

Seeing Red

Texas Star Party 2014

Advanced Observing Program

List created by
Larry Mitchell

Observing Guide compiled by
Alvin Huey
FaintFuzzies.com



Texas Star Party

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

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The Local Group
Selected Small Galaxy Groups
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The Rose Catalogue of Compact Galaxies
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The Voronstov-Velyaminov Catalogue – Part I and II
Object of the Week 2012 and 2013 – Deep Sky Forum

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Front Cover: Serpen's Object from the Sloan Digital Sky Survey

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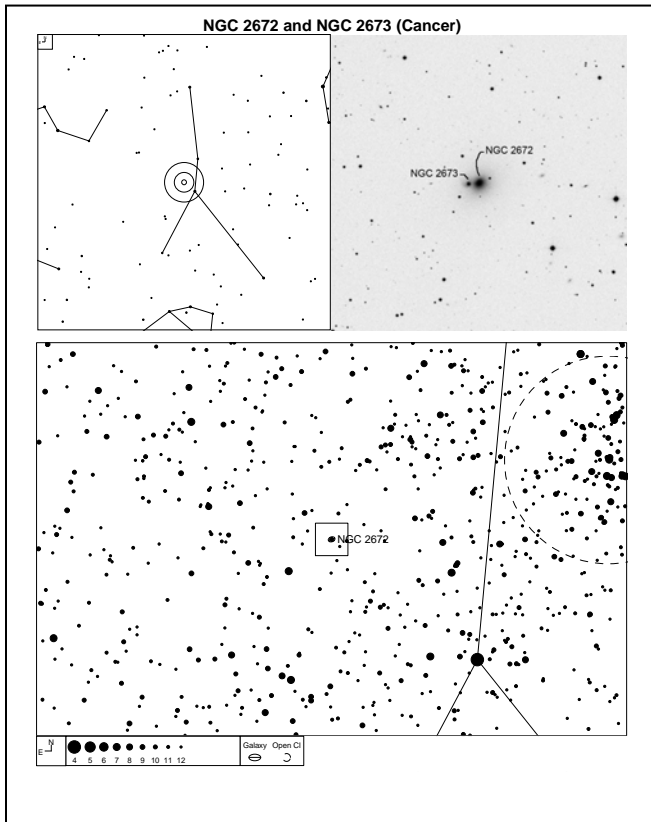


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Page	Object	RA	Dec	Const	Mag	Size	Urano 1	Urano 2
7	V Hydrae	10 51 37.3	-21 15 00	Hya	7.5 - 13 (var)	*	U-325	151L
8	SS Virginis	12 25 14.4	+00 46 11	Vir	7.4 - 9.5 (var)	*	U-238	111L
9	Abell 35	12 53 41.4	-22 51 42	Hya	12.0p	12.8'	U-329	149R
10	RY Draconis	12 56 25.7	+65 59 40	Dra	5.9	*	U-26	13L
11	Abell 36	13 40 41.3	-19 52 57	Vir	13.0p	6.0 x 5.0'	U-331	149L
12	NGC 6072 - ESO 389+5	16 12 58.2	-36 13 48	Sco	14.1p	98 x 72"	U-374	165L
13	IC 4592, LBN 1113	16 13 08.0	-19 24 00	Sco	-	200 x 60'	U-335	147L
14	IC 4604 - Rho Ophiuchus	16 25 20.0	-23 28 00	Sco	-	80 x 72'	U-336	147L
15	Wolf 630A, B, C	16 55 29.2	-08 20 03	Oph	9.0, 10.3, 17.7	quintuple star	U-292	128R
16	NGC 6357 - Sharpless 2-5	17 24 56.0	-34 12 15	Sco	-	31.8 x 30.0'	U-376	164L
17	Milky Way Center	17 45 40.0	-29 00 28	Sgr	-	-	U-377	146L
18	Barnard's Star	17 57 48.0	+04 43 10	Oph	9.54v	*	U-249	106R
19	NGC 6559	18 09 53.0	-24 04 30	Sgr	-	8.3 x 4.2'	U-339	45R
20	NGC 6589	18 16 52.0	-19 46 43	Sgr	-	4.0 x 3.5'	U-339	145R
20	NGC 6590	18 17 02.0	-19 51 47	Sgr	-	5.6 x 3.3'	U-339	145R
21	Serpen's Object, SVS 2	18 29 56.8	+01 14 46	Ser	-	2.0 x 1.4'	U-250	106L
22	T Lyrae	18 32 20.1	+36 59 56	Lyr	7.5 - 9.3 (var)	*	U-117	49R
23	Sharpless 2-61, PK26+01.0	18 33 21.8	-04 58 16	Sct	-	2.0'	U-250	106L
24	V Aquila	19 04 24.0	-05 41 05	Aql	6.6 - 8.4 (var)	*	U-296	127L
25	NGC 6781 - PK 41-2.1	19 18 28.2	+ 06 32 15	Aql	11.8p	1.8'	U-206	85L
26	Sharpless 2-83	19 24 30.4	+20 47 31	Vul	-	2.0'	U-161	66R
27	Parsamyan 21	19 29 00.6	+09 39 02	Aql	-	42 x 19"	U-207	85L
28	Sharpless 2-82	19 30 23.3	+18 17 02	Sge	-	9.0'	U-162	66R
29	NGC 6820	19 42 27.8	+23 05 22	Vul	-	24.7 x 12.0'	U-162	66R
29	CAB2008-V39	19 43 28.1	+23 20 38	Vul	-	0.5 x 5.0'	U-162	66R
30	Sharpless 2-88	19 45 57.0	+25 19 50	Vul	-	17.5 x 41'	U-162	66R
31	Sharpless 2-90 - LBN 144	19 49 12.4	+26 50 49	Vul	-	5.0 x 3.4'	U-162	66R
32	Sharpless 2-93 - LBN 146	19 55 00.5	+27 12 47	Vul	-	1.8'	U-162	66R
33	Sharpless 2-101	19 59 55.0	+35 21 00	Cyg	-	21.8 x 12.0'	U-119	48R
34	RS Cygni	20 13 23.7	+38 43 45	Cyg	7.1 - 7.6 (var)	*	U-119	48L
35	Sharpless 2-112	20 34 03.0	+45 38 42	Cyg	-	115'	U-85	32R
36	B 161 (inside IC 1396)	21 40 25.3	+57 48 03	Cep	-	3.9 x 2.5'	U-57	19R
37	Herschel's Garnet Star	21 43 30.4	+58 46 49	Cep	4.02v	*	U-57	19R
38	NGC 7139	21 46 08.6	+63 47 31	Cep	13.3p	77"	U-33	9L
39	Kruger 60A & B	22 27 59.5	+57 41 45	Cep	9.6 , 11.4	double star	U-57	19L
40	Sharpless 2-188	01 30 30.0	+58 23 30	Cas	-	9.0'	U-37	29R
41	NGC 896	02 26 40.0	+62 05 00	Cas	-	21.0'	U-17	29L

How to Use the Atlas



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 generally 15' square, otherwise larger.

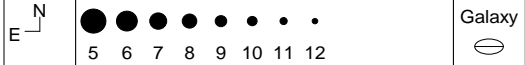
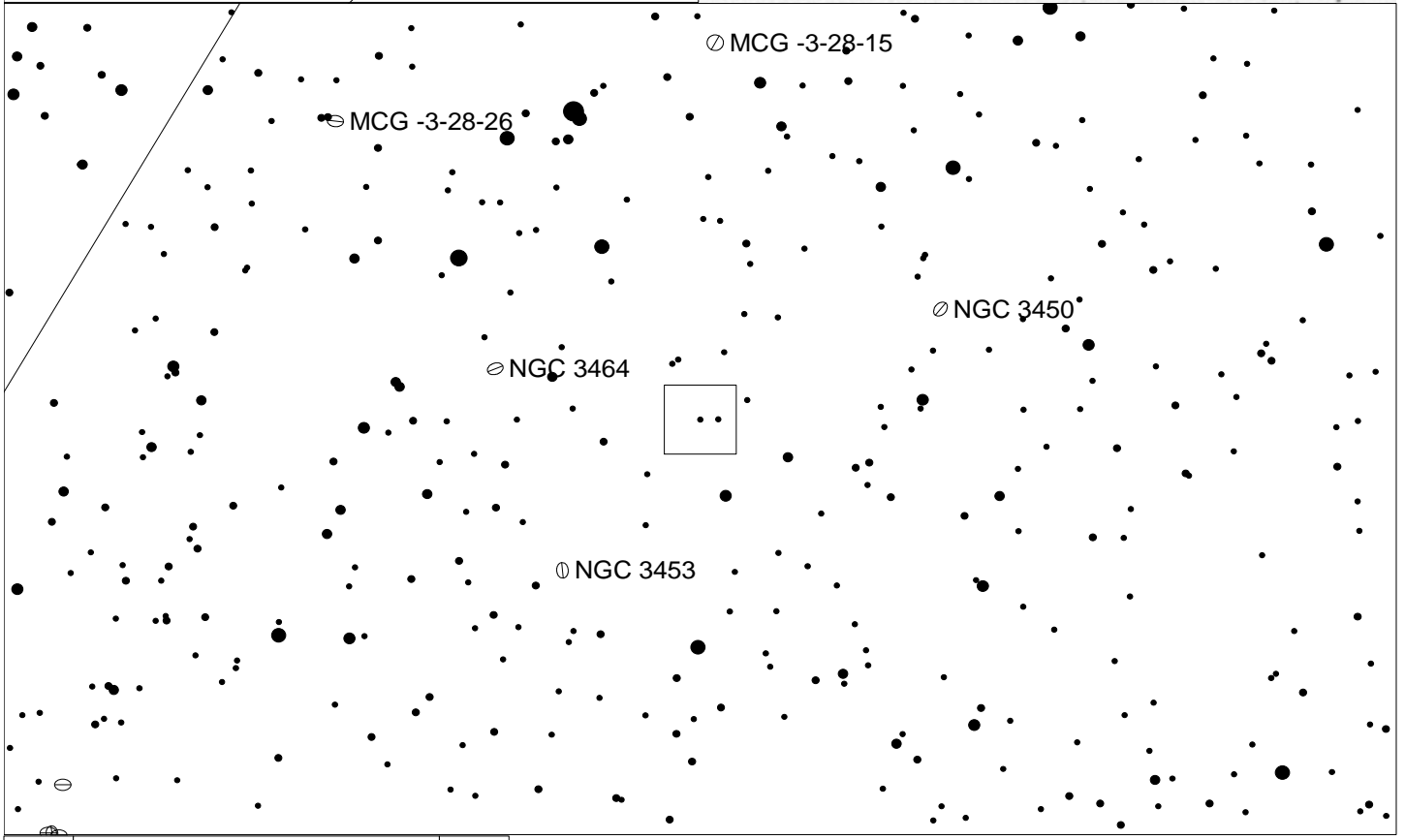
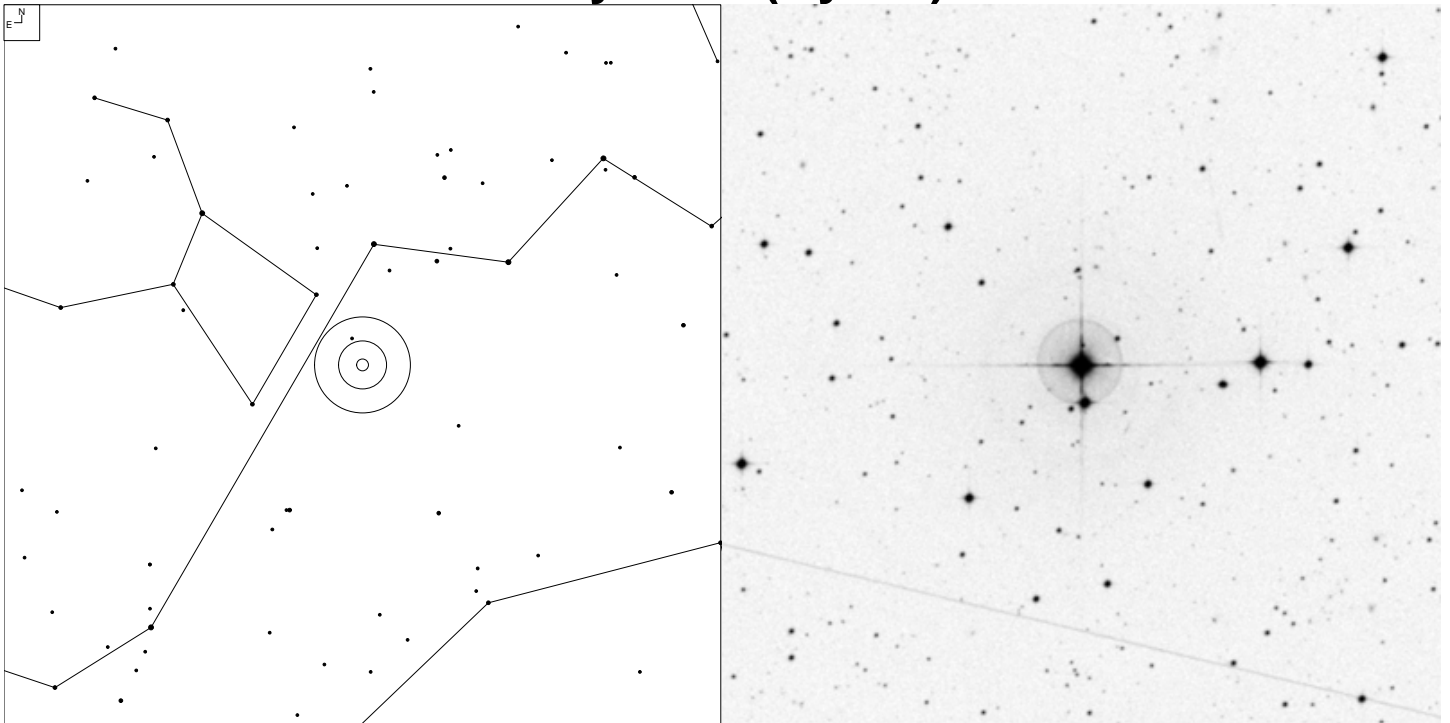
The bottom panel is a finder field of about 4.5° across and 3.0° high. The finder field is wide enough for the finder scope and detailed enough for those who choose to use a low power eyepiece as a “finder”. The limiting magnitude of the field stars is generally set to 12.0, but set to a lower limit in star rich regions. Pay attention to the magnitude scale on the bottom left. The rectangular 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.

Texas Star Party 2014

Advanced Observing List – Seeing Red

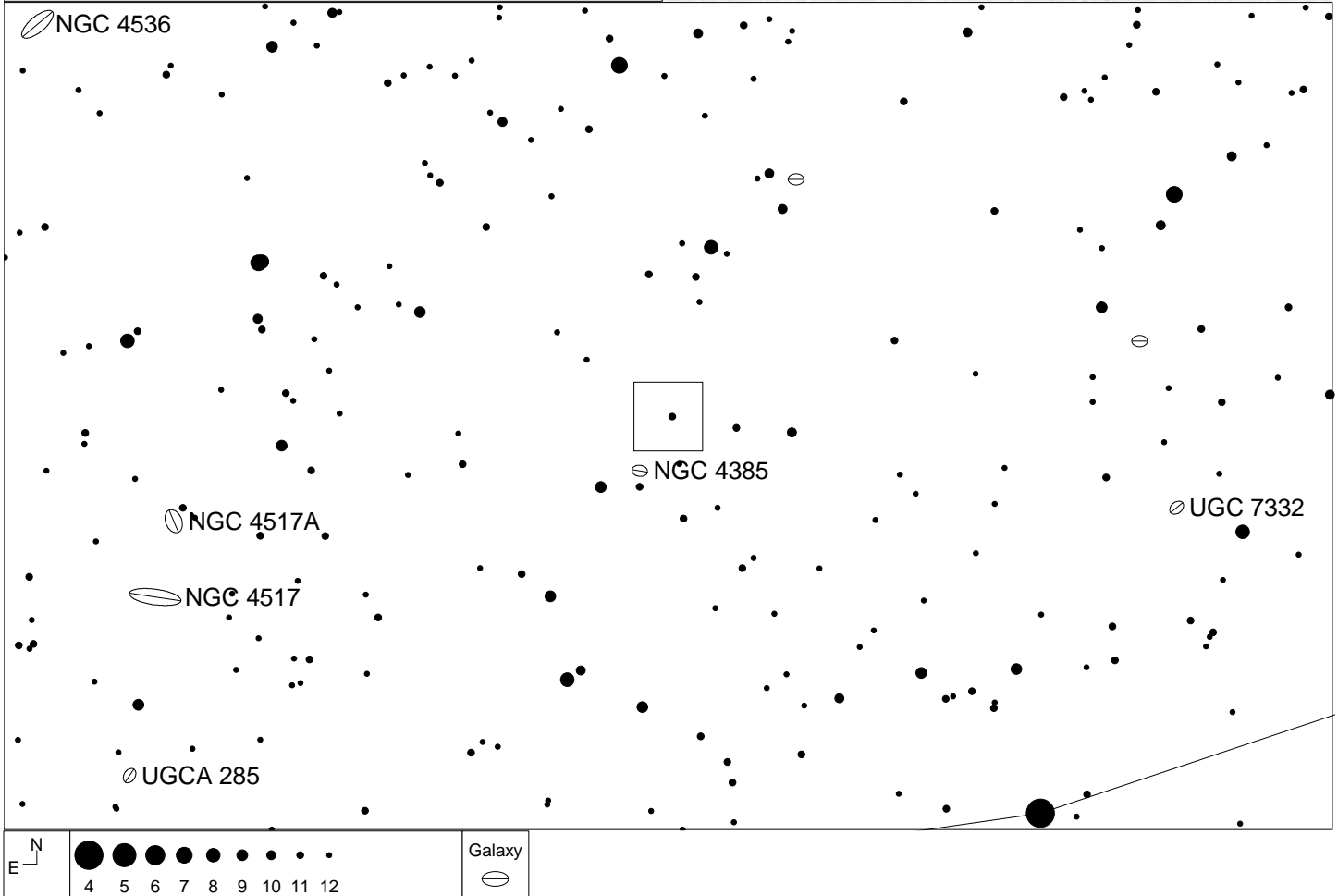
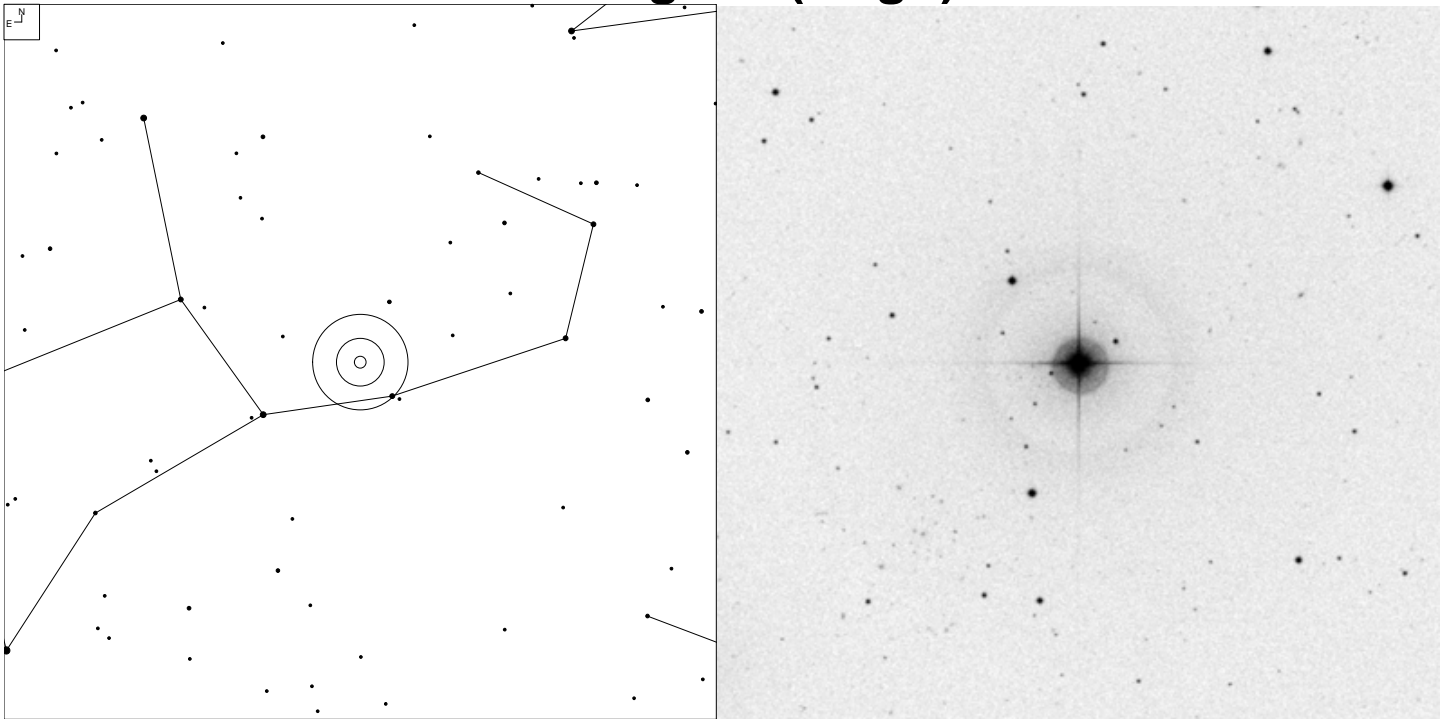
V Hydrae (Hydra)



RA	Dec	Mag	Size	Urano 2000.0
10 51 37.3	-21 15 00	7 - 13 (11.9) var	*	151L

<http://www.aavso.org/lcotw/v-hydrae>
http://www.astrosience.org/abdul-ahad/V_Hydrae.html

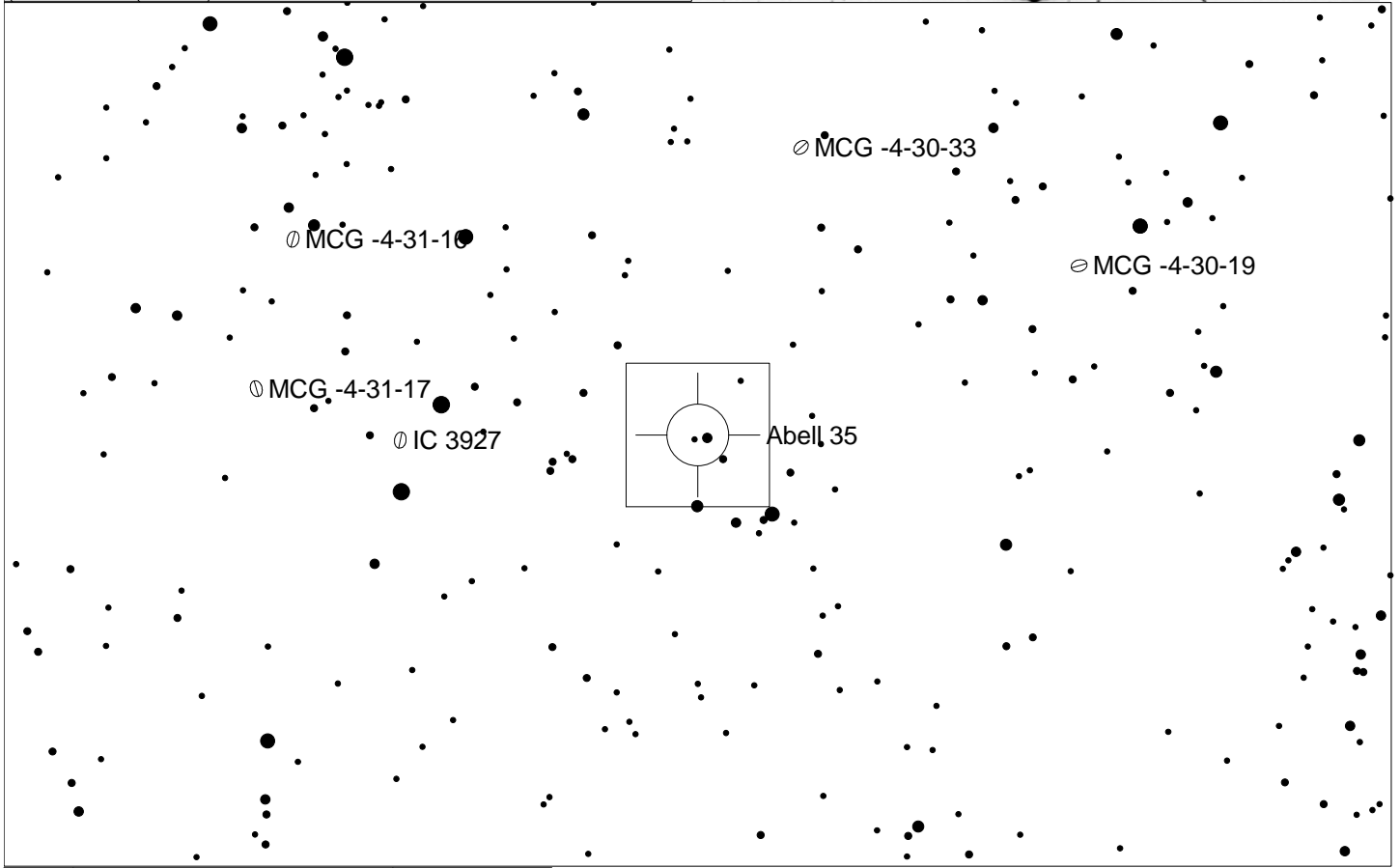
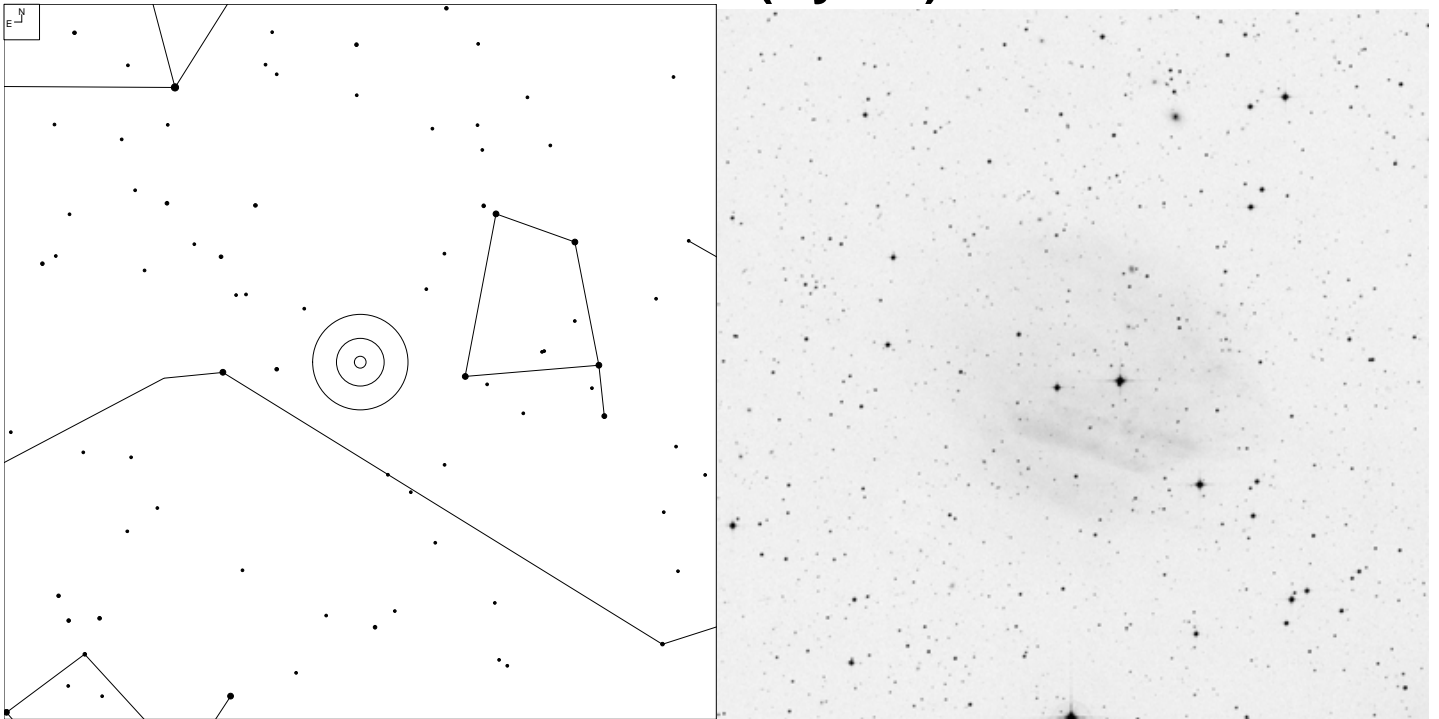
SS Virginis (Virgo)



RA	Dec	Mag	Size	Urano 2000.0
12 25 14.4	+00 46 11	7.4 – 9.5 (var)	*	111L

http://en.wikipedia.org/wiki/SS_Virginis

Abell 35 (Hydra)

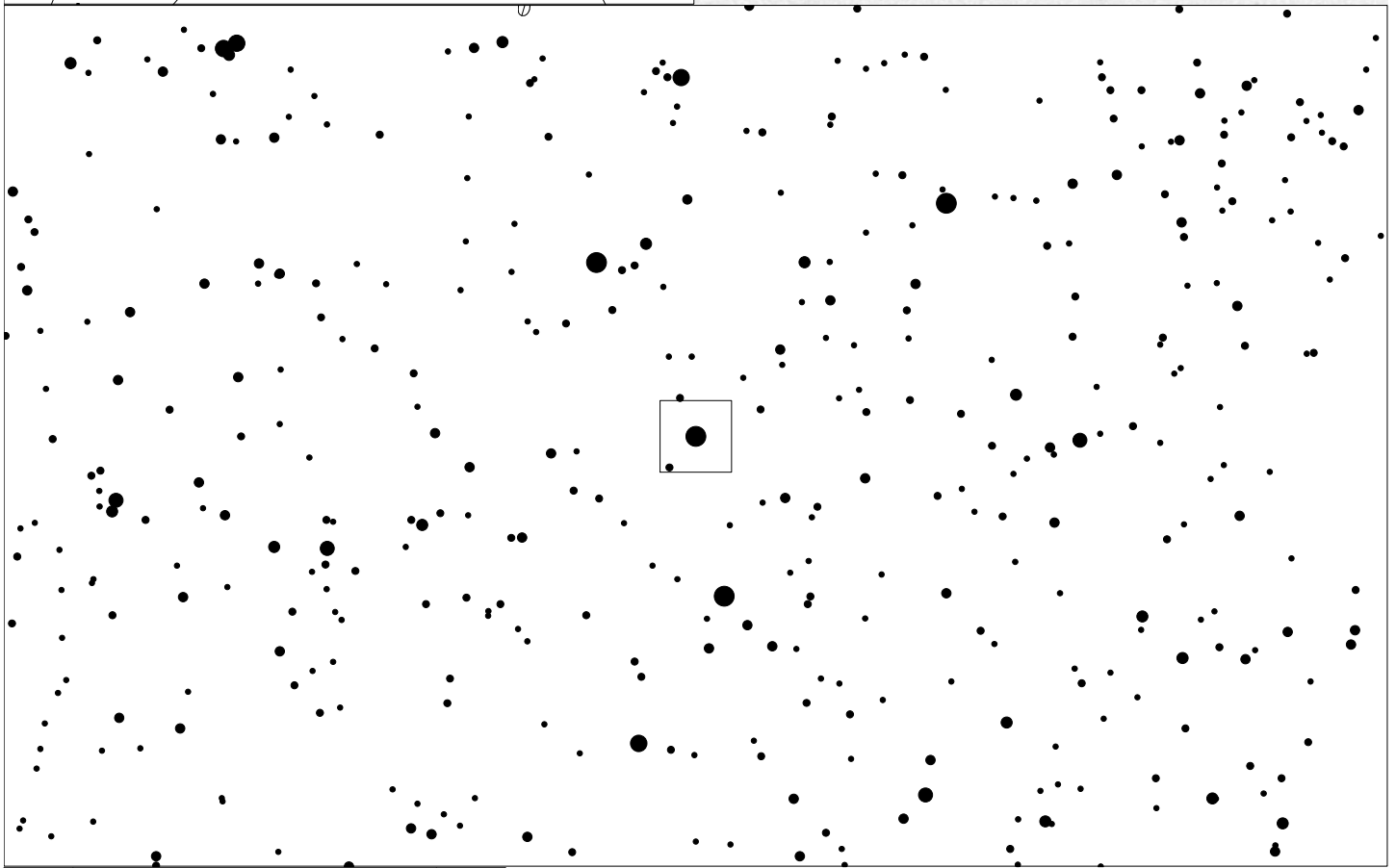
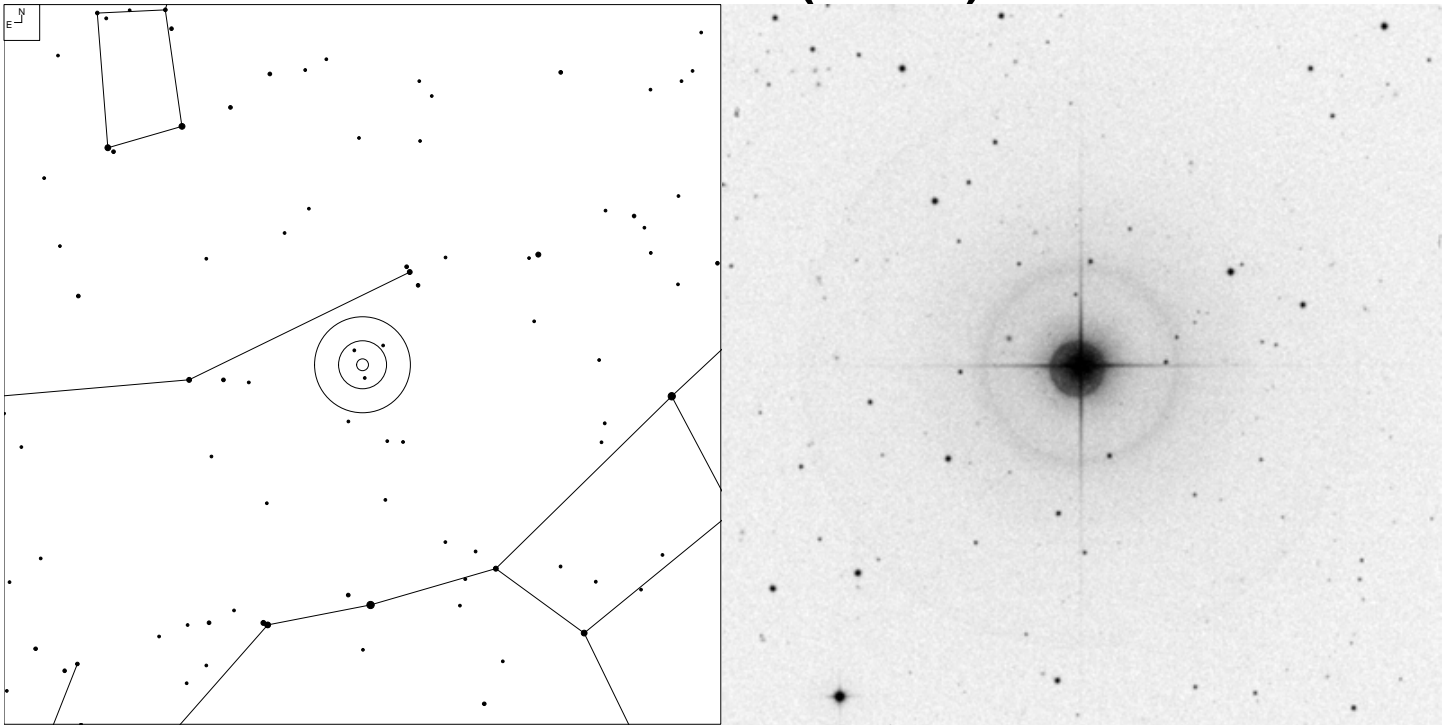


6 7 8 9 10 11 12

Galaxy Planetary

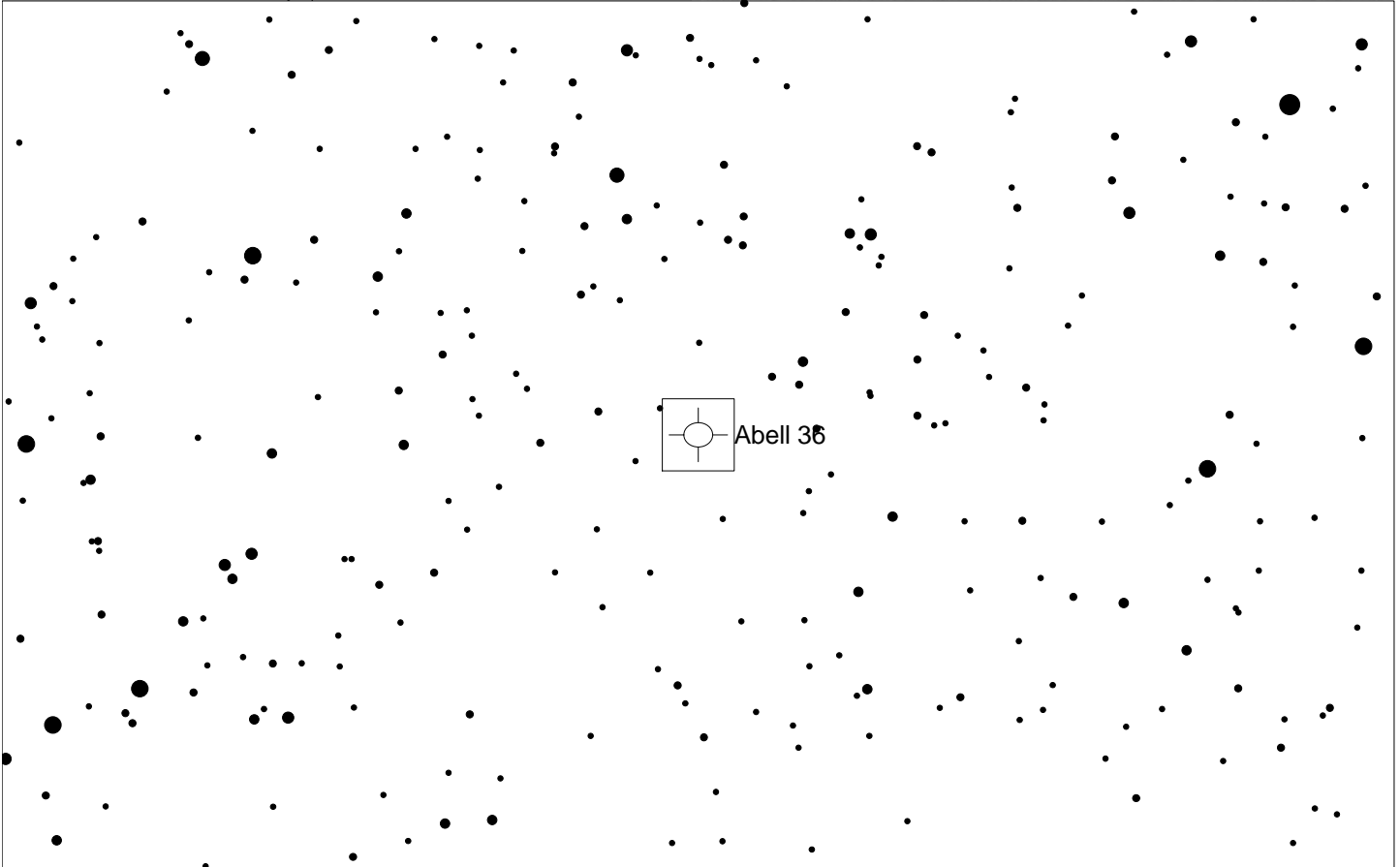
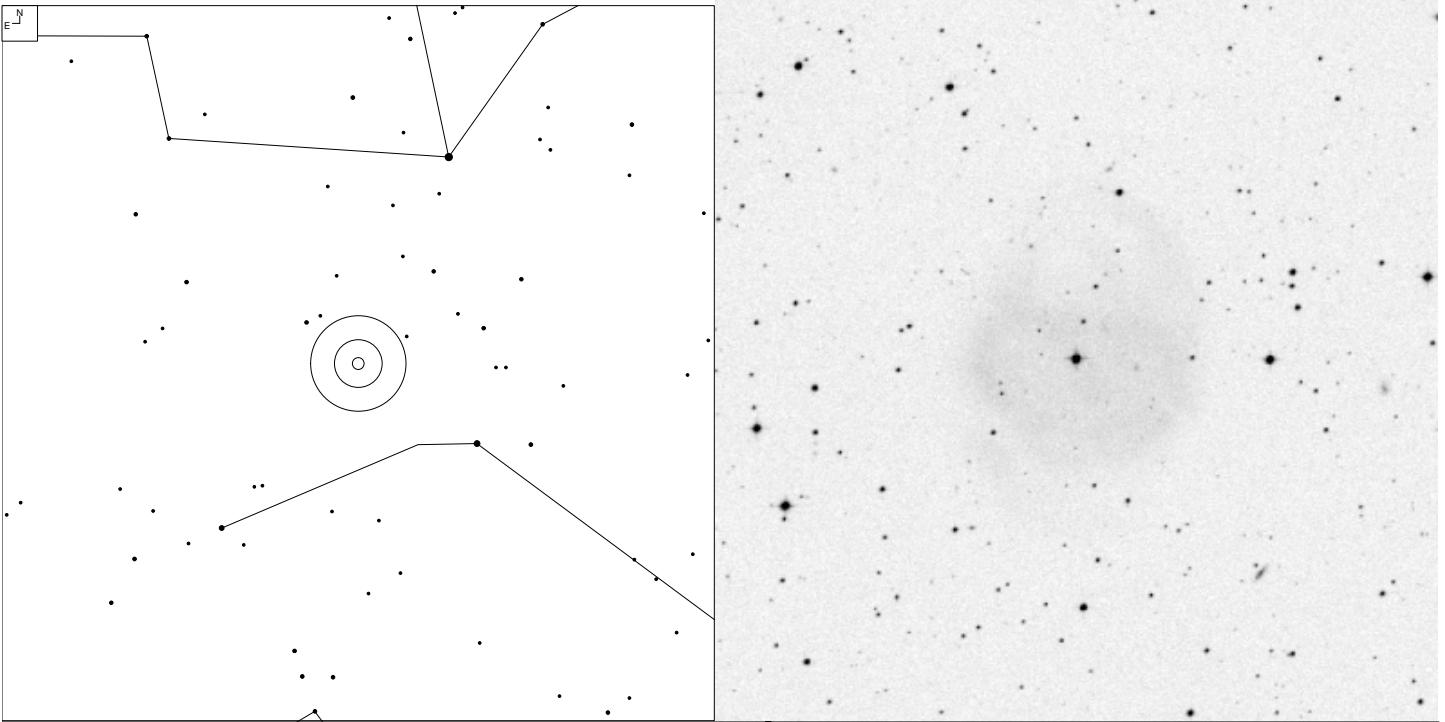
RA	Dec	Mag	Size	Urano 2000.0
12 53 41.4	-22 51 42	12.0p	12.8'	149R

RY Draconis (Draco)



RA	Dec	Mag	Size	Urano 2000.0
12 56 25.72	+65 59 40	5.9	*	13L

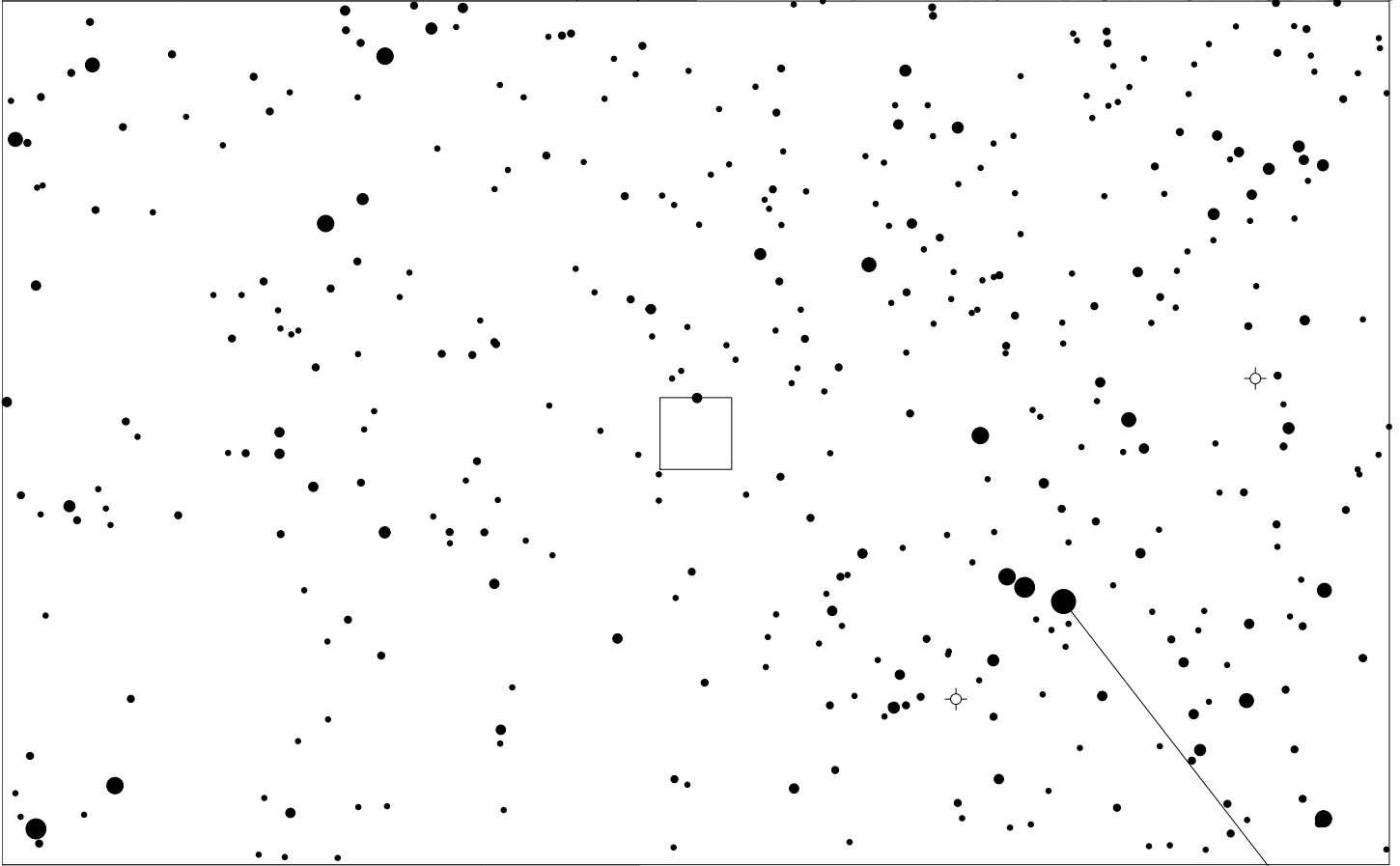
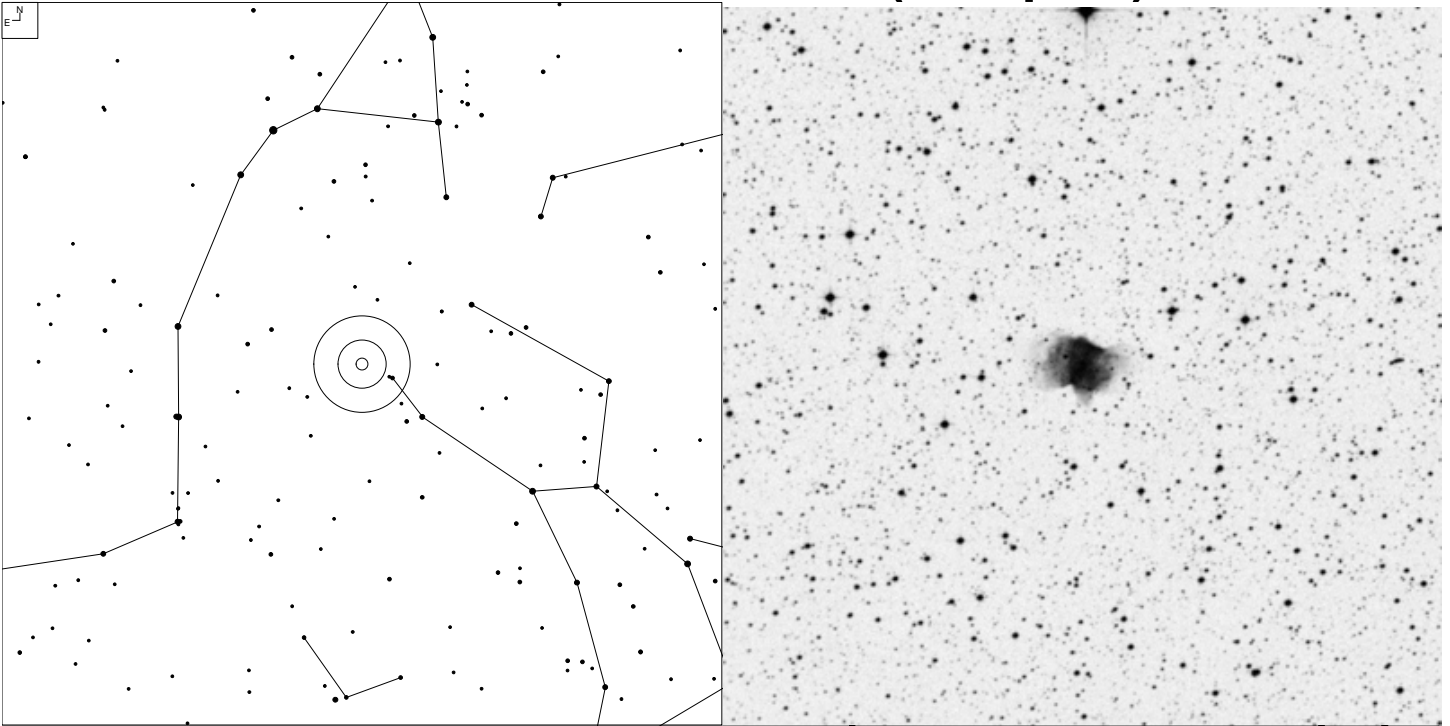
Abell 36 (Virgo)



N E	● ● ● ● ● ● ●	Galaxy	Planetary
	6 7 8 9 10 11 12	☉	♃

RA	Dec	Mag	Size	Urano 2000.0
13 40 41.3	-19 52 57	13.0p	6.0 x 5.0'	149L

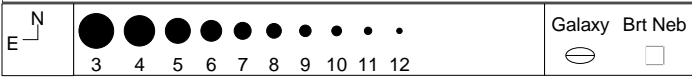
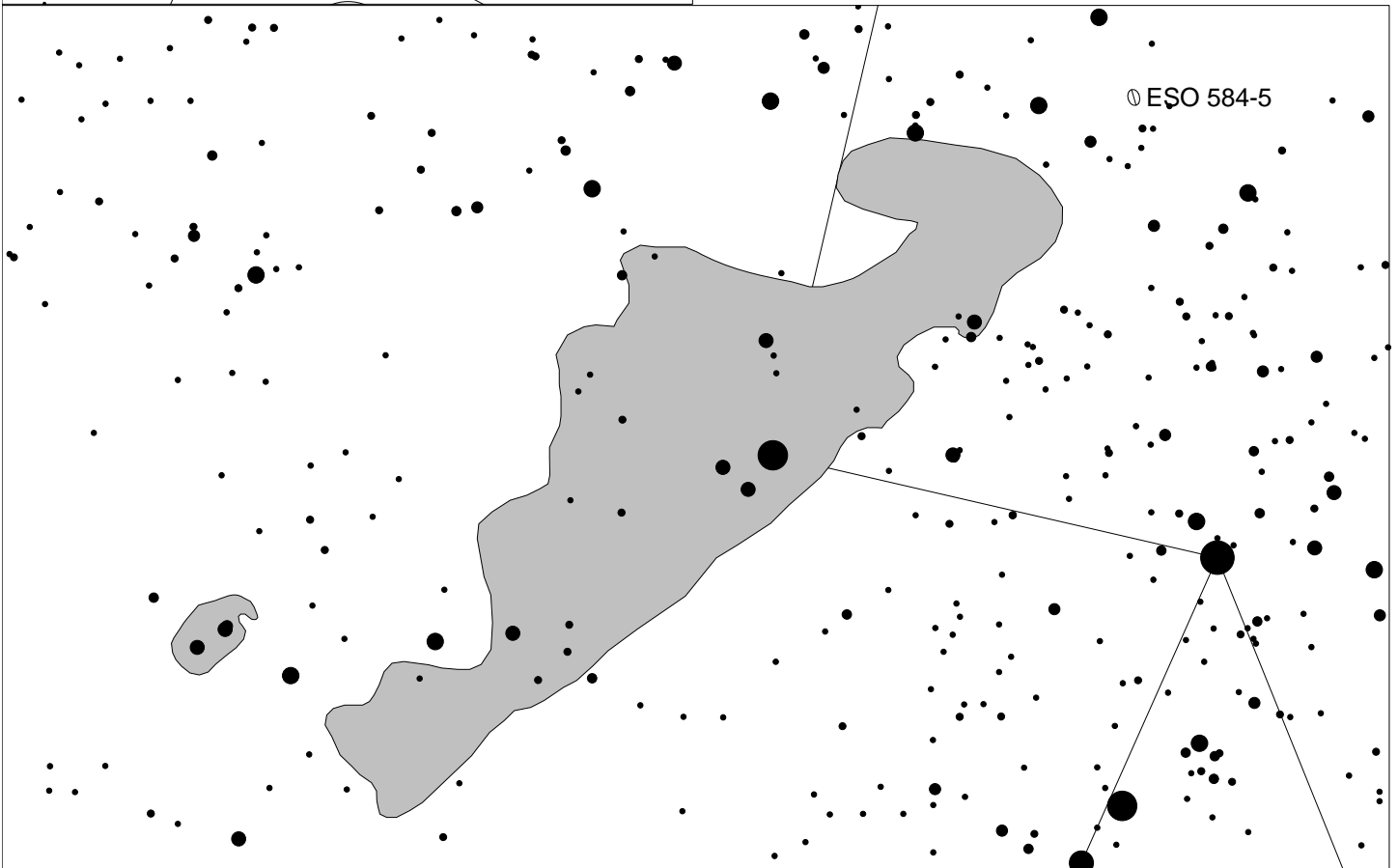
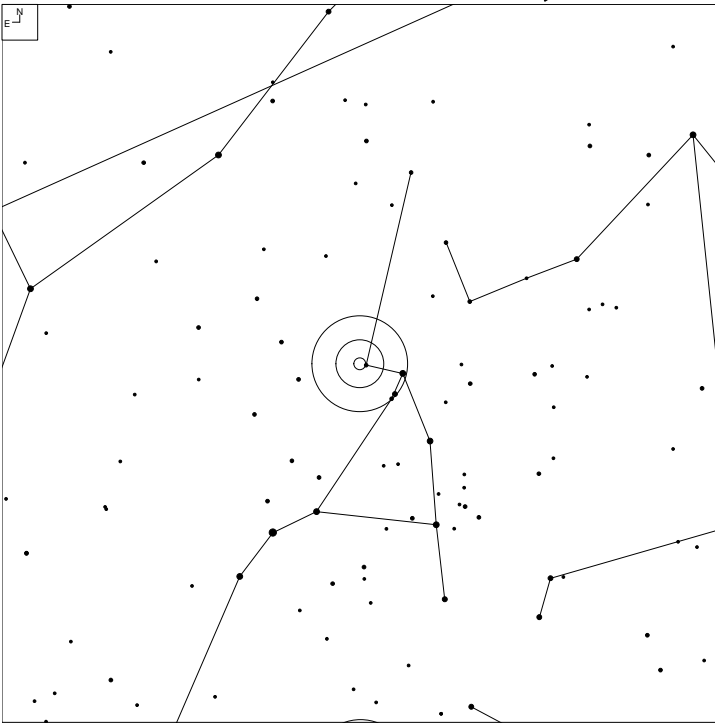
NGC 6072 - ESO 389+5 (Scorpius)



E ↙ N ↑	●●●●●●●●●●	Galaxy	Planetary
	4 5 6 7 8 9 10 11 12		

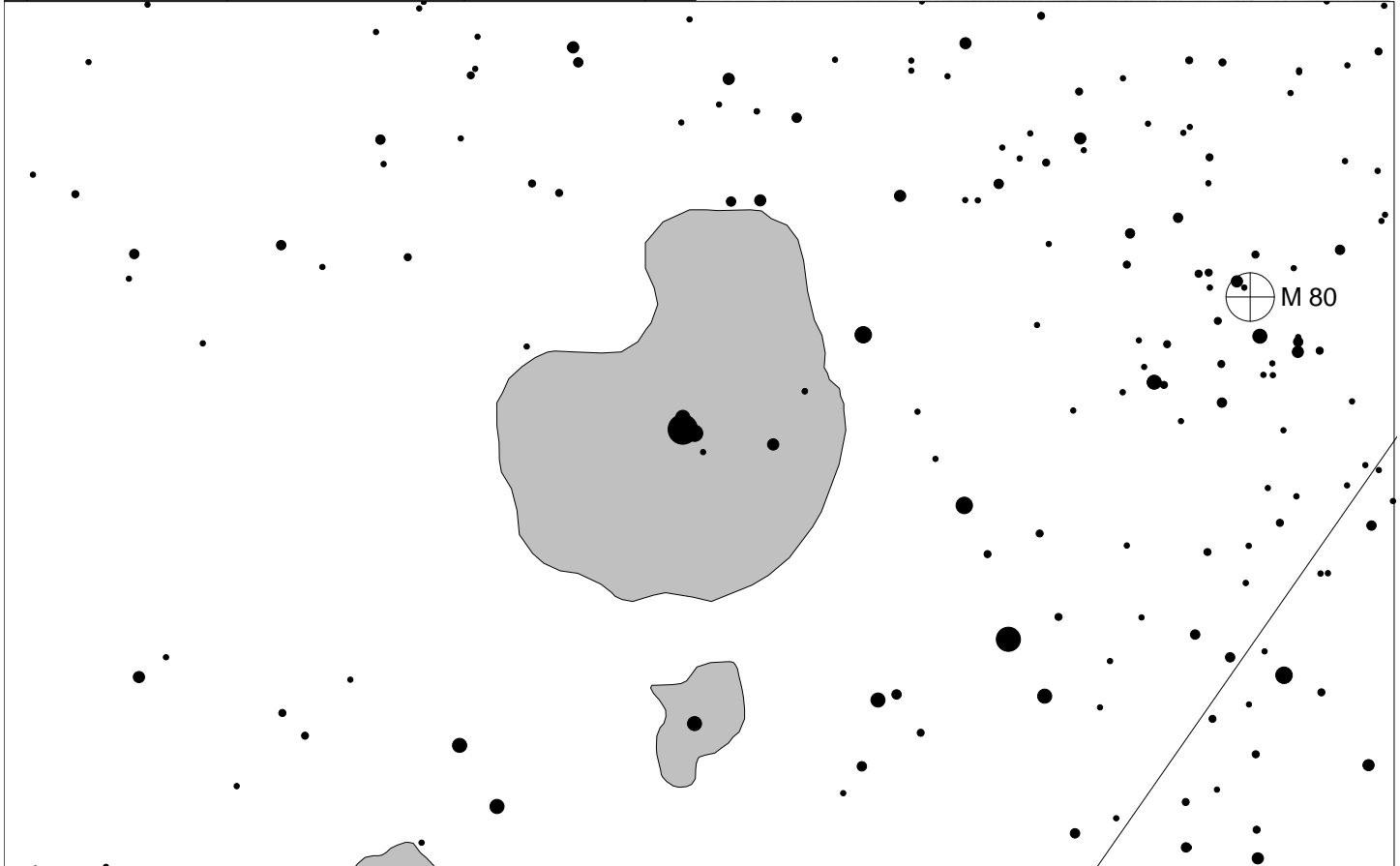
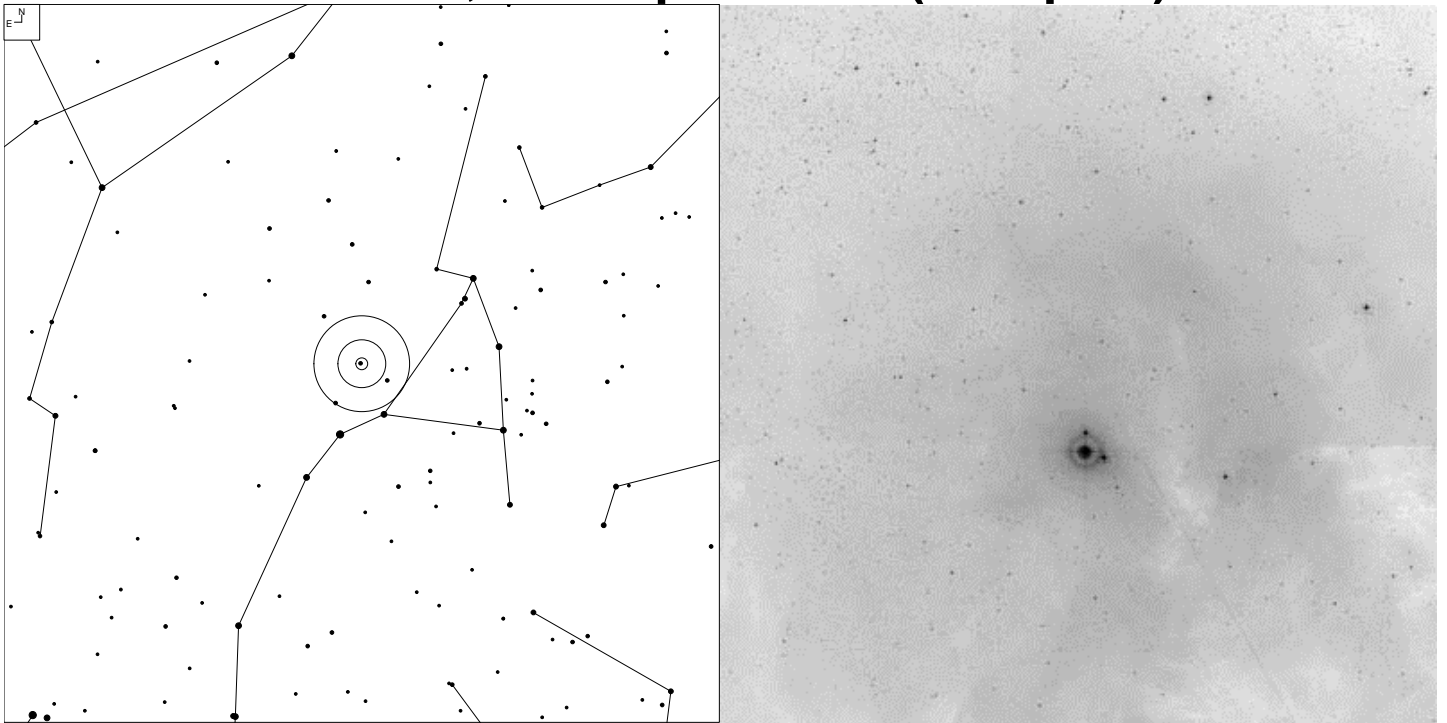
RA	Dec	Mag	Size	Urano 2000.0
16 12 58.2	-36 13 48	14.1p	98 x 72"	165L

IC 4592, LBN 1113 (Scorpius)



RA	Dec	Mag	Size	Urano 2000.0
16 13 08.0	-19 24 00	-	200 x 60'	147L

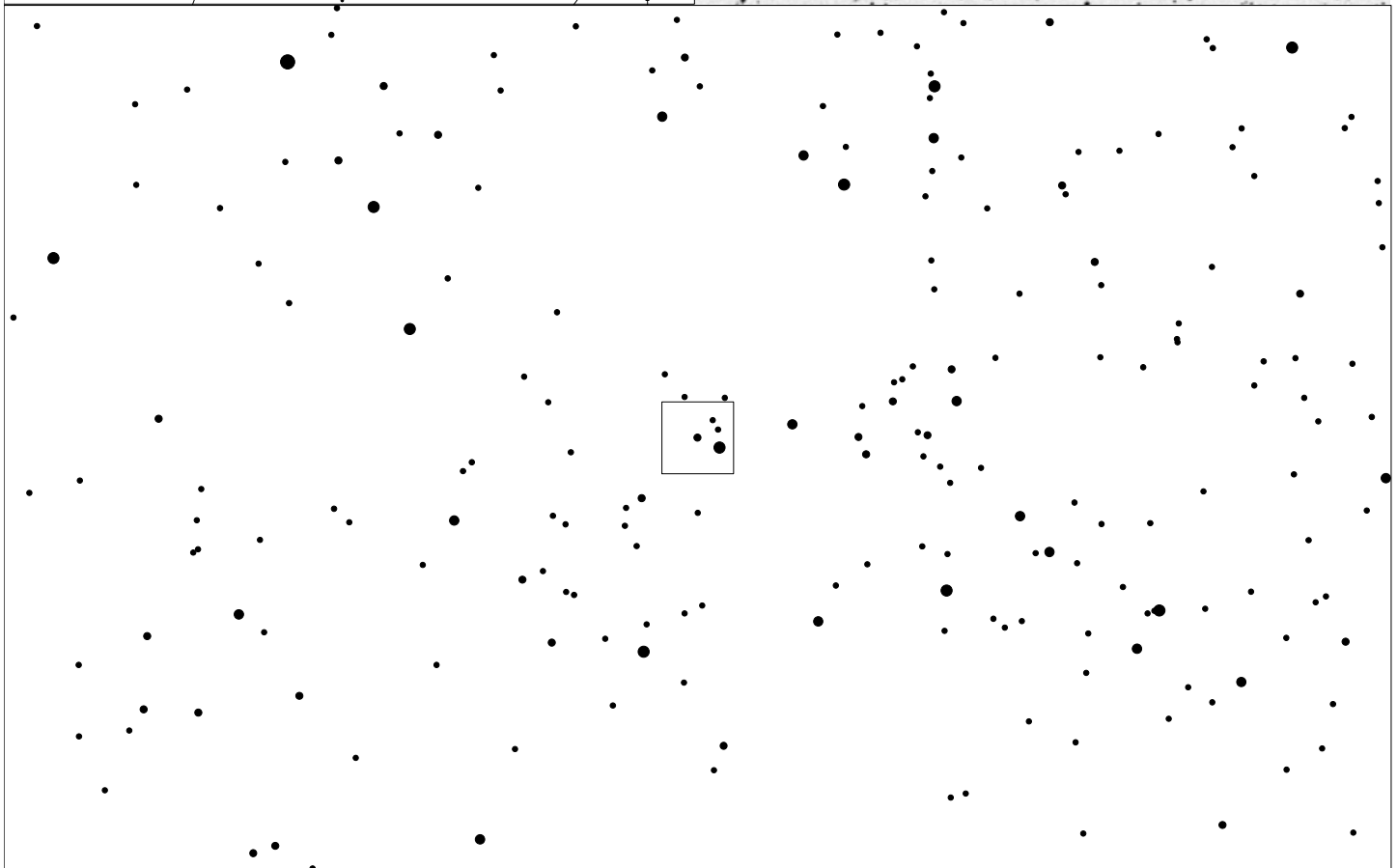
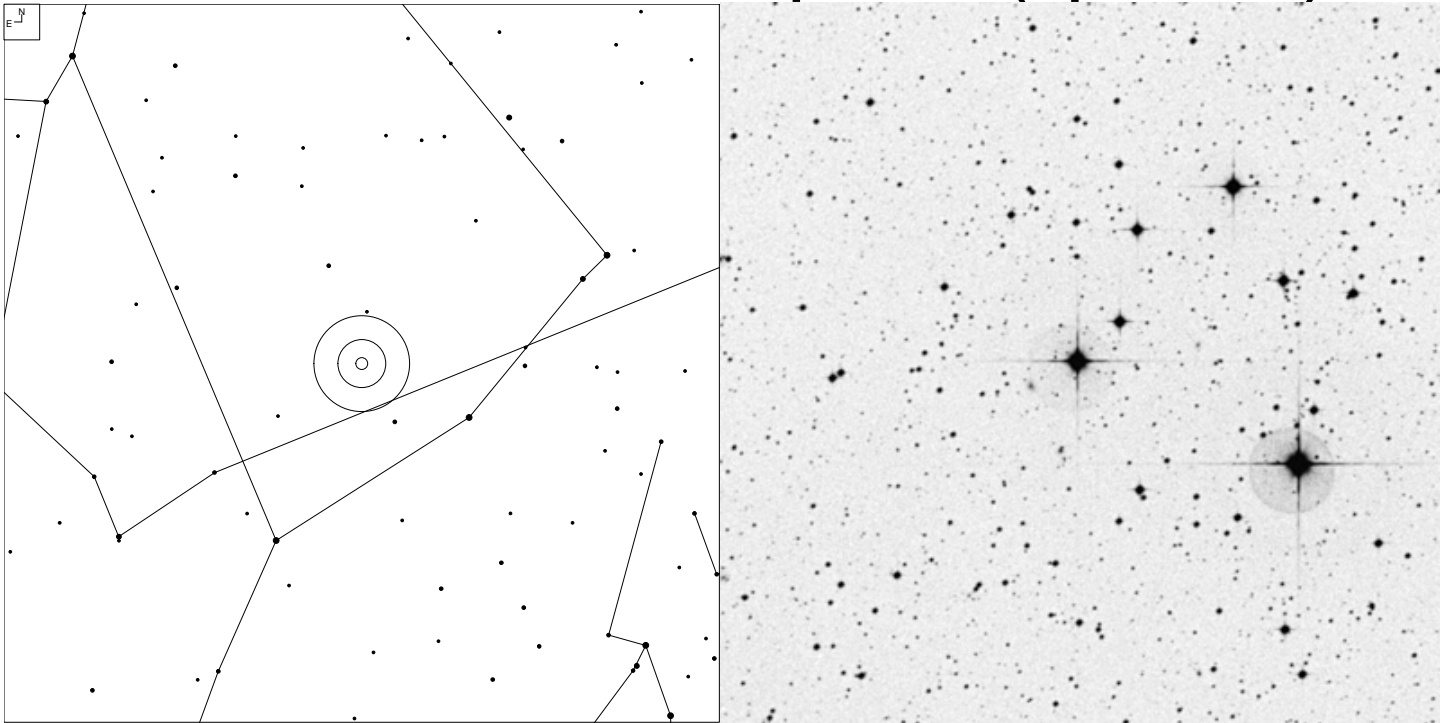
IC 4604, Rho Ophiuchus (Scorpius)



Galaxy
 Globular
 Brt Neb

RA	Dec	Mag	Size	Urano 2000.0
16 25 20.0	-23 28 00	-	80 x 72'	147L

Wolf 630A, B, C – V1054 Ophiuchi (Ophiuchus)

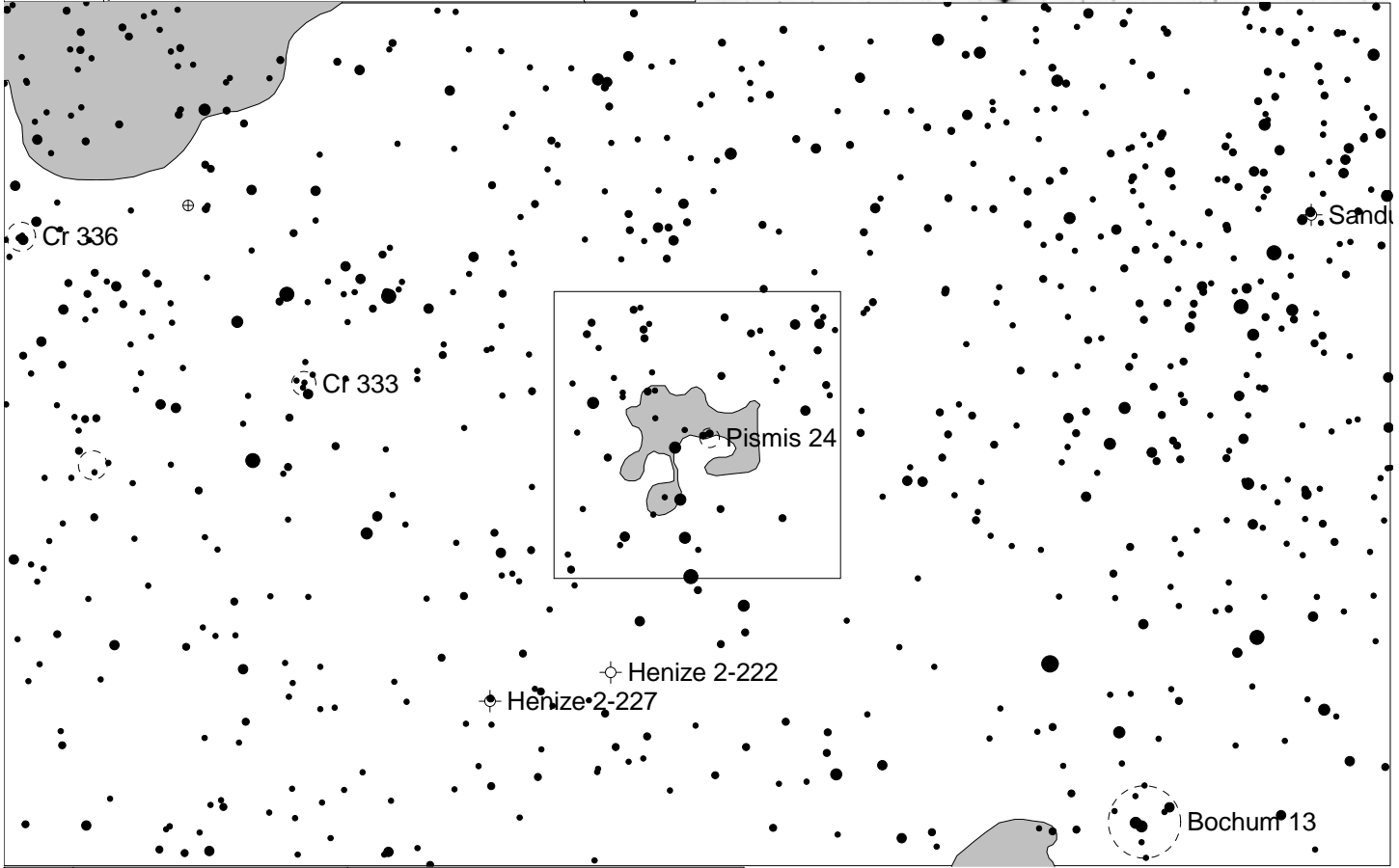
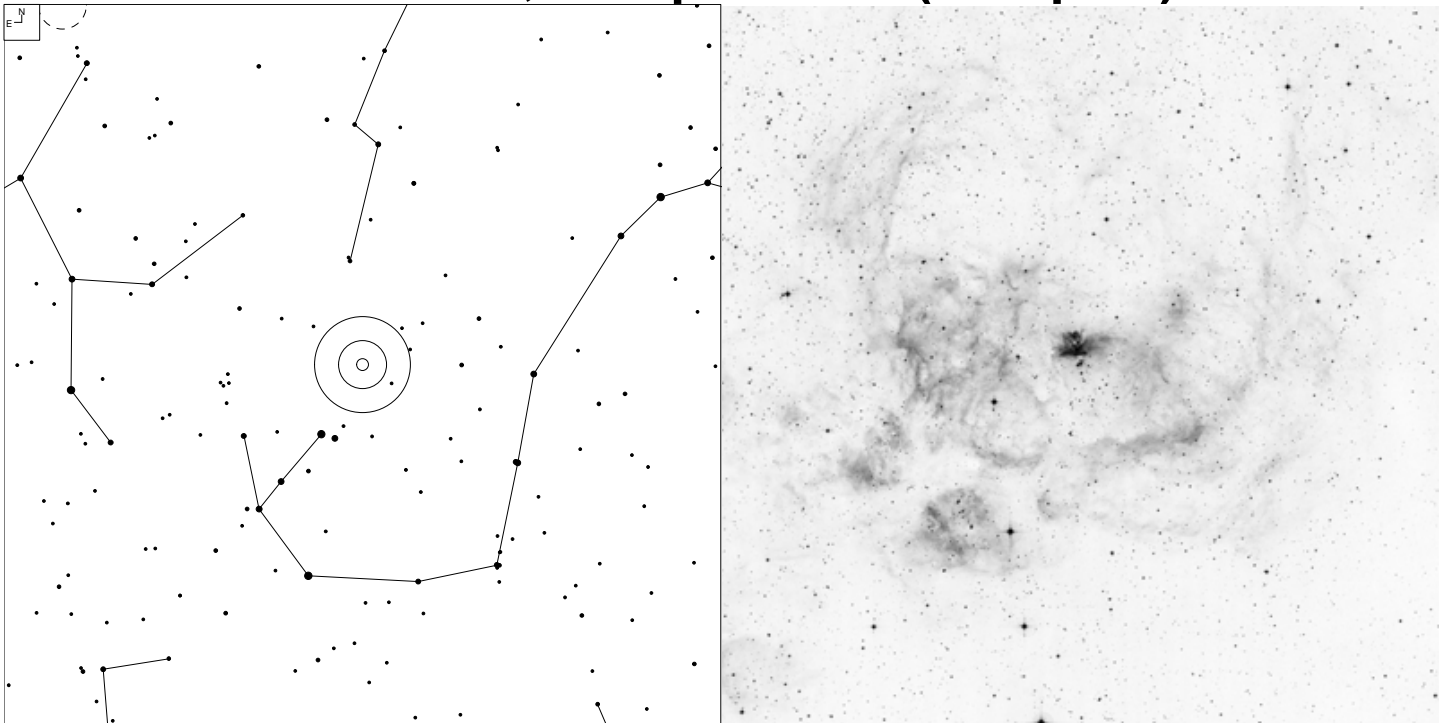


7 8 9 10 11 12

Galaxy

RA	Dec	Mag	Size	Urano 2000.0
16 55 29.2	-08 20 03	9.0, 10.3, 17.7	quintuple star	128R

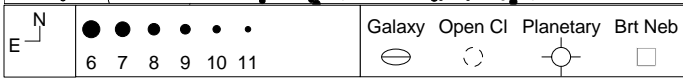
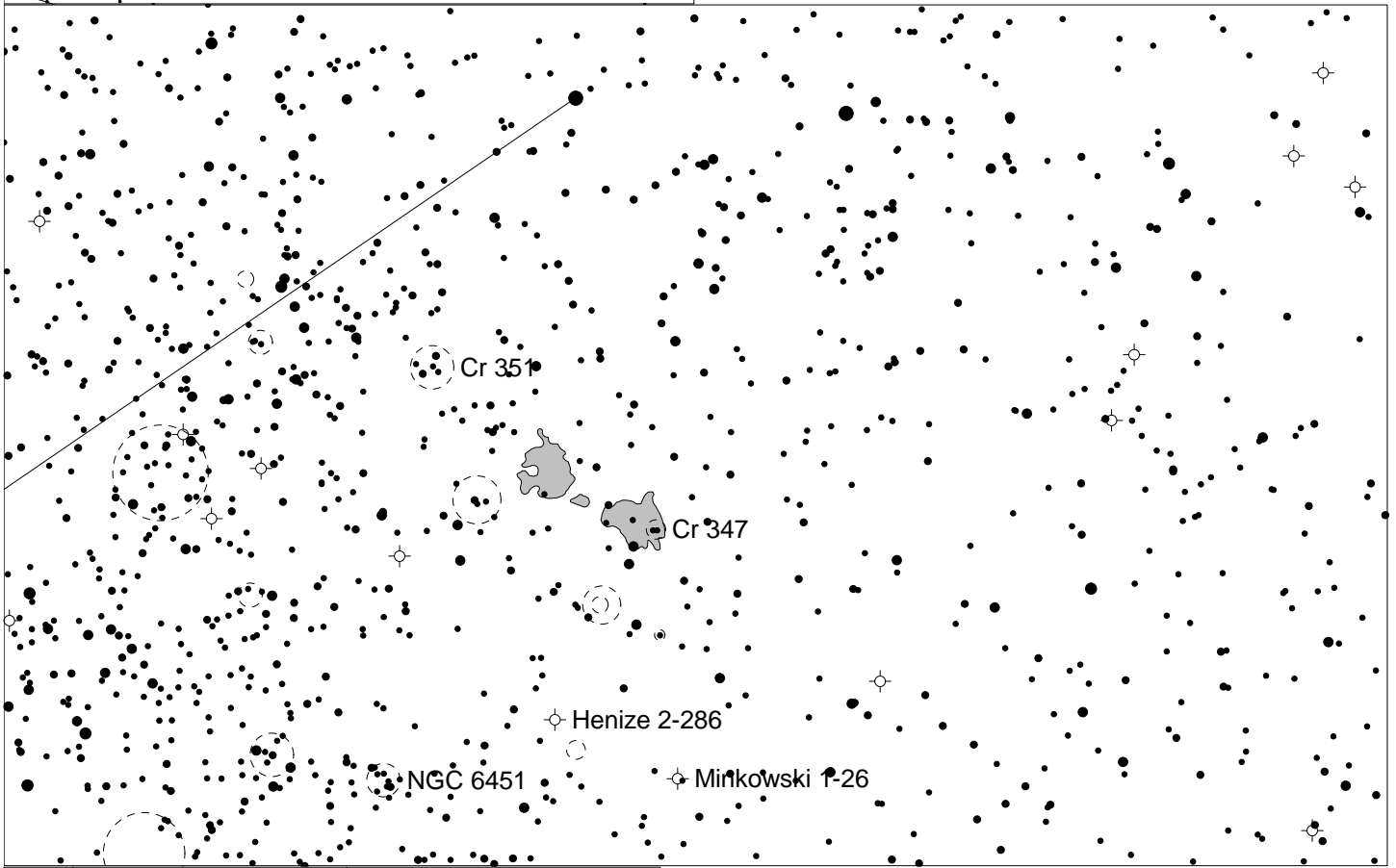
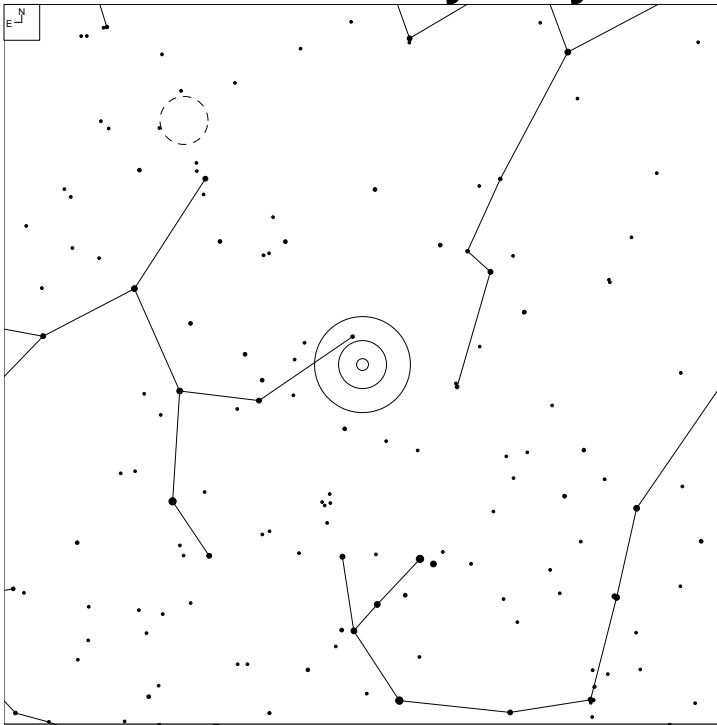
NGC 6357, Sharpless 2-5 (Scorpius)



E N	● ● ● ● ●	Galaxy	Globular	Open Cl	Planetary	Brt Neb
	6 7 8 9 10 11	☉	⊕	⊙	⊛	□

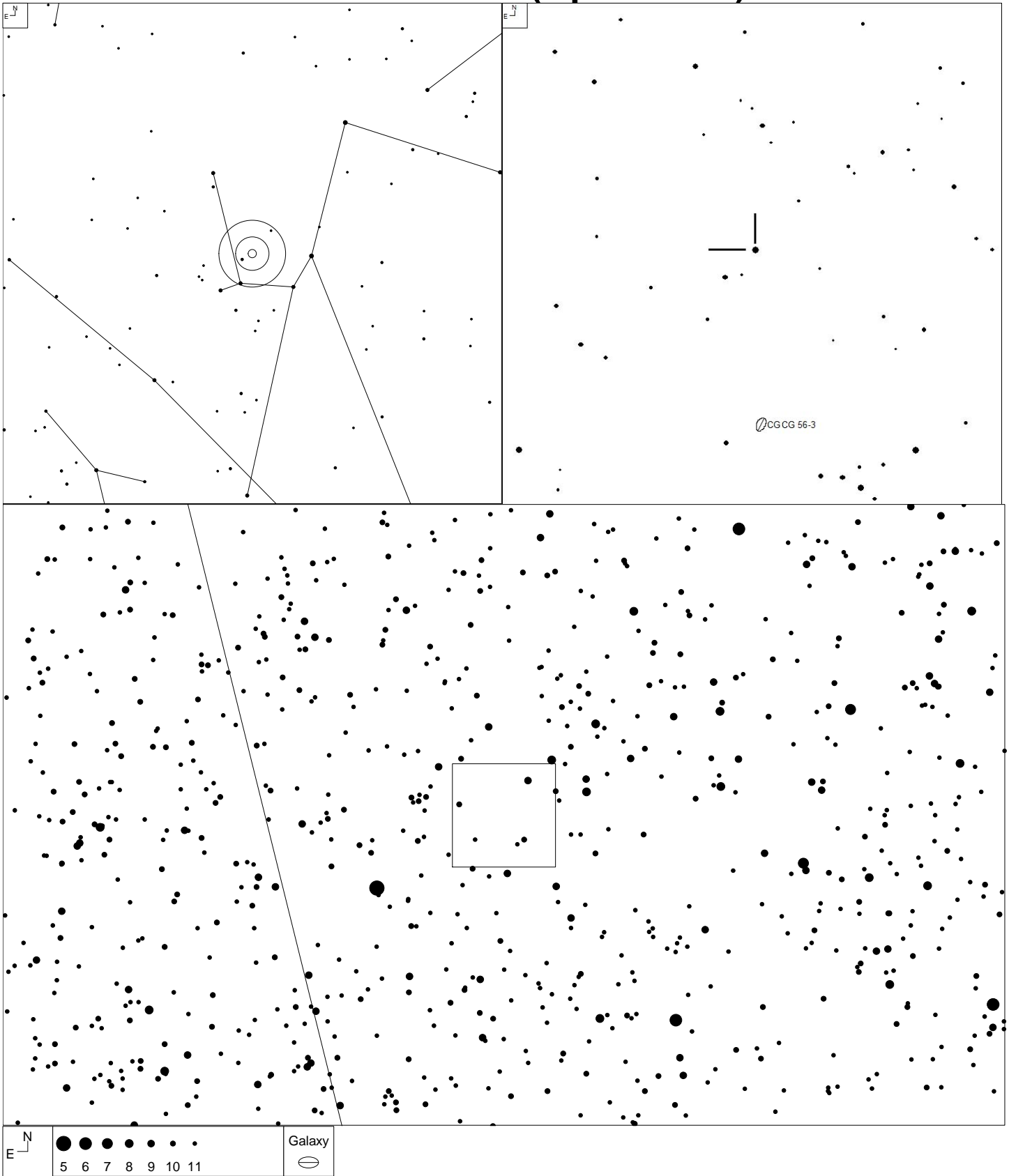
RA	Dec	Mag	Size	Urano 2000.0
17 24 56.0	-34 12 15	-	31.8 x 30.0'	164L

Milky Way Center (Sagittarius)



RA	Dec	Mag	Size	Urano 2000.0
17 45 40.04	-29 00 28			146L

Barnard's Star (Ophiuchus)

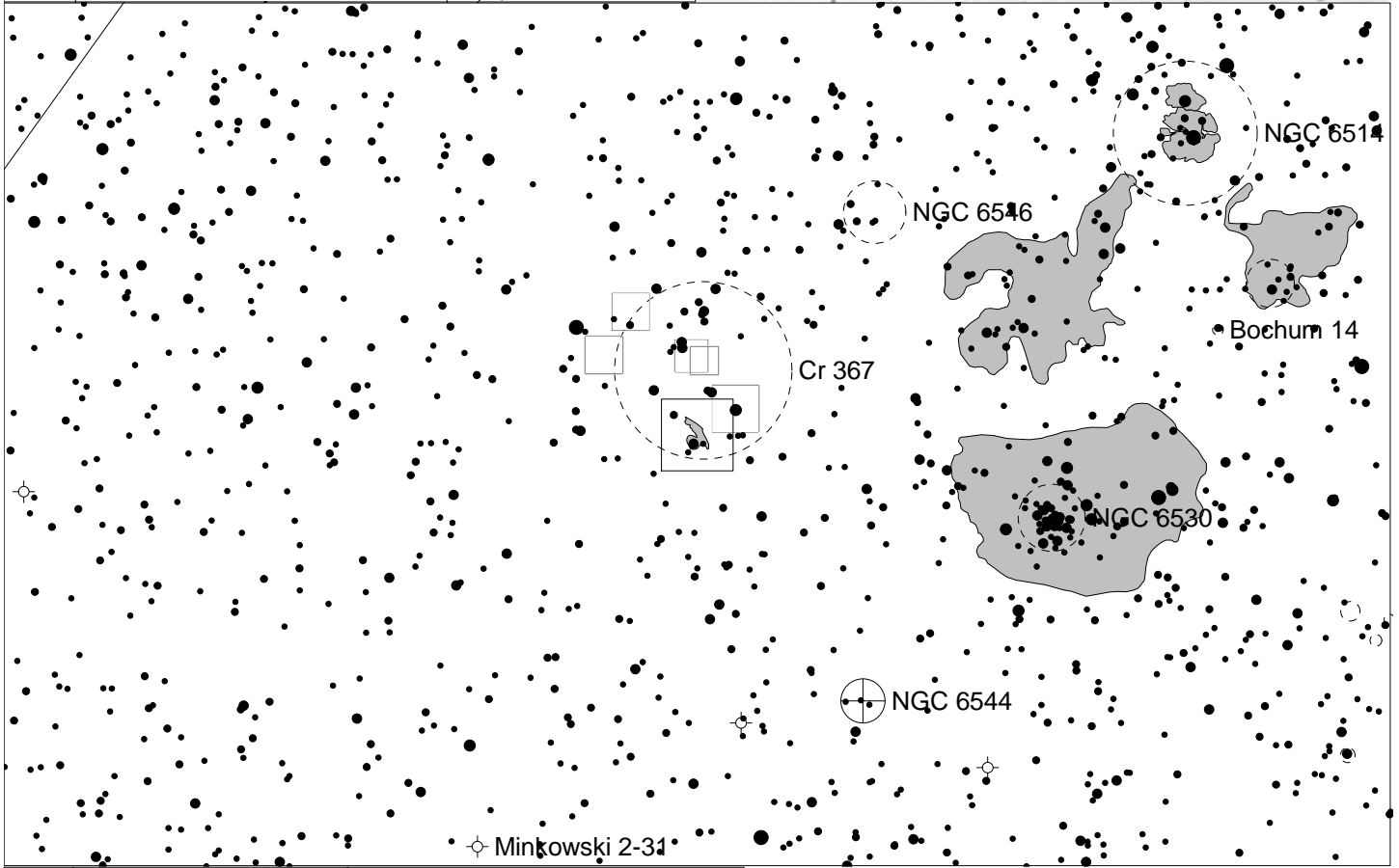
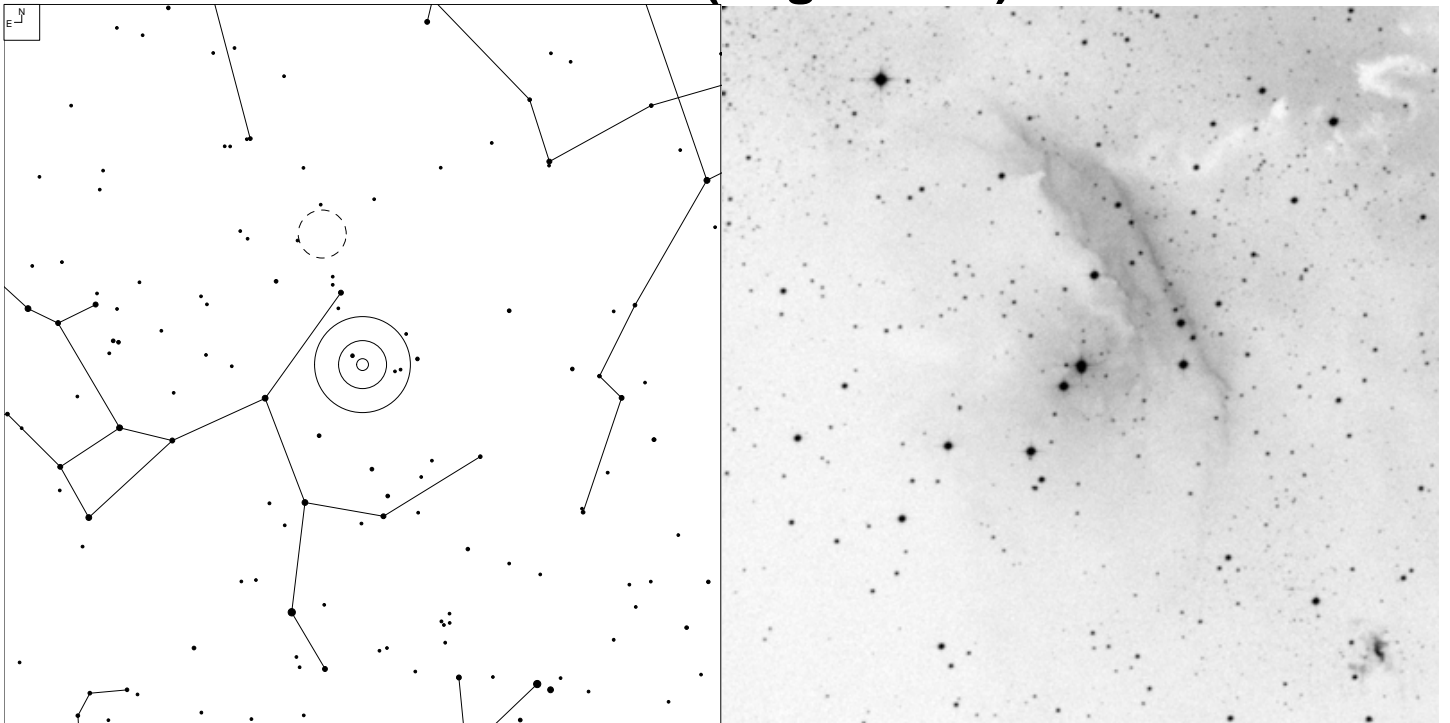


CGCG 56-3



RA	Dec	Mag	Size	Urano 2000.0
17 57 48.0	+04 43 10	9.54v	*	106R

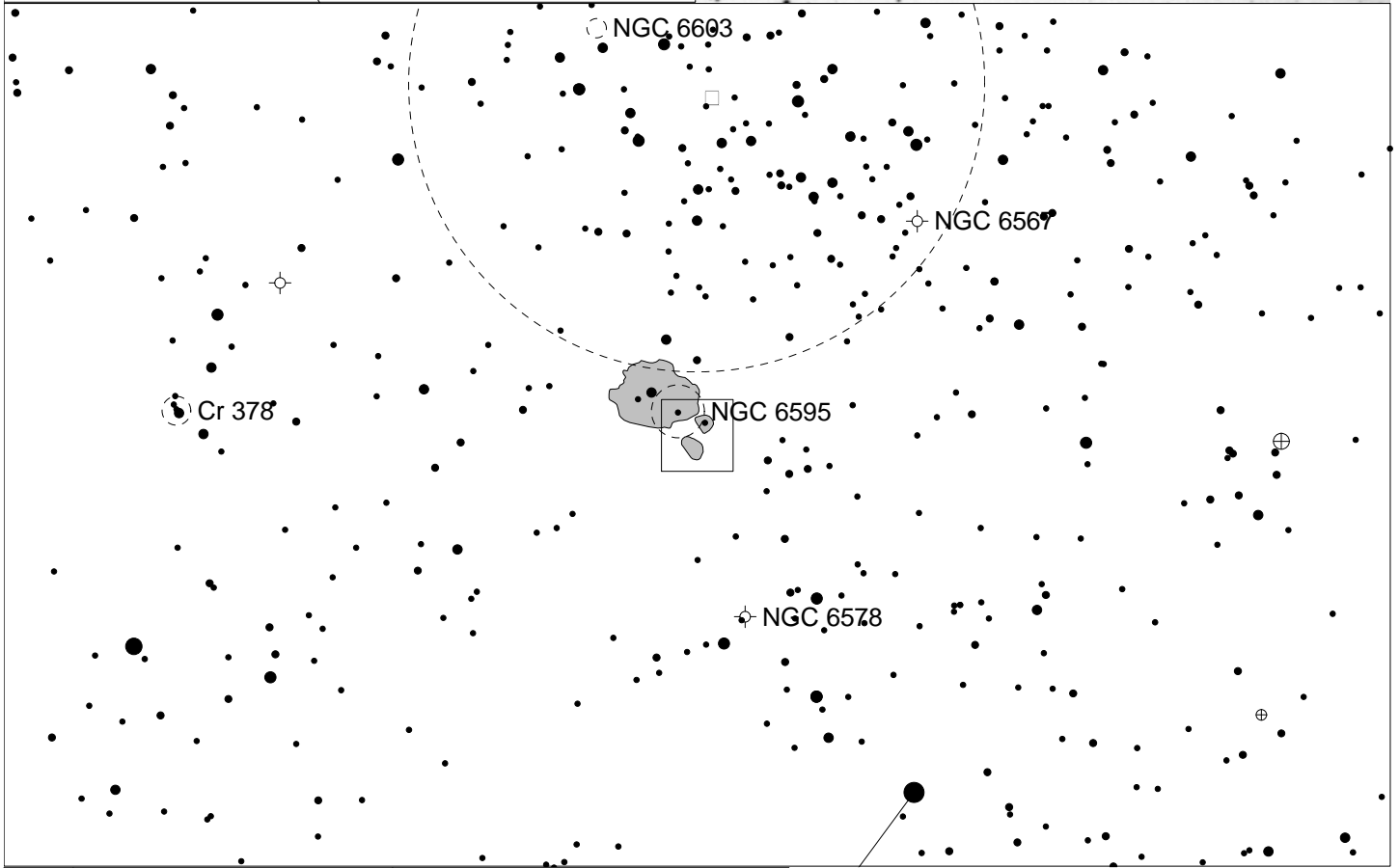
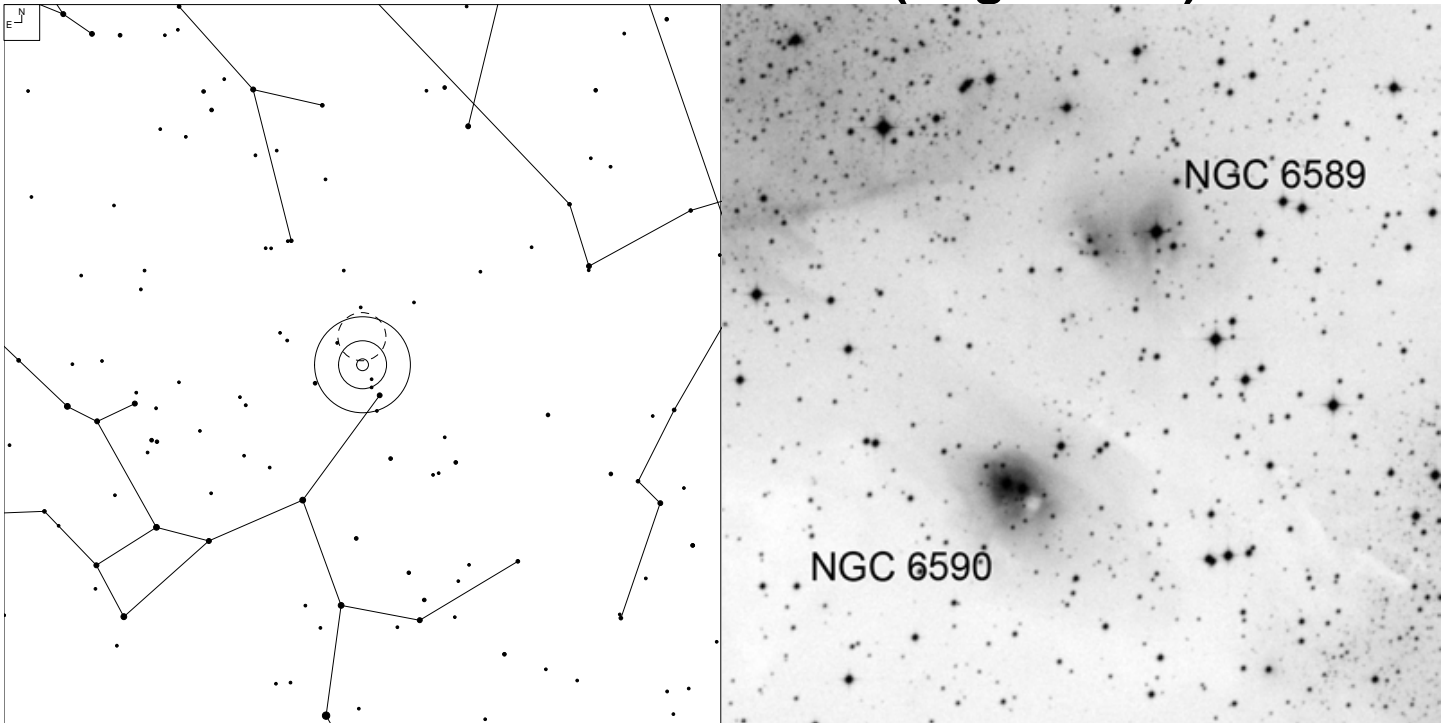
NGC 6559 (Sagittarius)



E N	● ● ● ● ●	Galaxy	Globular	Open Cl	Planetary	Brt Neb
	6 7 8 9 10 11	☉	⊕	⊙	⊙	□

RA	Dec	Mag	Size	Urano 2000.0
18 09 53.0	-24 04 30	-	8.3 x 4.2'	145R

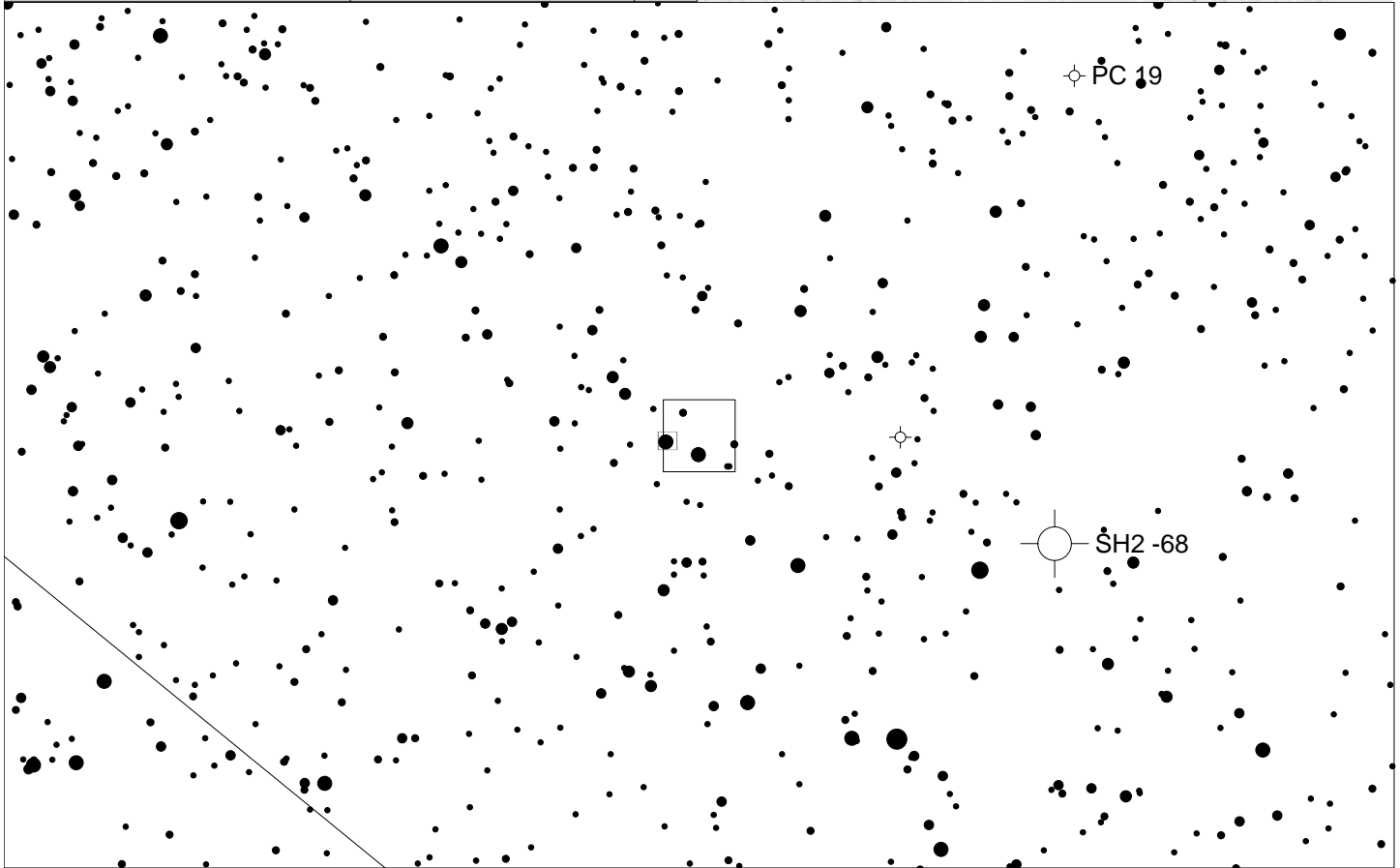
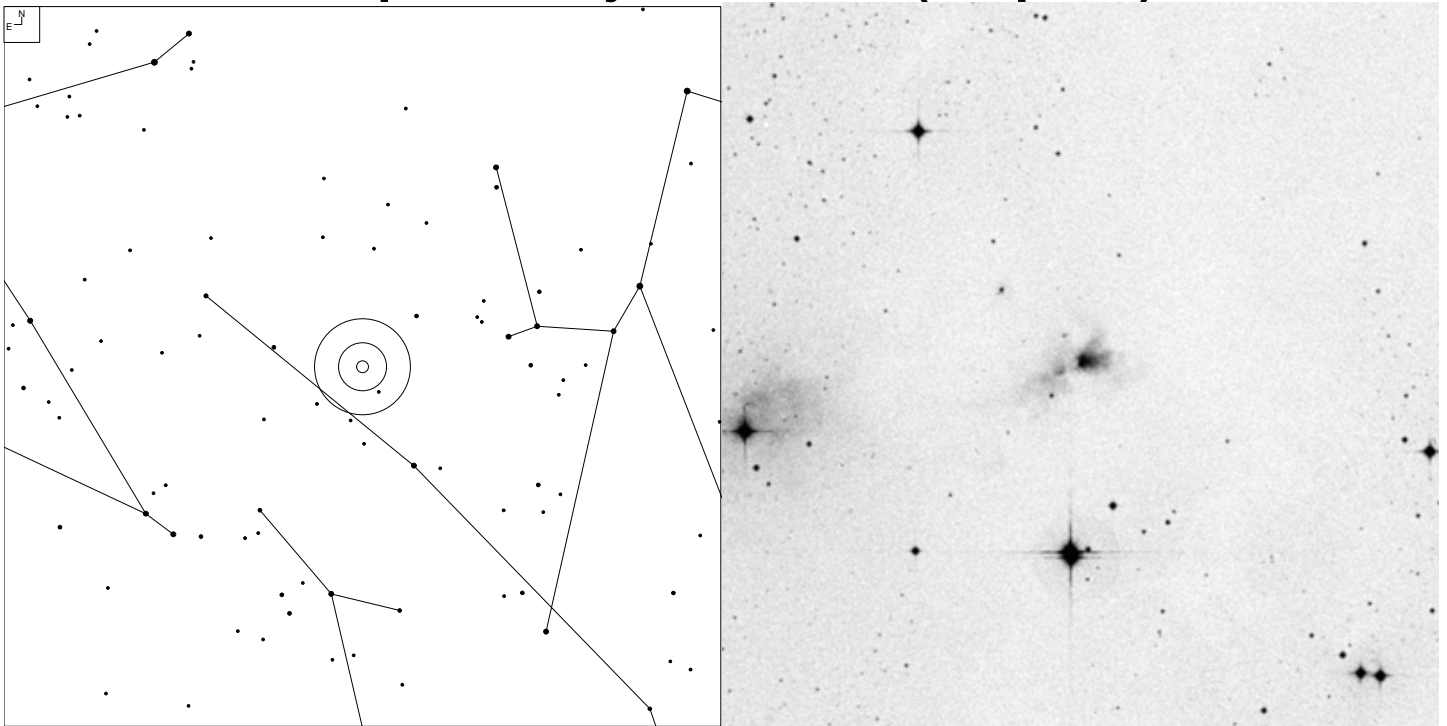
NGC 6589 and NGC 6590 (Sagittarius)



E N	● ● ● ● ● ● ● ●	Galaxy	Globular	Open Cl	Planetary	Brt Neb
	4 5 6 7 8 9 10	☾	⊕	⊙	⊕	□

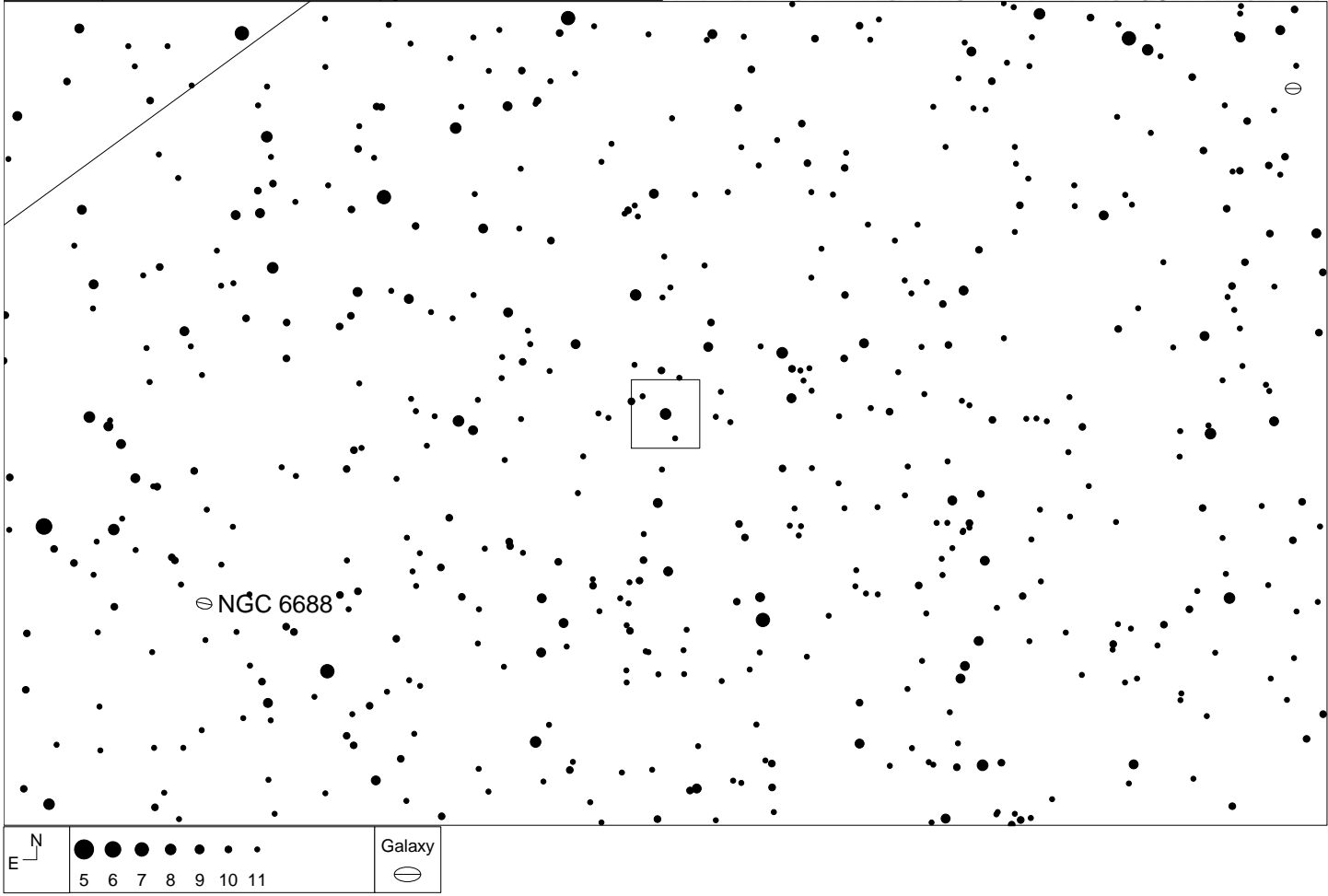
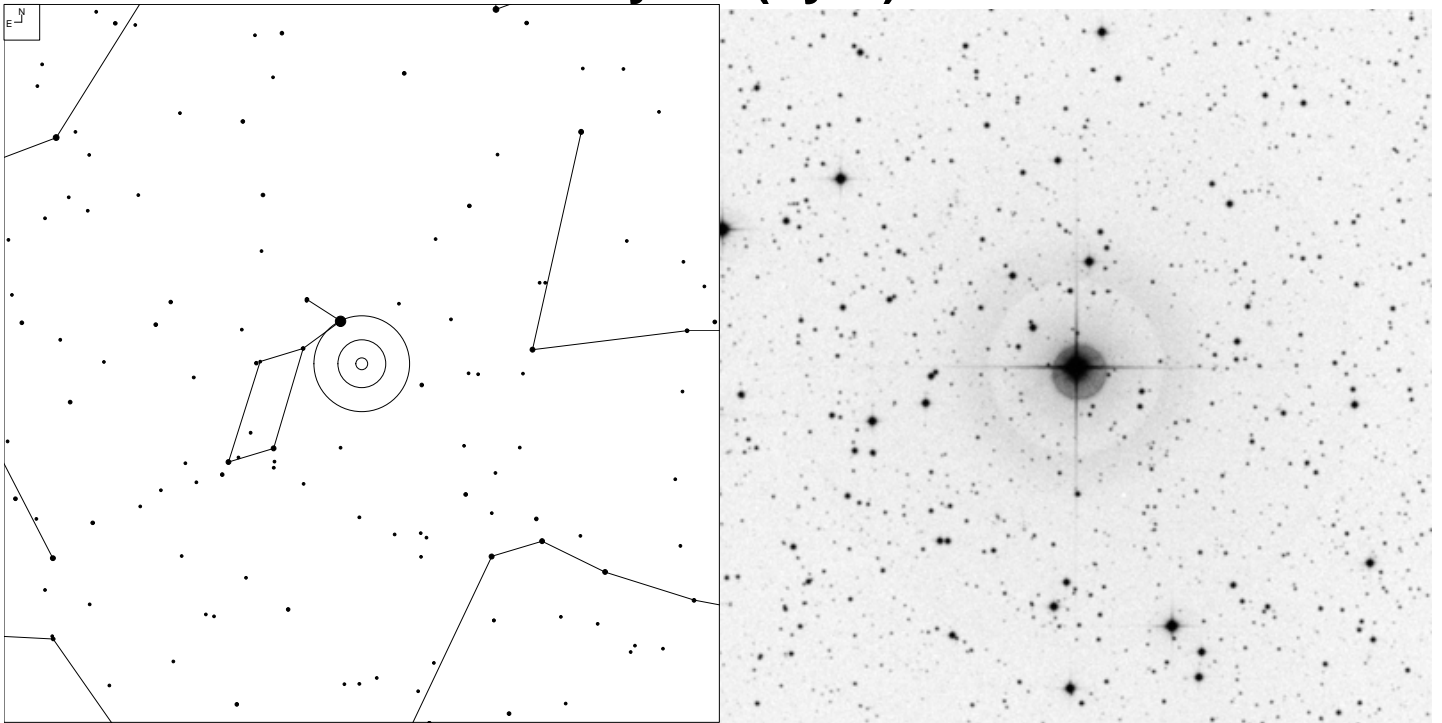
	RA	Dec	Mag	Size	Urano 2000.0
NGC 6589	18 16 52.0	-19 46 43	-	4.0 x 3.5'	145R
NGC 6590	18 17 02.0	-19 51 47	-	5.6 x 3.3'	

Serpen's Object - SVS 2 (Serpens)



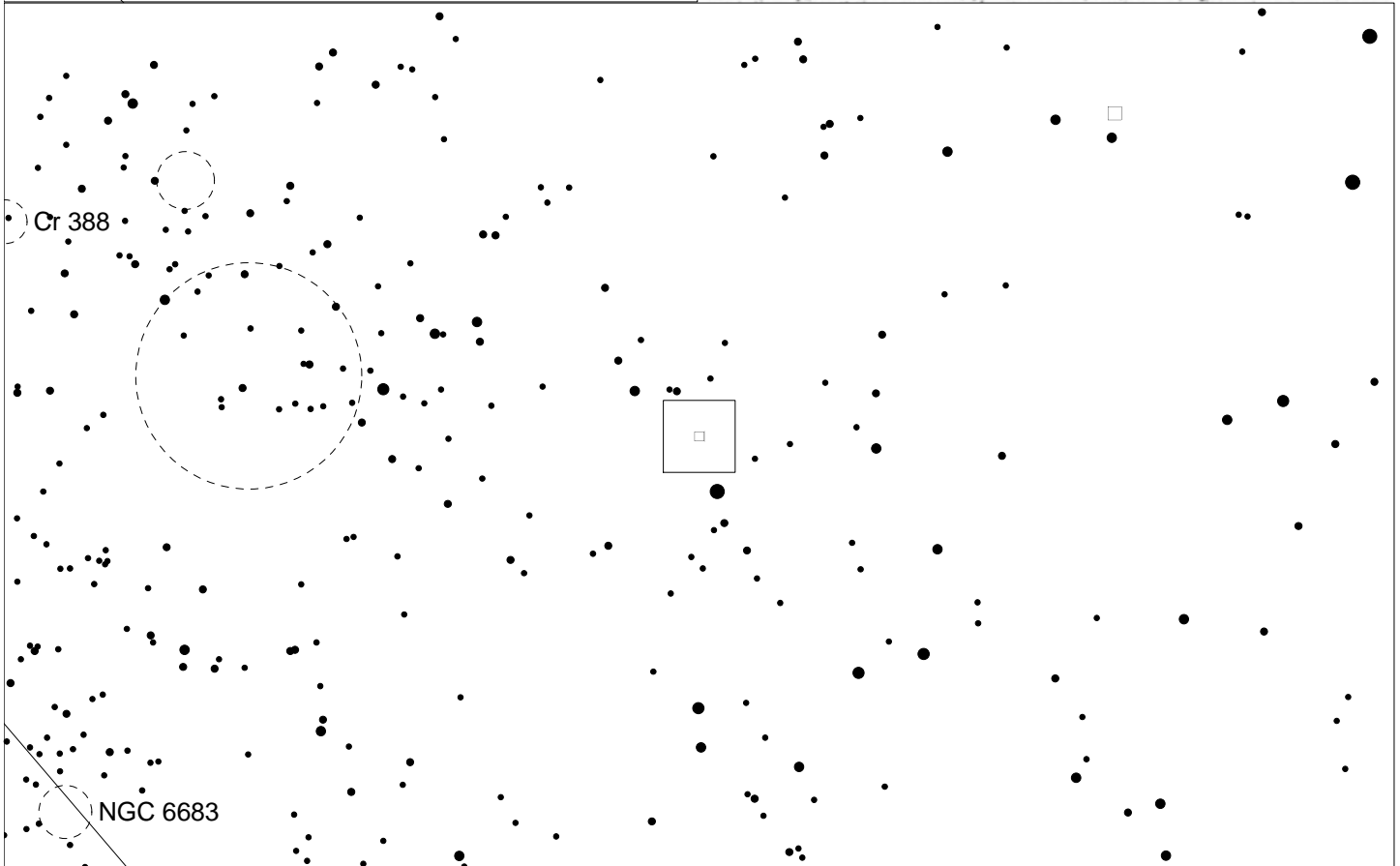
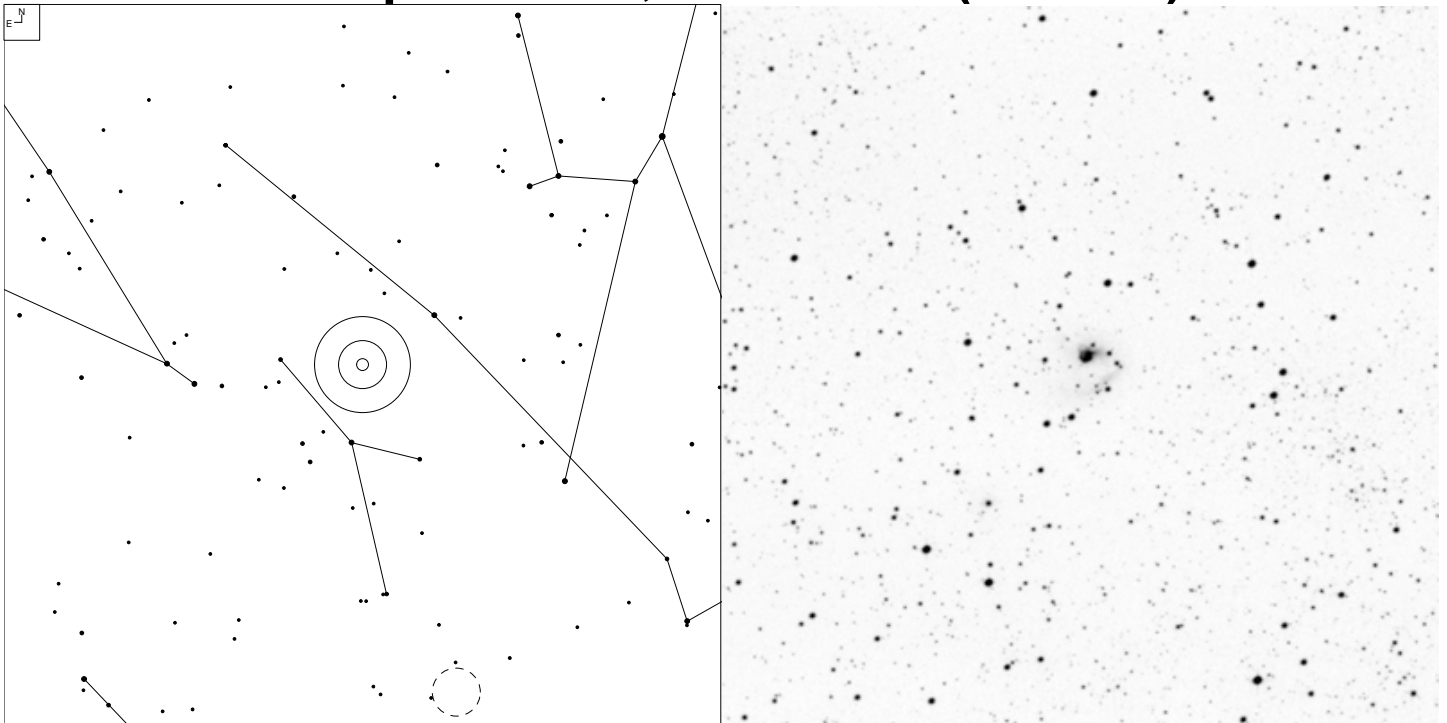
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18 29 56.8	+01 14 46		2.0 x 1.4'	106L

T Lyrae (Lyra)



RA	Dec	Mag	Size	Urano 2000.0
18 32 20.08	+36 59 56	7.5 – 9.3 (var)	*	49R

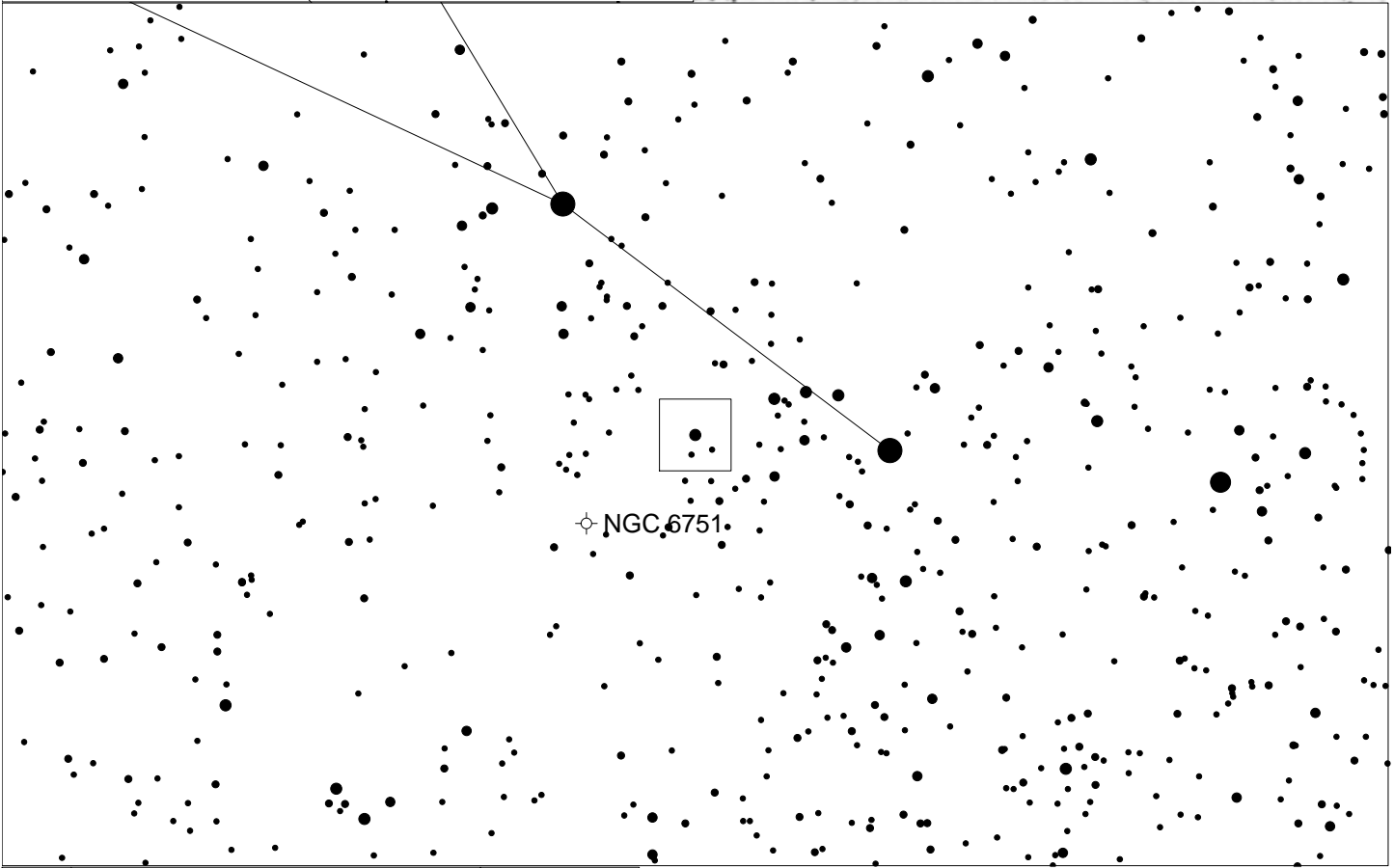
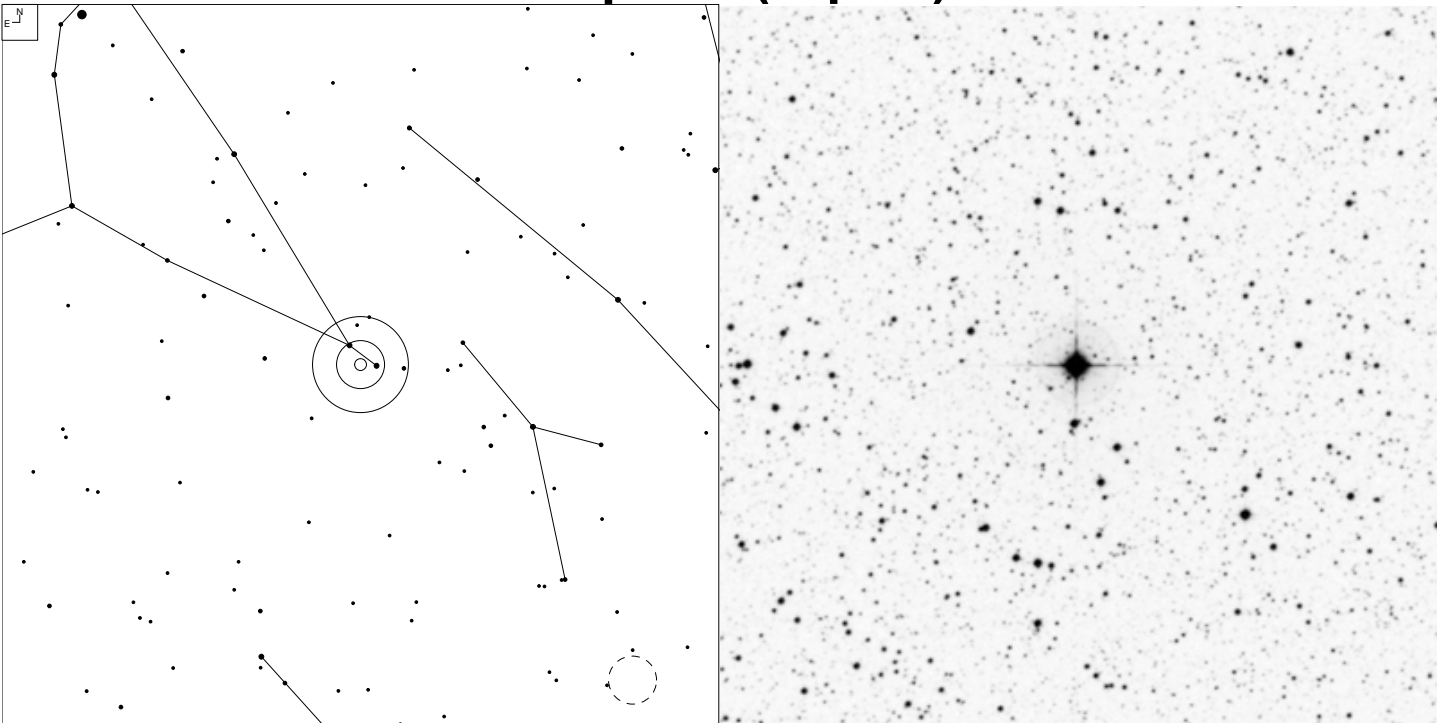
Sharpless 2-61, PK26+01.0 (Scutum)



E N	● ● ● ● ● ●	Galaxy	Open Cl	Brt Neb
	6 7 8 9 10 11	☉	○	□

RA	Dec	Mag	Size	Urano 2000.0
18 33 21.8	-04 58 16		2.0'	106L

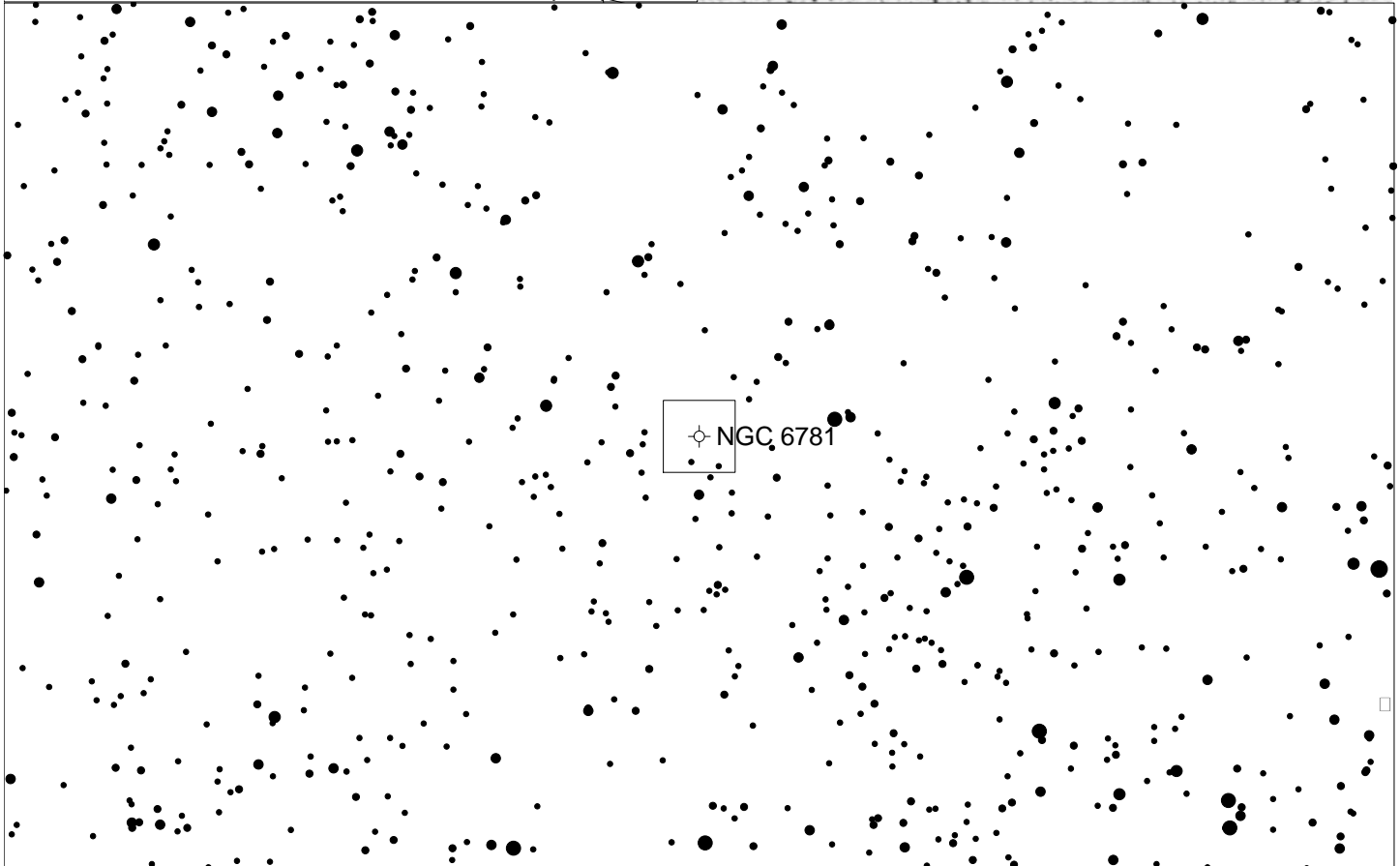
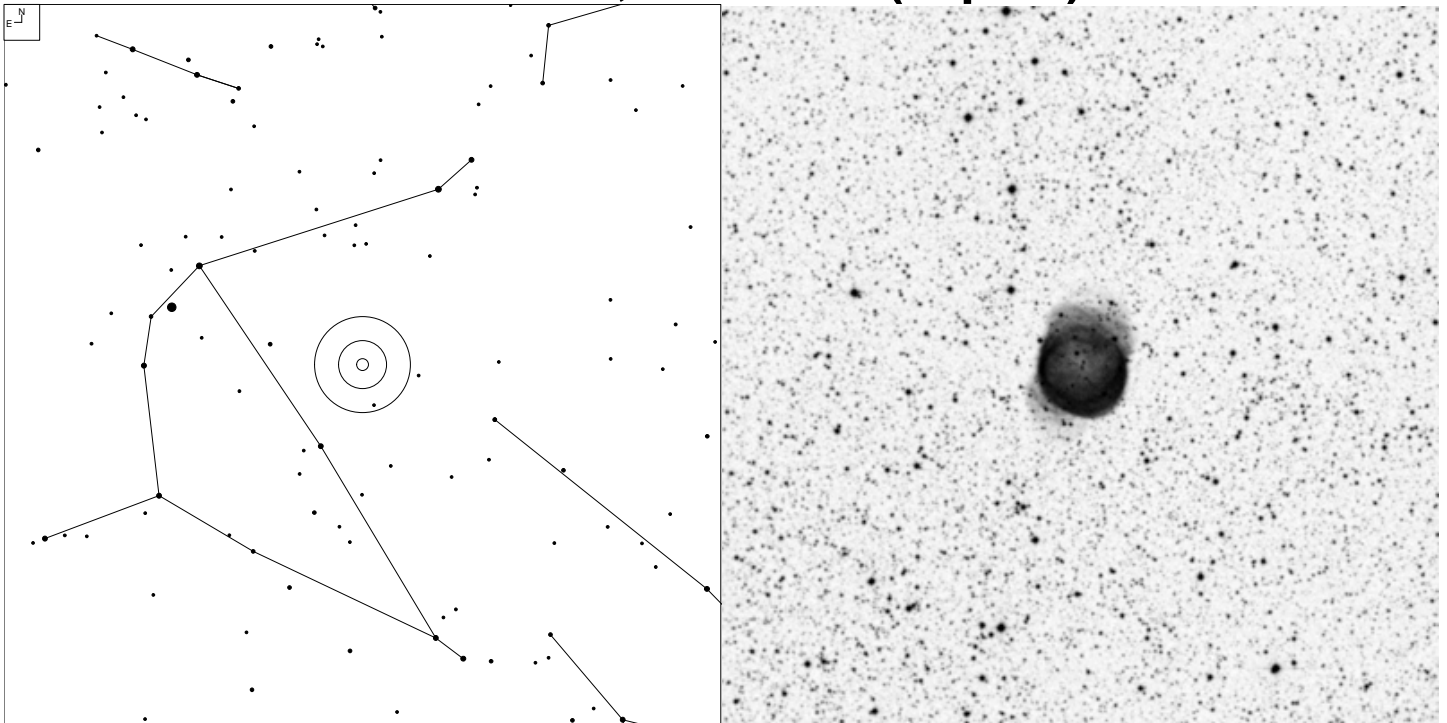
V Aquilae (Aquila)



RA	Dec	Mag	Size	Urano 2000.0
19 04 24.0	-05 41 05	6.6 – 8.4 (var)	*	127L

www.klima-luft.de/steinicke/Artikel/V%20Aquilae.pdf

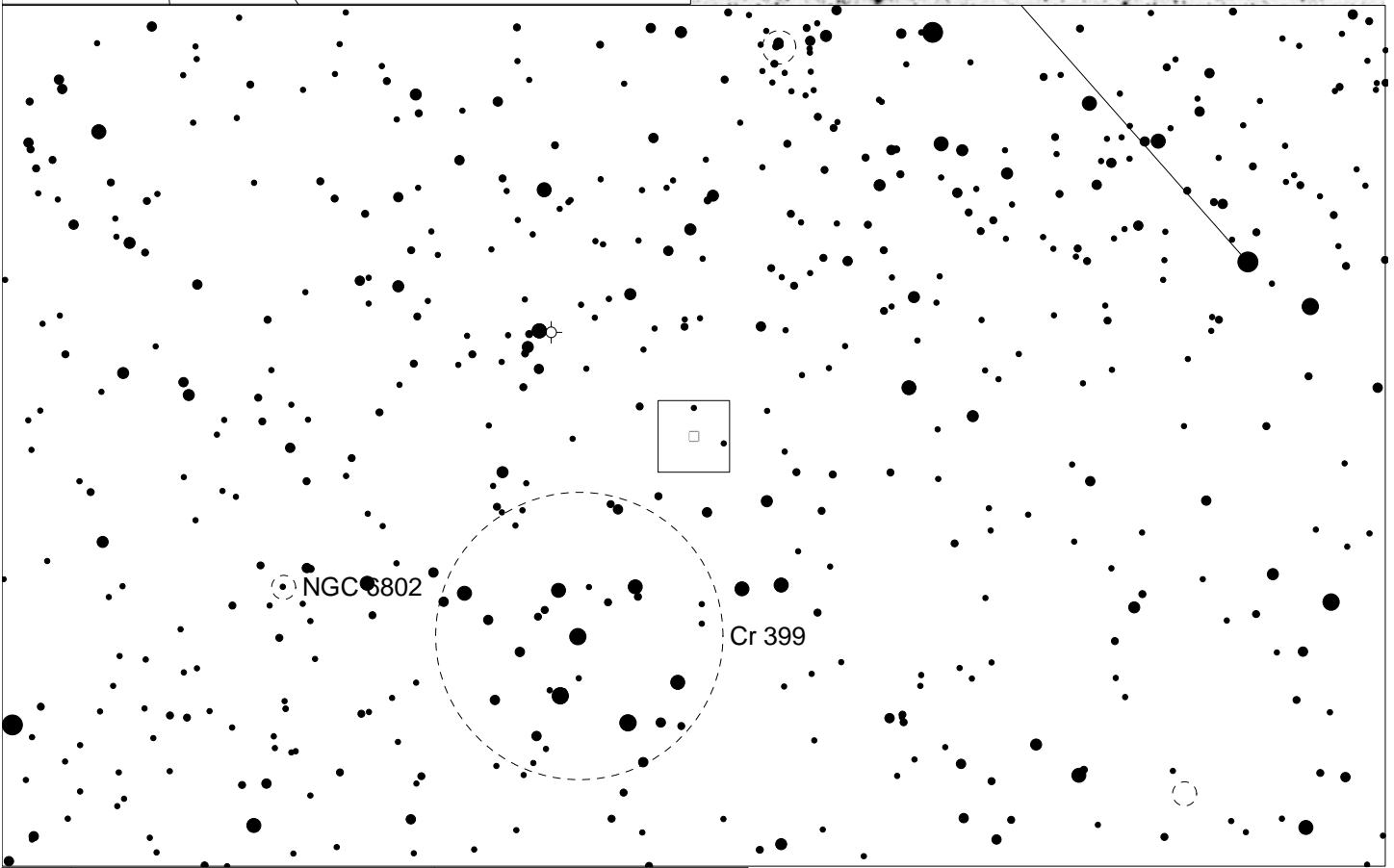
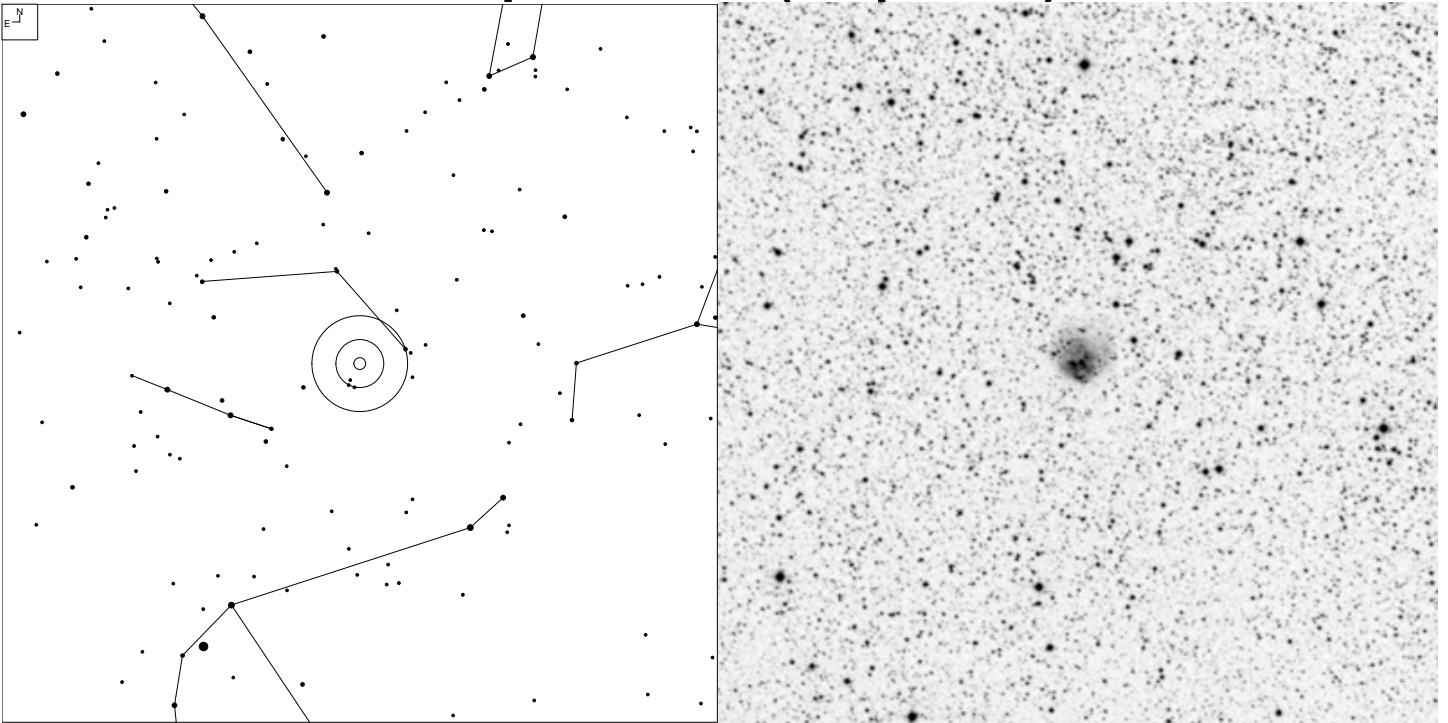
NGC 6781, PK41-2.1 (Aquila)



E ↙ N ↑	● ● ● ● ● ●	Galaxy	Planetary	Brt Neb
	5 6 7 8 9 10 11	☉	☿	□

RA	Dec	Mag	Size	Urano 2000.0
19 18 28.2	+06 32 15	11.8p	1.8'	85L

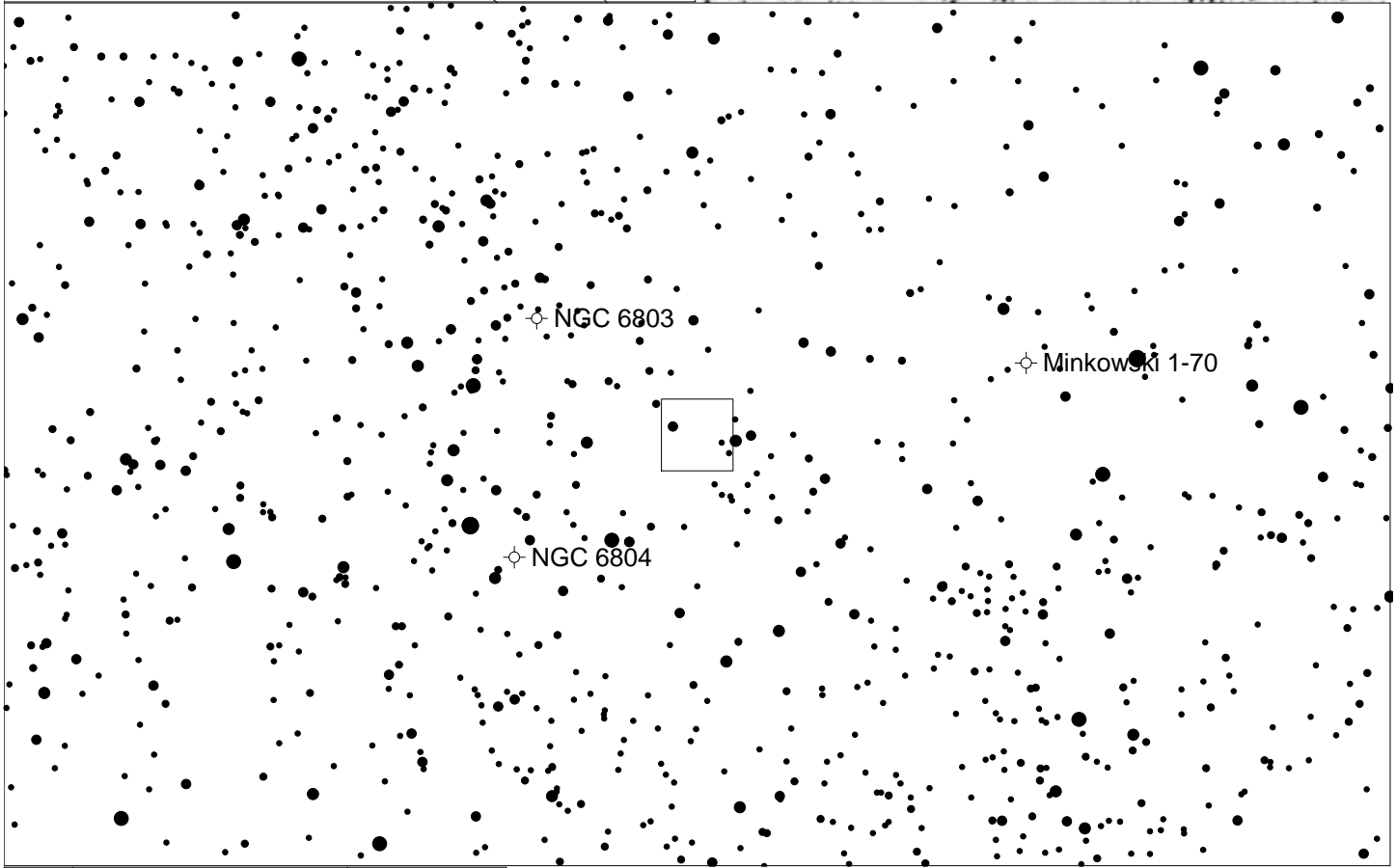
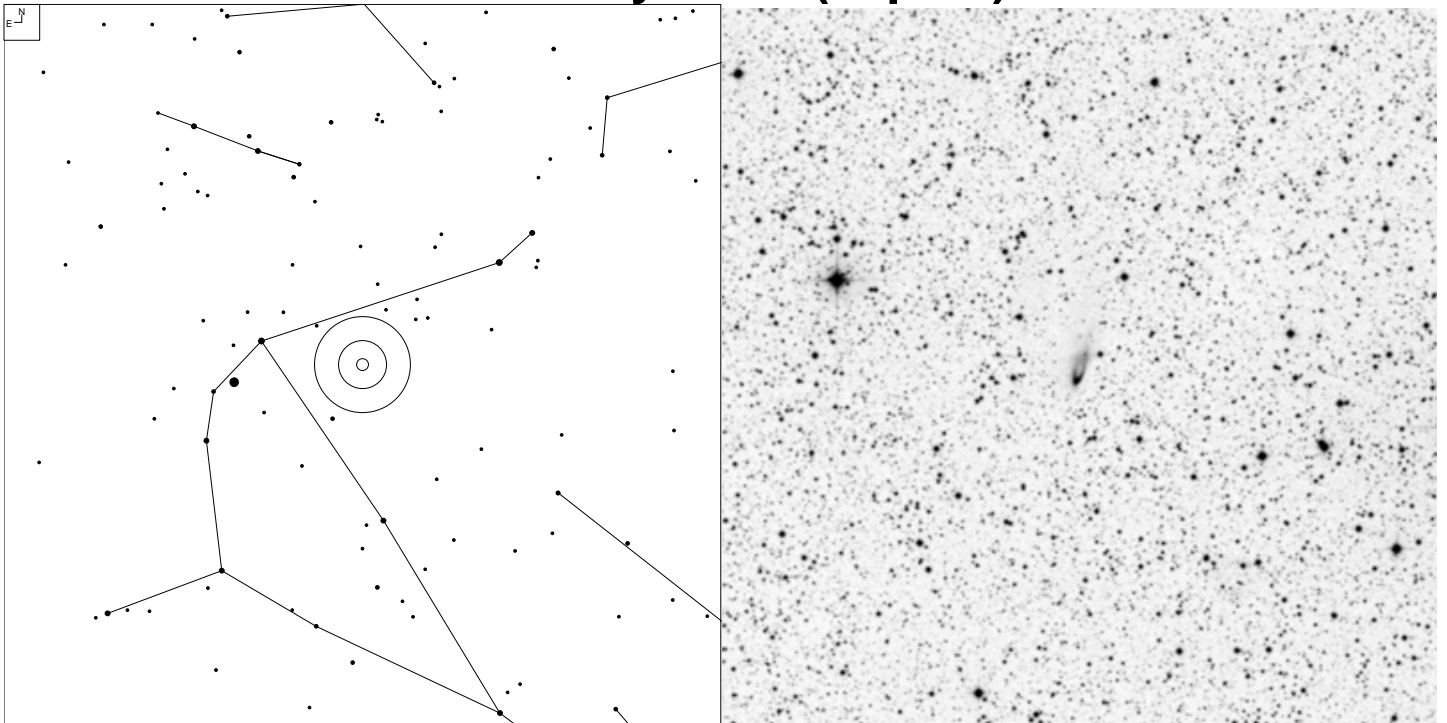
Sharpless 2-83 (Vulpecula)



E N	●●●●●●●●●●	Galaxy	Open Cl	Planetary	Brt Neb
	5 6 7 8 9 10 11 12	☾	⊙	⊕	□

RA	Dec	Mag	Size	Urano 2000.0
19 24 30.4	+20 47 31		2.0'	66R

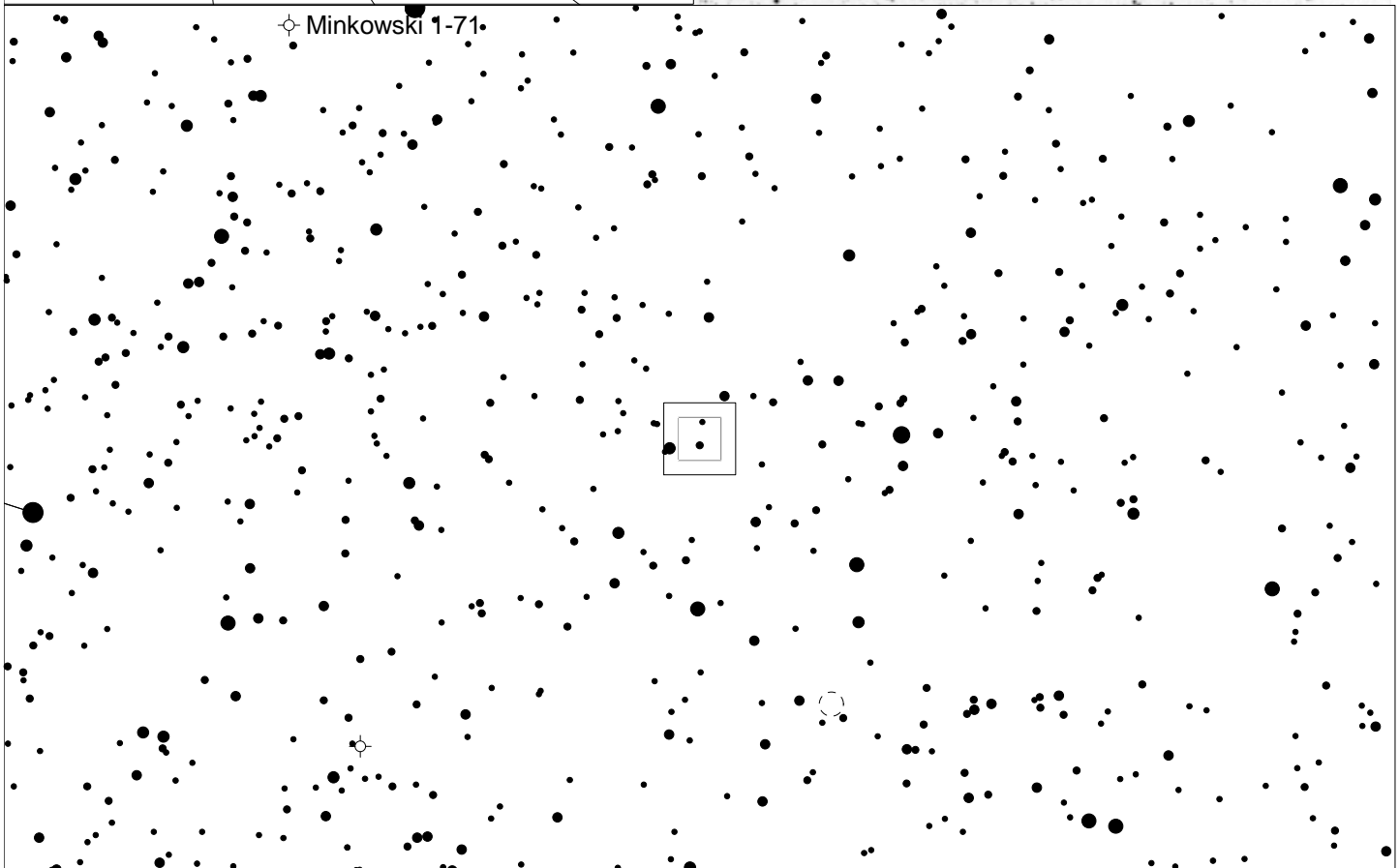
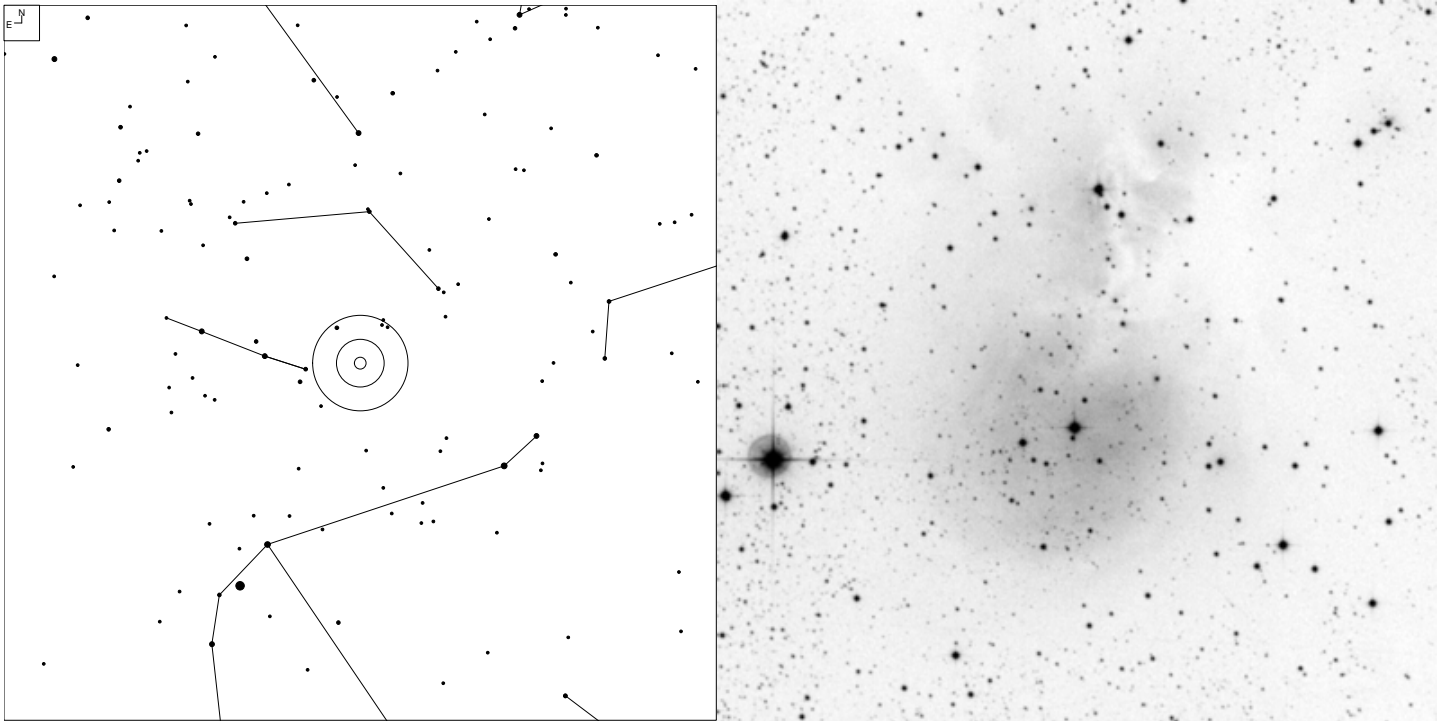
Parsamyan 21 (Aquila)



	6 7 8 9 10 11	Galaxy	Planetary

RA	Dec	Mag	Size	Urano 2000.0
19 29 00.6	+09 39 02		42 x 19"	85L

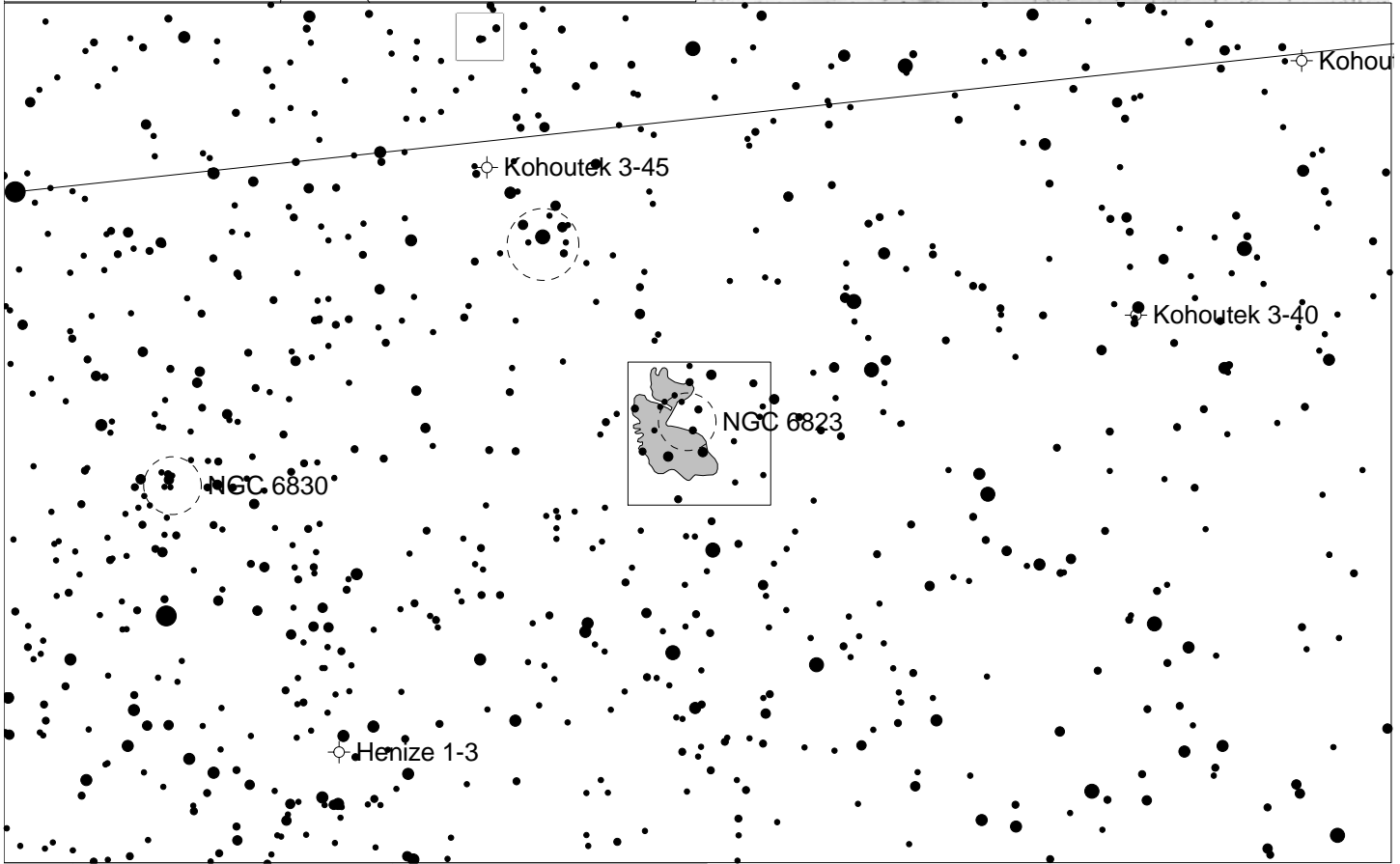
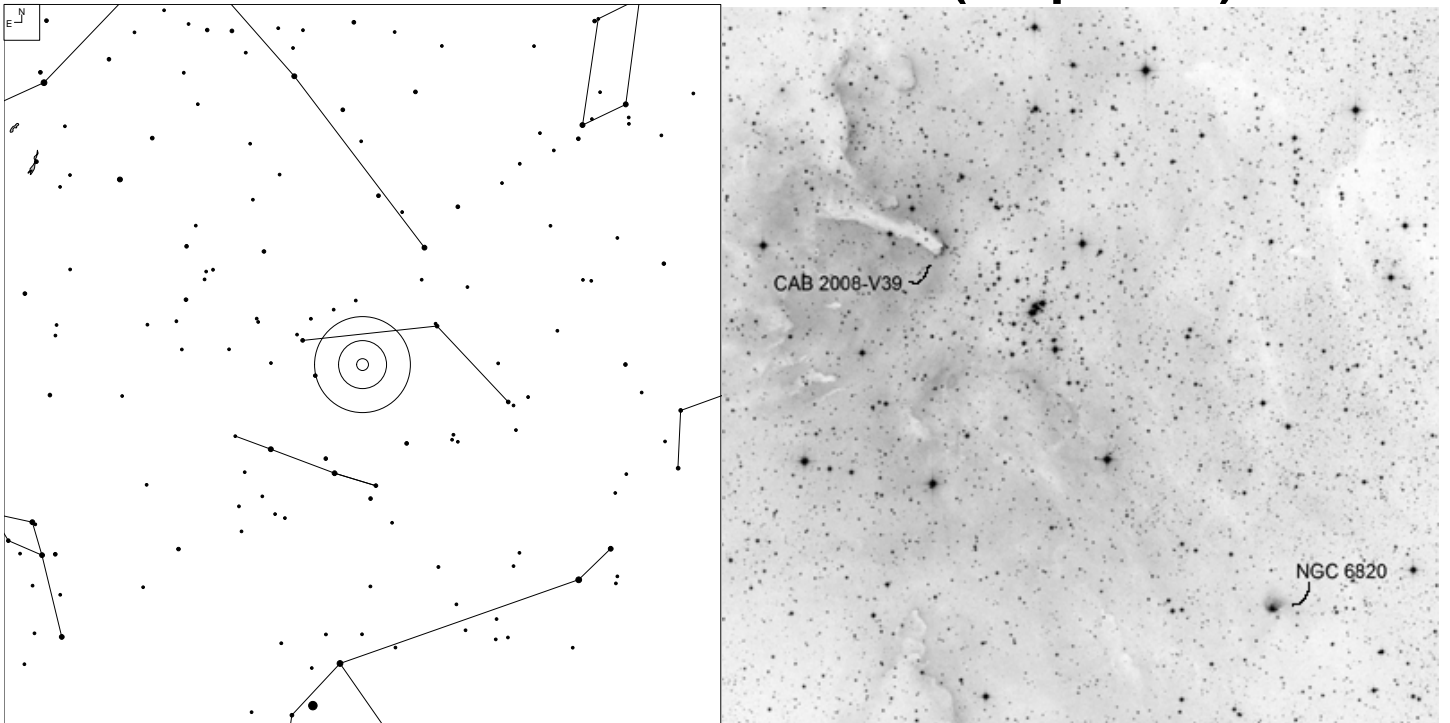
Sharpless 2-82 (Vulpecula)



	Galaxy	Open Cl	Planetary	Brt Neb

RA	Dec	Mag	Size	Urano 2000.0
19 30 23.3	+18 17 02		9.0'	66R

NGC 6820 and CAB2008-V39 (Vulpecula)

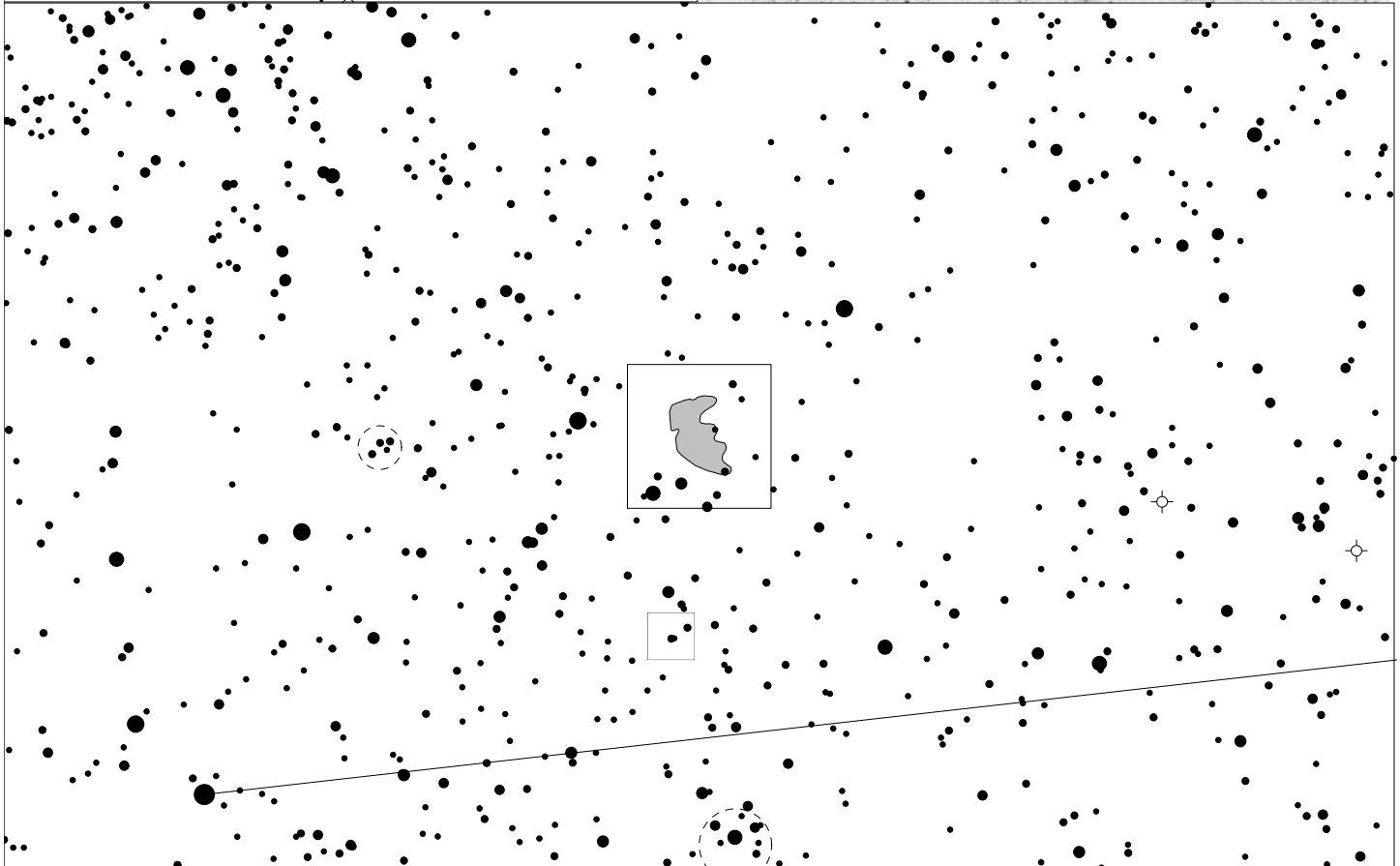
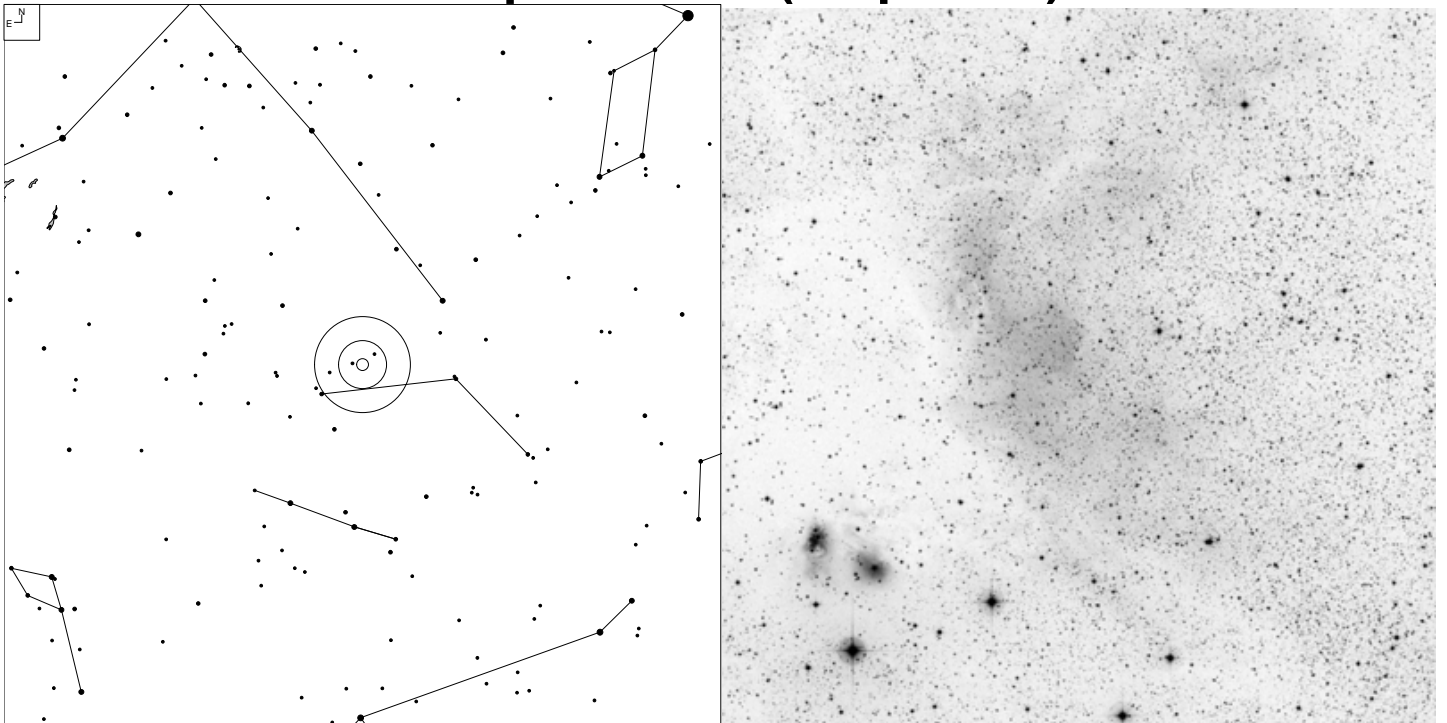


5 6 7 8 9 10 11

Galaxy
 Open Cl
 Planetary
 Brt Neb

	RA	Dec	Mag	Size	Urano 2000.0
NGC 6820	19 42 53.0	+23 12 23	-	24.7 x 12.0'	66R
CAB2008-V39	19 43 28.1	+23 20 38	-	0.5 x 5.0'	

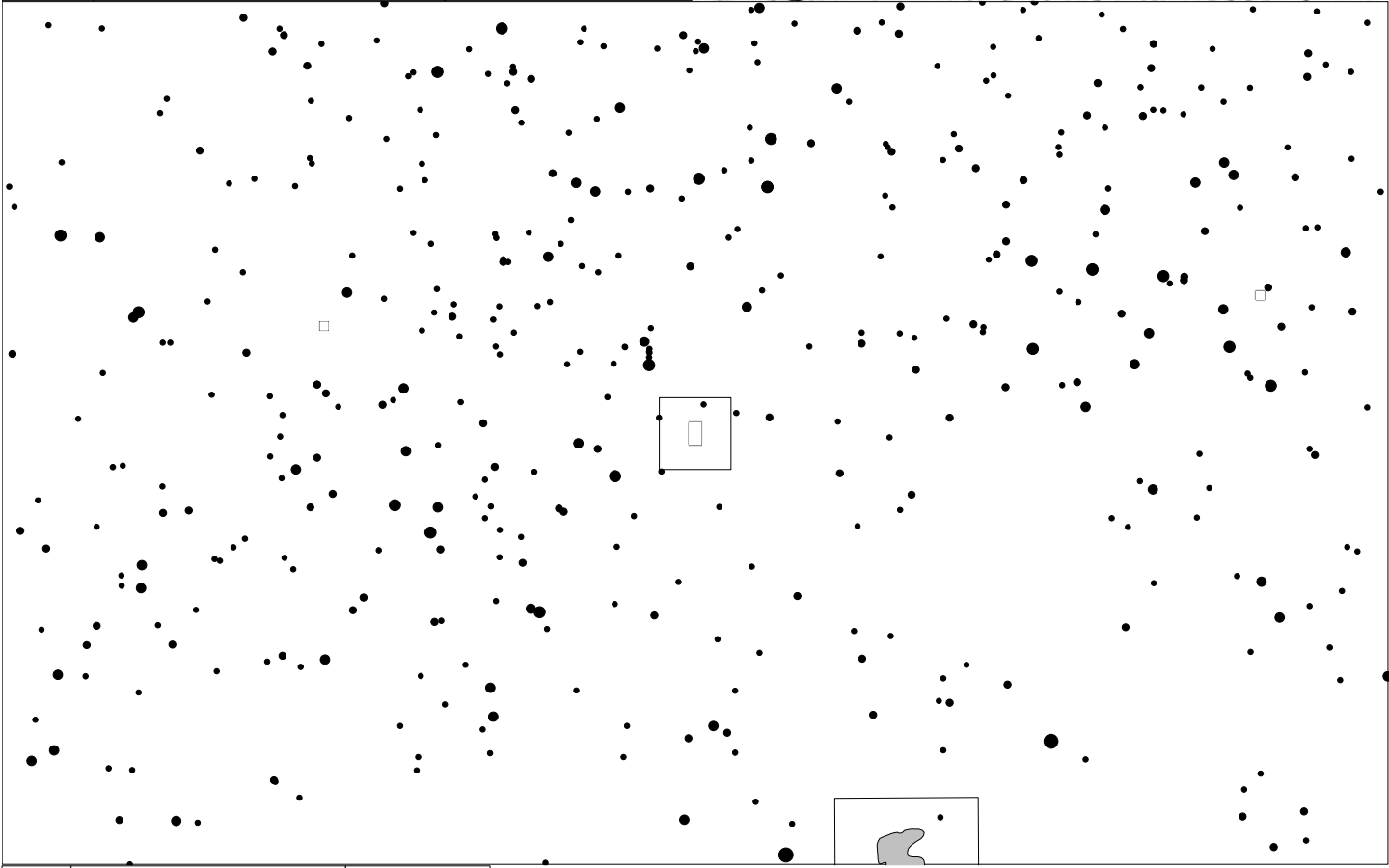
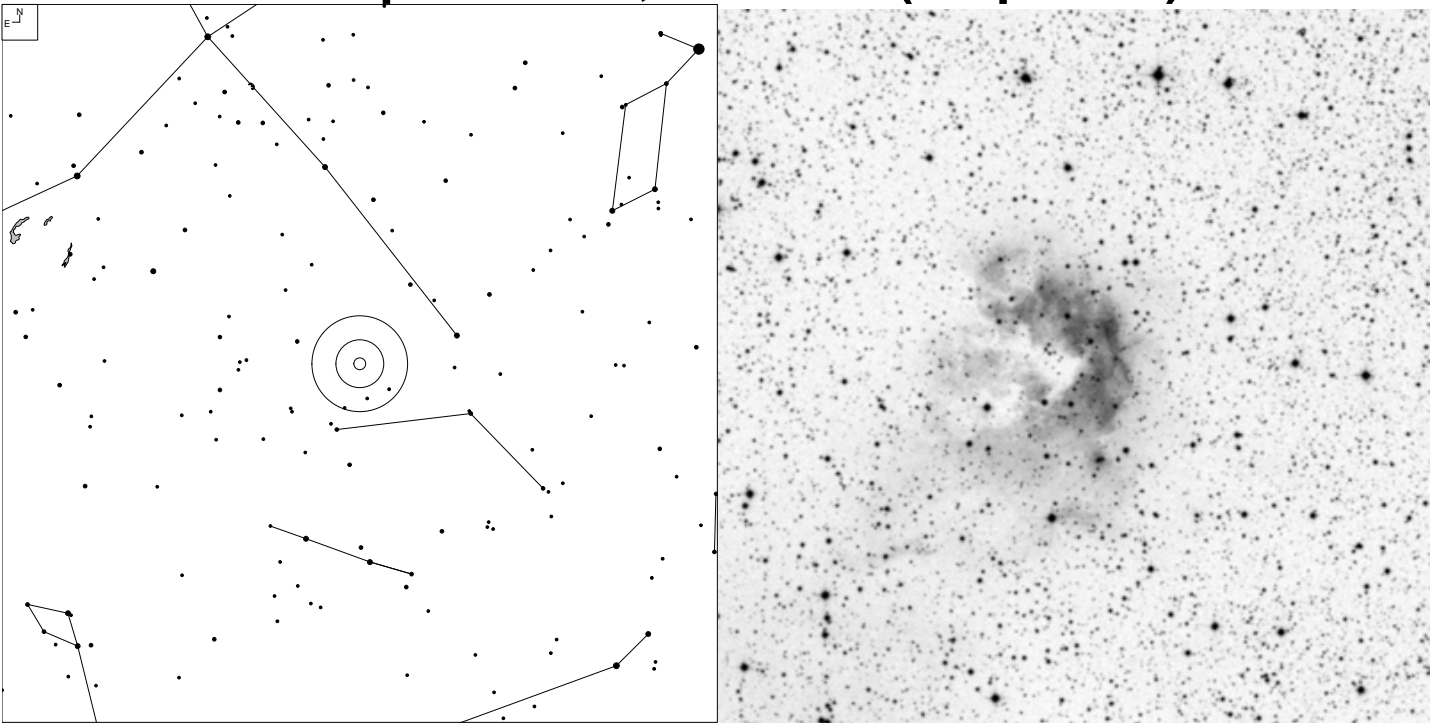
Sharpless 2-88 (Vulpecula)



E N	●	●	●	●	●	●	●	●	●	●
	5	6	7	8	9	10	11			
	Galaxy	Open Cl	Planetary	Brt Neb						
	⊖	○	⊕	□						

RA	Dec	Mag	Size	Urano 2000.0
19 45 57.0	+25 19 50		17.5 x 41'	66R

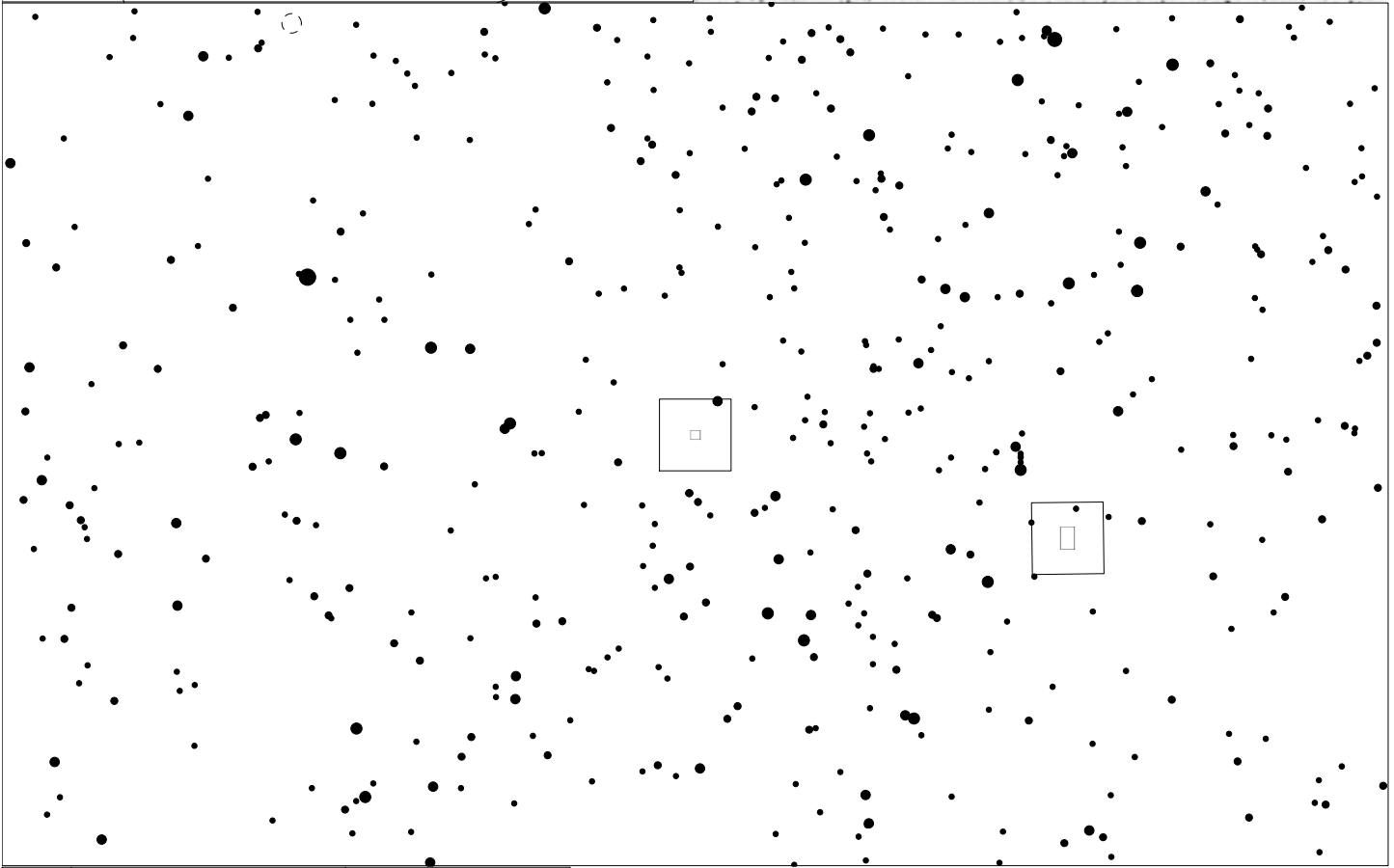
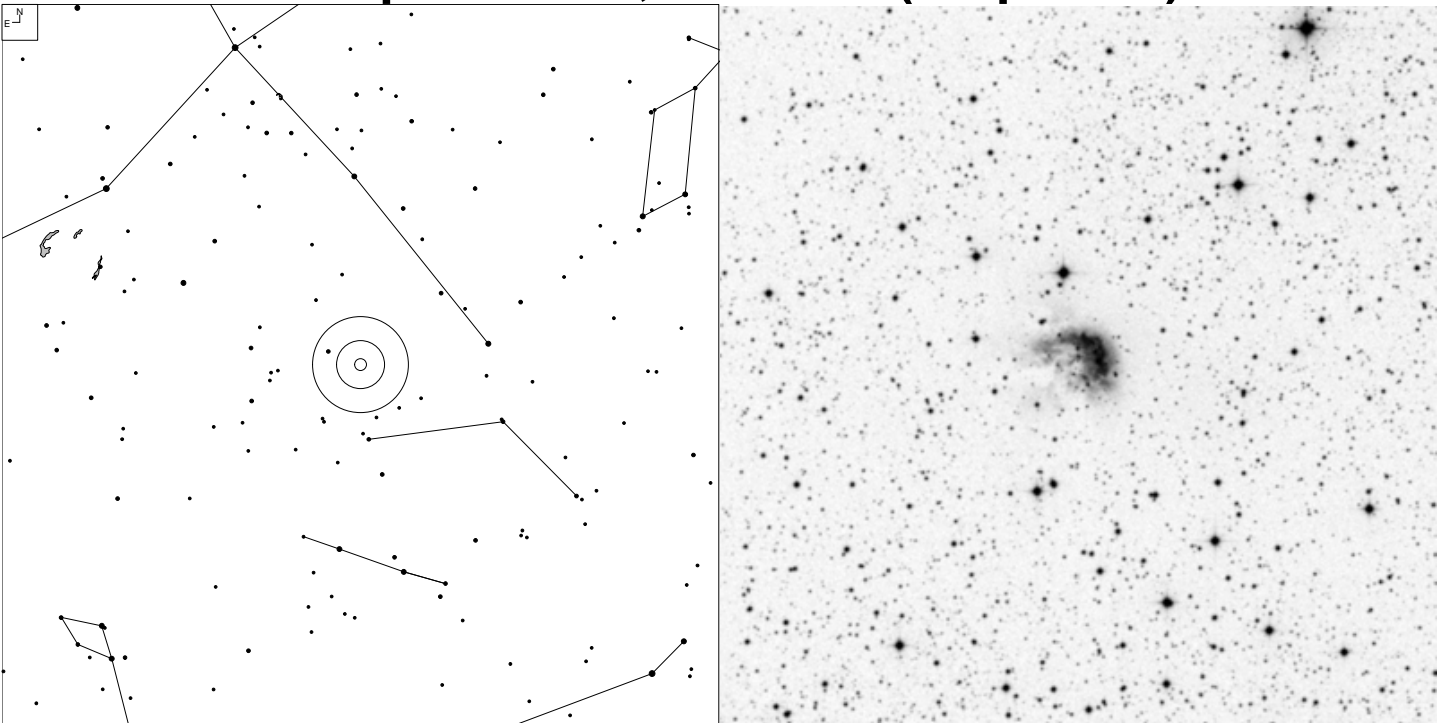
Sharpless 2-90, LBN 144 (Vulpecula)



E N	● ● ● ● ● ●	Galaxy	Brt Neb
	6 7 8 9 10 11	☉	□

RA	Dec	Mag	Size	Urano 2000.0
19 49 12.4	+26 50 49		5.0 x 3.4'	66R

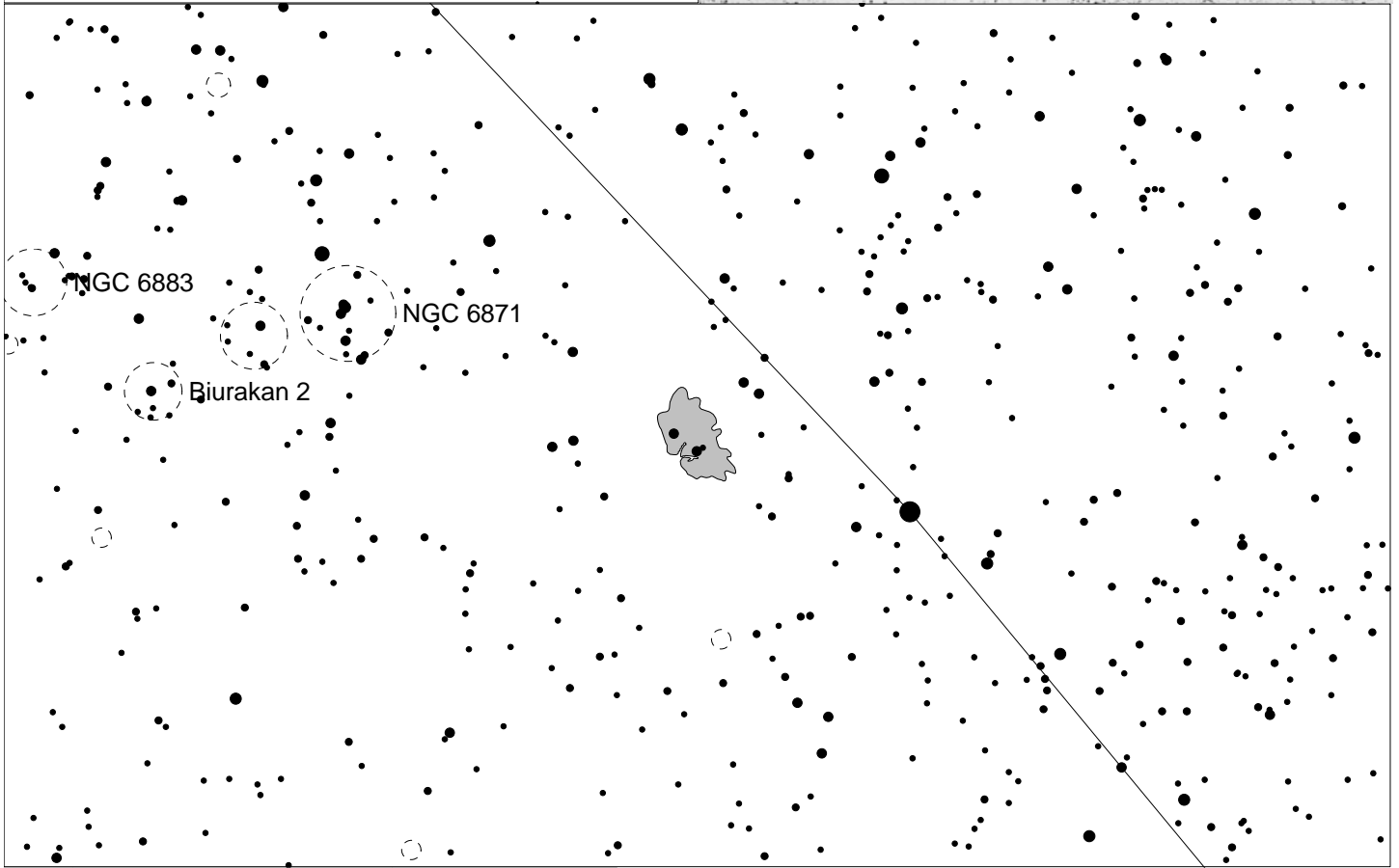
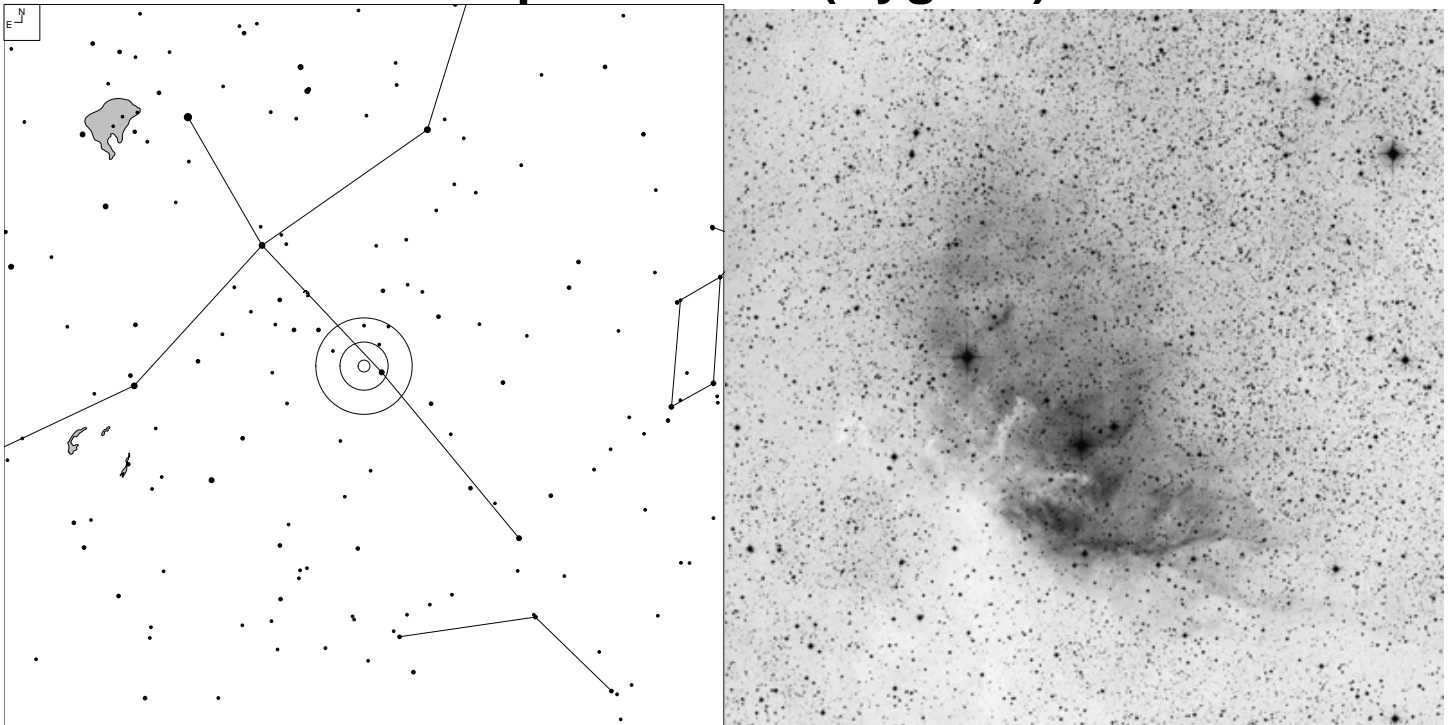
Sharpless 2-93, LBN 146 (Vulpecula)



E ↙ N ↑	● ● ● ● ● ●	Galaxy	Open Cl	Brt Neb
	5 6 7 8 9 10	☉	⊖	□

RA	Dec	Mag	Size	Urano 2000.0
19 55 00.5	+27 12 47		1.8'	66R

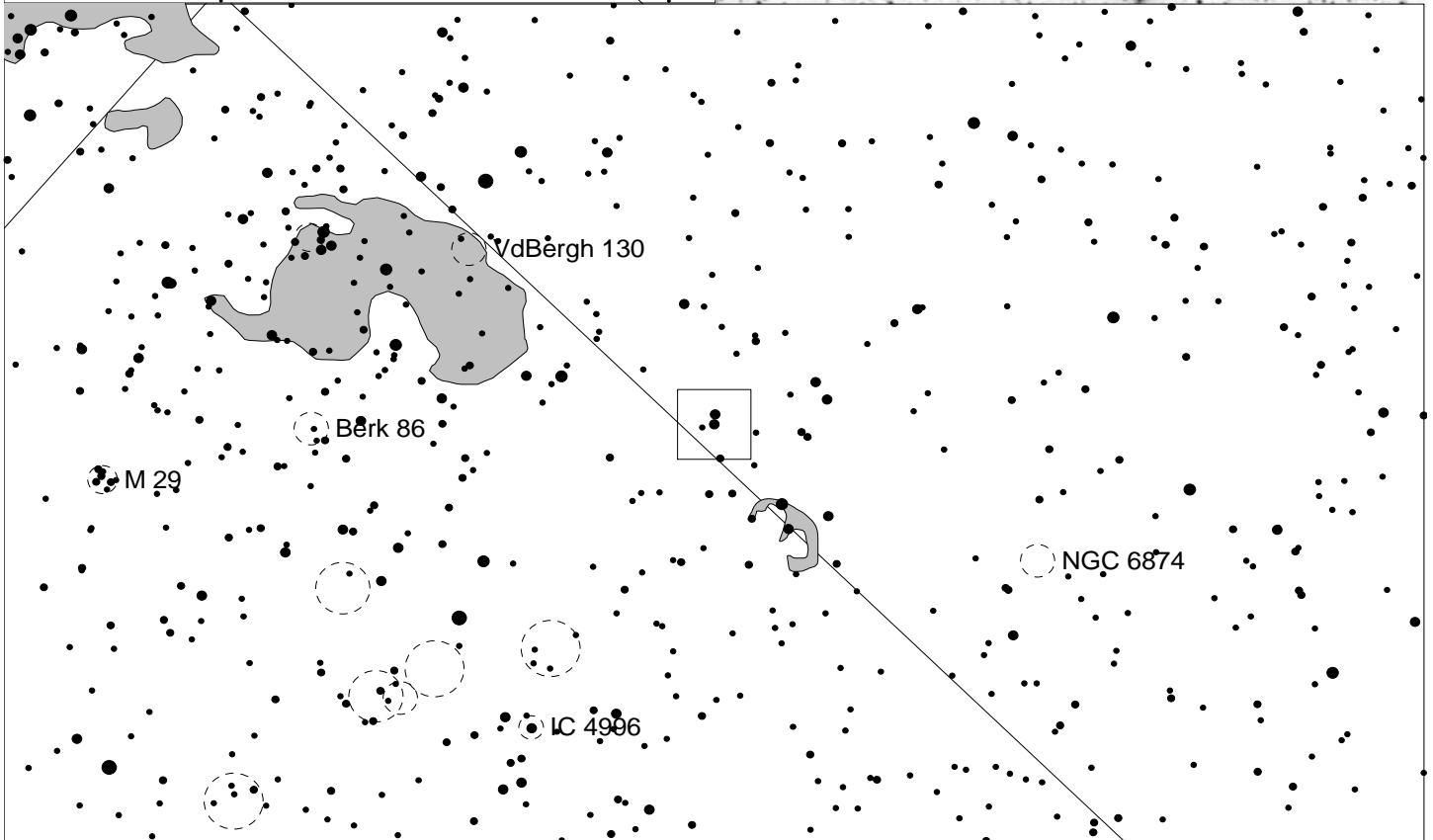
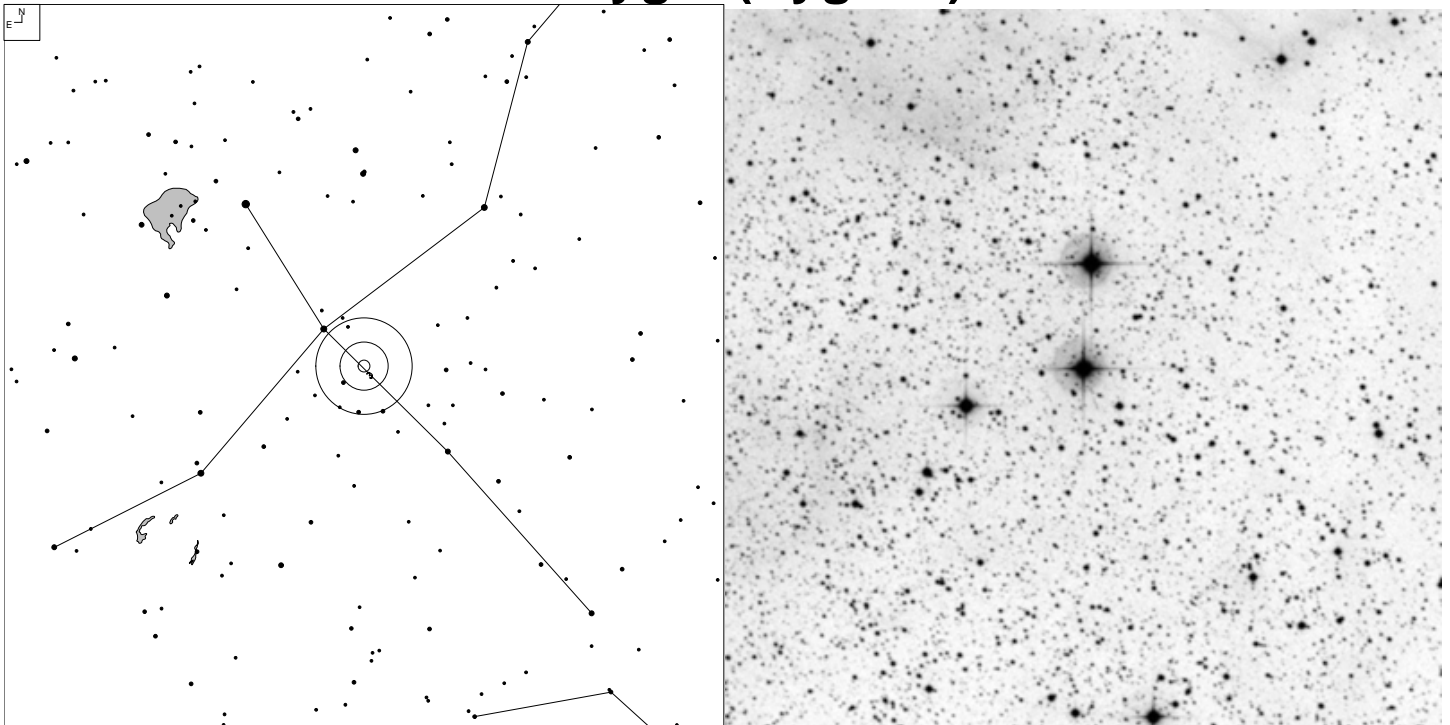
Sharpless 2-101 (Cygnus)



E ↙ N ↑	● ● ● ● ● ● ● ●	Galaxy	Open Cl	Brn Neb
	4 5 6 7 8 9 10	☉	○	□

RA	Dec	Mag	Size	Urano 2000.0
19 59 55.0	+35 21 00		21.8 x 12.0'	48R

RS Cygni (Cygnus)

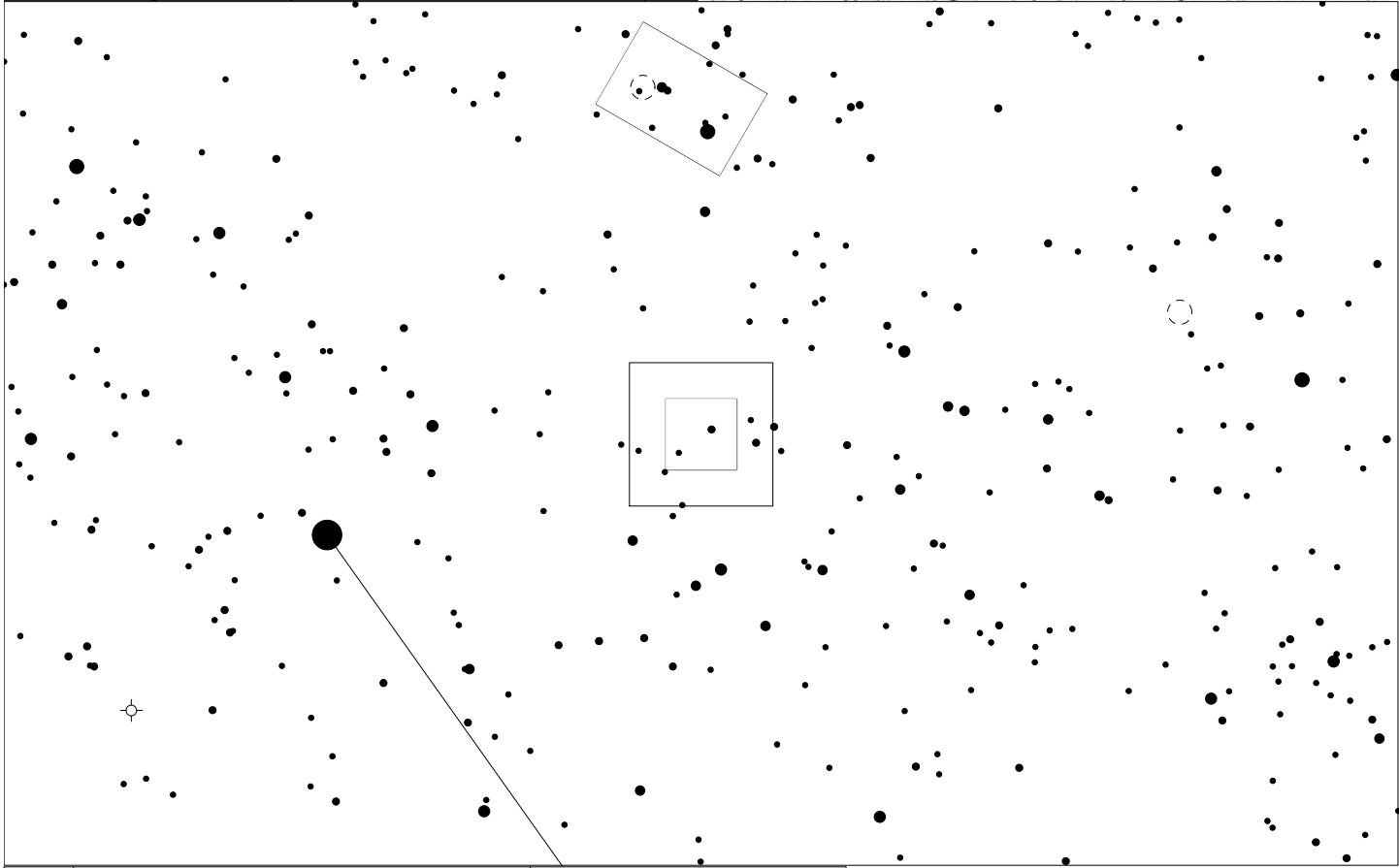
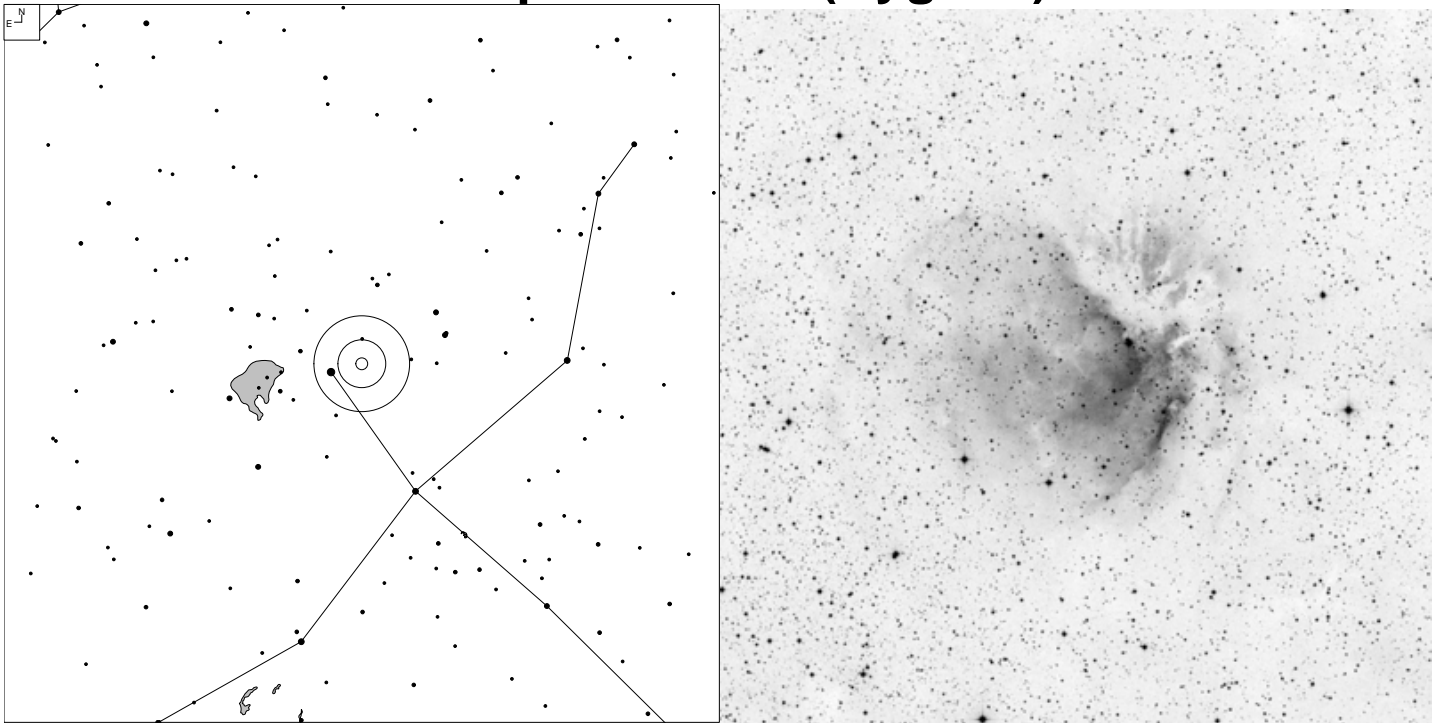


E N	● ● ● ● ●	Galaxy	Open Cl	Brt Neb
	6 7 8 9 10	☉	○	□

RA	Dec	Mag	Size	Urano 2000.0
20 13 23.7	+38 43 45	7.1 - 7.6 (var)		48L

<http://www.newforestobservatory.com/2012/07/03/rs-cygni-a-carbon-star-lying-close-to-the-crescent-nebula-in-cygnus/>
http://www.astroscience.org/abdul-ahad/RS_Cygni.html

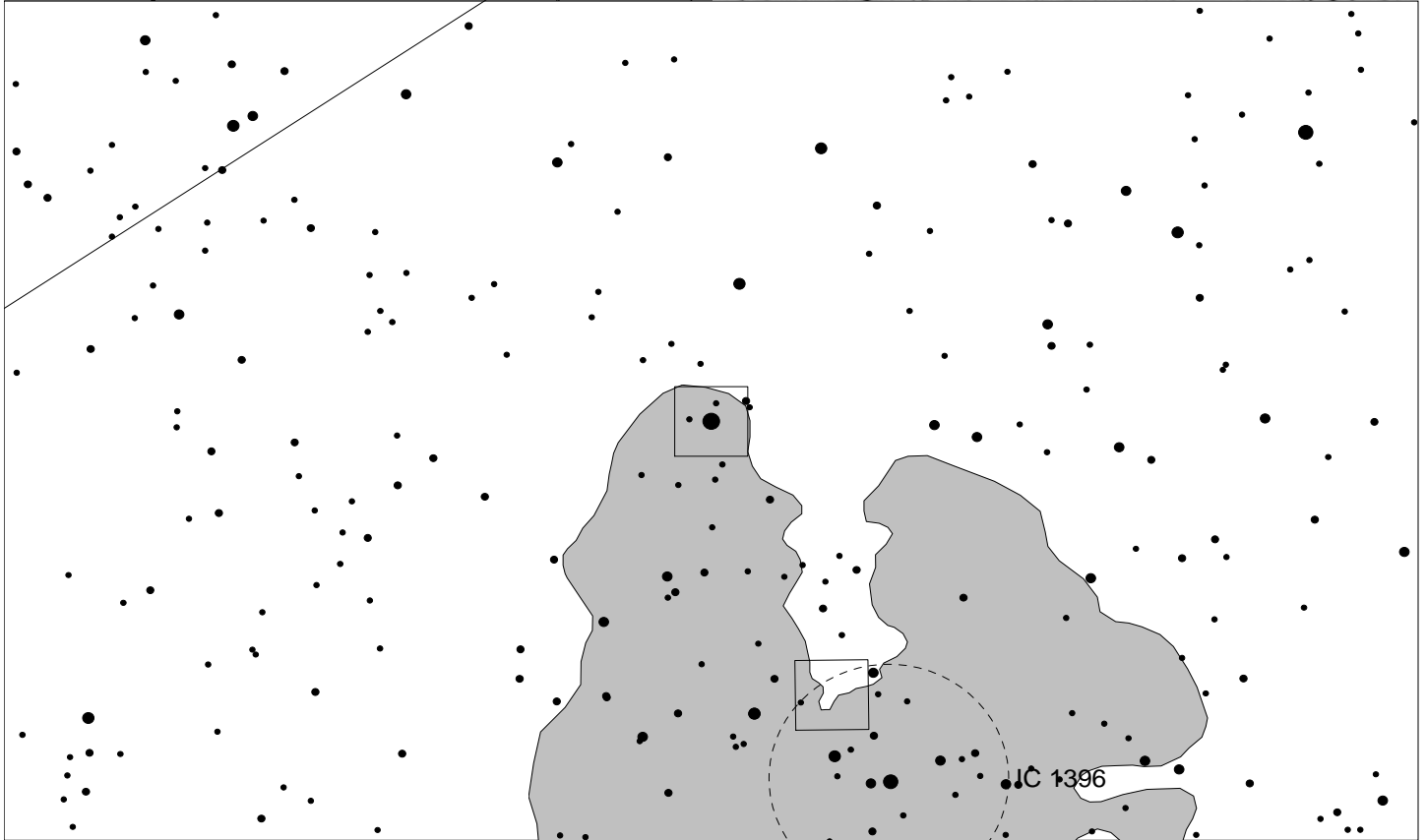
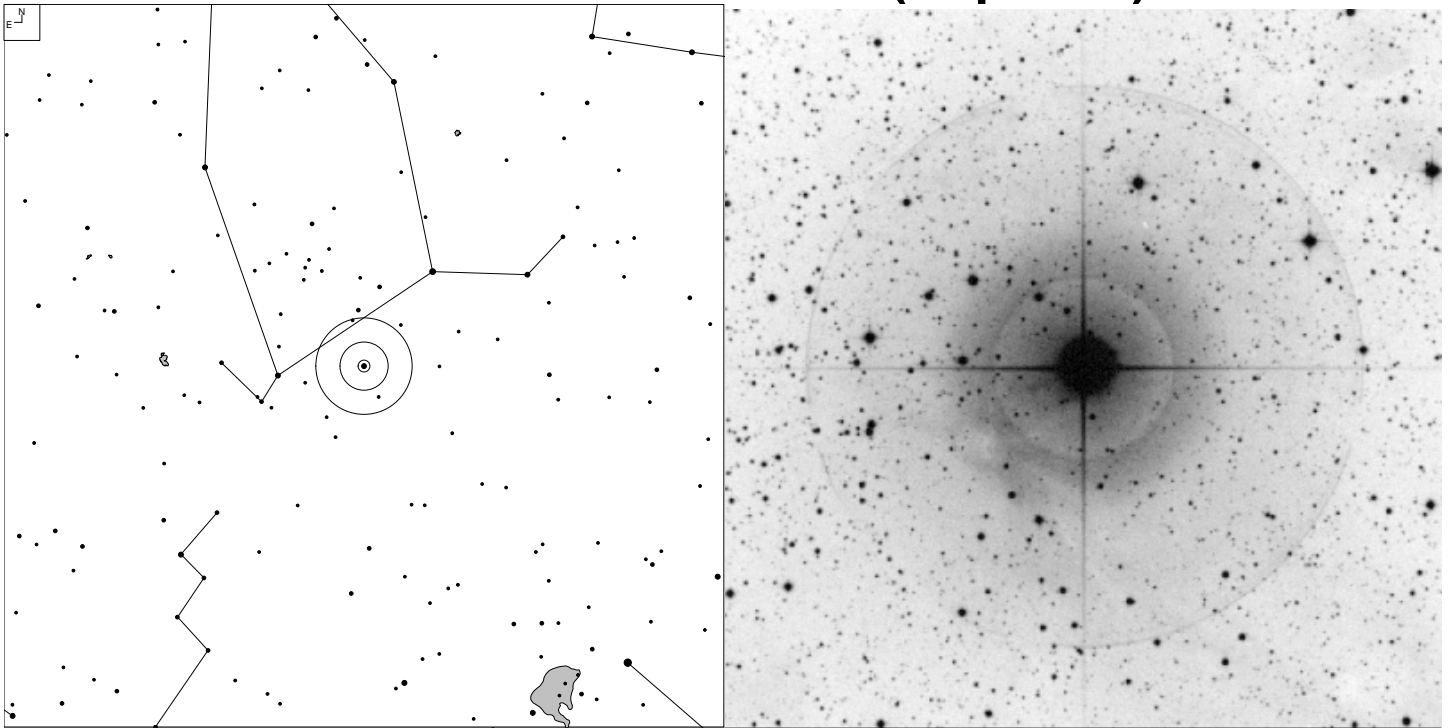
Sharpless 2-112 (Cygnus)



E N	●	●	●	●	●	●	●	●	●	●	Galaxy	Open Cl	Planetary	Brt Neb
	1	2	3	4	5	6	7	8	9	10	☾	⊕	♁	□

RA	Dec	Mag	Size	Urano 2000.0
20 34 03.0	+45 38 42		115'	32R

Herschel's Garnet Star (Cepheus)

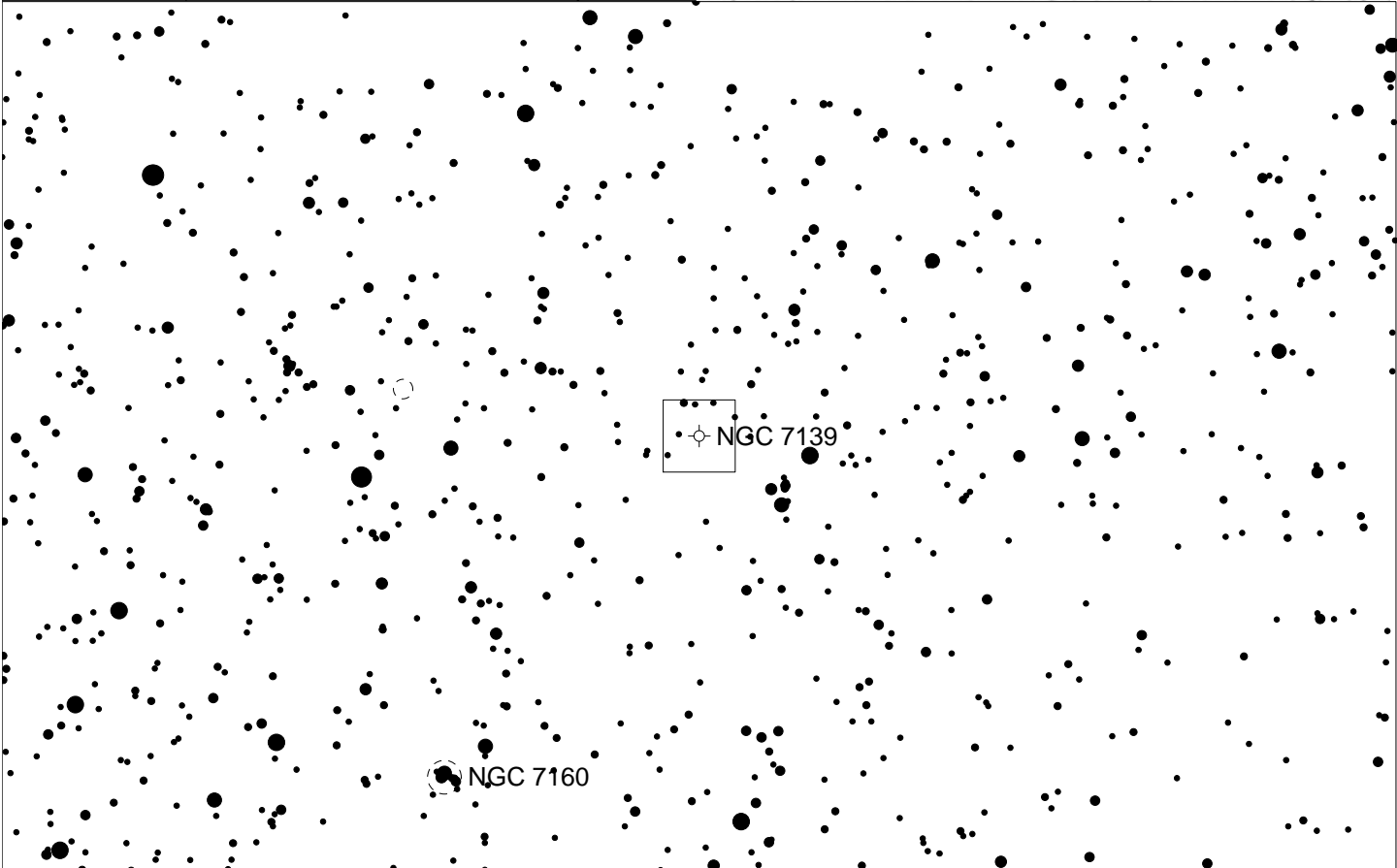
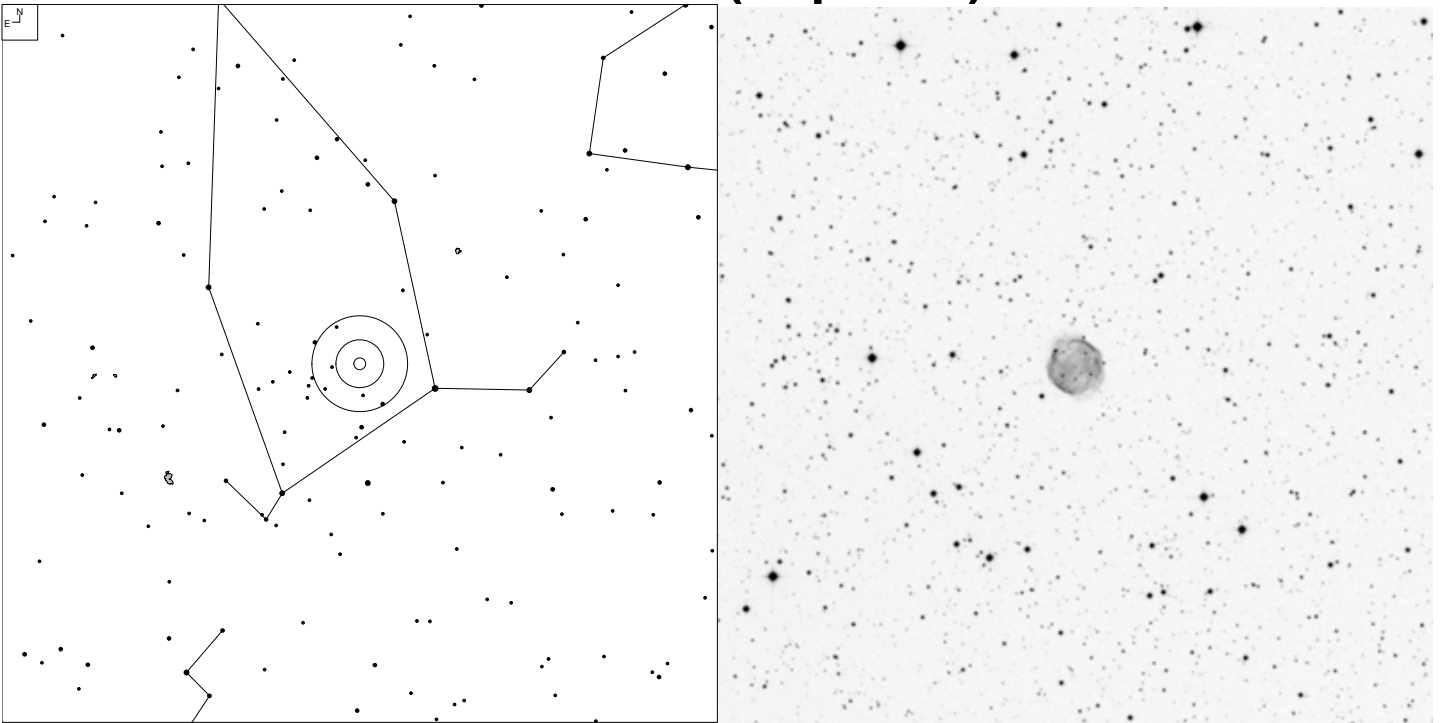


E N	●	●	●	●	●	●	●	●	●	●	●	Galaxy	Open Cl	Brt Neb
	5	6	7	8	9	10	11	☉	☾	☐				

RA	Dec	Mag	Size	Urano 2000.0
21 43 30.4	+58 46 49	4.02v	*	19R

<http://www.universetoday.com/103491/seeing-red-hunting-herschels-garnet-star/>
http://en.wikipedia.org/wiki/Mu_Cephei

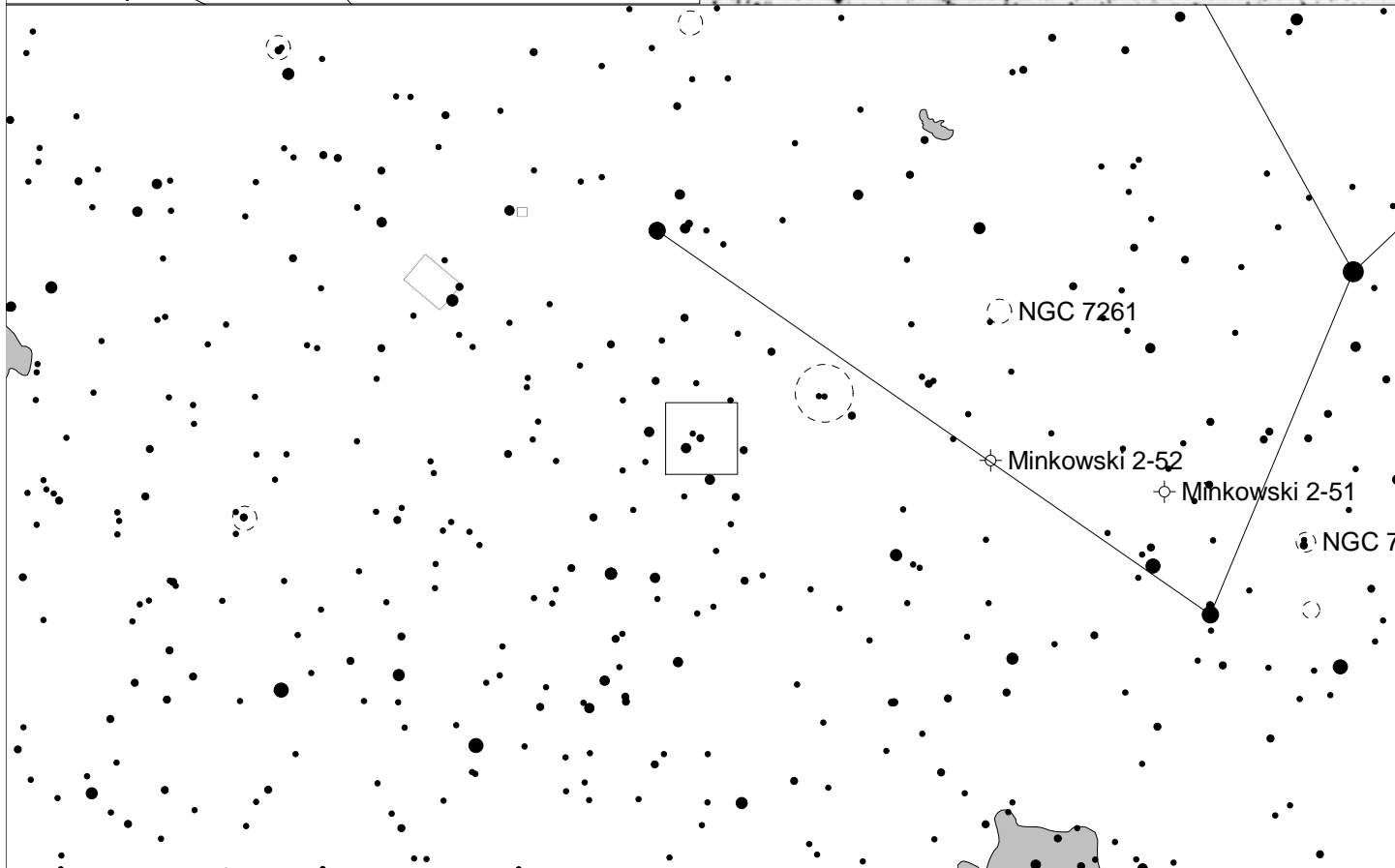
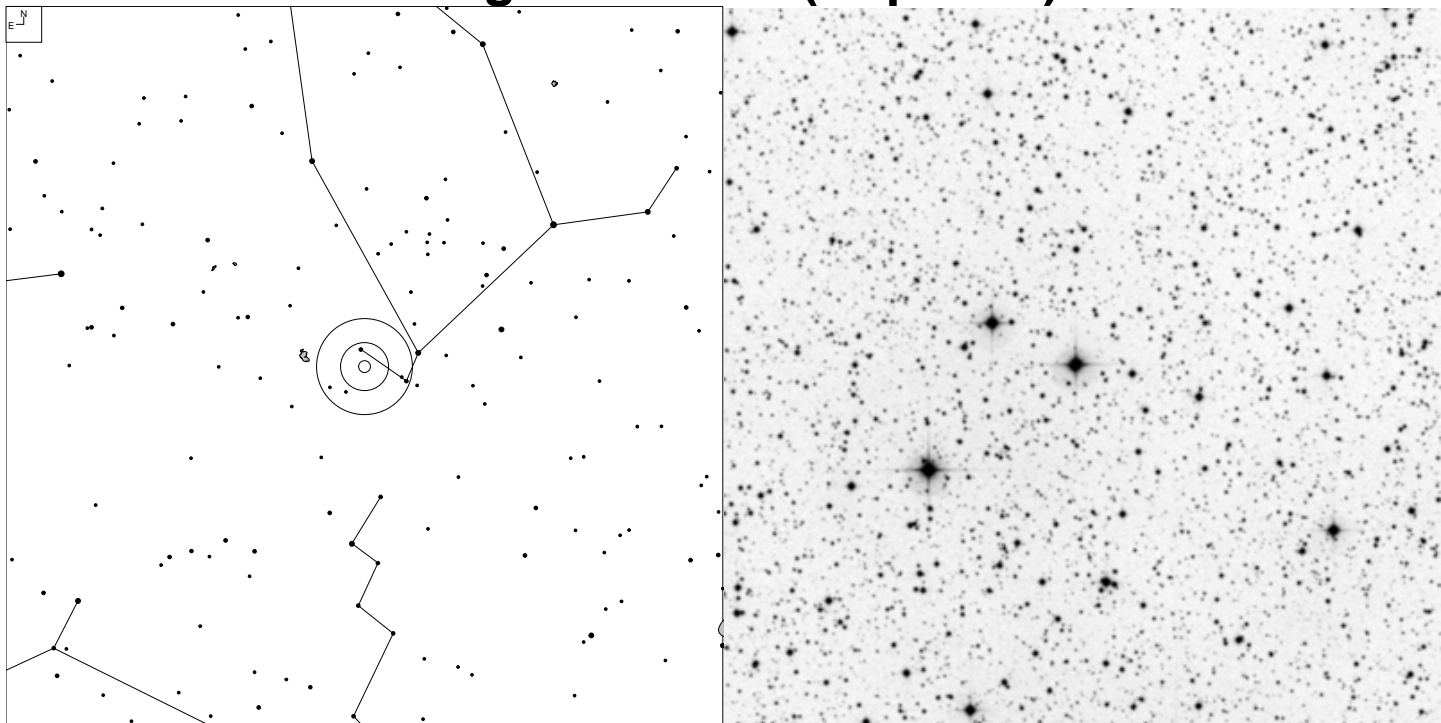
NGC 7139 (Cepheus)



Galaxy
 Open Cl
 Planetary

RA	Dec	Mag	Size	Urano 2000.0
21 46 08.6	+63 47 31	13.3p	77"	9L

Kruger 60A & B (Cepheus)

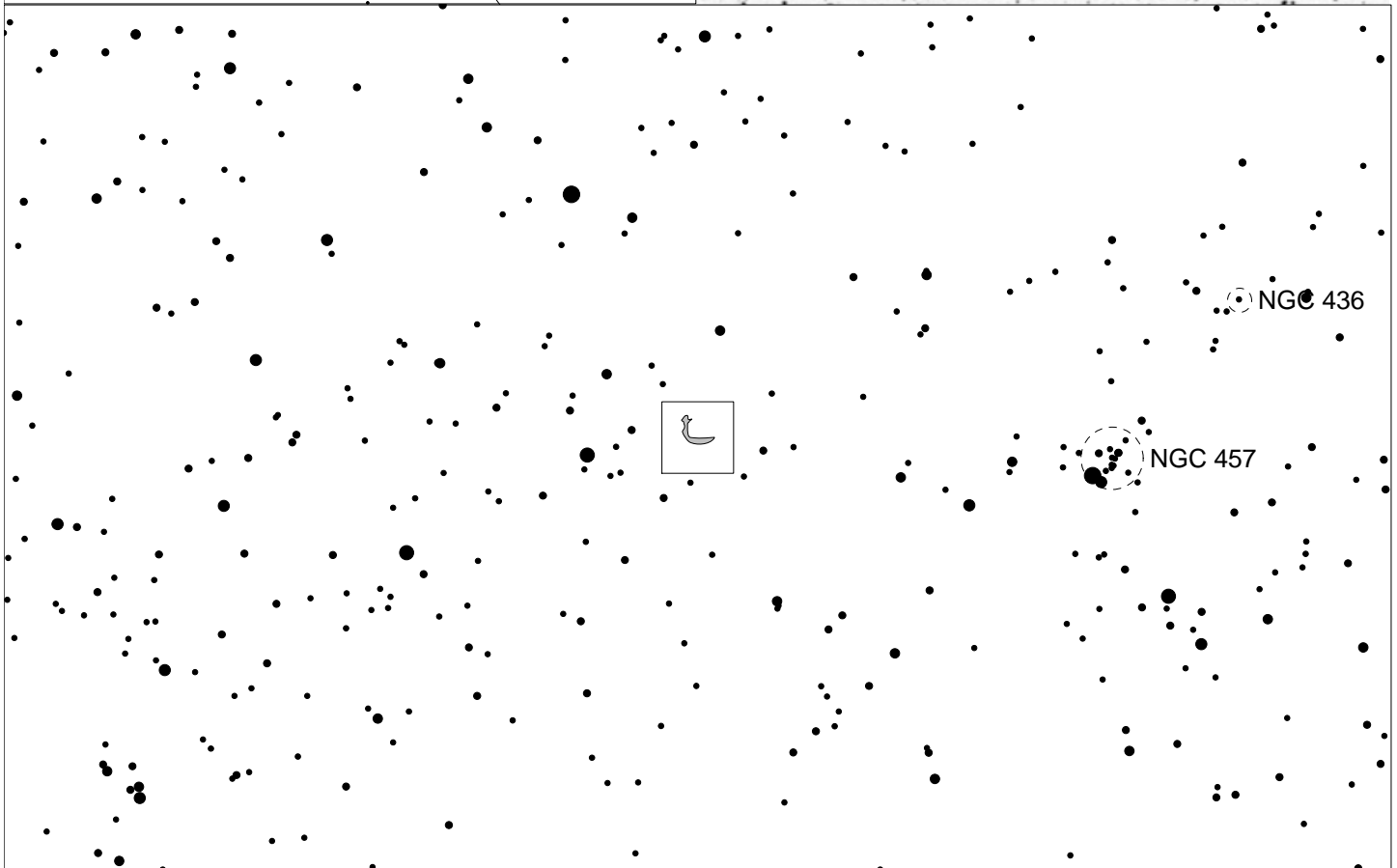
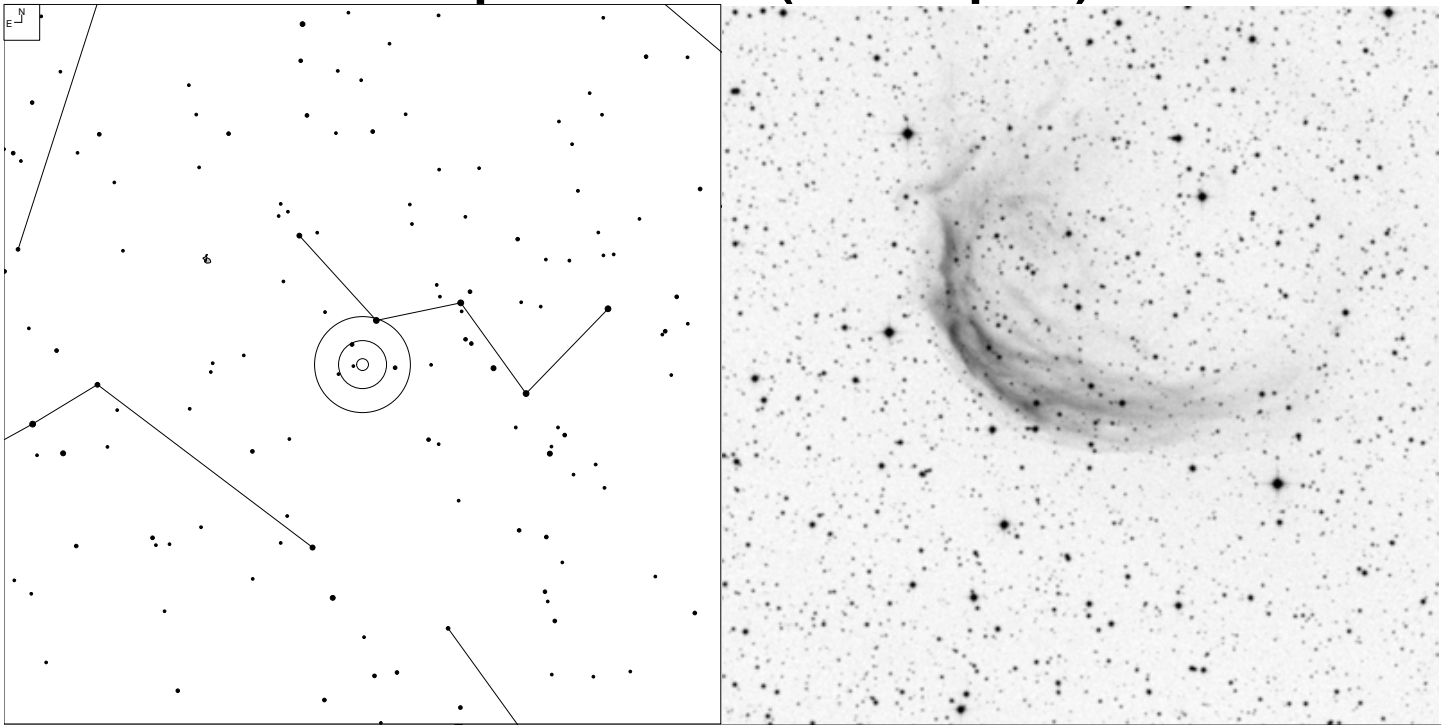


E N	● ● ● ● ● ● ● ● ● ●	Galaxy	Open Cl	Planetary	Brt Neb
	3 4 5 6 7 8 9 10	☉	○	⊙	□

RA	Dec	Mag	Size	Urano 2000.0
22 27 59.5	+57 41 45	9.6, 11.4	2.5"	19L

<http://www.perseus.gr/Astro-Star-Dwarf-Krueger-60.htm>

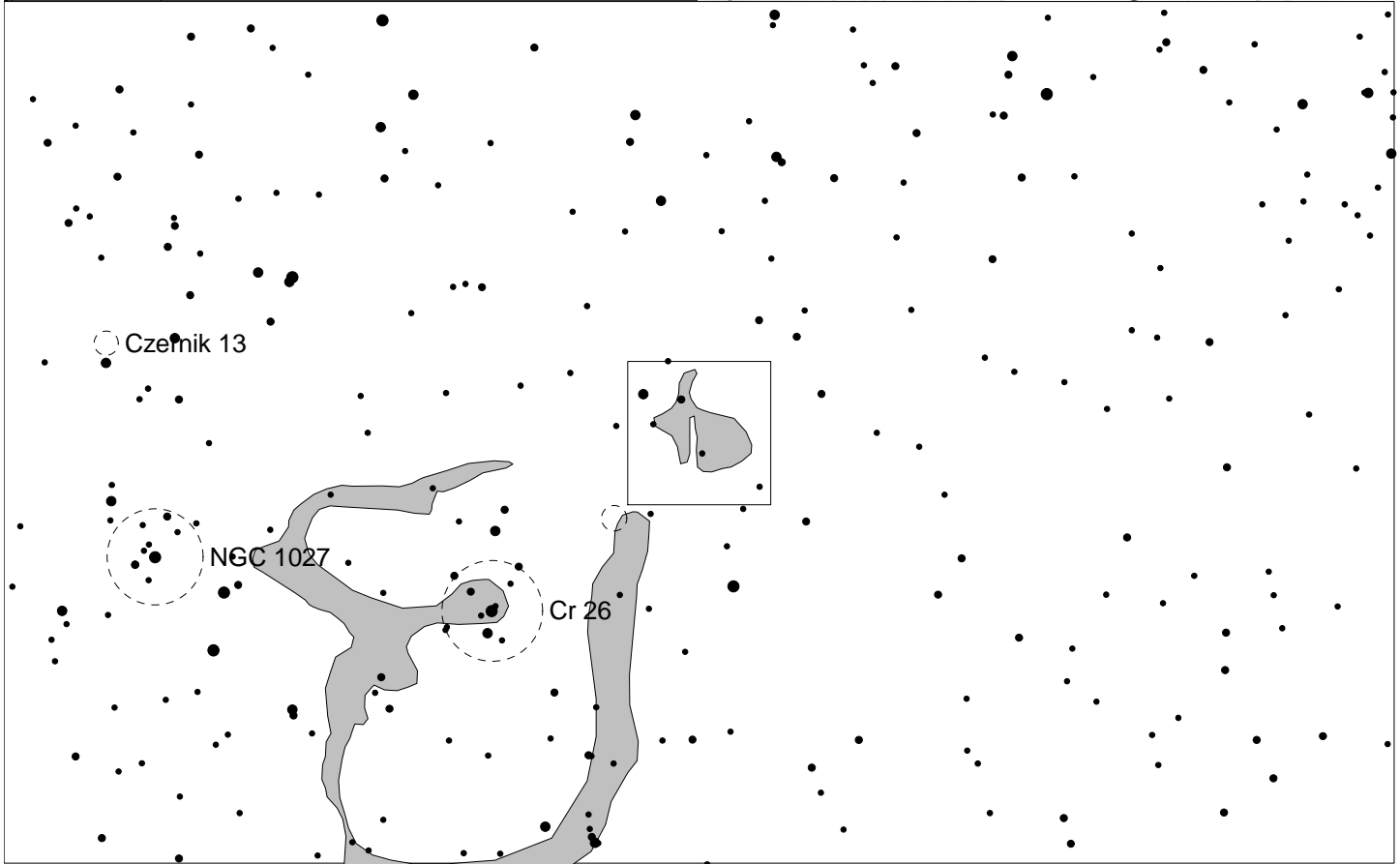
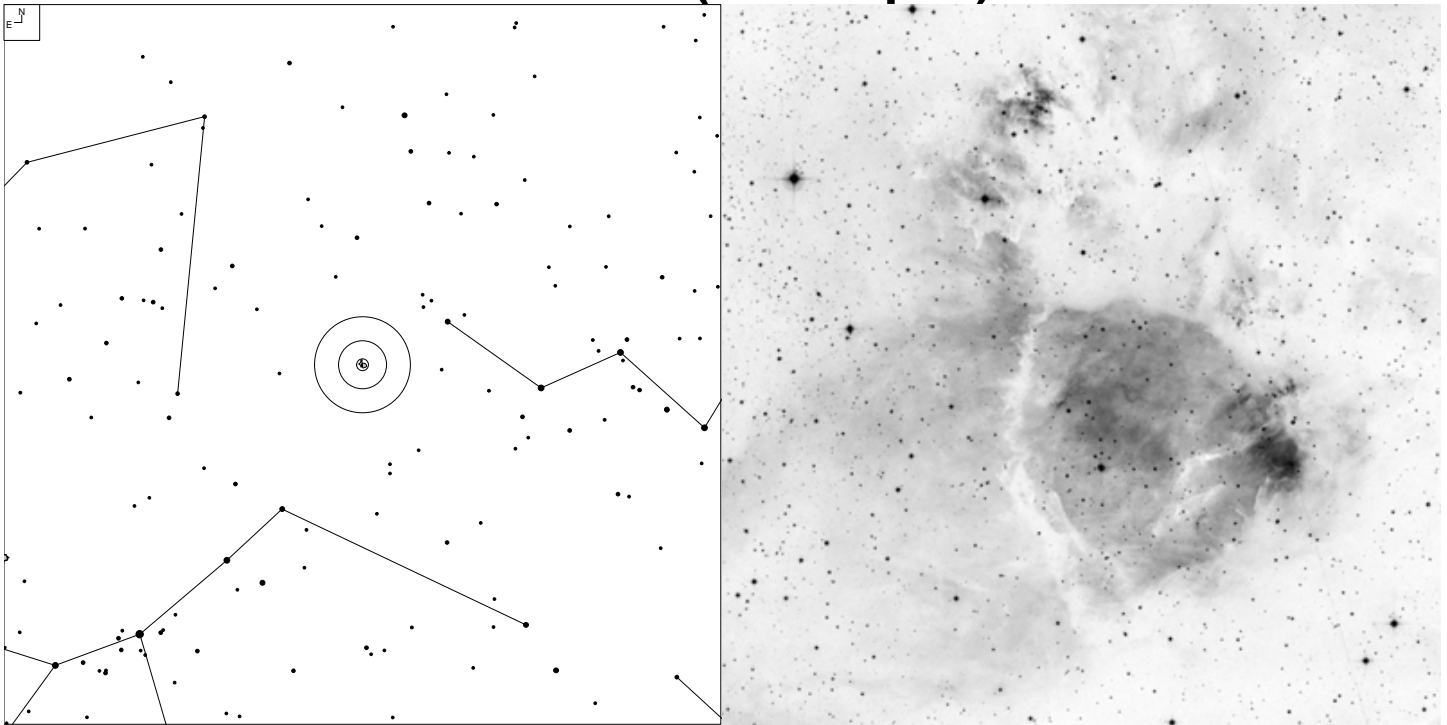
Sharpless 2-188 (Cassiopeia)



E N	● ● ● ● ●	Galaxy	Open Cl	Planetary
	5 6 7 8 9 10			

RA	Dec	Mag	Size	Urano 2000.0
01 30 30.0	+58 23 30		9.0'	29R

NGC 896 (Cassiopea)



E ↙ N ↑	● ● ● ● ●	Galaxy	Open Cl	Brt Neb
	6 7 8 9 10	☉	⊖	□

RA	Dec	Mag	Size	Urano 2000.0
02 26 40.0	+62 05 00		21.0'	29L

Seeing Red – Interesting Websites and Additional Information

Reiner Vogel's Sharpless Observing Guide
http://www.reinervogel.net/index_e.html

Astronomical League – Carbon Star Observing Program
<http://www.astroleague.org/content/carbon-star-observing-club>

Abdul Ahad's Catalog of Red Stars
http://www.astroscience.org/abdul-ahad/red_star_catalog.htm