The background of the entire page is a deep-sky photograph showing a vast field of stars. In the center, there is a prominent, elongated cluster of stars with a distinct blue tint, likely representing a galaxy or a star-forming region. The stars are scattered across the dark field, with some appearing brighter and larger than others.

Observing Local Group Galaxies

Includes Observable Extragalactic Objects
Within Local Group Galaxies

Alvin Huey
Revised Edition
FaintFuzzies.com

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Updated: February 2026

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Observing Local Group Galaxies
Flat Galaxies
Abell Galaxy Clusters
Voronstov-Velyaminov Catalogue – Part I and II
Rose Catalogue of Compact Galaxies
Variable Galaxies
Selected Shakhbazian Groups
Ring Galaxies
Palomar Compact Galaxy Catalogue
Object of the Week 2012 and 2013 – Deep Sky Forum

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All Maps by MegaStar™ v5
Front Cover: NGC 6822 from Pan-STARRS

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Introduction to the Local Group Guide

My interest in observing extragalactic objects began in the 1980s after reading an article by Brian Skiff in *Deep Sky* magazine suggesting that globular clusters in the Andromeda Galaxy (M31) were within reach of visual observers. Intrigued by the possibility, I began observing them with my 8-inch telescope. That effort intensified in the early 1990s when I upgraded to a 16-inch telescope and started creating detailed personal finder charts for M31's globular clusters. Over the course of several nights, I observed at least fifty of these clusters—an experience that proved both challenging and deeply rewarding. In the years that followed, this project naturally expanded into creating finder charts for globular clusters in other Local Group galaxies.

That progression ultimately led to this guide. My goal was to build a one-stop field observing resource for intermediate and advanced visual observers interested in exploring Local Group galaxies and their associated extragalactic objects. I began with the basic structure of my personal finder charts, including positional information and observational data, and gradually developed the format into the guide you now hold in your hands. The content has gone through several revisions to arrive at its current form.

The Local Group (LG) is dominated by the Andromeda Galaxy and the Milky Way, accompanied by a large population of smaller elliptical, irregular, and dwarf galaxies. Today, more than 135 members are known. Some of these galaxies are so faint and diffuse that they are effectively invisible even in digital sky surveys such as the DSS or SDSS. As a practical observing criterion, objects that are not discernible in these surveys are considered unobservable and have been intentionally excluded from this guide. Each included Local Group galaxy that hosts observable extragalactic objects is annotated using labeled Pan-STARRS images when available.

Pan-STARRS images are preferred for annotation because their central regions are less saturated than those in DSS or SDSS imagery, making it easier to identify and label extragalactic objects near galactic nuclei. While Pan-STARRS images do exhibit stitching artifacts—an unavoidable limitation—I believe the improved visibility of central detail outweighs this drawback for observational purposes.

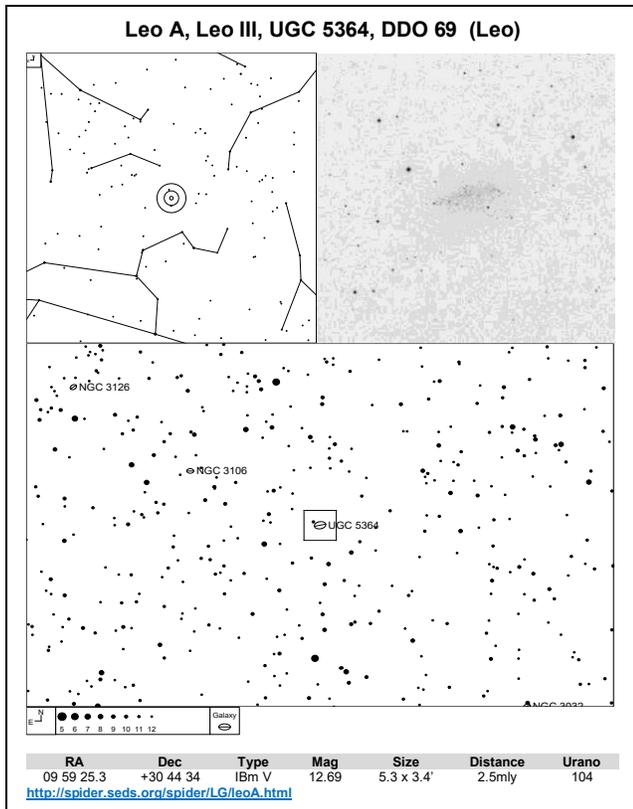
Since the first edition of this observing guide was released in 2008, discoveries and research have dramatically reshaped our understanding of the Local Group. What was once a collection of roughly thirty to forty known galaxies in the 1980s and 1990s has grown to well over one hundred today, and further discoveries are inevitable. Research into Local Group extragalactic objects—including resolved stars—has expanded rapidly as well. For this revised edition, I consulted journal articles, corresponded with accomplished observers, examined Pan-STARRS imagery, and compared results with NED and SIMBAD data to identify extragalactic objects that are realistically observable. A representative sampling is included here to help observers get started, including globular clusters, star cluster candidates, OB associations, H II regions, Wolf–Rayet stars, and supergiant stars. At least fifteen Local Group or near Local Group galaxies in this guide include one or more annotated extragalactic objects.

Because this guide grew out of my own observing program and is based in the Northern Hemisphere, I have not included extragalactic objects for Local Group members south of -50 degrees declination. An excellent resource for observing the Large Magellanic Clouds is provided in the appendix. Indeed, the Large Magellanic Cloud alone could easily justify an entire volume.

I sincerely hope this guide proves useful in the field as you search out the faint dwarf galaxies and subtle “faint fuzzies” that populate our local galactic neighborhood.

Before closing, I would like to express my deep gratitude to the peers who reviewed drafts of this guide and offered valuable suggestions and corrections. Much gratitude to Scott Harrington who provided additional extragalactic objects in M33, IC 1613, and Sextans A, and caught several errors. I thank Steve Gottlieb who contributed objects and enhancements for M31, NGC 6822, and IC 1613. Thanks also to Butch Phaneuf, Dragan Nikin, Owen Brazell, and Brent Knight for their general comments and feedback. Finally, I extend heartfelt thanks to my current observing group—Larry Mitchell, Keith Rivich, Amelia and Steve Goldberg, and Jose Sancho—who reviewed the draft and shared their insights. Since relocating from the eastern foothills of the Sierras near Lake Tahoe to the Texas Hill Country, I have greatly appreciated finding a new community of advanced observers. Any remaining errors are entirely my own, and I hope they are minimal.

How to Use the Atlas



The left panel shows the naked-eye field with Telrad™ circles centered on the Local Group galaxy. The upper-right panel displays an inverted, labeled DSS or Pan-STARRS image, typically covering a 15' square field unless a larger area is required.

The lower panel presents a finder field approximately 4.8° wide by 3.0° high. This field is wide enough for use with a finder scope, yet detailed enough for observers who prefer to use a low-power eyepiece as a finder. The limiting magnitude of the field stars is generally set to 12, but is reduced in star-rich regions to maintain clarity. A magnitude scale is provided in the lower left, and the footprint of the DSS or Pan-STARRS image is overlaid on the finder chart. A link at the bottom of the page directs the reader to the SEDS website for the object, which contains additional data and background information.

Some Local Group galaxies host extragalactic objects—such as globular clusters, H II regions, and super star clusters—that are visible in large amateur telescopes. Finder charts are included for selected

extragalactic objects. This area of research is rapidly evolving: many of these objects have been discovered only recently, and additional discoveries are likely in the future.

A table is provided below giving the basic information on the Local Group member.

- **RA** and **Dec** are in Epoch 2000.0
- The **Type** is provided by the NASA Extragalactic Database (NED).
- The **Magnitude** and **Size** provided are from various sources, namely NED or MegaStar, which are pulled from RC3 (Third Reference Catalogue of Bright Galaxies).
- **Distance** in kly (kilo/thousand light-years) or mly (million light-years) is provided by NED.
- **Uranometria** is the chart number of the 2nd edition of the Uranometria star charts.

Note: I've split the catalogue into two sections, as some are considered within the Local Group and some were recently deemed as outside of the Local Group.¹

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. Any comments or to share any observations, send them to Alvin.Huey@FaintFuzzies.com.

¹ Thanks to Scott Harrington for bringing it to my attention. See Table 1 in Alan W. McConnachie's journal article for those inside or outside of the Local Group. Specifically, any objects after UGC 4879 were deemed outside of the Local Group. Alan W. McConnachie. "The Observed Properties of Dwarf Galaxies in and Around the Local Group," *The Astrophysical Journal* Vol. 144, Iss. 1 (July 2012)

Local Group Catalog

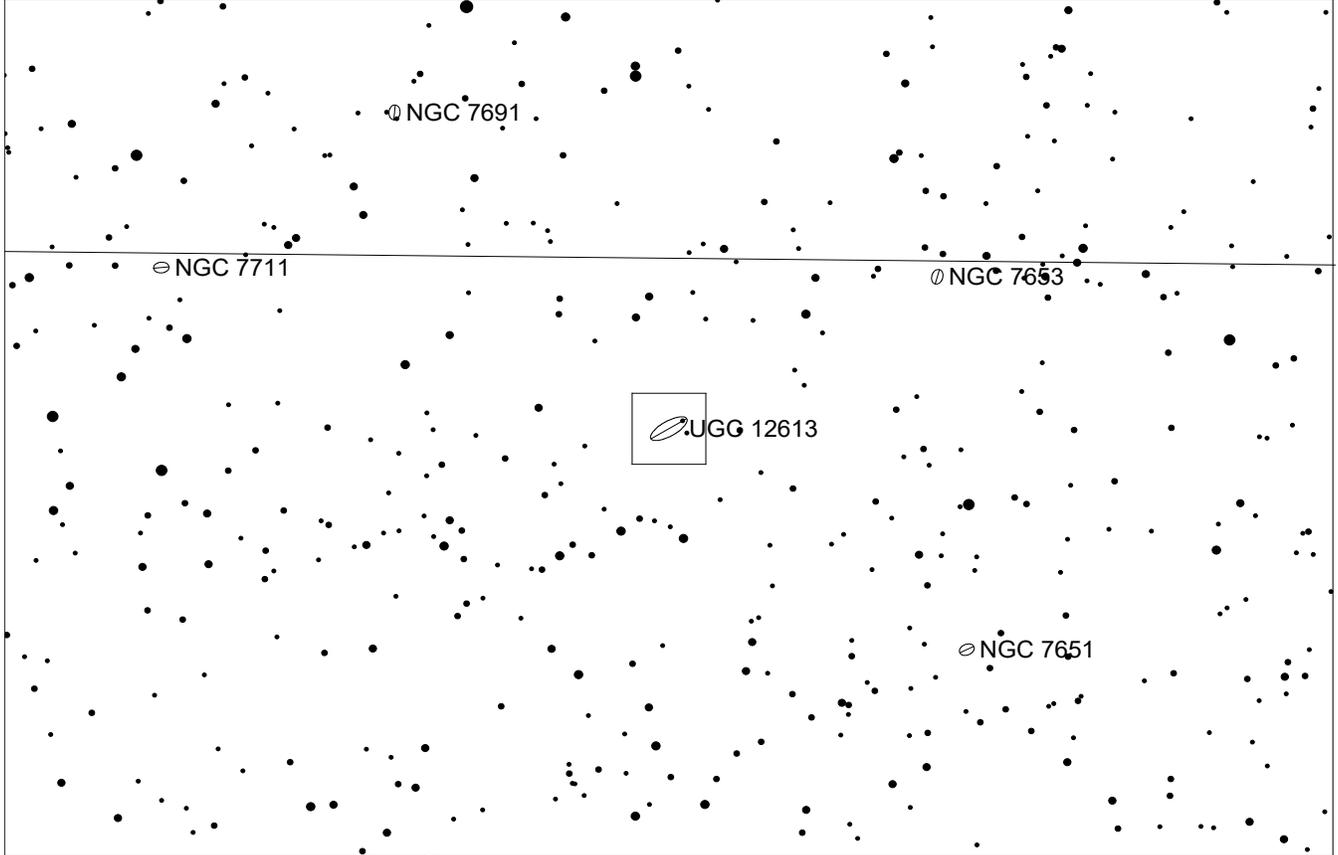
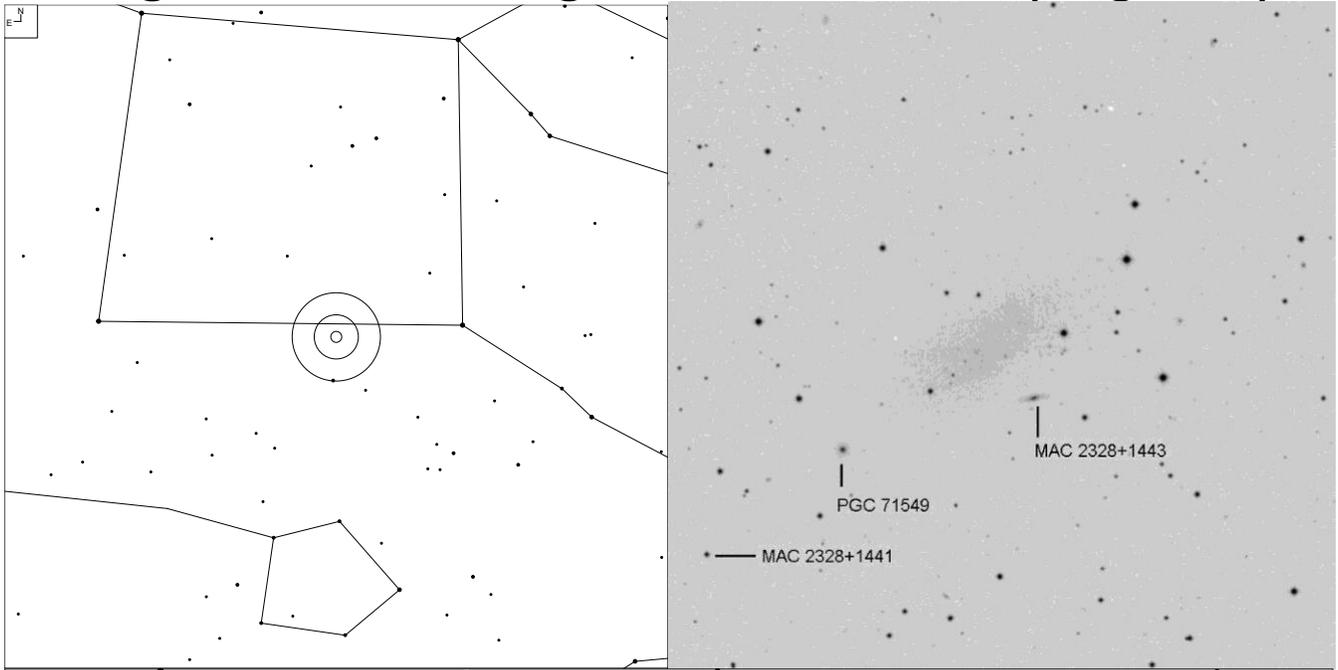
Pg	Member	RA	Dec	Mag	Size	Con	Urano	iDSA	Distance
12	Pegasus Dwarf Irr	23 28 34	+14 44 48	12.5v	8.2 x 2.5'	Peg	81R	-	3.0 mly
13	IC 10	00 20 18	+59 18 06	9.5v	6.3 x 5.1'	Cas	18L	8L, 15R	4.2 mly
15	NGC 147	00 33 12	+48 30 28	9.5v	13.2 x 7.7'	Cas	30L	27R	2.4 mly
18	NGC 185	00 38 58	+48 20 14	9.2v	11.9 x 10.1'	Cas	30L	27R	2.3 mly
20	M 31	00 42 44	+41 16 09	3.4v	3.2 x 1 deg	And	30L	27R	2.5 mly
30	NGC 205. M 110	00 40 23	+41 41 22	8.1v	21.9 x 10.9	And	30L	27R	2.9 mly
32	Andromeda VII	23 26 32	+50 40 33	12.9v	2.5 x 2.0'	And	30R	16L	2.5 mly
33	Andromeda VI	23 51 46	+24 35 06	13.2v	3.5 x 3.5'	Peg	63R	-	2.7 mly
34	Andromeda I	00 45 42	+38 02 09	12.7v	4.0 x 3.0'	And	62R	27R, 39R	2.9 mly
35	Andromeda III	00 35 31	+36 30 31	14.4v	2.0 x 2.0'	And	45L	27R, 39R	2.9 mly
36	Andromeda IV	00 42 33	+40 34 24	16.6b	1.3 x 0.9'	And	30L	27R	2.8 mly
37	Andromeda IX	00 52 53	+43 11 45	16.3v	5'	And	44R	-	2.5 mly
38	Andromeda X	01 06 34	+44 48 16	16.6v	7'	And	44R	-	2.9 mly
39	Andromeda V	01 10 17	+47 37 41	15.3v	2.0 x 1.5'	And	44R	27L	2.5 mly
40	Andromeda II	01 16 26	+33 25 37	11.7v	2.0 x 2.0'	Psc	62R	39L	2.9 mly
41	Pisces Dwarf (LGS3)	01 03 53	+21 53 05	14.3v	2.0 x 2.0'	Psc	80R	51L	3.0 mly
42	WLM, MCG-3-1-15	00 01 56	-15 27 21	11.1v	11.6 x 4.0'	Cet	123L	75R	3.4 mly
44	M 33	01 33 51	+30 39 37	5.7v	66 x 38'	Tri	62L	39L	2.6 mly
53	Cetus Dwarf	00 26 11	-11 02 27	13.2v	5.0 x 4.3'	Cet	123L	75R	2.8 mly
54	IC 1613	01 04 47	+02 07 05	10.0v	16.3 x 14.5'	Cet	120R	63L	2.9 mly
56	Fornax Dwarf, MCG-6-7-1	02 39 59	-34 26 57	7.4v	17.0 x 12.6'	For	175R	86R	530 kly
58	SMC	00 52 45	-72 49 43	2.7	320 x 185'	Tuc	204L	108L, D29	199 kly
59	Sculptor Dwarf	01 00 11	-33 43 15	8.6v	39.8 x 30.8'	Scl	176R	87R	280 kly
60	Phoenix Dwarf	01 51 06	-44 26 42	13.2v	4.8 x 3.9'	Phe	191L	-	1.4 mly
61	LMC	05 23 35	-69 45 22	0.9	650 x 550'	Dor	212L	112R	158 kly
62	Carina Dwarf, ESO 206-20A	06 41 37	-50 57 58	11.0v	23 x 16'	Car	188R	96R	330 kly
63	UGC 4879	09 16 02	+52 50 42	13.2v	2.5 x 1.5'	Uma			4.2 mly
64	Leo A, Leo III	09 59 25	+30 44 34	13.2v	5.3 x 3.4'	Leo	73L	35L	2.5 mly
65	Leo I, Regulus Dwarf	10 08 28	+12 18 27	10.0v	5.1 x 3.5'	Leo	93L	46R	900 kly
66	Leo II	11 13 29	+22 09 12	12.0v	10.1 x 9.0'	Leo	73L	34L	750 kly
67	Leo T	09 34 51	+17 03 02	15.1v	1.4 x 1.4'	Leo	93R	-	1.4 mly
68	Ursa Minor Dwarf	15 08 48	+67 11 00	10.6v	30.4 x 19.1'	Umi	12L	75L	240 kly
69	Draco Dwarf	17 20 08	+57 54 58	10.6v	35.5 x 24.5'	Dra	21R	10L	280 kly
70	SagDIG	19 29 59	-17 40 42	13.6v	3.2 x 1.5'	Sag	144R	66L	4.2 mly
71	NGC 6822	19 44 57	-14 48 11	8.1v	15.6 x 13.5'	Sag	126R	66L	1.8 mly
75	Aquarius Dwarf	20 46 52	-12 50 51	14.8v	2.2 x 1.1	Cap	125R	65R	3.4 mly
76	Tucana Dwarf	22 41 49	-64 25 15	15.2v	2.9 x 1.2'	Tuc	205L	100L	3.2 mly

Just Outside the Local Group Catalog

Page	Member	RA	Dec	Mag	Size	Con	Urano	iDSA	Distance
78	UKS2323-326	23 26 27	-32 23 17	14.2v	1.5 x 1.5'	Scl	159R	-	4.7 mly
79	NGC 55	00 15 08	-39 12 53	7.9v	32.3 x 5.6'	Scl	159L	88L, 99R	6.5 mly
81	UGCA 86	03 59 51	+67 08 35	14.2v	5.4 x 3.5'	Cam	16R	7L	6.2 mly
83	UGCA 92	04 32 06	+63 36 57	16.2b	2.0 x 1.0'	Cam	16R	14L	4.7 mly
84	Sextans B	09 59 59	+05 19 53	11.9v	5.1 x 3.5	Sex	113L	59L, 58R	4.7mly
86	Sextans A	10 11 0.4	-04 41 57	11.9v	5.7 x 5.1	Sex	113L	58R	5.2 mly
88	GR 8, UGC 8091	12 58 40	+14 13 04	15.0v	1.9 x 1.3'	Vir	90R	45R	7.9 mly
90	NGC 3109	10 03 06	-26 09 26	10.0v	21.0 x 3.7'	Hya	151R	82R, 83L	4.5 mly
92	Antlia B	09 48 56	--25 59 24	-	-	Ant	151R	82R, 83L	4.5 mly
93	Antlia Dwarf	10 04 03	-27 19 47	15.2v	1.9 x 1.4'	Ant	151R	82R, 83L	4.6 mly
94	IC 5152	22 02 41	-51 17 47	10.9v	5.2 x 3.2'	Ind	178R	89L, 100R	5.9 mly

The Local Group Atlas

Pegasus Dwarf Irregular, UGC 12613 (Pegasus)



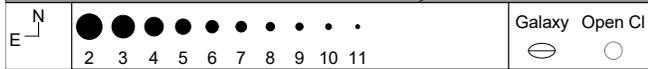
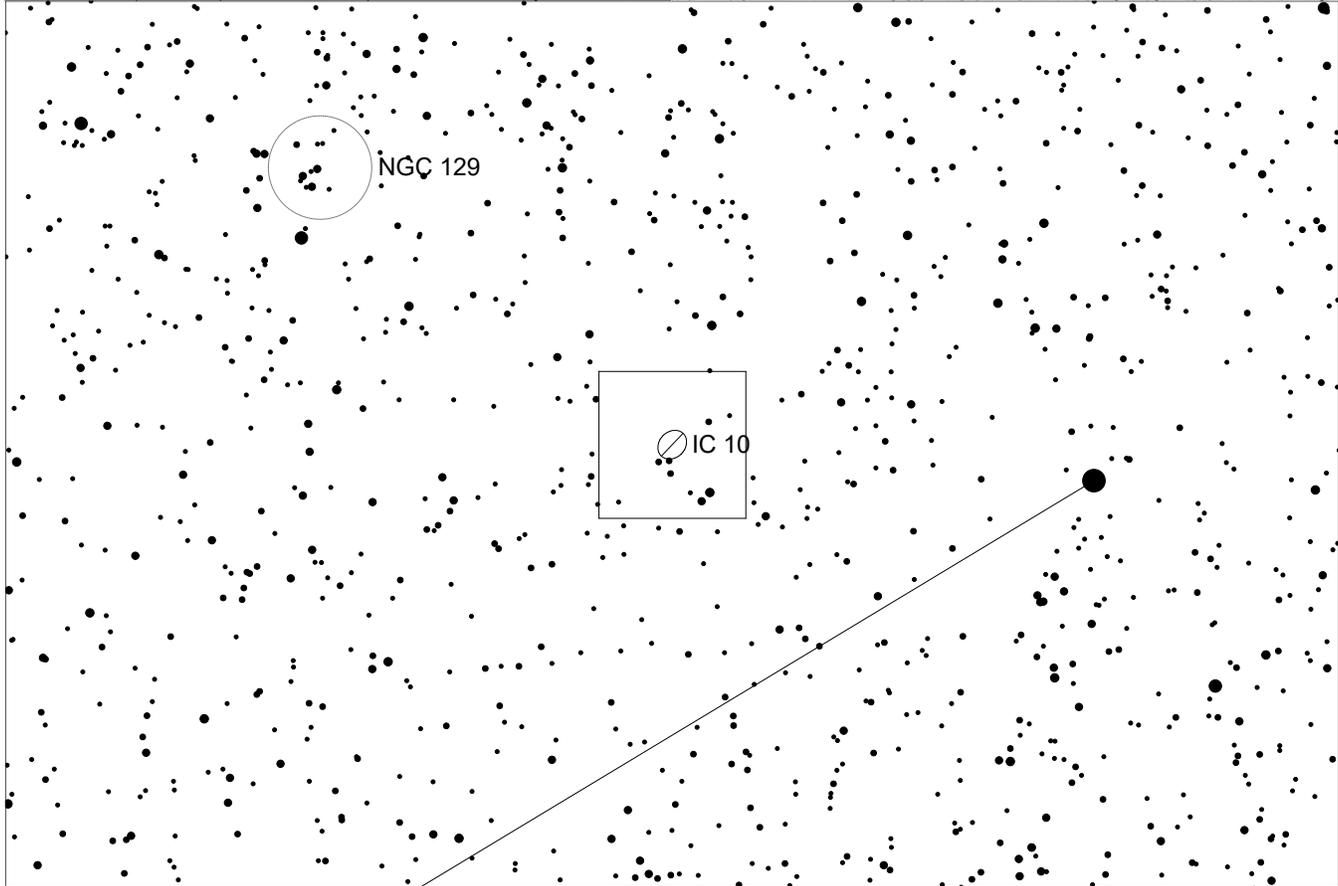
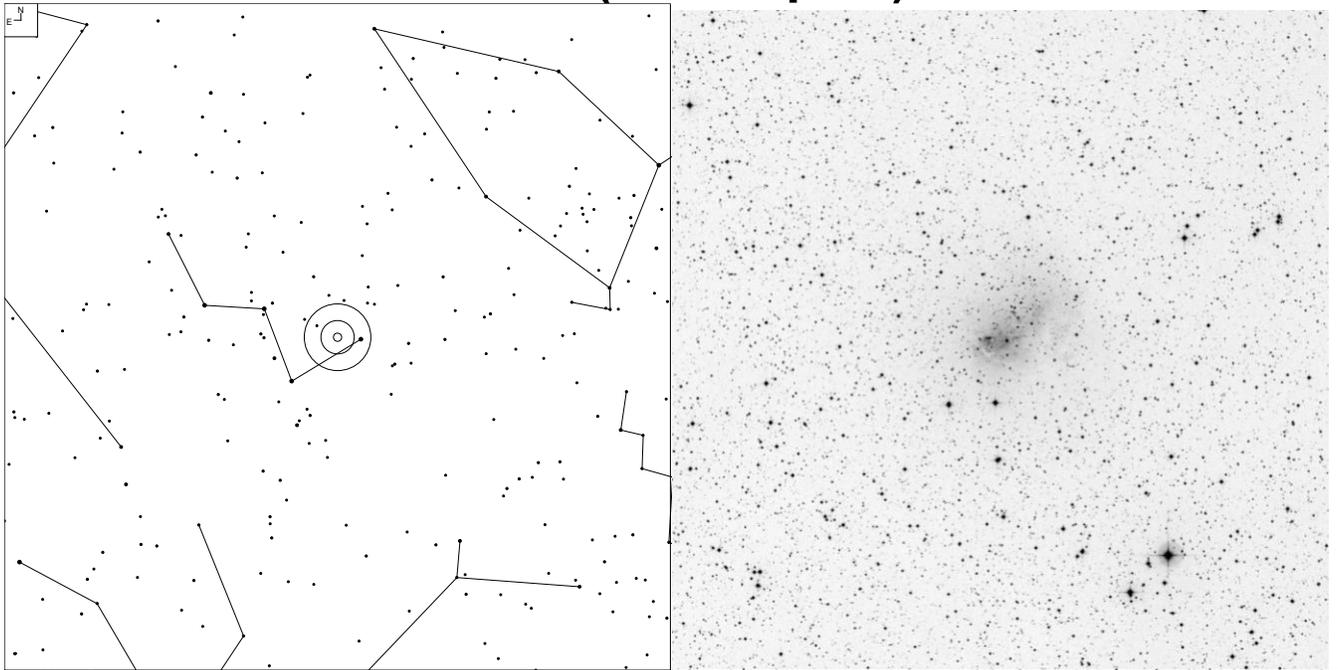
N E	● ● ● ● ● ●	Galaxy ☉
	7 8 9 10 11 12	

RA	Dec	Type	Mag	Size	Distance	Urano
23 28 34	+14 44 48	Im V	12.5v	8.2 x 2.5'	3.0 mly	81R

<https://www.cloudynights.com/forums/topic/519535-pegasus-dwarf-andromeda-vi/>

SEDS website: http://spider.seds.org/spider/LG/peg_dw.html

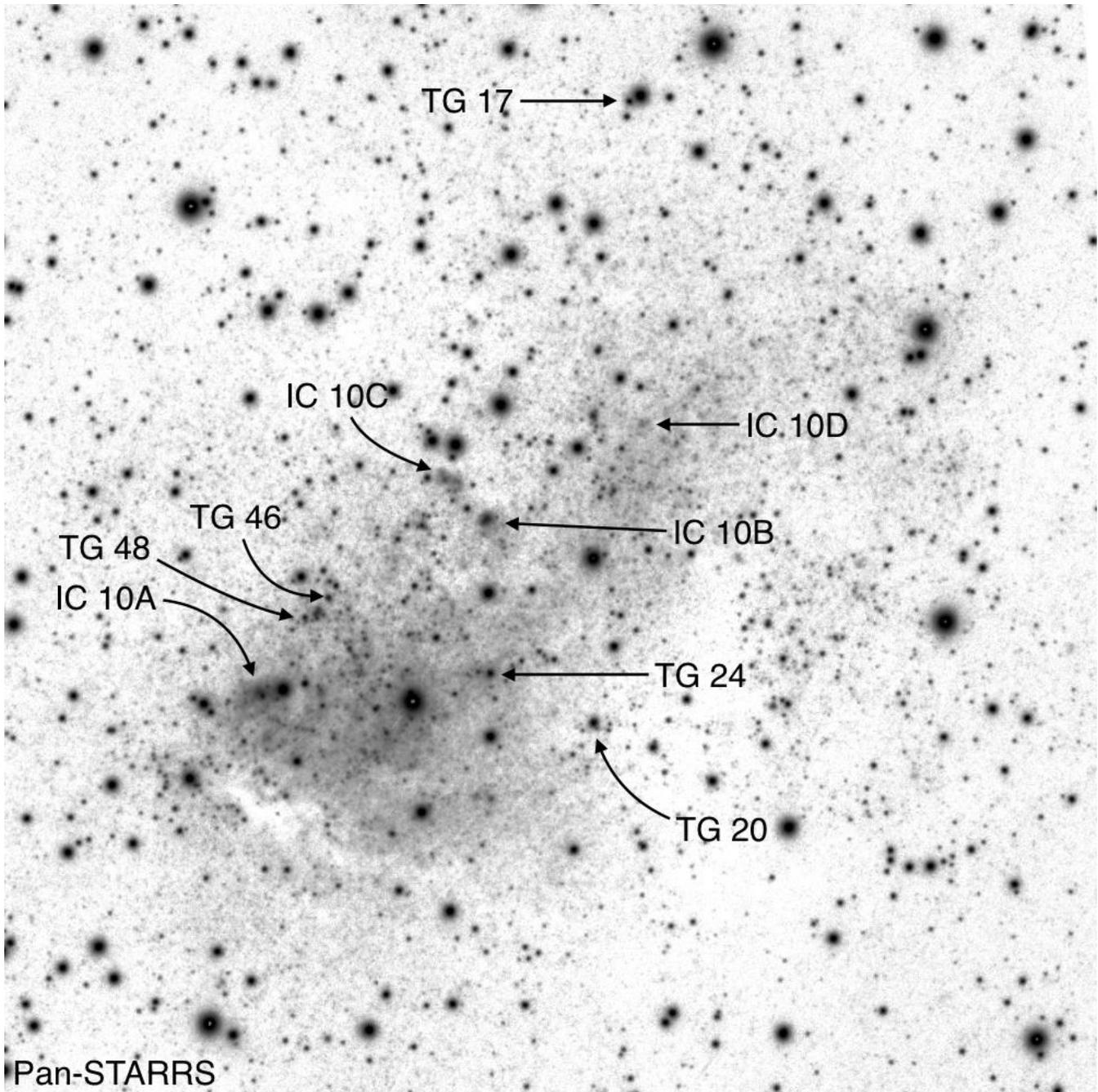
IC 10 (Cassiopeia)



RA	Dec	Type	Mag	Size	Distance	Urano
00 20 18	+59 18 06	KBm?	9.5v	6.3 x 5.1'	2.5 mly	18L

SEDS website: <http://www.messier.seds.org/xtra/ngc/i0010.html>

Non-stellar objects within IC 10

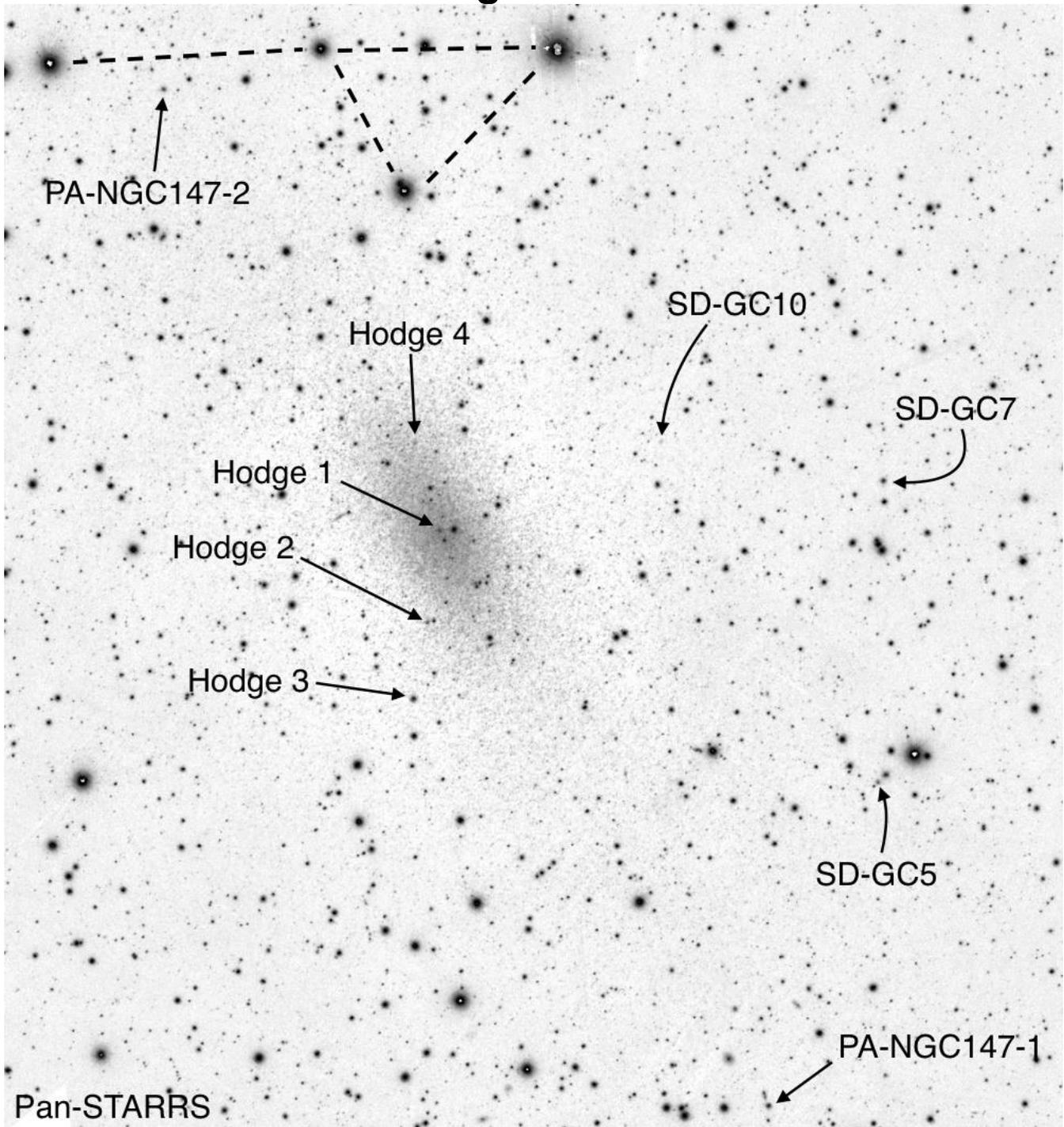


Object ²	RA	Dec	Type	Mag	Object	RA	Dec	Type	Mag
IC 10A	00 20 28	+59 17 37	H II ³	-	TG 17	00 20 10.8	+59 21 08	OC	17.3v
IC 10B	00 20 17	+59 18 40	H II	-	TG 20	00 20 12.4	+59 17 28	GC	17.6v
IC 10C	00 20 19	+59 18 54	H II	-	TG 24	00 20 17.1	+59 17 46	GC	17.6v
IC 10D	00 20 10	+59 19 14	H II	-	TG 46	00 20 24.7	+59 18 13	SC	18.4v
					TG 48	00 20 25.1	+59 18 07	SC	18.0v

² See Scott Harrington, "IC 10 – The Hidden Dwarf," *Sky and Telescope* (Dec 2023): 57-59 for a list of H II regions, globular clusters, open cluster and star clusters. I've used Harrington's object titles in the image above.

³ See Paul Hodge and Myung Gyoon Lee, "The H II regions of IC 10," *Publications of the Astronomical Society of the Pacific* Vol. 102, Number 647 (Jan 1990): 26-40 for the list of H-II regions in IC 10.

NGC 147's globular clusters

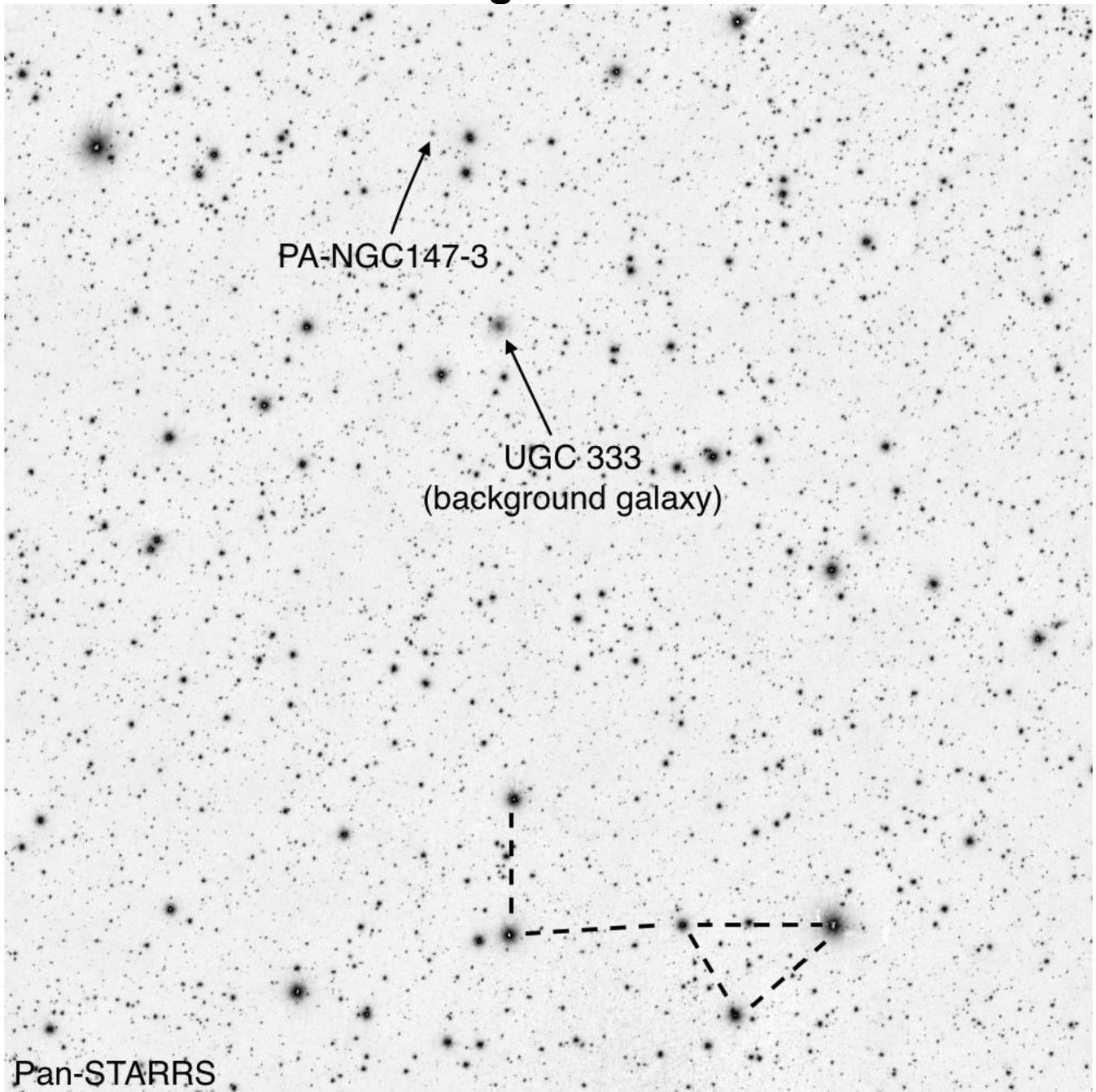


Object	RA	Dec	Mag(g) ⁴	Object	RA	Dec	Mag (g)
Hodge 1	00 33 12.2	+48 30 32.3	17.17	SD-GC7	00 32 22.2	+48 31 27.0	16.73
Hodge 2	00 33 13.6	+48 28 48.7	17.79	SD-GC10	00 32 47.2	+48 32 10.7	19.59
Hodge 3	00 33 15.2	+48 27 23.1	16.29	PA-N147-1	00 32 35.3	+48 19 48.0	16.72
Hodge 4	00 33 15.0	+48 32 09.6	18.83	PA-N147-2	00 33 43.3	+48 38 45.0	17.11
SD-GC5	00 32 22.9	+48 25 49.0	17.83	PA-N147-3 ⁵	00 34 10.0	+49 02 39.0	17.17

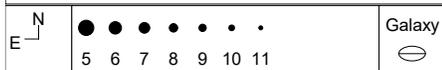
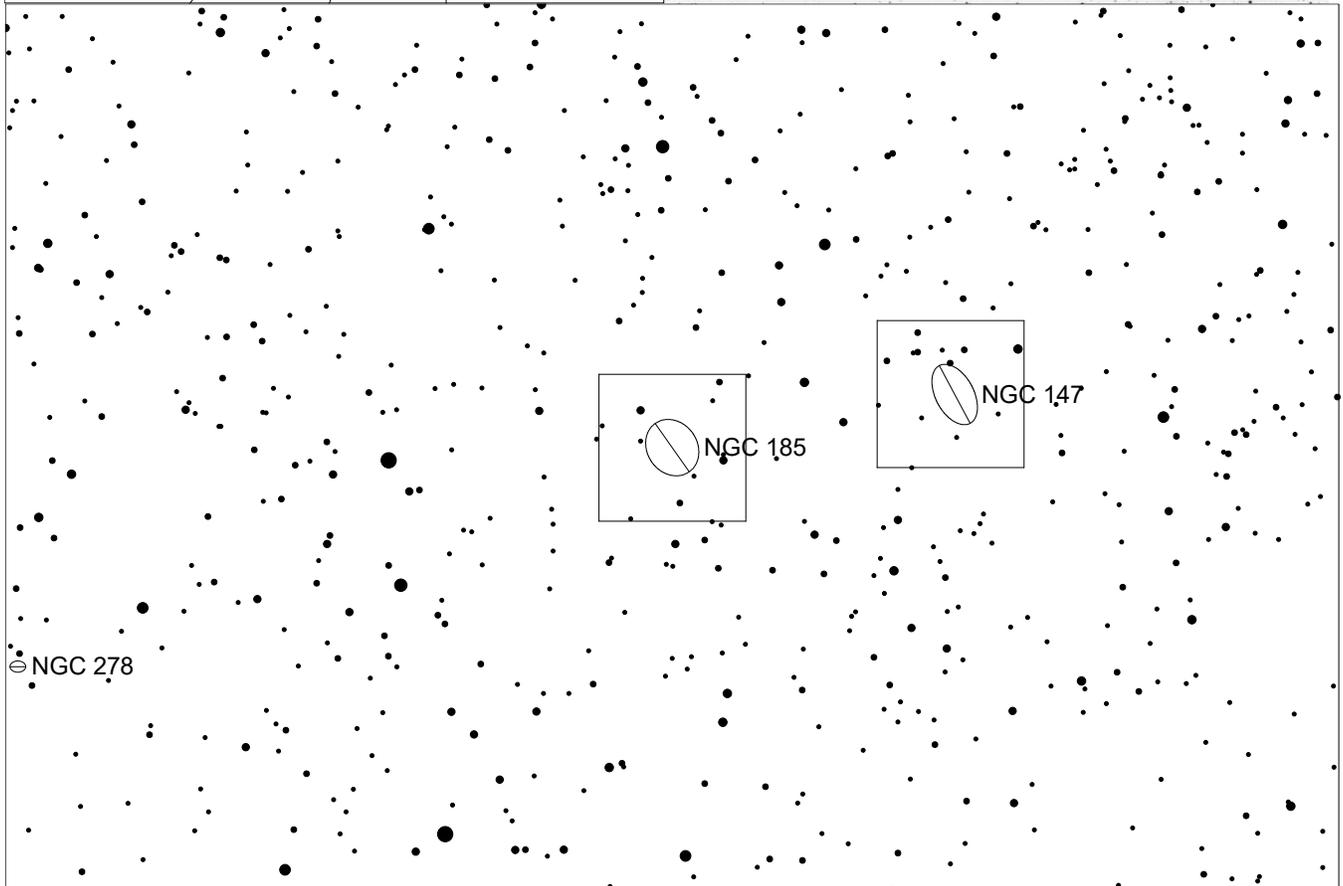
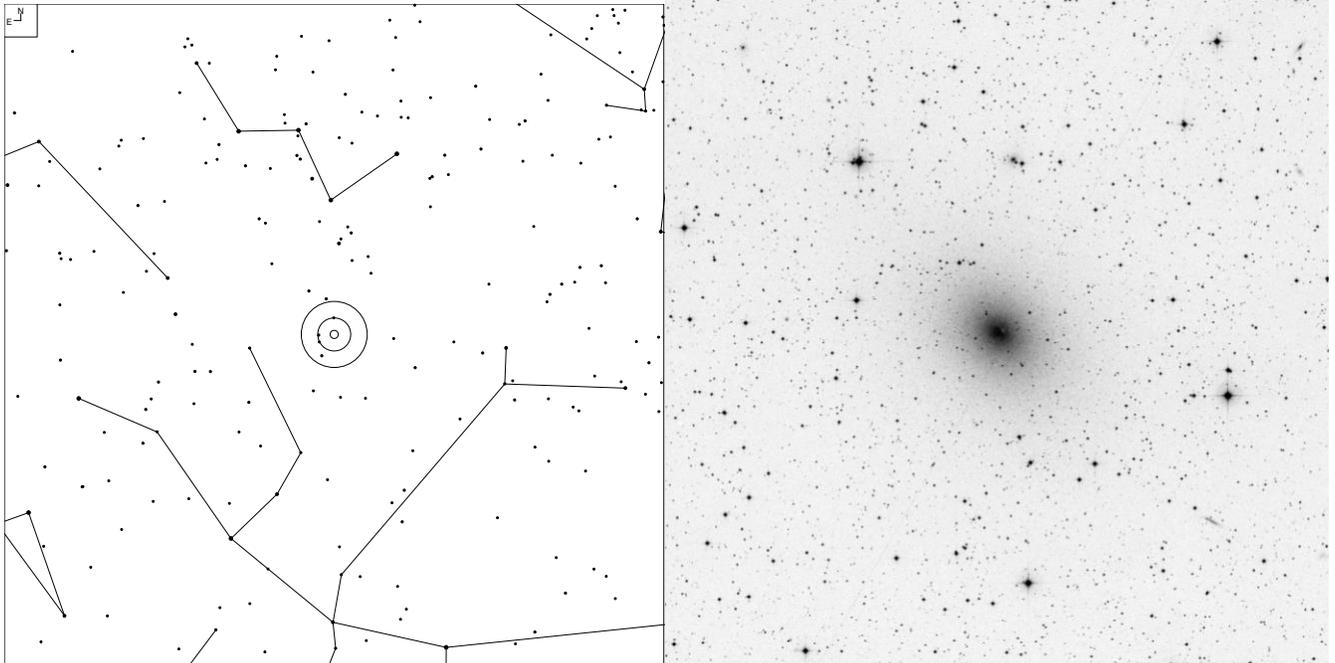
⁴ J. Veljanoski, A. M. N. Ferguson, et al, "Newly-Discovered Globular Clusters in NGC 147 and NGC 185 from PAndAS," *Monthly Notices of the Royal Astronomical Society* Vol. 435, Iss. 4 (Nov 2013): 3654-3666.

⁵ See next page for finder chart for PA-N147-3 as it is ½ degree north of the field. See star pattern to align the two charts.

PA-NGC147-3 globular of NGC 147



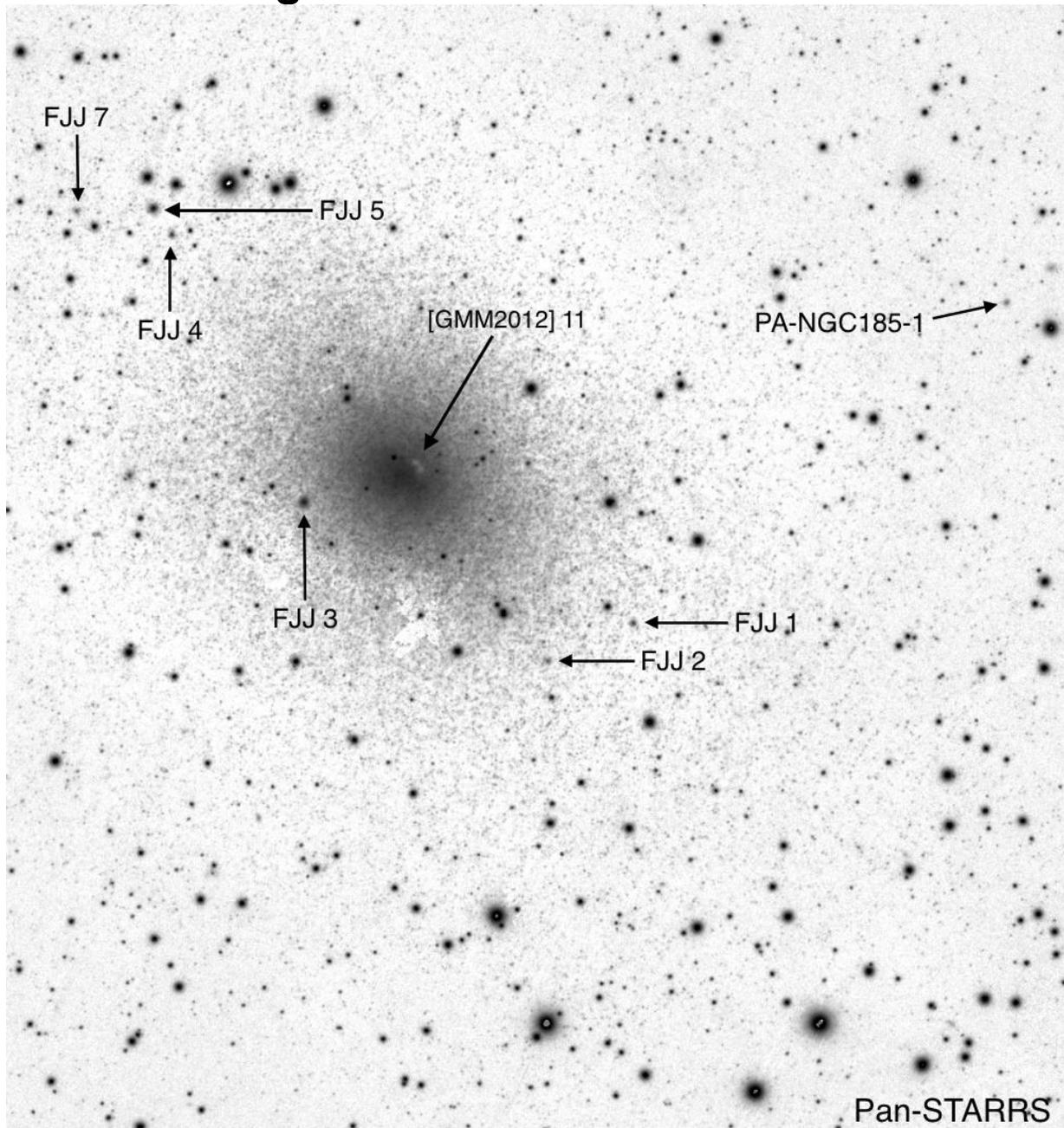
NGC 185 (Cassiopeia)



RA	Dec	Type	Mag	Size	Distance	Urano
00 38 58	+48 20 14	dE3 pec	9.2v	11.9 x 10.1'	2.3 mly	30L

SEDS website: <http://spider.seds.org/spider/LG/n0185.html>

NGC 185's globular clusters and dark features



Object ⁶	RA	Dec	Mag (g) ⁷	Object	RA	Dec	Mag (g)
FJJ 1	00 38 42.7	+48 18 40.4	17.96	FJJ 7	00 39 18.4	+48 23 03.6	18.36
FJJ 2	00 38 48.1	+48 18 15.9	18.28	FJJ 8	00 39 23.7	+48 18 45.1	17.29
FJJ 3	00 39 03.8	+48 19 57.5	16.20	PA-N185-1	00 38 18.8	+48 22 04.0	18.65
FJJ 4	00 39 12.2	+48 22 48.2	17.58	[GMM2012] 11 ⁸	00 38 56.5	+48 20 22	-
FJJ 5	00 39 13.4	+48 23 04.9	16.38				

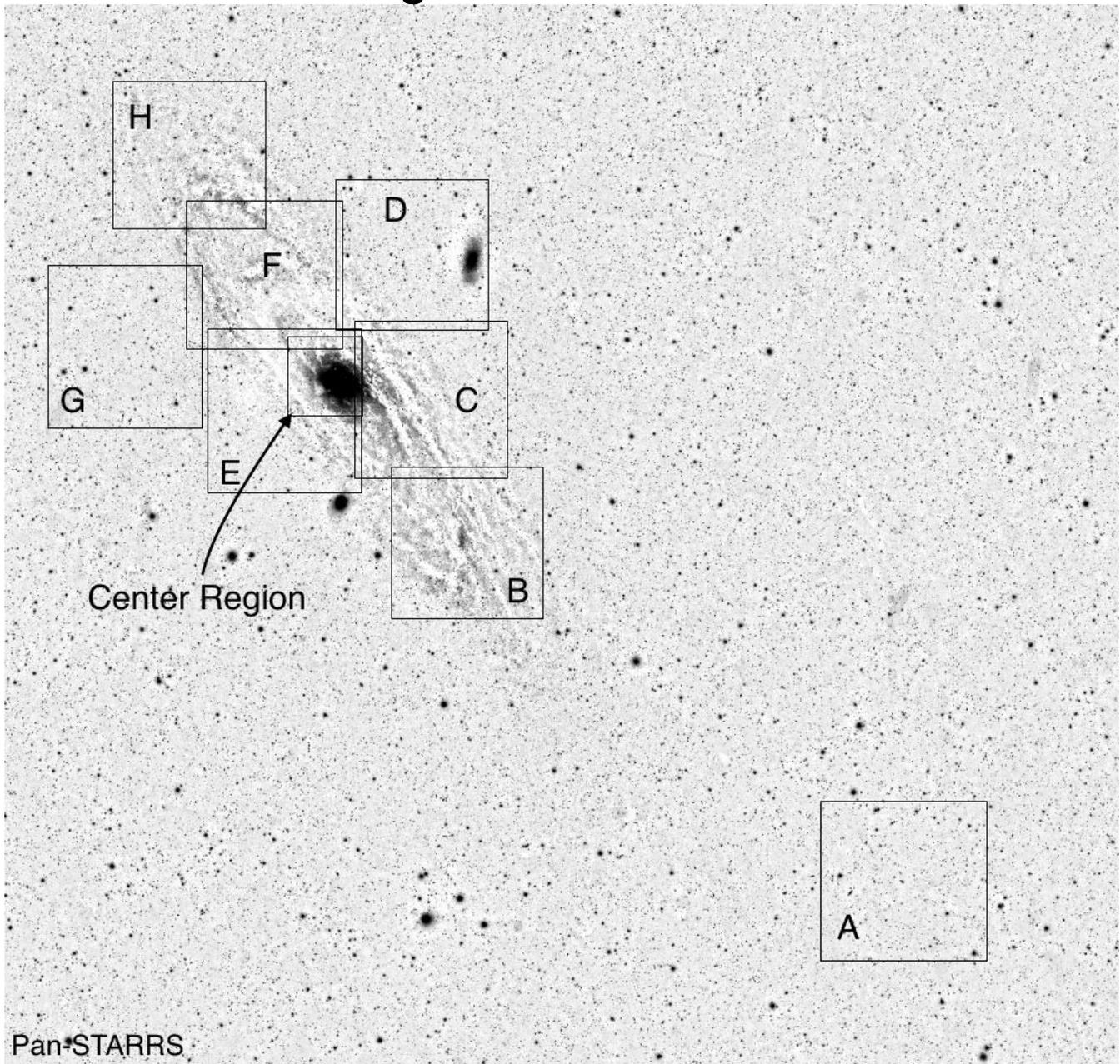
The Hodge globular clusters referenced in some articles are the same as the FJJ clusters in Sharov, et al's paper. FJJ 6 was determined to be an elliptical galaxy in the Hubble image, also see Veljanoski's paper, page 3665.

⁶ A. S. Sharov and V. M. Liutyi, "Photoelectric catalogue of globular clusters in the Andromeda Nebula M31 and its companions NGC 147, NGC 185, and NGC 205," *Astrophysics and Space Science* Vol. 90, No. 2 (Feb. 1983): 371-384

⁷ J. Veljanoski, A. M. N. Ferguson, et al, "Newly-Discovered Globular Clusters in NGC 147 and NGC 185 from PAndAS," *Monthly Notices of the Royal Astronomical Society* Vol. 435, Iss. 4 (Nov 2013): 3654-3666

⁸ See Denise R. Goncalves, et al, "Deep Spectroscopy of the Emission-line Populations in NGC 185," *Monthly Notice of the Royal Astronomical Society* Vol 419 (2012): 854-865

Selected globular clusters in M 31



SEDS Website: <http://www.messier.seds.org/m/m031.html>

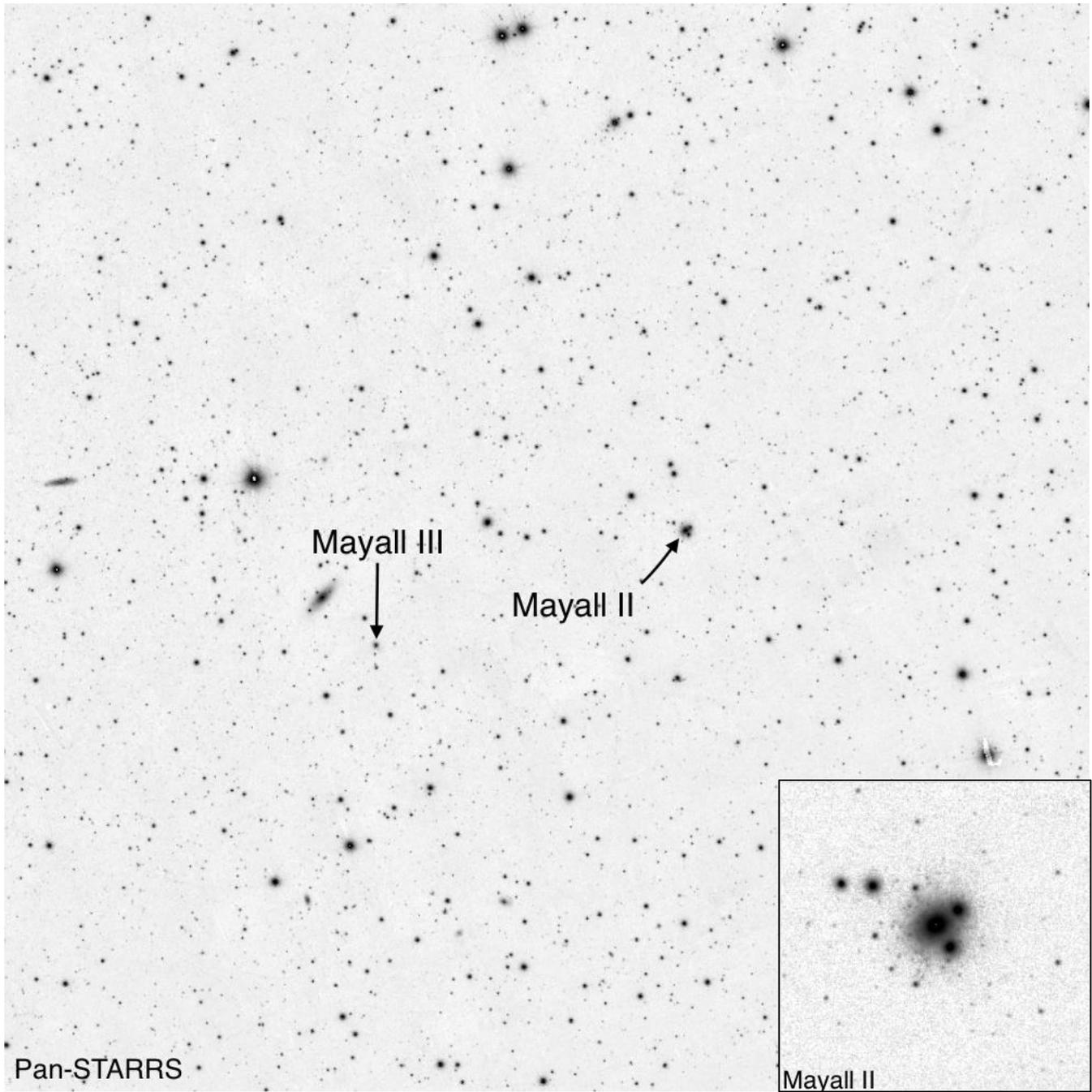
Each chart containing various objects is lettered. Each chart is approximately 30' square, except for the center region, which is about 15' square. About 70 brightest globular clusters of M31 are plotted. For the rest, you can see other great sources on the internet, such as Gendler's map below.

For a full-field globular cluster map from Robert Gendler
<http://www.robgendlerastropics.com/M31NMmosaicglobs2.html>

P. Barmby and J. P. Huchra, "M31 Globular Clusters in the Hubble Space Telescope Archive I. Cluster Detection and Completeness," *The Astronomical Journal* Volume 122, Number 5 (2001): 2458-2468

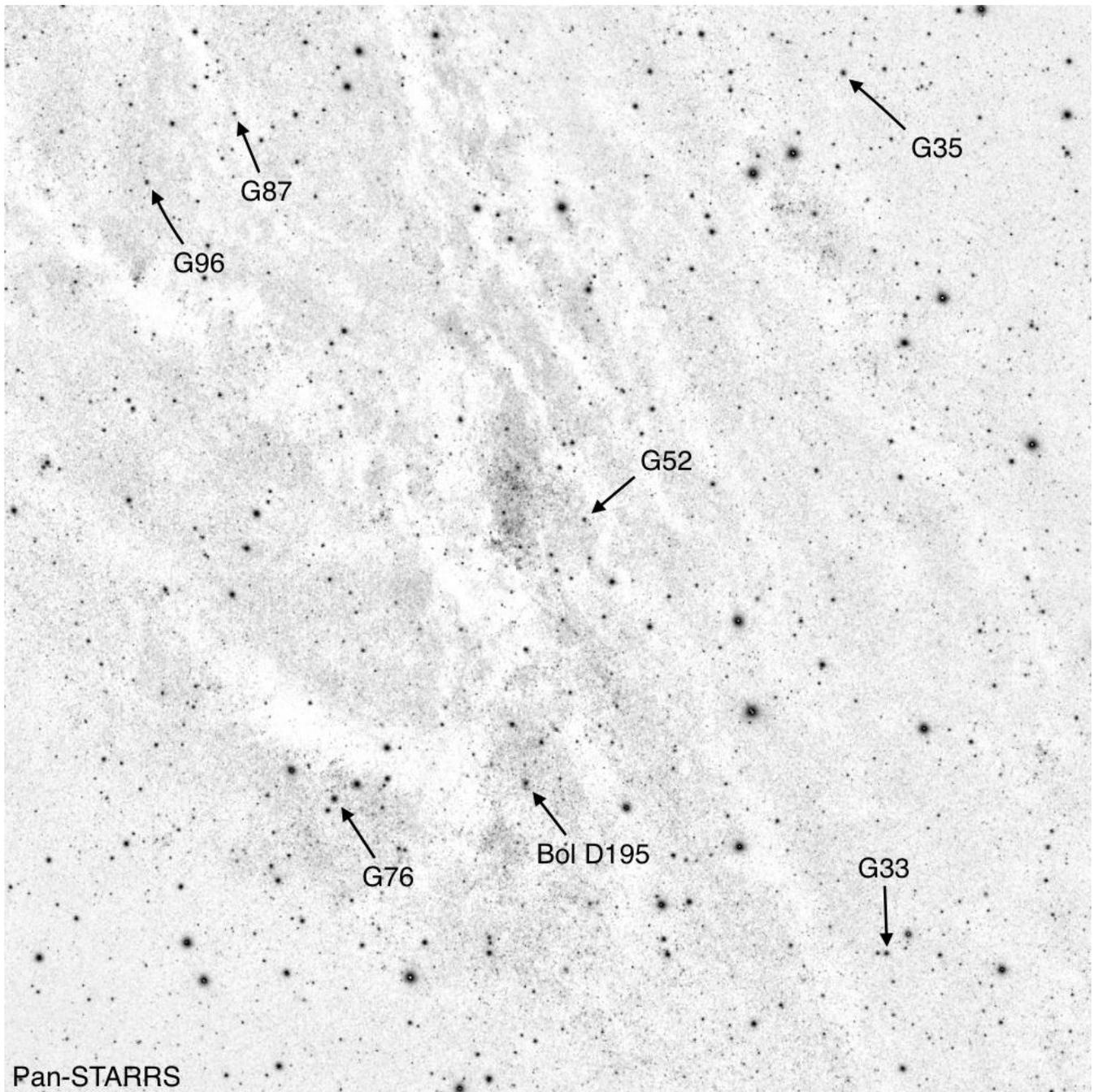
See Steve Gottlieb's observations for most of M31's globular clusters,
<https://adventuresindeepspace.com/gcm31.htm>

M 31 Chart A – Selected Globular Clusters



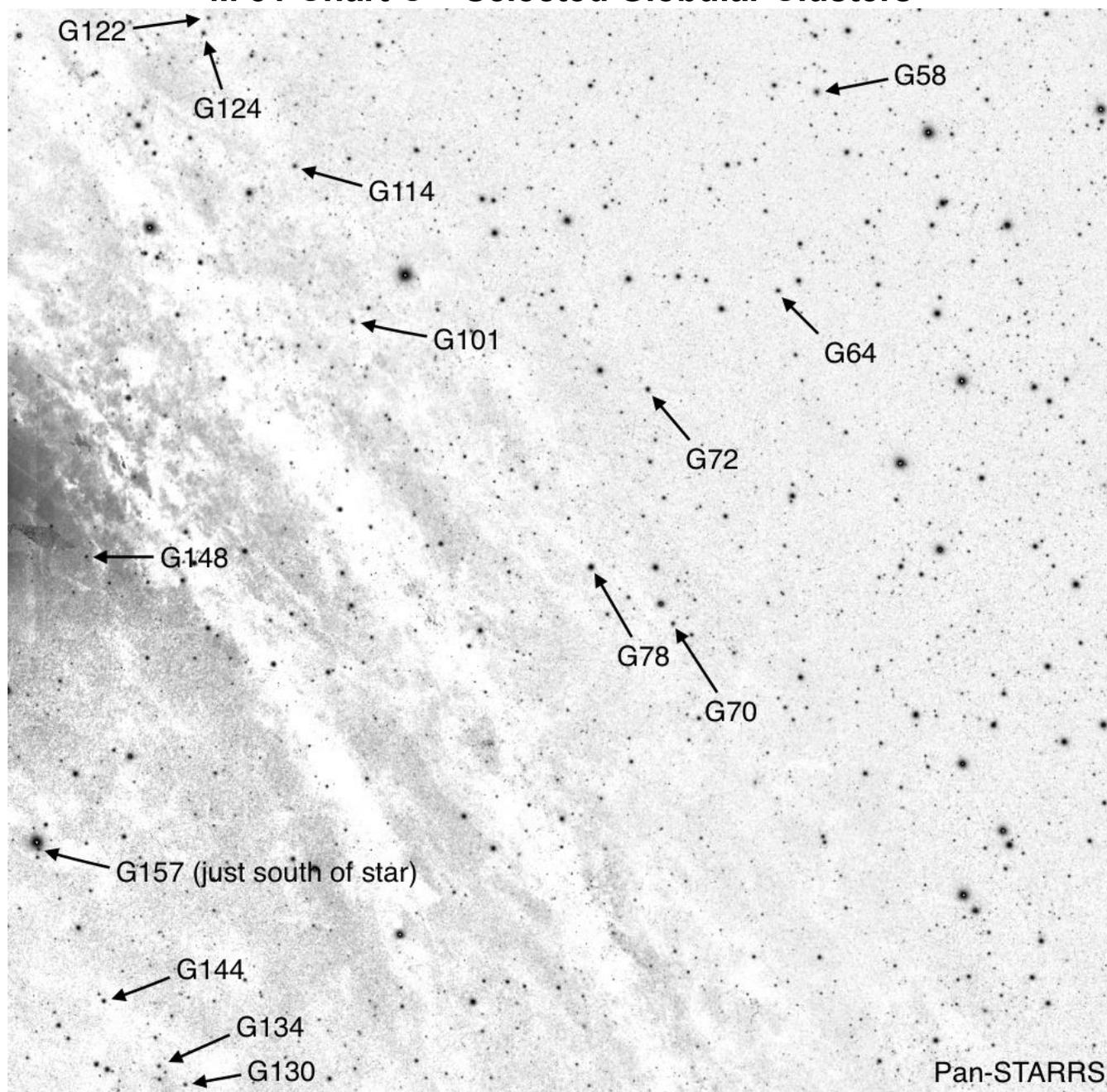
Object	RA	Dec	Mag
Mayall II	00 32 47	+39 34 40	13.8
Mayall III	00 33 34	+39 31 19	15.8

M 31 Chart B – Selected Globular Clusters



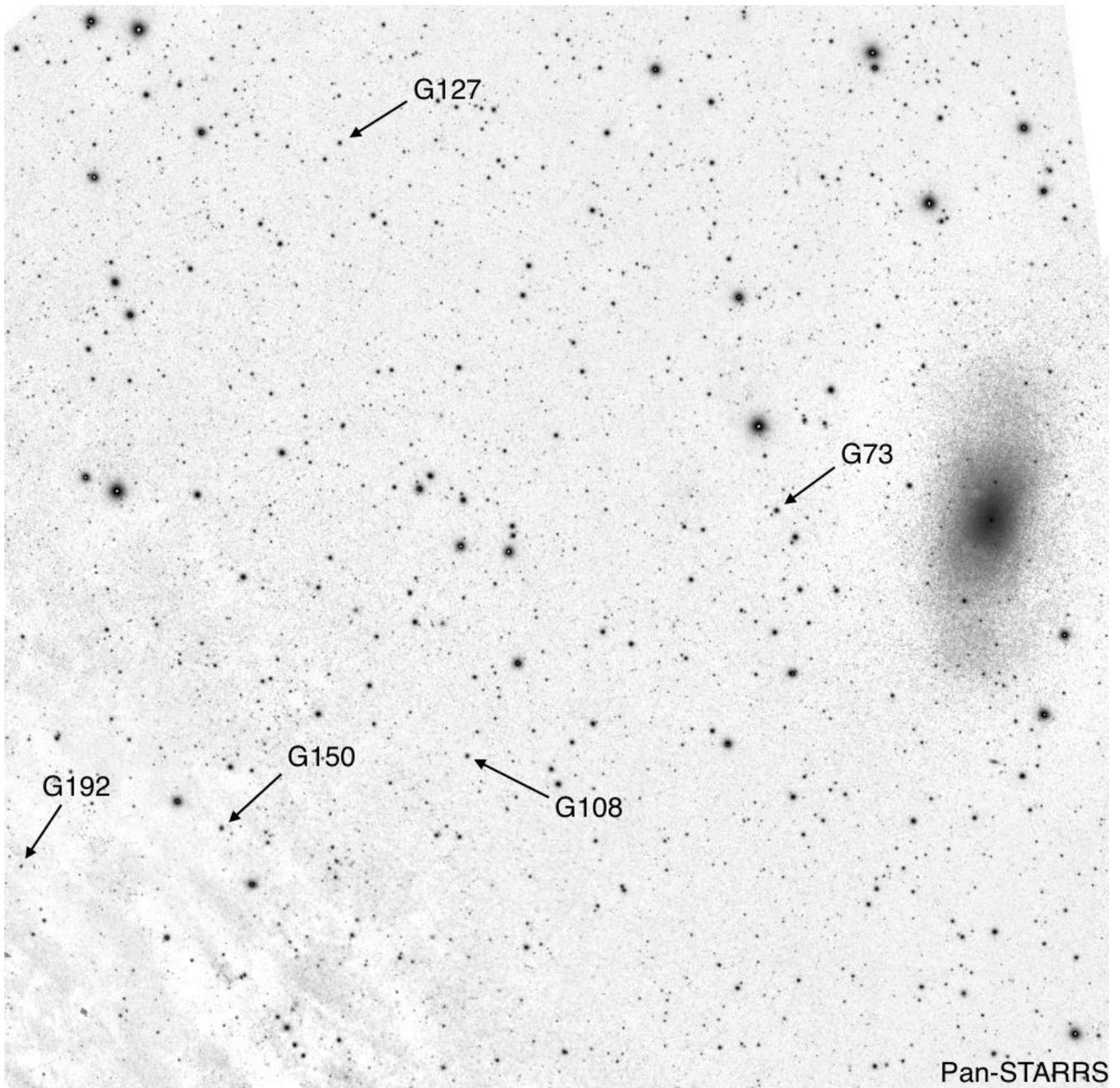
Object	RA	Dec	Mag
G33	00 39 34	+40 31 14	15.4
G35	00 39 40	+40 57 02	15.5
G52	00 40 20	+40 43 58	15.7
BOL D195	00 40 29	+40 36 15	15.2
G76	00 40 59	+40 35 47	14.2
G87	00 41 15	+40 55 51	15.6
G96	00 41 28	+40 53 49	15.5

M 31 Chart C – Selected Globular Clusters



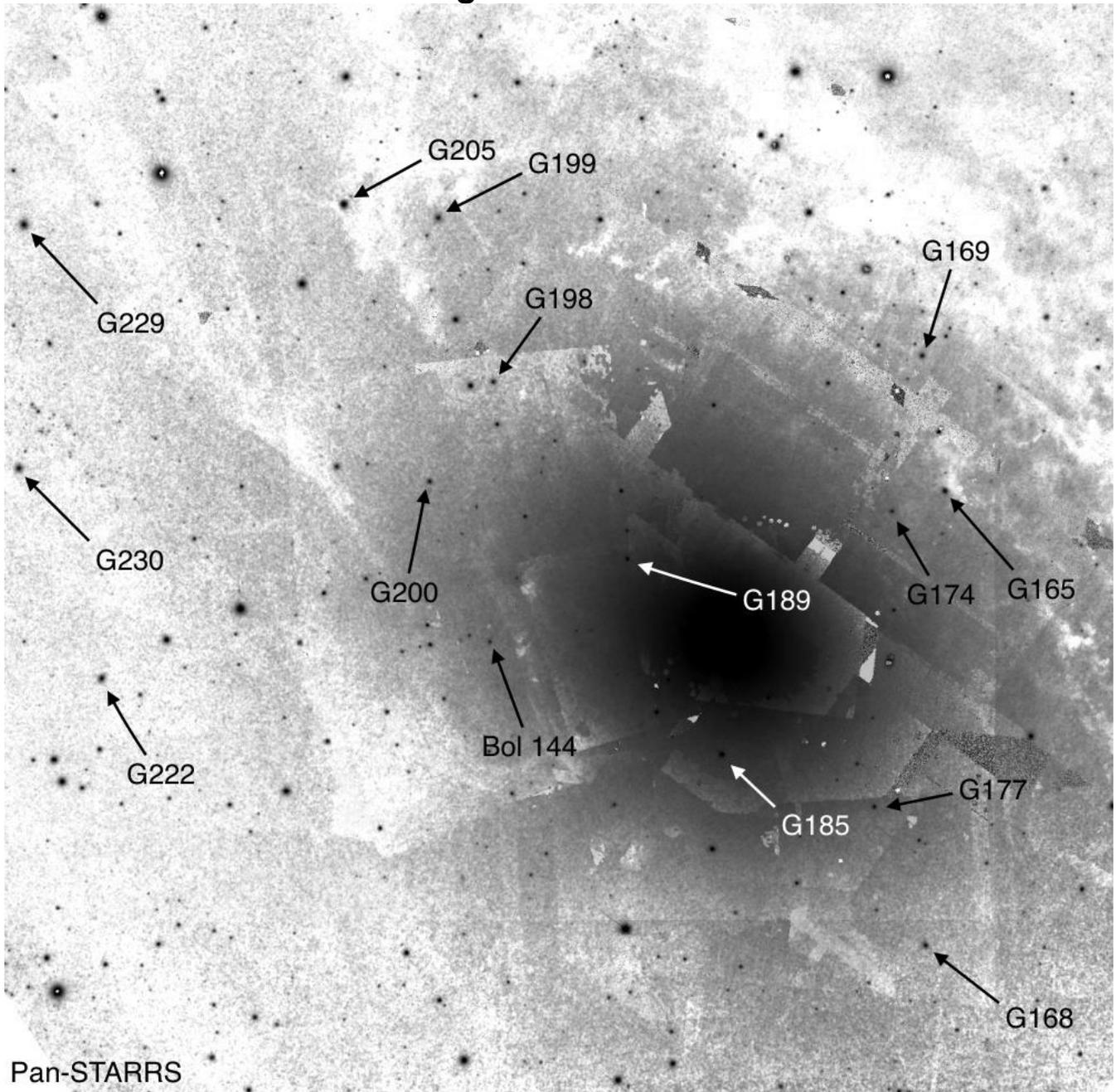
Object	RA	Dec	Mag	Object	RA	Dec	Mag
G58	00 40 26	+41 27 26	15.7	G122	00 42 00	+41 29 36	16.7
G64	00 40 32	+41 21 44	15.2	G124	00 42 01	+41 29 10	15.7
G70	00 40 49	+41 12 07	15.9	G130	00 42 03	+40 58 50	16.3
G72	00 40 53	+41 18 53	14.9	G134	00 42 07	+40 59 21	16.0
G78	00 41 01	+41 13 45	14.2	G144	00 42 16	+41 01 14	15.5
G101	00 41 38	+41 20 50	16.0	G148	00 42 19	+41 14 01	15.1
G114	00 41 47	+41 25 19	16.2	G157	00 42 26	+41 05 36	15.8

M 31 Chart D – Selected Globular Clusters



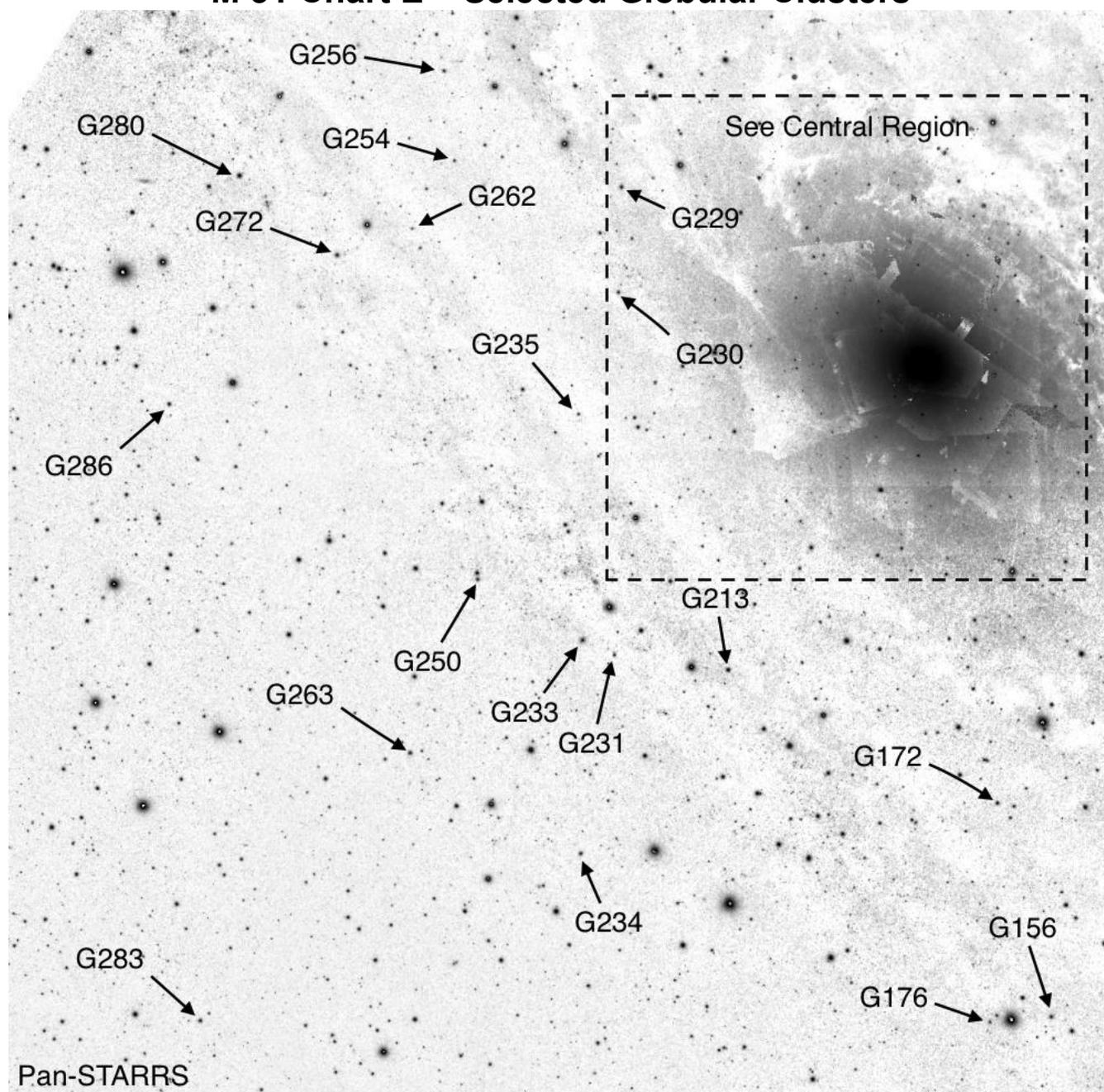
Object	RA	Dec	Mag
G73	00 40 55.3	+41 41 25	14.9v
G108	00 41 43.1	+41 34 20	15.7v
G127	00 42 03.0	+41 52 02	16.0v
G150	00 42 21.1	+41 32 14	15.3v
G192	00 42 52.0	+41 31 08	15.9v

M 31 Chart Center Region – Selected Globular Clusters



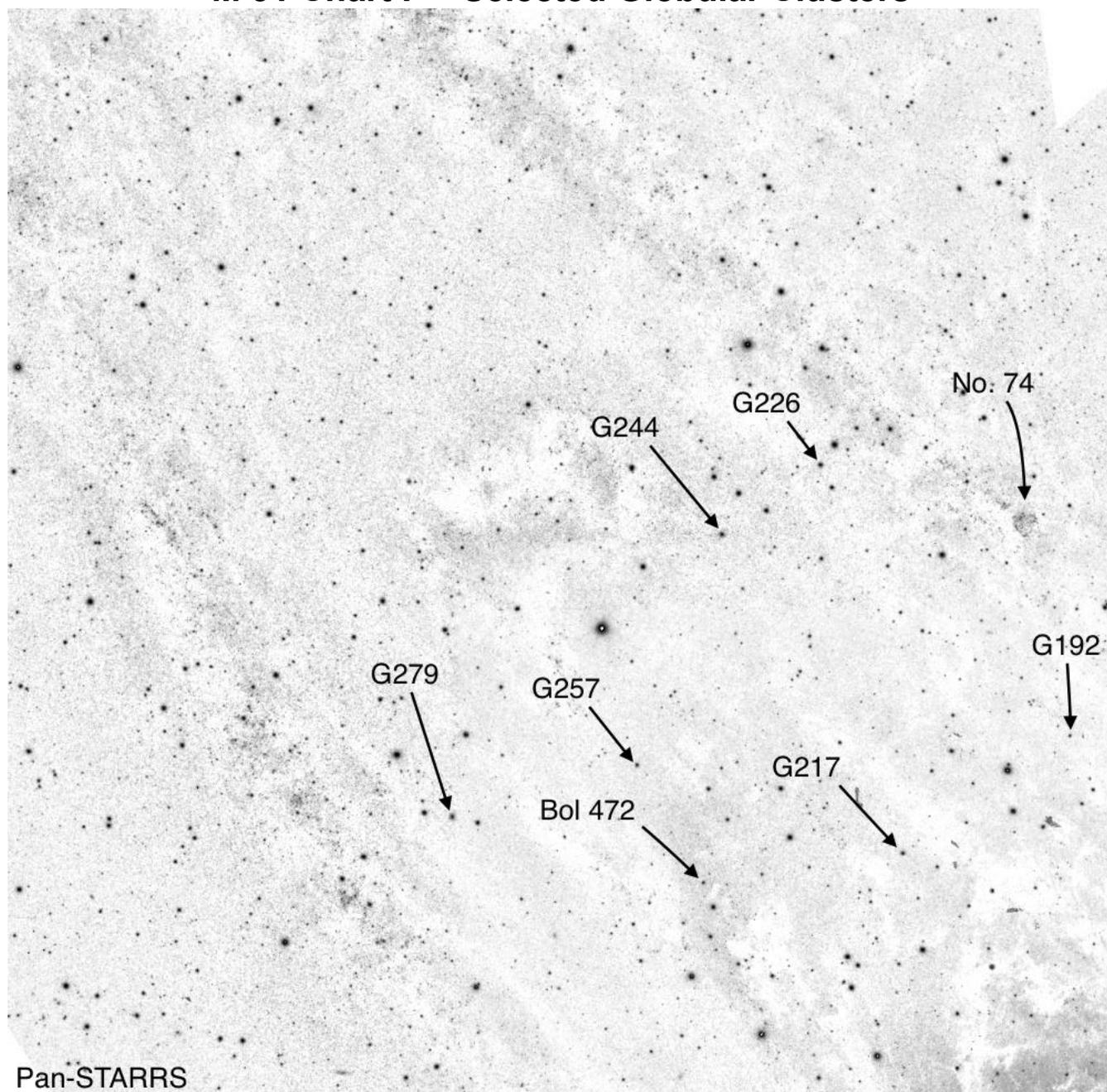
Object	RA	Dec	Mag	Object	RA	Dec	Mag
G165	00 42 30	+41 17 57	15.2	Bol 144	00 43 00	+41 16 06	16.7
G168	00 42 31	+41 12 18	16.0	G199	00 43 03	+41 21 22	15.6
G169	00 42 31	+41 19 39	15.9	G200	00 43 04	+41 18 05	15.8
G174	00 42 33	+41 17 42	16.4	G205	00 43 10	+41 21 32	14.8
G177	00 42 34	+41 14 02	16.0	G222	00 43 26	+41 15 37	15.3
G185	00 42 44	+41 14 42	14.5	G229	00 43 31	+41 21 16	15.0
G189	00 42 51	+41 17 08	15.3	G230	00 43 31	+41 18 14	15.3
G198	00 43 00	+41 19 19	16.1				

M 31 Chart E – Selected Globular Clusters



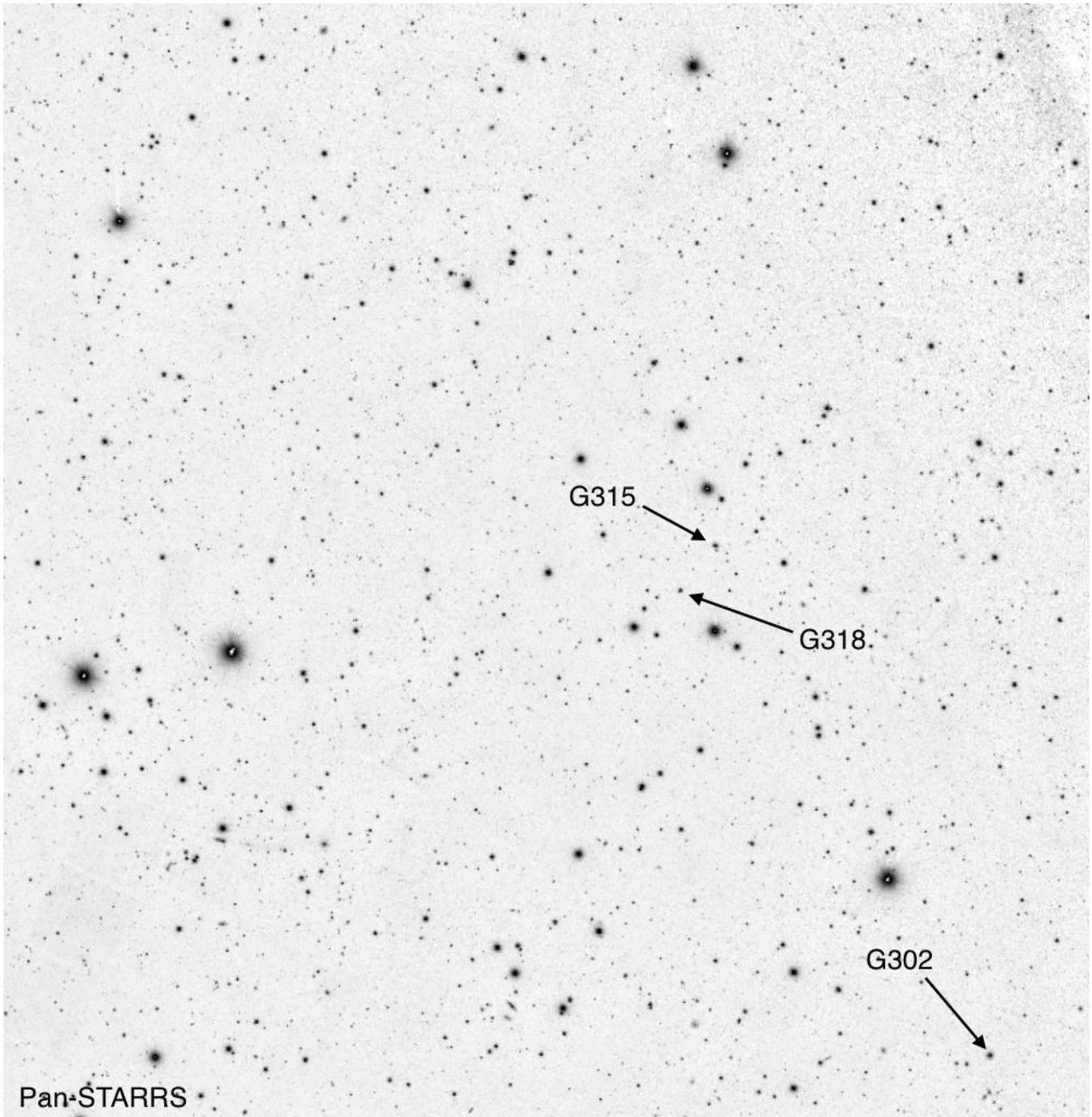
Object	RA	Dec	Mag	Object	RA	Dec	Mag
G156	00 42 25	+40 57 17	15.5	G250	00 43 53	+41 09 58	16.0
G172	00 42 33	+41 03 28	15.2	G254	00 43 56	+41 22 03	15.7
G176	00 42 34	+40 57 09	16.9	G262	00 44 03	+41 20 05	16.3
G213	00 43 14	+41 07 21	14.7	G263	00 44 03	+41 04 57	15.4
G231	00 43 32	+41 07 46	16.0	G272	00 44 14	+41 19 20	14.7
G233	00 43 37	+41 08 12	15.3	G280	00 44 30	+41 21 37	14.2
G234	00 43 37	+41 02 02	15.9	G283	00 44 35	+40 57 13	16.1
G235	00 43 37	+41 14 43	15.5	G286	00 44 40	+41 15 01	15.6

M 31 Chart F – Selected Globular Clusters



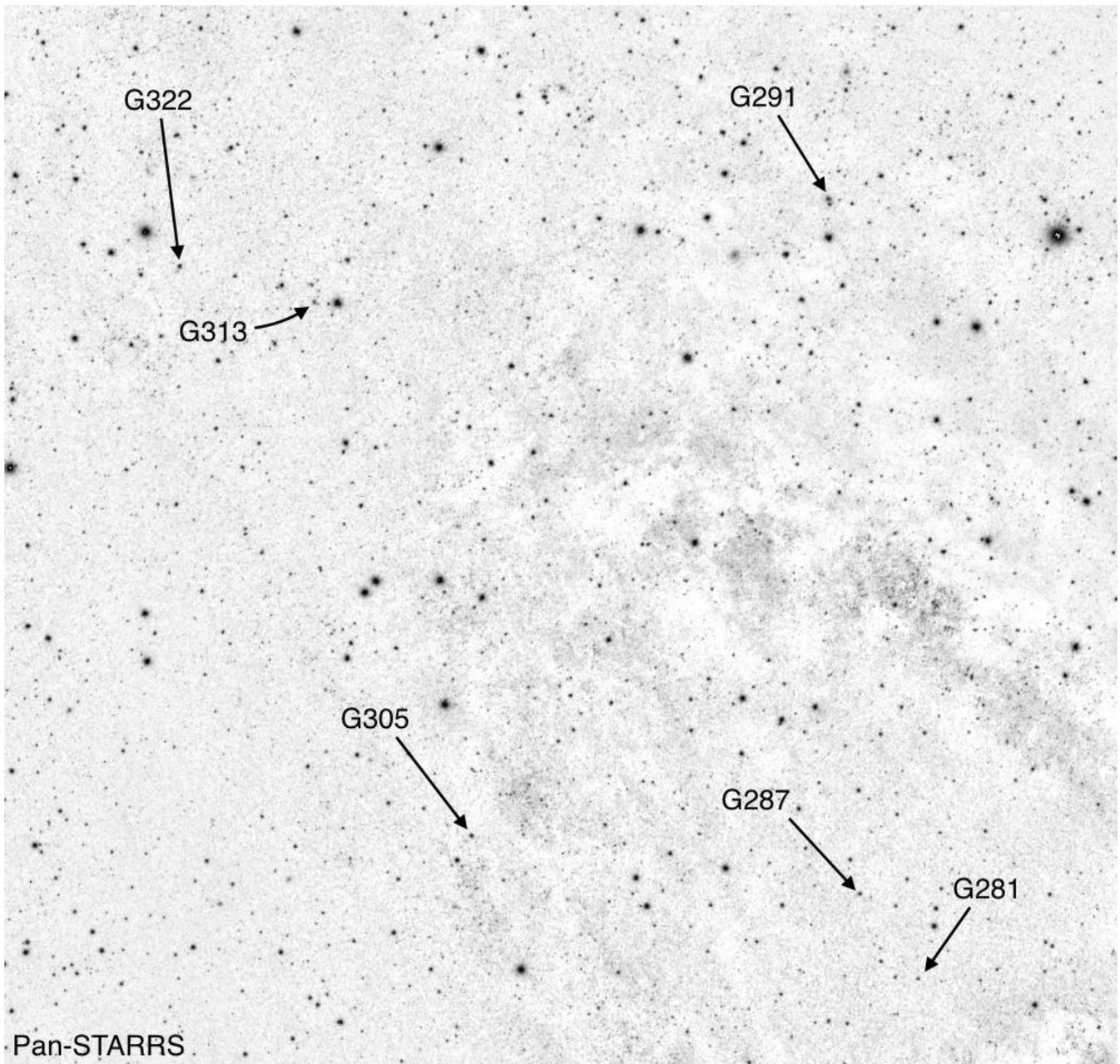
Object	RA	Dec	Mag
G192	00 42 52	+41 31 08	16.0
G217	00 43 18	+41 27 46	15.0
G226	00 43 30	+41 38 57	15.4
G244	00 43 46	+41 36 58	15.2
Bol 472	00 43 48	+41 26 53	15.2
G257	00 43 59	+41 30 18	14.9
G279	00 44 27	+41 28 51	15.4
No 74 (H II region)	00 42 59	+41 37 17	16.0

M 31 Chart G – Selected Globular Clusters



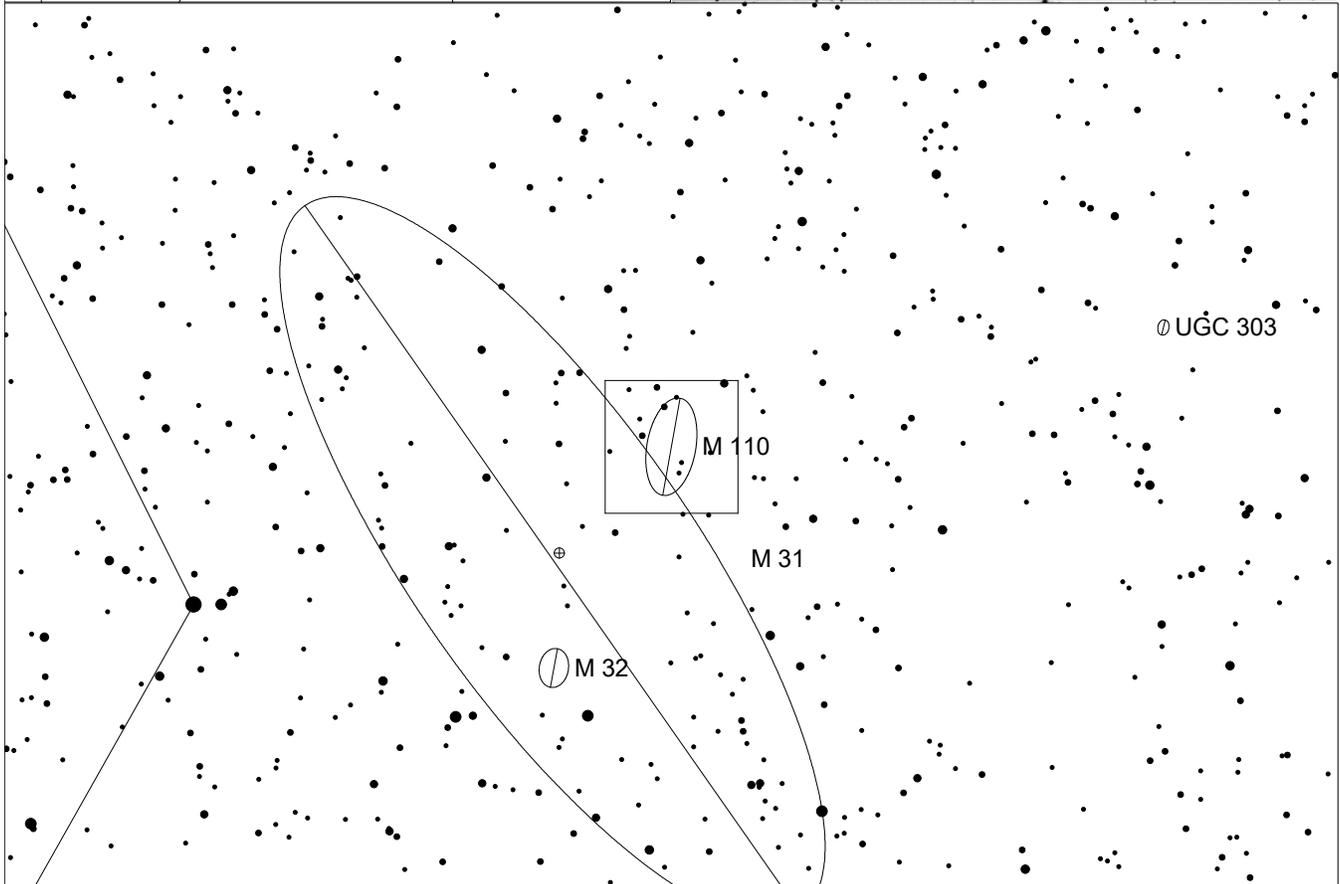
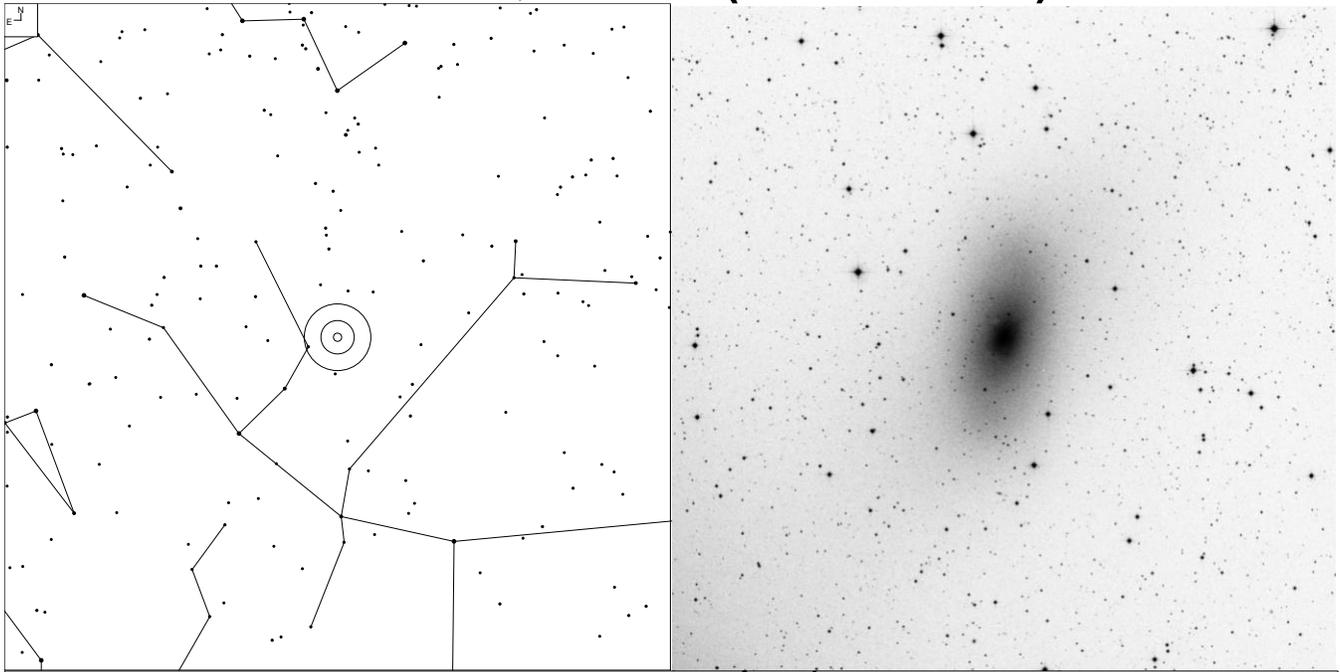
Object	RA	Dec	Mag
G302	00 45 25	+41 06 24	15.2
G315	00 46 07	+41 20 59	15.8
G318	00 46 12	+41 19 42	15.3

M 31 Chart H – Selected Globular Clusters



Object	RA	Dec	Mag
G281	00 44 33	+41 41 28	16.7
G287	00 44 42	+41 43 54	15.6
G291	00 44 47	+42 03 50	16.2
G305	00 45 42	+41 45 35	15.5
G313	00 46 06	+42 00 53	16.8
G322	00 46 27	+42 01 53	15.5

NGC 205, M 110 (Andromeda)

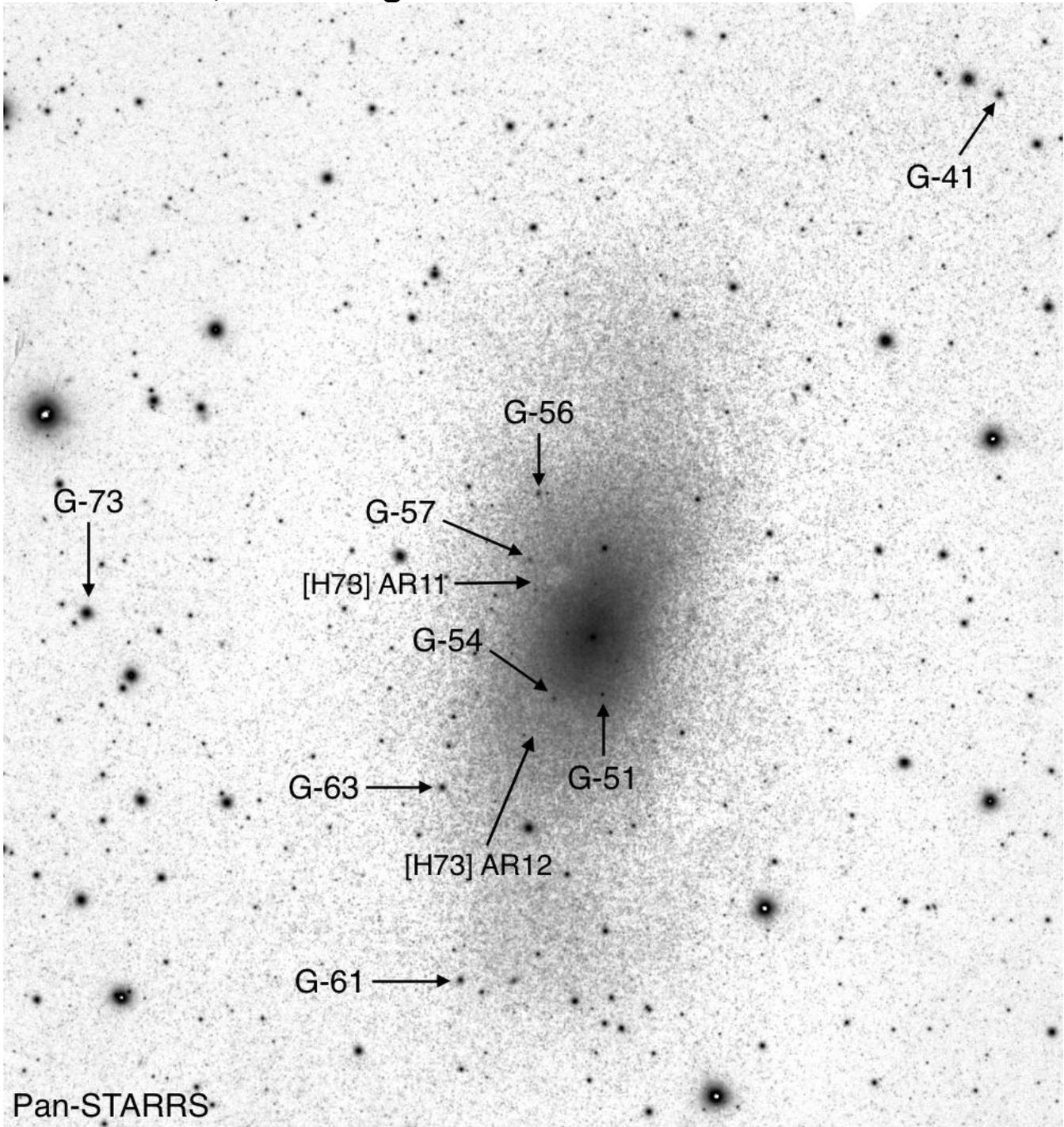


E N	● ● ● ● ● ● ● ●	Galaxy	Globular
	5 6 7 8 9 10 11 12	⊖	⊕

RA	Dec	Type	Mag	Size	Distance	Urano
00 40 23	+41 41 22	E5 pec	8.1v	21.9 x 10.9	2.9 mly	30L

SEDS Website: <http://spider.seds.org/spider/LG/m110.html>

NGC 205, M 110's globular clusters and dark features

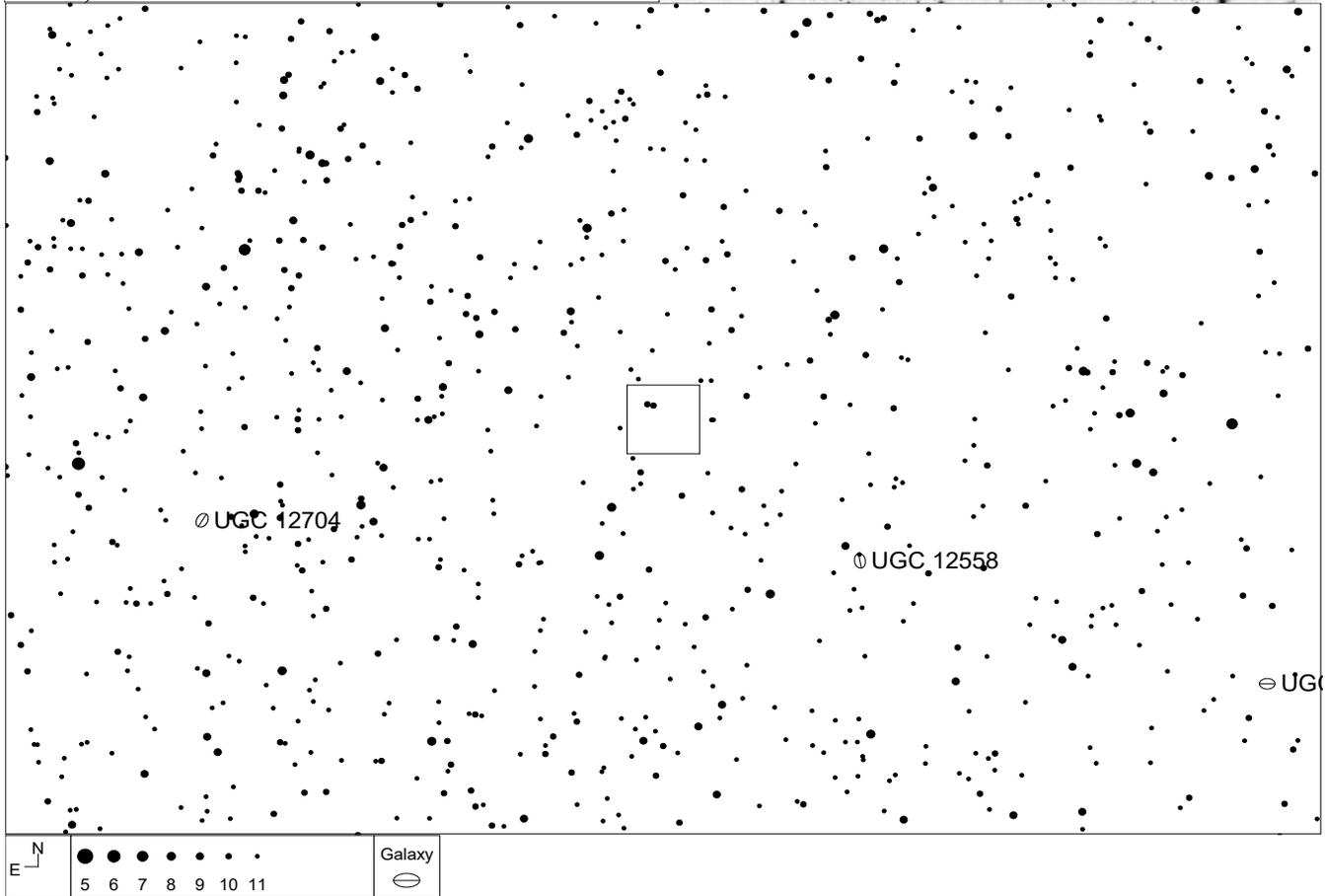
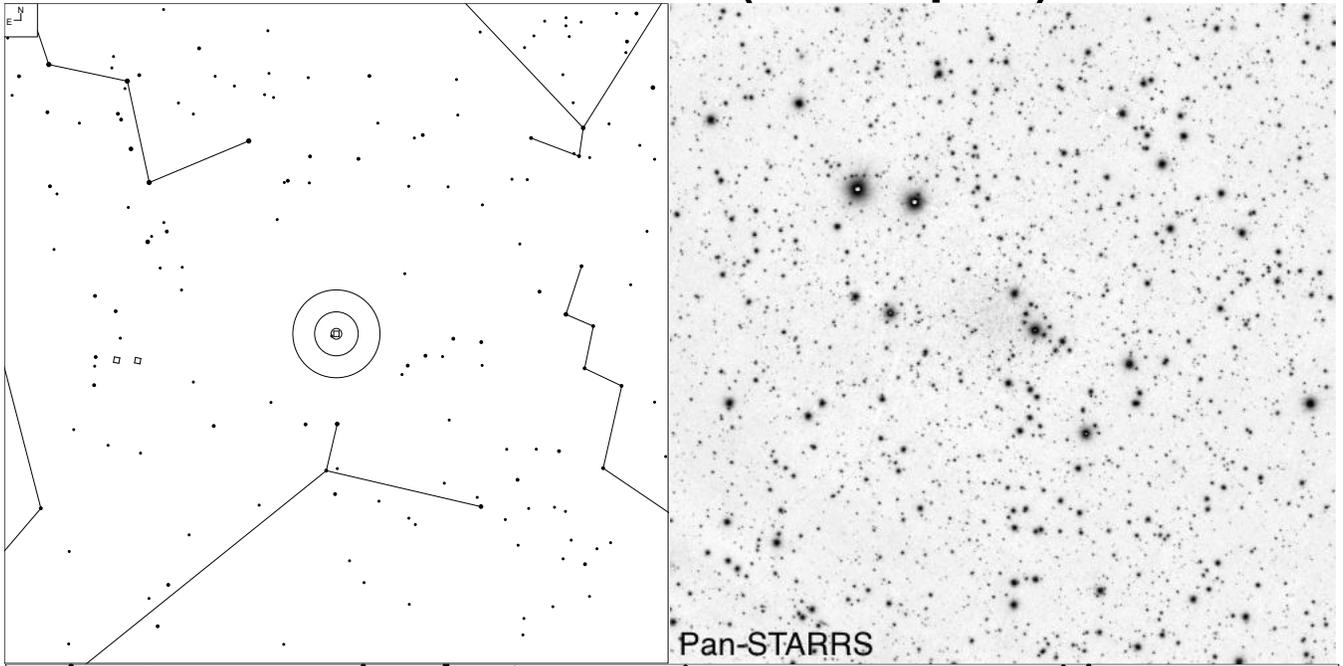


Object	RA	Dec	Mag ⁹	Object	RA	Dec	Mag
G-41	00 39 55.2	+41 47 46	16.91	G-61	00 40 30.7	+41 36 56	16.97
G-51	00 40 21.4	+41 40 25	16.73	G-63	00 40 31.9	+41 39 17	16.64
G-54	00 40 24.6	+41 40 22	18.52	G-73	00 40 55.3	+41 41 25	14.96
G-56	00 40 25.6	+41 42 53	17.24	[H73] ¹⁰ AR11	04 40 24.1	+41 41 50	-
G-57	00 40 26.1	+41 42 04	17.86	[H73] AR12	00 40 25.9	+41 40 19	-

⁹ A. S. Sharov and V. M. Liutyi, "Photoelectric catalogue of globular clusters in the Andromeda Nebula M31 and its companions NGC 147, NGC 185, and NGC 205," *Astrophysics and Space Science* Vol. 90, No. 2 (Feb 1983): 371-384

¹⁰ See Paul Hodge, "The Structure and Content of NGC 205," *Astrophysical Journal* Vol 182 (June 1975): 690 for dark absorption regions.

Andromeda VII¹¹ (Cassiopeia)

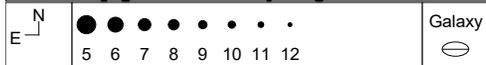
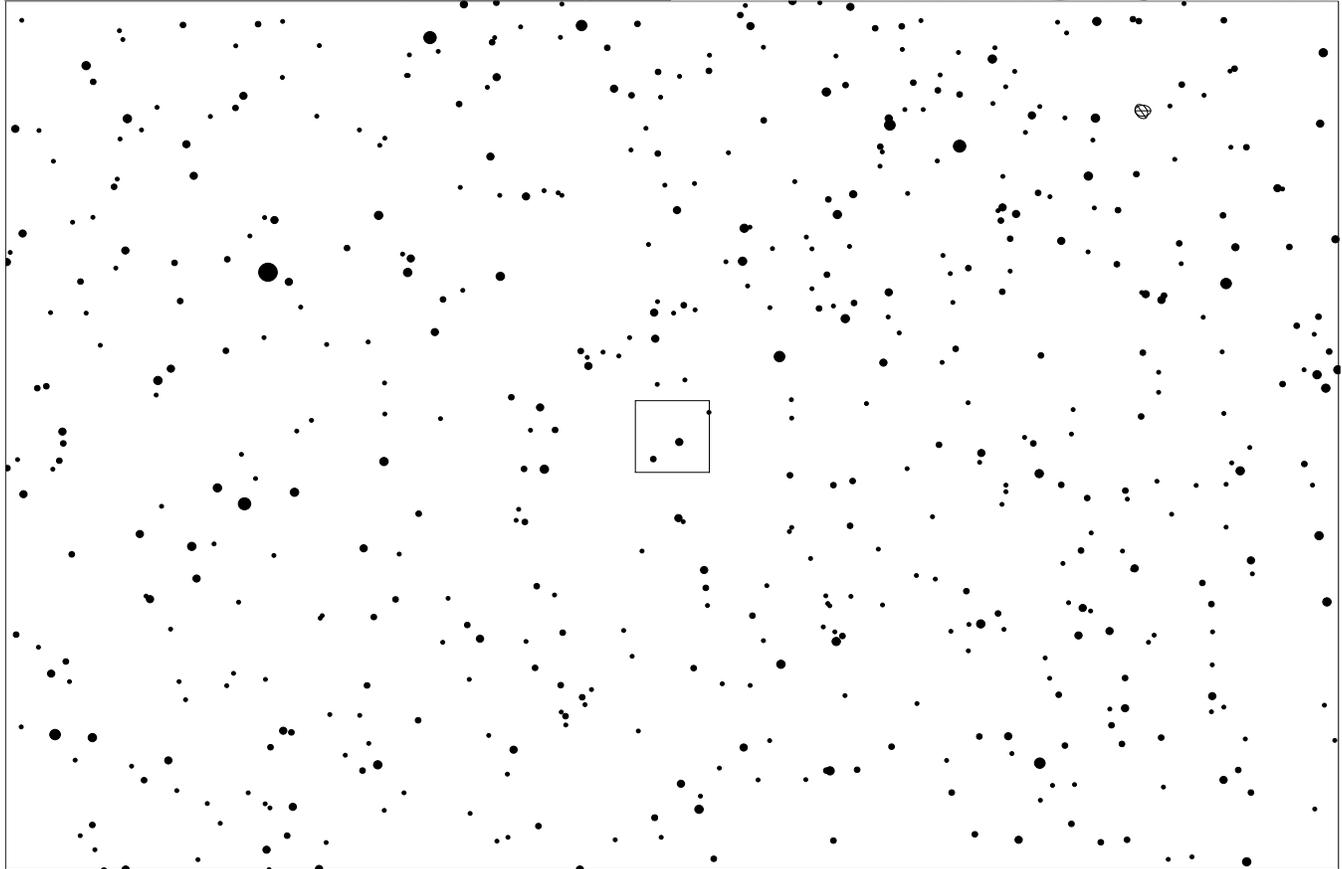
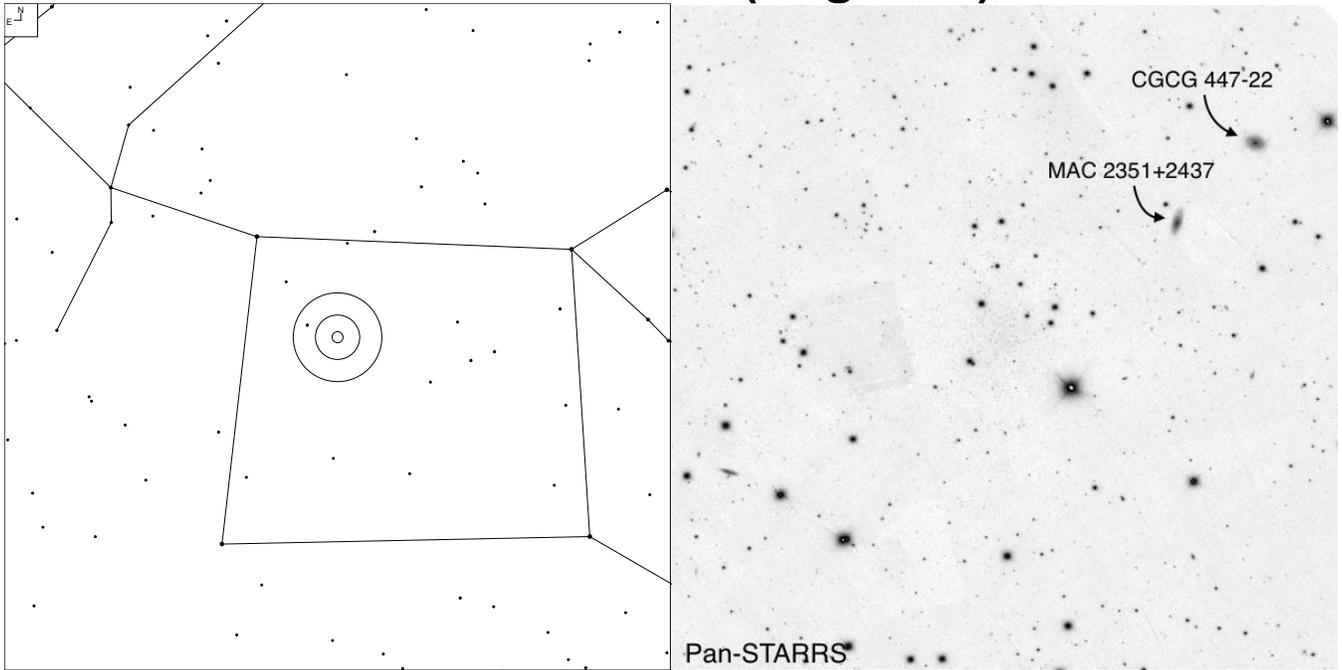


RA	Dec	Type	Mag	Size	Distance	Urano
23 26 32	+50 40 33	dSph	12.9v	2.5 x 2.0'	2.5 mly	30R

SEDS Website: <http://spider.seds.org/spider/LG/and7.html>

¹¹ For a list of possible satellite galaxies of M31, see McConnachie, "The Observed Properties of Dwarf Galaxies in and Around the Local Group", Table 1. Also see Amandine Doliva-Dolinsky, et al., "The Pandas View of the Andromeda Satellite System. IV Global Properties," *Astrophysical Journal* Vol. 952, No. 1 (2023): 72-83

Andromeda VI (Pegasus)

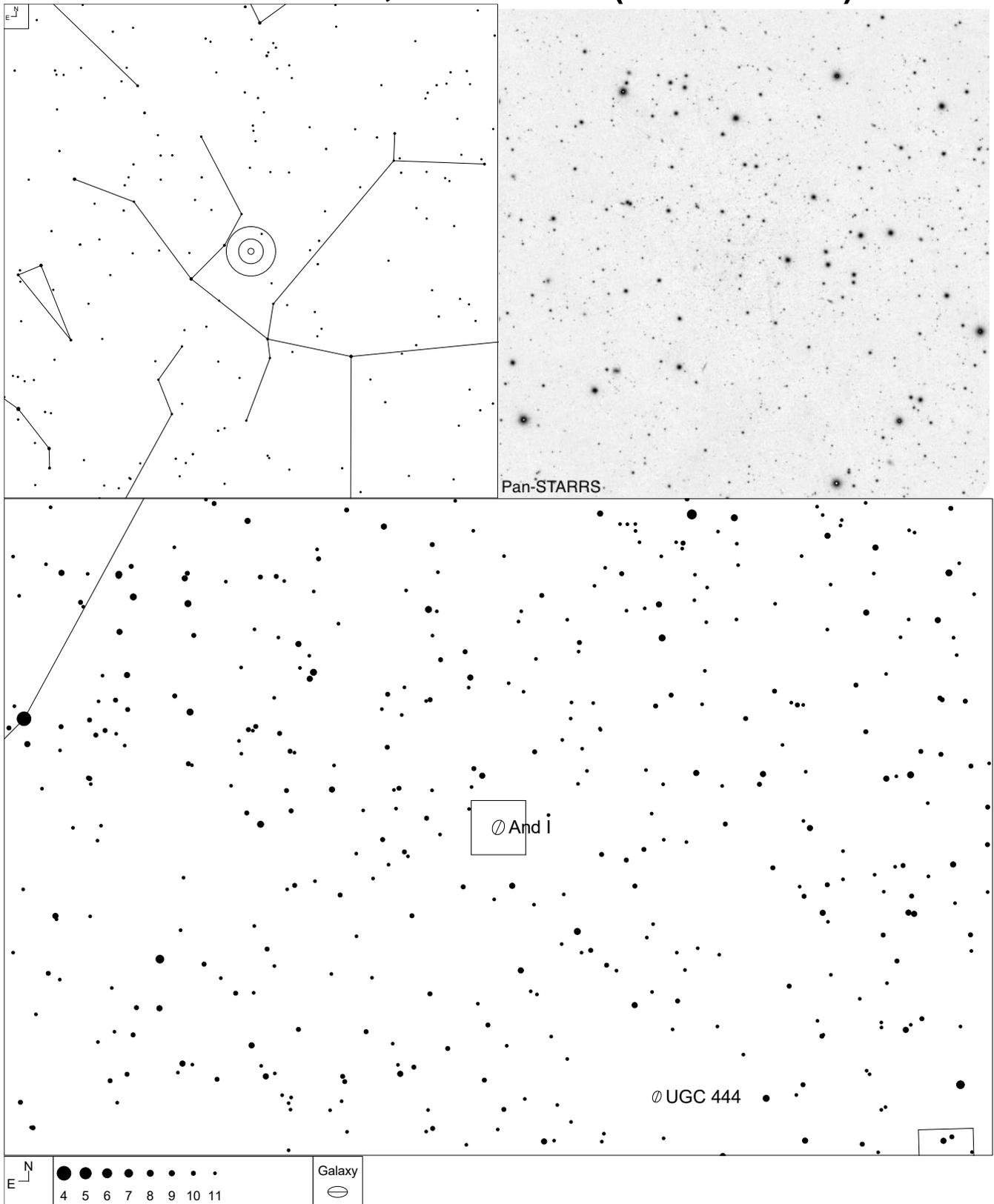


RA	Dec	Type	Mag	Size	Distance	Urano
23 51 46	+24 35 06	dE?	13.2v	3.5 x 3.5'	2.7 mly	63R

SEDS Website: <http://spider.seds.org/spider/LG/and6.html>

For a recent image taken with a 3.5-meter WIYN telescope at Kitt Peak Observatory released in June 2020, see <https://noirlab.edu/public/images/noao-02752/>

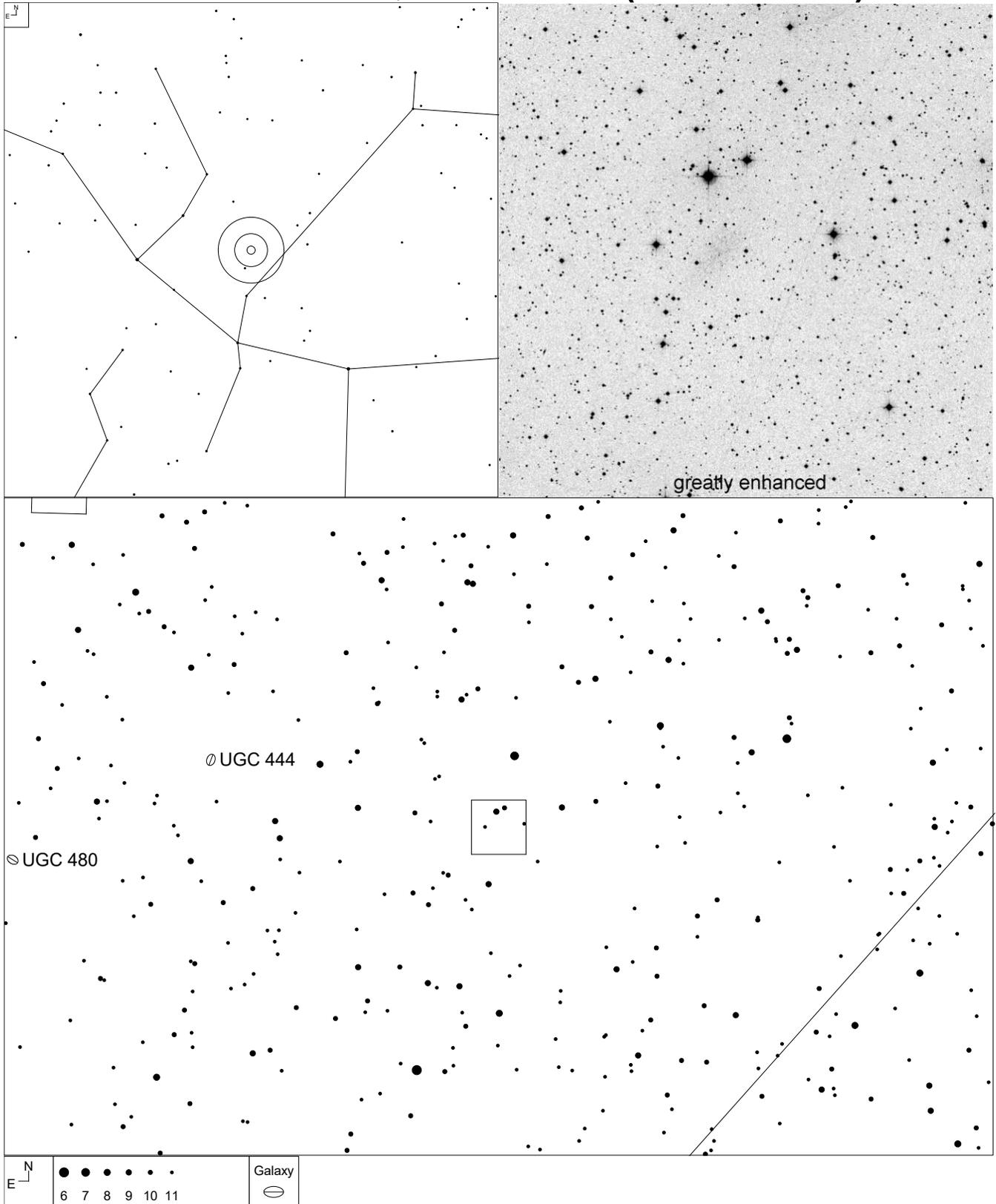
Andromeda I, PGC 2666 (Andromeda)



RA	Dec	Type	Mag	Size	Distance	Urano
00 45 42	+38 02 09	dE3 pec	12.7v	4.0 x 3.0'	2.9 mly	62R

SEDS Website: <http://spider.seds.org/spider/LG/and1.html>

Andromeda III, PGC 2121 (Andromeda)

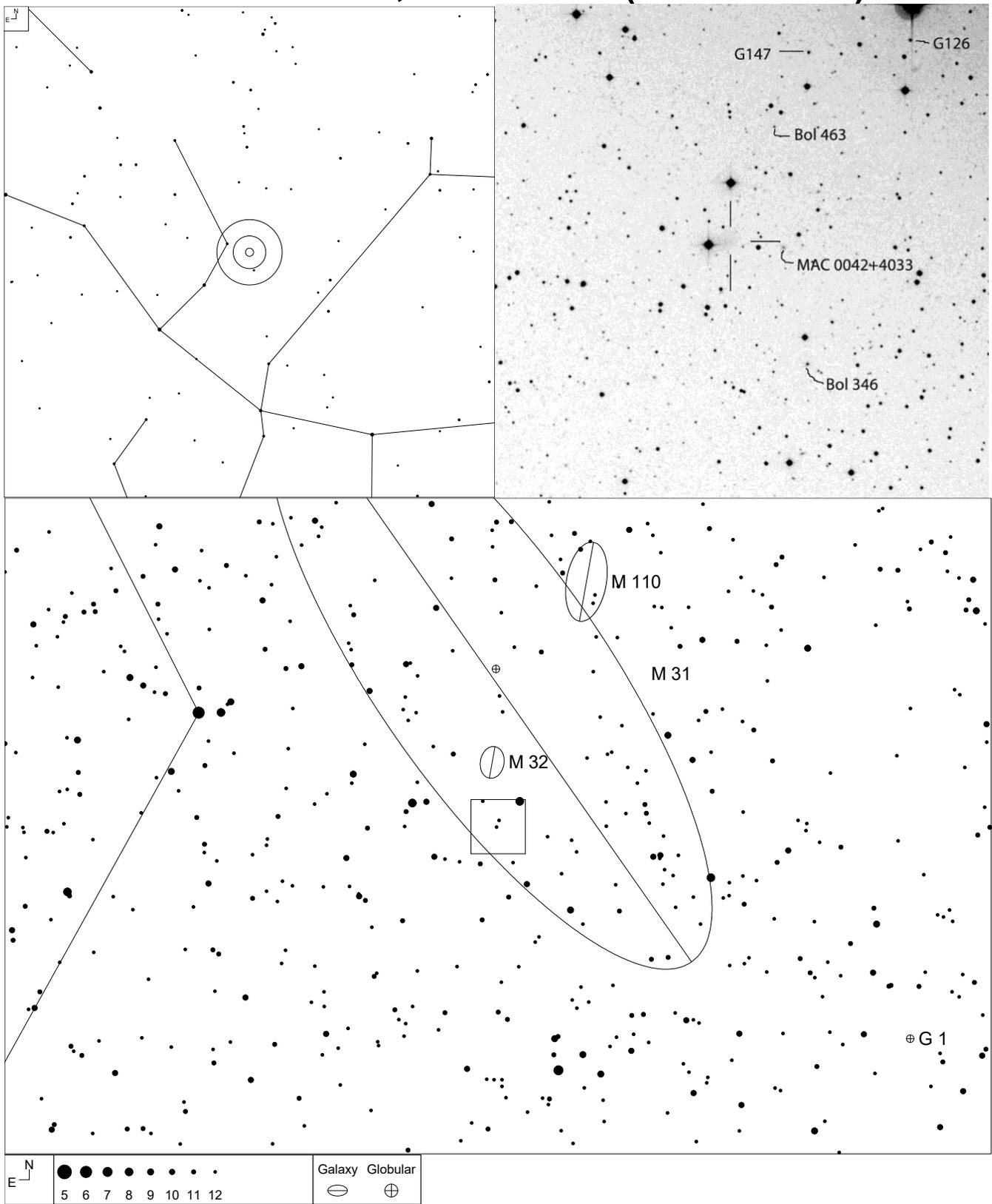


RA	Dec	Type	Mag	Size	Distance	Urano
00 35 31	+36 30 31	dE2	14.4b	2.0 x 2.0'	2.9 mly	45L

SEDS Website: <http://spider.seds.org/spider/LG/and3.html>

“Hubble Observed an Oddly Organized Satellite Galaxy” online article, [link](#)

Andromeda IV, PGC 2544 (Andromeda)

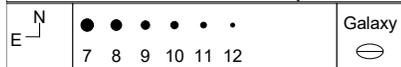
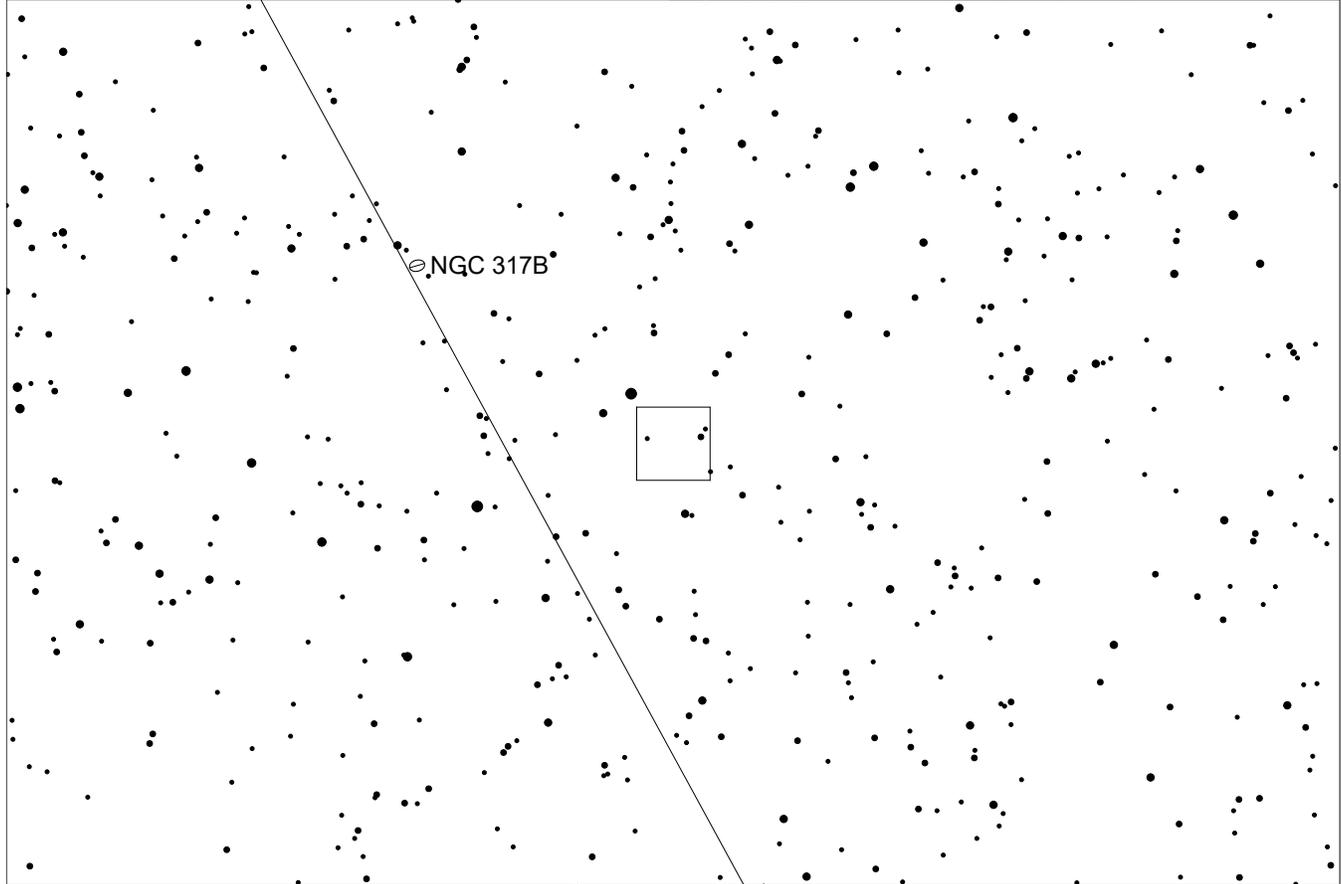
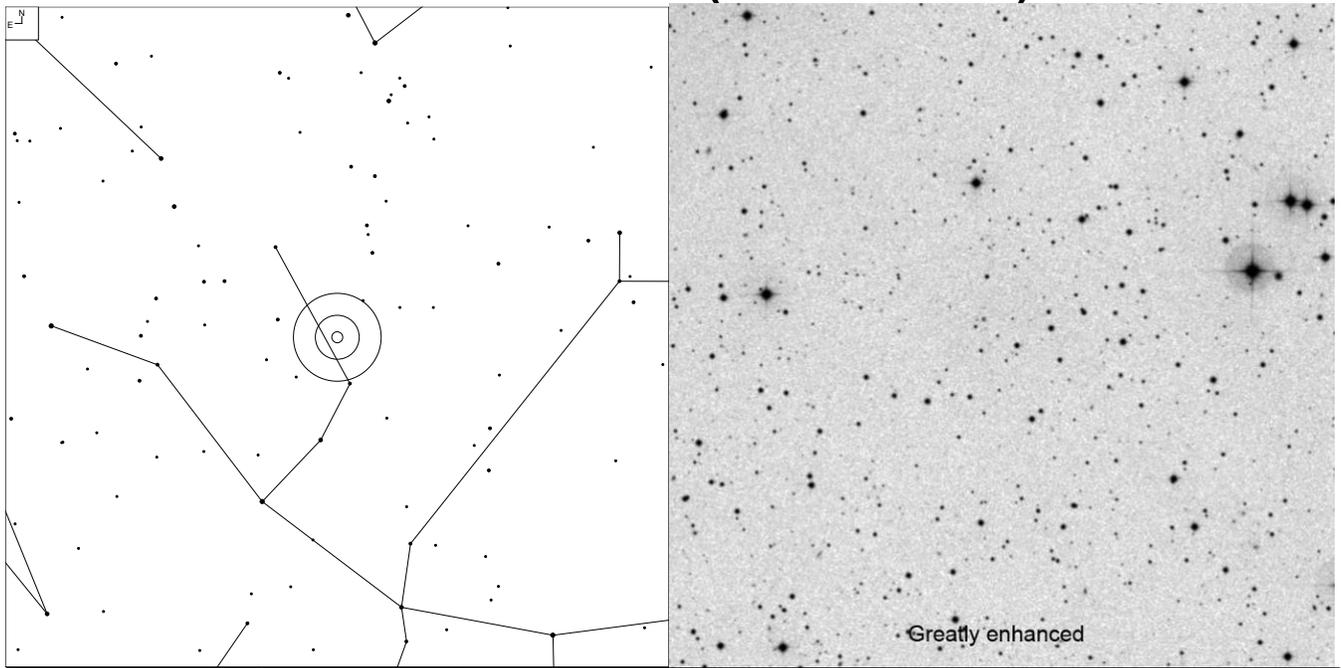


RA	Dec	Type	Mag	Size	Distance	Urano
00 42 33	+40 34 24	?	16.6b	1.3 x 0.9'	2.8 mly	30L

SEDS Website: <http://spider.seds.org/spider/LG/and4.html>

Annette M.N. Ferguson, et al, "On the Nature of Andromeda IV," *The Astronomical Journal* Vol 120 (Aug 2000): 821-832

Andromeda IX (Andromeda)

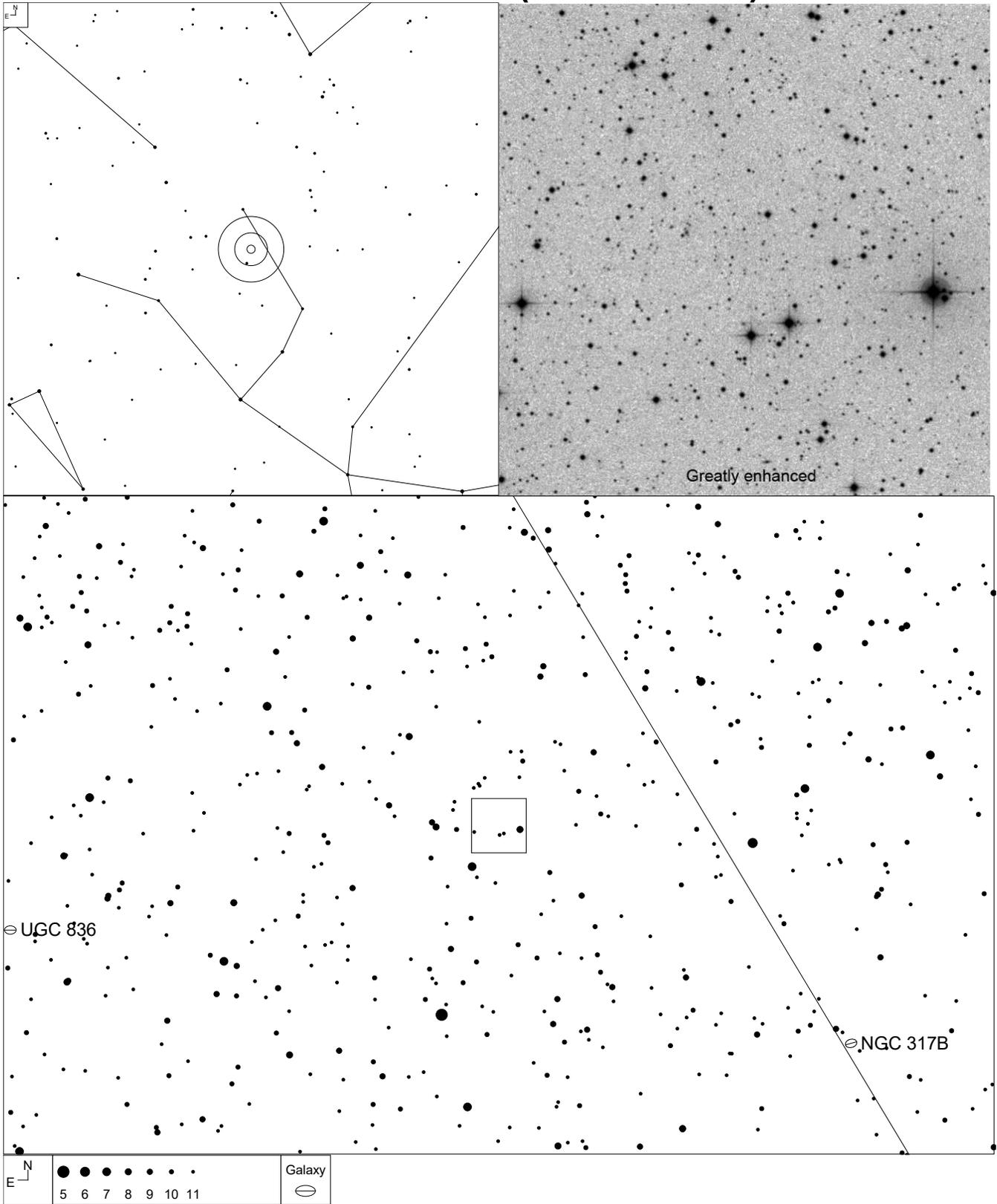


RA	Dec	Type	Mag	Size	Distance	Urano
00 52 53	+43 11 45	dE	16.3v	5'	2.5 mly	44R

SEDS Website: <http://spider.seds.org/spider/LG/and9.html>

Daniel B. Zucker, et al, "Andromeda IX: A New Dwarf Spheroidal Satellite of M31," *The Astrophysical Journal* Vol 612 (2004)

Andromeda X (Andromeda)

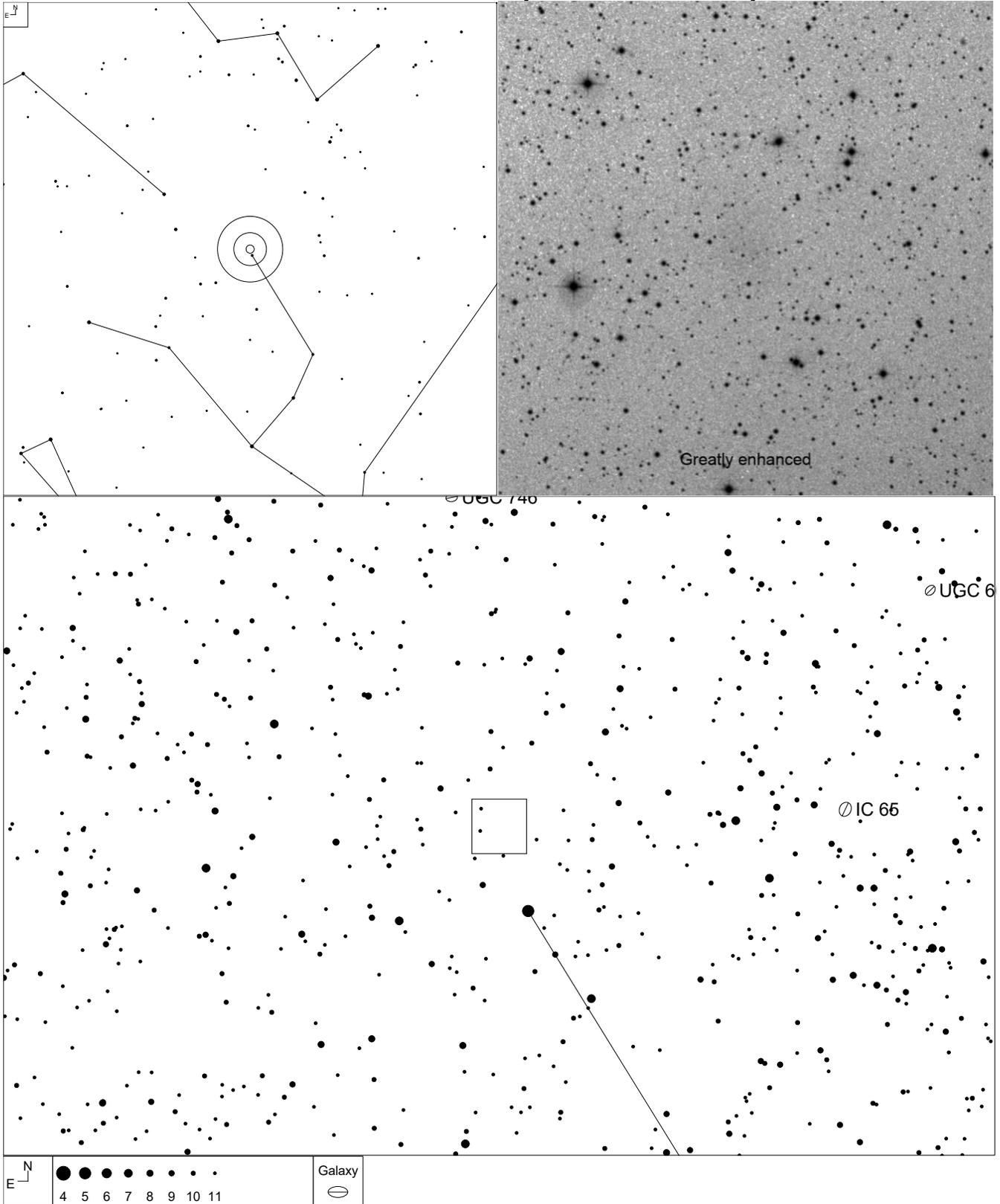


RA	Dec	Type	Mag	Size	Distance	Urano
01 06 34	+44 48 16	dSph	16.6v	7'	2.9 mly	44R

SEDS Website: <http://spider.seds.org/spider/LG/and10.html>

Daniel B. Zucker, et al, "Andromeda X, A New Dwarf Spheroidal Satellite of M31: Photometry," *The Astrophysical Journal* Vol 659 (April 2007): L21-L24.

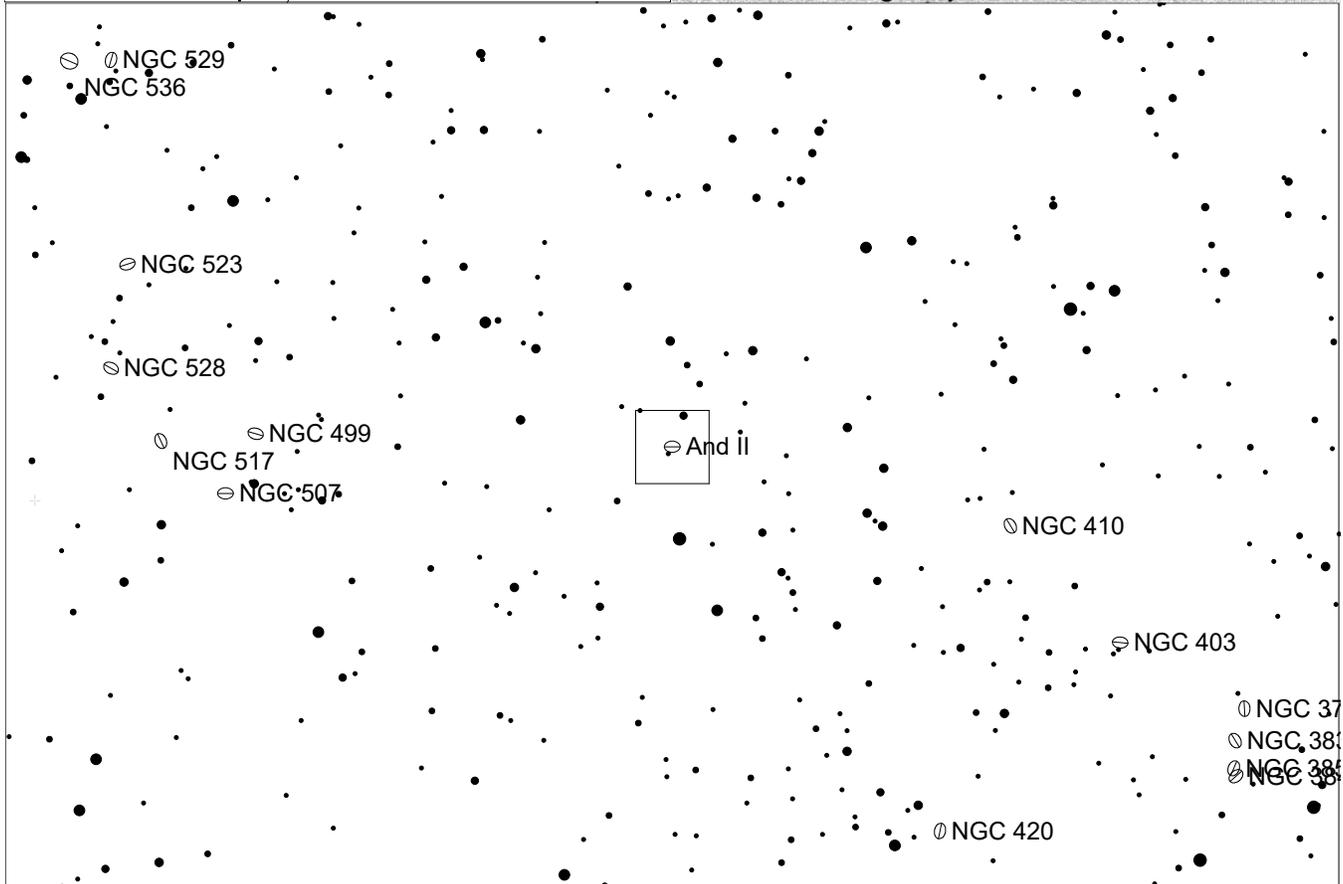
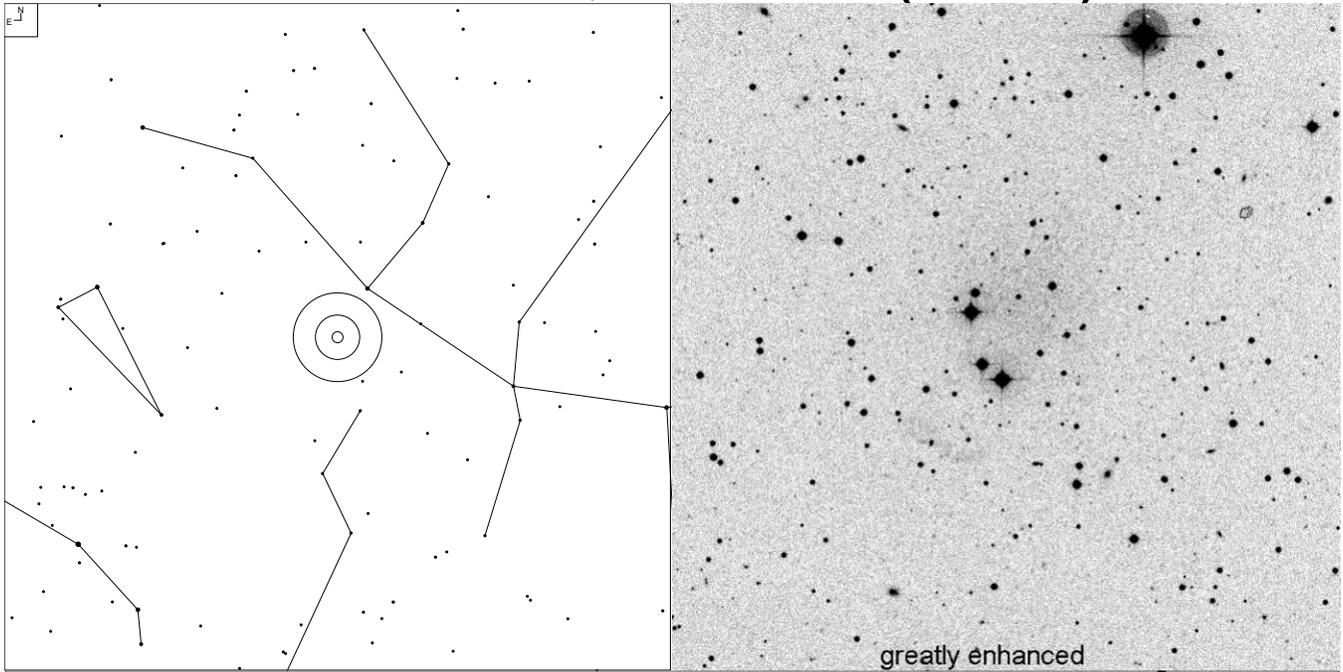
Andromeda V (Andromeda)



SEDS Website: <http://spider.seds.org/spider/LG/and5.html>

Taft E. Armandroff, et al, "A Survey for Low Surface Brightness Galaxies around M31. I. The Newly Discovered Dwarf Andromeda V," *The Astrophysical Journal* Vol 116 (Nov 1998): 2287-2296

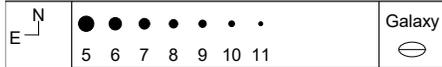
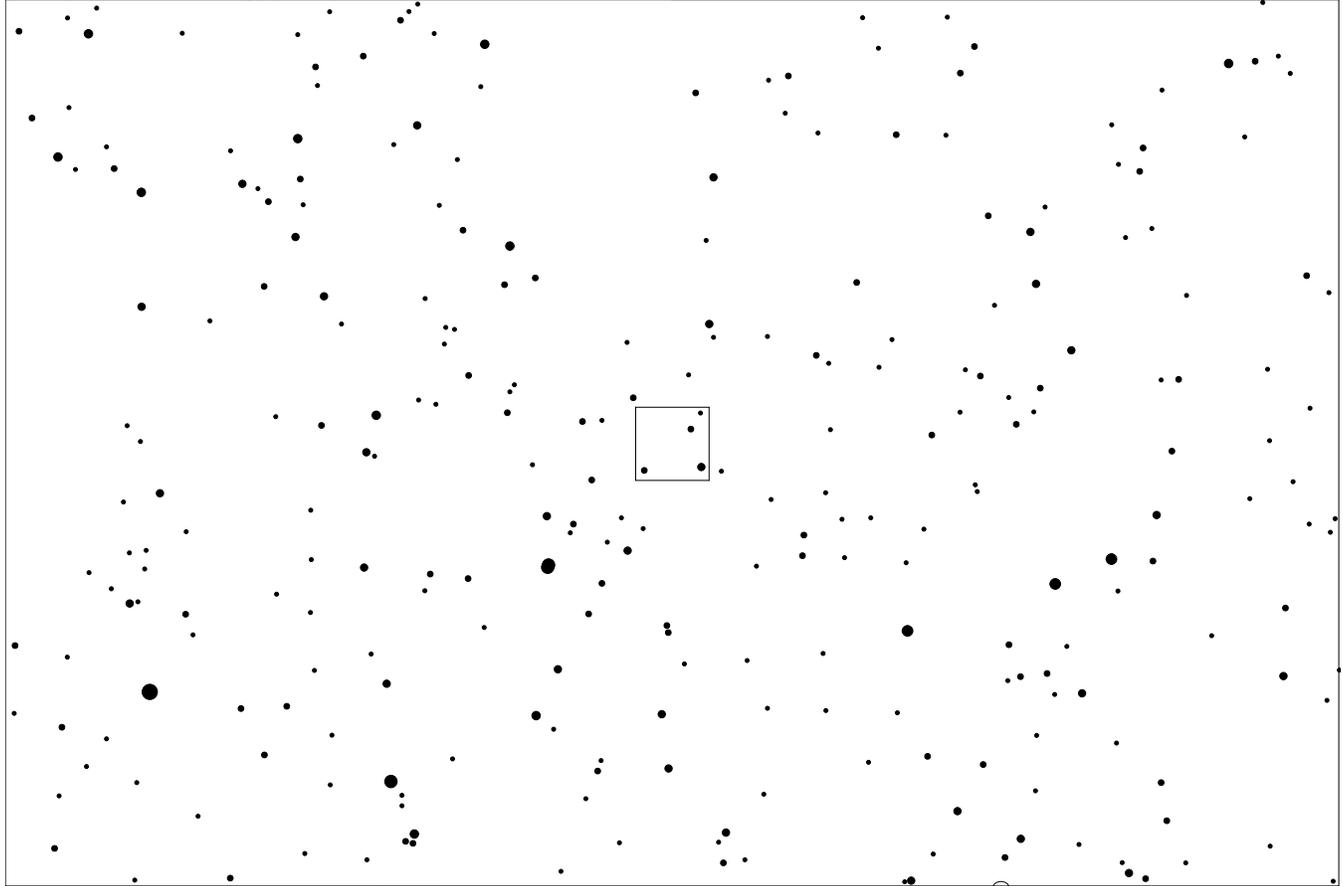
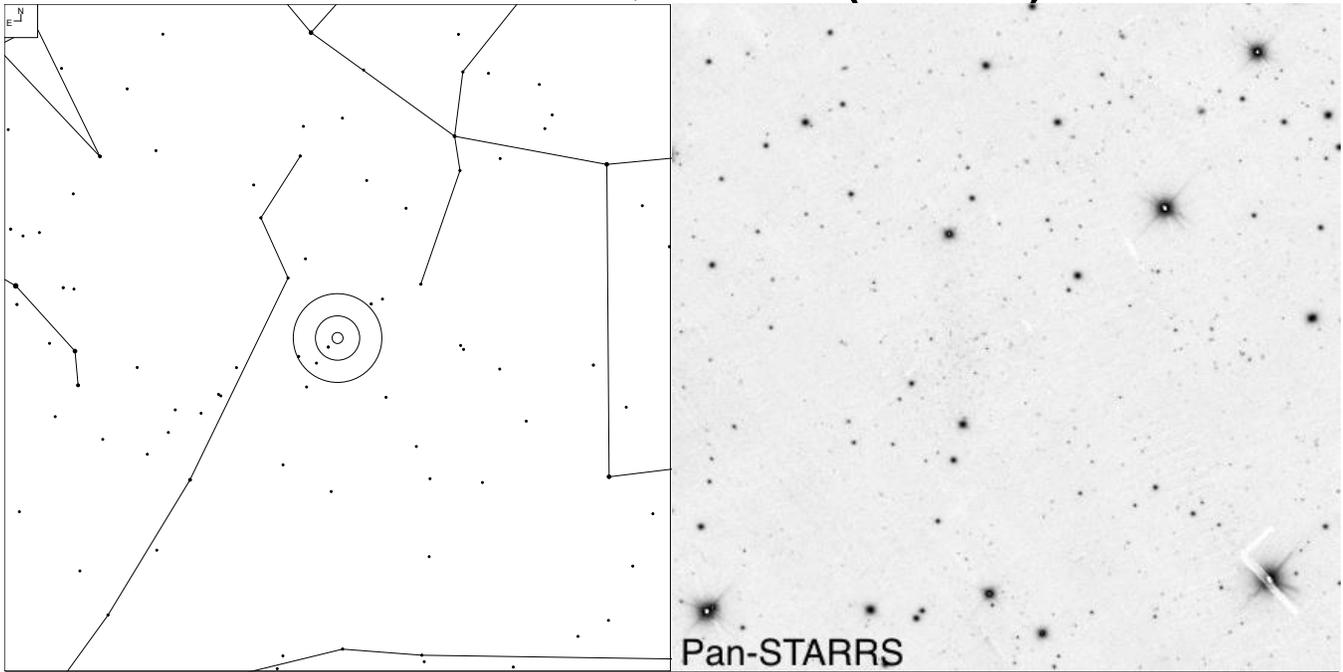
Andromeda II, PGC 4601 (Pisces)



RA	Dec	Type	Mag	Size	Distance	Urano
01 16 26	+33 25 37	dE0	11.7v	2.0 x 2.0'	2.9 mly	62R

SEDS Website: <http://spider.seds.org/spider/LG/and2.html>

Pisces Dwarf, LGS 3 (Pisces)

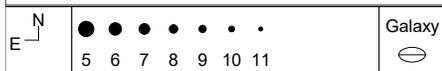
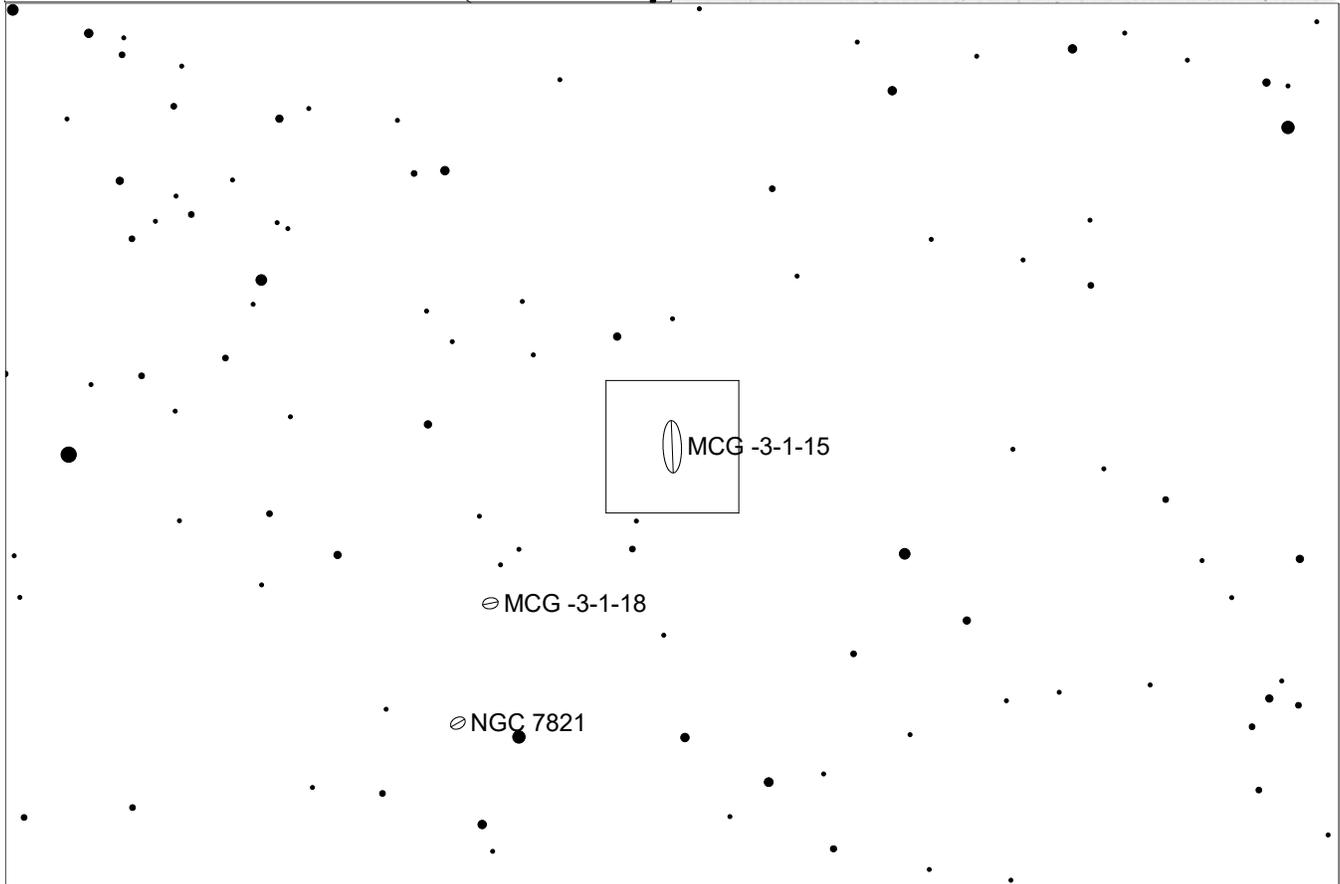
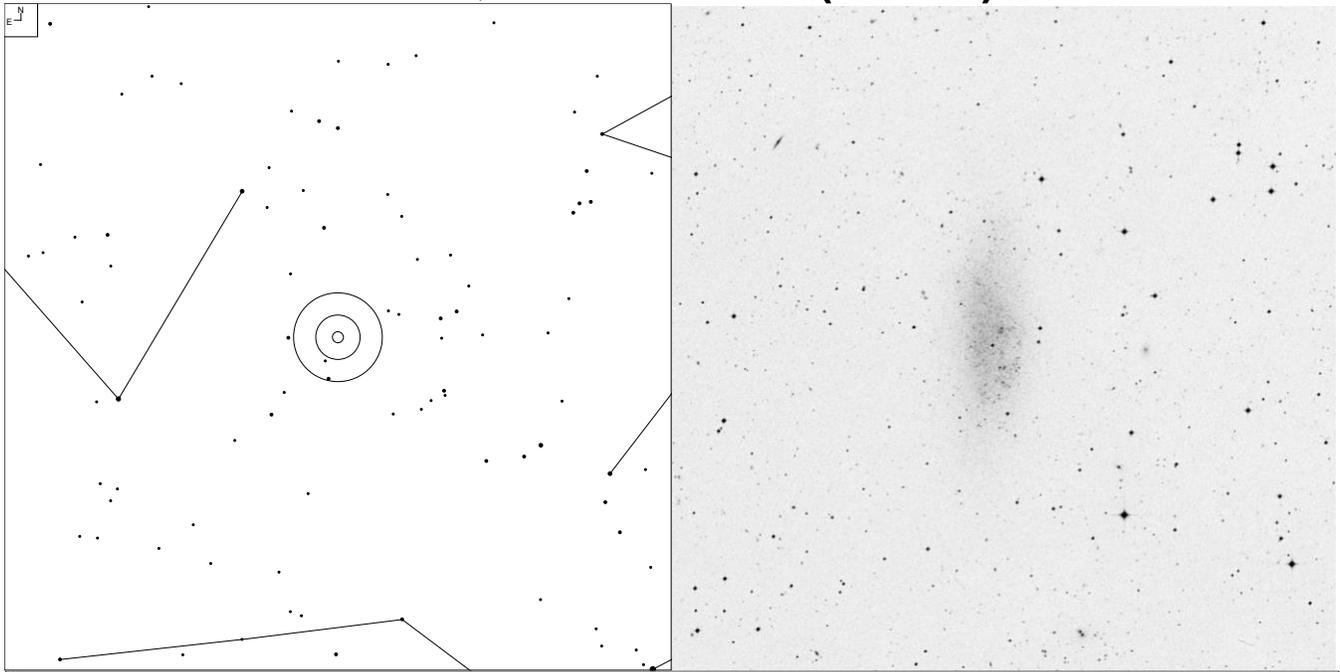


RA	Dec	Type	Mag	Size	Distance	Urano
01 03 53	+21 53 05	dlrr	14.3v	2.0 x 2.0'	3.0 mly	80R

SEDs Website: <http://spider.seds.org/spider/LG/lgs3.html>

T.X. Thuan and G.E. Martin, "A New Dwarf Galaxy in the Local Group," *Astrophysical Journal*, Vol 232 (1979): L11-L16

WLM, MCG-3-1-15 (Cetus)

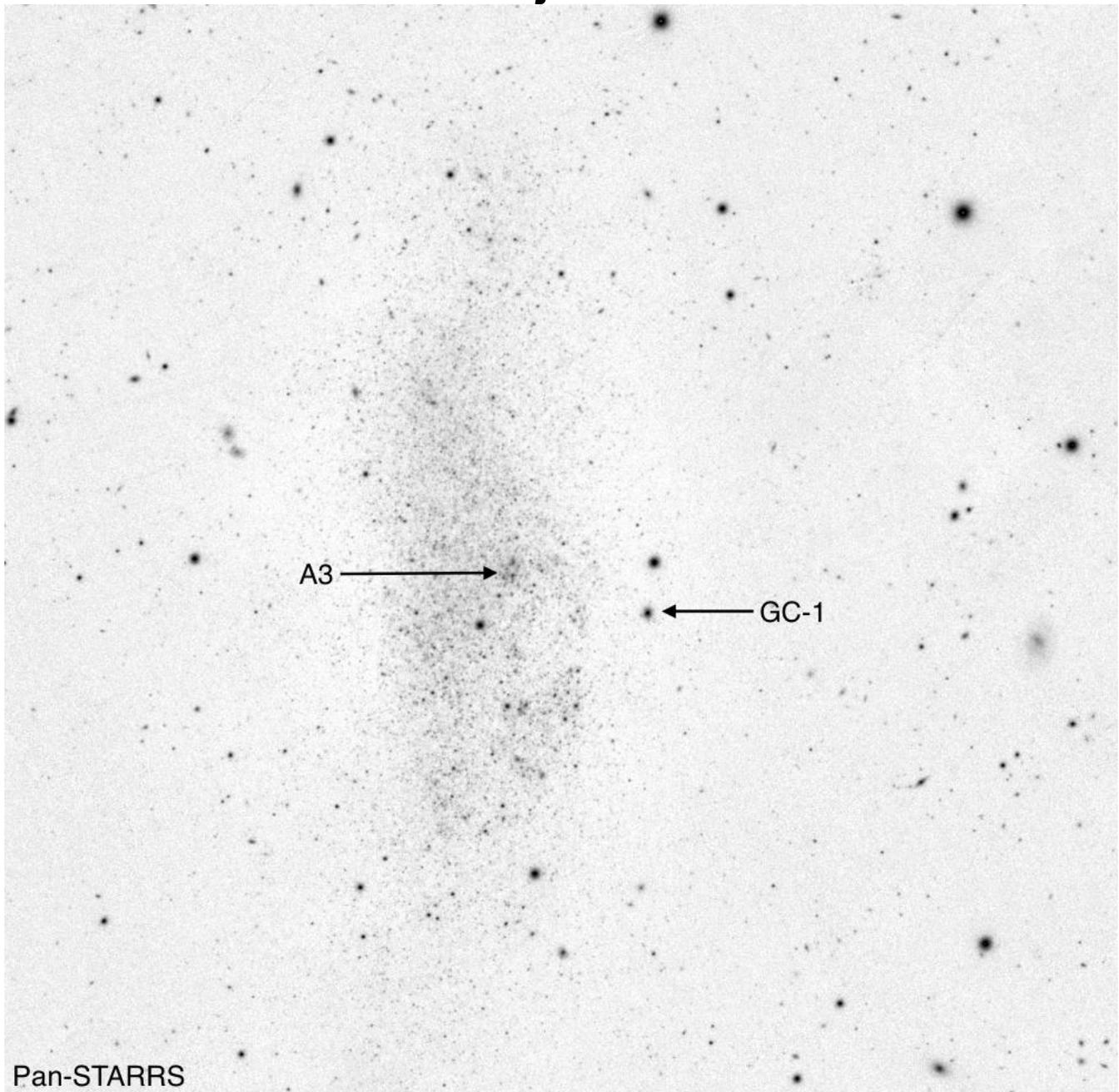


RA	Dec	Type	Mag	Size	Distance	Urano
00 01 56	-15 27 21	lb(s) IV-V	11.1v	11.6 x 4.0'	3.4 mly	123L

SEDs Website: <http://spider.seds.org/spider/LG/wlm.html>

Wolf-Lundmark-Melotte: Max Wolf discovered it in 1909, then Knut Lundmark and P.J. Melotte revealed its nature as an external galaxy in 1926.

Non-Stellar Objects within WLM

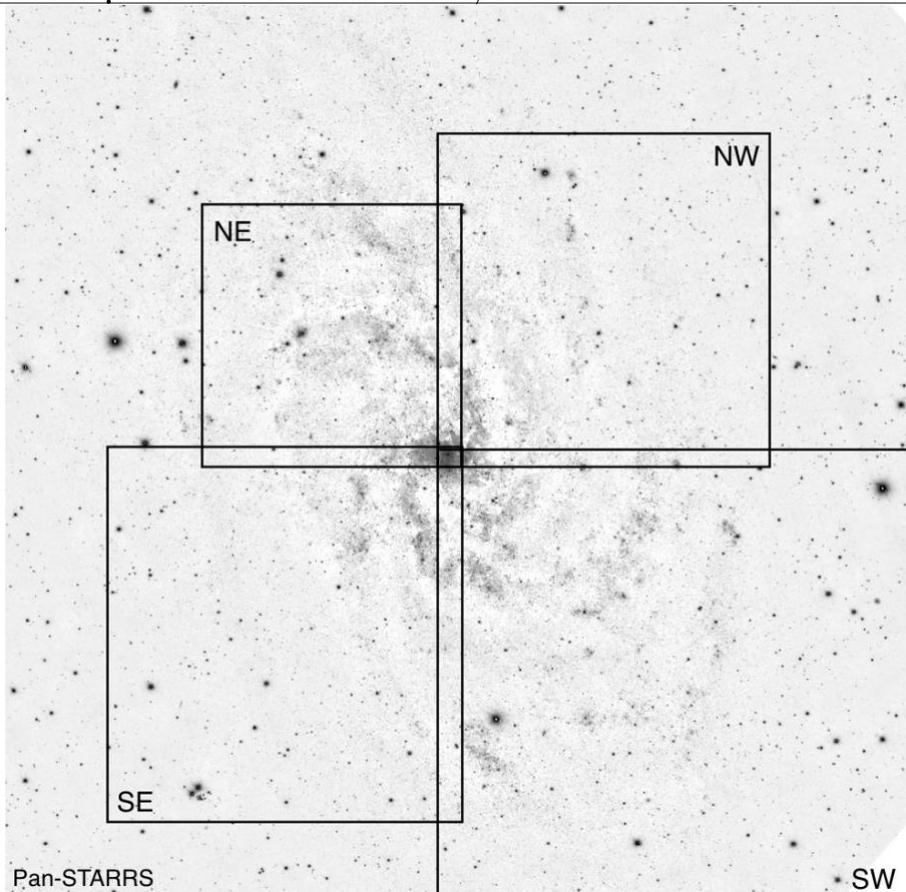
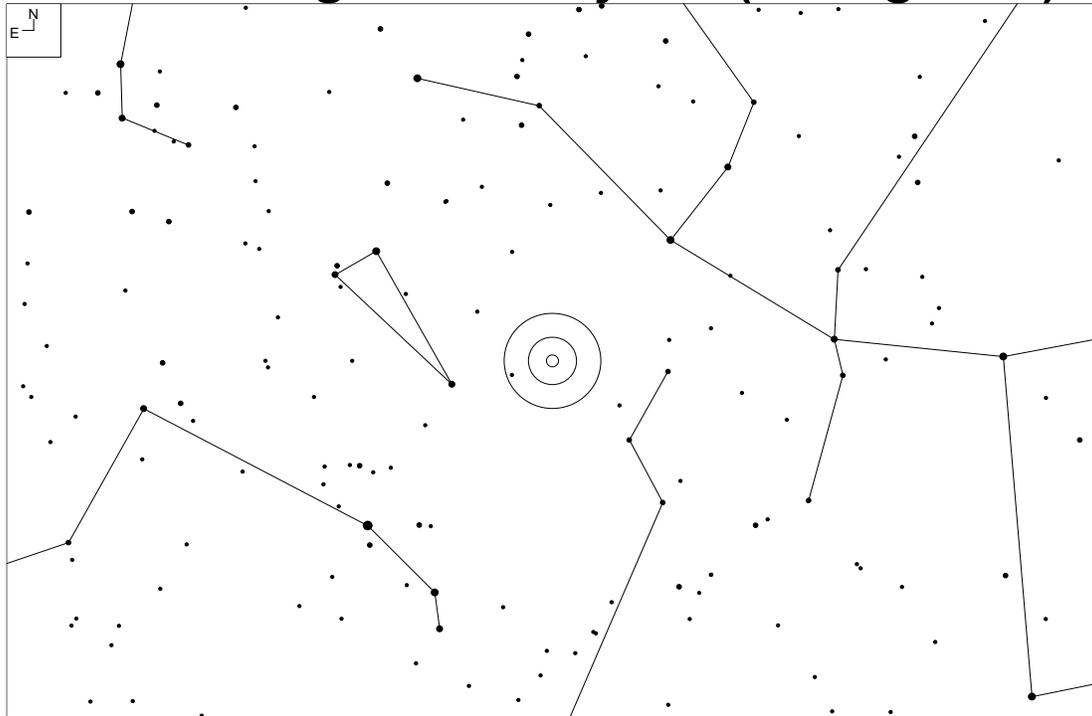


Pan-STARRS

Object	RA	Dec	Type	Mag	Size
GC-1	00 01 50	-15 27 30	Globular Cluster	16.1	-
A3	00 01 57	-15 27 00	OB Association	-	-

James Webb Telescope peers into WLM (2022): <https://www.space.com/james-webb-space-telescope-wlm-dwarf-galaxy-image>

M 33 Extragalactic Objects (Triangulum)



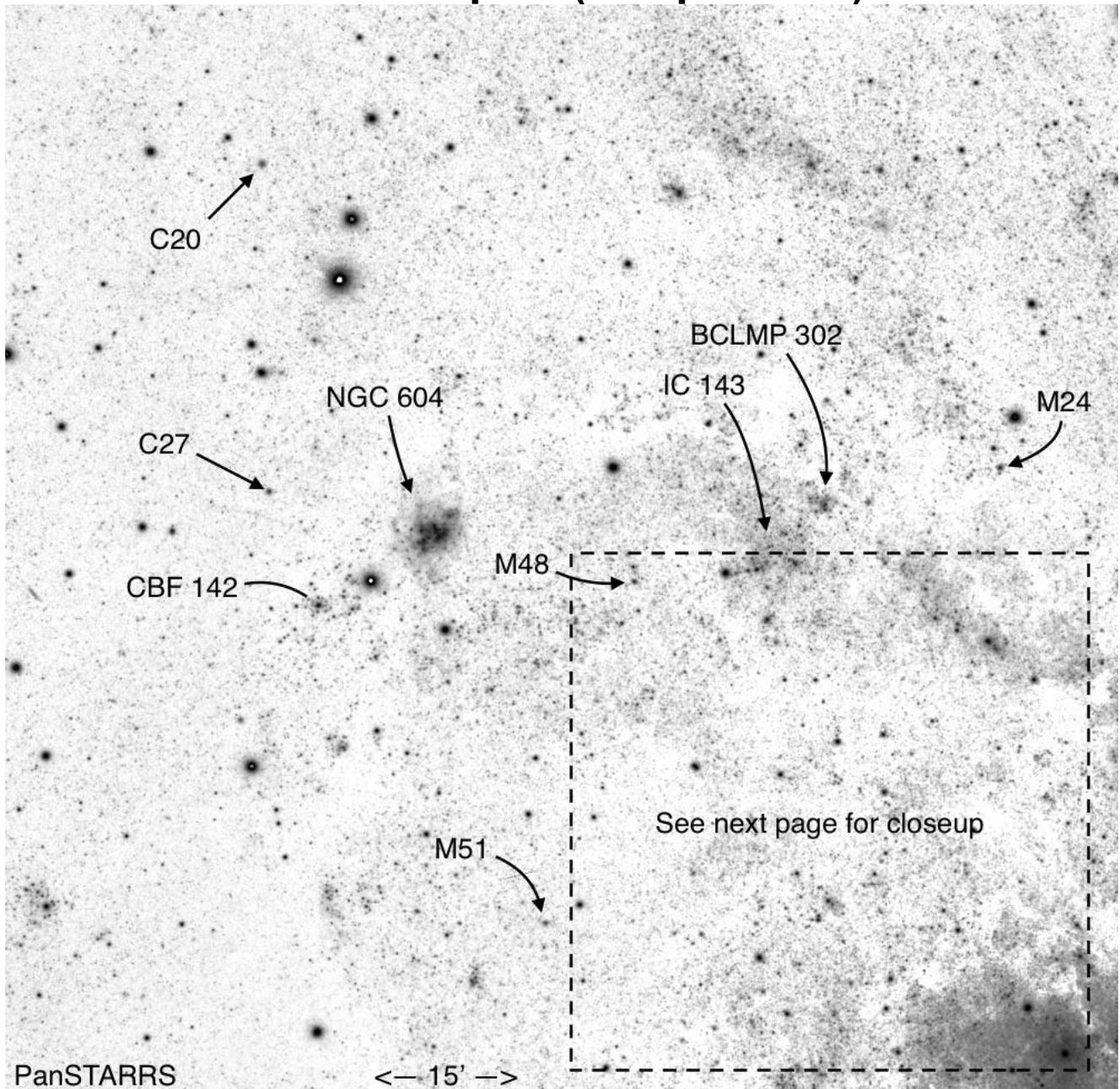
Each quadrant in the following pages shows selected extragalactic objects within M33. All images are from Pan-STARRS.

SEDS Website: <http://www.messier.seds.org/m/m033.html>

For a superb M33 observing guide, see Scott Harrington's guide. Click on this [link](#).

For stars and some clusters in M33, see Scott Harrington, "Observe M33's Brightest Stars and Clusters," *Sky and Telescope* (Nov 2024): 22-29.

M 33 Complex (NE quadrant)

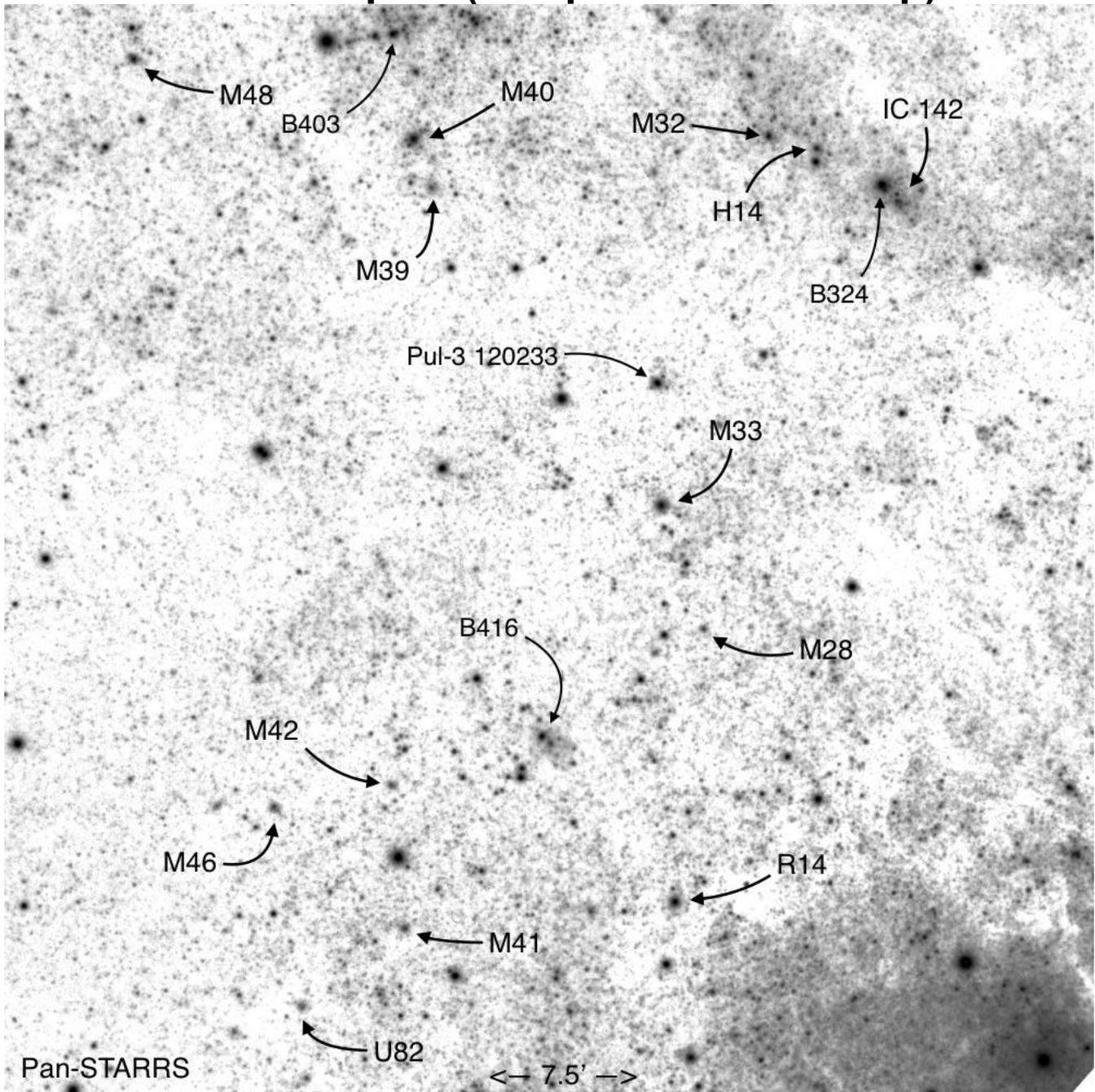


Object	Type	RA	Dec	Mag
NGC 604	H II	01 34 32.1	+30 47 01	14.0b
IC 143	H II	01 34 11.0	+30 46 39	-
BCLMP 302	H II	01 34 06.9	+30 47 28	14.4v
M24 ¹²	GC	01 33 55.2	+30 47 58	16.6v
M48	GC	01 34 19.4	+30 46 21	16.7v
M51	GC	01 34 25.4	+30 41 28	17.5v
CBF 142	SC	01 34 40.4	+30 46 01	15.9v
C20 ¹³	SC	01 34 43.8	+30 47 38	17.5v
C27	GC	01 34 44.2	+30 52 19	17.2v

¹² For the “M” prefixed globular clusters, see B.J. Mochejska, et al “Identification and Photometry of Globular Clusters in M31 and M33 Galaxies,” *Acta Astronomica* Vol 48 (1998): 455-488. Note: The official label is “M 33 xx”, “33” was left out for clarity.

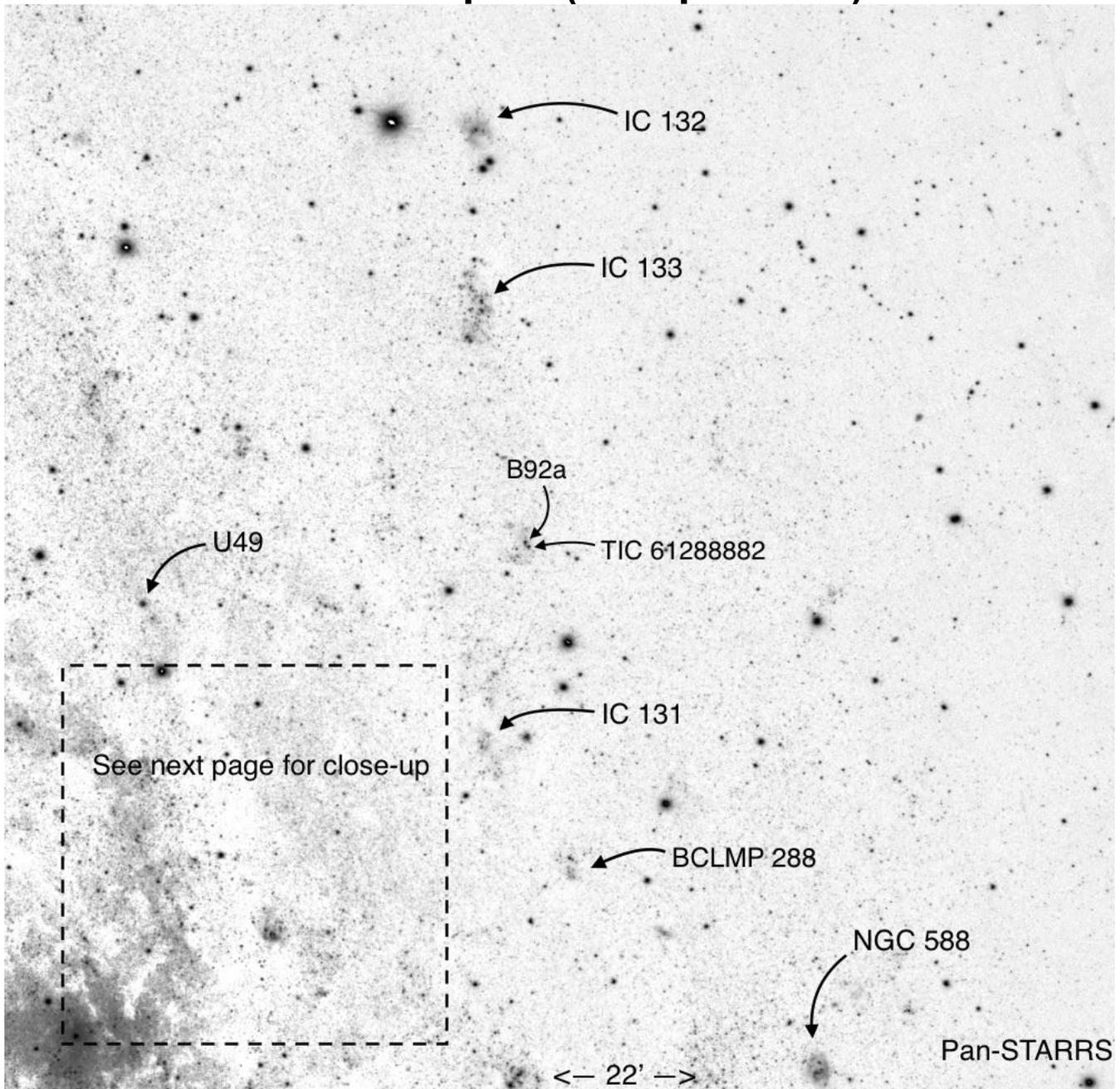
¹³ For the “C”, “H”, and “U” prefixed objects, see C.A. Christian and R.A Schommer, “The Cluster System of M33,” *Astrophysical Journal, Supplement Series* Vol 49 (1982): 405-424.

M 33 Complex (NE quadrant close-up)



Object	Type	RA	Dec	Mag	Object	Type	RA	Dec	Mag
IC 142	H II	01 33 55.1	+30 45 22	14.2b	M39	GC	01 34 10.1	+30 45 29	17.4v
B324	Star	01 33 55.9	+30 45 30	14.9v	M40	GC	01 34 10.6	+30 45 49	16.1v
H14	GC	01 33 58.0	+30 45 45	17.1V	M41	GC	01 34 11.0	+30 40 30	17.8v
M32	GC	01 33 59.5	+30 45 50	17.6v	B403	Star	01 34 11.3	+30 46 31	16.0v
M28	GC	01 34 01.5	+30 42 31	17.9v	M42	GC	01 34 11.4	+30 41 28	18.2v
R14	GC	01 34 02.4	+30 40 41	16.5v	U82	GC	01 34 14.2	+30 39 58	17.9v
M33	GC	01 34 02.9	+30 43 21	16.3v	M46	GC	01 34 15.0	+30 41 19	17.5v
Pul-3	Star	01 34 03.0	+30 44 11	15.4v	M48	GC	01 34 19.4	+30 46 21	16.7v
B416	Star	01 34 06.6	+30 41 48	16.1v					

M 33 Complex (NW quadrant)

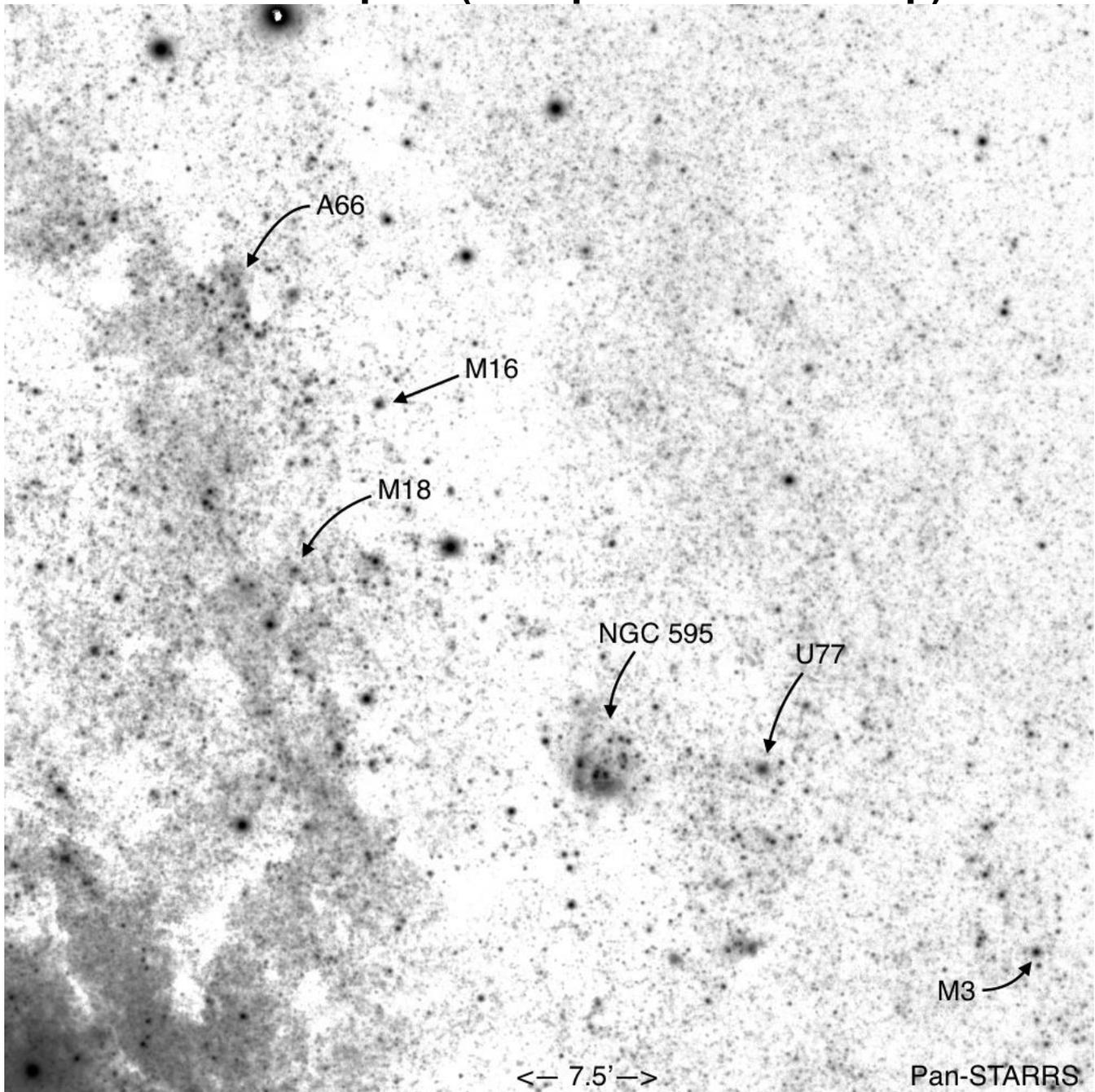


Object	Type	RA	Dec	Mag
NGC 588	H II	01 32 45.2	+30 38 54	14.4v
BCLMP 288 ¹⁴	H II	01 33 07.4	+30 42 40	13.0v
TIC 61288882	Yellow Supergiant	01 33 11.1	+30 48 52	17.0v
B92a	Wolf Rayet Star	01 33 11.4	+30 48 57	16.5v
IC 131	H II	01 33 15.0	+30 45 09	12.5b
IC 132	H II	01 33 15.8	+30 56 45	14.8v
IC 133	H II	01 33 15.9	+30 53 02	12.2v
U49	GC	01 33 45.1	+30 47 47	16.3v

B92a, a Wolf-Rayet star forms a close “double” with TIC 61288882, a yellow supergiant star. Pretty interesting pair, as it is an optical double star from another galaxy.

¹⁴ For the BCLMP prefix, see J. Boulsteix, et al, “An Optical Study of M33: I. Morphology of the Gas,” *Astronomy & Astrophysics* Vol 37 (1974): 33-48

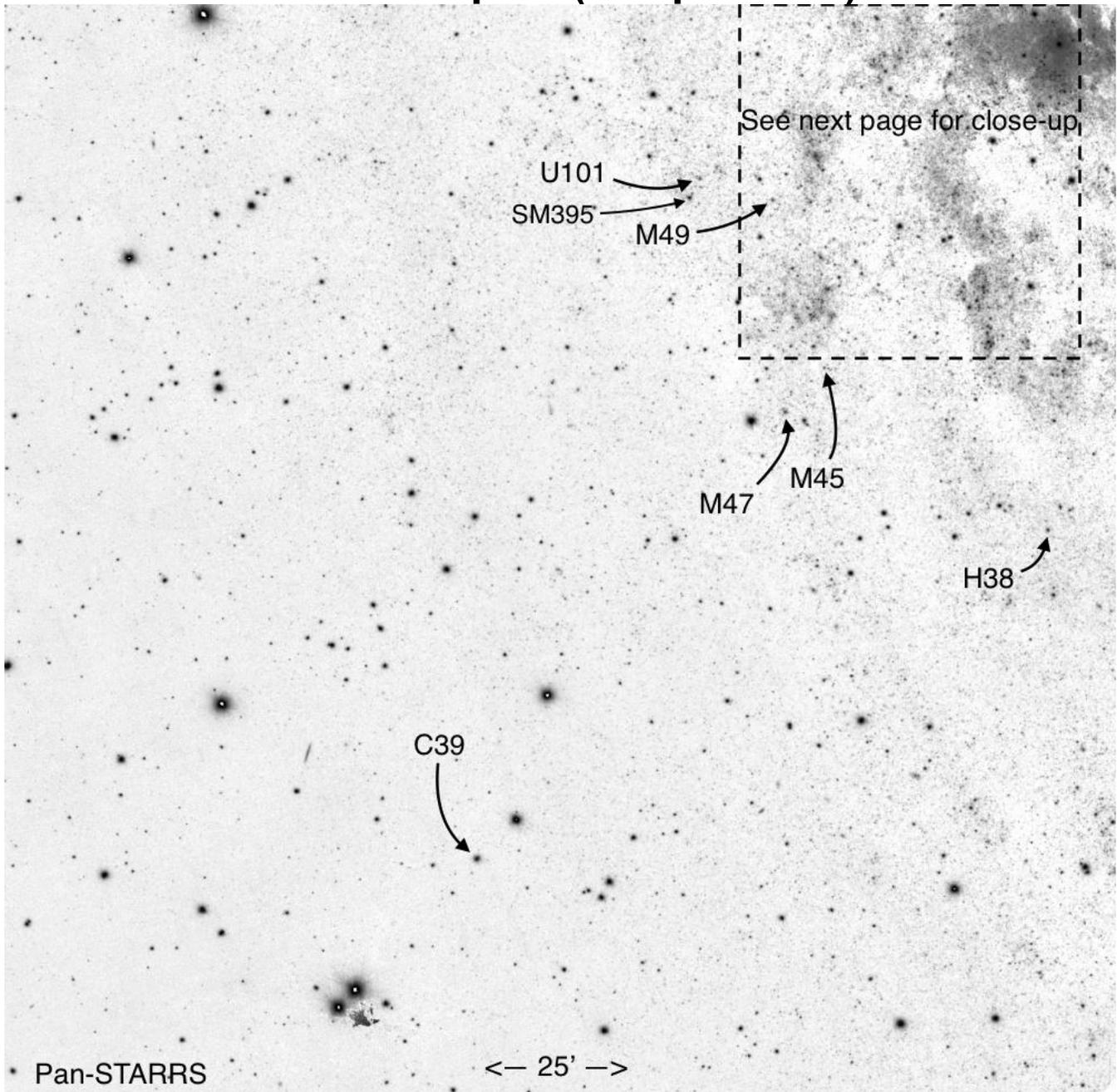
M 33 Complex (NW quadrant close-up)



Object	Type	RA	Dec	Mag
M3	GC	01 33 20.4	+30 40 23	17.2v
U77	GC	01 33 28.7	+30 41 35	17.3v
NGC 595	H II	01 33 33.5	+30 41 30	-
M16	GC	01 33 40.3	+30 43 58	17.0v
M18	GC	01 33 43.0	+30 42 53	17.3v
A66 ¹⁵	SCC	01 33 44.9	+30 44 48	-

¹⁵ For the "A" prefix, see Alan Whitman, "Digging Deep in M33," Sky and Telescope (Dec 2004): 92-95

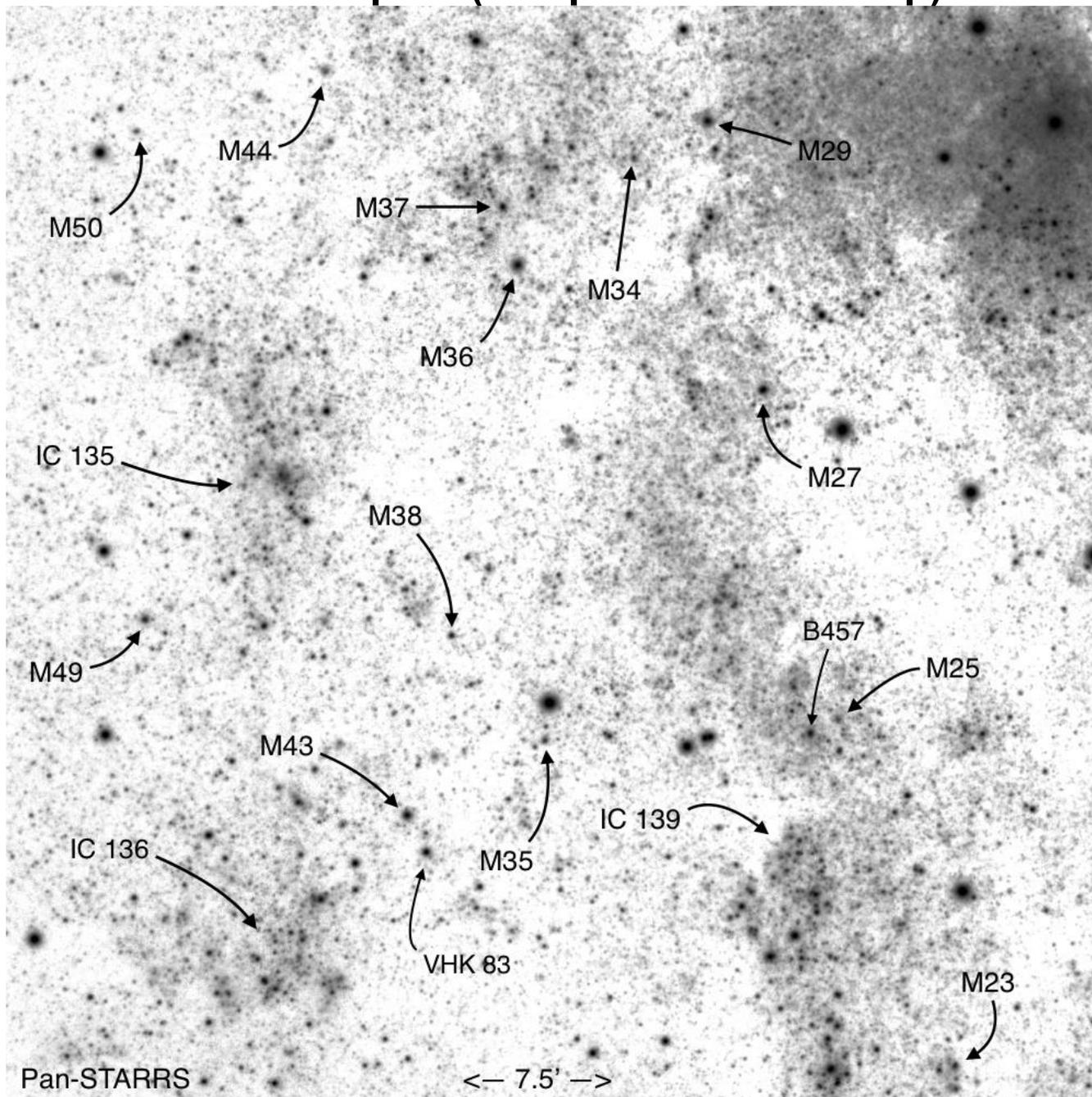
M 33 Complex (SE quadrant)



Object	Type	RA	Dec	Mag
M45	GC	01 34 14.6	+30 32 35	18.1v
M47	GC	01 34 18.7	+30 31 38	16.7v
M49	GC	01 34 19.9	+30 36 13	17.1v
U101	GC	01 34 27.1	+30 36 42	17.7v
SM395	GC	01 34 28.2	+30 36 17	15.9v
C39 ¹⁶	GC	01 34 49.6	+30 21 56	16.1v
H38	GC	01 33 52.2	+30 29 04	17.3v

¹⁶ C39 is the brightest globular cluster of M33, but it is much younger than the ‘classic’ ones found in the Milky Way.

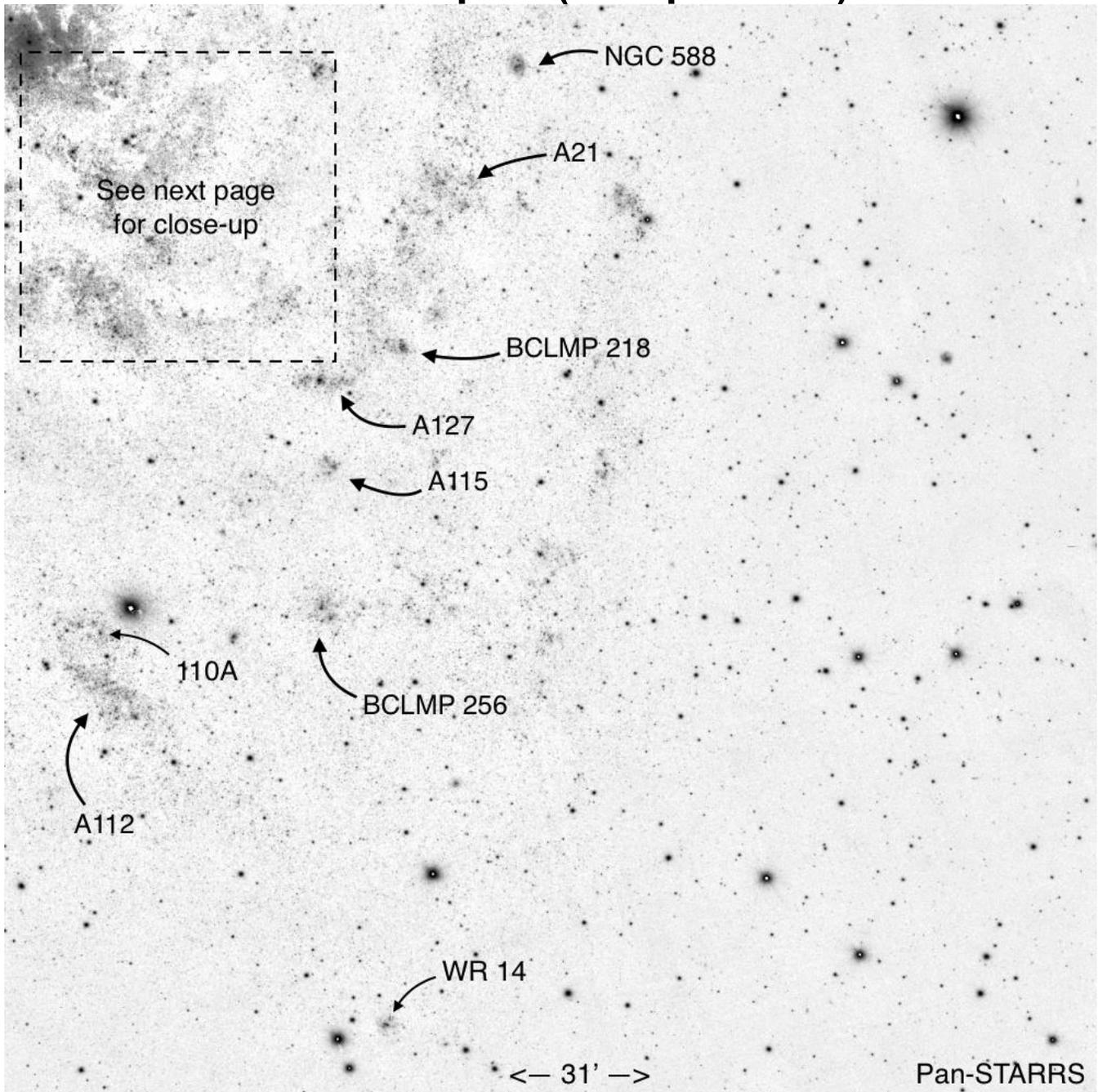
M 33 Complex (SE quadrant close-up)



Object	Type	RA	Dec	Mag	Object	Type	RA	Dec	Mag
M23	GC	01 33 54.1	+30 33 10	17.2v	M37	GC	01 34 08.0	+30 38 38	16.4v
M25	GC	01 33 57.8	+30 35 32	18.1v	M38	GC	01 34 09.0	+30 36 34	17.8v
B457	VS	01 33 58.7	+30 35 26	17.4v	VHK 83 ¹⁷	BS	01 34 10.9	+30 34 37	15.8-16.8
IC 139	H II	01 33 59.4	+30 34 30	-	M43	GC	01 34 11.5	+30 34 53	16.5v
M27	GC	01 34 00.2	+30 37 47	16.0v	M44	GC	01 34 14.2	+30 39 58	17.9v
M29	GC	01 34 02.0	+30 39 38	16.2v	IC 135	SCC	01 34 15.6	+30 37 13	17.8v
M34	GC	01 34 04.3	+30 39 23	17.9v	IC 136	SCC	01 34 16.2	+30 33 54	11.0b
M35	GC	01 34 07.2	+30 35 23	17.8v	M49	GC	01 34 19.9	+30 36 13	17.1v
M36	GC	01 34 08.0	+30 38 38	16.4v	M50	GC	01 34 20.1	+30 39 33	18.4v

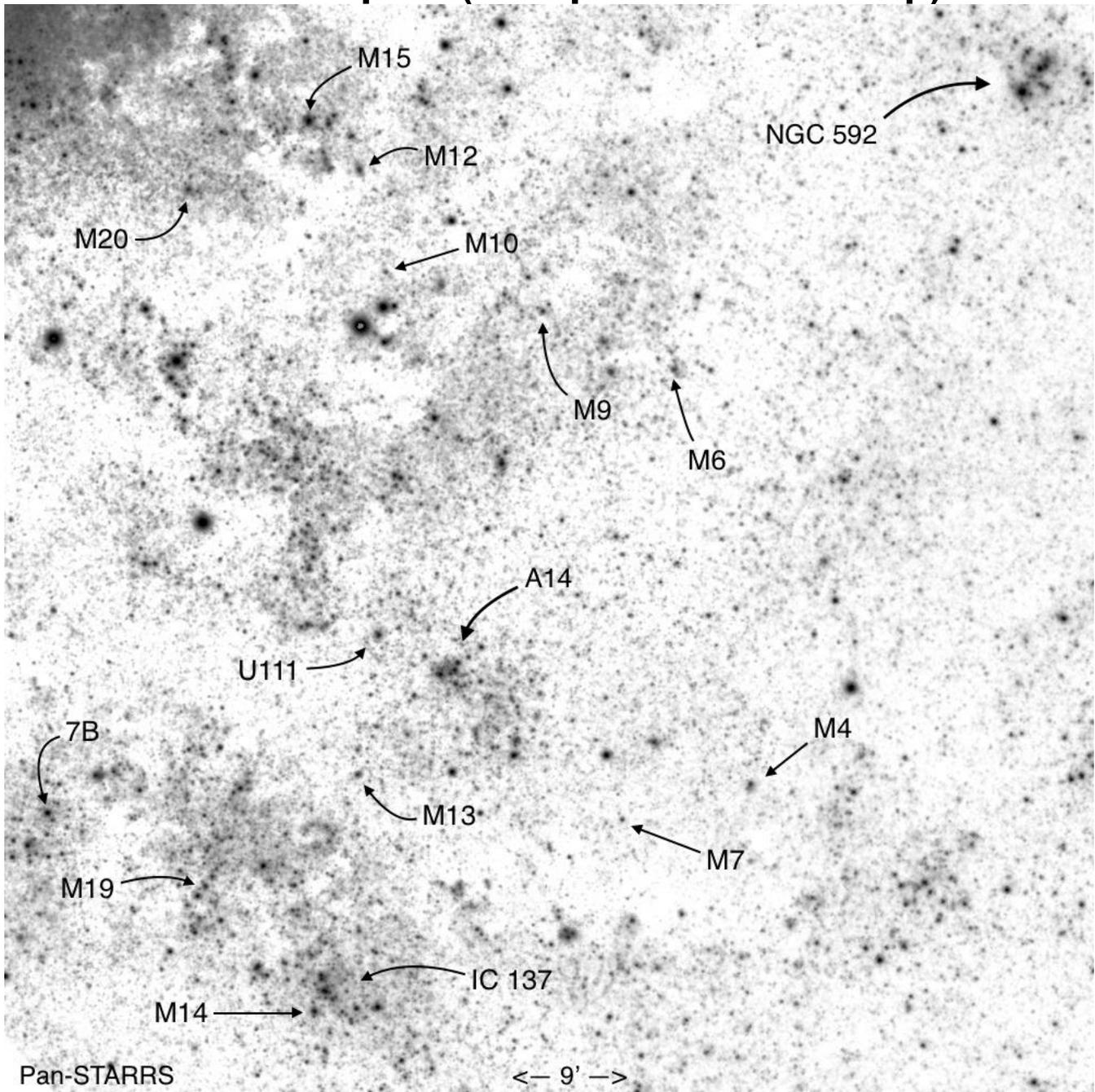
¹⁷ See Scott N Harrington, "The Earliest Recorded Eruption of Luminous Blue Variables in Messier 33," *Journal for the History of Astronomy* Vol 57, Iss 1 (Feb 2026)

M 33 Complex (SW quadrant)



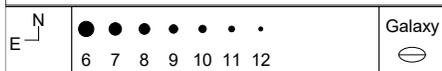
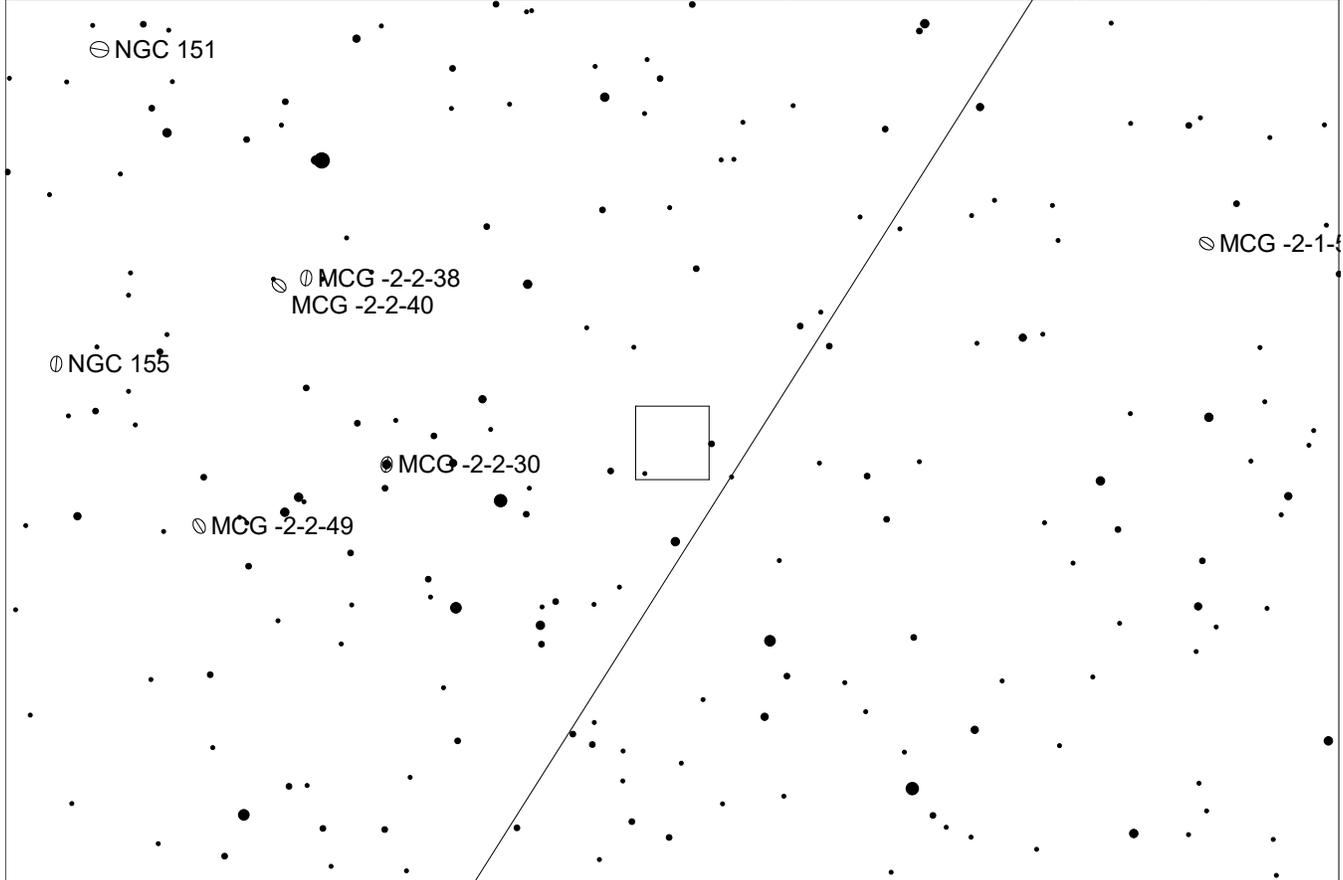
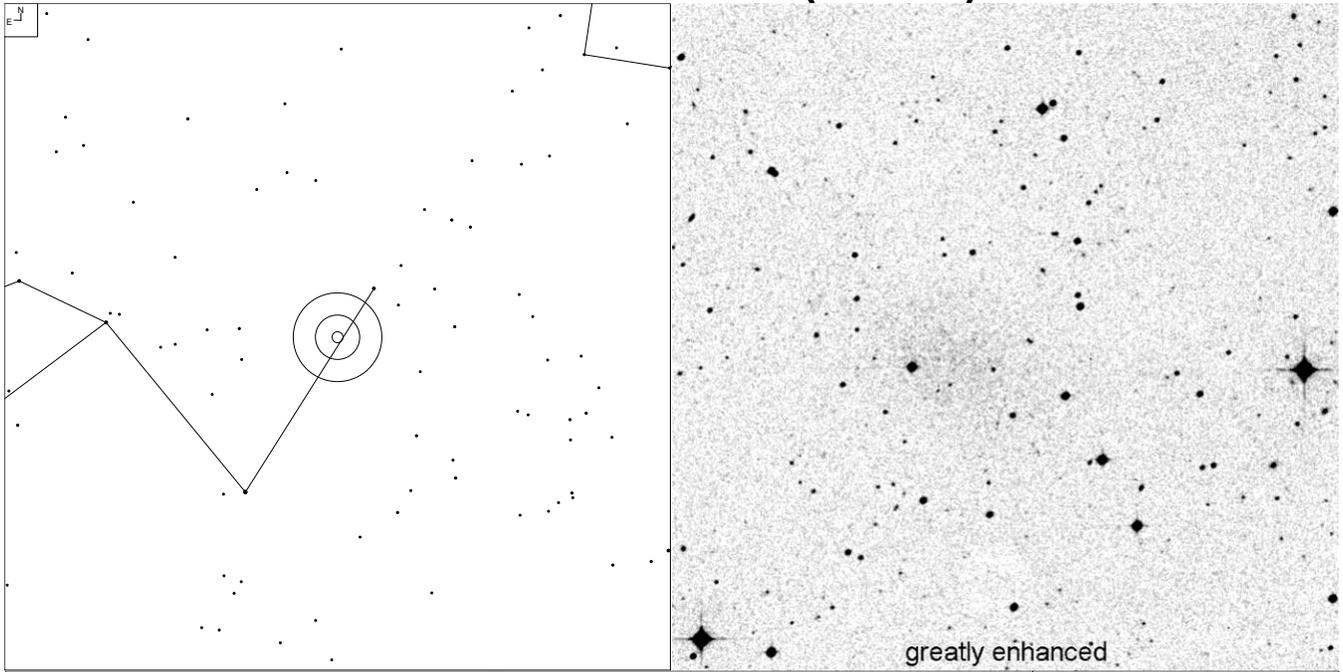
Object	Type	RA	Dec	Mag
NGC 588	H II	01 32 45.2	+30 38 54	14.4v
A21	SCC	01 32 55.0	+30 35 32	-
BCLMP 218	H II	01 33 00.7	+30 30 51	11.9v
A127	SCC	01 33 10.1	+30 29 50	-
A115	SCC	01 33 10.6	+30 27 28	-
BCLMP 256	H II	01 33 11.7	+30 23 21	11.9v
WR 14	WR	01 33 02.9	+30 11 22	16.1v
A112	SCC	01 33 40.4	+30 21 01	-
110A	BS	01 33 41.2	+30 22 37	16.3v
A112	SCC	01 33 40.0	+30 21 02	-

M 33 Complex (SW quadrant close-up)



Object	Type	RA	Dec	Mag	Object	Type	RA	Dec	Mag
NGC 592	H II	01 33 12.2	+30 38 47	-	M12	GC	01 33 38.0	+30 38 02	17.4v
M4	GC	01 33 23.0	+30 33 01	17.6v	M13	GC	01 33 38.0	+30 33 05	17.6v
M6	GC	01 33 26.0	+30 36 24	17.8v	IC 137	SCC	01 33 38.9	+30 31 21	-
M7	GC	01 33 28.0	+30 32 43	18.4v	M14	GC	01 33 39.6	+30 31 09	16.4v
M9	GC	01 33 31.0	+30 36 52	18.5v	M15	BS	01 33 39.9	+30 38 26	17.0v
A14	SCC	01 33 34.7	+30 33 55	-	M19	GC	01 33 43.9	+30 32 10	17.4v
M10	GC	01 33 37.0	+30 37 12	18.5v	M20	GC	01 33 44.5	+30 37 53	17.4v
U111	GC	01 33 37.2	+30 34 14	17.1v	7B	Star	01 33 49.8	+30 32 46	16.0v

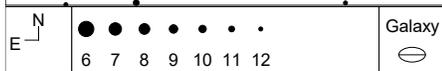
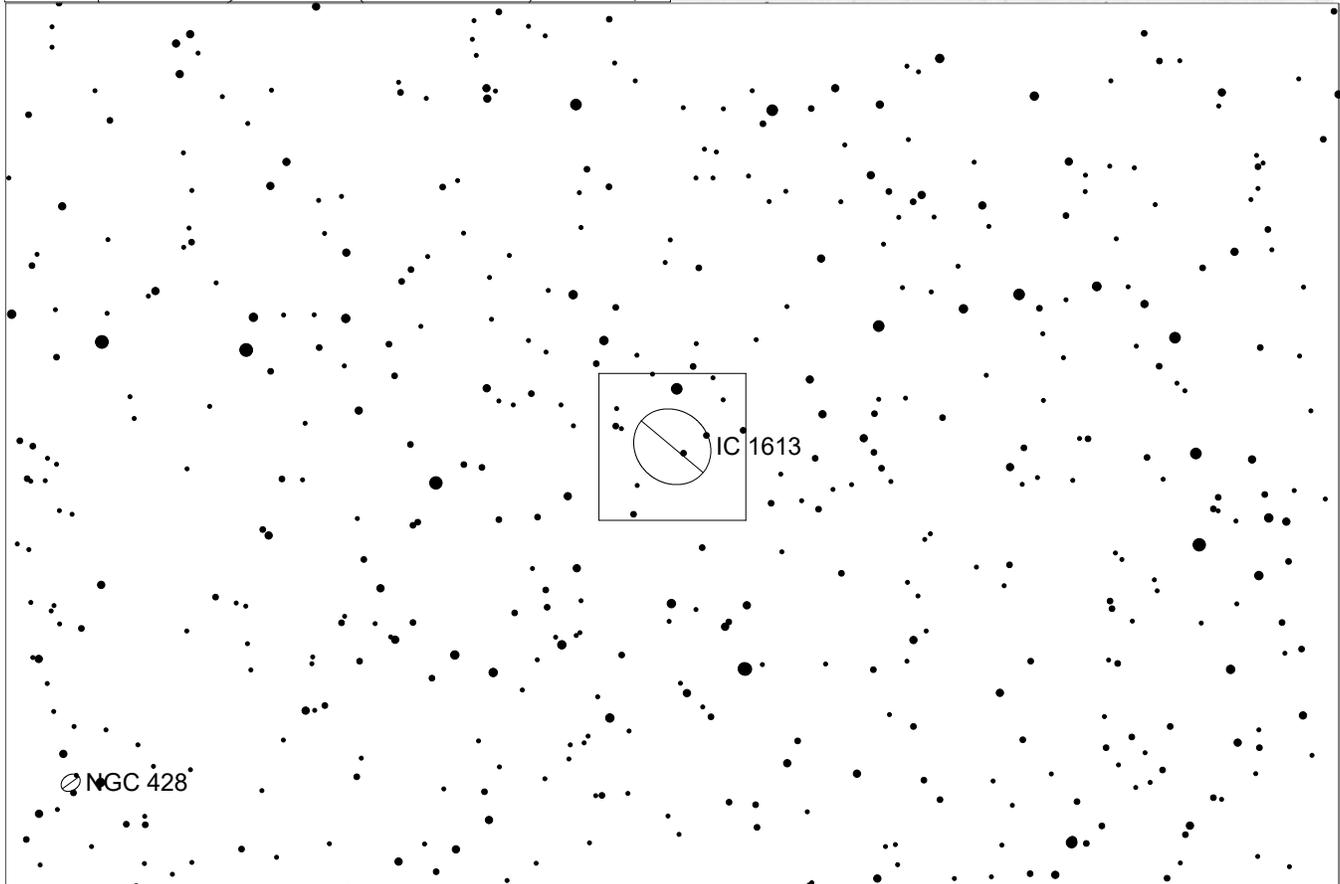
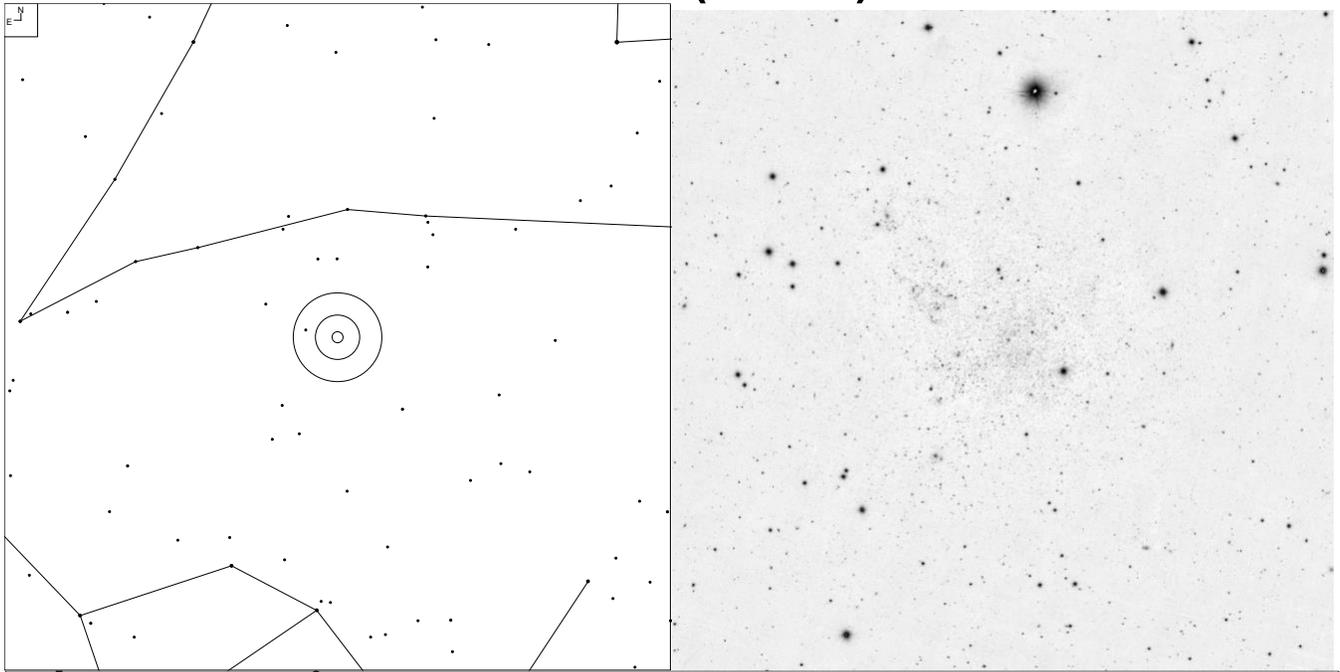
Cetus Dwarf (Cetus)



RA	Dec	Type	Mag	Size	Distance	Urano
00 26 11	-11 02 27	dE4	13.2v	5.0 x 4.3'	2.8 mly	123L

SEDS Website: http://spider.seds.org/spider/LG/cet_dw.html

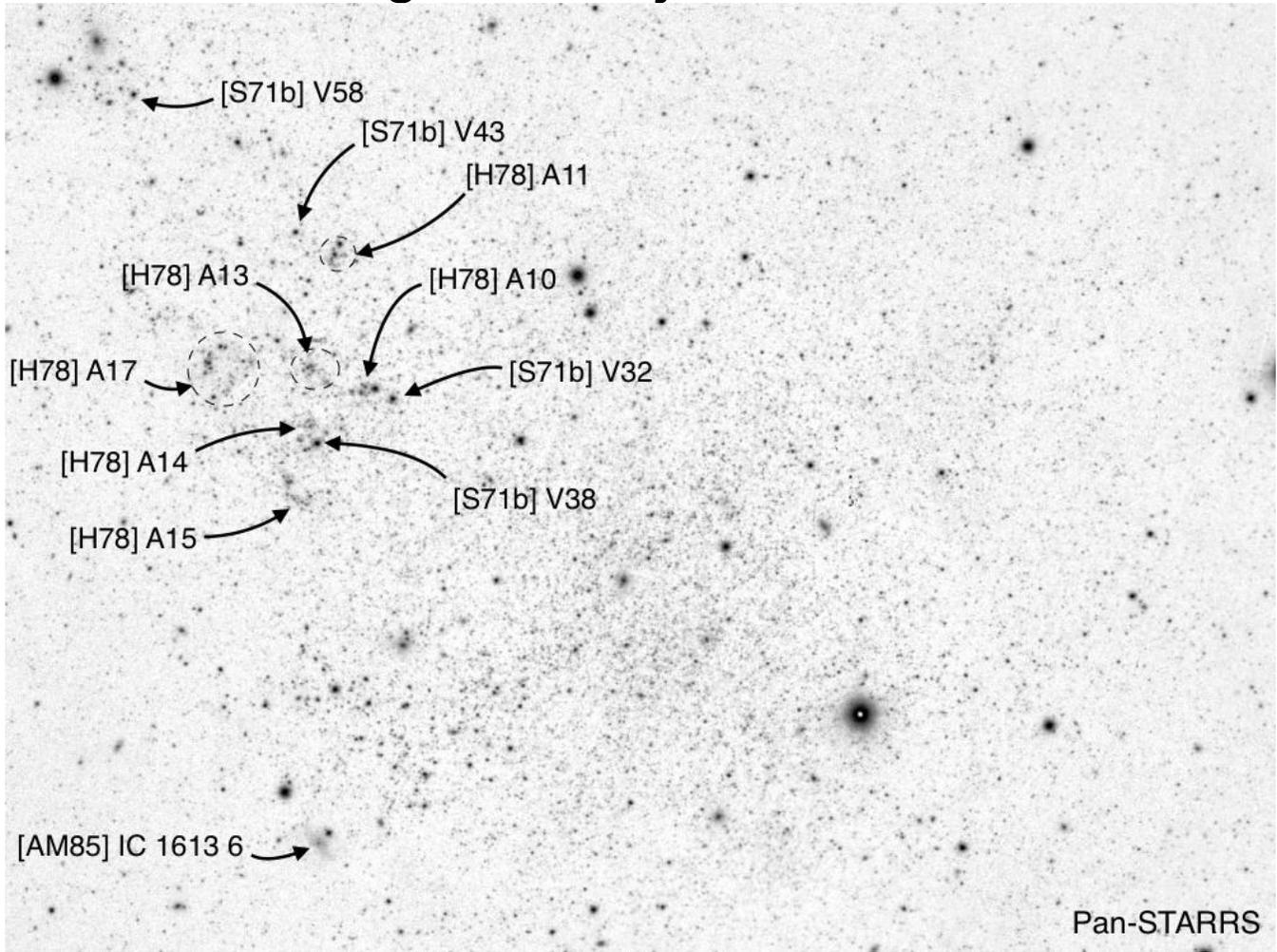
IC 1613 (Cetus)



RA	Dec	Type	Mag	Size	Distance	Urano
01 04 47	+02 07 05	IAB(s)m V	10.0v	16.3 x 14.5'	2.9 mly	120R

SEDS Website: <http://spider.seds.org/spider/LG/i1613.html>

Extragalactic Objects in IC 1613



Object	Type	RA	Dec	Mag	Object	Type	RA	Dec
[S71b] ¹⁸ V38	RI	01 05 01.7	+02 08 39	16.7v	[H78] ¹⁹ A10	H II	01 04 59.5	+02 09 17
[S71b] V32	RI	01 04 58.4	+02 09 08	17.4v	[H78] A11	H II	01 05 00.6	+02 10 43
[S71b] V58	RI	01 05 09.6	+02 12 26	17.6v	[H78] A13	H II	01 05 02	+02 09 28
[S71b] V43	RI	01 05 05.1	+02 11 55	18.7b	[H78] A14	H II	01 05 02.2	+02 08 44
[SK76] ²⁰ A43	BS	01 04 59.1	+02 09 15	16.4v	[H78] A15	H II	01 05 02.2	+02 08 04
[SK76] A22	BS	01 05 00.9	+02 10 42	17.5v	[H78] A17	H II	01 05 06.3	+02 08 04
[SK76] B42	BS	01 05 06.4	+02 09 32	17.8v	[AM85] IC 1613 6 ²¹	WR	01 05 01.6	+02 04 20

Type: RI = red irregular supergiant, BS = blue supergiant

See Paul Hodge, Myung Gyoon Lee, and Mark Gurwell, "The H II Regions of IC 1613," *Publications of the Astronomical Society of the Pacific* Vol 102, No. 657 (1990) for discussion of the H II regions in IC 1613.

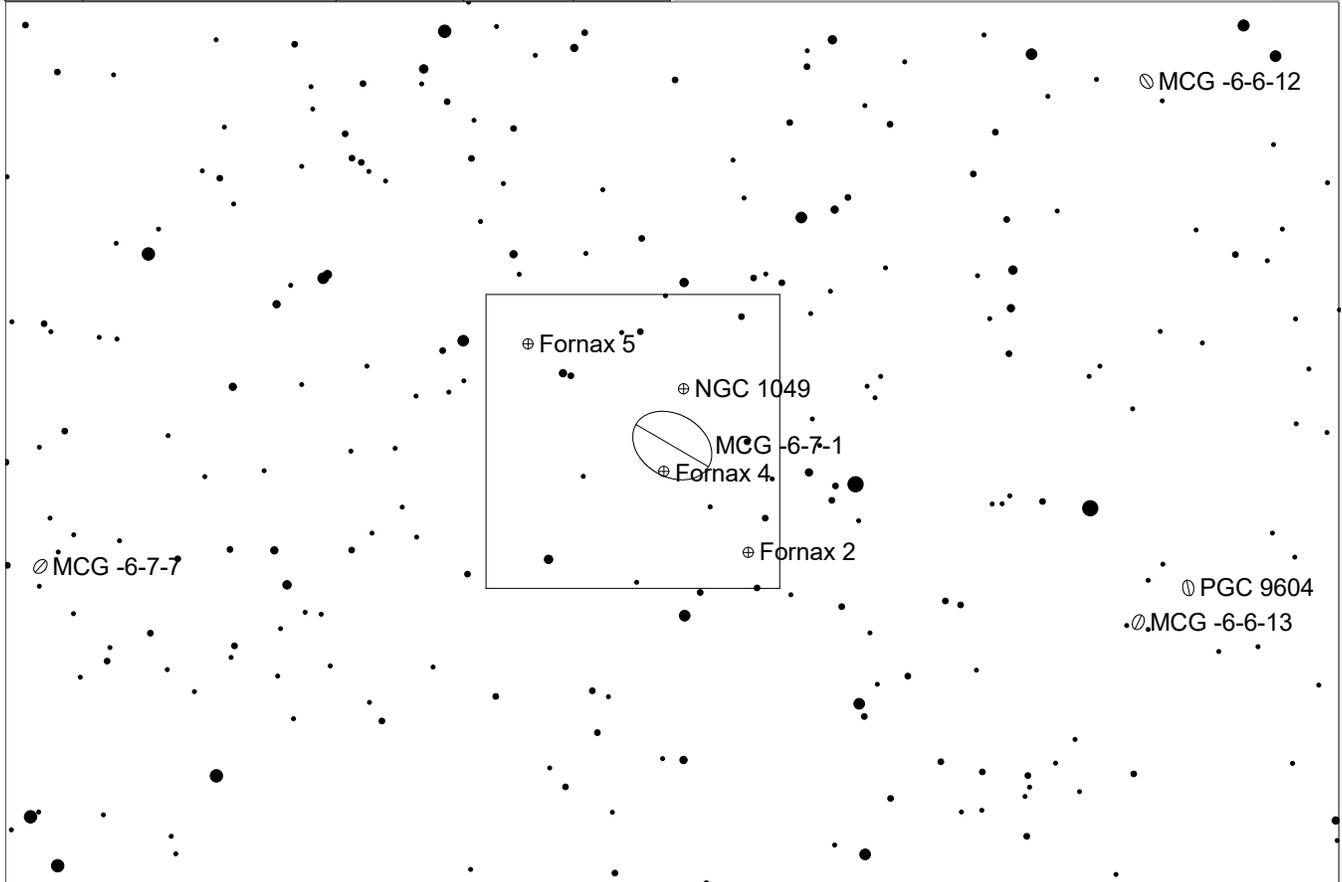
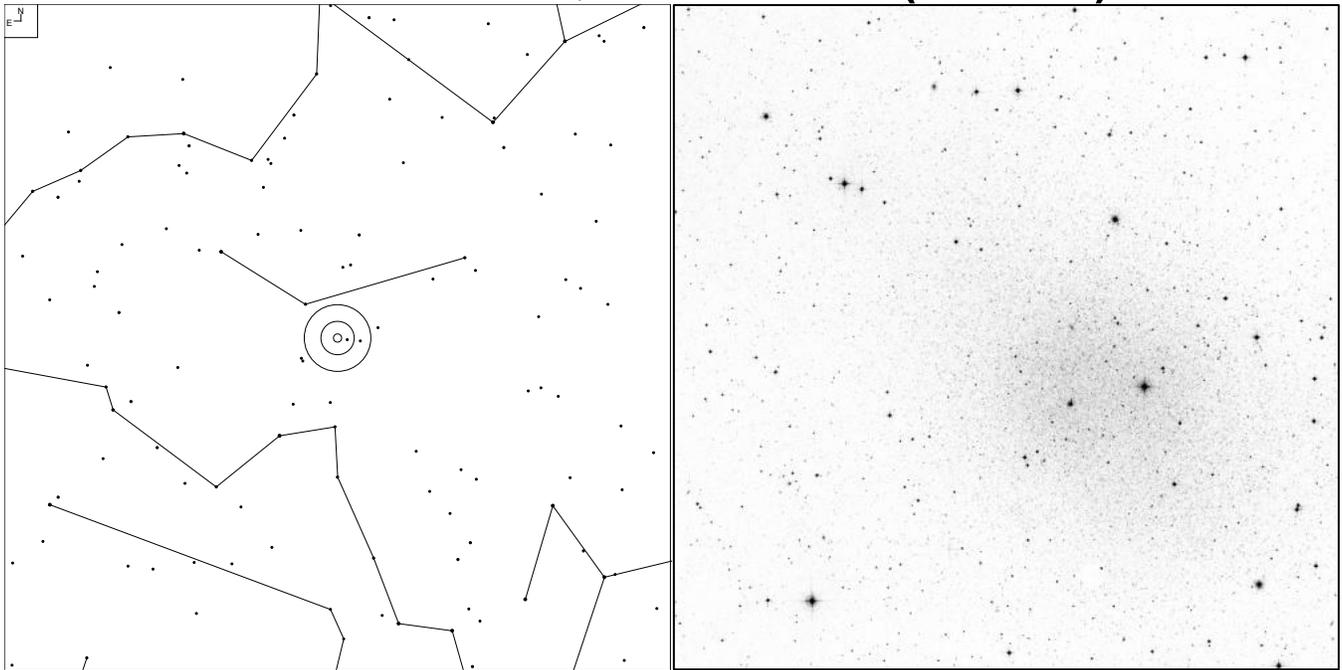
¹⁸ For [S71b] designation for red irregular supergiant stars, see Allan Sandage, "The Distance of the Local-Group Galaxy IC 1613 Obtained from Baade's Work on its Stellar Content," *The Astrophysical Journal* Vol 166 (1971): 13-35.

¹⁹ For [H78] designations of H II regions, see Paul W. Hodge, "The Structure and Content of IC 1613," *The Astrophysical Journal, Supplement Series* Vol 37 (May 1978): 145-167. Note: Mag was not listed.

²⁰ For [SK76] designations of blue supergiant stars, see Allan Sandage and Basil Katem, "The brightest stars in nearby galaxies. I. The color-magnitude diagram and luminosity function for IC 1613," *Astronomical Journal* Vol 81 (Sept 1976): 743-793.

²¹ For [AM85] designations of Wolf-Rayet stars, see T.E. Armandroff and P. Massey, "Wolf-Rayet Stars in NG 6822 and IC 1613," *Astrophysical Journal* Vol 291 (1985): 685-692

Fornax Dwarf, MCG-6-7-1 (Fornax)

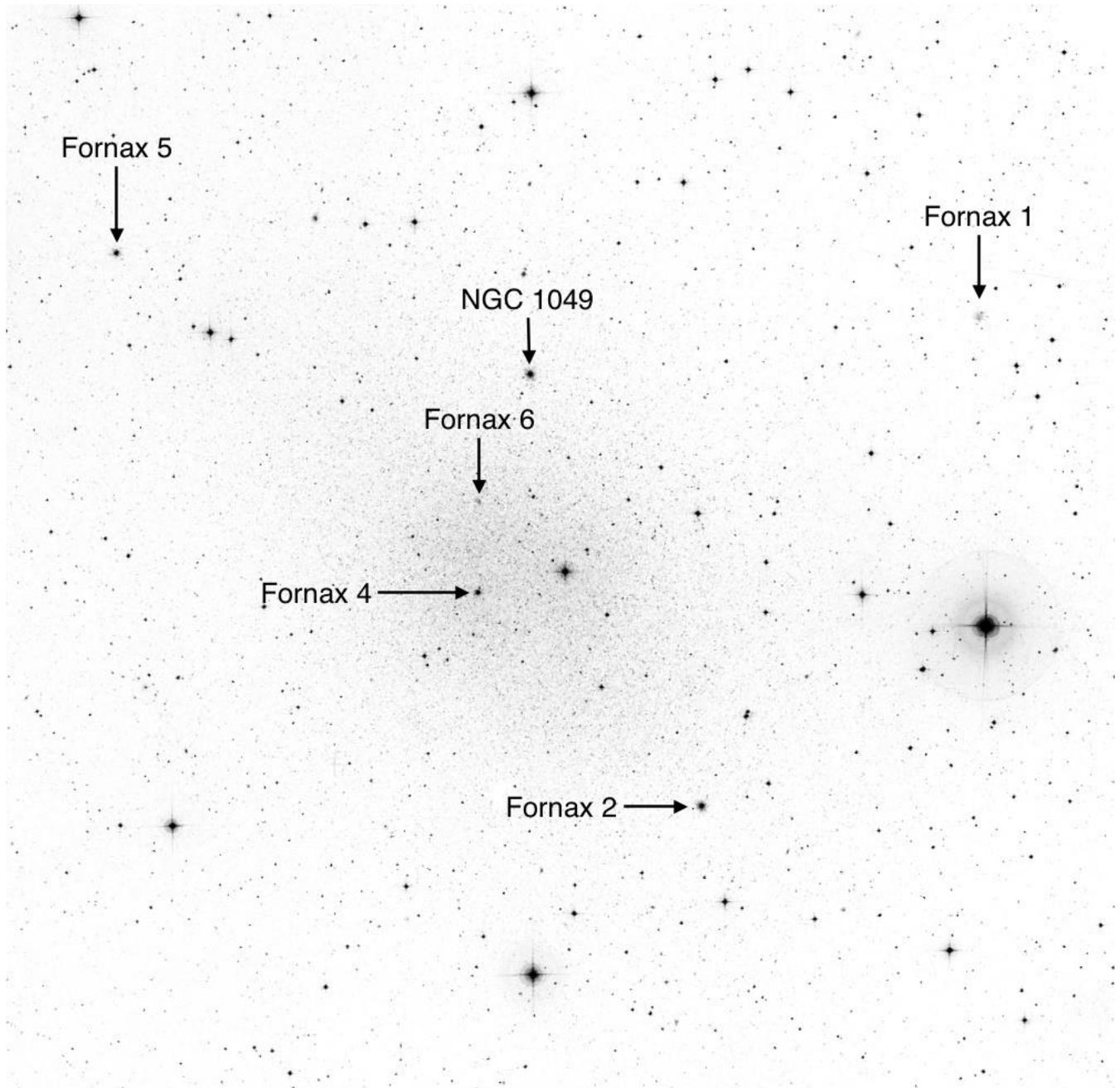


E ↙ N ↑	● ● ● ● ● ● ● ● ● ● ● ●	Galaxy	Globular
	6 7 8 9 10 11 12	⊖	⊕

RA	Dec	Type	Mag	Size	Distance	Urano
02 39 59	-34 26 57	dE0	7.4v	17.0 x 12.6'	530 kly	175R

SEDS Website: http://spider.seds.org/spider/LG/for_dw.html

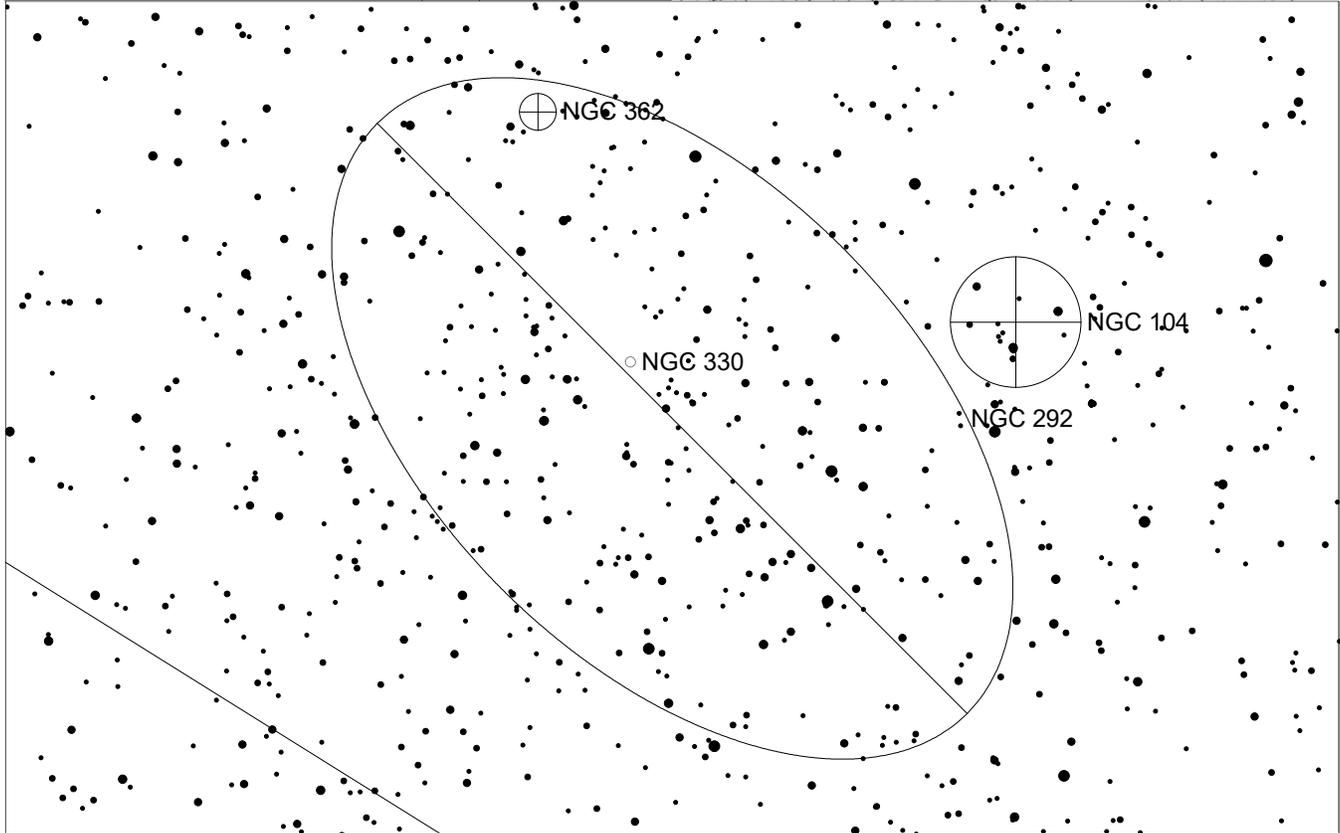
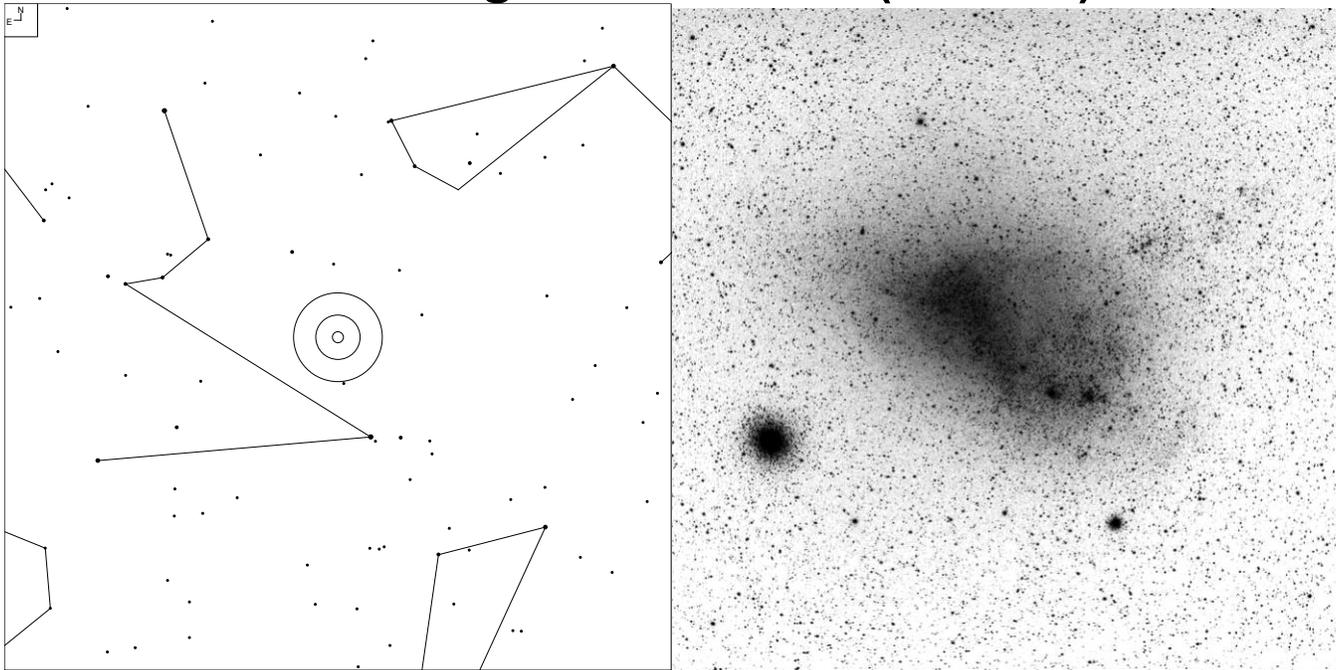
Fornax Dwarf's Globular Clusters



Object ²²	RA	Dec	Mag	Size
NGC 1049	02 39 48.2	-34 15 29	12.6	0.8'
Fornax 1	02 37 02.1	-34 11 00	15.6	0.9'
Fornax 2	02 38 44.2	-34 48 31	13.5	0.8'
Fornax 4	02 40 07.6	-34 32 11	13.6	0.8'
Fornax 5	02 42 21.1	-34 06 06	13.4	1.7'
Fornax 6	02 40 06.9	-34 25 19	-	0.6'

²² K. S. Oh, D. N. C. Lin, Harvey B. Richer. "Globular Clusters in the Fornax Dwarf Spheroidal Galaxy," *The Astrophysical Journal* Vol 531 (March 2010): 727-738

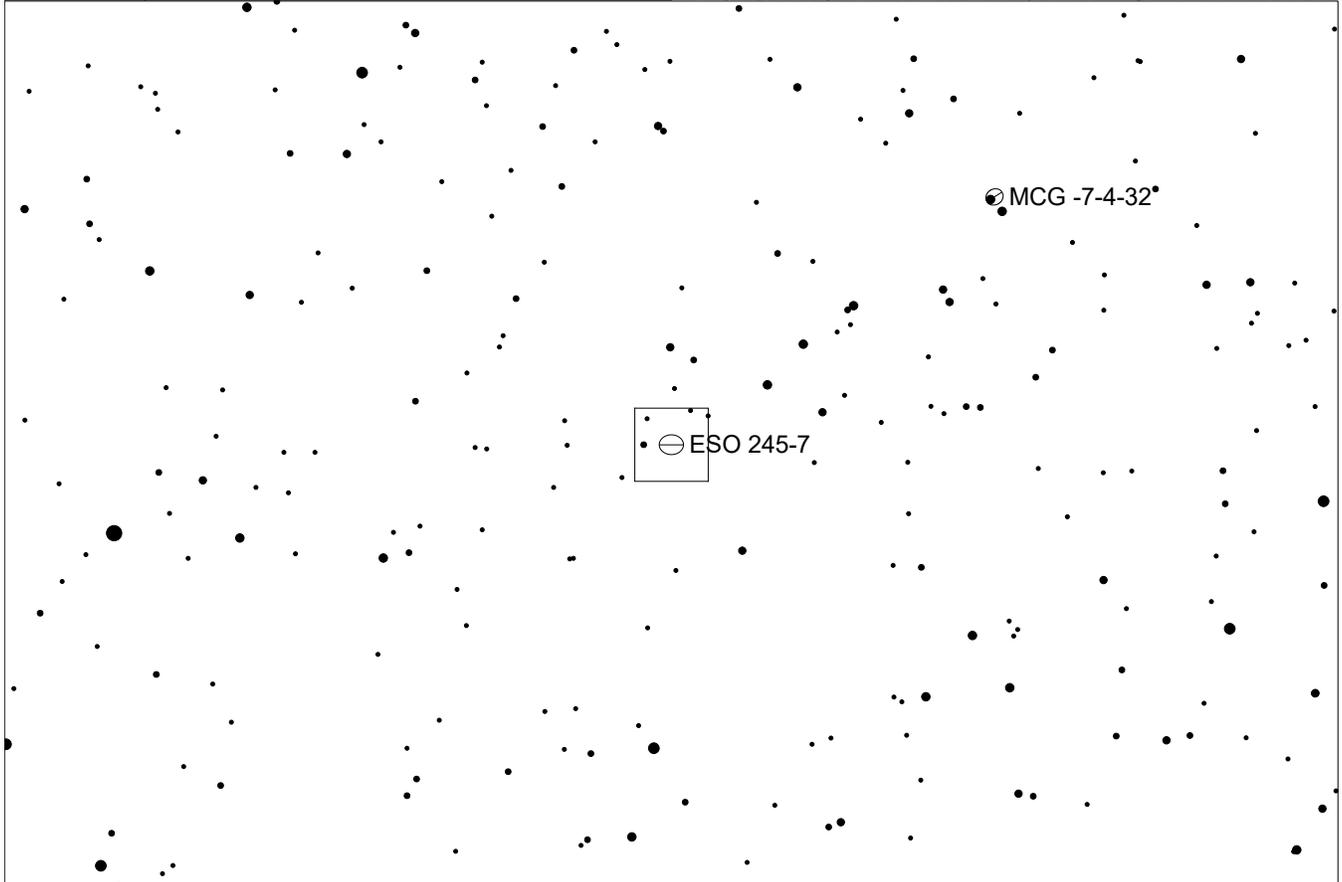
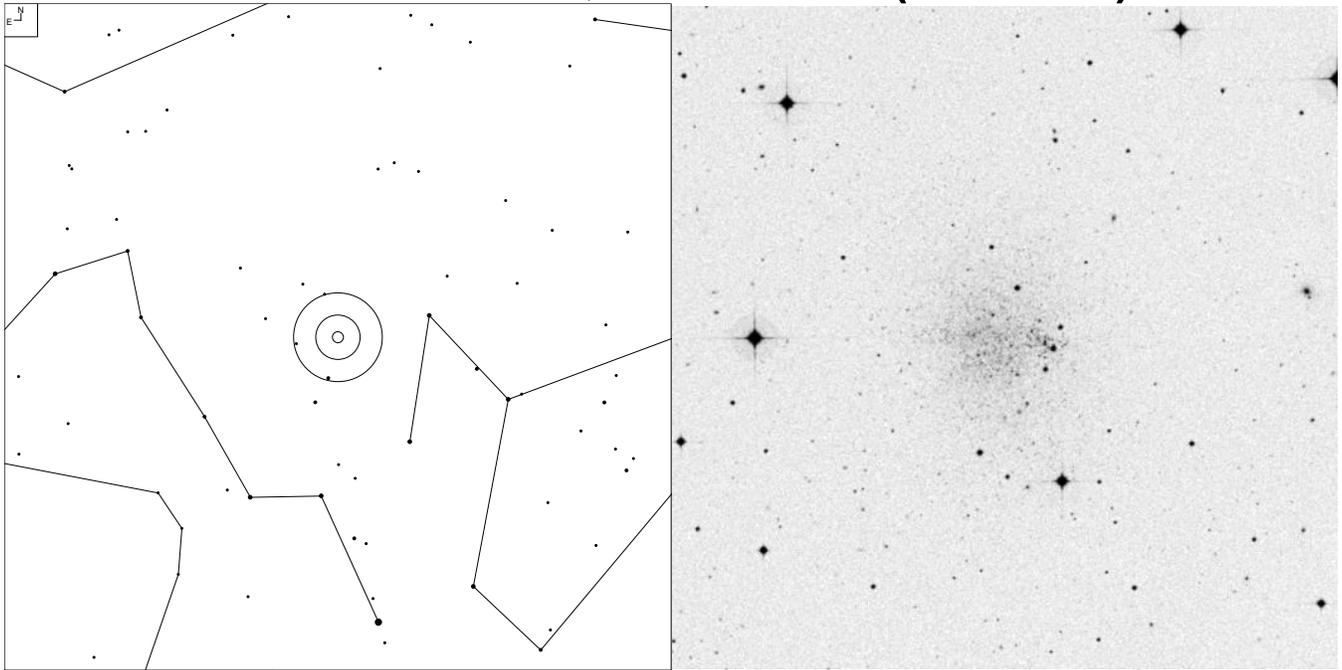
Small Magellanic Cloud (Tucana)



RA	Dec	Type	Mag	Size	Distance	Urano
00 52 45	-72 49 43		2.7	320 x 185'	199 kly	204L

SEDS Website: <http://spider.seds.org/spider/LG/smc.html>

Phoenix Dwarf, PGC 6830 (Phoenix)



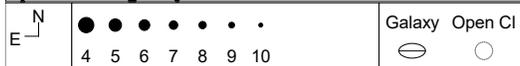
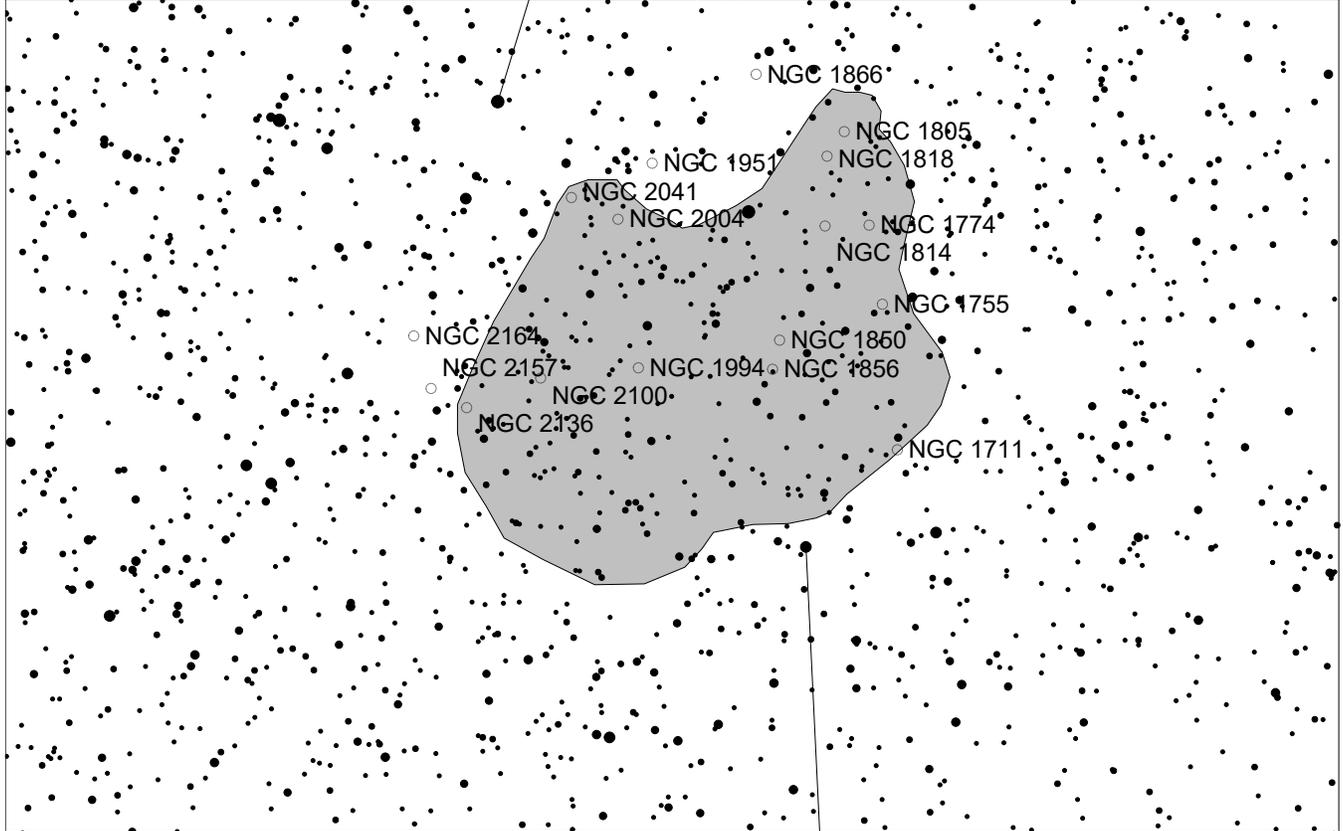
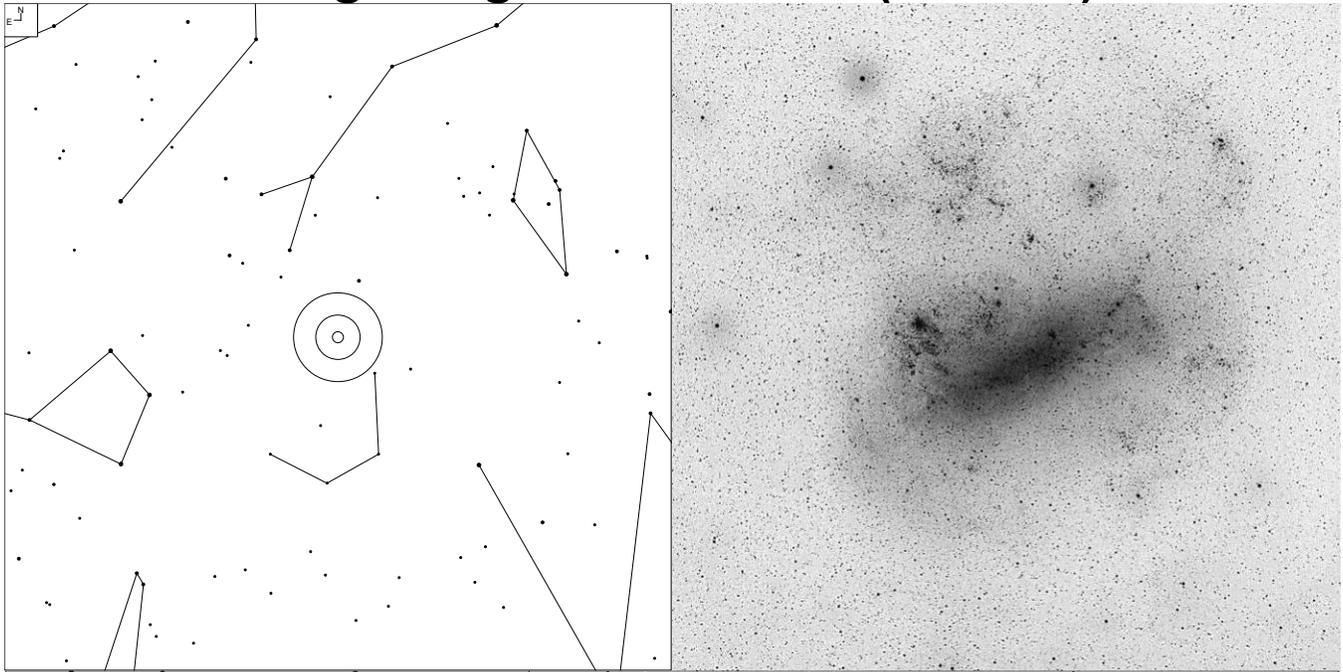
E ↙ N ↘	● ● ● ● ● ● ● ●	Galaxy ○
	5 6 7 8 9 10 11 12	

RA	Dec	Type	Mag	Size	Distance	Urano
01 51 06	-44 26 42	IAm	13.2v	4.9 x 4.1'	1.4 mly	191L

SEDS Website: http://spider.seds.org/spider/LG/phe_dw.html

For the Hubble image of the Phoenix Dwarf (2011), see <https://esahubble.org/images/potw1143a/>

Large Magellanic Cloud (Toucan)

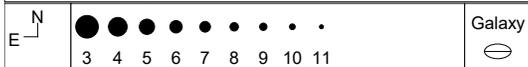
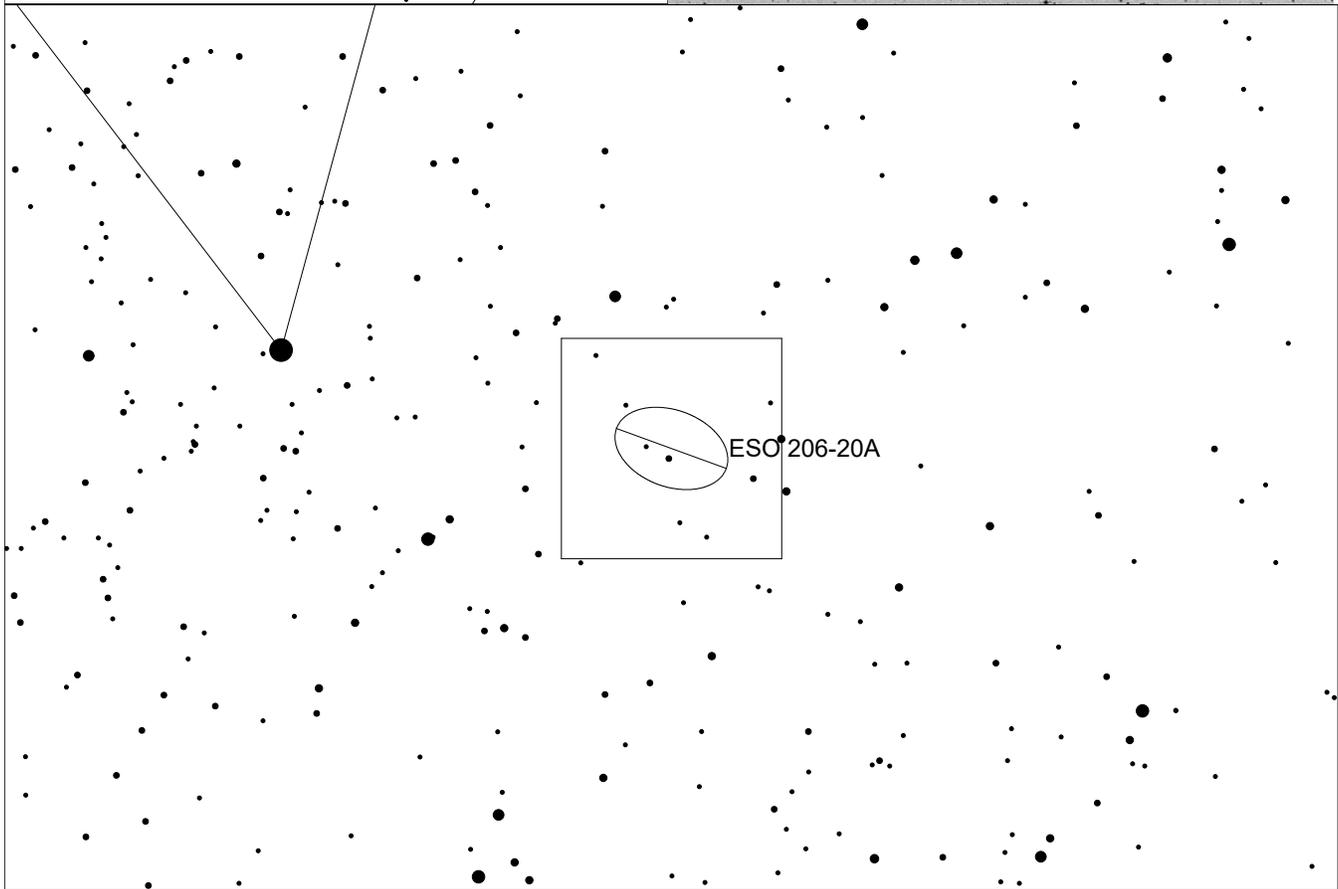
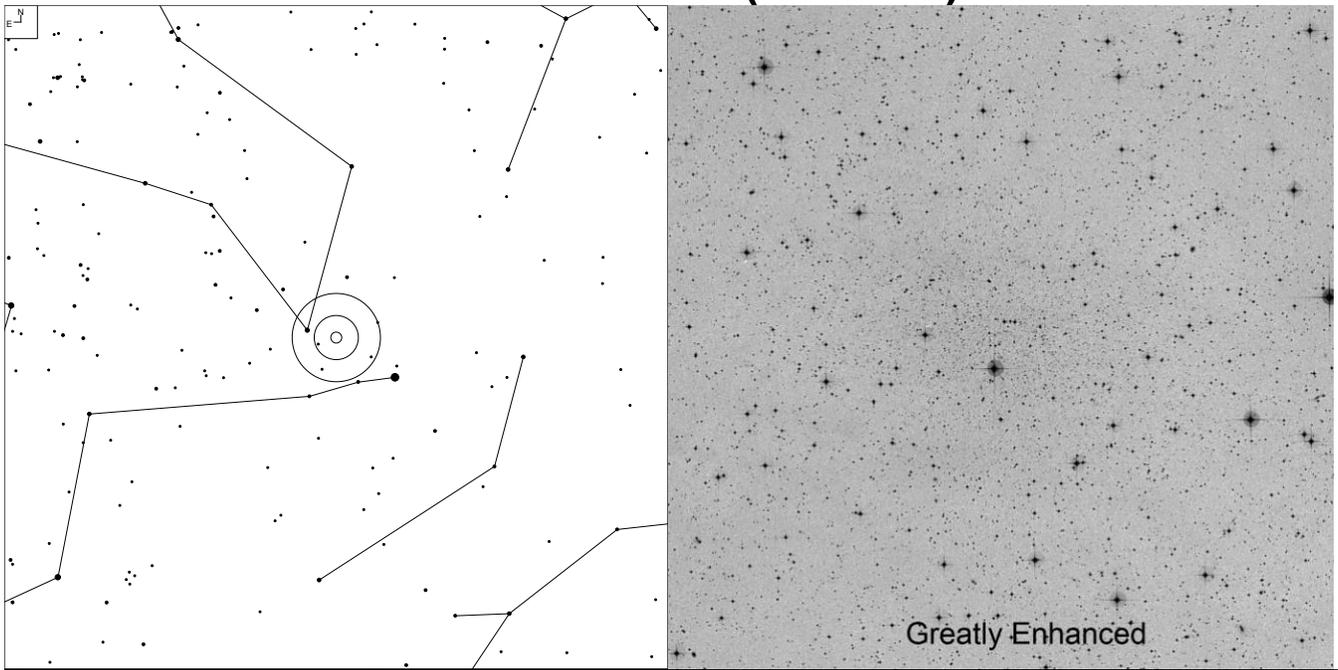


RA	Dec	Type	Mag	Size	Distance	Urano
05 23 35	-69 45 22	SB(s)m	0.9	650 x 550'	158 kly	212L

SEDS Website: <http://spider.seds.org/spider/LG/lmc.html>

Observing Guide: largemagellaniccloud.com

Carina Dwarf (Tucana)

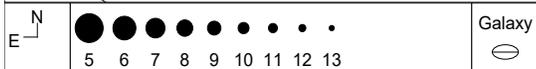
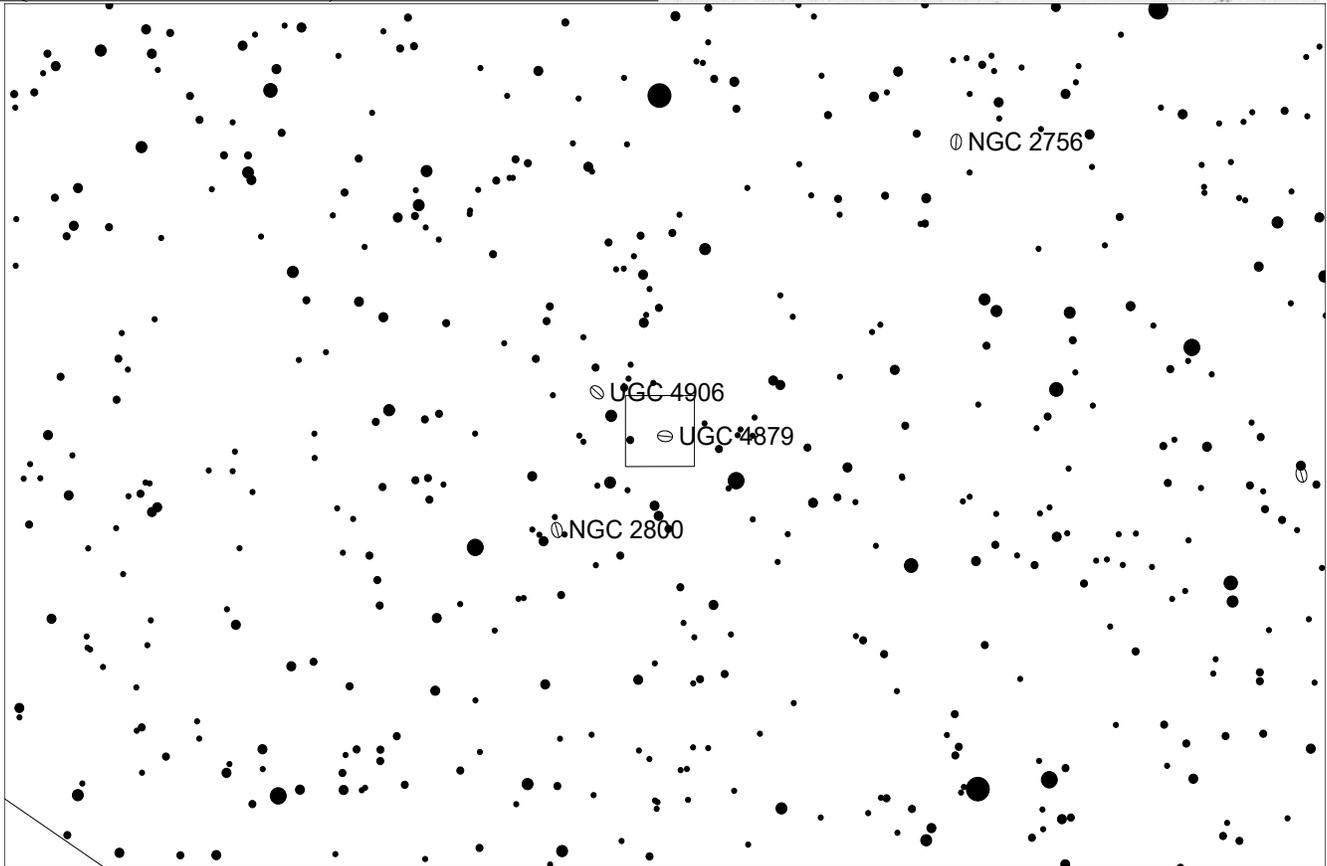
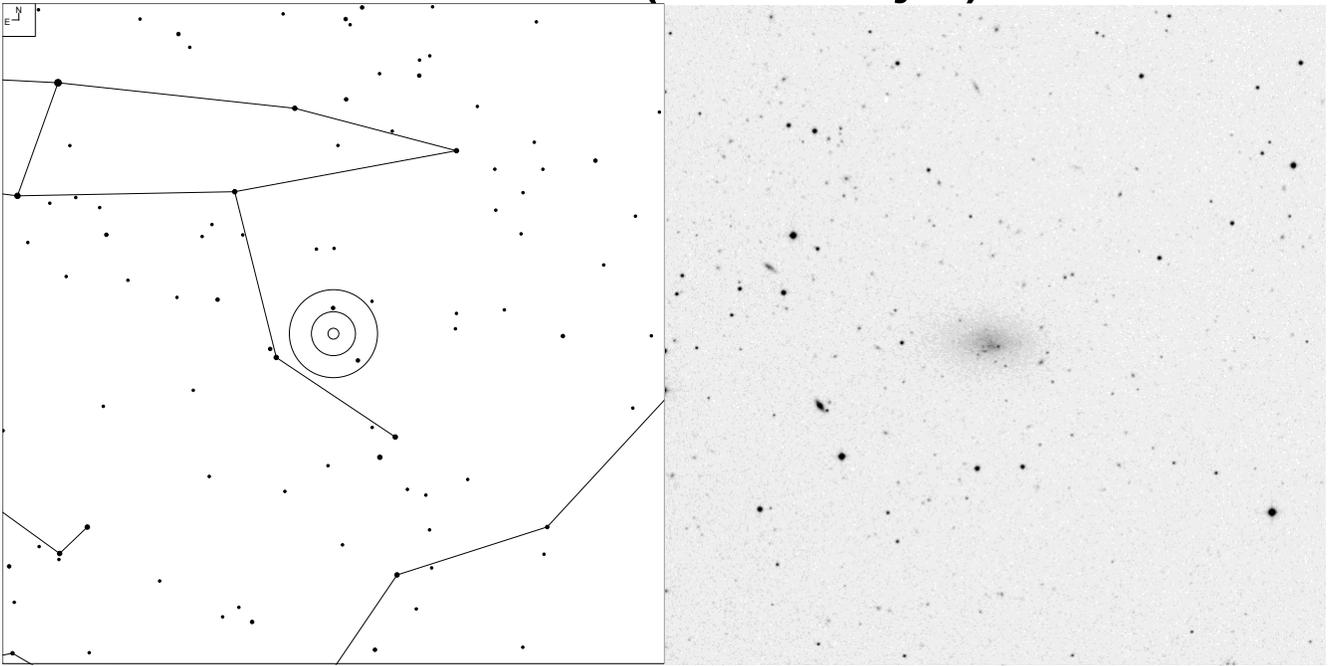


RA	Dec	Type	Mag	Size	Distance	Urano
06 41 37	-50 57 58	dE3	11.0v	23.4 x 15.5'	330 kly	188R

SEDS Website: http://spider.seds.org/spider/LG/car_dw.html

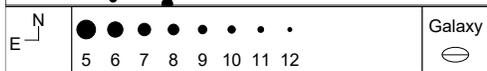
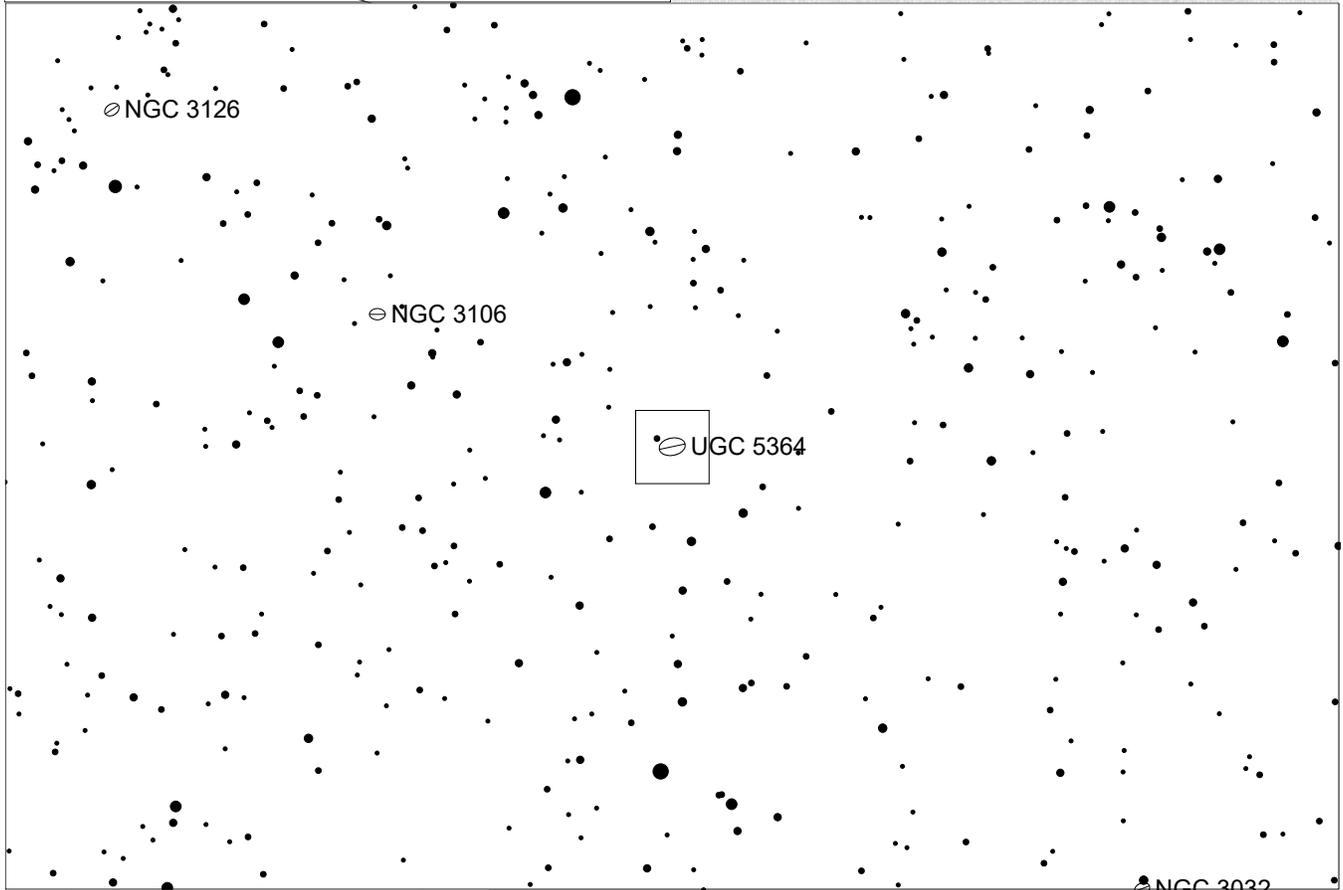
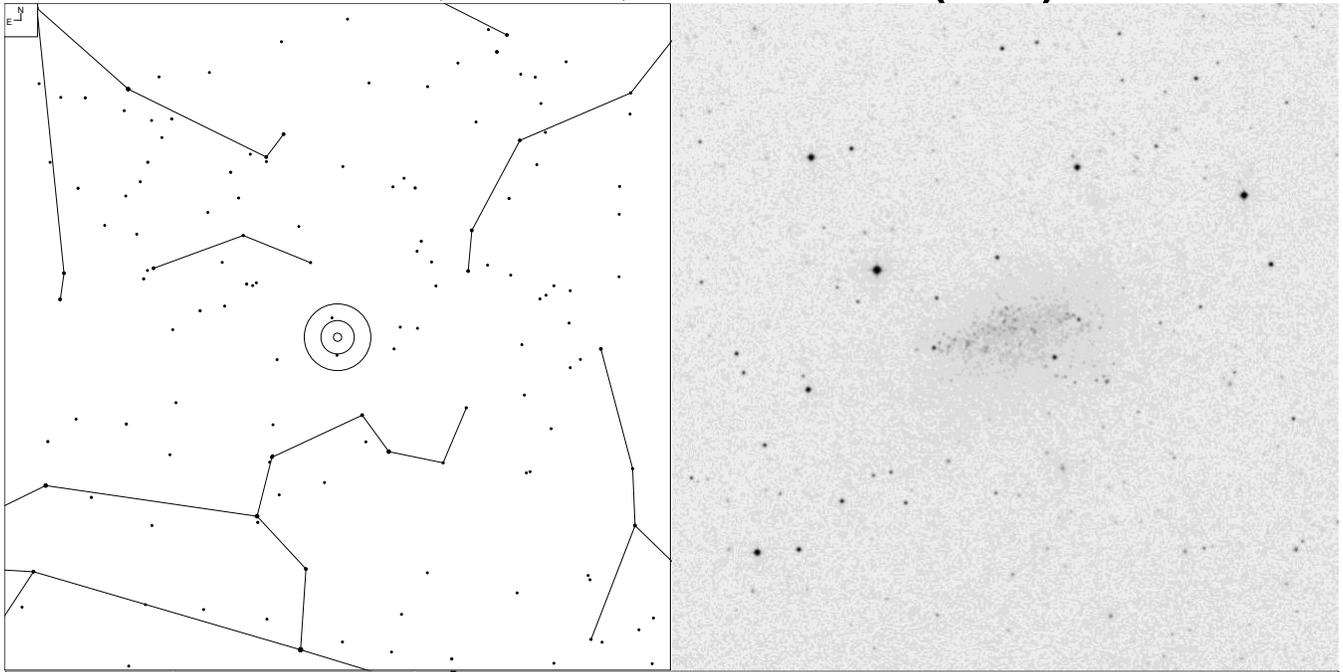
For a brief article "Hiding in Plain Sight – the Elusive Carina Dwarf Galaxy" (2011), see <https://www.eso.org/public/images/potw1126a/>

UGC 4879 (URSA Major)



RA	Dec	Type	Mag	Size	Distance	Urano
09 16 02	+52 50 42	IAm	13.2v	2.5 x 1.5'	4.2 mly	

Leo A, Leo III, UGC 5364 (Leo)

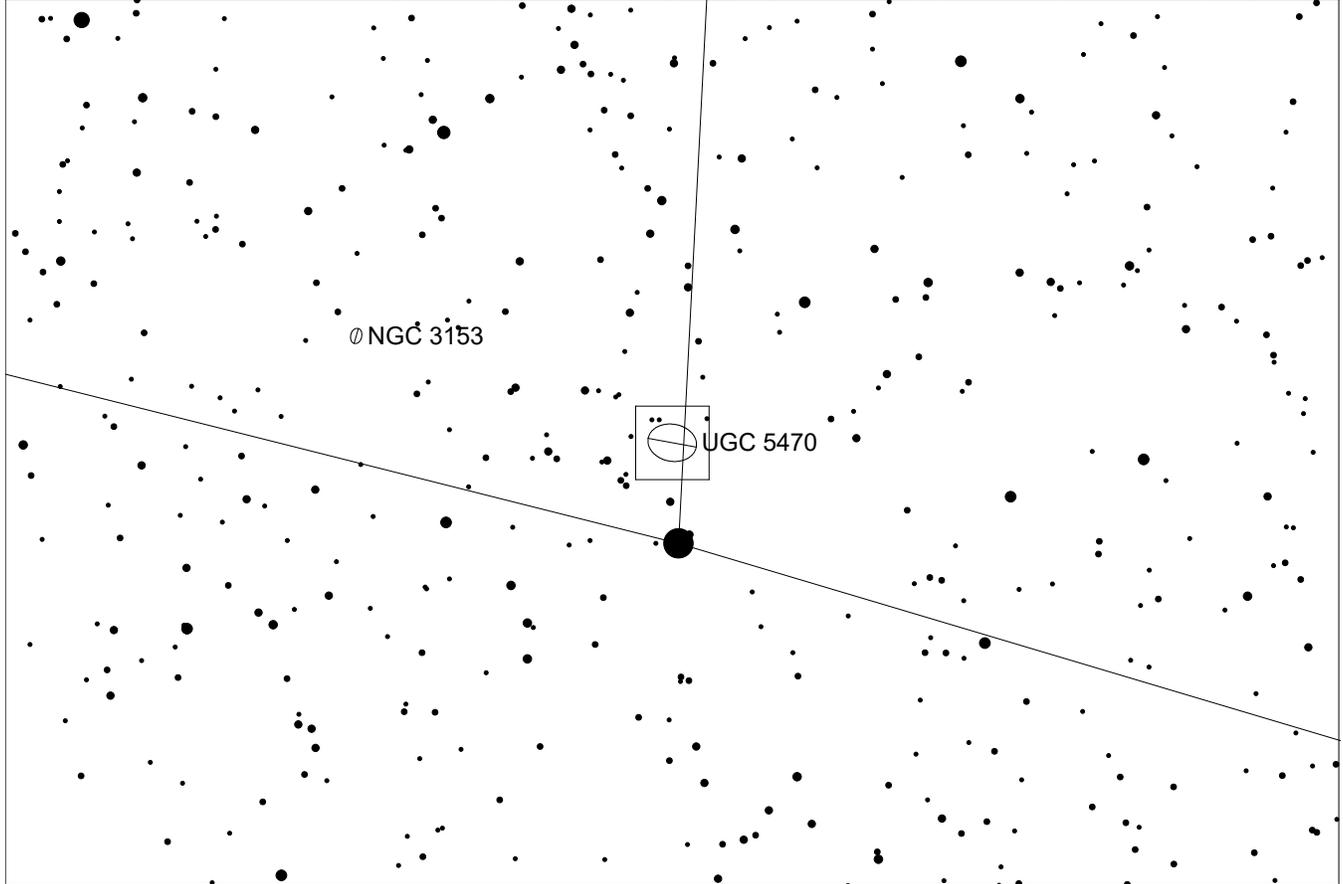
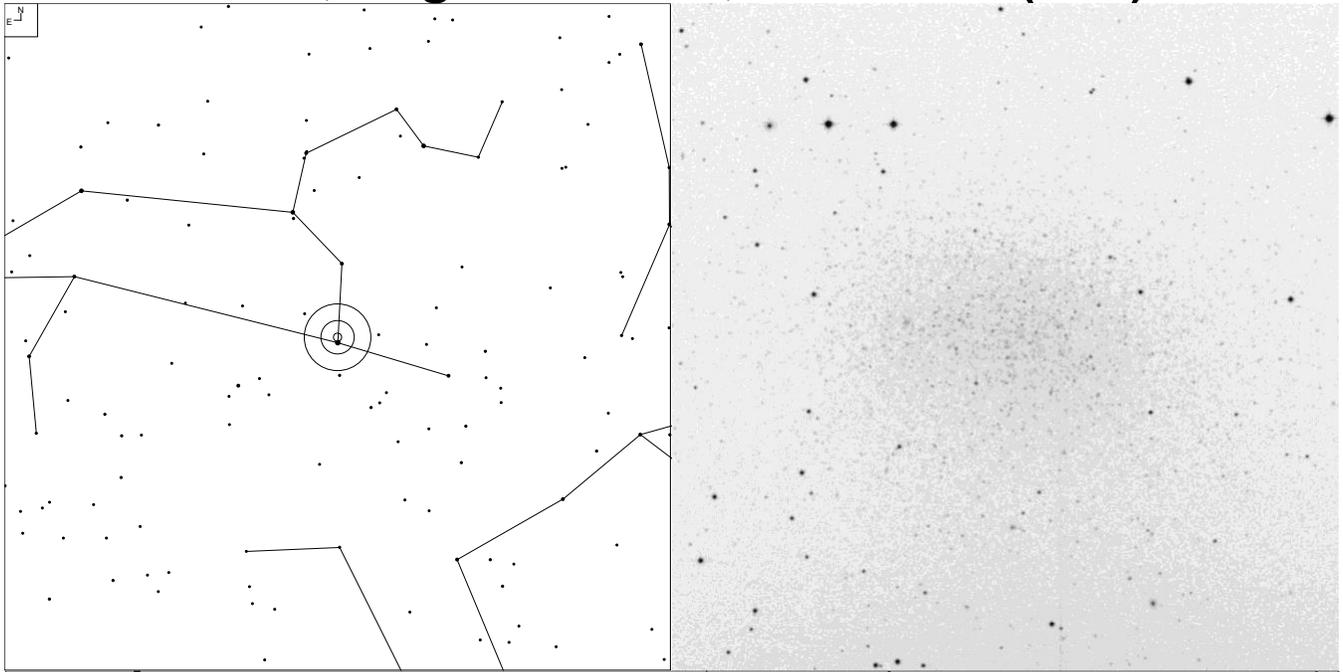


RA	Dec	Type	Mag	Size	Distance	Urano
09 59 25	+30 44 34	IBm V	13.2v	5.3 x 3.4'	2.5 mly	73L

SEDS Website: <http://spider.seds.org/spider/LG/leoA.html>

For a brief article "Hubble Peers into the Mouth of Leo A", see <https://science.nasa.gov/missions/hubble/hubble-peers-into-the-mouth-of-leo-a/>

Leo I, Regulus Dwarf, UGC 5470 (Leo)



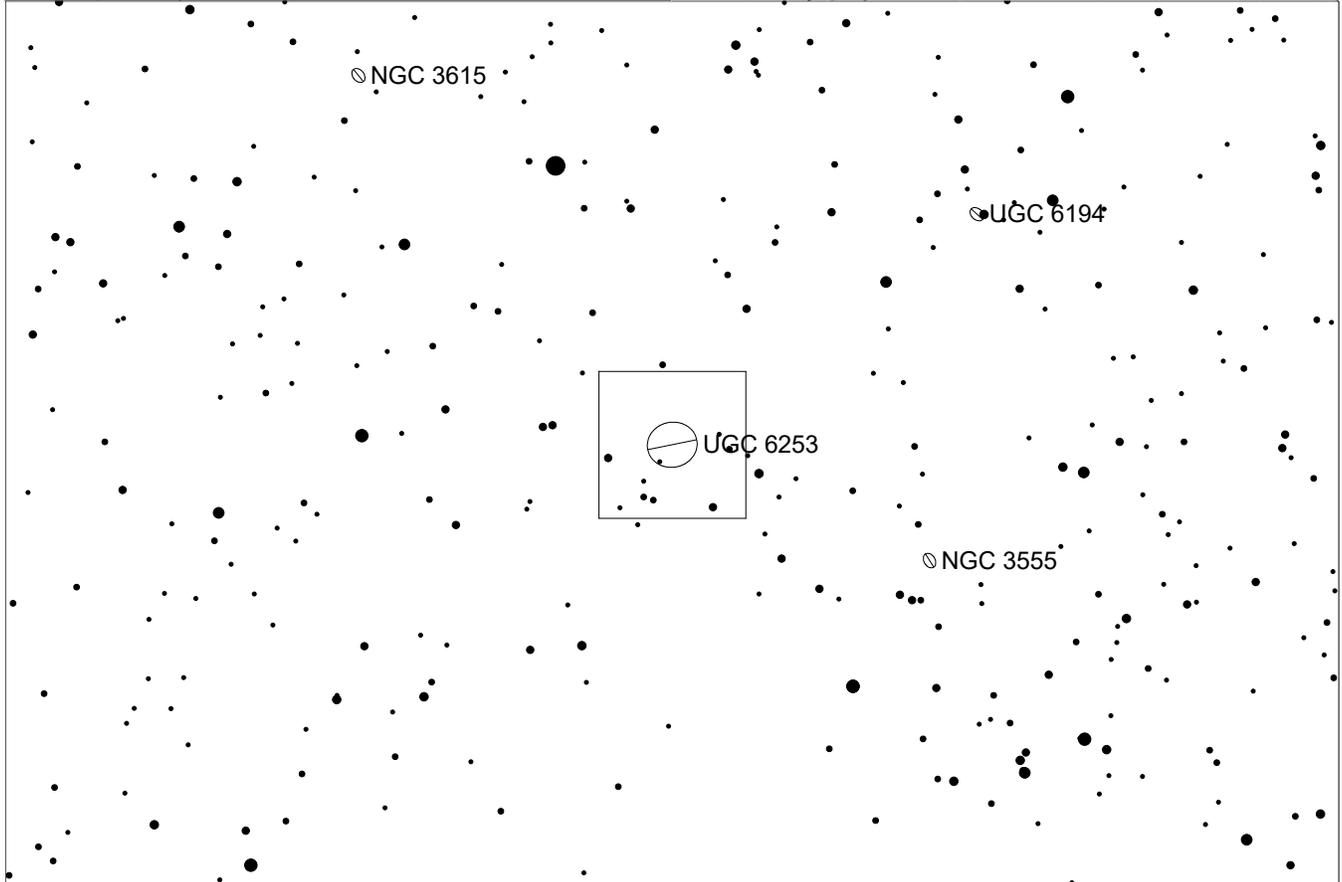
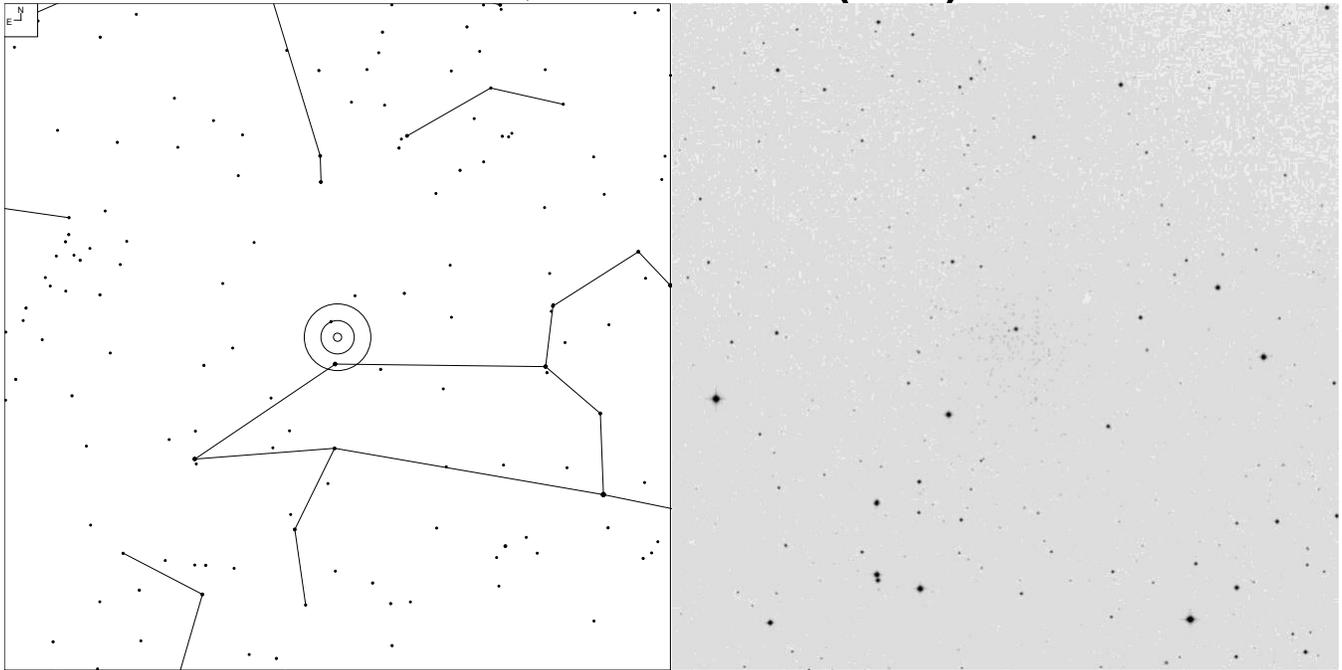
1	2	3	4	5	6	7	8	9	10	11	12	Galaxy
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RA	Dec	Type	Mag	Size	Distance	Urano
10 08 28	12 18 27	dE3	10.0v	5.1 x 3.5'	900 kly	93L

SEDS Website: <http://spider.seds.org/spider/LG/leo1.html>

Recent discovery of a massive black hole in Leo I: <https://www.sci.news/astronomy/dwarf-spheroidal-galaxy-leo-i-black-hole-10328.html>

Leo II, UGC 6253 (Leo)

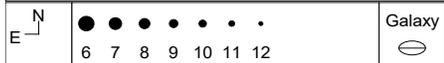
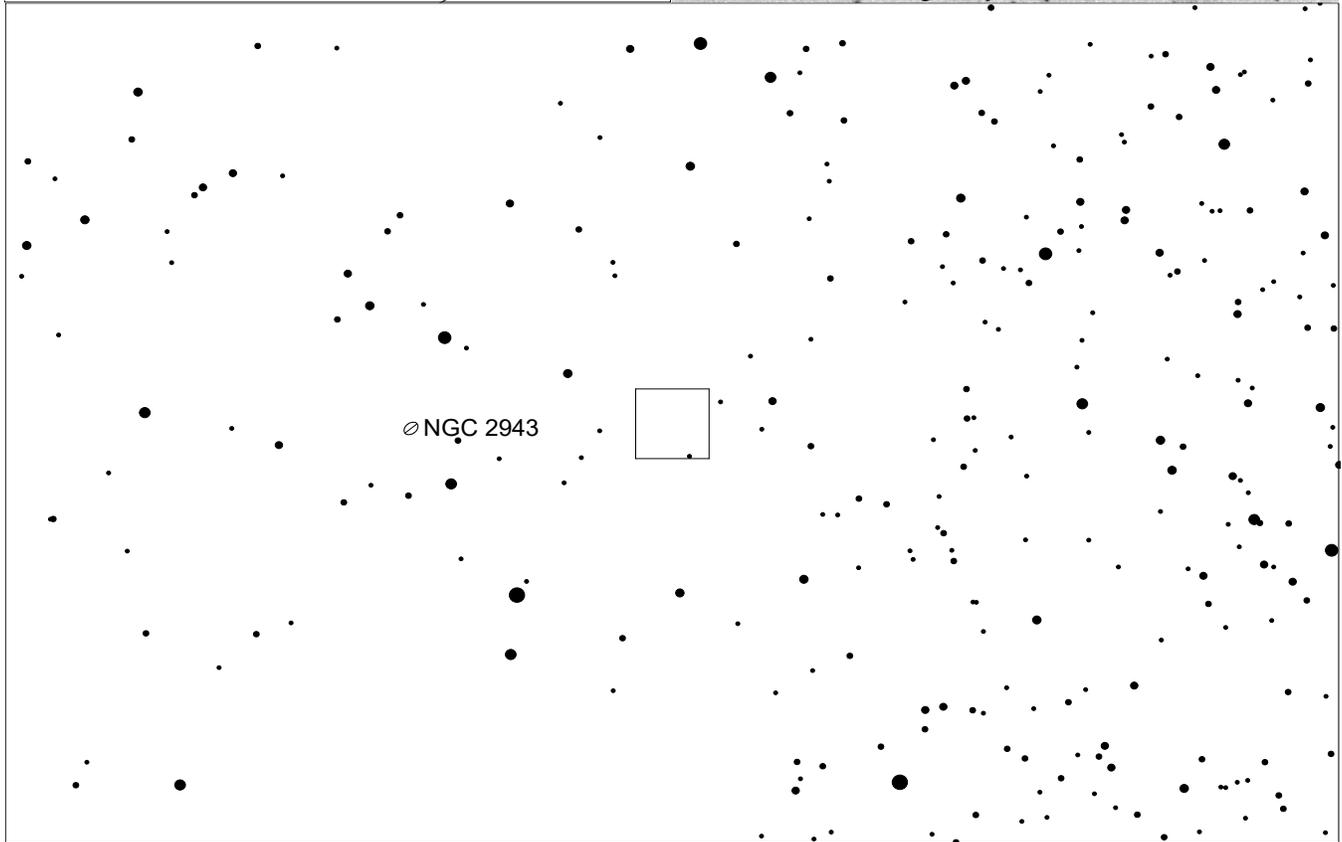
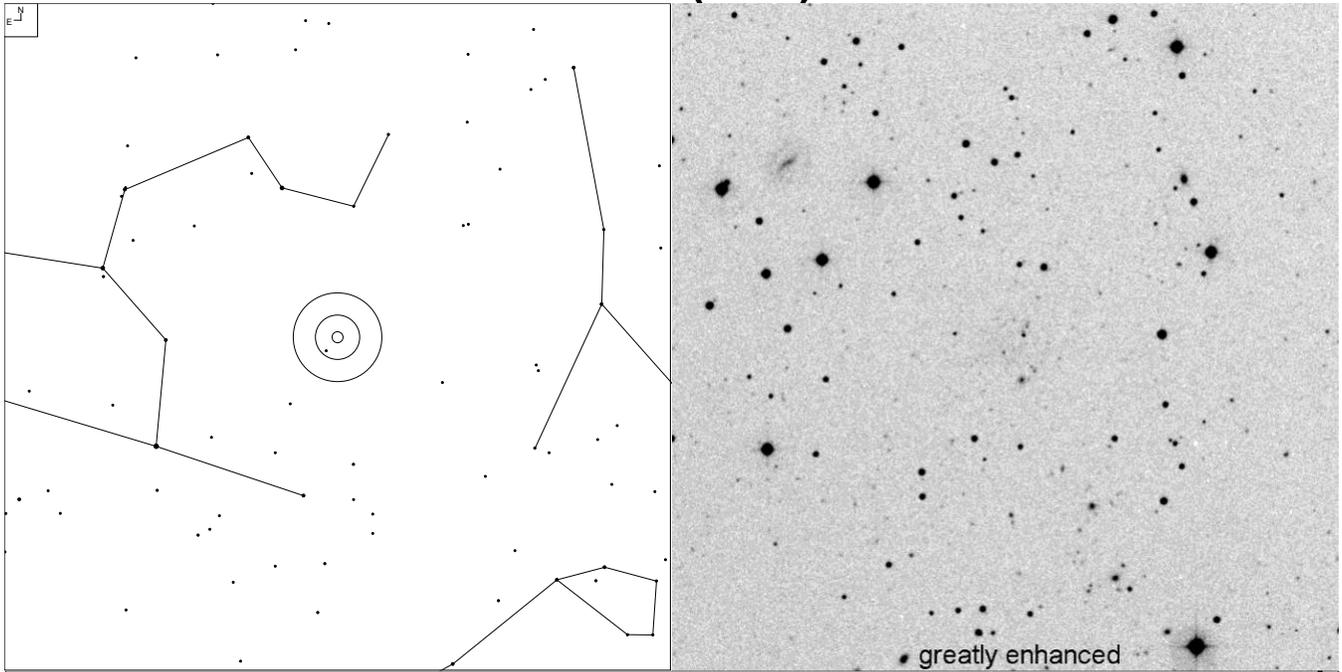


E ↙ N ↘	● ● ● ● ● ● ● ●	Galaxy ○
	5 6 7 8 9 10 11 12	

RA	Dec	Type	Mag	Size	Distance	Urano
11 13 29	+22 09 12	dE0 pec	12.0v	10.1 x 9.0'	750 kly	73L

SEDS Website: <http://spider.seds.org/spider/LG/leo2.html>

Leo T (Leo)

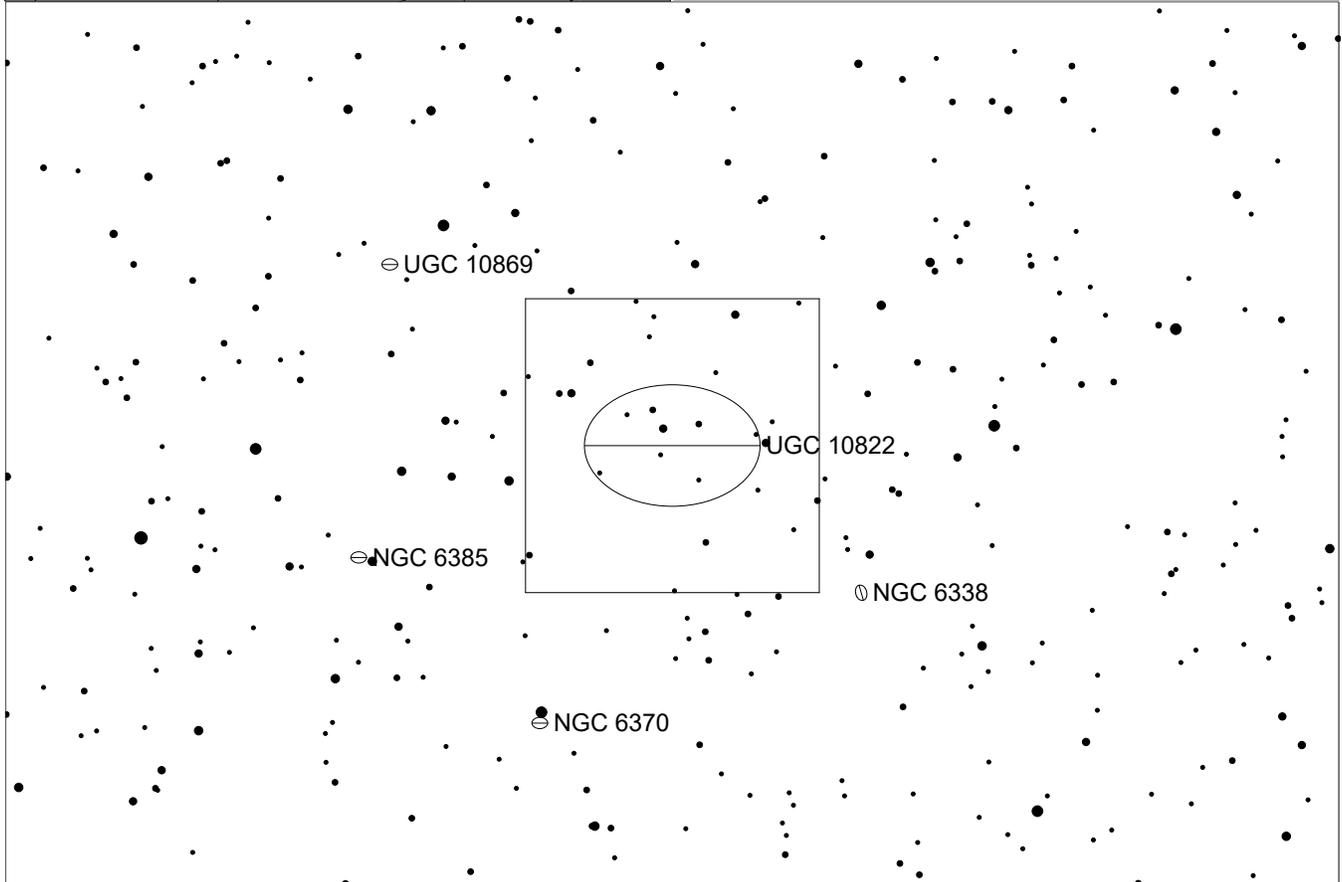
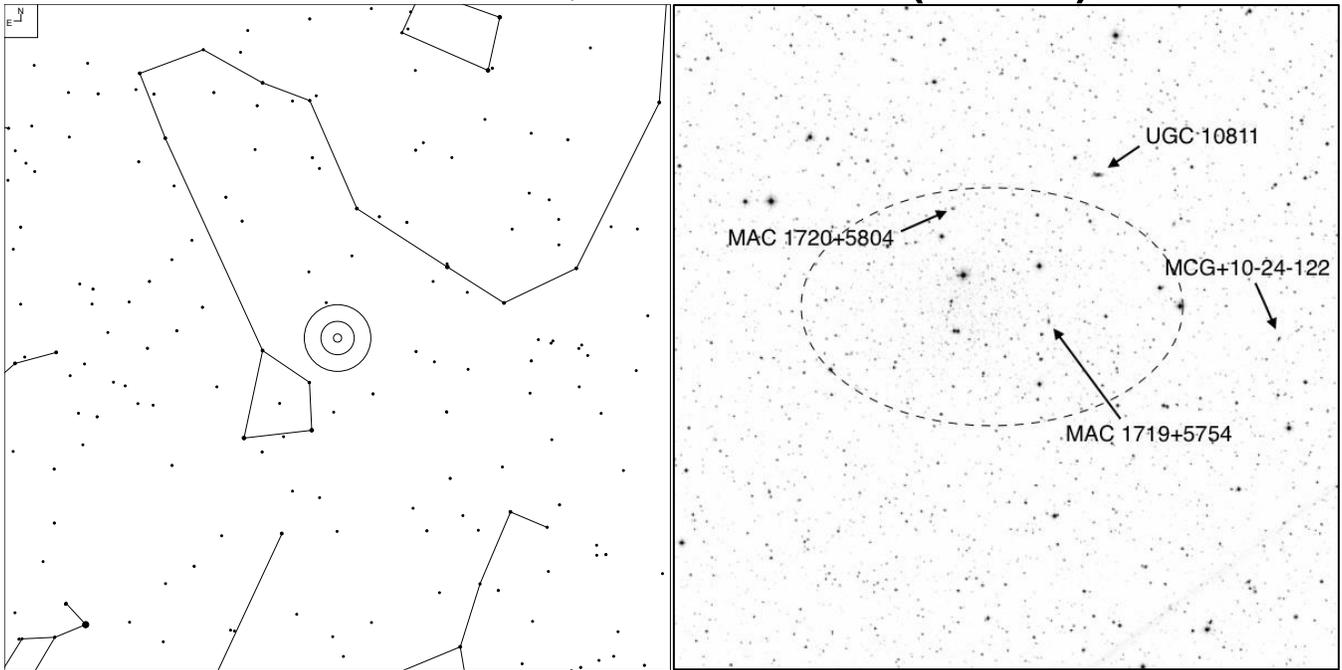


RA	Dec	Type	Mag	Size	Distance	Urano
09 34 51	+17 03 02	dSph	15.1v	1.4 x 1.4'	1.4 mly	93R

SEDs Website: <http://spider.seds.org/spider/LG/leoT.html>

For a journal article discussing star formation in the faintest known star-forming galaxy, see Daniel R. Weisz, Daniel B Zucker, et al, "The Star Formation History of Leo I from Hubble Space Telescope Imaging," *The Astrophysical Journal* Vol 748, No. 2 (April 2012): 88-93

Draco Dwarf, UGC 10822 (Draco)



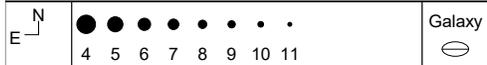
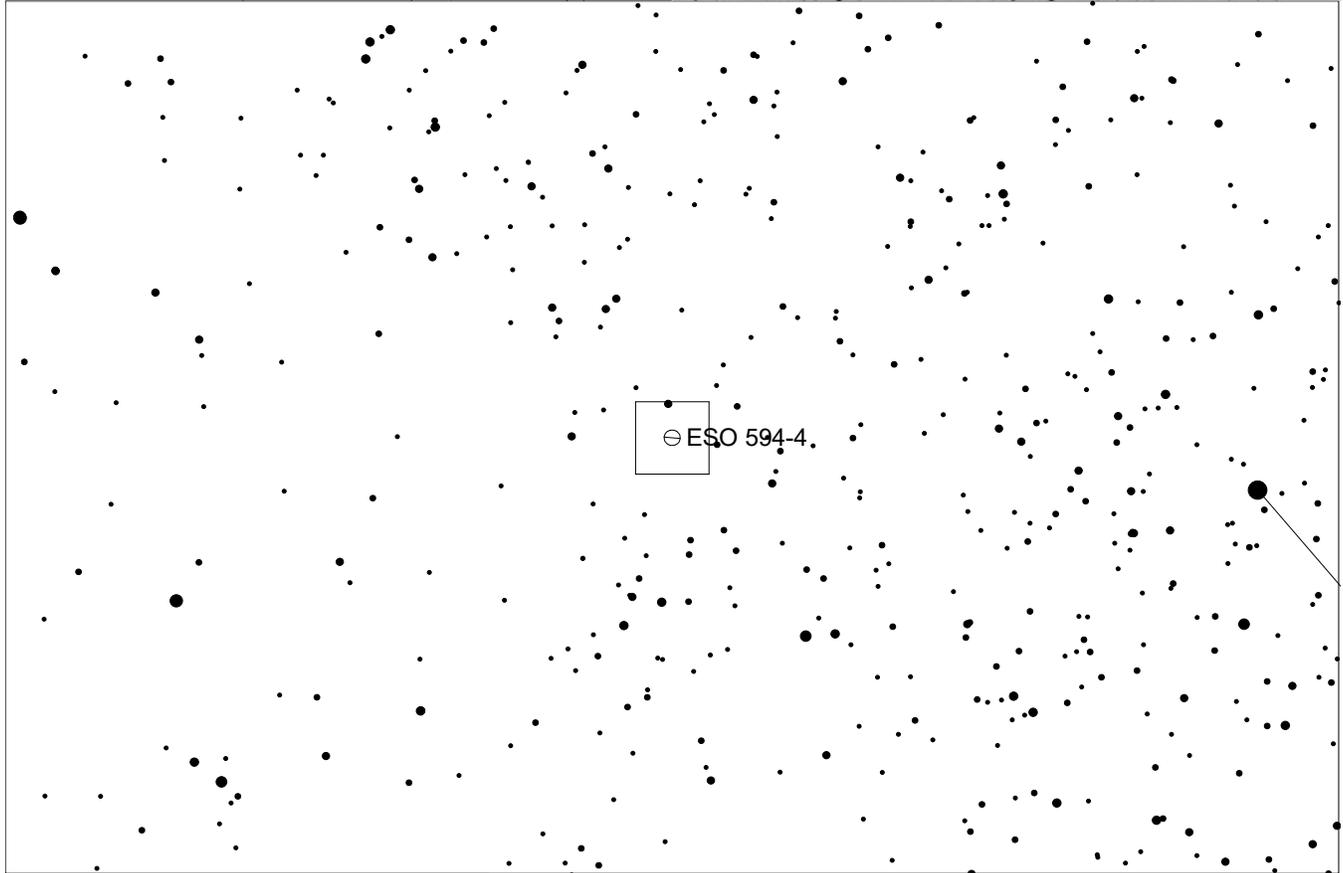
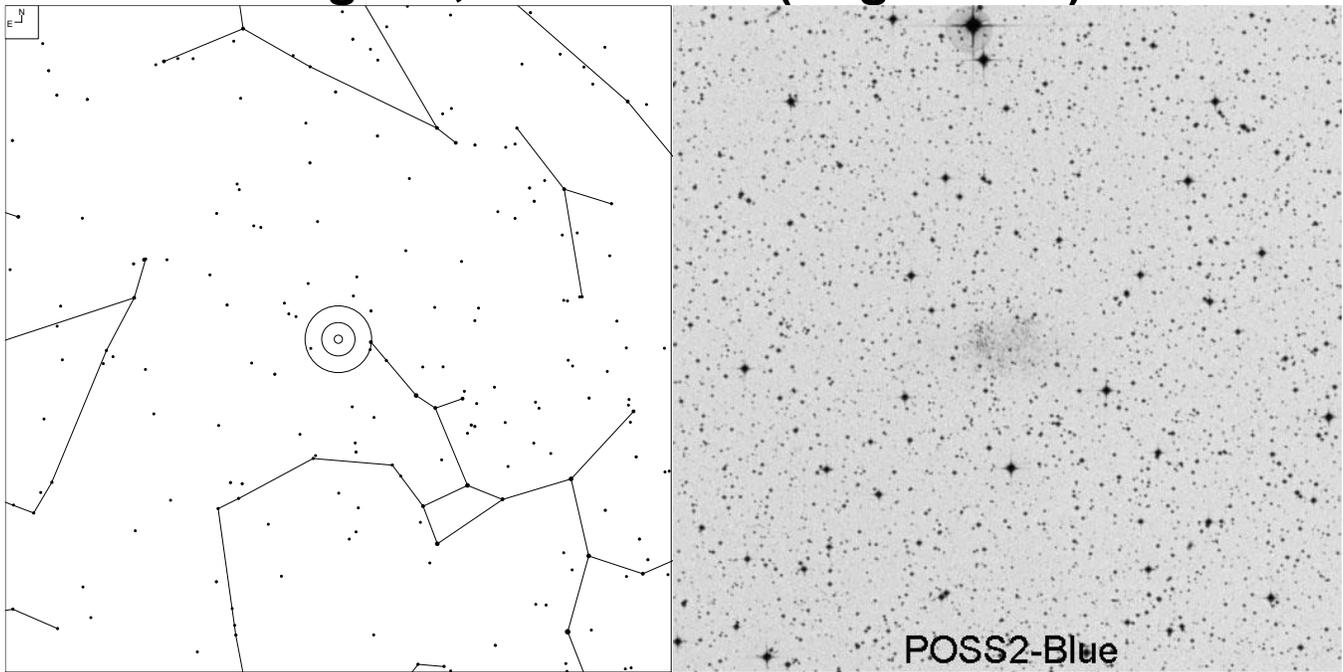
6 7 8 9 10 11

Galaxy

RA	Dec	Type	Mag	Size	Distance	Urano
17 20 08	+57 54 58	dE0 pec	10.6v	35.5 x 24.5'	280 kly	21R

SEDS Website: http://spider.seds.org/spider/LG/dra_dw.html

SagDIG, ESO 594-4 (Sagittarius)

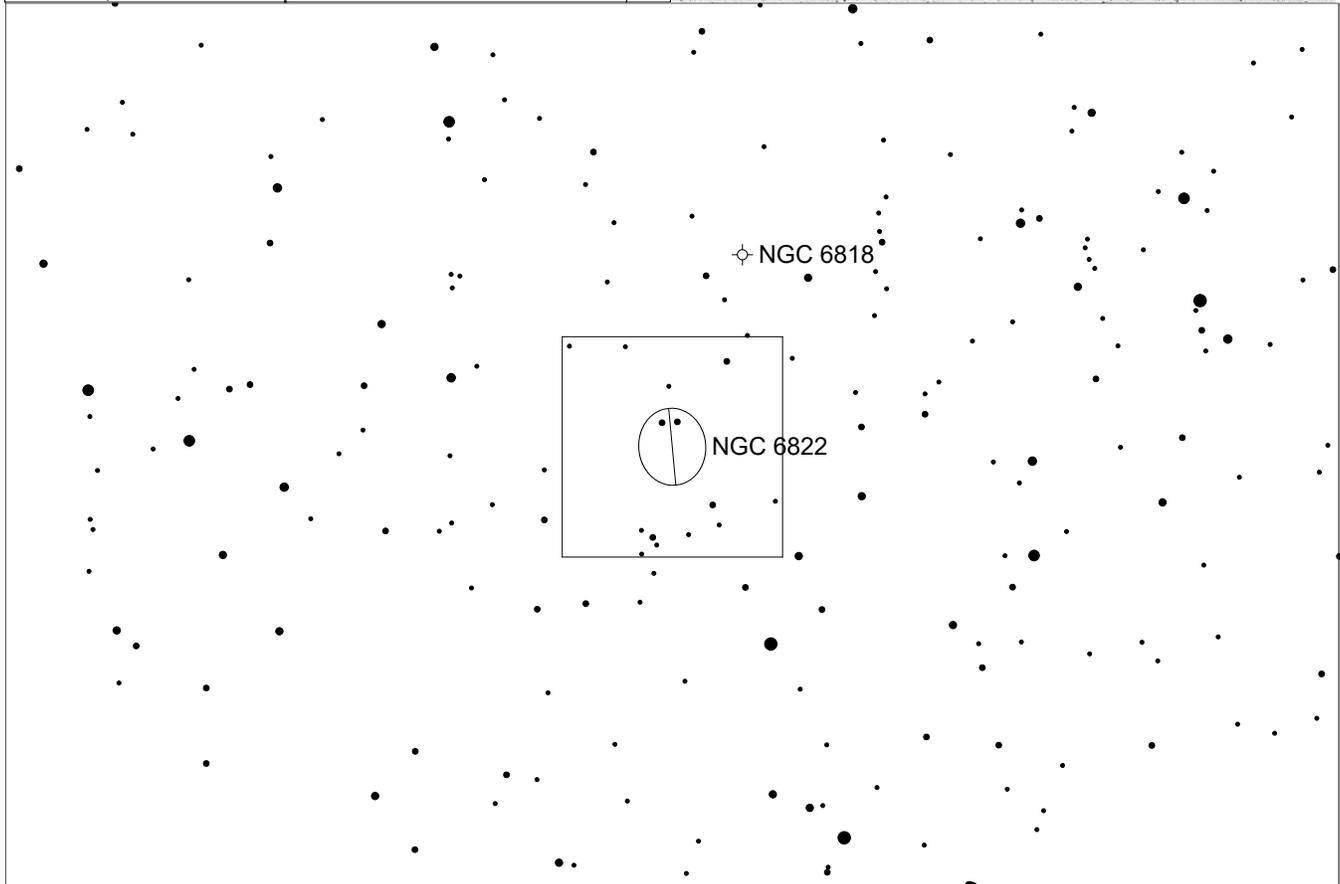
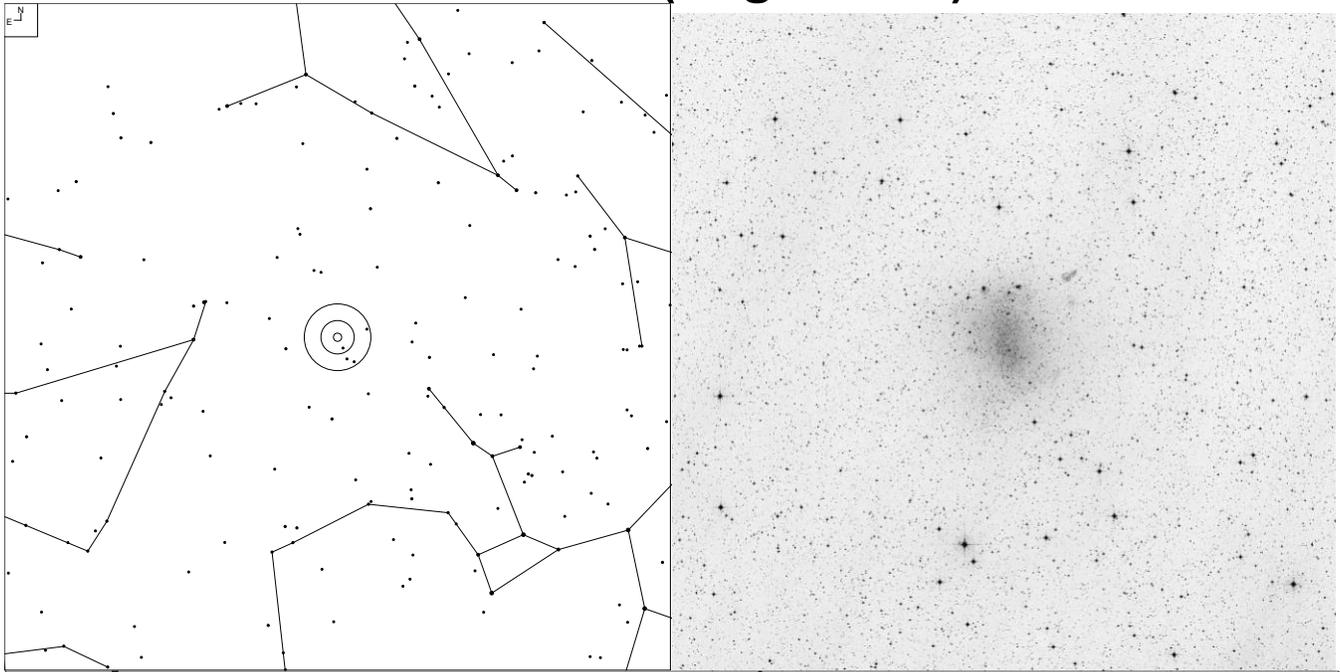


RA	Dec	Type	Mag	Size	Distance	Urano
19 29 59	-17 40 42	Ir V	13.6v	3.2 x 1.5'	4.2 mly	144R

SEDS Website: <http://spider.seds.org/spider/LG/sdig.html>

For a Hubble image of SagDIG (2004), see <https://hubblesite.org/contents/media/images/2004/31/1603-Image.html>

NGC 6822 (Sagittarius)



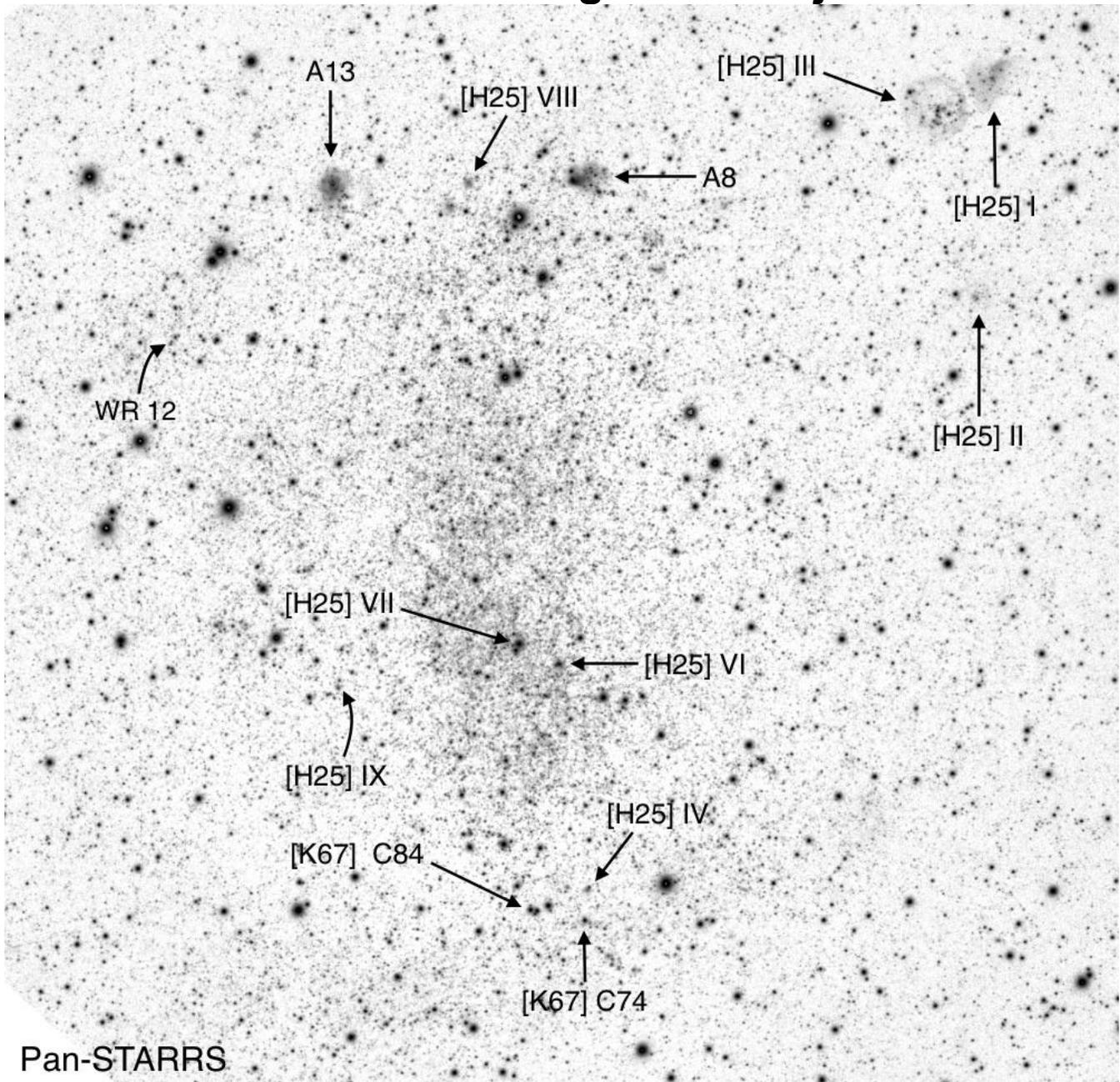
5 6 7 8 9 10 11

Galaxy Planetary

RA	Dec	Type	Mag	Size	Distance	Urano
19 44 56	-14 48 11	IB(s)m	8.1v	15.6 x 13.5'	1.8 mly	126R

SEDS Website: <http://spider.seds.org/spider/LG/n6822.html>

NGC 6822's Extragalactic Objects



Pan-STARRS

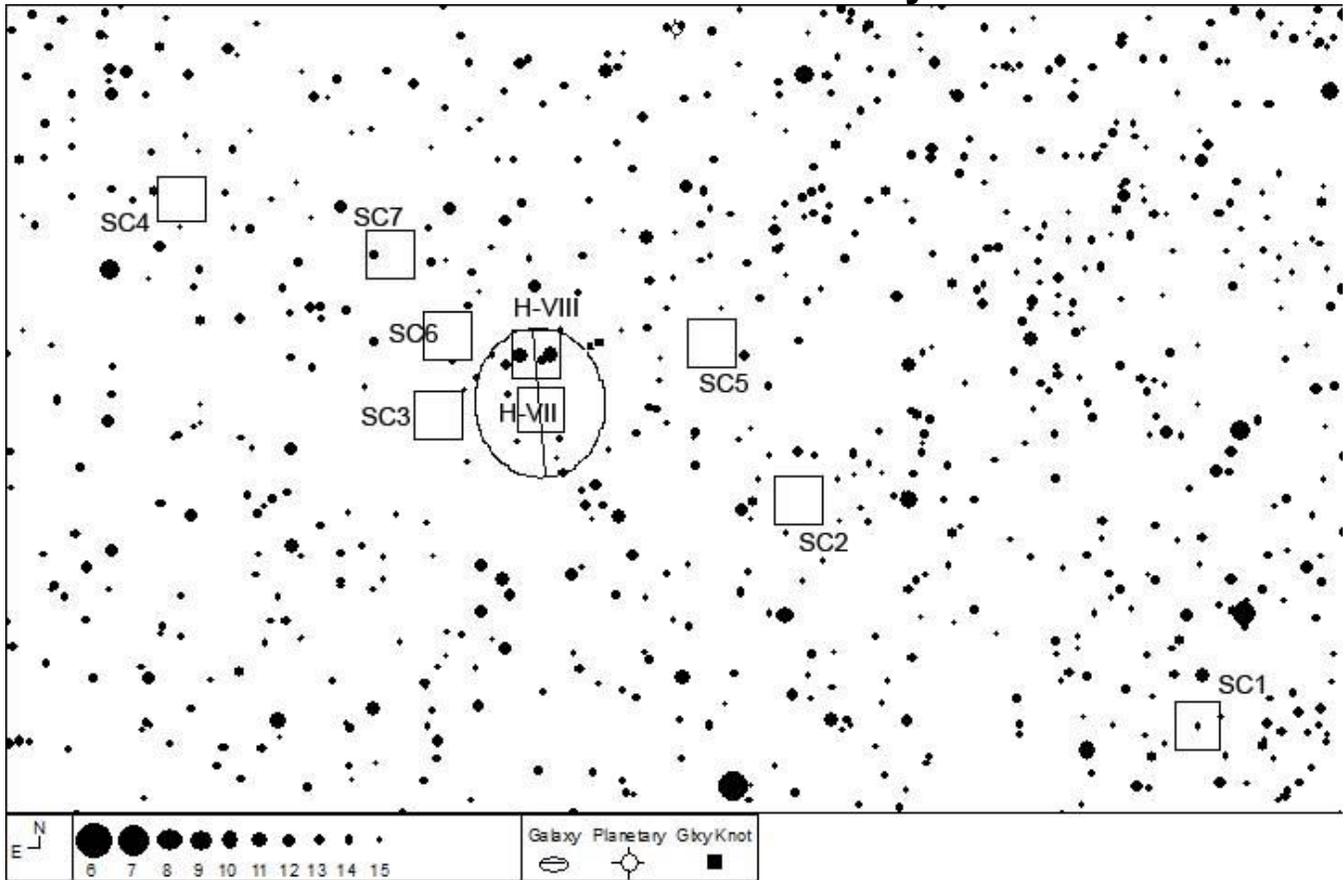
Object	Type	RA	Dec	Mag	Object	Type	RA	Dec	Mag
[H25] I ²³	H II	19 44 31.4	-14 41 56	15.0b	[K67] C84	Star	19 44 55.1	-14 52 13	16.0v
[H25] II	H II	19 44 32.0	-14 44 38	-	[H25] VII	GC	19 44 55.8	-14 48 56	15.9v
[H25] III	H II	19 44 34.3	-14 42 19	14.2	[H25] VIII	GC	19 44 58.3	-14 43 14	17.9v
[H25] IV	H II	19 44 52.2	-14 51 58	-	[H25] IX	GC	19 45 05.0	-14 49 29	18.6
[K67] C74 ²⁴	Star	19 44 52.3	-14 52 21	16.5v	A13 = [H25] X	OB	19 45 05.2	-14 43 15	-
A8 = [H25] V	OB	19 44 52.4	-14 43 10	-	WR 12 ²⁵	WR	19 45 13.5	-14 45 13	19.0v
[H25] VI	GC	19 44 53.6	-14 49 11	16.3v					

²³ For [H25] designation, see Edwin P. Hubble, "NGC 6822, A Remote Stellar System," *Astrophysical Journal* Vol 62 (1925): 409-433

²⁴ For [K67] designation of NGC 6822's stars, see S.E. Kayser, "Photometry of the Nearby Irregular Galaxy NGC 6822," *Astronomical Journal* Vol 72 (1967): 134-148

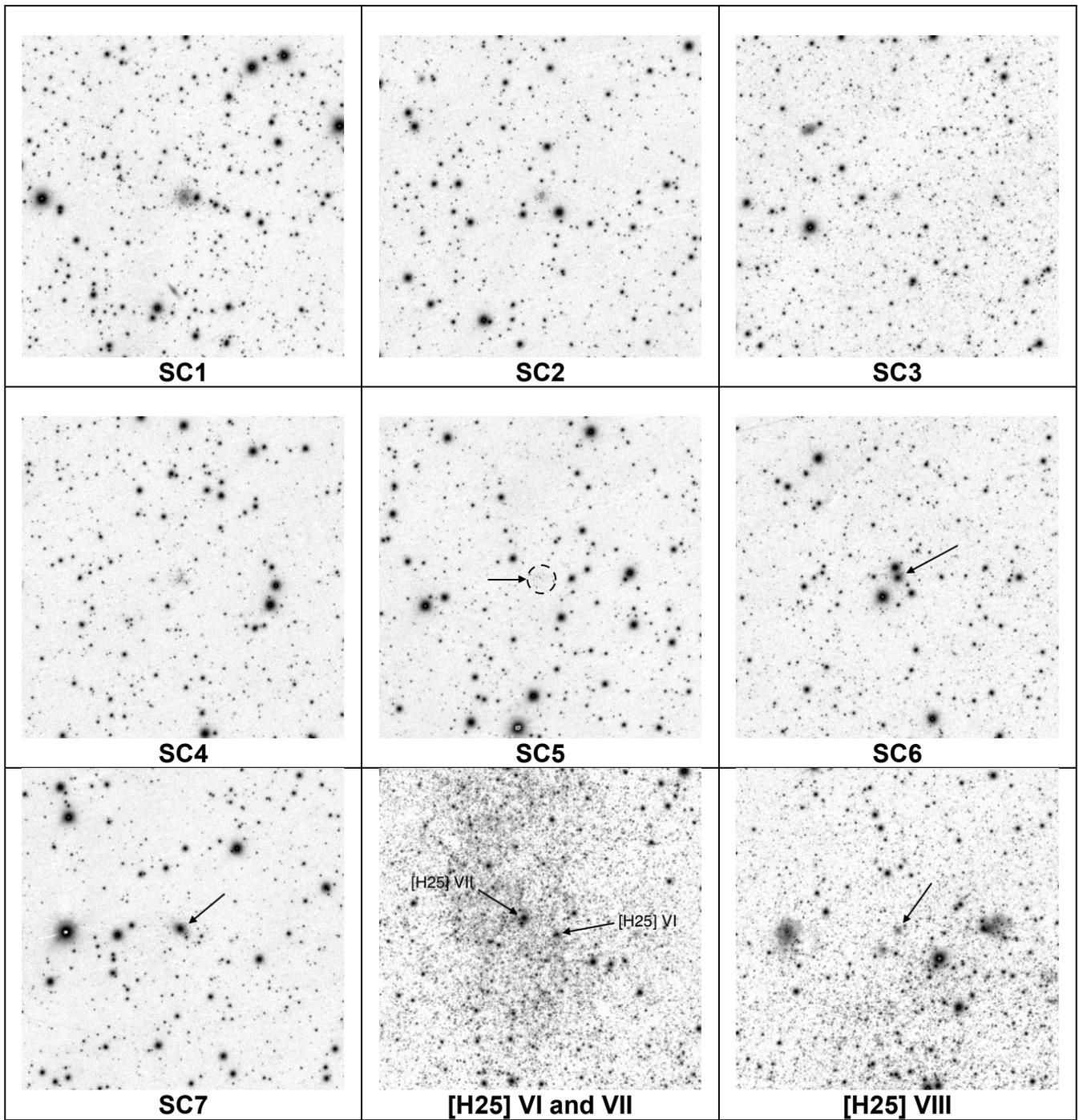
²⁵ WR 12 is the brightest Wolf-Rayet star of NGC 6822. The full name is [AM85] NGC 6822 12. See T.E. Armandroff and P. Massey, "Wolf-Rayet Stars in NG 6822 and IC 1613," *Astrophysical Journal* Vol 291 (1985): 685-692

NGC 6822 Globular Cluster System



Name ²⁶	RA	Dec	Size (")	Mag
SC1	19 40 11.9	-15 21 47	3.7	16.4g
SC2	19 43 04.5	-14 58 21	7.0	18.3g
SC3	19 45 40.2	-14 49 26	8.0	19.2g
SC4	19 47 30.4	-14 26 49	3.0	18.2g
SC5	19 43 42.3	-14 42 00	8.0	-
SC6	19 45 37.0	-14 41 11	7.5	-
SC7	19 46 00.7	-14 32 35	4.7	-
[H25] VI	19 44 53.6	-14 49 11	-	16.3v
[H25] VII	19 44 55.8	-14 48 56	5.0	15.9v
[H25] VIII	19 44 58.3	-14 43 14	-	17.9v

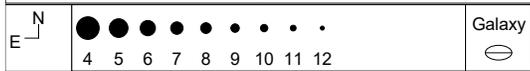
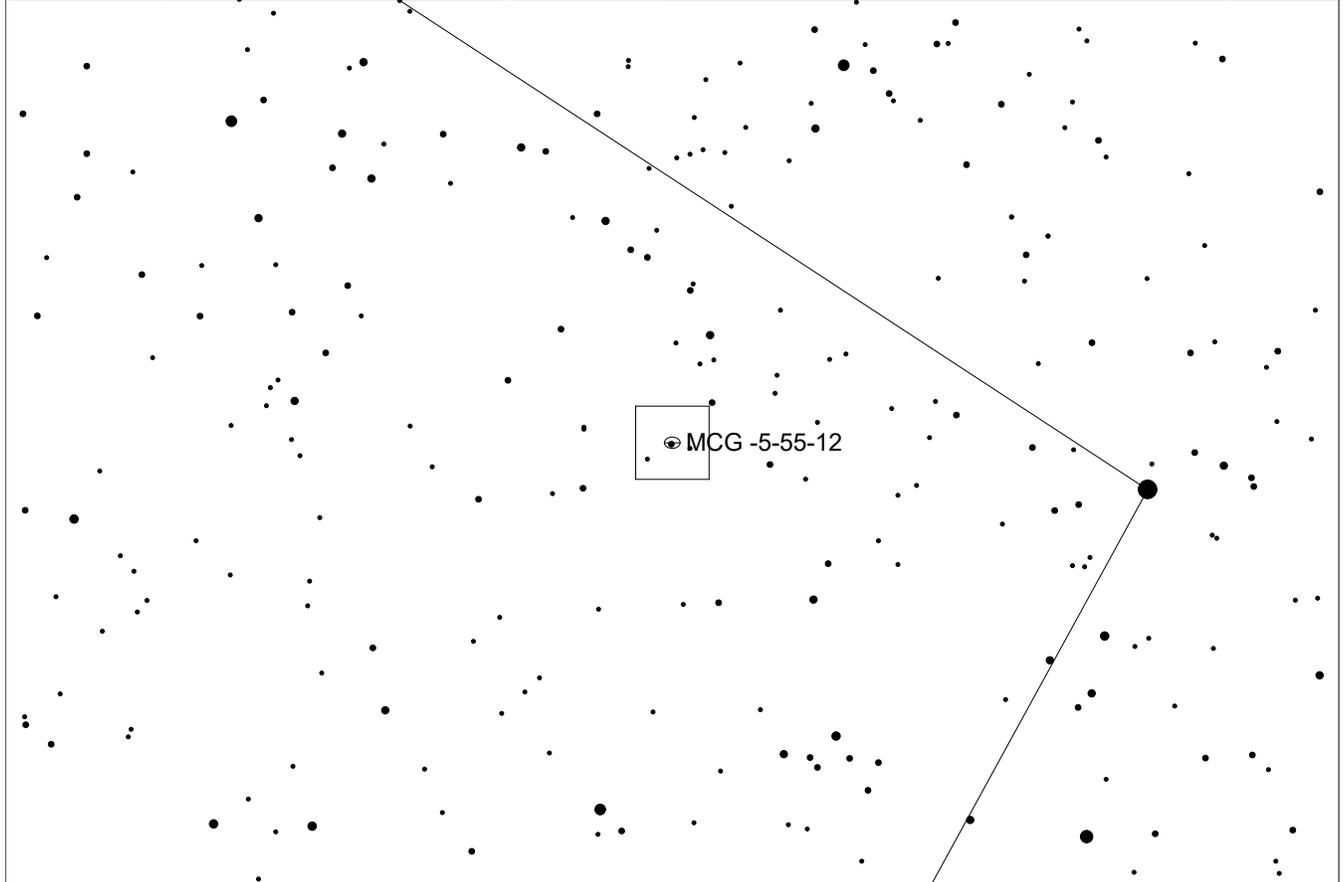
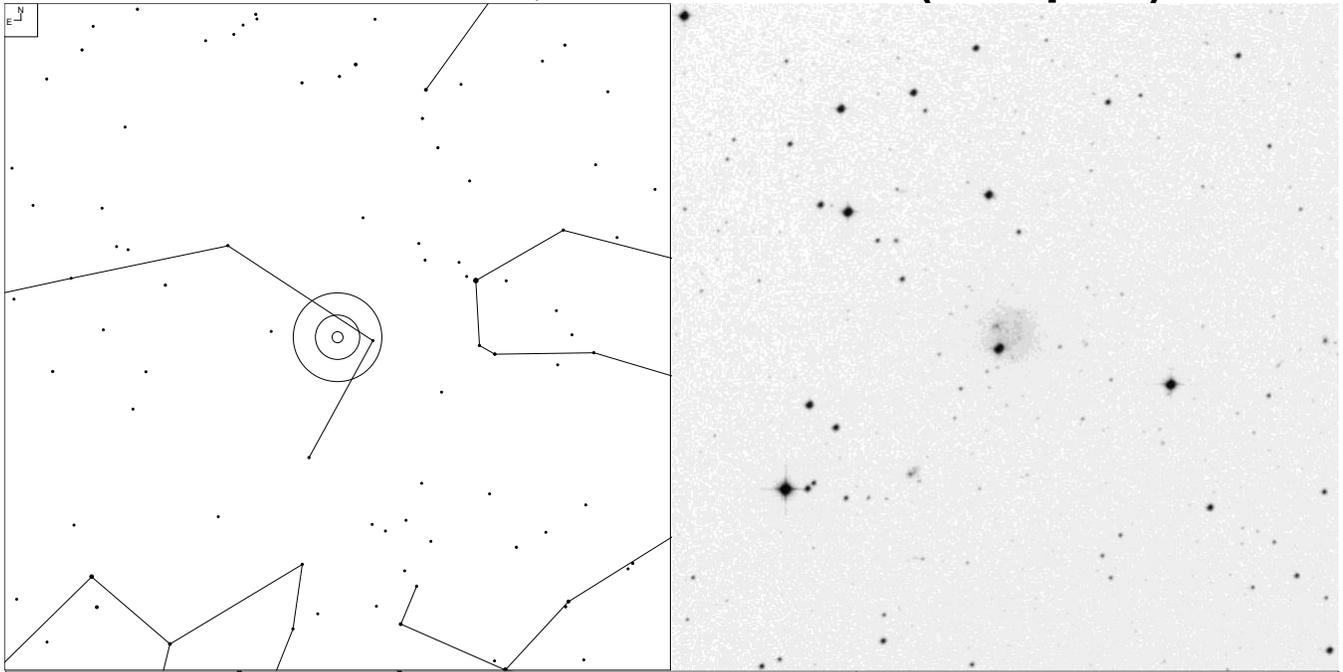
²⁶ See J. Veljanoski, A. M. N. Ferguson, et al., "The Globular Cluster System of NGC 6822," *Monthly Notices of the Royal Astronomical Society* Vol 452, Iss 1 (Sept 2015): 320-332. Thanks to Steve Gottlieb for posting this on CloudyNights.com



Images from Pan-STARRS and 5' across.

“Just Outside the Local Group” Atlas

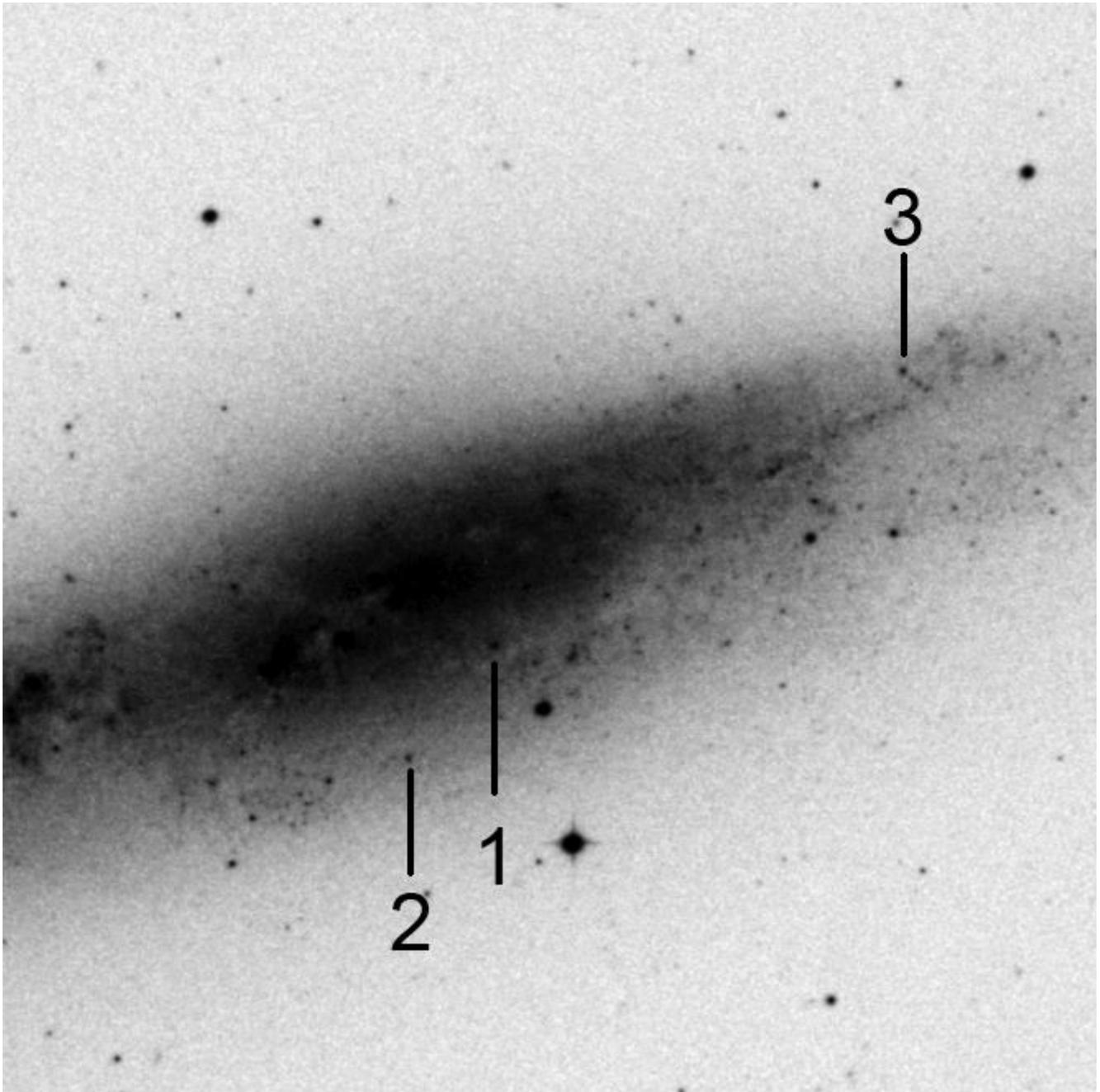
UKS 2323-326, MCG-5-55-12 (Sculptor)



RA	Dec	Type	Mag	Size	Distance	Urano
23 26 27	-32 23 17	IB(s)m pec	14.2v	1.5 x 1.5'	4.7 mly	159R

SEDS Website: <http://spider.seds.org/spider/LG/uks2323-326.html>

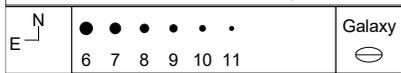
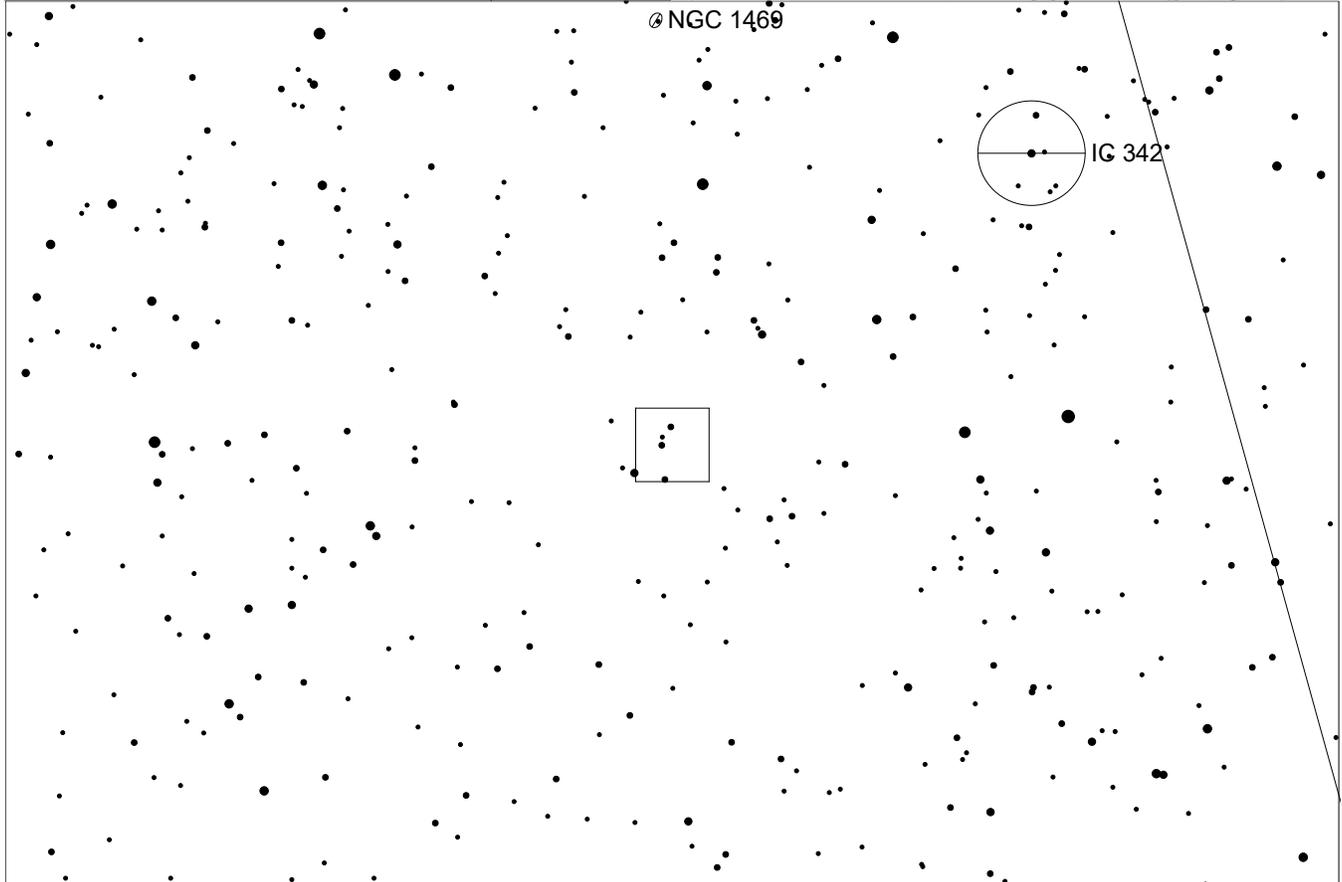
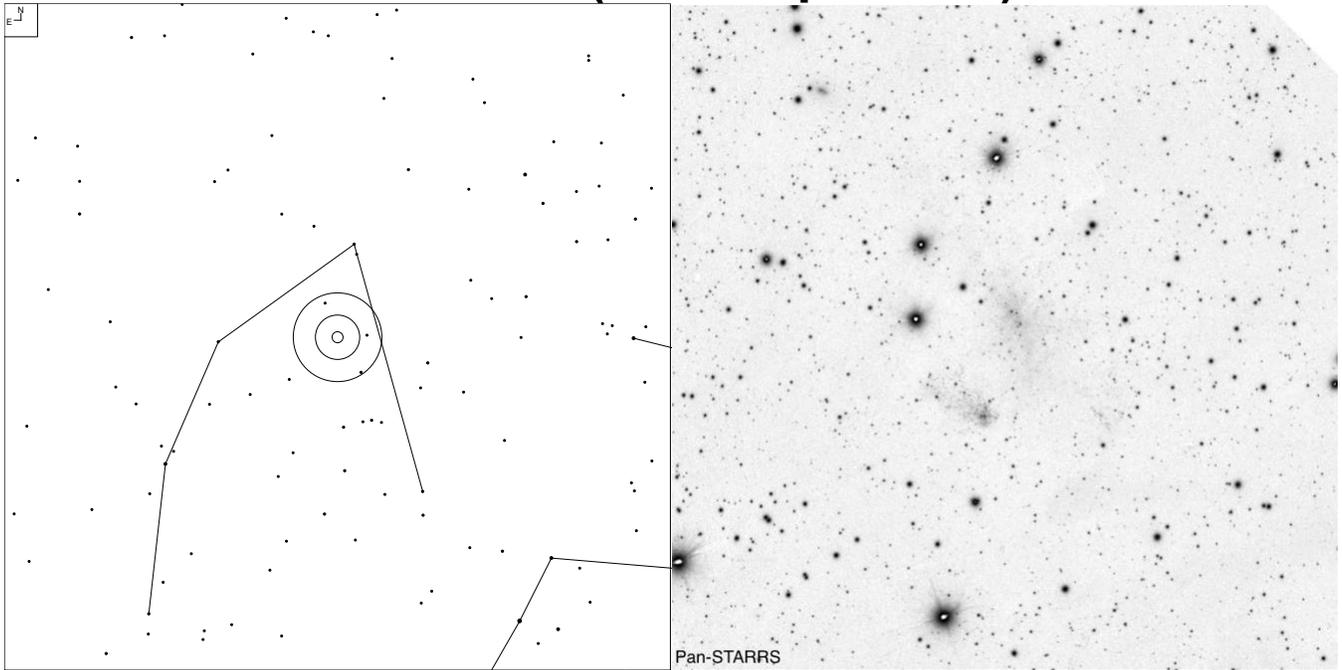
Globular Clusters of NGC 55



Object ²⁷	RA	Dec	Mag	Size
1	00 14 49	-39 12 31	17.0	-
2	00 14 54	-39 13 40	17.8	-
3	00 14 27	-39 09 51	17.8	-

²⁷ For a journal article discussing globular clusters in NGC 55, see G. S. Da Costa and J. A. Graham, "Globular clusters in the sculptor group Galaxy NGC 55," *Astrophysical Journal Part 1*. Vol. 261 (Oct. 1, 1982): 70, 71, 73-76.

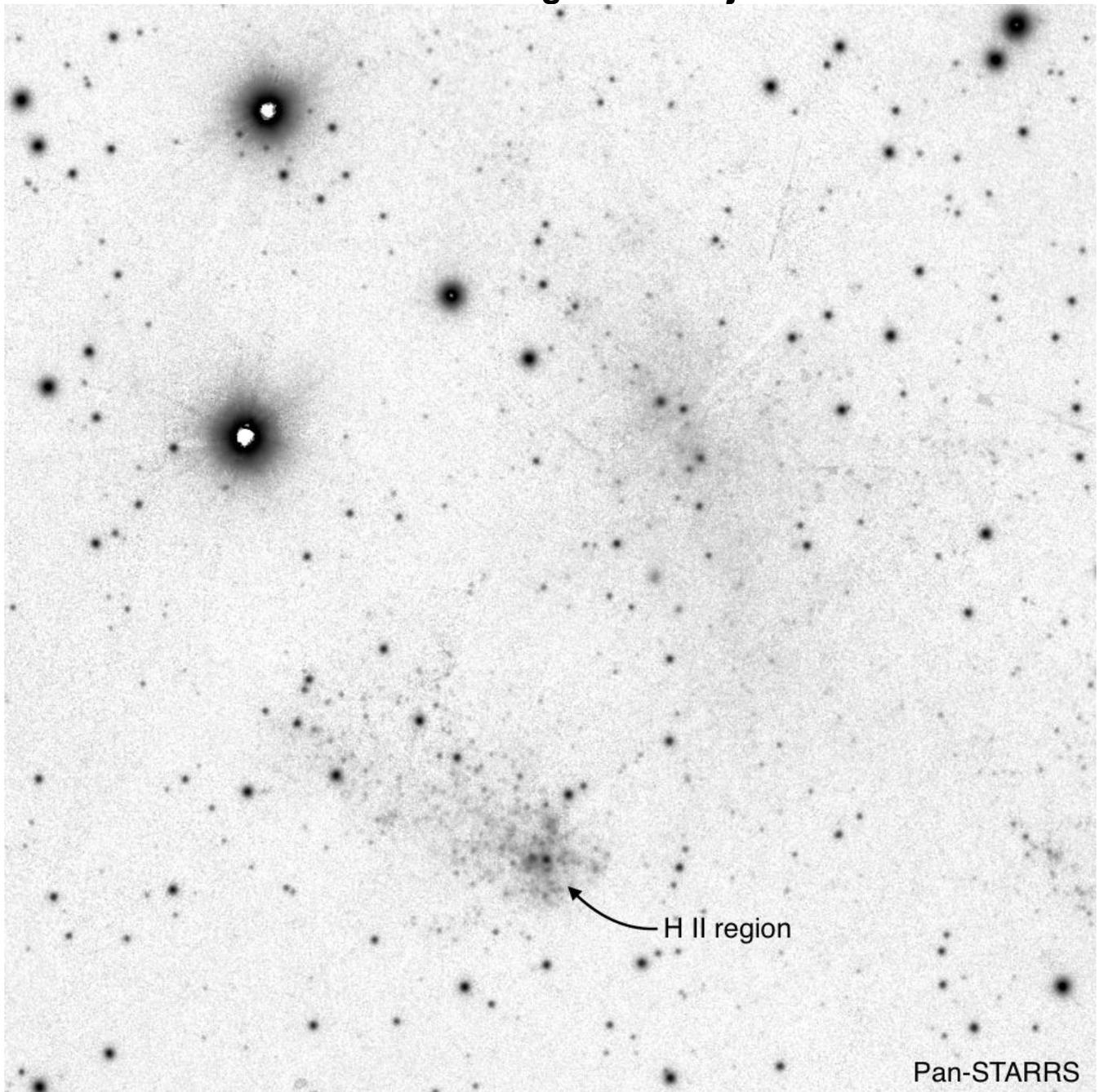
UGCA 86 (Camelopardalis)



RA	Dec	Type	Mag	Size	Distance	Urano
03 59 51	+67 08 35	Irr? S0?	14.2v	5.4 x 3.5'	6.2 mly	16R

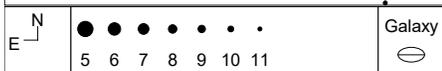
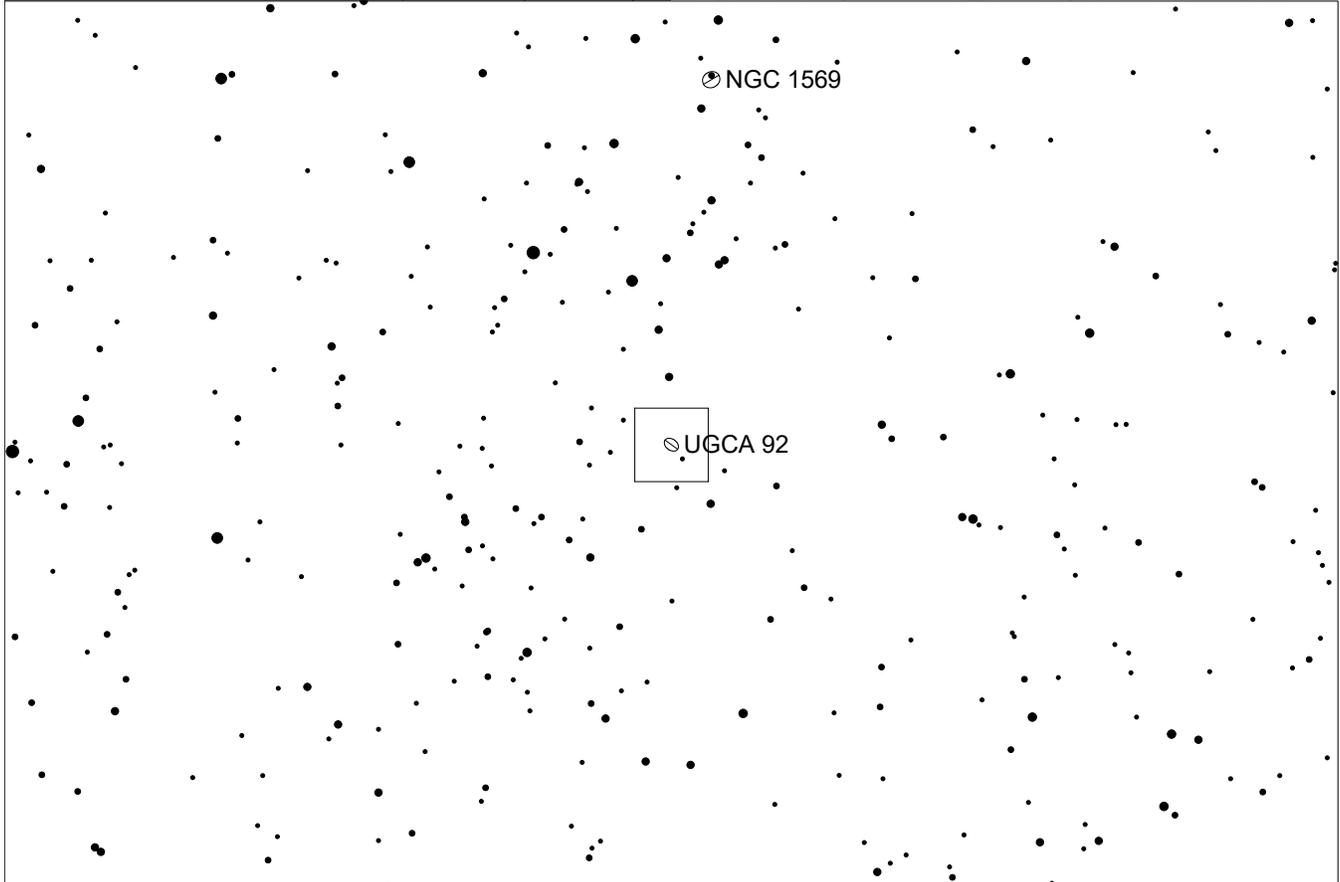
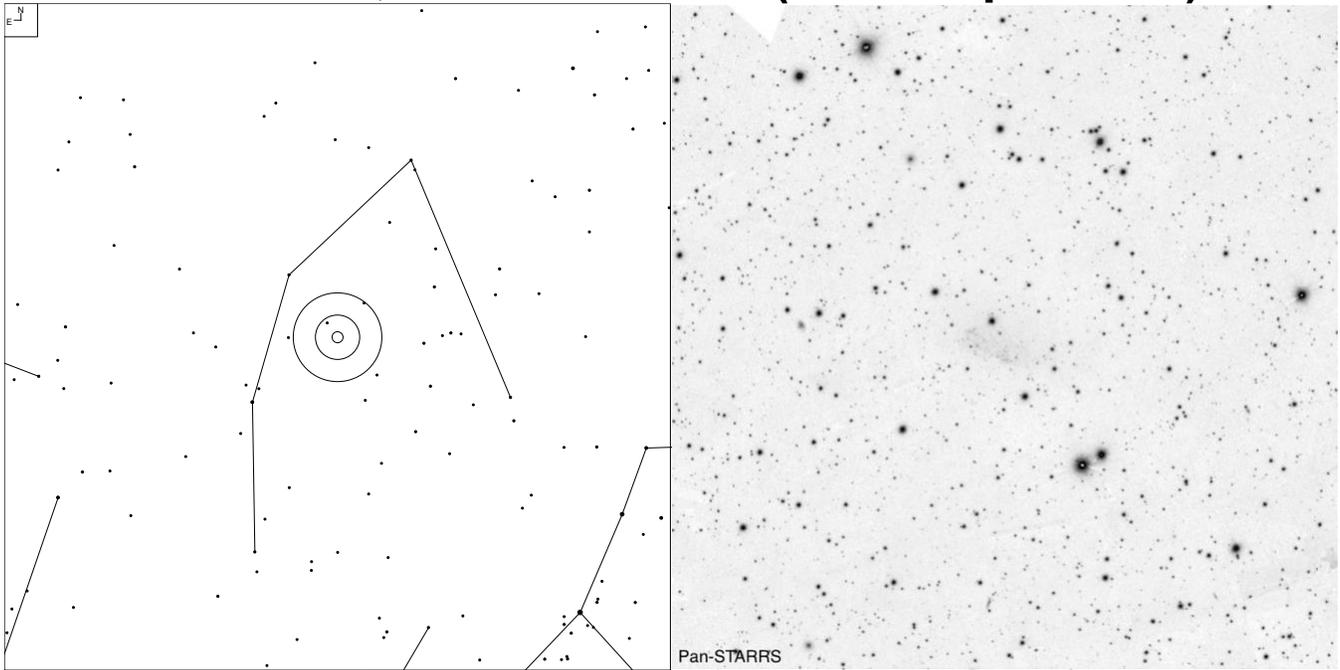
SEDS Website: <http://spider.seds.org/spider/LG/ua86.html>

UGCA 86 Extragalactic Objects



Paul Hodge and Bryan W. Miller, "H II Regions in Four Galaxies in and Near the Local Group," *Astrophysical Journal* Vol 451 (Sept 1995): 176-187

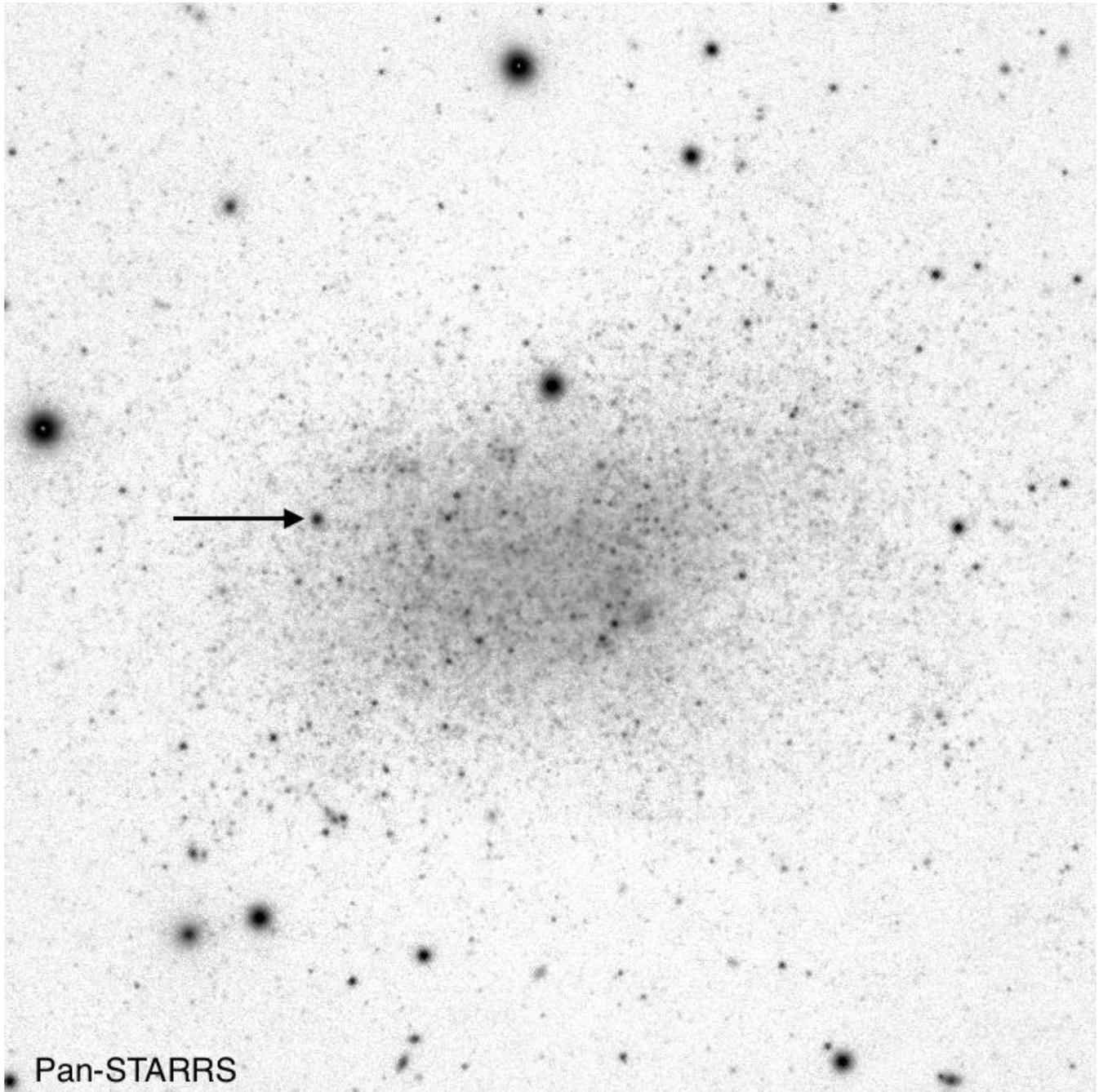
UGCA 92, EGB 0427+63 (Camelopardalis)



RA	Dec	Type	Mag	Size	Distance	Urano
04 32 06	+63 36 57	Irr? S0?	16.2b	2.0 x 1.0'	4.7 mly	16R

SEDs Website: <http://spider.seds.org/spider/LG/ua92.html>

Globular Cluster in Sextans B

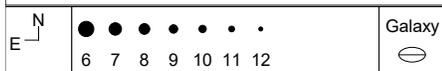
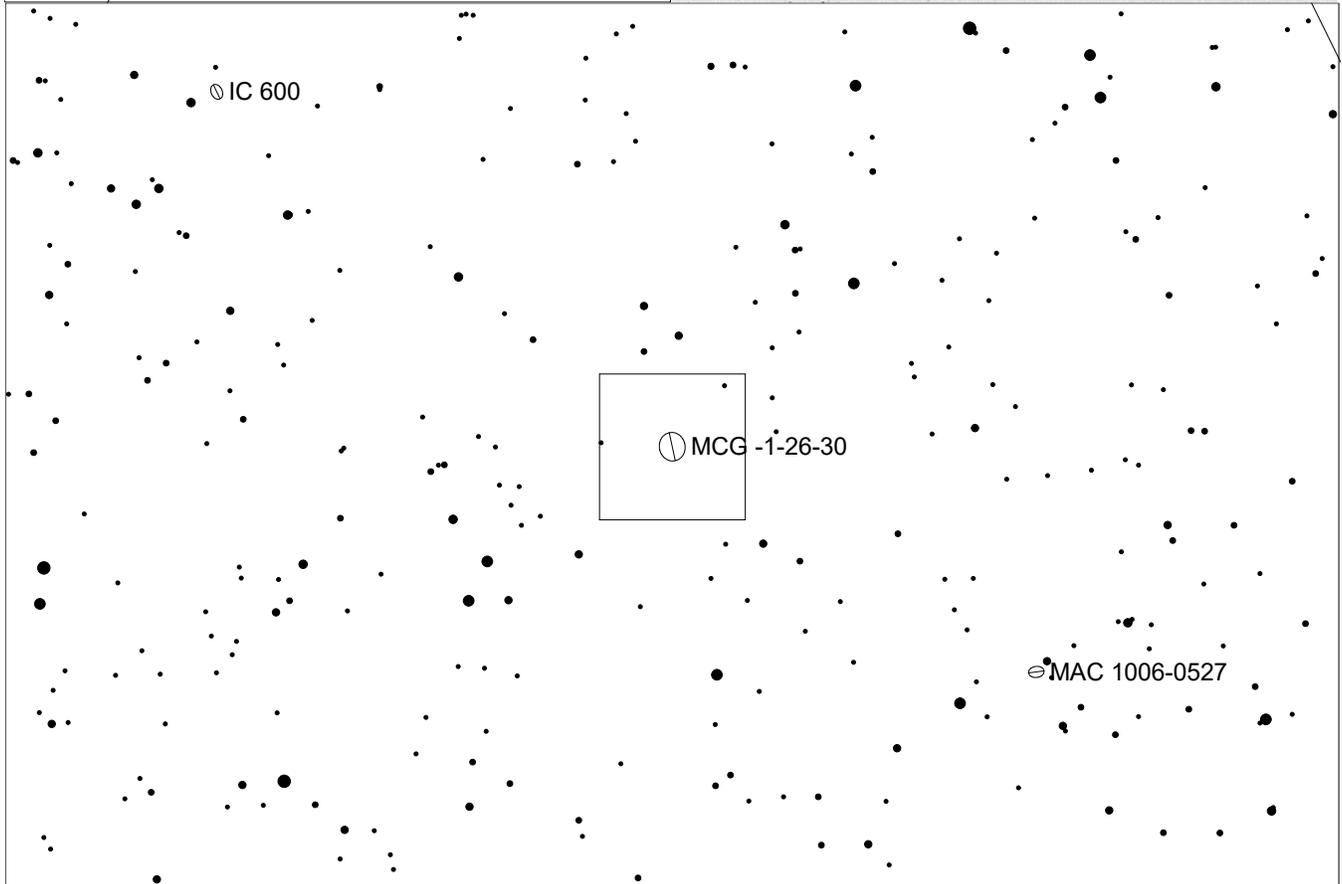
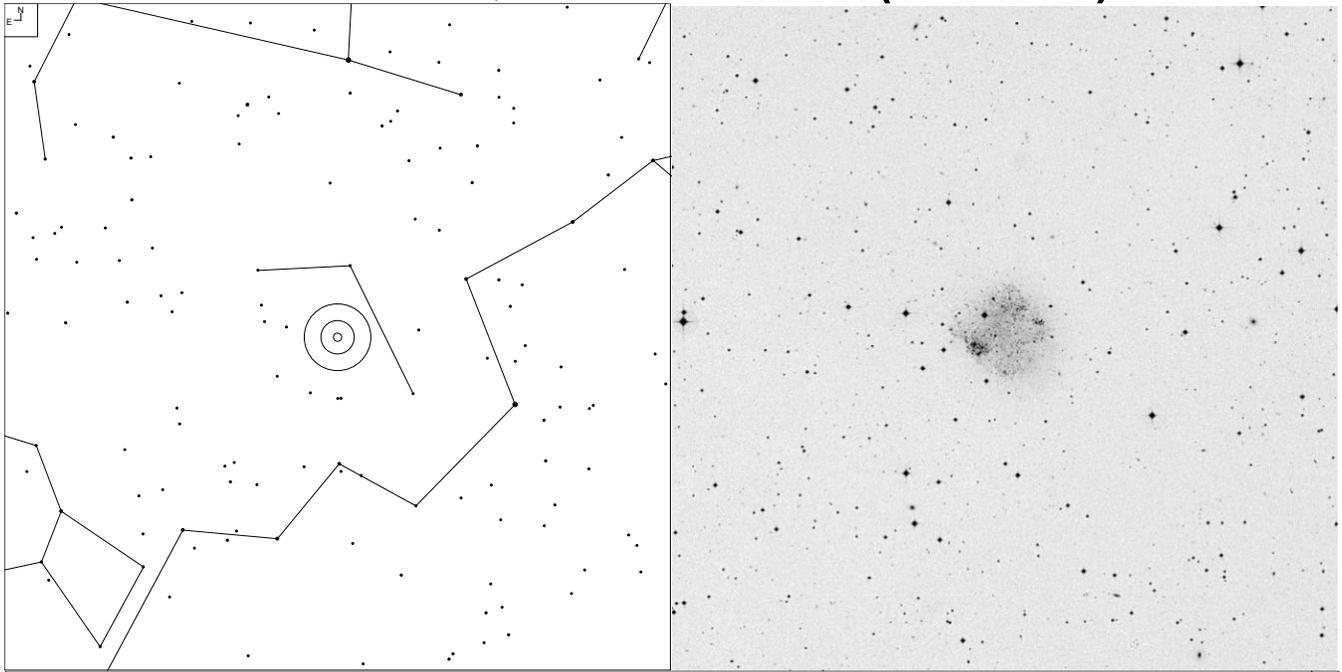


A globular cluster was discovered in Sextans B using the Hubble Wide field camera.²⁸

RA	Dec	Mag
10 00 04.7	+05 20 08	-

²⁸ M. E. Sharina, T. H. Puzia, and A. S. Krylatyh, "A Globular Cluster in the Dwarf Galaxy Sextans B," *Astrophysical Journal* Vol 62, Iss 3 (Sept 2007): 209-216

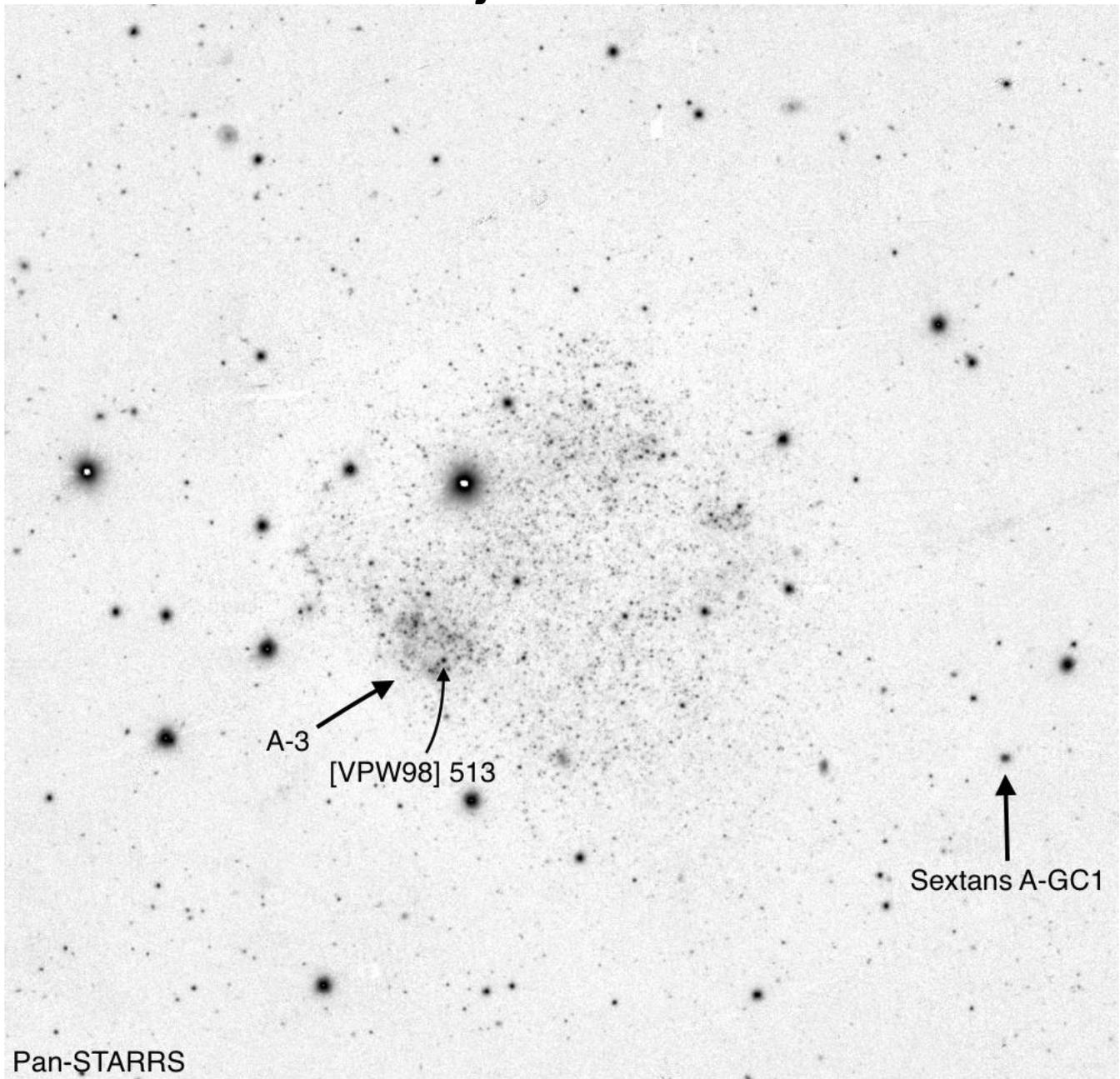
Sextans A, MCG-1-26-30 (Sextans)



RA	Dec	Type	Mag	Size	Distance	Urano
10 11 00	-04 41 57	Ir + V	11.9v	5.7 x 5.1	5.2 mly	113L

SEDS Website: <http://spider.seds.org/spider/LG/sexA.html>

Non-stellar objects within Sextans A



Object	Type	RA	Dec	Mag
A-3	OB Association	10 11 05.7	-04 42 24	-
Sextans A-GC1	Globular Cluster ²⁹	10 10 43.8	-04 43 29	18v
[VPW98] 513 ³⁰	Star	10 11 04.9	-04 42 34	

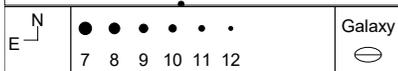
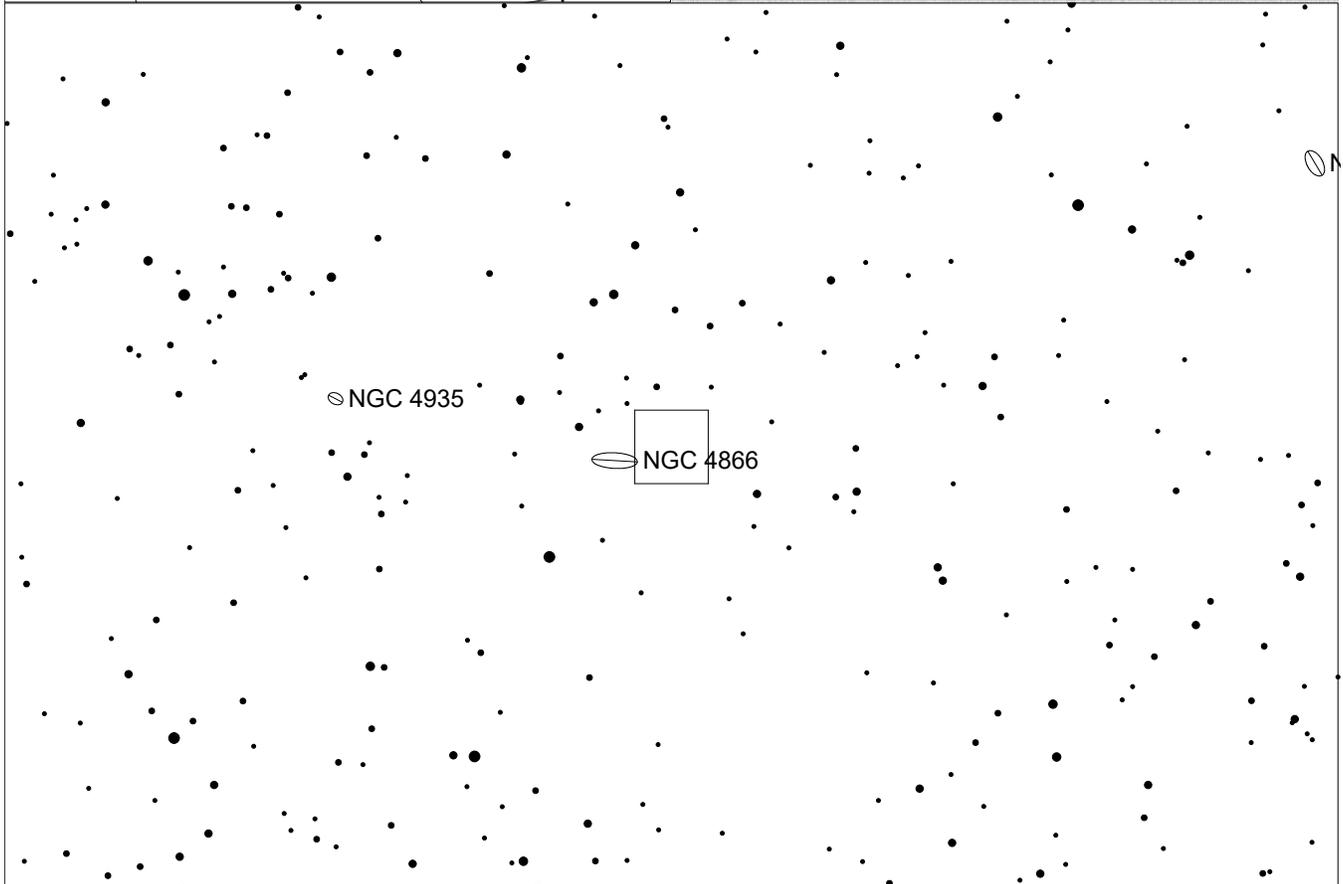
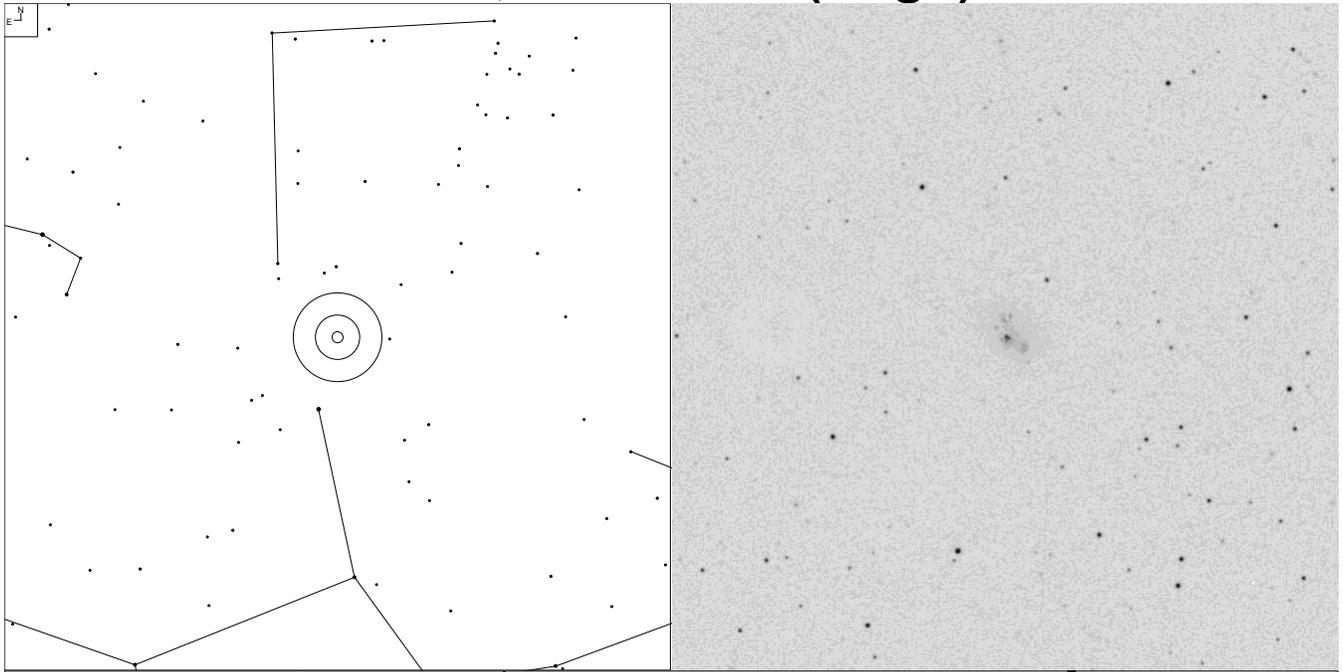
James Webb Telescope Detects Unexpected Dust in Sextans A Dwarf Galaxy - [link](#)

For a recent image of Sextans A released on June 2021, see the web article “The Cosmic Jewels of Sextans A” <https://noirlab.edu/public/images/iotw2126a/>

²⁹ Mario H. Pedreros and Carme Gallart, “New cluster candidates in dwarf galaxies of the Local Group, Extragalactic star clusters,” *IAU Symposium Series* Vol 207 (2002): 177-179

³⁰ See S.D. Van Dyk, D. Puche, and T. Wong, “The Recent Star Formation in Sextans A,” *The Astronomical Journal* Vol 116 No 5 (1998): 2341-2362

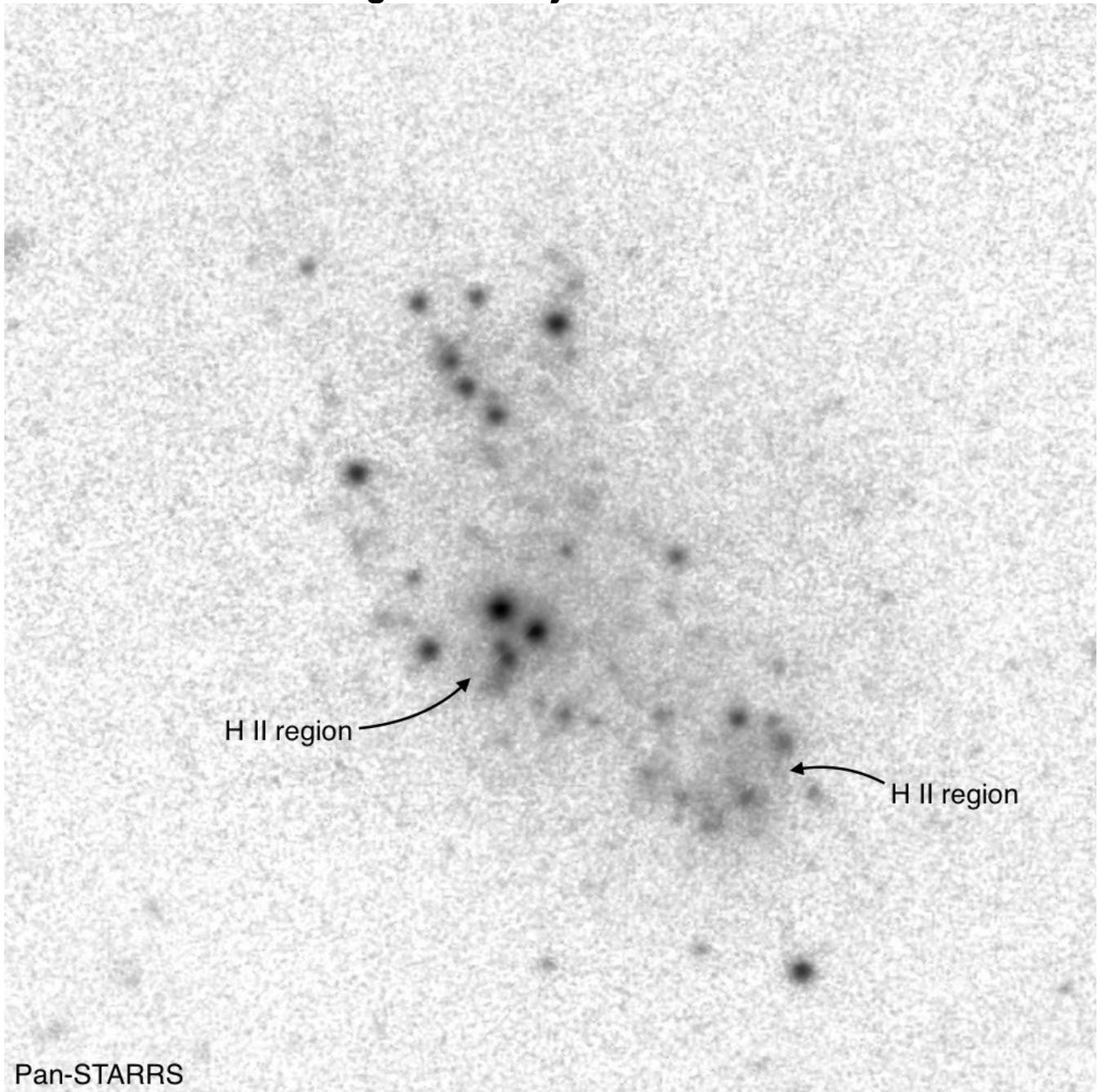
GR 8, UGC 8091 (Virgo)



RA	Dec	Type	Mag	Size	Distance	Urano
12 58 40	+14 13 04	Im	15.0v	1.9 x 1.3'	7.9 mly	90R

SEDS Website: <http://spider.seds.org/spider/LG/gr8.html>

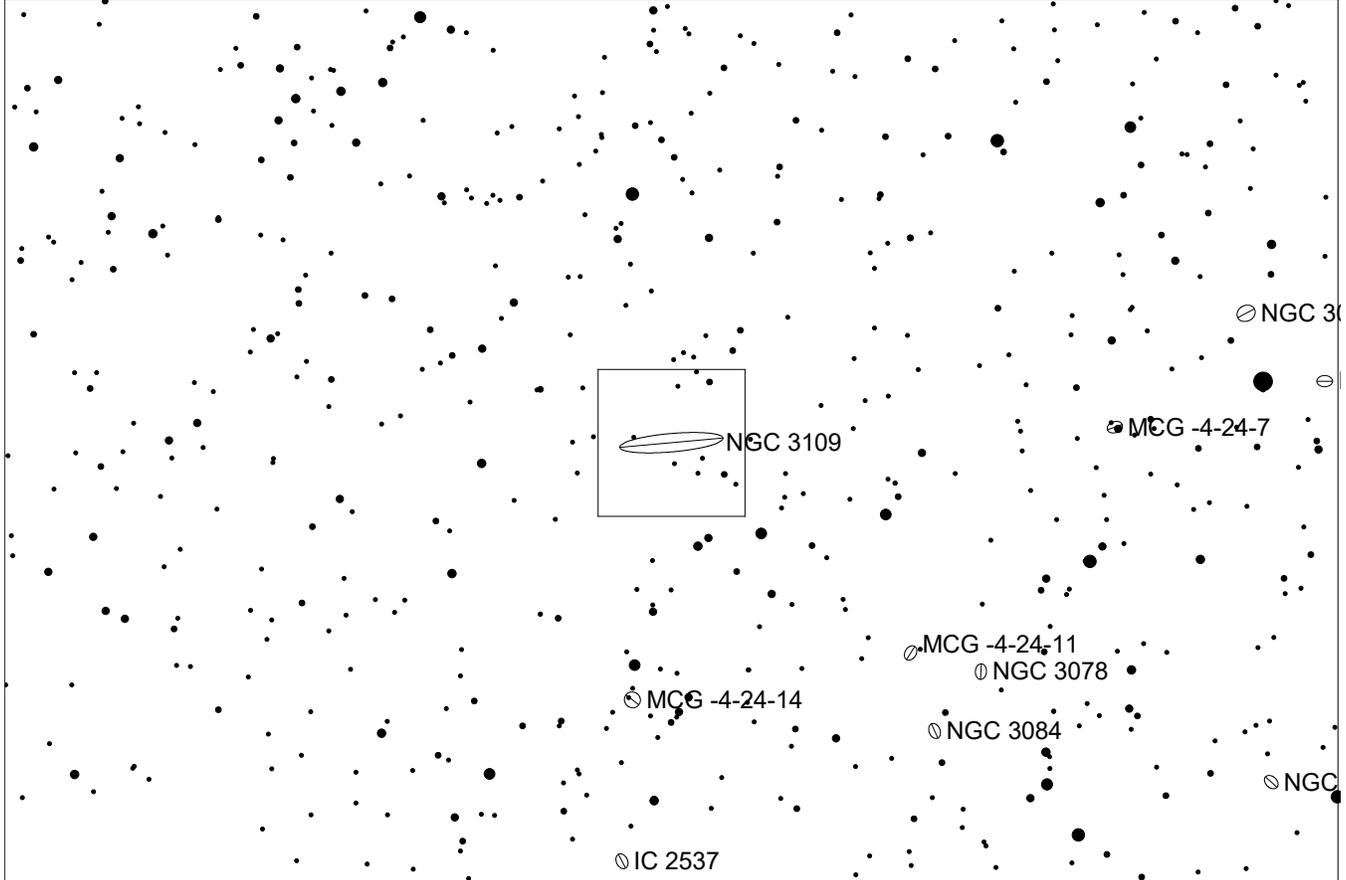
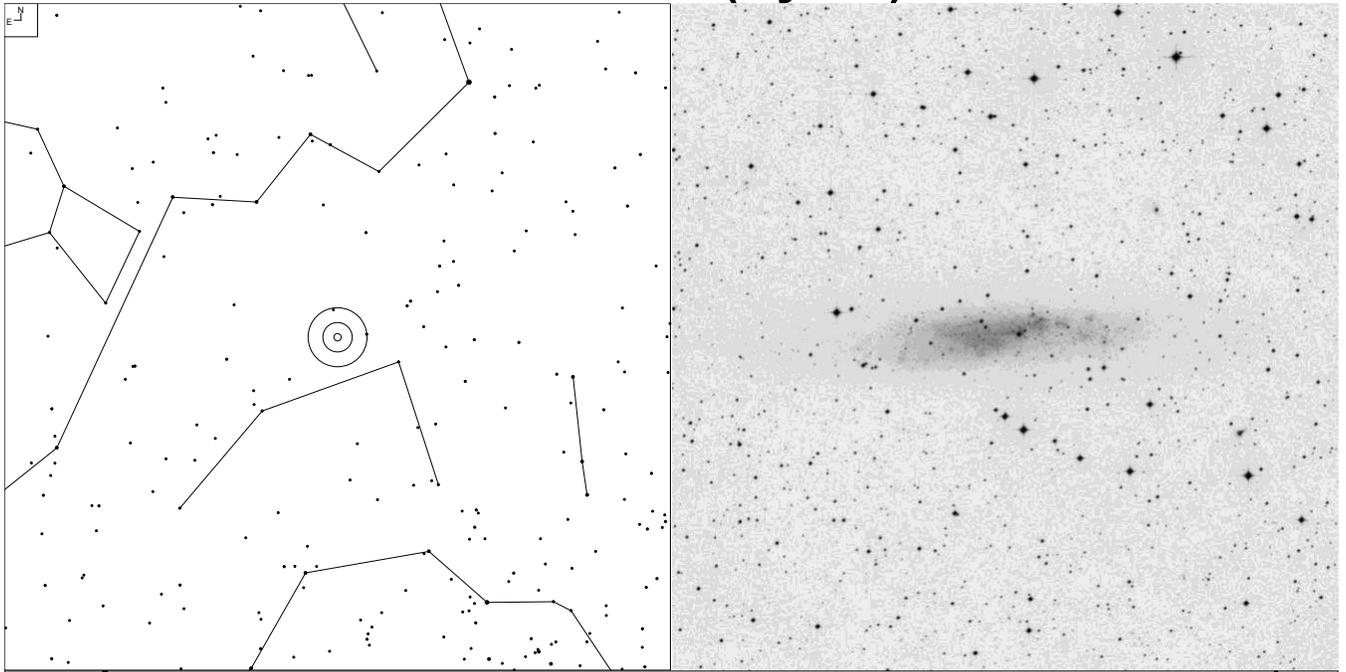
Extragalactic Objects within GR8



In the Dec 2023 article, Hubble takes a close look at GR8: See www.esahubble.org/news/heic2313/

See Paul Hodge, Myung Gyoon Lee, and Robert C. Kennicutt, "The H II Regions of GR8," *The Astronomical Society of the Pacific* Vol 101 (July 1989): 640-648.

NGC 3109 (Hydra)

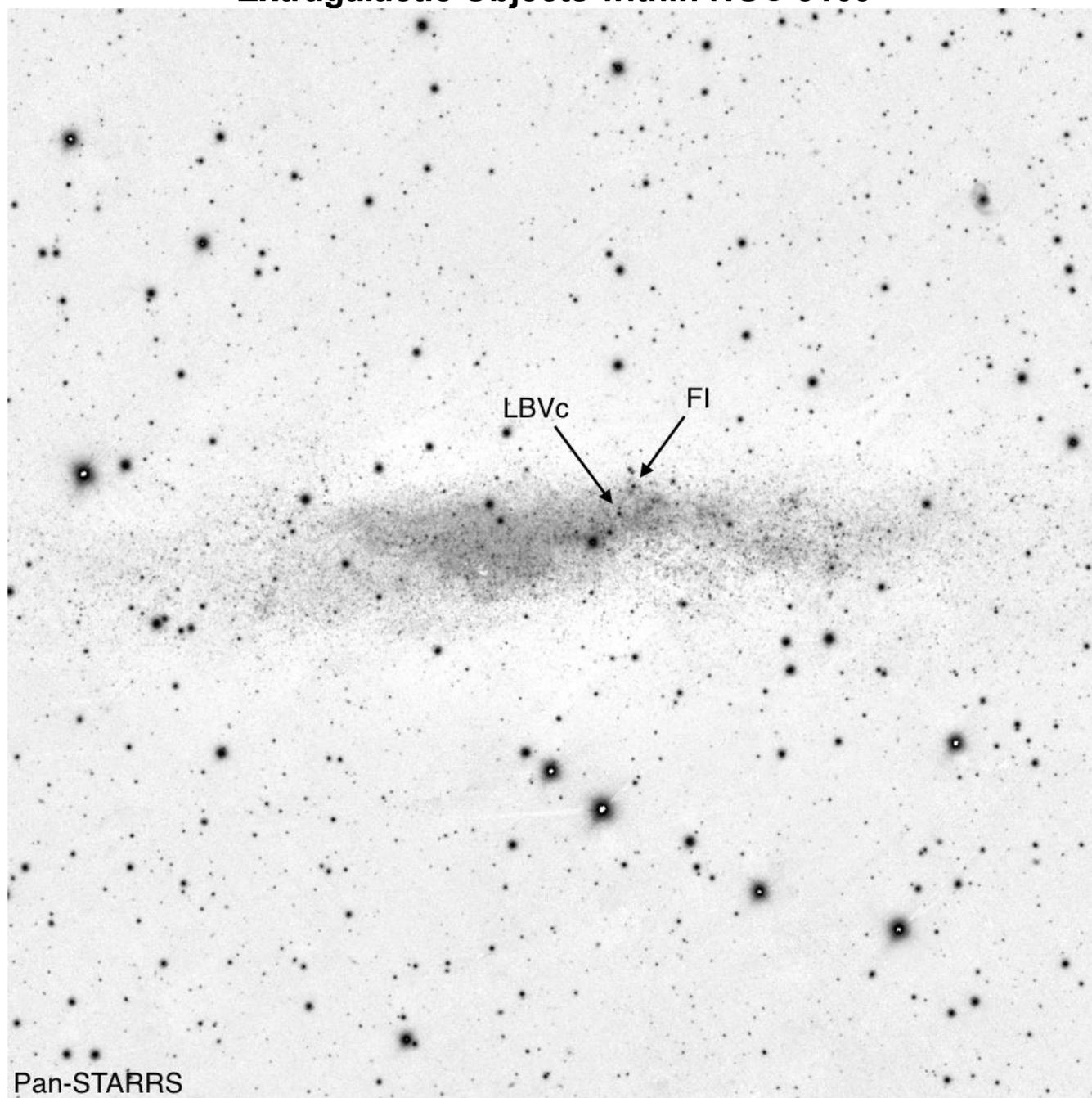


E ↙ N ↑	●	●	●	●	●	●	●	●	●	●	●	Galaxy
	5	6	7	8	9	10	11	12	☉			

RA	Dec	Type	Mag	Size	Distance	Urano
10 03 06	-26 09 26	Ir+ IV-V	10.0v	21.0 x 3.7'	4.5 mly	151R

SEDS Website: <http://spider.seds.org/spider/LG/n3109.html>

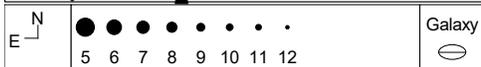
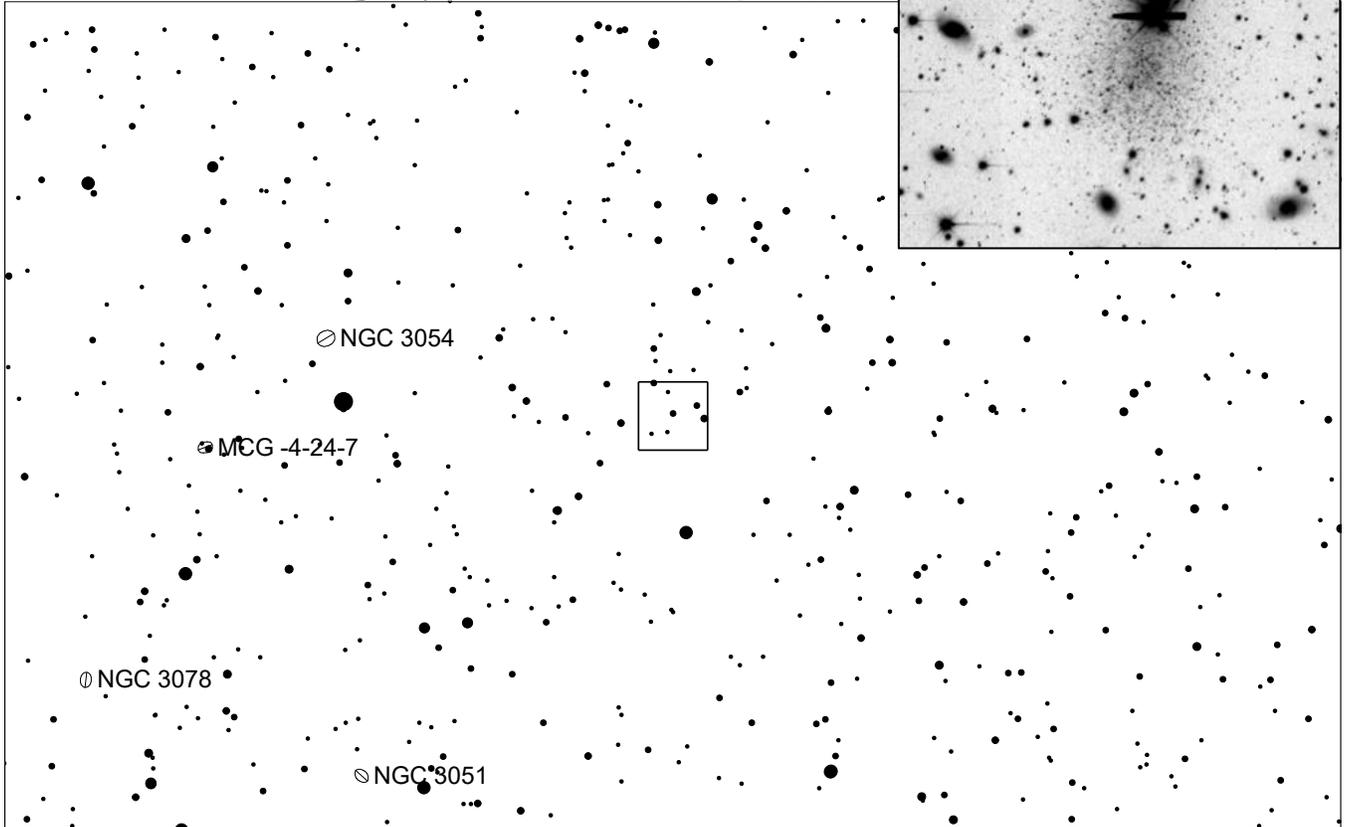
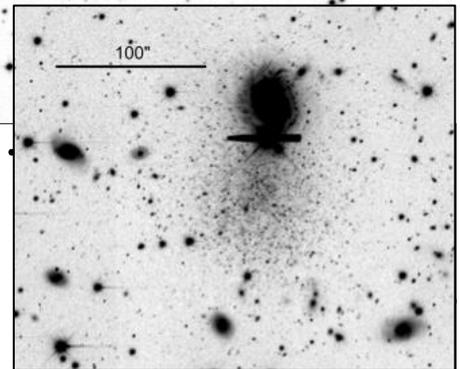
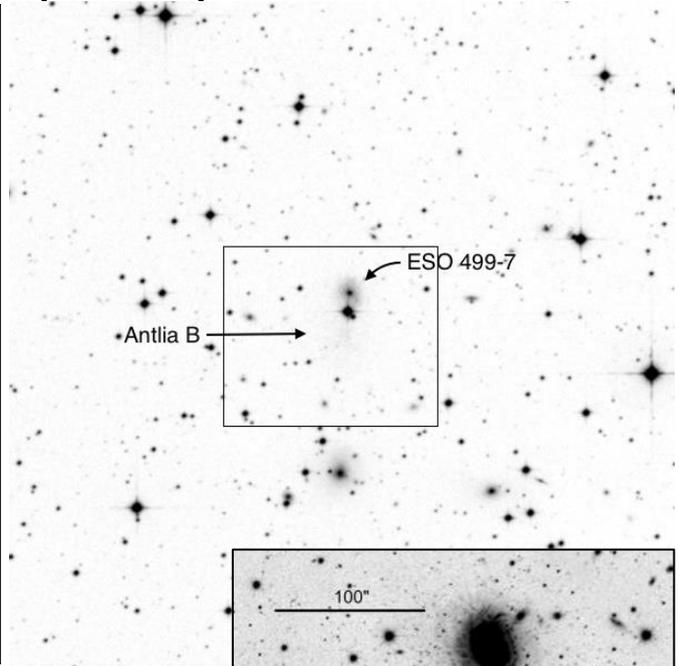
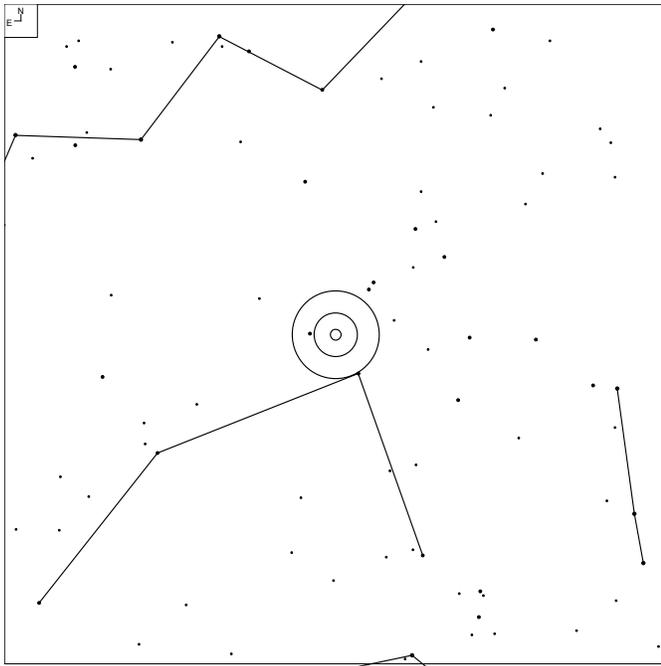
Extragalactic Objects within NGC 3109



Two stars, F1 and LBVc, were seen by Scott Harrington with Keith's 25-inch and Jimi's 48-inch telescopes, respectively.

See M. Pena, M.G. Richer, and G Stasinska, "A Catalog of Planetary Nebula Candidates and HII Regions in NGC 3109," *Astronomy and Astrophysics* Vol 466 (2007): 75-82

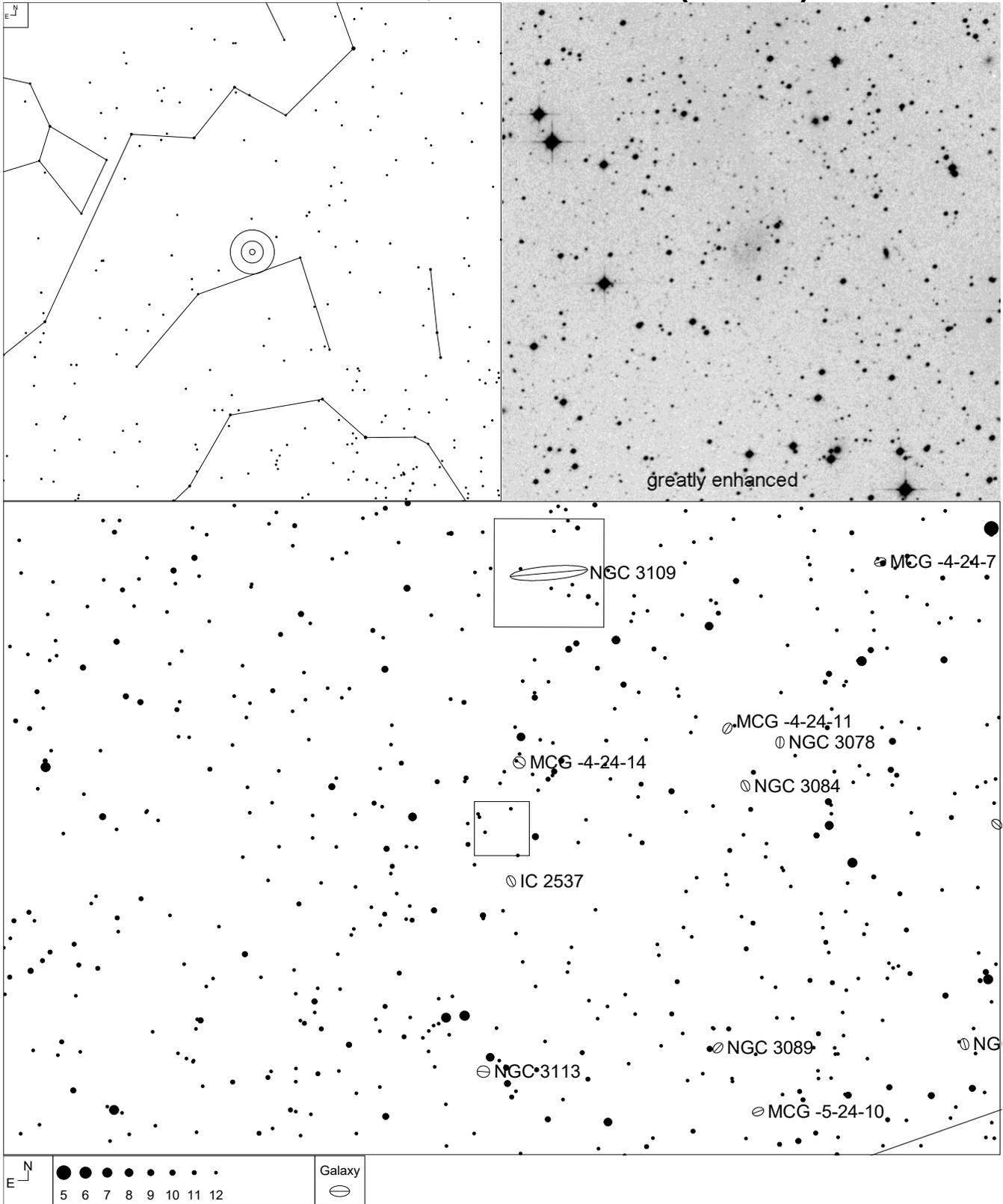
Antlia B (Antlia)



RA	Dec	Type	Mag	Size	Distance	Urano
09 48 56	-25 59 25	Dwarf Irr	-	-	4.5 mly	151R

This object will be very difficult to observe as a blazing star, and ESO 499-7 is on the northern half.
 For the inset photo and discussion of Antlia B, See S.J. Sand, et al, "Antlia B: A Faint Dwarf Galaxy Member of the NGC 3109 Association," *The Astrophysical Journal Letters* Vol 812, L13 (Oct 2015)

Antlia Dwarf, PGC 29194 (Antlia)

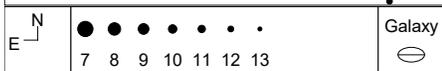
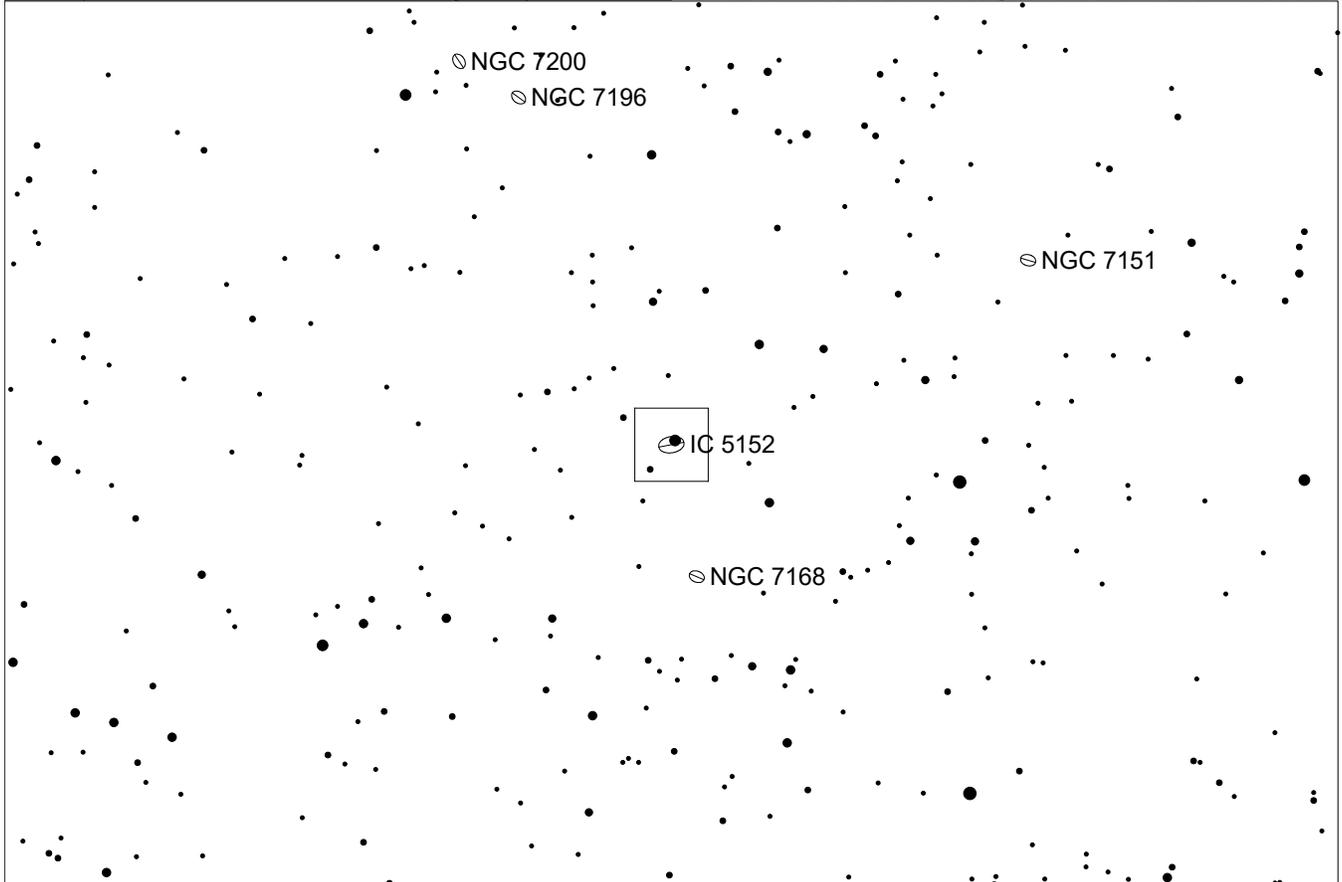
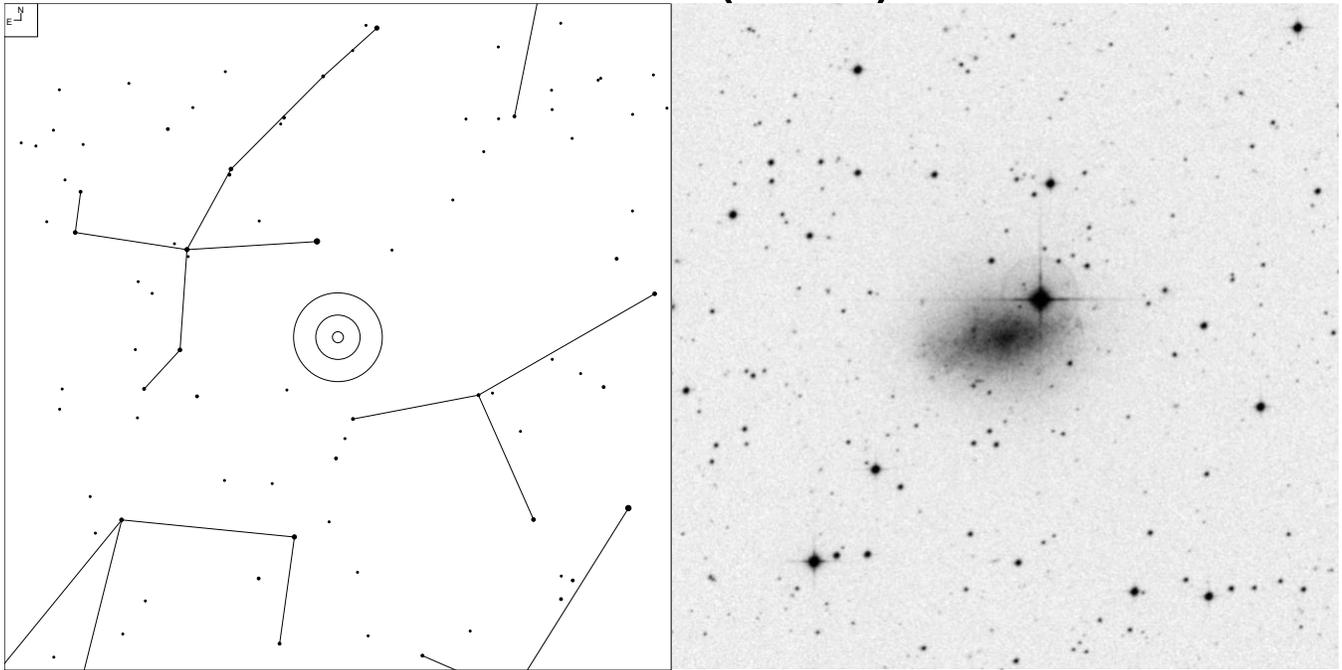


RA	Dec	Type	Mag	Size	Distance	Urano
10 04 03	-27 19 47	dE3	15.2v	1.9 x 1.4'	4.6 mly	151R

SEDS Website: http://spider.seds.org/spider/LG/ant_dw.html

For a brief article, "Antlia Dwarf Galaxy Peppers the Sky with Stars" (2012) by the Hubble team, see <https://science.nasa.gov/missions/hubble/antlia-dwarf-galaxy-peppers-the-sky-with-stars/>

IC 5152 (Indus)



RA	Dec	Type	Mag	Size	Distance	Urano
22 02 41	-51 17 47	IA(s)m	10.9v	5.2 x 3.2'	5.9 mly	178R

SEDS Website: <http://spider.seds.org/spider/LG/i5152.html>

Local Group Galaxies Not Included

This list contains a list of known Local Group galaxies intentionally not included in this observing guide, they are unlikely be visually observable.

Member	RA	Dec	Mag	Size	Con
Segue II	02 19 16	+20 10 31	15.2v		
Carina, ESO 206-20A	06 41 37	-50 57 58	11.0v		Car
Argo Dwarf	07 05 17	-58 31 13	14.2v	3.5 x 1.7'	Arg
Canis Major Dwarf	07 12 35	-27 40 00	-	12 x 12 deg	Cma
Antlia II	09 35 29	-36 46 12	-		Ant
Segue 1	10 07 04	+16 04 55	15.3v		
Sextans dSph	10 13 03	-01 36 53	10.4v		Sex
Sextans Dwarf	10 13 03	-01 36 53	10.4v	30 x 12'	Sex
Ursa Major II	08 51 30	+63 07 48	13.3v		Uma
Ursa Major I	10 34 53	+51 55 12	14.4v		Uma
Willman 1	10 49 21	+51 03 00	15.2v		Uma
Leo V	11 31 10	+02 13 12	16.0v		Leo
Leo V	11 31 10	+02 13 12	16.0v		Leo
Leo IV	11 32 57	-00 32 00	15.1v	3.3 x 2.5'	Leo
Leo IV	11 32 57	-00 32 00	15.1v		Leo
CVn I dSph	12 28 03	+33 33 21	13.1v	8.4 x 5.0'	CVn
CVn II dSph	12 57 10	+34 19 12	16.1v	3.0 x 2.1'	CVn
Coma Dwarf	12 26 59	+23 54 15	14.1v	5.0 x 2.5'	Com
Boötes III	13 57 07	+26 46 30	12.6v		Boo
Boötes II	13 58 00	+12 51 00	15.4v		Boo
Boötes Dwarf	14 00 00	+14 30 00	12.8v		Boo
Boötes I	14 00 06	+14 30 00	13.6	13.0 x 8.7'	Boo
Hercules	16 31 02	+12 47 30	14.0v	8.0 x 6.0'	Her
Hercules Dwarf	16 31 02	+12 47 30	14.0v		Her
Sagittarius sSph SDG	18 55 20	-30 32 43	3.6v		Sgr
Pisces II	22 58 31	+05 57 09	16.3v		Psc

Additional Resources

Books

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

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

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Gottlieb, Steve. "In Search of Extragalactic Globular Clusters." *Sky and Telescope* (Nov 2018): 34-40

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Harrington, Scott. "IC 10 – The Hidden Dwarf." *Sky and Telescope* (Dec 2023): 57-59

Harrington, Scott, "Observe M33's Brightest Stars and Clusters." *Sky and Telescope* (Nov 2024): 22-29

Higgins, David. "The M31 Globular Cluster System." *Deep Sky* Vol 32 (1990): 24-29

Ling, Alister. "Dwarf Galaxies for 'Dwarf' Telescopes." *Deep Sky* Vol 34 (1991): 46-47

Mitchell, Larry. "The M31 Challenge." *Sky and Telescope* (1997): 106-109

Polakis, Tom. "Observing the Local Group." *Deep Sky* Vol 36 (1991): 12-19

Skiff, Brian. "All About M-31." *Deep Sky* Vol 8 (1984): 8-15

Whiteman, Alan. "Digging Deep in M33." *Sky and Telescope* (Dec 2004): 92-95

Websites

ned.ipac.caltech.edu/level5/ANDROMEDA_Atlas/frames.html - Paul W. Hodge's Atlas of the Andromeda Galaxy

ned.ipac.caltech.edu/level5/Mateo/table1.html - Local Group list from NED

spider.seds.org/spider/LG/lg.html - SEDS list of Local Group members

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

adventuresindeepspace.com/ - Great source of observing projects for all skill levels.

skyserver.sdss.org/dr16/en/tools/chart/navi.aspx - SkyServer DR16 Tools for Visual Exploration (SDSS)

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

www.largemagellaniccloud.com - Large Magellanic Cloud Observing Guide

Sources of Charts and Images

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

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Digital Sky Survey (DSS): These results are based [in part] on data obtained with the Digitized Sky Survey, which was produced at the Space Telescope Science Institute under U.S. Government grant NAG W-2166. The images are based on photographic data obtained using the Oschin Schmidt Telescope on Palomar Mountain, which has been processed to create the Digitized Sky Survey by the California Institute of Technology.

Sloan Digital Sky Survey (SDSS): Funding for the Sloan Digital Sky Survey V has been provided by the Alfred P. Sloan Foundation, the Heising-Simons Foundation, the National Science Foundation, and the Participating Institutions. SDSS acknowledges support and resources from the Center for High-Performance Computing at the University of Utah. SDSS telescopes are located at Apache Point Observatory, funded by the Astrophysical Research Consortium and operated by New Mexico State University, and at Las Campanas Observatory, operated by the Carnegie Institution for Science. The SDSS web site is www.sdss.org.

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Revision History

Date	Revision
March 20, 2013	<p>Added the following new objects:</p> <ul style="list-style-type: none"> • Andromeda VII • Andromeda VIII • Andromeda IX • Andromeda X • Andromeda V • Toucan Dwarf • Small Magellanic Cloud • NGC 55 • Sculptor Dwarf • Phoenix Dwarf • Large Magellanic Cloud • Carina Dwarf • Canis Major Dwarf • Sextans Dwarf • IC 5152 • Many non-stellar objects of various local group galaxies <p>Deleted the following objects:</p> <ul style="list-style-type: none"> • Wray 16-423 • Arp GC2 • Henize 2-436 • Terzan 8 <p>Enhanced non-stellar objects within some local groups.</p> <p>Enhanced finder charts and resorted starting at Pegasus/Andromeda regions to be consistent with my other guides.</p>
March 26, 2013	<ul style="list-style-type: none"> • Very minor enhancements <ul style="list-style-type: none"> ○ Enhanced TOC ○ Moved the index to the beginning ○ Enhanced recommended reading section
April 12, 2013	<ul style="list-style-type: none"> • Added front cover
July 31, 2017	<ul style="list-style-type: none"> • Removed G-295 from page 25 (Andromeda Galaxy) as it is a star. • Added NGC 6822 globular cluster systems (pages 73 – 74)

Date	Revision
March 2024	<ul style="list-style-type: none"> • Deleted GC-295 from M-31. It is actually a star. I forgot to replace the image in the last update, so now it is gone. • Added link to Scott Harrington’s M-33 observing guide to M-33 page. • M-33 corrections <ul style="list-style-type: none"> ○ C13 is a background galaxy - deleted ○ NGC 595 was mislabeled as NGC 592 - corrected ○ A66b was mislabeled as NGC 595 - corrected ○ IC 136 was mislabeled, actually is A127 - deleted ○ IC 135 was mislabeled, actually is A115 – deleted ○ H-38 globular cluster misplotted – deleted • Added a small number of links to recent images by the professional community. • Made all hyperlinks clickable for the PDF version.
March 2024	<p>Added new resources based on recent scholarship and discoveries Made corrections to the following objects. Thanks to Scott Harrington for bringing it to my attention.</p> <ul style="list-style-type: none"> • WLM – mislabeled globular cluster • M110 – G55 is a faint foreground star - deleted. Added G41. • M33-SW region – U111 mislabeled as G-11. • M33 NW region – U49 mislabeled as G-21. • M33 NE region – M4 mislabeled as G24, H14 mislabeled as G26 and R14 mislabeled as G31. • NGC 185 – relabeled GCs as FJJ and added newly discovered globular cluster, PA-N185-1. • NGC 147 – relabeled GC throughout and added three newly discovered globular clusters, PA-N147-1, PA-N147-2, and PA-N147-3. • IC-10 – labeled objects within IC 10 based on Harrington’s article. <p>Rearranged the list to “Local Group Members” and “Just Outside the Local Group”.</p> <p>Converted some of the notes as footnotes.</p>
February 2026	<ul style="list-style-type: none"> • Deleted Canis Major Dwarf, Sextans Dwarf, and Coma Dwarf as they are likely not observable. • Revamped M 31 globular clusters to include about 70 brightest globular clusters. Used Pan-STARRS images throughout for clarity. • Revamped M 33 extragalactic objects images with Pan-STARRS. Removed a few extragalactic objects. Added additional objects from Scott Harrington’s Nov 2024 article in Sky and Telescope. Added close-ups of the nuclear region. • NGC 185: FJJ 6 mislabeled as FJJ 4. • NGC 6822: Corrected mis plot of Hubble-VI globular cluster. Added H-IV and H-IX. • Added Antlia B dwarf galaxy, a member of NGC 3109. • Added new extragalactic objects to Sextans A, IC 1613, UGCA 86, UGCA 92, GR8, and NGC 3109. • The tables for extragalactic object were enhanced throughout the guide to include coordinates, type and magnitude for each annotated image. • Enhanced with Pan-STARRS image for some objects for clarity. • Added new relevant articles by Gottlieb and Harrington.

