The background of the entire page is a dark, star-filled field. In the center, there is a prominent cluster of galaxies, including several bright, yellowish-white stars and several fainter, blueish-white stars. The galaxies are of various shapes and sizes, some appearing as small, irregular patches of light, while others are more elongated and diffuse. The overall appearance is that of a rich, multi-colored stellar population.

The Palomar Compact Galaxy Catalogue

(a survey of 60 groups)

Alvin Huey
FaintFuzzies.com

Other books by Alvin H. Huey

Hickson Group Observer's Guide, 2nd edition
The Abell Planetary Observer's Guide, 2nd edition
Observing the Arp Peculiar Galaxies

Downloadable Guides by FaintFuzzies.com

The Local Group
Selected Small Galaxy Groups
Galaxy Trios and Triple Systems
Selected Shakhbazian Groups
Globular Clusters
Observing Planetary Nebulae and Supernovae Remnants
Observing the Abell Galaxy Clusters
The Rose Catalogue of Compact Galaxies
Flat Galaxies
Ring Galaxies
Variable Galaxies
The Voronstov-Velyaminov Catalogue – Part I and II
Observing the Herschel 400 Objects – Part I, II and III
Object of the Week 2012 and 2013 – Deep Sky Forum

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The Palomar Compact Galaxy Catalogue and Observing Project

This catalogue was created by Dr. Angela Iovino of an Italian astronomical observatory institution, Osservatorio Astronomico di Brera, along with several other astronomers around the world by examining the digitized second Palomar Observatory Sky Survey.

As astronomers study galaxy formation and evolution, they feel that by studying galaxies in compact clusters gives a different perspective in this work. Additionally, compact galaxy groups present a unique opportunity to study galactic interaction between multiple neighbors.

Despite that several others have catalogued compact galaxy groups, such as Boris Voronstov-Velyaminov (1959), Shakhbazian (1973), James Rose (1977) and Paul Hickson (1982) to name a few, Iovino et al, decided to take the criterion and make them a little tighter and to build a catalogue of compact galaxy groups based on an automated algorithm. The criterion is as listed below. I should note that observing guides to all of the aforementioned compact groups are available on my website.

As Dr. Iovino et al examined the plates, they developed a selection criterion. They are as follows:

- *Richness* – Two parts to this criterion; first is that the number of the group has to be at least 4 member galaxies and secondly, the magnitude range must be within 2. This range is tighter than Hickson's criterion.
- *Isolation* – The group must be at least 3 group diameters away from the nearest galaxy. Say the diameter of the cluster is 30", the nearest galaxy within 0.5 magnitudes of the faintest member must be at least 90" (1.5') away. This avoids finding small aggregates within a larger structure, such as a galaxy cluster.
- *Compactness* – the mean surface brightness within the group diameter is at least 24.0 mag/arcsec². For comparison, Dr. Hickson used the same criterion, but at least 26.0 for his famous Hickson Compact Galaxy Catalogue.

Since the POSS plates are so old, some faint stars sometimes get mistaken for a galaxy or two. So Iovino et al decided to stay away from the galactic equator by limiting the search at least 40° from the galactic equator. In total they found 352 groups near the north galactic pole and 107 groups near the southern galactic pole.

For the purposes of this observing guide I've included the 60 of the 459 total groups listed on this 2005 paper. There is an additional 84 groups in his first paper, listed below, but you will need to build the finder charts yourself. I think this is sufficient to keep the observer busy for quite some time.

Why I created this list? I'm always in a quest in looking for challenges for observers with large telescopes; hence this book is for folks with 20", or maybe 25" and larger telescopes.

Since this is a very challenging list, in many cases more challenging than the Shakhbazian Compact Galaxy list, also available on my website, here are some observing tips that will enhance your ability to see them:

- A steady sky is a must for resolving individual members, so seek them during steady nights.

- Keep your eyes dark adapted as fully as possible. Even the sky glow from the sky, especially if the Milky Way is above the horizon, can impact your night vision. When not looking at the eyepiece, waiting for your turn at the eyepiece, or just taking a break, look down at the dark ground, preferably with a hood over your head. I sometimes look down for a few minutes before looking in the eyepiece.
- To further darken the field around you, use a hooded vest, such the Hooded Observing Vest available from DarkSkiesApparal.com. The hood would block all extraneous light, including the sky glow and even the Milky Way at very dark sites.
- Use your eyepiece guards. They offer an extra light blocking barrier between your eyepiece and your eye. If your eyepiece doesn't come with one, you can install one for some eyepiece. For some examples, please see my website at faintfuzzies.com/ObservingAids.html
- If you think you saw the object(s), but not sure, gently rap the telescope or wiggle it. The stars will wiggle in the eyepiece, and if you saw the object, it would wiggle as well along with the foreground stars.
- Sometimes if you are very tired you won't see as much. Take a nap or rest on a lawn chair. Try to observe in a comfortable position. It really helps if you aren't straining your neck (or anything else) when you are trying to observe. Some fleeting objects would disappear when fatigued.
- Use high magnification, such as 300x or even higher. When I observe object from this list, I generally use my 6mm ZAO-II, 5mm BGO and/or 4mm ZAO-II orthoscopic eyepieces. I employ the TMB 1.8x ED Barlow if I need even more magnification.
- Use low-glass count, high transmission eyepieces. Even with modern glass polish and coating technology, there is still a very small, but noticeable difference between high glass count eyepieces, such as the common wide-field eyepiece versus a simple orthoscopes or Plossl. Over the years, I've done many comparisons between various eyepieces, such as the Naglers, Ethos, Naglers, Pentax XW's, orthoscopes (Zeiss, Baader, University Optics, etc) and Plossls (some makes) and found that low glass count eyepieces consistently outperforms high glass count eyepieces. See my website under Observing Tips, titled Going DEEP with simple eyepieces, for more information.

Note: This list presented here is the second batch of PCG's as catalogued by Iovino et al. For the first batch, see the paper titled, *A New Sample of Distant Compact Groups from the Digitized Second Palomar Observatory Sky Survey*, by Angela Iovino, et al published in April 2003. The paper is listed on page 71.

So "GIVE IT A GO AND LET US KNOW"

Two ways of "letting us know"

1. Post your observations [at www.deepskyforum.com](http://www.deepskyforum.com) and I'm sure that other galaxy hounds would like to read them.
2. Email me at Alvin.huey@faintfuzzies.com

The Palomar Compact Galaxy Index (60 selected objects)

Page	PCG #	RA	Dec	Radius (")	Mag (t)	SB	Δ mag	Const
12	2221-0105	22 21 11.76	-01 05 04.88	28.1	16.26	23.64	1.847	Aqr
13	2324+0051	23 24 45.18	+00 51 10.01	36.6	15.61	23.56	1.118	Psc
14	2334+0037	23 34 46.19	+00 37 43.46	47.7	15.4	23.93	1.01	Psc
15	0009+1958	00 09 54.48	+19 58 25.03	38.0	15.95	23.98	1.834	Psc
16	0011+0544	00 11 08.97	+05 44 49.13	22.2	16.08	22.95	1.819	Psc
17	0017-0206	00 17 12.53	-02 06 09.22	49.3	15.13	23.73	1.16	Psc
18	0038+0245	00 38 18.24	+02 45 37.62	32.5	16	23.69	1.673	Psc
19	0045+1940	00 45 19.32	+19 40 05.99	21.5	15.8	22.6	0.398	Psc
20	0127+1459	01 27 35.14	+14 59 13.88	38.8	15.84	23.92	1.558	Psc
21	2226+0512	22 26 33.57	+05 12 07.02	46.3	15.44	23.9	1.271	Peg
22	2259+1329	22 59 02.90	+13 29 34.01	29.3	15.74	23.21	1.672	Peg
23	2312+1017	23 12 40.10	+10 17 38.29	38.2	15.71	23.75	1.845	Peg
24	2328+0900	23 28 01.59	+09 00 38.63	20.1	16.02	22.67	1.241	Peg
25	2332+1144	23 32 30.92	+11 44 31.38	43.2	15.6	23.91	1.537	Peg
26	2350+1437	23 50 15.48	+14 37 23.92	33.6	15.7	23.47	0.844	Peg
27	0209+1039	02 09 15.12	+10 39 52.45	19.6	15.51	22.1	1.238	Ari
28	0209+0452	02 09 45.12	+04 52 51.24	26.7	15.56	22.83	0.474	Cet
29	0250+0700	02 50 56.96	+07 00 49.43	30.3	15.62	23.16	1.237	Cet
30	0303+0847	03 03 52.37	+08 47 00.60	51.5	15.13	23.82	1.874	Cet
31	0904+4523	09 04 26.79	+45 23 47.26	31.1	16.28	23.88	1.618	Lyn
32	0915+2130	09 15 24.57	+21 30 38.81	32.4	15.81	23.5	1.011	Cnc
33	0854+4919	08 54 49.18	+49 19 11.93	46.8	15.27	23.75	1.119	UMa
34	0928+6347	09 28 31.26	+63 47 36.10	30.1	15.27	22.8	0.977	UMa
35	0953+5710	09 53 52.68	+57 10 47.31	35.0	15.43	23.28	1.842	UMa
36	1041+4017	10 41 48.68	+40 17 17.23	40.8	15.72	23.91	1.406	UMa
37	1045+4931	10 45 27.36	+49 31 18.55	21.5	15.61	22.41	1.595	UMa
38	1123+3559	11 23 56.63	+35 59 24.86	47.0	15.14	23.63	1.915	UMa
39	1137+3234	11 37 01.72	+32 34 12.47	34.7	15.65	23.49	1.056	UMa
40	1221+5548	12 21 42.14	+55 48 21.60	37.3	15.4	23.39	1.24	UMa
41	0943+3923	09 43 16.67	+39 23 08.41	36.6	16.05	24	1.402	LMi
42	1013+2831	10 13 24.71	+28 31 47.06	29.5	15.55	23.03	1.1	LMi
43	1021+3713	10 21 57.32	+37 13 20.49	27.7	15.76	23.11	1.123	LMi
44	1025+3601	10 25 44.54	+36 01 34.78	22.0	15.59	22.44	1.847	LMi
45	1026+3906	10 26 07.76	+39 06 06.37	13.5	15.9	21.69	1.634	LMi

Page	PCG #	RA	Dec	Radius (")	Mag (t)	SB	Δ mag	Const
46	1044+3536	10 44 50.25	+35 36 01.59	28.3	15	22.39	1.726	LMi
47	0922+2855	09 22 52.71	+28 55 18.37	50.0	15.31	23.94	1.226	Leo
48	0939+1240	09 39 56.17	+12 40 37.70	49.1	15.01	23.6	0.831	Leo
49	0955+0935	09 55 07.57	+09 35 20.58	29.0	15.2	22.65	0.946	Leo
50	1003+1904	10 03 55.26	+19 04 54.66	41.1	15.6	23.8	1.453	Leo
51	1008+1715	10 08 37.84	+17 15 47.59	26.9	15.22	22.5	1.366	Leo
52	1011+0841	10 11 13.40	+08 41 27.24	49.2	15.08	23.67	0.95	Leo
53	1045+2027	10 45 30.62	+20 27 01.84	27.0	15.61	22.9	1.109	Leo
54	1045+1758	10 45 38.53	+17 58 27.01	33.7	15.63	23.4	1.49	Leo
55	1054+1133	10 54 00.74	+11 33 27.04	26.0	15.84	23.05	1.522	Leo
56	1100+0824	11 00 02.73	+08 24 35.39	25.4	15.45	22.61	0.982	Leo
57	1120+0744	11 20 51.84	+07 44 39.84	52.0	15.05	23.76	0.28	Leo
58	1151+2738	11 51 20.00	+27 38 03.63	26.6	15.15	22.41	1.866	Leo
59	0955+0345	09 55 27.22	+03 45 08.35	37.6	15.22	23.23	1.181	Sex
60	1010+0346	10 10 53.65	+03 46 12.90	48.0	15.23	23.77	1.235	Sex
61	1013-0055	10 13 28.73	-00 55 22.01	30.9	15.97	23.55	1.601	Sex
62	1044+0248	10 44 18.96	+02 48 14.44	31.1	15.69	23.29	0.862	Sex
63	1156+0318	11 56 10.09	+03 18 02.16	24.6	15.63	22.72	1.436	Vir
64	1222+1139	12 22 22.05	+11 39 23.26	28.6	15.93	23.35	1.592	Vir
65	1212+2235	12 12 52.51	+22 35 19.89	21.6	15.23	22.04	1.212	Com
66	1352+1234	13 52 15.45	+12 33 59.83	19.3	16.1	22.66	1.321	Boo
67	1528+4235	15 28 53.30	+42 35 46.21	34.1	15.74	23.54	1.482	Boo
68	1525+2956	15 25 02.34	+29 56 05.50	26.7	15.11	22.38	1.447	CBr
69	1513+1907	15 13 40.07	+19 07 14.12	20.8	15.76	22.48	1.64	Ser
70	1516+0257	15 16 24.76	+02 57 57.46	15.2	15.25	21.29	0.836	Ser

PCG – The catalog number. The schematic is RA (in hours and minutes) and Dec (in degrees and minutes)

RA and **Dec** in J2000.0 coordinates.

Radius – the diameter of the group in arc seconds. Keep in mind, this is arc seconds, so many groups could be covered by Jupiter if placed on top of it.

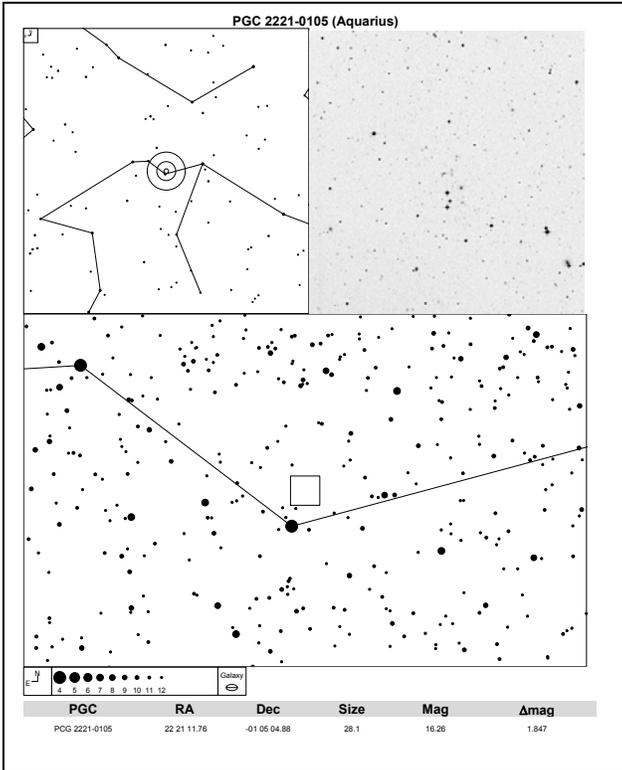
Mag(t) – total r magnitude of the group. The visual magnitude is generally 0.5 mag fainter than the r magnitude

SB – Surface brightness in mag/arcsec²

Δ mag – The magnitude difference between the brightest and faintest member of the group.

Const – the constellation the object is located on

How to Use the PCG Observer's Atlas



The top left panel contains the naked eye field with the TelRad™ superimposed on the center of the Palomar Compact Galaxy group. The top right panel contains the inverted Digital Sky Survey image. The DSS image is 15' square.

The bottom panel is a finder field of about 4.8° across and 3.0° 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 whatever as indicated by the legend on the bottom left. In some star poor regions, the limiting magnitude is increase to 13.0 and vice-versa. The square field of the DSS image is superimposed on the finder chart.

An inverted SDSS image with labels is in the middle right. The labels are from the original paper. Two objects are outside of SDSS's range, I've used a cropped image from the DSS blue plates.

All charts and images are oriented north pointed up and west to the right.

The table below lists the following information:

PCG – PCG number. The numeric schematic is the RA in hours and minutes followed by the Declination in degrees and minutes.

RA and **Dec** – the coordinates in J2000.0

Size – the listed size of the group as listed in the original paper. The size listed is in seconds, giving you an idea how small these groups are.

Mag – the listed total combined magnitude as appears in the original paper

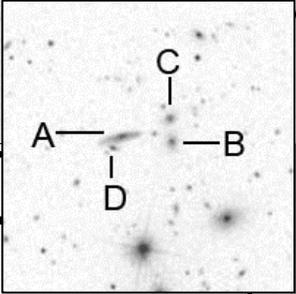
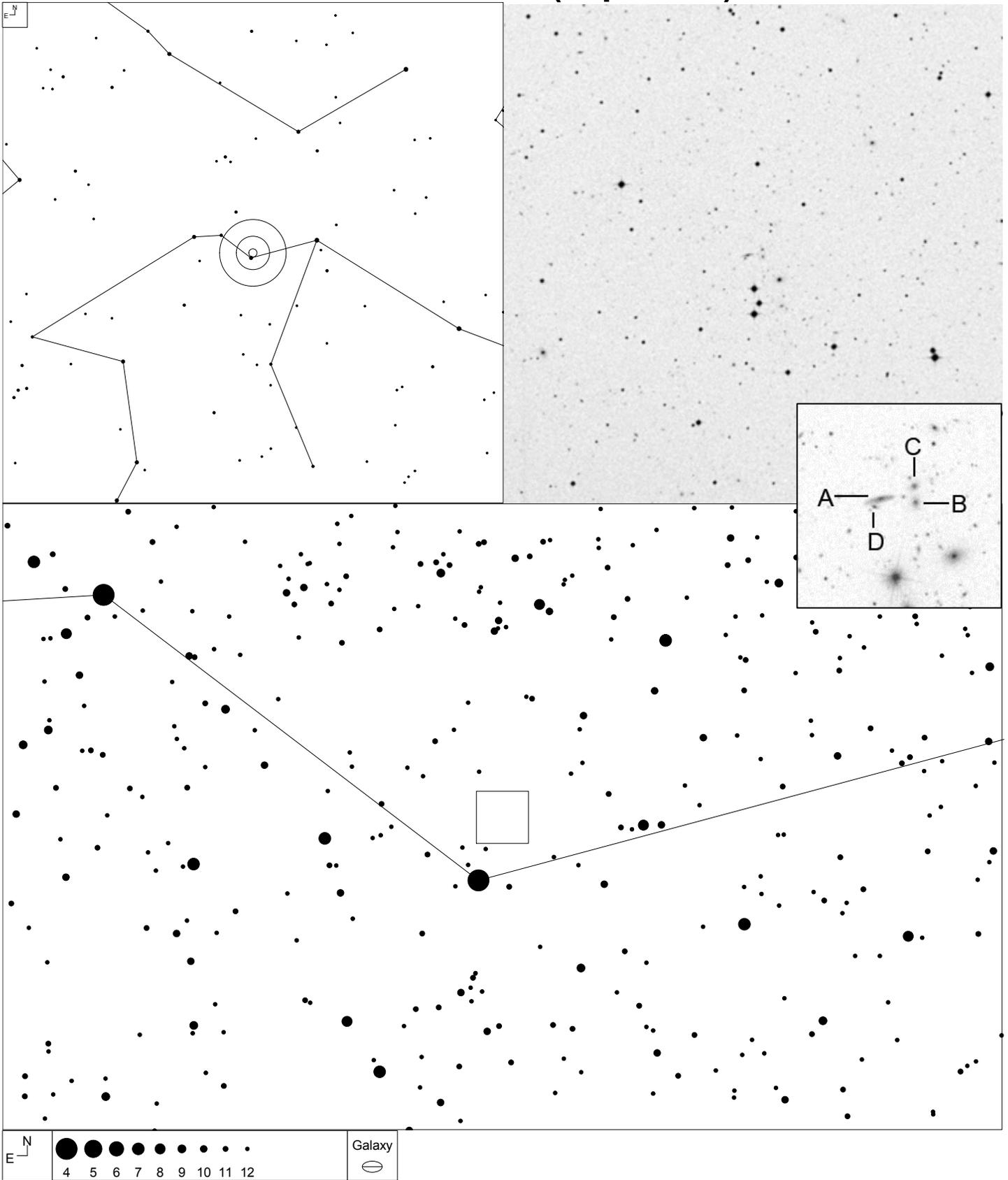
ΔMag – The magnitude difference between the brightest and faintest member.

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The Palomar Compact Galaxy Catalogue

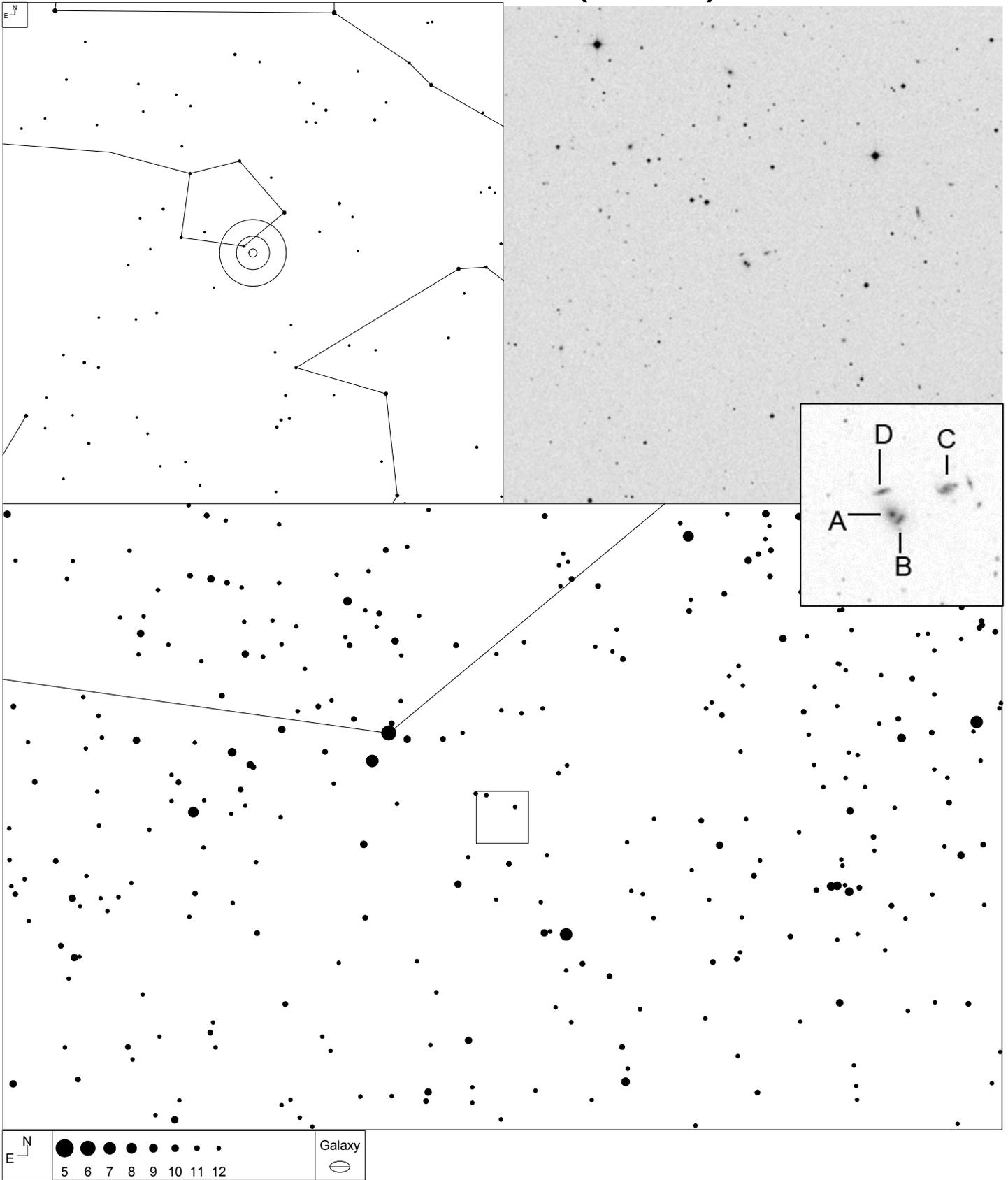
60 selected objects

PCG 2221-0105 (Aquarius)



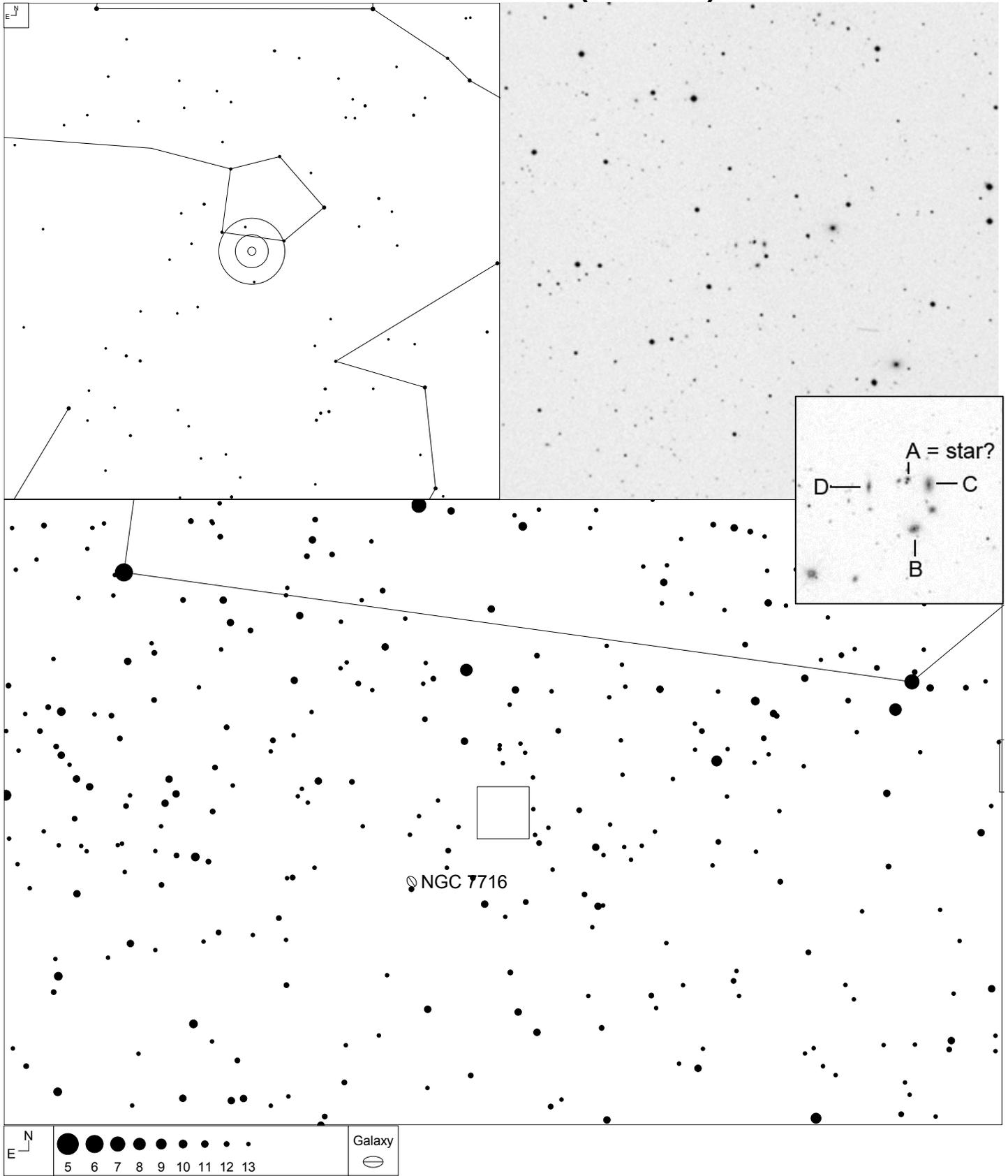
PCG	RA	Dec	Size	Mag	Δ mag
PCG 2221-0105	22 21 11.76	-01 05 04.88	28.1	16.26	1.847

PCG 2324+0051 (Pisces)



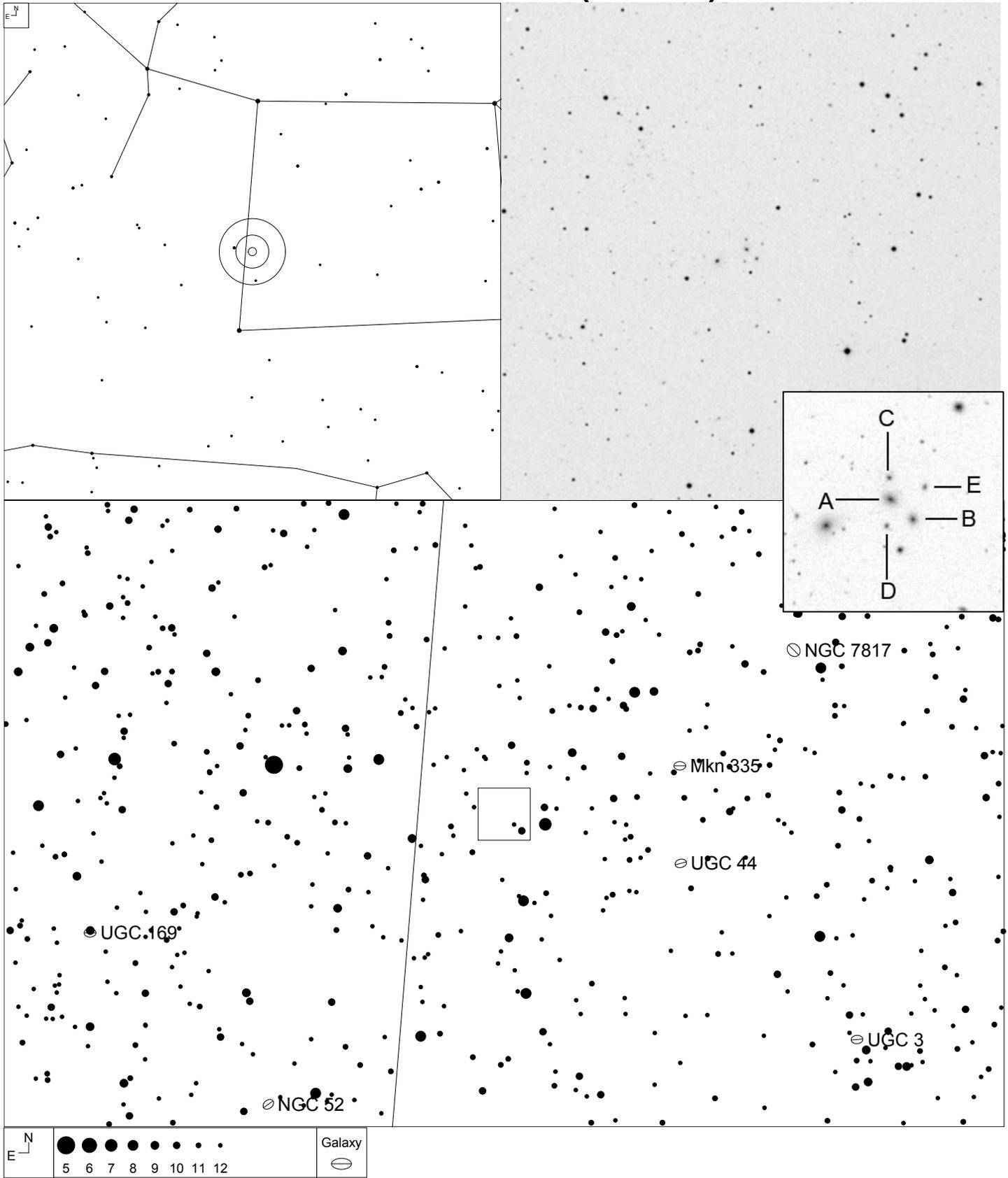
PCG	RA	Dec	Size	Mag	Δ mag
PCG 2324+0051	23 24 45.18	+00 51 10.01	36.6	15.61	1.118

PCG 2334+0037 (Pisces)



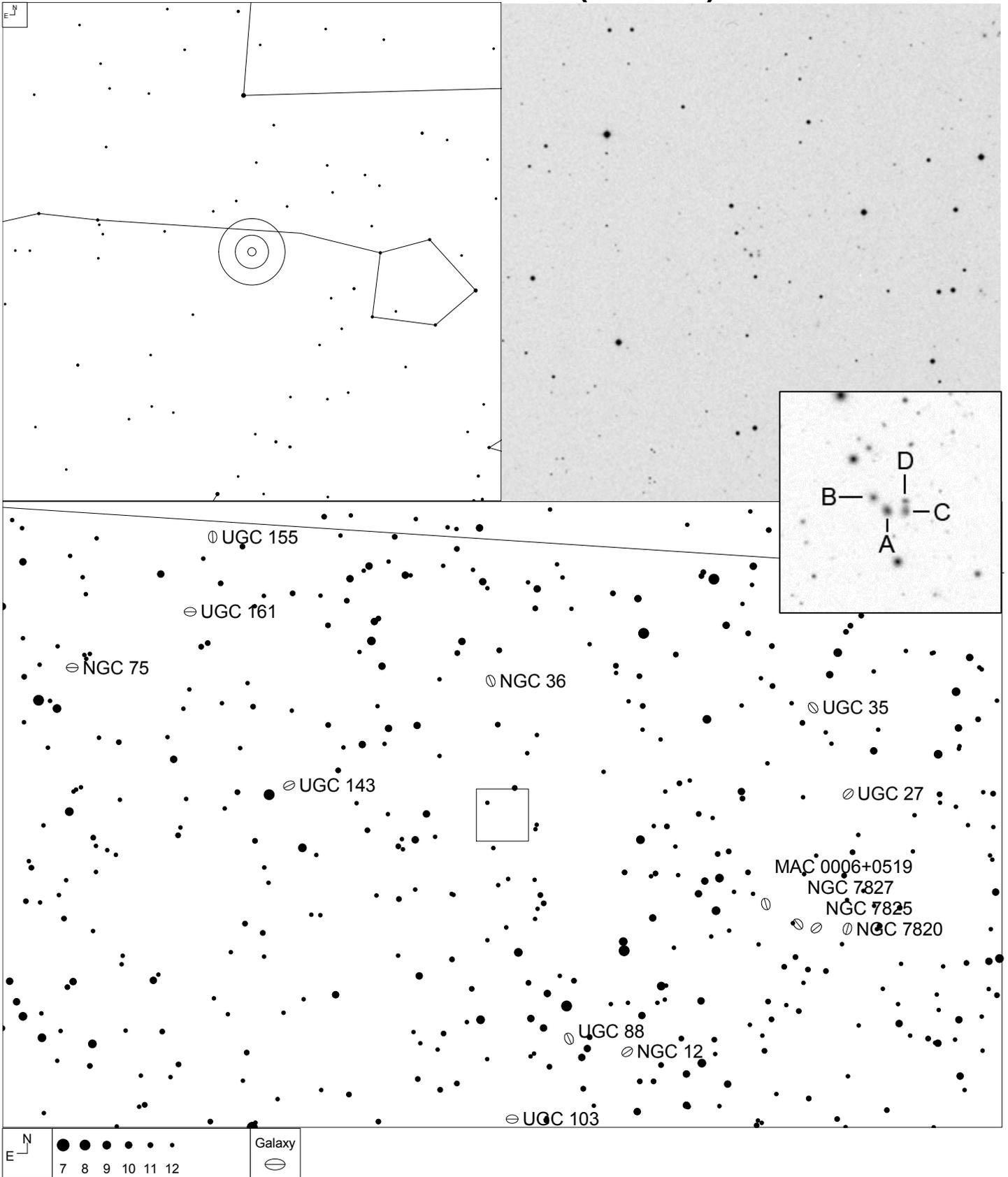
PCG	RA	Dec	Size	Mag	Δmag
PCG 2334+0037	23 34 46.19	+00 37 43.46	47.7	15.4	1.01

PCG 0009+1958 (Pisces)



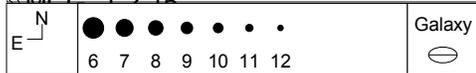
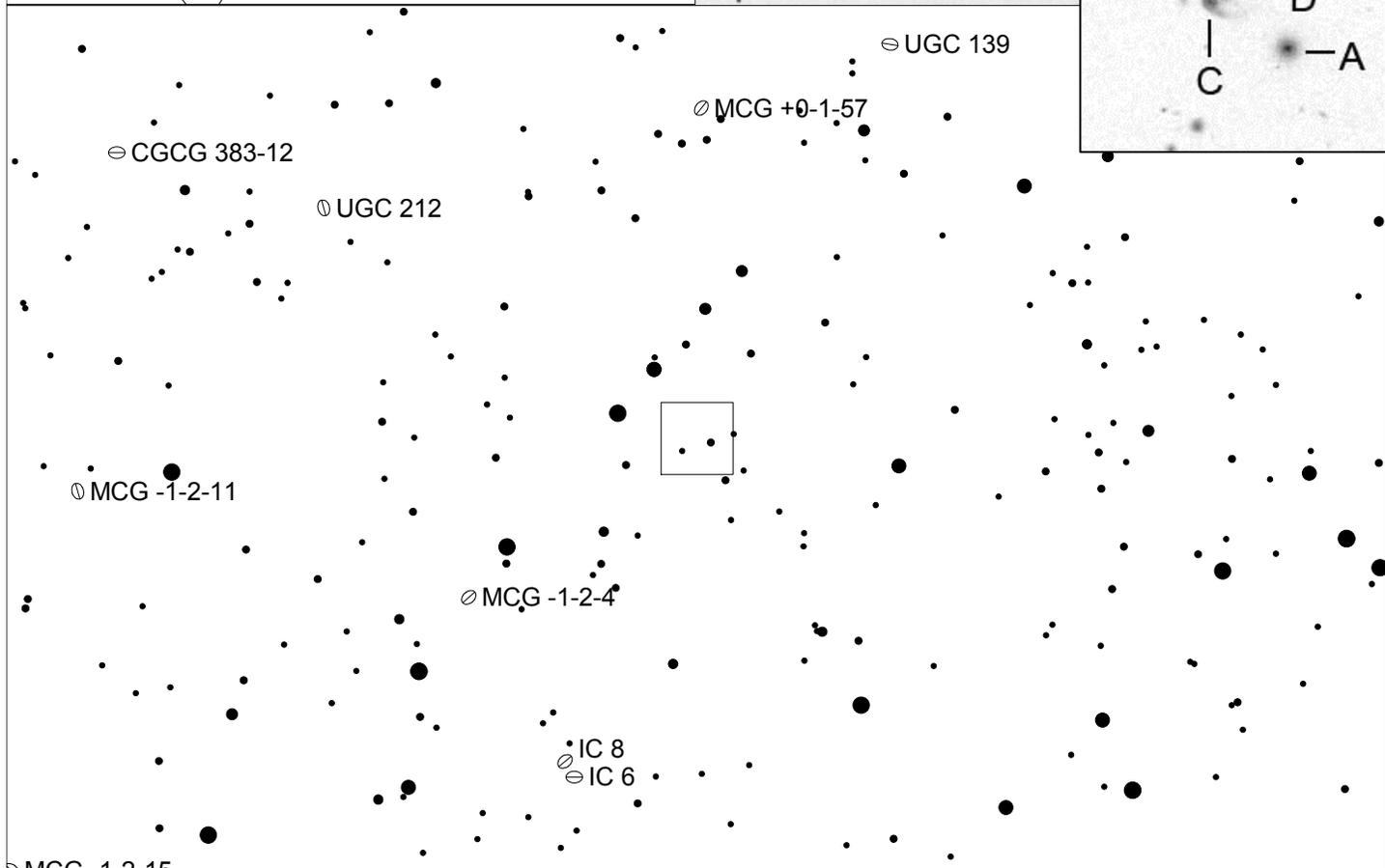
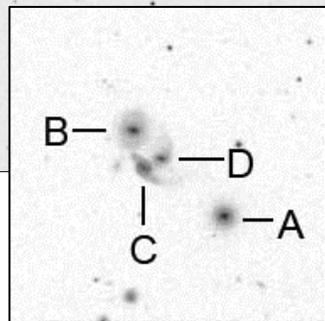
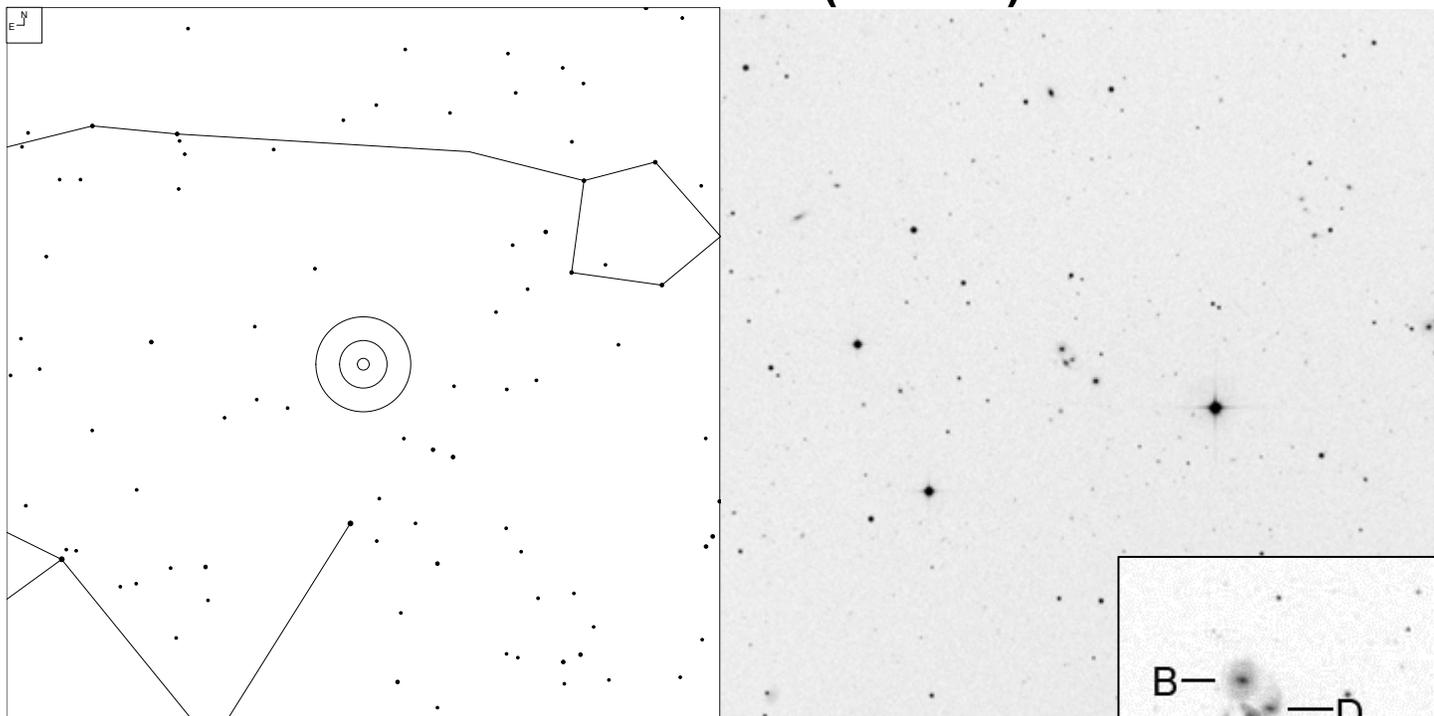
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0009+1958	00 09 54.48	+19 58 25.03	38.0	15.95	1.834

PCG 0011+0544 (Pisces)



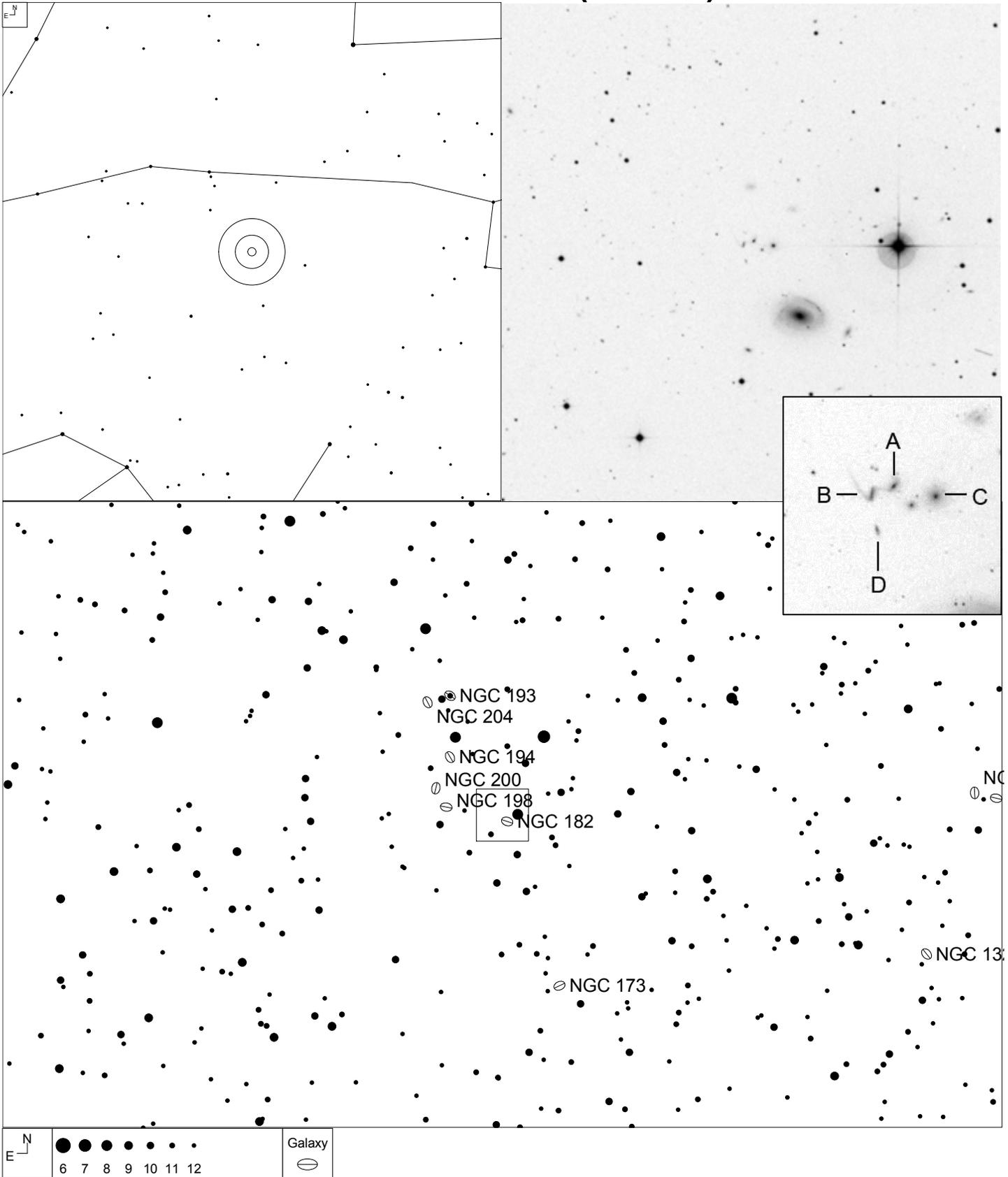
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0011+0544	00 11 08.97	+05 44 49.13	22.2	16.08	1.819

PCG 0017-0206 (Pisces)



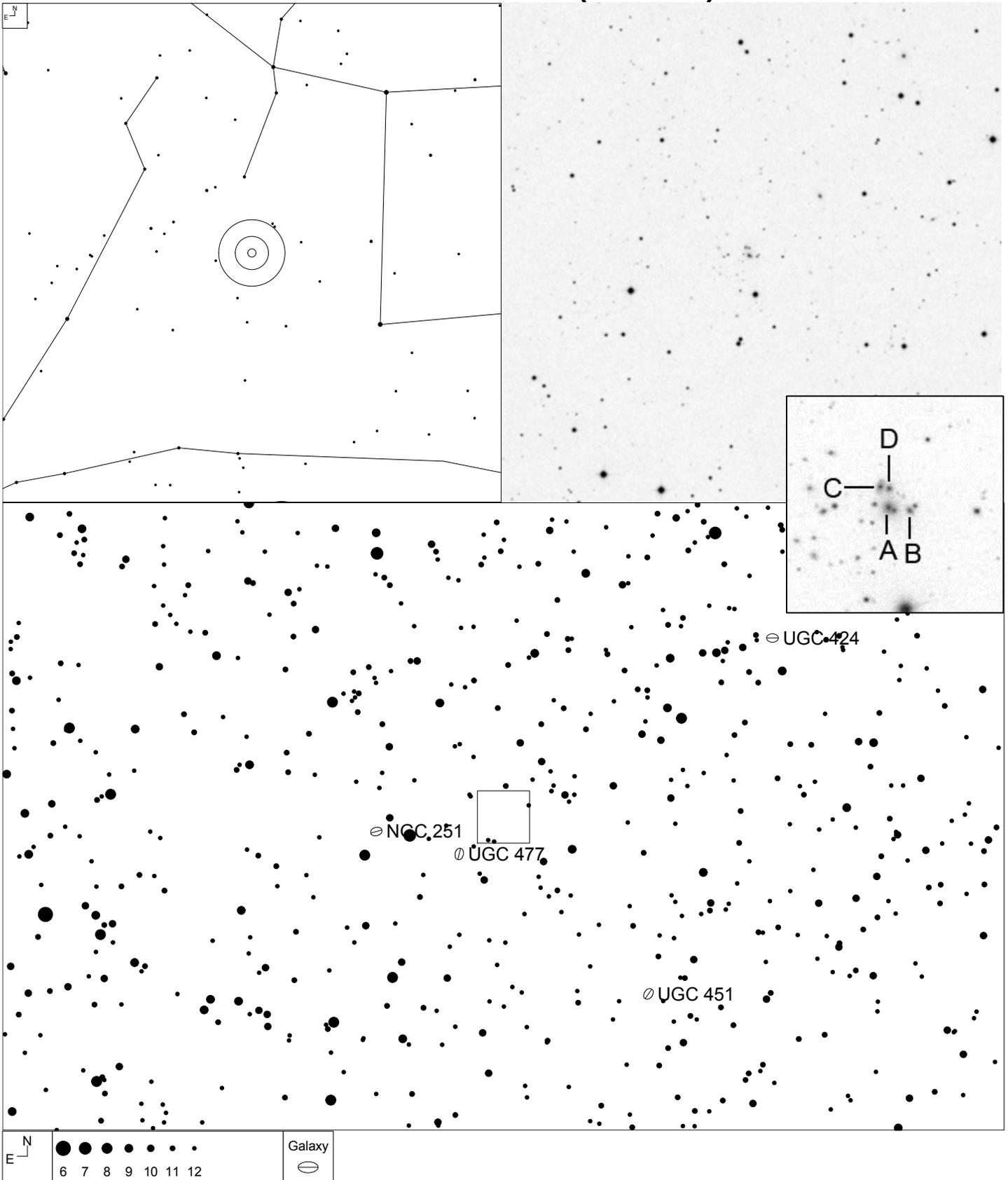
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0017-0206	00 17 12.53	-02 06 09.22	49.3	15.13	1.16

PGC 0038+0245 (Pisces)



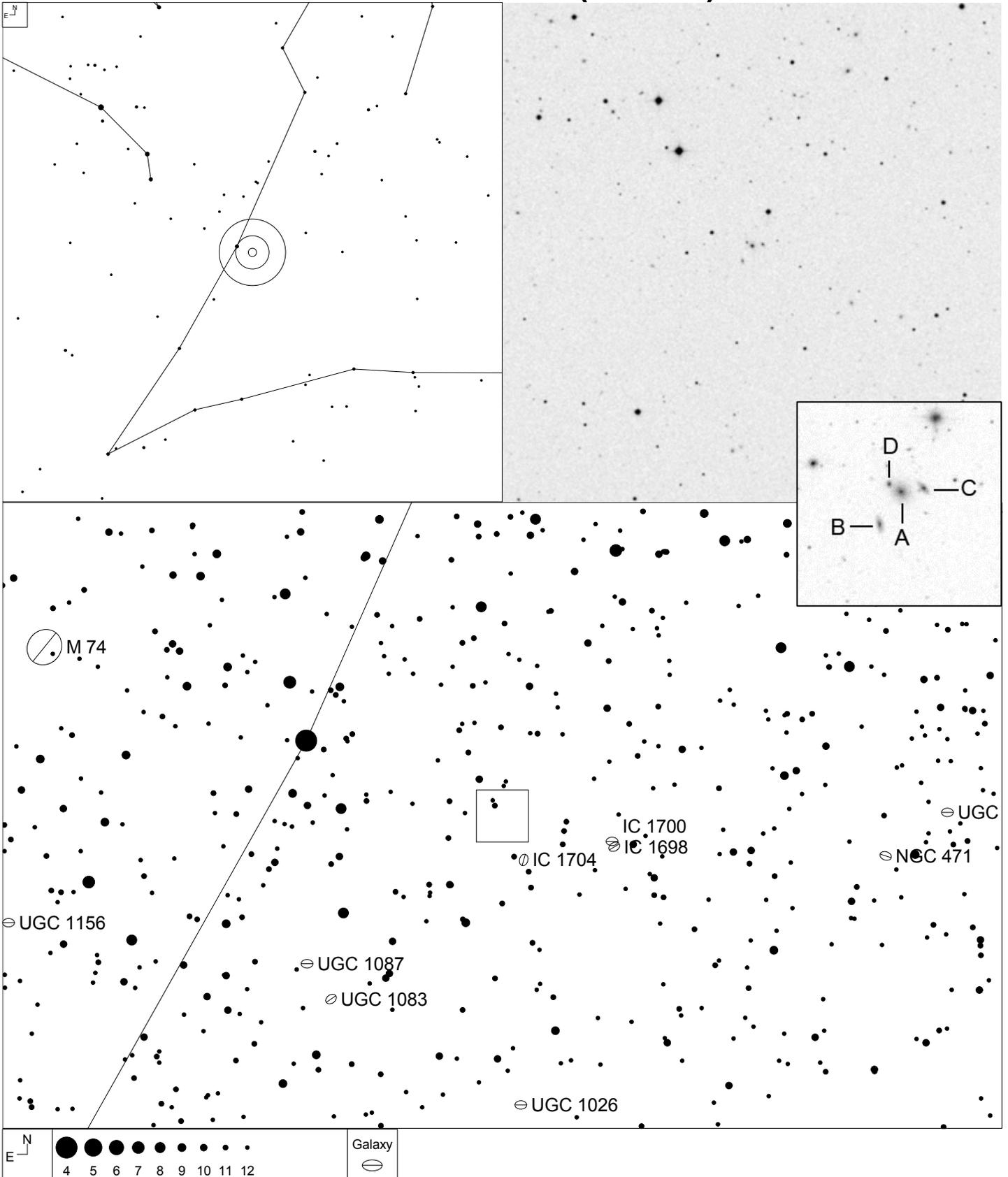
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0038+0245	00 38 18.24	+02 45 37.62	32.5	16	1.673

PGC 0045+1940 (Pisces)



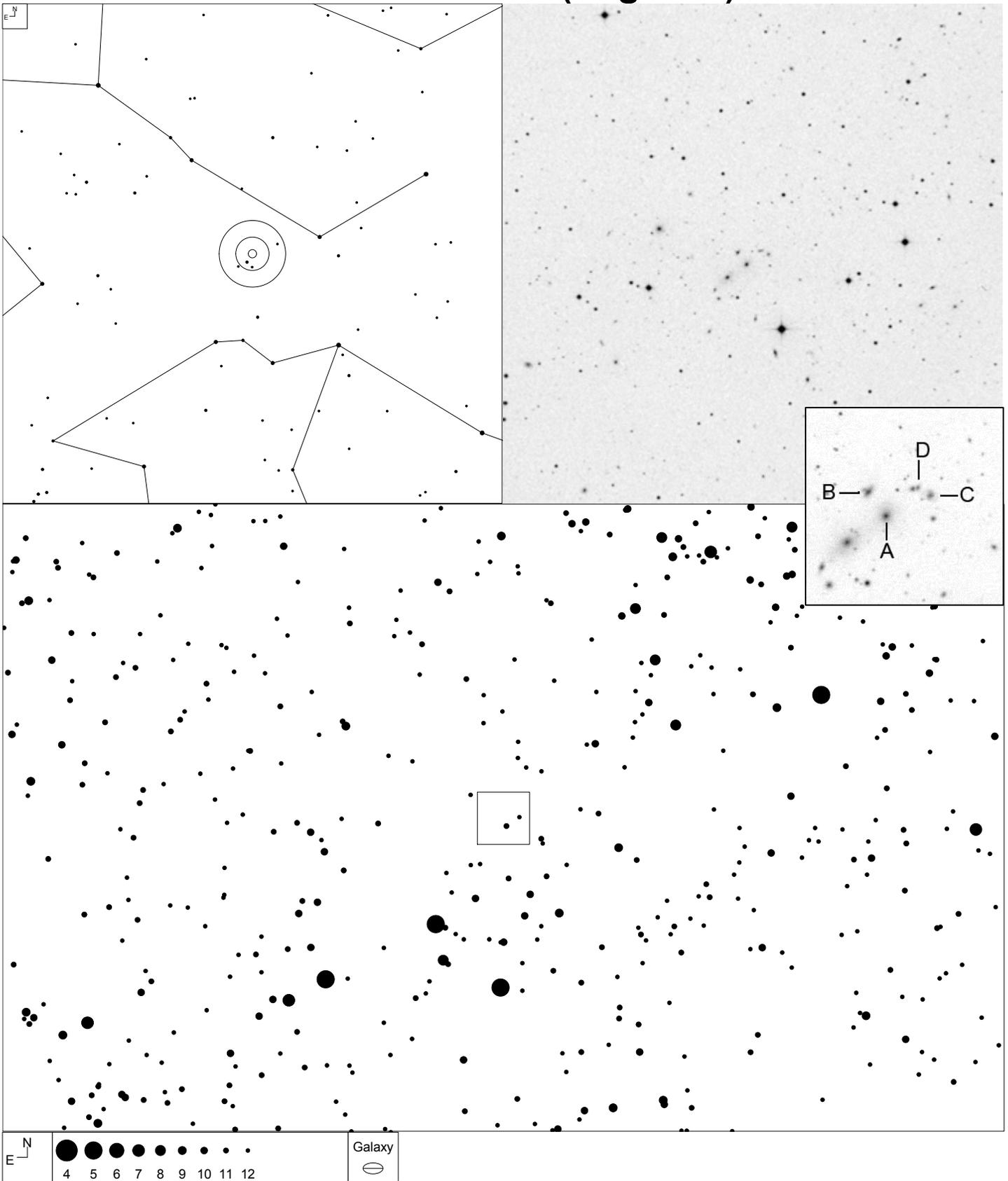
PCG	RA	Dec	Size	Mag	Δmag
PGC 0045+1940	00 45 19.32	+19 40 05.99	21.5	15.8	0.398

PCG 0127+1459 (Pisces)



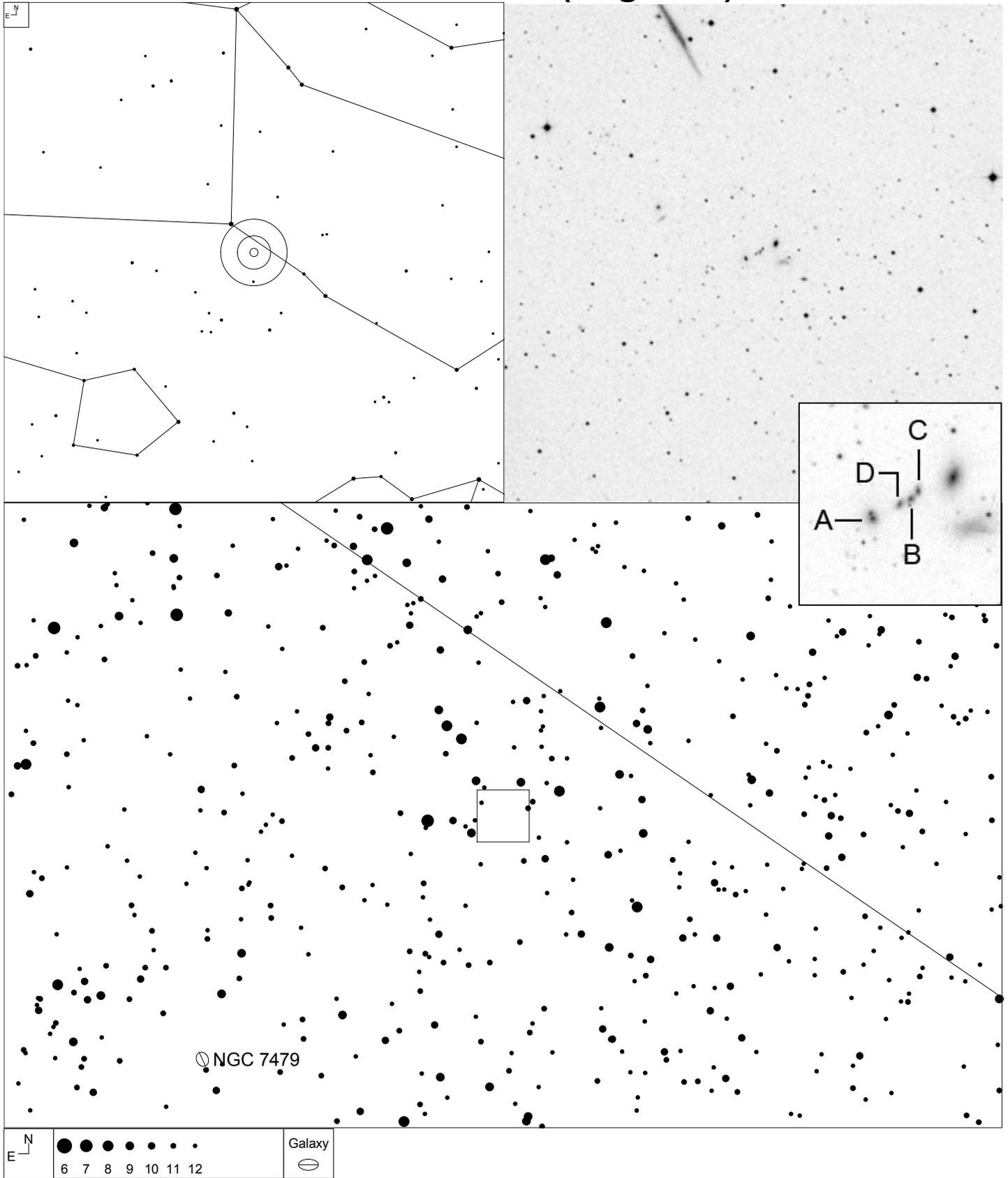
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0127+1459	01 27 35.14	+14 59 13.88	38.8	15.84	1.558

PCG 2226+0512 (Pegasus)



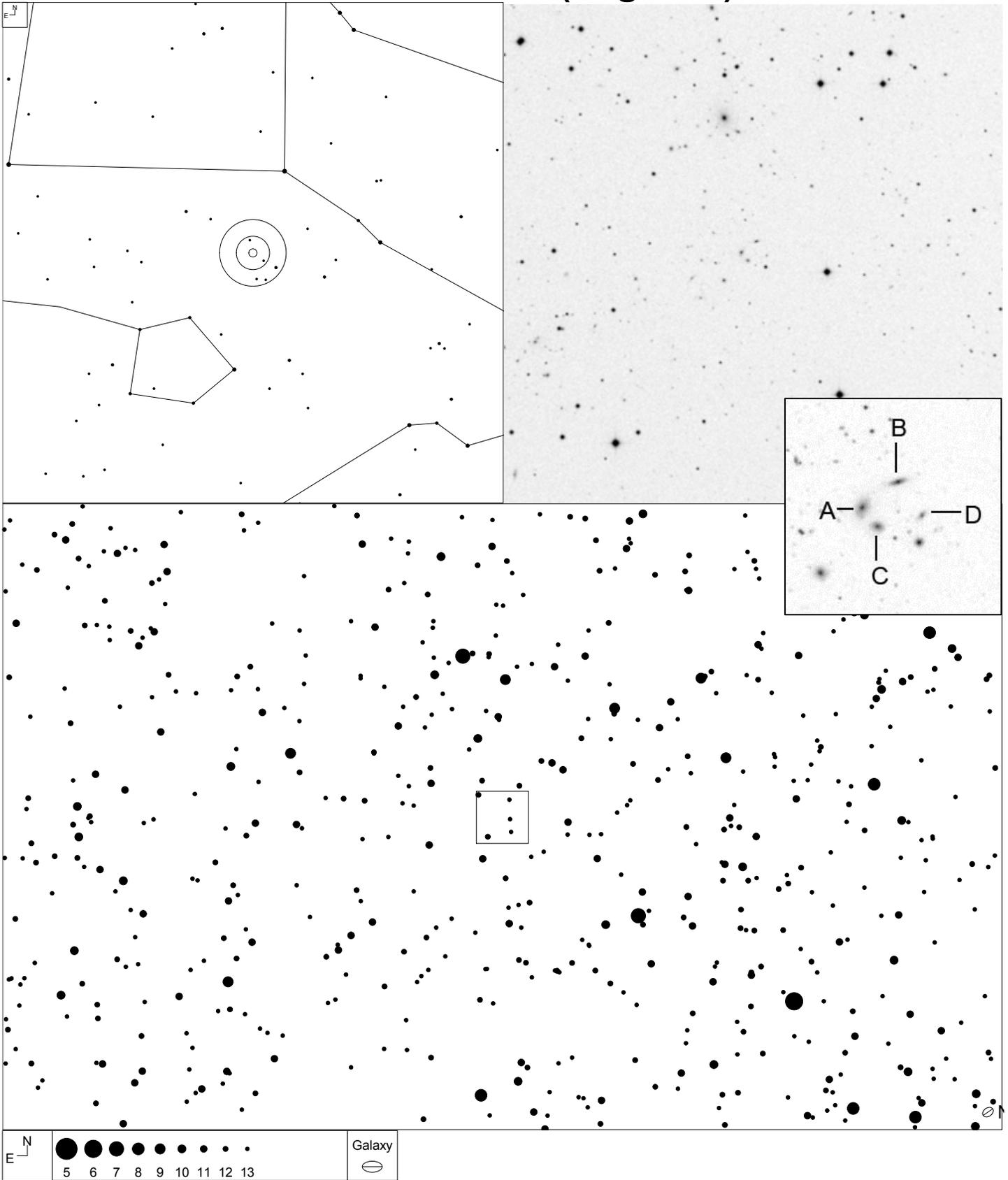
PCG	RA	Dec	Size	Mag	Δ mag
PCG 2226+0512	22 26 33.57	+05 12 07.02	46.3	15.44	1.271

PCG 2259+1329 (Pegasus)



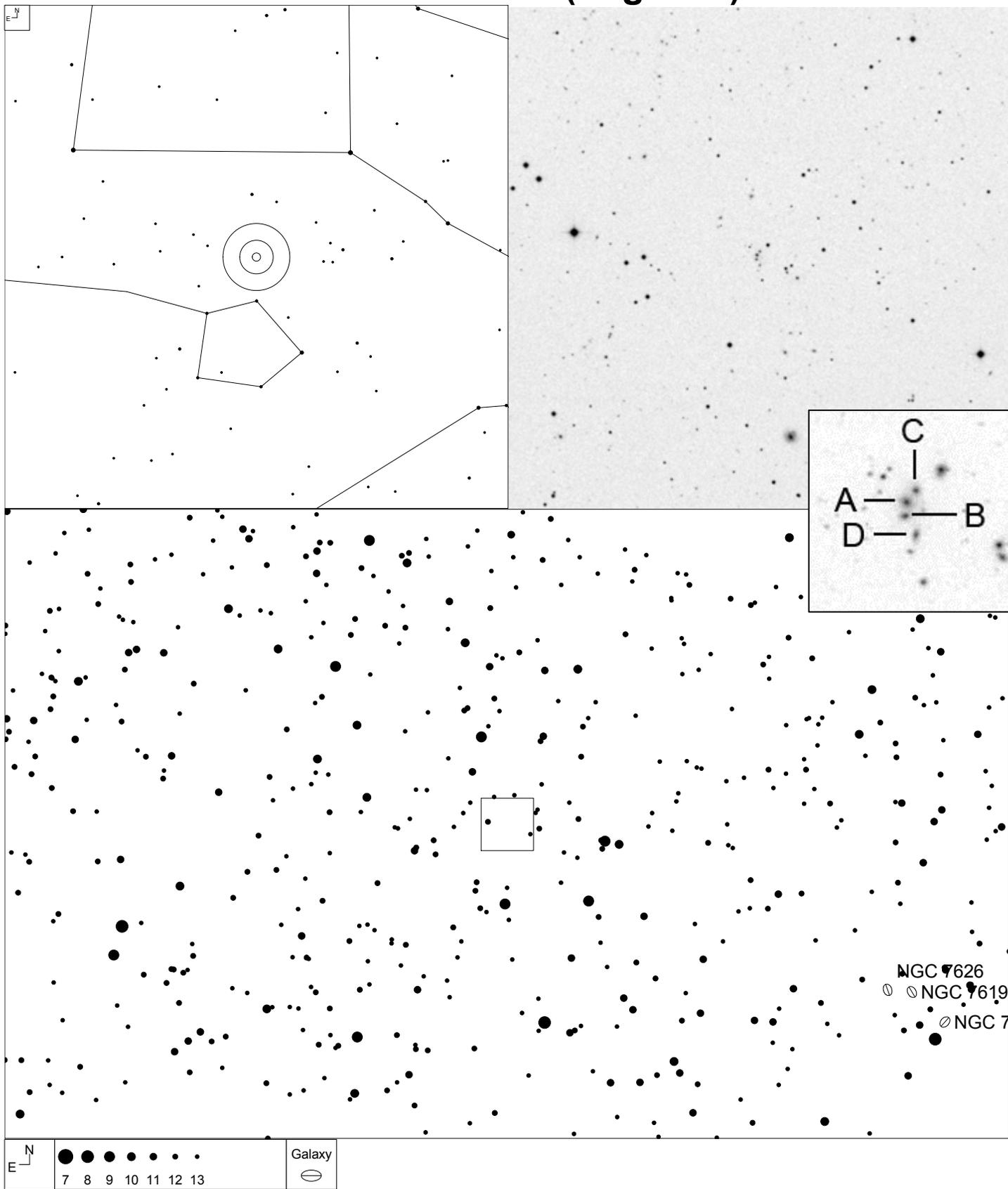
PCG	RA	Dec	Size	Mag	Δmag
PCG 2259+1329	22 59 02.90	+13 29 34.01	29.3	15.74	1.672

PCG 2312+1017 (Pegasus)

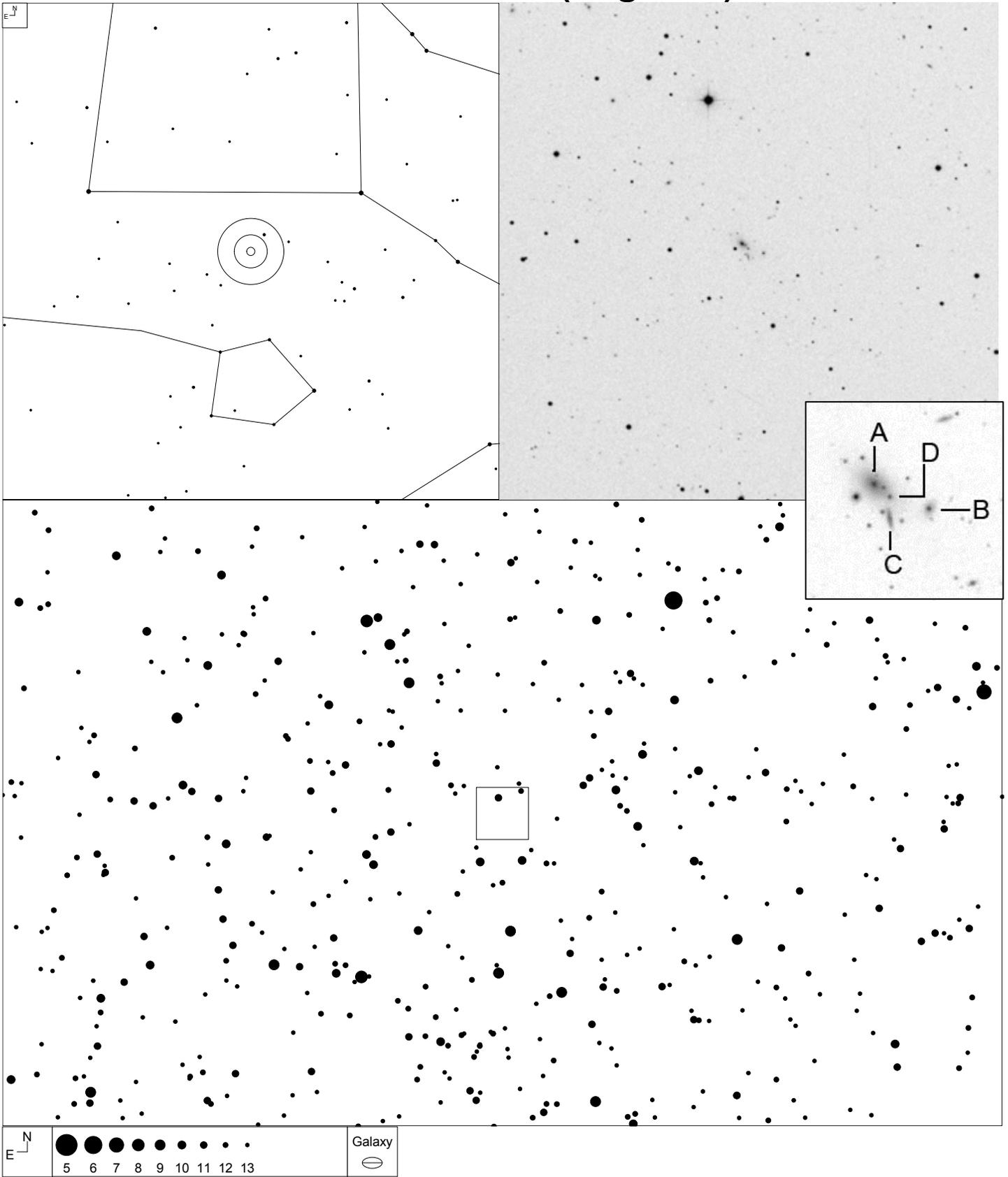


PCG	RA	Dec	Size	Mag	Δ mag
PCG 2312+1017	23 12 40.10	+10 17 38.29	38.2	15.71	1.845

PCG 2328+0900 (Pegasus)

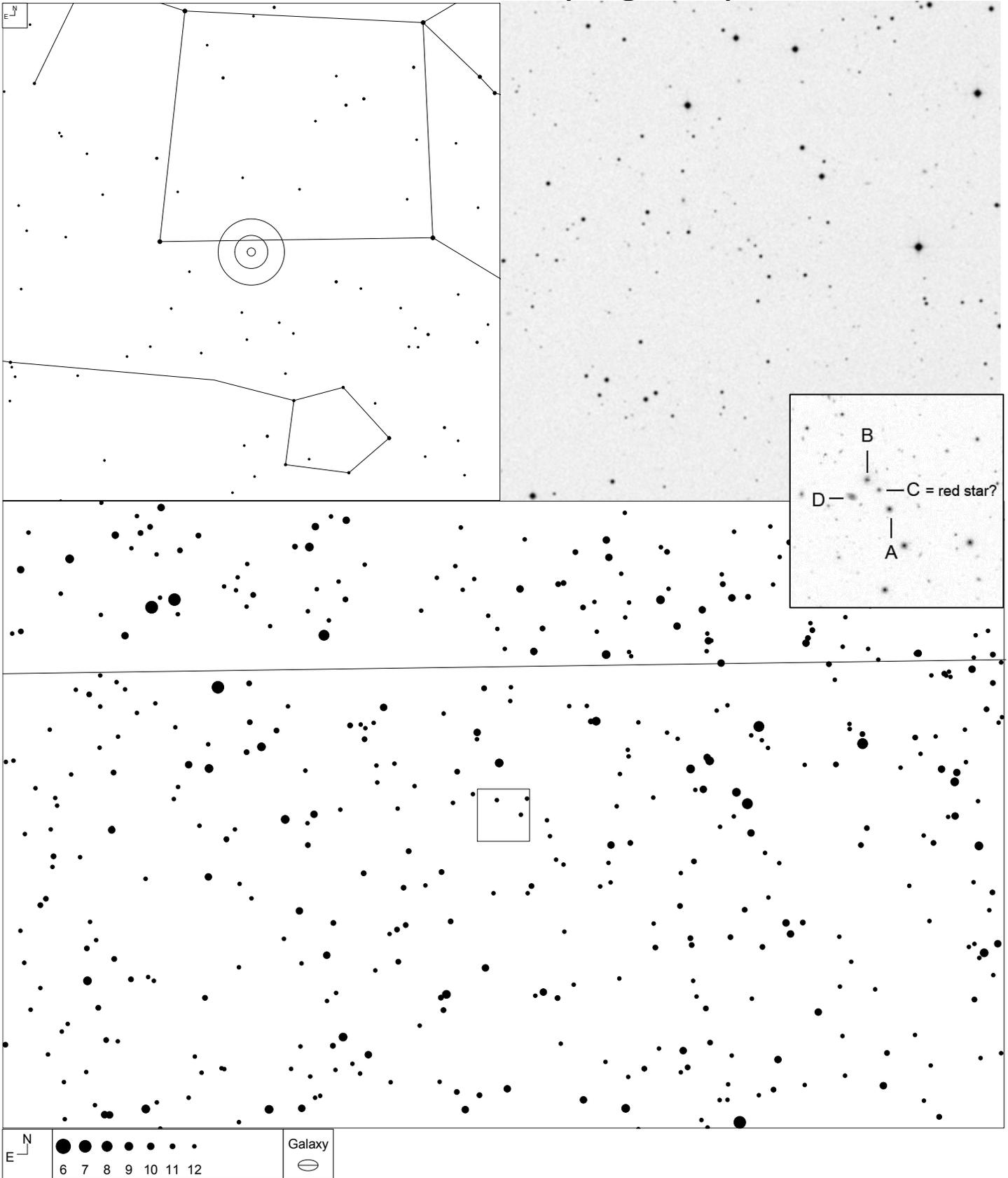


PCG 2332+1144 (Pegasus)



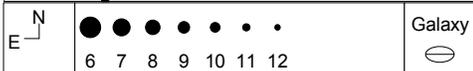
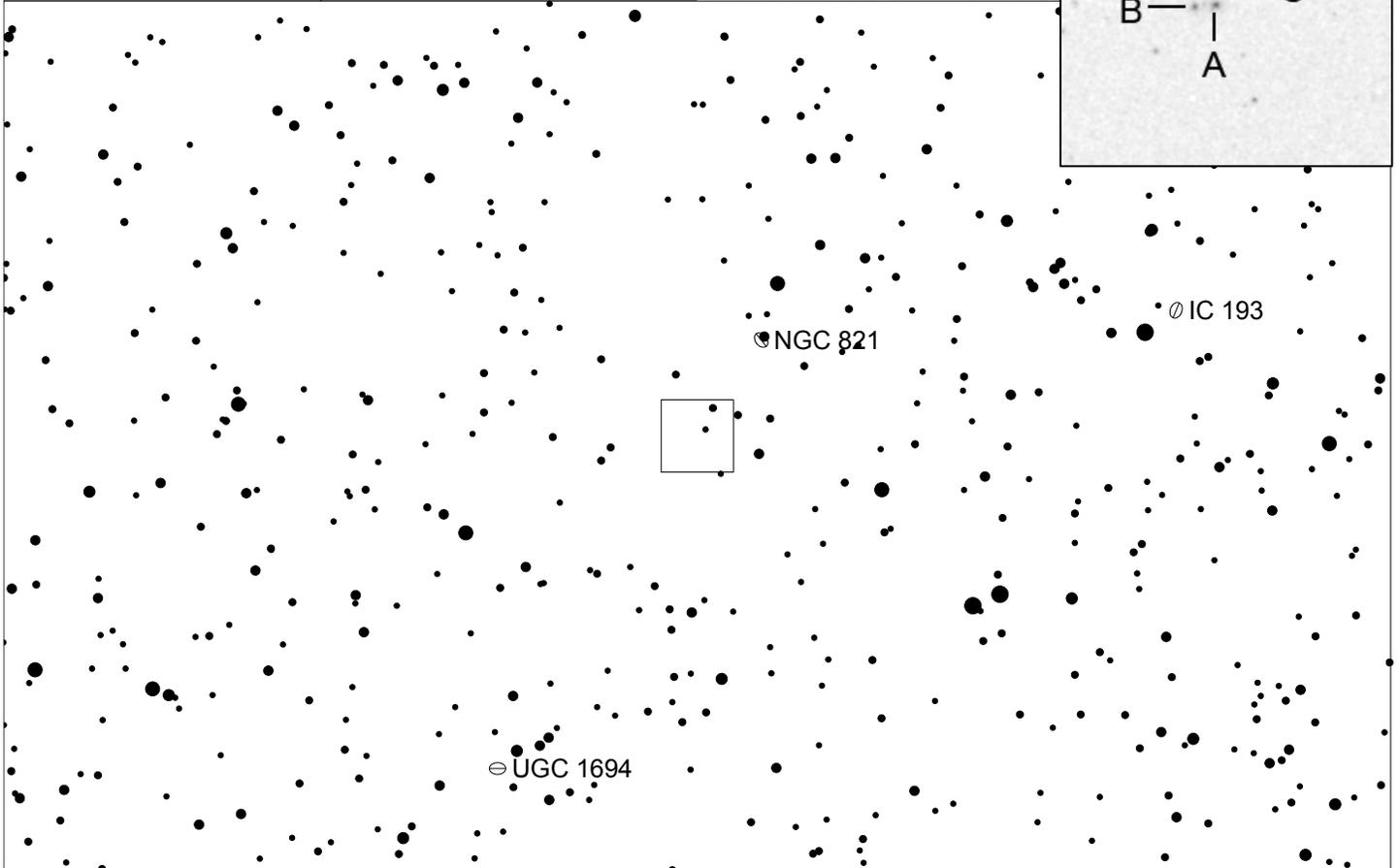
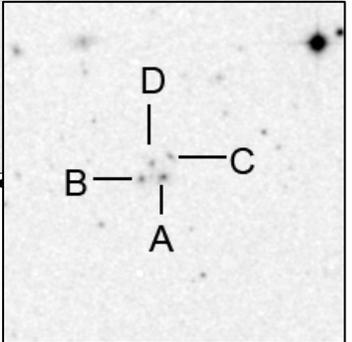
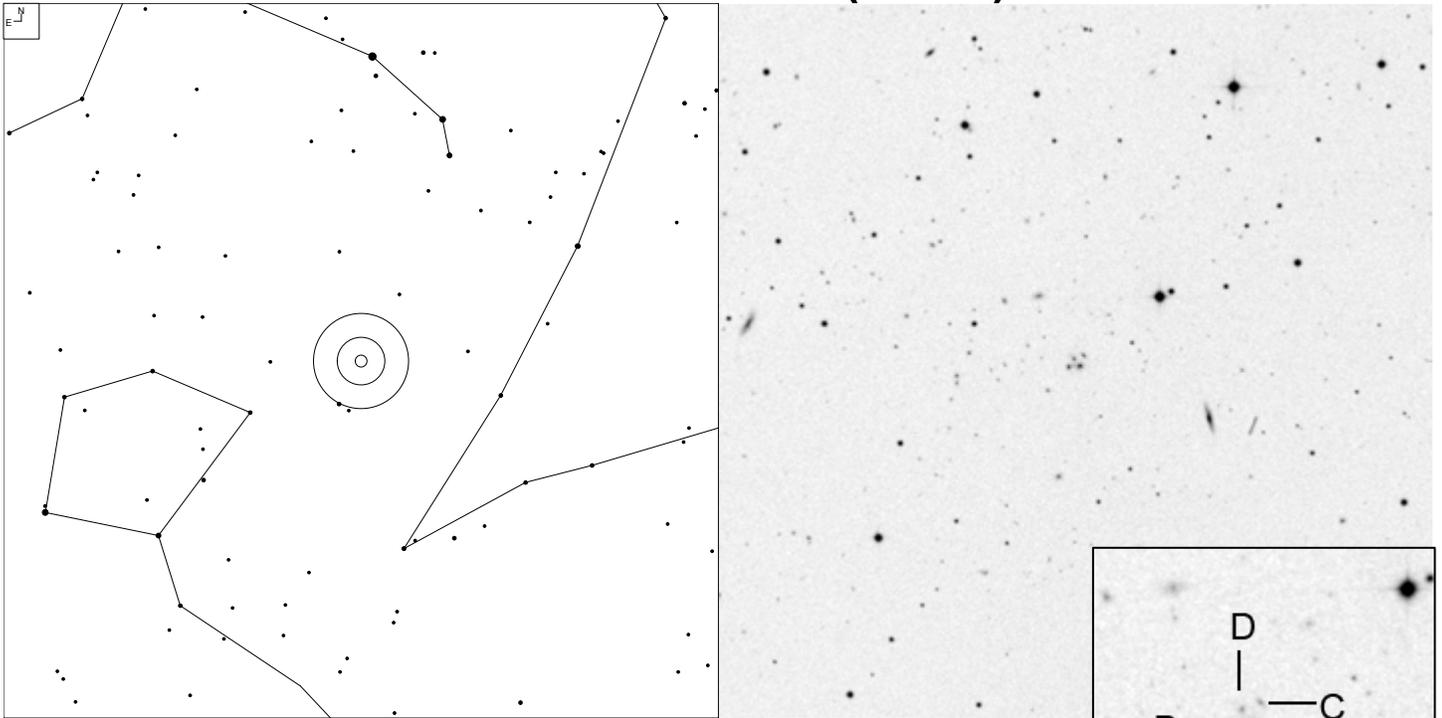
PCG	RA	Dec	Size	Mag	Δmag
PCG 2332+1144	23 32 30.92	+11 44 31.38	43.2	15.6	1.537

PCG 2350+1437 (Pegasus)



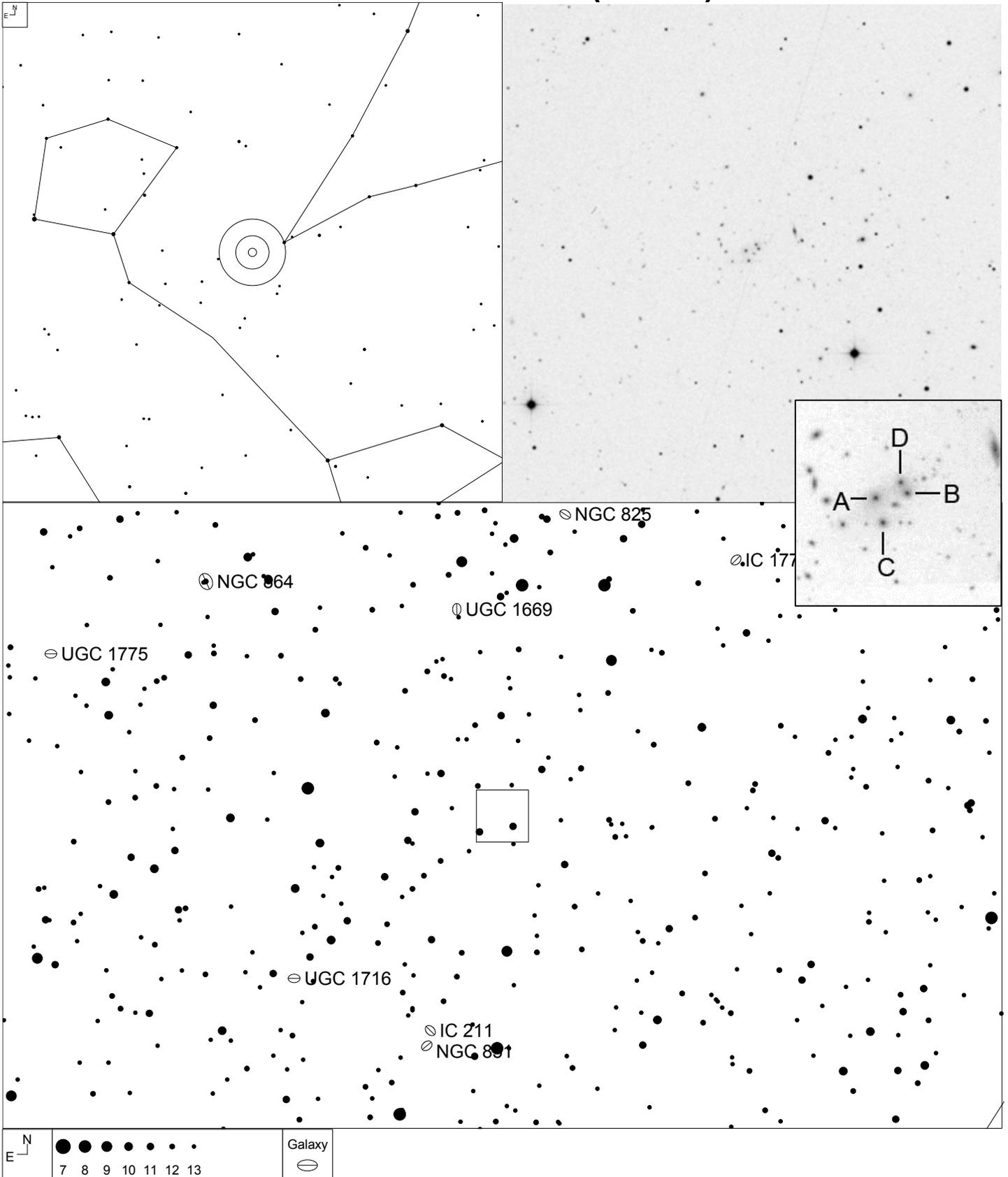
PCG	RA	Dec	Size	Mag	Δmag
PCG 2350+1437	23 50 15.48	+14 37 23.92	33.6	15.7	0.844

PCG 0209+1039 (Aries)



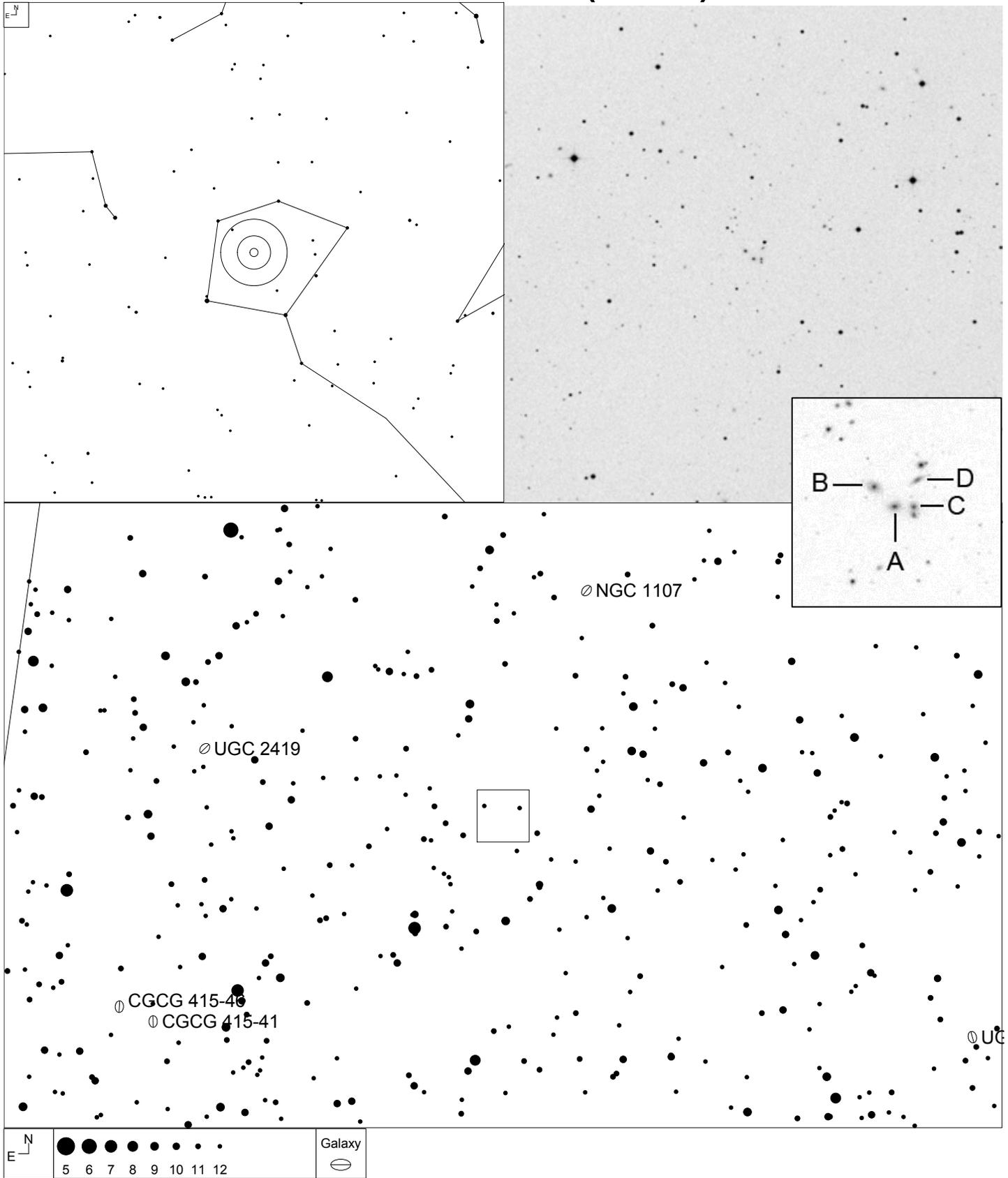
PCG	RA	Dec	Size	Mag	Δmag
PCG 0209+1039	02 09 15.12	+10 39 52.45	19.6	15.51	1.238

PCG 0209+0452 (Cetus)



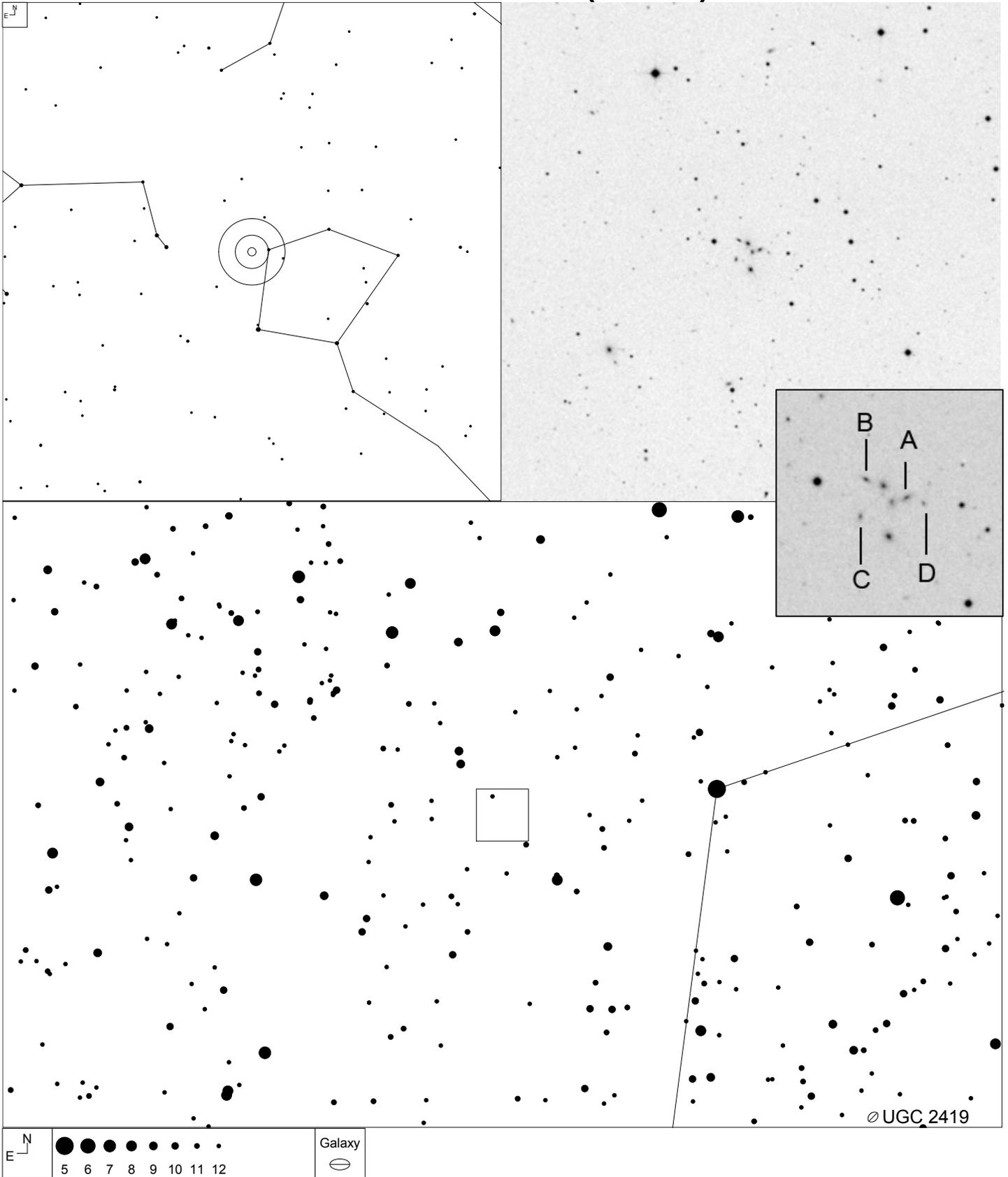
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0209+0452	02 09 45.12	+04 52 51.24	26.7	15.56	0.474

PCG 0250+0700 (Cetus)



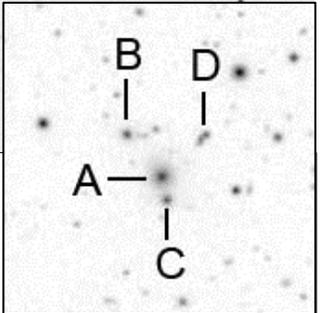
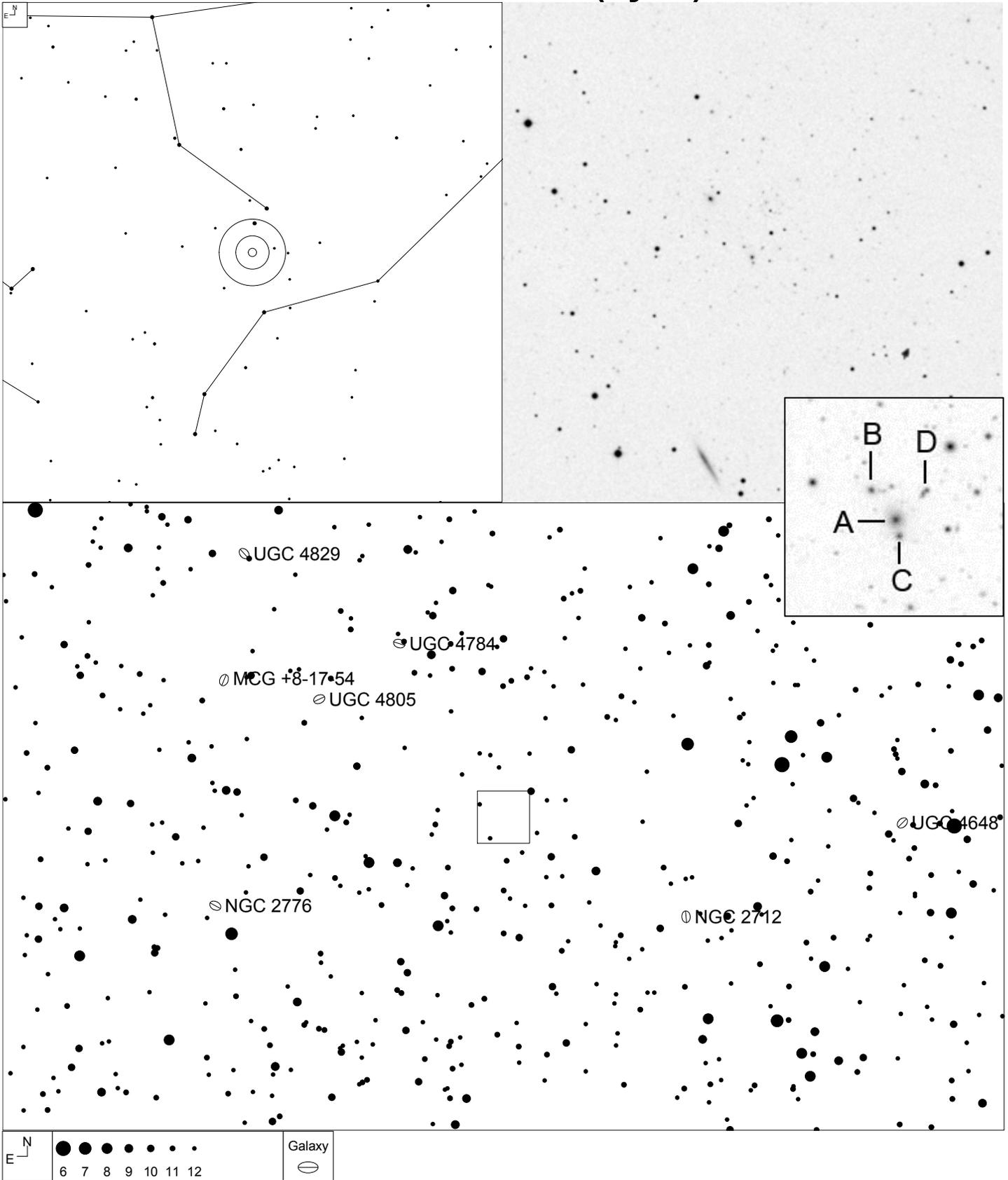
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0250+0700	02 50 56.96	+07 00 49.43	30.3	15.62	1.237

PCG 0303+0847 (Cetus)



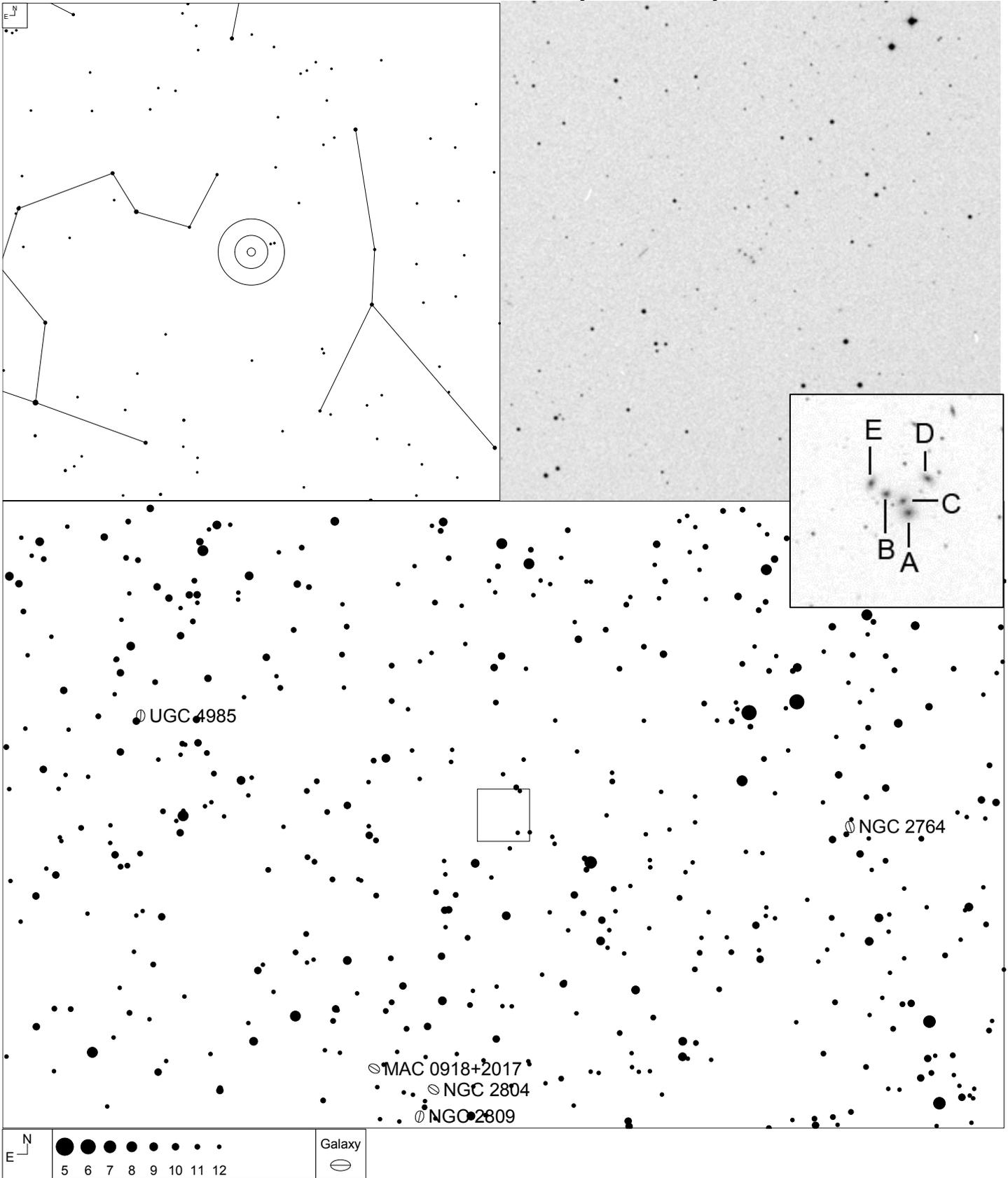
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0303+0847	03 03 52.37	+08 47 00.60	51.5	15.13	1.874

PCG 0904+4523 (Lynx)



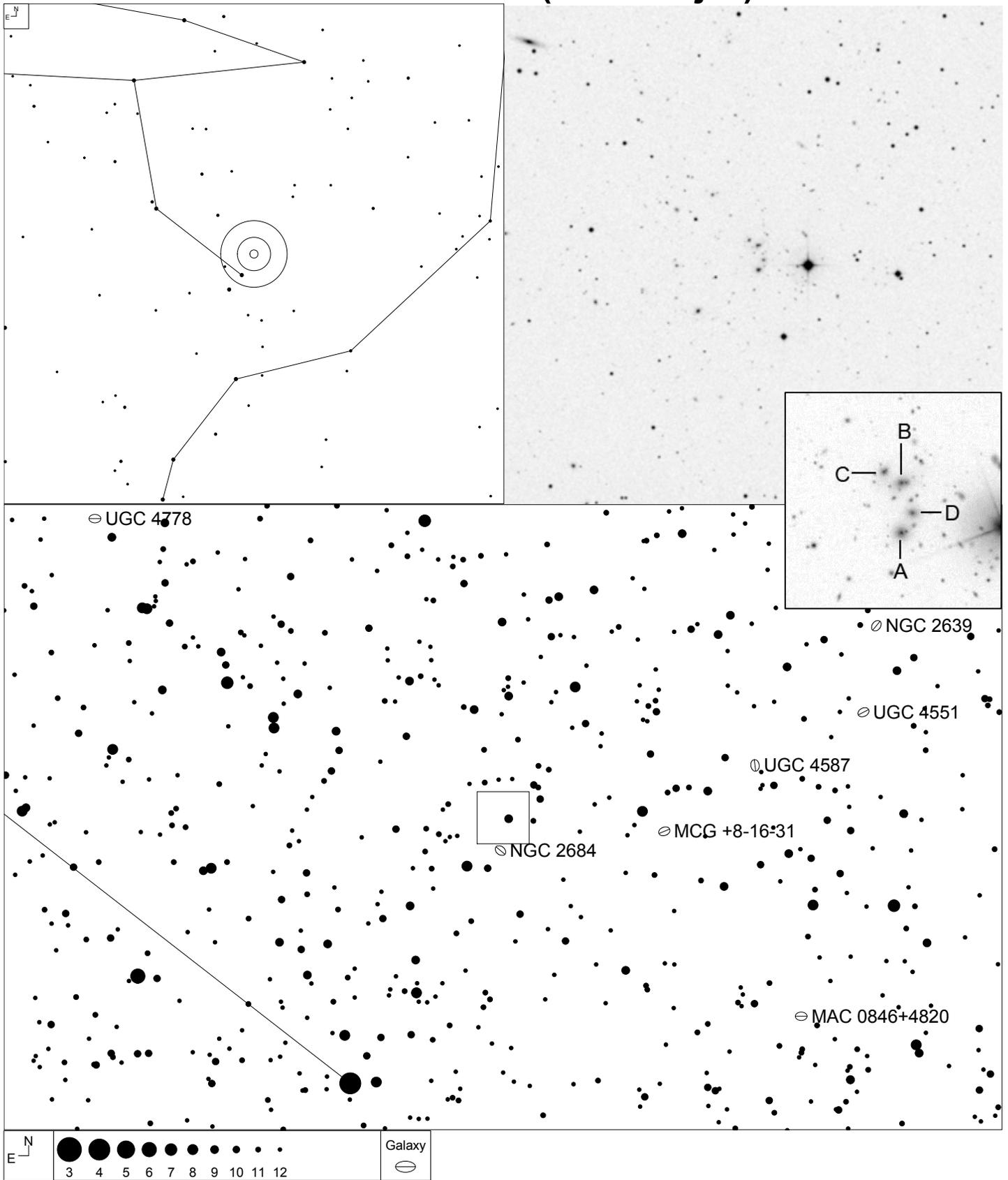
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0904+4523	09 04 26.79	+45 23 47.26	31.1	16.28	1.618

PCG 0915+2130 (Cancer)



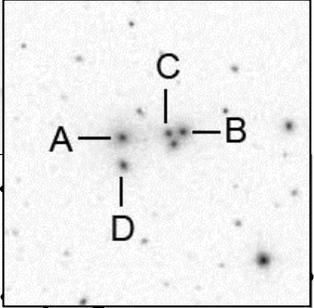
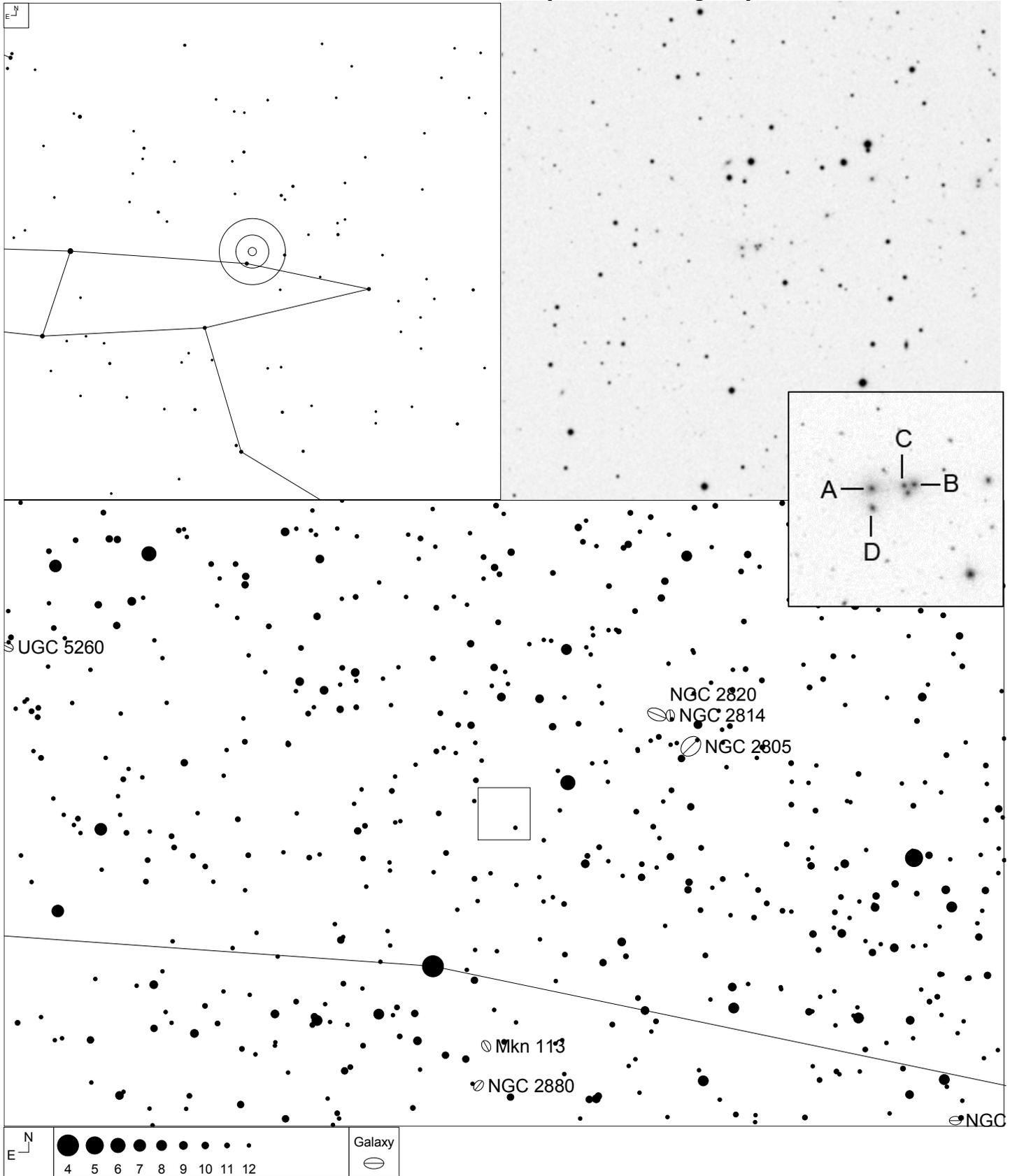
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0915+2130	09 15 24.57	+21 30 38.81	32.4	15.81	1.011

PCG 0854+4919 (Ursa Major)



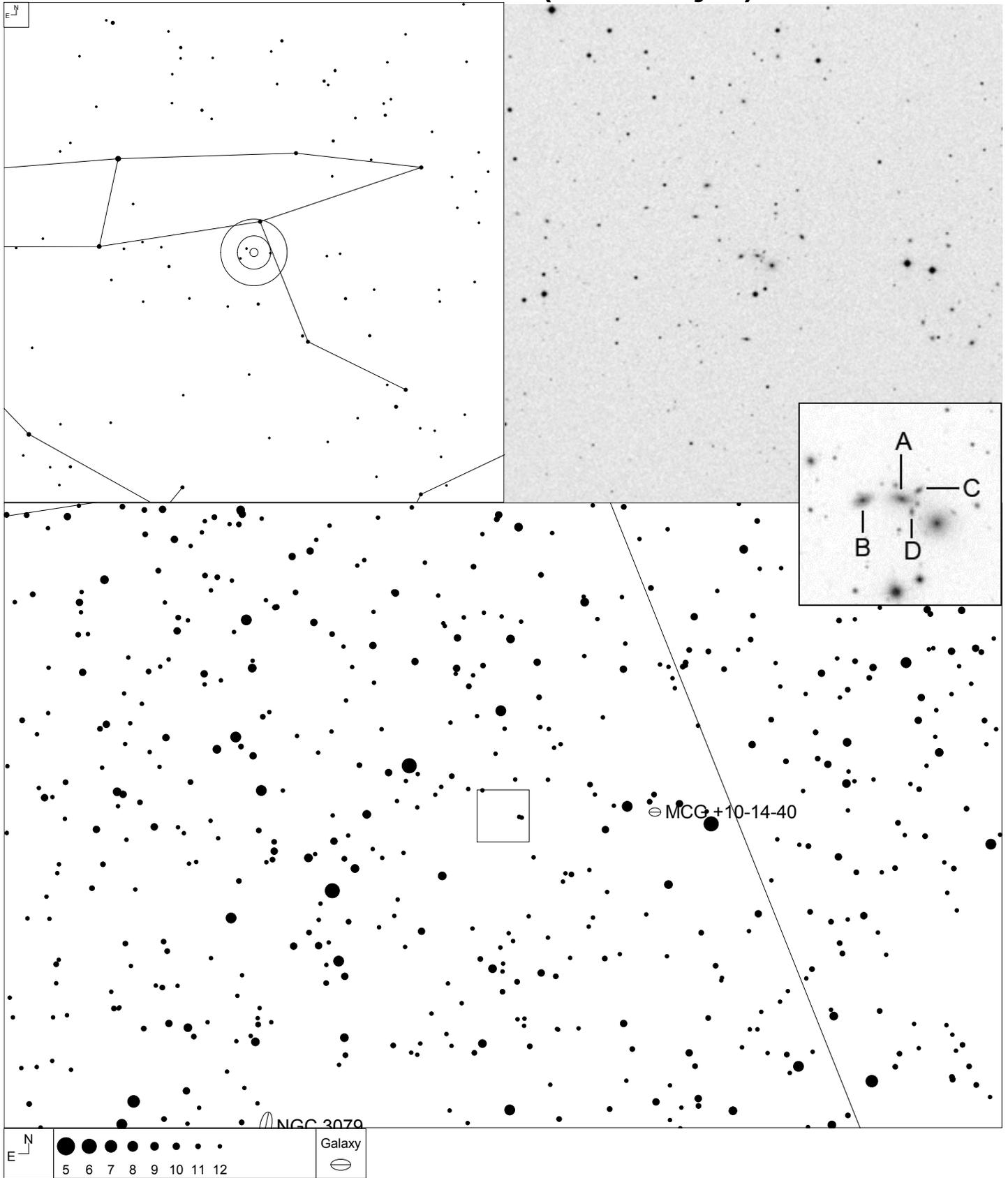
PCG	RA	Dec	Size	Mag	Δmag
PCG 0854+4919	08 54 49.18	+49 19 11.93	46.8	15.27	1.119

PCG 0928+6347 (Ursa Major)



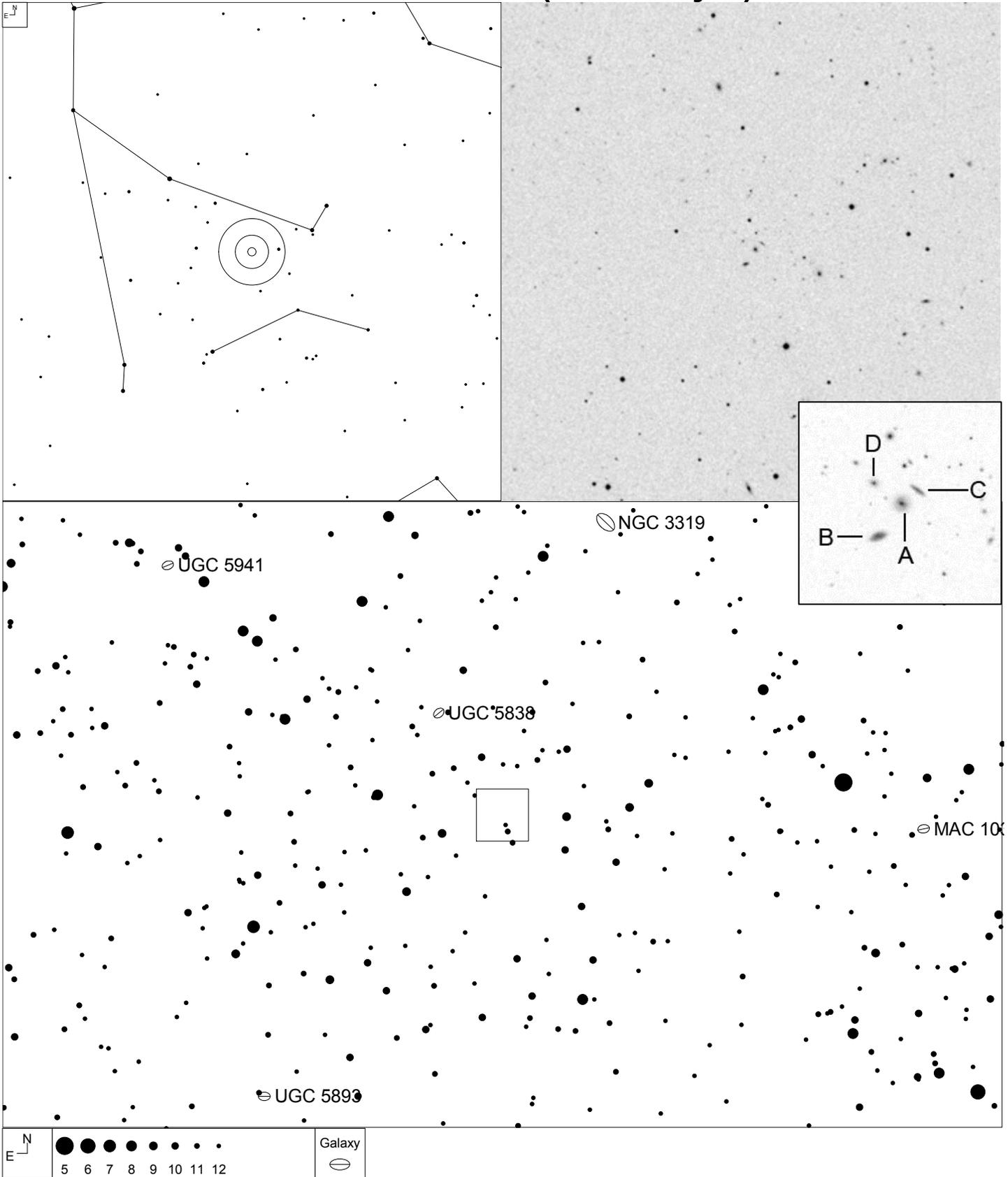
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0928+6347	09 28 31.26	+63 47 36.10	30.1	15.27	0.977

PCG 0953+5710 (Ursa Major)



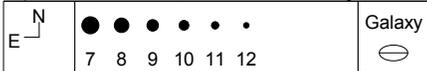
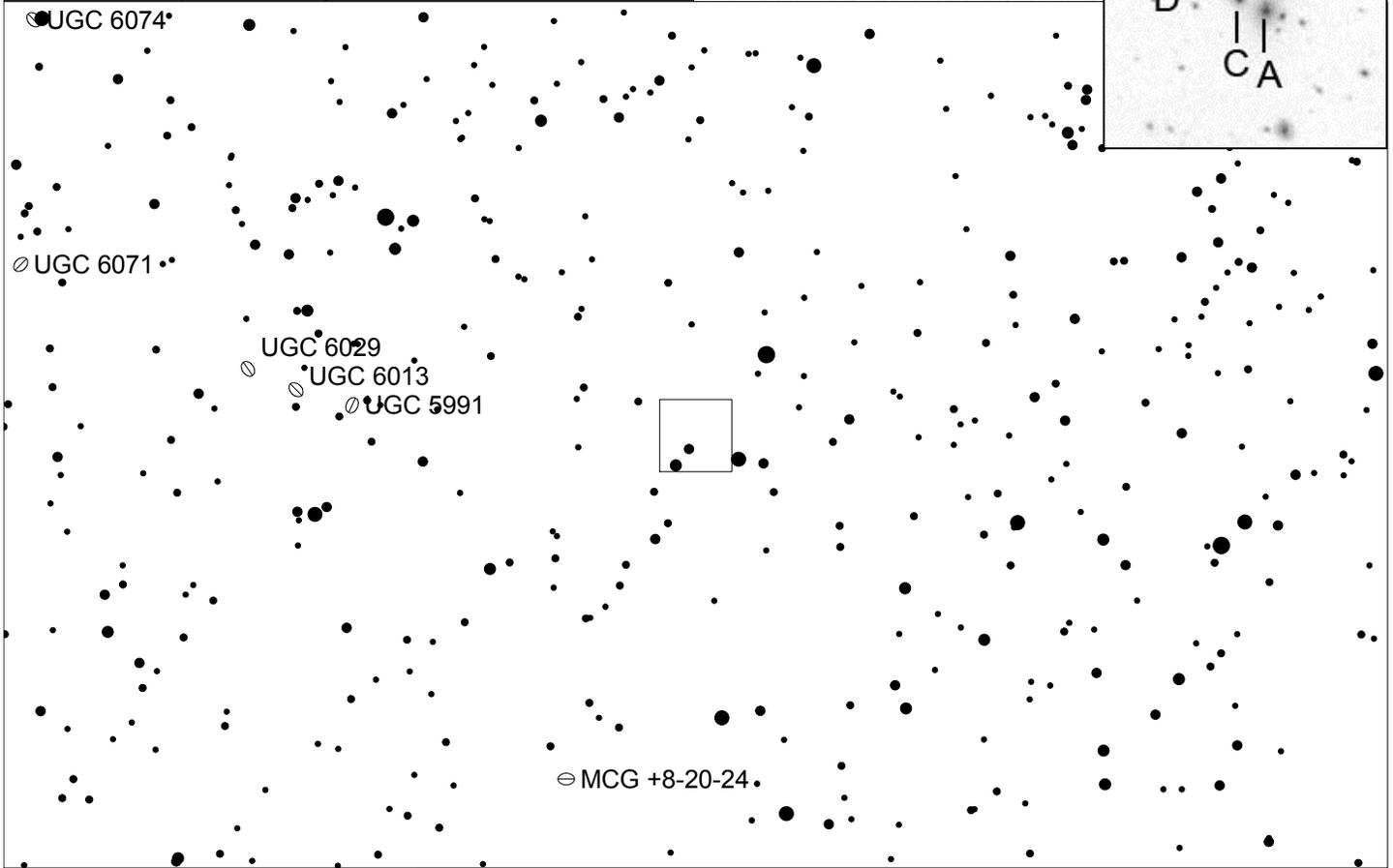
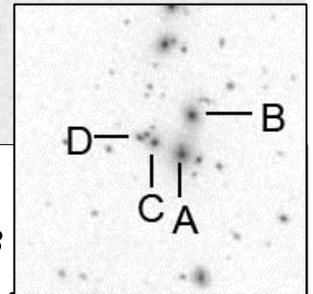
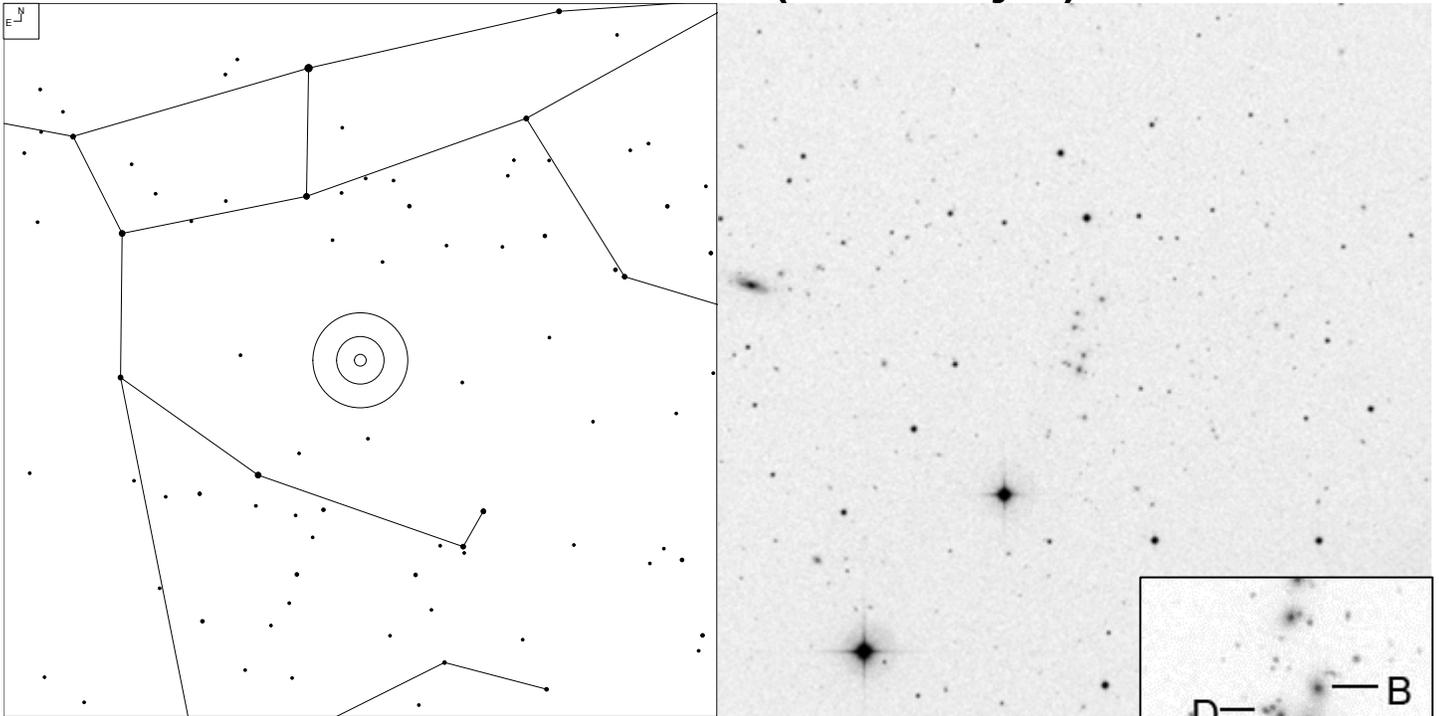
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0953+5710	09 53 52.68	+57 10 47.31	35.0	15.43	1.842

PCG 1041+4017 (Ursa Major)



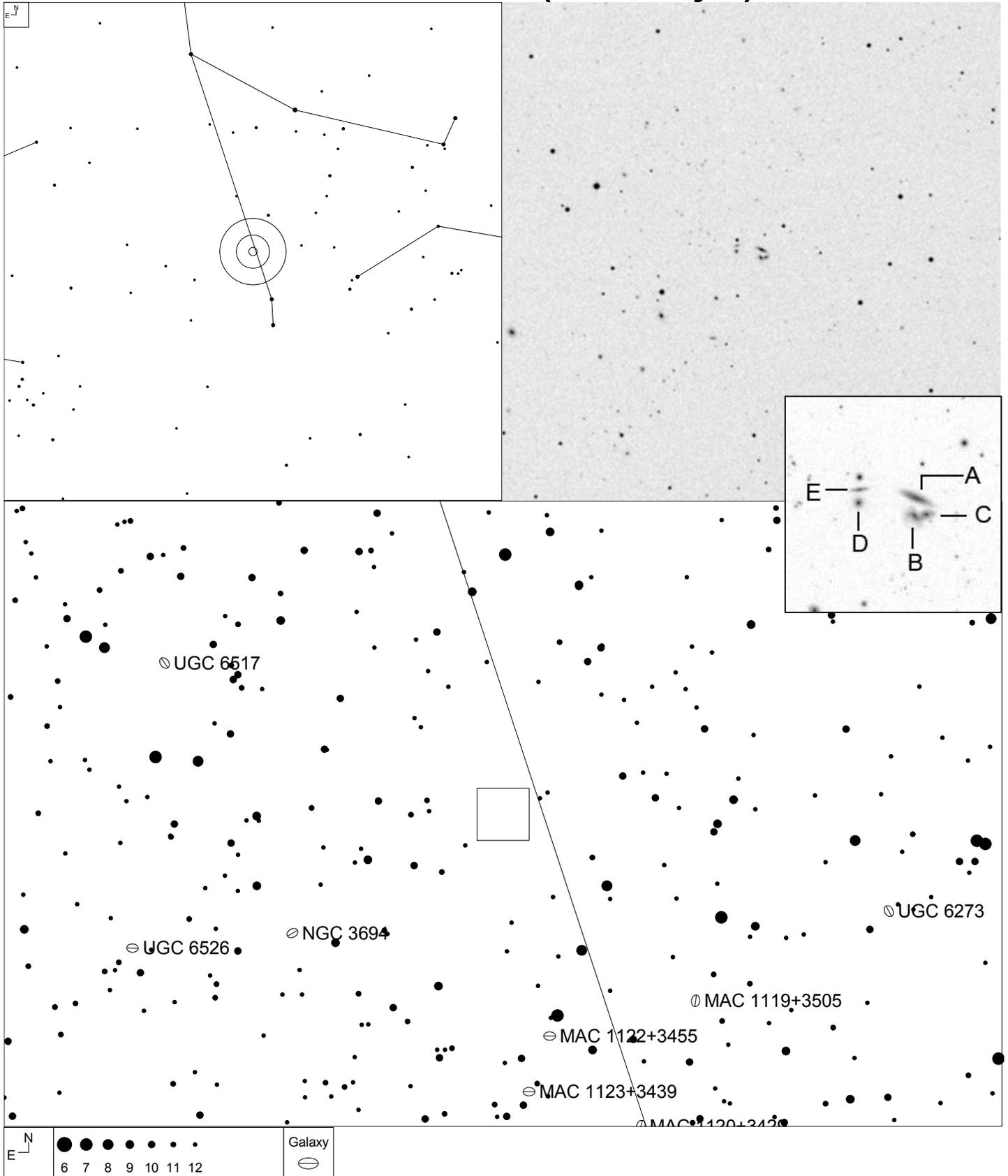
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1041+4017	10 41 48.68	+40 17 17.23	40.8	15.72	1.406

PCG 1045+4931 (Ursa Major)



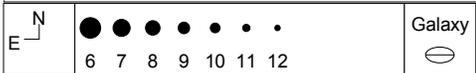
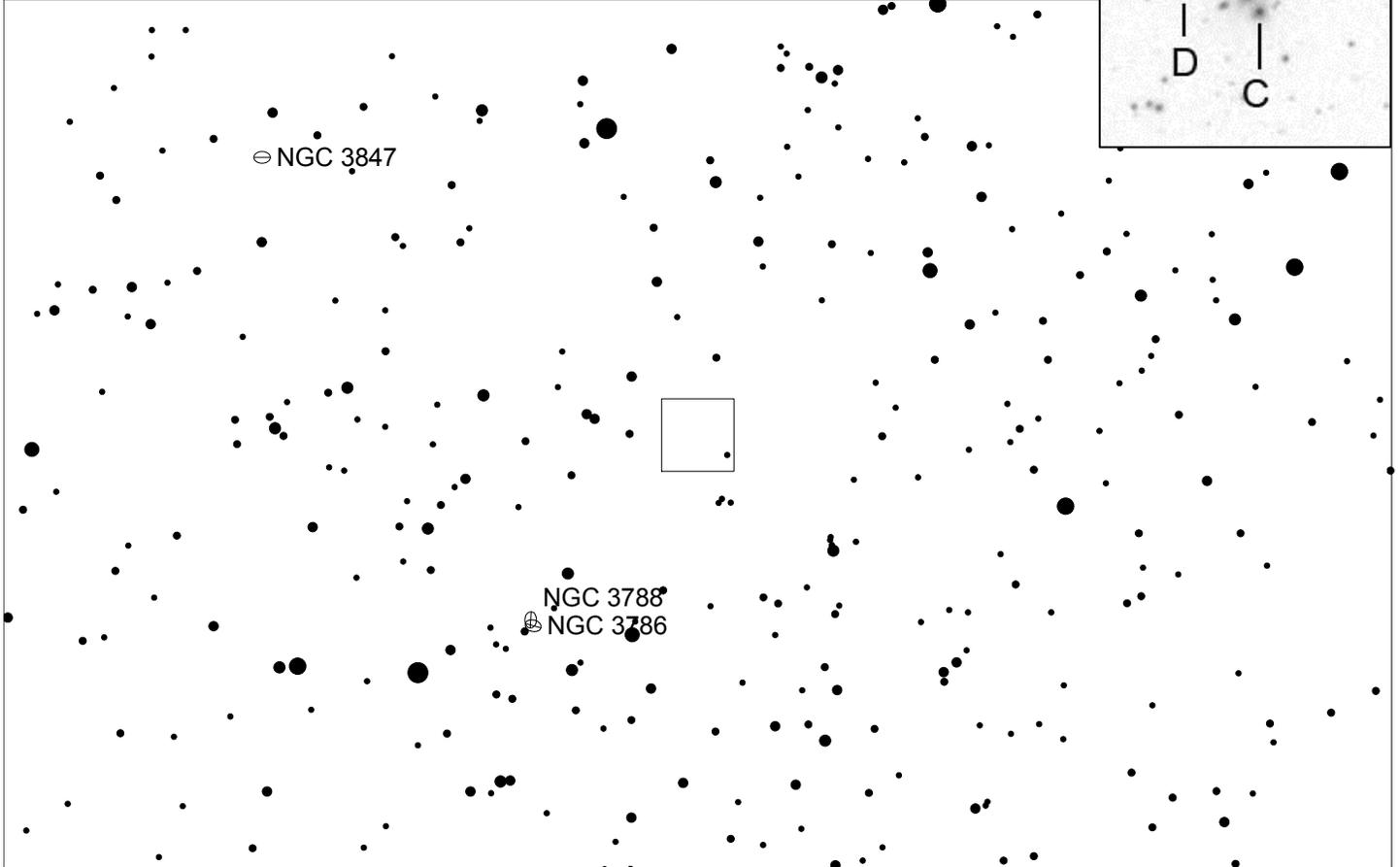
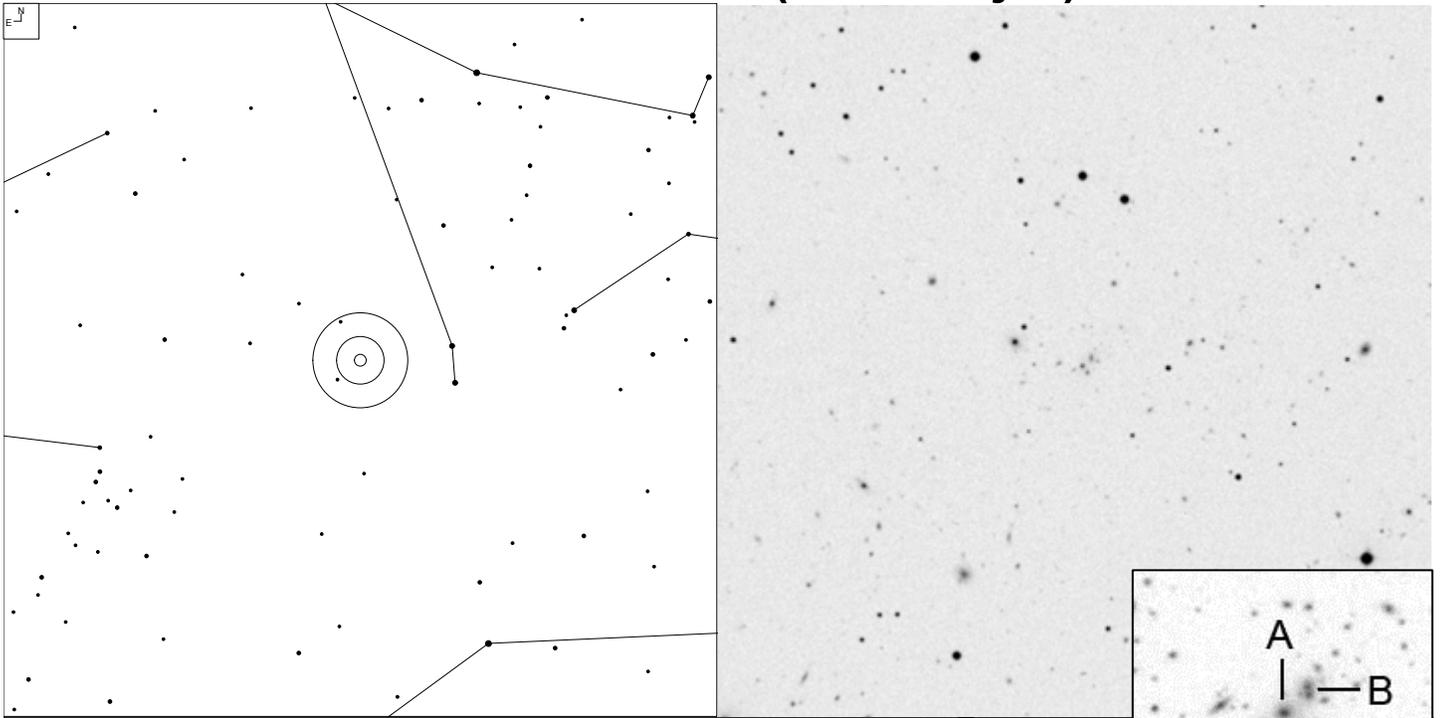
PCG	RA	Dec	Size	Mag	Δmag
PCG 1045+4931	10 45 27.36	+49 31 18.55	21.5	15.61	1.595

PCG 1123+3559 (Ursa Major)



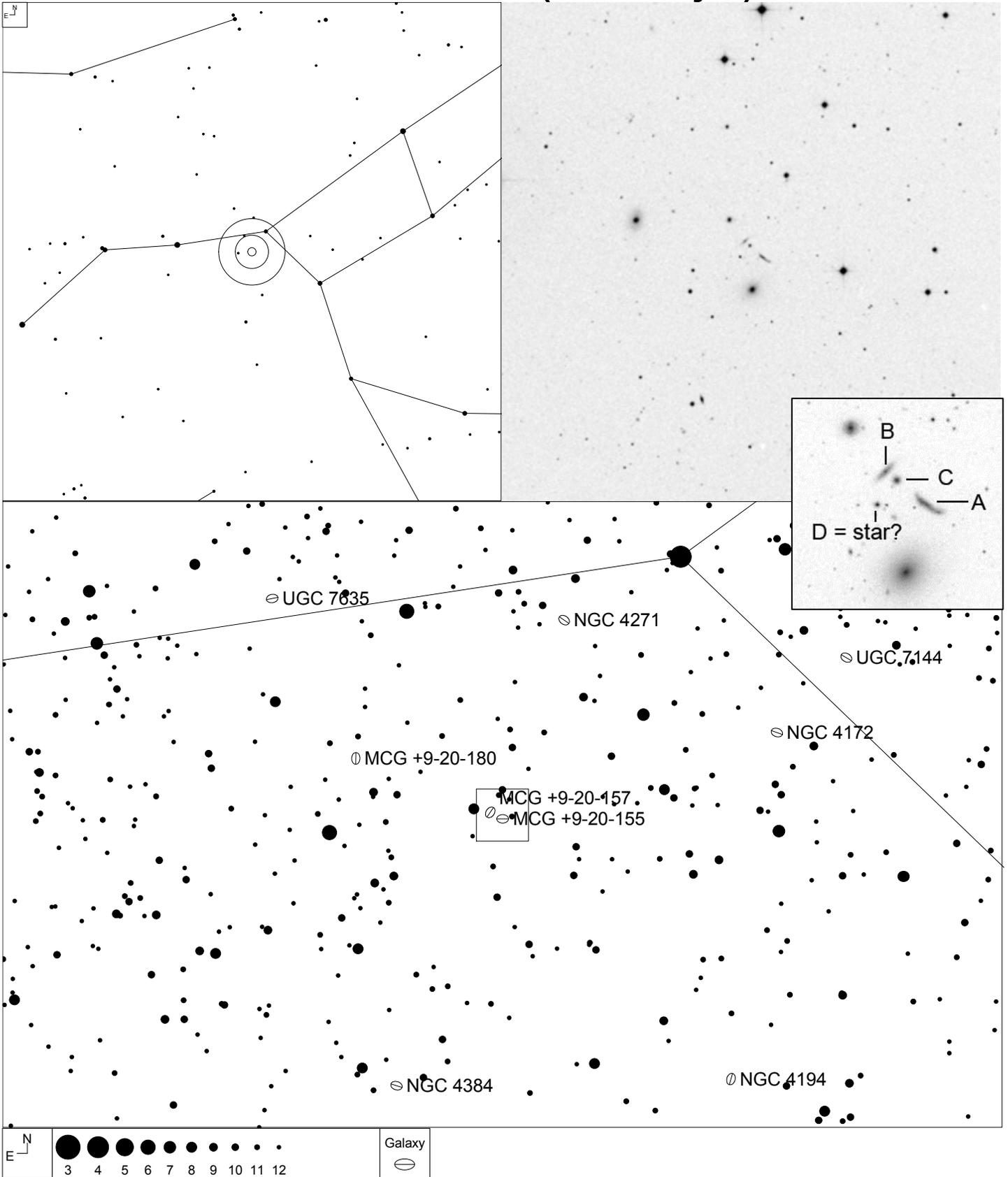
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1123+3559	11 23 56.63	+35 59 24.86	47.0	15.14	1.915

PCG 1137+3234 (Ursa Major)



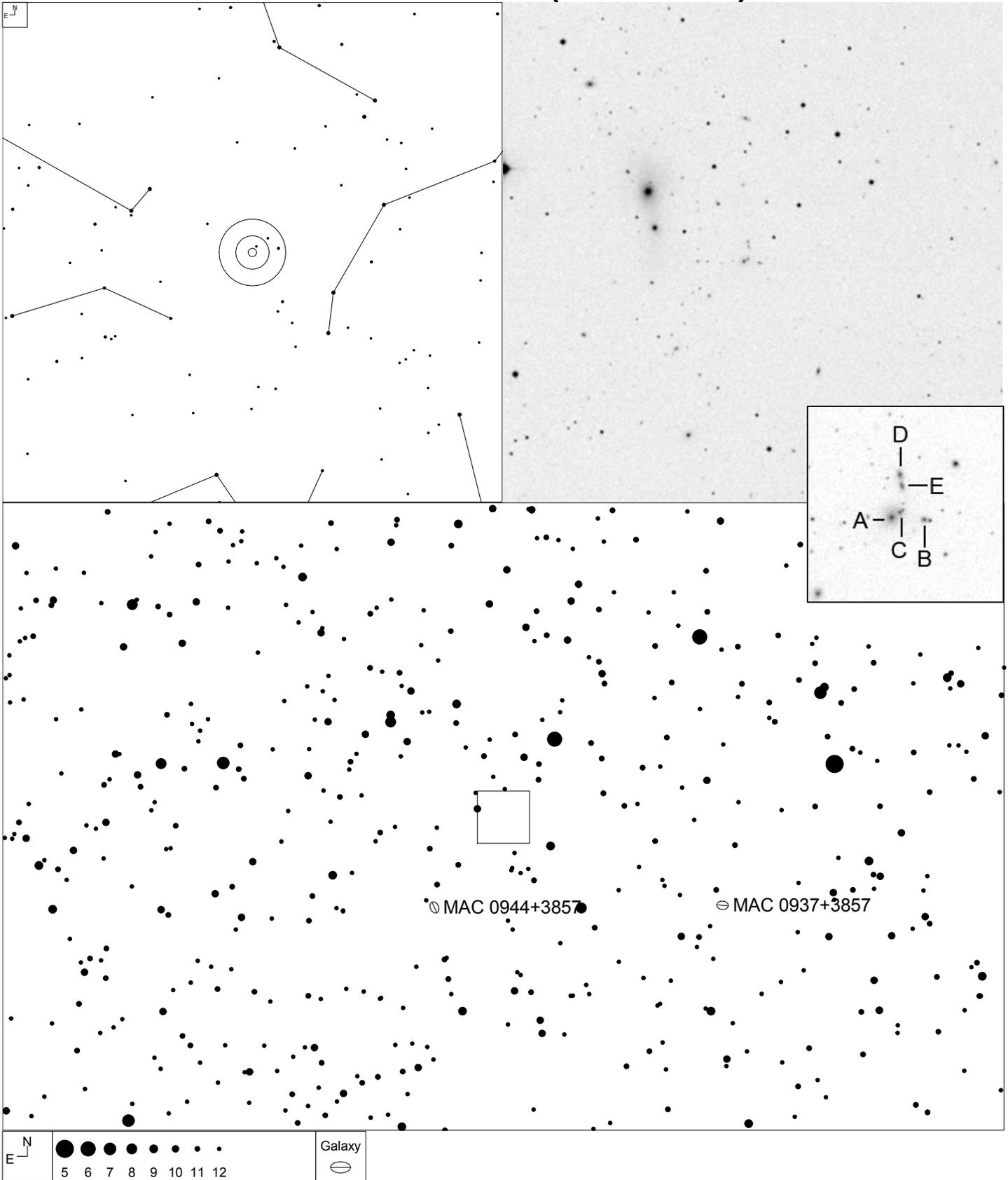
PCG	RA	Dec	Size	Mag	Δmag
PCG 1137+3234	11 37 01.72	+32 34 12.47	34.7	15.65	1.056

PCG 1221+5548 (Ursa Major)



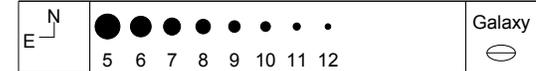
PCG	RA	Dec	Size	Mag	Δmag
PCG 1221+5548	12 21 42.14	+55 48 21.60	37.3	15.4	1.24

PCG 0943+3923 (Leo Minor)



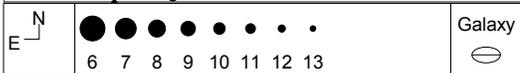
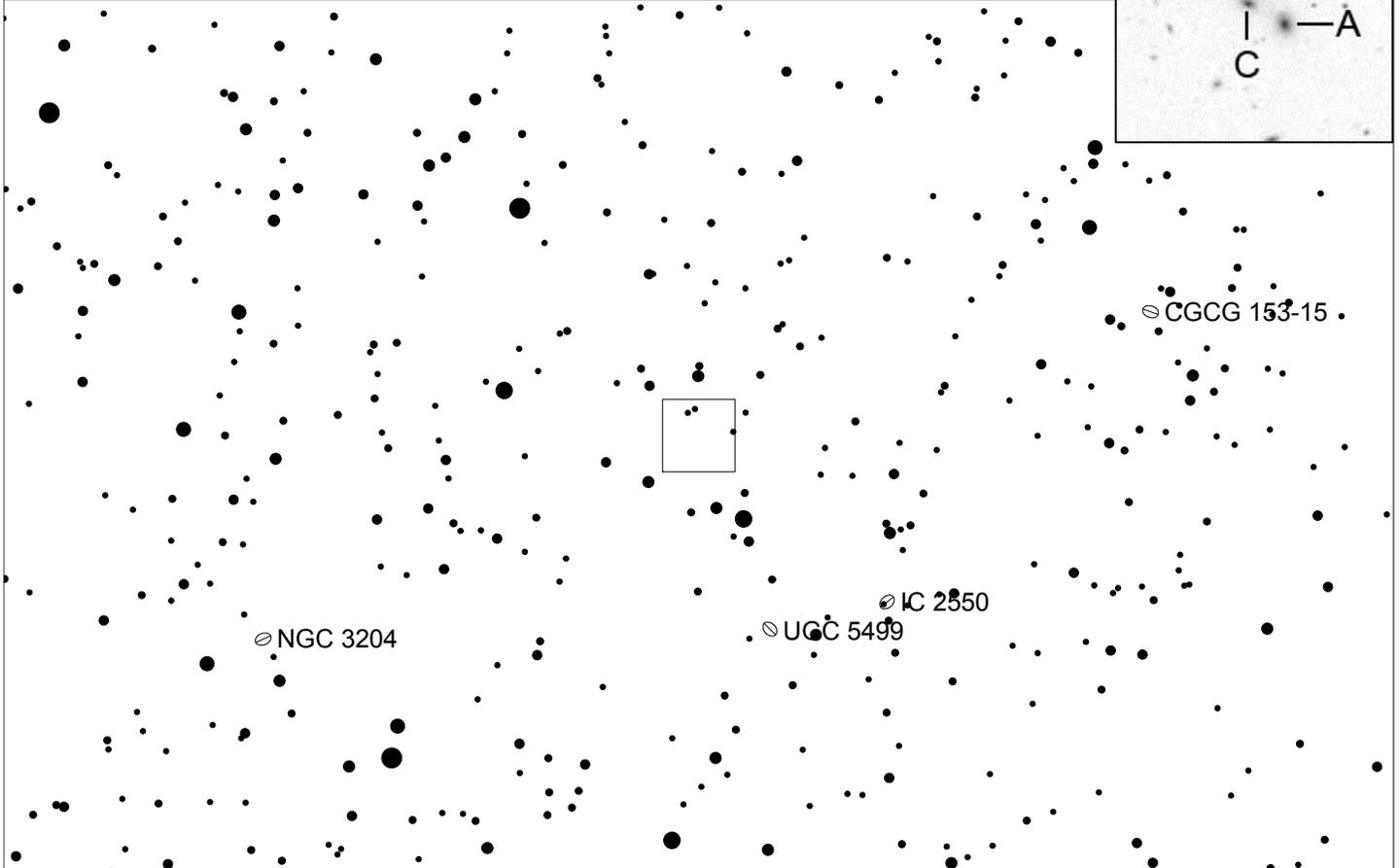
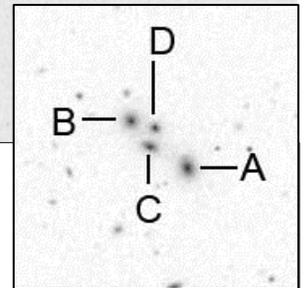
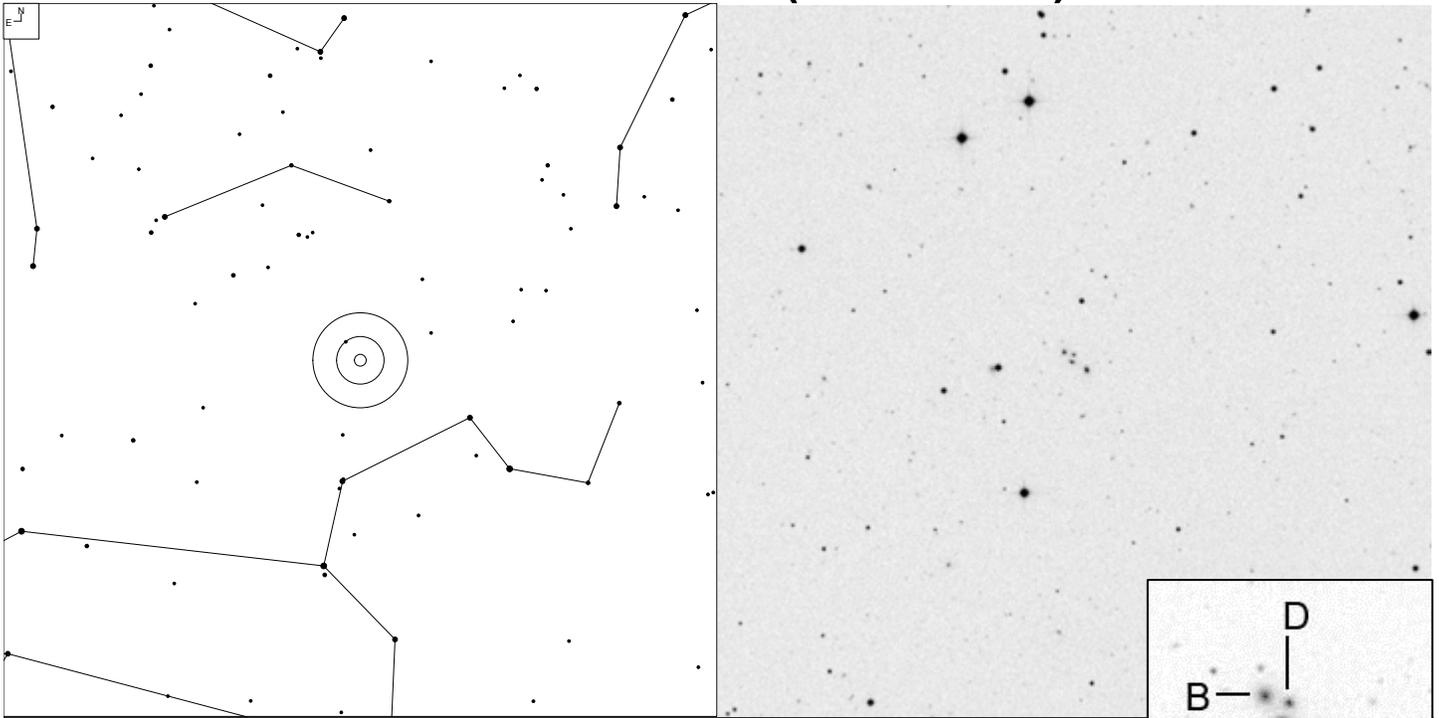
☉ MAC 0944+3857

☉ MAC 0937+3857



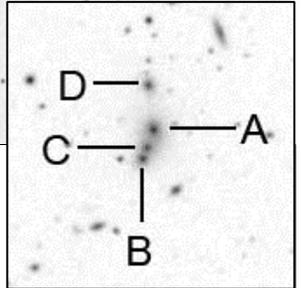
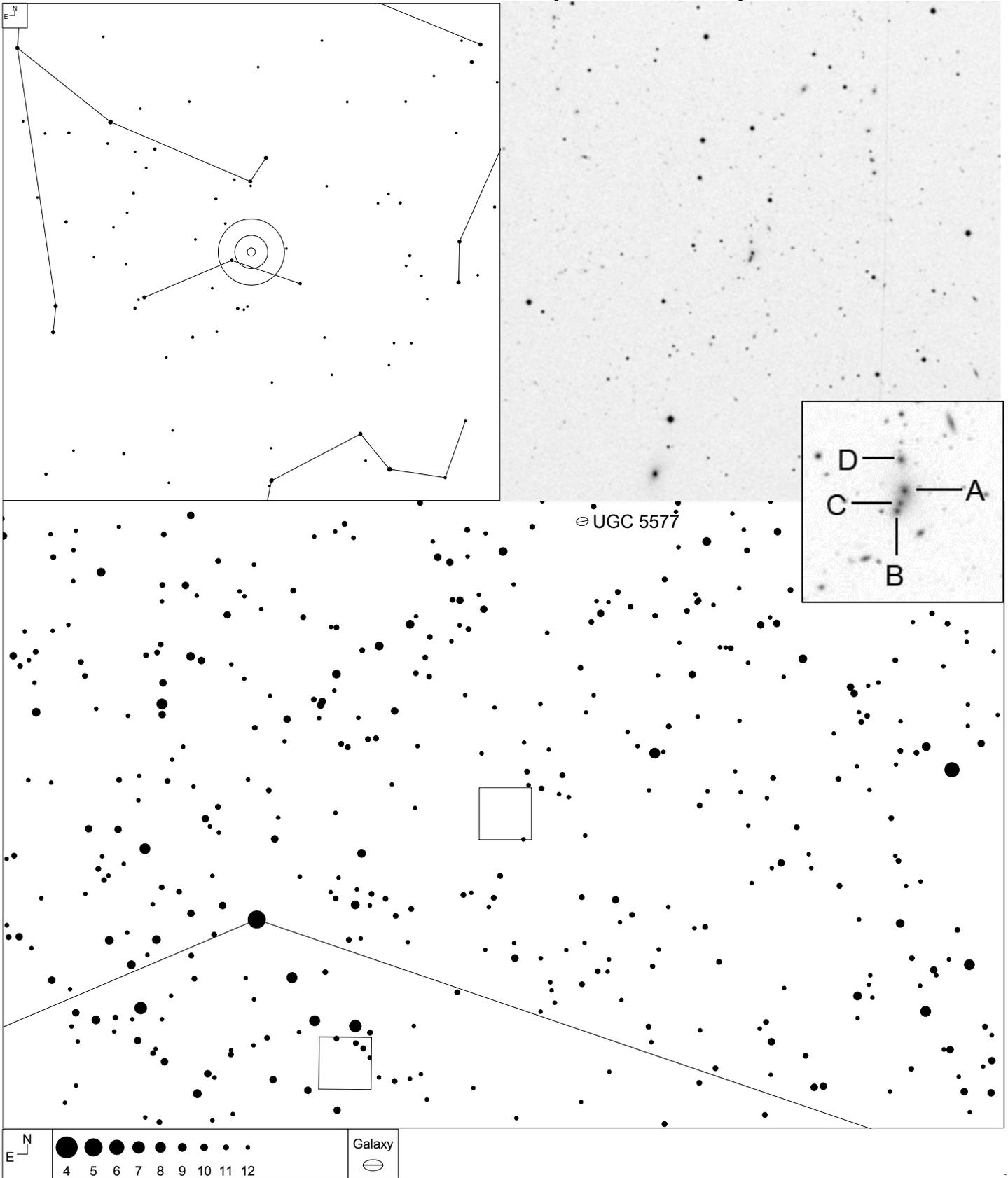
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0943+3923	09 43 16.67	+39 23 08.41	36.6	16.05	1.402

PCG 1013+2831 (Leo Minor)

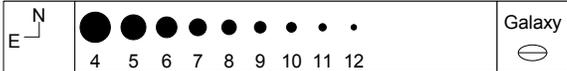


PCG	RA	Dec	Size	Mag	Δ mag
PCG 1013+2831	10 13 24.71	+28 31 47.06	29.5	15.55	1.1

PCG 1021+3713 (Leo Minor)

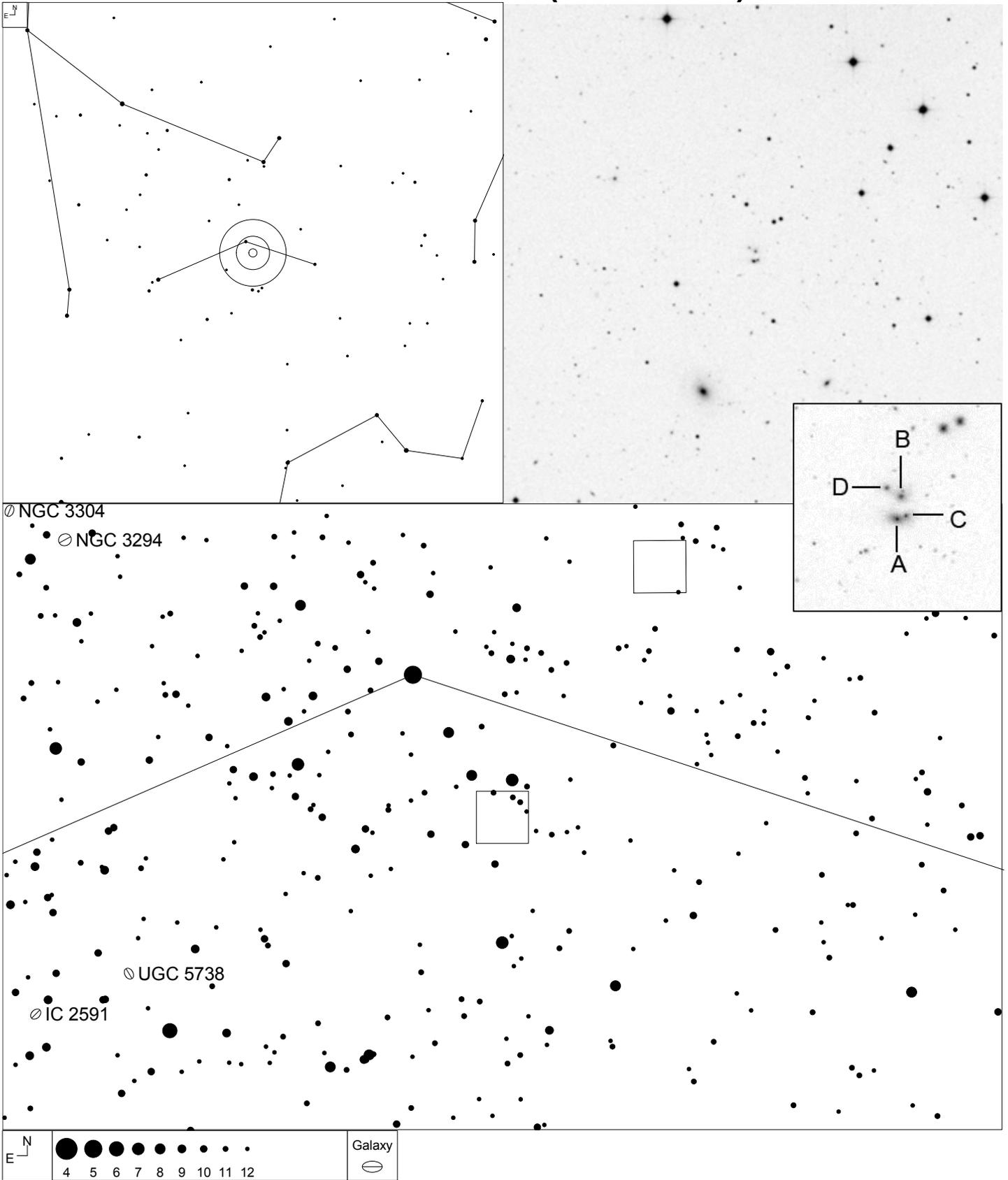


e UGC 5577



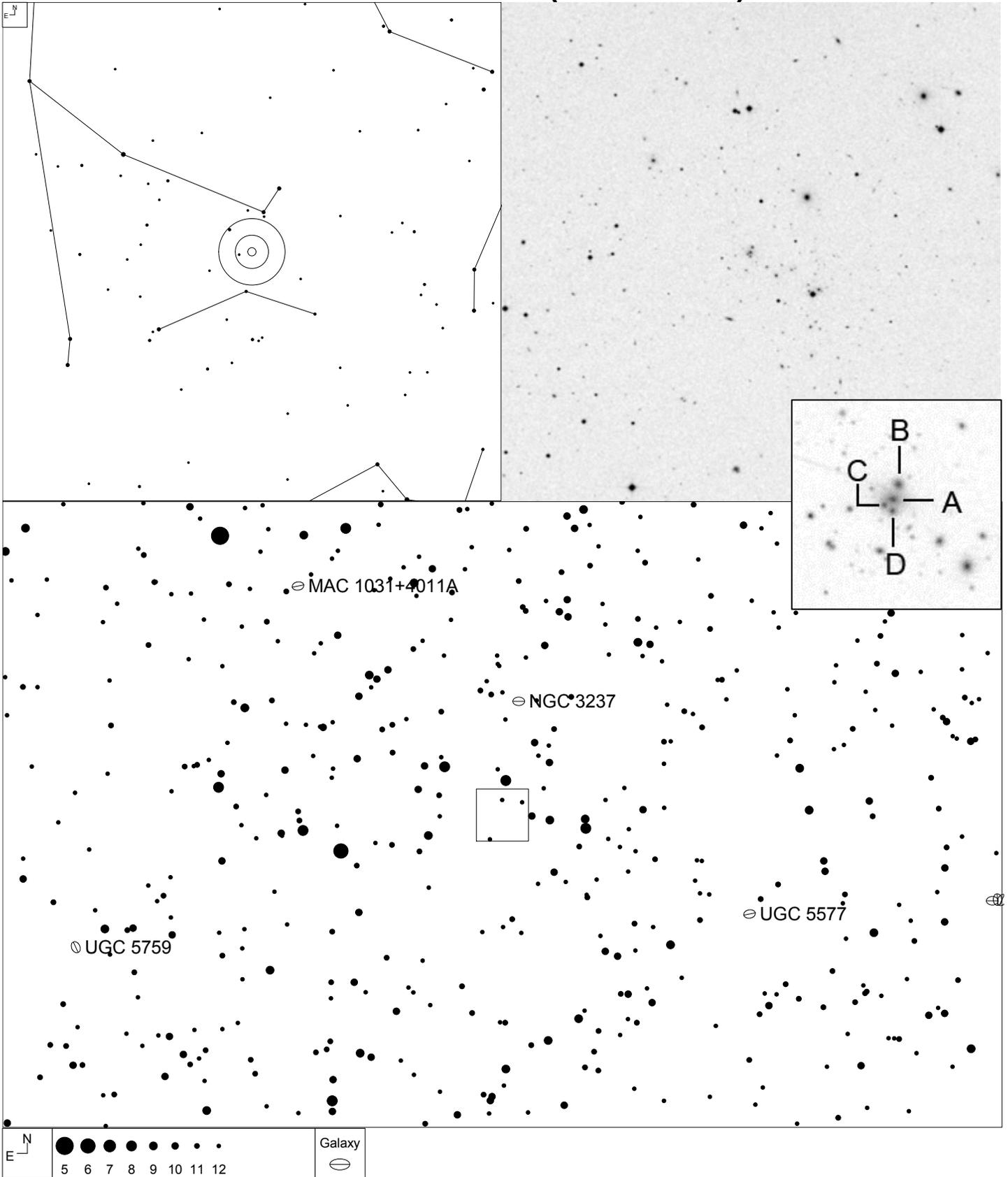
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1021+3713	10 21 57.32	+37 13 20.49	27.7	15.76	1.123

PCG 1025+3601 (Leo Minor)



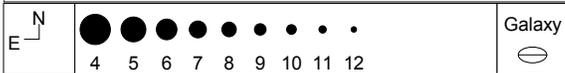
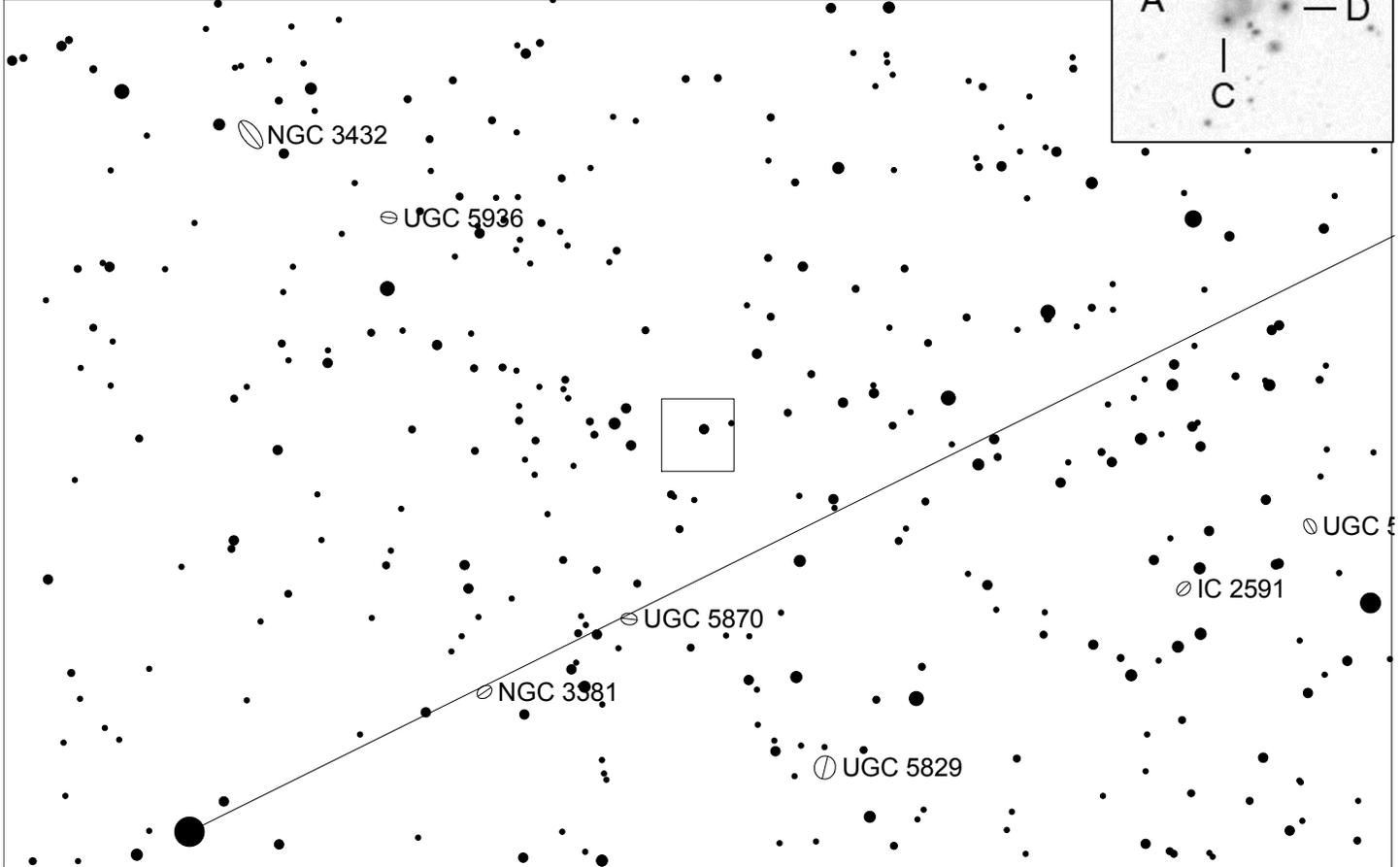
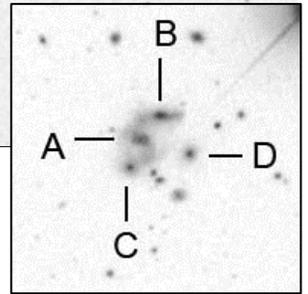
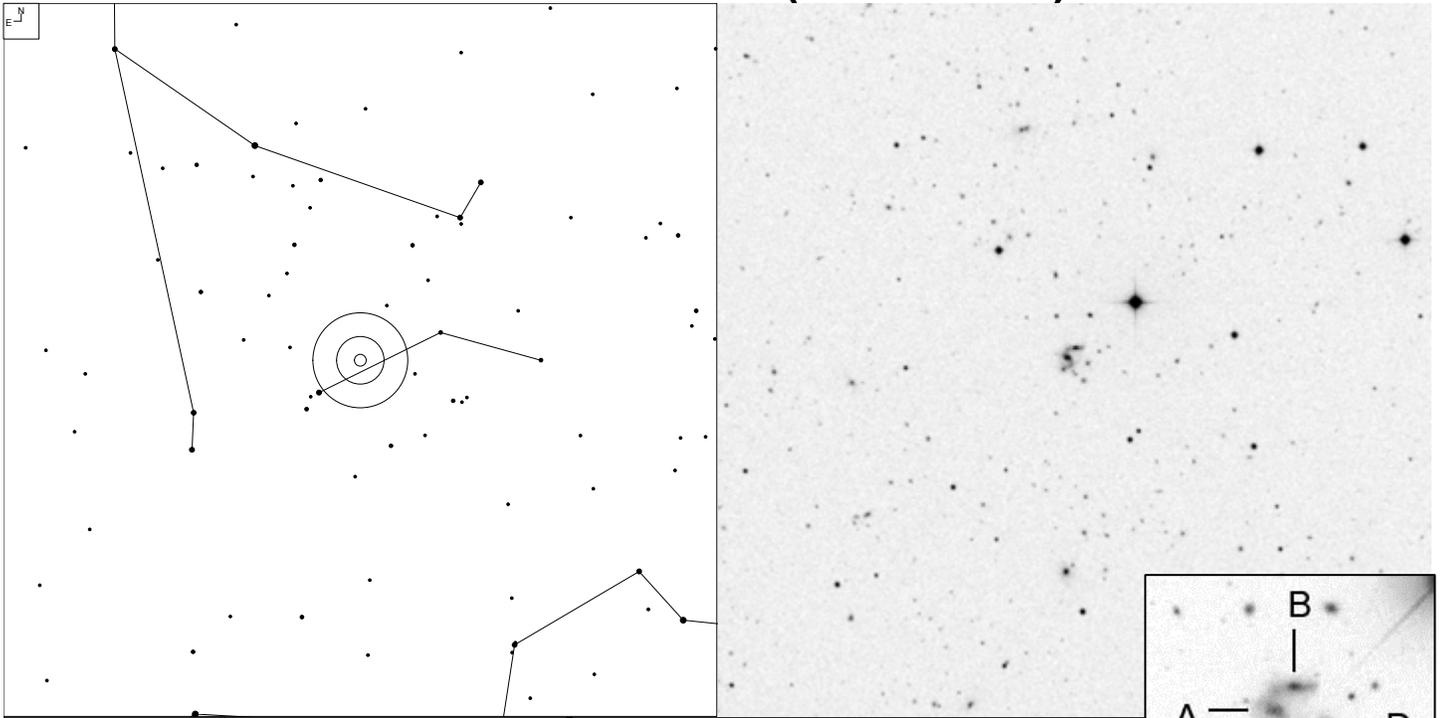
PCG	RA	Dec	Size	Mag	Δmag
PCG 1025+3601	10 25 44.54	+36 01 34.78	22.0	15.59	1.847

PCG 1026+3906 (Leo Minor)



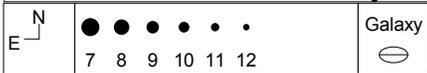
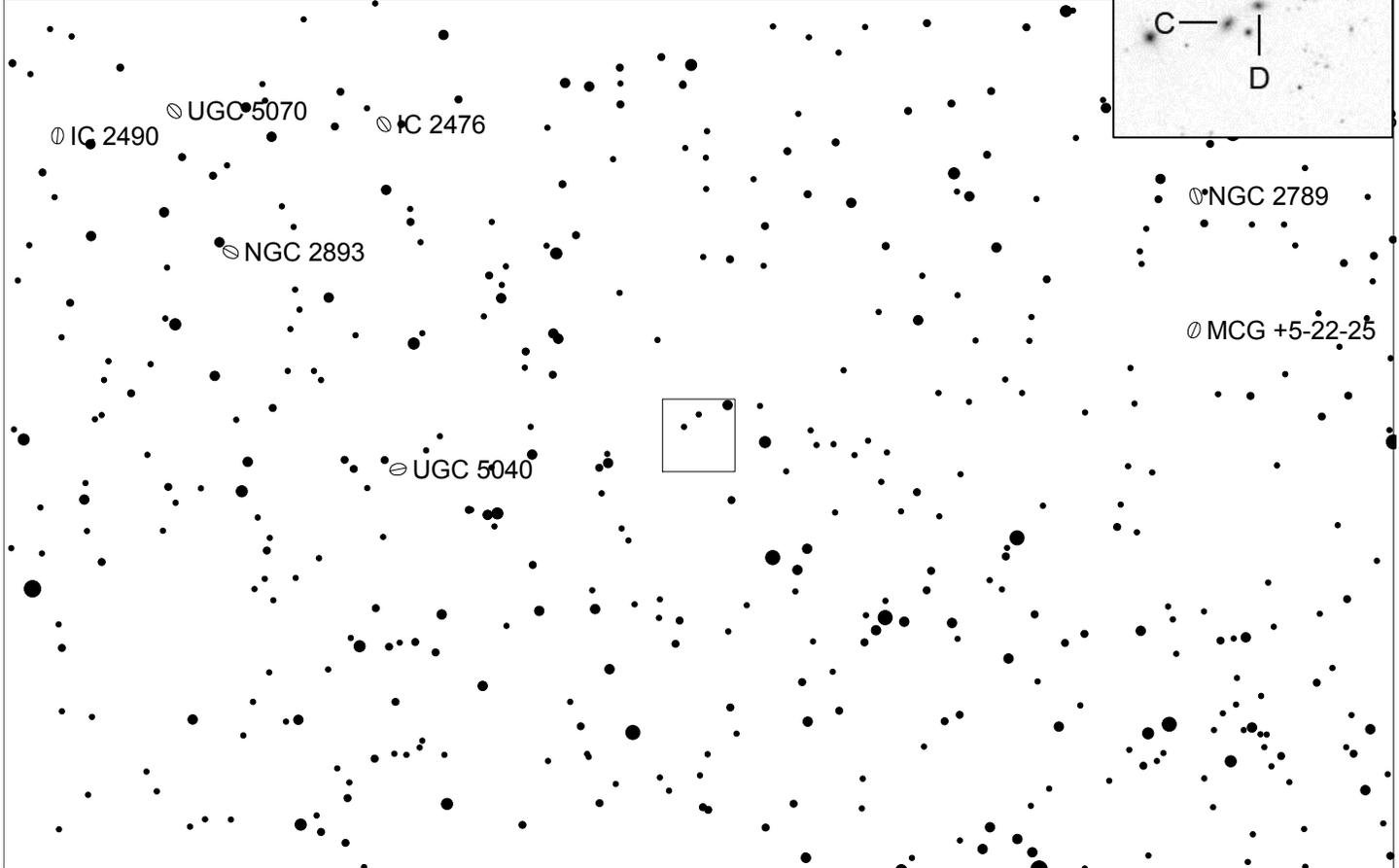
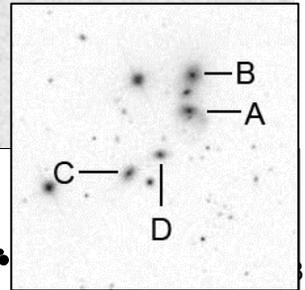
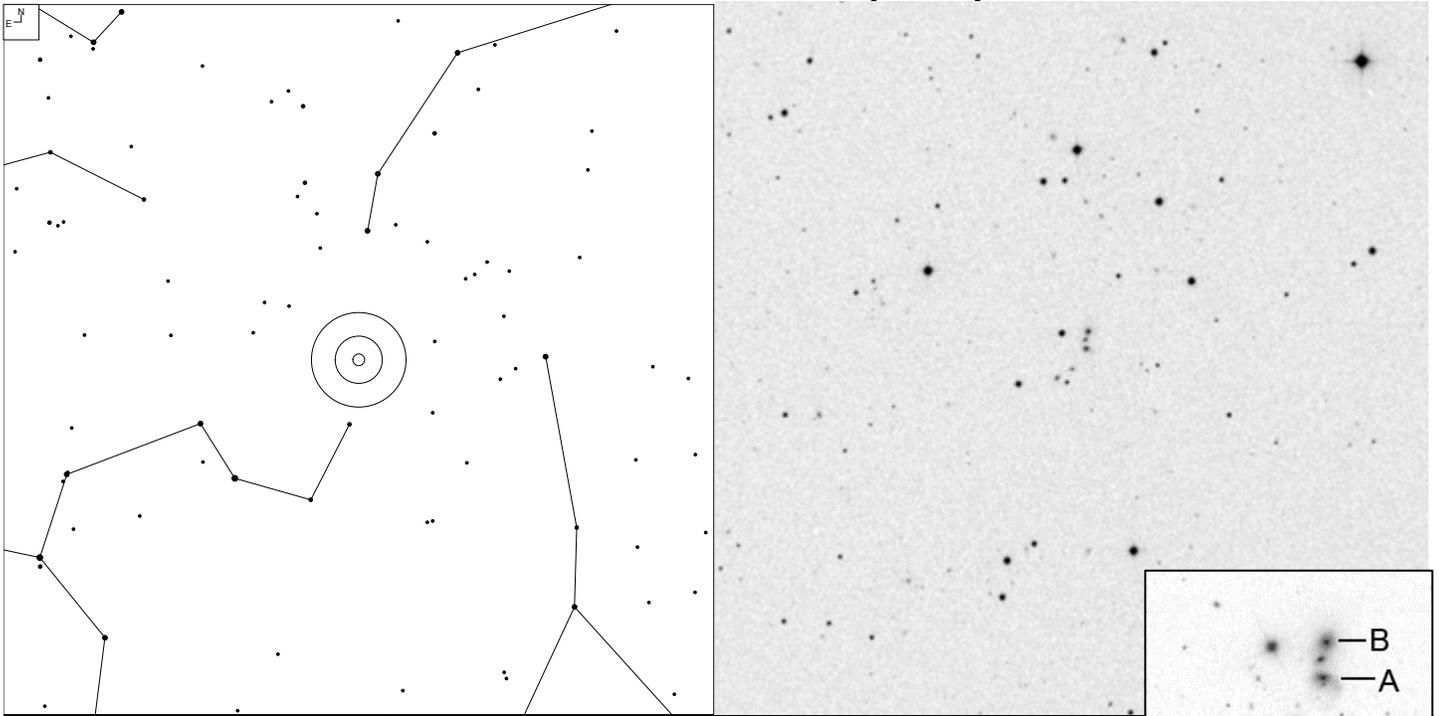
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1026+3906	10 26 07.76	+39 06 06.37	13.5	15.9	1.634

PCG 1044+3536 (Leo Minor)



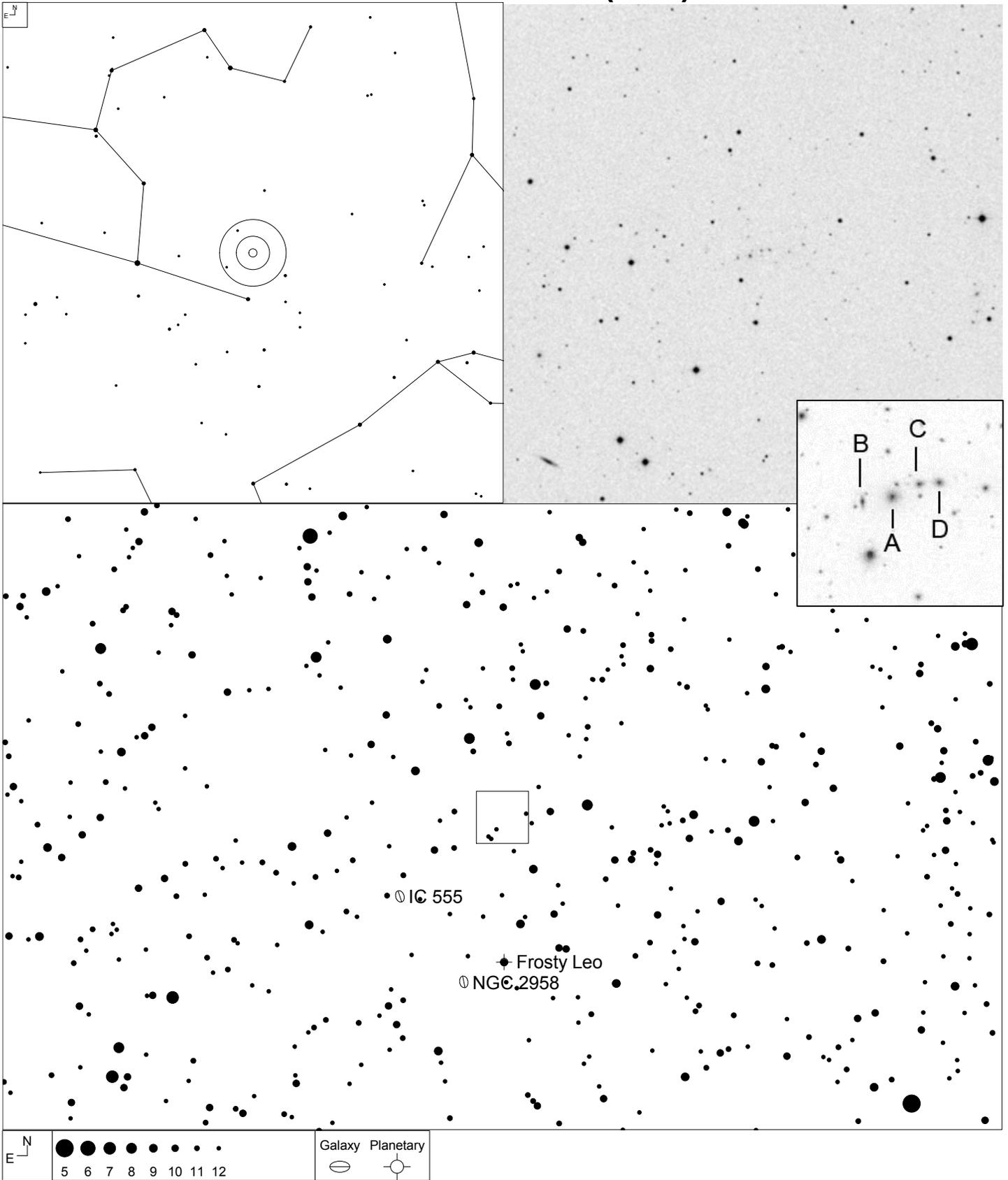
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1044+3536	10 44 50.25	+35 36 01.59	28.3	15	1.726

PCG 0922+2855 (Leo)



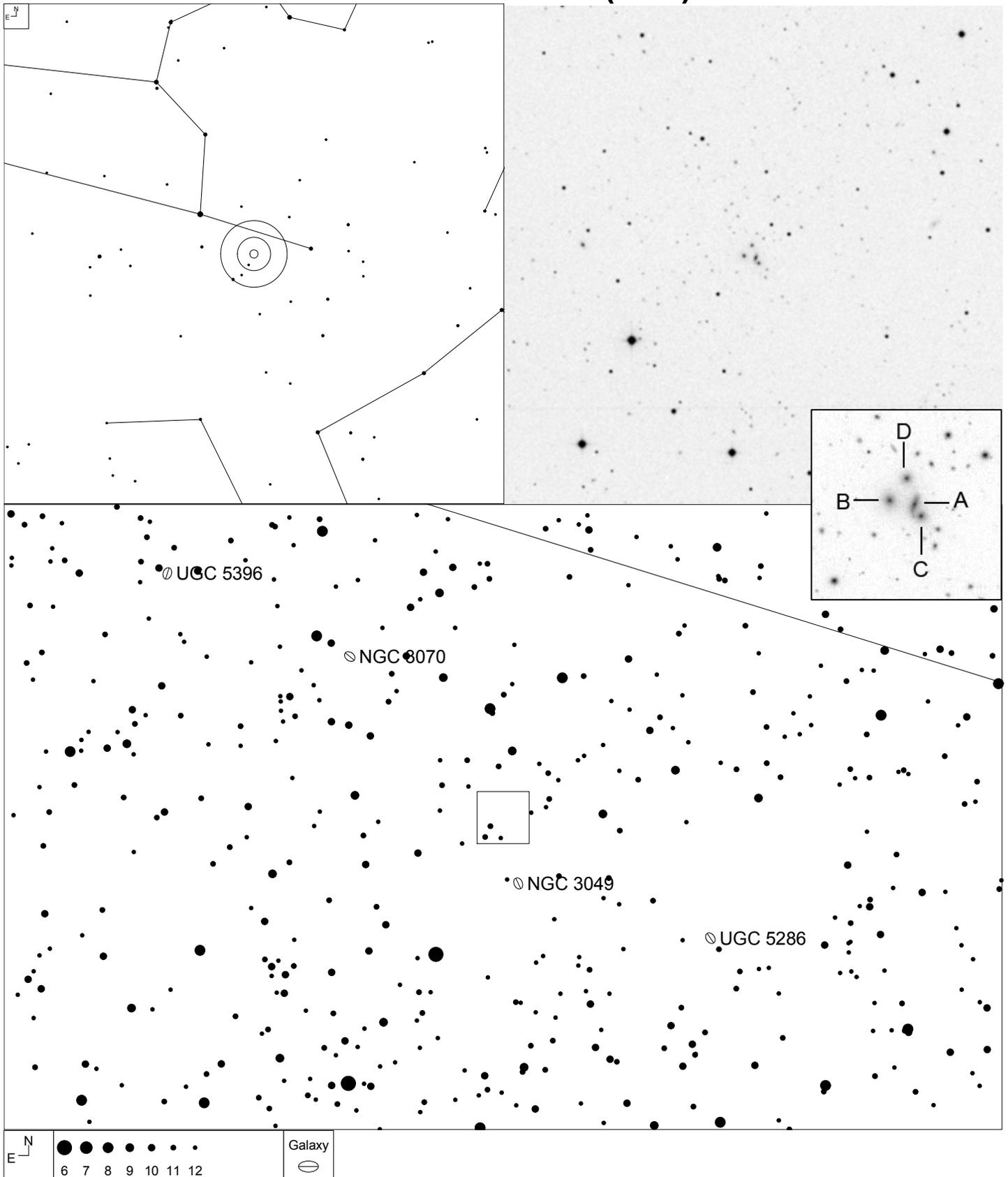
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0922+2855	09 22 52.71	+28 55 18.37	50.0	15.31	1.226

PCG 0939+1240 (Leo)



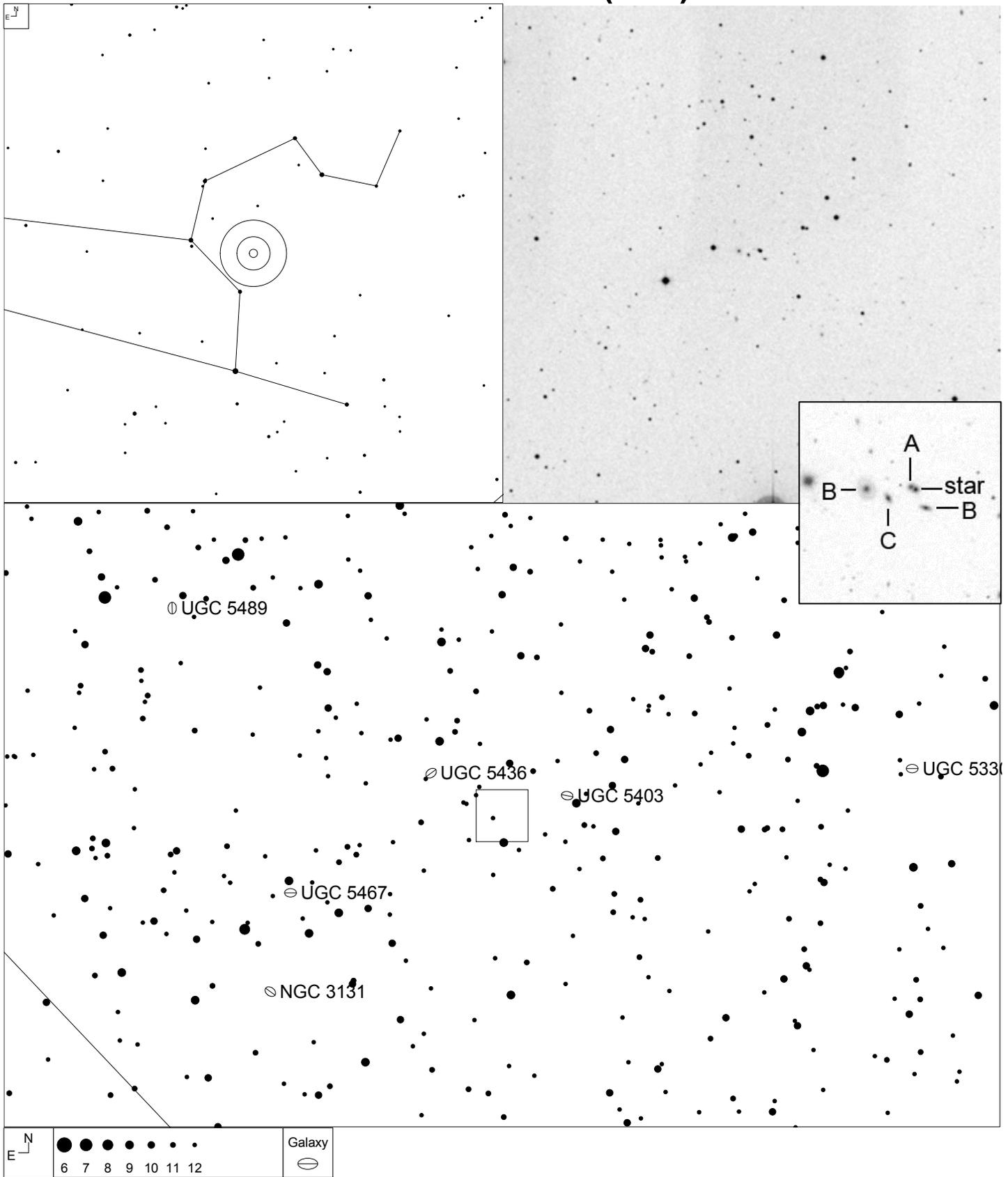
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0939+1240	09 39 56.17	+12 40 37.70	49.1	15.01	0.831

PCG 0955+0935 (Leo)



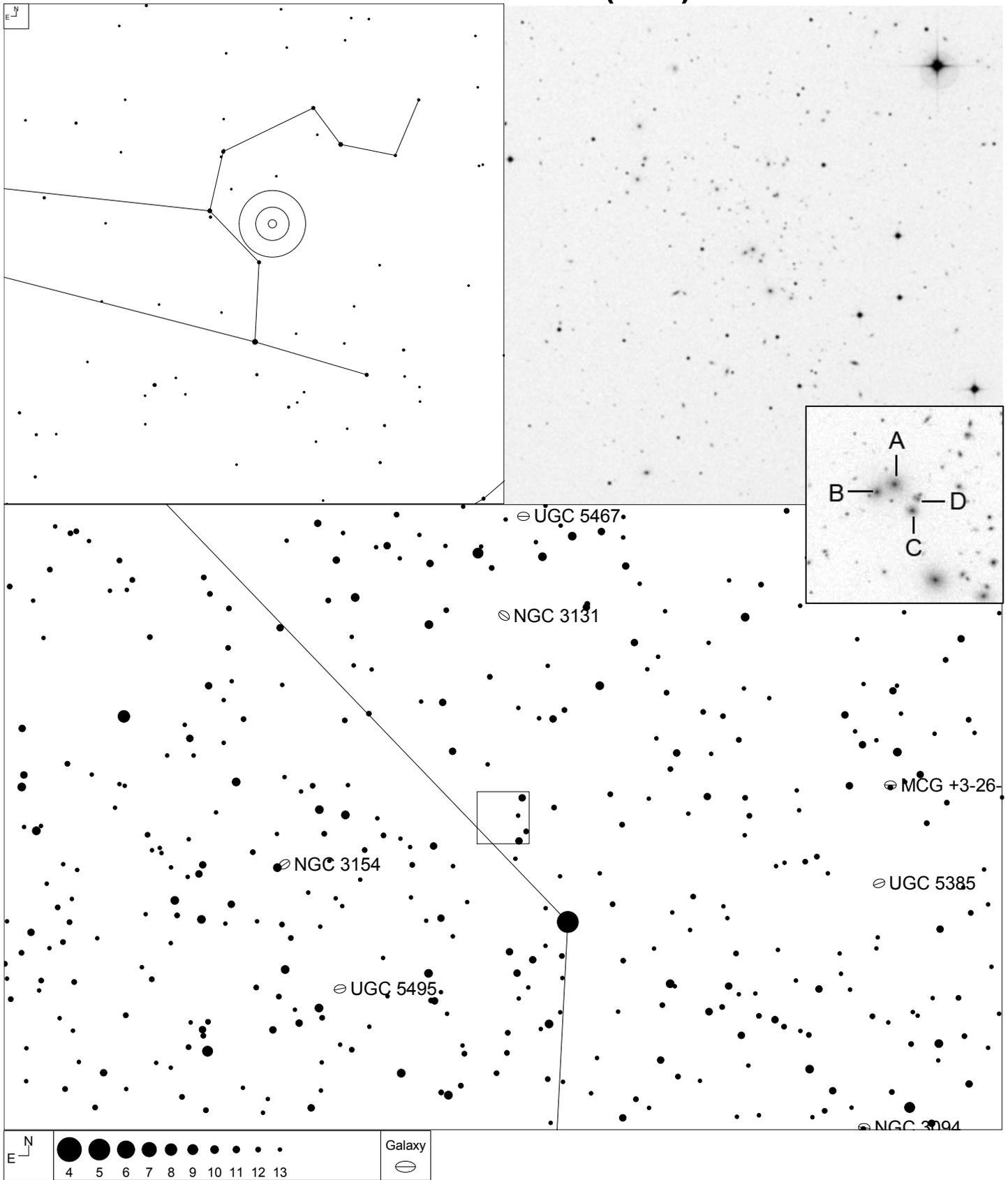
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0955+0935	09 55 07.57	+09 35 20.58	29.0	15.2	0.946

PCG 1003+1904 (Leo)



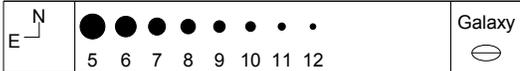
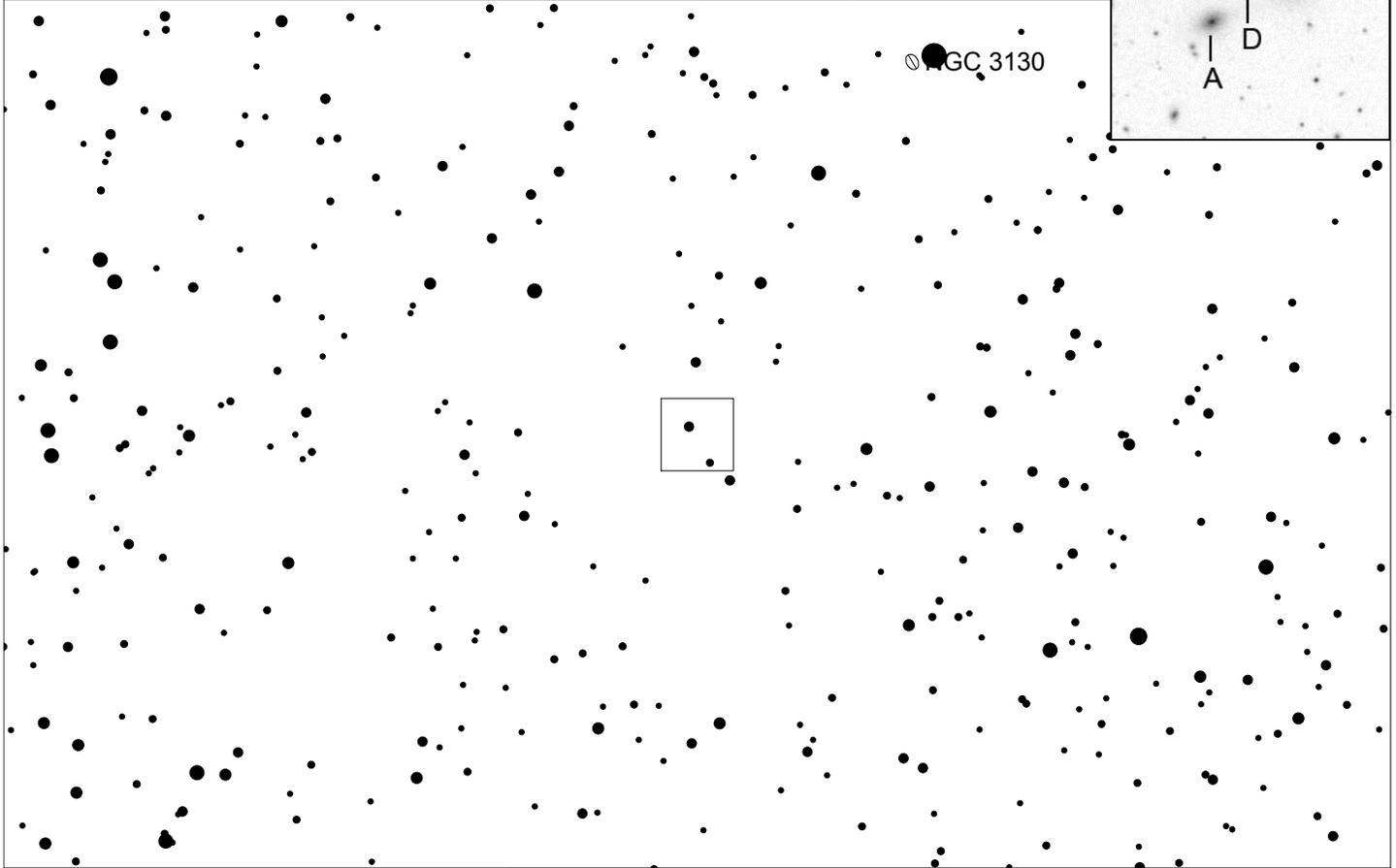
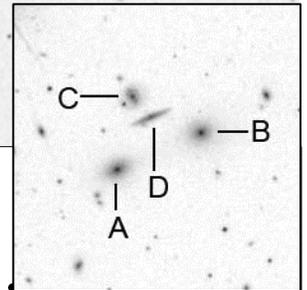
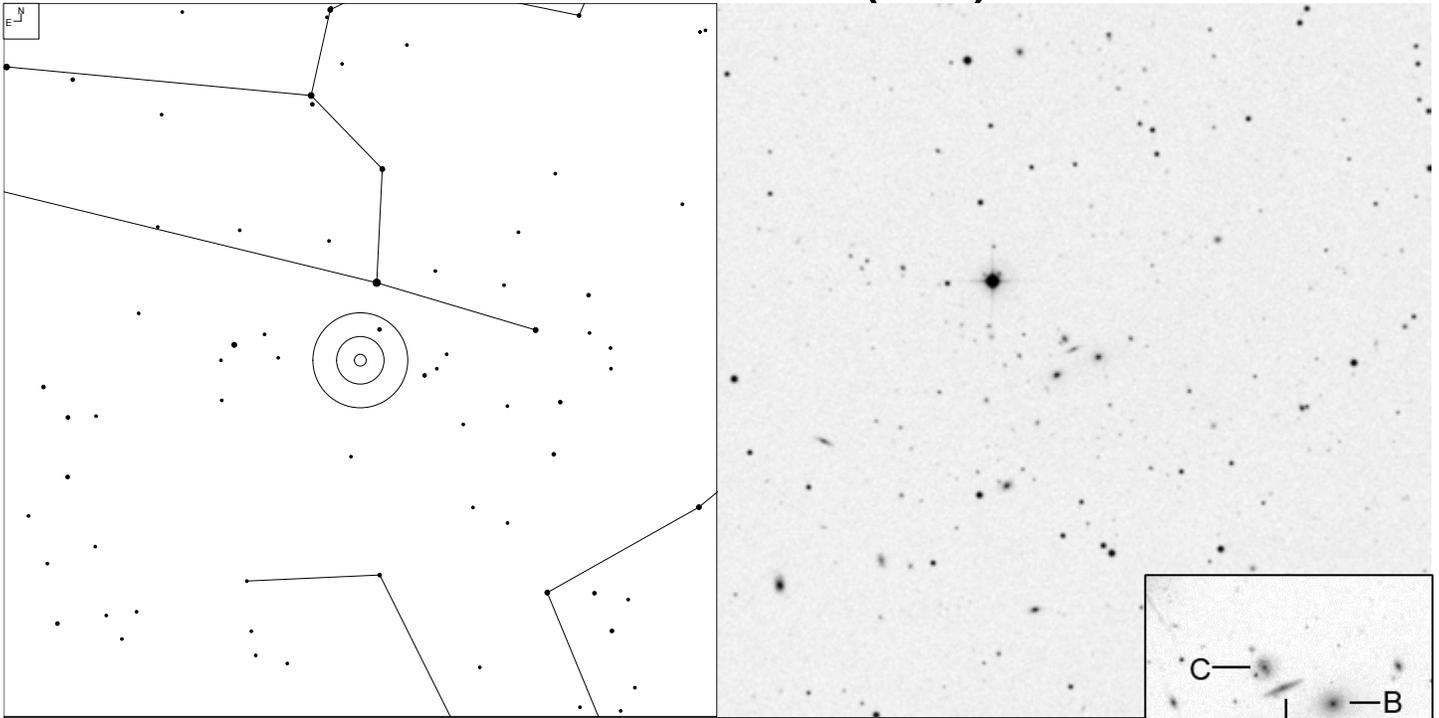
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1003+1904	10 03 55.26	+19 04 54.66	41.1	15.6	1.453

PCG 1008+1715 (Leo)



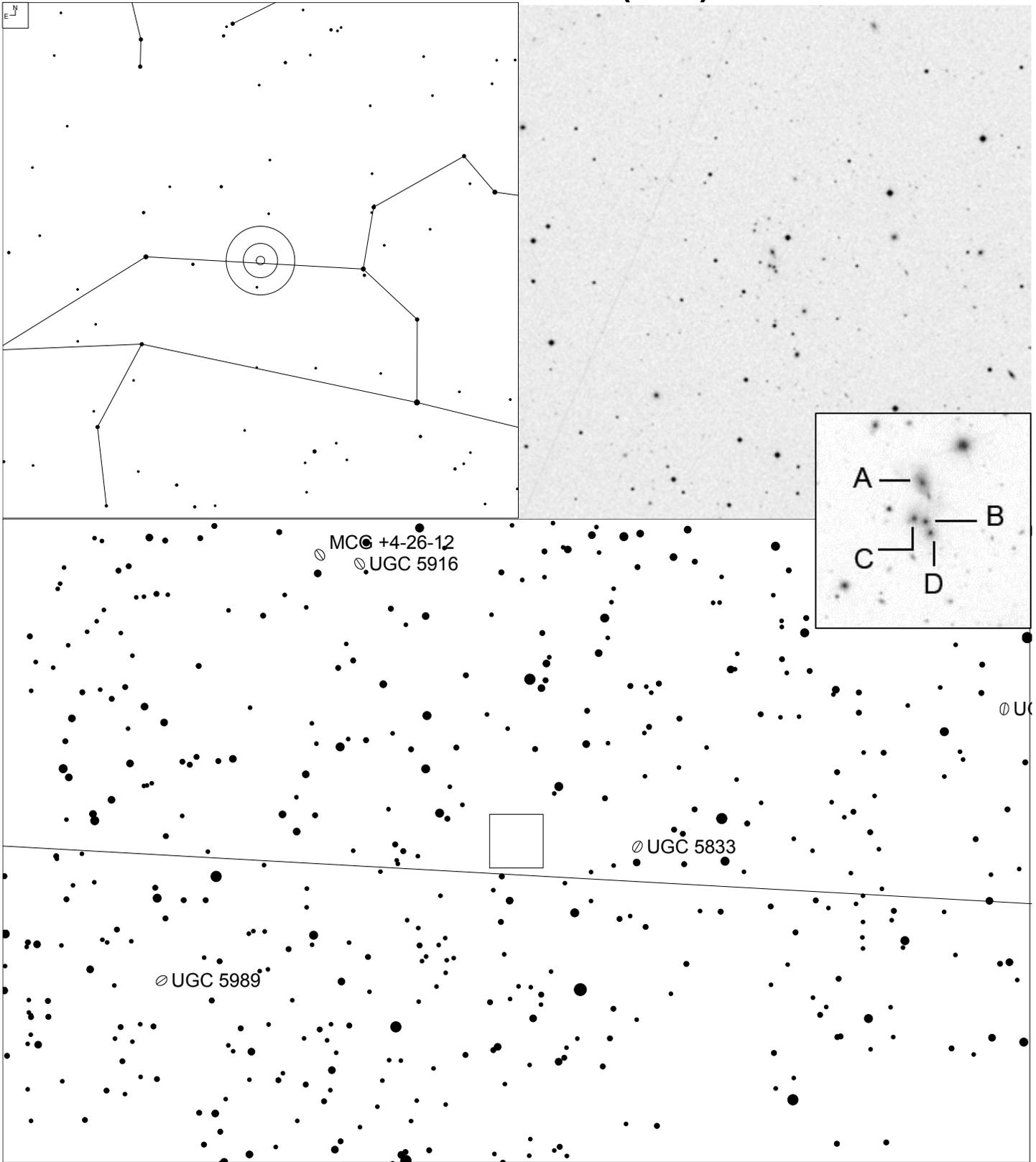
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1008+1715	10 08 37.84	+17 15 47.59	26.9	15.22	1.366

PCG 1011+0841 (Leo)



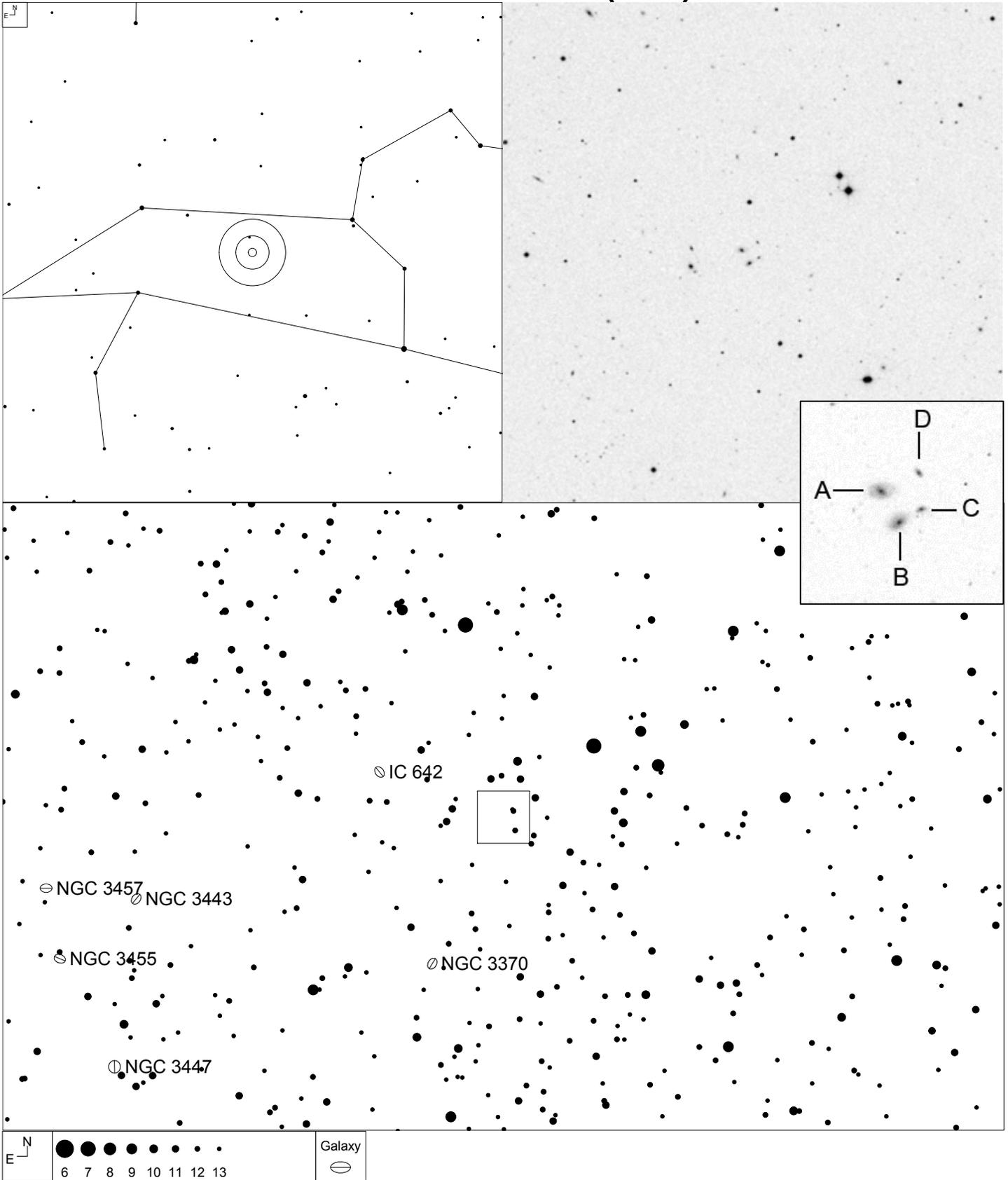
PCG	RA	Dec	Size	Mag	Δmag
PCG 1011+0841	10 11 13.40	+08 41 27.24	49.2	15.08	0.95

PCG 1045+2027 (Leo)



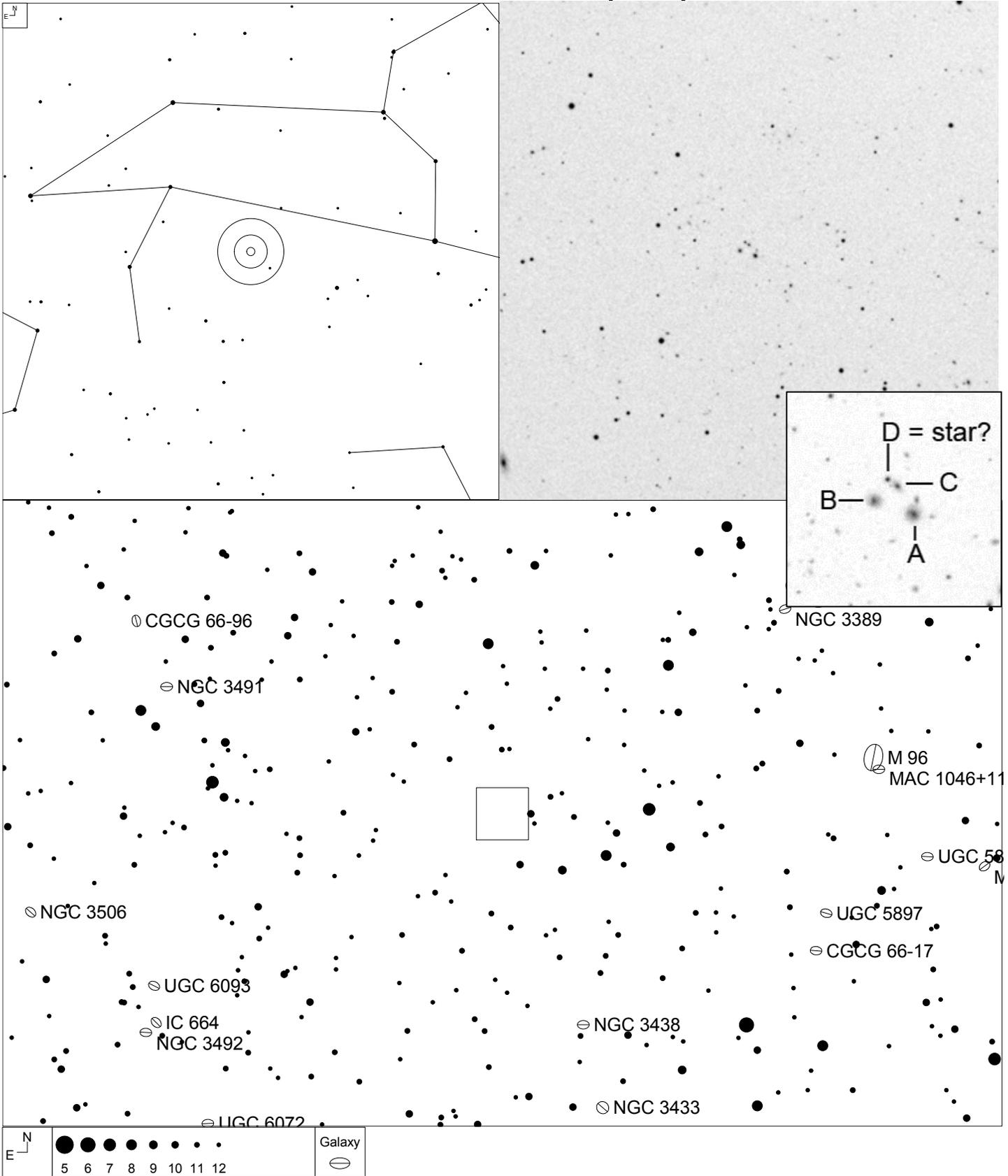
PCG	RA	Dec	Size	Mag	Δmag
PCG 1045+2027	10 45 30.62	+20 27 01.84	27.0	15.61	1.109

PCG 1045+1758 (Leo)



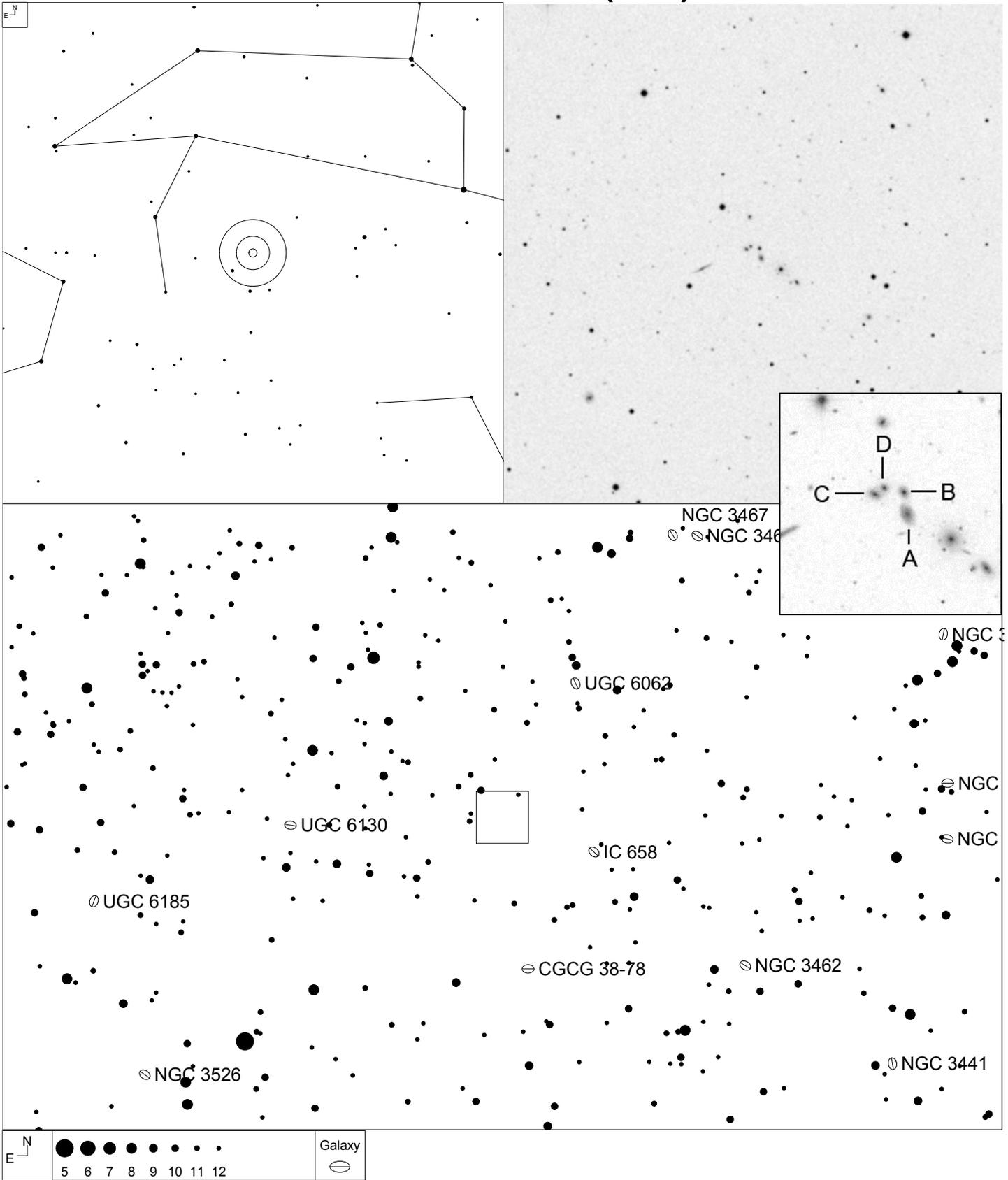
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1045+1758	10 45 38.53	+17 58 27.01	33.7	15.63	1.49

PCG 1054+1133 (Leo)



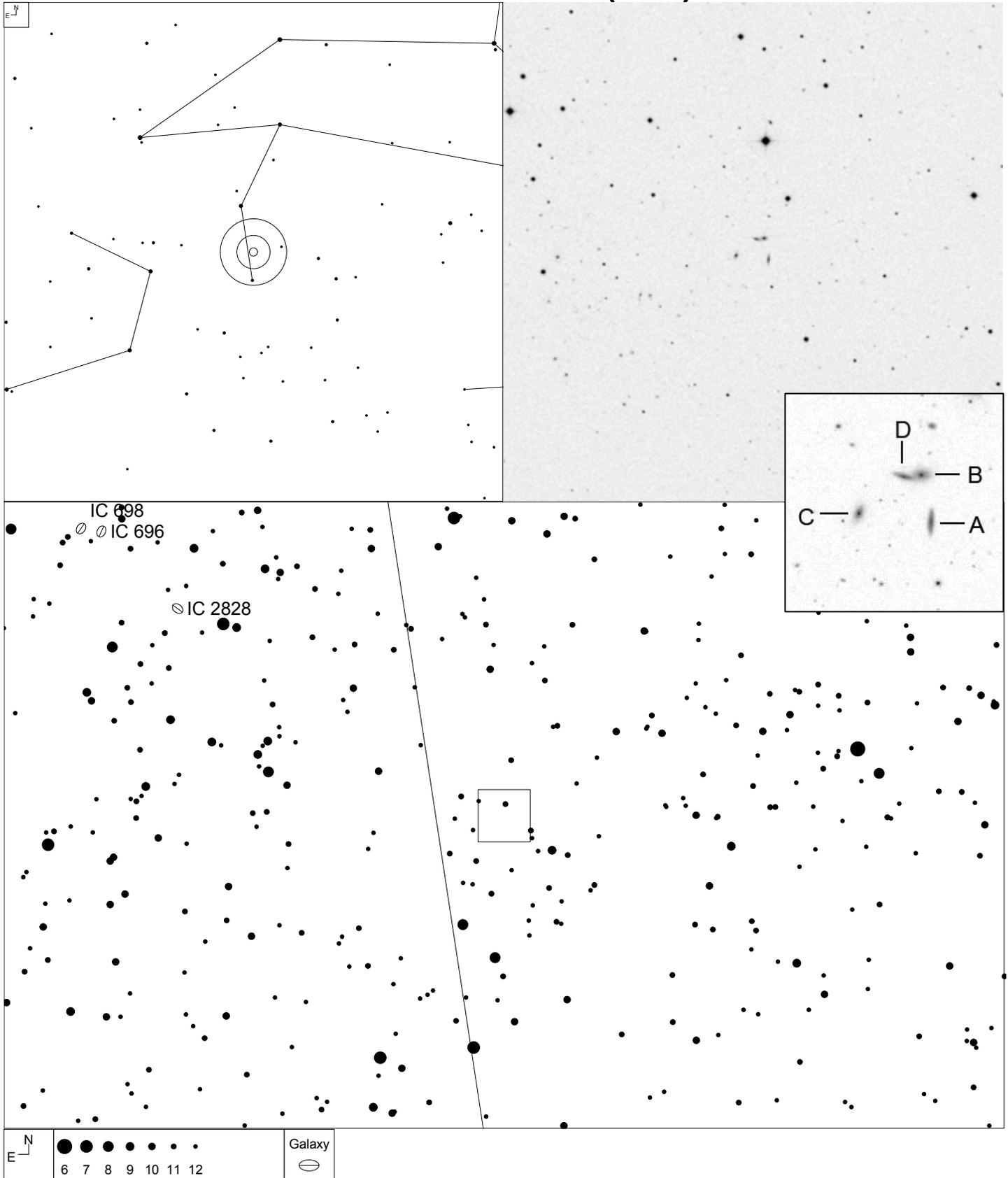
PCG	RA	Dec	Size	Mag	Δmag
PCG 1054+1133	10 54 00.74	+11 33 27.04	26.0	15.84	1.522

PCG 1100+0824 (Leo)



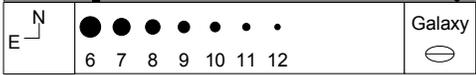
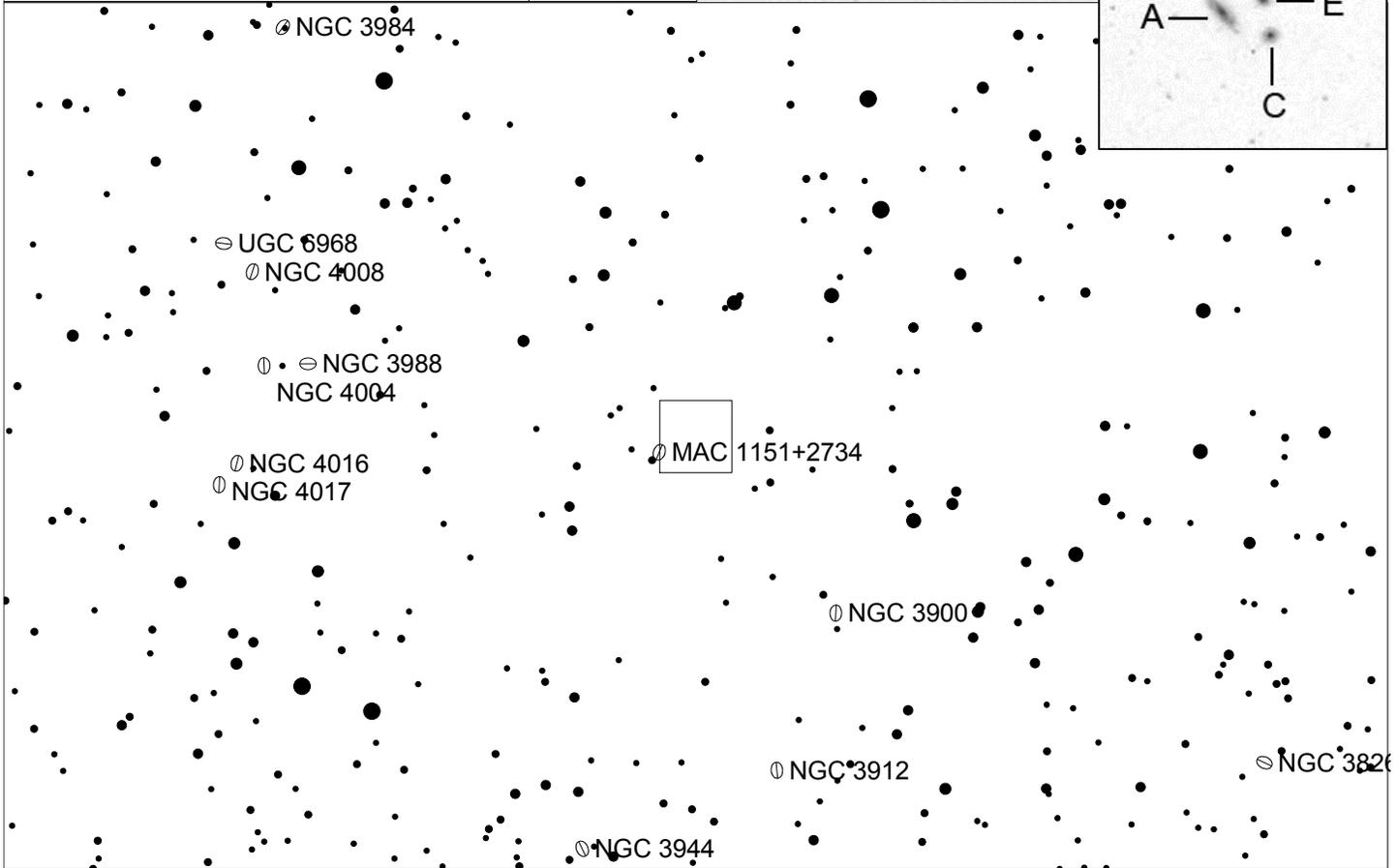
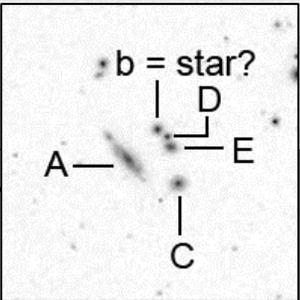
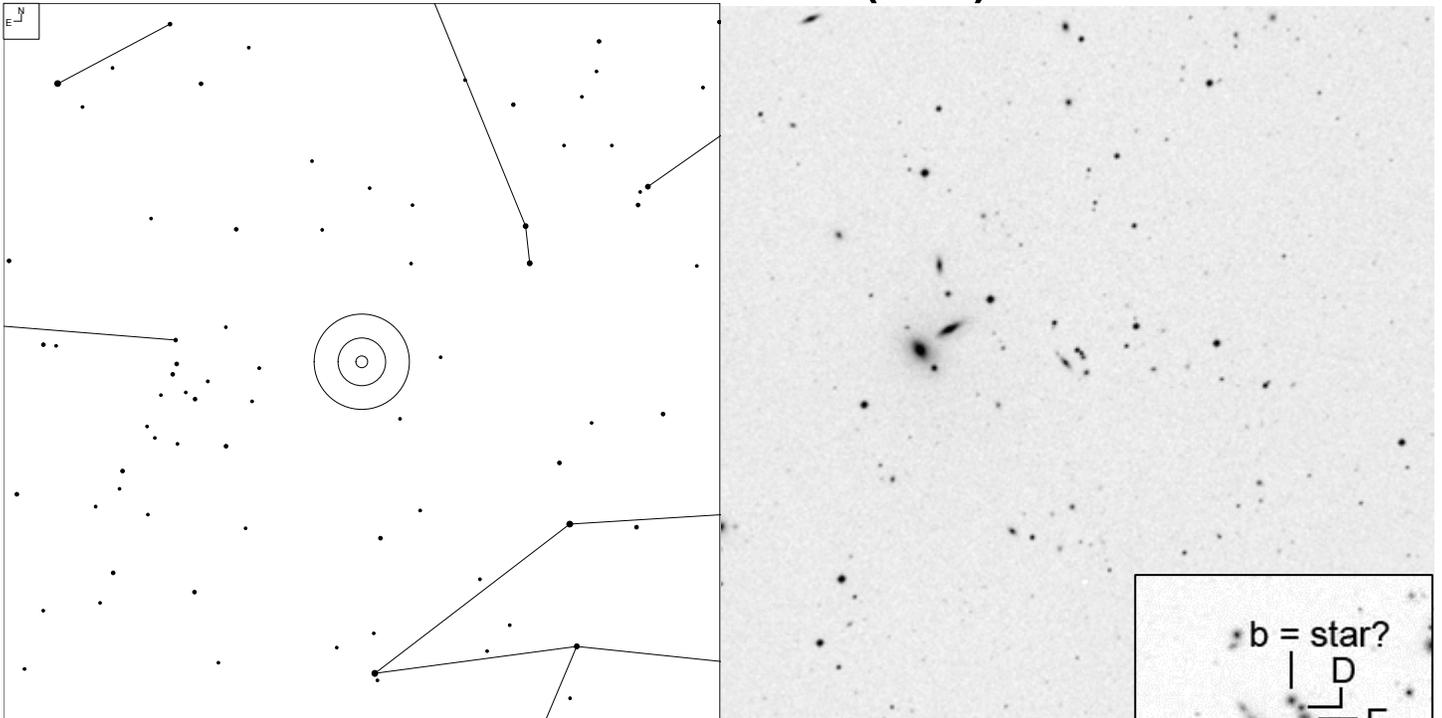
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1100+0824	11 00 02.73	+08 24 35.39	25.4	15.45	0.982

PCG 1120+0744 (Leo)



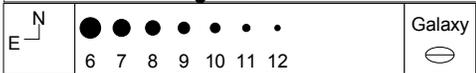
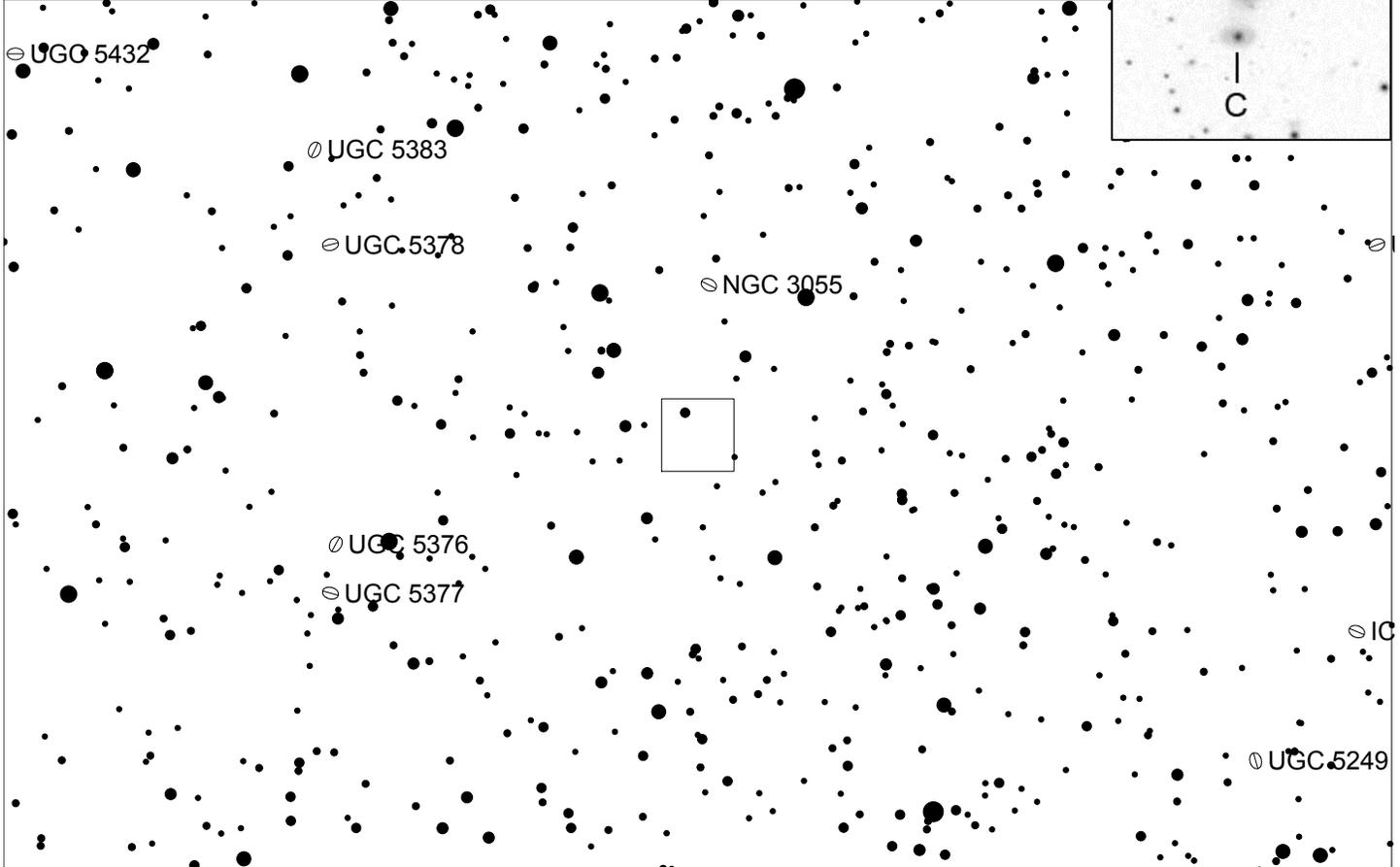
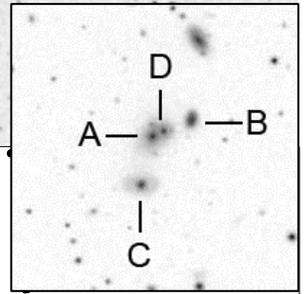
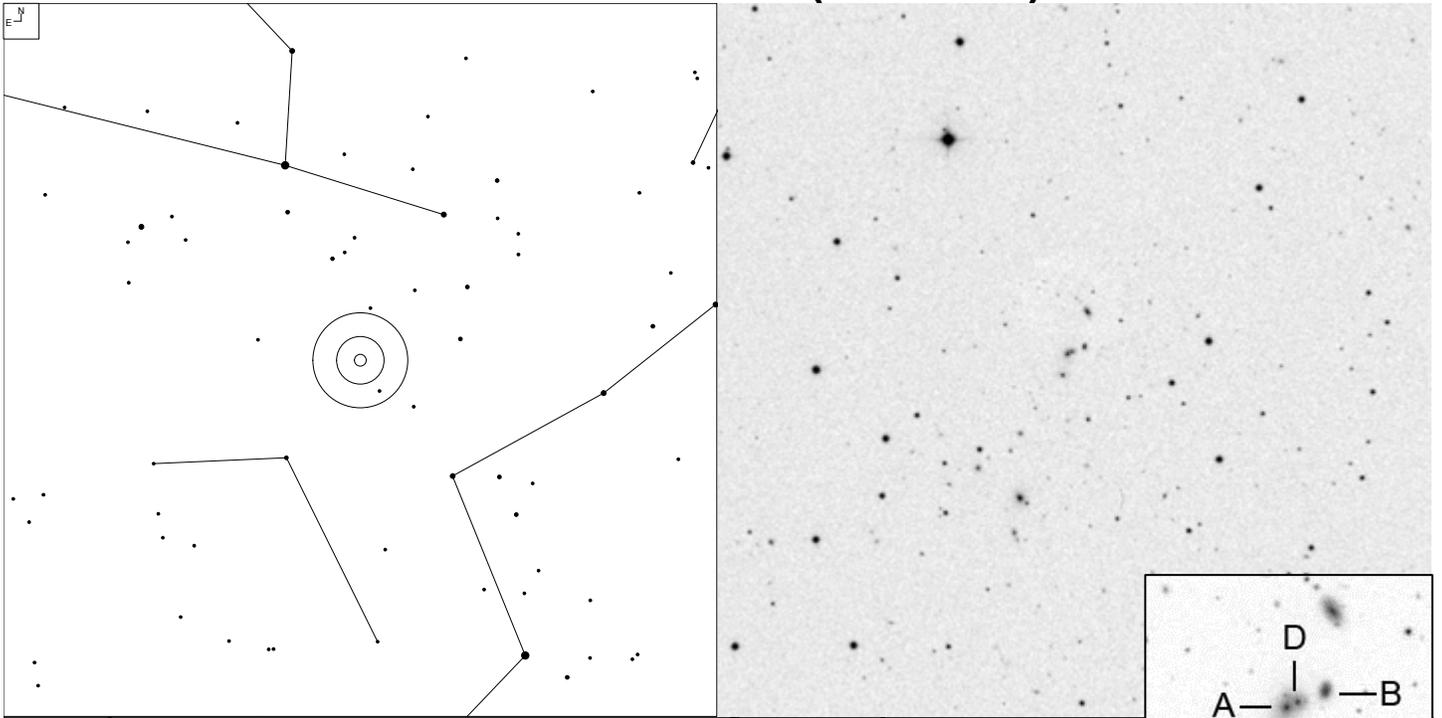
PCG	RA	Dec	Size	Mag	Δmag
PCG 1120+0744	11 20 51.84	+07 44 39.84	52.0	15.05	0.28

PCG 1151+2738 (Leo)



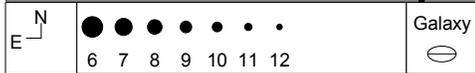
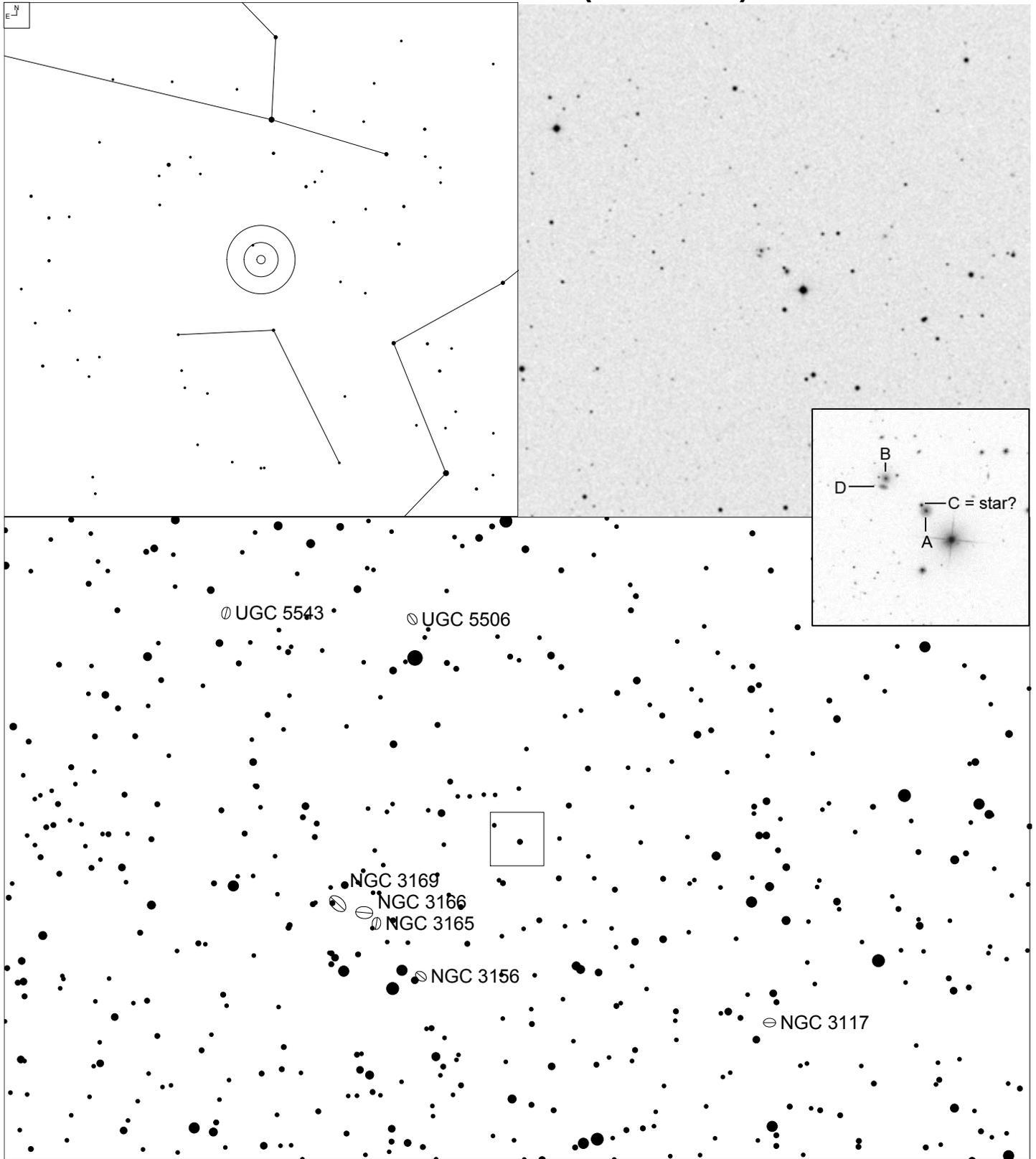
PCG	RA	Dec	Size	Mag	Δmag
PCG 1151+2738	11 51 20.00	+27 38 03.63	26.6	15.15	1.866

PCG 0955+0345 (Sextans)



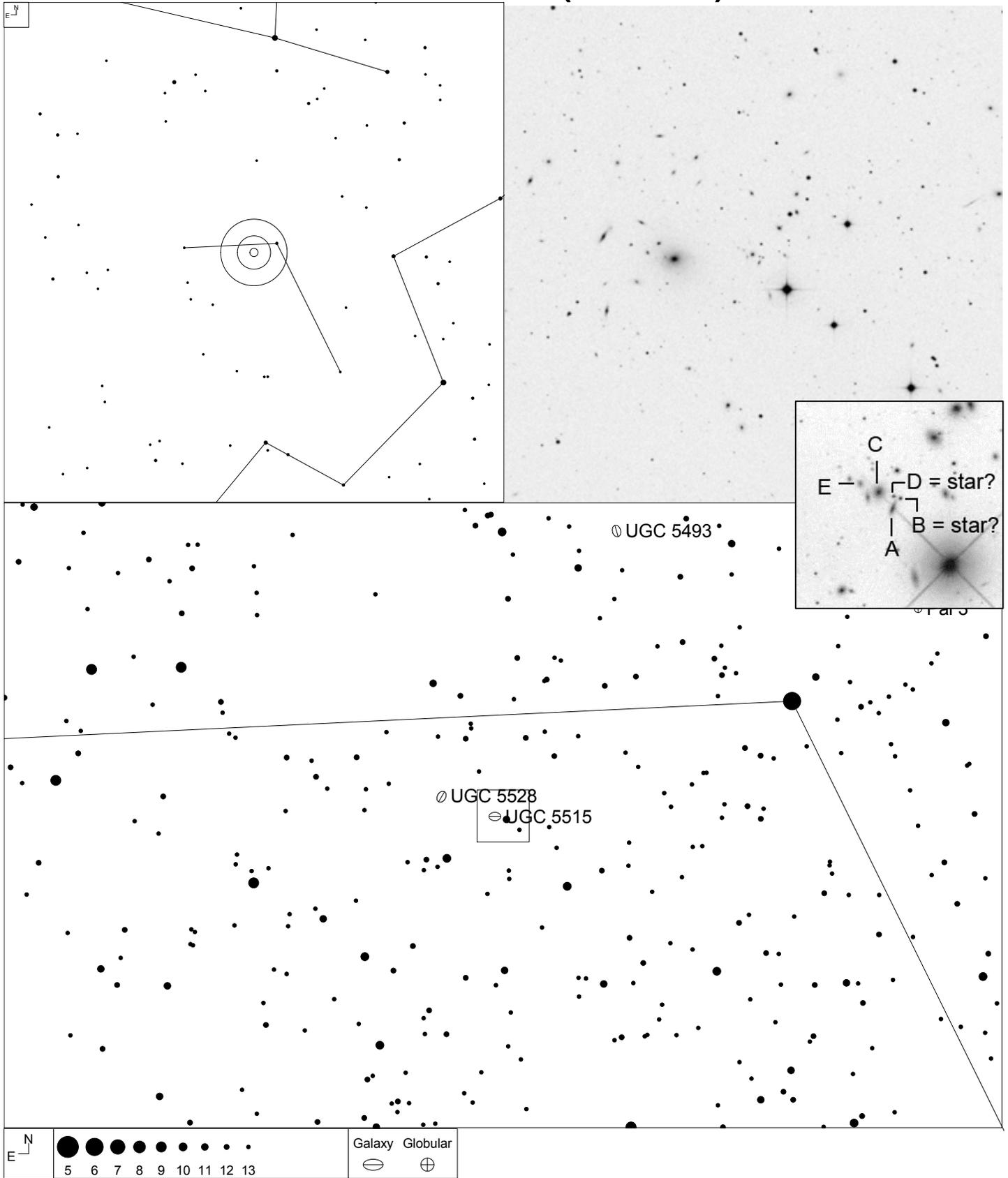
PCG	RA	Dec	Size	Mag	Δ mag
PCG 0955+0345	09 55 27.22	+03 45 08.35	37.6	15.22	1.181

PCG 1010+0346 (Sextans)



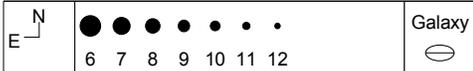
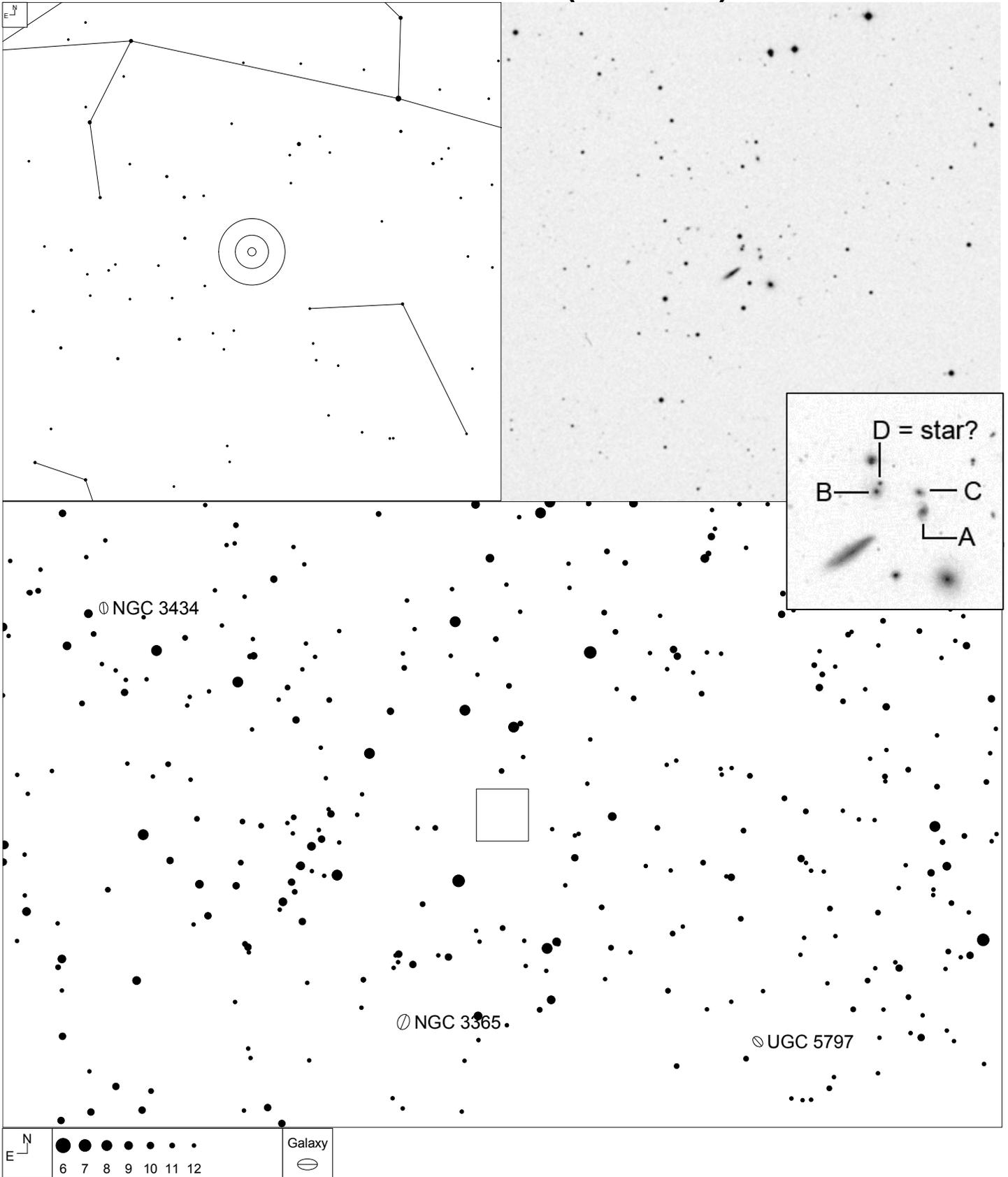
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1010+0346	10 10 53.65	+03 46 12.90	48.0	15.23	1.235

PCG 1013-0055 (Sextans)



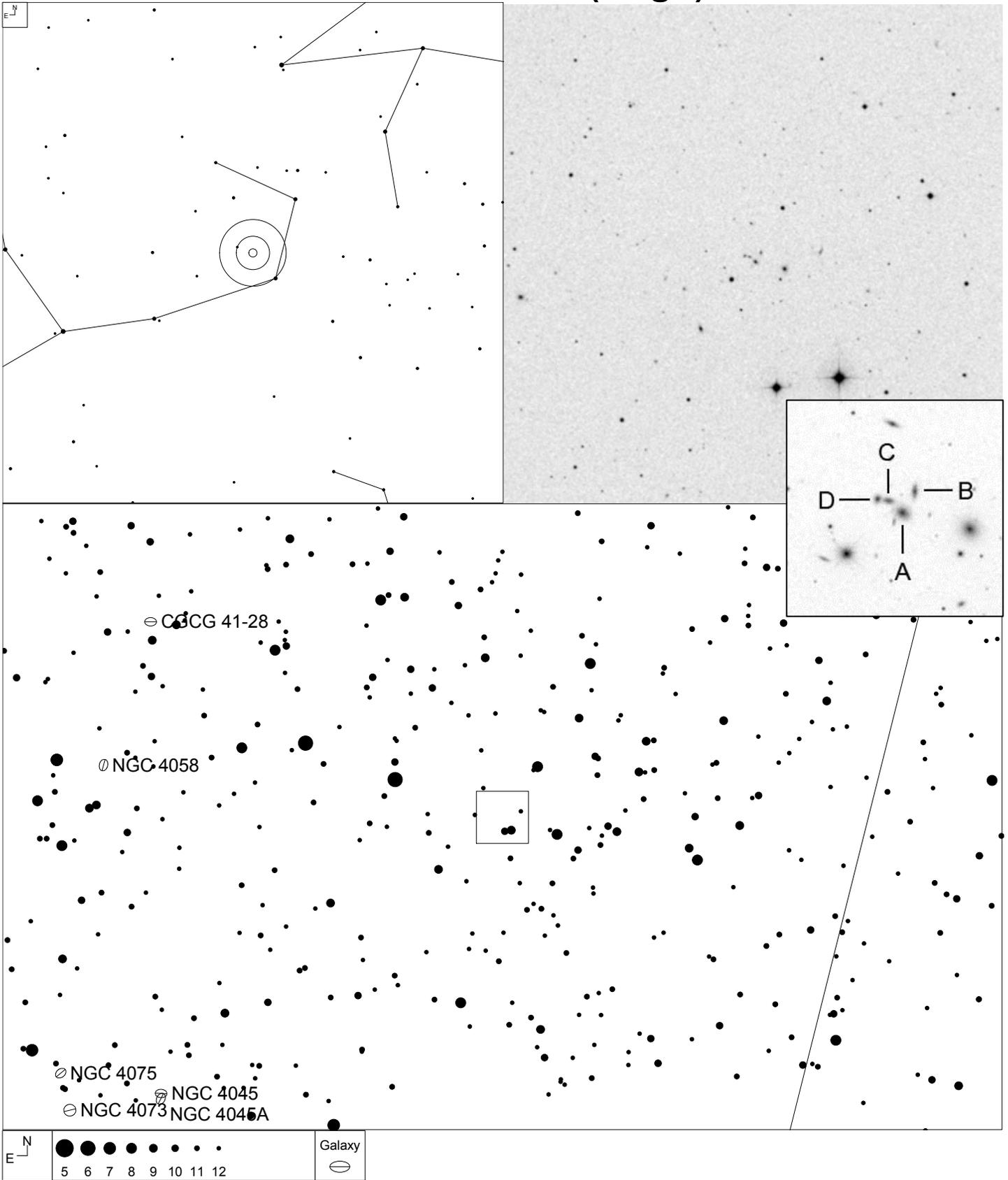
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1013-0055	10 13 28.73	-00 55 22.01	30.9	15.97	1.601

PCG 1044+0248 (Sextans)



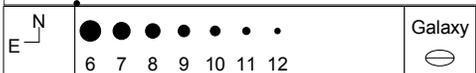
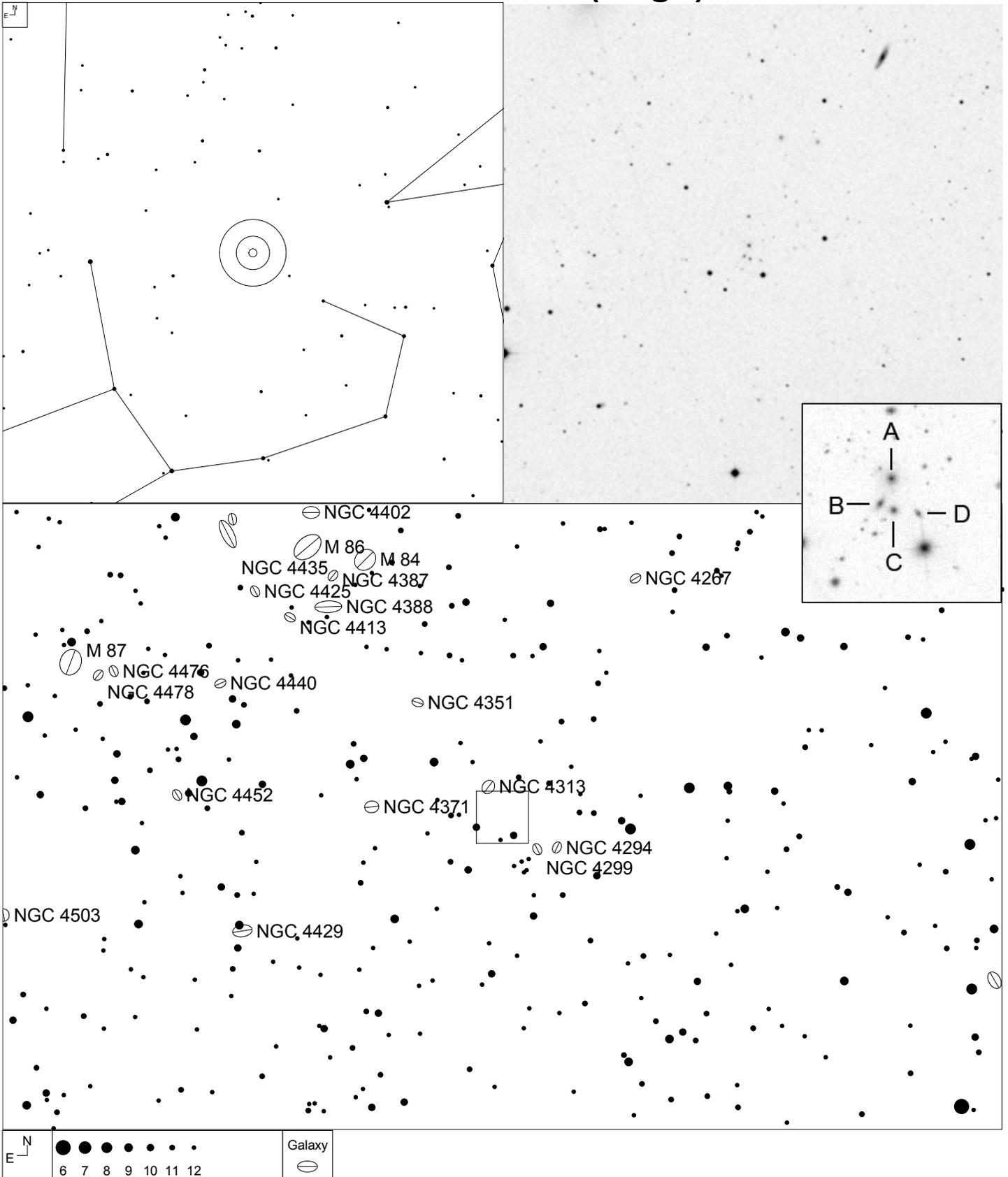
PCG	RA	Dec	Size	Mag	Δmag
PCG 1044+0248	10 44 18.96	+02 48 14.44	31.1	15.69	0.862

PCG 1156+0318 (Virgo)



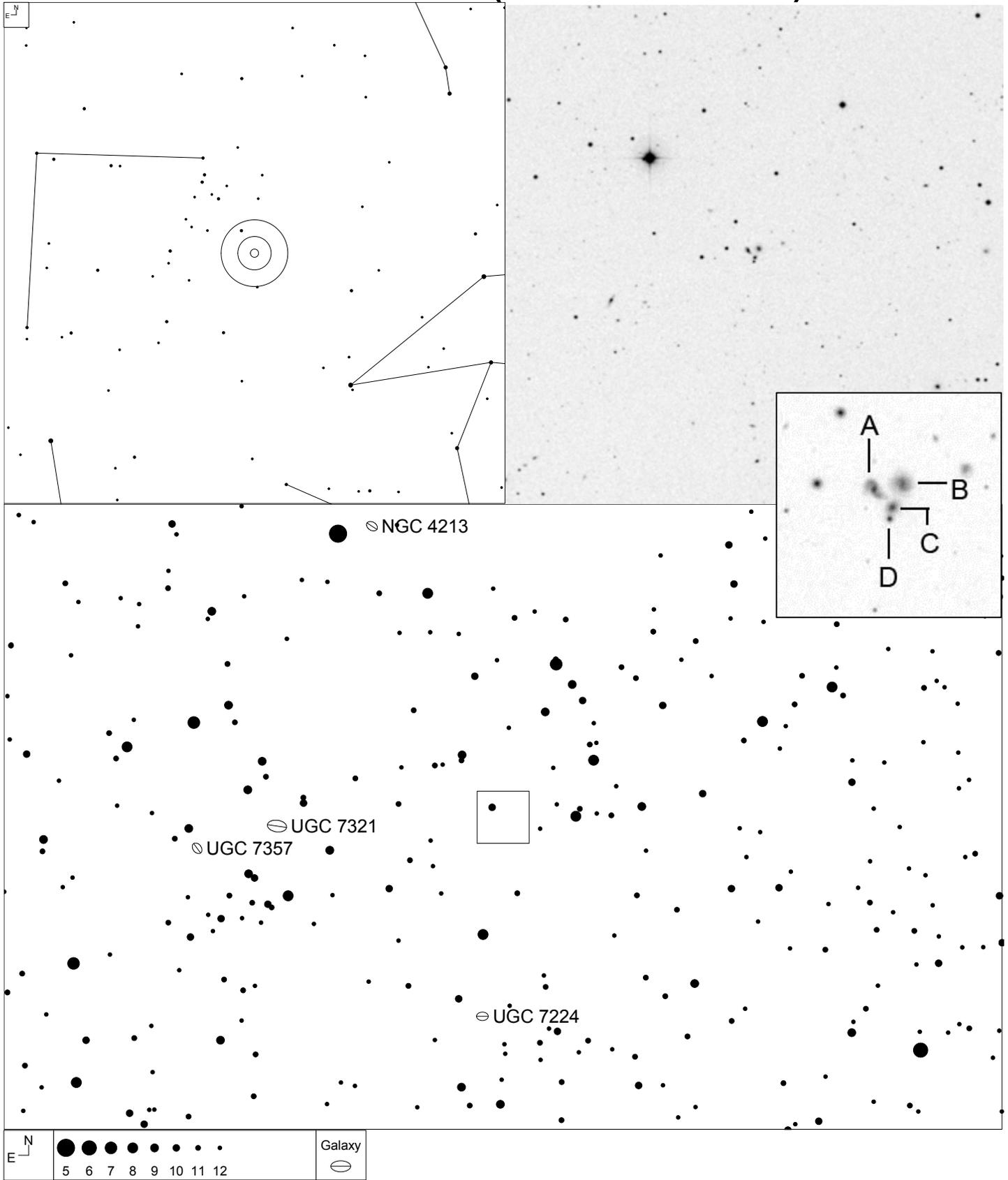
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1156+0318	11 56 10.09	+03 18 02.16	24.6	15.63	1.436

PCG 1222+1139 (Virgo)



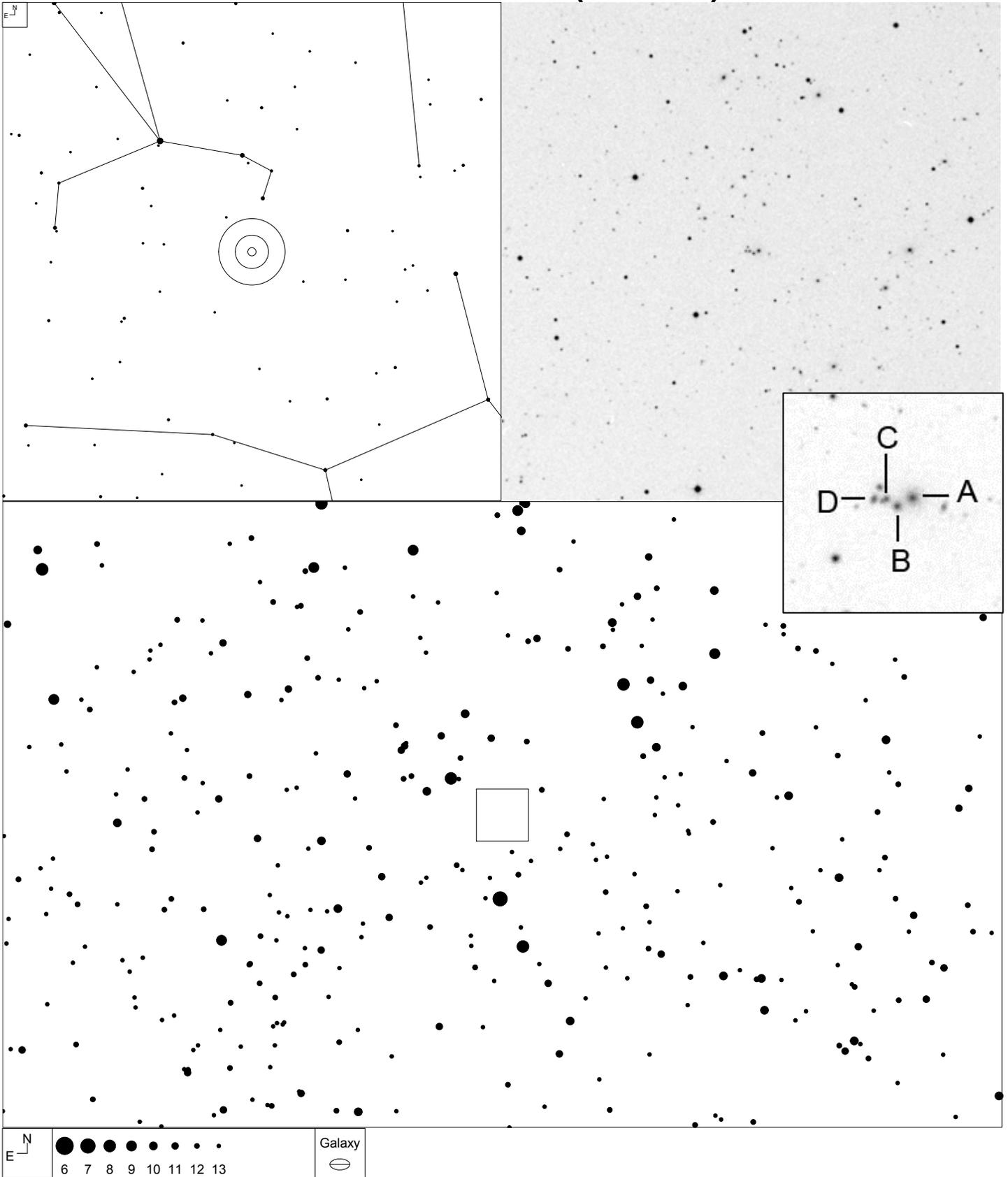
PCG	RA	Dec	Size	Mag	Δmag
PCG 1222+1139	12 22 22.05	+11 39 23.26	28.6	15.93	1.592

PCG 1212+2235 (Coma Berenices)



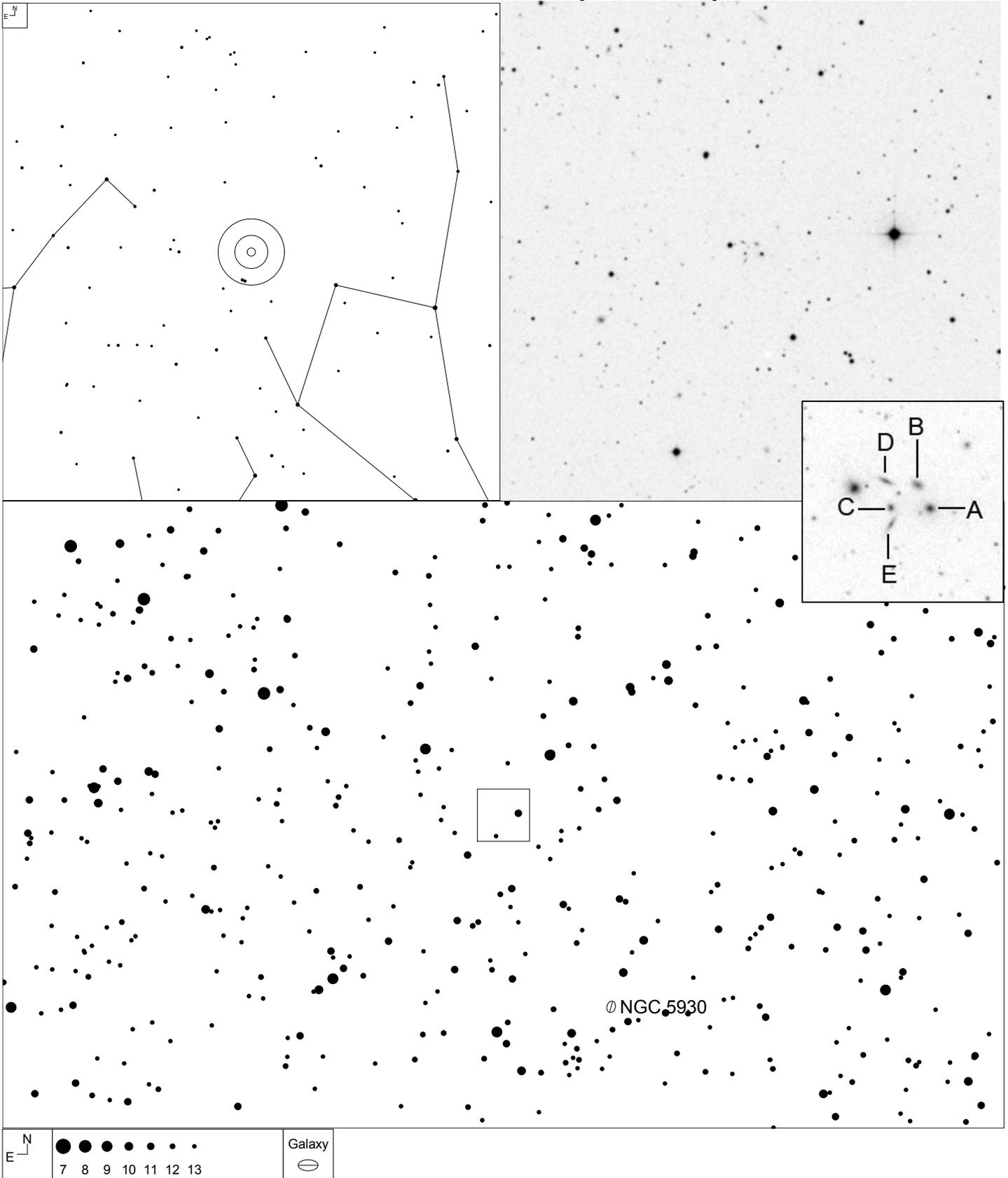
PCG	RA	Dec	Size	Mag	Δmag
PCG 1212+2235	12 12 52.51	+22 35 19.89	21.6	15.23	1.212

PCG 1352+1234 (Bootes)



PCG	RA	Dec	Size	Mag	Δmag
PCG 1352+1234	13 52 15.45	+12 33 59.83	19.3	16.1	1.321

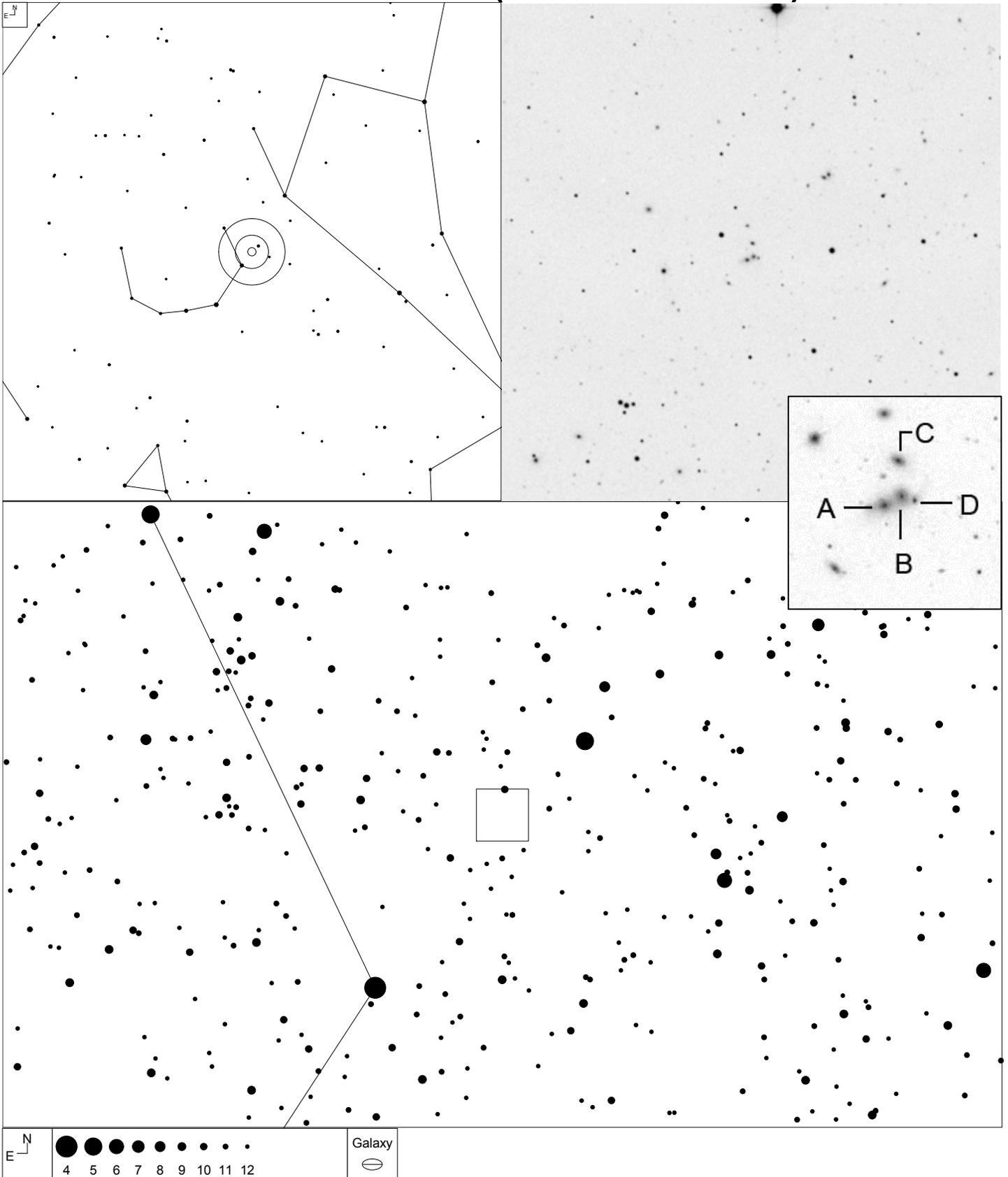
PCG 1528+4235 (Bootes)



NGC 5930

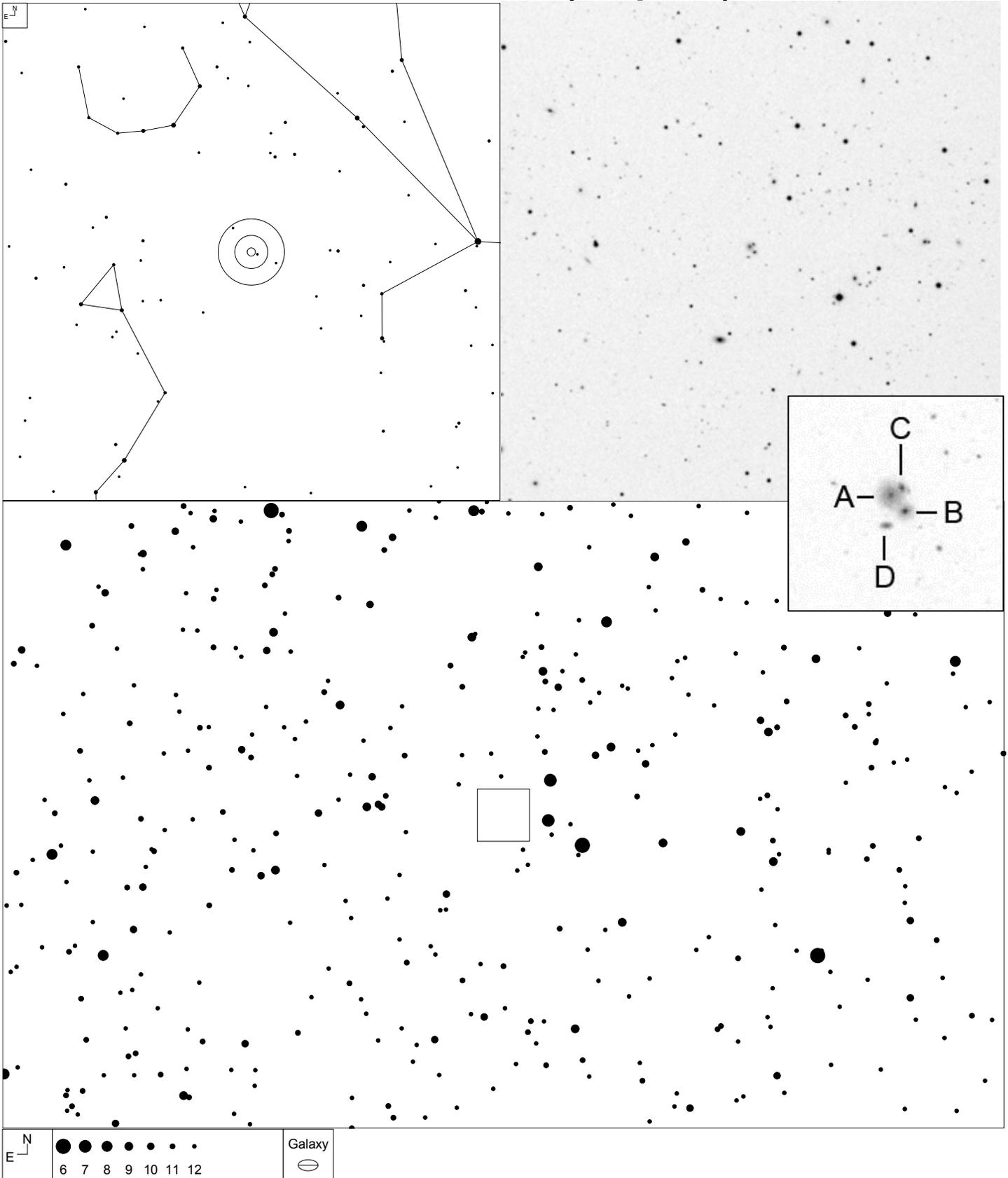
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1528+4235	15 28 53.30	+42 35 46.21	34.1	15.74	1.482

PCG 1525+2956 (Corona Borealis)



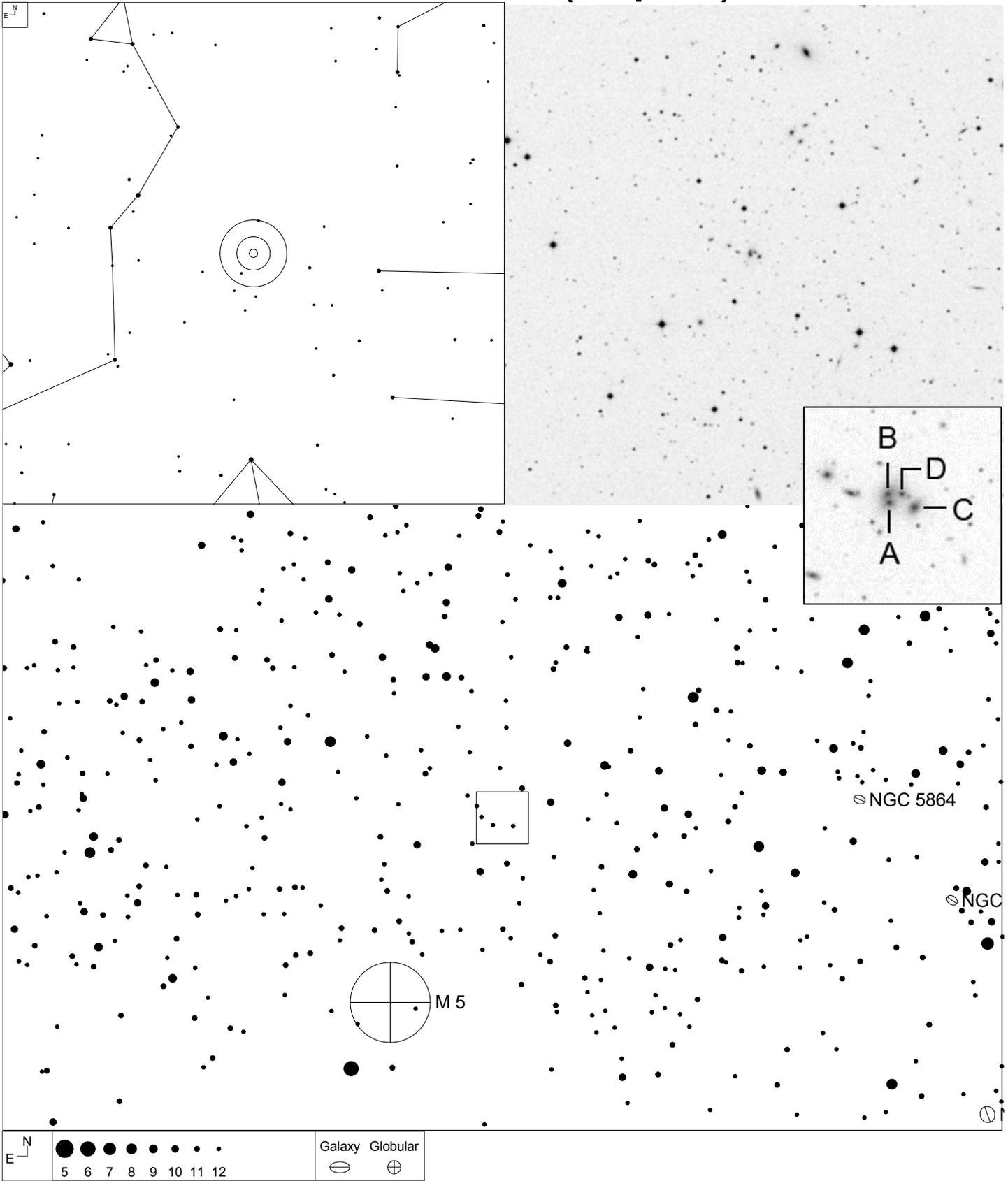
PCG	RA	Dec	Size	Mag	Δ mag
PCG 1525+2956	15 25 02.34	+29 56 05.50	26.7	15.11	1.447

PCG 1513+1907 (Serpens)



PCG	RA	Dec	Size	Mag	Δ mag
PCG 1513+1907	15 13 40.07	+19 07 14.12	20.8	15.76	1.64

PCG 1516+0257 (Serpens)



PCG	RA	Dec	Size	Mag	Δmag
PCG 1516+0257	15 16 24.76	+02 57 57.46	15.2	15.25	0.836

Recommended Further Material

Papers used for this list

Carvalho, R.R. et al *A Catalog of Distant Compact Groups Using the Digitized Second Palomar Observatory Sky Survey*. The Astronomical Journal, 130: 425-444, August 2005

lovino, A. et al *A New Sample of Distant Compact Groups from the Digitized Second Palomar Observatory Sky Survey*. The Astronomical Journal, 125: 1660-1681, April 2003

Additional Papers

Vorontsov-Velyaminov, B.A. *Atlas of Interacting Galaxies, Part II and the Concept of Fragmentation of Galaxies*. Astron. Astrophys. Suppl. Vol 28, p1-117, 1977

Rose, J.A. *Survey of Compact Groups of Galaxies*, Ap. J., **211**, p311-318 1977

Hickson, P. *Systematic Properties of Compact Groups of Galaxies*, Ap J, 255, p382-391 1982

Shakbazian, R.K. *Astrofizka* Vol 9, p145 1973

General Recommended Reading

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

Coe, Steven R. 2000. *Deep Sky Observing. The Astronomical Tourist*. Springer Publishing Company, N.Y.

Eicher, David J. 1992. *Galaxies and the Universe*. Kalmbach Publishing Co., W.I.

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

Kepple, George R. and Glen W. 1998. *The Night Sky Observer's Guide, Vol. 1 and 2*. Willmann-Bell, Richmond, VA.

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

Steinicke, Wolfgang and Richard Jakiel. 2007. *Galaxies and How to Observe Them*. Springer Publishing Company, N.Y.

Webb Society 1982; *Webb Society Deep-Sky Observer's Handbook, Volume 4 Galaxies* Enslow Publishers Hillside, N.J.

Webb Society 1982; *Webb Society Deep-Sky Observer's Handbook, Volume 5 Clusters of Galaxies* Enslow Publishers Hillside, N.J.

Webb Society 1987; *Webb Society Deep-Sky Observer's Handbook, Volume 6 Anonymous Galaxies* Enslow Publishers Hillside, N.J.

Recommended Web Sites

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.

<http://nedwww.ipac.caltech.edu/> - NASA-IPAC Extragalactic Database – NED

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

<http://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.

www.galaxyzoo.com – Galaxy Zoo

Sources of charts and images

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

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

<http://www.sdss.org> - Sloan Digital Sky Survey – Data Release 8 (SDSS DR8)

Notes

