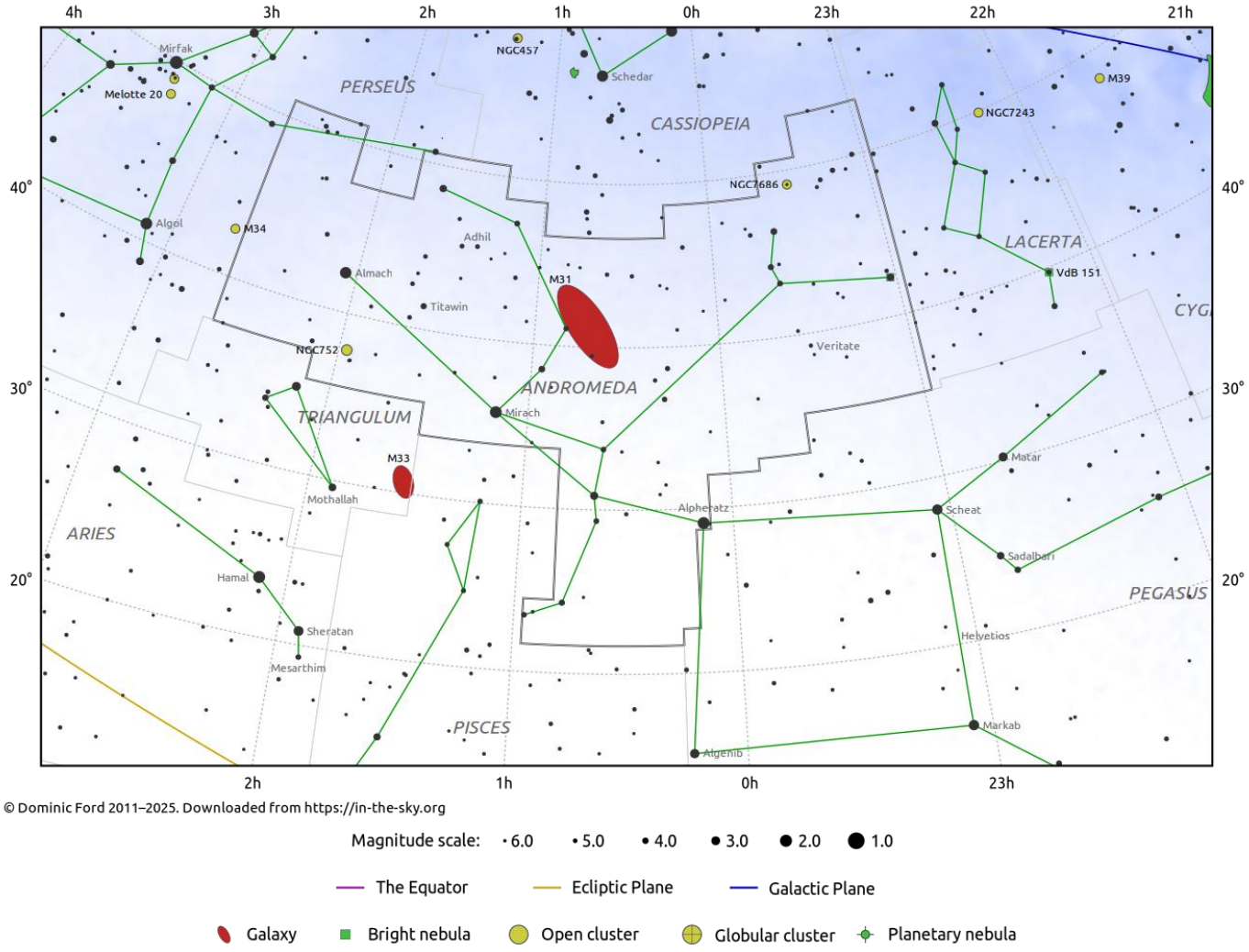
Andromeda (And)

Evening Visibility: **September - November**

Online Information: **Andromeda**

More Online Information: Arp 113, (M-31, M-32, M-110), Almach, 36 And, Pi And, R And, GX/GQ And, NGC-891, NGC-7686, NGC-7662, 56 And, NGC-752, VX And, AQ And, Kappa And, SAO-054970, STAR 14

In-The-Sky.org Constellation Map



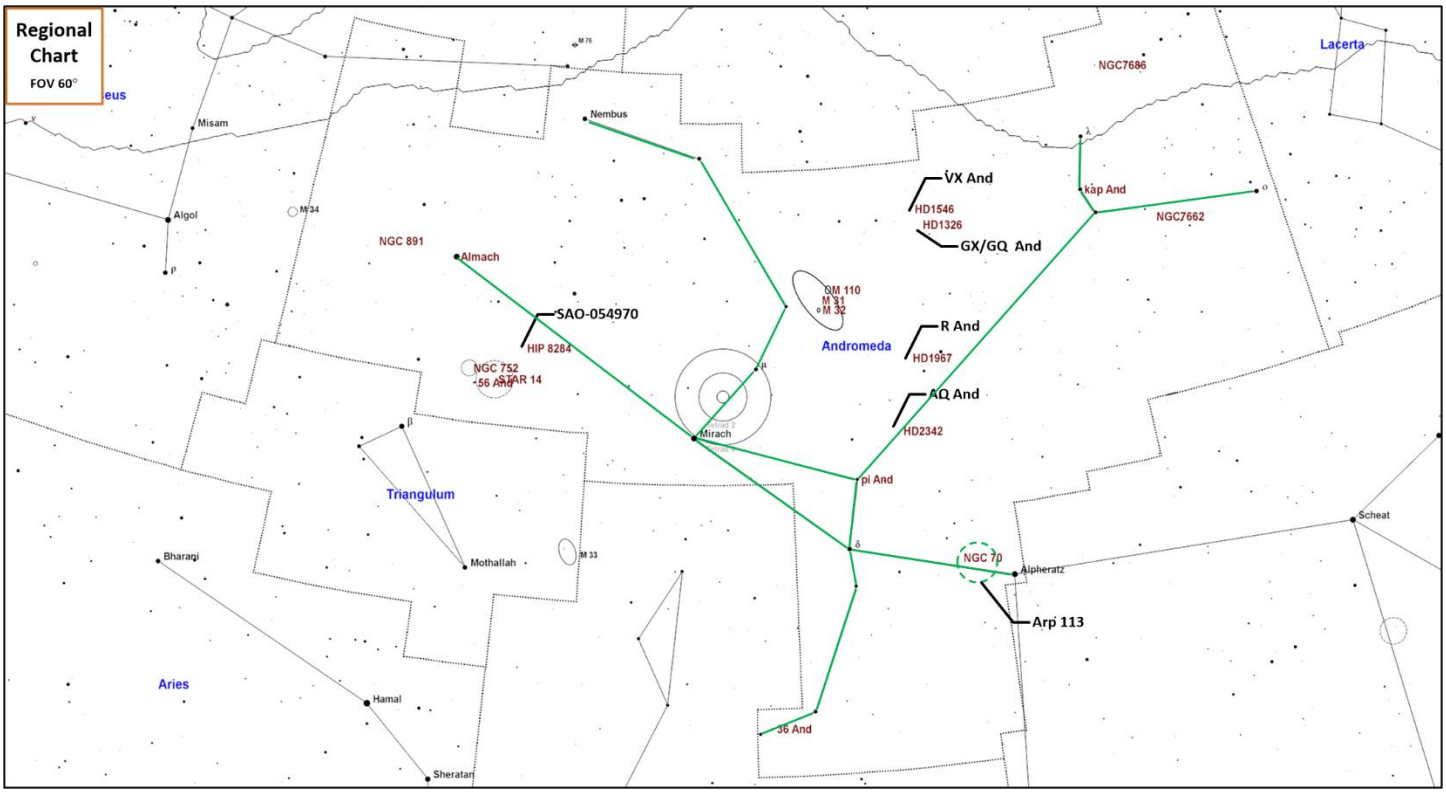
Constellation Guide

Andromeda is located between Cassiopeia Triangulum and Pegasus and is where the great Andromeda Galaxy (Messier 31) is located, this is the grandest galaxy in the northern hemisphere and can even been seen with the naked eye in dark conditions.

Constellation Highlights

- **Messier 31, 32, 110** (G): The Andromeda and two satellite galaxies.
- **Almach** (DS): A wonderful gold and blue double star system.

Constellation Targets Map



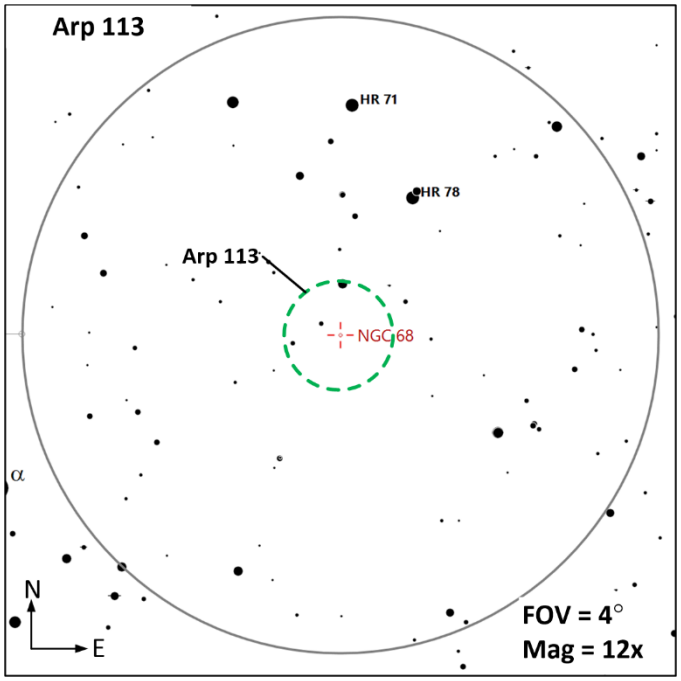
Objects Summary

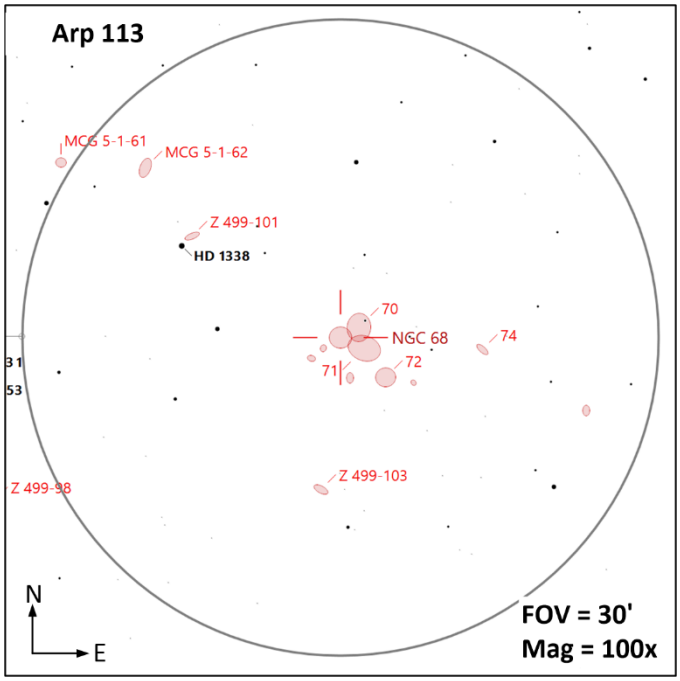
Object (Type)	Ref	Aliases	Stats
Arp 113 (G) galaxy group	1	VV 166, NGC 70 galaxy group, NGC 68 galaxy group	| M = 14.2 | Size = 20' | Reference Galaxy: NGC-70
Pi And (DS)	1, 2	SAO-054033, HIP 2912, 29 And, HR 154, HD 3369, ADS 513, SACDBL20, π And	AB | M=4.4, 7.1 | Sep=36.2" | PA=174.5° |
AQ And (CS)		HIP 2180, HD 2342	| M = 7.7 to 9.5 | Period = 169 days |
R And (CV, DS)	1	SAO-053860, HIP 1901, HR 90, HD 1967	| M = 5.8 to 15.2 | Period = 409 days | AB | M=12.0, 12.4 | Sep=83.5" | PA=142.2° |
GX/GQ And (DS)	1, 2	SAO-036248, HIP 1475, HD 1326, GRB 34, ADS 246, SACDBL13	AB | M=8.3, 11.4 | Sep=34" | PA=66° | AC | M=8.3, 11.8 | Sep=299" | PA=259° |
VX And (CS)		HIP 1593, HD 1546	| M = 7.5 to 9.7 | Period = 375 days | Reddest Carbon Stars

Constellation Guide

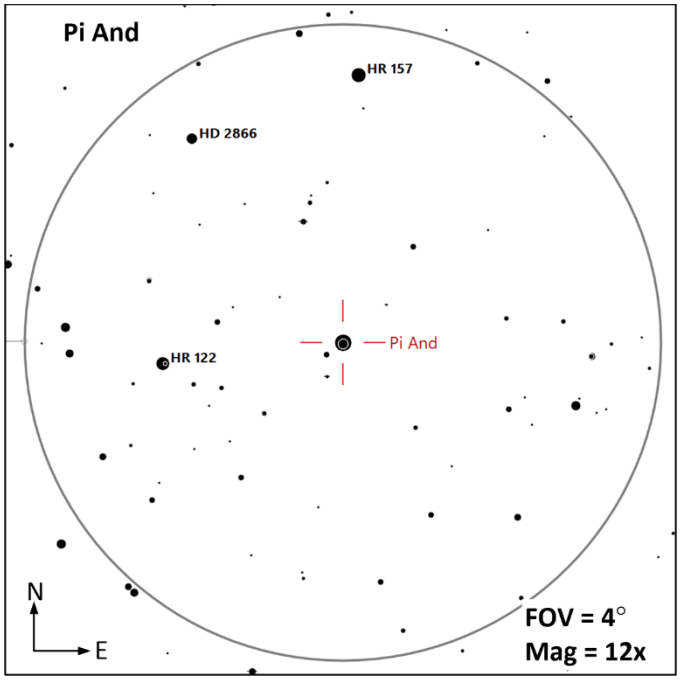
Object (Type)	Ref	Aliases	Stats
Kappa And (MS-3)	1, 2	SAO-053264, HIP 116805, 19 And, HD 222439, ADS 16916, SACDBL11517, SACDBL11516	AB | M=4.1, 11.3 | Sep=47" | PA=202° | AC | M=4.1, 11.3 | Sep=115" | PA=293° |
NGC-7662 (PN)	1	Blue Snowball, C 22, ARO 20, VV 285,	| M = 8.3 | Size = 0.5 x 0.5' | 19.3 |
NGC-7686 (OC)	1	CR 456	| M = 5.6 | Size = 16' | SB = 20.1 |
M-31, M-32, M-110 (G)	1,2,3	**M-31**: Andromeda Galaxy, NGC 224, UGC 454, PGC 2557 **M-32**: NGC 221, UGC 452, PGC 2555 **M-110**: NGC 204, UGC 426, PGC 2429	**M-31** | M=4.3 | Size =189.1x61.7' | SB = 23.1 | **M-32** | M=9.1 | Size =8.5x6.5' | SB = 22.1 | **M-110** | M=8.9 | Size =19.5x11.5' | SB = 23.4 |
SAO-054970 (MS-3)	1	HIP 8284, ADS 1404, STF 157, WDS01467+3856	AB | M=9.6, 10.9 | Sep=0.7" | PA = 205° | AC | M=9.6, 10.1 | Sep=12" | PA=115° | AD | M=9.6, 11.3 | Sep=56" | PA=281° |
NGC-752 (OC)	1	C 28, Cr 23	| M = 5.7 | Size = 50' | SB = 22.8 |
56 And (MS-4)	1, 2	SAO-055107, HIP 9021, HR 557, HD 11749, STFA 4, ADS 1534, SACDBL41	AB | M=5.8, 6.1 | Sep=203" | PA=298° | AC | M=5.8, 12 | Sep=18" | PA=80° | BD | 6.1, 9.8 | Sep=204" | PA=258° |
STAR 14 (AS)			|Stars = 6 + NGC-752 | Size = 95' x 25' |
Almach (DS)	1, 2	SAO-037734, HIP 9640, Gamma And, 57 And, HR 603, HD 12533, Alamach, Almach, CCDM02039+4220, BD+41 395	AB | M = 2.3, 5.0 | Sep = 9.5" | PA = 63.2° |
NGC-891 (G)	1	Silver Sliver Galaxy, C 23, UGC 1831, PGC 9031	| M = 10.8 | Size = 11.7'x1.6' | SB = 22.6 |
36 And (MS-3)	1, 2	SAO-074359, HIP 4288, HR 258, HD 5286, STF 73, ADS 755, SACDBL24	AB | M=6.1, 6.5 | Sep=1.2" | PA = 335° | (AB) C | M=6.3, 11.0 | Sep=162" | PA=223° |

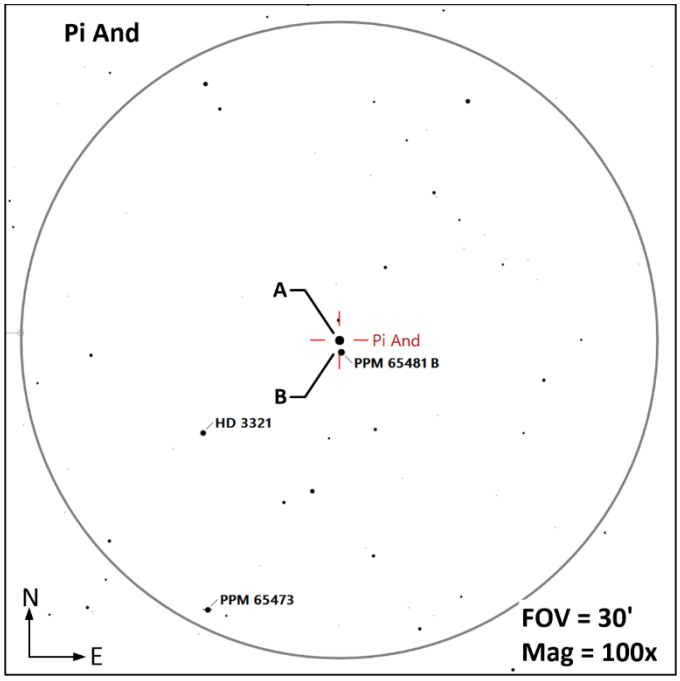
Arp 113 (Galaxy Group | M = 14.2 | Size = 20’ |) – This is a Cluster of Galaxies 40 to 60 dim galaxies (in the range of 12-13 magnitude) some of the brighter galaxies in this group include NGC 67-72, UGC 166, PGC 1163, NGC 74. This grouping of galaxies is conveniently located just over 2° west of Alpheratz, the brightest star in Andromeda.





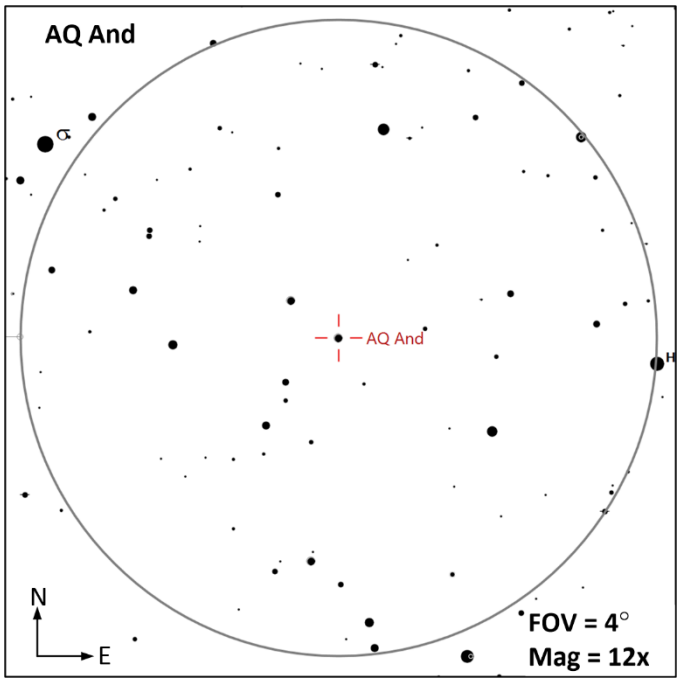
Pi And (DS | **AB** | M = 4.4, 7.1 | Sep = 36.2” | PA = 174.5° |) – A double star system that should be easily resolved in a small telescope and located 598 ly from earth.

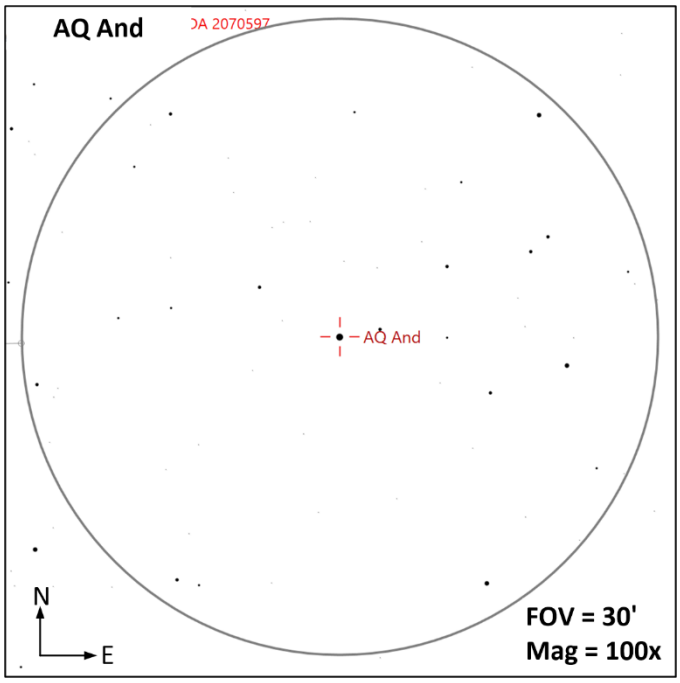




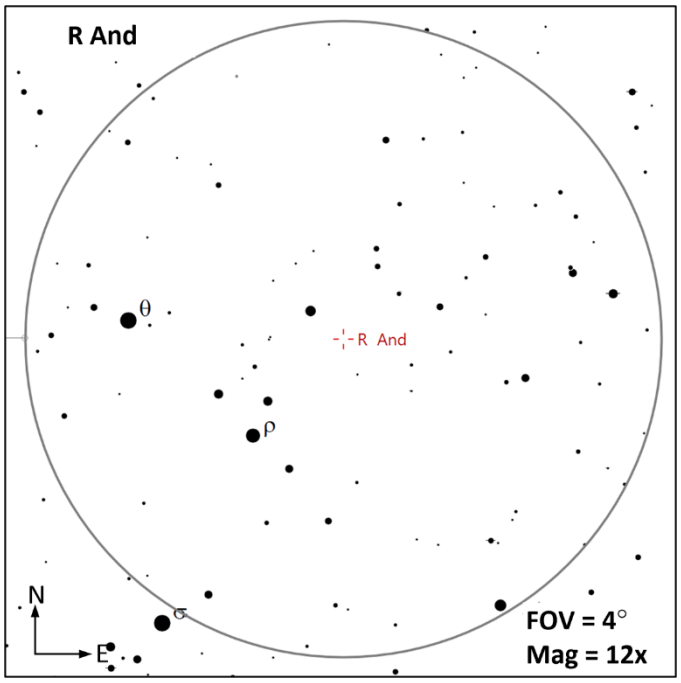
Constellation Guide

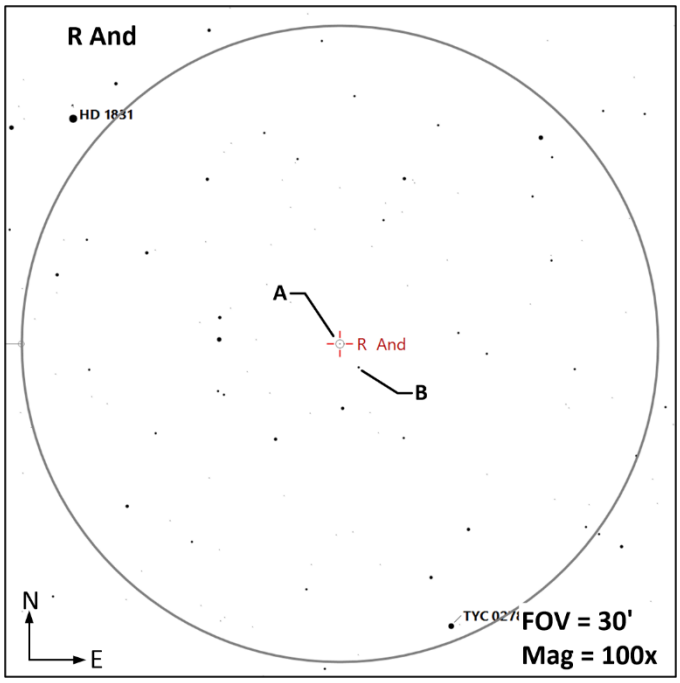
AQ And (CS | M = 7.7 to 9.5 | Period = 169 days |) – A Carbon Star with a variable magnitude of 7.7 to 9.5 over a 169 day period.





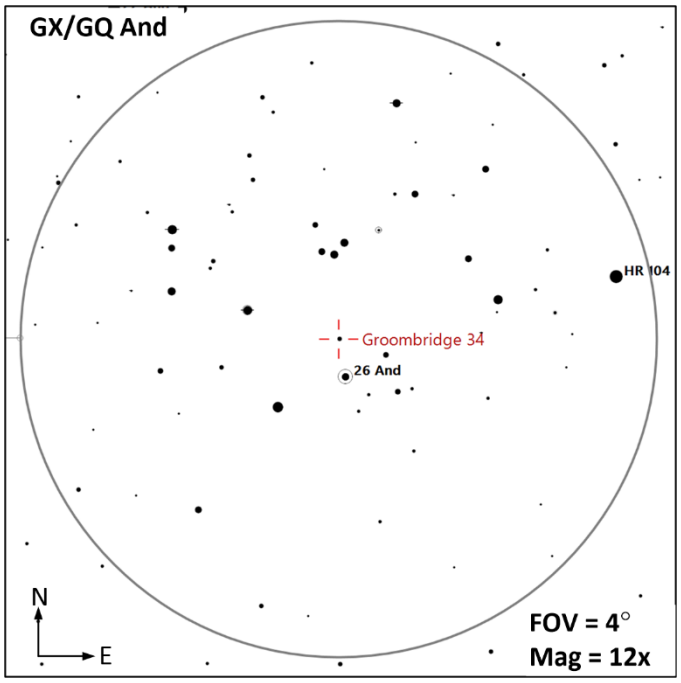
R And (CS, DS | M = 5.8 to 15.2 | Period = 409 days | | **AB** | M = 12.0, 12.4 | Sep = 83.5” | PA = 142.2° |) – Both a This carbon star is part of a double star system located 1259 ly from earth. Both the primary and secondary stars in this system are quite dim at about magnitude 12.

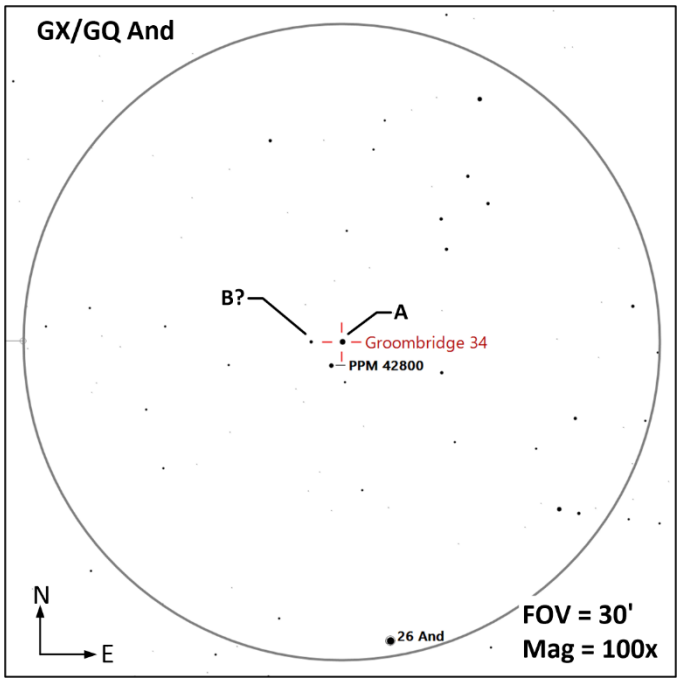




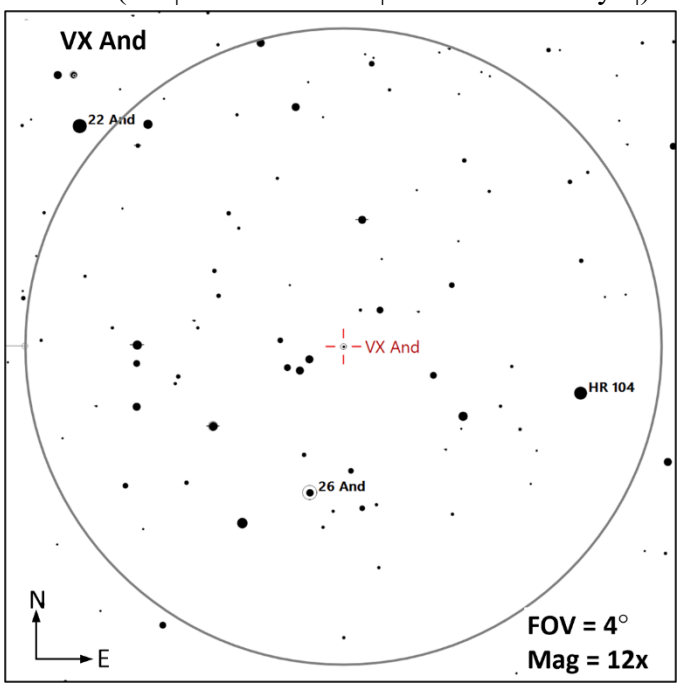
Constellation Guide

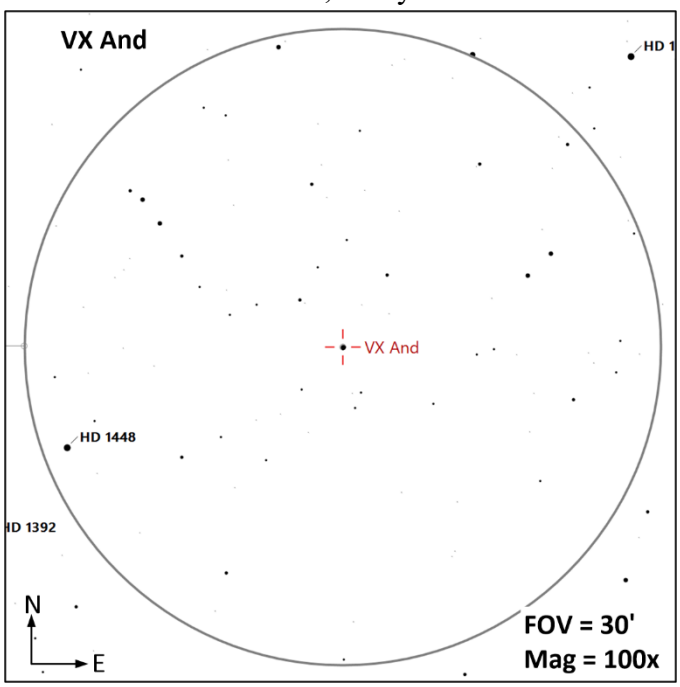
GX/GQ And (DS | **AB** | M=8.3, 11.4 | Sep=34” | PA=66° || **AC** | M=8.3, 11.8 | Sep=299” | PA=259° |) – This double star system is a pair of red dwarfs 11.7 light years distant, it is one of the closest double stars to the Sun.





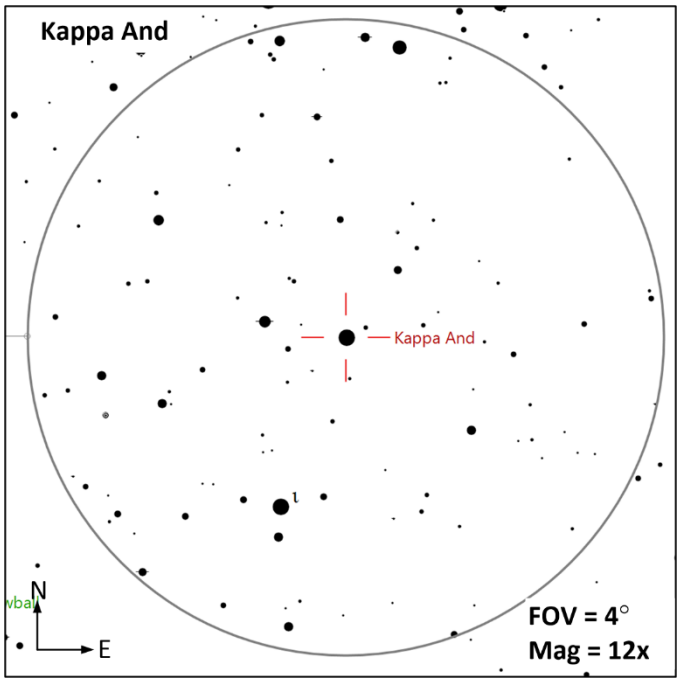
VX And (CS | M = 7.5 to 9.7 | Period = 375 days |) – This carbon star is located 1,284 ly from earth.

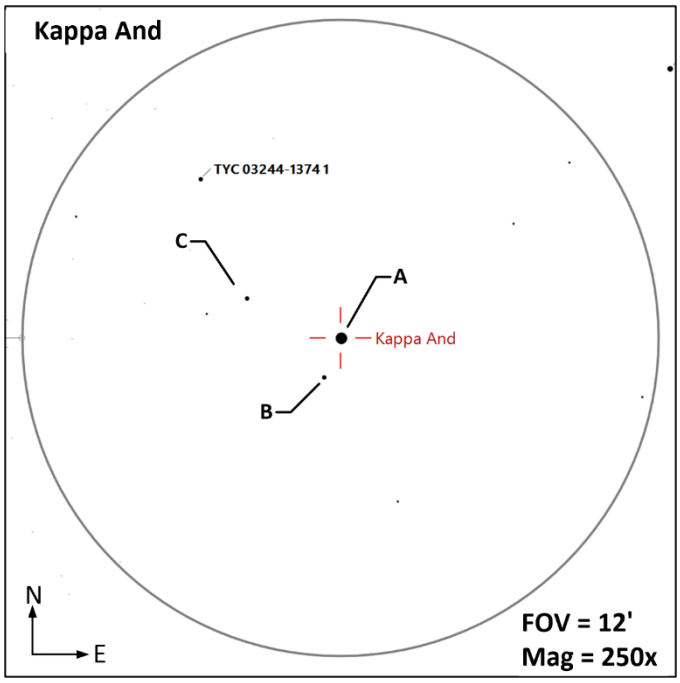




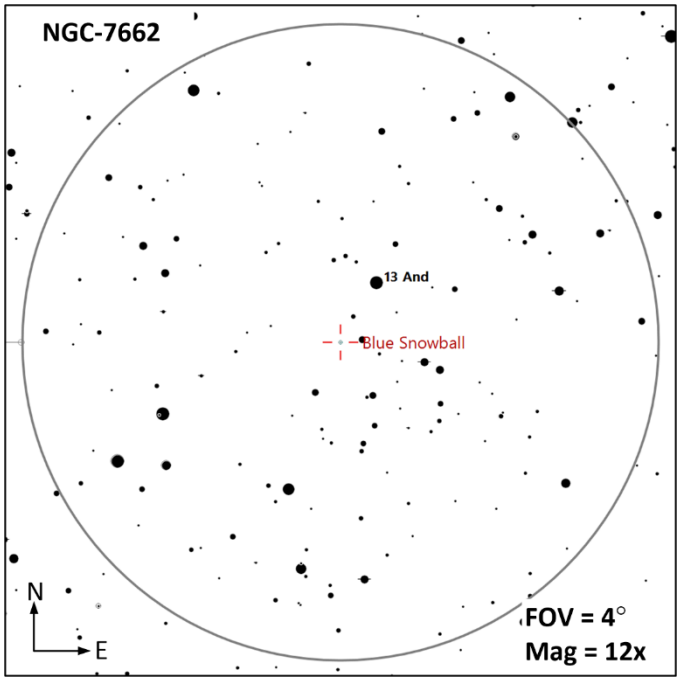
Constellation Guide

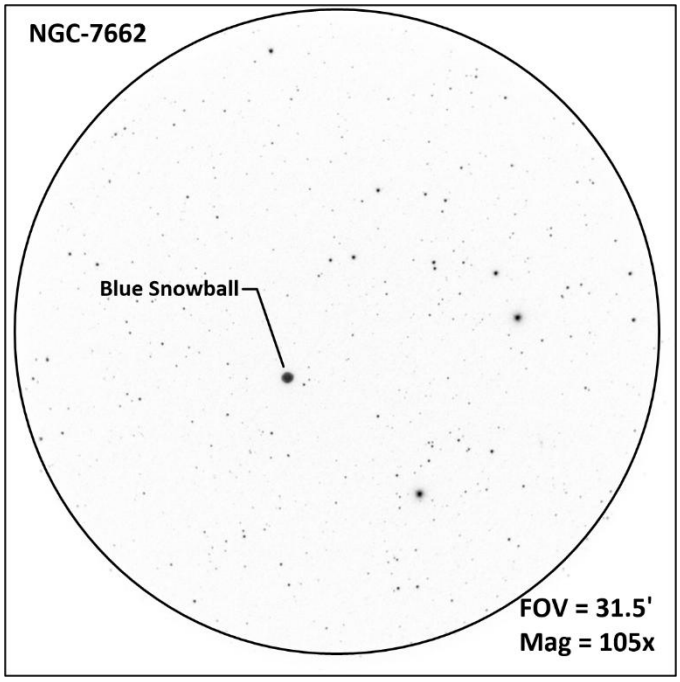
Kappa And (MS-3 **AB** | M=4.1, 11.3 | Sep=47” | PA=202° || **AC** | M=4.1, 11.3 | Sep=115” | PA=293° |) – This is a triple star system located 168ly from earth. Both companions to the primary are quite dim at magnitude 11.3 but have enough of a separation that they should be easy to separate.



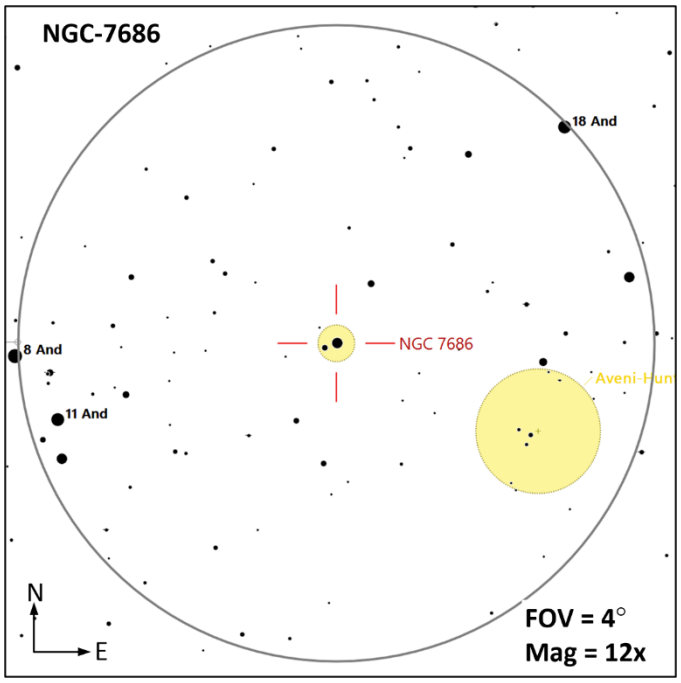


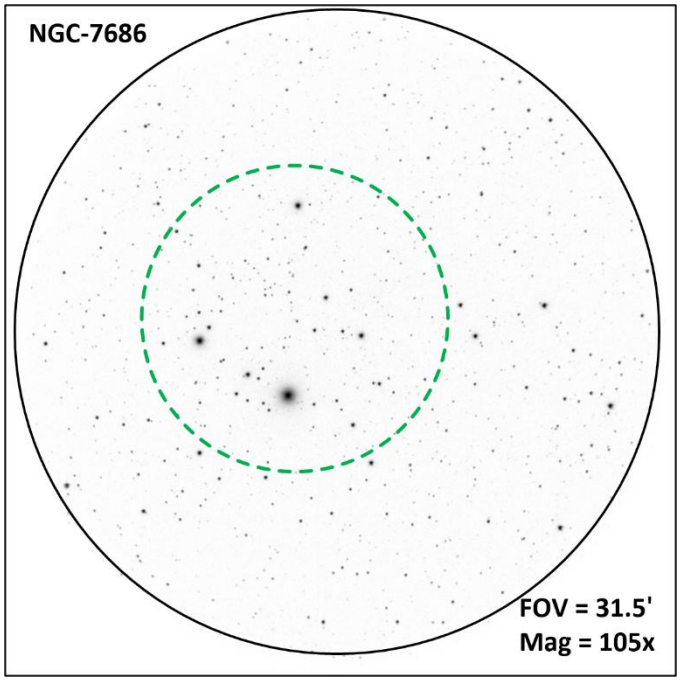
NGC-7662 (PN | M = 8.3 | Size = 0.5 x 0.5’ | 19.3 |) – The Blue Snowball nebula is 2.5° west-southwest of the star Iota Andromedae. At 100x the planetary appears as a slightly bluish disk.



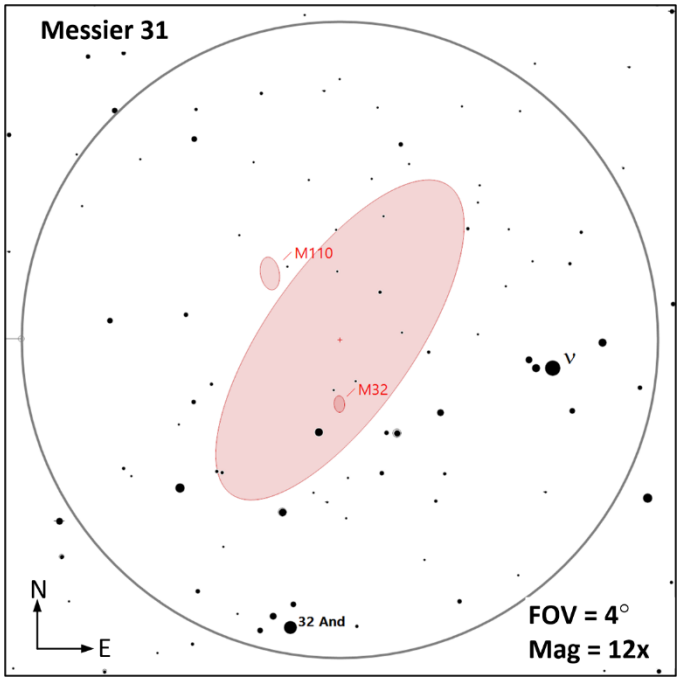


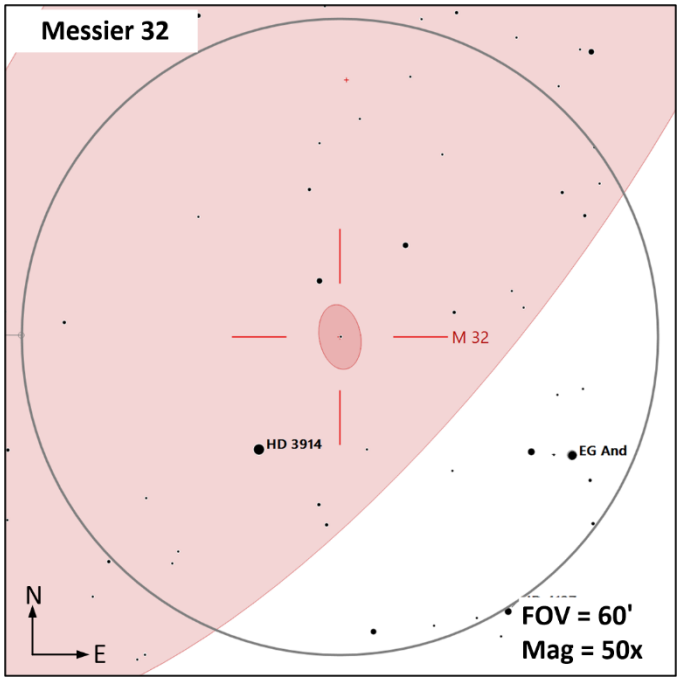
NGC-7686 (OC | M = 5.6 | Size = 16’ | SB = 20.1 |) – This open cluster is located 5,003 ly from our solar system and consist of approximately 80 stars. This is a good target for binoculars and small telescopes.

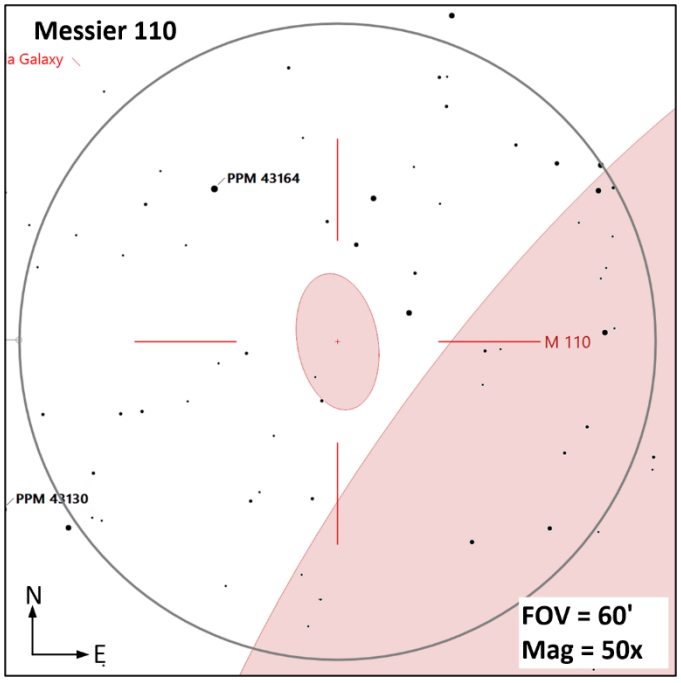




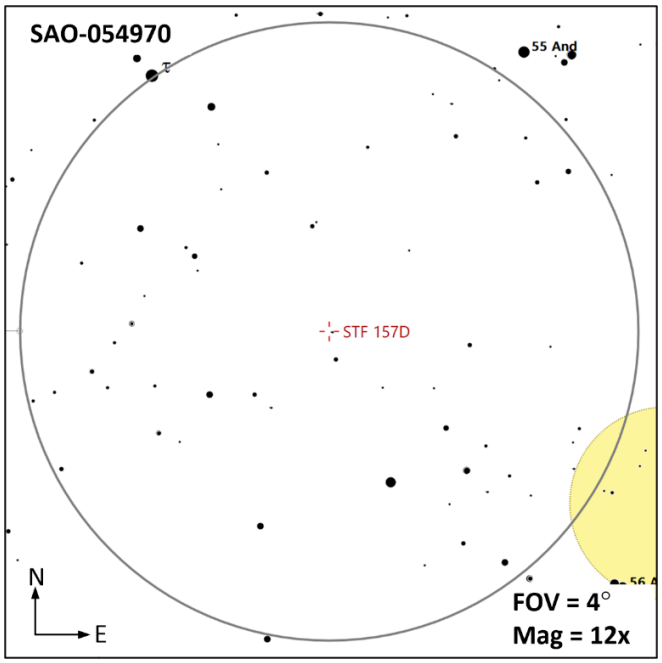
M-31, M-32, M-110 (Galaxies | M-31 | M=4.3 | Size =189.1x61.7' | SB = 23.1 |) – The Andromeda Galaxy is the nearest spiral galaxy to our own. It is located 2.54 million ly from our sun. Two companion galaxies M-32 and M-110 can also be identified. These objects are best observed in binoculars or a small telescope with low magnification. This is the biggest and best galaxy in the night sky.

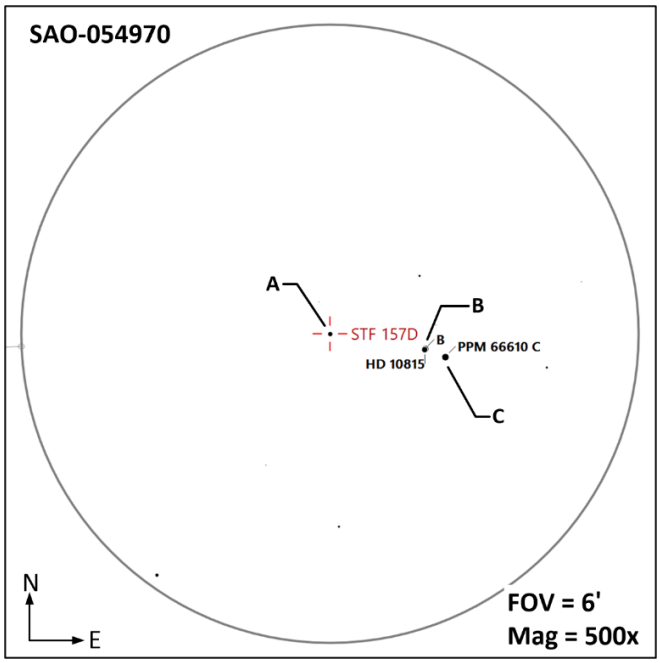




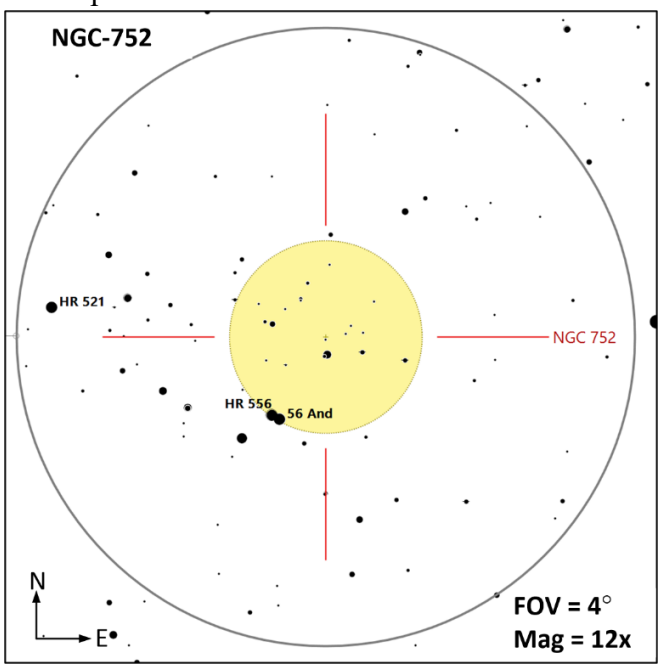


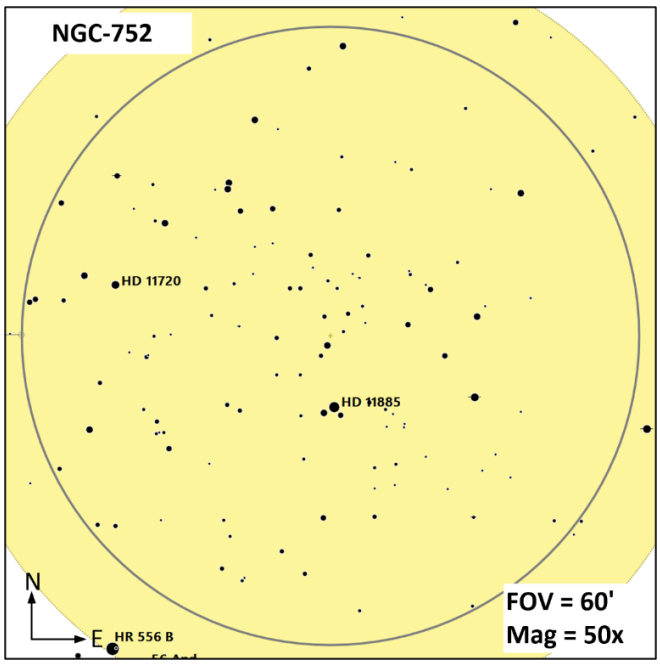
SAO-054970 (MS-3 **AB** | M=9.6, 10.9 | Sep=0.7” | PA = 205° || **AC** | M=9.6, 10.1 | Sep=12” | PA=115° || **AD** | M=9.6, 11.3 | Sep=56” | PA=281° |) – This is a triple star system located just about ½ way between the stars Almach and Mirach. The AB components are quite close together, so difficult to separate in small to medium telescopes. The “C” component should be easier to separate. All three stars in this system are fairly faint.



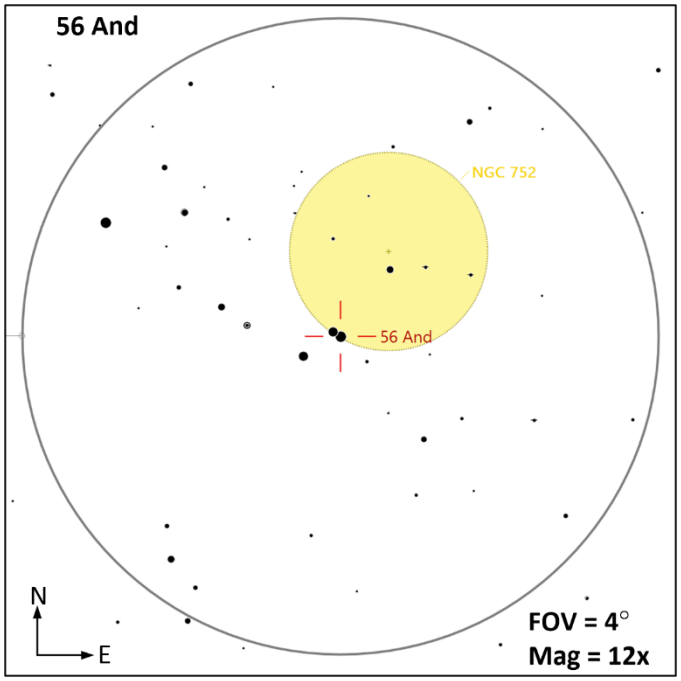


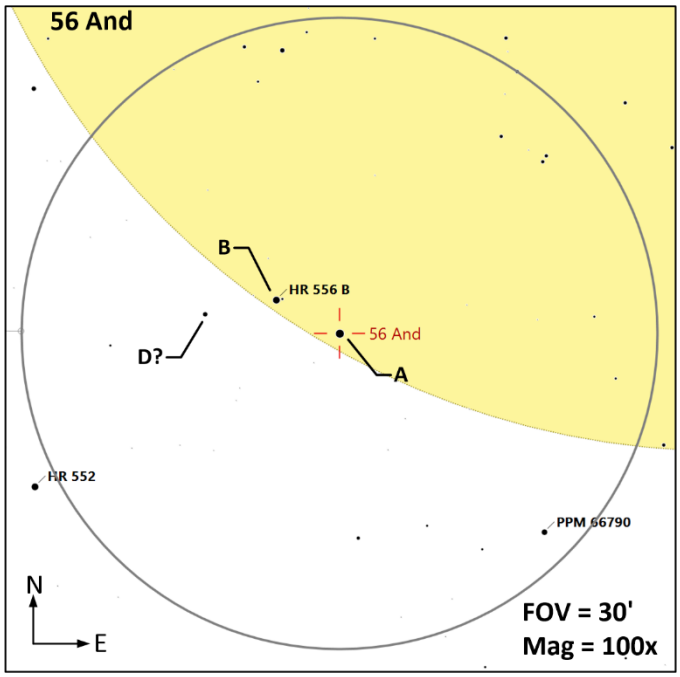
NGC-752 (OC | M = 5.7 | Size = 50’ | SB = 22.8 |) – A large collection of 60 to 70 stars over a 50’ area. This is an excellent target for binoculars it is also part of STAR-14 (Below) and 56 And (Below) lies just on the edge of this open cluster.



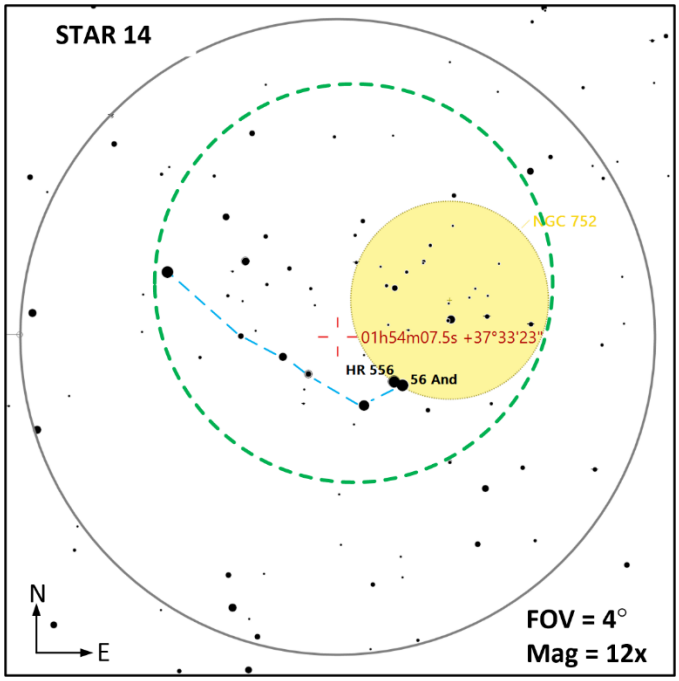


56 And (MS-4 | **AB** | M=5.8, 6.1 | Sep=203” | PA=298° || **AC** | M=5.8, 12 | Sep=18” | PA=80° || **BD** | 6.1, 9.8 | Sep=204” | PA=258° |) – Located on the edge of NGC-752 the A & B components of this system are not physically associated with each other. However, the A & C components are. Images below don’t seem to correspond to the data provided (Sep & PA) so I’m not sure what to expect when viewing this system.

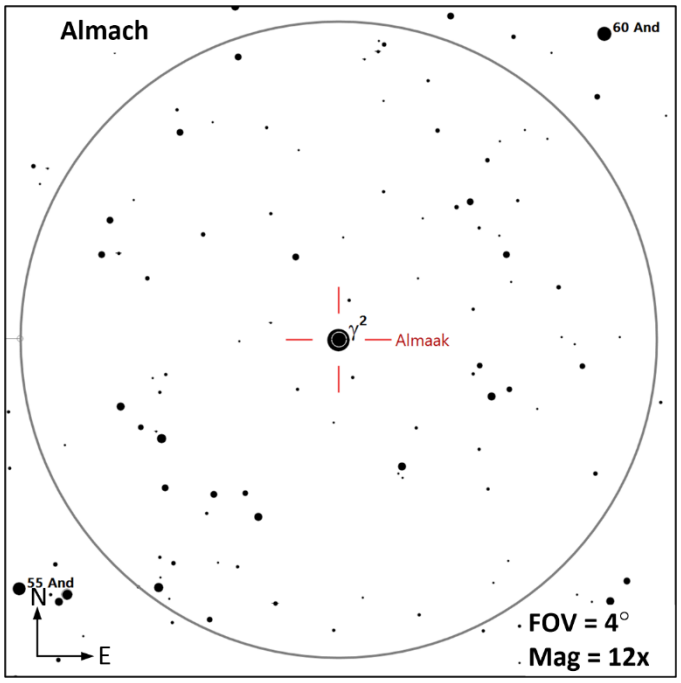


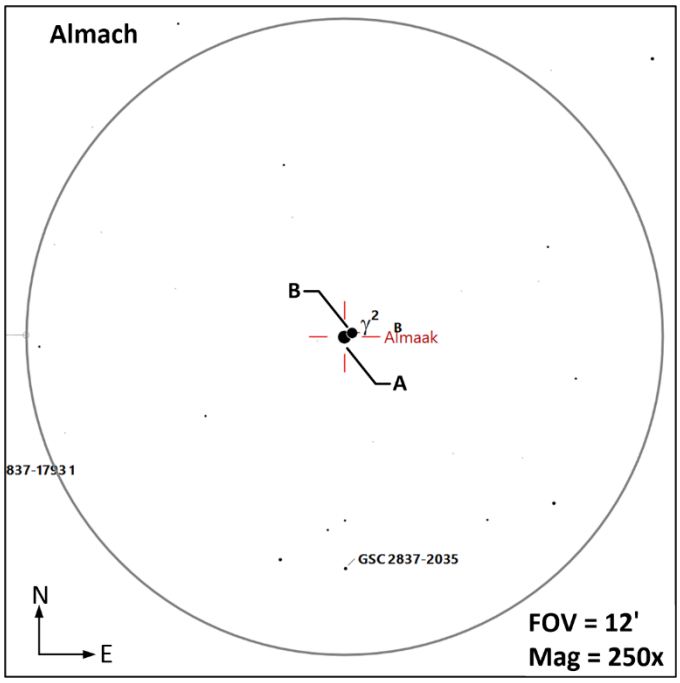


STAR 14 (AS |Stars = 6 + NGC-752 | Size = 95’ x 25’ |) – Also known as The Golf Putter, this asterism is supposed to be shaped like a gulf club with the open cluster NGC-752 being the golf ball. The large size of the object makes it an ideal target for binoculars.

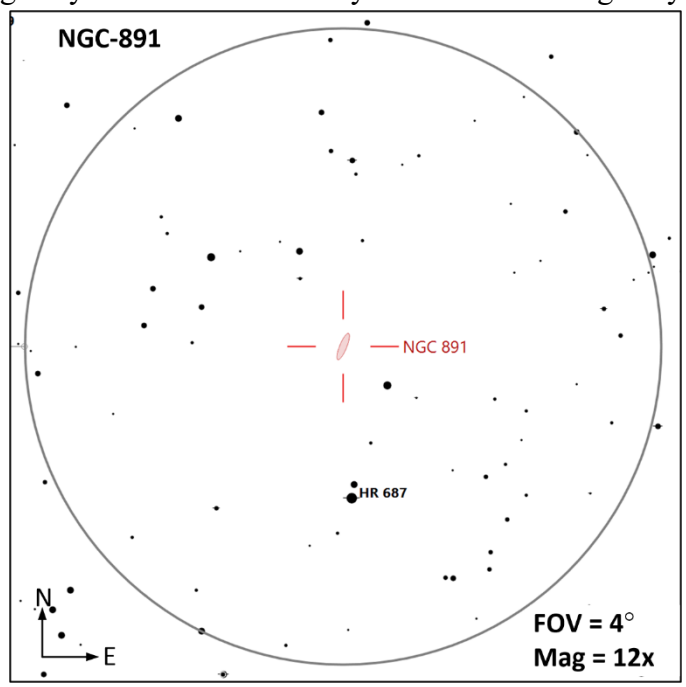


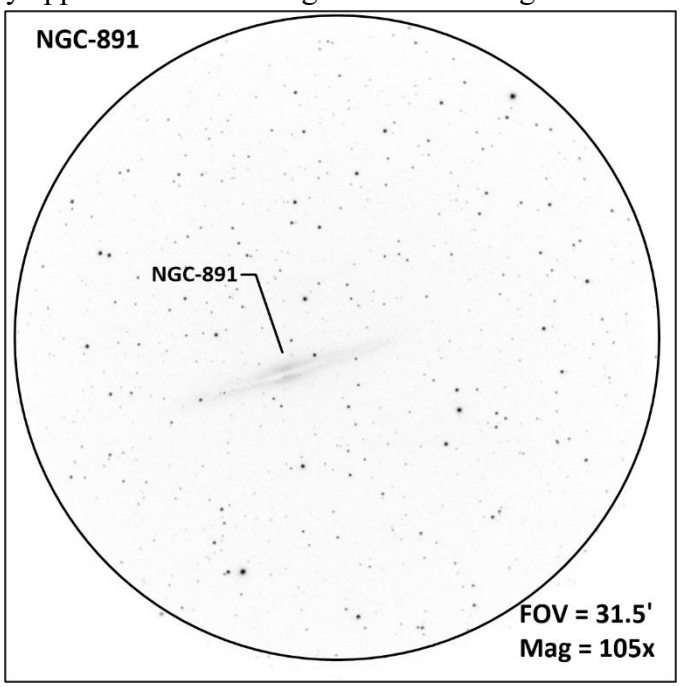
Almach (DS | **AB** |M = 2.3, 5.0 | Sep = 9.5” | PA = 63.2° |) – A beautiful gold and blue pair. One of the best doubles in the northern sky and has many striking resemblances to Albireo. This system is 390 ly from earth.



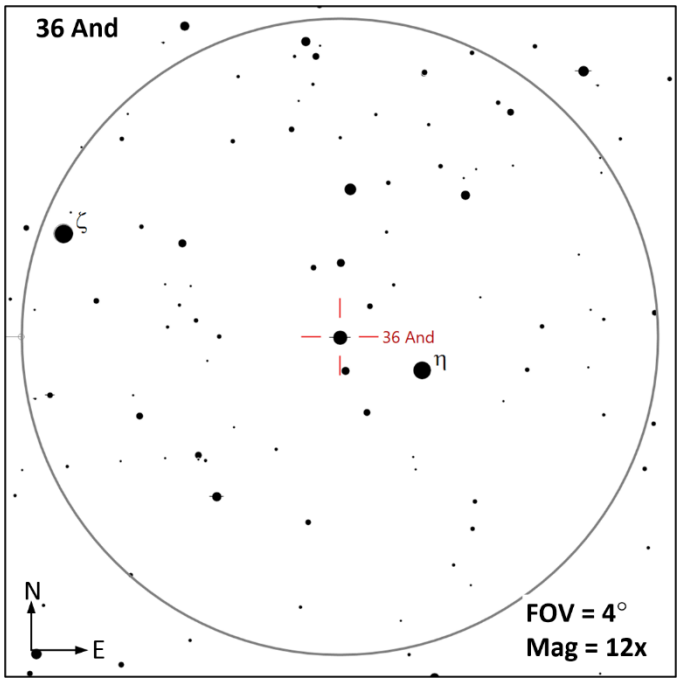


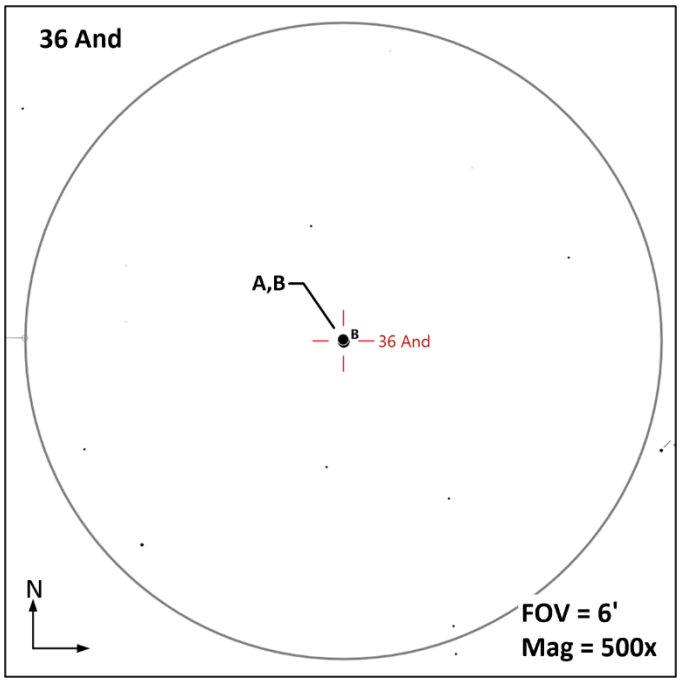
NGC-891 (G | M = 10.8 | Size = 11.7’x1.6’ | SB = 22.6 |) – Also known as the Silver Sliver galaxy this edge-on galaxy is about 33 million ly from earth. This galaxy may appear as a faint elongated slither of light.





36 And (MS-3 **AB** | M=6.1, 6.5 | Sep=1.2” | PA = 335° || **(AB) C** | M=6.3, 11.0 | Sep=162” | PA=223° |) – This multiple star system is located on the edge of the Andromeda constellation close to the Pisces constellation. The AB components are near the same brightness and quite close at 1.2” apart, so may be challenging for smaller telescopes. The C component is quite dim at 11 magnitude and quite far removed at 162”, so may not be easy to identify. This system may prove challenging.





Constellation Guide

References, Resources and Tools used to create this document

The resources listed below were utilize to generate this document.

References

- Books
  - Objects in the Heavens: Peter Birren
  - Touring the Universe through Binoculars: Philip Harrington
  - The Deep Sky: Philip Harrington
  - Double and Multiple Stars and How to Observe Them: James Mullaney
  - Sky Spot Books
    - Bright Telescopic Objects: Brent Watson
    - Select Double Stars: Brent Watson
    - Overlooked Objects: Bret Watson
- Asterisms
  - Astronomical League: Asterisms observing program List
  - Asterisms: Demeiza Ramakers
  - Pattern Asterisms: John Chiravalle
- Saguaro Astronomy Club
  - Asterisms List
  - 110 Best of the NGC
  - Red Stars List
- Online
  - Wikipedia
  - The Garden Astronomer: Double, Multiple, and Special Star Observations List
  - Sky & Telescope: Colored Double Stars, Real and Imagined
  - In-The-Sky.org
  - Constellation-guide.com

Applications

- SkyTools 4.1 Visual Professional
- AstroPlanner Version 2.4
- Cartes du Ciel Version 4.3
- Sky Safari Pro 7
- Microsoft Office Home and business 2021 - Word
- Microsoft Visio Professional 2010
- IrfanView Version 4.72