789	NGC 4774	12 53 06.2	+36 49 22	GPair	14.6b	0.6 x 0.4	R

VV 418 (Canes Venatici)



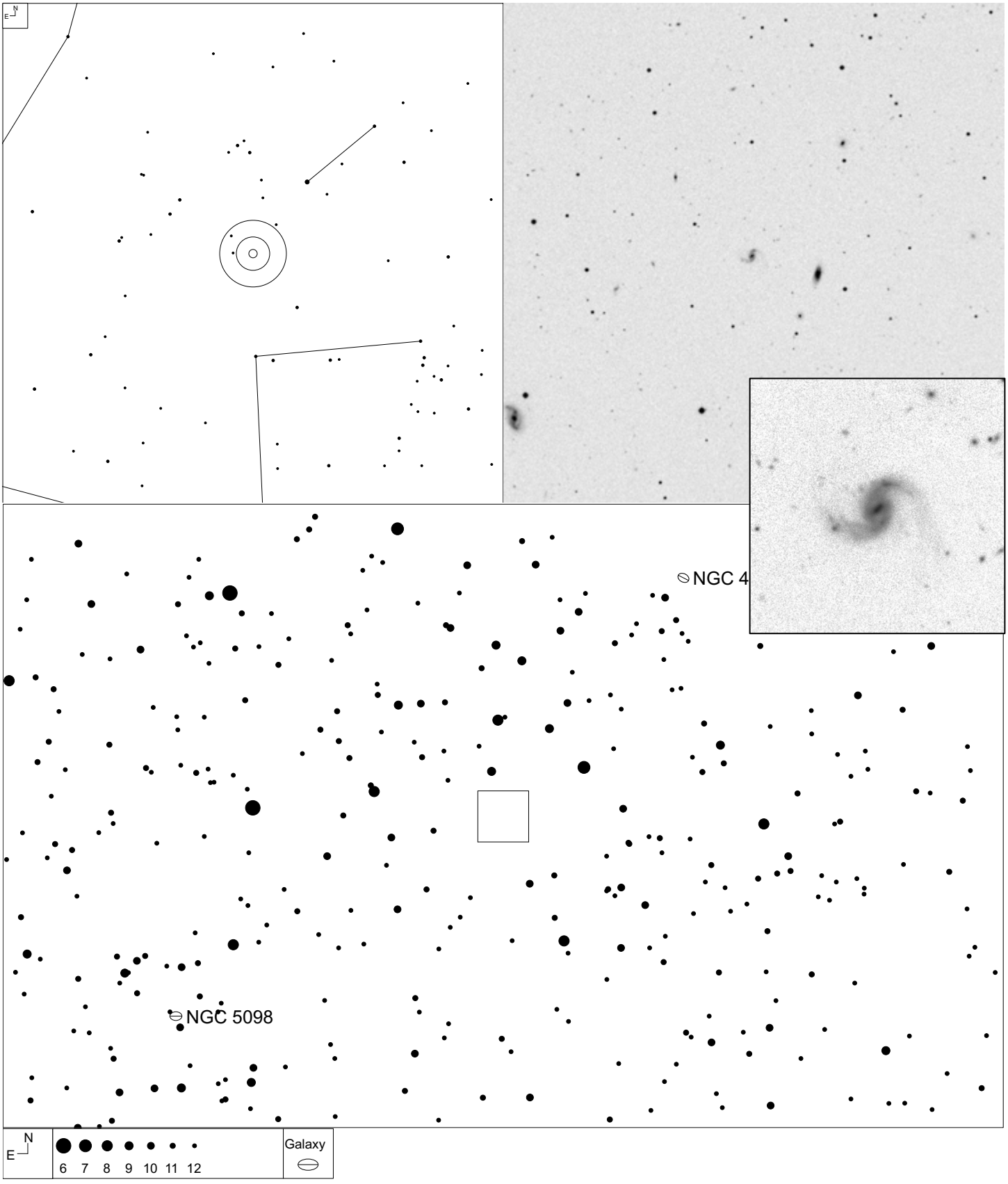
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
418	IC 4056	13 00 44.3	+39 45 15	G	15.8g	0.8 x 0.5	M

VV 704 (Canes Venatici)



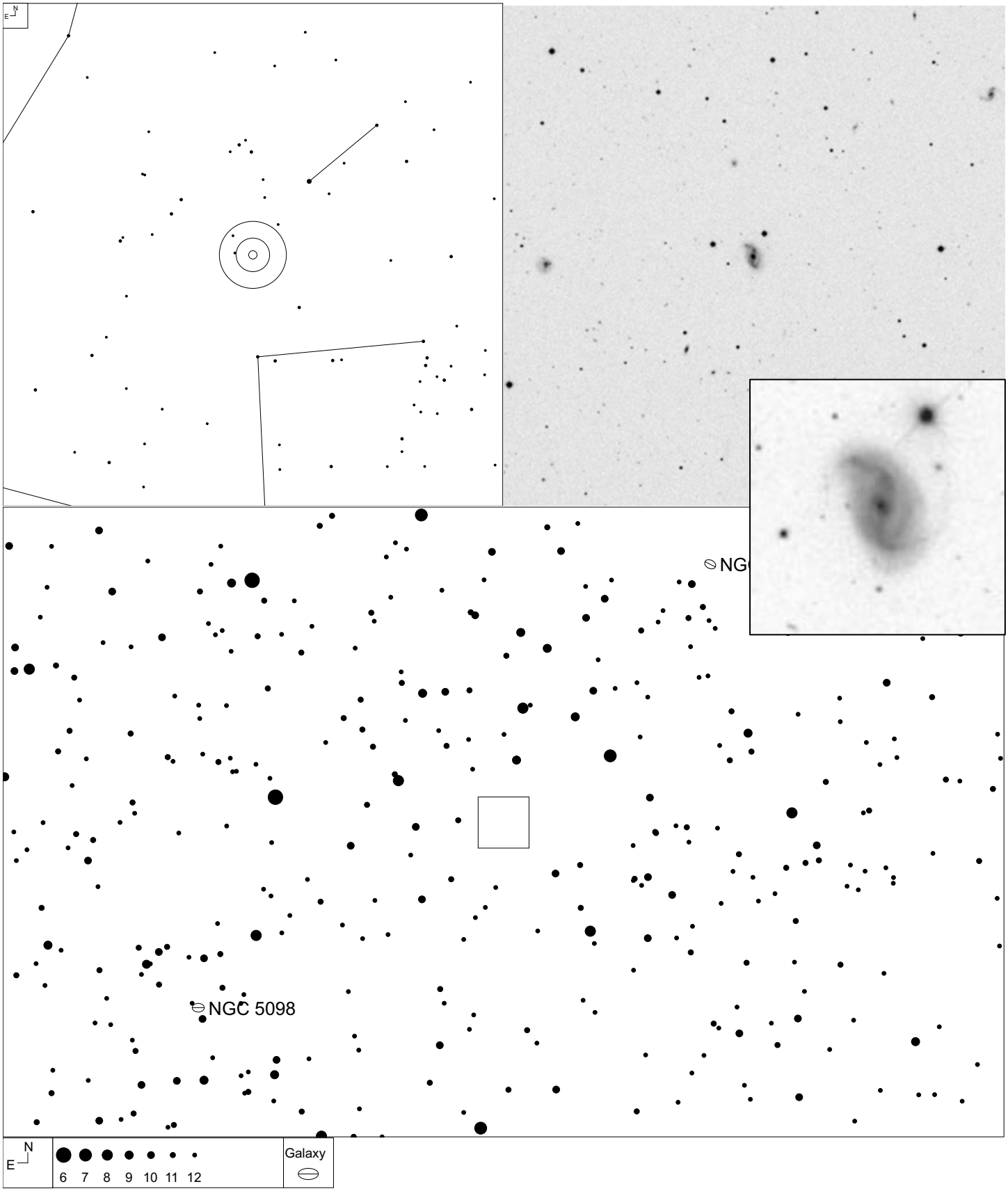
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
704		13 11 59.2	+44 48 42	GTrpl			NNNP
704a	MCG +08-24-079	13 11 58.4	+44 48 31	G	16.0b	0.4 x 0.4	
704b	UGC 8281	13 12 02.4	+44 48 53	G	15.3g	1.1 x 0.2	
704c	PGC 214090	13 11 57.4	+44 48 55	G	17.1g	0.4 x 0.2	

VV 450 (Canes Venatici)



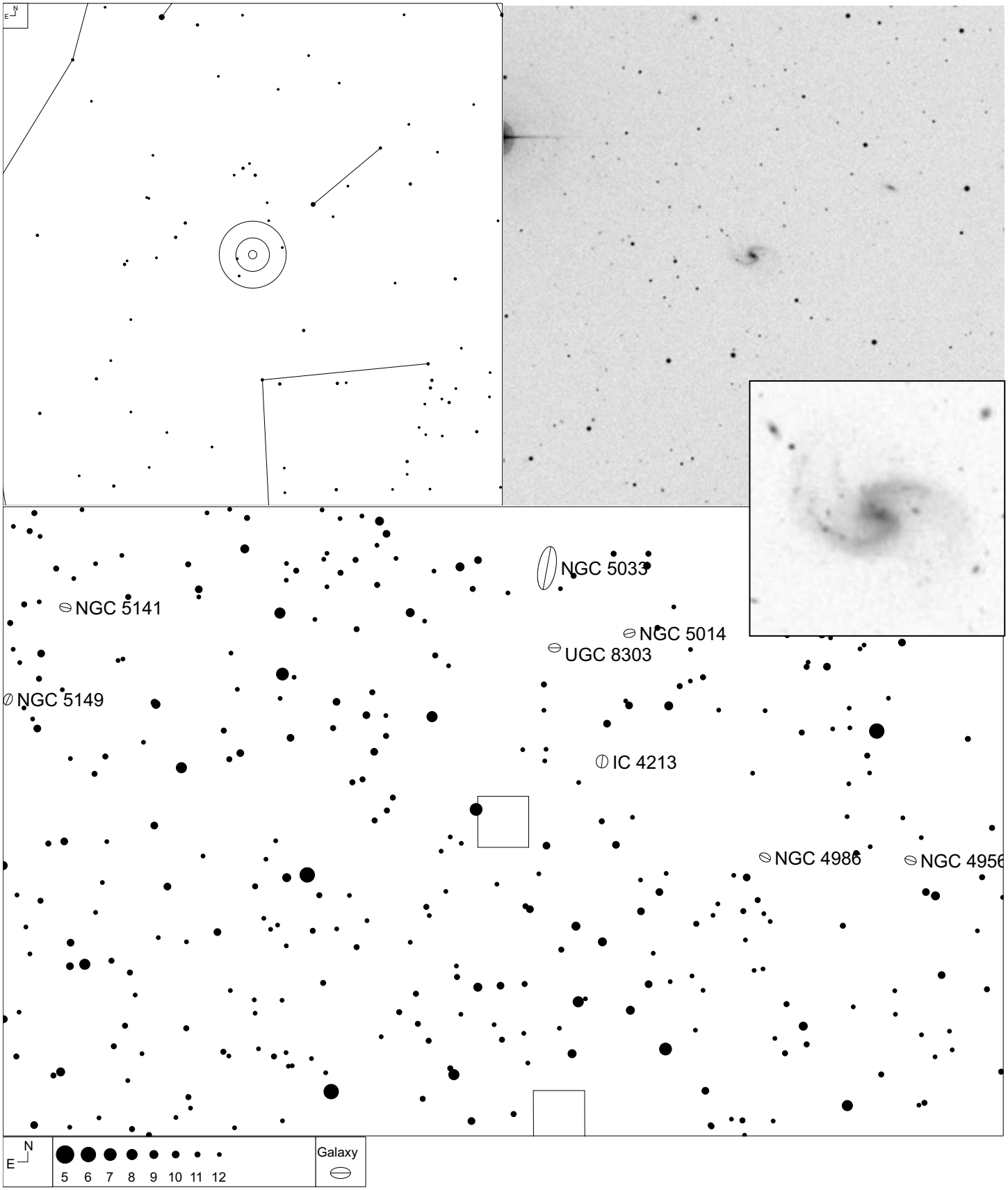
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
450	MCG +06-29-059	13 12 38.8	+34 03 59	G	15.4g	0.8 x 0.6	MM

VV 451 (Canes Venatici)



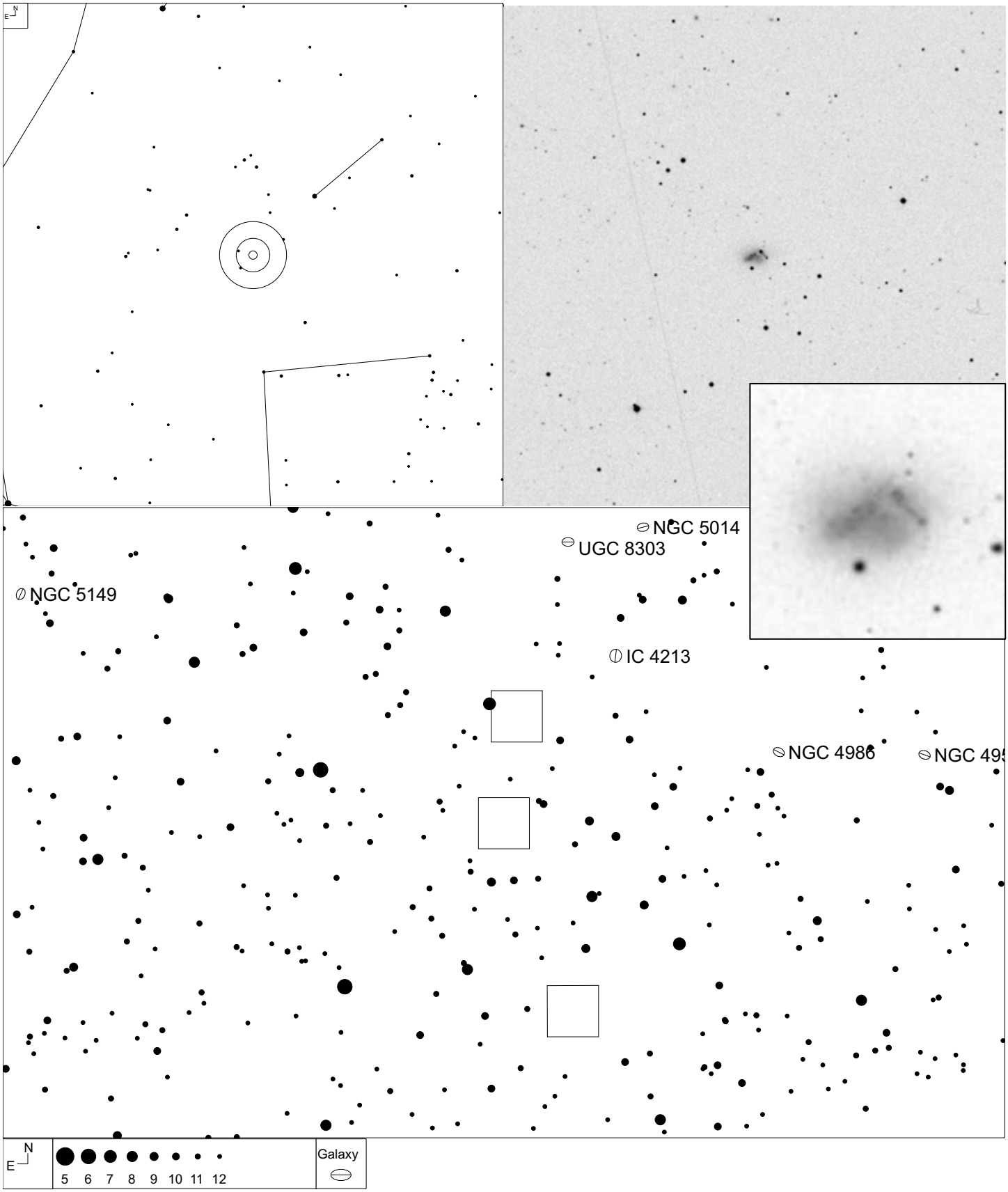
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
451	UGC 8299	13 13 13.3	+33 59 04	G	14.9g	1.2 x 0.6	MM

VV 438 (Canes Venatici)



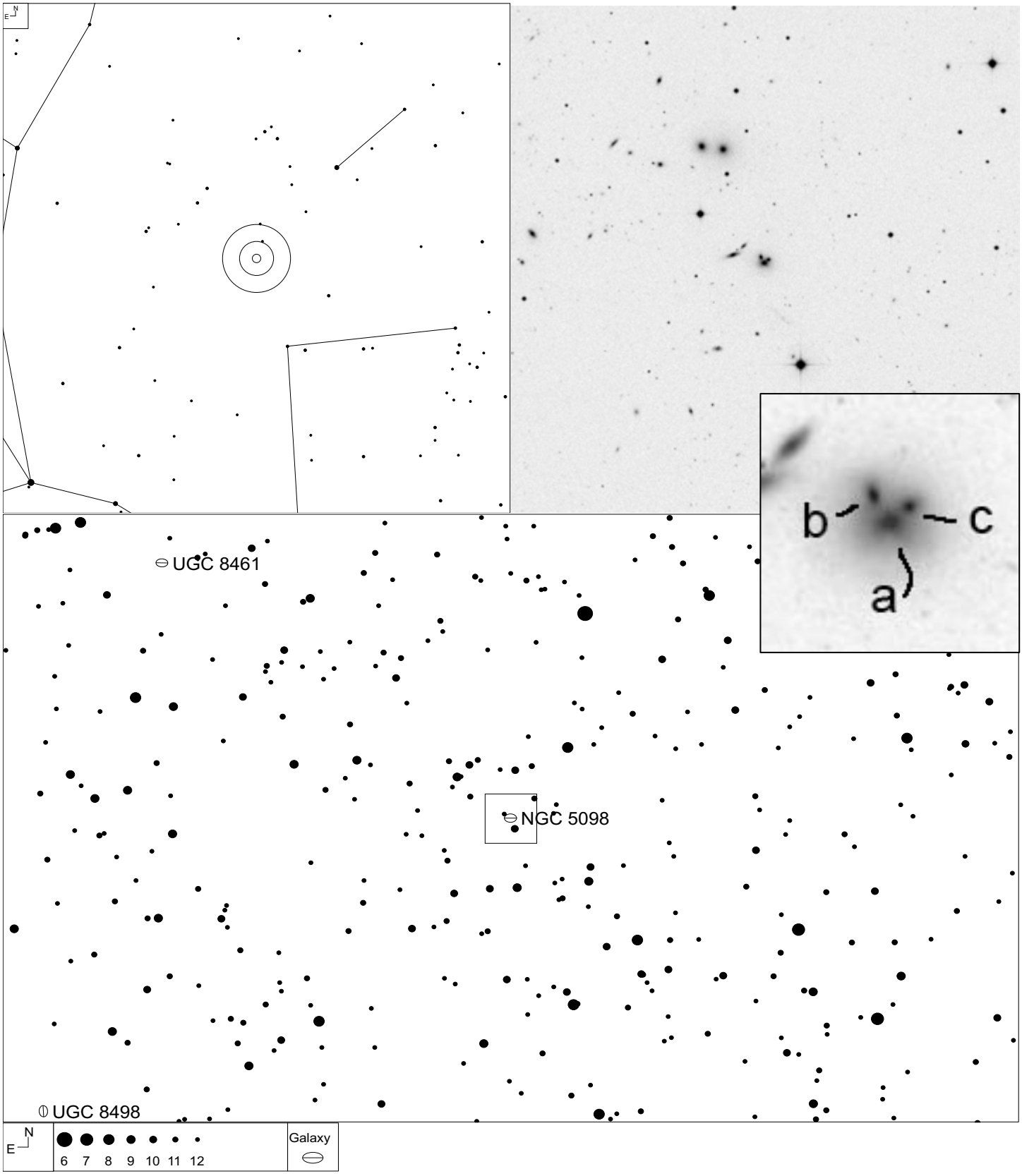
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
438	UGC 8318	13 14 30.5	+35 23 12	G	15.4g	1.5 x 0.9	M

VV 616 (Canes Venatici)



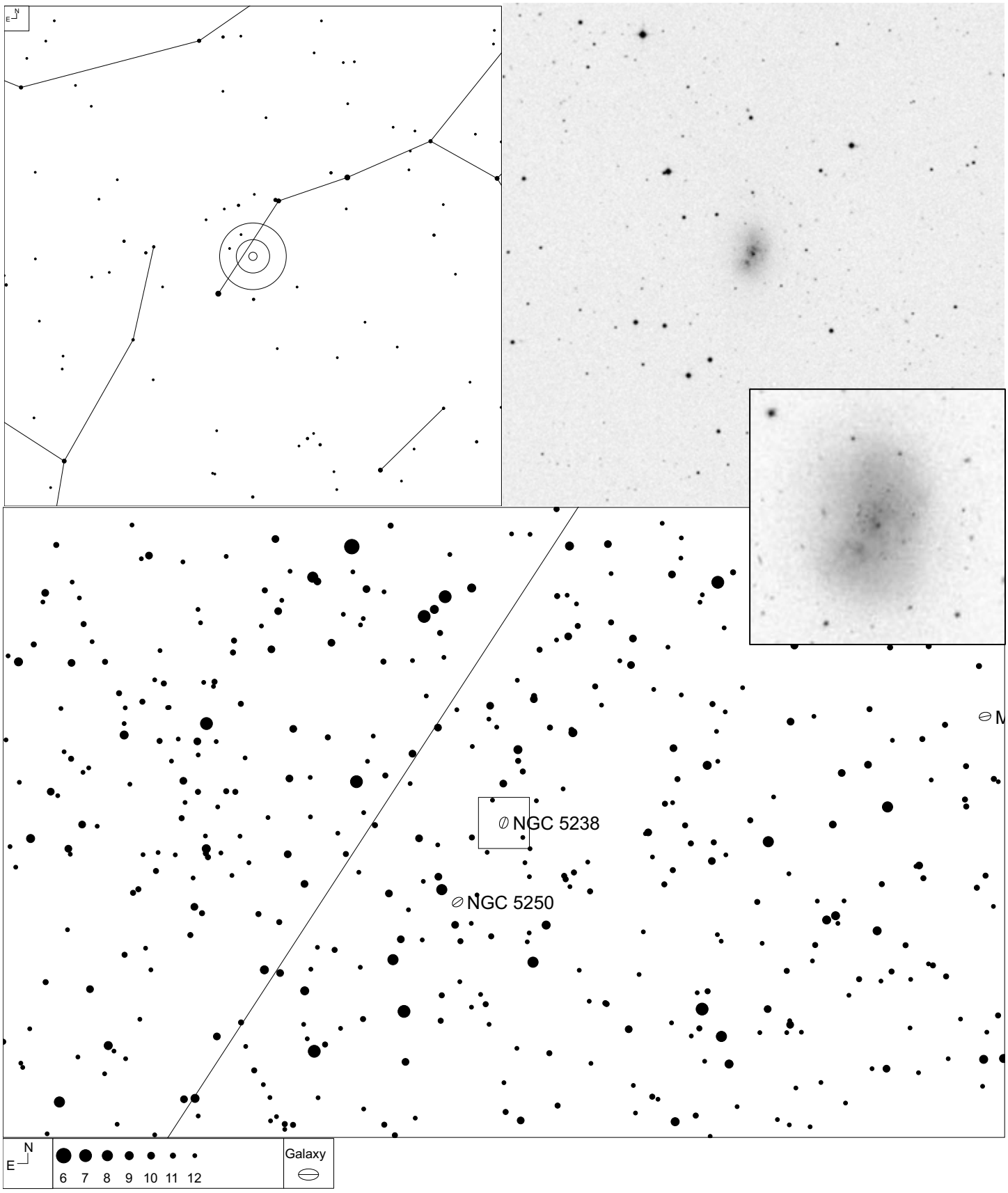
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
616	UGC 8323	13 14 48.3	+34 52 51	G	14.9g	1.0 x 0.8	N

VV 633 (Canes Venatici)



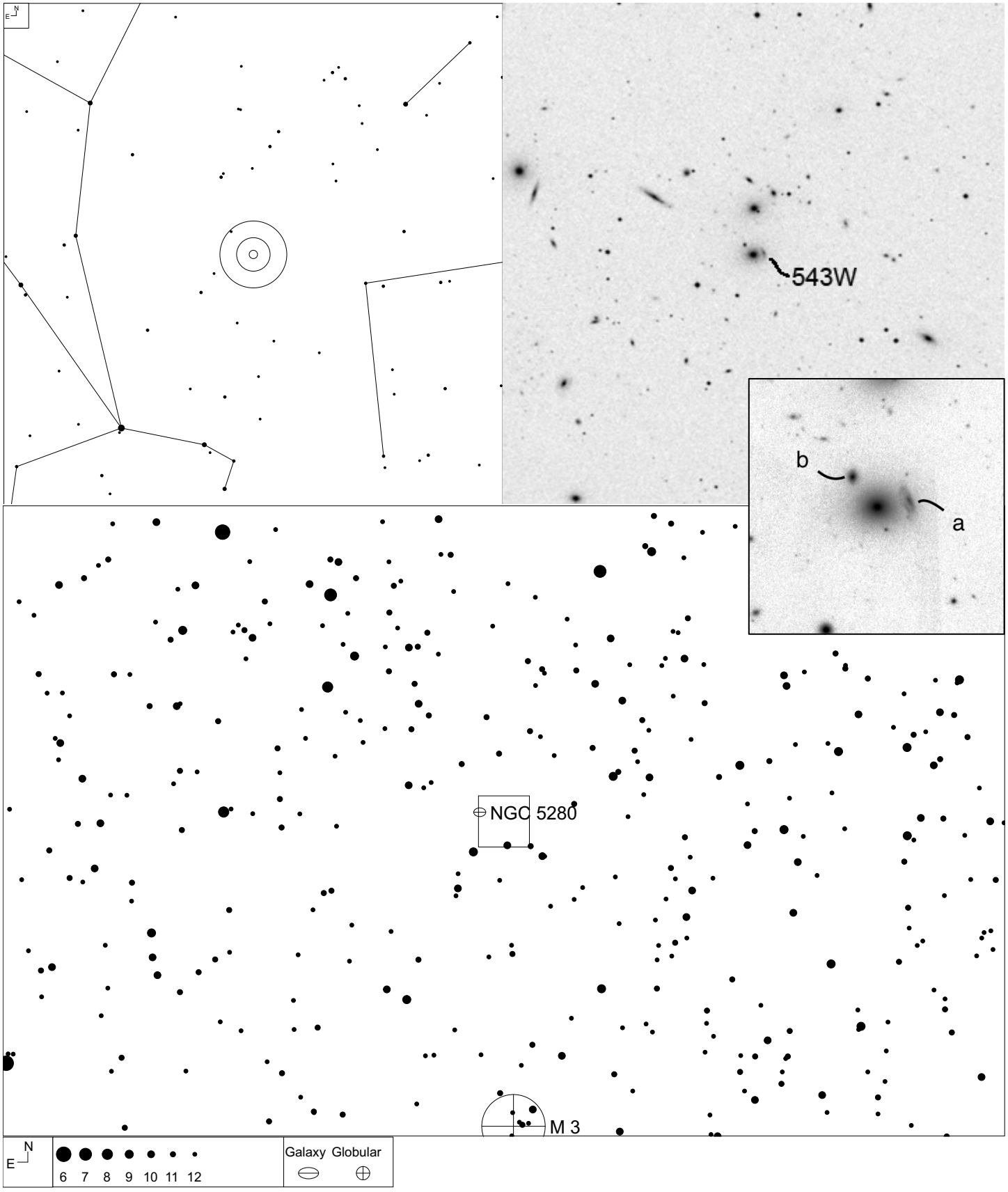
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
633	NGC 5096	13 20 08.5	+33 05 22	GTrpl	15.0g	0.7 x 0.7	N

VV 828 (Canes Venatici)



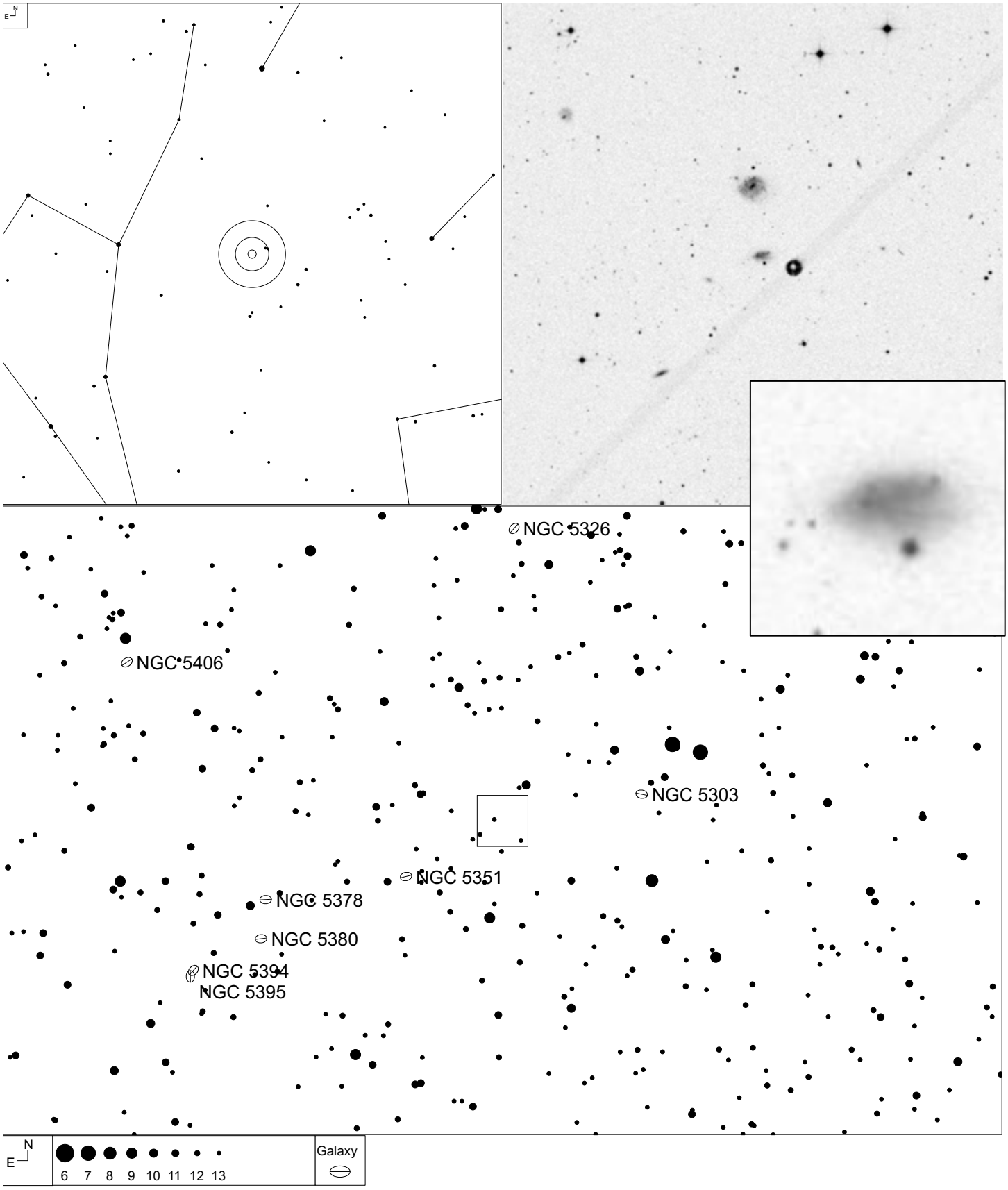
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
828	NGC 5238	13 34 42.5	+51 36 50	G	13.9g	1.7 x 1.4	Enat

VV 543 (Canes Venatici)



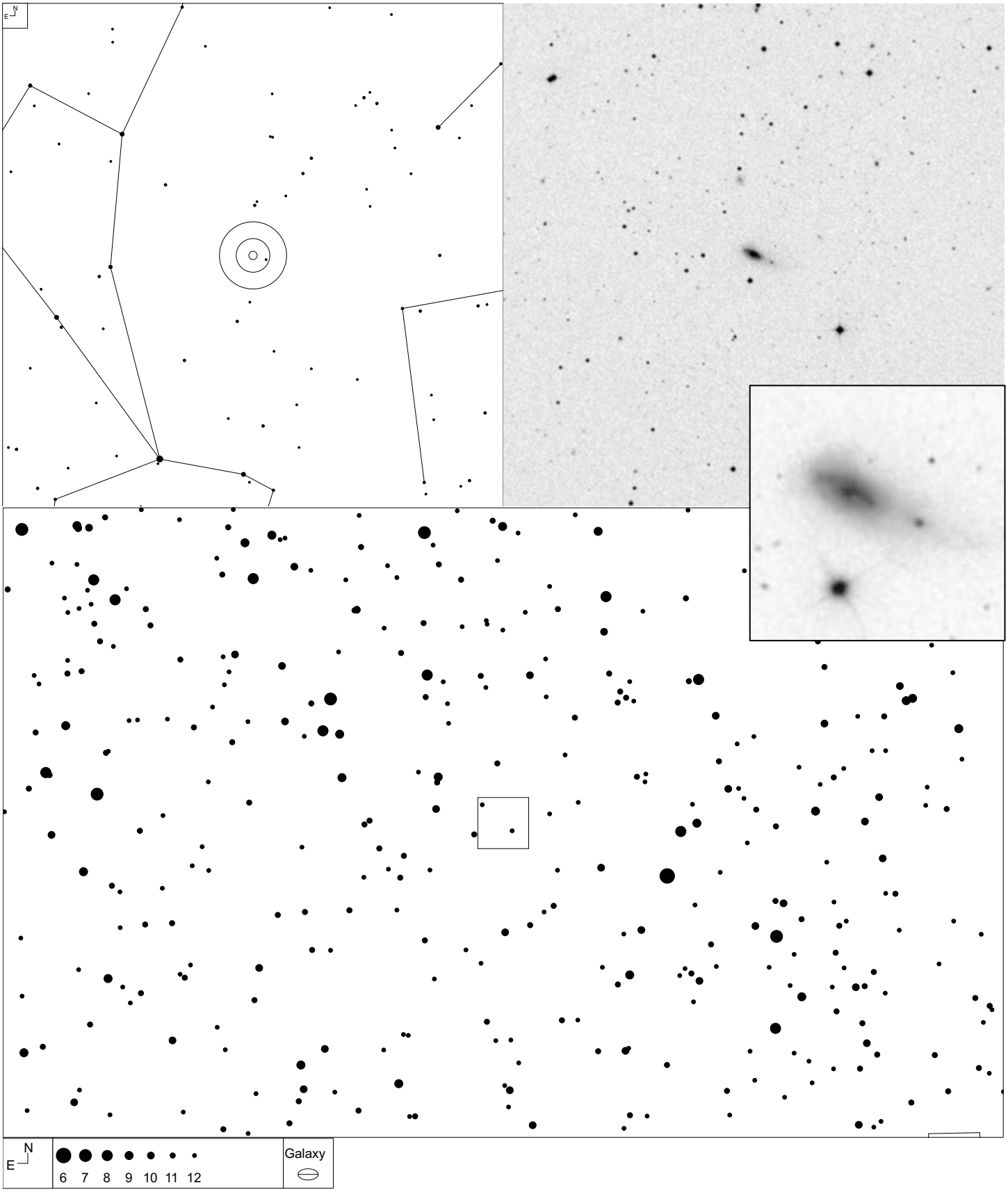
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
543	NGC 5275	13 42 23.5	+29 49 30	G	14.7g	0.5 x 0.5	N
543a	*NGC 5275B*	*13 42 22.1*	*+29 49 33*	*G*	*17.5g*		
543b	*NGC 5275C*	*13 42 24.7*	*+29 49 48*	*G*	*17.6g*		

VV 607 (Canes Venatici)



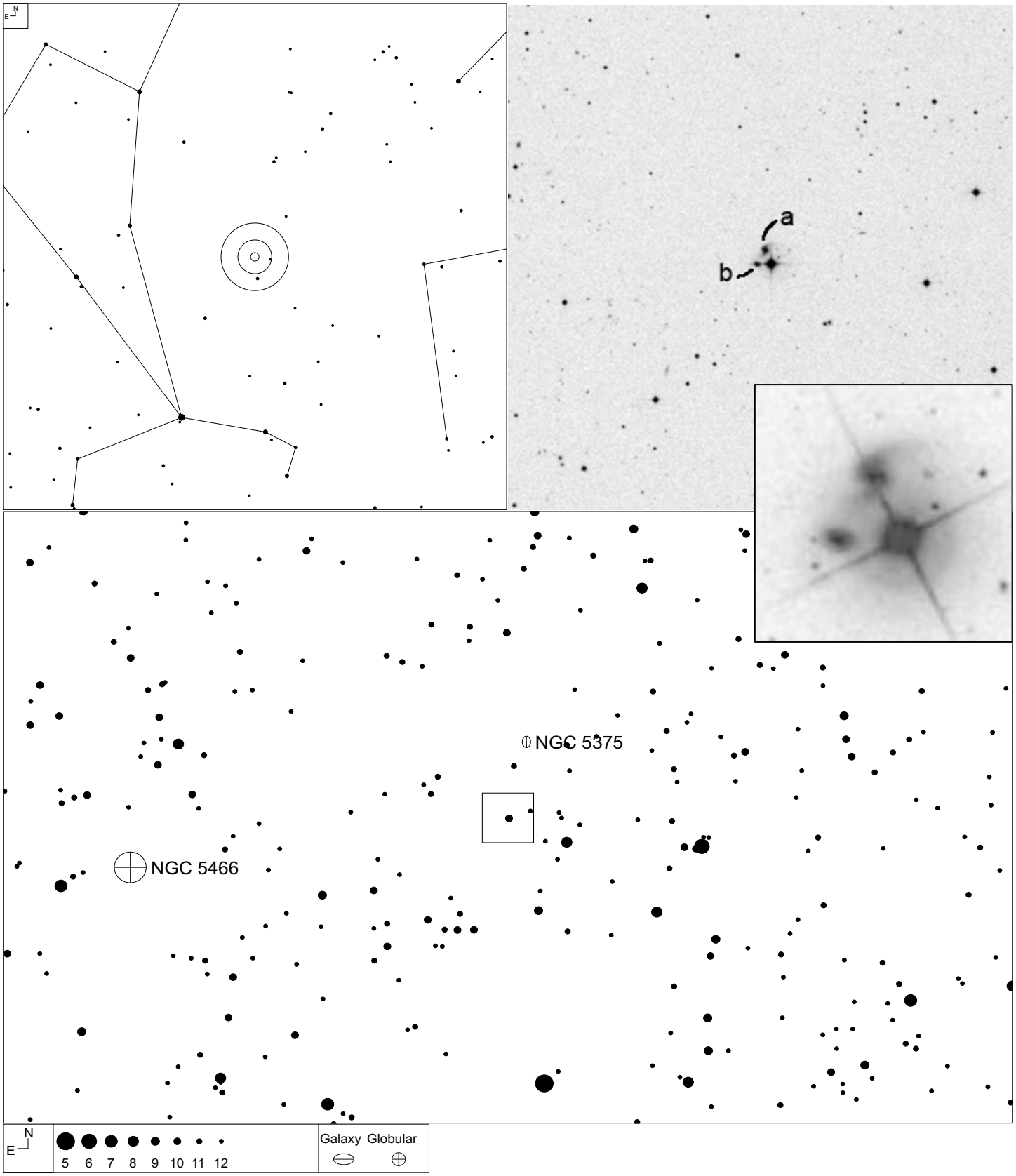
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
607	NGC 5325	13 50 54.2	+38 14 29	G	15.8g	1.0 x 0.8	N

VV 369 (Canes Venatici)



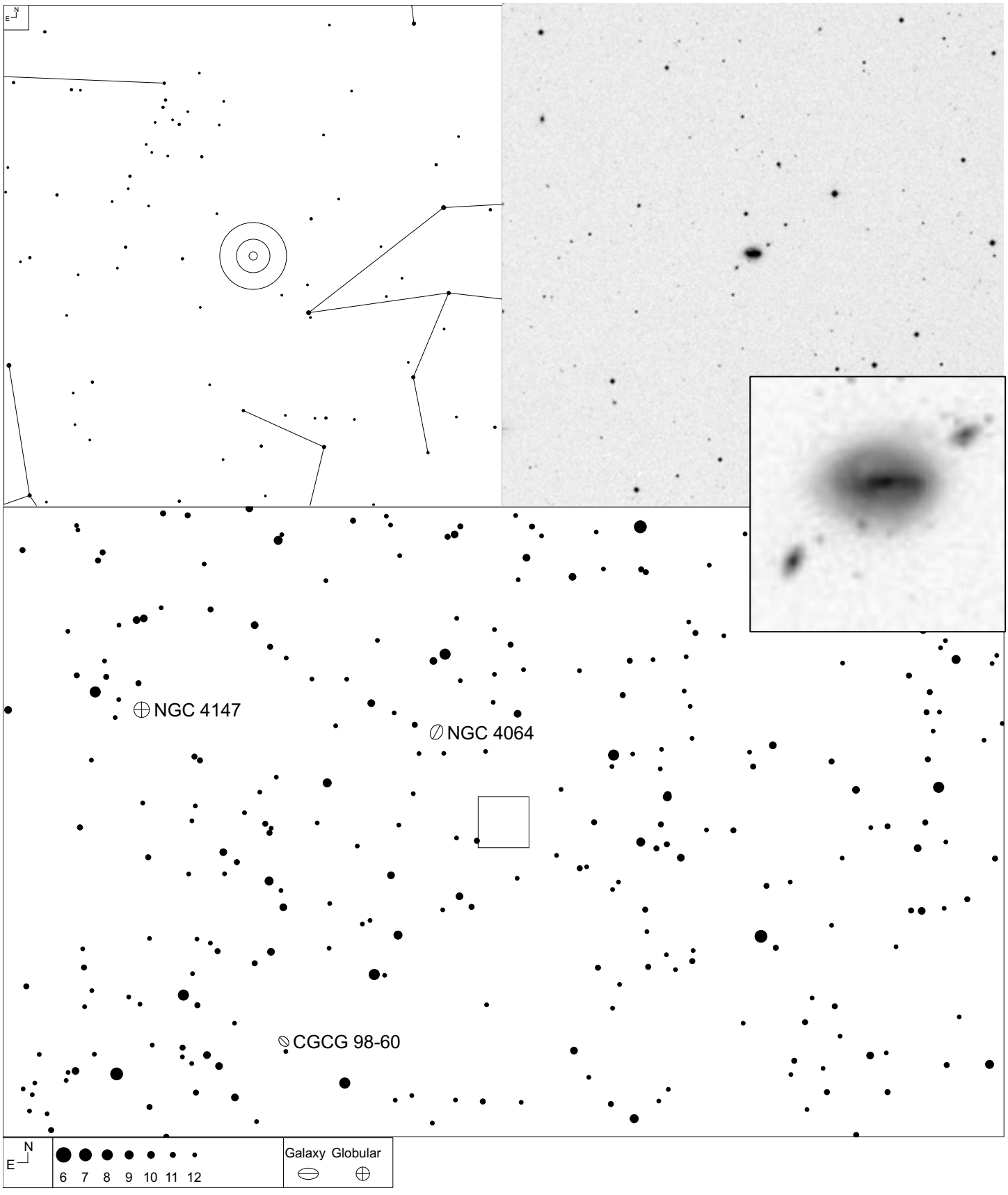
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
369	UGC 8782	13 52 17.8	+31 26 46	G	15.1v	0.9 x 0.5	MMM

VV 688 (Canes Venatici)



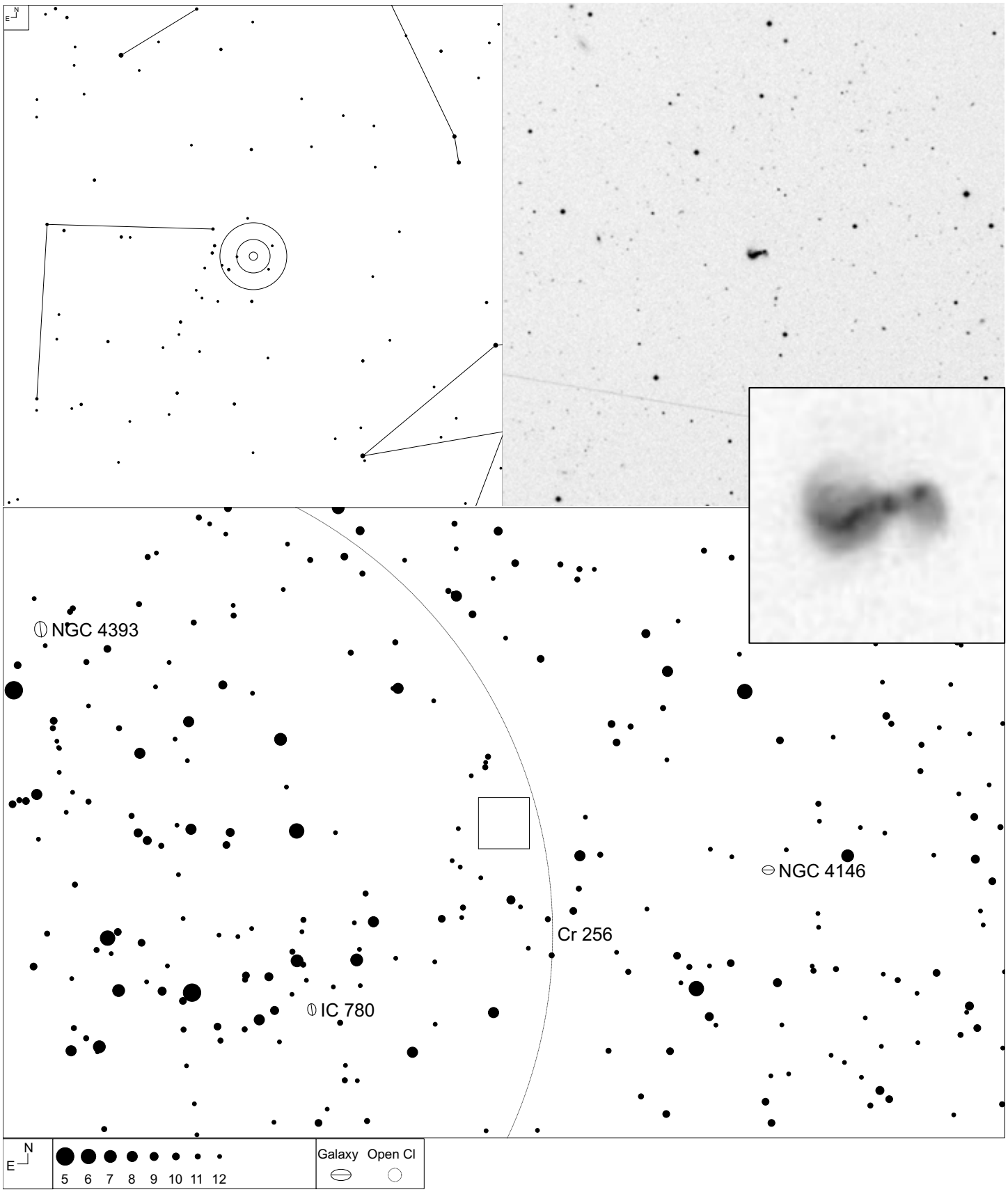
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
688	Mrk 280	13 57 20.7	+28 47 34	GPair			NNNP
688a	MCG +05-33-028	13 57 20.1	+28 47 48	G	14.9v	0.4 x 0.3	
688b	MCG +05-33-029	13 57 21.1	+28 47 24	G	17.1b	0.3 x 0.2	

VV 384 (Coma Berenices)



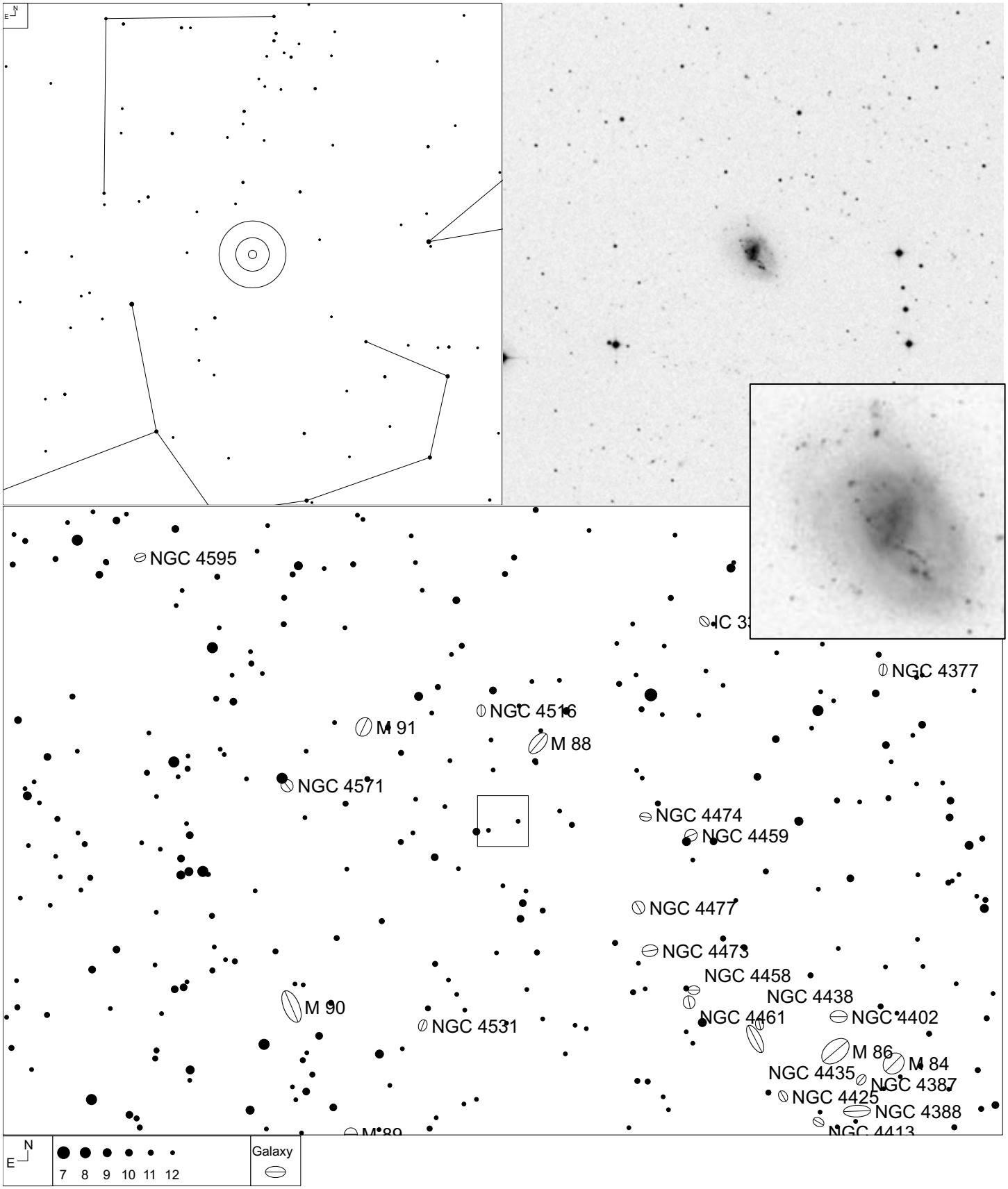
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
384	NGC 4048	12 02 50.3	+18 00 55	GGroup	14.2g	0.6 x 0.5	MMM

VV 735 (Coma Berenices)



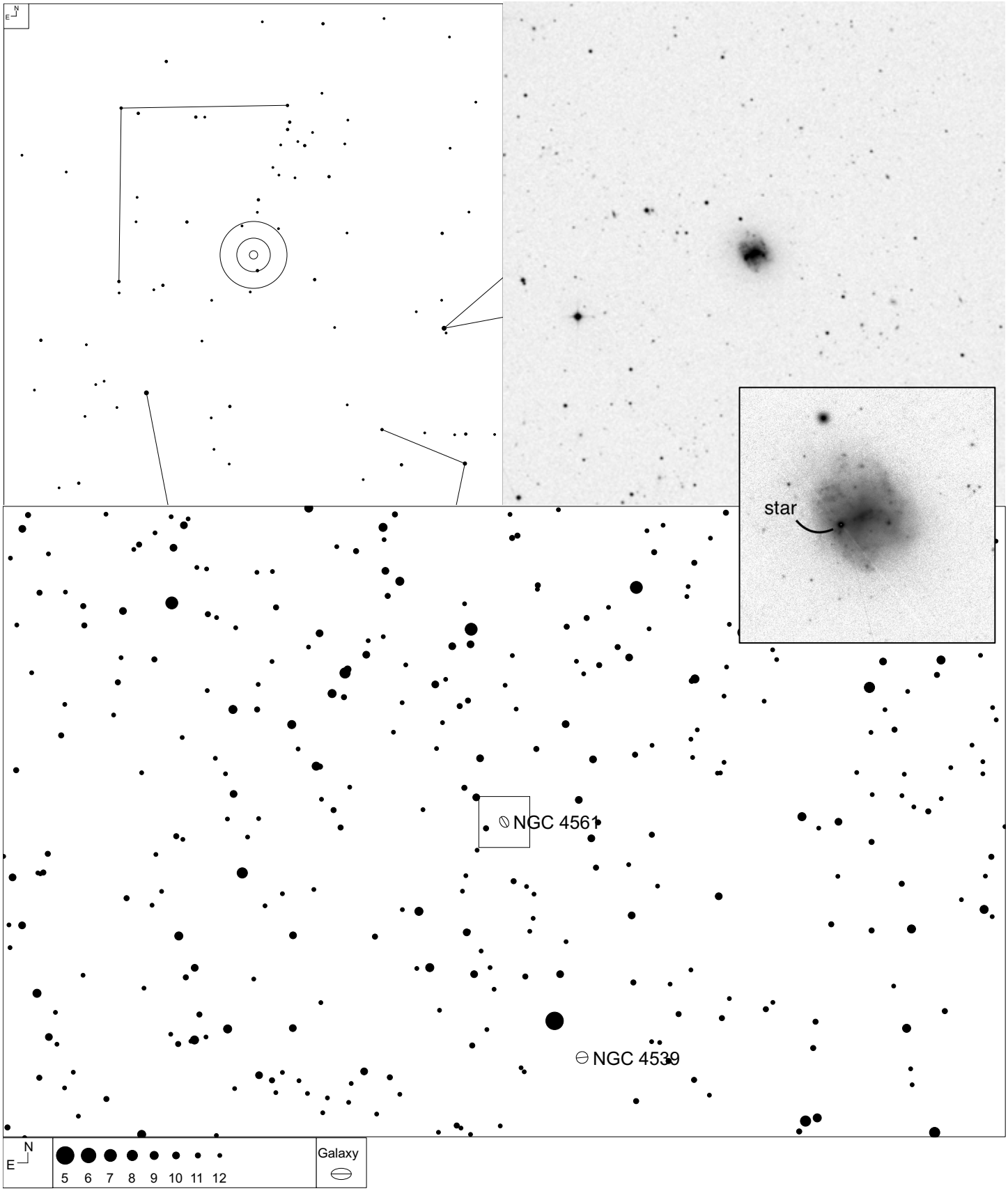
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
735	MCG +05-29-045	12 15 55.3	+26 39 45	G	15.5g	0.8 x 0.5	PC

VV 563 (Coma Berenices)



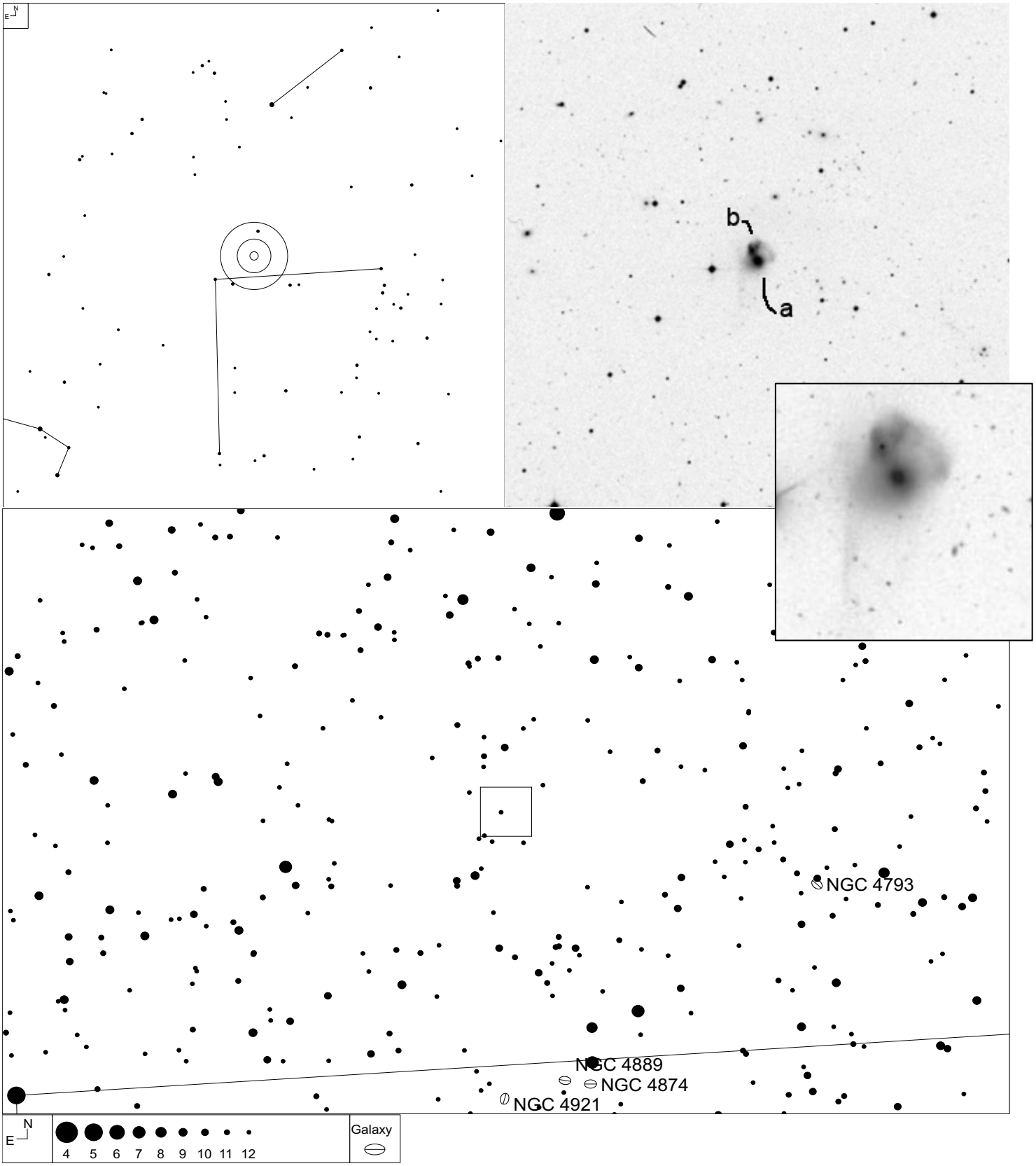
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
563	UGC 7695	12 32 41.9	+14 02 57	G	13.4g	2. 1 x 1.8	N

VV 571 (Coma Berenices)



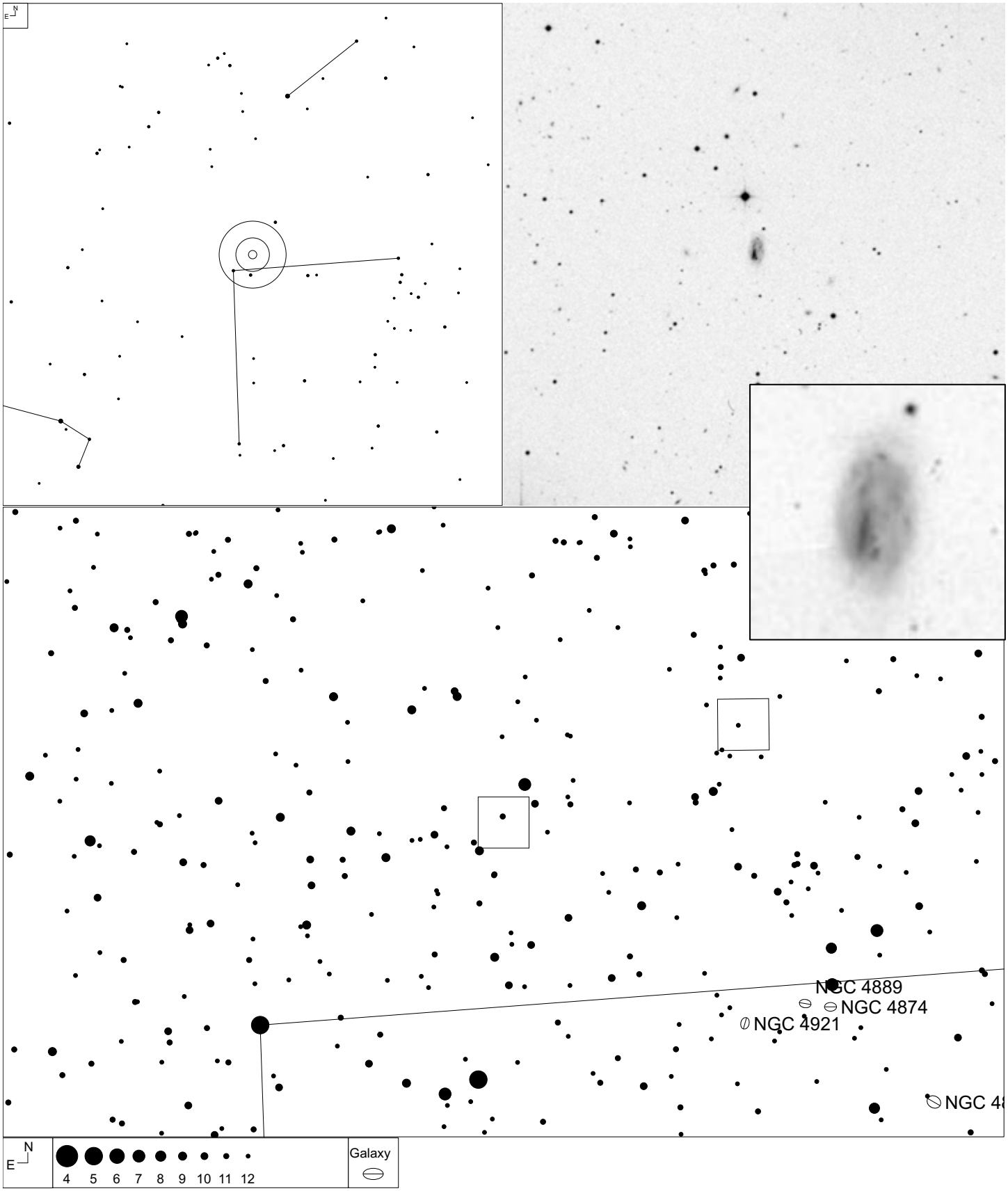
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
571	UGC 7768	12 36 08.2	+19 19 22	G	13.0g	1.5 x 1.3	N

VV 609 (Coma Berenices)



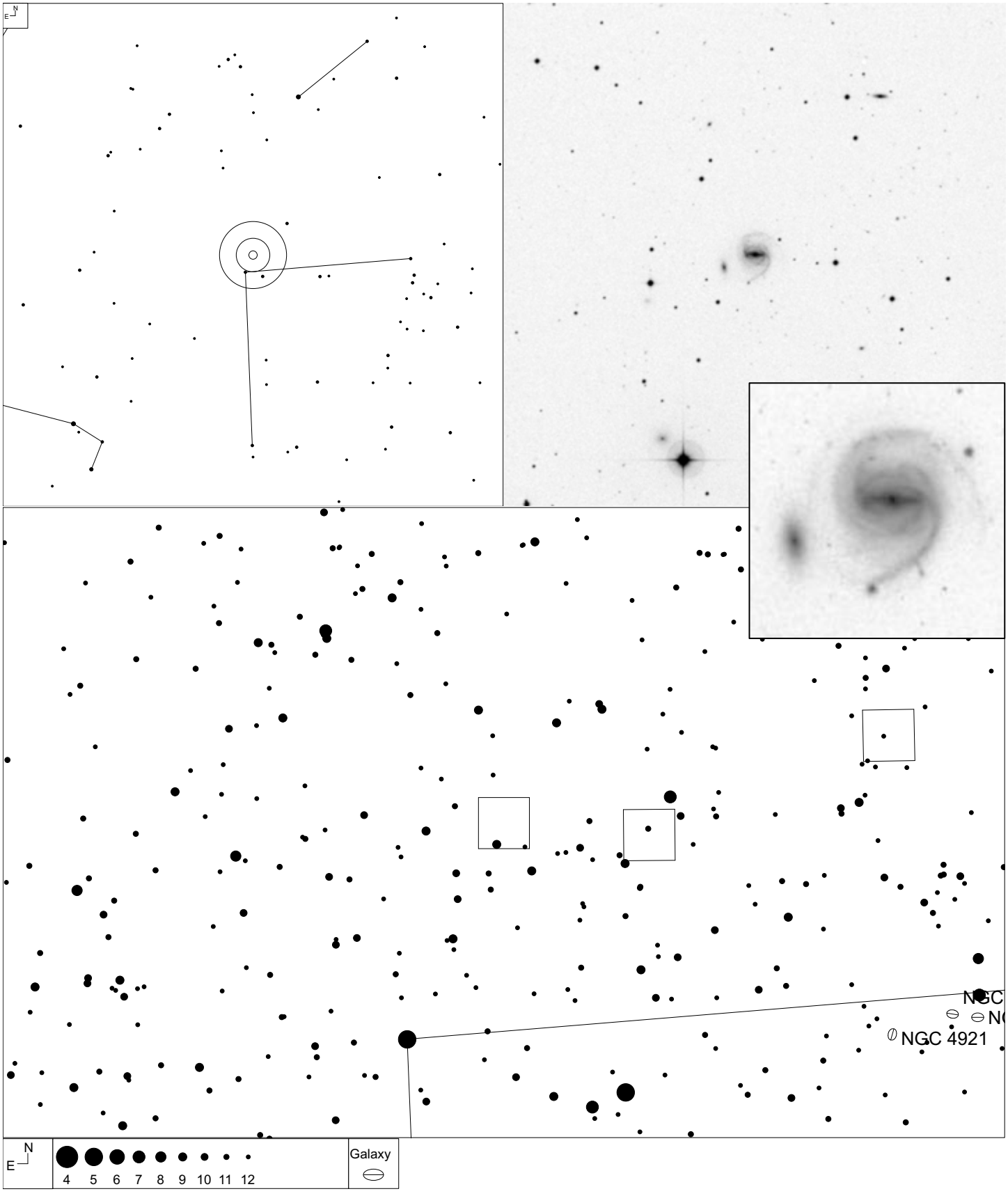
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
609	NGC 4922	13 01 24.6	+29 18 39	GPair			N
609a*	NGC 4922N	13 01 24.2	+29 18 29	G	14.7v	1.5 x 1.2	
609b*	NGC 4922S	13 01 25.1	+29 18 52	G	15.0v	0.5 x 0.3	

VV 841 (Coma Berenices)



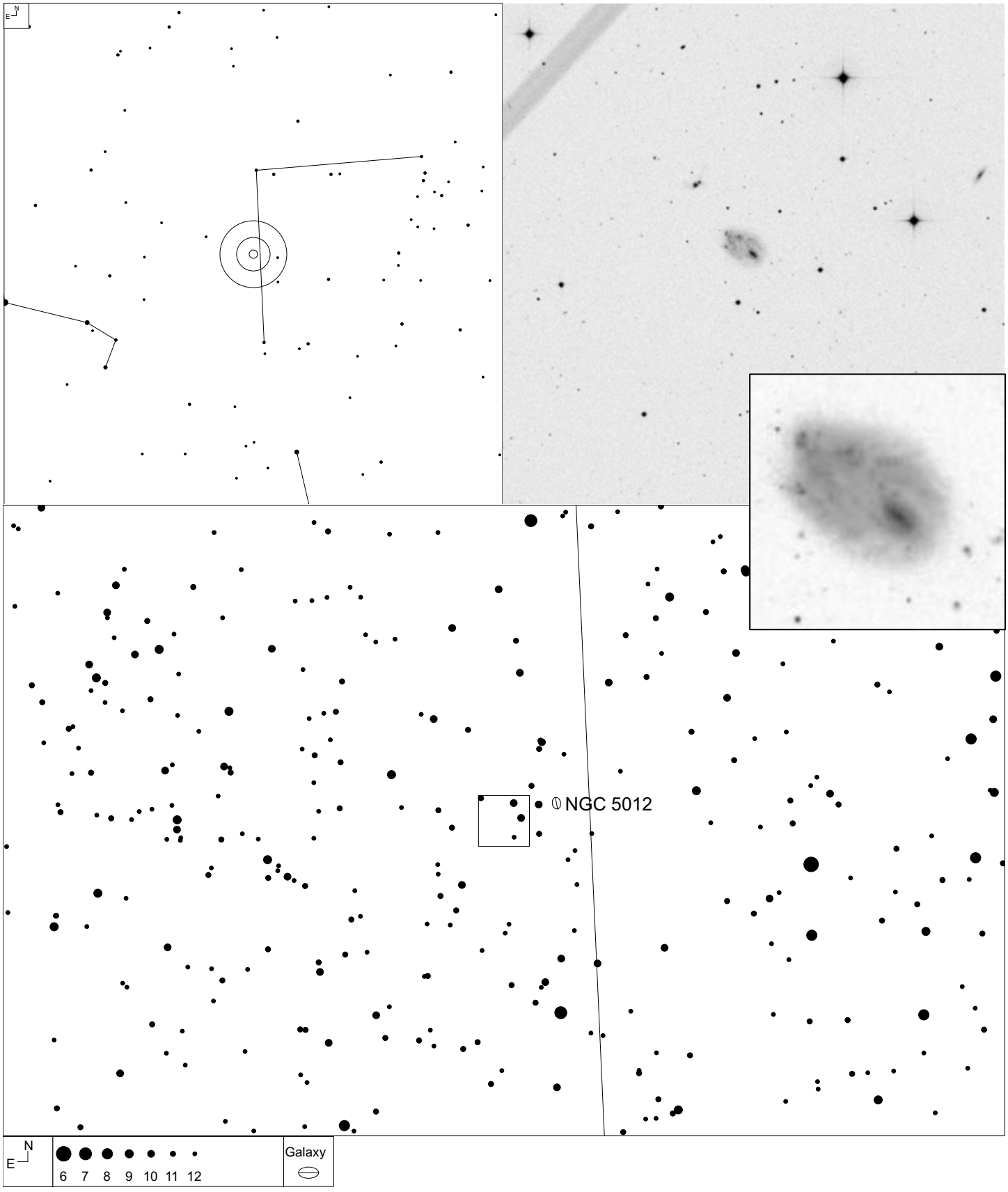
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
841	MCG +05-31-133	13 06 38.1	+28 50 54	G	14.8v	0.8 x 0.4	Enat

VV 460 (Coma Berenices)



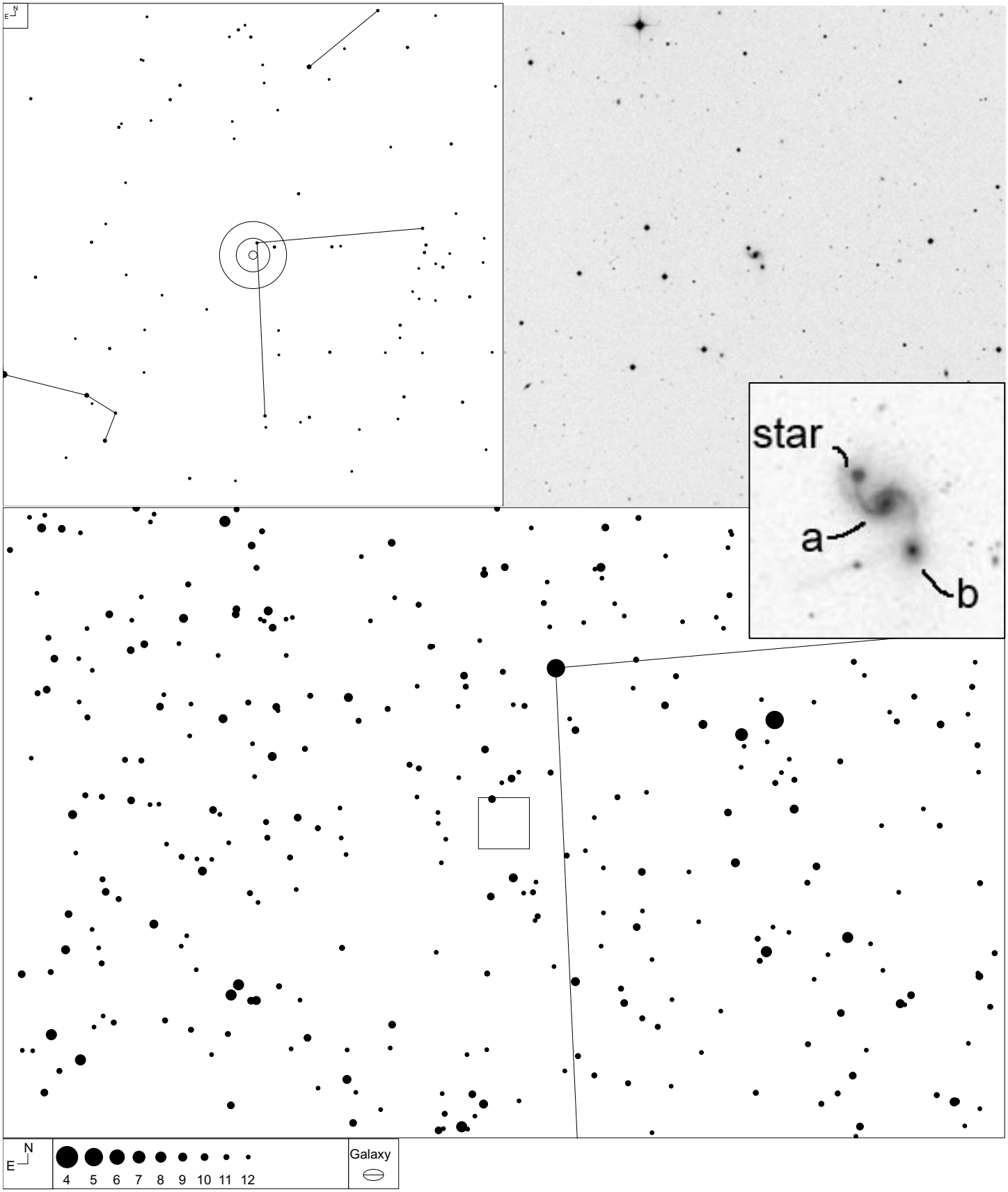
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
460	NGC 5000	13 09 47.5	+28 54 25	G	13.4v	1.7 x 1.4	MM

VV 559 (Coma Berenices)



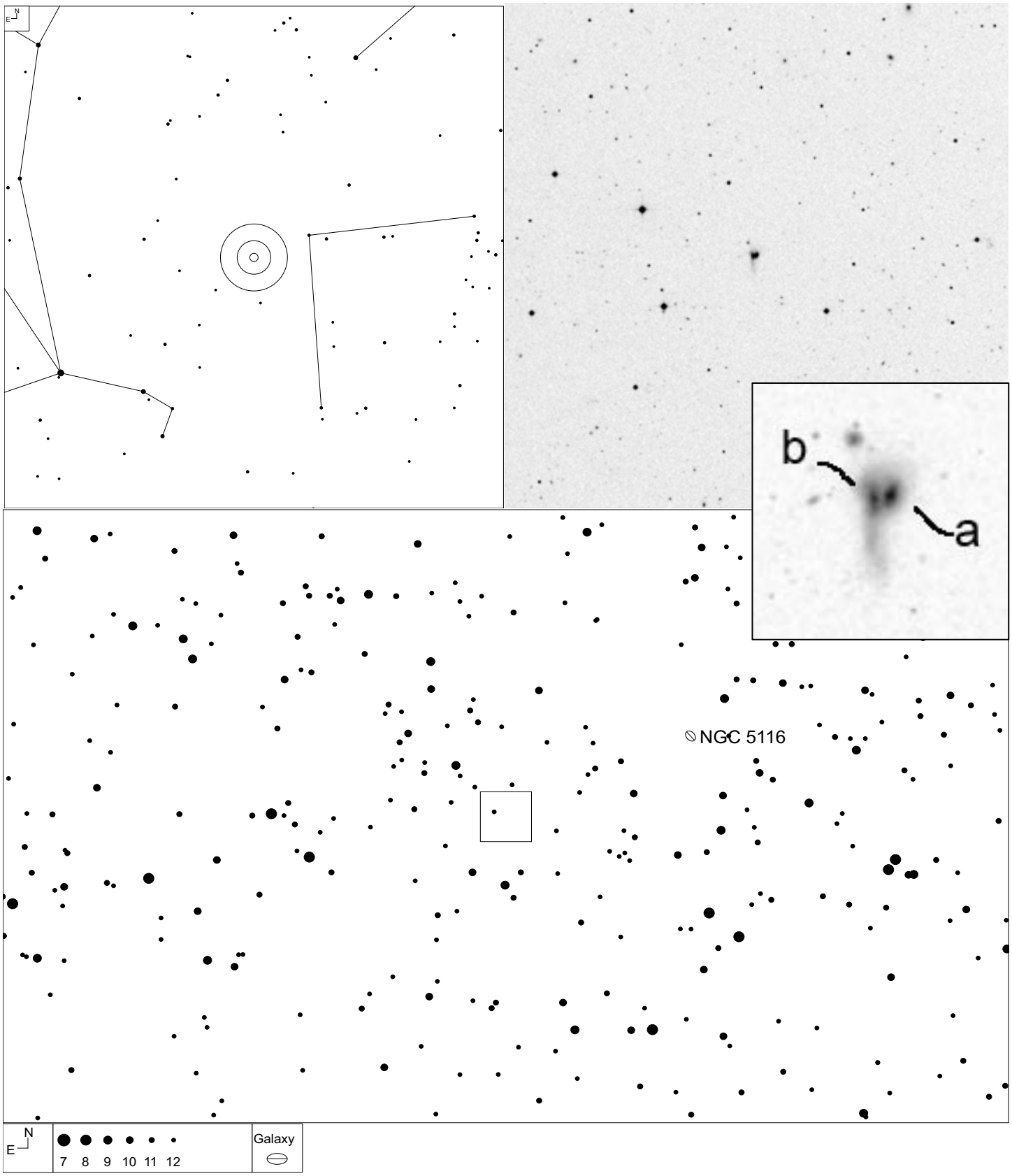
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
559	NGC 5012A	13 12 41.7	+22 49 47	G	14.4g	1.6 x 1.0	N

VV 474 (Coma Berenices)



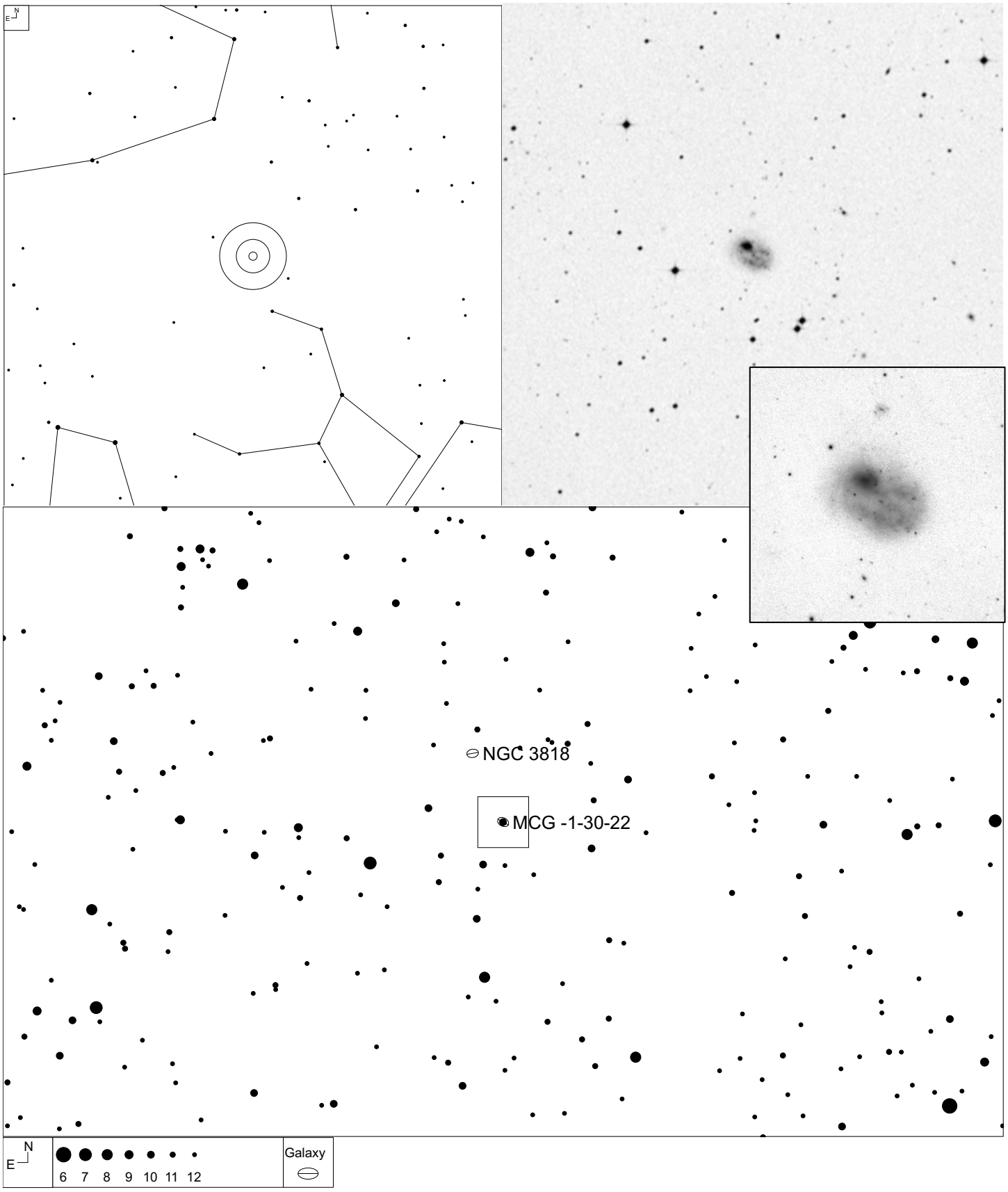
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
474a	MCG +05-31-154	13 12 59.5	+27 08 28	GPair	15.5g	0.6 x 0.4	MM

VV 831 (Coma Berenices)



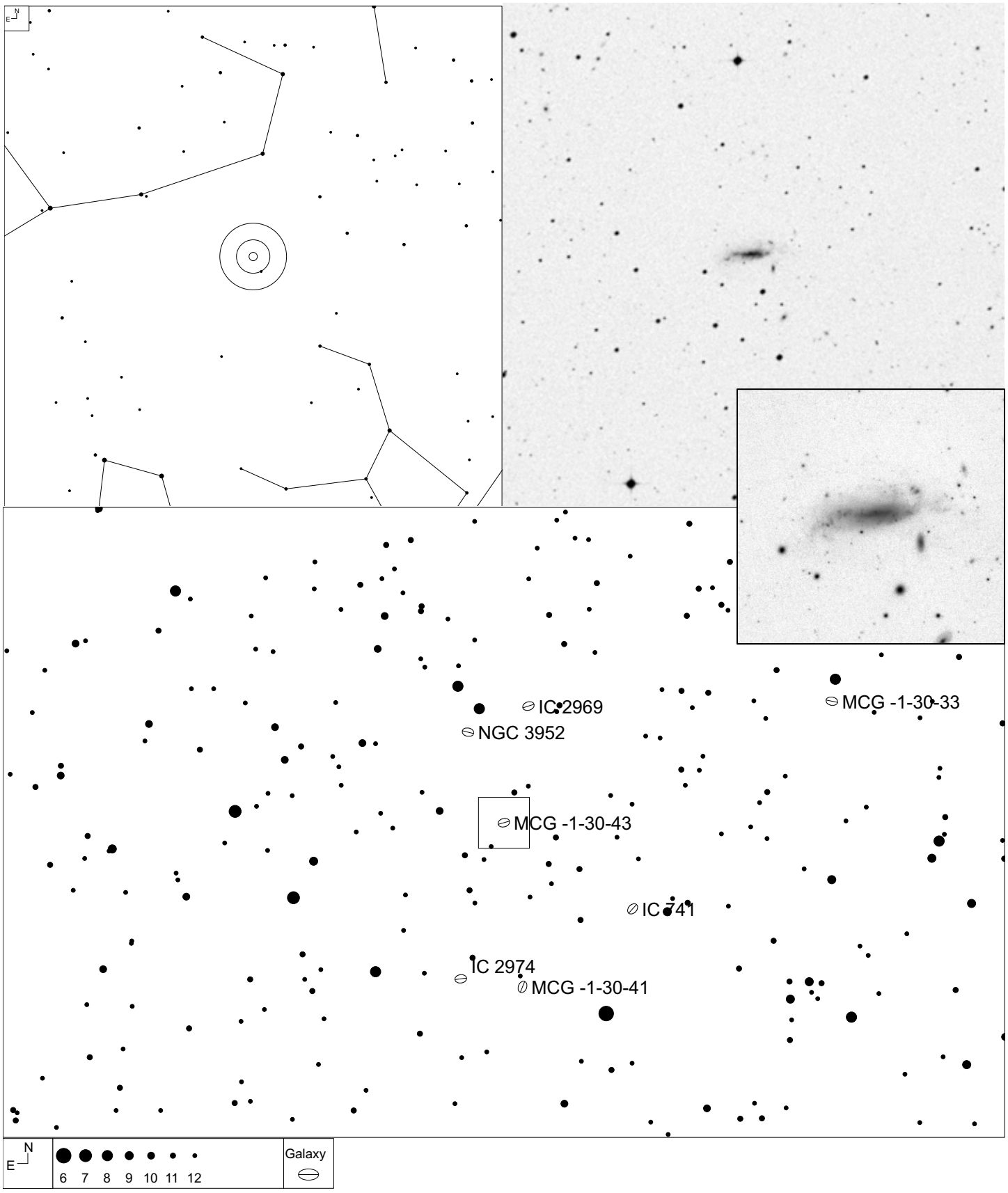
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
831	MCG +05-32-020	13 26 51.3	+26 35 28	GPair	15.3g	0.4 x 0.3	Enat

VV 544 (Virgo)



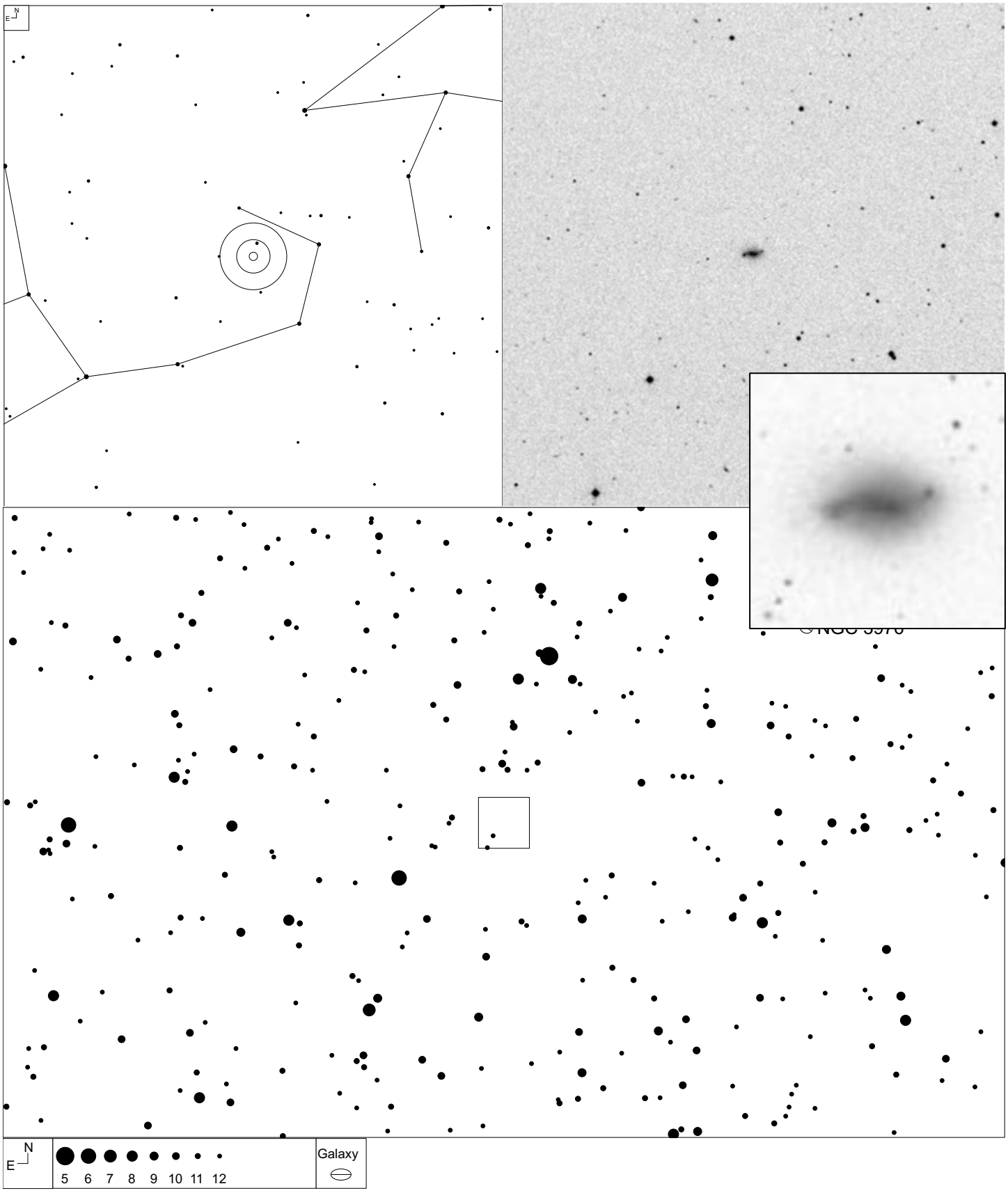
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
544	UGCA 242	11 41 22.5	-06 28 53	G	14.1g	1.7 x 1.3	N

VV 457 (Virgo)



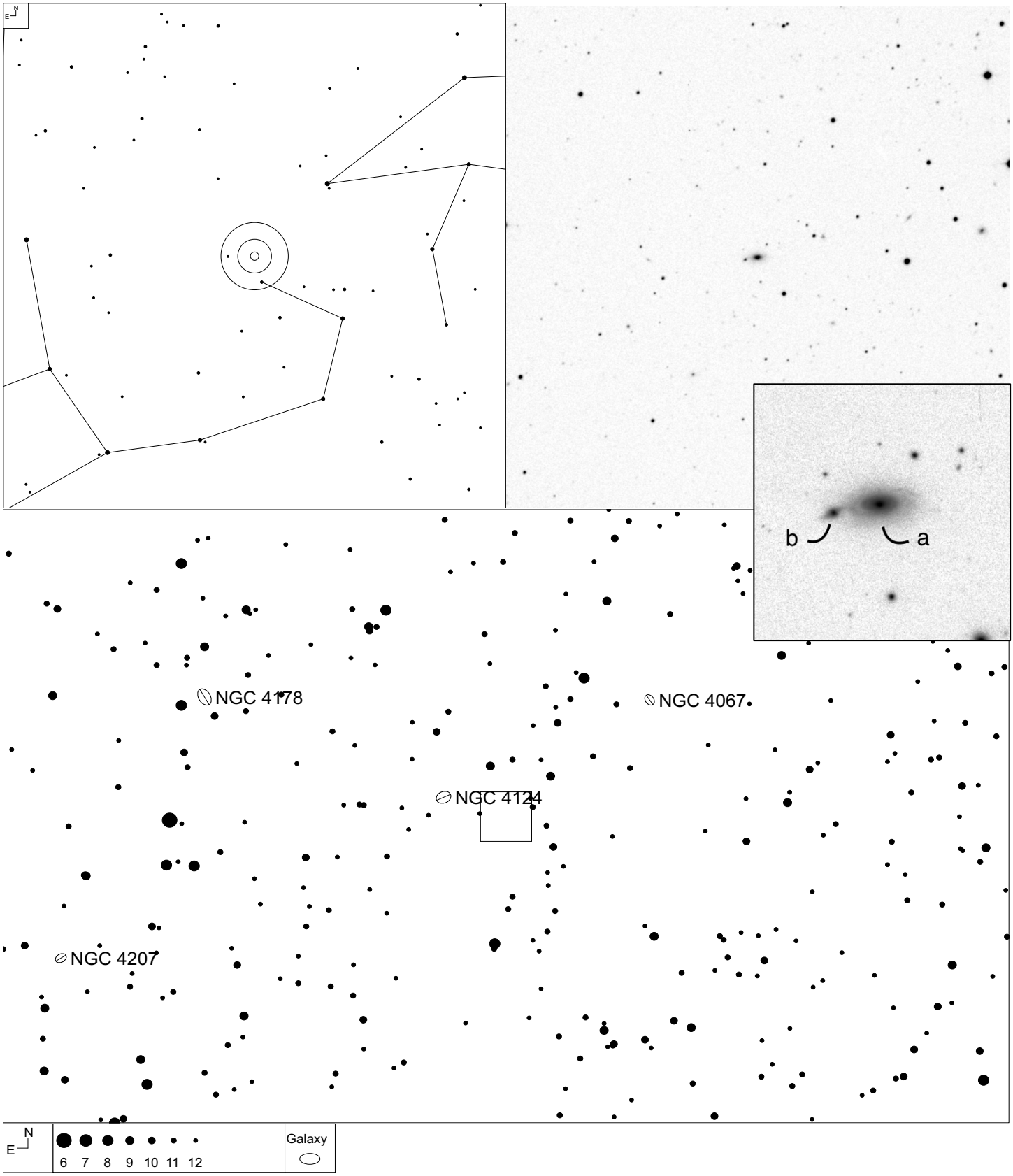
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
457	MCG -01-30-043	11 52 59.4	-04 25 37	G	14.1b	2.0 x 1.1	MM

VV 462 (Virgo)



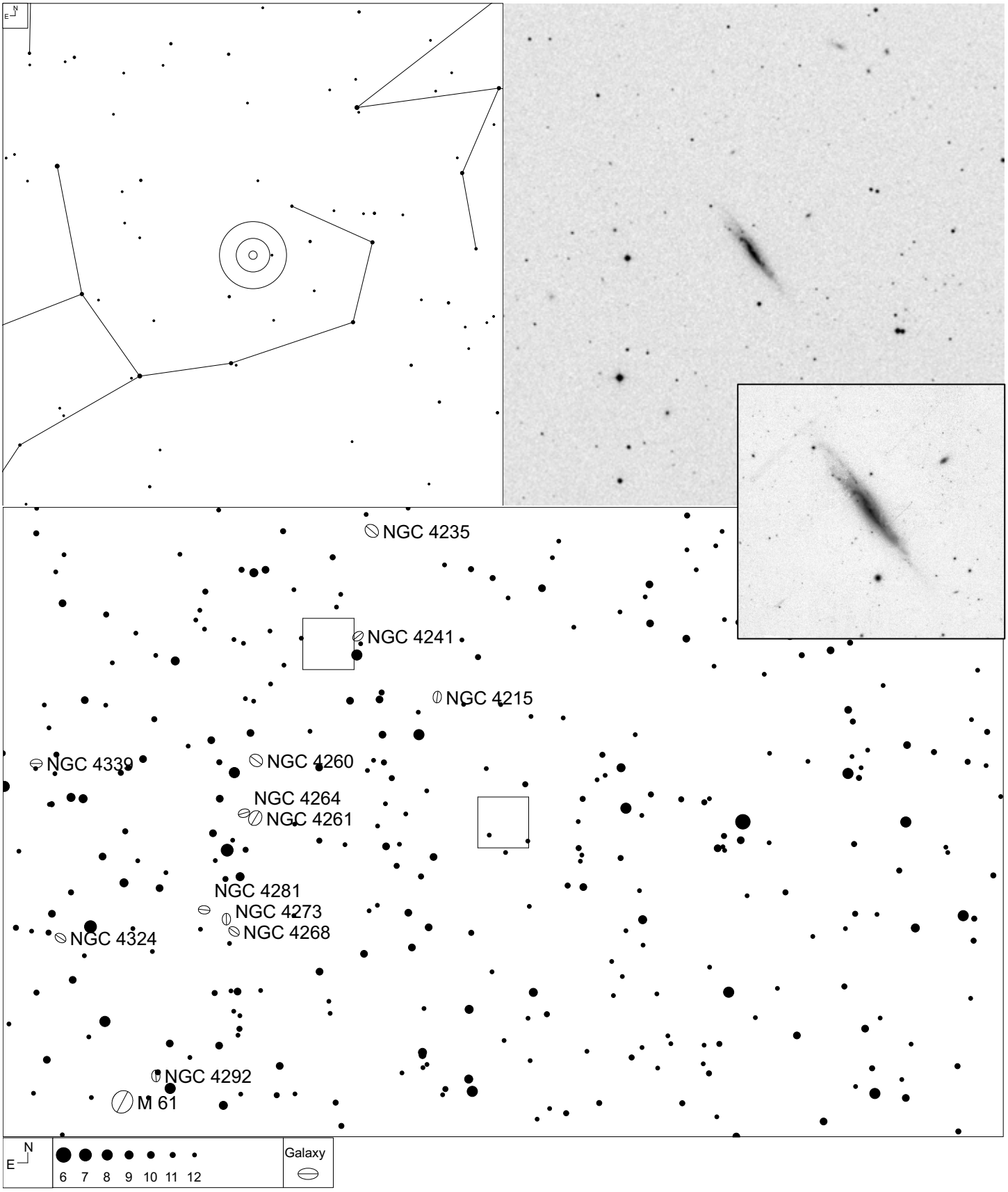
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
462	MCG +01-31-009	12 01 44.3	+05 49 17	G	14.9g	0.7 x 0.5	MM

VV 378 (Virgo)



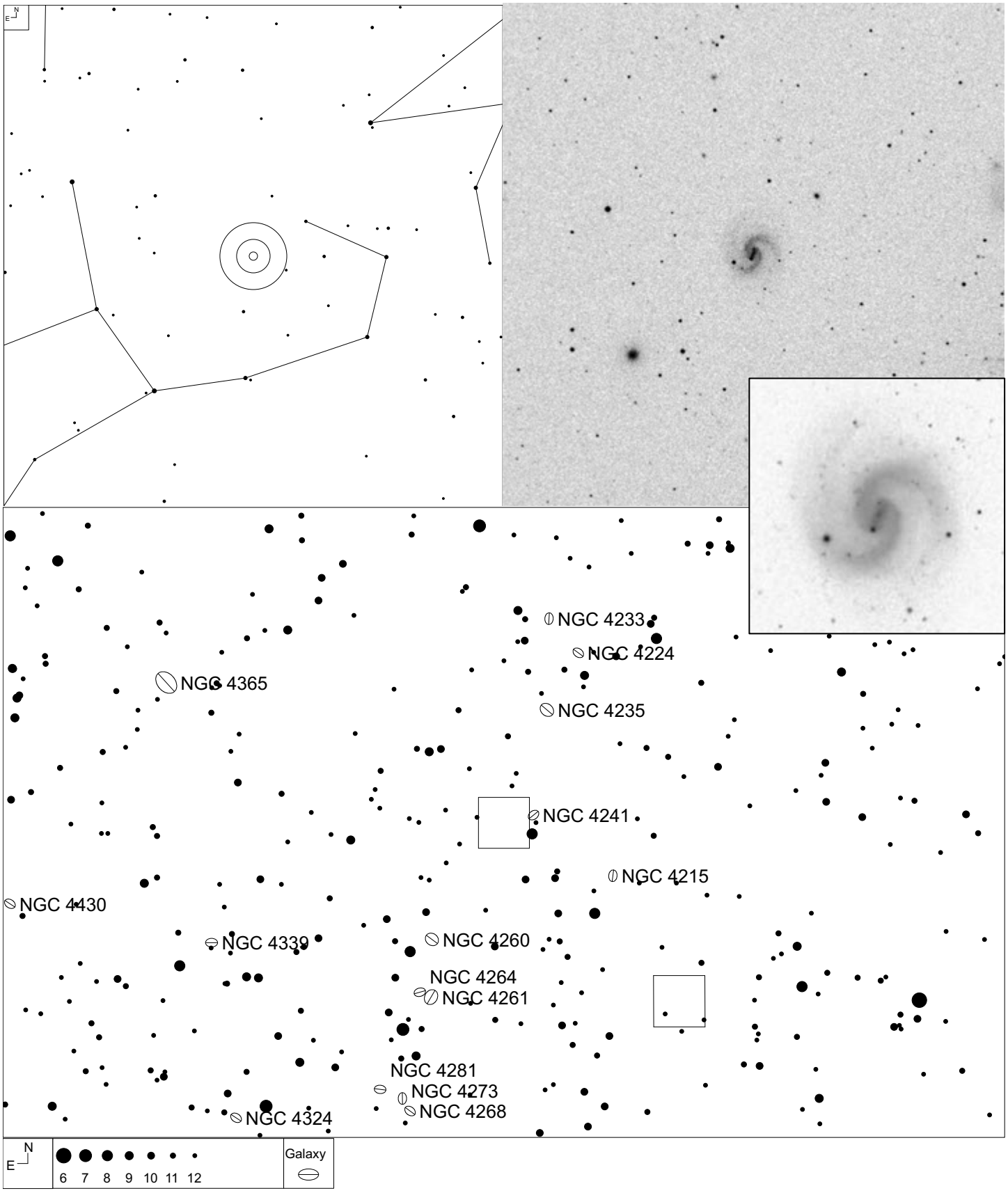
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
378	MCG +02-31-029	12 06 57.4	+10 17 01	GPair	15.2g	0.8 x 0.5	MMM

VV 520 (Virgo)



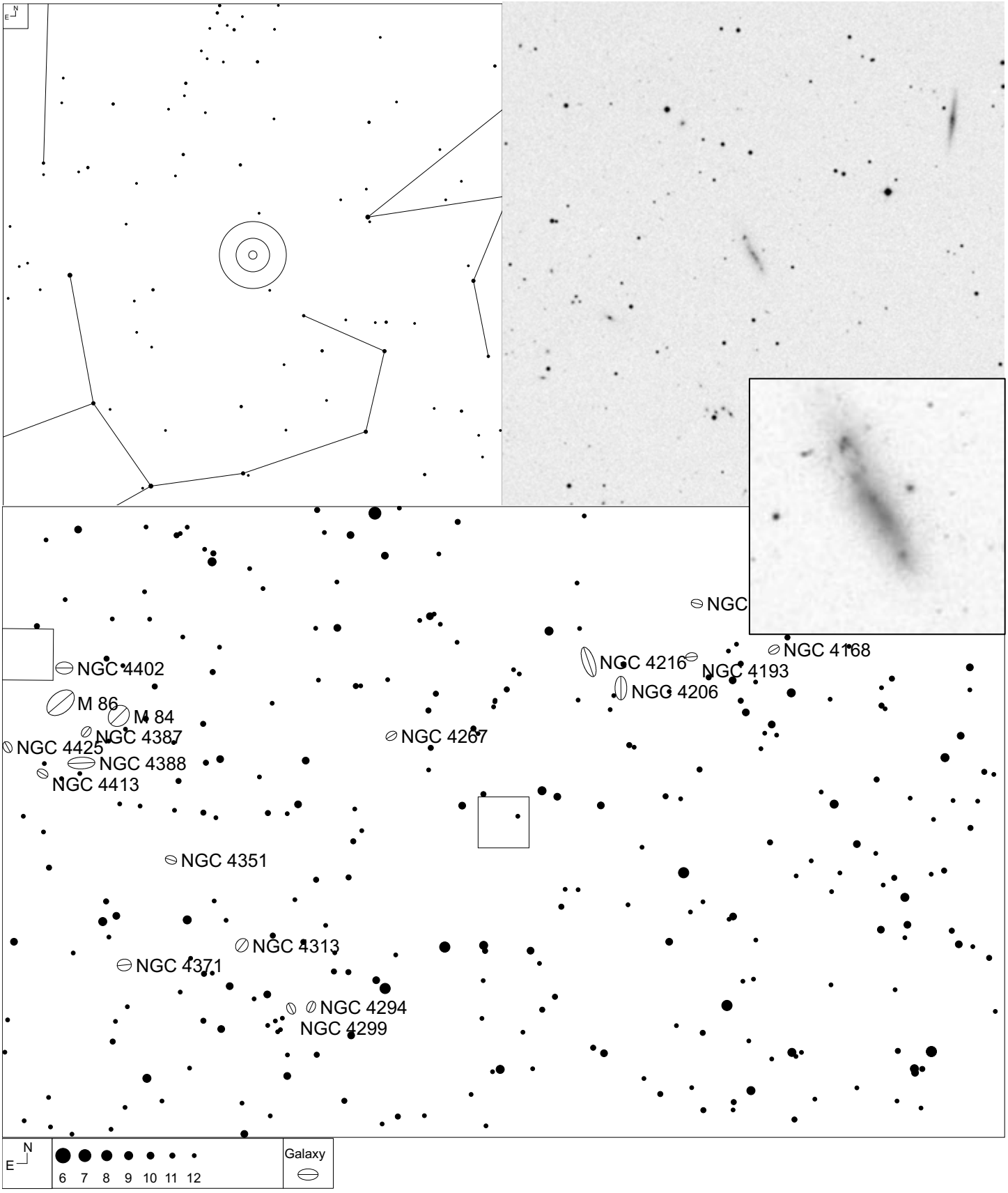
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
520	NGC 4197	12 14 38.5	+05 48 18	G	13.2g	3.2 x 0.6	Ch

VV 431 (Virgo)



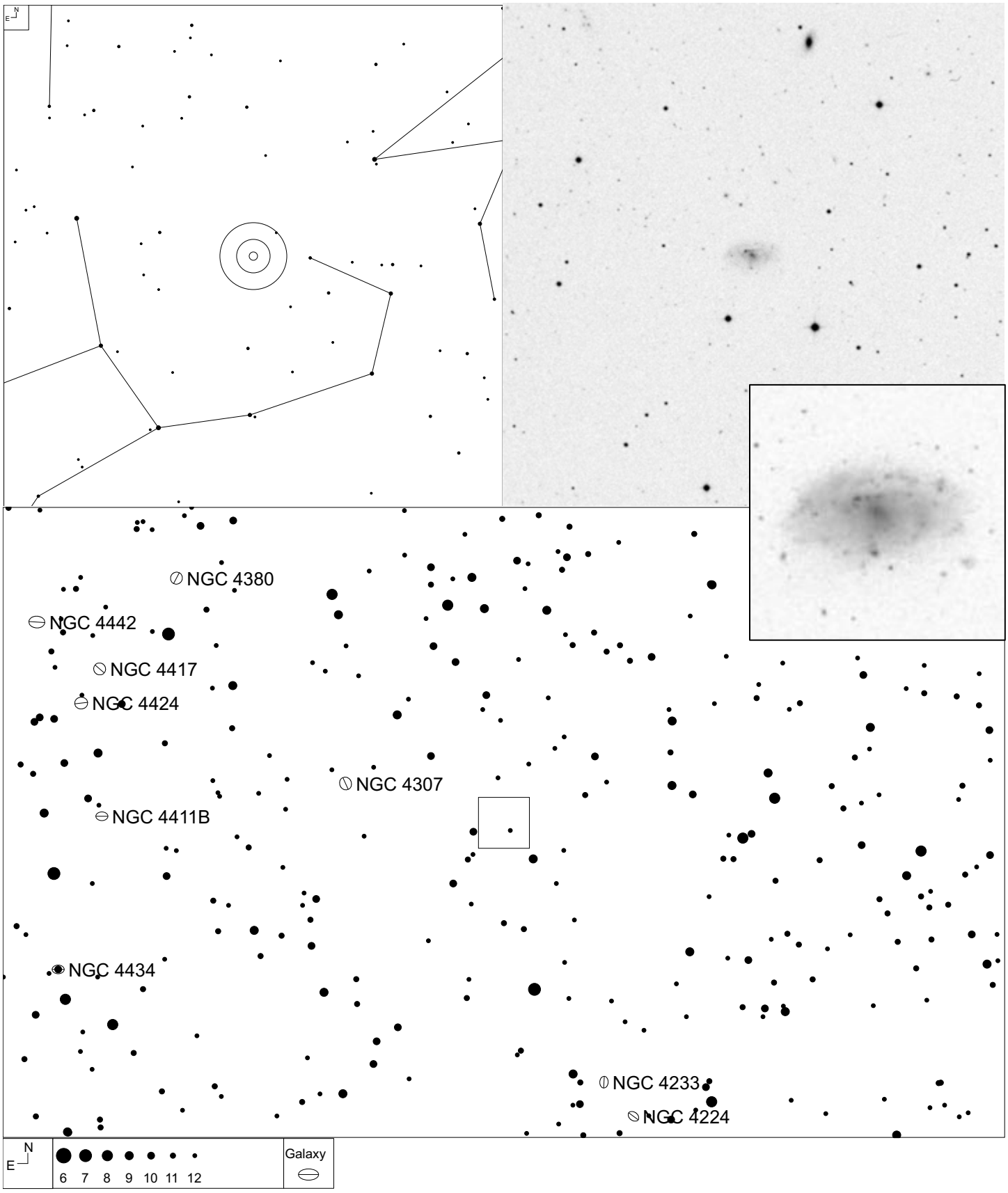
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
431	NGC 4241	12 17 59.9	+06 39 13	G	13.86g	1.2 x 1.0	M

VV 432 (Virgo)



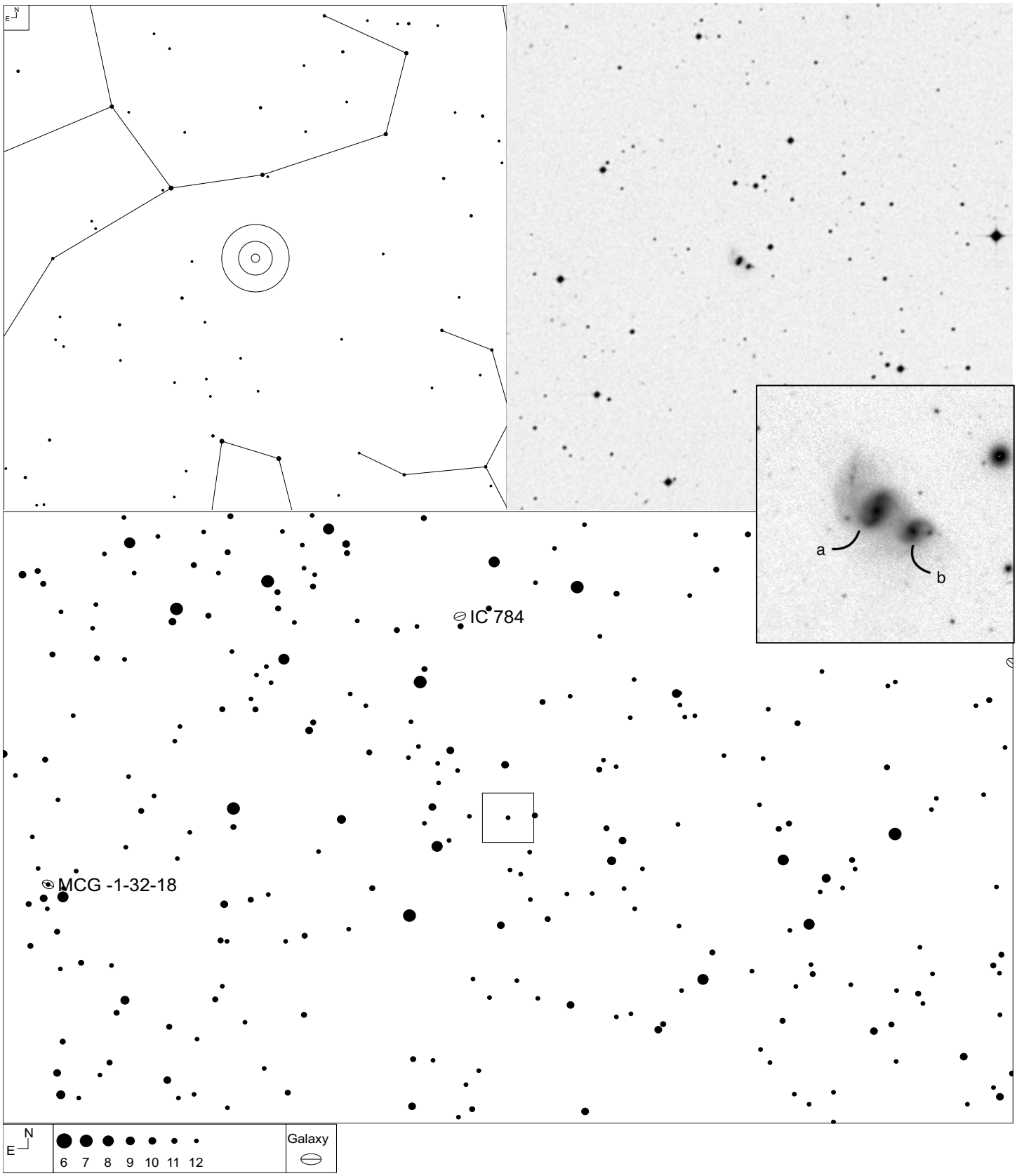
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
432	IC 3105	12 17 33.7	+12 23 17	G	14.7g	1.8 x 0.5	M

VV 614 (Virgo)



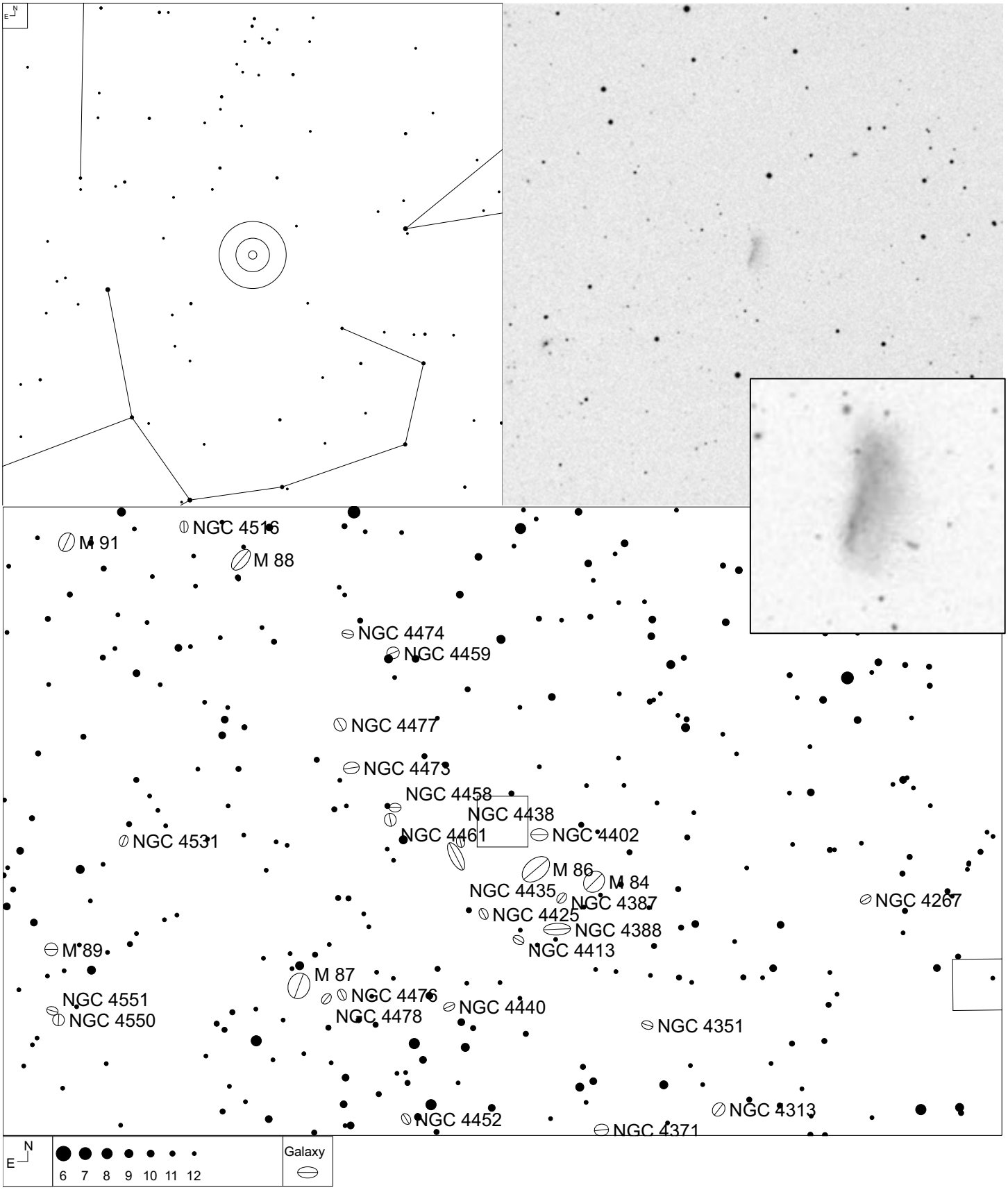
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
614	IC 776	12 19 02.9	+08 51 23	G	14.8g	1.8 x 1.1	N

VV 759 (Virgo)



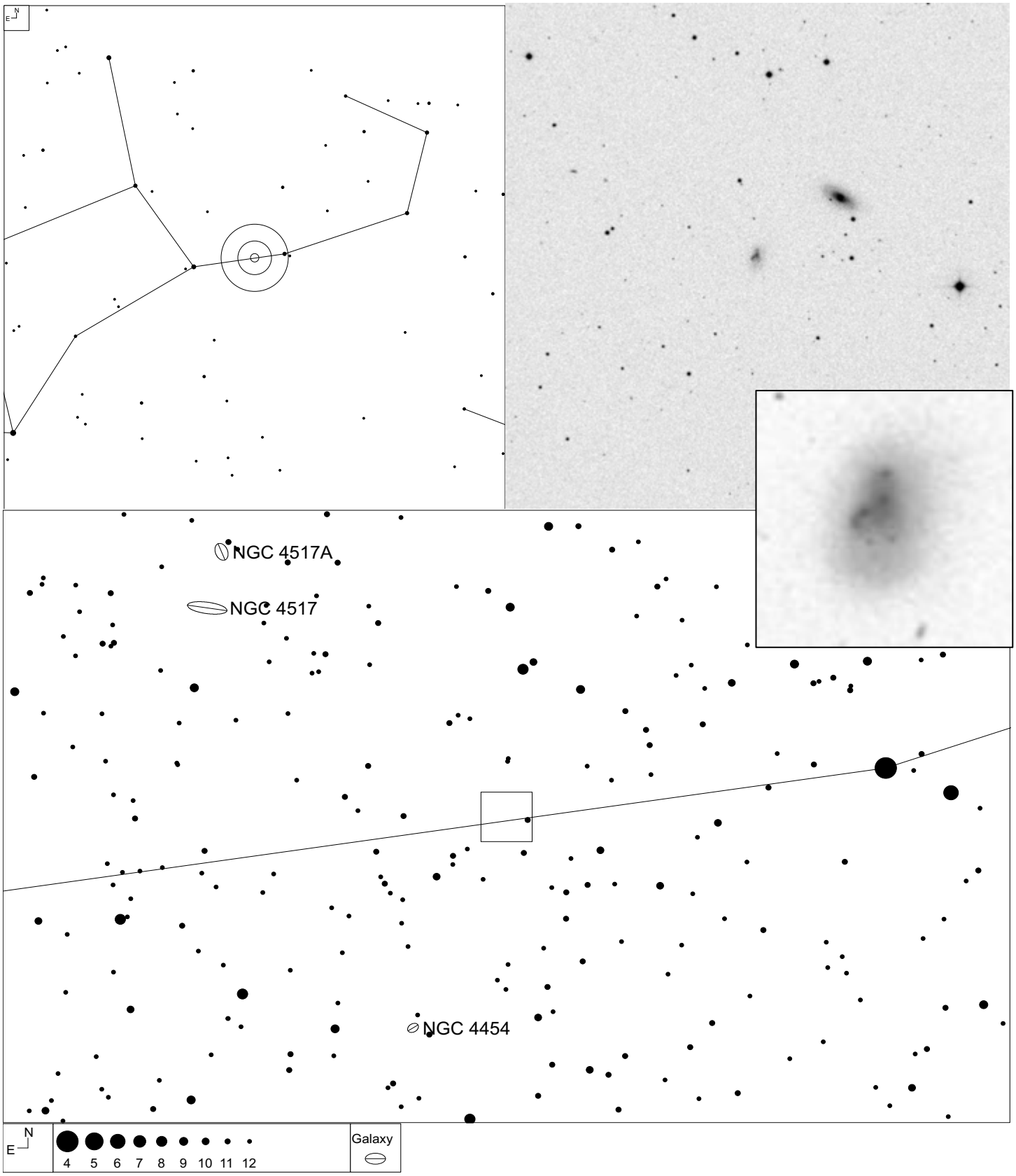
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
759	MCG -01-32-005	12 21 32.9	-05 38 15	GPair*	15.1g	0.9 x 0.5	NPNP

VV 511 (Virgo)



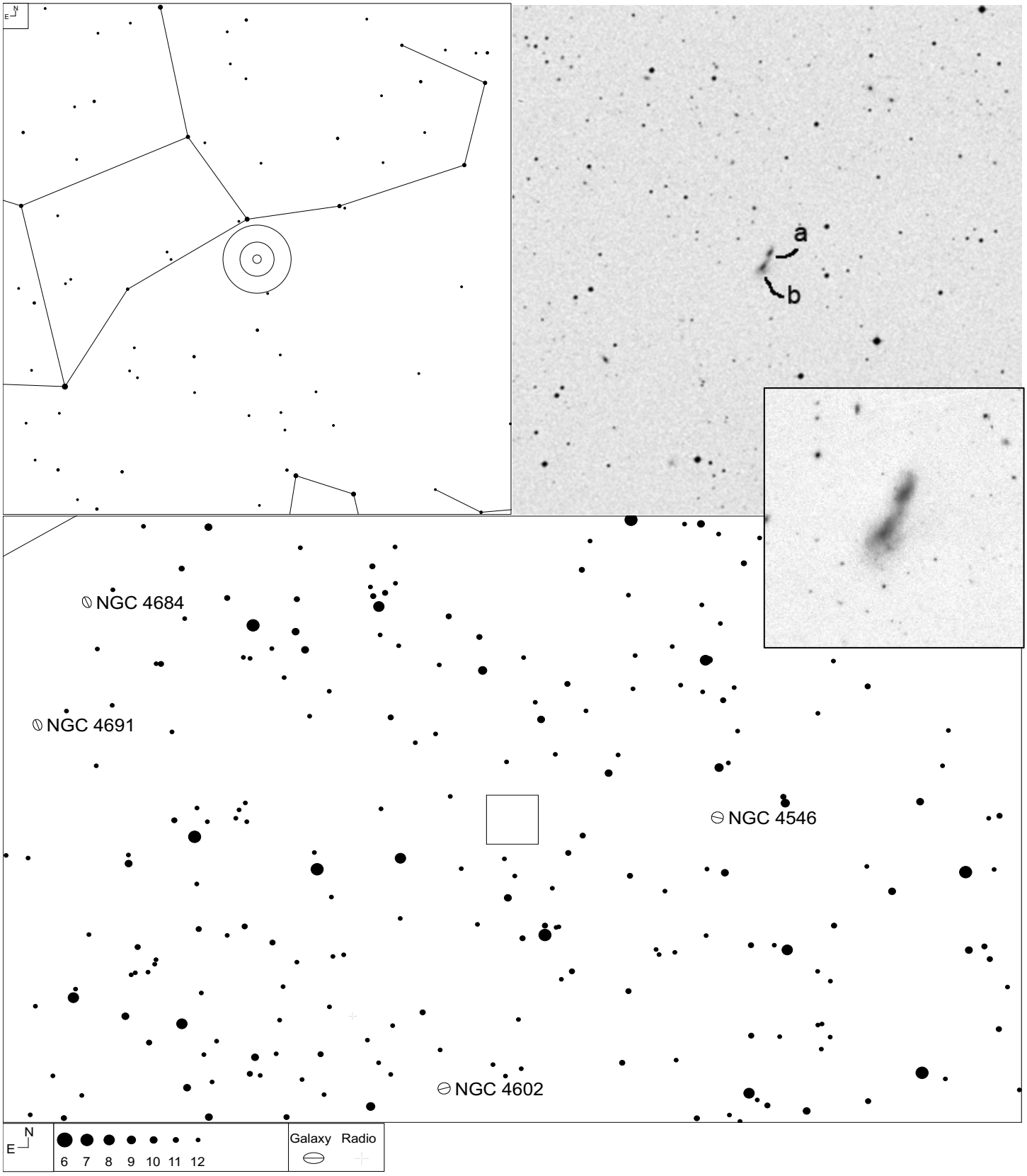
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
511	IC 3355	12 26 51.1	+13 10 33	G	14.9v	1.1 x 0.5	Ch

VV 655 (Virgo)



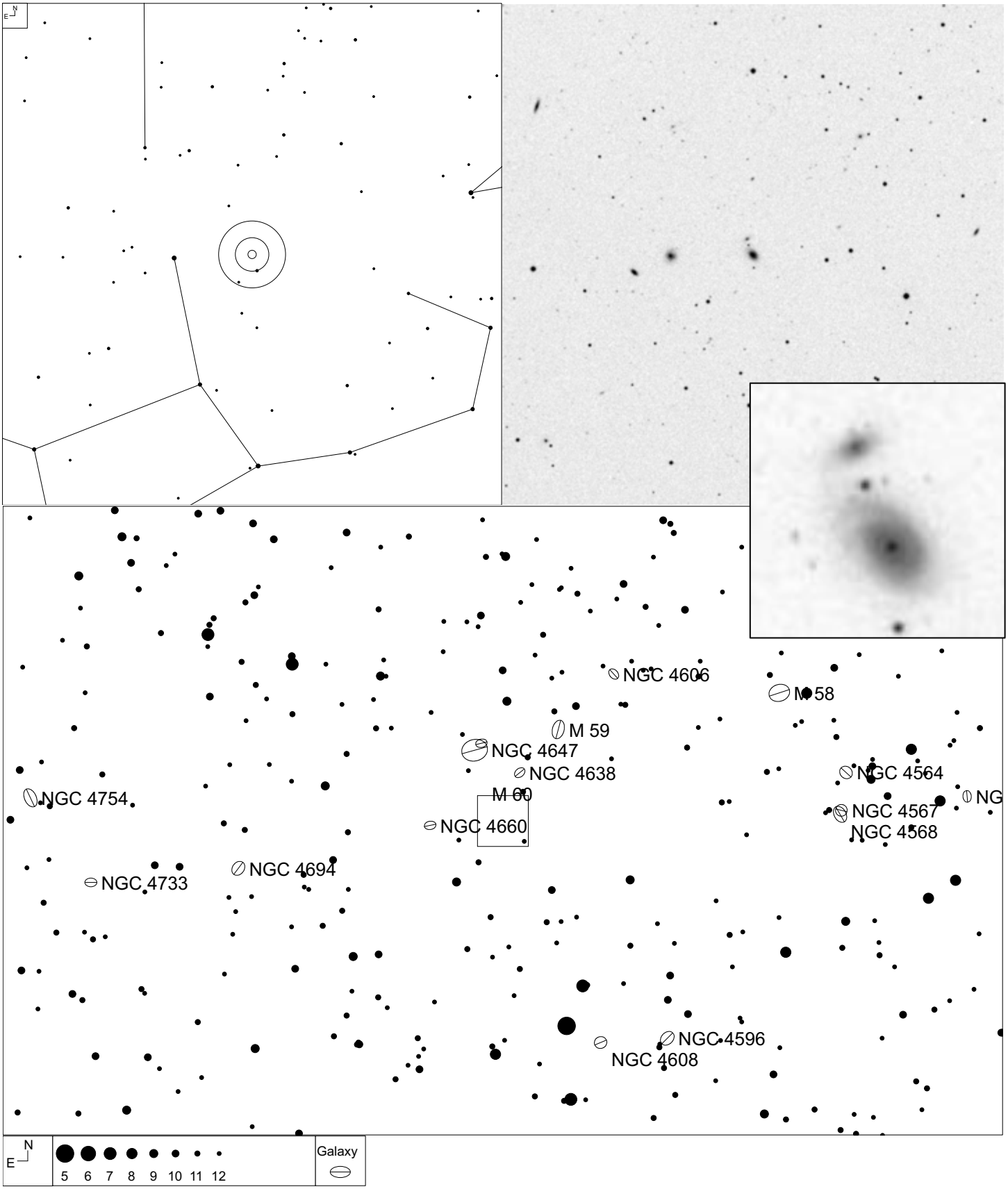
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
655	MCG 00-32-013	12 27 04.5	-00 54 23	GPair	15.2g	1.0 x 0.7	N

VV 844 (Virgo)



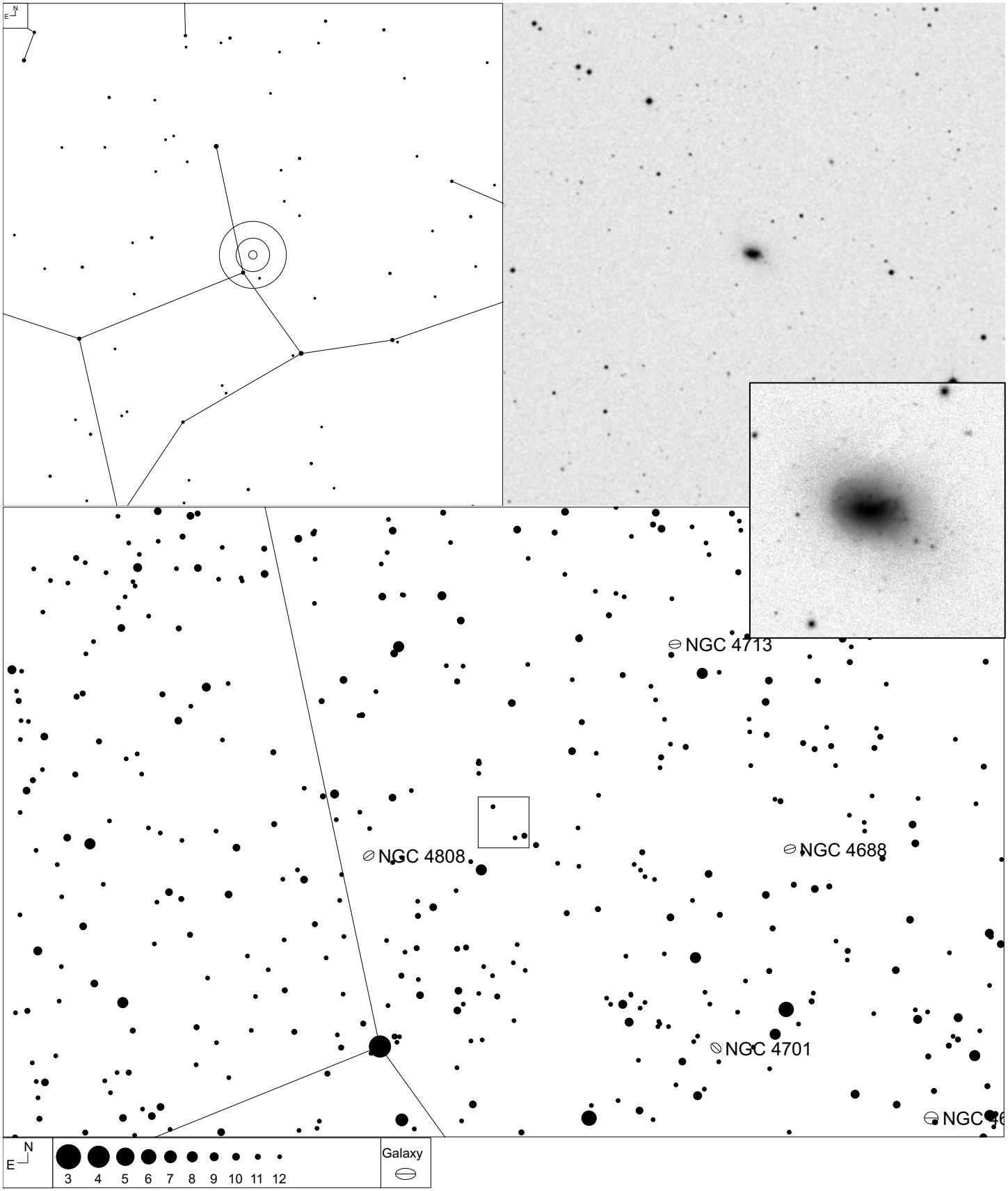
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
844		12 39 20.3	-03 48 30	GPair			Ent
844a	PGC 1066645	12 39 19.9	-03 48 18	G	16.2v		
844b	MCG -01-32-031	12 39 20.6	-03 48 33	G	15.9g	1.0 x 0.3	

VV 505 (Virgo)



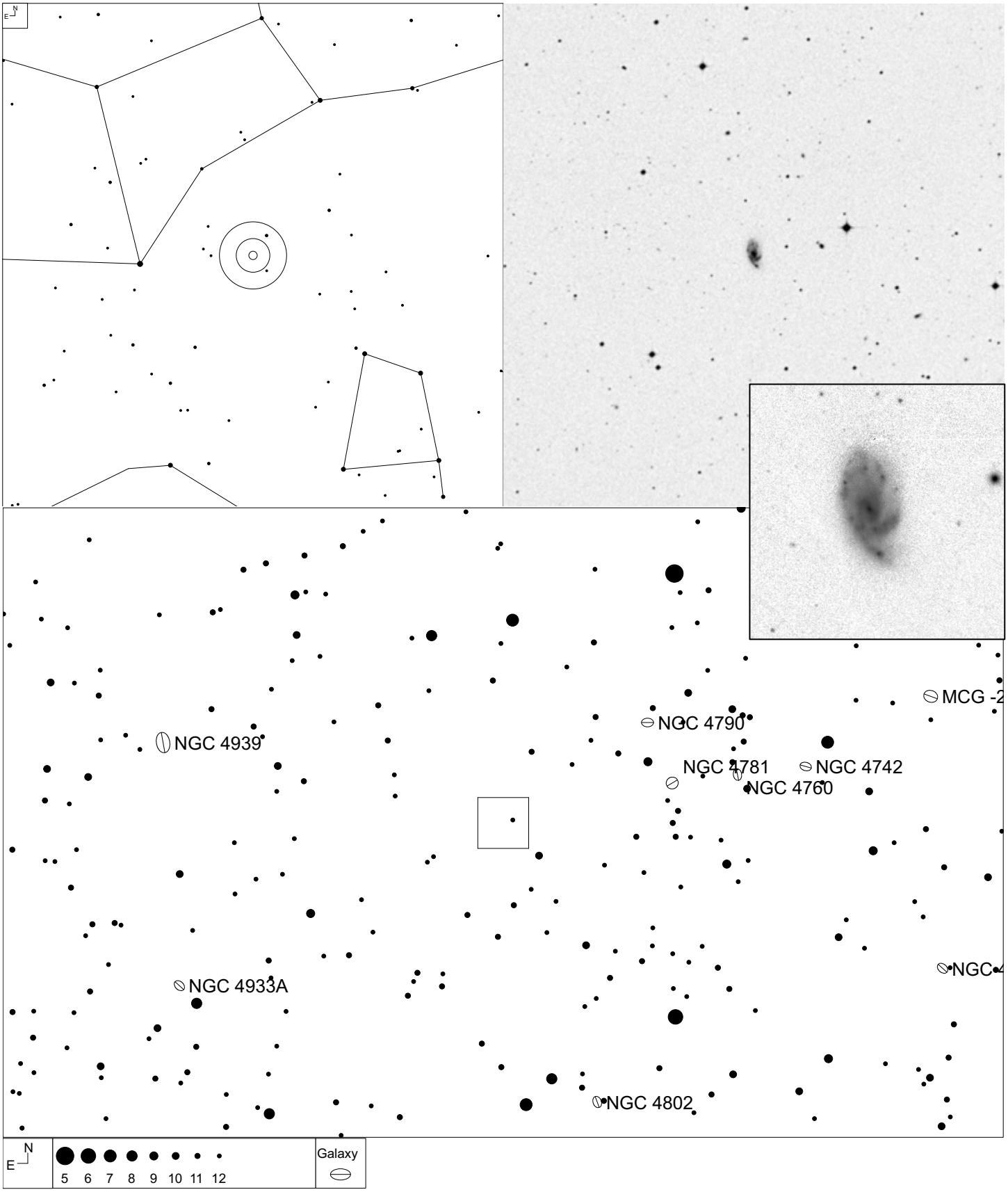
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
505	IC 3694	12 43 07.3	+11 12 43	G	15.1g	0.7 x 0.4	Ch

VV 366 (Virgo)



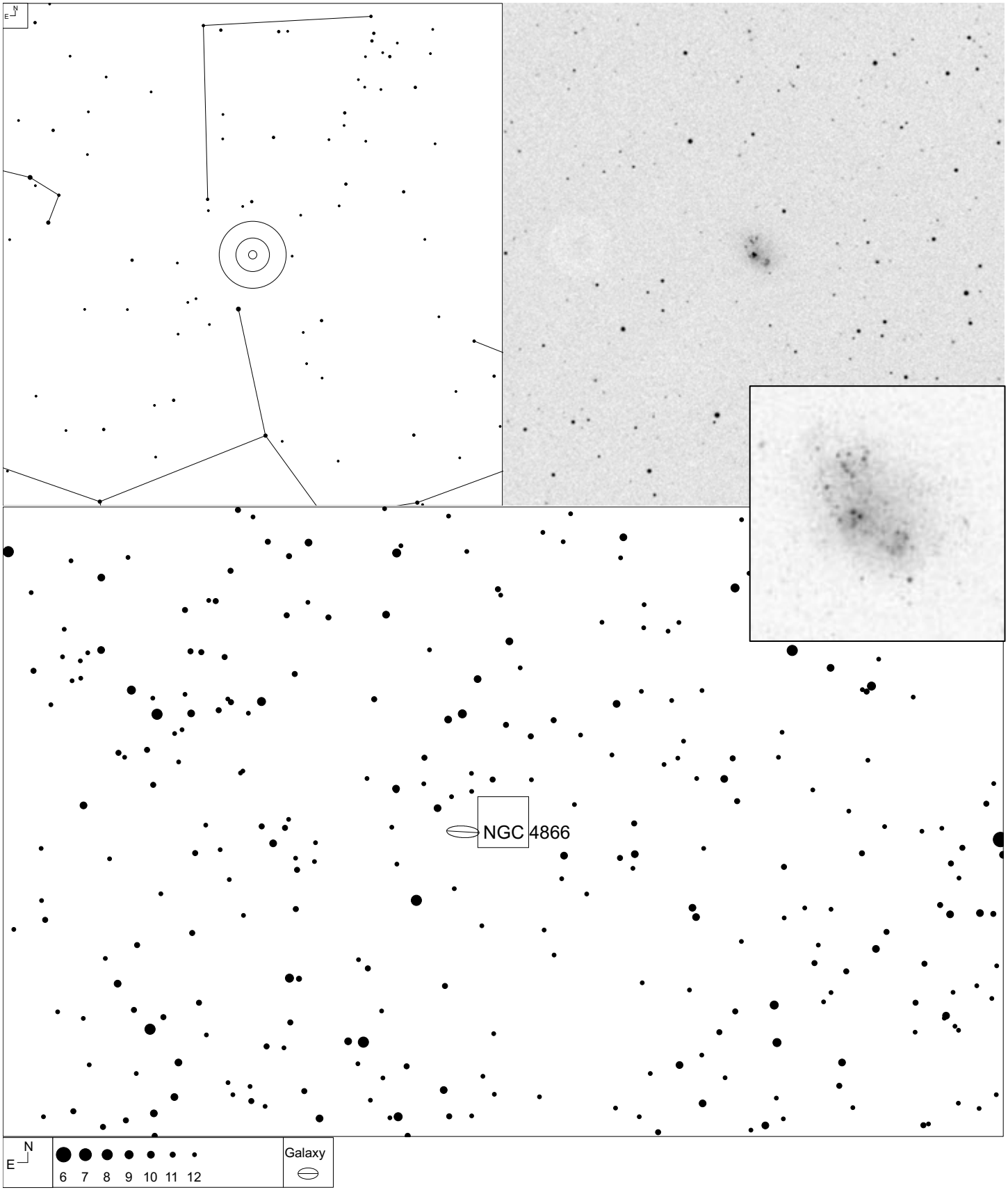
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
366	NGC 4765	12 53 14.4	+04 27 47	G	13.0b	1.1 x 0.8	MMM

VV 434 (Virgo)



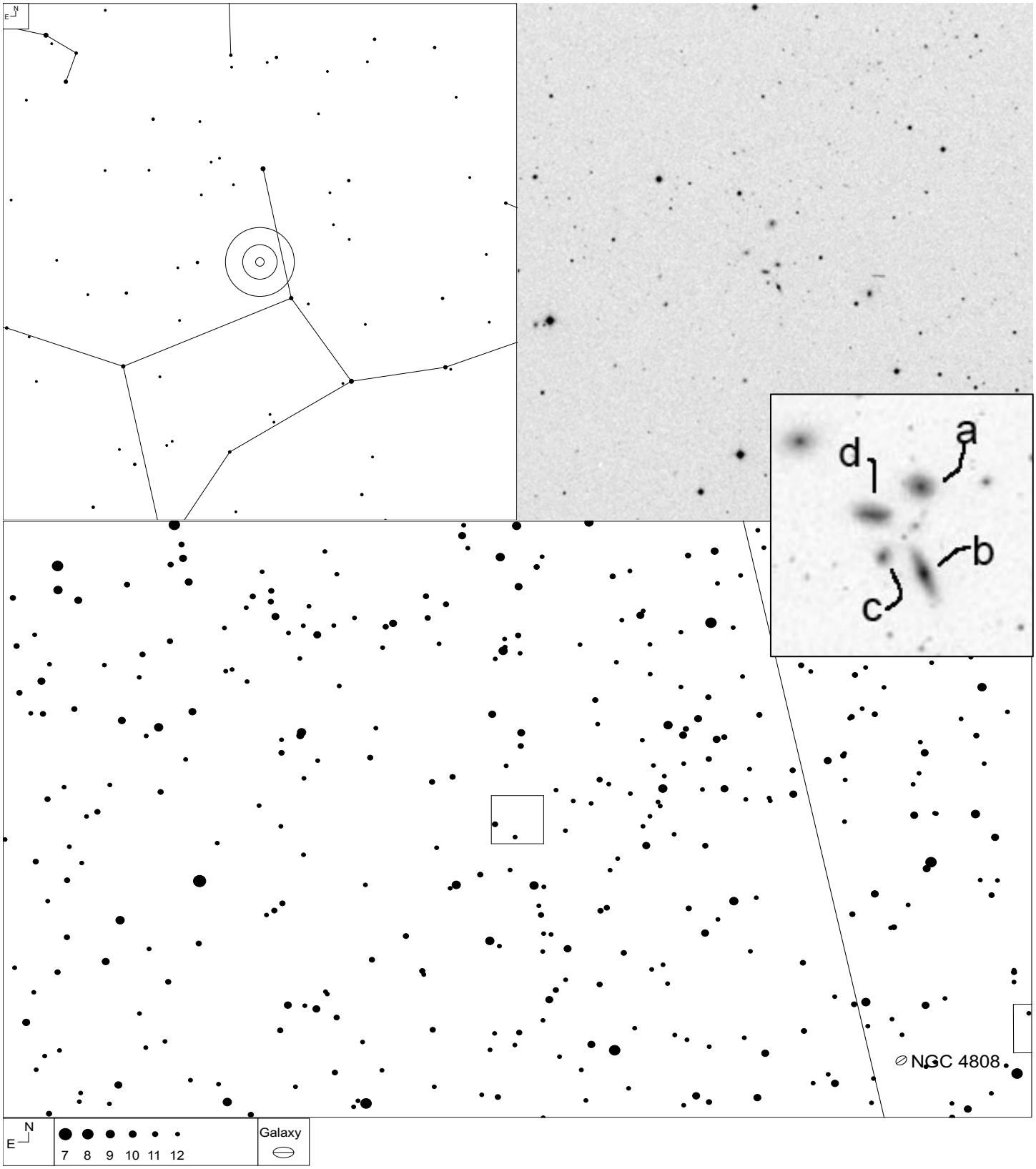
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
434	MCG -02-33-073	12 57 39.5	-10 43 36	G	14.0b	1.1 x 0.6	M

VV 558 (Virgo)



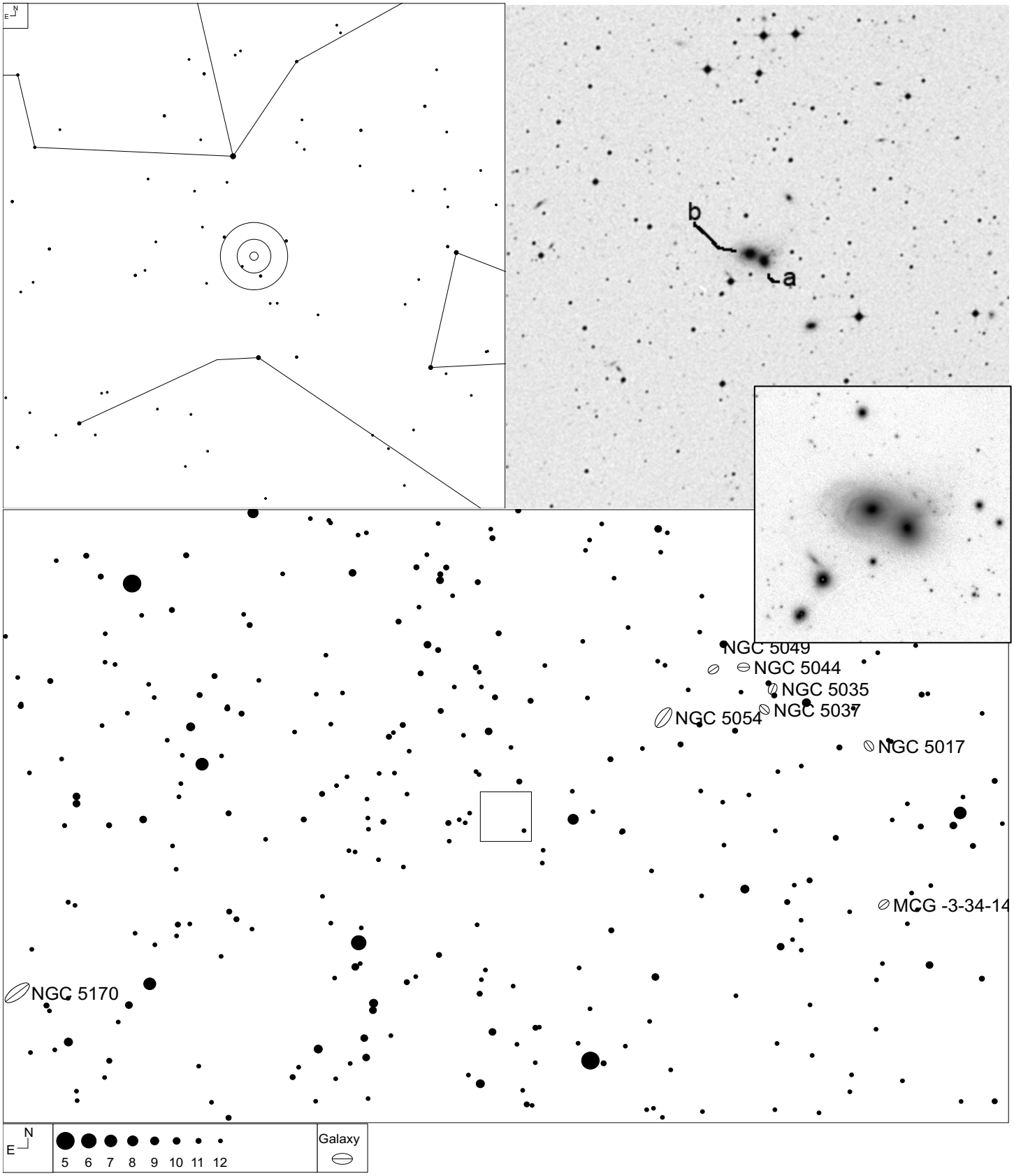
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
558	UGC 8091	12 58 40.4	+14 13 02	G	15.0v	1.1 x 1.0	N

VV 676 (Virgo)



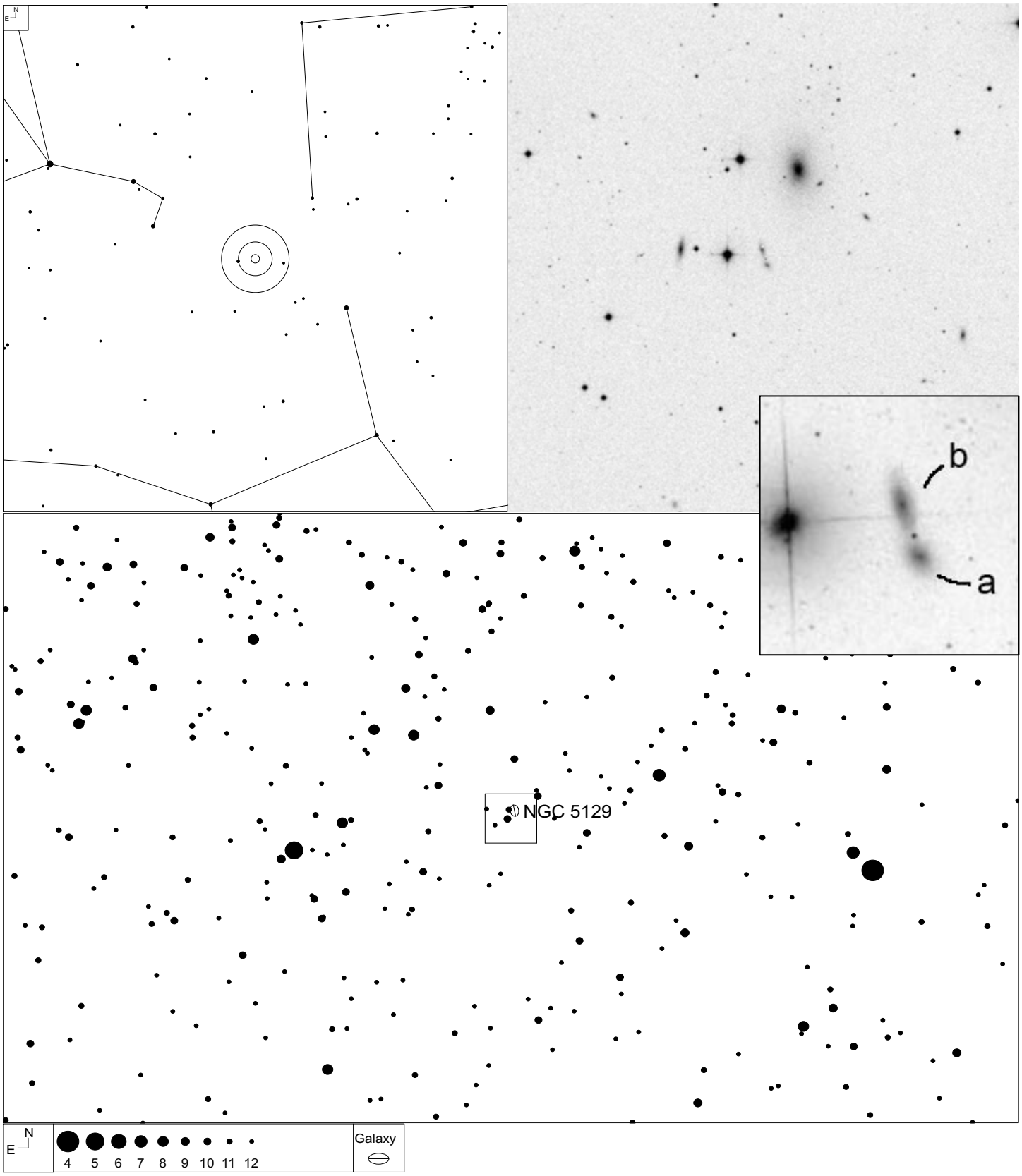
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
676		13 02 55.3	+05 31 21	GGroup			NNN
676a	MCG +01-33-038	13 02 54.9	+05 30 36	G	15.3b	0.4 x 0.2	
676b	*MAC 1302+0531*	*13 02 55.0*	*+05 31 15*	*G*	*16.3g*	*0.2 x 0.1*	
676c	*PGC 2801011*	*13 02 56.1*	*+05 30 43*	*G*	*17.7g*	*0.1 x 0.1*	
676d	*PGC 45047*	*13 02 56.4*	*+05 31 02*	*G*	*16.9g*	*0.3 x 0.1*	

VV 802 (Virgo)



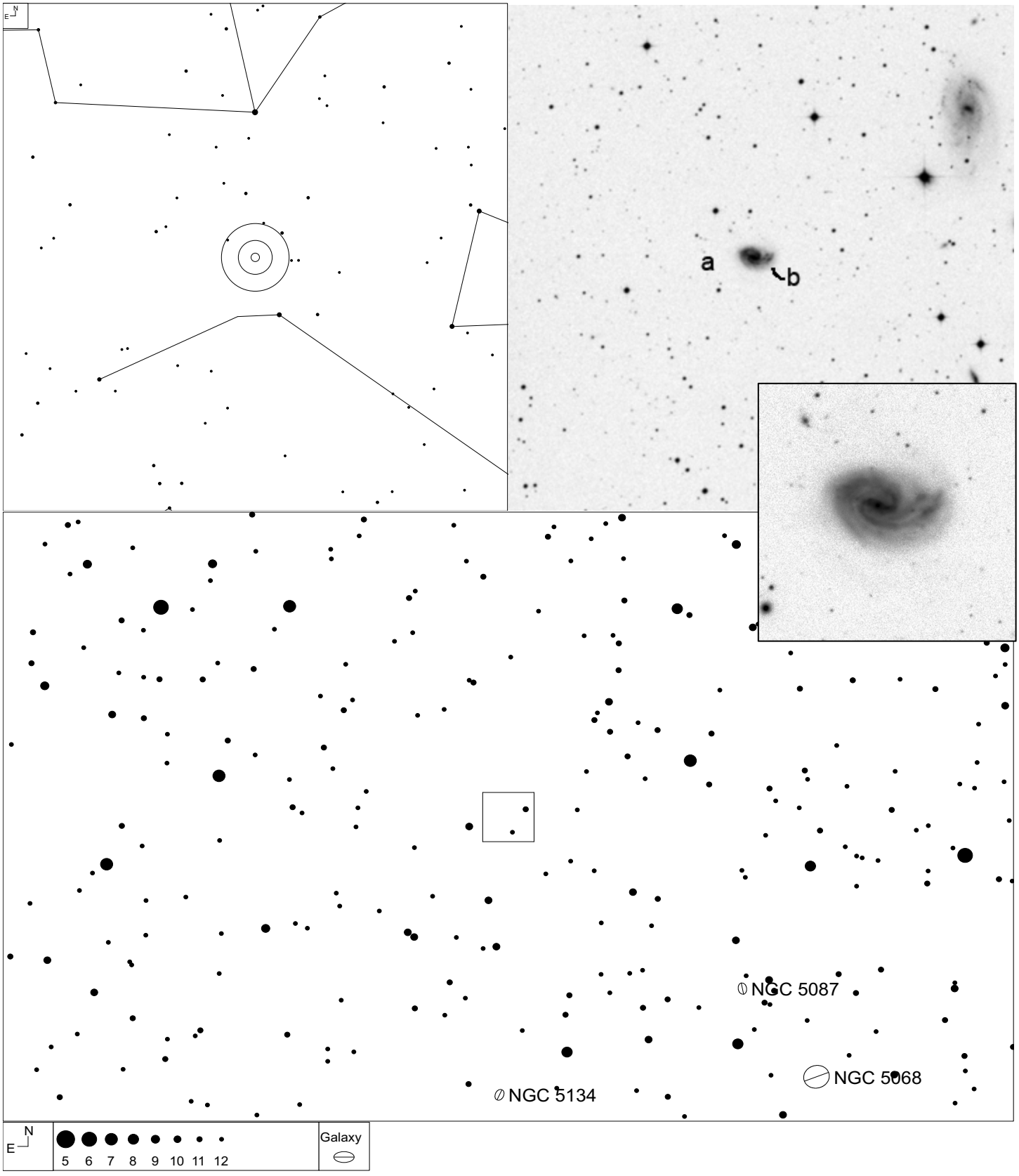
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
802		13 20 05.5	-17 07 12	GPair			PKb
802a	MCG -03-34-048	13 20 04.7	-17 07 18	G	15.0b	0.4 x 0.4	
802b	MCG -03-34-049	13 20 06.4	-17 07 05	G	15.0b	0.6 x 0.5	

VV 513 (Virgo)



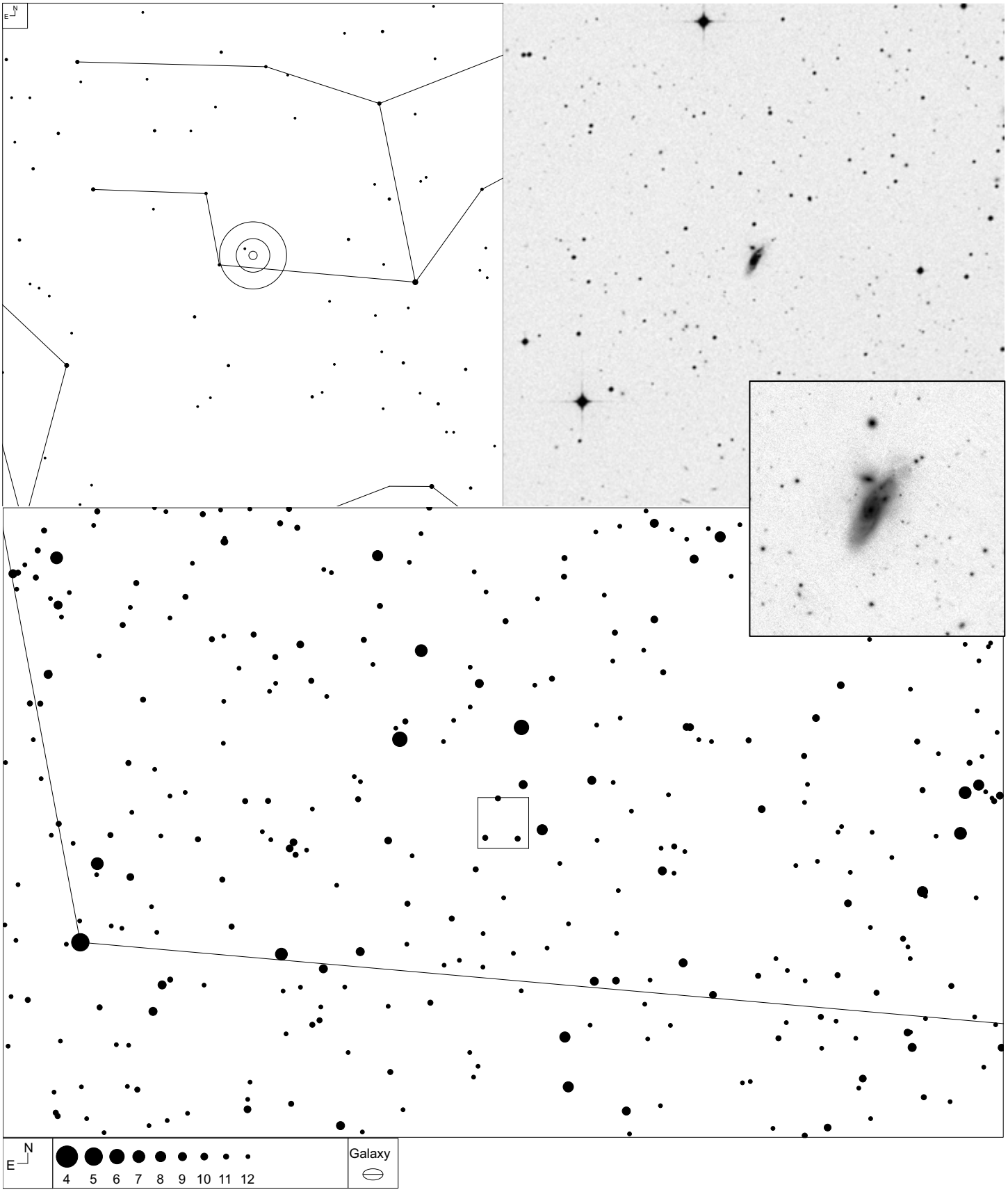
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
513	MCG+02-34-013	13 24 14.2	+13 56 00	GPair	17.2g	0.4 x 0.3	Ch
*513b**	*MAC 1324+1355*	*13 24 14.4*	*+13 56 15*	*G*	*16.2g*	*0.4 x 0.2*	

VV 485 (Virgo)



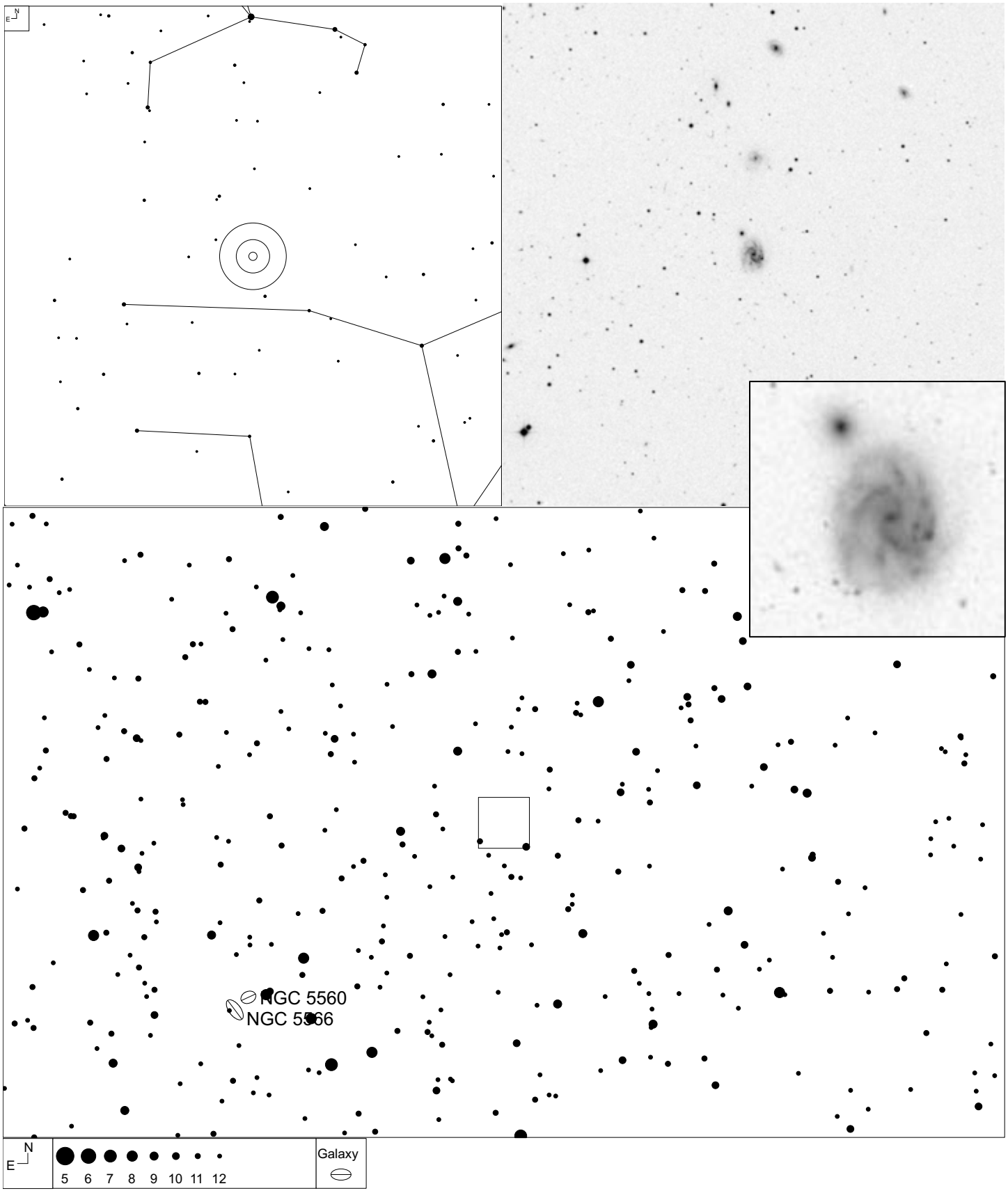
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
485		13 25 08.0	-19 46 07	GPair			M
485a	MCG -03-34-070	13 25 09.0	-19 46 05	G	13.7b	1.3 x 0.9	
485b	MCG -03-34-071	13 25 07.0	-19 46 09	G	15.0b	1.2 x 0.8	

VV 691 (Virgo)



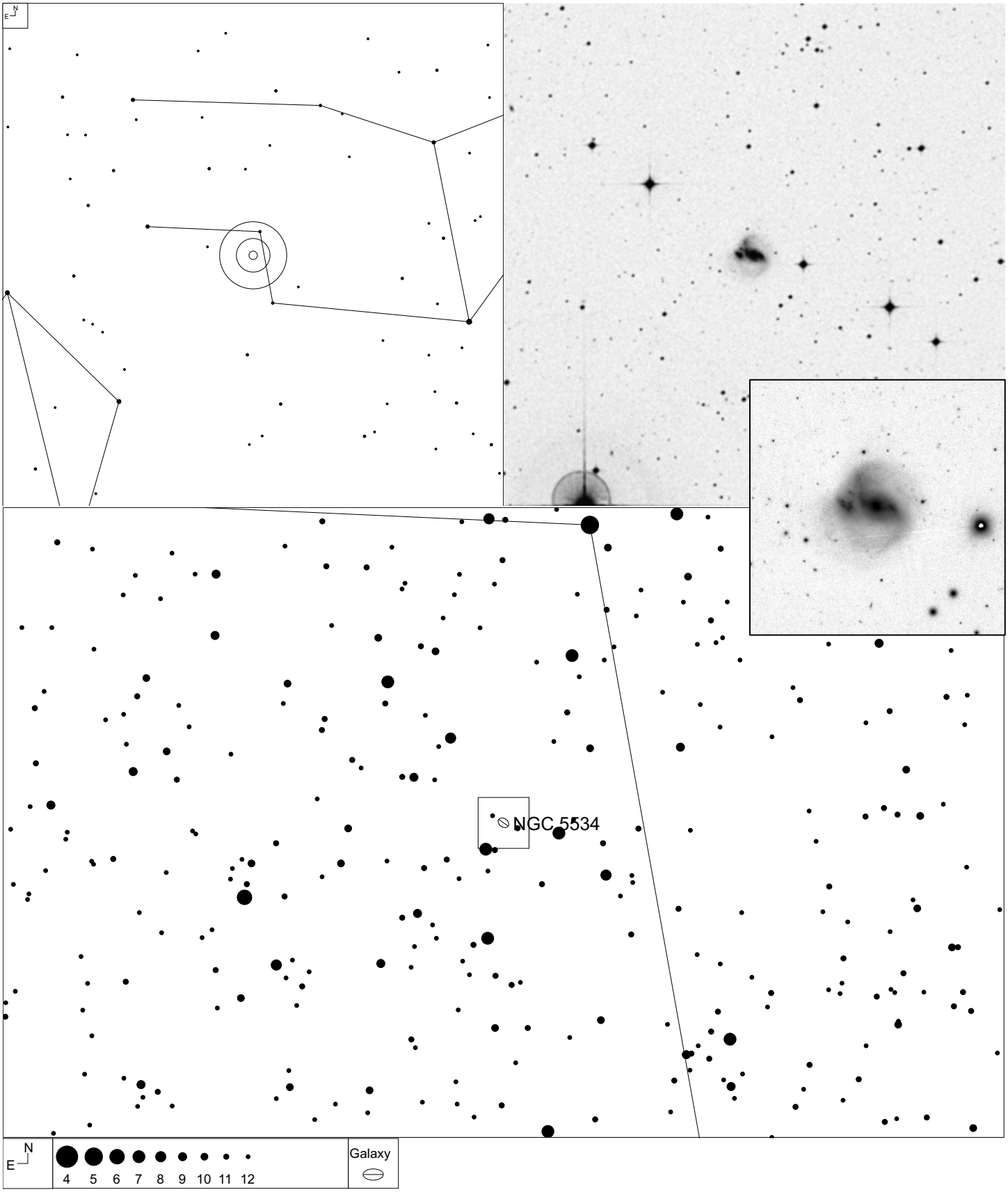
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
691	NGC 5442	14 04 43.2	-09 42 39	G	14.3g	1.2 x 0.5	N

VV 567 (Virgo)



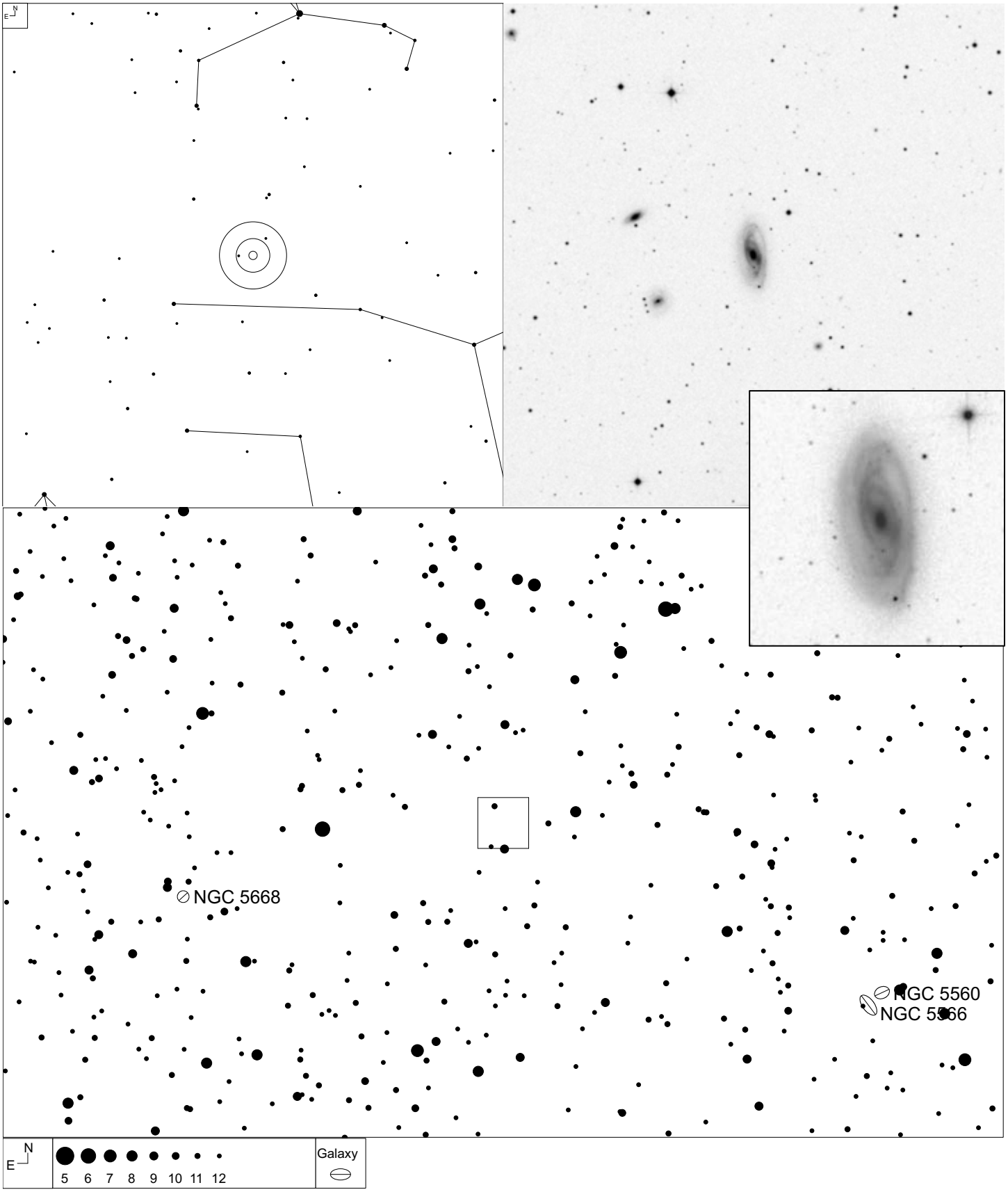
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
567	UGC 9120	14 15 12.3	+04 49 27	G	14.3g	1.1 x 0.8	N

VV 615 (Virgo)



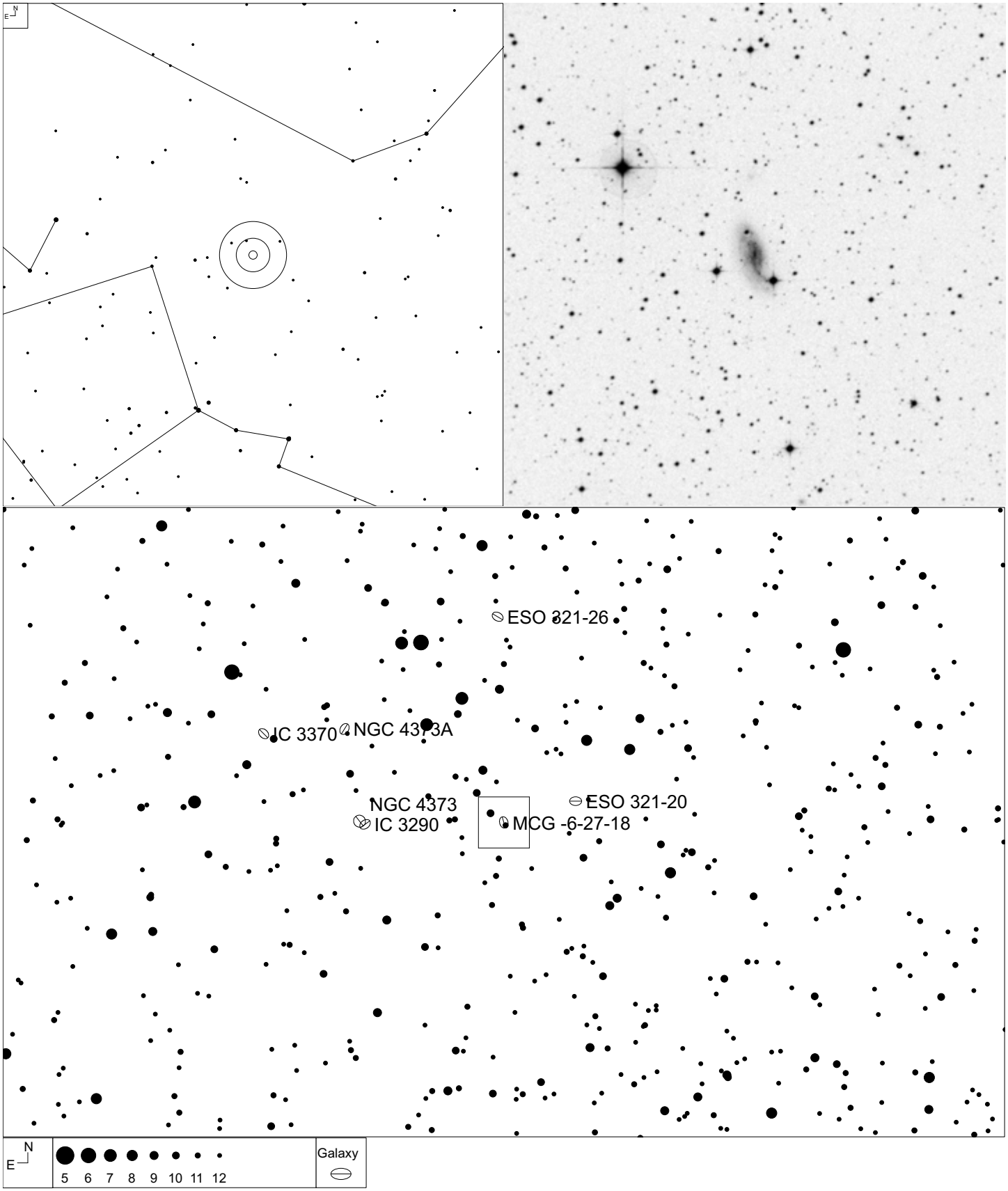
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
615	NGC 5534	14 17 40.2	-07 25 03	G	13.1g	1.4 x 0.8	N

VV 408 (Virgo)



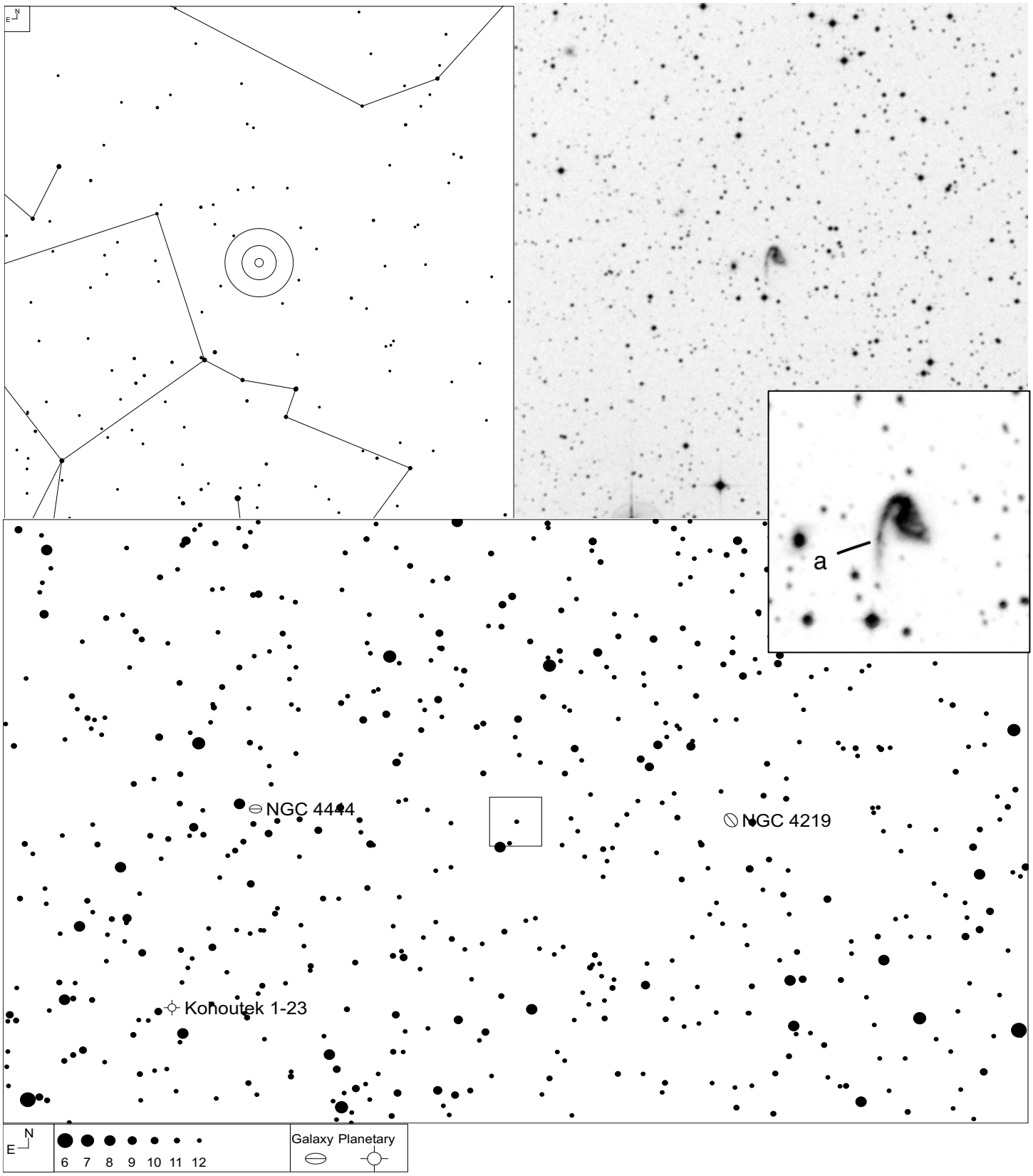
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
408	NGC 5619	14 27 18.2	+04 48 10	G	13.0g	2.2 x 1.2	M

VV 416 (Centaurus)



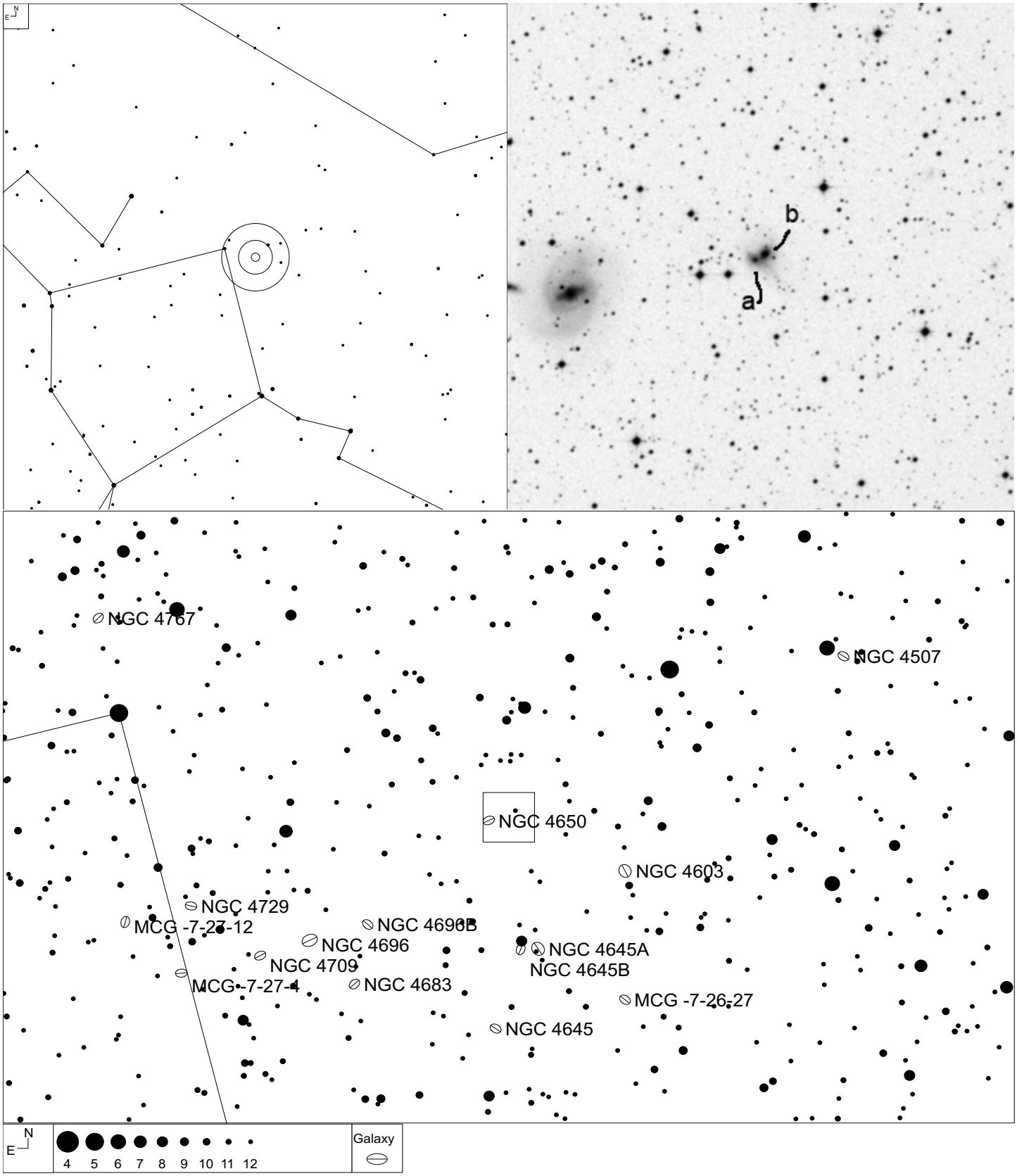
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
416	MCG -06-27-018	12 21 42.9	-39 46 10	G	12.7b	2.2 x 1.1	M

VV 415 (Centaurus)



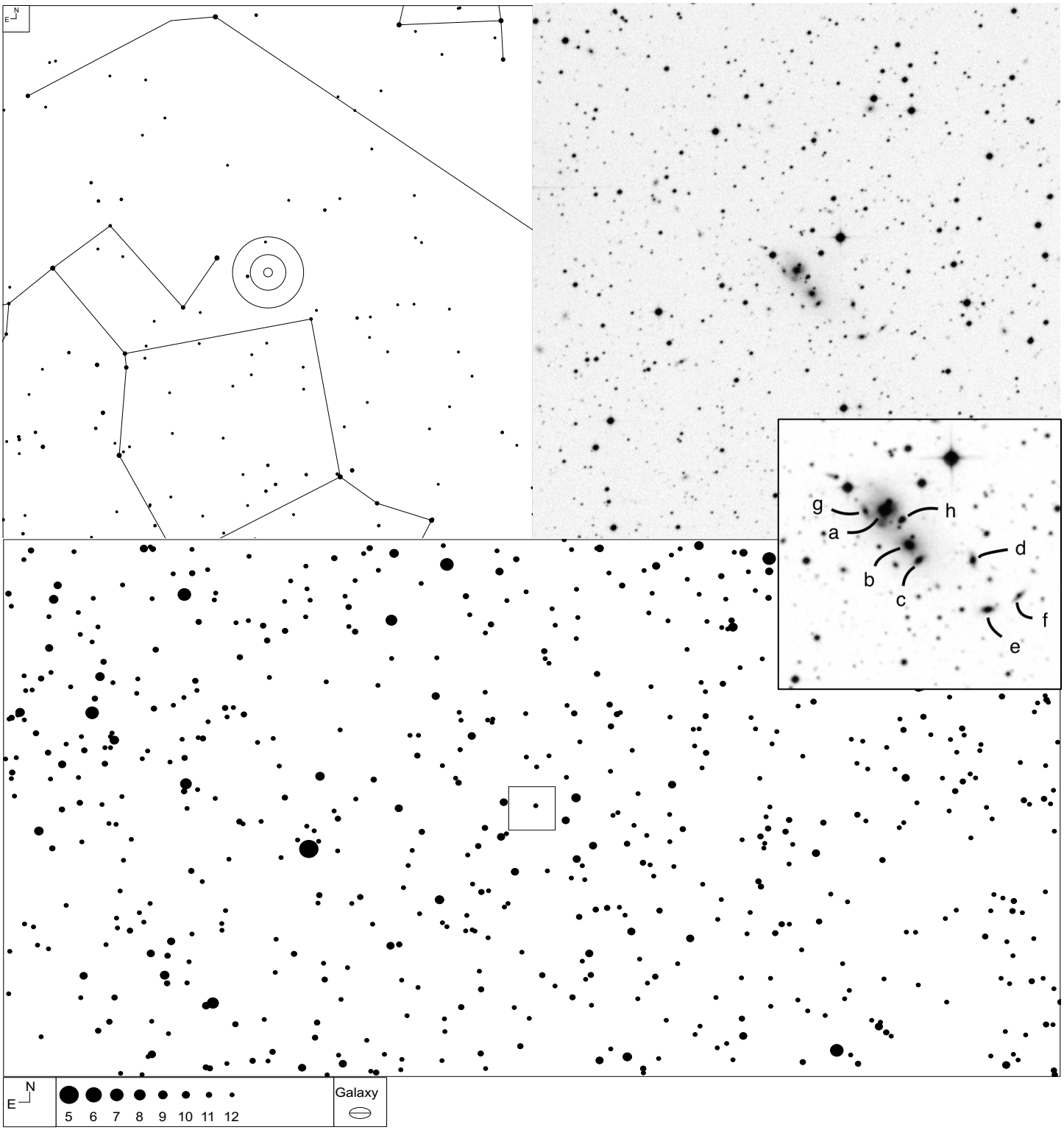
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
415	MCG -07-26-001	12 21 57.9	-43 20 14	GPair	14.0v	0.9 x 0.7	N

VV 580 (Centaurus)



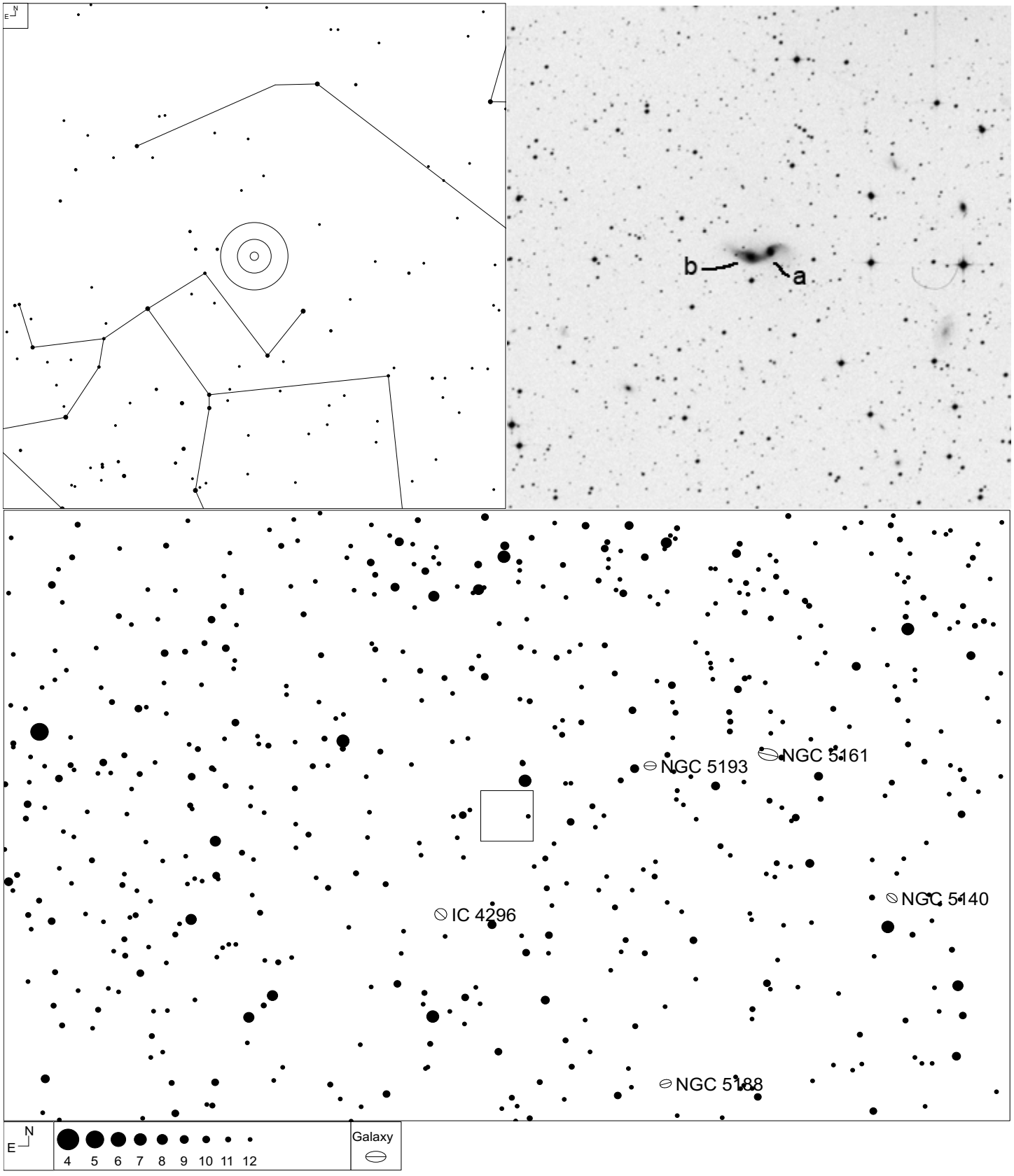
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
580		12 43 49.8	-40 42 57	GPair			N
580a	NGC 4622B	12 43 50.6	-40 43 03	G	15.0b	1.1 x 0.7	
580b	NGC 4622A	12 43 49.2	-40 42 53	G	14.5b	0.6 x 0.5	

VV 671 (Centaurus)



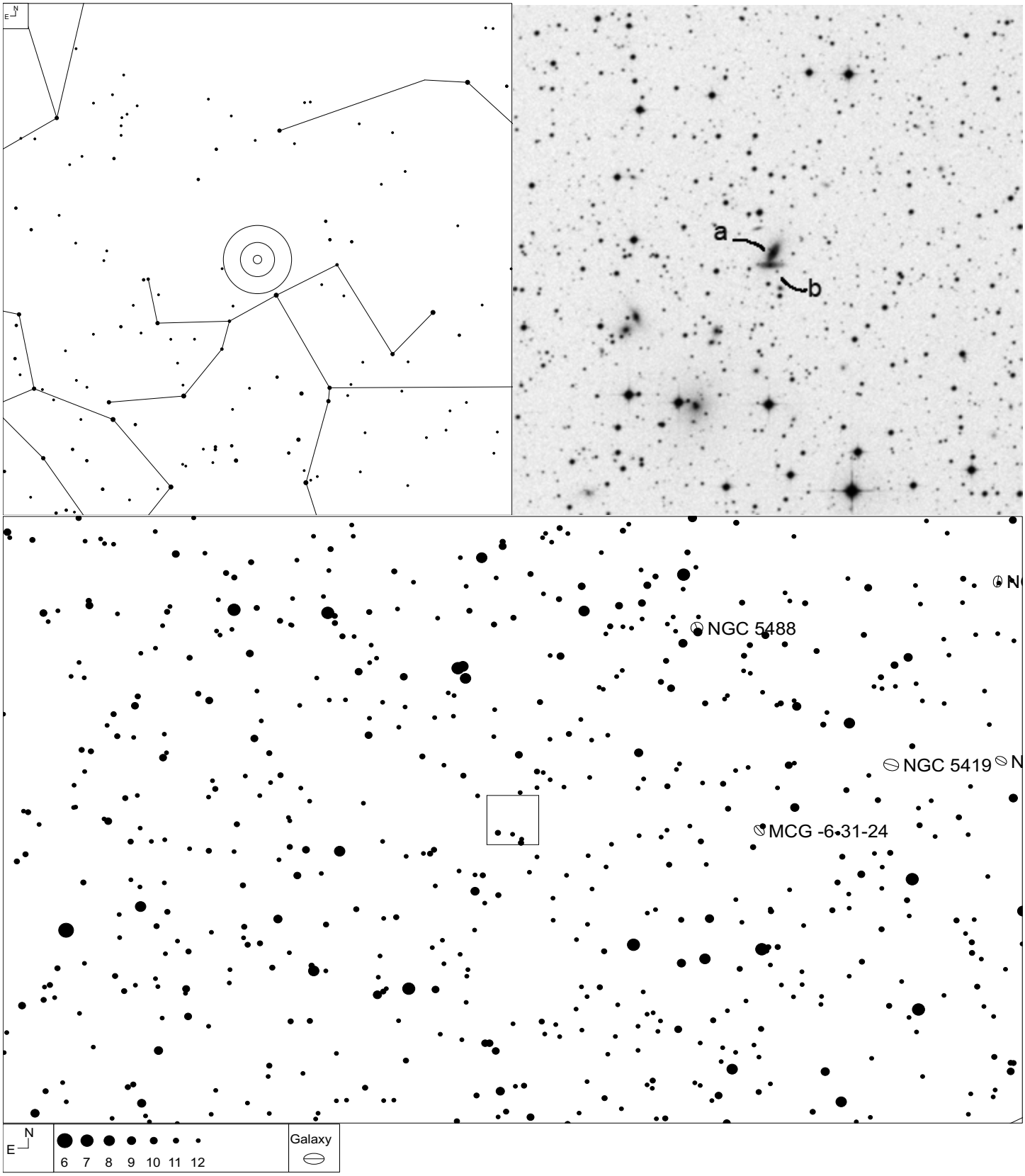
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
671		13 06 04.3	-37 35 57	GGroup			Ch
671a*	NGC 4953	13 06 10.1	-37 35 08	G	14.1b	1.1 x 0.8	
*671b**	*PGC 45343*	*13 06 07.7*	*-37 35 47*	*G*	*15.5b*	*0.4 x 0.3*	
*671c**	*MAC 1306-3736*	*13 06 07.3*	*-37 36 04*	*G*	*16.4g*	*0.3 x 0.1*	
*671d**		*13 06 02.3*	*-37 36 06*	*G*	*16.9g*	*0.4 x 0.2*	
*671e**	*MAC 1306-3737*	*13 06 00.9*	*-37 37 00*	*G*	*16.8g*	*0.4 x 0.2*	
*671f**	*MAC 1305-3736*	*13 05 57.9*	*-37 36 47*	*G*	*17.0**	*0.3 x 0.1*	
*671g**		*13 06 12.3*	*-37 35 10*	*G*	*17.0g*	*0.2 x 0.1*	
*671h**		*13 06 08.9*	*-37 35 19*	*star*			

VV 693 (Centaurus)



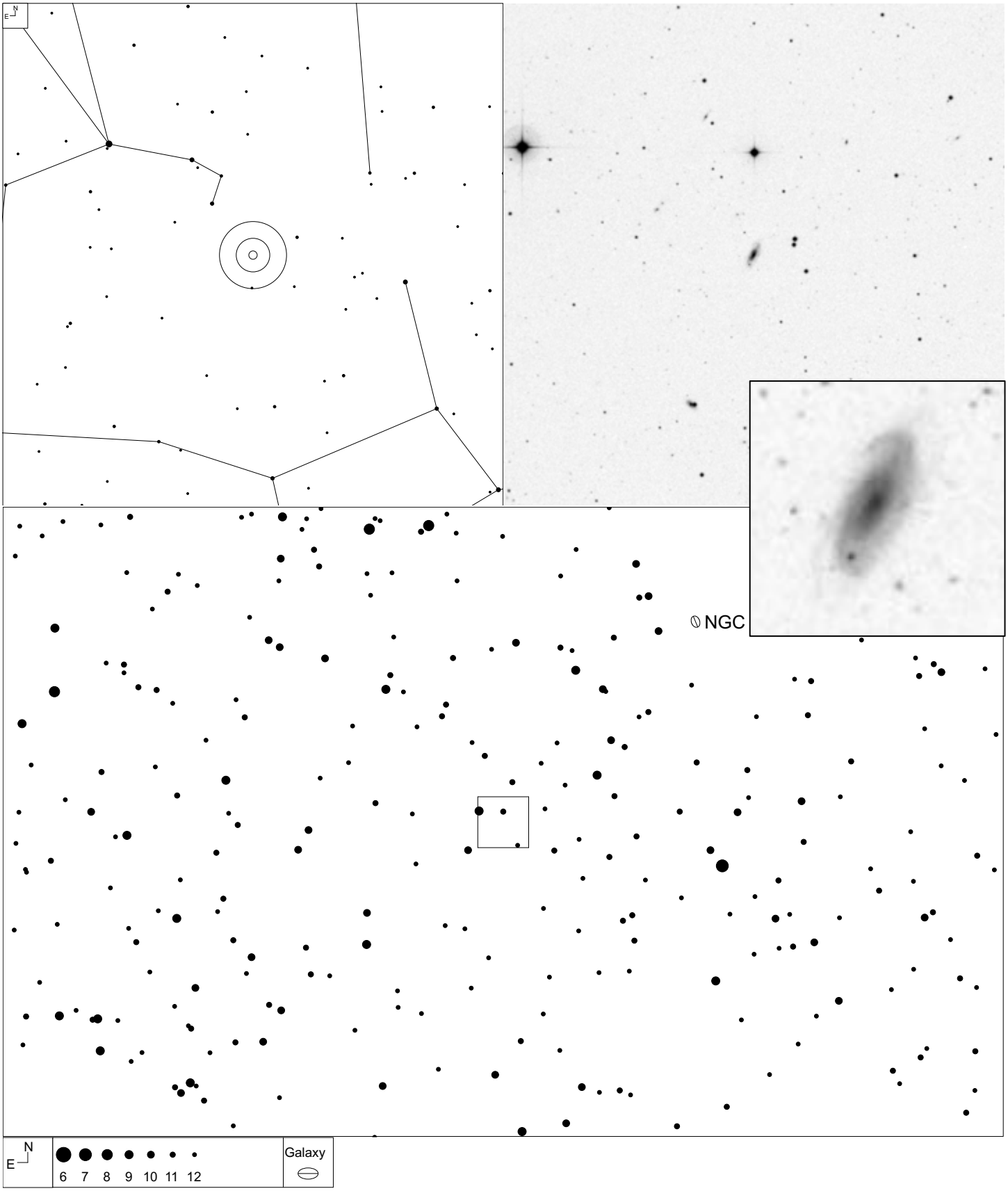
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
693		13 35 08.2	-33 29 02	GPair			PDbt
693a	NGC 5215A	13 35 06.6	-33 28 52	G	14.2b	0.6 x 0.5	
693b	NGC 5215B	13 35 09.8	-33 28 59	G	13.9b	1.1 x 0.5	

VV 743 (Centaurus)



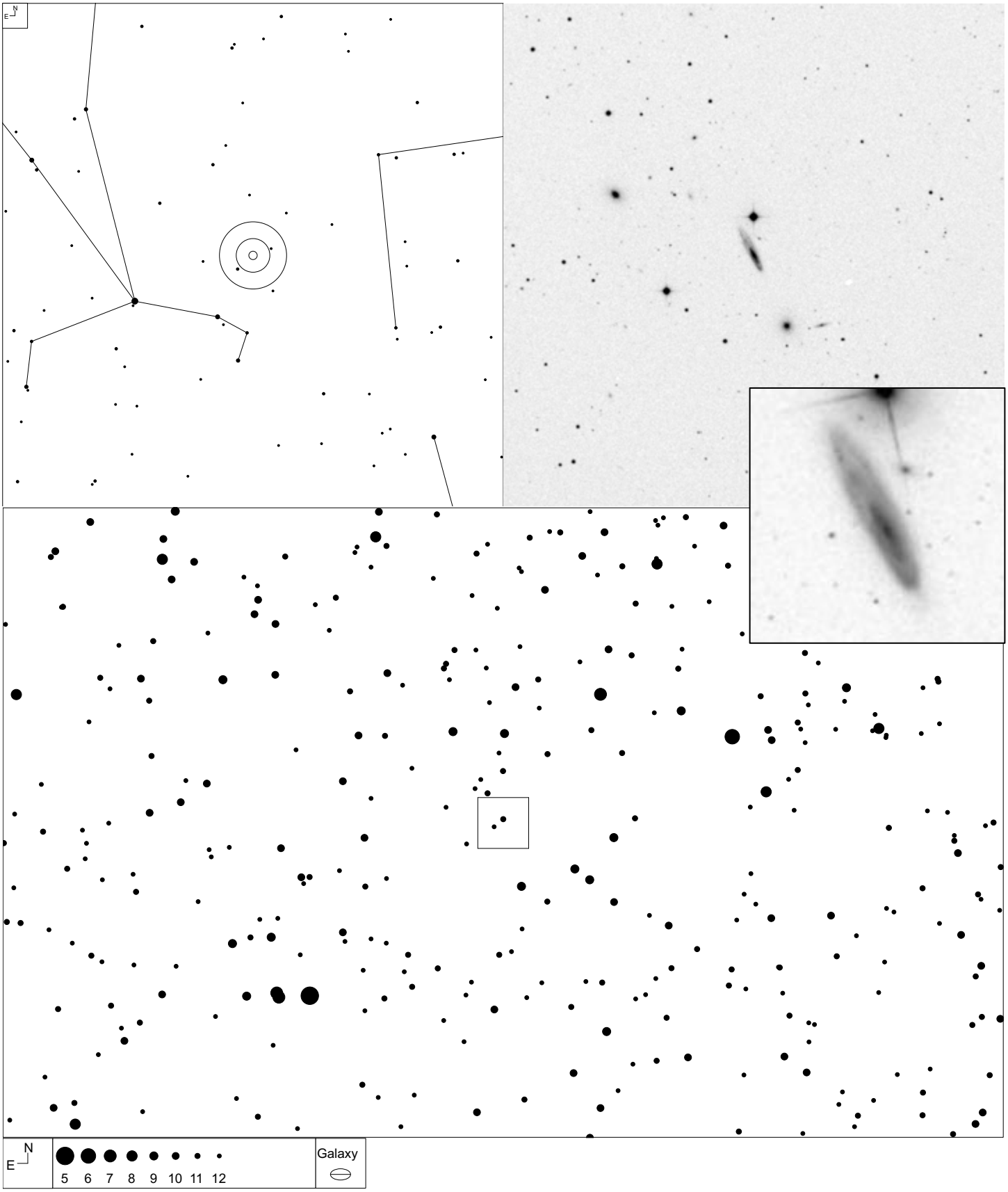
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
743		14 12 10.2	-34 16 09	GPair			PK
743a	IC 4378	14 12 09.6	-34 15 55	G	14.5b	1.4 x 0.6	
743b	IC 4379	14 12 10.2	-34 16 22	G	15.5b	1.2 x 0.2	

VV 422 (Boötes)



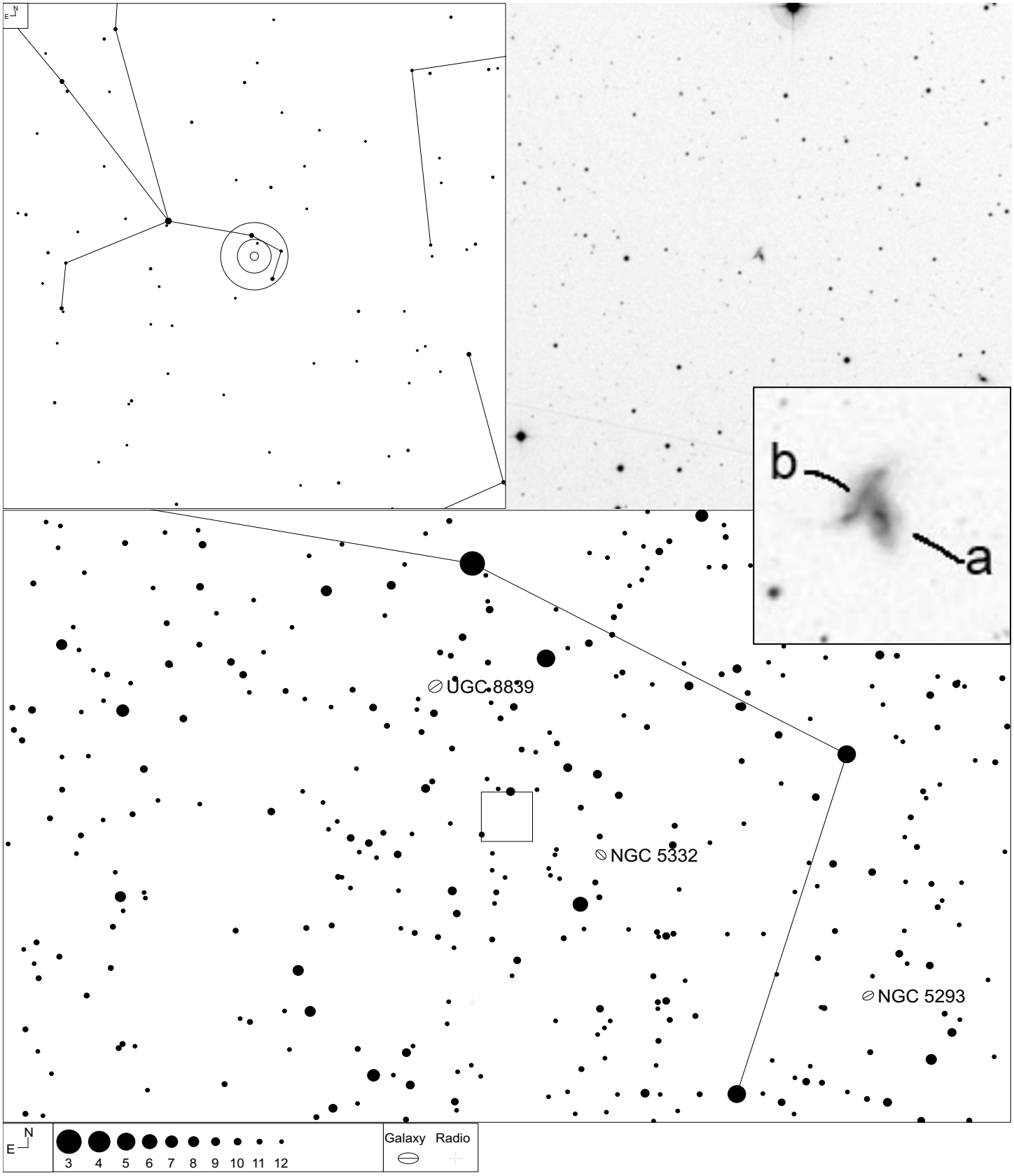
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
422	MCG +02-35-016	13 39 18.1	+12 43 27	G	15.2g	0.7 x 0.3	M

VV 799 (Boötes)



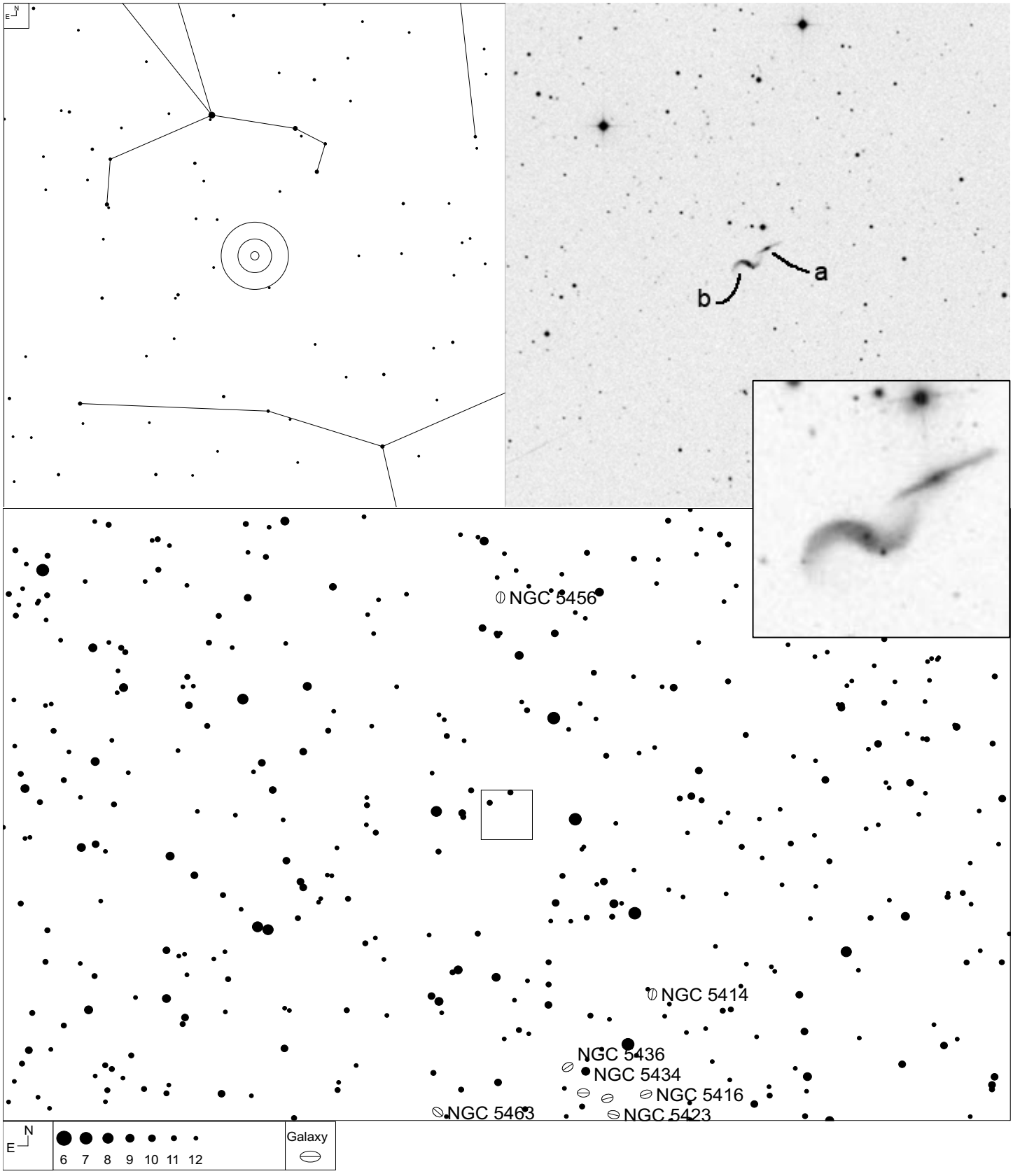
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
799	UGC 8701	13 45 45.6	+22 05 20	G	14.7g	1.6 x 0.3	K

VV 719 (Boötes)



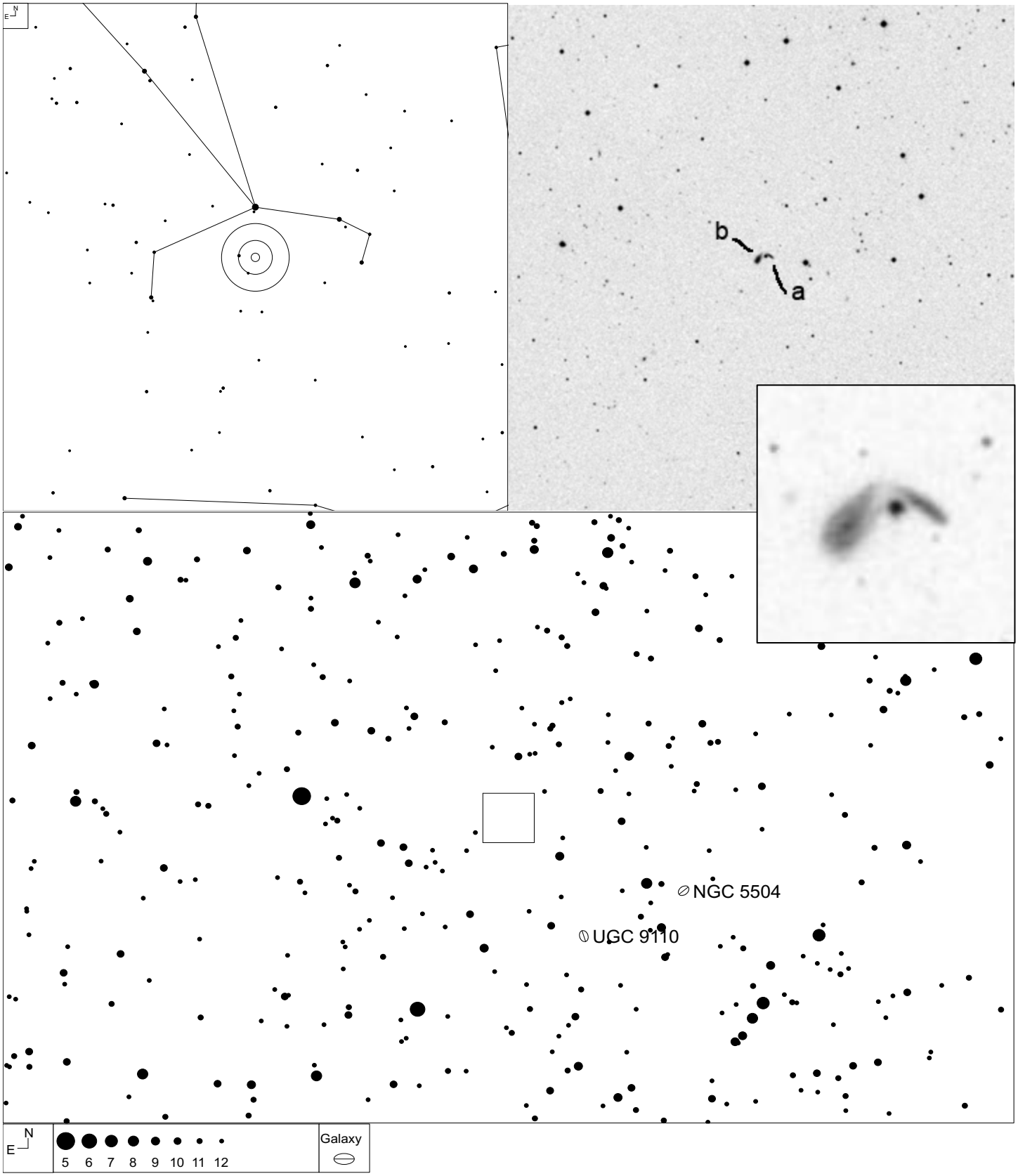
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
719	MGC+03-35-036	13 53 59.8	+17 09 28	GPair	16.4g	0.3 x 0.2	PC

VV 782 (Boötes)



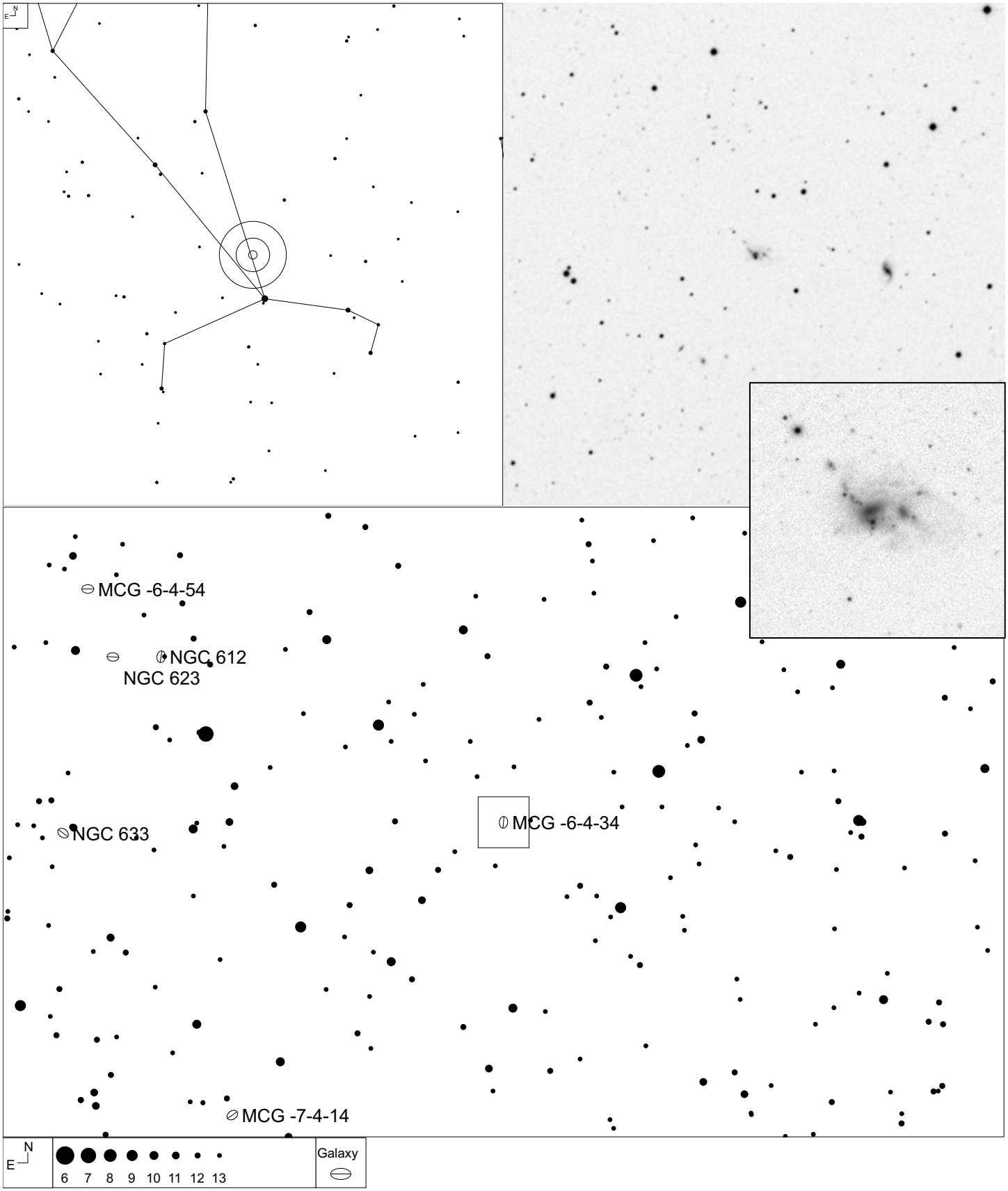
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
782		14 04 52.5	+10 48 18	GPair			PD?
782a	UGC 9000	14 04 51.4	+10 48 32	G	16.1g	1.1 x 0.1	
782b	UGC 9001	14 04 53.7	+10 48 04	G	15.4g	1.0 x 0.4	

VV 744 (Boötes)



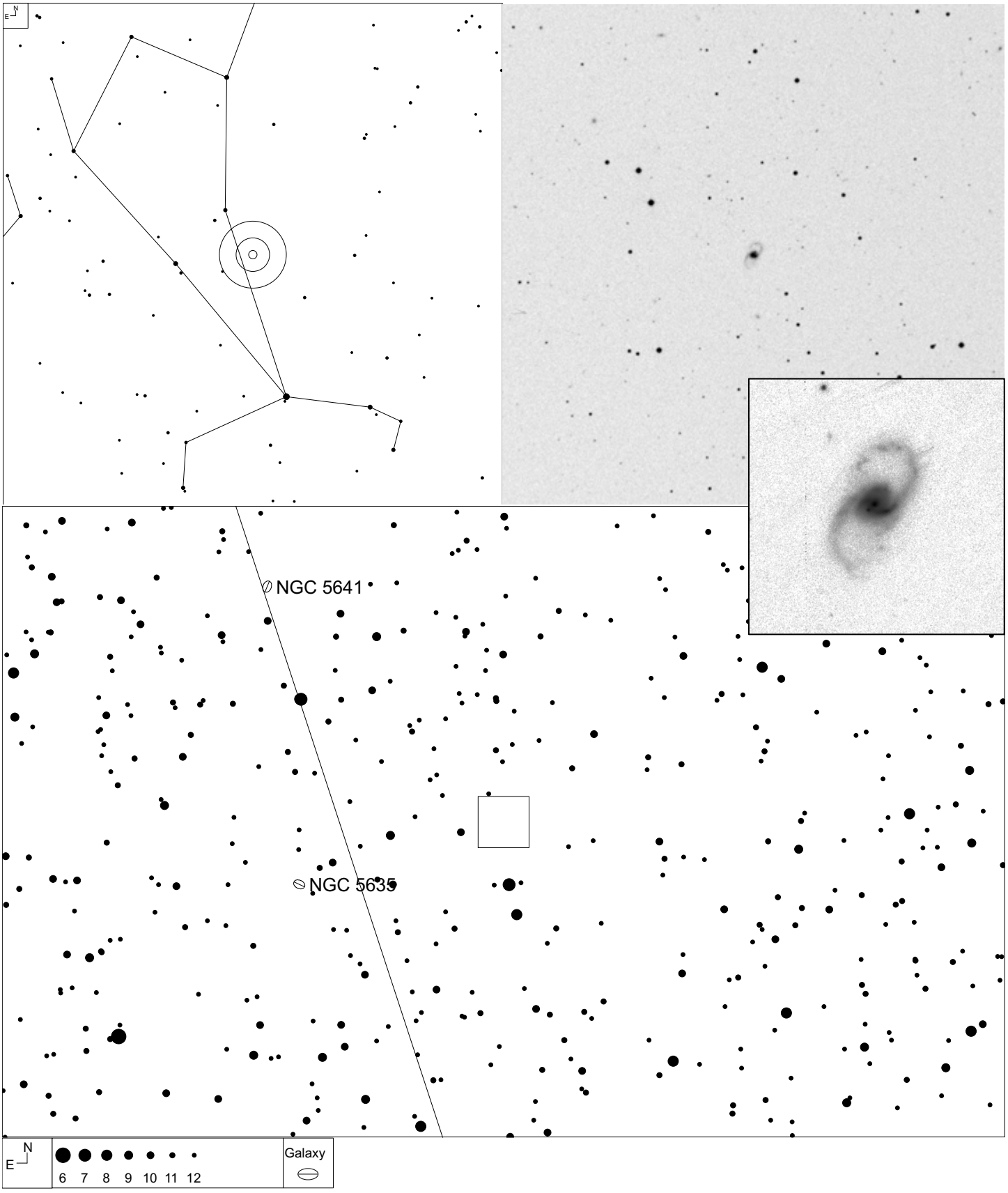
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
744	MCG +03-36-097	14 15 42.5	+16 12 02	GPair	15.4b	0.3 x 0.1	PK
744b	*PGC 1503164*	*14 15 43.1*	*+16 12 00*	*G*	*16.3g*	*0.4 x 0.2*	

VV 557 (Boötes)



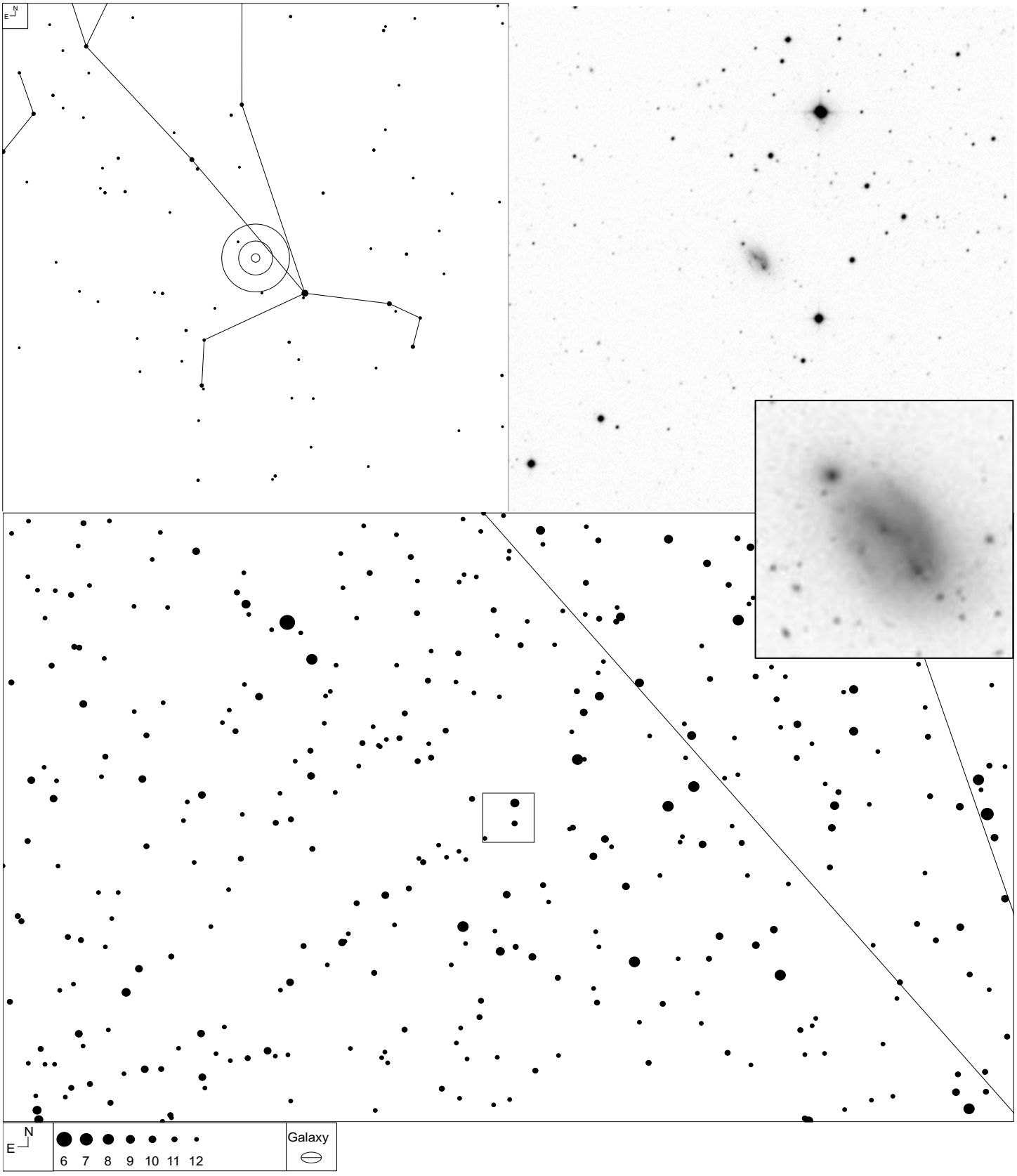
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
557	UGC 9164	14 18 43.4	+21 49 03	G	15.5g	1.1 x 0.7	N

VV 739 (Boötes)



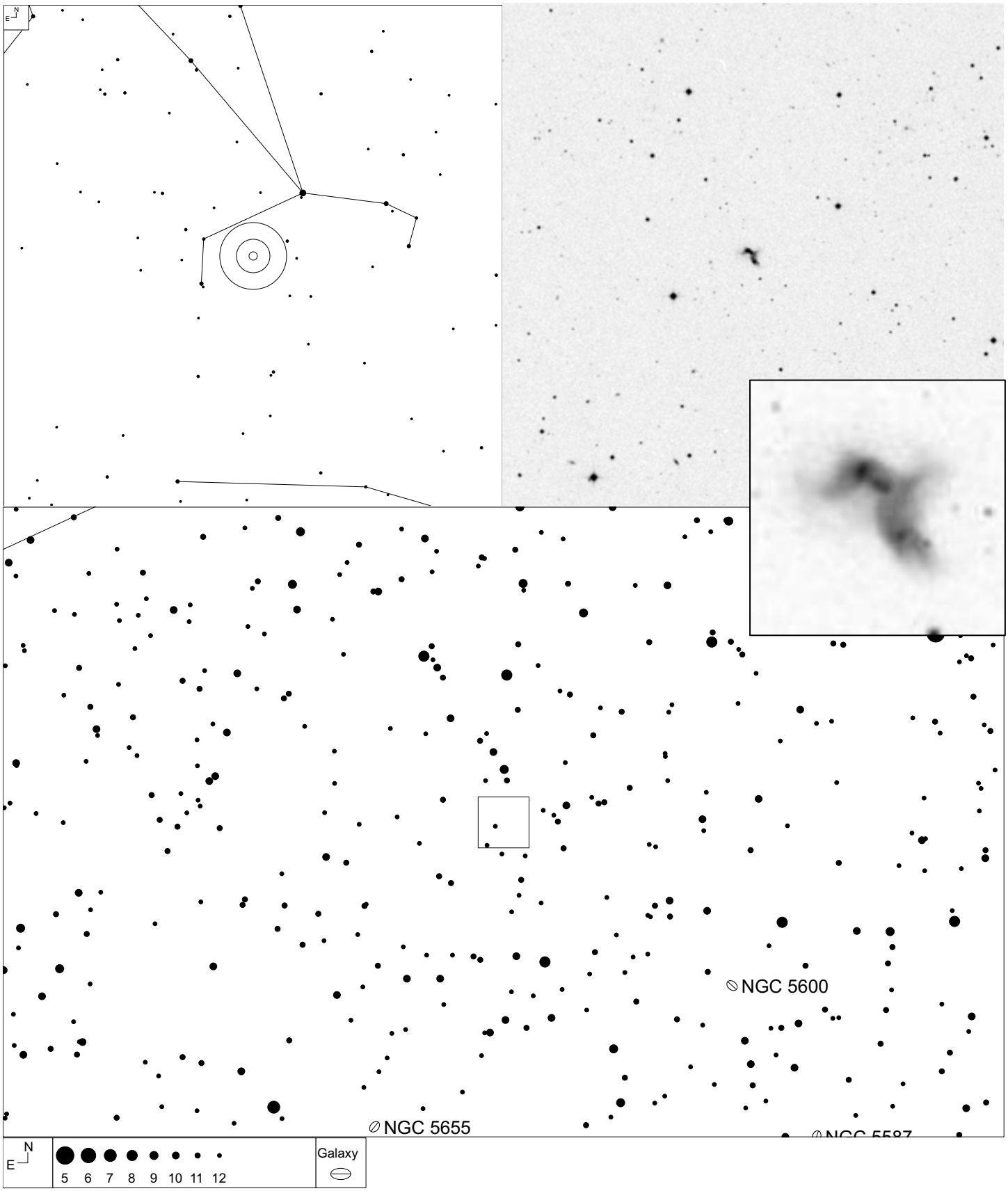
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
739	MCG +05-34-030	14 24 09.2	+27 42 40	G	15.5g	1.0 x 0.5	PC

VV 371 (Boötes)



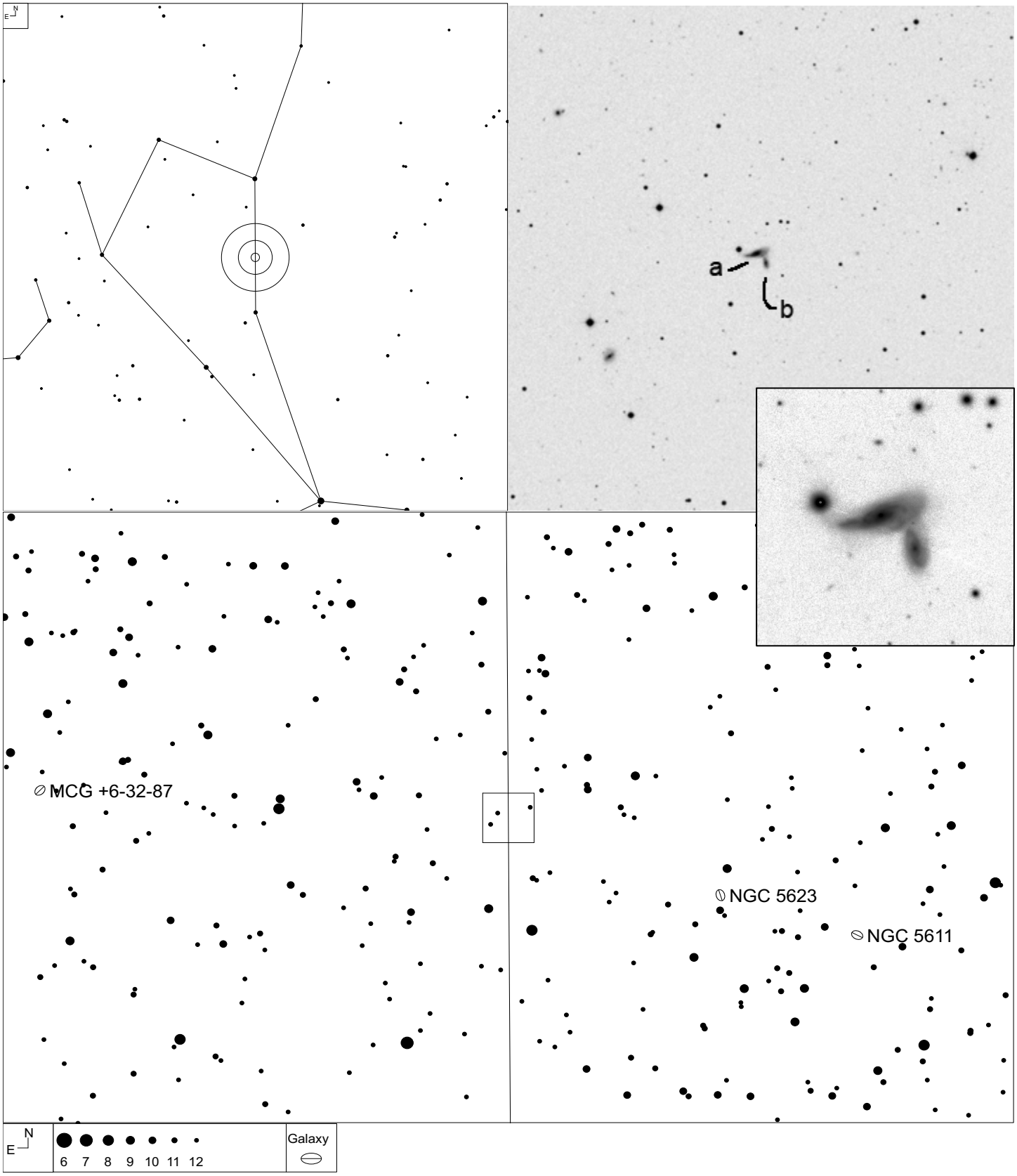
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
371	UGC 9274	14 28 03.3	+21 18 24	GPair	14.2g	1.3 x 0.8	MMM

VV 717 (Boötes)



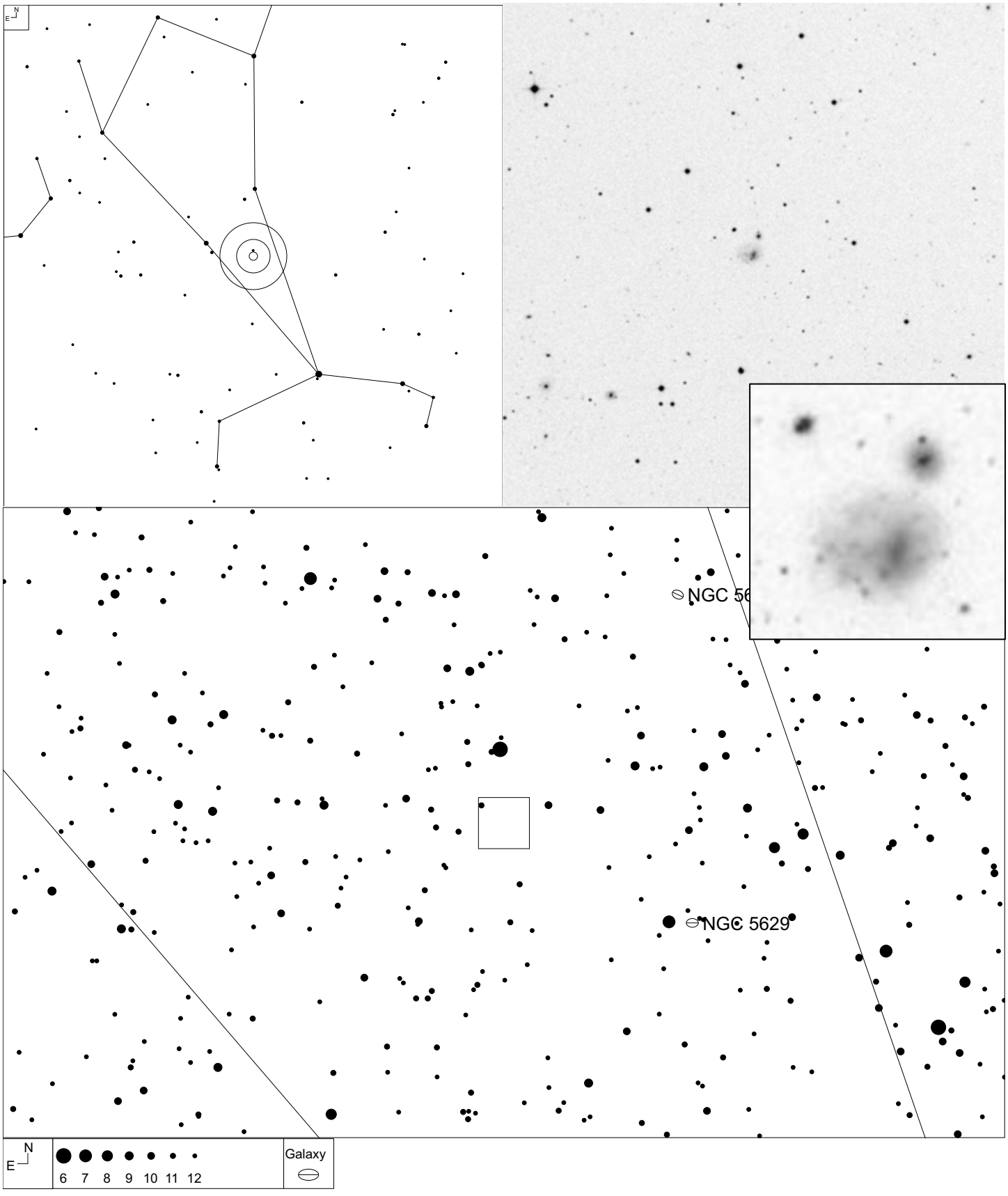
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
717	IC 1015	14 28 19.1	+15 25 12	GGroup	15.2	0.6 x 0.4	PC

VV 775 (Boötes)



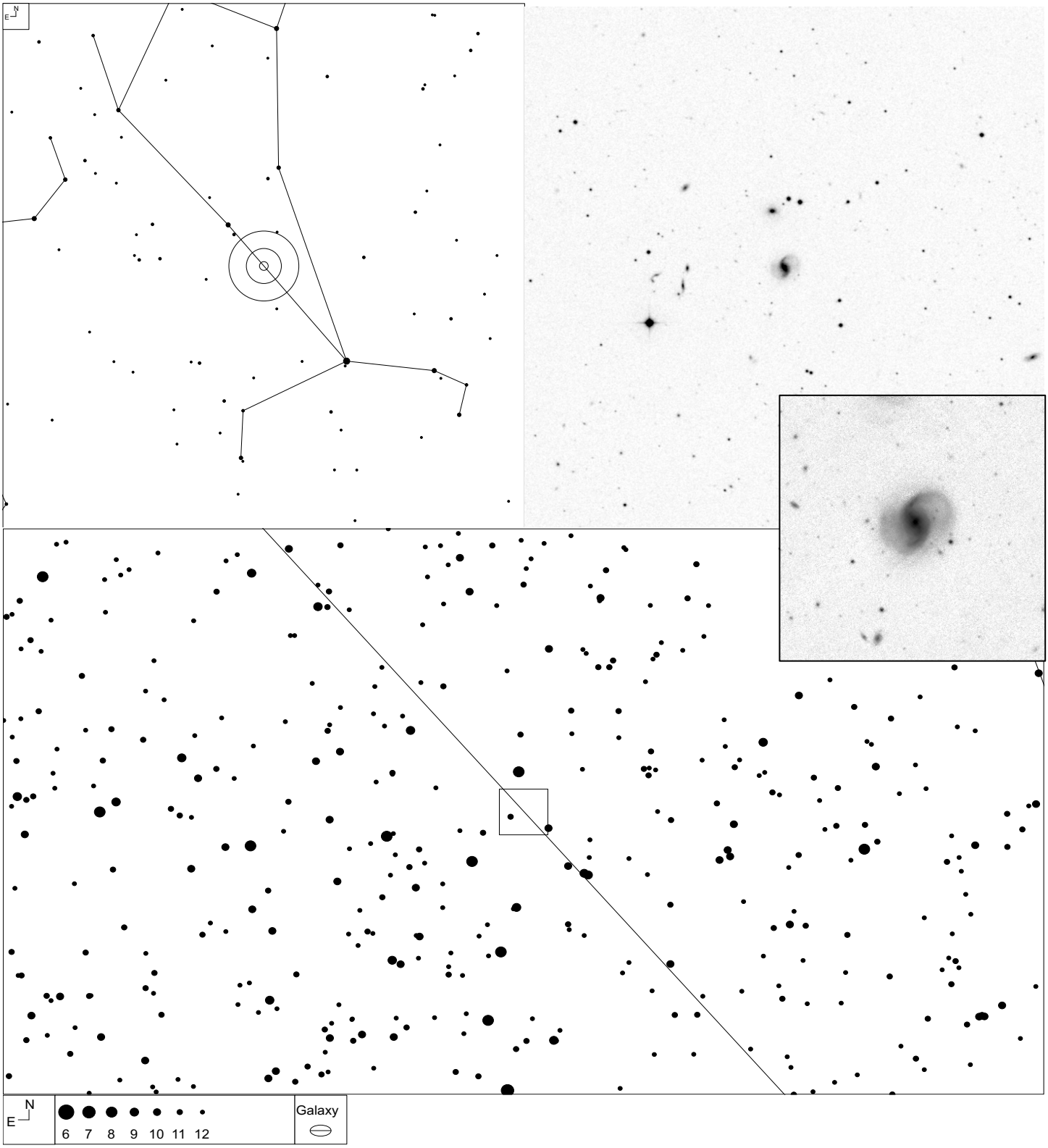
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
775		14 31 55.5	+33 38 24	GPair			PK
775a	MCG +06-32-058	14 31 56.2	+33 38 33	G	14.2v	1.1 x 0.3	
775b	MCG +06-32-058a	14 31 54.9	+33 38 16	G	15.7v	0.8 x 0.3	

VV 839 (Boötes)



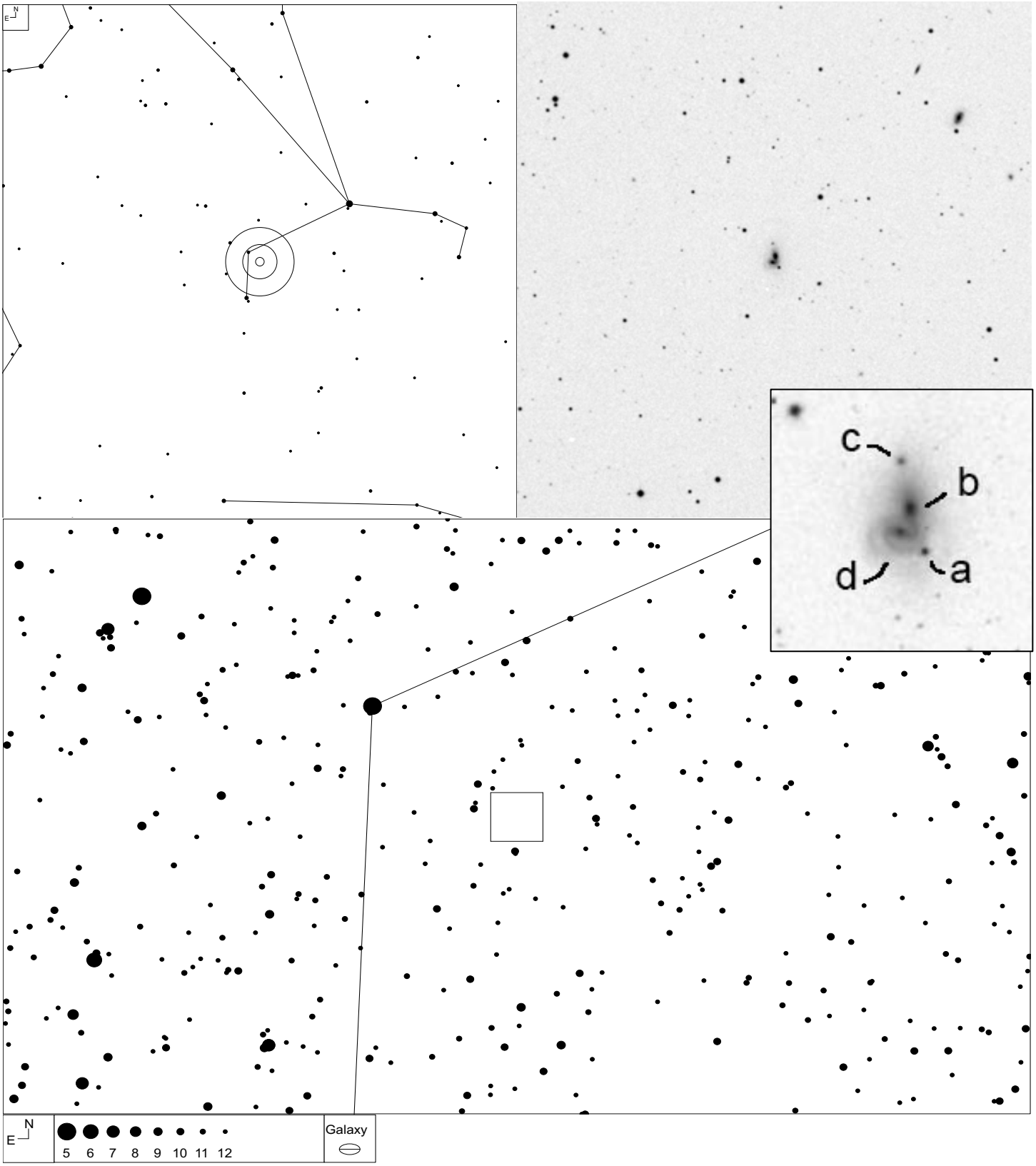
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
839	MCG +05-34-064	14 32 15.2	+26 19 36	G	15.8g	0.7 x 0.6	Enat

VV 762 (Boötes)



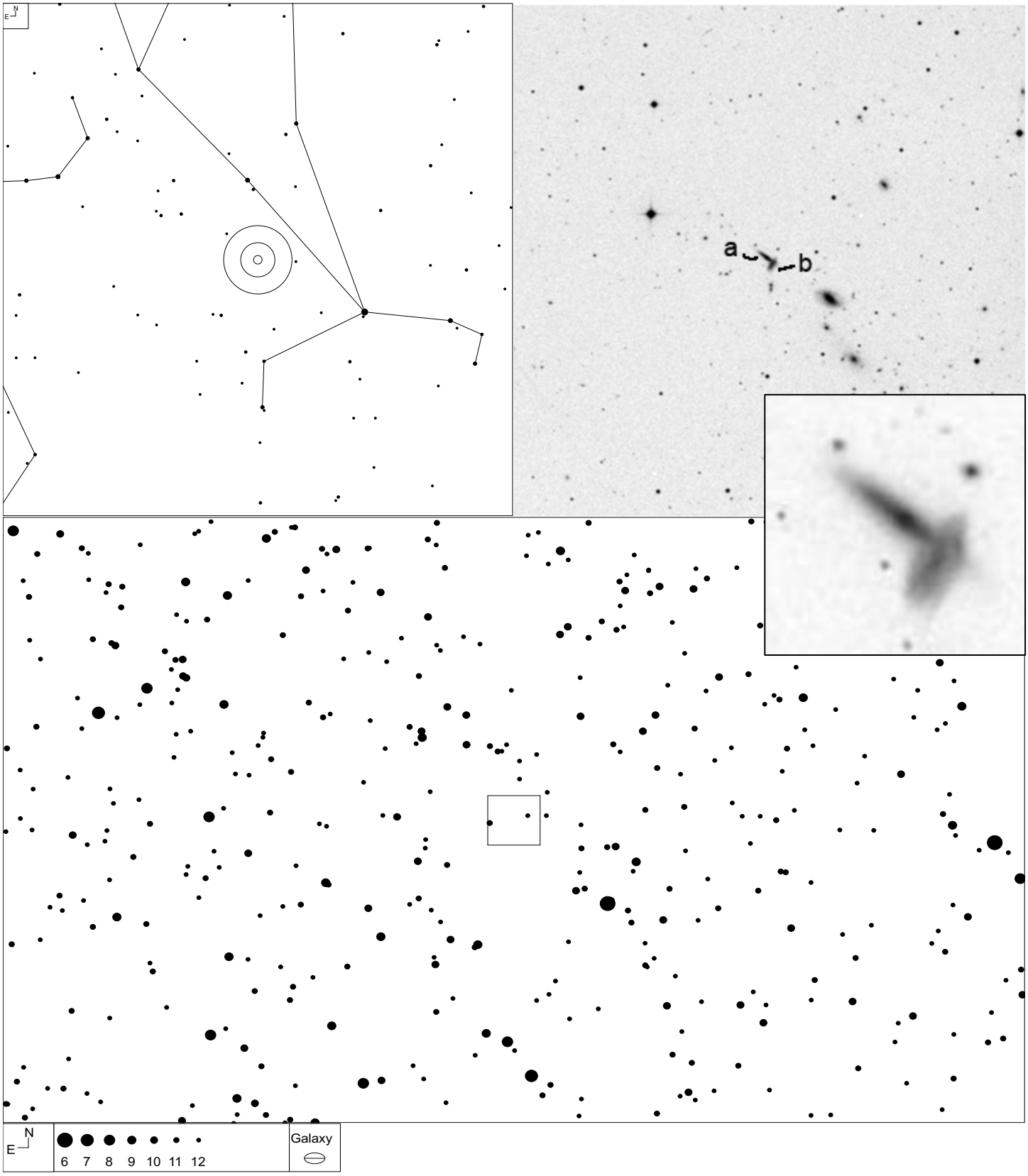
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
762	UGC 9396	14 35 48.3	+24 43 33	GGroup	14.60	11x8	NPNP

VV 732 (Boötes)



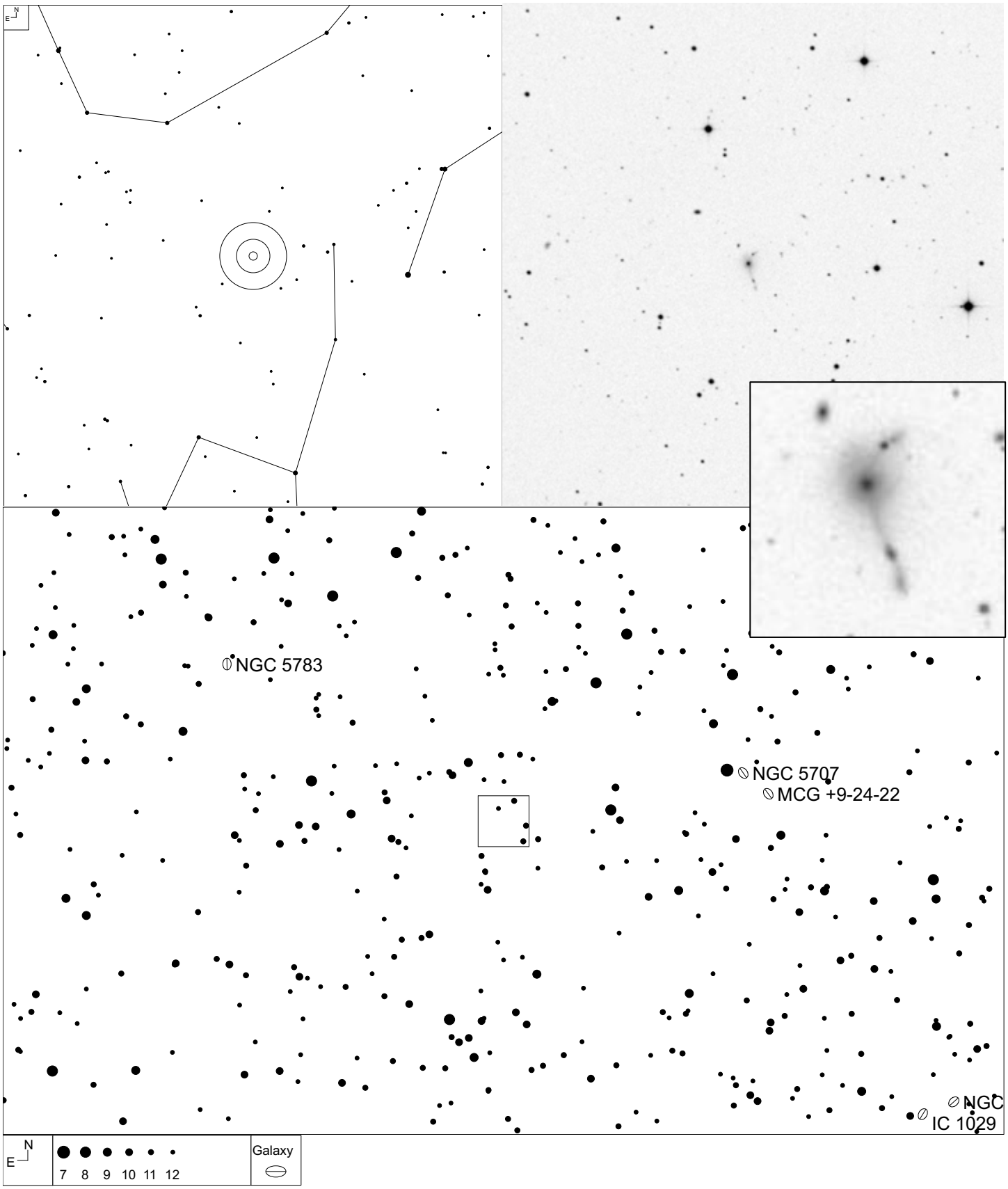
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
732	IC 4473	14 37 54.2	+15 51 43	GGroup	15.4g	0.9 x 0.4	N

VV 752 (Boötes)



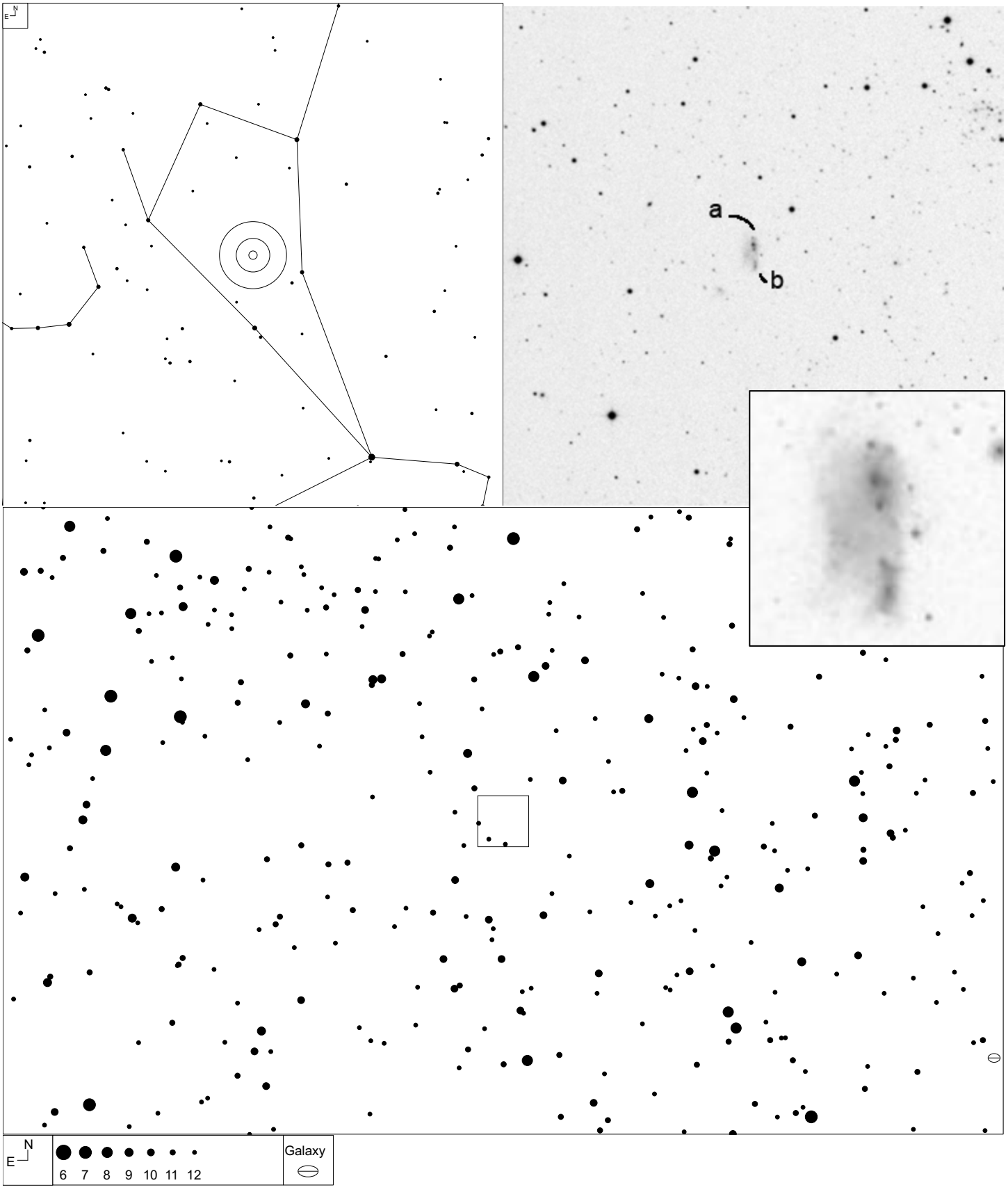
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
752		14 42 30.0	+22 21 04	GPair			PK
752a	MCG+04-35-004	14 42 30.4	+22 21 11	G	15.4g	0.7 x 0.2	
752b	*PGC 1668290*	*14 42 29.7*	*+22 20 56*	*G*	*15.9g*	*0.5 x 0.2*	

VV 517 (Boötes)



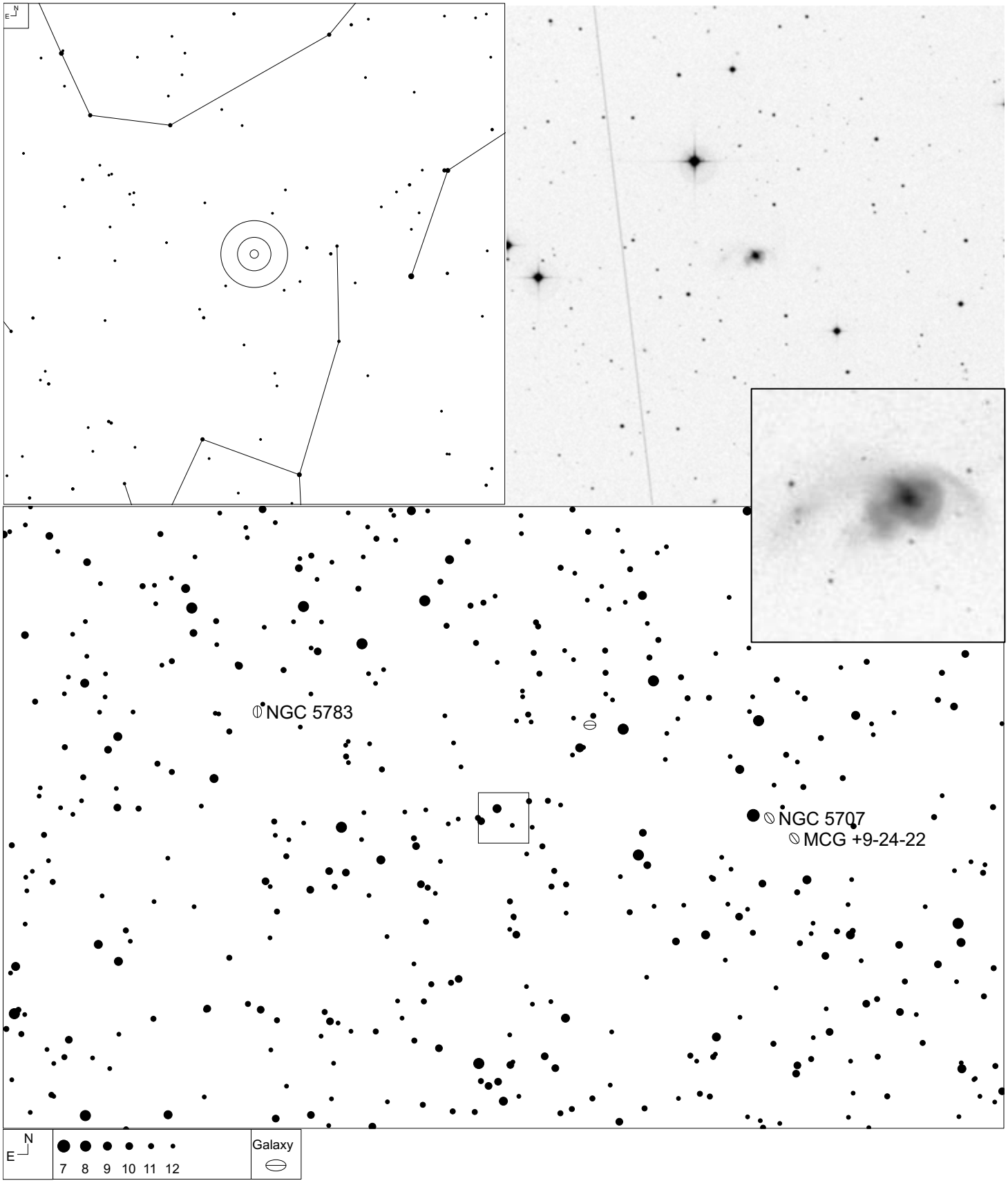
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
517	UGC 9511	14 44 52.7	+51 20 45	G	15.8g	1.2 x 0.4	Ch

VV 842 (Boötes)



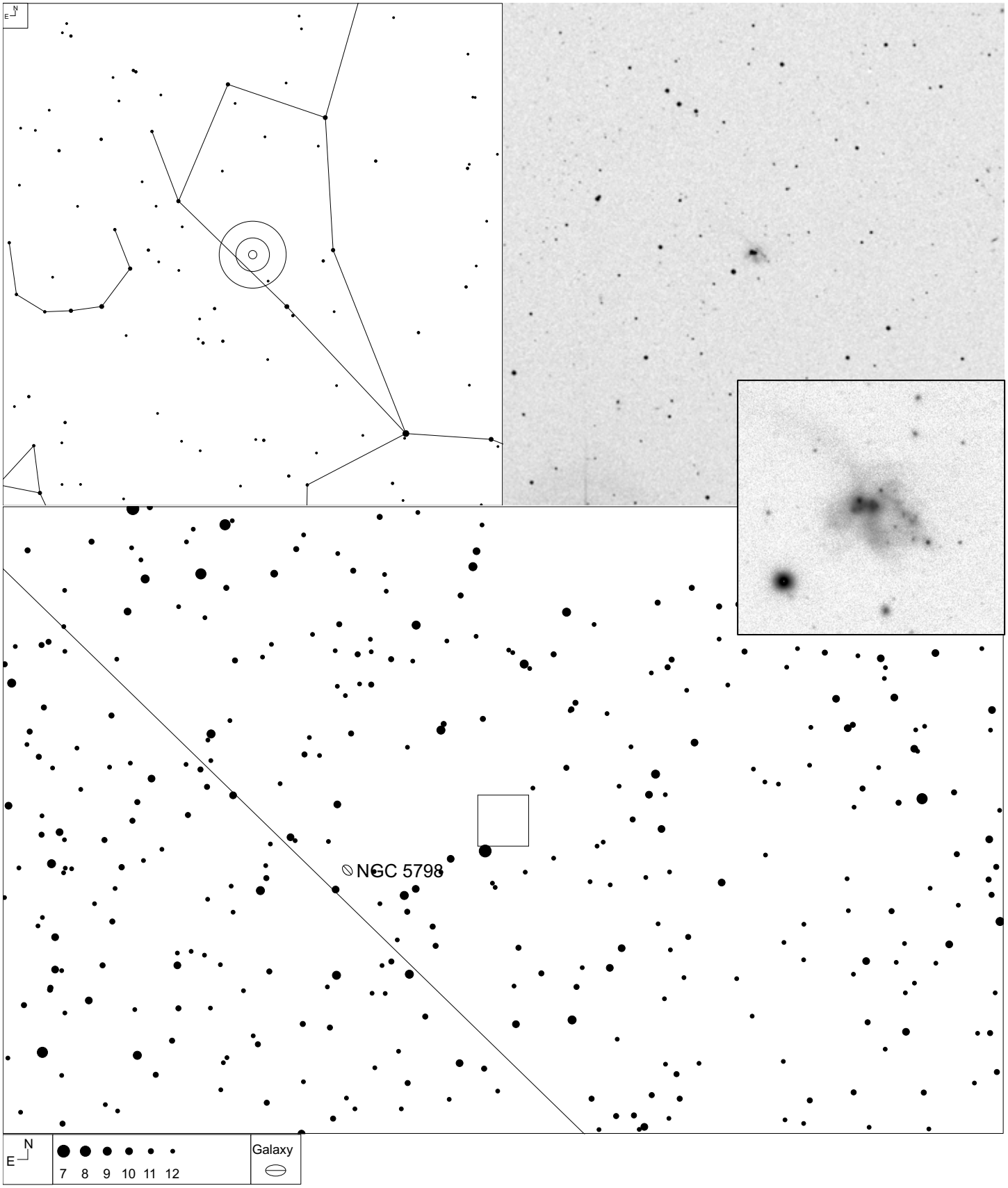
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
842	UGC 9504	14 45 27.8	+31 25 57	GPair			Enat
842a	MCG +05-35-012	14 45 28.0	+31 26 17	G	17.2g	1.4 x 0.6	
842b	MCG +05-35-013	14 45 27.6	+31 25 37	G	15.3b	1.4 x 0.6	

VV 713 (Boötes)



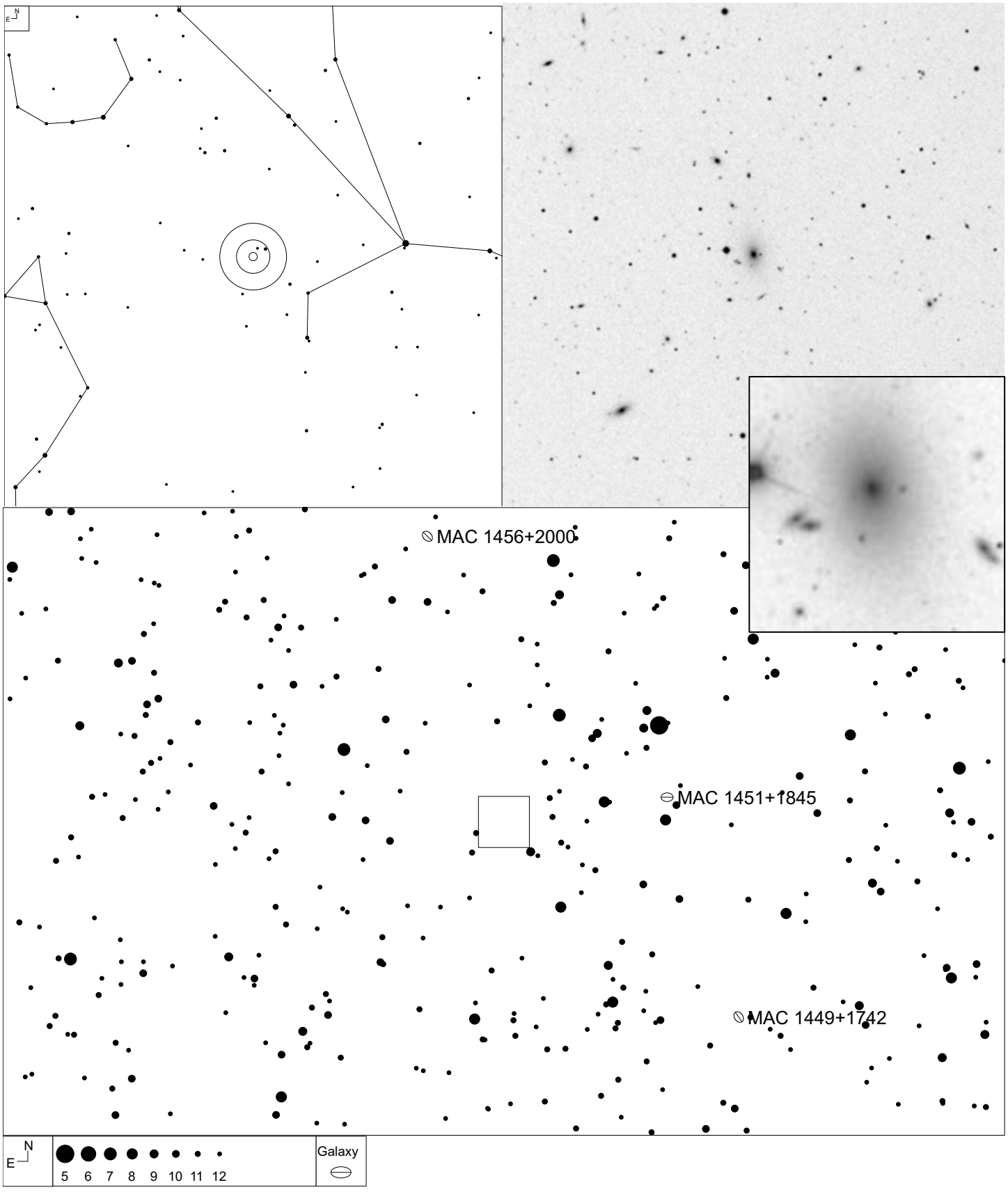
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
713	MCG +09-24-035	14 45 45.1	+51 34 51	G	14.2g	0.9 x 0.8	PC

VV 803 (Boötes)



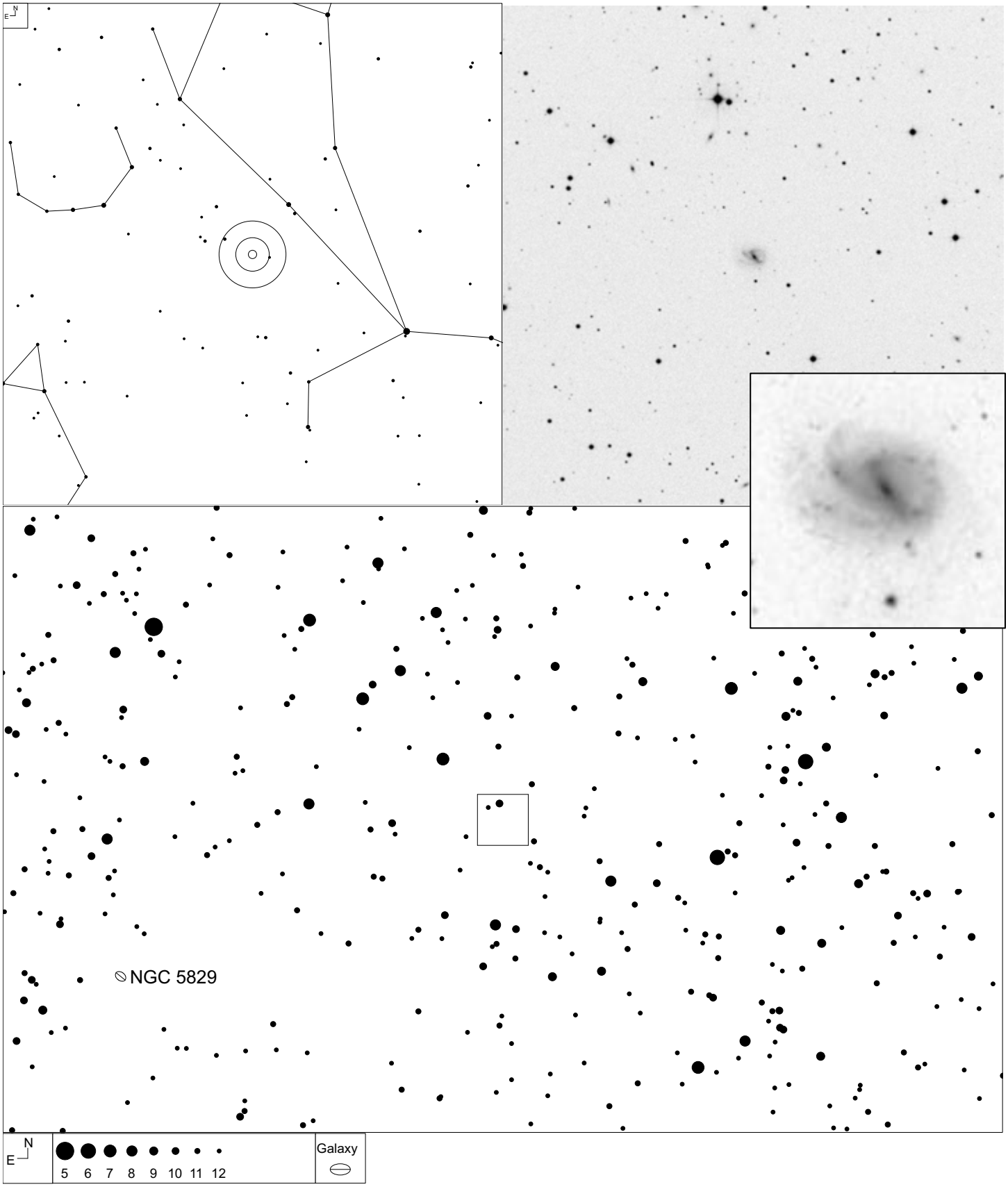
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
803	UGC 9588	14 54 11.9	+30 12 32	GPair	15.6g	1.0 x 0.7	K

VV 766 (Boötes)



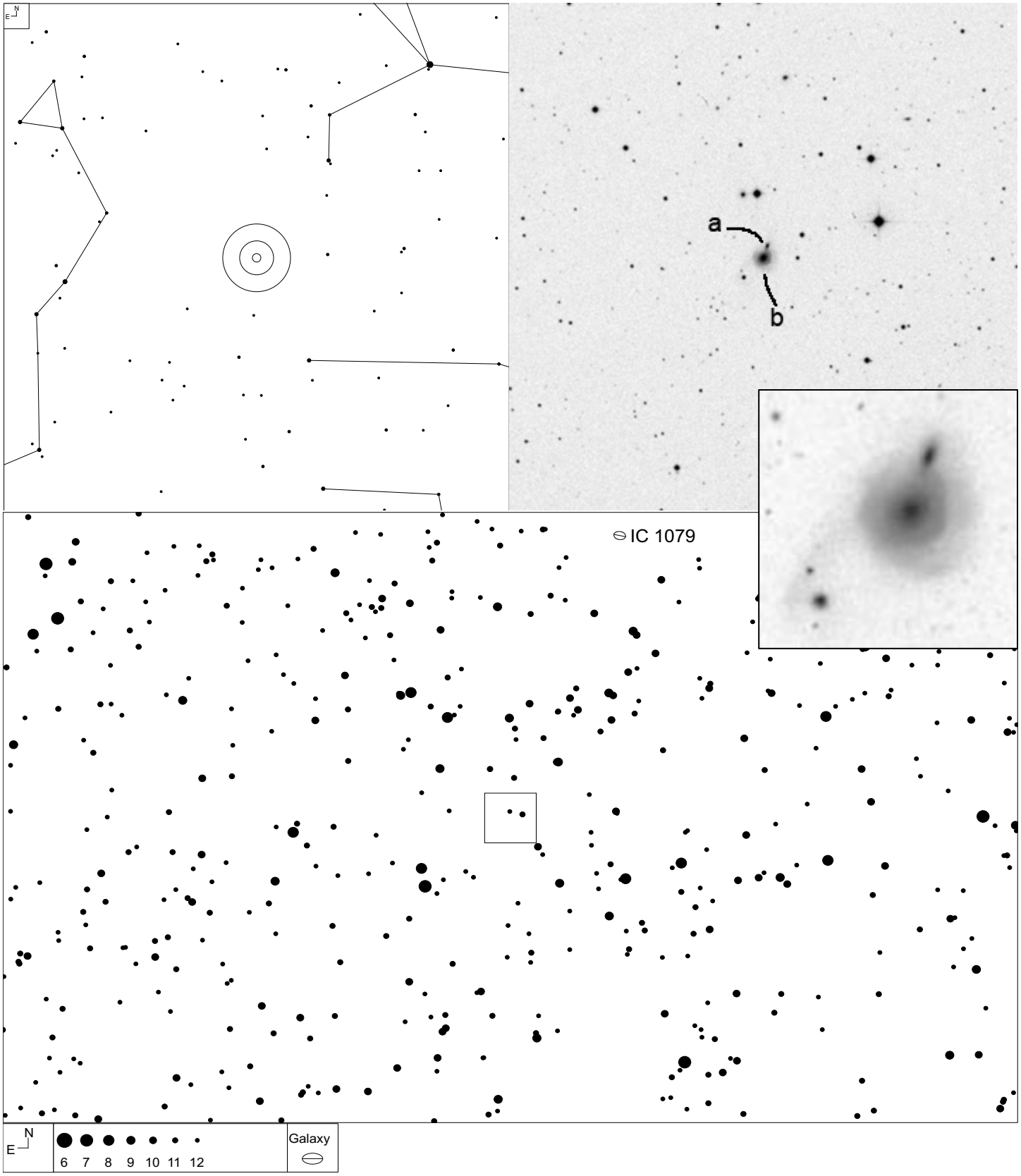
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
766	NGC 5778	14 54 31.5	+18 38 32	G	14.7g	1.2 x 0.9	NPNP

VV 469 (Boötes)



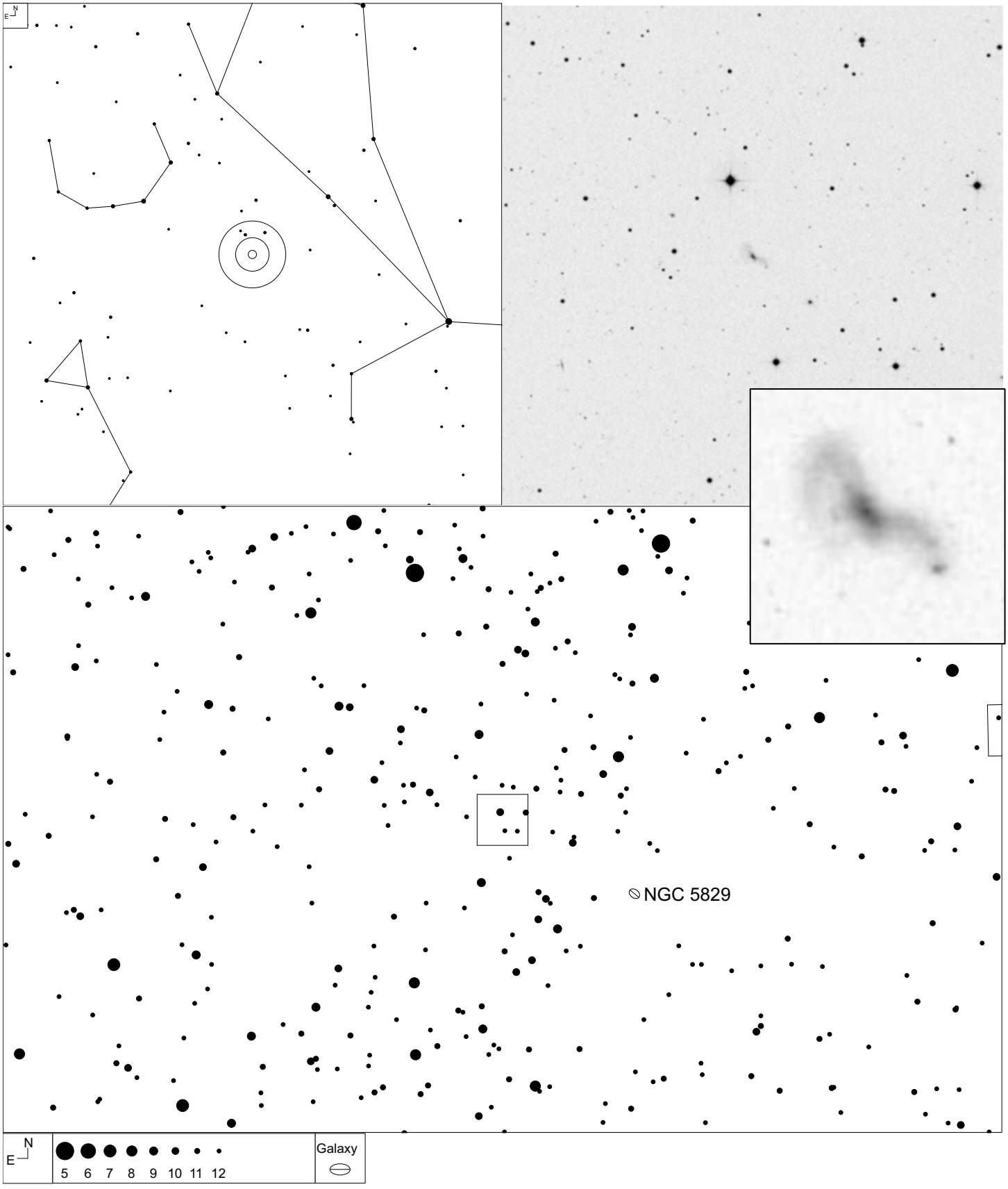
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
469	UGC 9594	14 54 44.8	+24 05 49	G	15.0g	1.0 x 0.8	MM

VV 374 (Boötes)



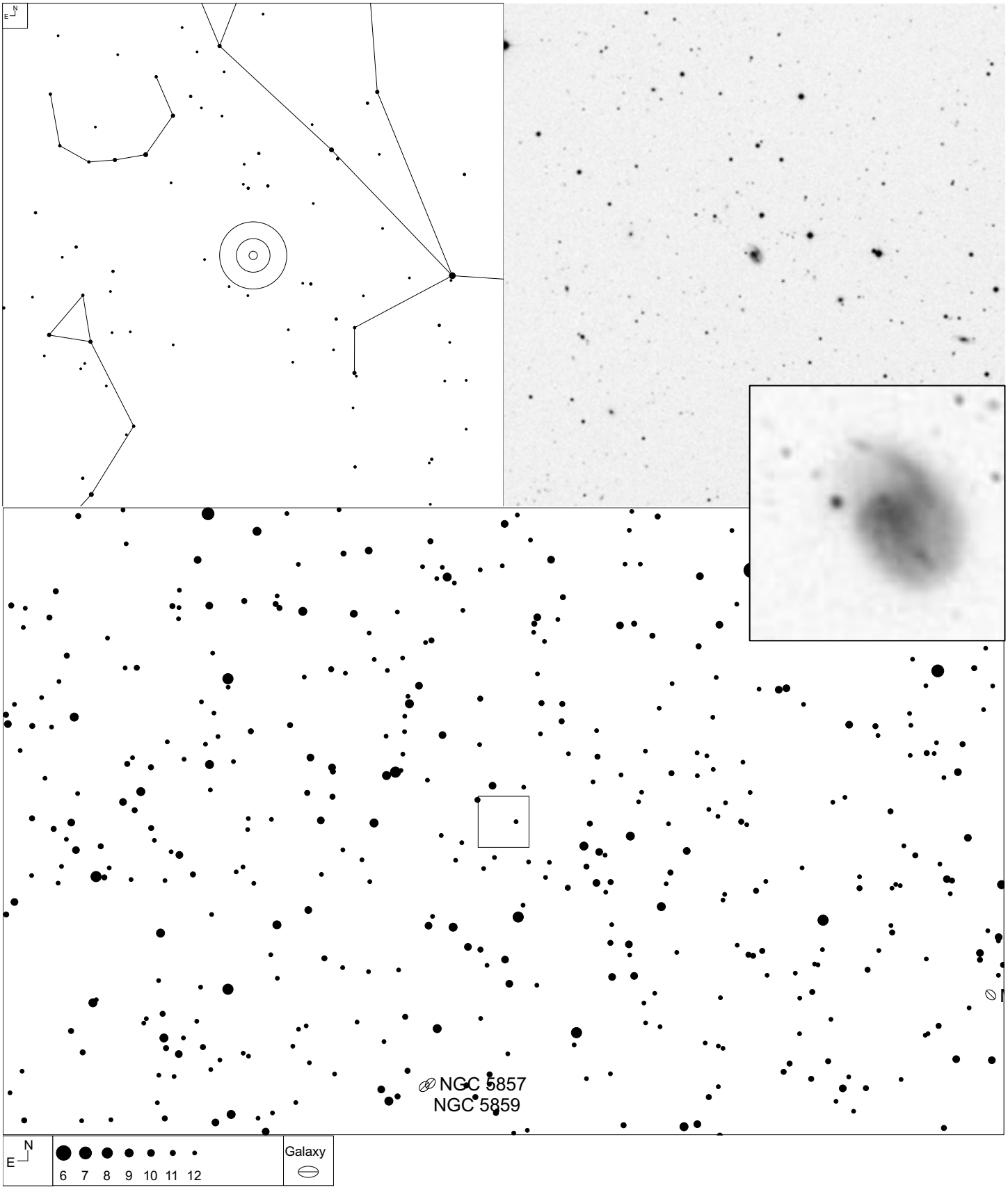
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
374	MCG +01-38-025	14 58 41.2	+07 59 14	GPair	14.1g	0.8 x 0.7	MMM

VV 836 (Boötes)



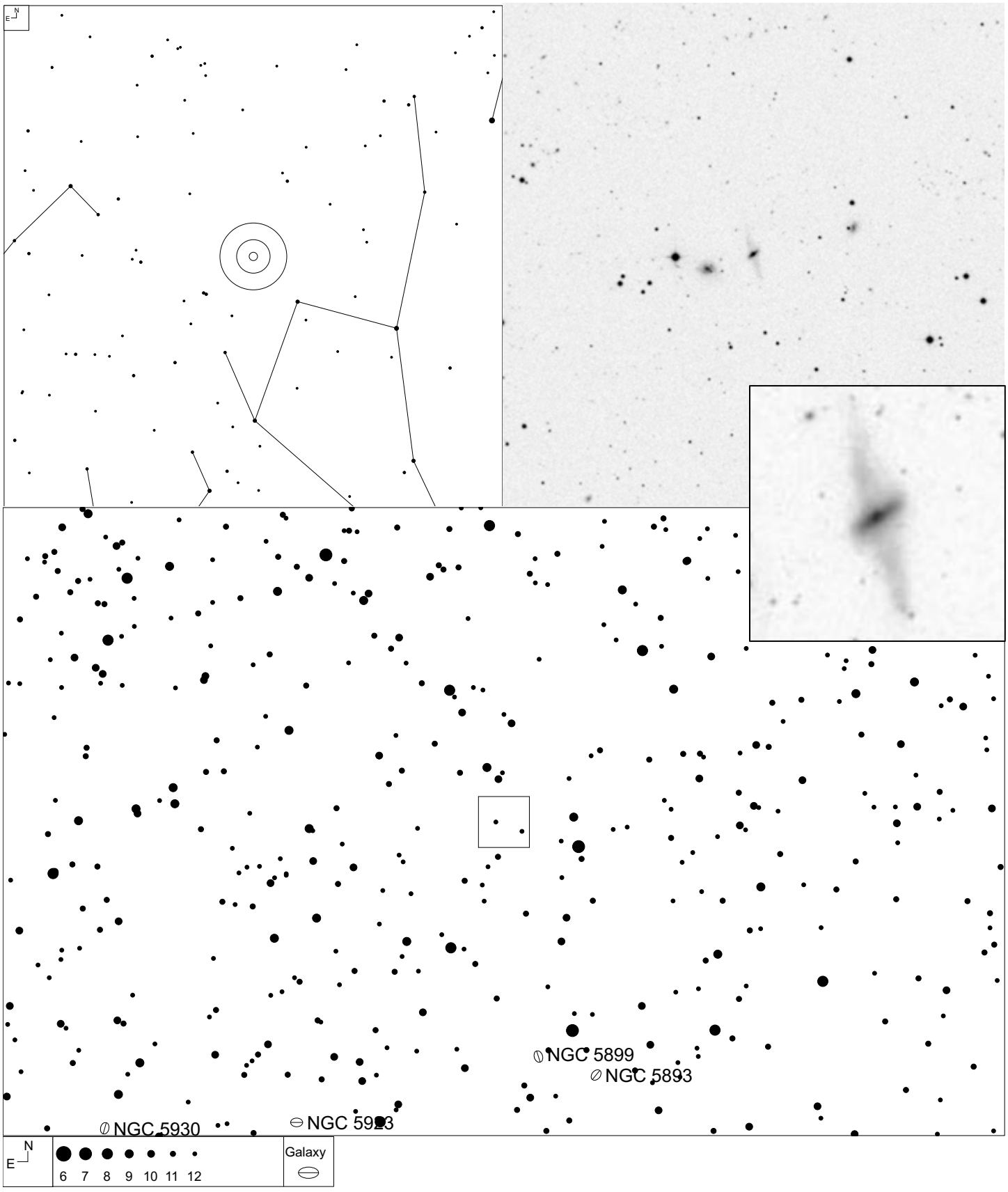
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
836	UGC 9698	15 05 27.2	+23 41 20	G	15.3g	1.0 x 0.3	Enat

VV 397 (Boötes)



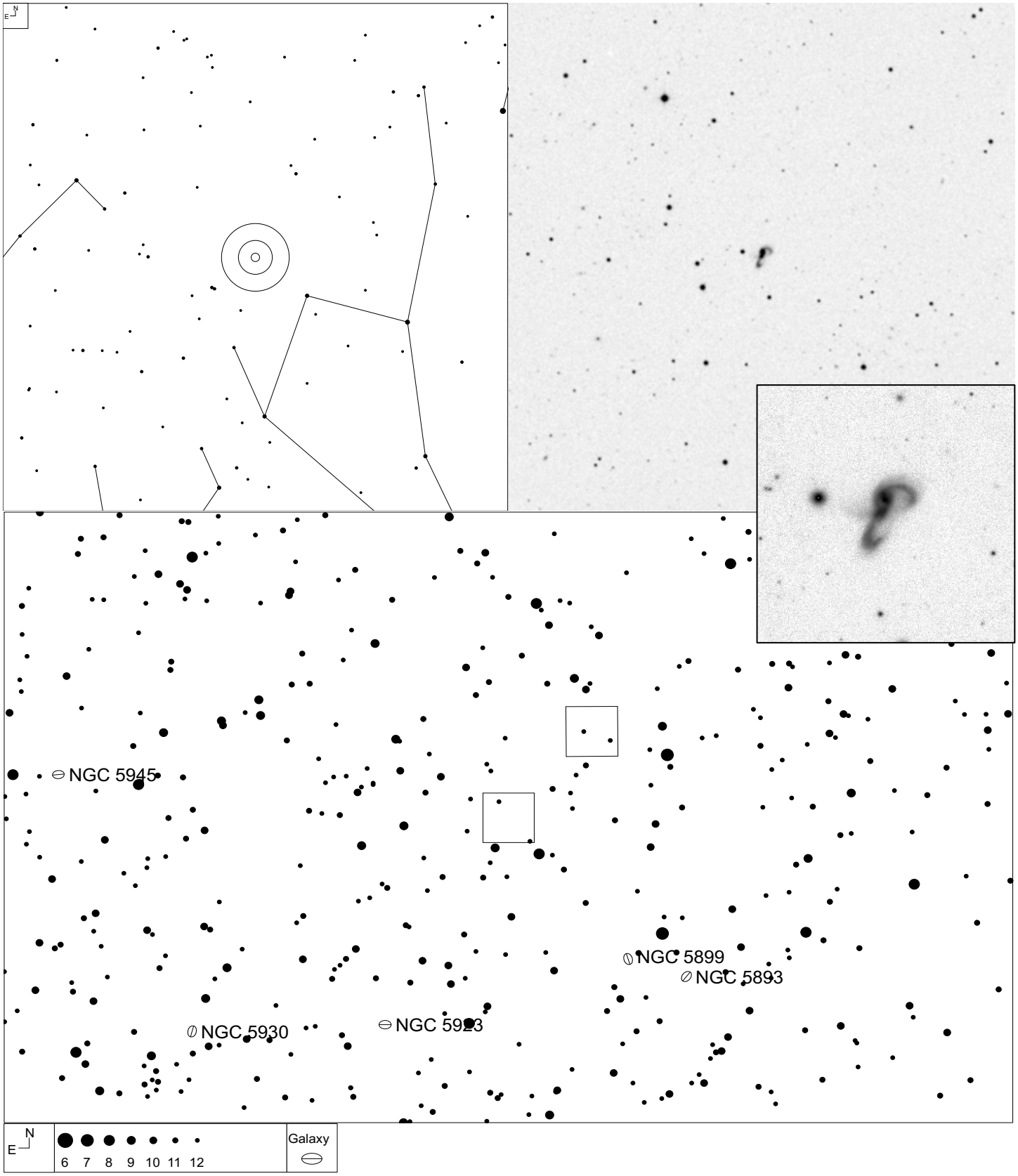
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
397	MCG +04-36-009	15 05 58.5	+20 50 57	G	15.1g	0.6 x 0.4	N

VV 786 (Boötes)



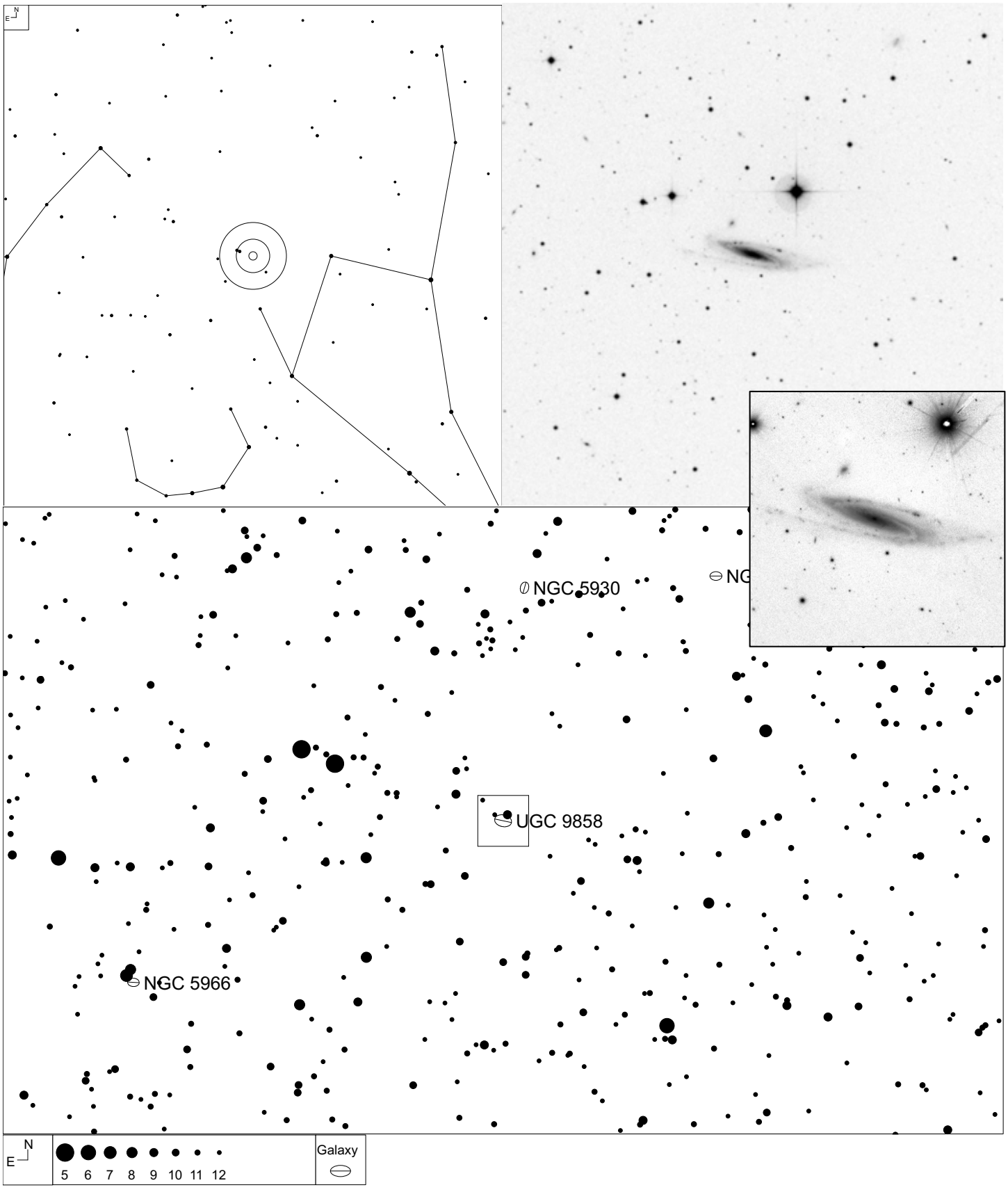
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
786	UGC 9796	15 15 56.3	+43 10 00	G	17.0b	0.8 x 0.4	En

VV 705 (Boötes)



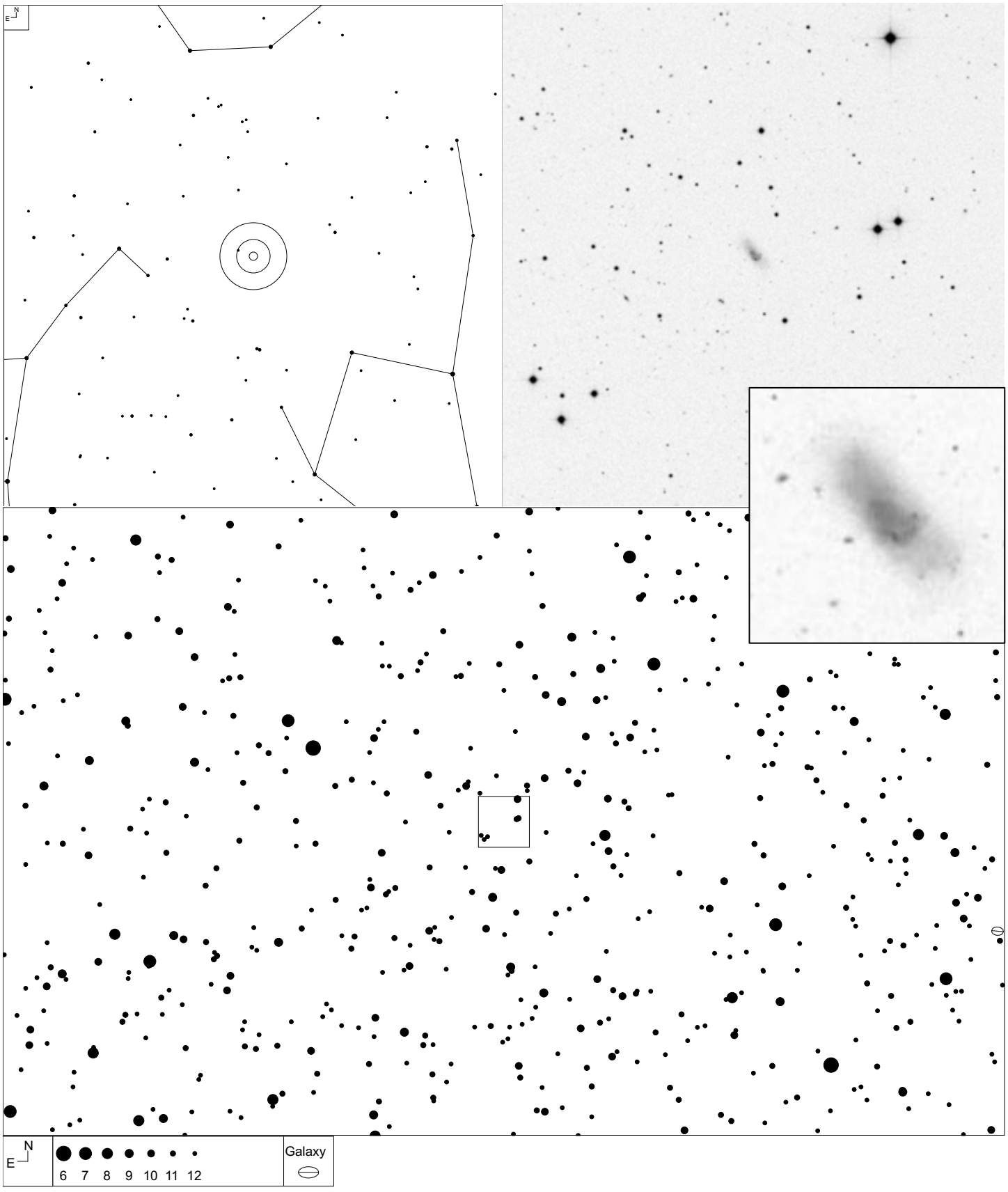
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
705	1 Zw 107	15 18 06.3	+42 44 37	GPair	15.0v	0.9 x 0.6	NNNP

VV 427 (Boötes)



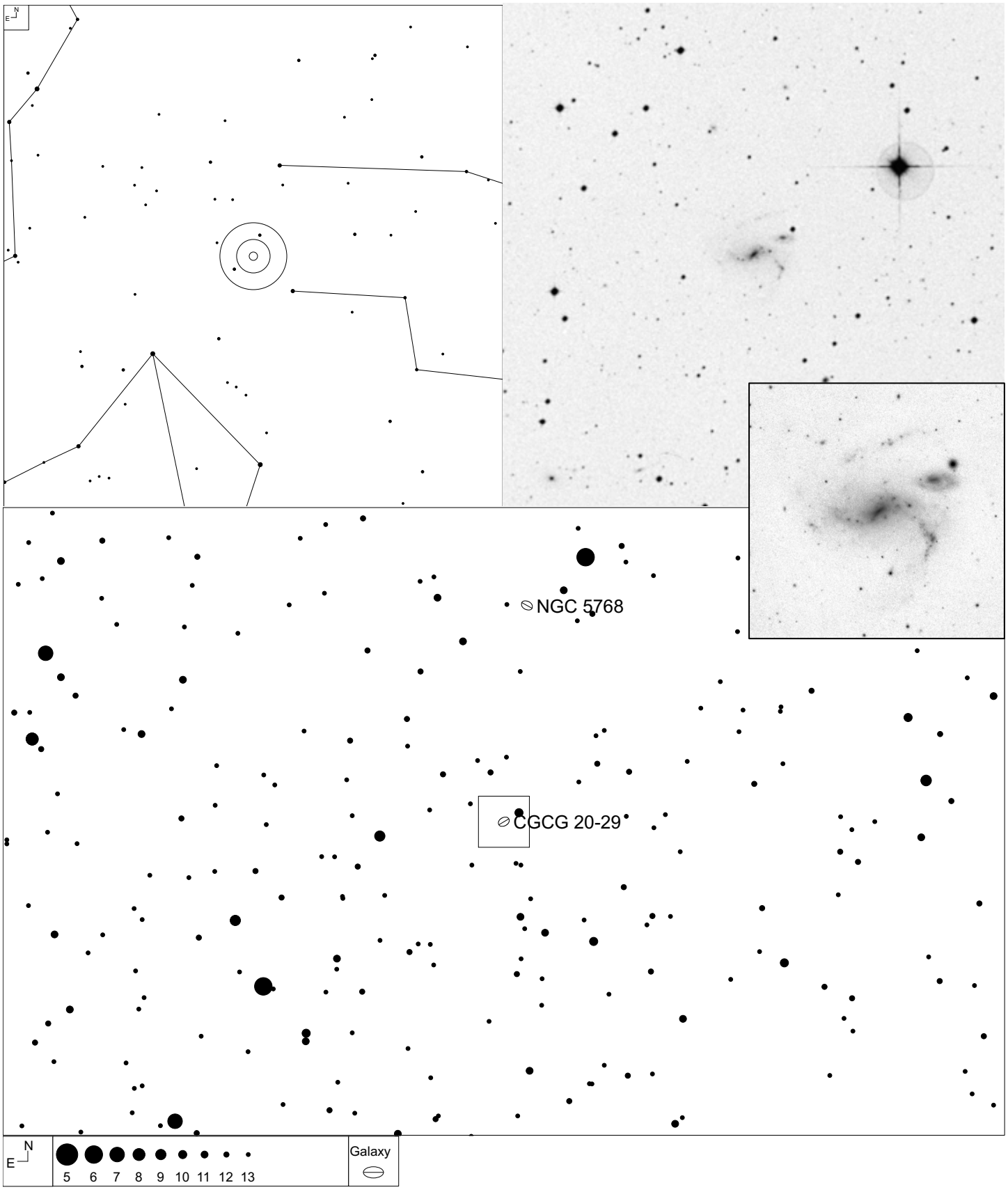
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
427	UGC 9858	15 26 41.5	+40 33 52	G	12.9g	4.3 x 0.8	M

VV 720 (Boötes)



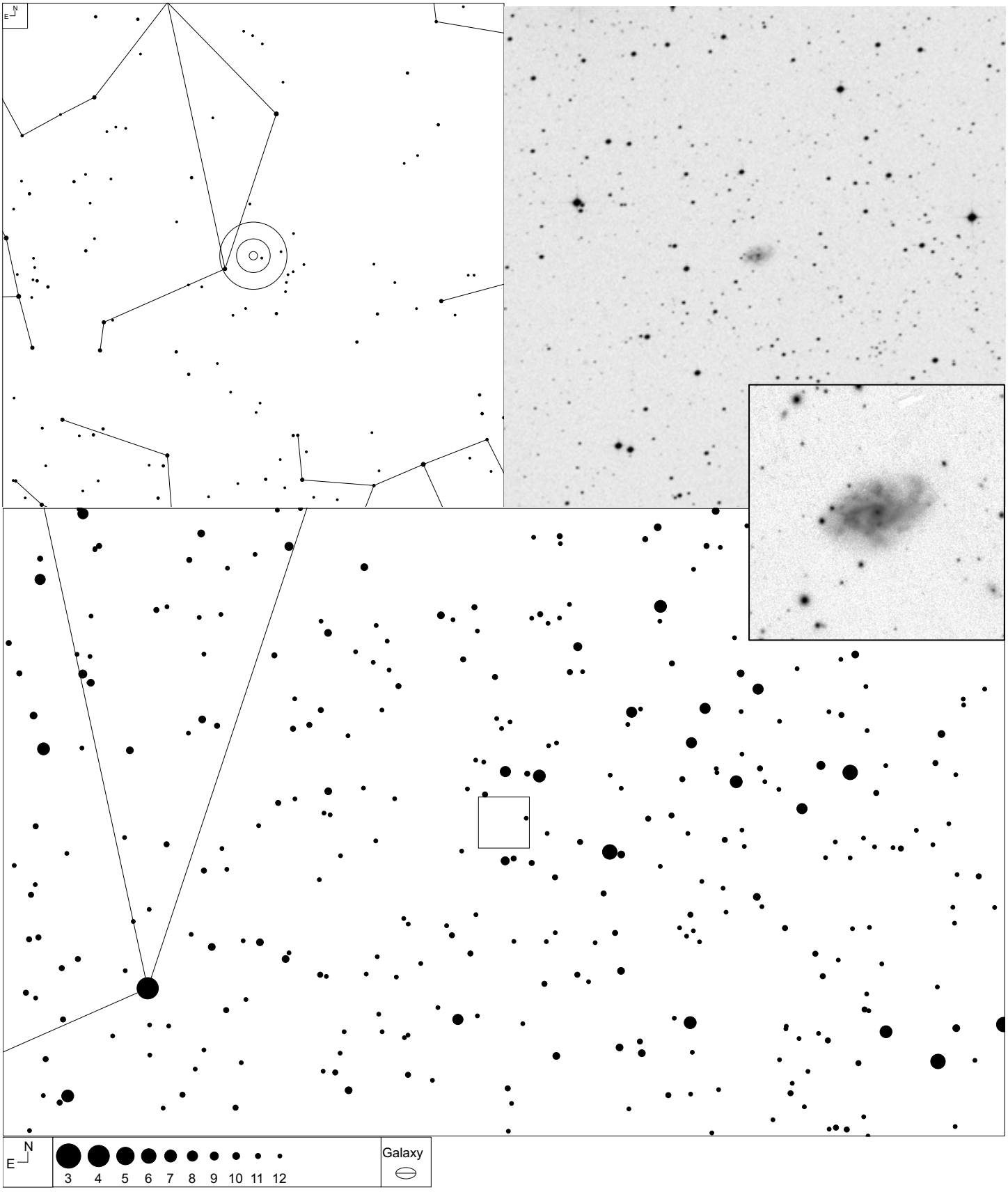
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
720	UGC 9893	15 32 57.3	+46 27 10	G	16.4g	1.4 x 0.5	PC

VV 815 (Libra)



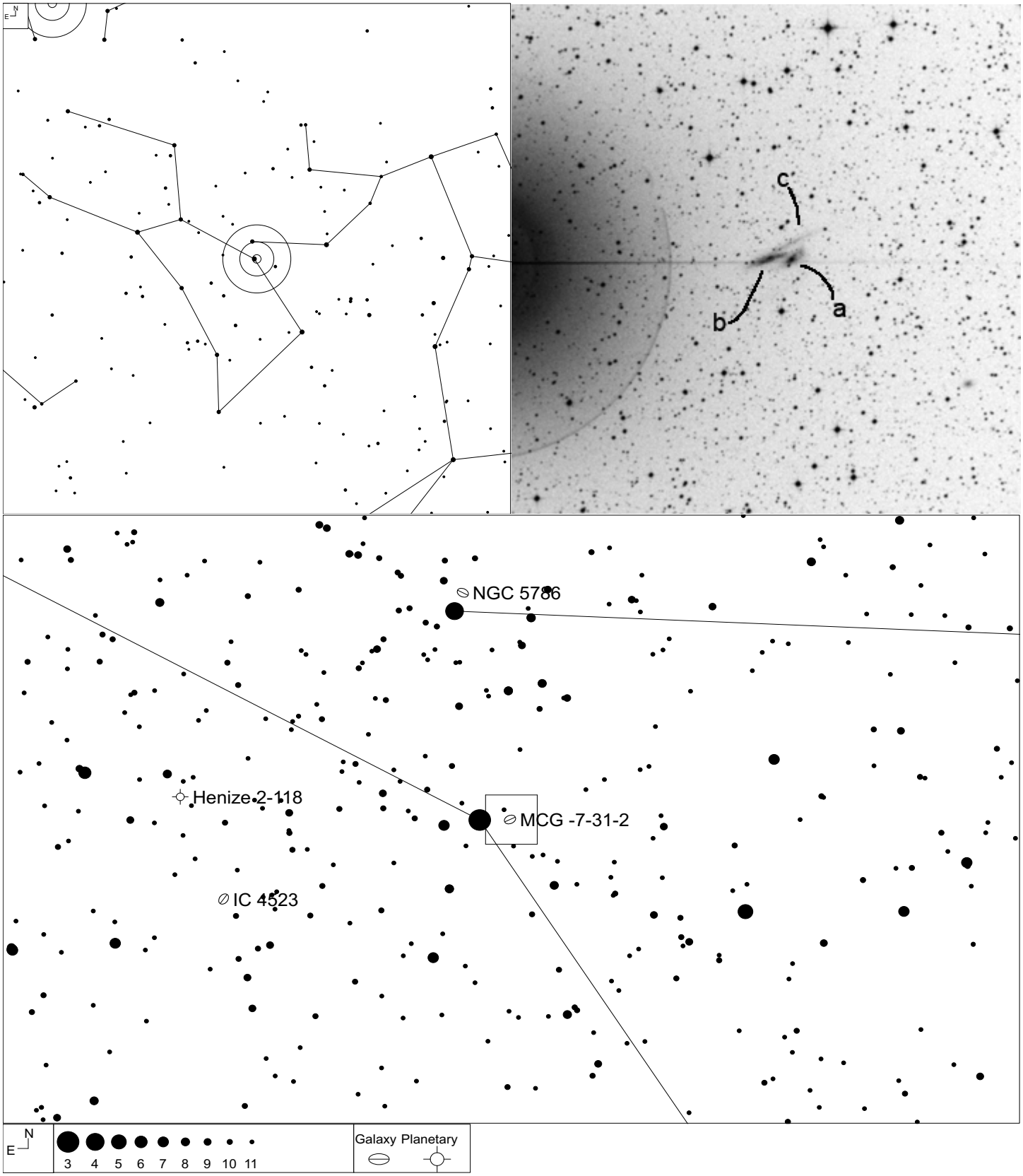
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
815	UGCA 396	14 52 34.8	-03 33 42	G	14.4g	2.9 x 2.4	NN

VV 585 (Libra)



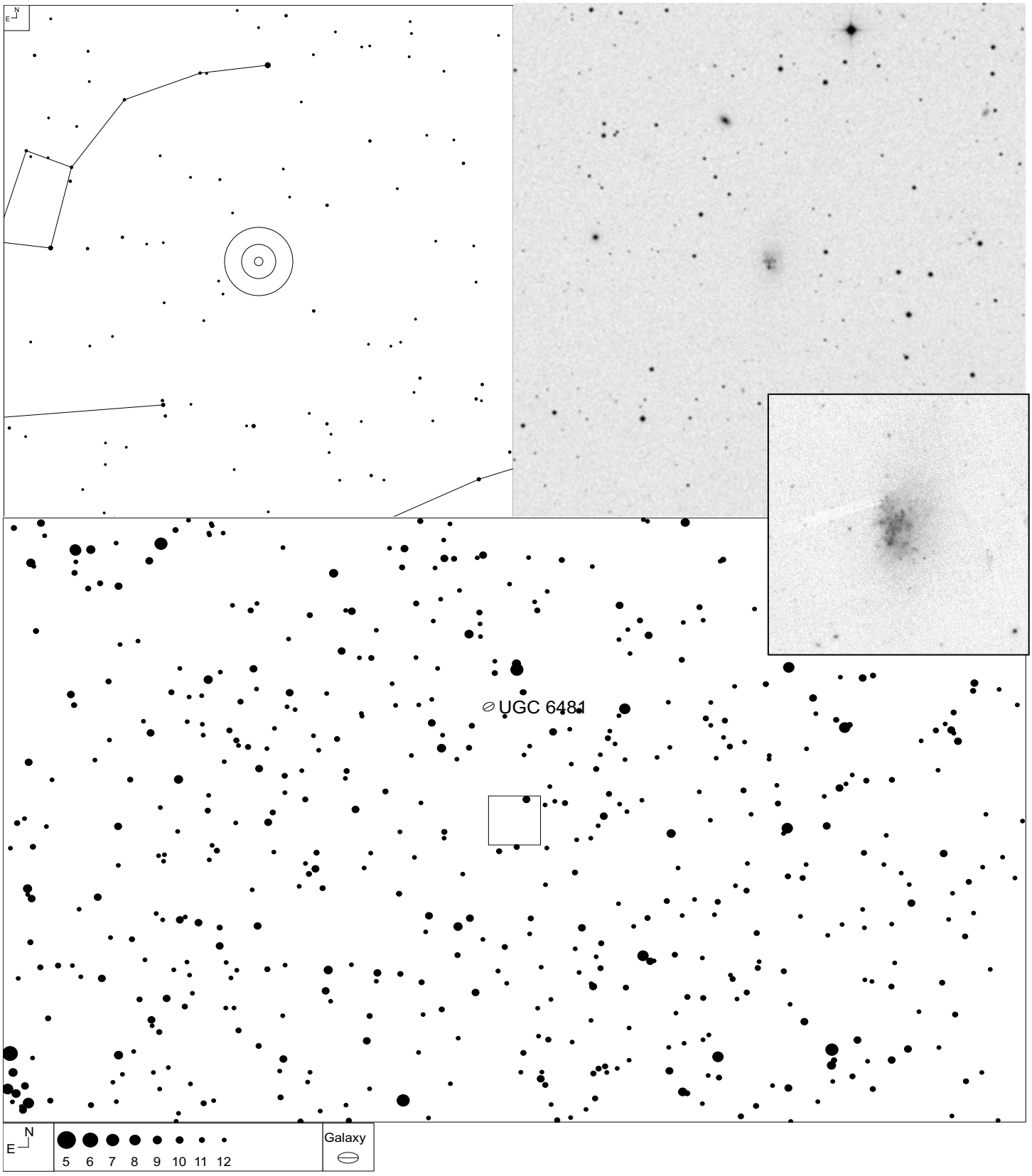
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
585	MCG -04-35-017	14 56 33.7	-24 30 10	GPair	15.0b	1.4 x 0.8	N

VV 780 (Lupus)



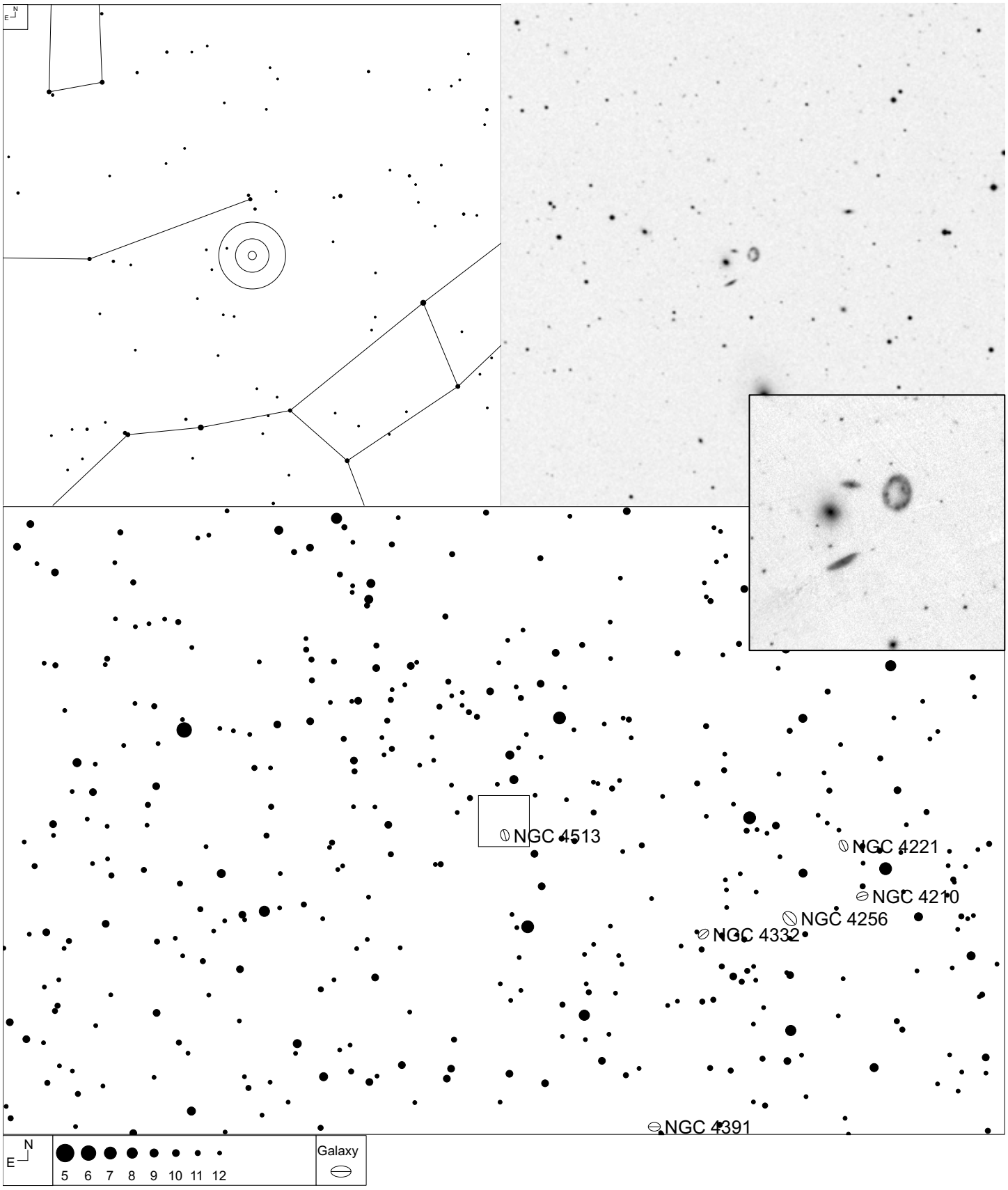
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
780		14 57 42.9	-43 07 54	GPair			NNN
780a	IC 4519A	14 57 41.2	-43 07 56	G	16.6b	0.9 x 0.5	
780b	IC 4518	14 57 45.1	-43 07 51	G	14.5b	1.5 x 0.3	

VV 574 (Draco)



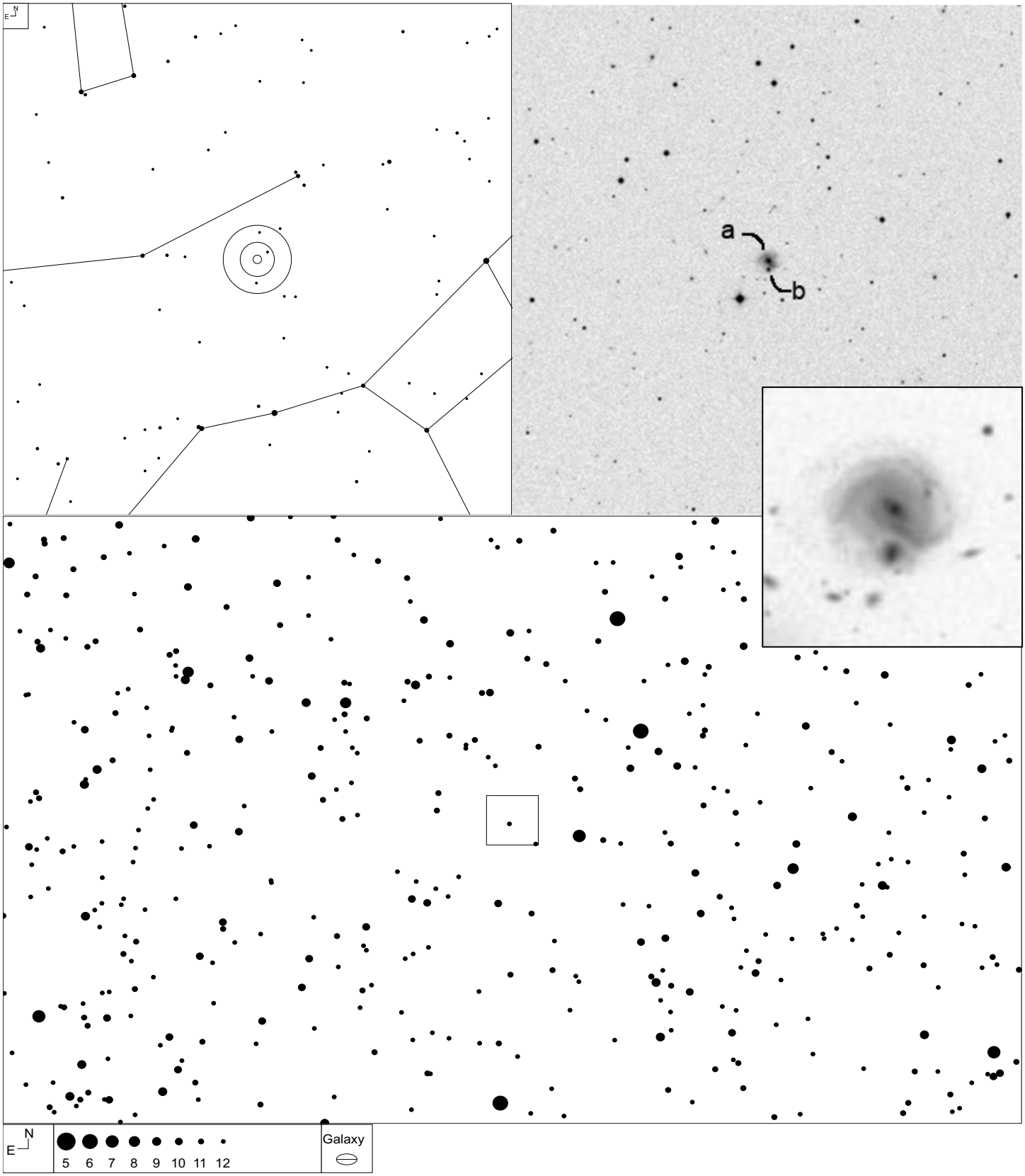
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
574	UGC 6456	11 28 00.4	+78 59 42	G	15.2g	1.4 x 0.8	N

VV 788 (Draco)



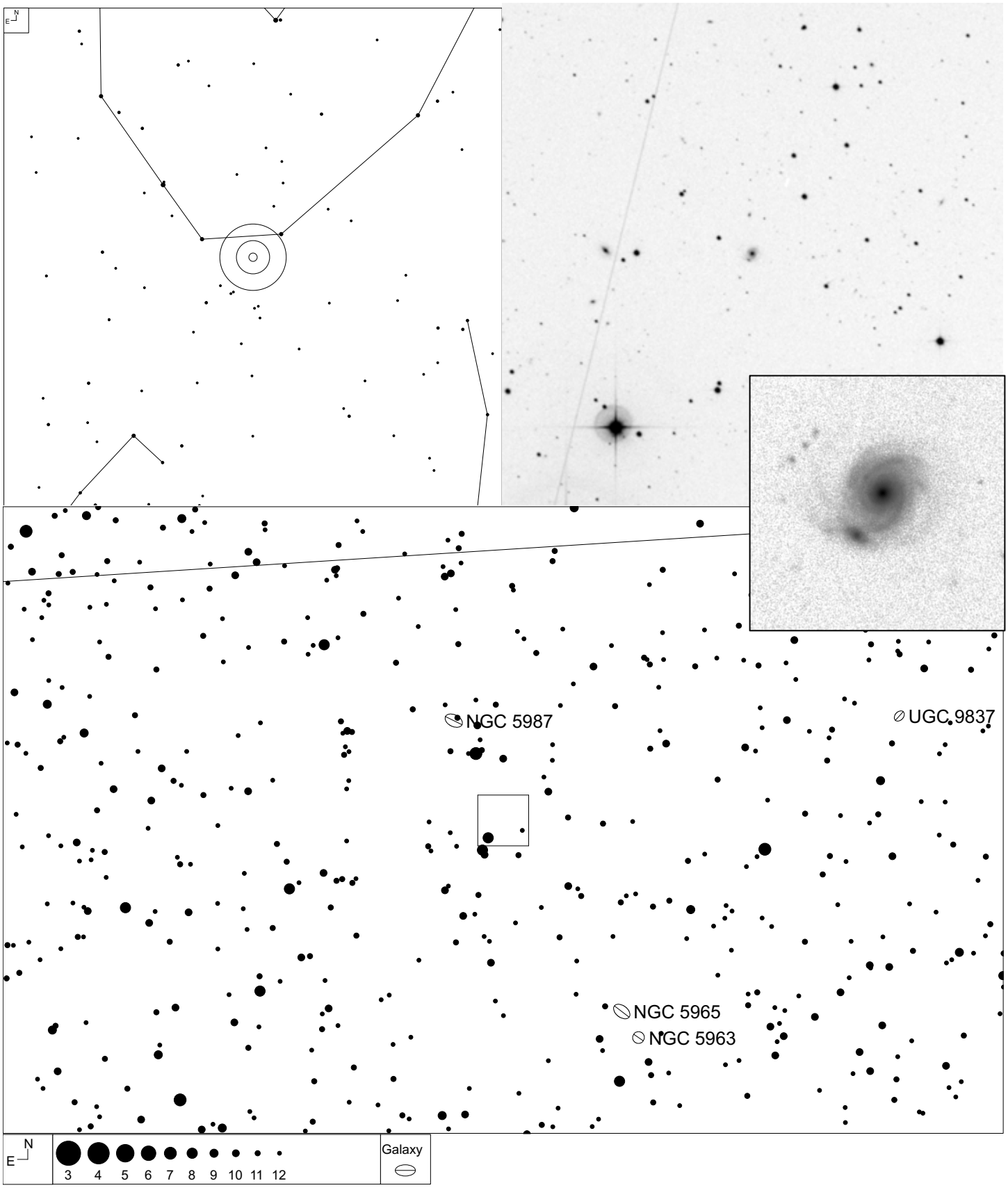
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
788	VII Zw 466 UGC 7683	12 32 05.2*	+66 24 13*	G	15.6b	0.4 x 0.3	R

VV 605 (Draco)



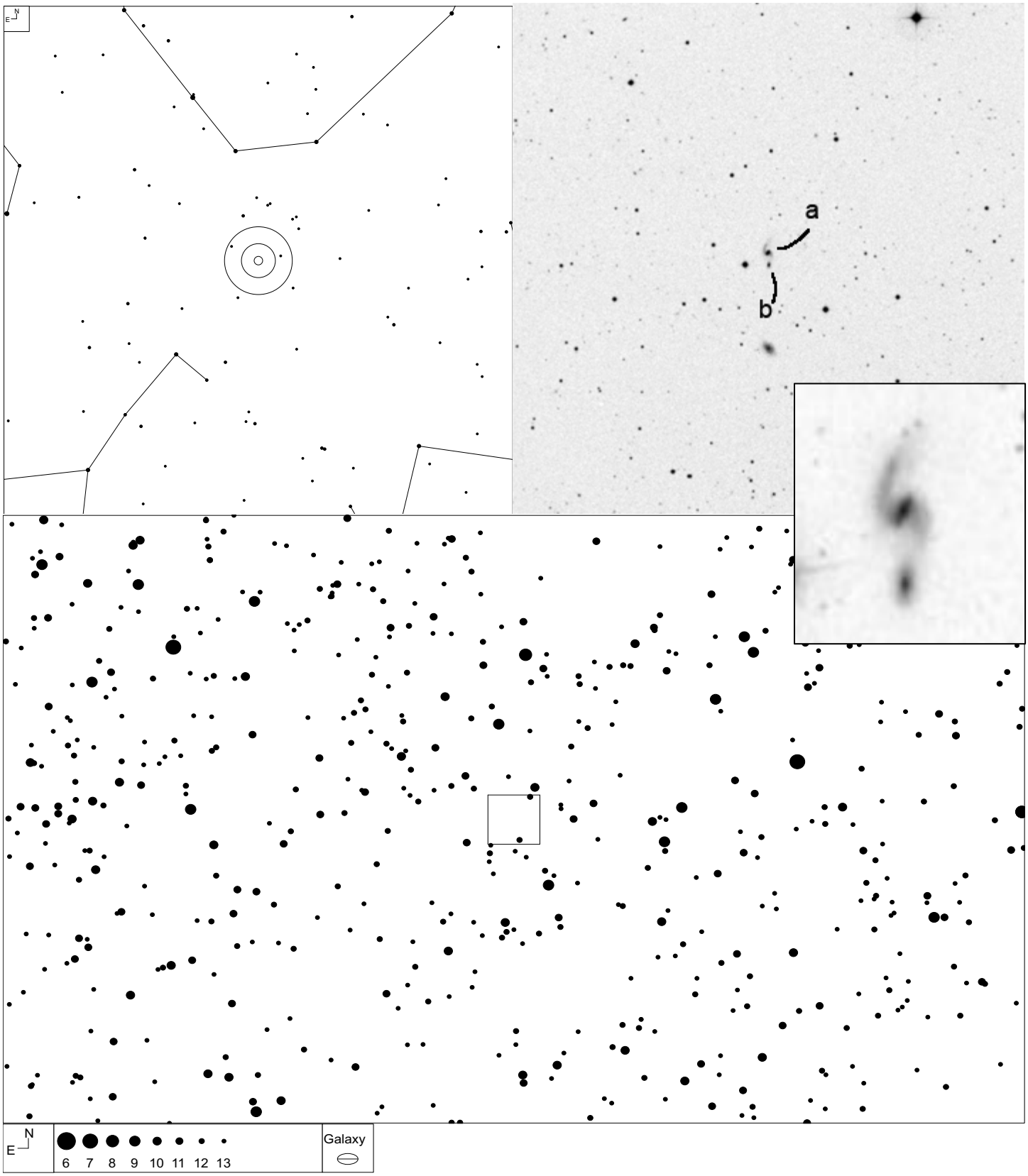
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
605	MCG +11-16-008	13 01 16.9	+65 00 20	GPair	15.2g	0.7 x 0.7	N
605b	*Mrk 238*	*13 01 16.6*	*+64 59 59*	*G*	*16.8g*	*0.4 x 0.3*	

VV 487 (Draco)



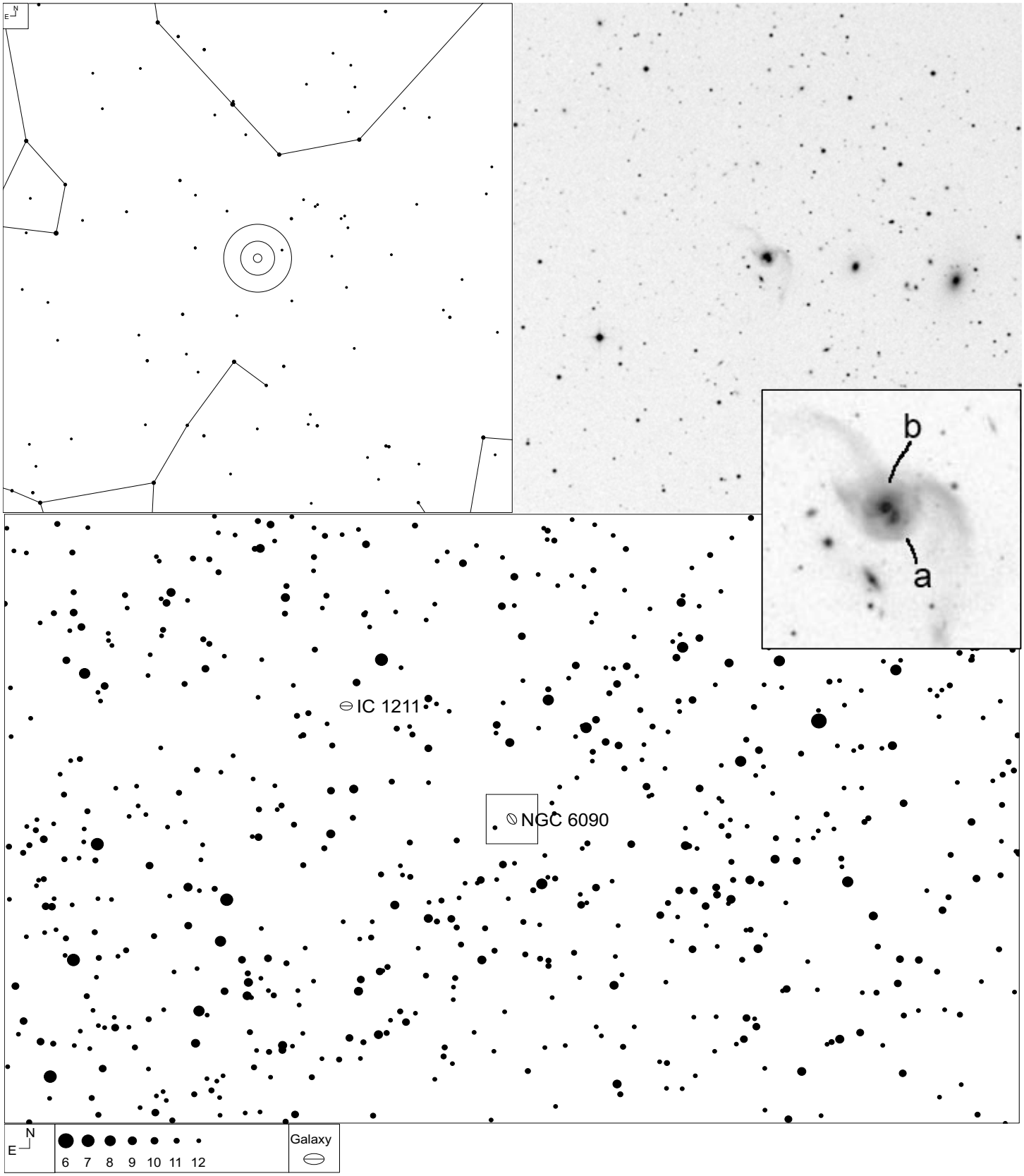
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
487	MCG +10-22-028	15 38 10.0	+57 36 13	G	17.8v	0.6 x 0.5	M

VV 816 (Draco)



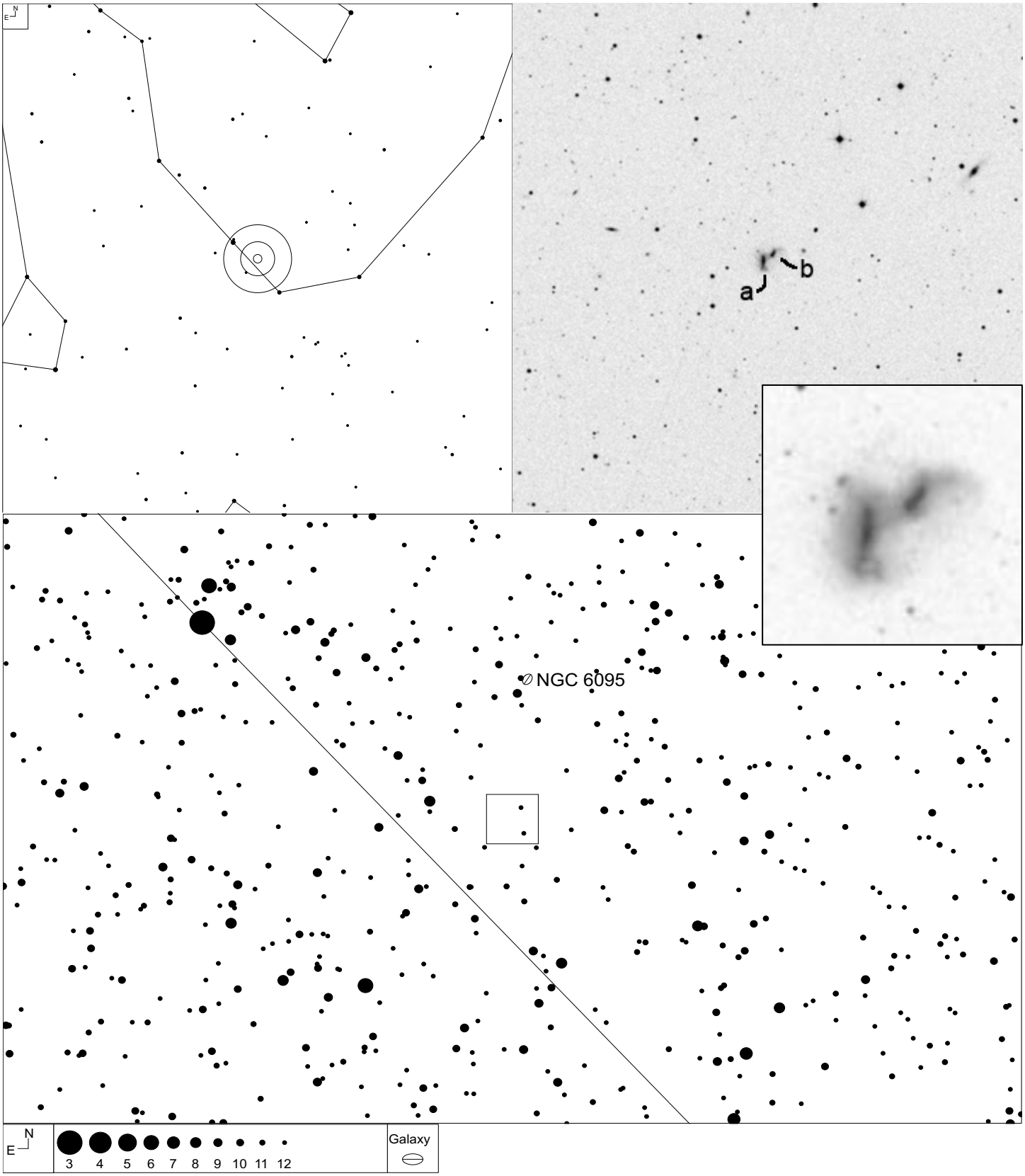
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
816	MCG +09-26-021	15 51 31.6	+52 05 30	GPair	15.9g	0.8 x 0.3	M

VV 626 (Draco)



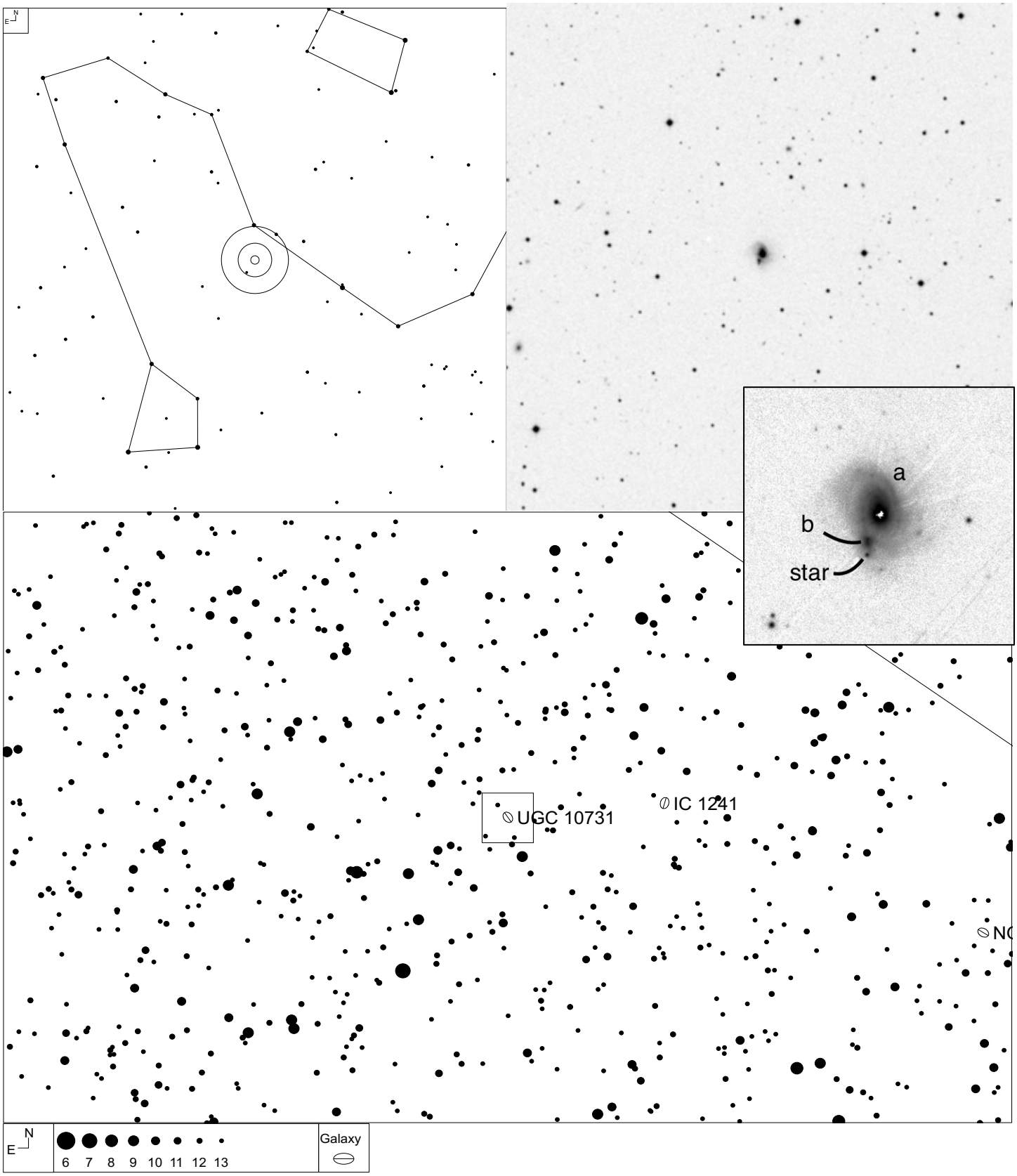
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
626	NGC 6090	16 11 40.6	+52 27 26	GPair	14.7g	1.7 x 0.7	N

VV 629 (Draco)



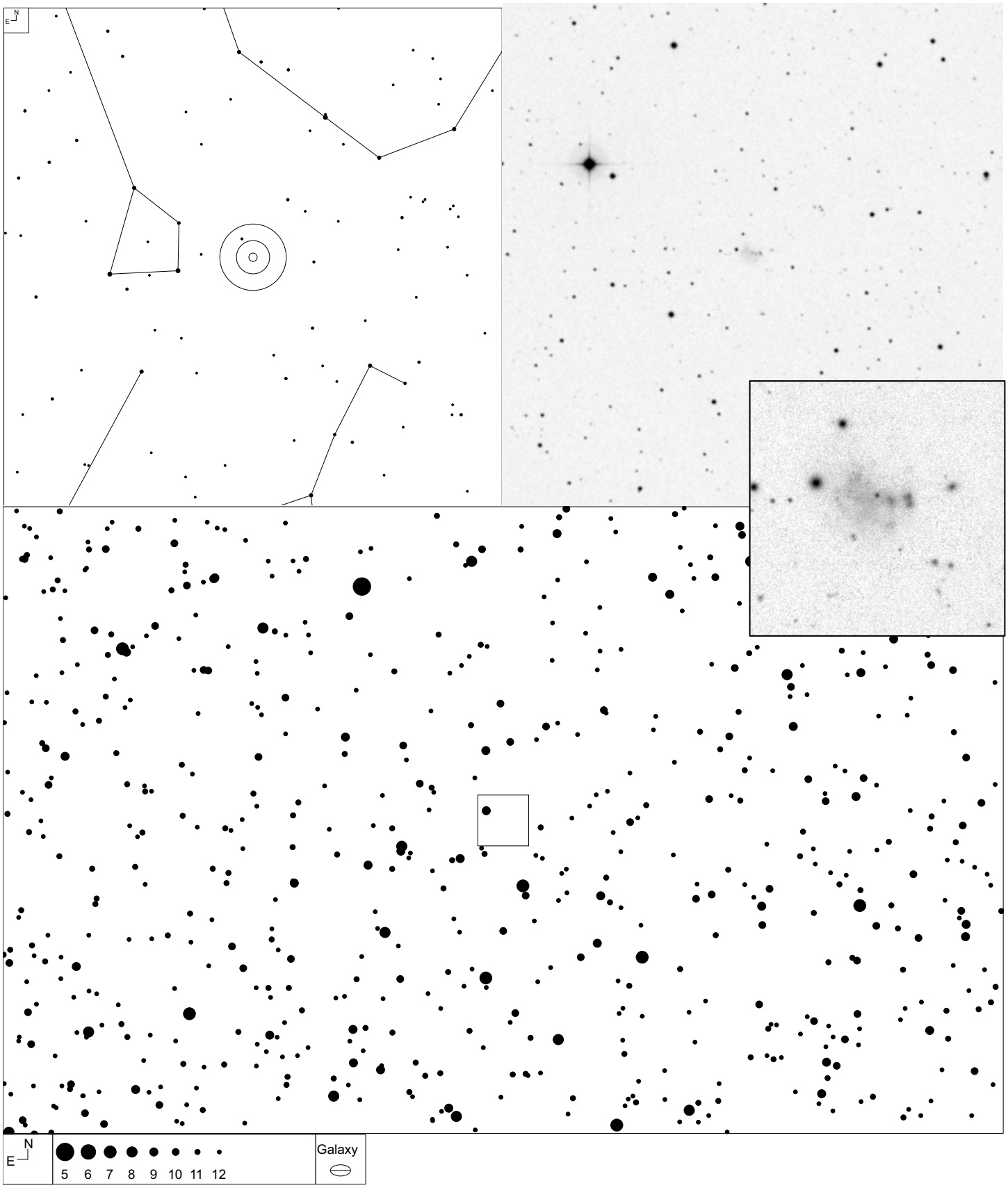
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
629	UGC 10279	16 11 45.8	+60 34 56	GPair	15.2g	1.0 x 0.9	N
*629b**	*Mrk 874B*	*16 11 44.4*	*+60 35 06*	*G*	*16.4g*	*0.5 x 0.2*	

VV 726 (Draco)



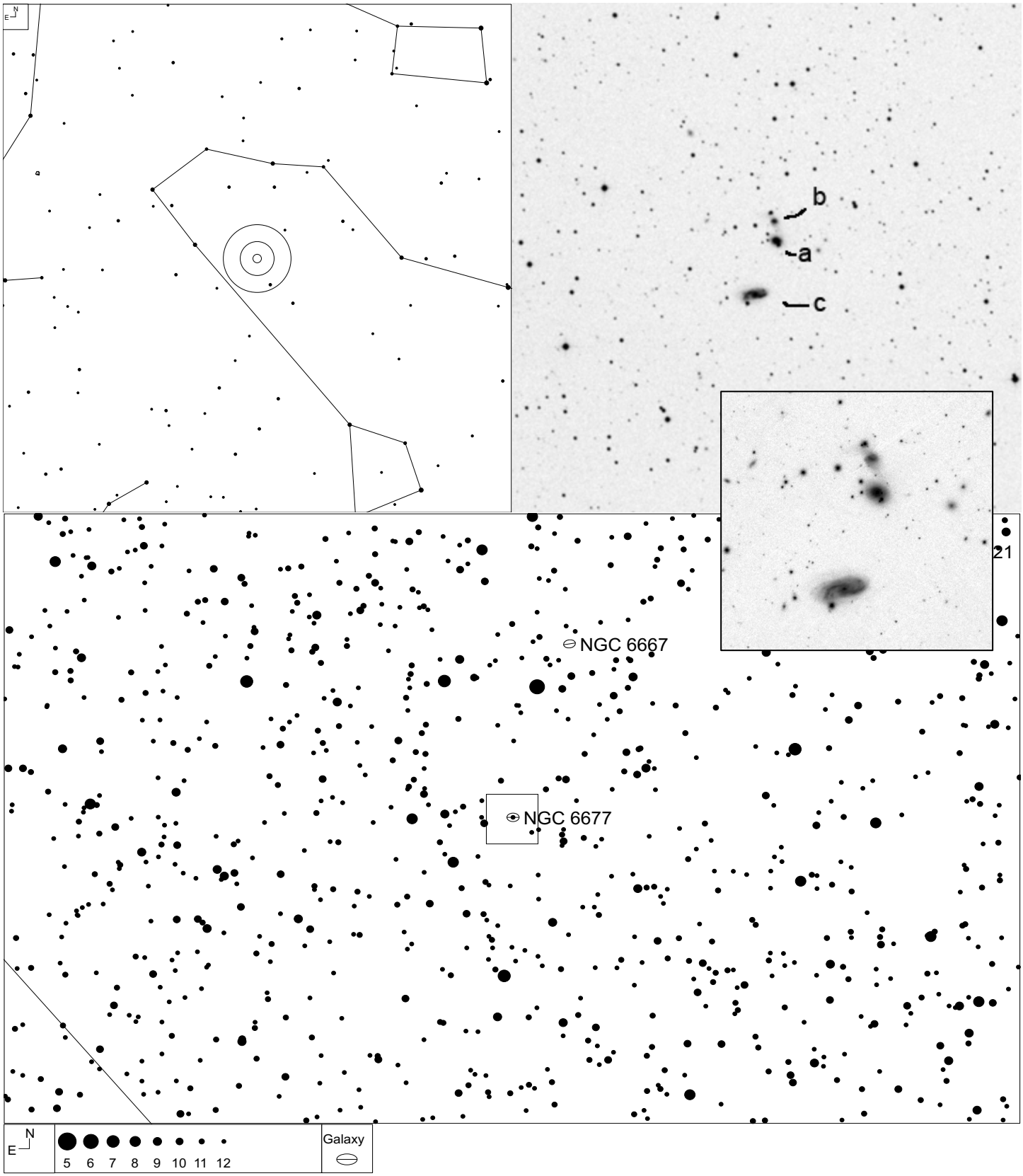
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
726	UGC 10731	17 08 10.3	+63 37 47	GPair	12.9g	0.8 x 0.5	PC

VV 507 (Draco)



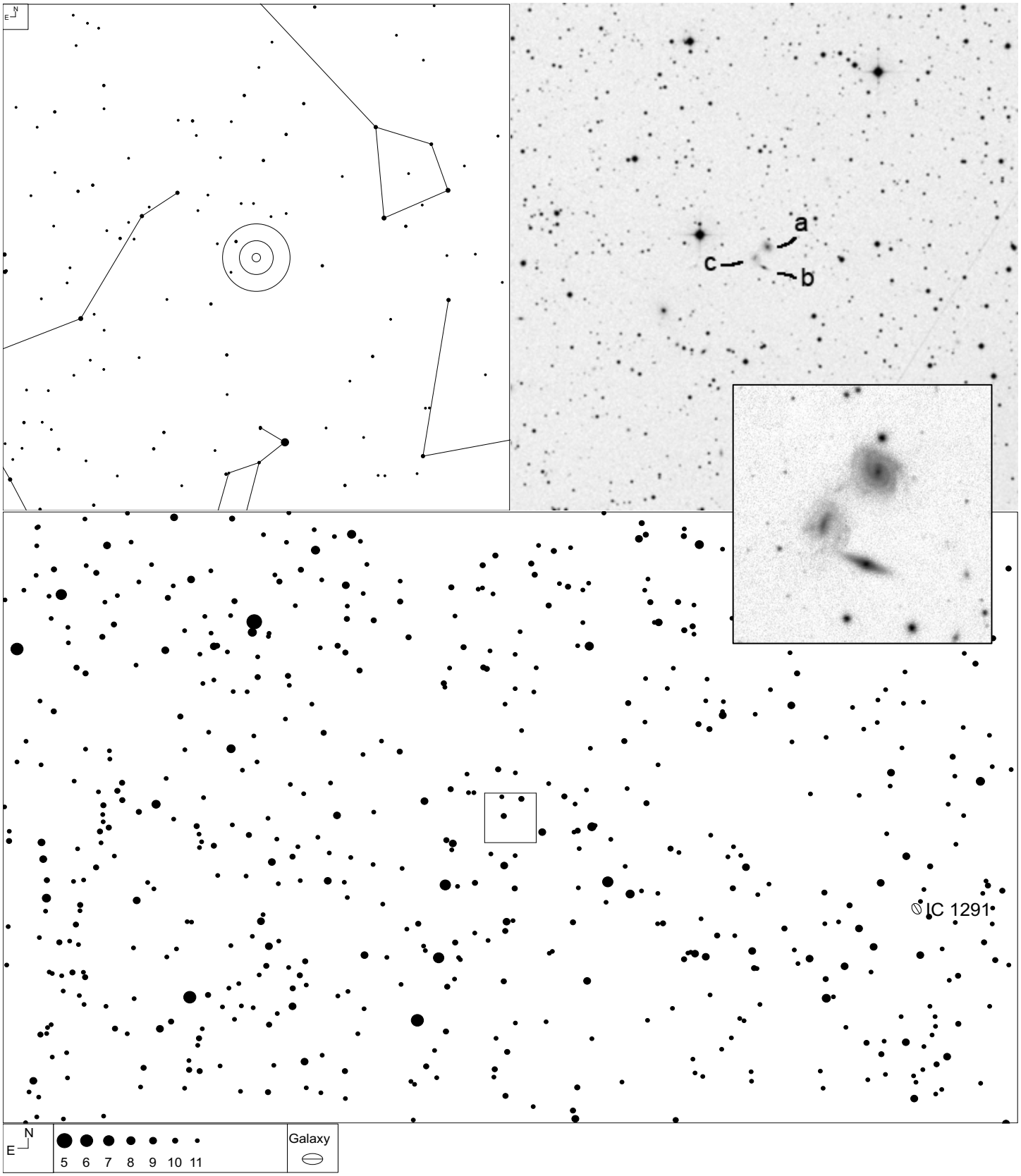
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
507	MCG +09-28-014	17 00 41.5	+53 21 33	G	17.2g	1.0 x 0.8	Ch

VV 672 (Draco)



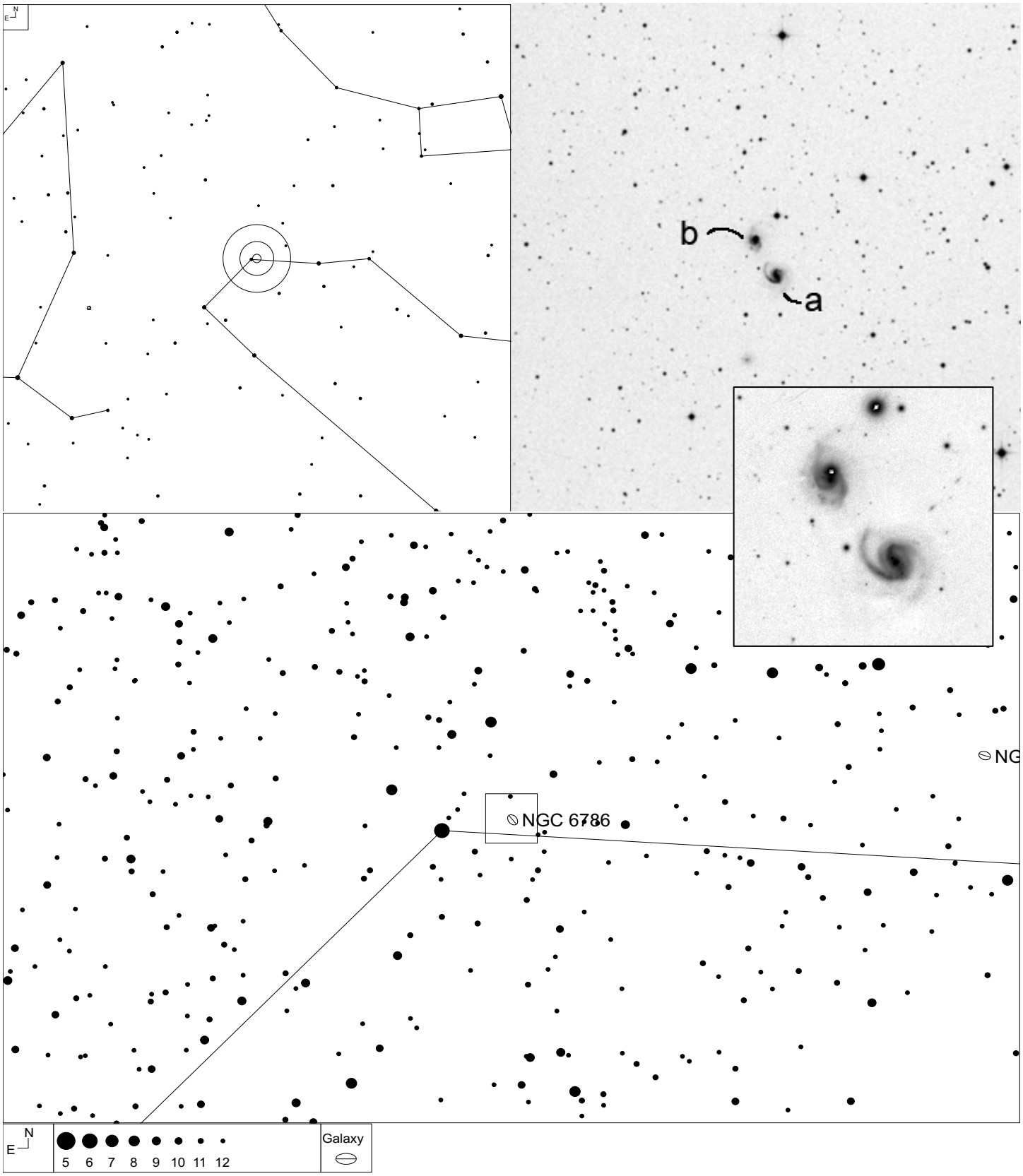
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
672		18 33 33.2	+67 07 42	GTrpl			NNNP
672a	NGC 6679	18 33 30.5	+67 08 14	G	14.5g	0.4 x 0.3	
672b	MCG+11-22-056	18 33 31.5	+67 08 48	G	13.6b	0.3 x 0.2	
672c	NGC 6677	18 33 36.1	+67 06 39	G	13.9	0.9 x 0.4	

VV 681 (Draco)



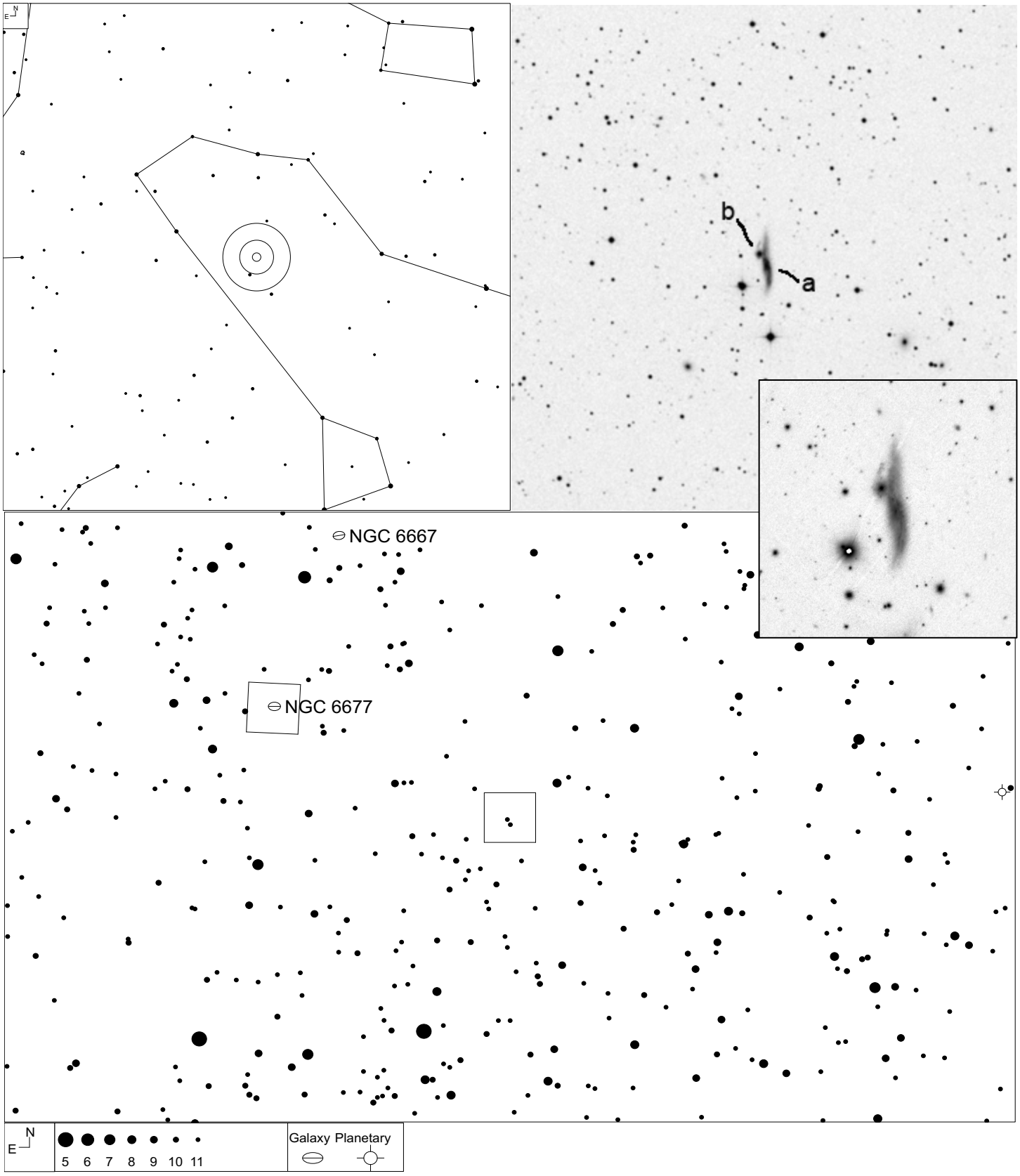
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
681		18 45 36.3	+49 45 43	GTrpl			NN
681a	MCG +08-34-017	18 45 35.7	+49 46 02	G	16.4g	0.3 x 0.3	
681b	MCG +08-34-(017a)	18 45 38.0	+49 45 42	G			
681c	MCG +08-34-018	18 45 36.2	+49 45 25	G	17.0b	0.4 x 0.2	

VV 414 (Draco)



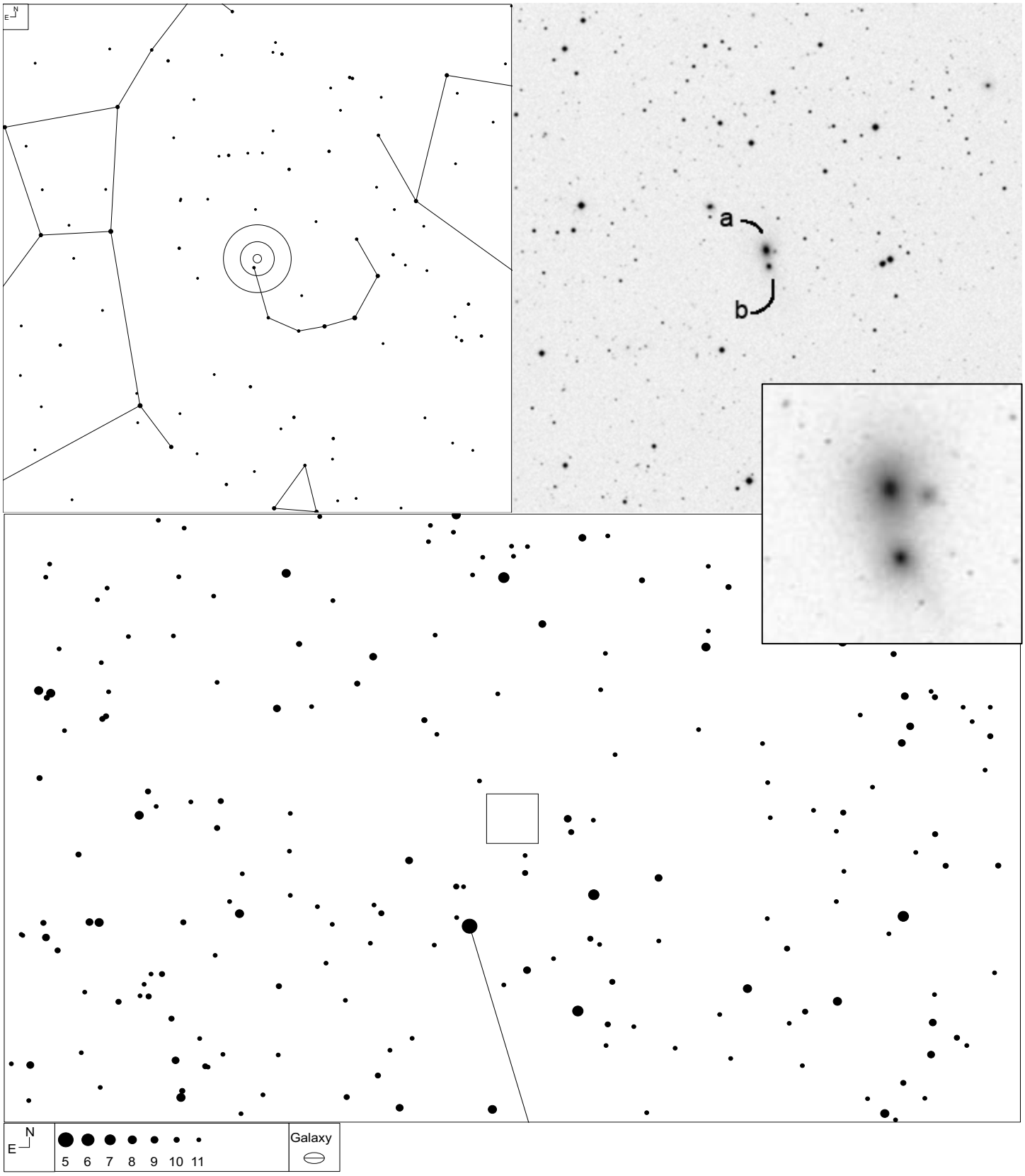
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
414		19 10 59.1	+73 25 06	GPair			PD
414a	NGC 6786	19 10 53.9	+73 24 37	G	13.7b	1.1 x 0.9	M
414b	UGC 11415	19 11 04.3	+73 25 33	G	15.1b	1.2 x 0.8	M

VV 368 (Draco)



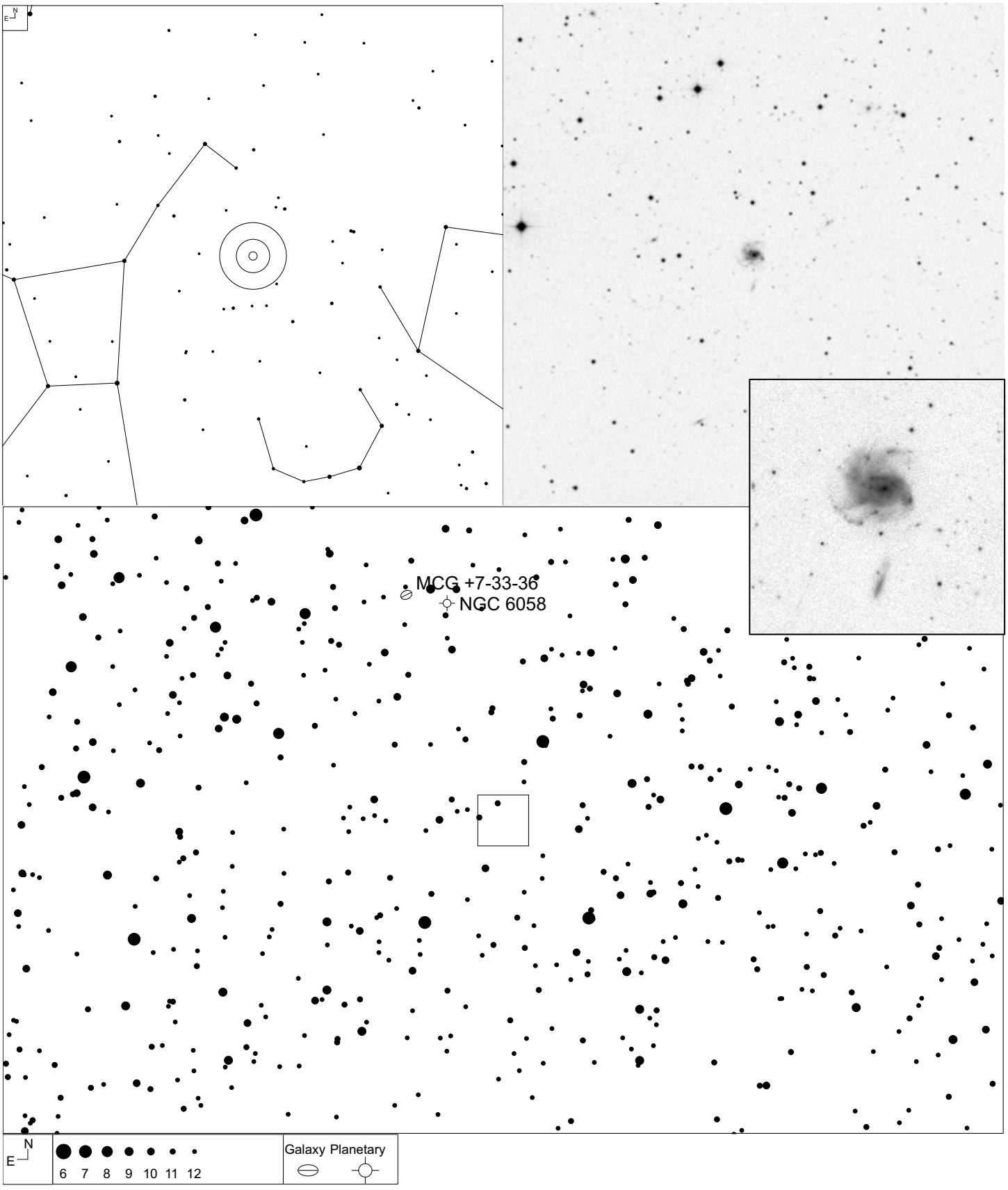
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
368=679		18 22 03.5	+66 37 13	GPair			NN
679a	NGC 6636	18 22 02.9	+66 37 00	G	14.3g	2.2 x 0.4	
679b	MCG +11-22-047	18 22 05.1	+66 37 10	G	16.4g	0.4 x 0.3	MMM

VV 838 (Corona Borealis)



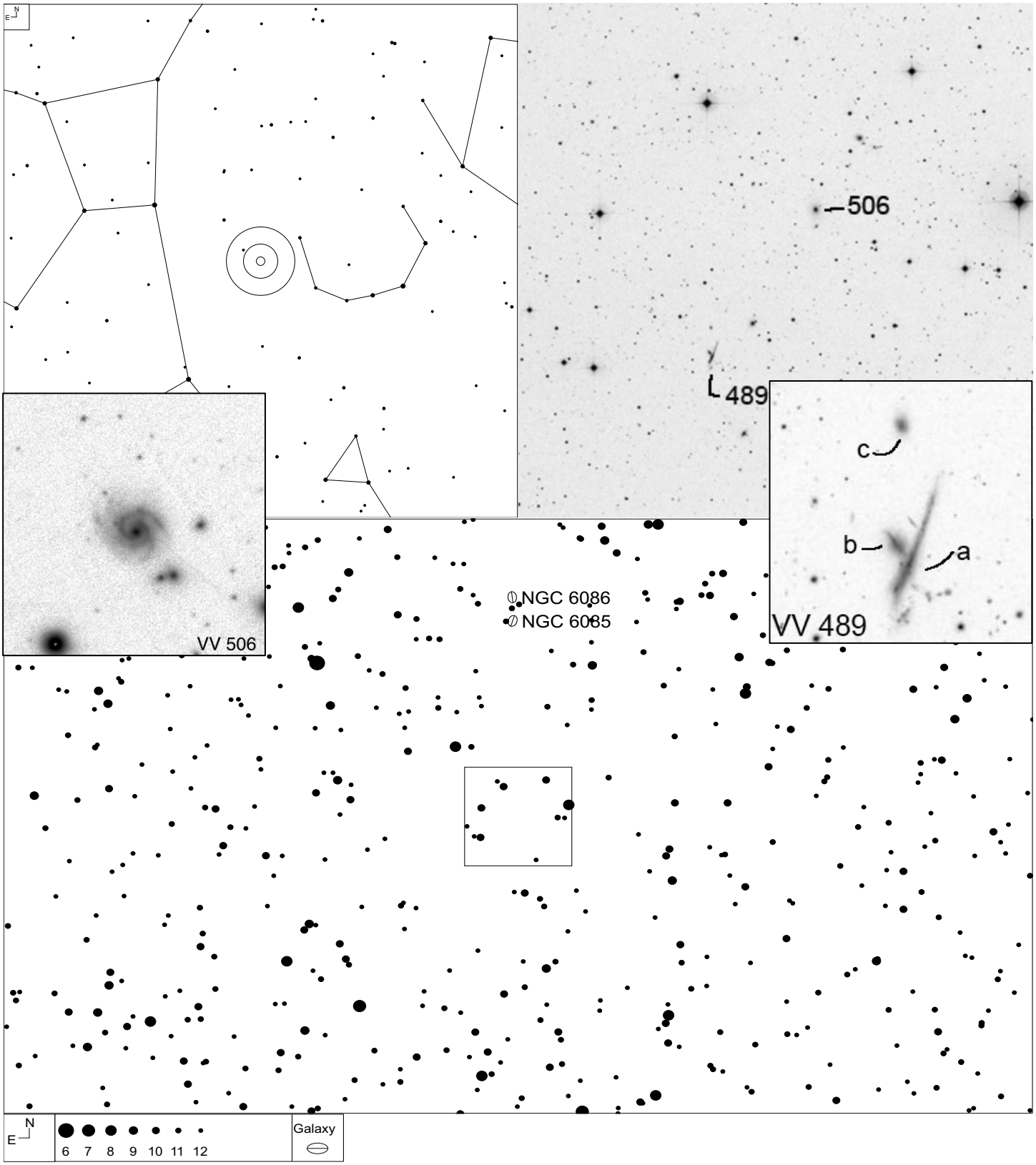
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
838		16 00 30.8	+30 22 52	GPair			Enat
838a	UGC 10128	16 00 31.0	+30 23 06	G	14.9g	0.7 x 0.6	
838b	MCG +05-38-009	16 00 30.6	+30 22 38	G	15.8g	0.5 x 0.4	

VV 611 (Corona Borealis)



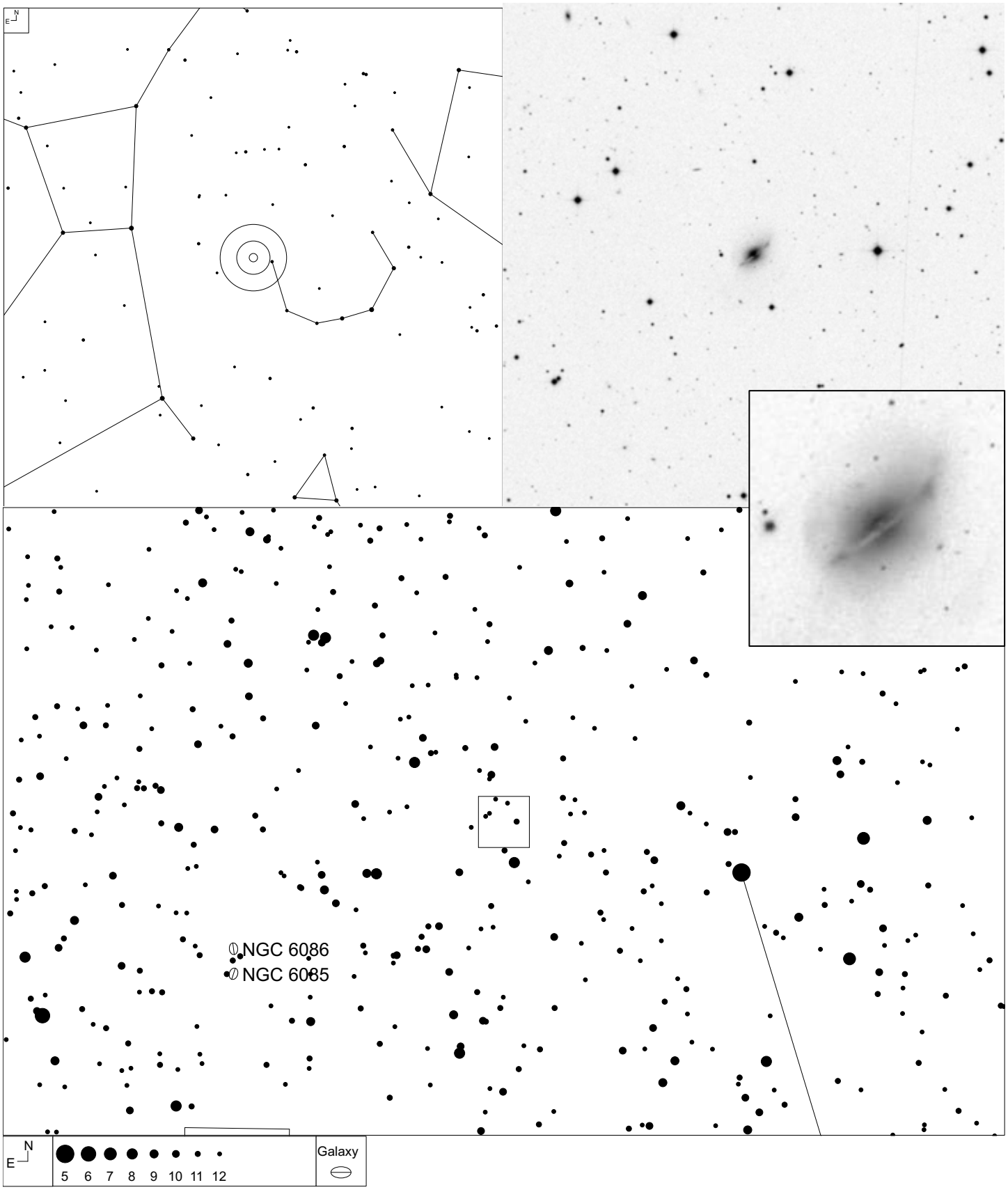
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
611	UGC 10155	16 03 01.5	+39 38 44	G	14.6g	1.0 x 0.9	N

VV 506 and VV 489 (Corona Borealis)



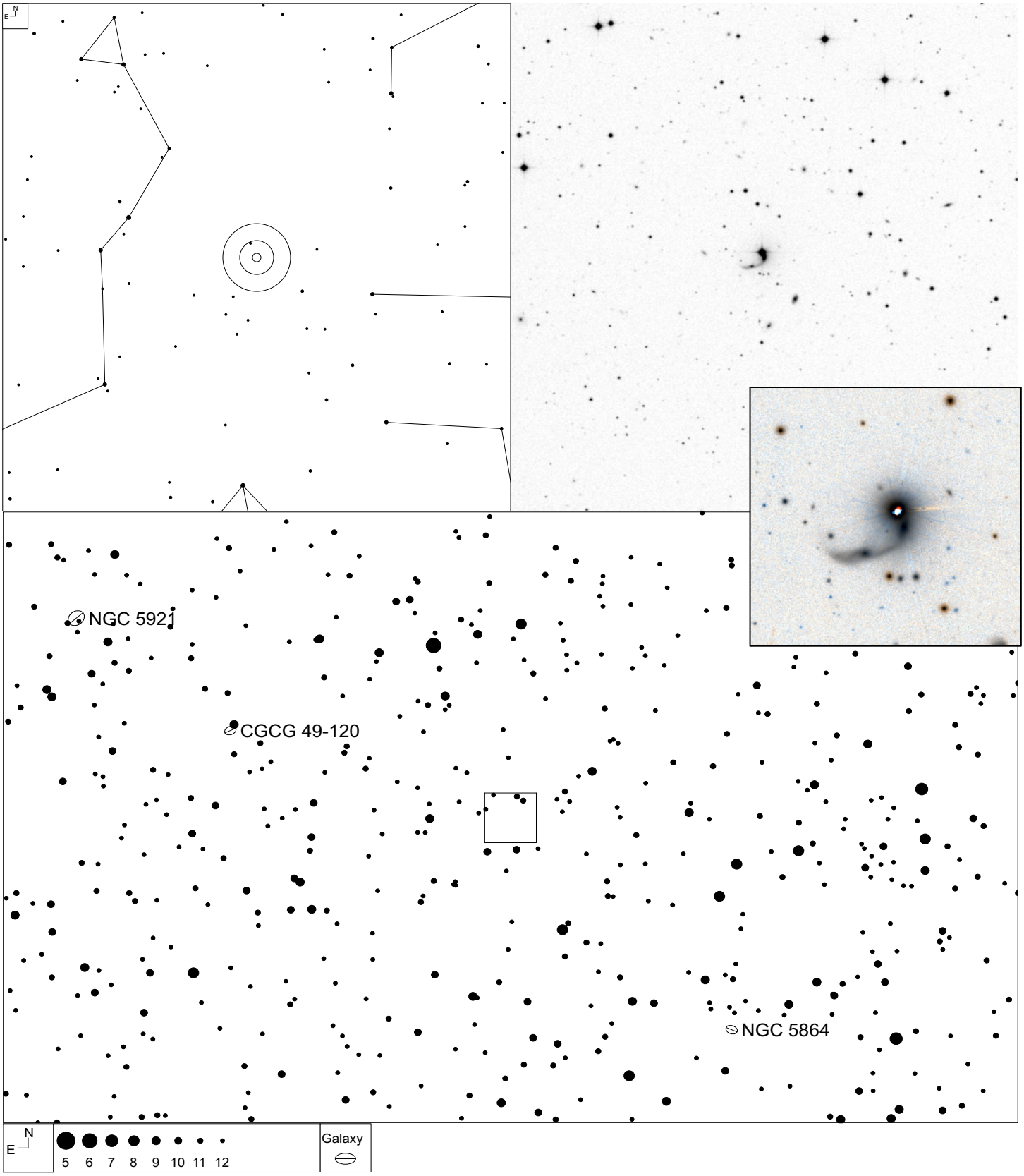
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
506	MCG +05-38-031	16 12 06.1	+28 29 56	G	15.2g	0.6 x 0.5	N
489		16 12 45.0	+28 18 05	GTrpl			NNN
489a	UGC 10273	16 12 44.4	+28 17 20	G	16.0g	0.7 x 0.2	
489b	PGC 1831614	16 12 45.1	+28 17 32	G	16.9		
489c	PGC 1832284	16 12 44.8	+28 19 00	G	17.2g	0.3 x 0.2	

VV 624 (Corona Borealis)



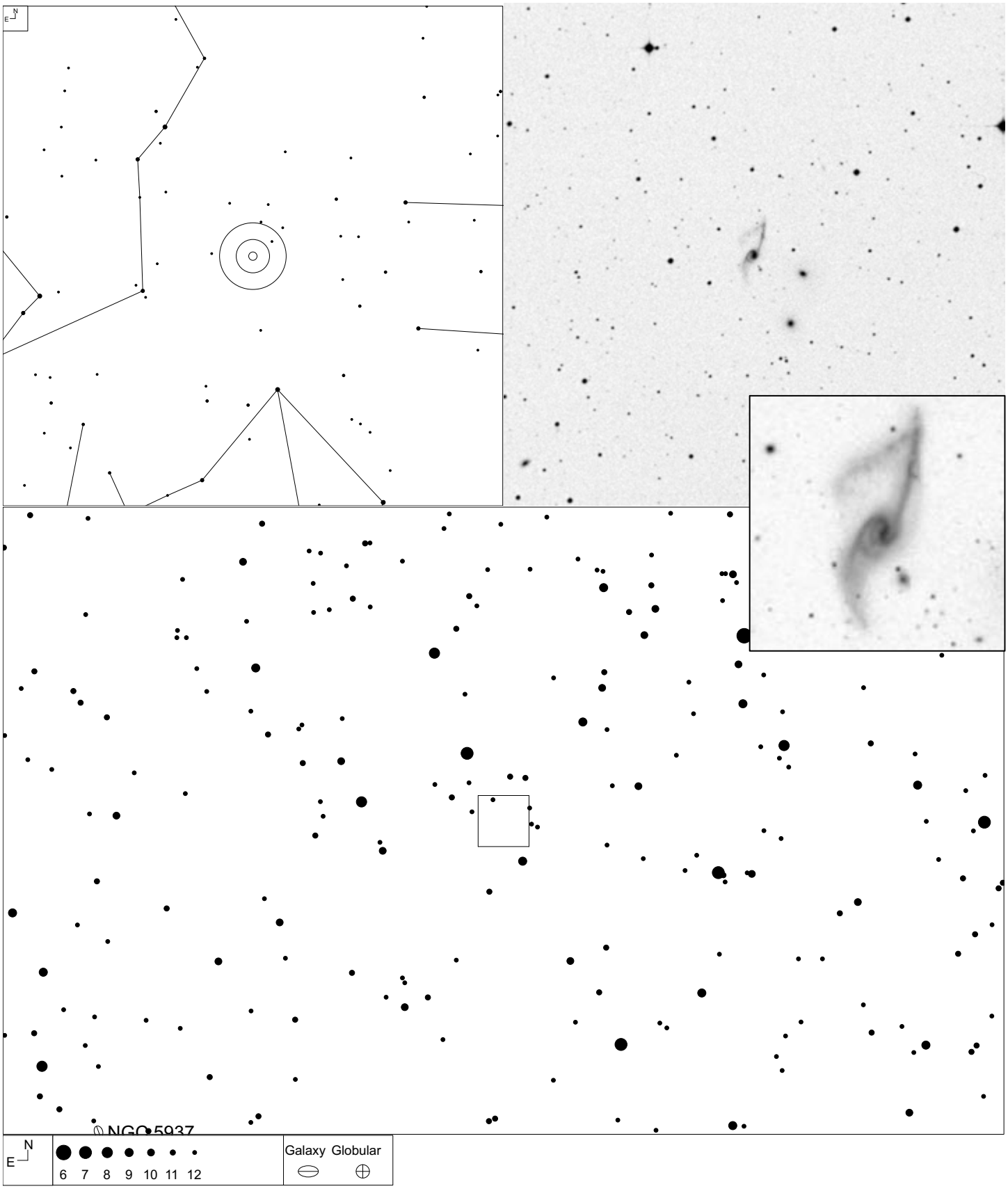
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
624	UGC 10205	16 06 40.2	+30 05 57	G	13.8g	1.6 x 0.8	N

VV 692 (Serpens)



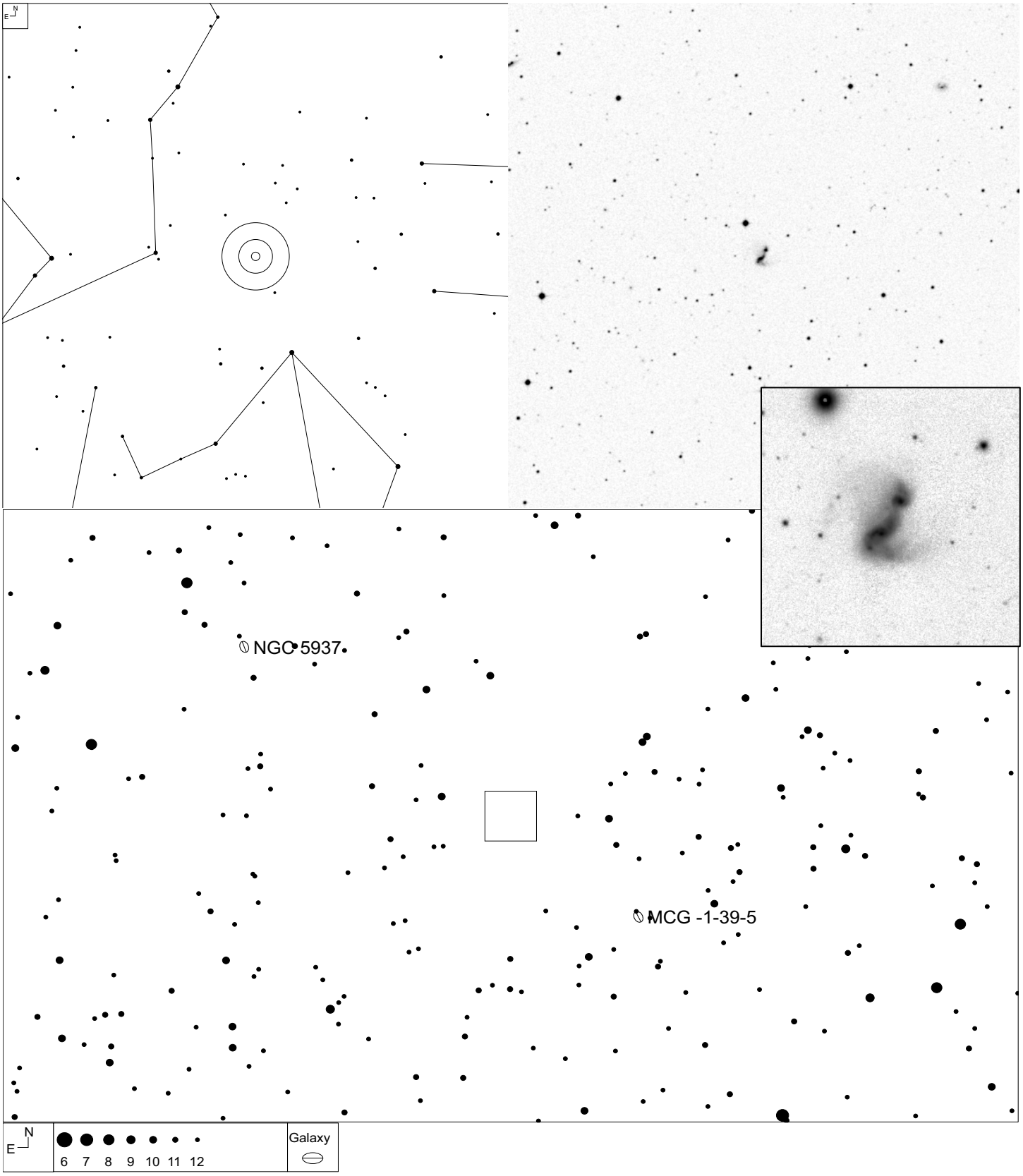
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
692	MCG +01-39-008	15 13 44.6	+04 05 20	GPair	15.6b	0.6 x 0.4	N

VV 847 (Serpens)



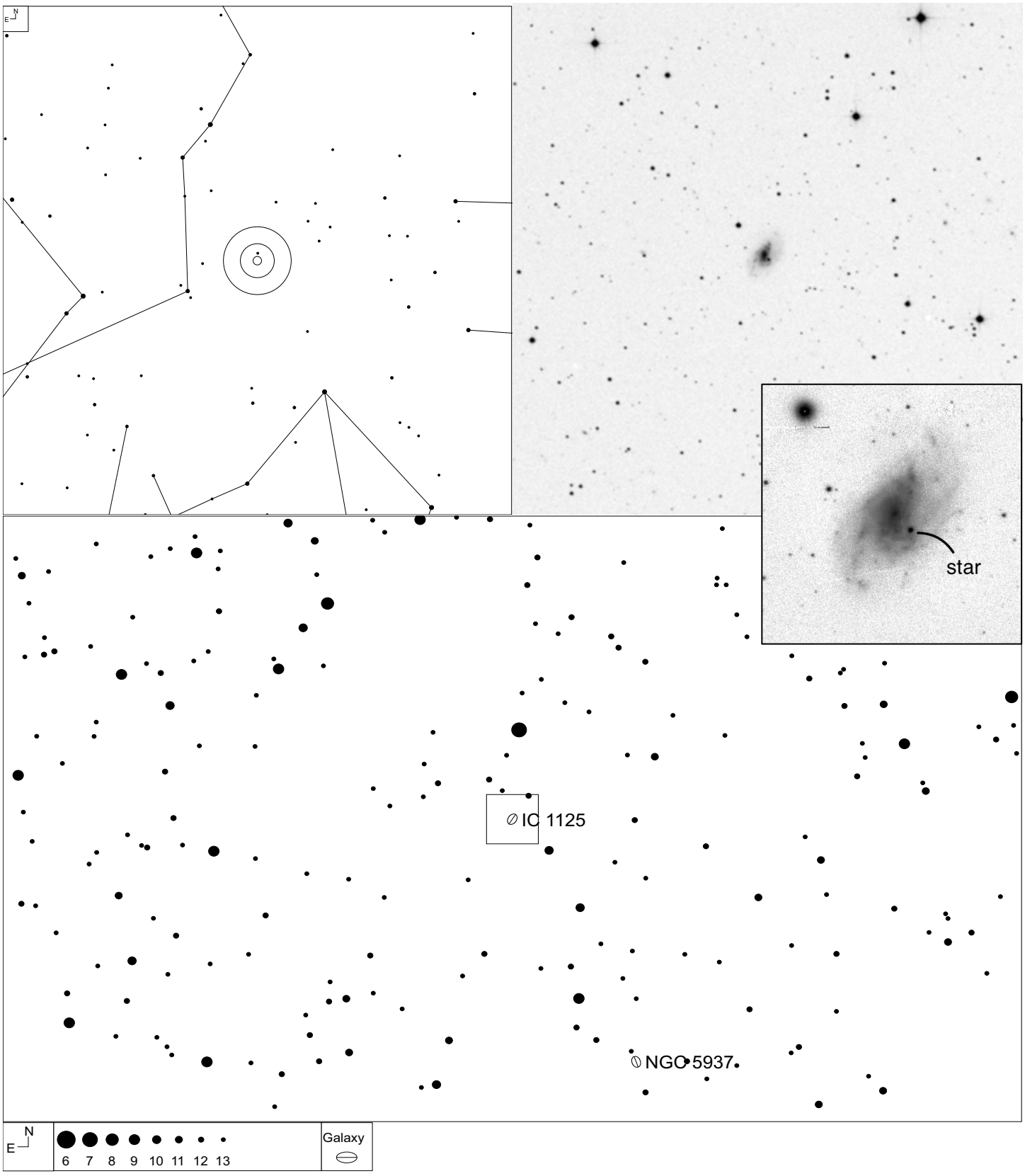
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
847	UGC 9829	15 23 01.6	-01 20 50	G	15.2g	2.2 x 0.9	Ent

VV 745 (Serpens)



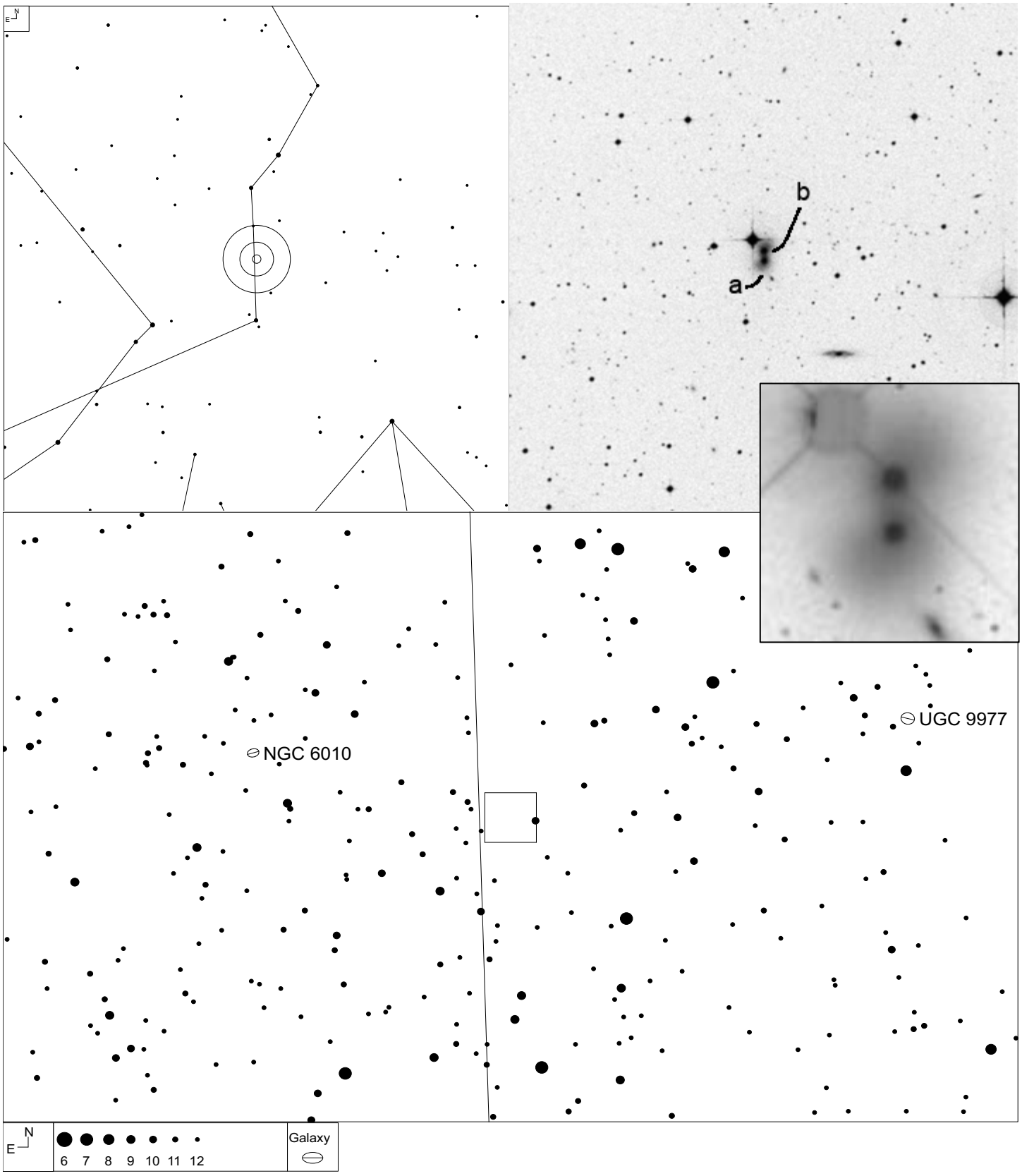
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
745	IC 1119	15 25 44.3	-03 39 23	GPair	15.3g	0.5 x 0.5	PK

VV 723 (Serpens)



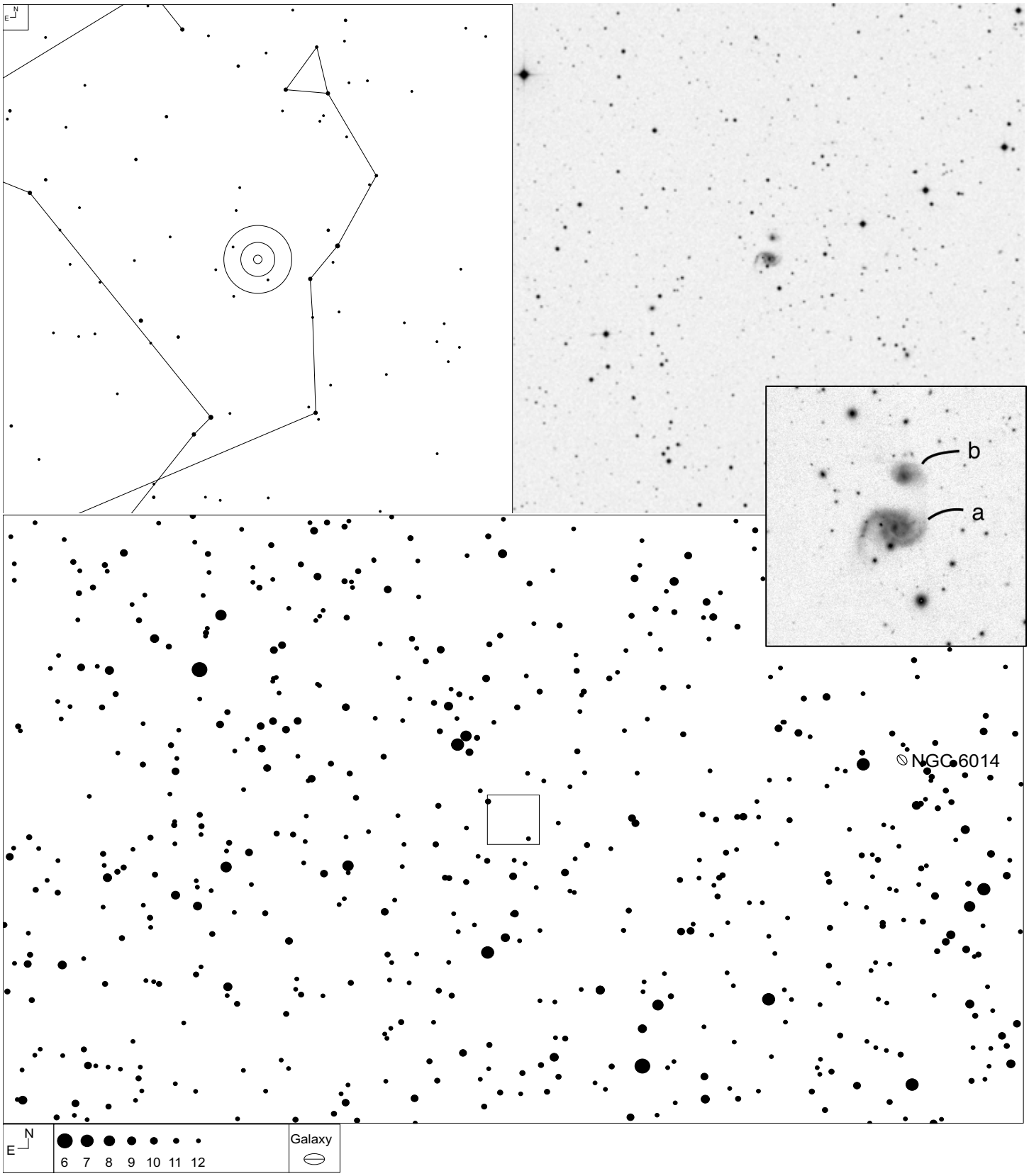
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
723	IC 1125	15 33 05.3	-01 37 48	GPair	14.0g	1.7 x 1.0	PC

VV 536 (Serpens)



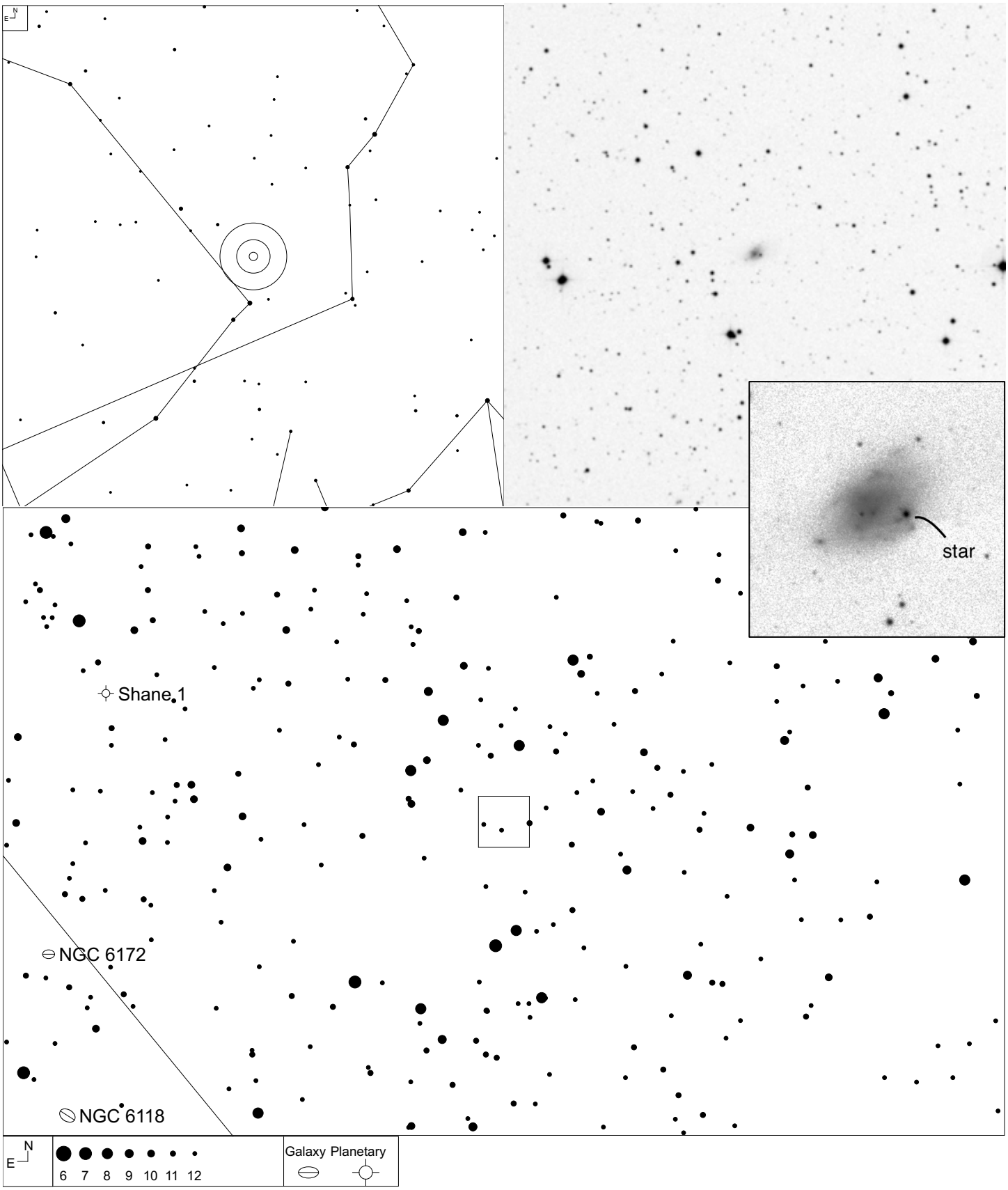
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
536		15 49 28.1	+00 13 49	GPair			PK
536a*	UGC 10046	15 49 28.2	+00 13 37	G	14.7g	0.7 x 0.7	
536b*	**PGC 200325**	**15 49 27.9**	**+00 14 09**	**G**	**13.6g**	**0.5 x 0.5**	

VV 702 (Serpens)



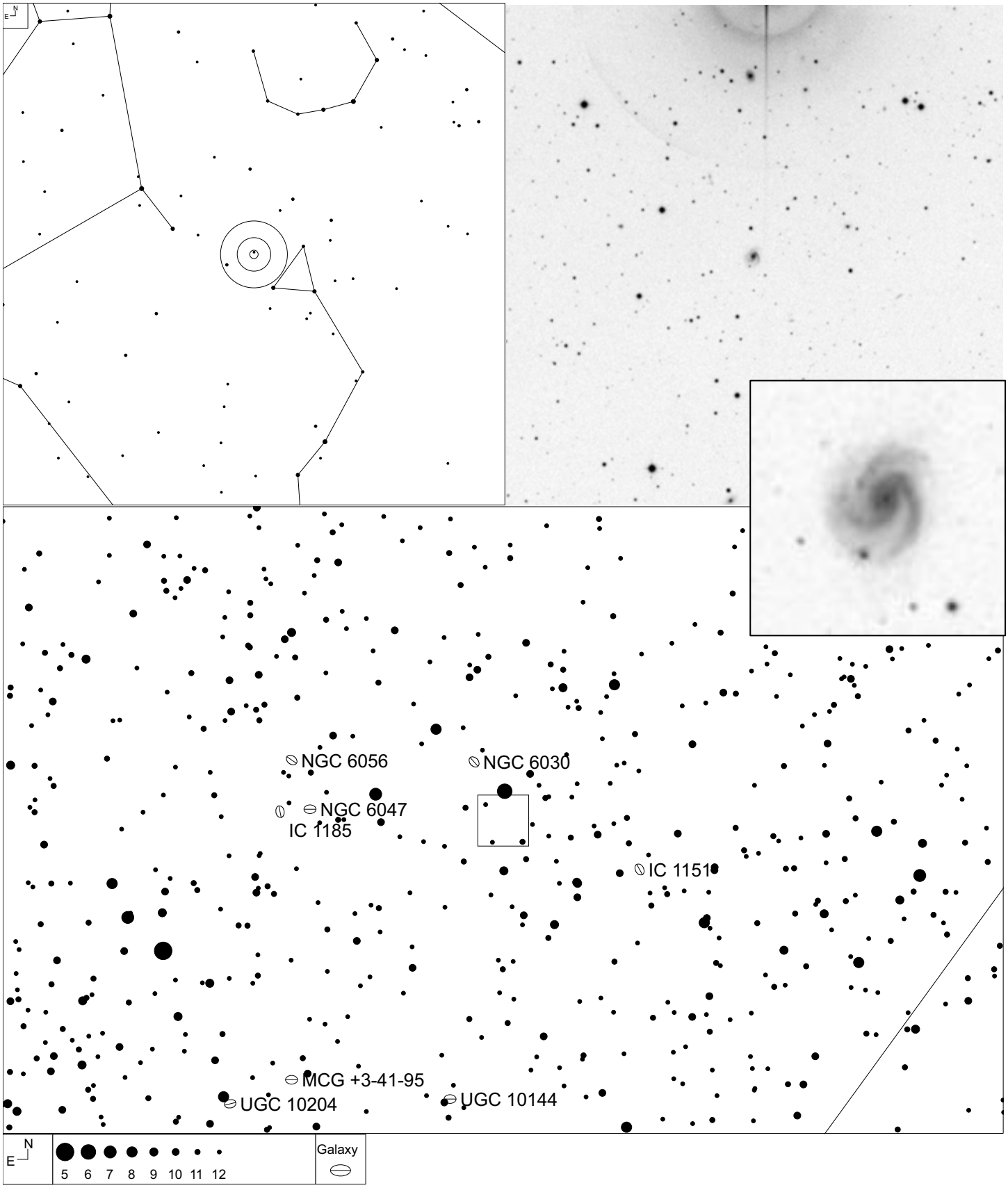
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
702		16 03 16.2	+05 38 40	GPair			NNNP
702a	UGC 10147	16 03 15.9	+05 38 27	G	15.0g	0.9 x 0.7	
702b	PGC 200327	16 03 16.3	+05 39 05	G	16.3g	0.4 x 0.3	

VV 370 (Serpens)



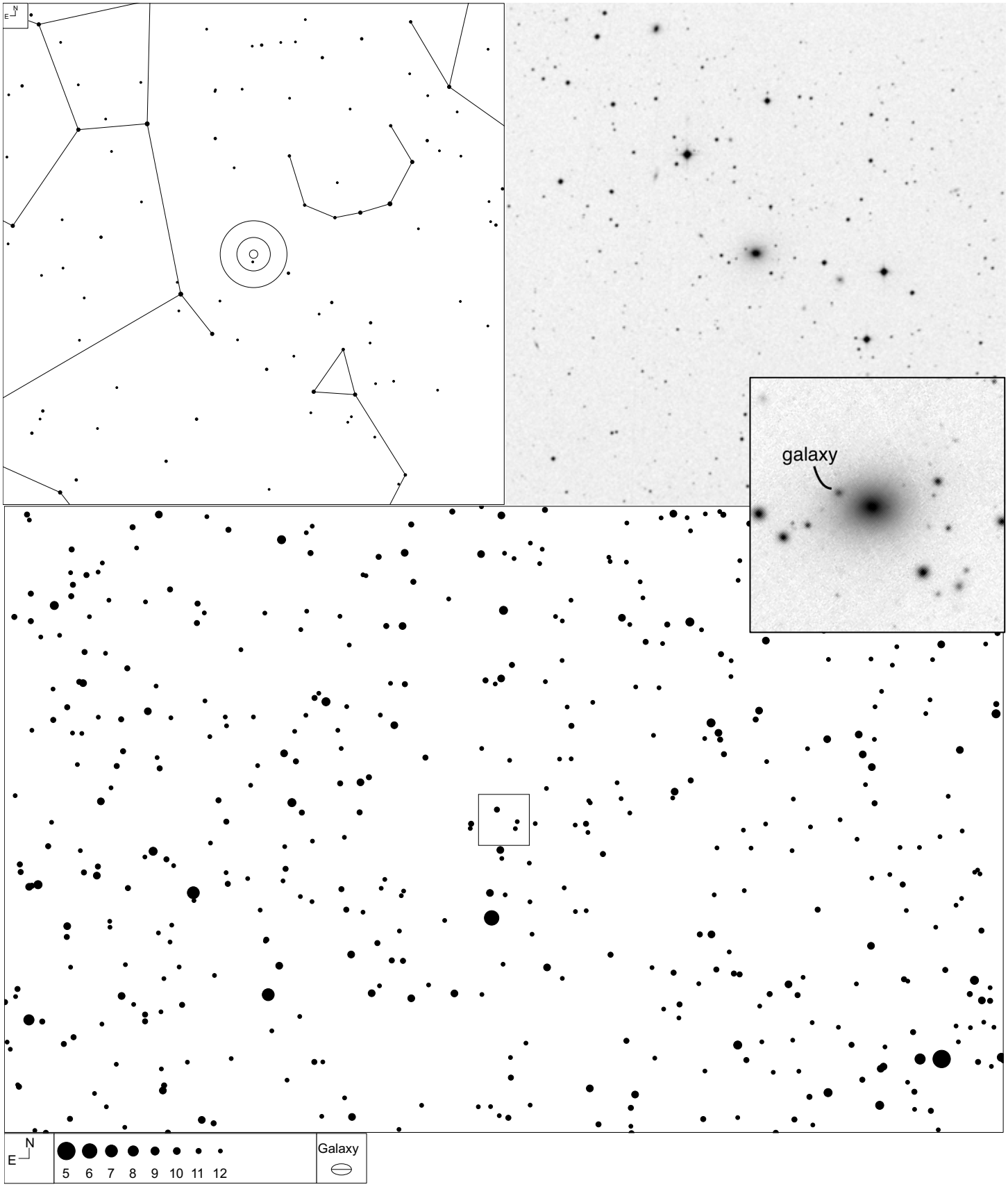
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
370	MCG 00-41-008	16 13 29.0	-00 53 01	G	15.3g	0.9 x 0.5	MMM

VV 452 (Hercules)



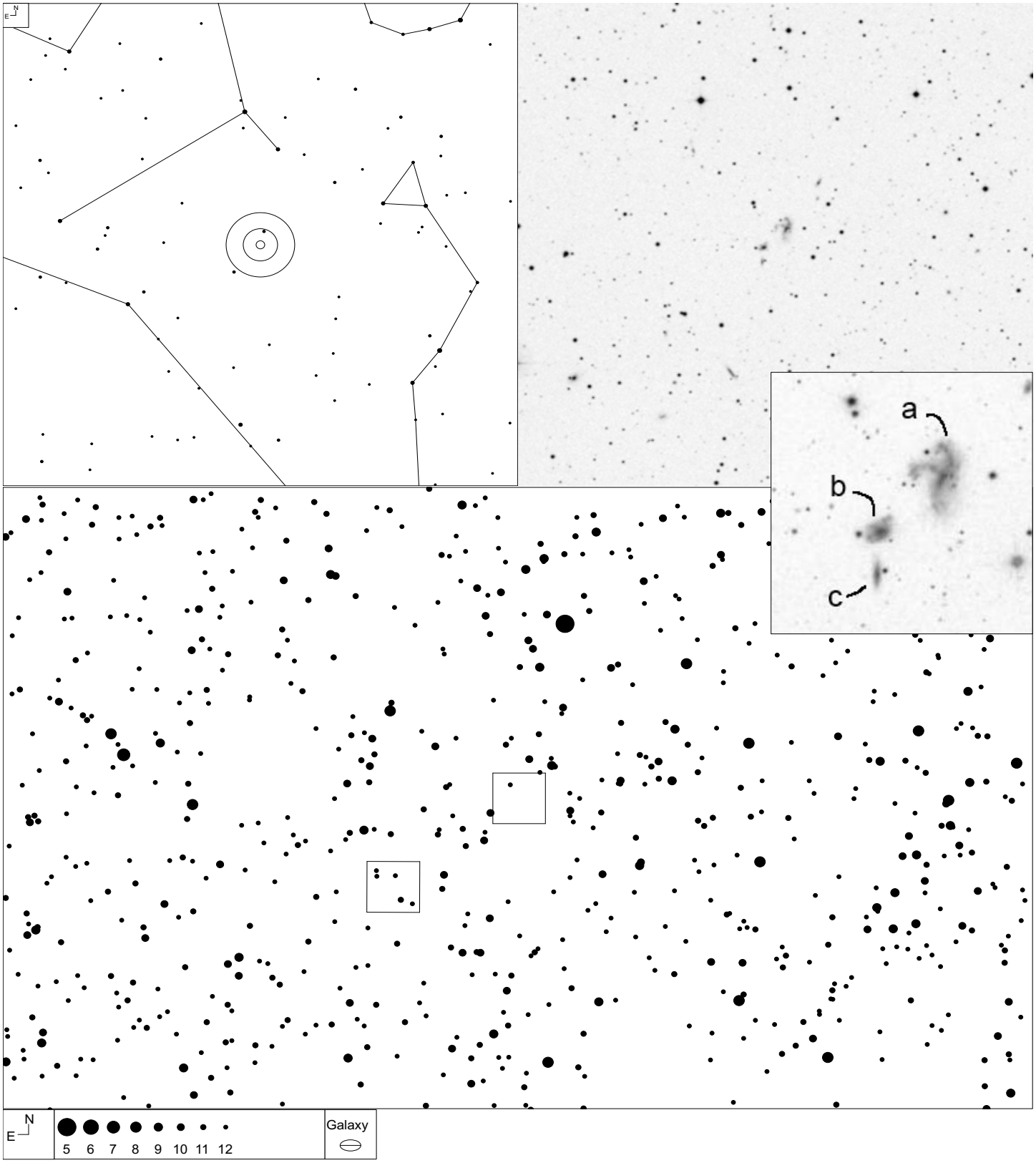
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
452	IC 1162	16 01 16.2	+17 40 42	G	15.3g	0.7 x 0.5	M

VV 380 (Hercules)



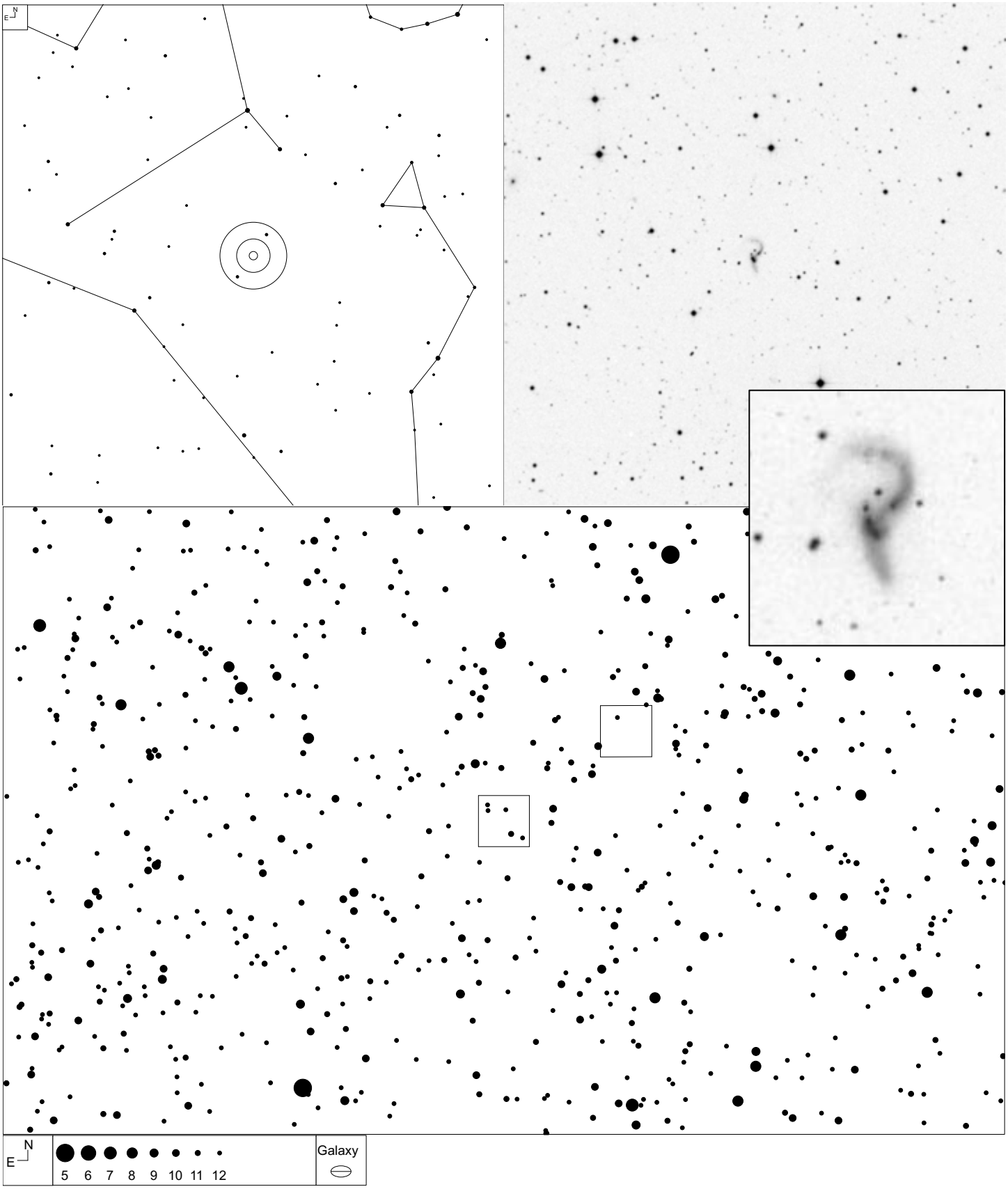
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
380	NGC 6075	16 11 22.6	+23 57 53	G	14.4g	0.9 x 0.7	MMM

VV 562 (Hercules)



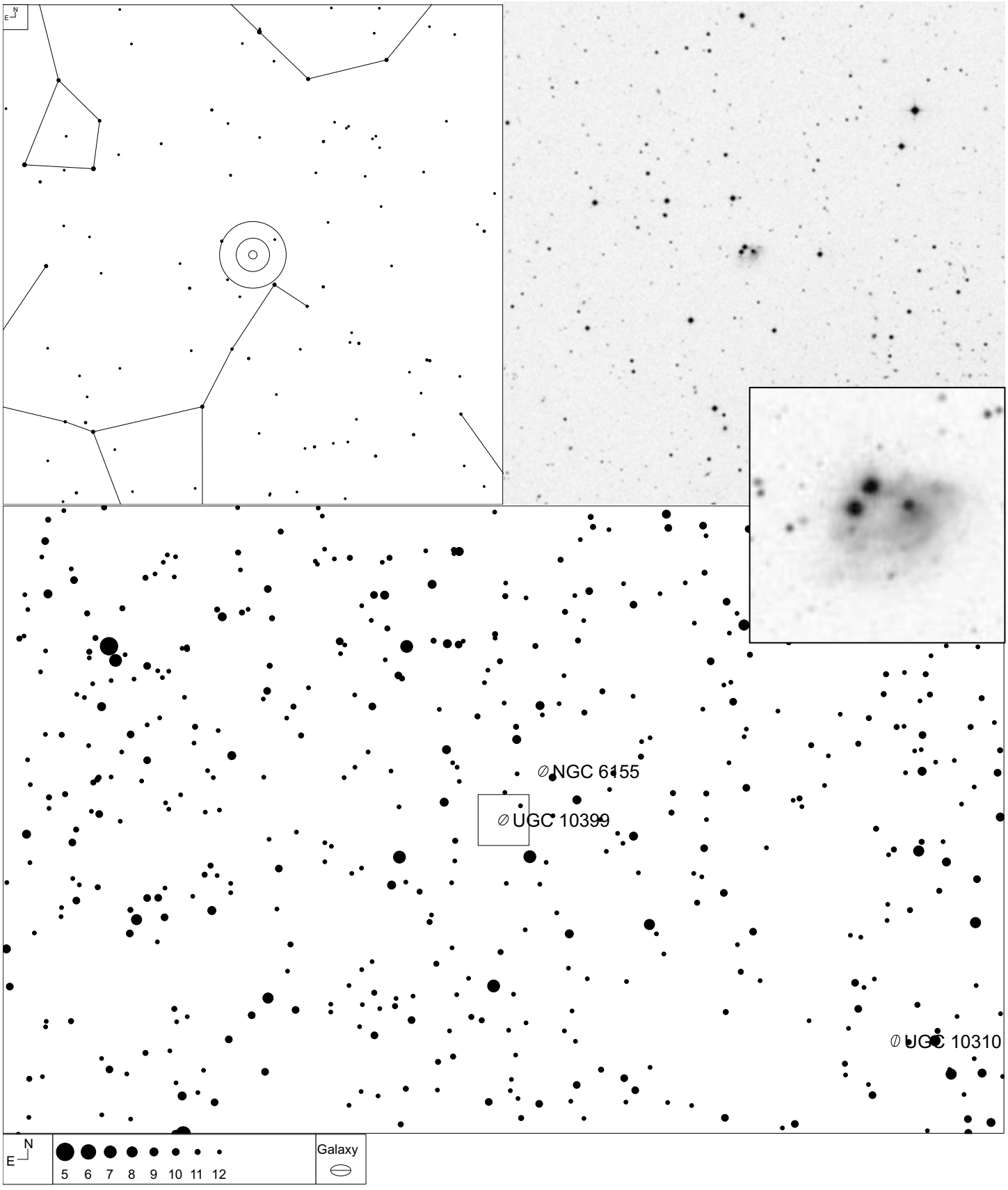
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
562		16 26 18.9	+13 11 00	GGroup			N
562a	MCG +02-42-004	16 26 17.6	+13 11 31	G	15.4g	0.9 x 0.7	
562b	*PGC 1424795*	*16 26 20.3*	*+13 10 54*	*G*	*16.3g*	*0.2 x 0.2*	
562c	*PGC 4500244*	*16 26 20.3*	*+13 10 28*	*G*	*17.8g*	*0.2 x 0.1*	

VV 560 (Hercules)



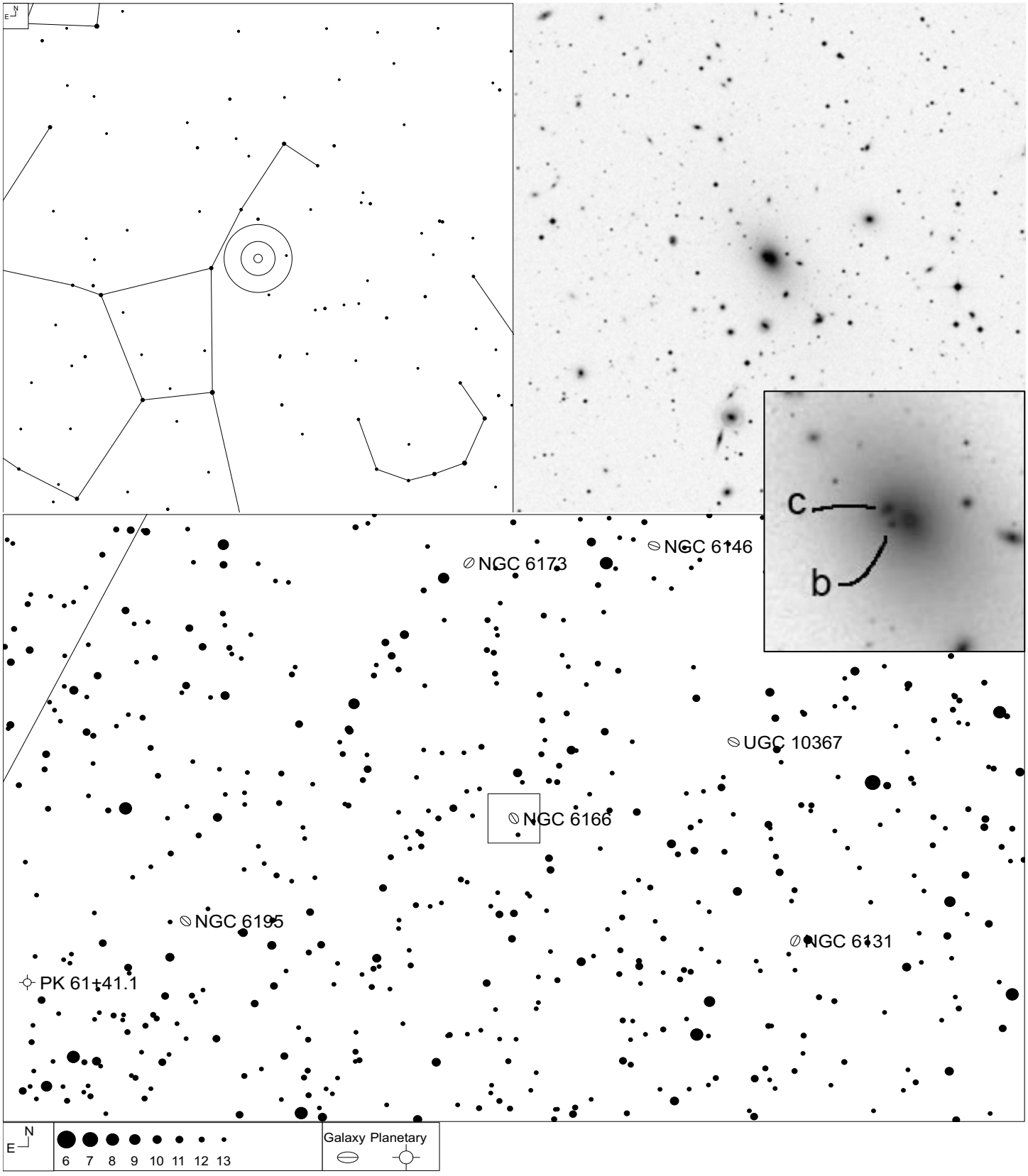
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
560	UGC 10402	16 28 41.0	+12 45 57	GGroup	15.8g	1.2 x 0.6	N

VV 657 (Hercules)



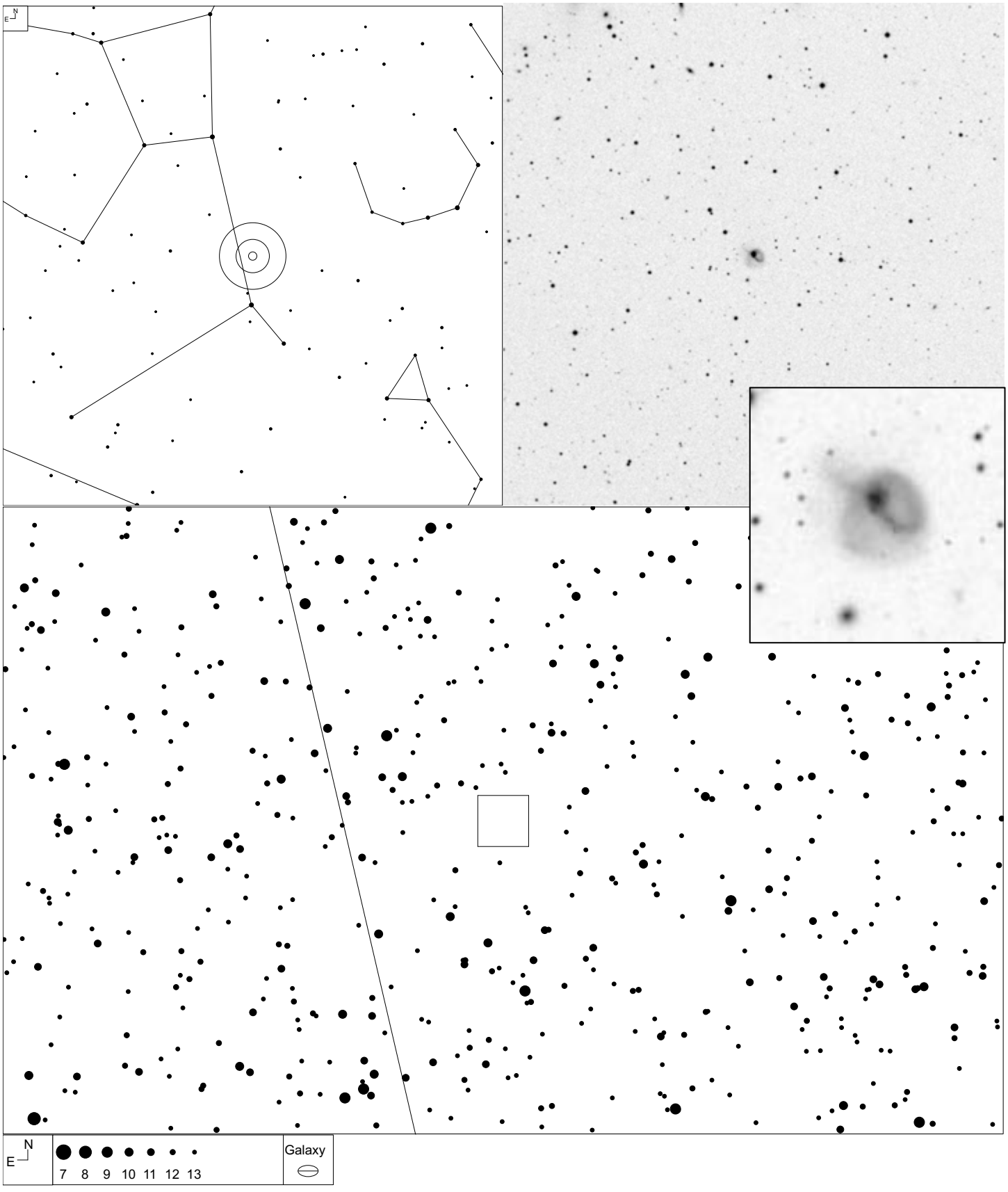
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
657	UGC 10399	16 27 16.8	+48 08 00	G	15.6g	1.2 x 0.8	NN

VV 364 (Hercules)



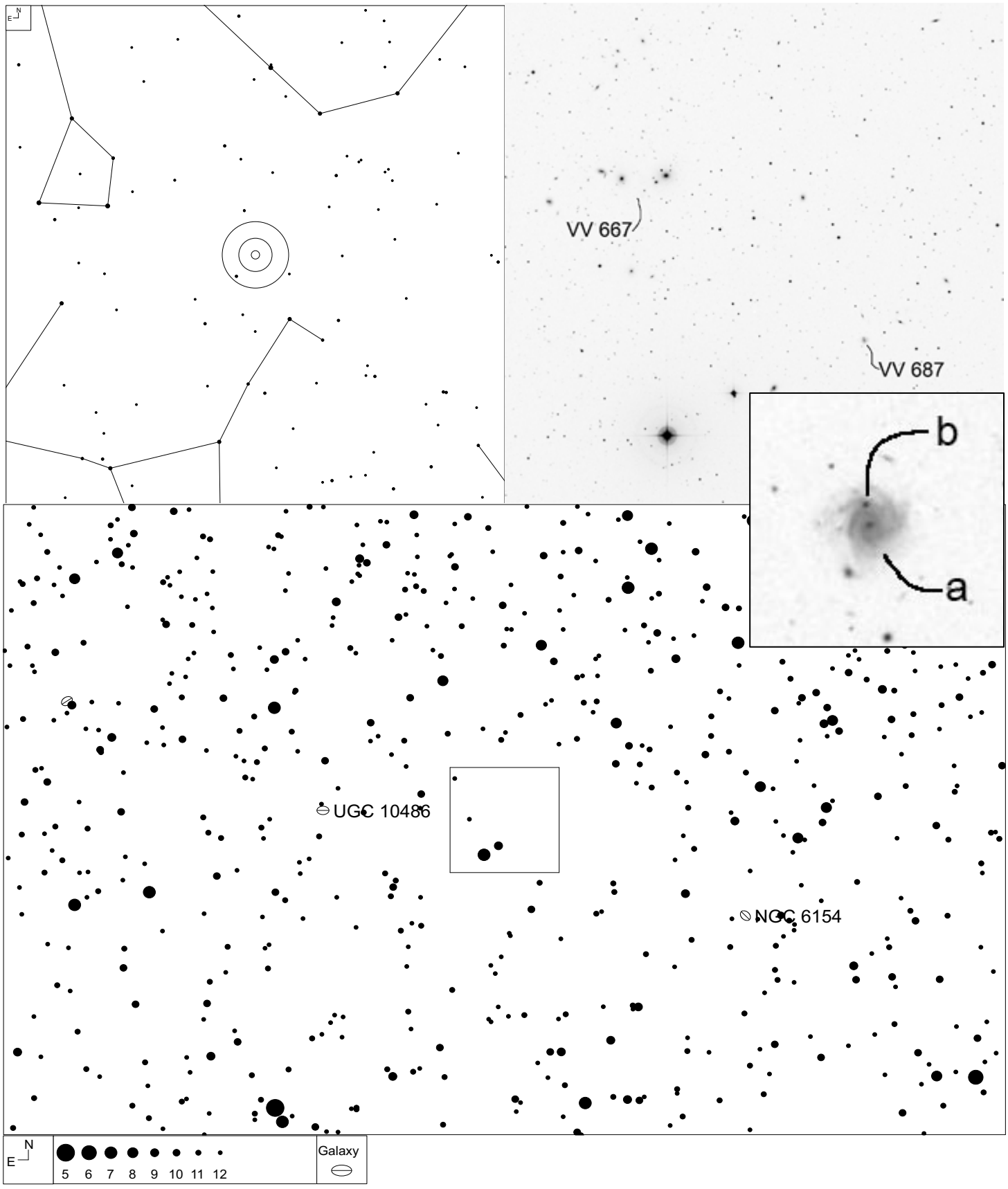
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
364	NGC 6166	16 28 38.5	+39 33 06	G	11.8v	2.0 x 1.4	NNN

VV 807 (Hercules)



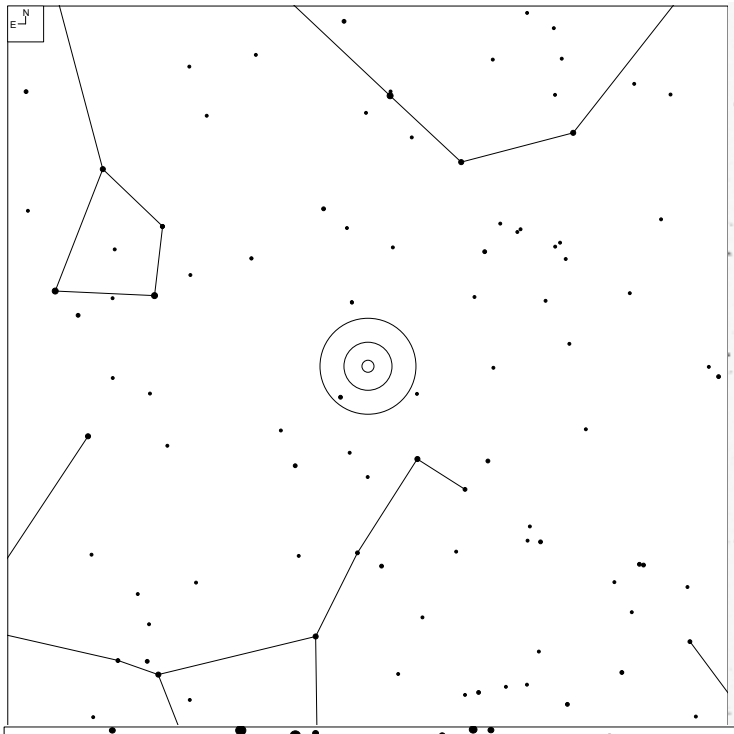
VV	ID	RA	Dec	NED Type	Mag	Size (‘)	Int. Type
807	MCG+04-39-008	16 29 52.8	+24 26 38	G	14.4v	0.7 x 0.4	Enat

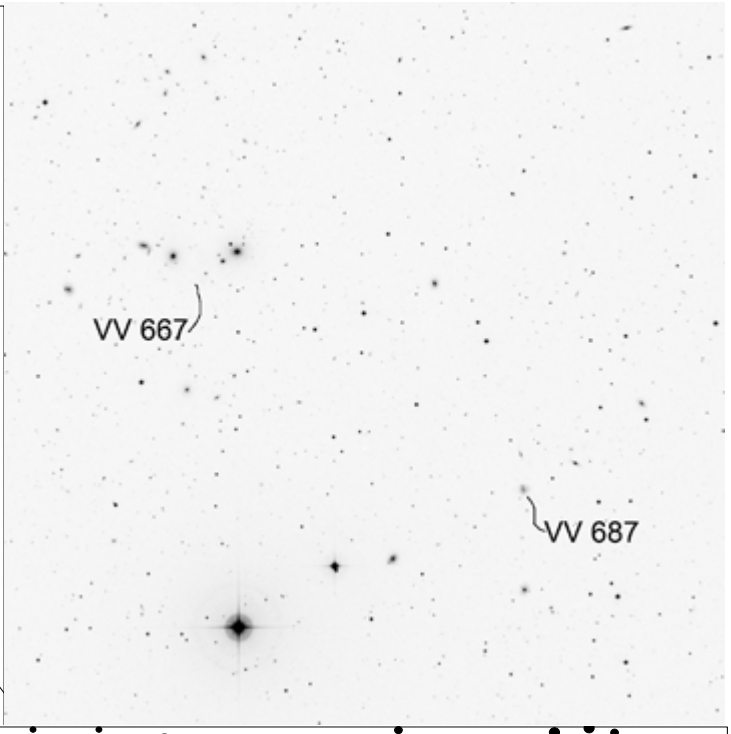
VV 687 (Hercules)

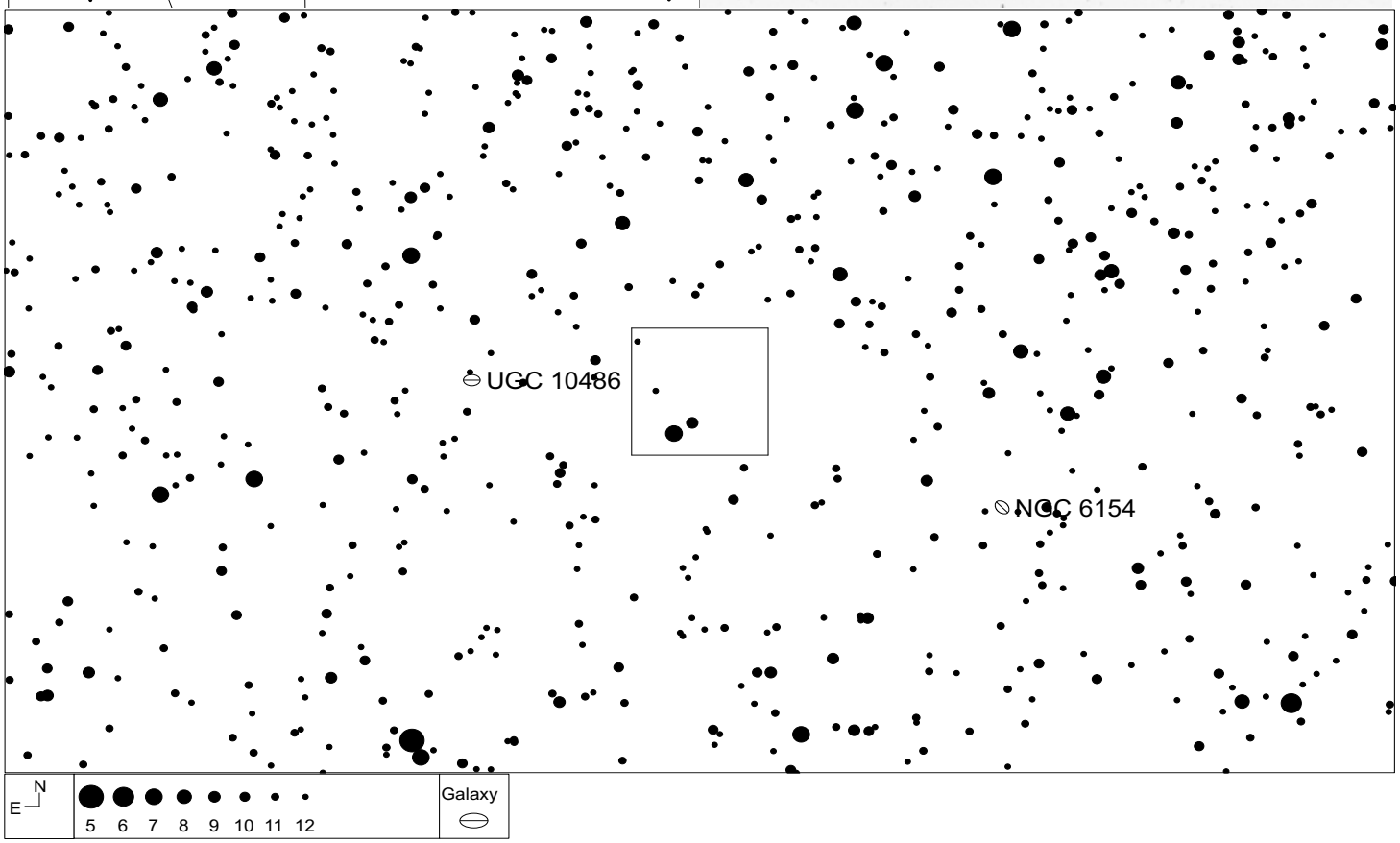


VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
687	MCG +08-30-021	16 31 42.6	+50 14 16	GPair	15.7g	0.7 x 0.6	N

VV 667 (Hercules)

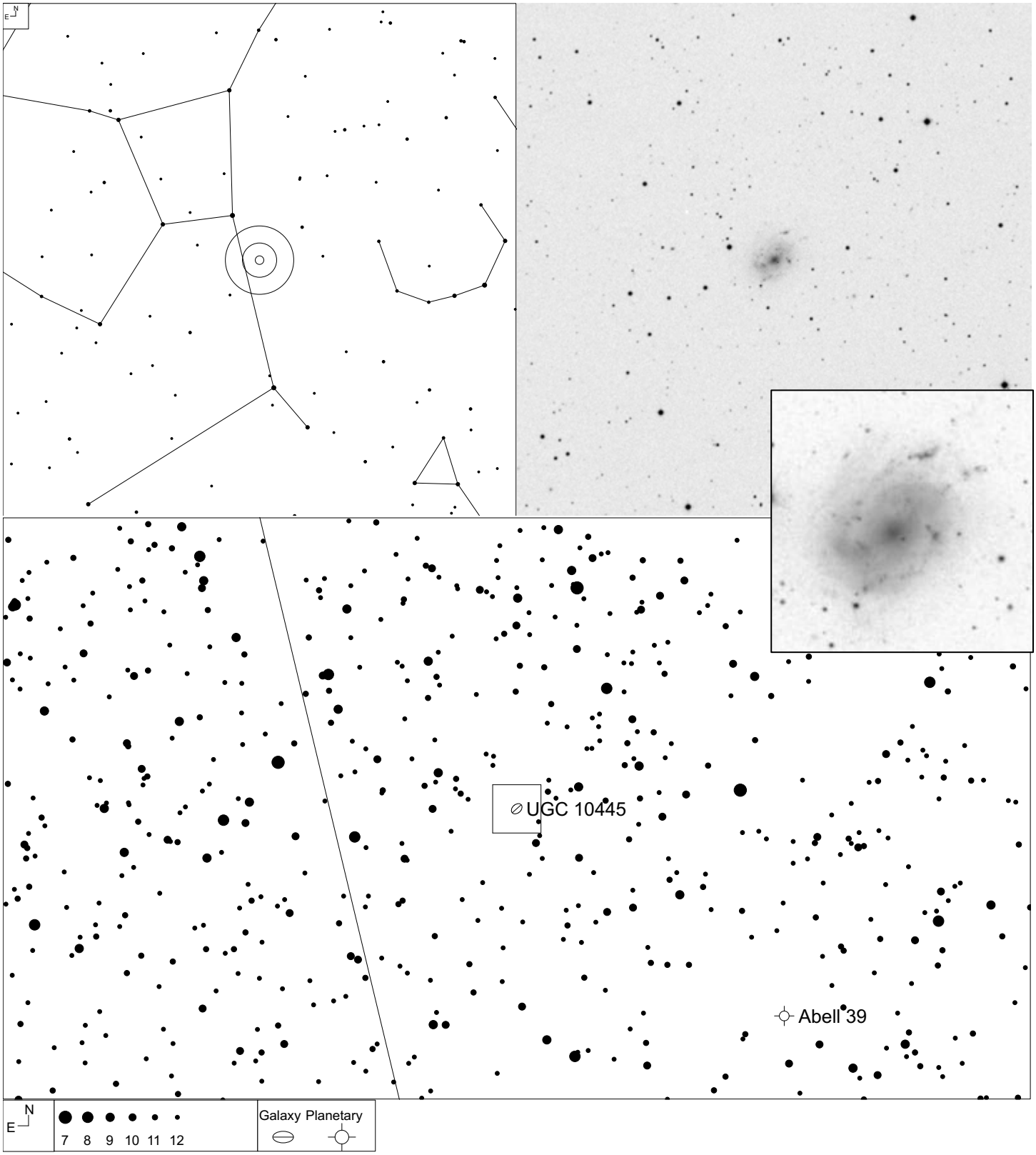






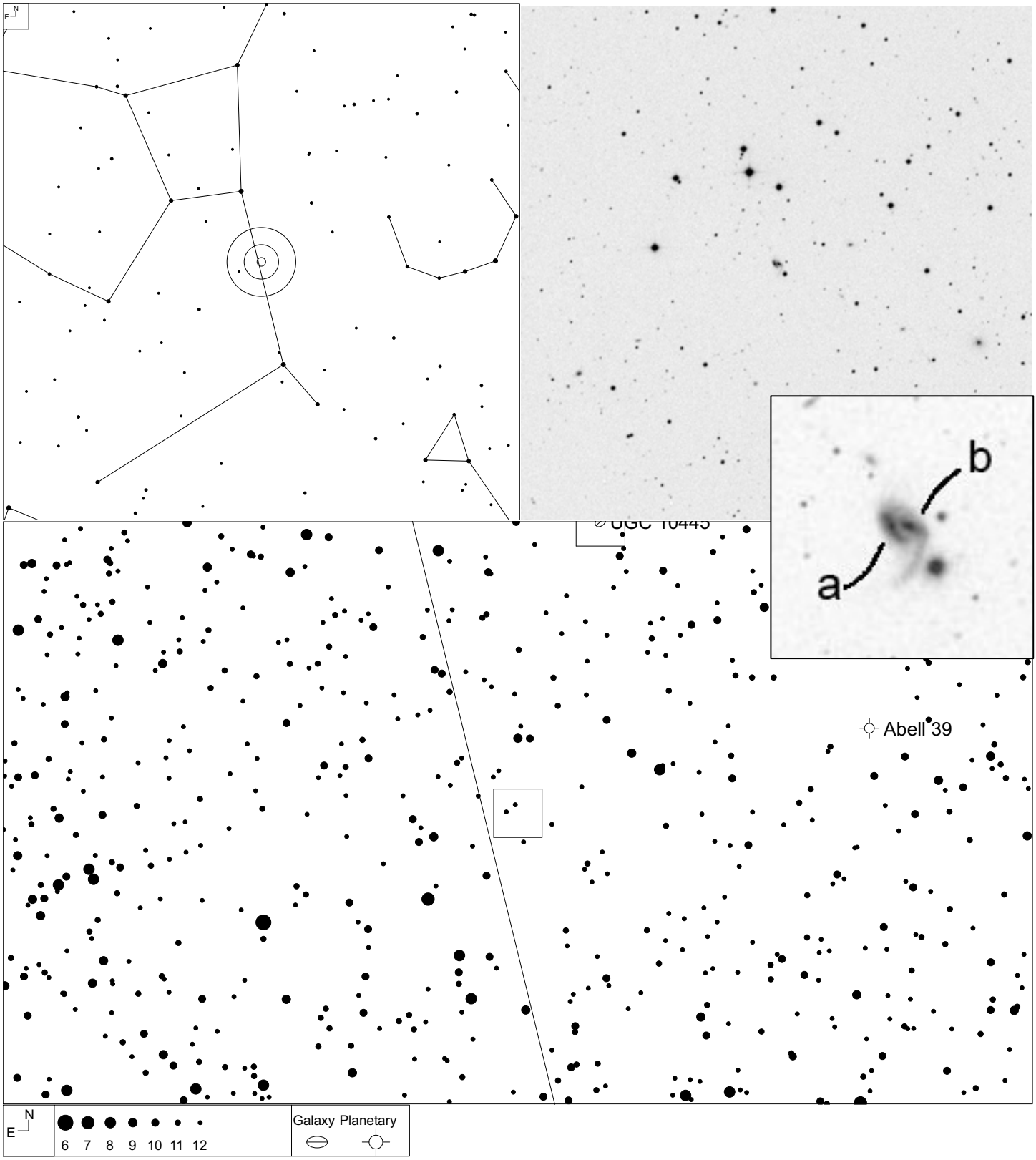
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
667		16 33 06.7	+50 23 47	GGroup			NNNP
667a	MCG +08-30-025	16 33 13.8	+50 23 54	G	14.7g	0.8	
667b	MCG +08-30-026	16 33 20.4	+50 24 04	GPair	15.2g	0.6	
667c	MCG +08-30-027	16 33 41.0	+50 22 31	G	15.1g	0.7 x 0.6	

VV 625 (Hercules)



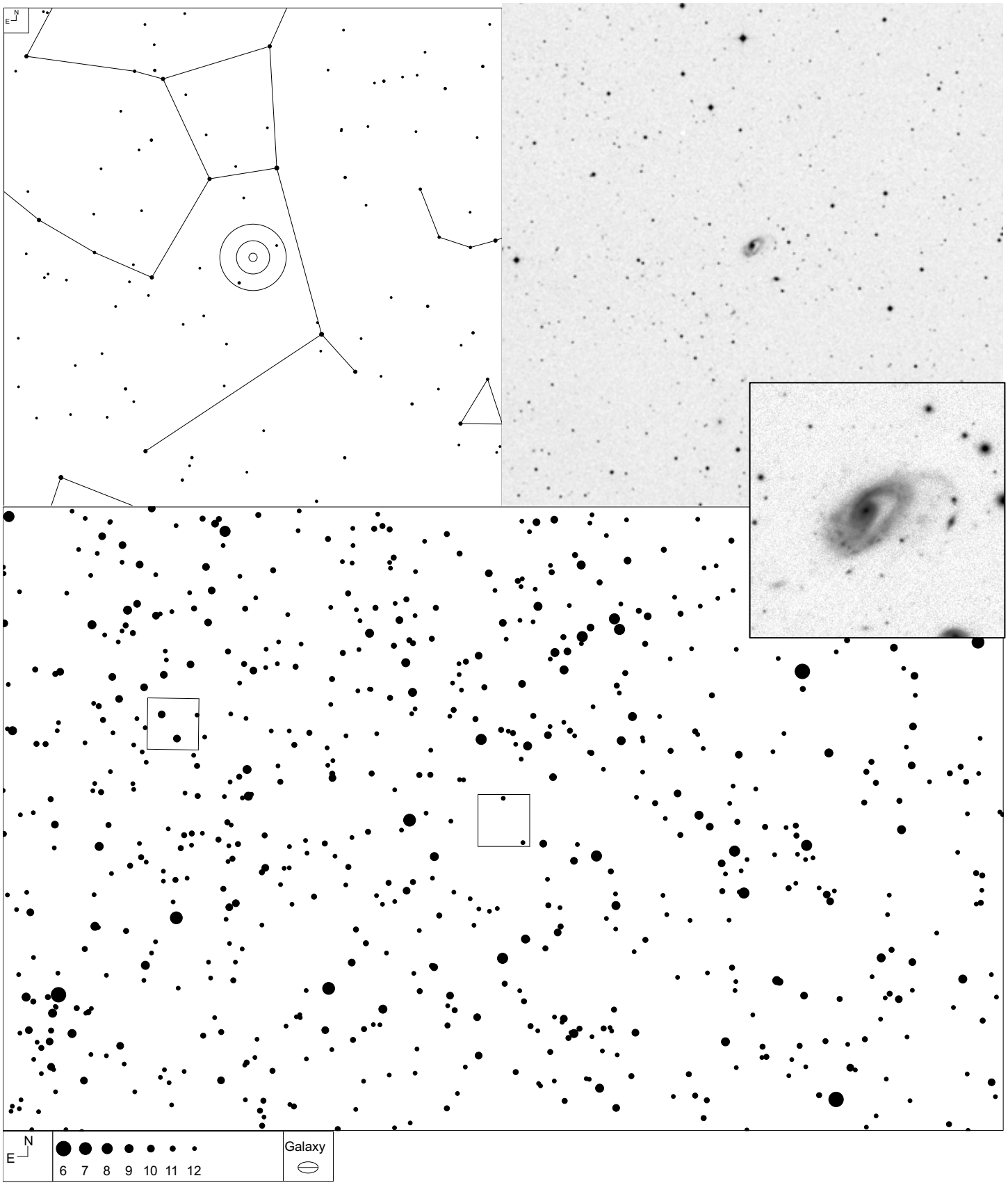
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
625	UGC 10445	16 33 47.6	+28 59 06	G	14.0g	1.4 x 1.0	N

VV 811 (Hercules)



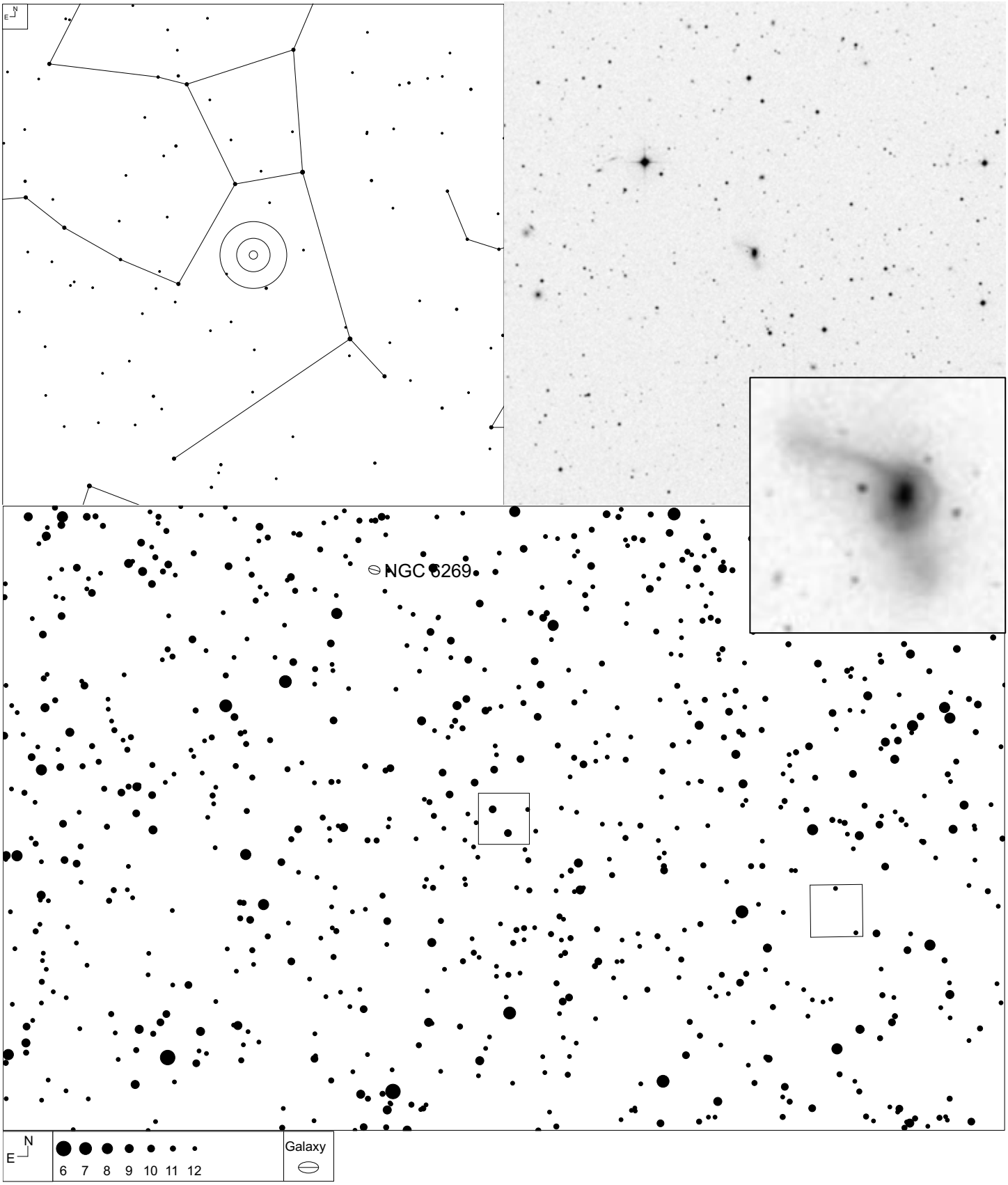
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
811	MCG +05-39-006	16 35 44.5	+27 29 13	GPair	16.6g	0.5 x 0.4	PCt

VV 791B (Hercules)



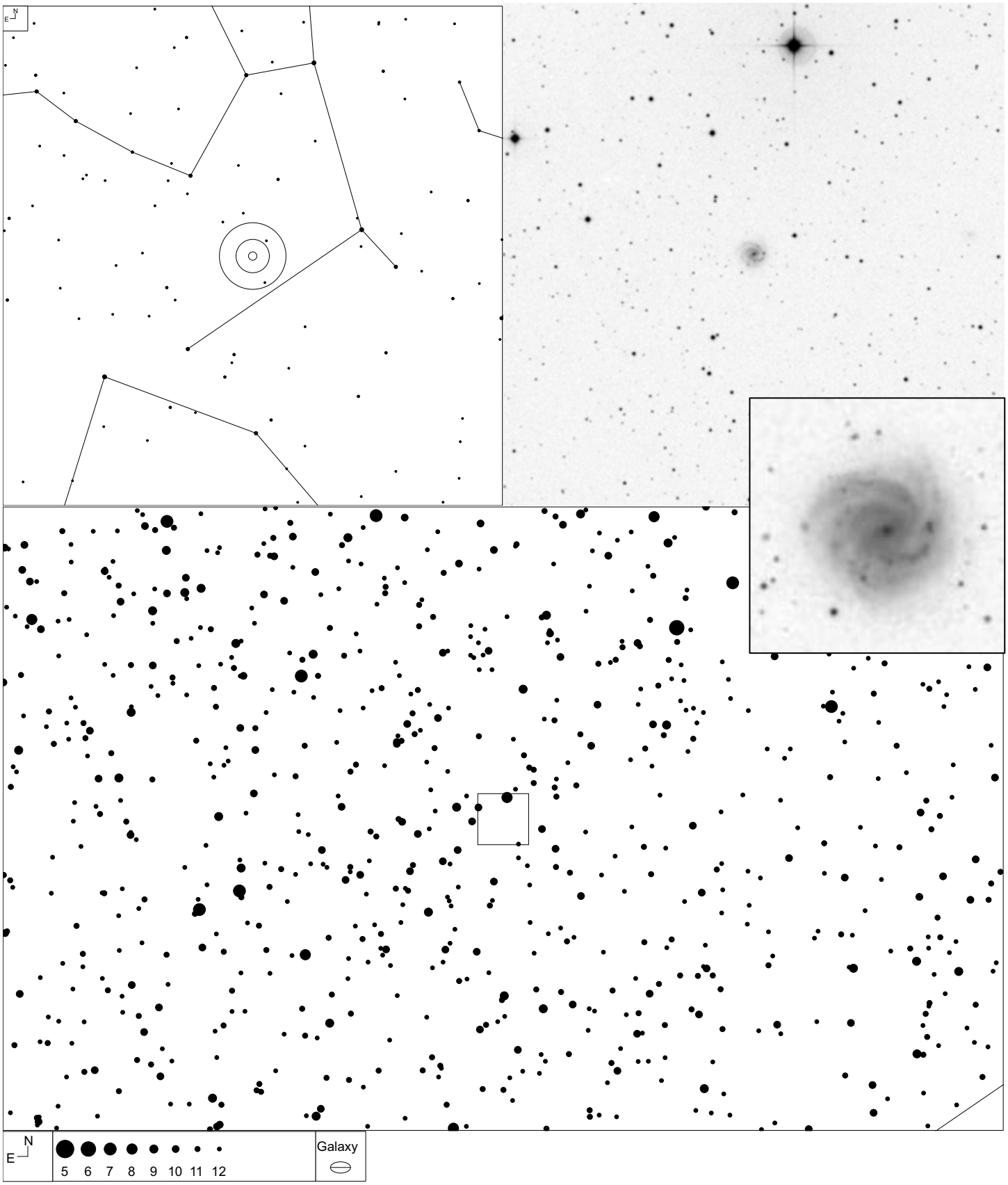
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
791B	NGC 6228	16 48 02.7	+26 12 34	G	16.6g	1.1 x 0.6	R

VV 852 (Hercules)



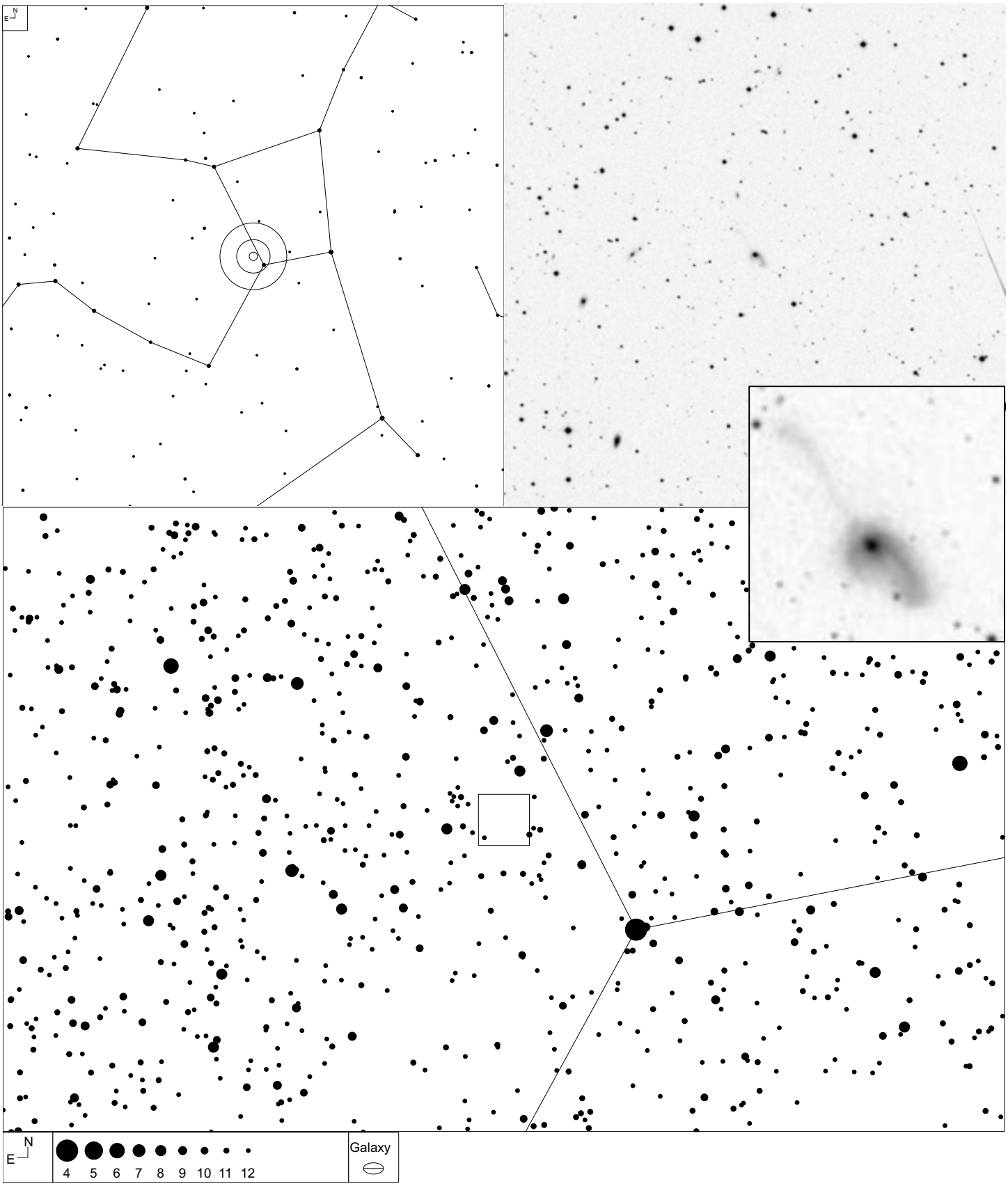
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
852	IC 4630	16 55 09.6	+26 39 46	G	14.4g	0.8 x 0.5	Ent

VV 442 (Hercules)



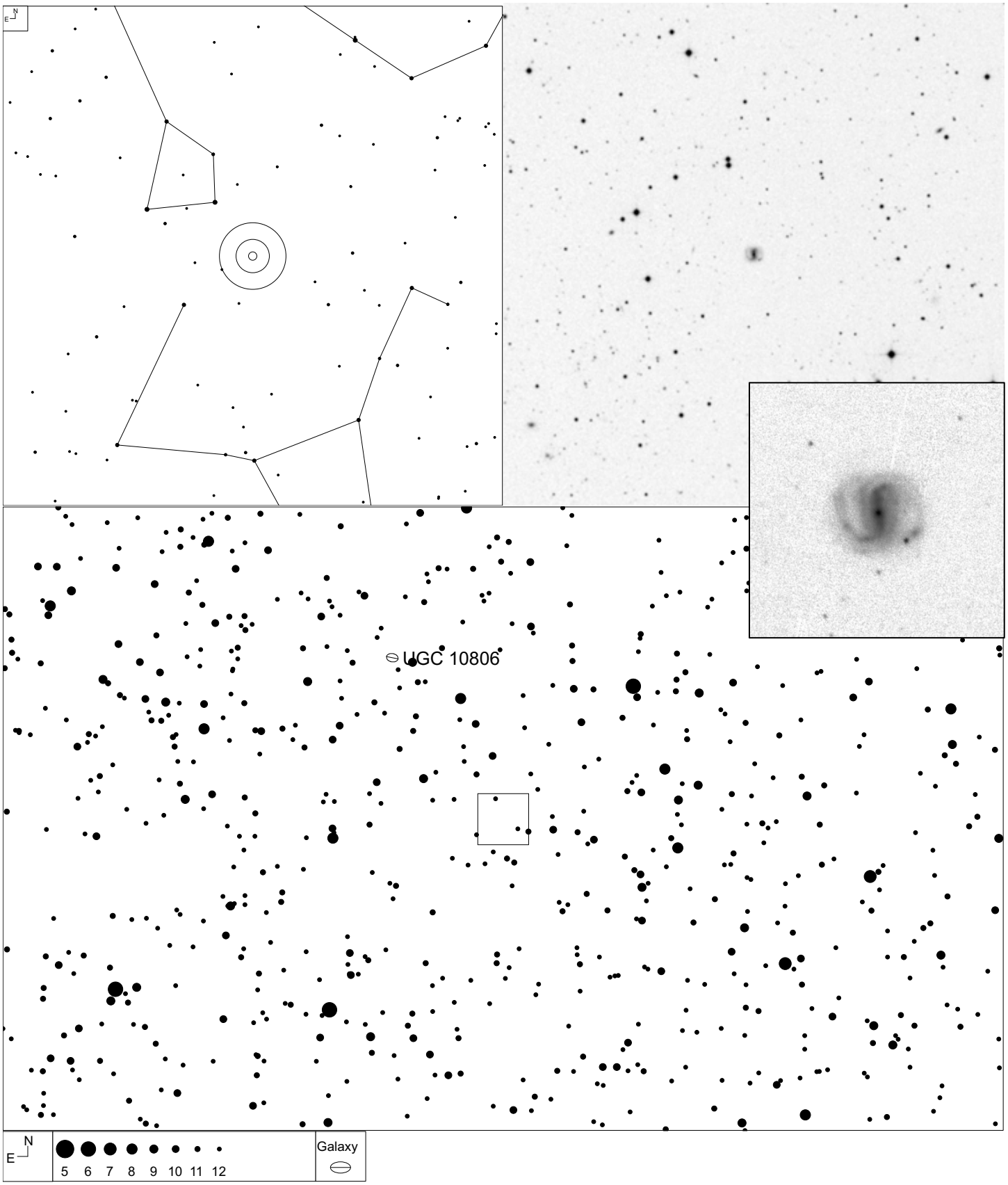
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
442	IC 1236	16 58 29.6	+20 02 29	G	14.2g	1.1 x 0.9	M

VV 805 (Hercules)



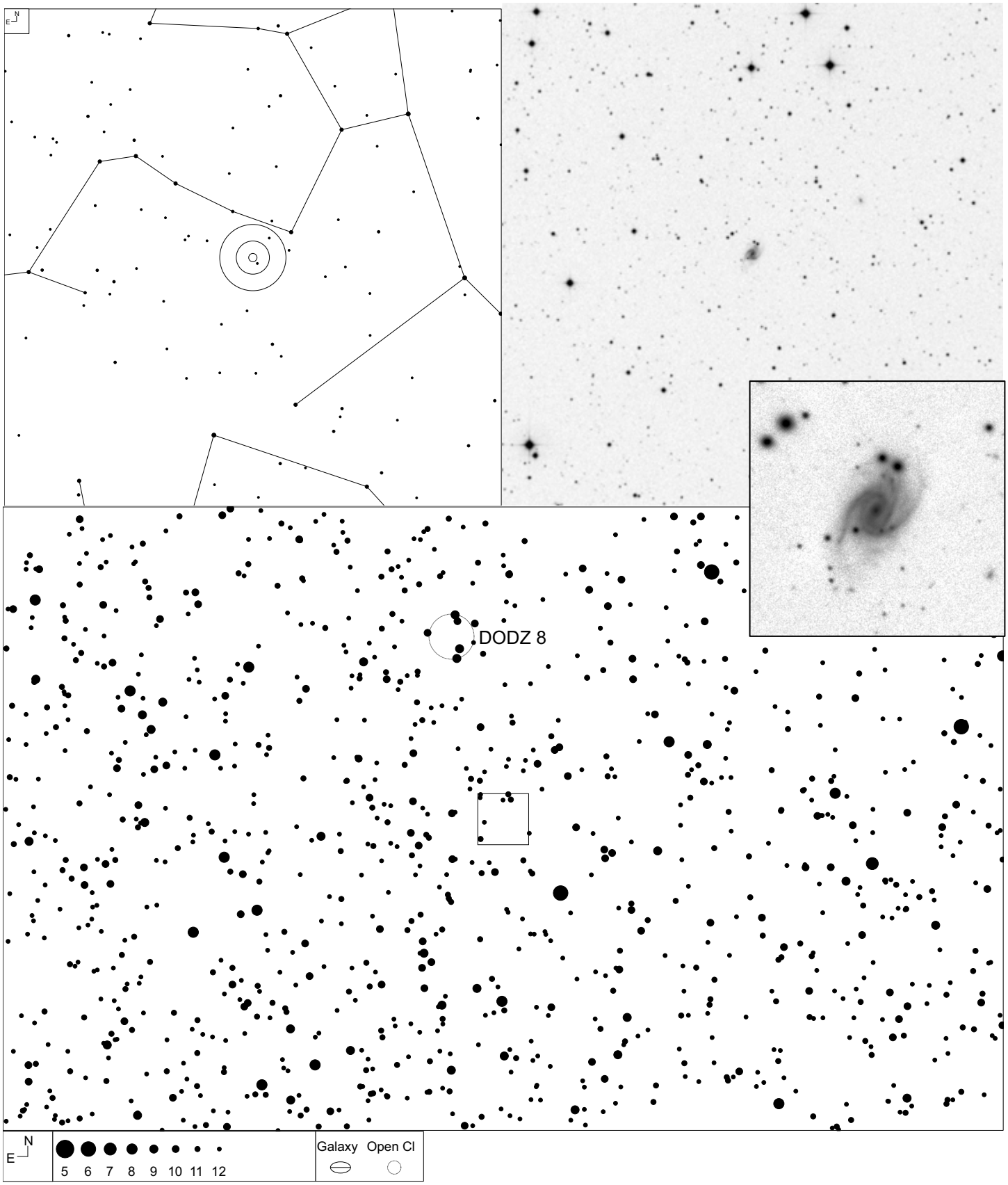
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
805	UGC 10675	17 03 15.7	+31 27 29	G	14.0v	0.7 x 0.4	Ent

VV 829 (Hercules)



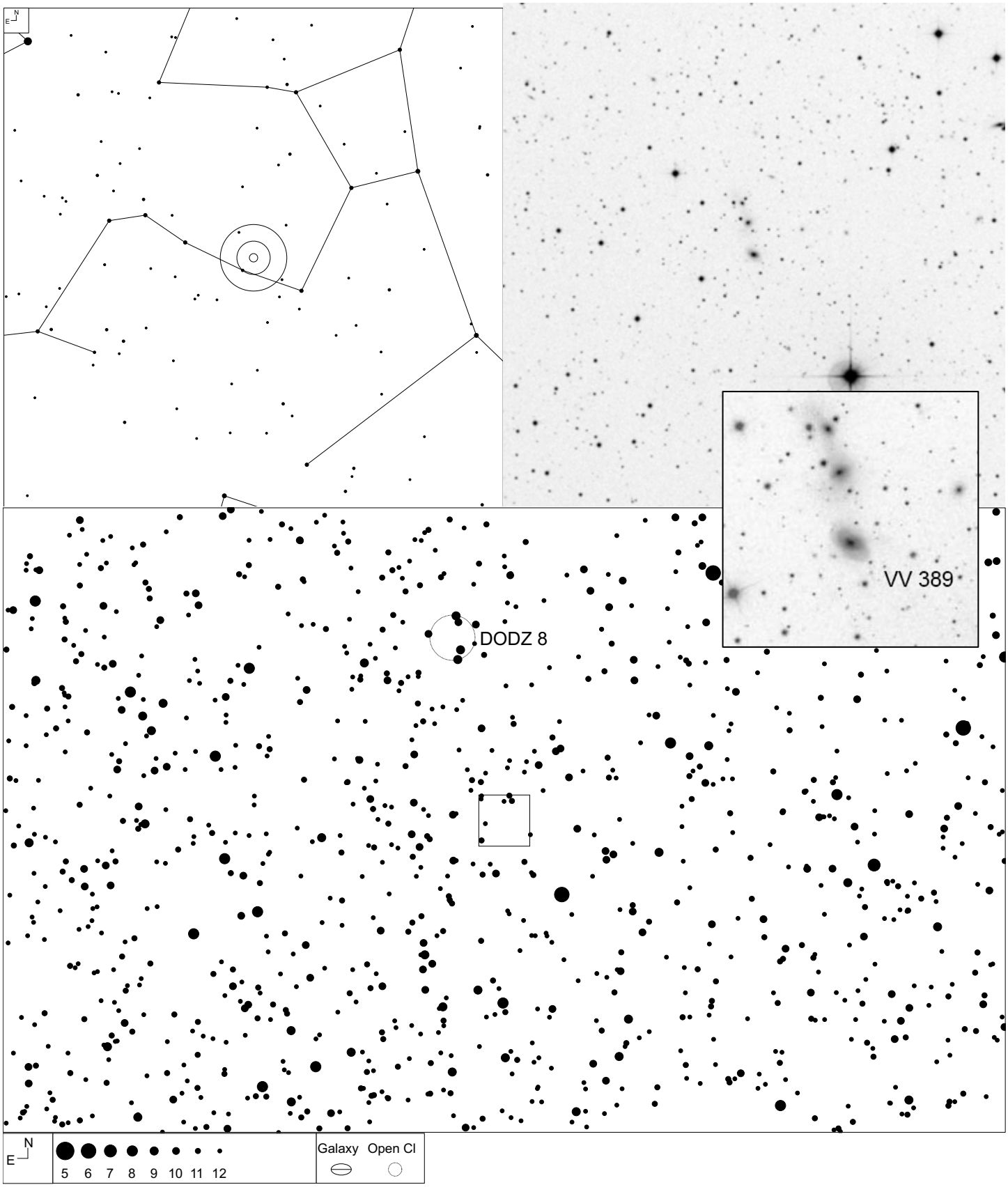
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
829	MCG +08-31-038	17 15 32.4	+49 06 41	G	15.5g	0.5	Enat

VV 404 (Hercules)



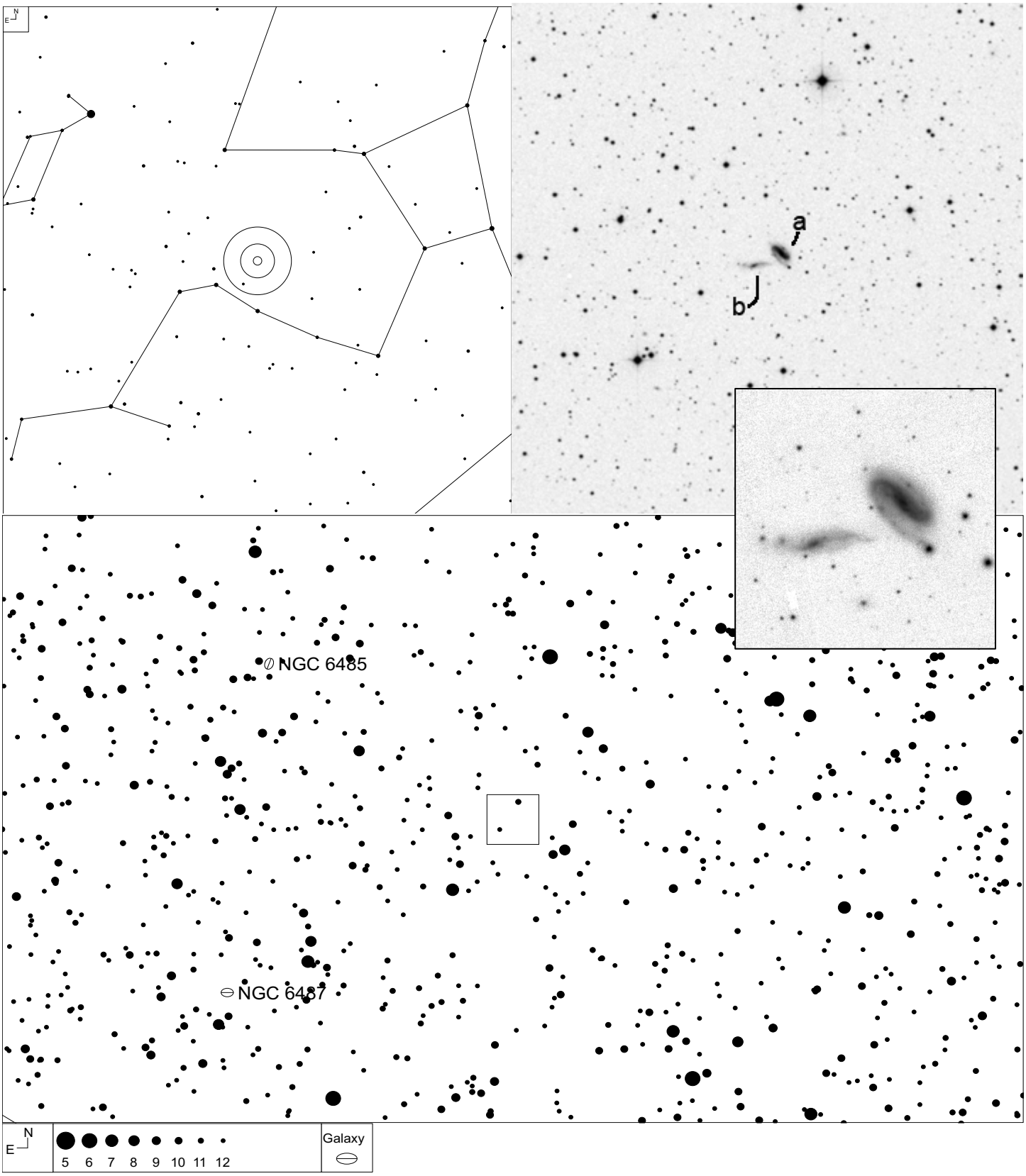
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
404	UGC 10847	17 25 18.4	+23 19 00	G	15.2g	1.0 x 0.6	MMM

VV 389 (Hercules)



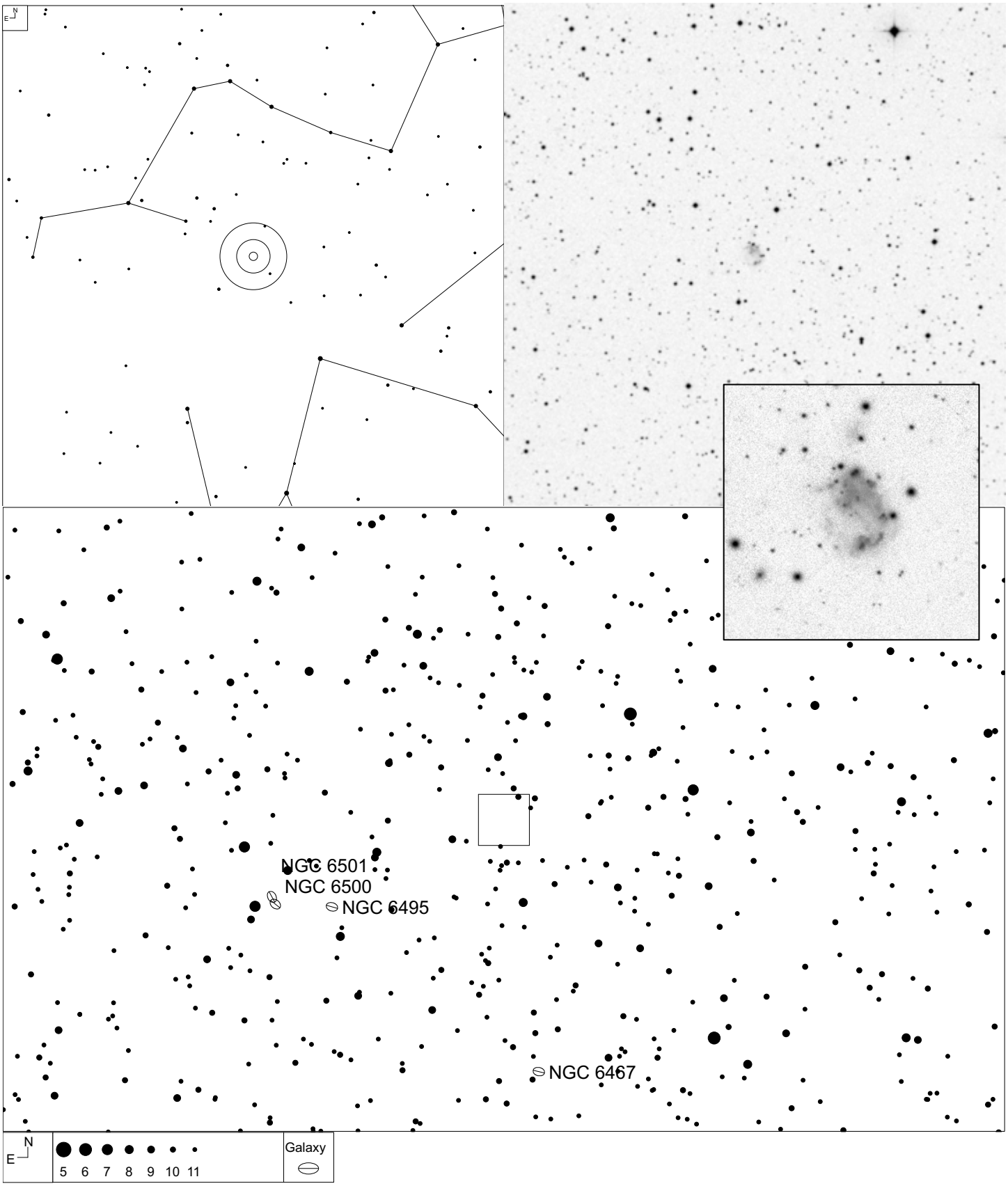
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
389	MCG +04-41-014	17 27 47.2	+26 51 21	G	15.3g	0.5 x 0.4	MMM

VV 426 (Hercules)



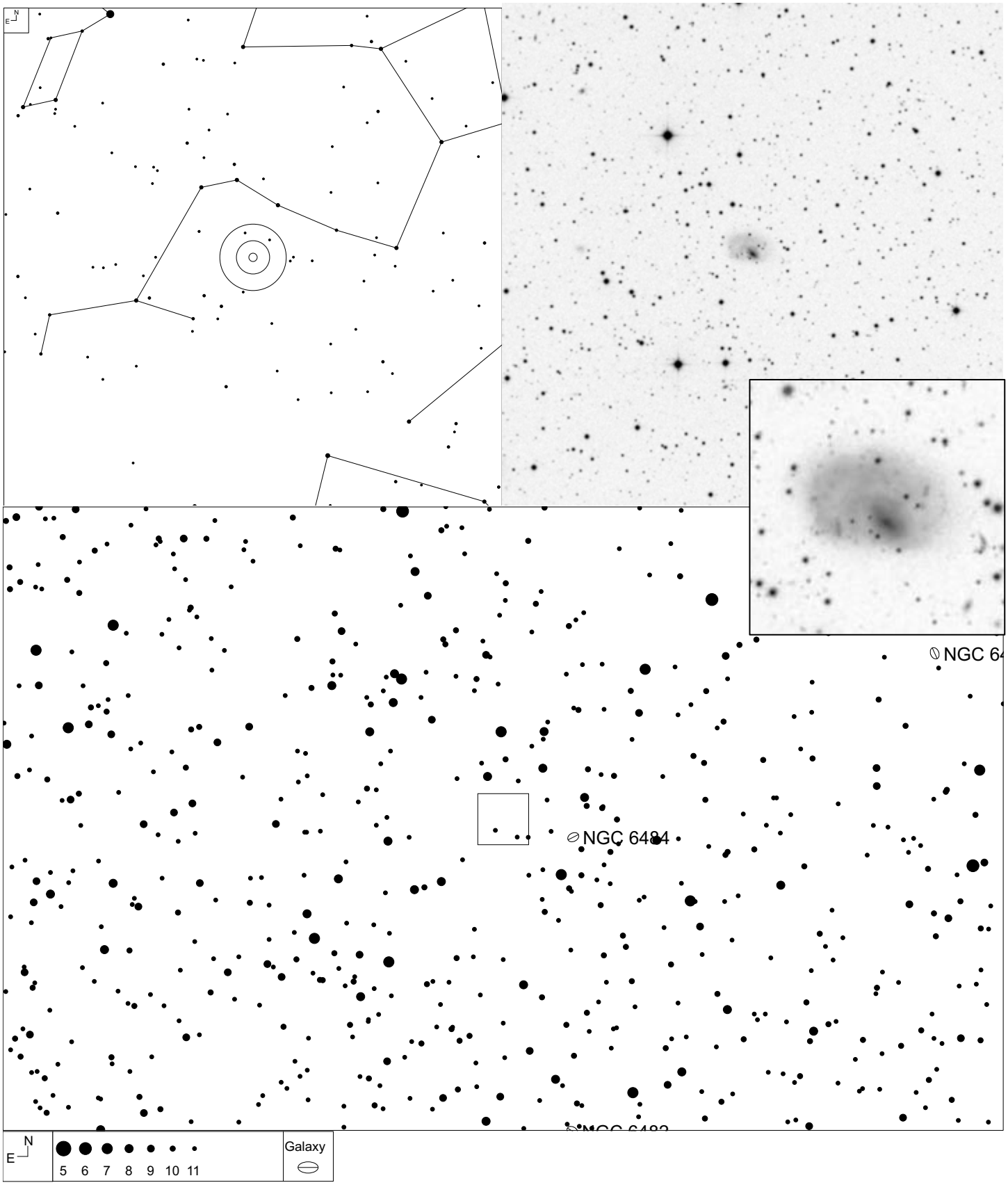
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
426		17 46 29.8	+30 42 06	GPair			PD
426a	UGC 10976	17 46 28.0	+30 42 21	G	14.3g	0.9 x 0.5	M
426b	UGC 10977	17 46 31.5	+30 41 55	G	16.3g	1.0 x 0.2	M

VV 623 (Hercules)



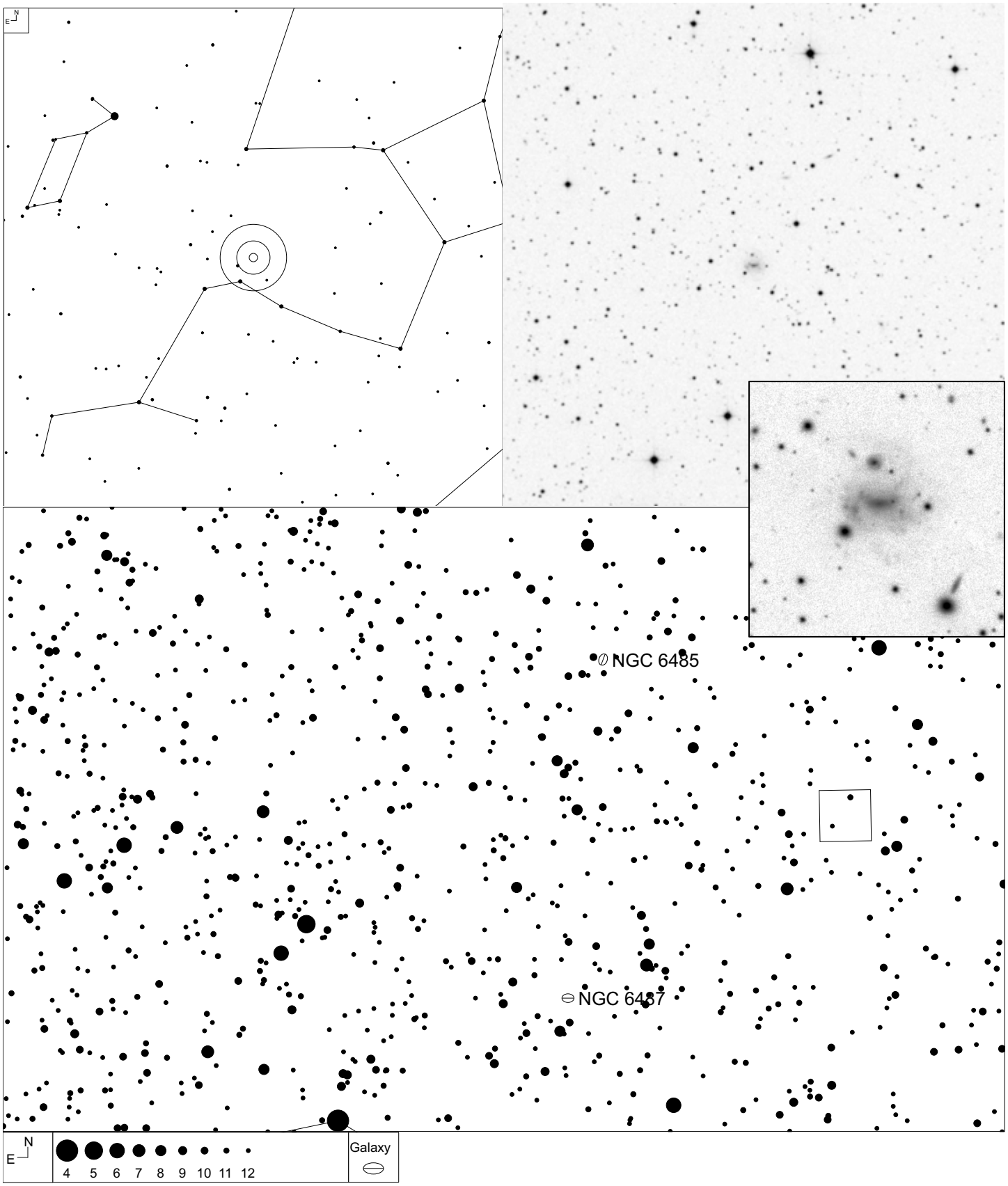
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
623	MCG +03-45-037	17 51 22.3	+18 44 50	GGroup	16.3g	1.0 x 0.7	N

VV 534 (Hercules)



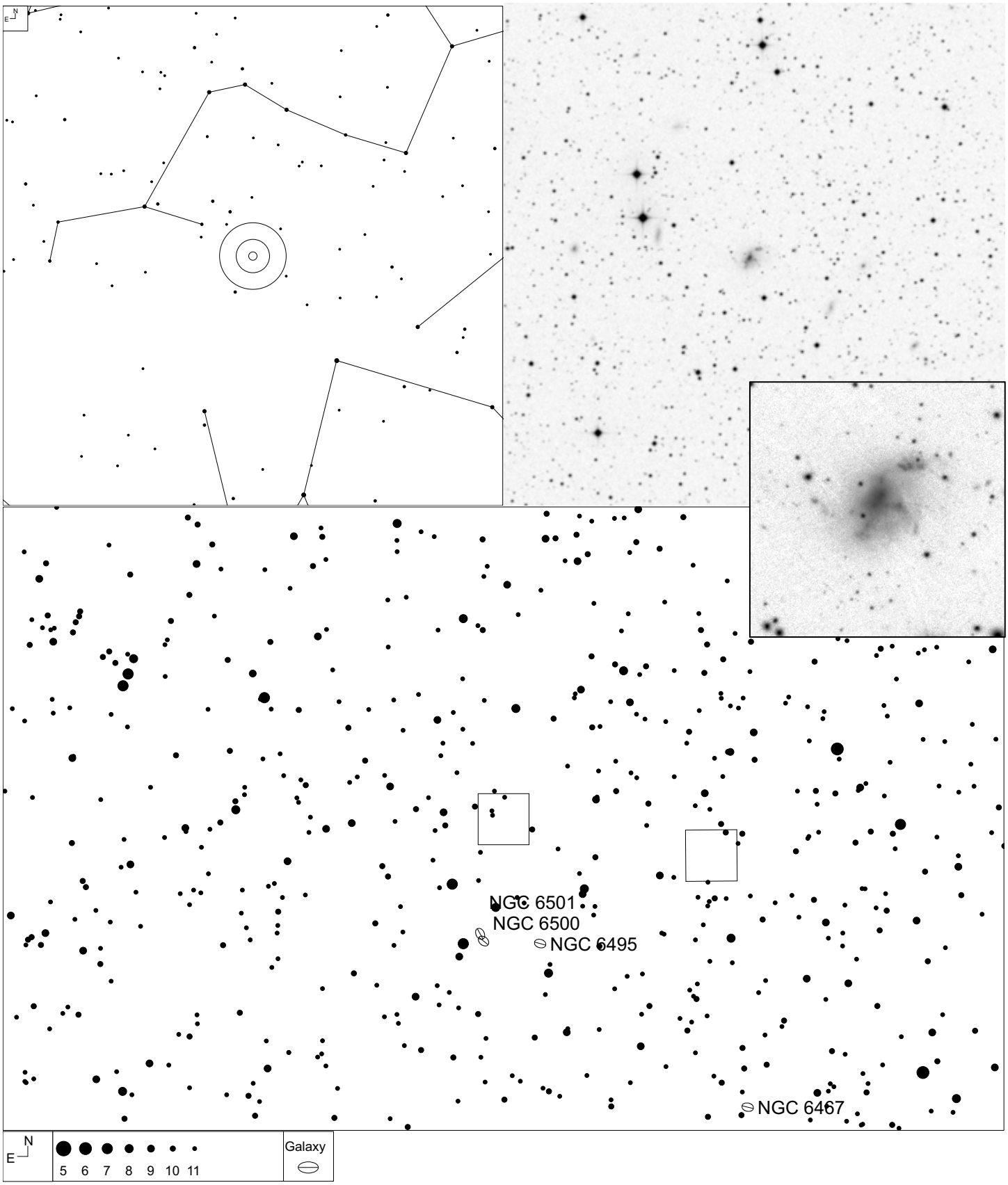
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
534	UGC 11027	17 53 16.0	+24 34 20	G	14.6g	1.2 x 0.9	N

VV 532 (Hercules)



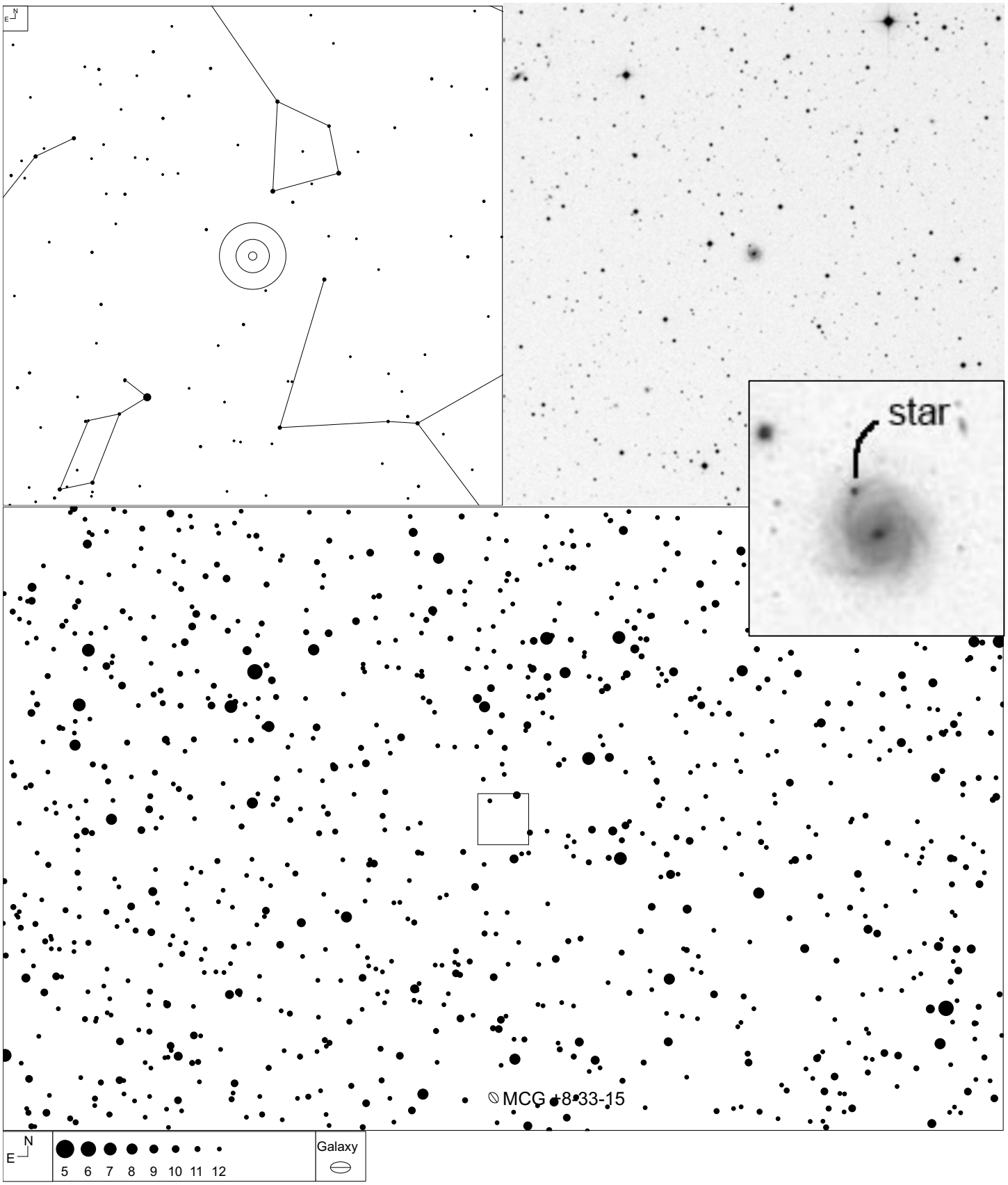
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
532	UGC 11031	17 54 07.0	+30 42 02	G	15.8g	0.9	N

VV 556 (Hercules)



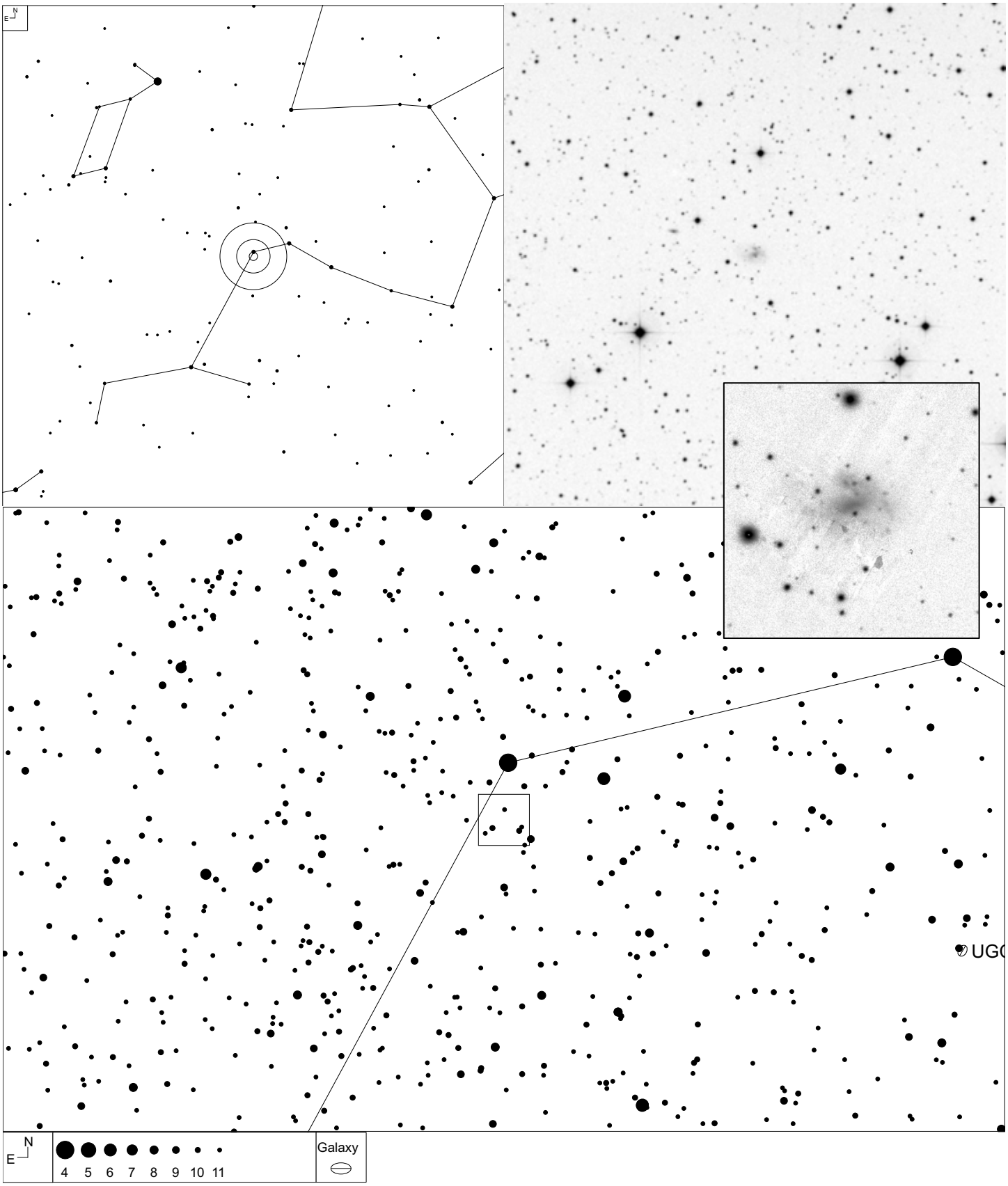
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
556	UGC 11044	17 55 34.7	+18 55 37	GTrpl	14.8g	1.2 x 0.8	NNN

VV 447 (Hercules)



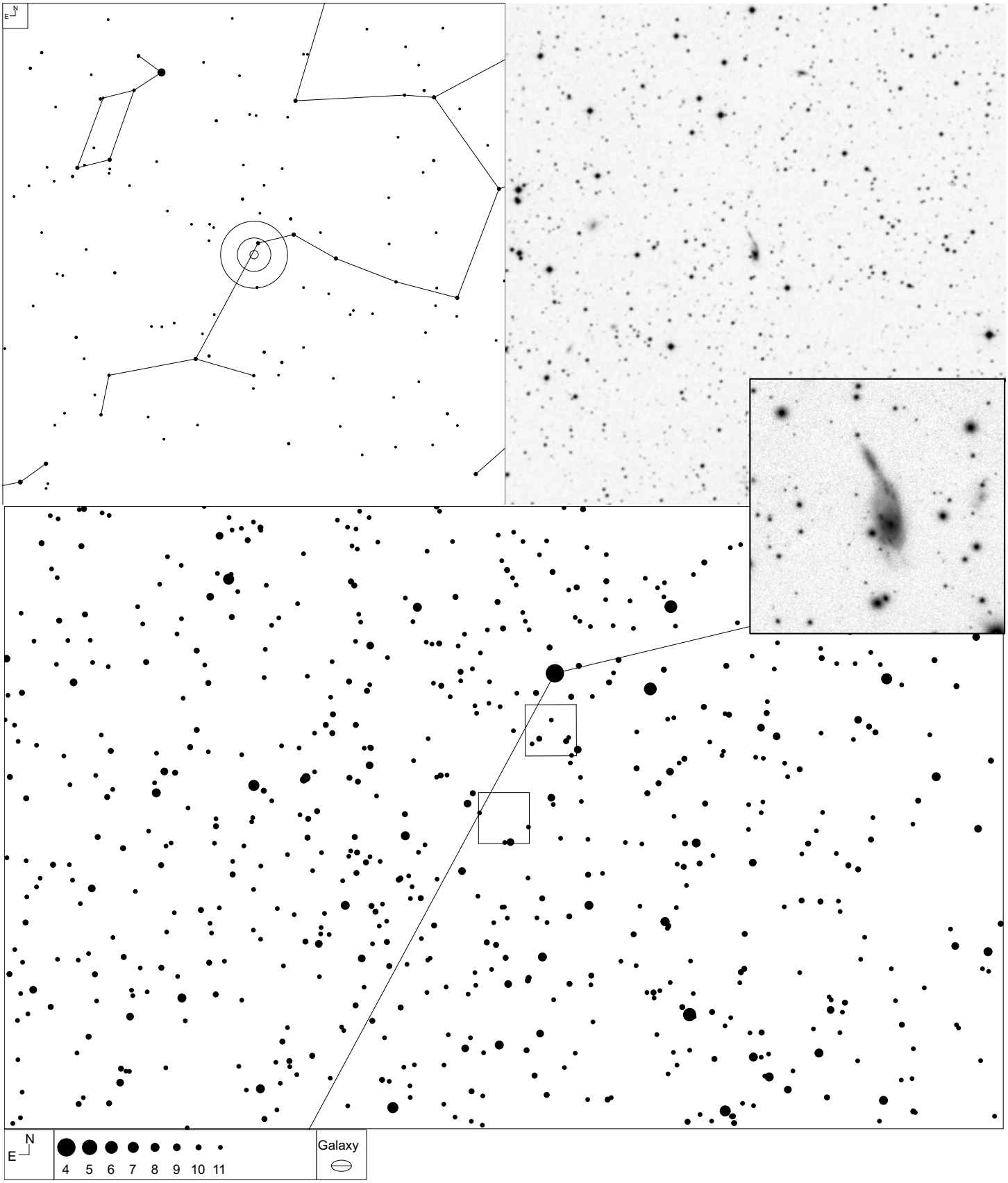
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
447	MCG +08-33-014	18 04 24.7	+47 35 44	G	15.2g	0.5 x 0.4	M

VV 712 (Hercules)



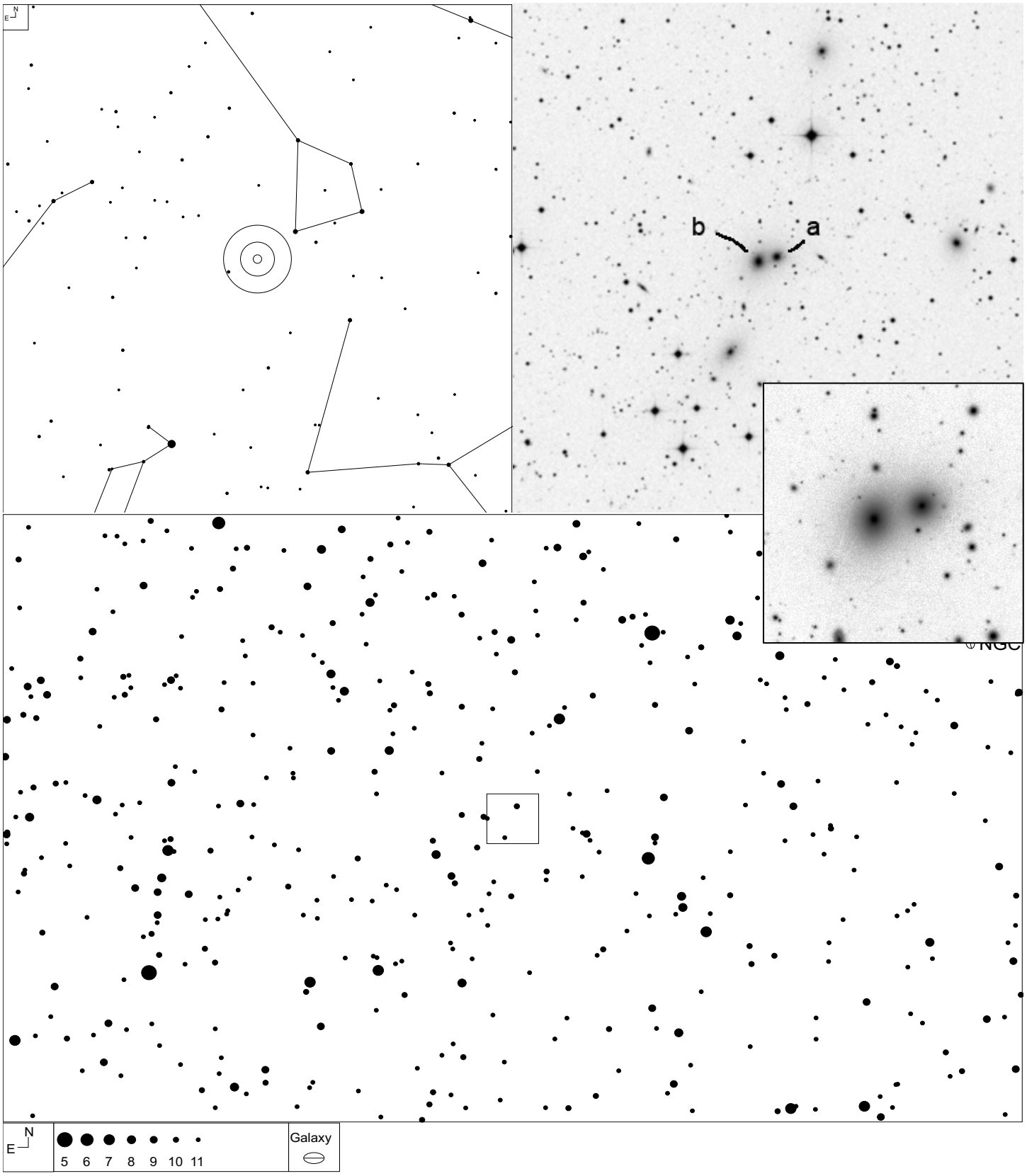
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
712	UGC 11123	18 07 38.0	+28 29 15	G	15.8g	1.0 x 0.8	PC

VV 718 (Hercules)



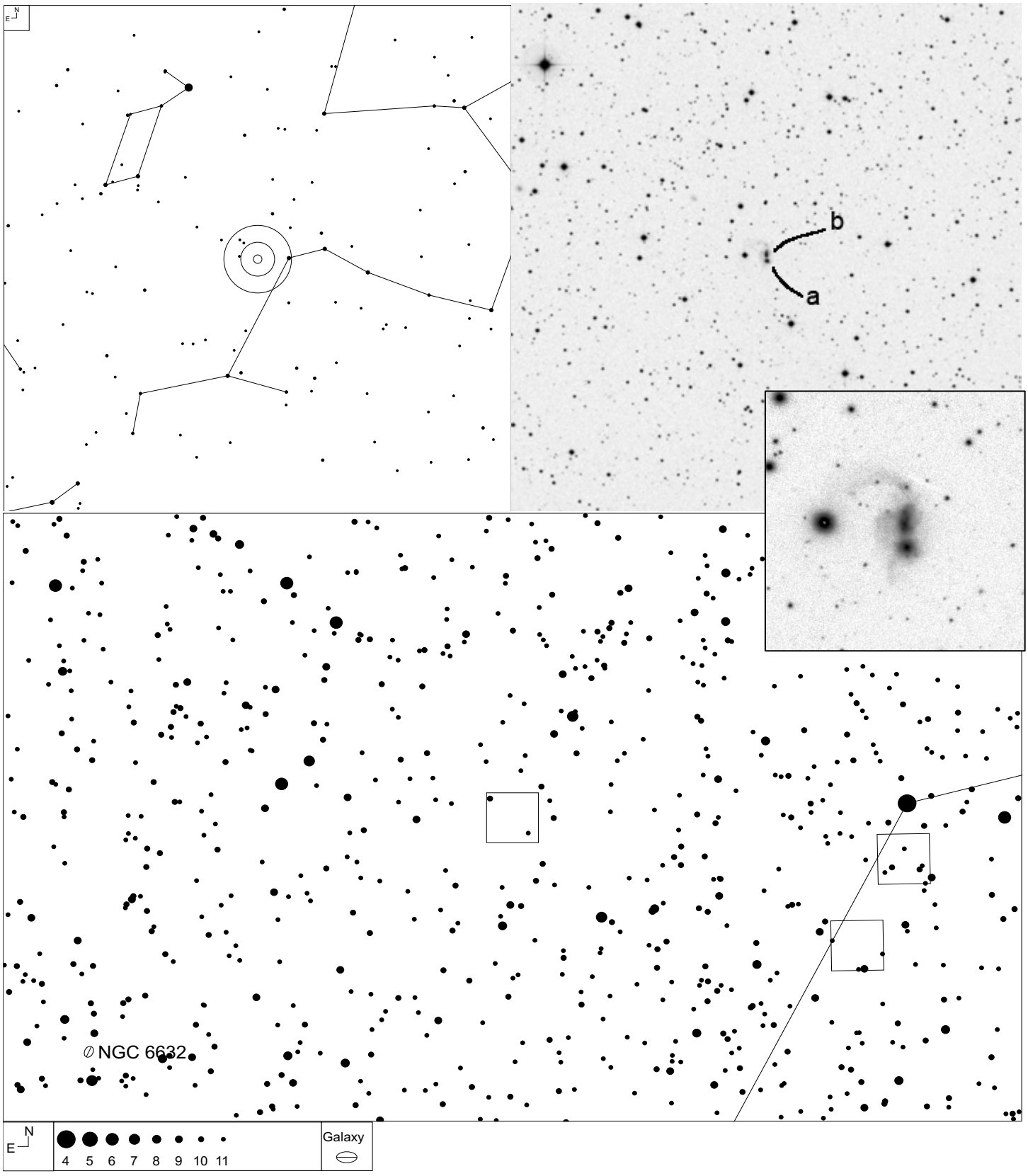
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
718	UGC 11127	18 08 39.5	+28 03 37	G	14.7g	0.7 x 0.3	PC

VV 818 (Hercules)



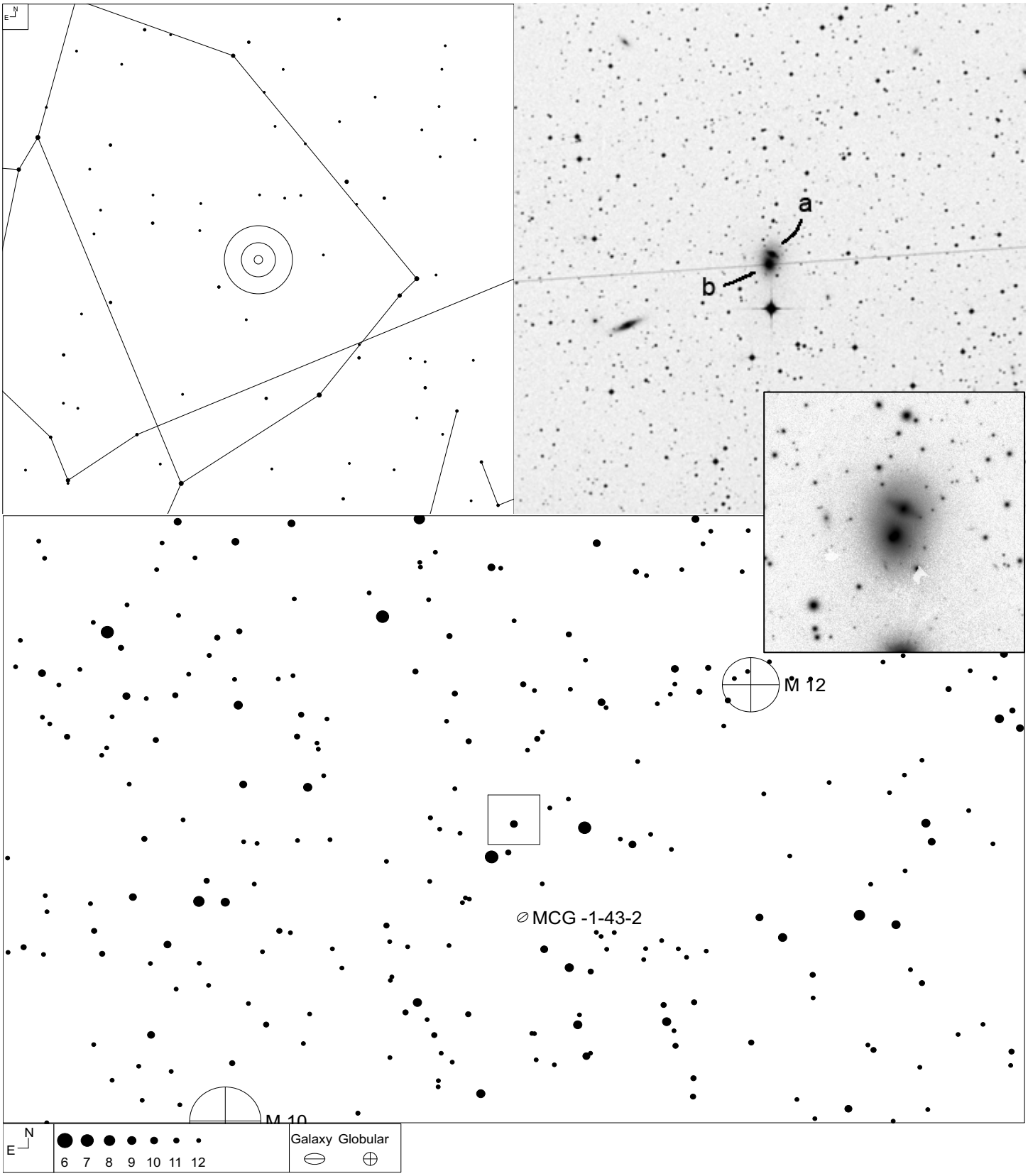
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
818		18 11 03.5	+49 54 38	GPair			Enat
818a	NGC 6582	18 11 01.9	+49 54 43	G	14.9g	0.4	
818b	MCG +08-33-030	18 11 05.1	+49 54 33	G	14.3g	0.9 x 0.6	

VV 711 (Hercules)



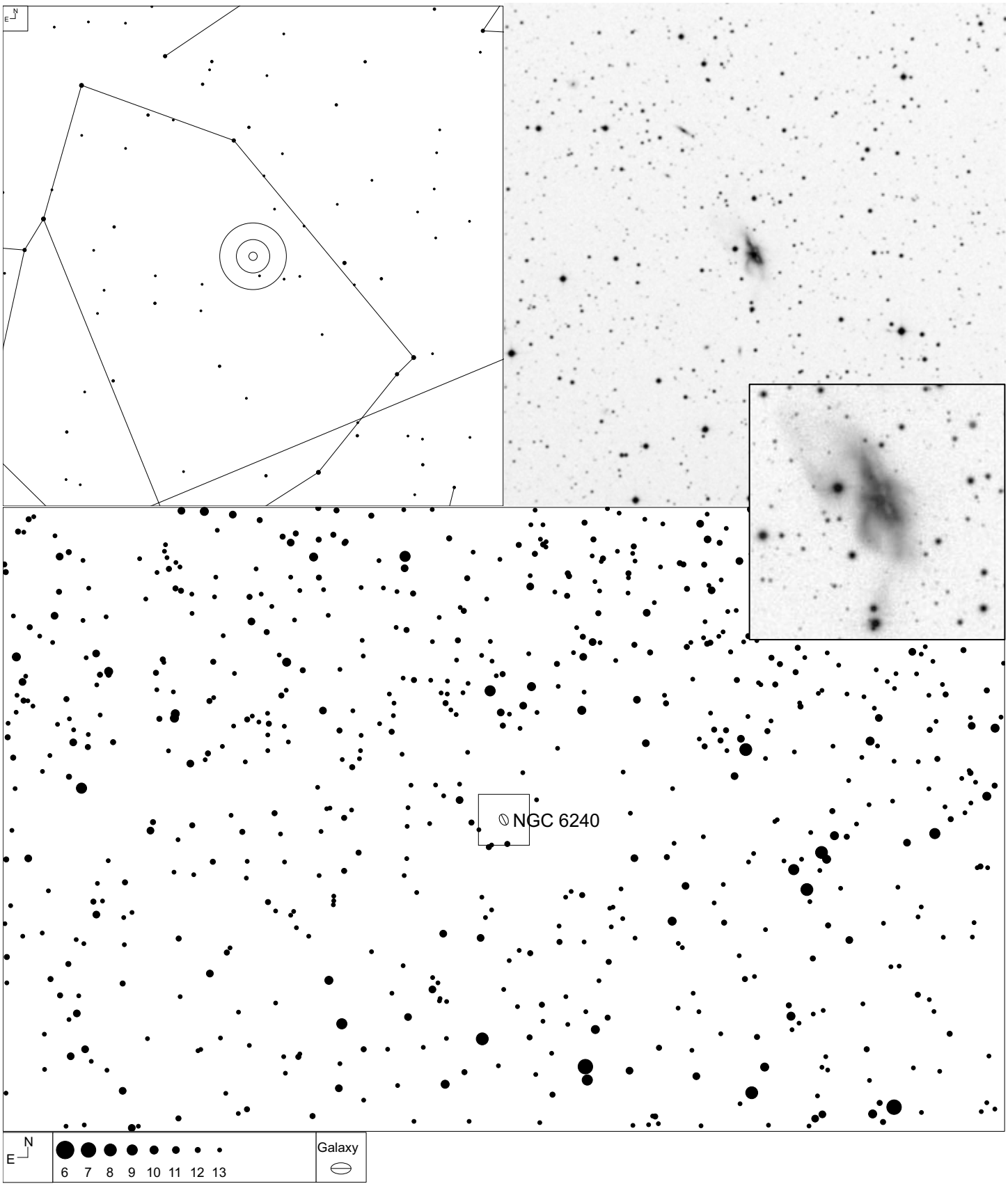
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
711	MCG +05-43-013	18 16 02.2	+28 42 23	GPair	15.2b	0.9 x 0.7	PC

VV 820 (Ophiuchus)



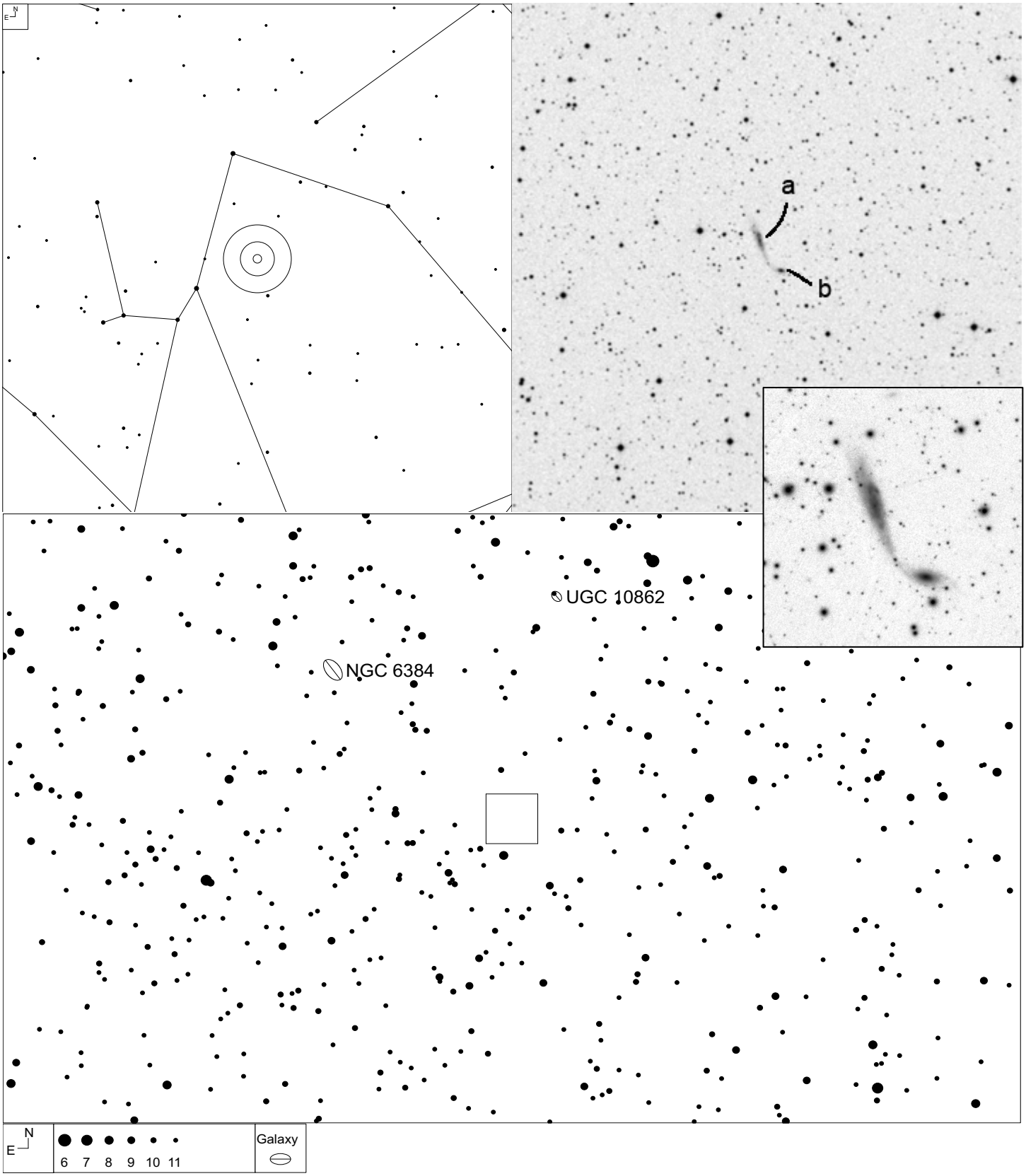
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
820	MCG 00-43-003	16 51 42.2	-02 36 47	GPair	13.9b	1.4 x 0.9	PK

VV 617 (Ophiuchus)



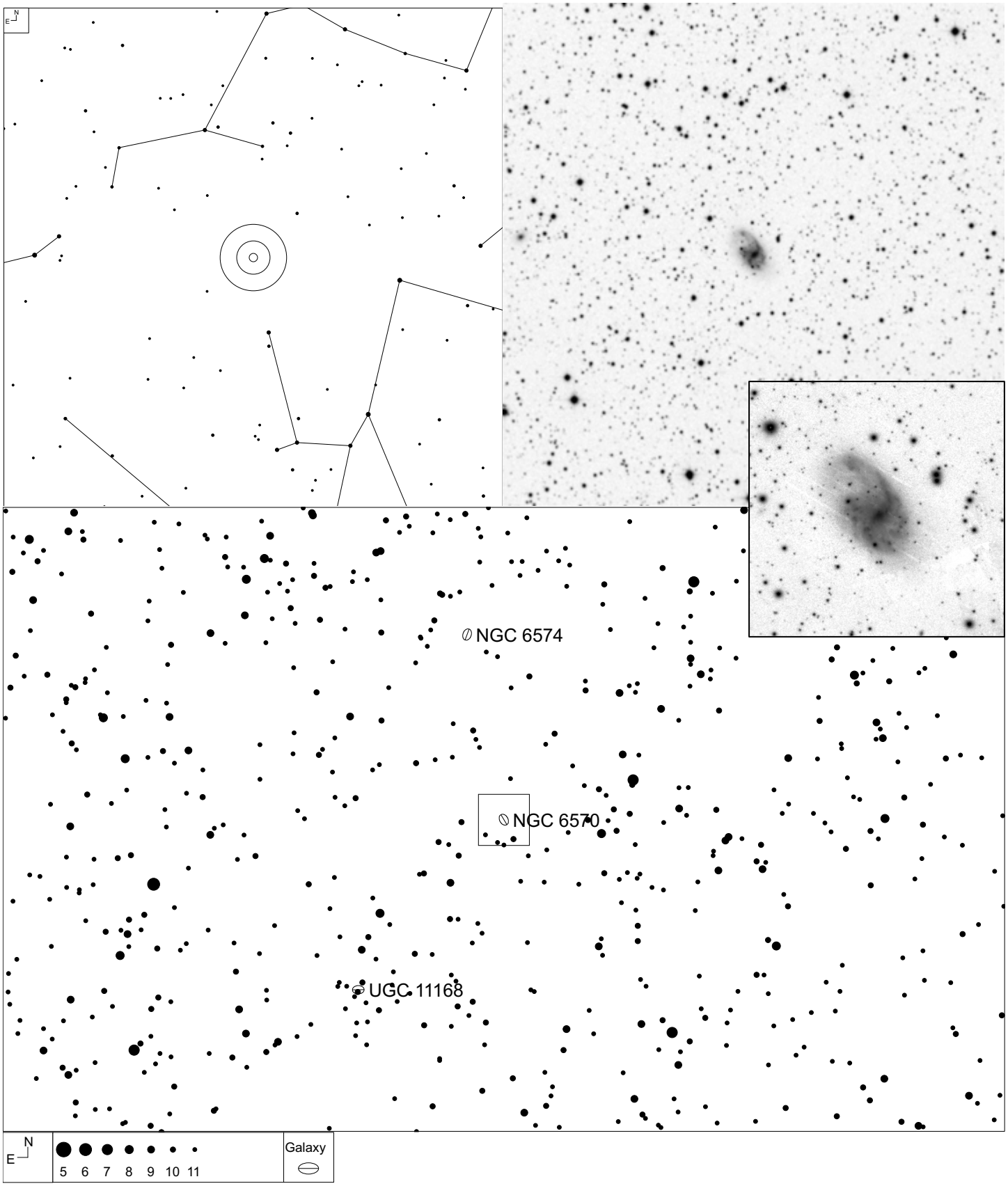
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int2.1 x G. Type
617	NGC 6240	16 52 58.9	+02 24 03	G	13.4v		N

VV 778 (Ophiuchus)



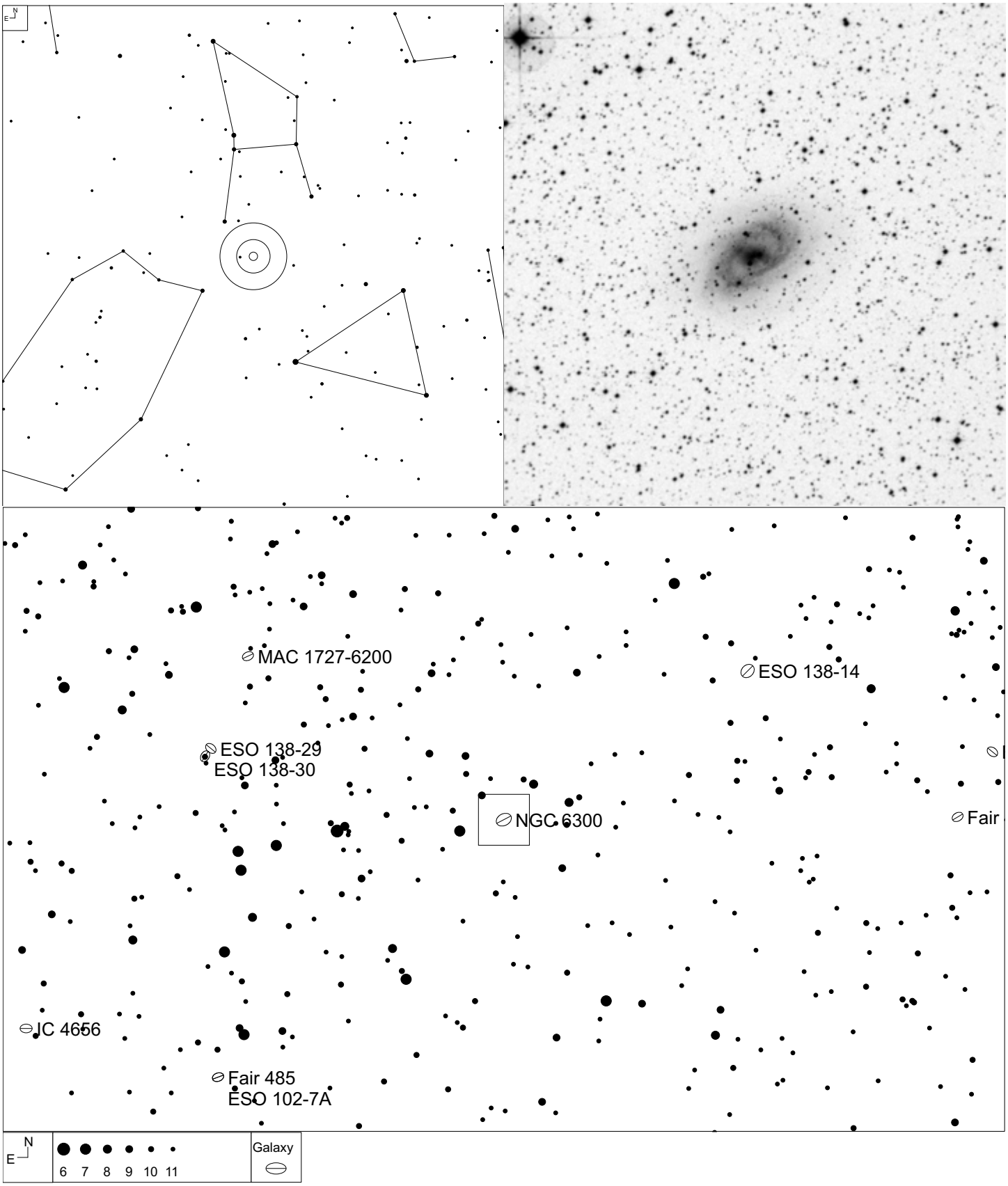
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
778	UGC 10868	17 28 59.5	+06 19 20	GPair	15.2b	2.1 x 0.5	PDb
778b	*PGC 200347*	*17 28 57.8*	*+06 19 02*	*G*	*16.0*		

VV 537 (Ophiuchus)



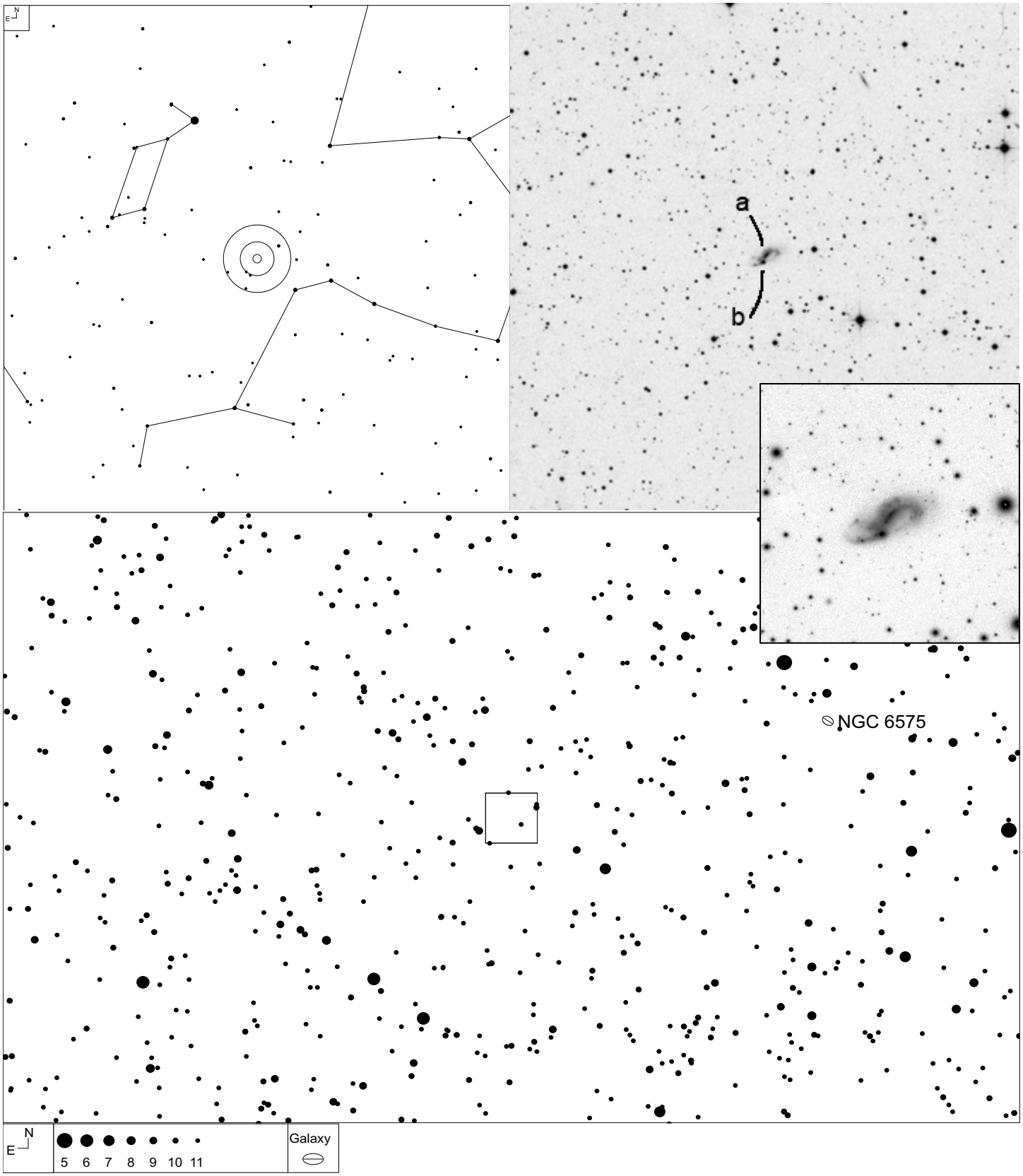
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
537	NGC 6570	18 11 07.4	+14 05 36	G	13.2	1.8 x 1.1	N

VV 734 (Ara)



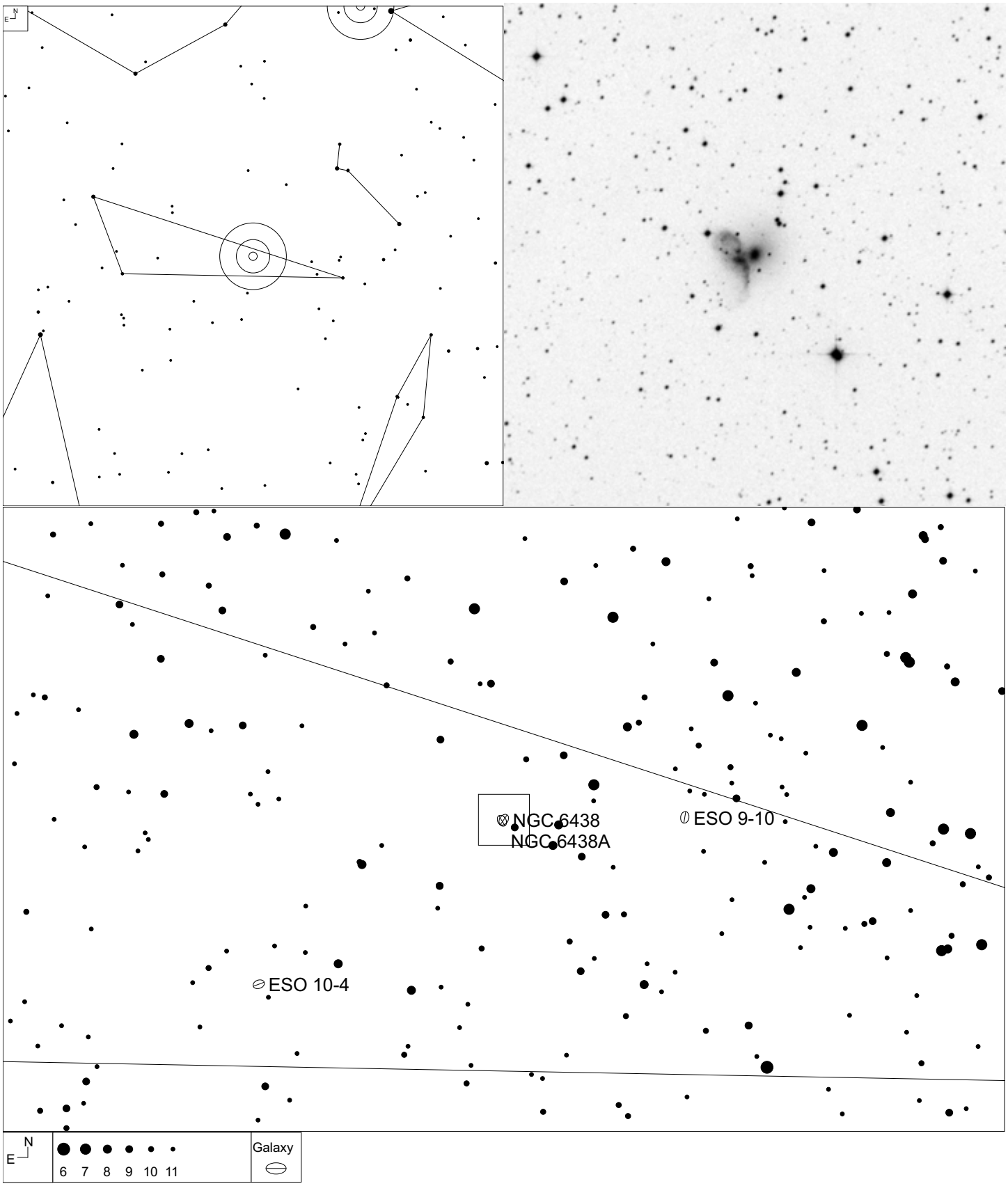
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
734	NGC 6300	17 16 59.2	-62 49 11	G	13.0v	4.5 x 3.0	PC

VV 569 (Lyra)



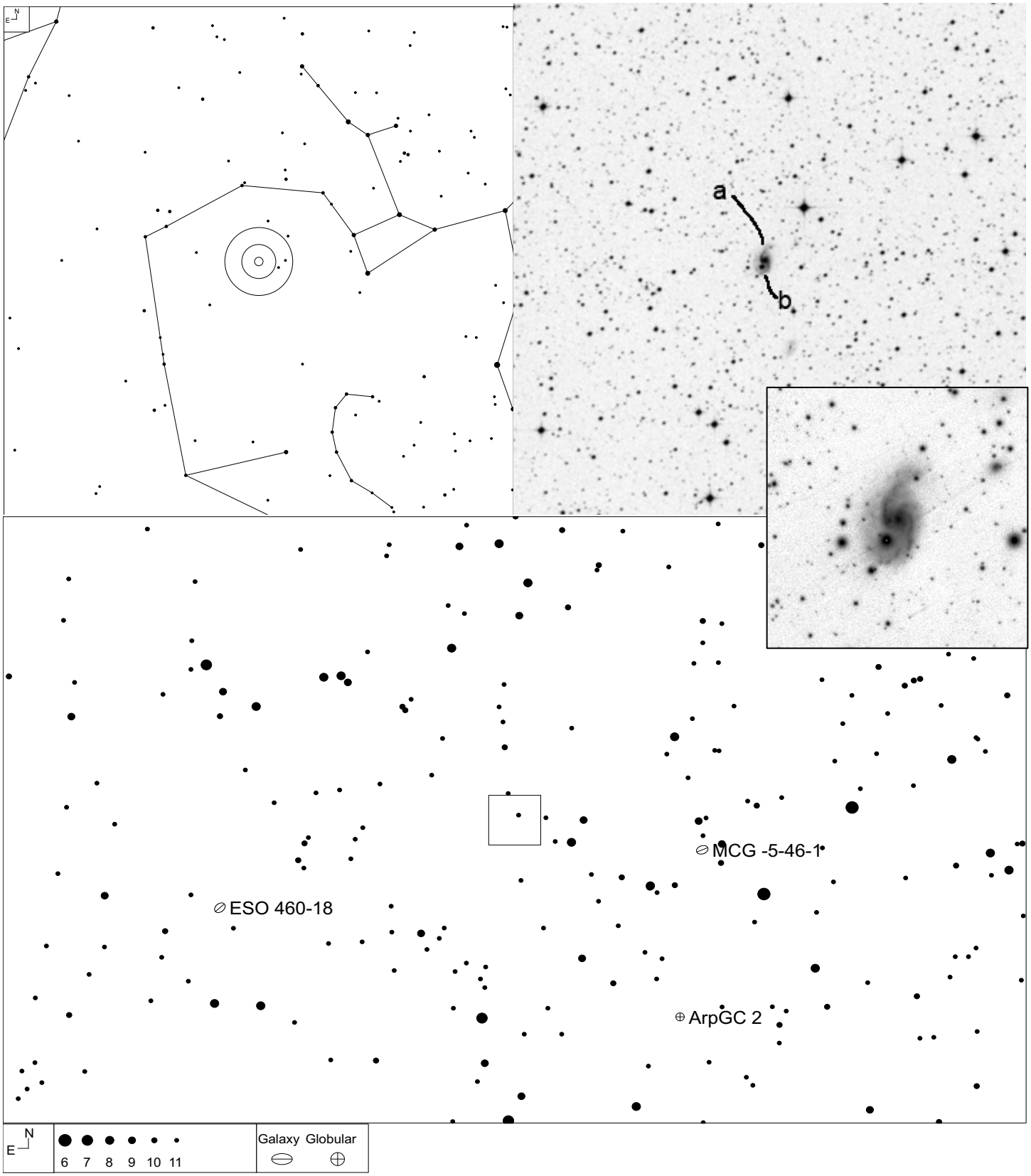
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
569	UGC 11195	18 17 56.8	+30 39 01	GPair	15;2g	1.1 x 0.5	N

VV 682 (Octans)



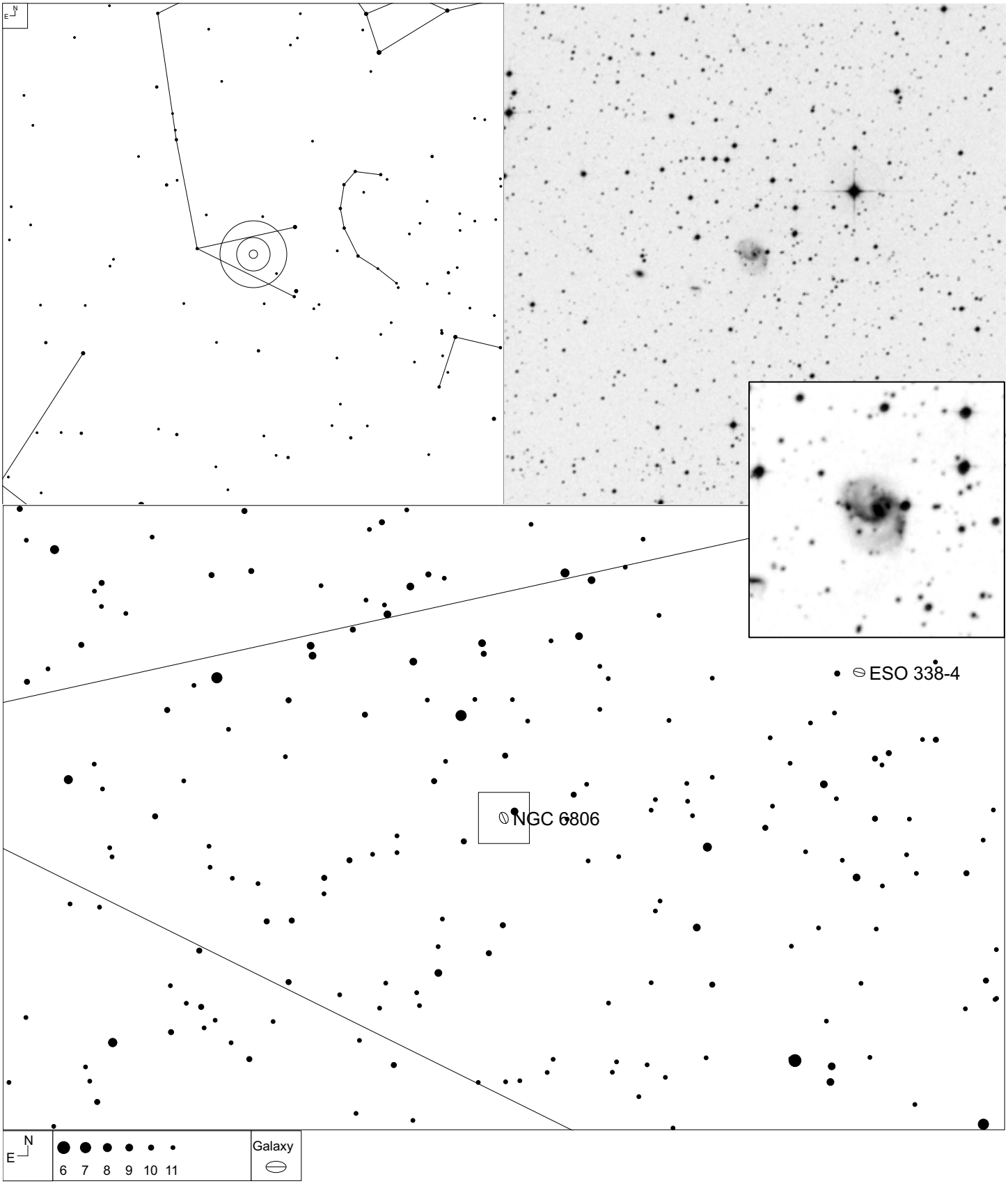
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
682	NGC 6438	18 22 17.5	-85 24 07	G	11.6v	1.6 x 1.3	N

VV 604 (Sagittarius)



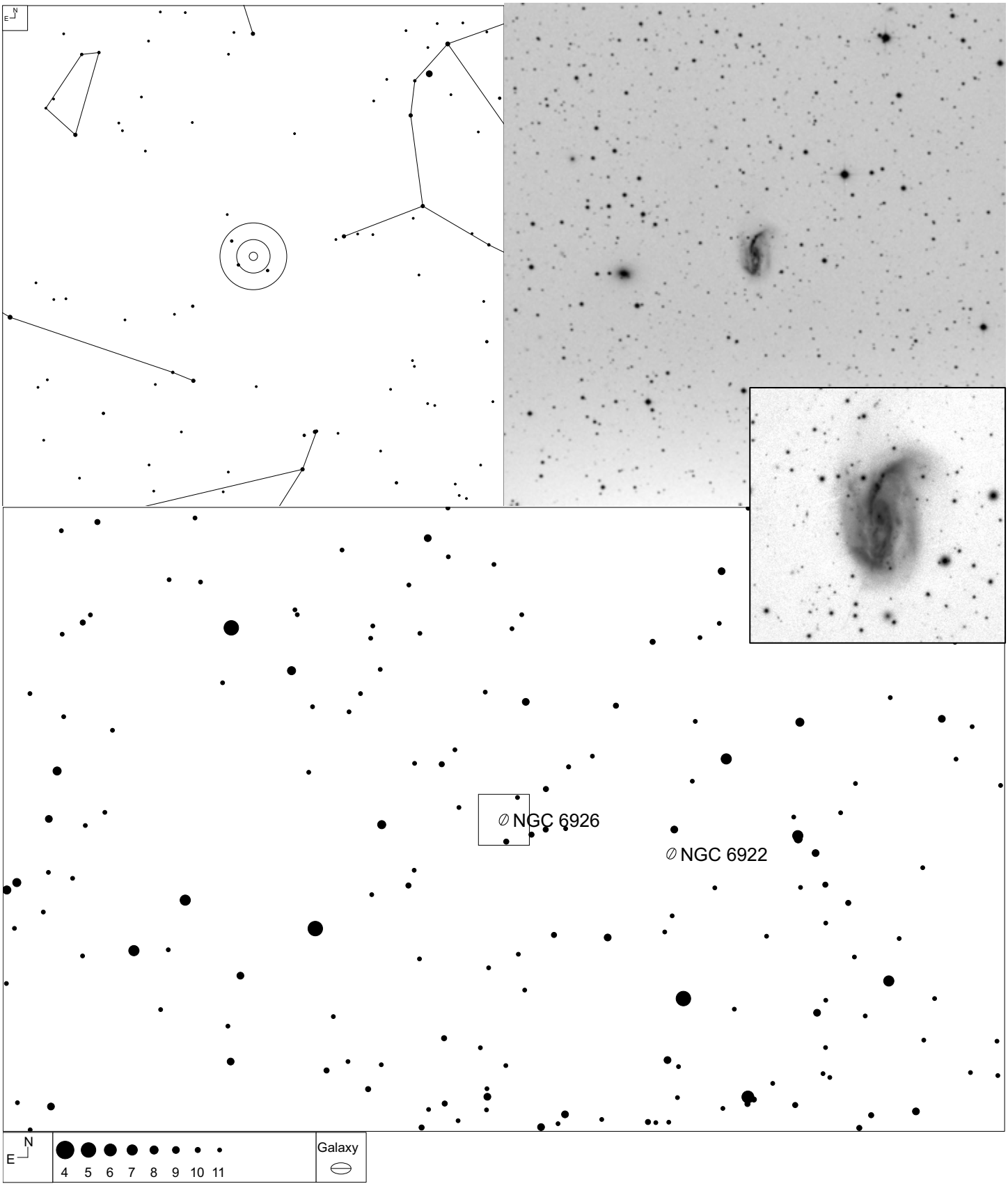
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
604	MCG-05-46-002	19 32 19.6	-29 23 09	GPair	14.3b	1.2 x 0.6	N

VV 411 (Sagittarius)



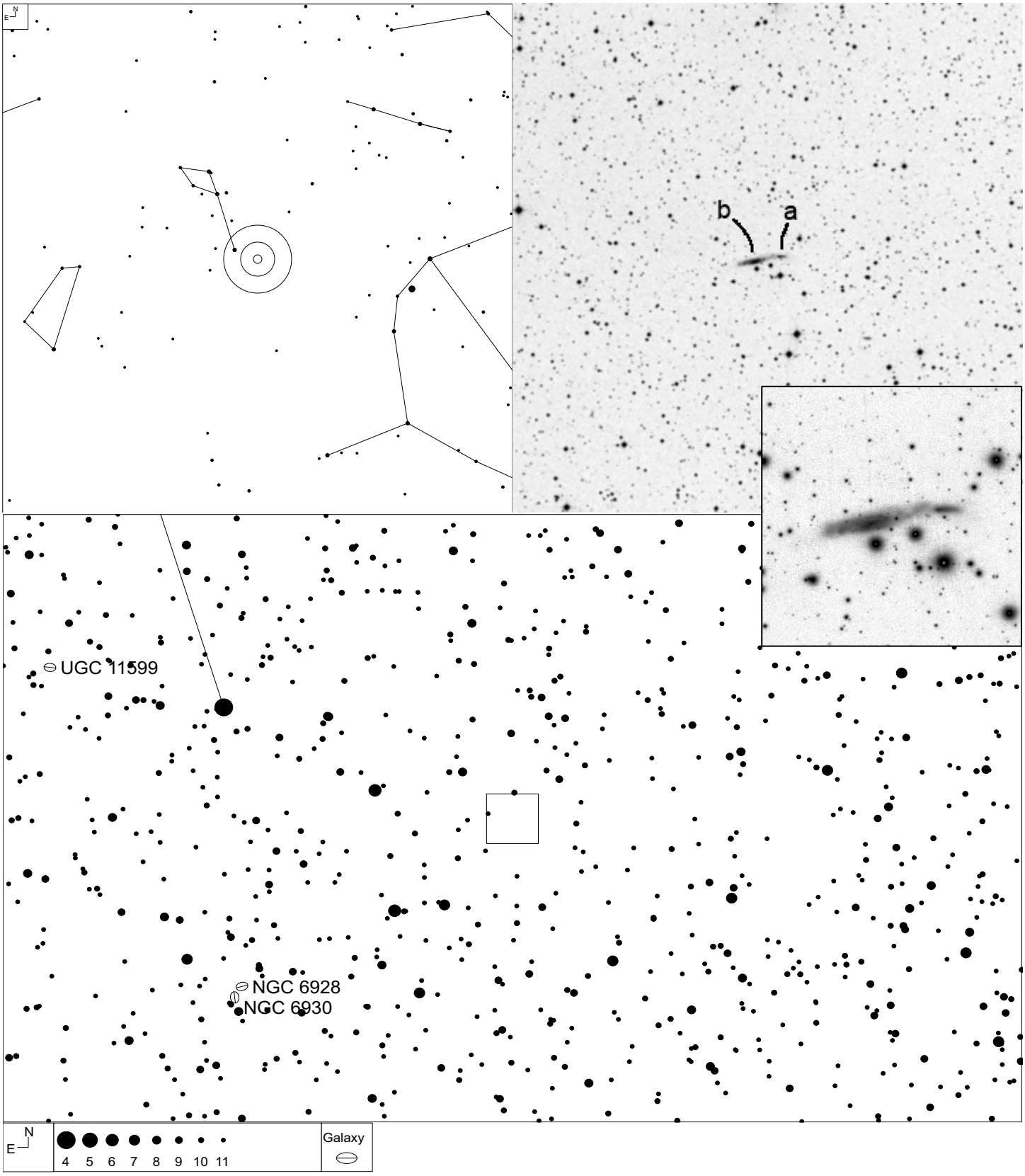
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
411	NGC 6806	19 37 05.0	-42 17 47	G	13.8b	1.6 x 1.0	M

VV 621 (Aquila)



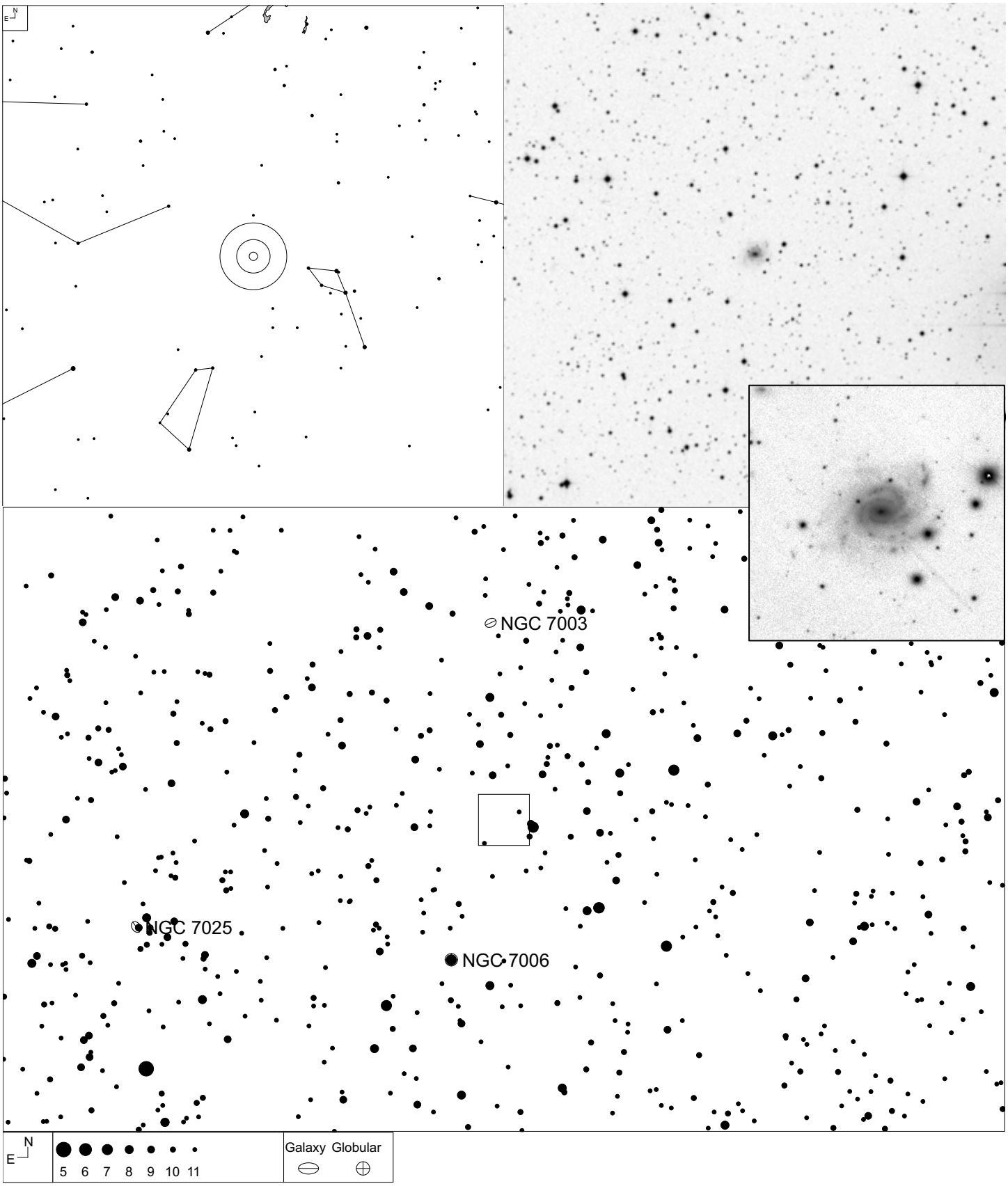
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
621	NGC 6926	20 33 06.1	-02 01 39	G	13.9v	1.9 x 1.3	N

VV 773 (Delphinus)



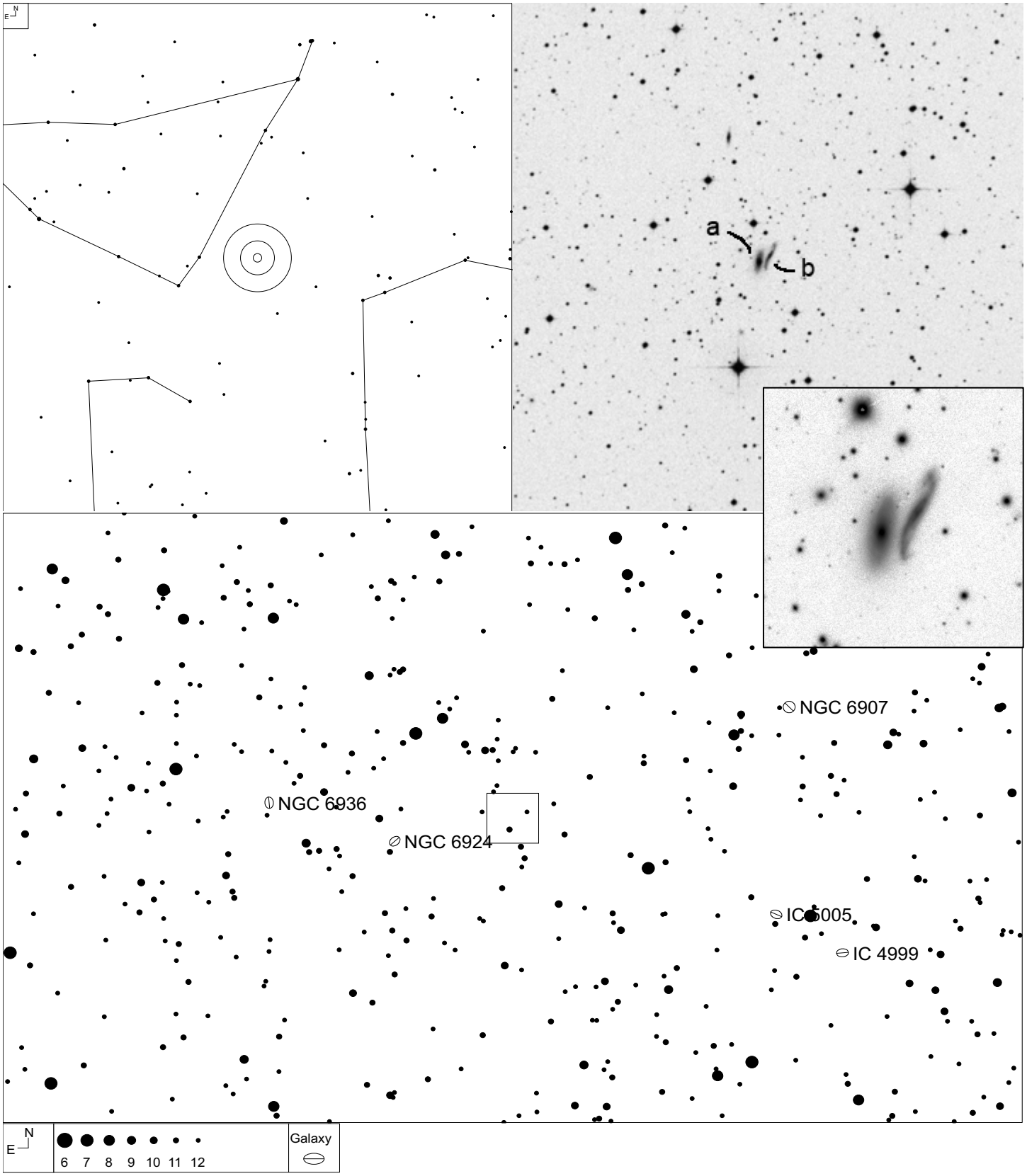
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
773		20 27 38.0	+10 45 31	GPair			PDb
773a	PGC 200364	20 27 36.5	+10 45 38	G	16.1	0.7 x 0.2	
773b	UGC 11564	20 27 39.6	+10 45 59	G	15.1b	1.6 x 0.3	

VV 591 (Delphinus)



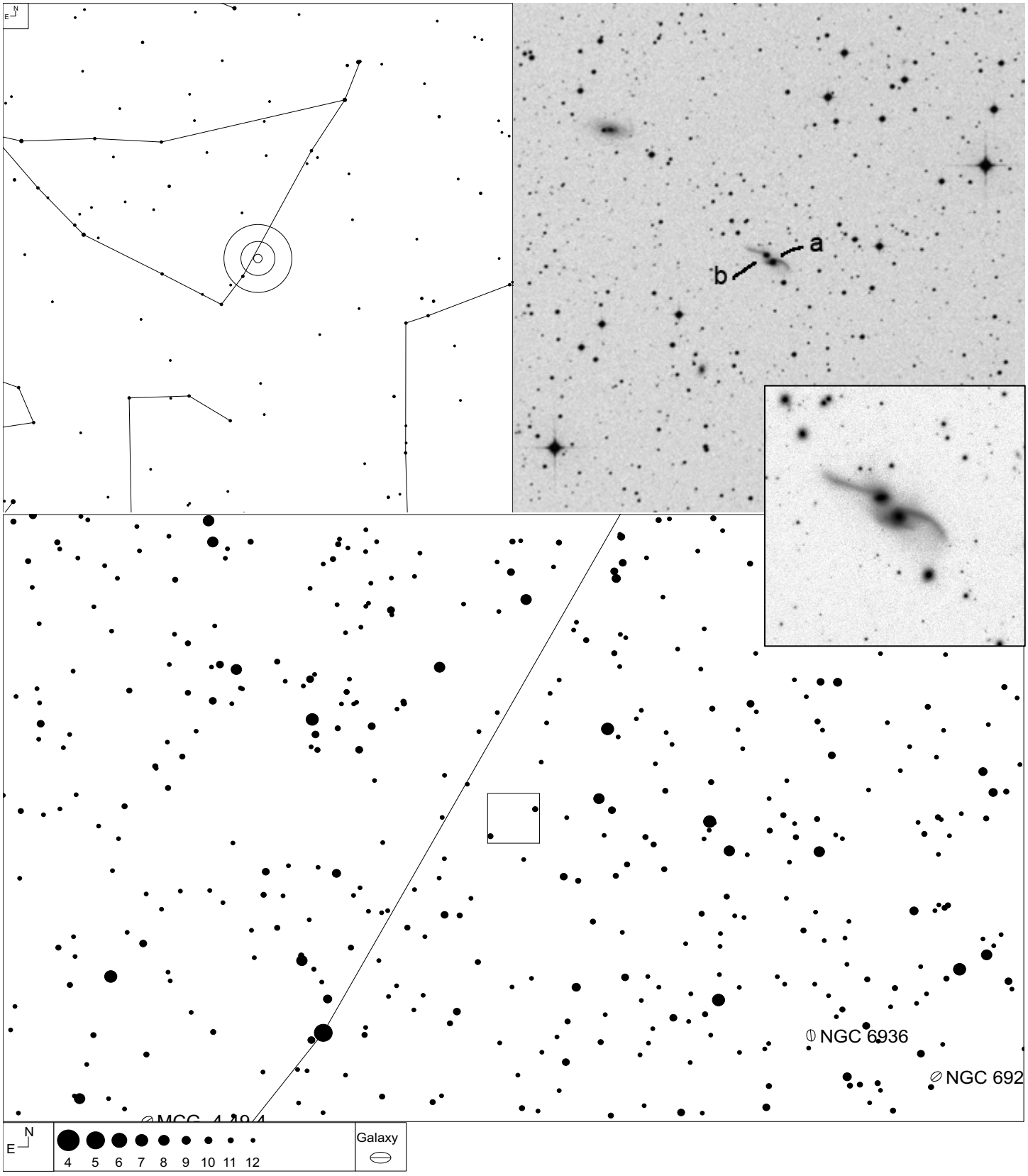
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
591	UGC 11661	21 00 26.2	+16 51 37	G	14.8b	1.0 x 0.9	N

VV 767 (Capricornus)



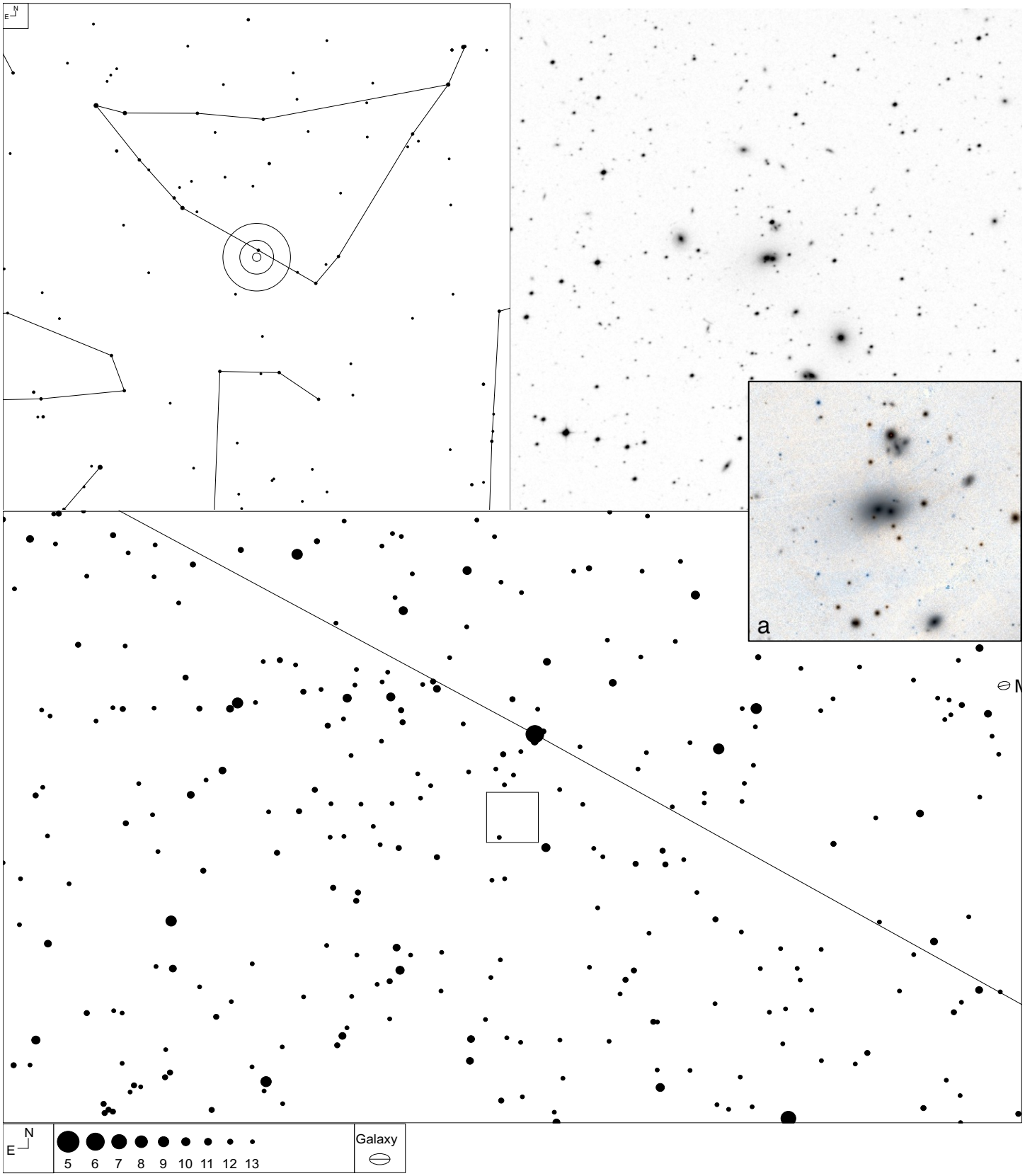
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
767		20 30 51.8	-25 21 52	GPair			PD
767a	MCG -04-48-012	20 30 53.1	-25 21 58	G	15.2b	0.9 x 0.2	
767b	MCG -04-48-011	20 30 51.1	-25 21 46	G	15.5b	1.0 x .02	

VV 750 (Capricornus)



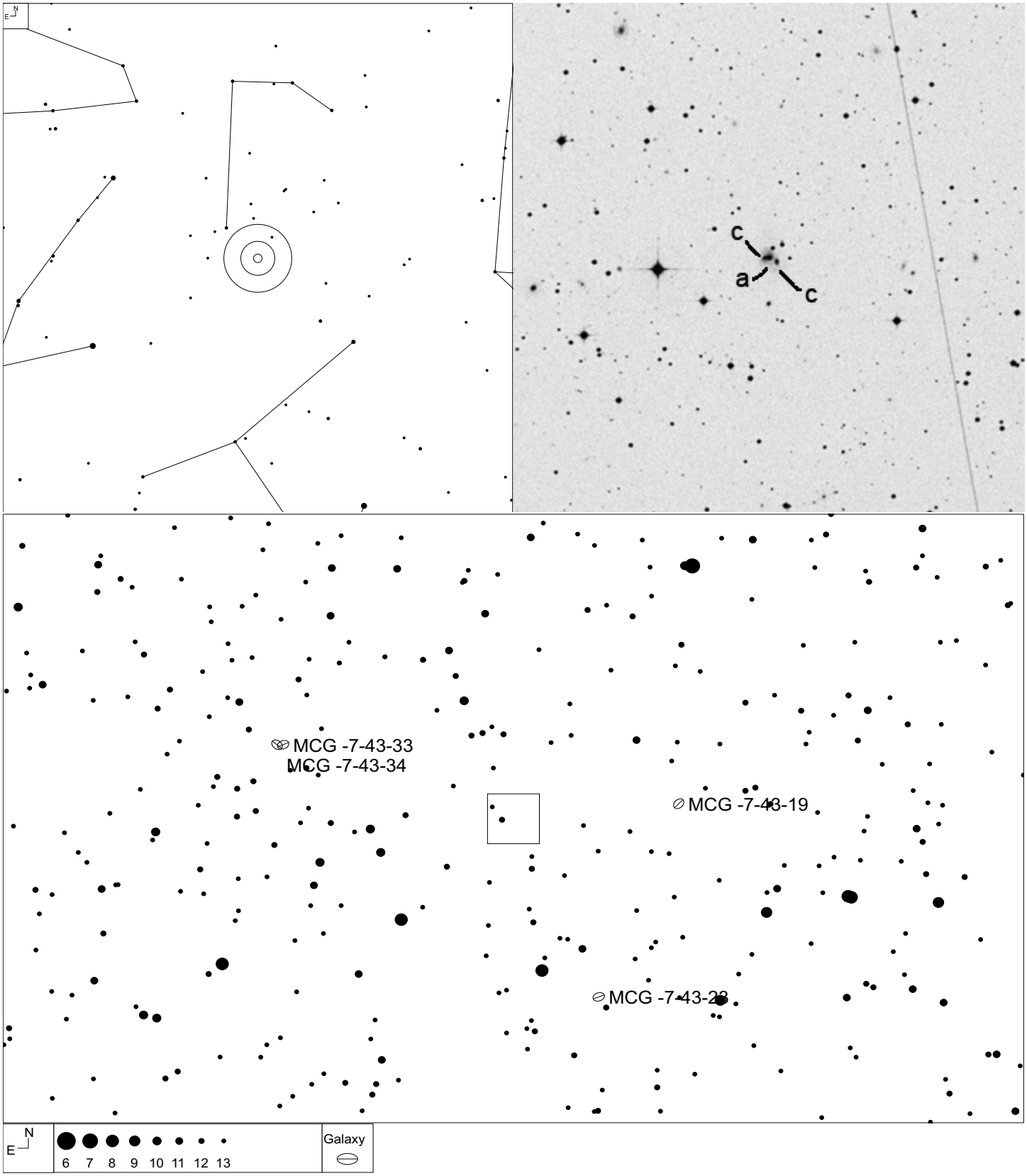
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
750	MCG -04-48-029	20 42 09.0	-24 12 50	GPair	14.9b	0.8 x 0.3	PDbt

VV 764 (Capricornus)



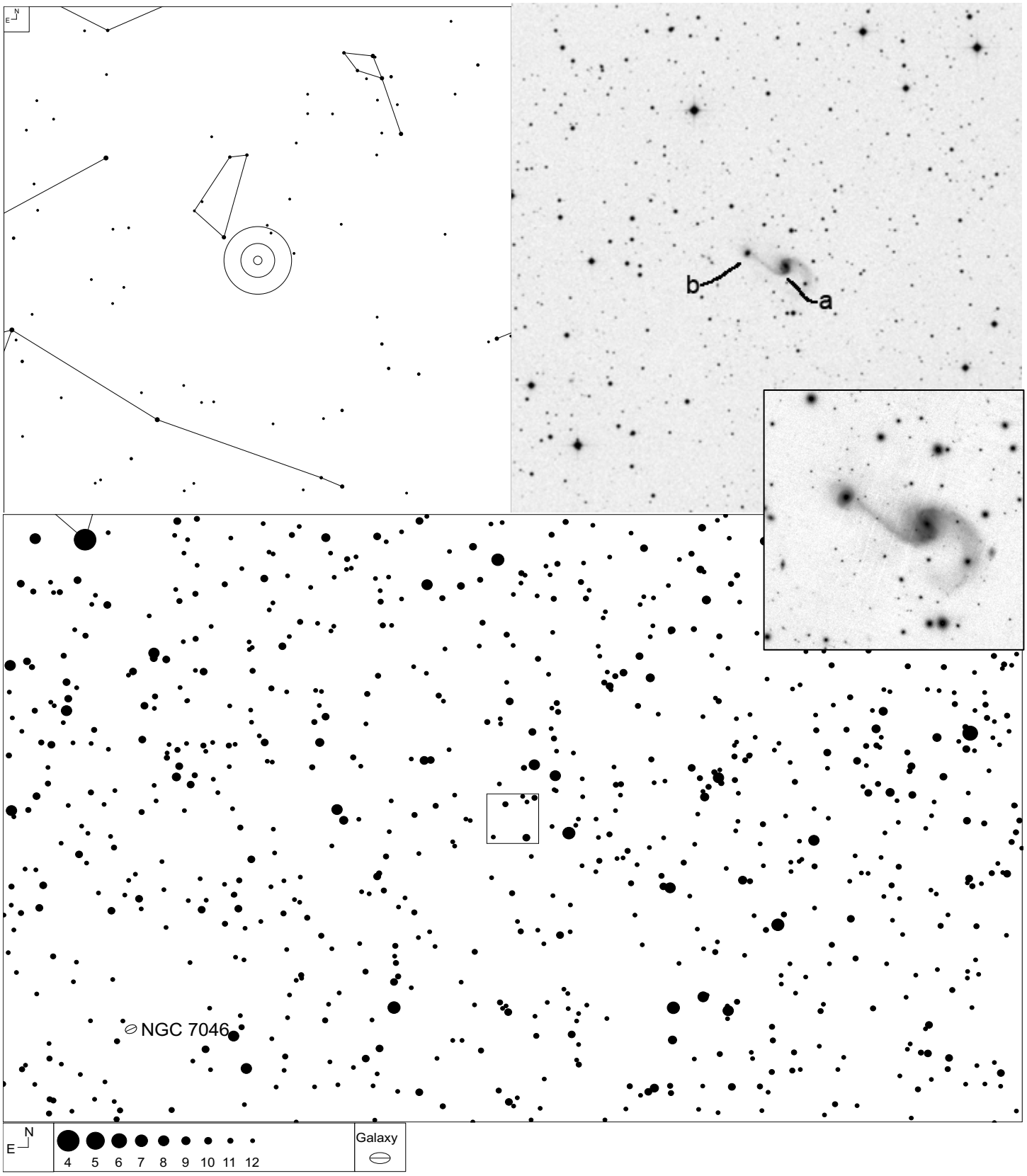
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
764	NGC 7018	21 07 35.7	-25 24 52	GGroup	14.4b	0.8 x 0.5	N

VV 677 (Microscopium)



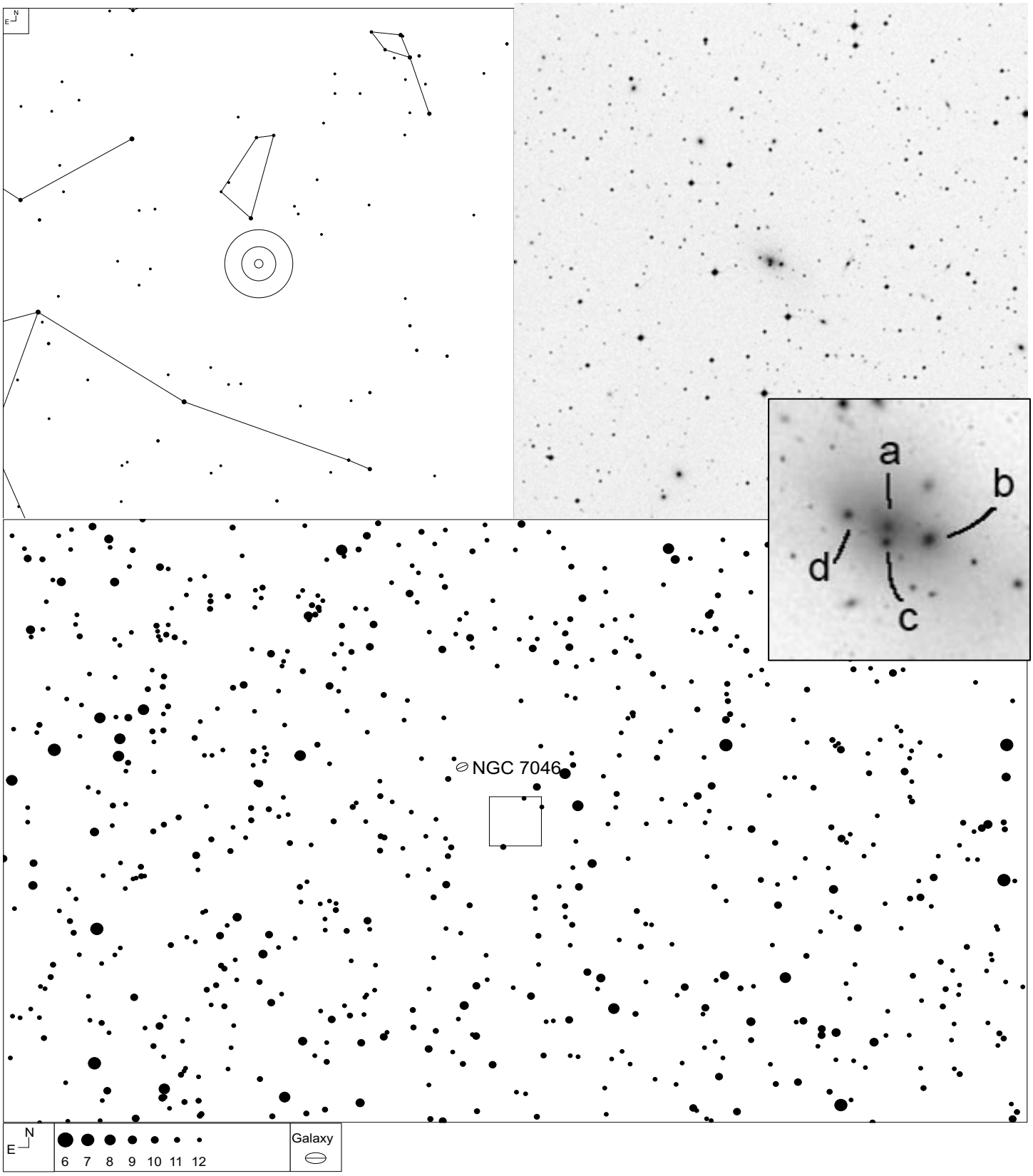
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
677		21 10 54.7	-42 38 10	GTrpl	14.81	9x5	NNNP
677a	MCG -07-43-028	21 10 54.8	-42 38 09	G	14.81b	0.3 x 0.2	
677b	MCG -07-43-029	21 10 53.6	-42 38 18	G	16.0b	0.1	

VV 476 (Equuleus)



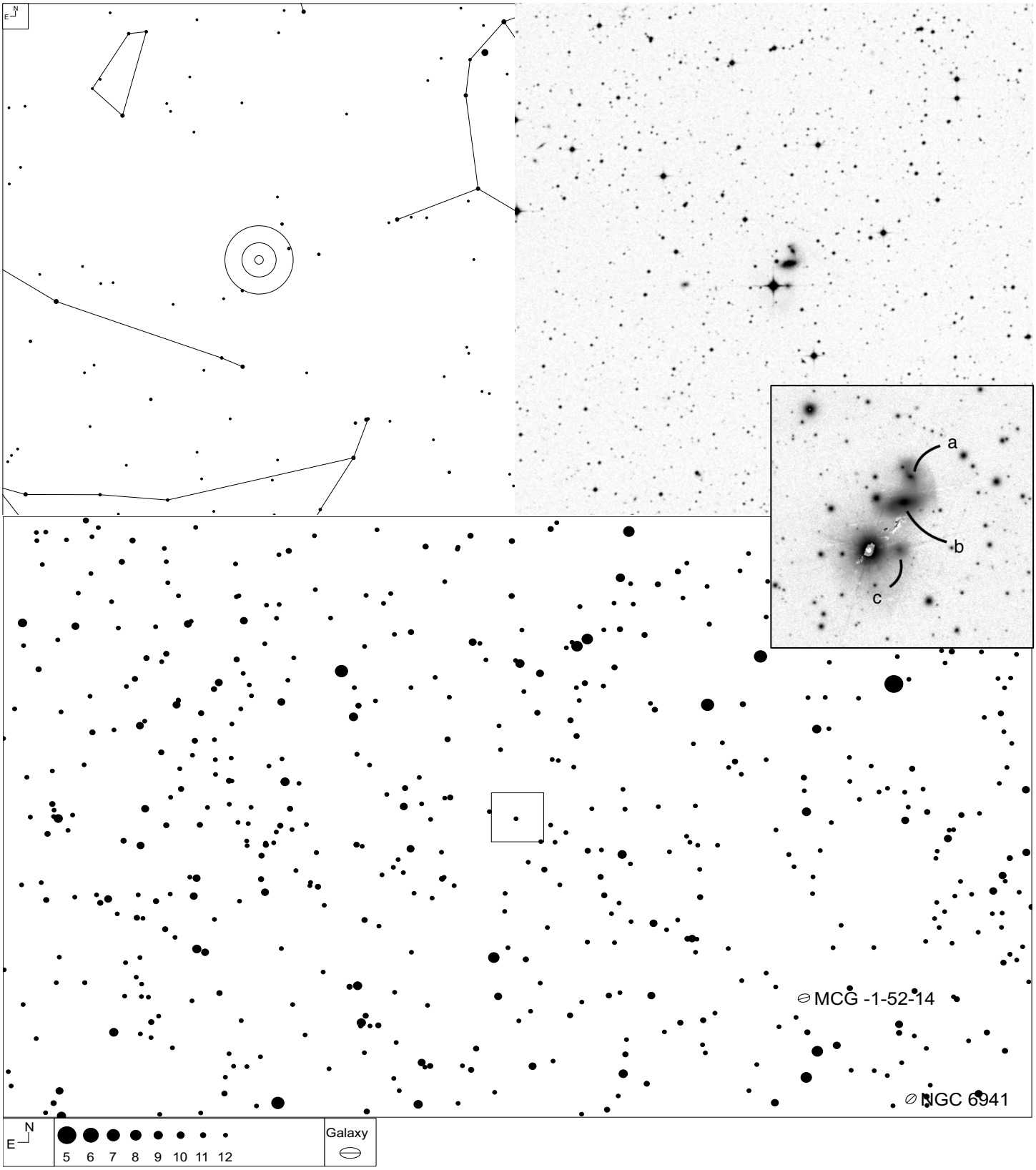
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
476		21 07 43.6	+03 52 30	GPair			M
476a	UGC 11680	21 07 41.5	+03 52 20	G	15.3	1.0 x 0.8	
476b	Mrk 879	21 07 45.8	+03 52 40	G	14.8b	0.6	

VV 508 (Equuleus)



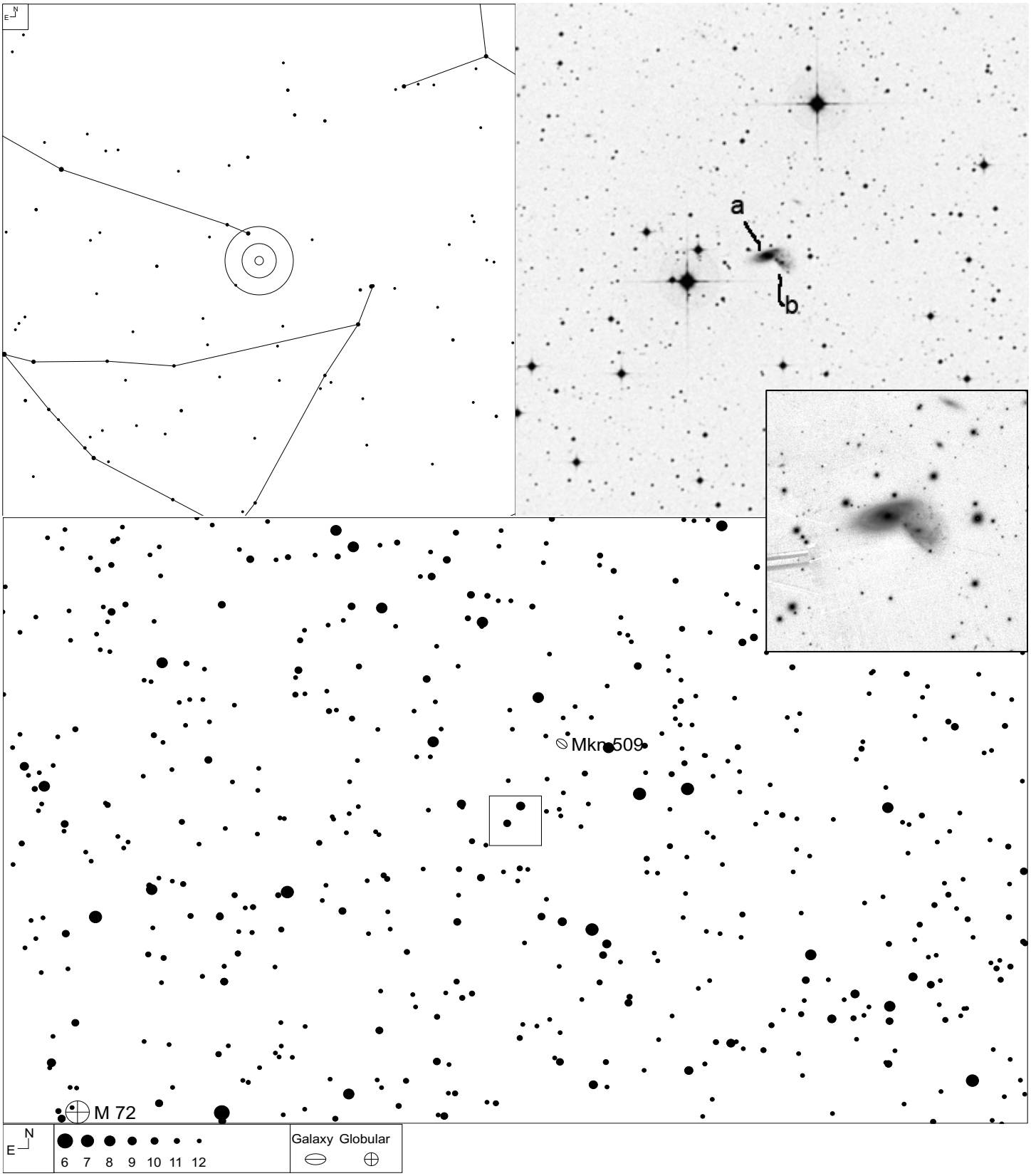
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
508	NGC 1365	21 13 55.9	+02 33 55	GGroup	15.1b	1.7 x 1.0	Ch

VV 695 (Aquarius)



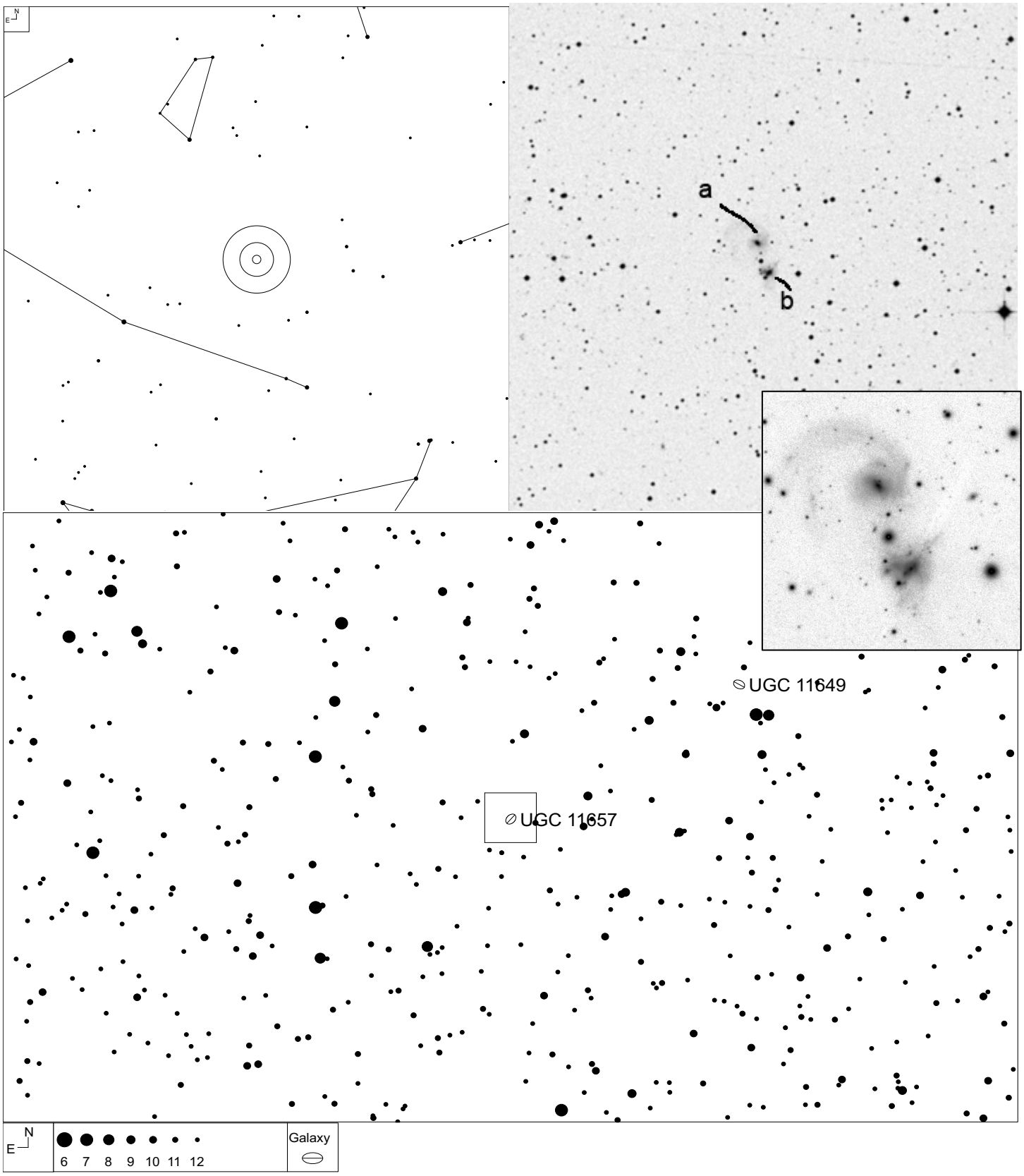
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
695		20 43 45.9	-03 12 58	GGroup			NN
695a	MCG -01-53-001	20 43 45.6	-03 12 26	G	16.0b	0.6 x 0.4	
695b	MCG -01-53-002	20 43 46.0	-03 12 18	G	14.5b		
695c	MCG -01-53-003	20 43 46.2	-03 13 26	G	18.0b	0.2 x 0.2	

VV 546 (Aquarius)



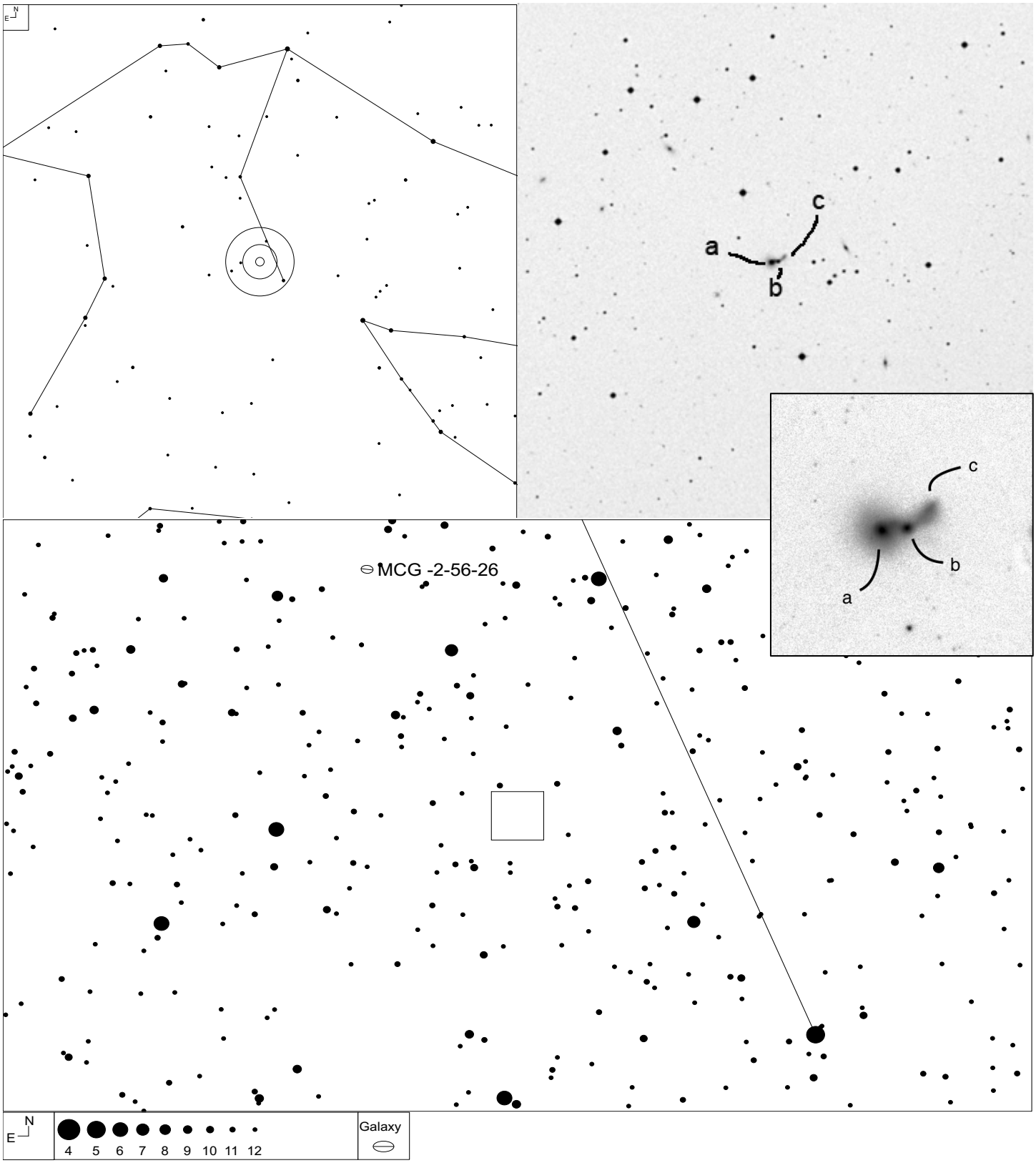
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
546	NGC 6985A	20 45 02.4	-11 06 23	GPair	14.2g	1.3 x 0.8	N
546b	*PGC 969910*	*20 45 01.1*	*-11 06 20*	*G*	*18.4g*	*0.8 x 0.5*	

VV 668 (Aquarius)



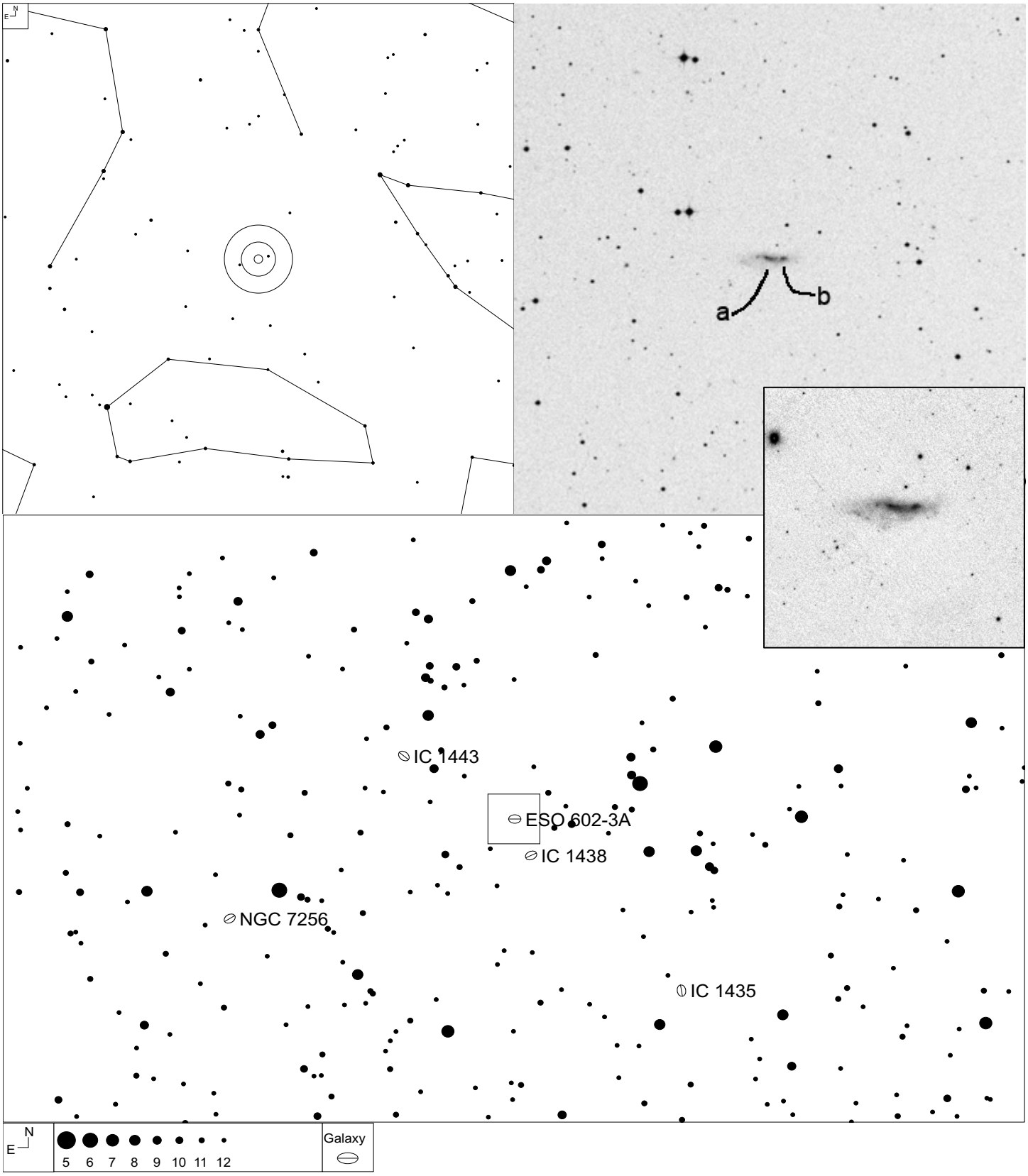
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
668		20 59 47.6	-01 52 50	GPair			Ch
668a	UGC 11657	20 59 46.9	-01 53 15	G	13.5v	1.1 x 1.1	
668b	UGC 11658	20 59 48.3	-01 52 22	G	14.4b	1.4 x 0.9	

VV 390 (Aquarius)



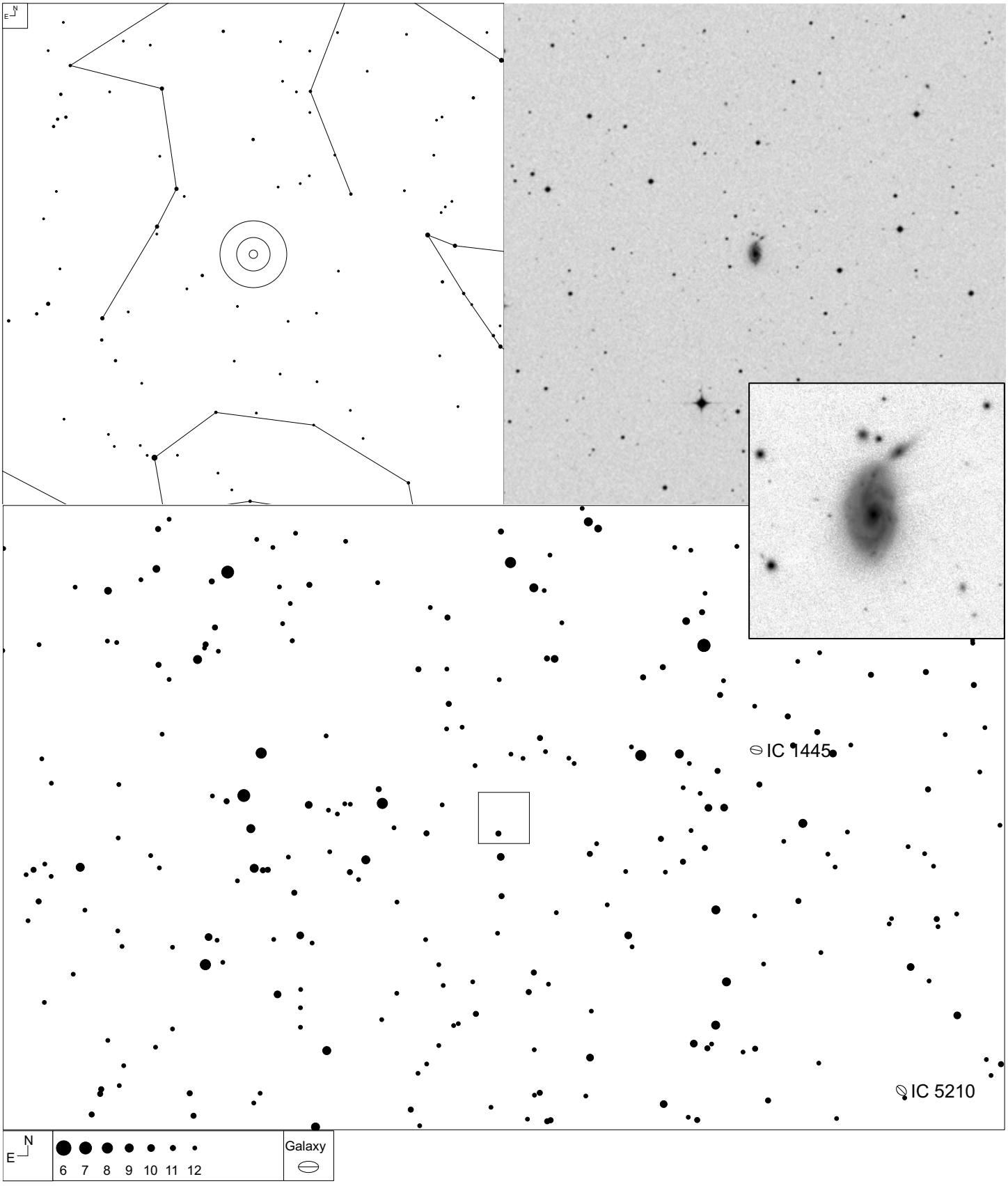
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
390	IC 1433	22 12 10.2	-12 45 55	GTrpl	15.2b	0.4 x 0.4	N

VV 494 (Aquarius)



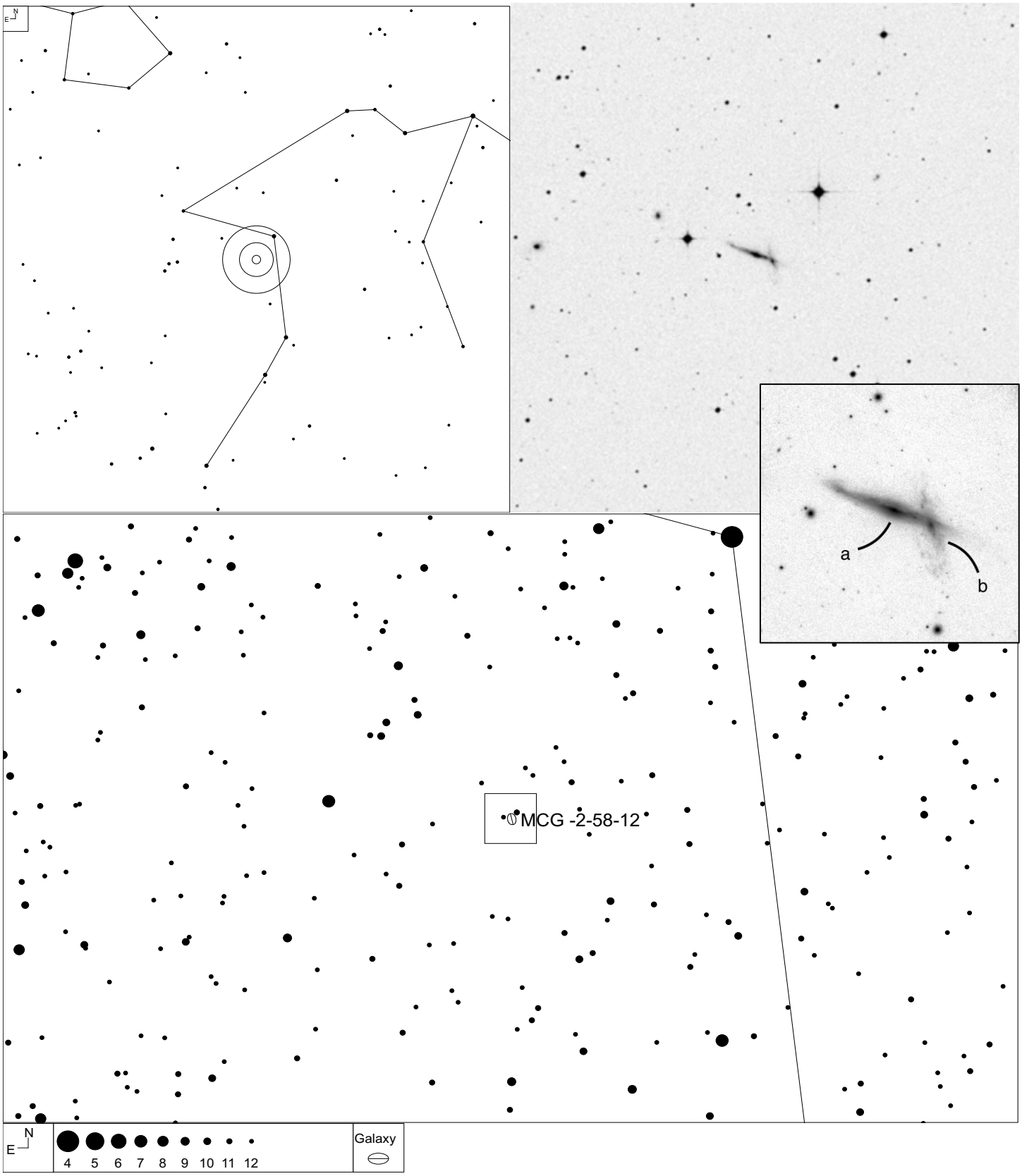
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
494	UGCA 427	22 16 50.8	-21 15 00	G	14.3v	2.1 x 0.7	Ch

VV 372 (Aquarius)



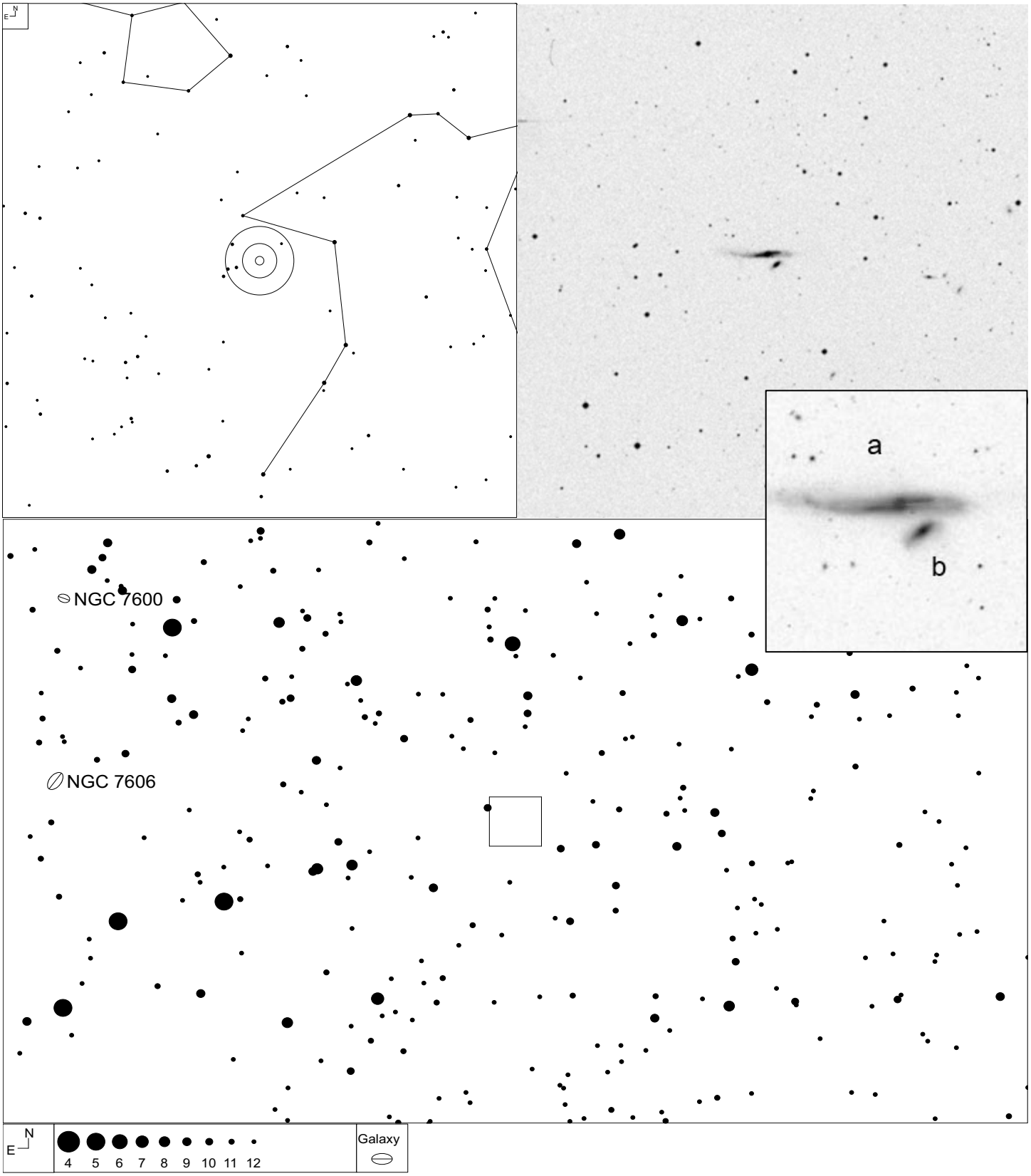
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
372	NGC 7301	22 30 34.7	-17 34 26	G	14.1b	1.0 x 0.5	MMM

VV 488 (Aquarius)



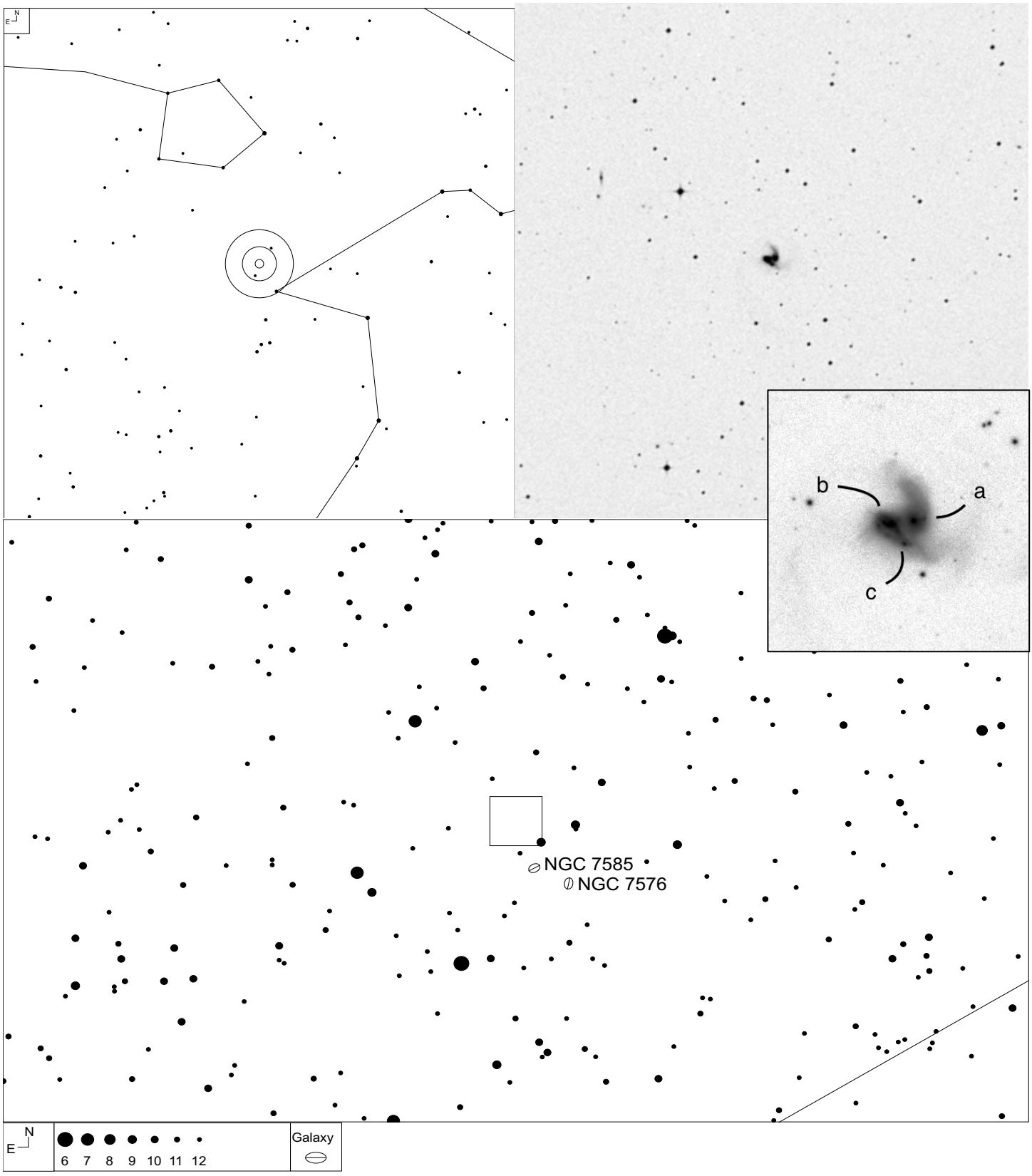
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
488	MCG -02-58-011	22 56 49.9	-08 58 09	GPair	14.6b	1.1 x 0.4	Ch

VV 490 (Aquarius)



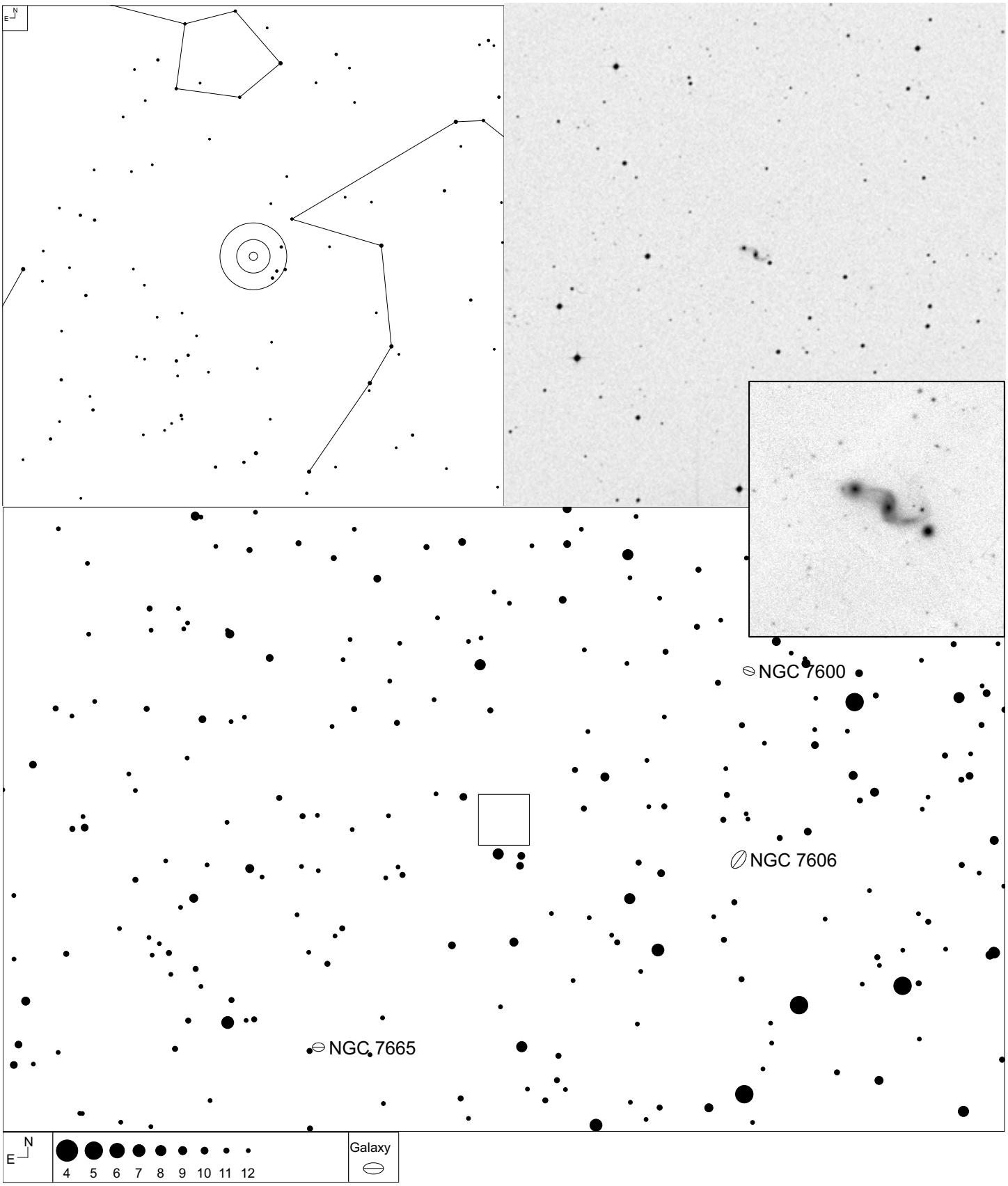
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
490		23 10 21.2	-08 41 32	GPair			
490a	MCG -02-59-004	23 10 21.8	-08 41 19	G	14.5g	2.5 x 0.3	Ch
490b	MCG -02-59-005	23 10 20.7	-08 41 42	G	15.5g	0.2 x 0.1	PD

VV 731 (Aquarius)



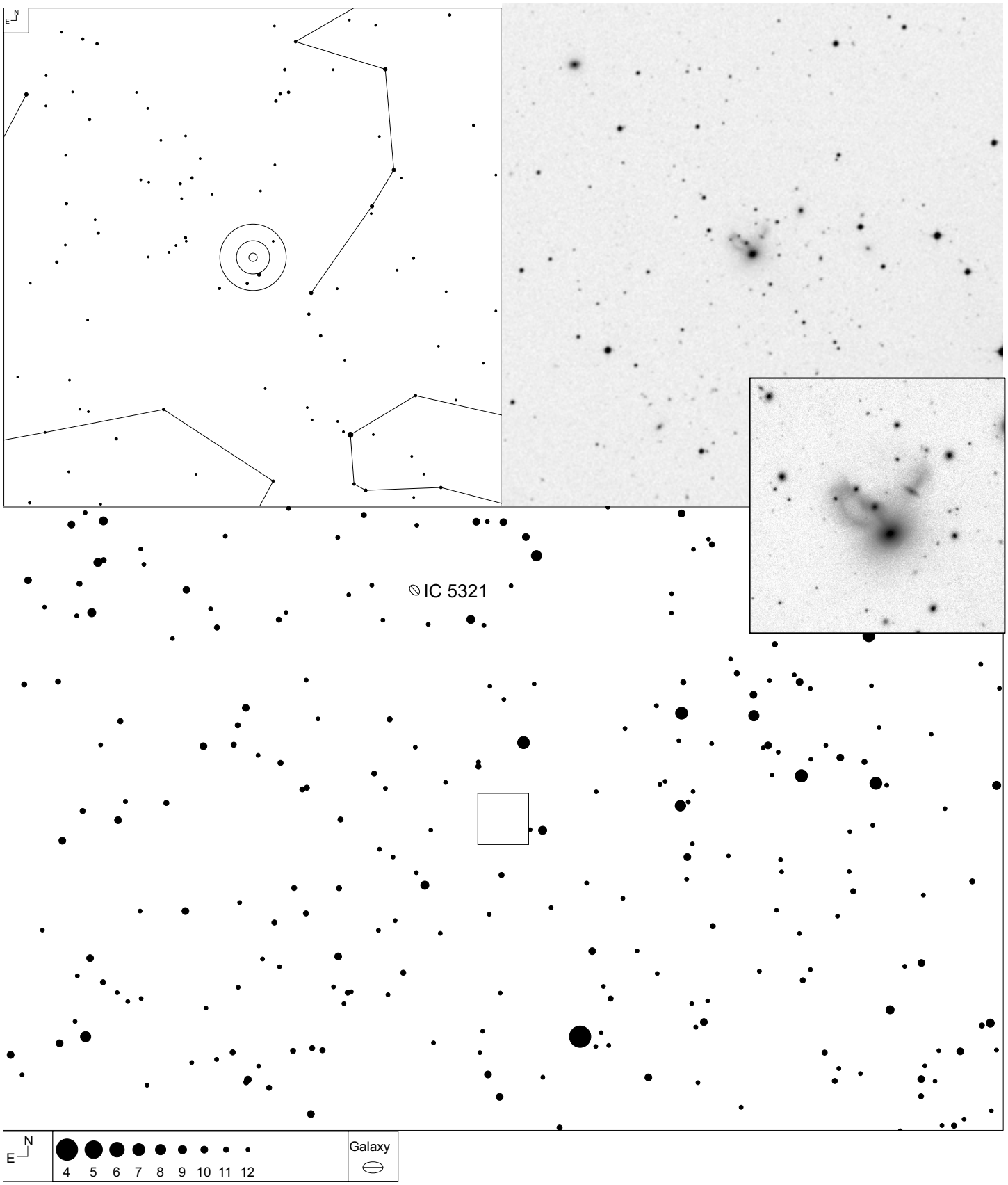
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
731	NGC 7592	23 18 22.2	-04 25 01	GTrpl	13.98	10x8	PC

VV 461 (Aquarius)



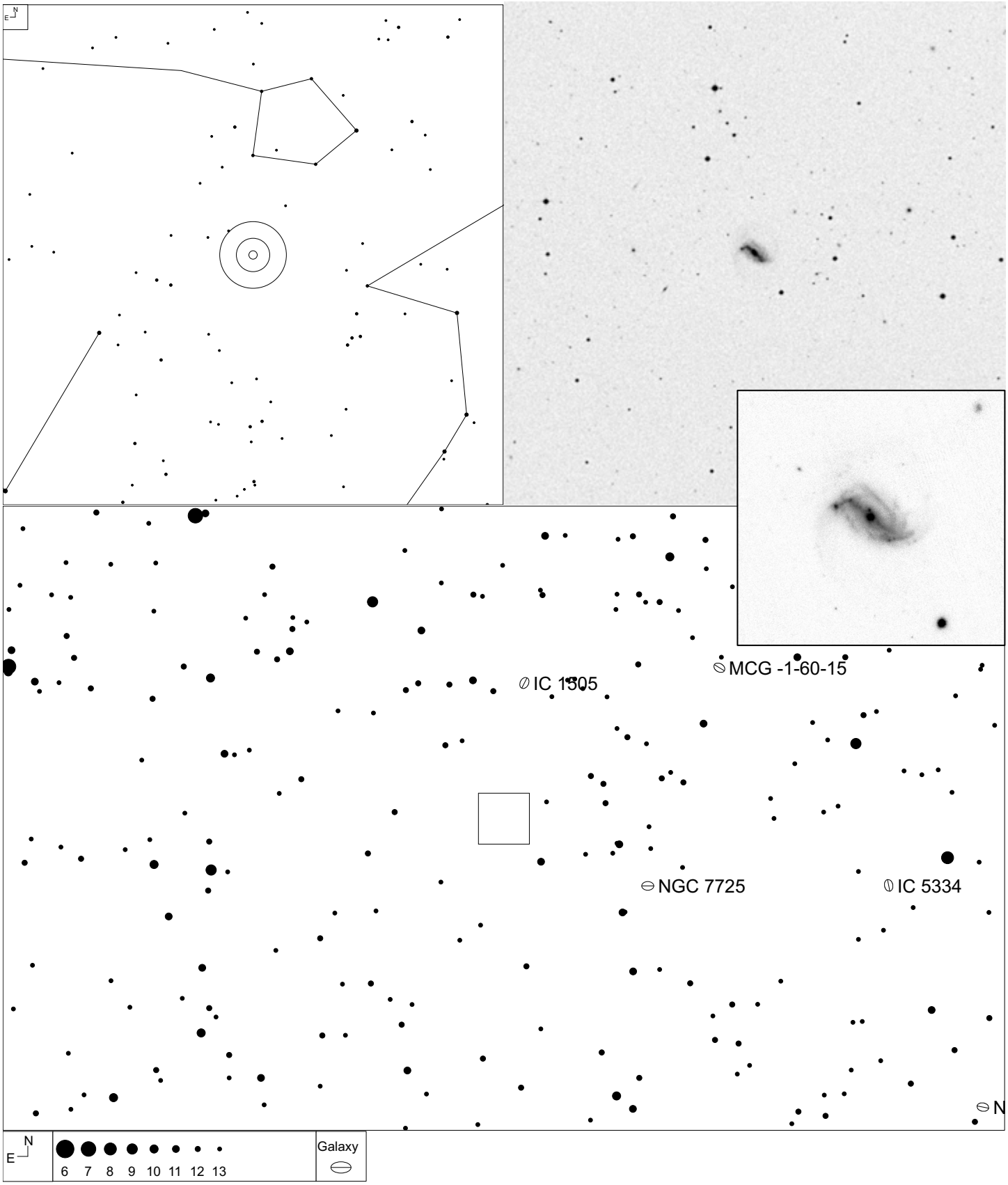
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
461	MCG -02-59-014	23 23 38.5	-08 17 44	G	16.3g	0.9 x 0.3	MM

VV 669 (Aquarius)



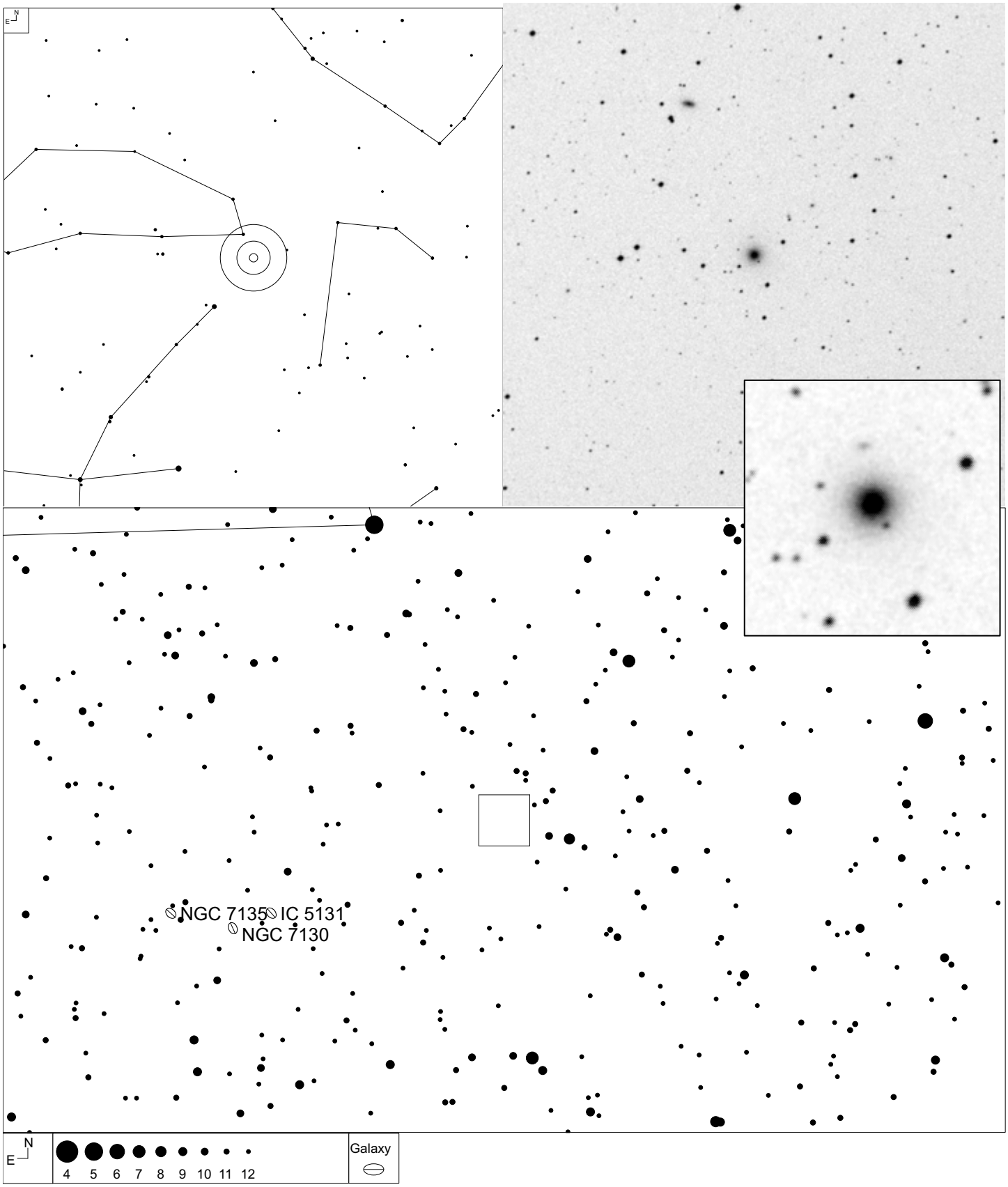
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
669	NGC 7656	23 24 31.4	-19 03 33	G	14.4g	1.2 x 1.1	NN

VV 480 (Aquarius)



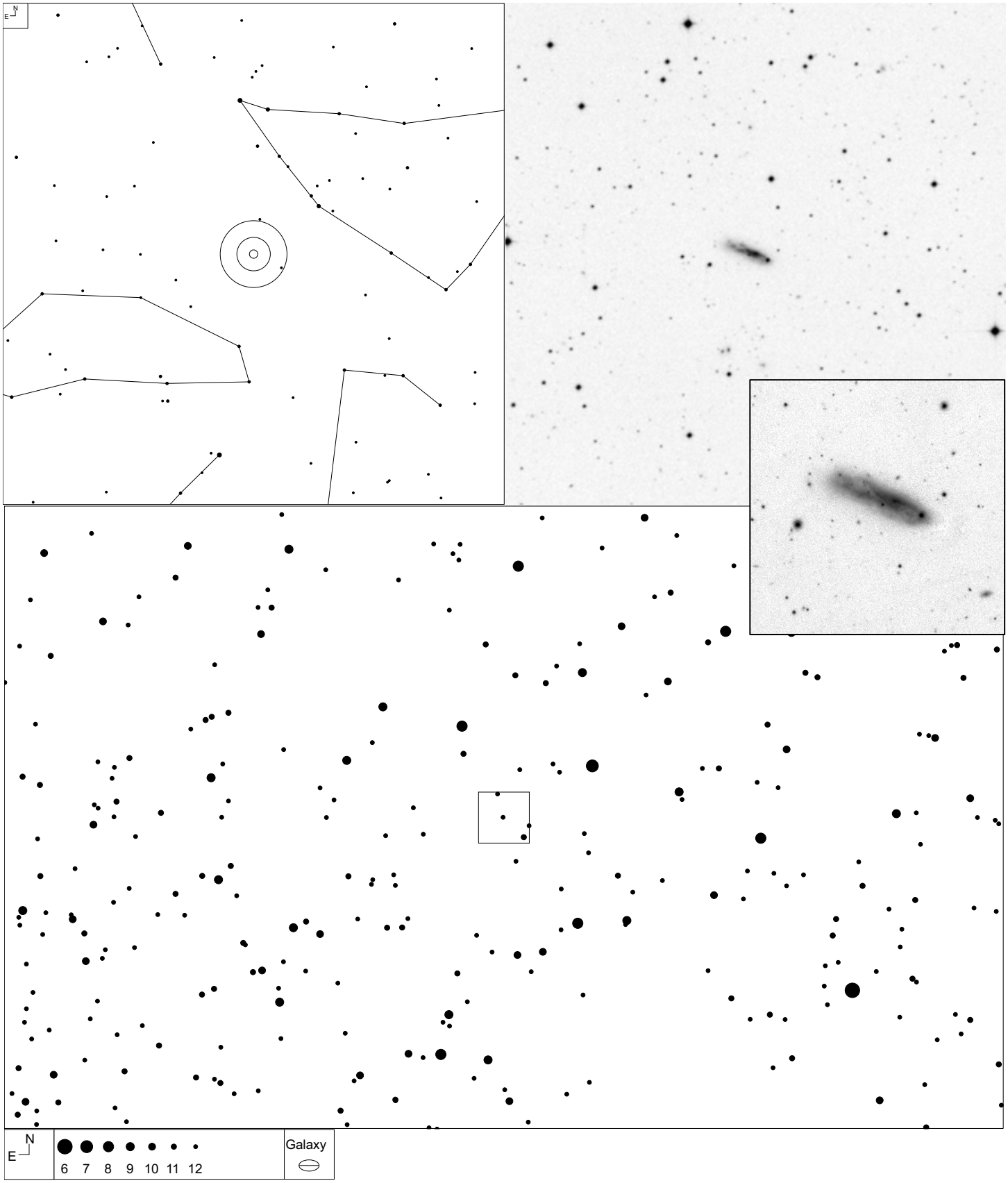
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
480	MCG -01-60-023	23 42 01.0	-04 13 00	G	14.2g	1.4 x 1.0	M

VV 376 (Piscis Austrinus)



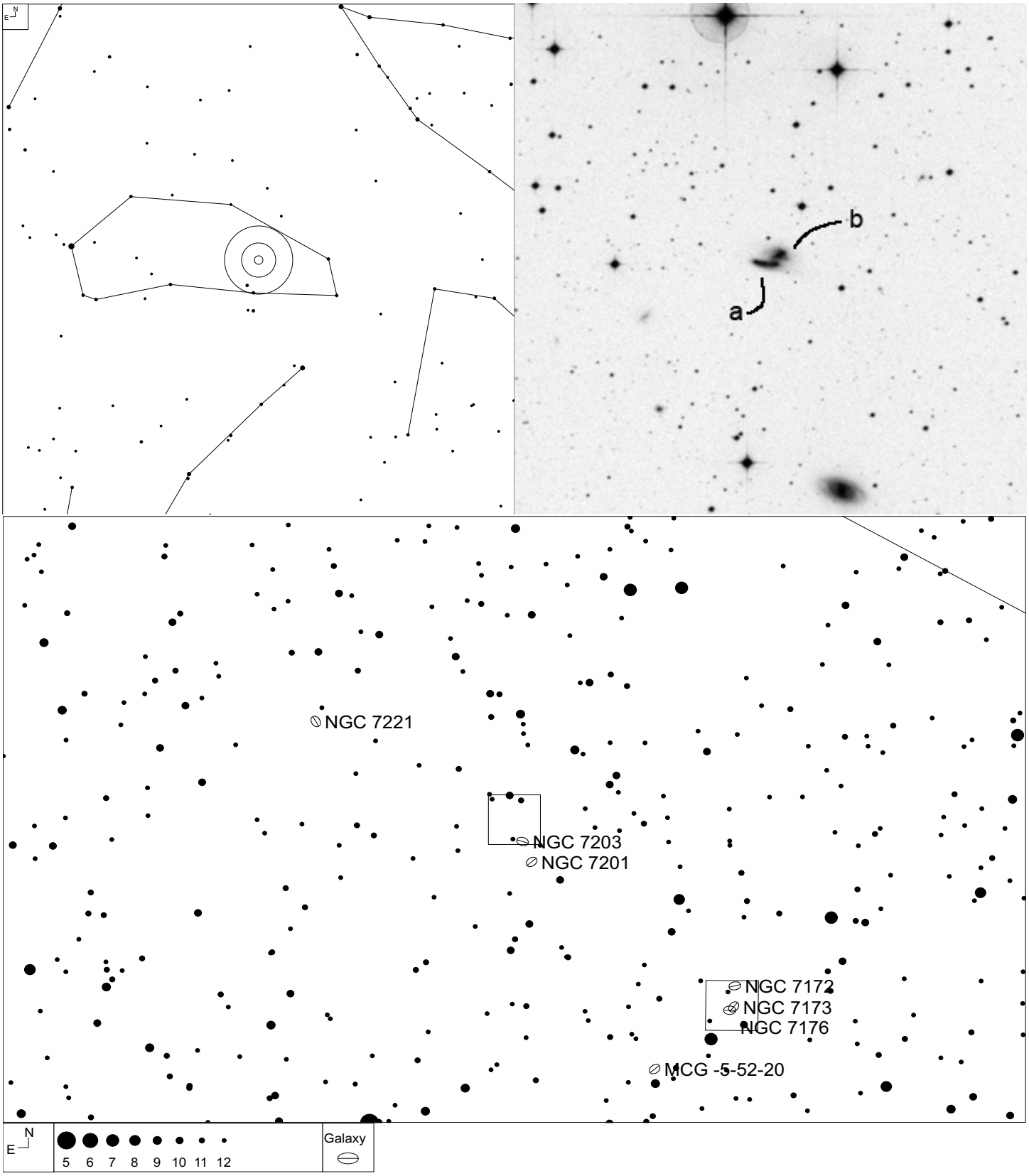
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
376	NGC 7109	21 41 58.5	-34 26 45	G	14.4b	0.8	MMM

VV 800 (Piscis Austrinus)



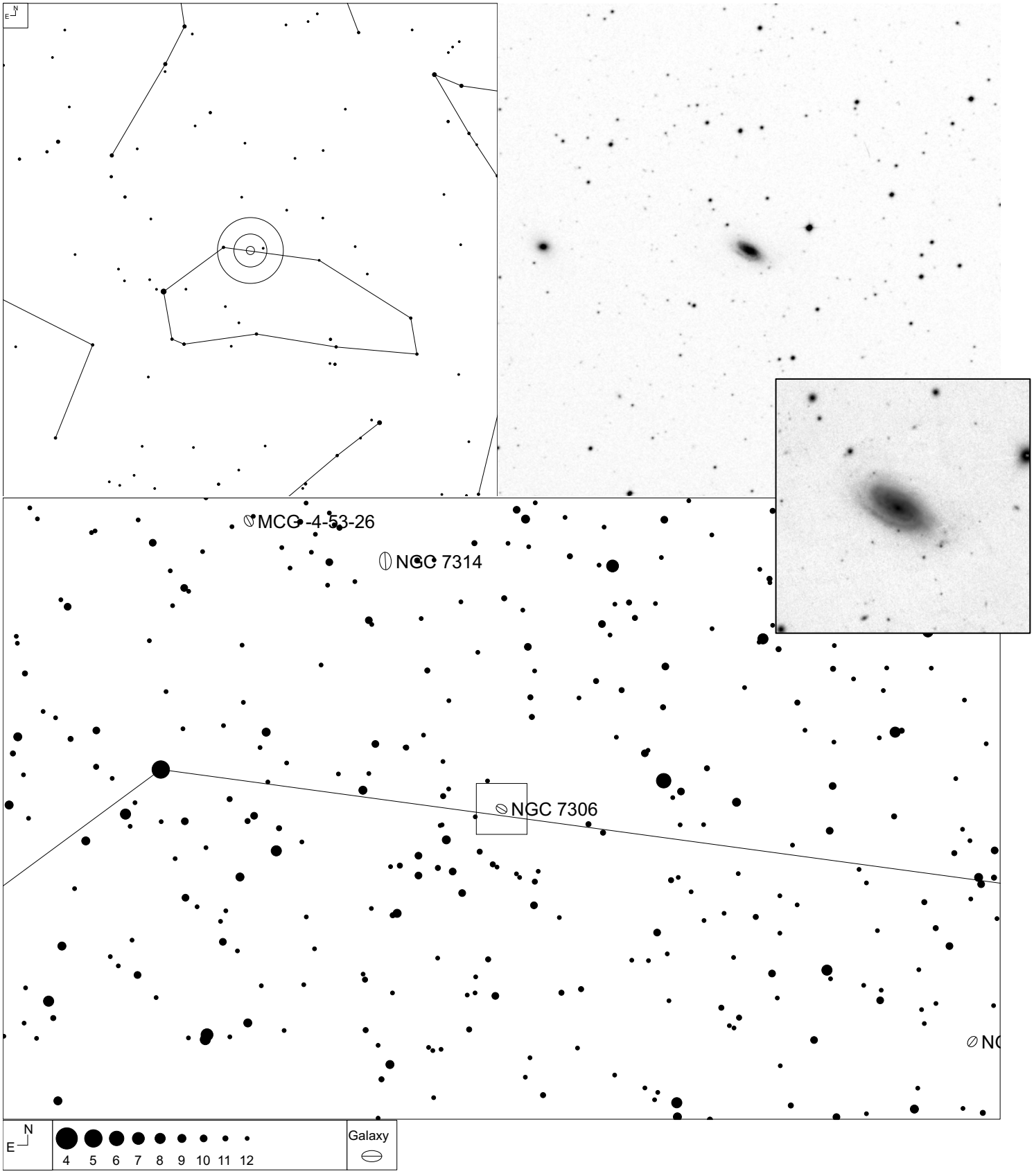
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
800	NGC 7115	21 43 38.5	-25 21 05	G	13.95	1.7 x 0.4	K

VV 685 (Piscis Austrinus)



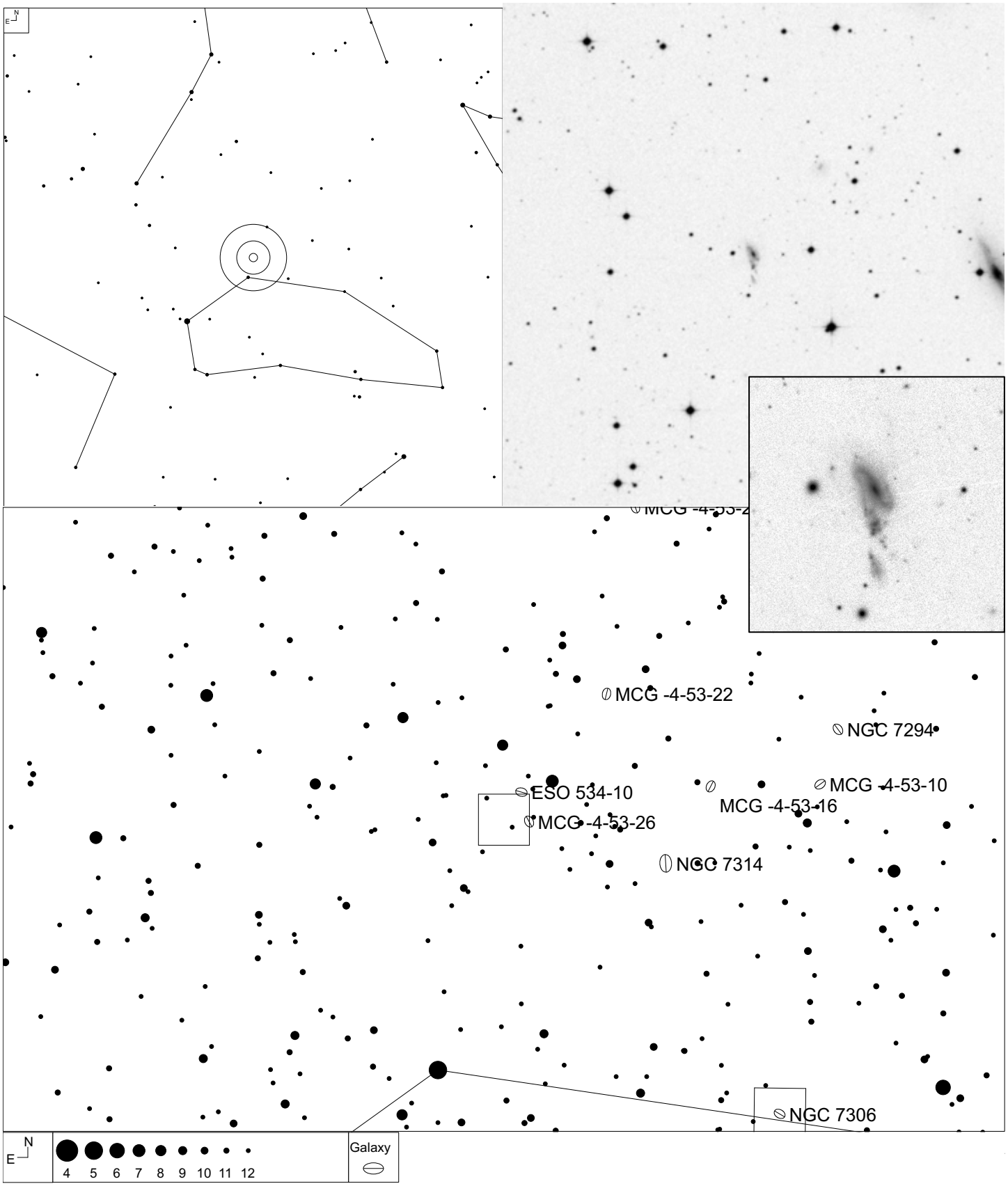
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
685		22 06 54.3	-31 03 04	GPair			N
685a	NGC 7204	22 06 54.9	-31 03 13	G	14.5p	1.2 x 0.4	
685b	MCG-05-52-028	22 06 53.3	-31 02 56	G	14.5b	1.1 x 0.5	

VV 832 (Piscis Austrinus)



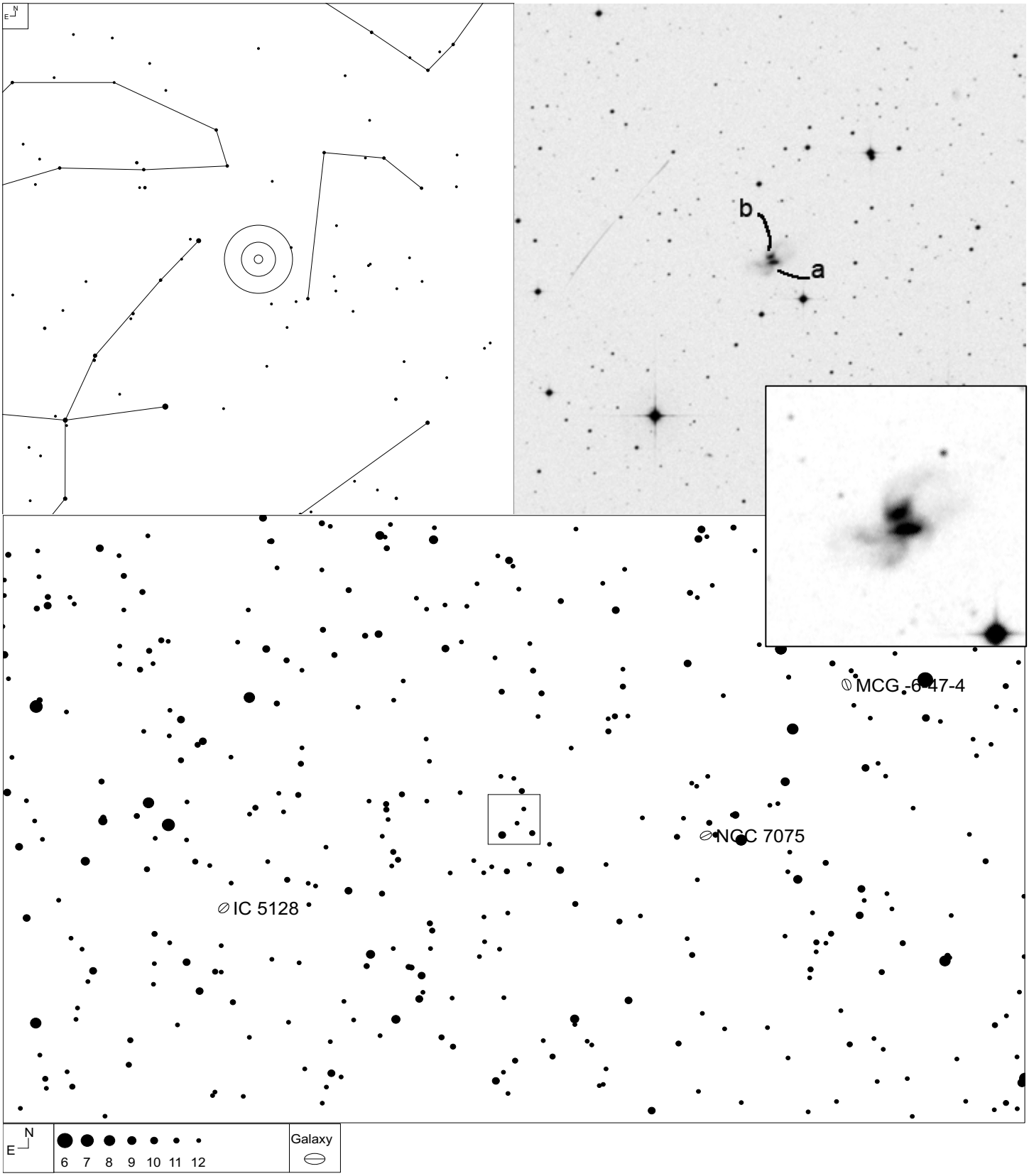
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
832	NGC 7306	22 33 16.6	-27 14 46	G	13.5b	1.7 x 0.7	Enat

VV 496 (Piscis Austrinus)



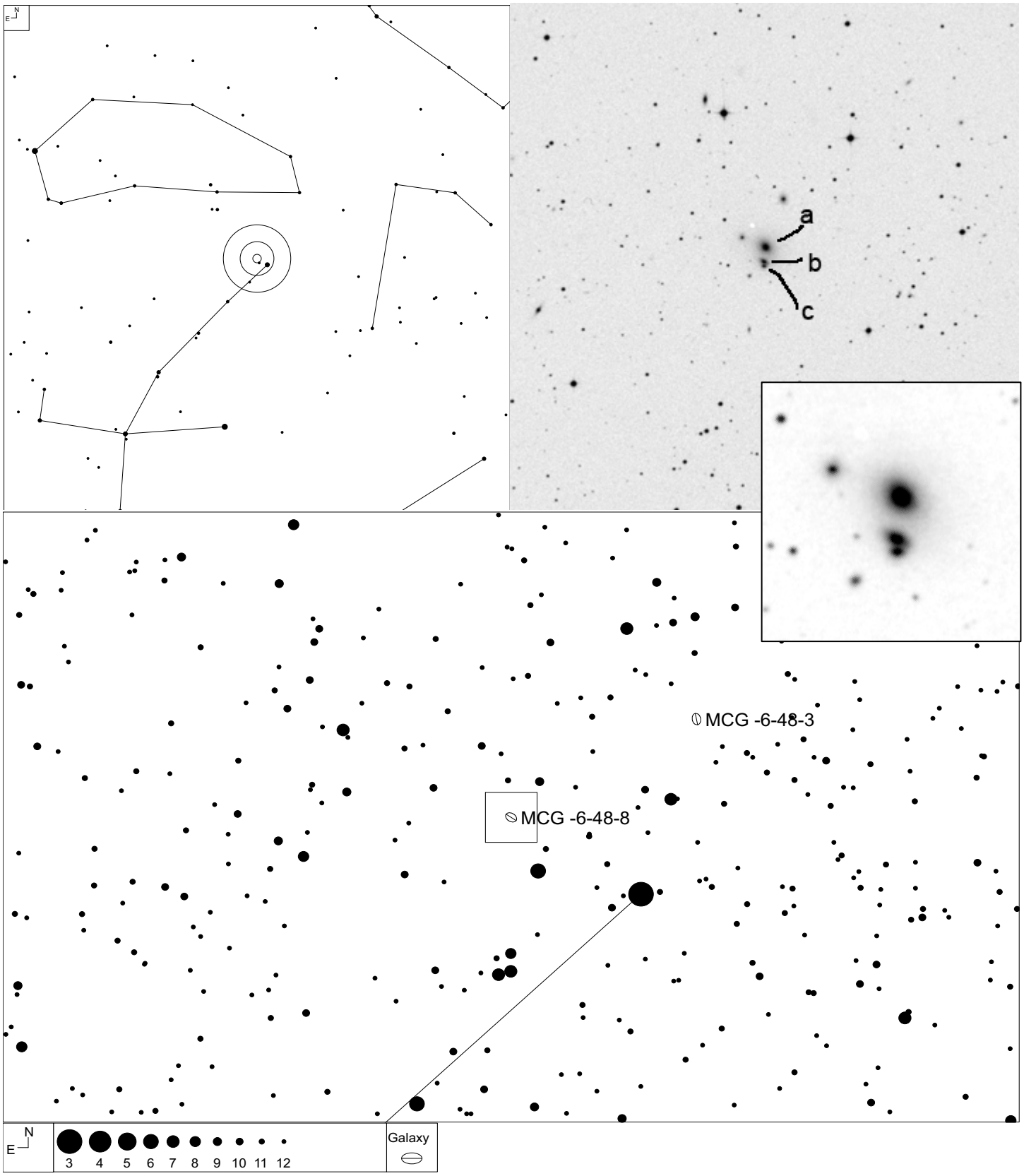
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
496	MCG -04-53-028	22 39 13.9	-25 50 33	G	15.4b	1.4 x 0.5	Ch

VV 714 (Grus)



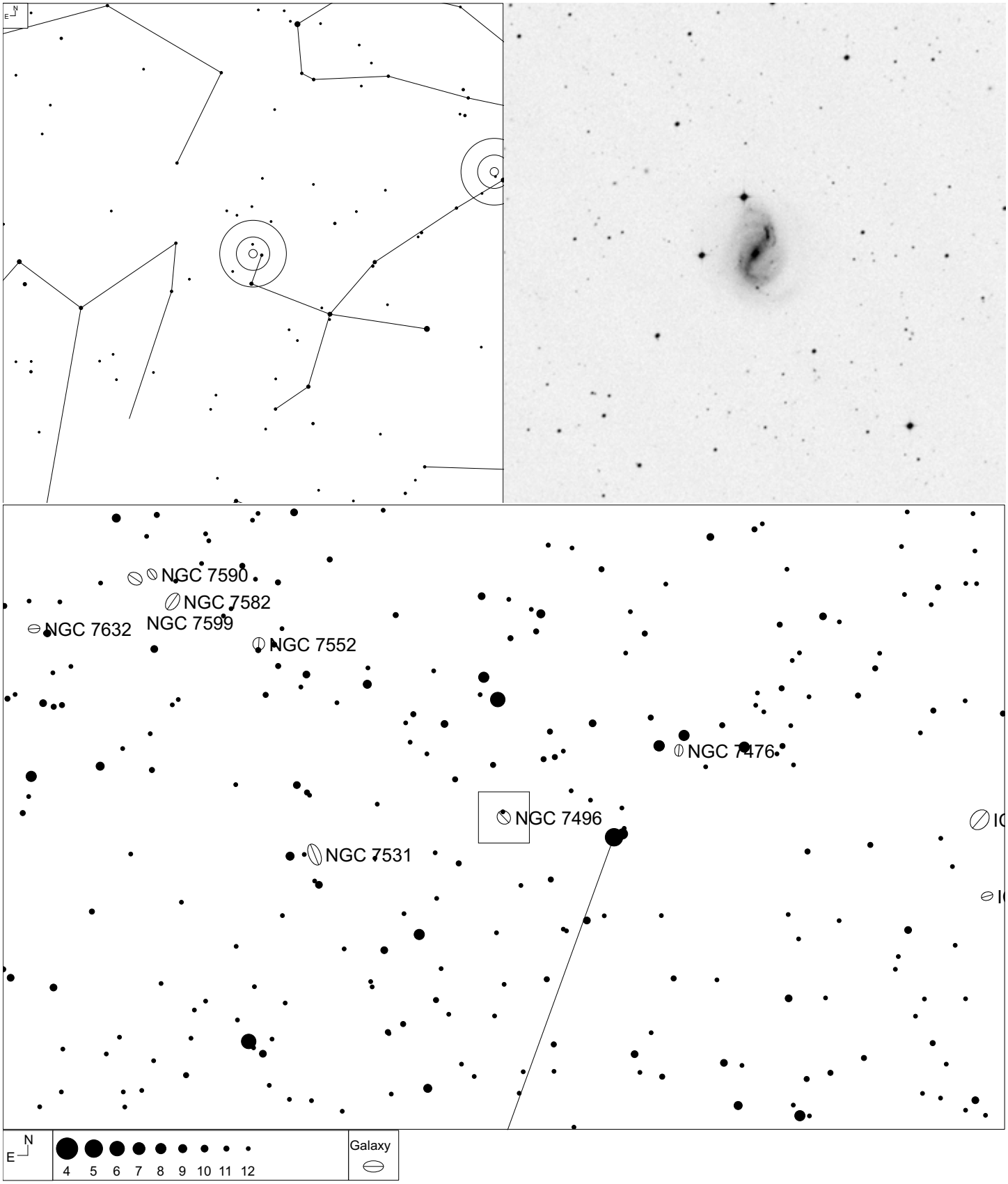
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
714	MCG -07-44-026	21 36 11.0	-38 32 37	GPair	13.4v	2.0 x 1.0	PC

VV 581 (Grus)



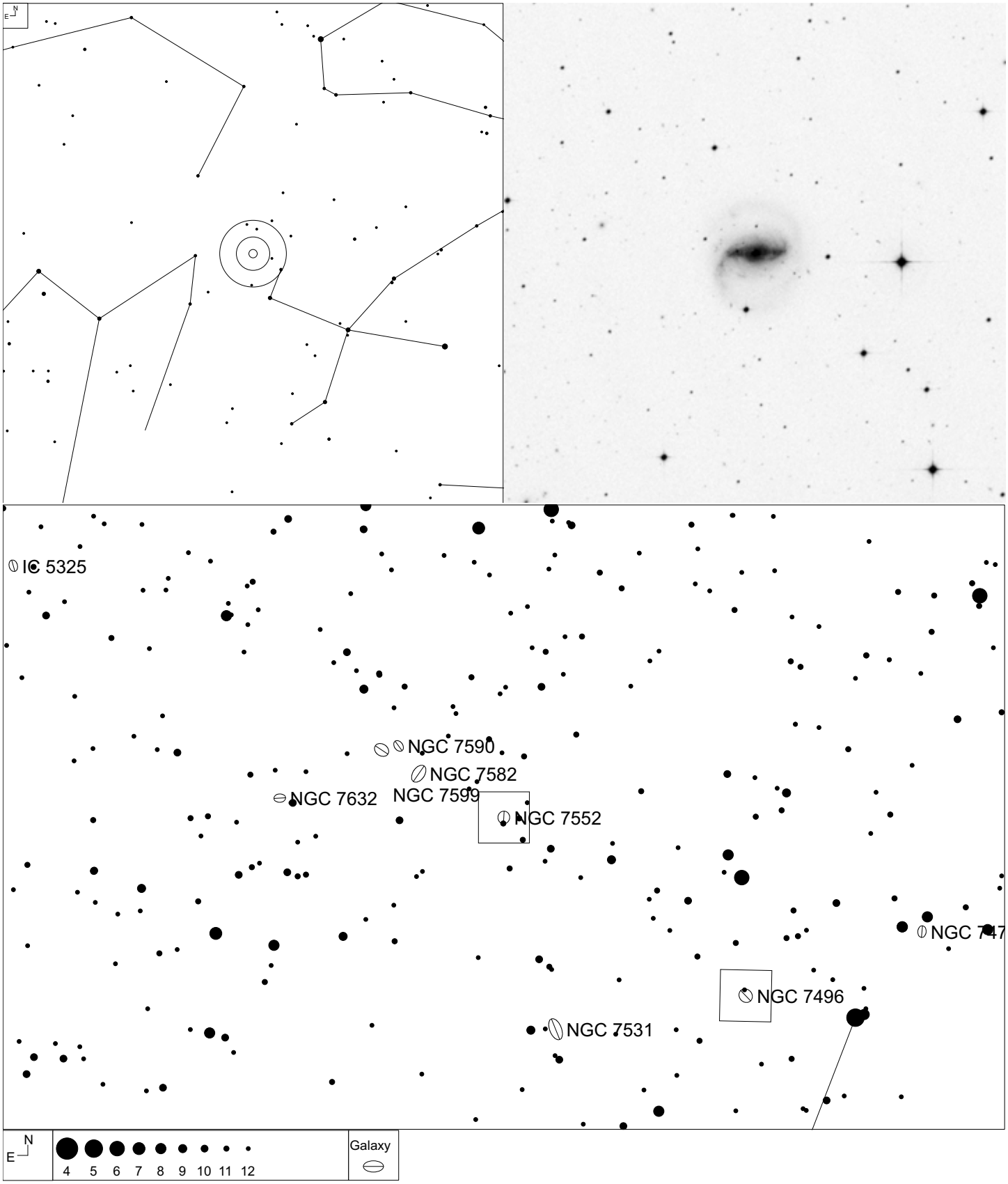
VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
581	MCG -06-48-008	21 57 01.5	-36 59 44	GTrpl	15.6b	0.9 x 0.7	NNNP

VV 771 (Grus)



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
771	NGC 7496	23 09 47.3	-43 25 40	G	13.9v	3.3 x 3.0	PKbt

VV 440 (Grus)



VV	ID	RA	Dec	NED Type	Mag	Size (')	Int. Type
440	NGC 7552	23 16 10.9	-42 35 05	G	10.6v	3.4 x 2.7	M

Index of Omitted VV (Part II) Objects

VV	Const	Reason for omission
356	UMa	Arp 217
357	UMa	Arp 18
359	Peg	Arp 28
361	Cet	Arp 59
362	Cet	Arp 10
363	UMa	Arp 27
399		Not listed in NED
403	CVn	Arp 85
406	UMa	Arp 217 = VV 356
412	Boo	Arp 49
413	Cnc	Arp 58
424	Com	Arp 305
435	Boo	Arp 47
437	Cet	Arp 51
444	Dra	Arp 38
445	Psc	Arp 88
453	Cet	Arp 54
458	Vir	Arp 274
471	Boo	Arp 64
472	Dra	Arp 66
491	Eri	Hickson 26
495	Eri	Arp 219
498	Leo	Hickson 54
500	Sgr	Defect in POSS1-blue plate
501	Her	Arp 125
519	Cam	Arp 80
521	And	Hickson 8
524	Eri	Arp 259
540	Ser	Arp 220
550	Ser	Hickson 77

VV	Const	Reason for omission
552B	LMi	Arp 21
564	Com	Arp 149
565	Eri	Arp 259 = VV524
584	Leo	Arp 132
587	Eri	Arp 279
622	And	Hickson 1
630	Ori	VV 225 covered in Part I
642	Cet	Arp 231
670	Cet	Hickson 6
674	Cet	Arp 251
678	Com	Shk 19
680	Vir	Defect in POSS1-blue plate
698	PsA	Hickson 90
700	PsA	Hickson 91
710	Her	Arp 103
746	Com	Arp 139
774	CrB	Nothing there
783	And	Arp 158
787	Cet	Arp 147
790	Cet	Arp 146
797	CVn	Arp 266
804	LMi	Arp 267
813	Leo	Defect in POSS1-blue plate
821	CVn	Arp 193
822	Eri	Arp 180
823	Boo	Arp 90
840	Boo	Arp 177

Additional Resources

Journal Articles

Chernin, A.D., et al "Vorontsov-Velyaminov Rows: Straight Segments in the Spiral Arms of Galaxies." *Astronomy Letters*, Vol 26, No 5 (2000), 285-296

Jokimäki, Ari., et al "A Catalogue of M51 type Galaxy Associations." *Astrophysics and Space Science*, Vol 315 (Jan 2008), 249-283

Pustilnik S., et al "Possibly Interacting Vorontsov-Velyaminov Galaxies." *Astronomy and Astrophysics,* Vol 400 (2003), 841-857

Vorontsov-Velyaminov, Boris.A. "Atlas of Interacting Galaxies, Part II and the Concept of Fragmentation of Galaxies." *Astronomy and Astrophysics Supplement Series*, Vol 28 (1977), 1-117

Vorontsov-Velyaminov, Boris A. "Correspondence – Morphological Catalogue of Galaxies Discriminated Against." *The Observatory*, Vol 94 (1974), 319-320

Vorontsov-Velyaminov, Boris A. "Interaction of Multiple Systems*" Problems of Extra-Galactic Research, Proceedings from IAU Symposium* No 15 (1962), 194-200

Vorontsov-Velyaminov, Boris A. "Interacting Galaxies and the Tidal Theory of Intergalactic Bridges." *Soviet Astronomy Letters*, Vol 1 (Nov-Dec 1975), 215-217

Vorontsov-Velyaminov, Boris A. "Some Characteristics of Galaxy Chains." *Soviet Astronomy Letters*, Vol 5 (Sept-Oct 1979), 267-269

Vorontsov-Velyaminov, Boris A. "Nine Enigmatic New Objects." S*oviet Astronomy Letters*, Vol 1 (Feb 1975), 23

Vorontsov-Velyaminov, Boris A. and Metlov, V. G. "The Nature of the Peculiar Object VV 794." *Soviet Astronomy Letter*s, Vol 6 (Mar-Apr 1980), 109-110

Vorontsov-Velyaminov, Boris A., et al "VV 644, a Very Compact Nest of Galaxies" *Soviet Astronomy Letters*, Vol 6 (July-Aug 1980), 217-219

Zasov, A. V. and Arkhipova, V. P. "Vorontsov-Velyaminov' nests: what are they?" *Small Galaxy Groups: IAU Colloquium 174, ASP Conference Series,* Vol 209 (2000), 126-131

General Recommended Reading

Burnham, Robert. *Burnham's Celestial Handbook, Vol. 1 to 3.* New York: Dover Books, 1978

Coe, Steven R. *Deep Sky Observing. The Astronomical Tourist.* New York: Springer Publishing Company, 2000

Eicher, David J. *Galaxies and the Universe*. Milwaukee, WI: Kalmbach Publishing Co., 1992

Harrington, Philip S. *Cosmic Challenge: The Ultimate Observing List for Amateurs*, Cambridge, Cambridge University Press, 2010

Kepple, George R. and Sanner, Glen W. *The Night Sky Observer's Guide, Vol. 1 Autumn & Winter.* Richmond, VA: Willmann-Bell, 1998

Kepple, George R. and Sanner, Glen W. *The Night Sky Observer's Guide, Vol. 2 Spring & Summer.* Richmond, VA: Willmann-Bell, 1998

Luginbuhl, Christian B. and Skiff, Brian A. *Observing Handbook and Catalogue of Deep-Sky Objects.* New York: Cambridge University Press, 1989

Steinicke, Wolfgang and Jakiel, Richard. *Galaxies and How to Observe Them.* New York: Springer Publishing Company, 2007

Stoyan, Ronald and Schurig, Stephan. *interstellarum Deep Sky Atlas*. Cambridge, MA: Cambridge University Press, 2015

Stoyan, Ronald and Glahn, Uwe. *interstellarum Deep Sky Guide*. Cambridge, MA: Cambridge University Press, 2018

Webb Society. *Webb Society Deep-Sky Observer's Handbook, Volume 4: Galaxies.* Edited by Kenneth Glyn Jones. Hillside. NJ: Enslow Publishers Hillside, 1982

Websites

ned.ipac.caltech.edu/level5/VV_Cat/frames.html - The Atlas and Catalogue of Interactive Galaxies by B.A. Vorontsov-Velyaminov (Part I only)

www.sai.msu.su/sn/vv/ - The Catalogue of Interacting Galaxies by Vorontsov-Velyaminov. This is the complete list. I've used this list to generate this observing guide but focused on Part I and II only.

www.deepskyforum.com - The premier Deep Sky forum where advanced deep sky observers converge and discuss observing the deep sky

www.astronomy-mall.com/Adventures.In.Deep.Space/ - Great source of observing projects for all skill levels.

nedwww.ipac.caltech.edu/ - NASA-IPAC Extragalactic Database – NED

archive.stsci.edu/cgi-bin/dss_form - The STScI Digitized Sky Survey

skyserver.sdss3.org/dr8/en/tools/chart/chart.asp - SkyServer DR8 Tools for Visual Exploration (SDSS)

www.cloudynights.com – Great resource for like-minded amateurs discussing most aspects of the hobby.

Sources of Charts and Images

Charts by *Megastar version 5* Willmann-Bell Richmond, VA

archive.stsci.edu/dss/acknowledging.html - DSS images (Digital Sky Survey)

www.sdss.org - Sloan Digital Sky Survey – Data Release 8 (SDSS DR8)

Revision History

Date	Revision
July 2013	New document
March 2024	Minor edits. No material changes.
November 2025	Enhancements throughout the guide • Enhanced object table to include primary ID. • Simplified tables throughout to match the VV catalogue hosted by the Sternberg Astronomical Institute located in Moscow, Russia. • Enhanced some closeup photos with improved labeling or added new insets. Most objects now have an inset. • Aligned magnitude figures using Simbad as primary source and NED and Megastar (MAC galaxies) as secondary. As usual take the magnitude figures with a grain of salt. • Simplified the primary index (pages 8-19) with reduced data and clutter for ease of reading on the field, while retaining useful data. • Corrected VV 832 DSS image. • Deleted remaining Hickson and Shakhbazian groups as they are duplicated in my other observing books.