

Constellation Guide

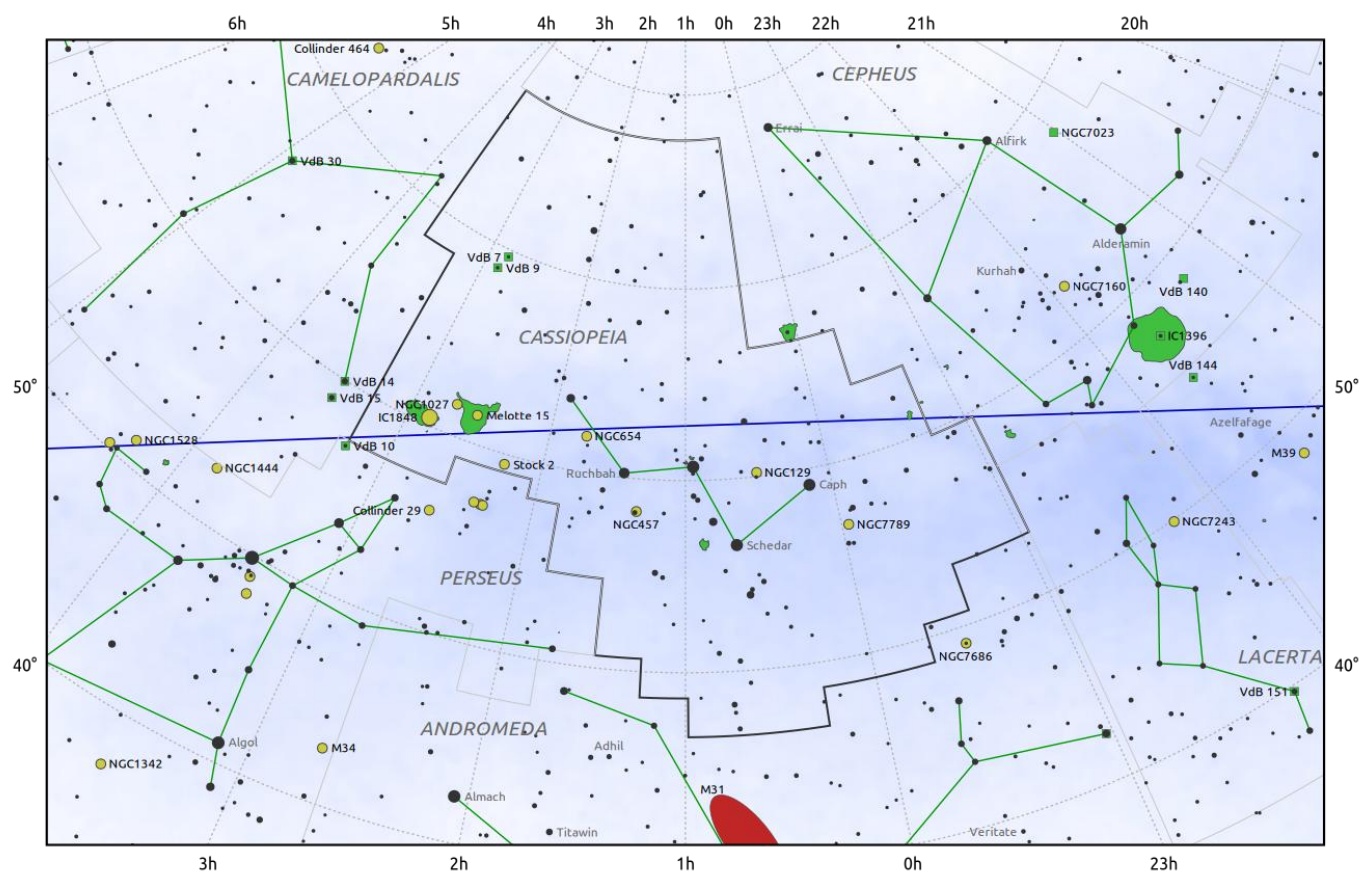
Cassiopeia (Cas)

Evening Visibility: **September - November**

Online Information: [Cassiopeia](#)

More Online Information: STAR 15, [Iota Cas](#), [NGC 663](#), [Messier 103](#), STAR 13, [NGC 457](#), W Cas, [Achird](#), [NGC 281](#), [NGC 185](#), HD 225009, [WZ Cas](#), [Sigma Cas](#), [NGC 7789](#), 6 Cas, [Messier 52](#), [NGC 7635](#), STAR 12, STAR 29

[In-The-Sky.org](#) Constellation Map



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Magnitude scale: • 6.0 • 5.0 • 4.0 • 3.0 • 2.0 • 1.0

— The Equator — Ecliptic Plane — Galactic Plane

Galaxy Bright nebula Open cluster Globular cluster Planetary nebula

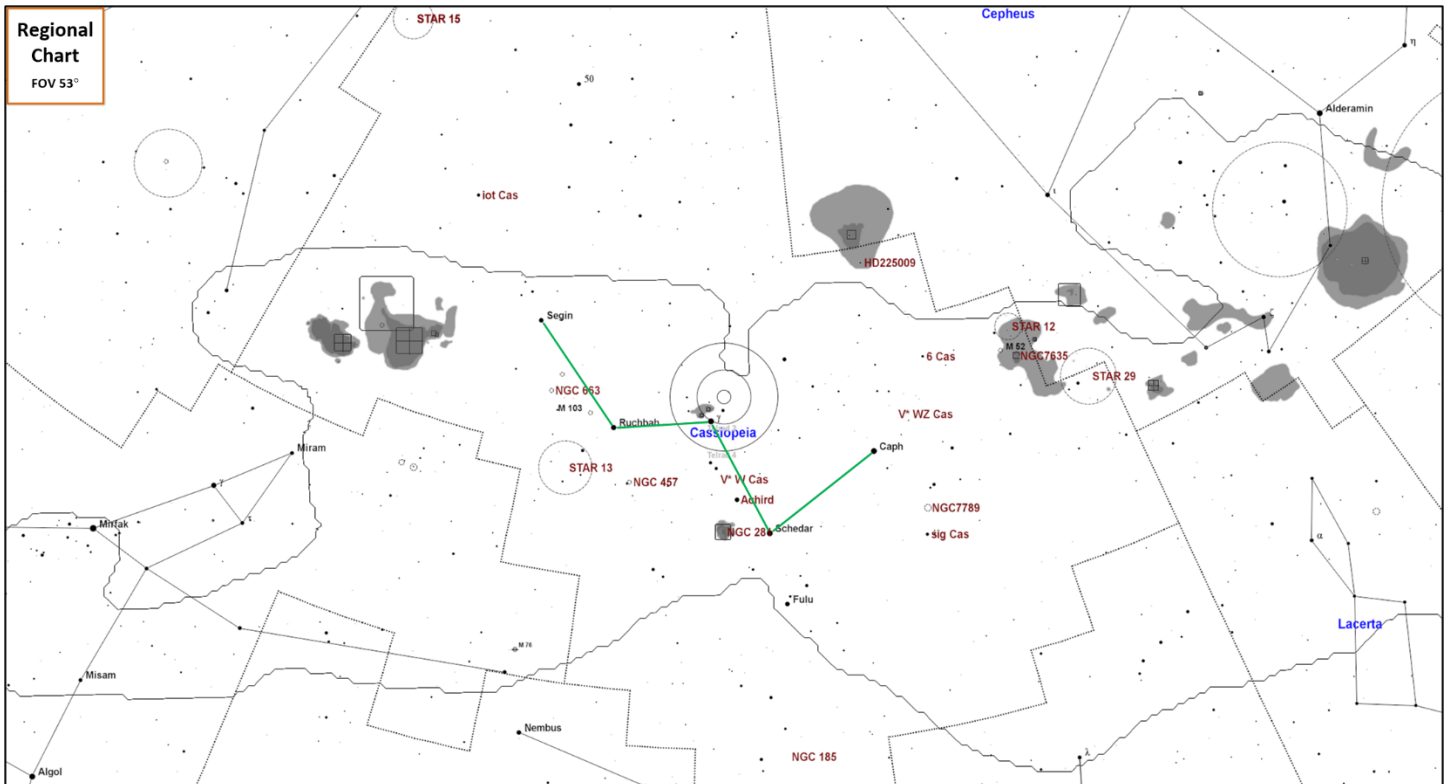
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Cassiopeia is easily recognized as the constellation shaped as an “M” or “W” with one leg kicked out. It is named after the Greek mythology queen and contains many objects of interest.

Constellation Highlights

- **Iota Cas (MS-3)** – An exceptional triple star system.
- **NGC 457 (OC)** – The Owl nebula, an open cluster with the shape of an owl with outstretched wings.
- **WZ Cas (CS, DS)** – A rare Red/Blue double star system in a field of background stars.

Constellation Targets Map



Objects Summary

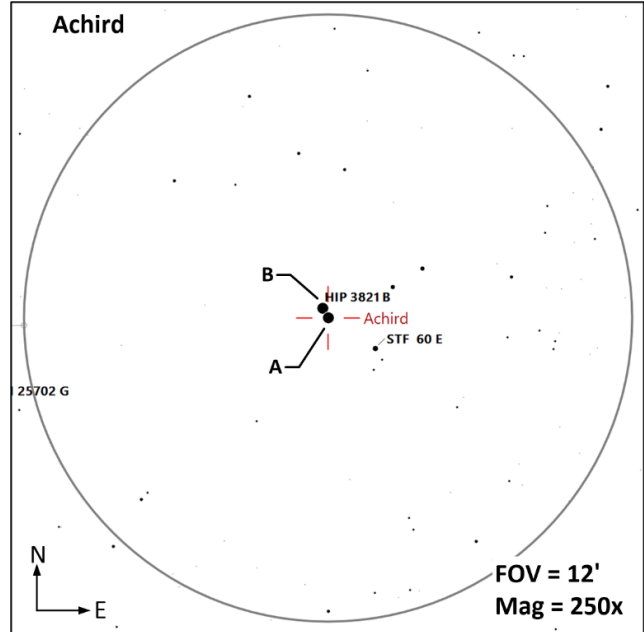
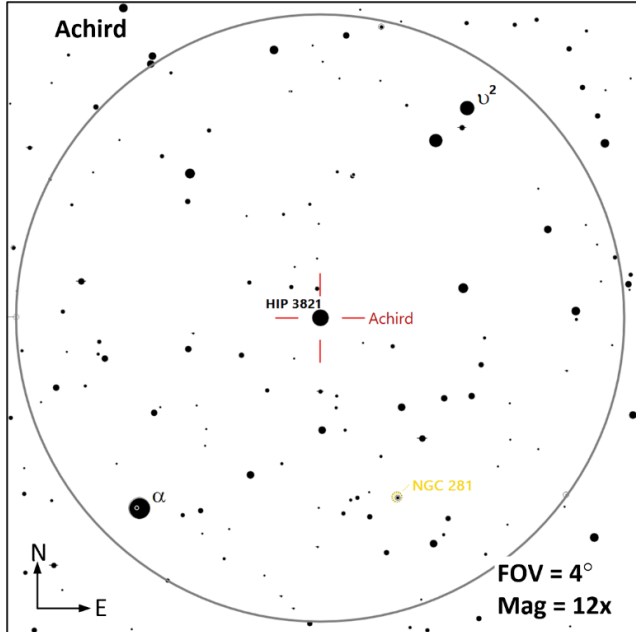
Object (Type)	Ref	Aliases	Stats
STAR-15 (AS)		Kemble’s Kite	Size = 1.5° x 0.5° Stars = 8 Ref Star: SAO-004917 (V805 Cas)
Iota Cas (MS-3)	1 , 2	SAO-012298, HIP 11569, HR 707, HD 15089, STF 262, ADS 1860	AB M=4.7, 6.9 Sep=3.0” PA=231° AC M=4.7, 9.1 Sep=6.9” PA=117° BC M=6.9, 9.1 Sep=8.5” PA=99°
NGC-663 (OC)	1	Caldwell 10	M=7.1 Size=16’ SB=21.7
Messier 103 (OC)	1	NGC 581	M=7.4 Size=6.0’ SB=19.9
STAR-13 (AS)		Queens Kite	Size = 2° x 1.5° Stars = 8 Ref Star: SAO-022441 (HD 9812)
NGC-457 (OC, AS)	1	Owl Cluster, Dragonfly Cluster, ET Cluster, Phi Cassiopeiae Cluster, Kachina Doll Cluster	M = 6.4 Size = 13’ SB = 20.6

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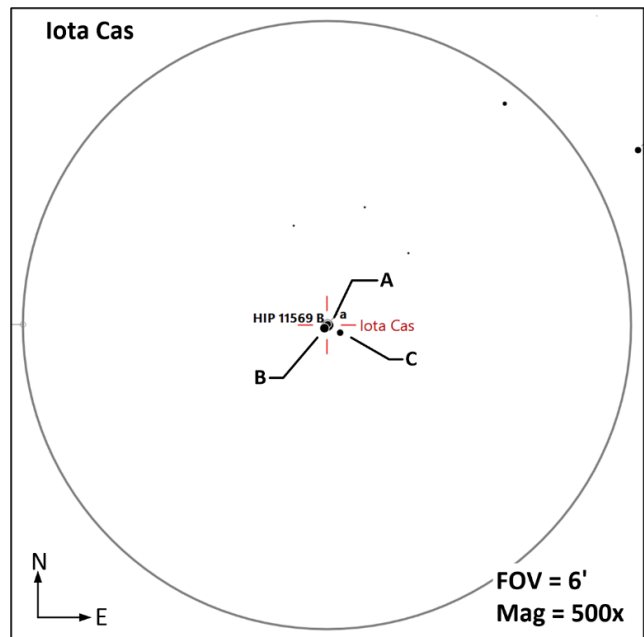
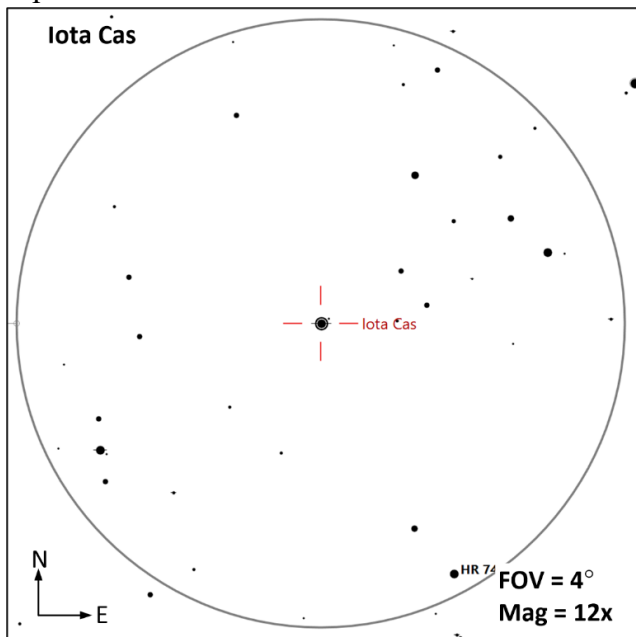
Object (Type)	Ref	Aliases	Stats
W Cas (CS)		HIP 4284, HD 5235	Mag Range=8.2 to 13.0 Period=408 d
Achird (DS)	1 , 2	SAO-021732, HIP 3821, Eta Cas, 24 Cas, HR 219, LHS 122, STF 60, ADS 671	AB M=3.5, 7.4 Sep=13.5" PA=328° (Color Doubles)
NGC-281 (EN)	1	IC 11, Sh2-184, Pacman Nebula	M= 7.4 Size=35' SB = 23.7
NGC-185 (G)	1	Caldwell 18, UGC 396, PGC 2329	M=10.1 Size=11.7' x 10.0' SB=23.9
HD 225009 (MS-3)	1	SAO-010937, HIP 207, HR 9094, HD 225009, STF 3053, ADS 1	AB M=6.0, 7.2 Sep = 15" PA=70° AC M=6.0, 11.0 Sep=98" PA = 291°
WZ Cas (CS, DS)	1 , 2	SAO-021002, HIP 99, HD 224855, STTA 254, SACDBL290	AB M=7.4, 8.3 Sep 58" PA=89°
Sigma Cas (DS)	1 , 2	SAO-035947, HIP 118243, 8 Cas, HR 9071, HD 224572, STF 3049, ADS 17140, σ Cas	AB M=5.0, 7.2 Sep=3.1", PA=326°
NGC-7789 (OC)	1	Caroline's Rose, Caroline's Haystack, White Rose Cluster, Cr 460, Mel 245	M=6.7 Size = 16' SB = 21.3
6 Cas (MS-3)	1	SAO-020869, HIP 117447, HD 223385, STT 508, ADS 17022, V 566	AB M=5.7, 8.0 Sep=1.5" PA=194° AC M=5.7, 10.2 Sep=63" PA=311°
Messier 52 (OC)	1	NGC 7654, Scorpion Cluster, The Scorpion, NGC7654, Cassiopeia Salt-and-Pepper, October Salt-and-Pepper	M=7.3 Size=13.0' SB=21.5
NGC-7635 (PN)	1	Bubble Nebula, Sh 2-162, C 11, LBN 548	M=10.0 Size = 15'x8' SB=23.8
STAR-12 (AS)		Airplane	Size = 60' Stars = 8 Ref Star: SAO-020572 (HR 8886)
STAR-29 (AS)		Lucky 7	Size = 2° x 1.2° Stars = 13 Ref Star: SAO 035090 (V1183 Cas), 1 Cas

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Achird (DS AB | M=3.5, 7.4 | Sep=13.5'' | PA=328° |) – Eta Cas is a colorful double star system composed of a yellow and red star pair. The system is 19.4 ly from earth. The system has a period of 472 years with an average distance of 70 AU between the stars. This system has a highly excentric orbit where distances between these stars varies between 35 AU to 105 AU. The primary sun in this system is very similar in properties to our own sun.

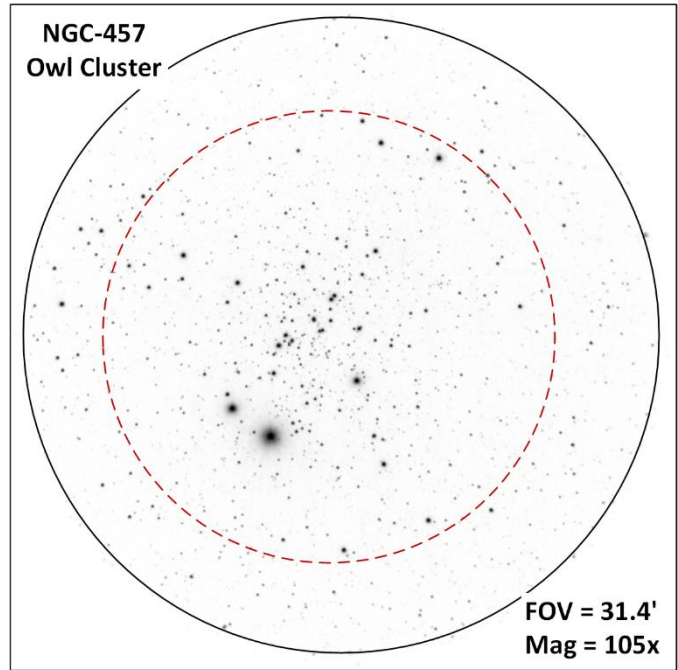
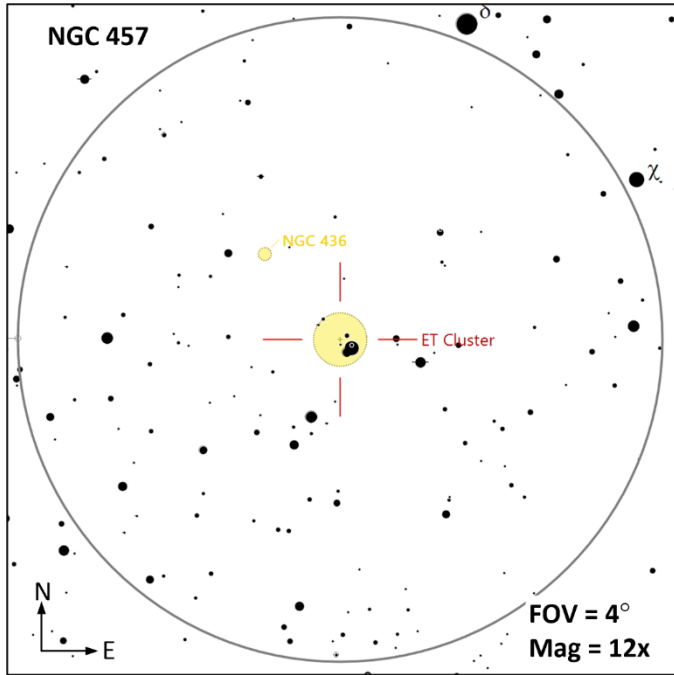


Iota Cas (MS-3 AB | M=4.7, 6.9 | Sep=3.0'' | PA=231° || AC | M=4.7, 9.1 | Sep=6.9'' | PA=117° || BC | M=6.9, 9.1 | Sep=8.5'' | PA=99° |) – Located 140 ly from earth this system is a delight for telescopes since it consists of 3 components that can be resolved by most telescopes. The primary appears white with a blue and yellow companions.

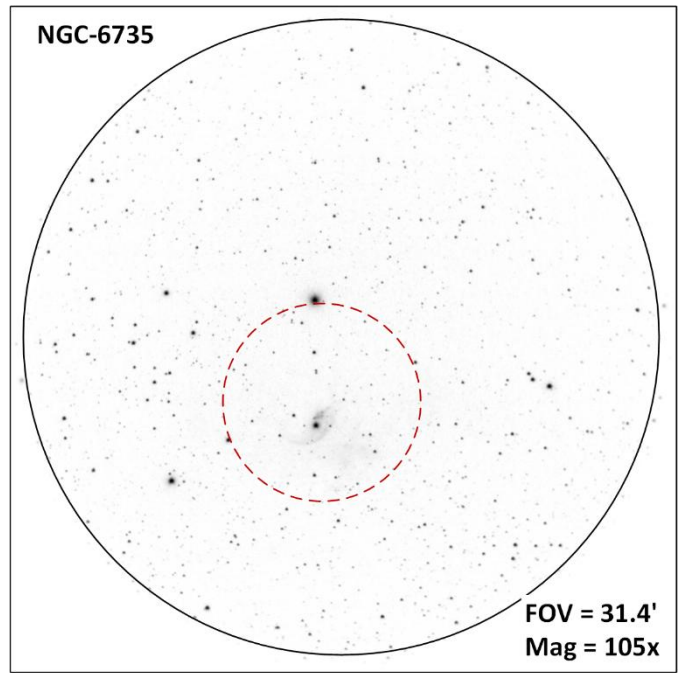
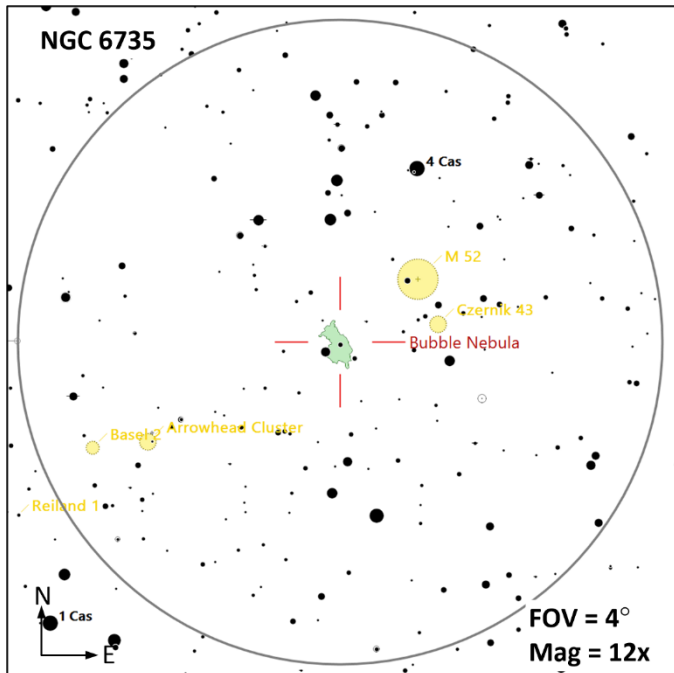


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NGC-457 (OC, AS | M = 6.4 | Size = 13' | SB = 20.6) – This cluster goes by a number of names including the Owl Cluster, ET Cluster and Dragonfly Cluster. It is a delightful cluster that doesn't take much imagination to see the Owl outline. Located 7,900 ly from earth with an age of 21 million years.

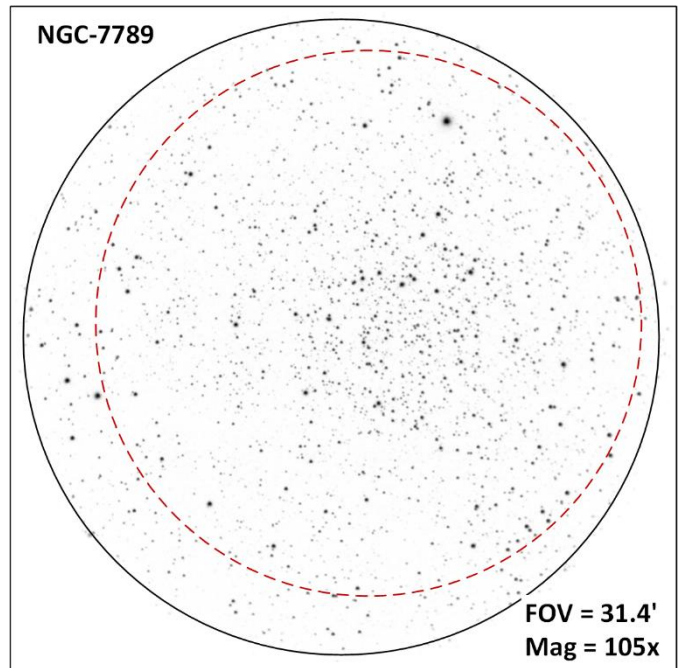
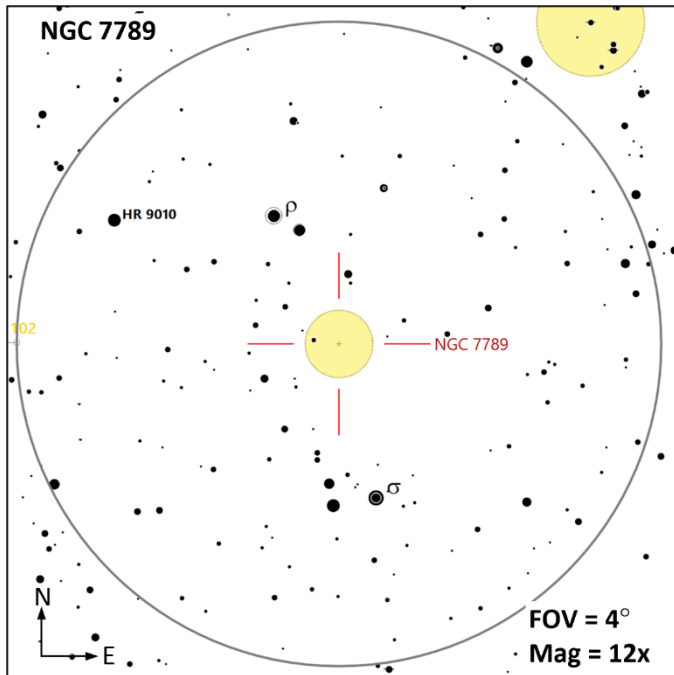


NGC-7635 (PN | M=10.0 | Size = 15'x8' | SB=23.8) – The Bubble Nebula is located about 11,000 ly away and about 10 ly across, this dim nebula may be best viewed with a large aperture (8 or more inches) and a nebula filter.

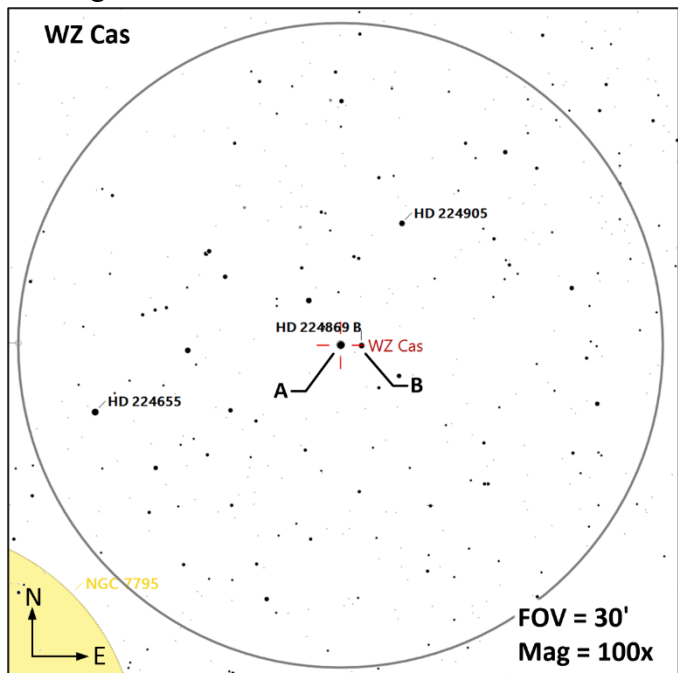
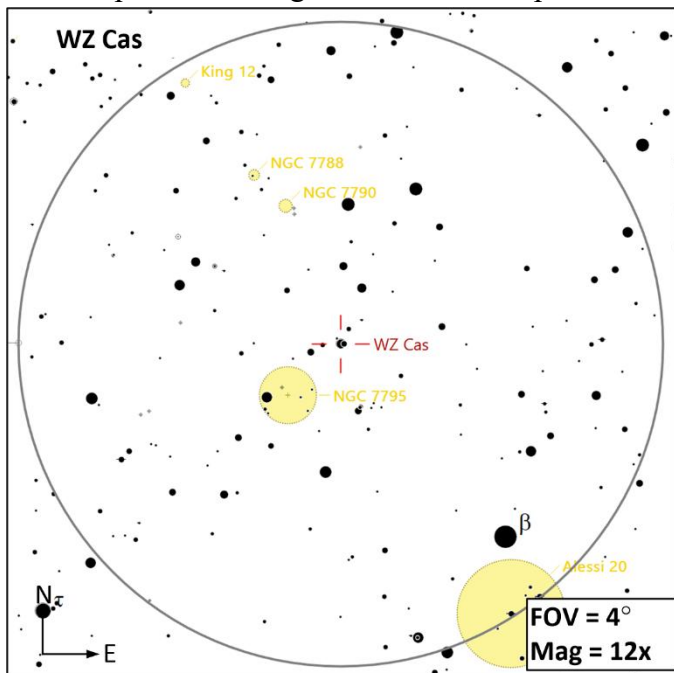


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NGC-7789 (OC | $M=6.7$ | Size = 16' | SB = 21.3) – Caroline's Rose is a large dense open cluster composed of at least 150 stars. This cluster is 8,000 ly from earth with a diameter of 60 ly.

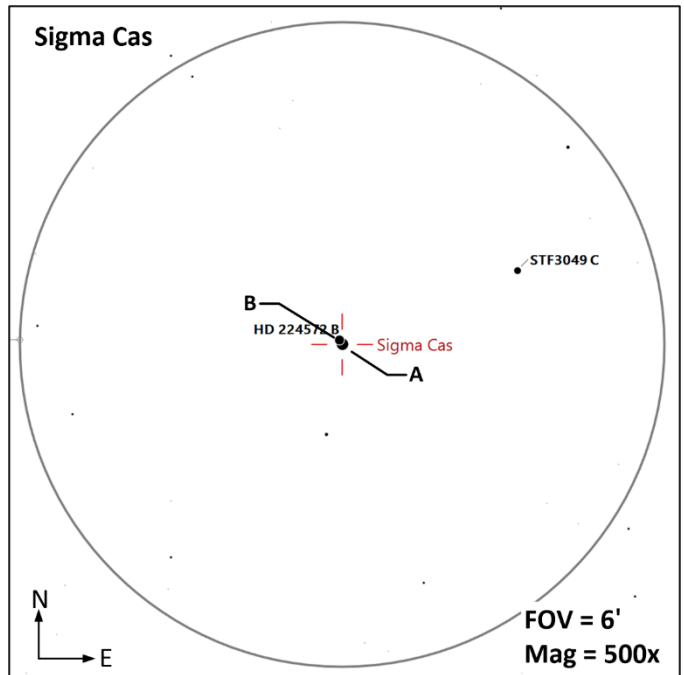
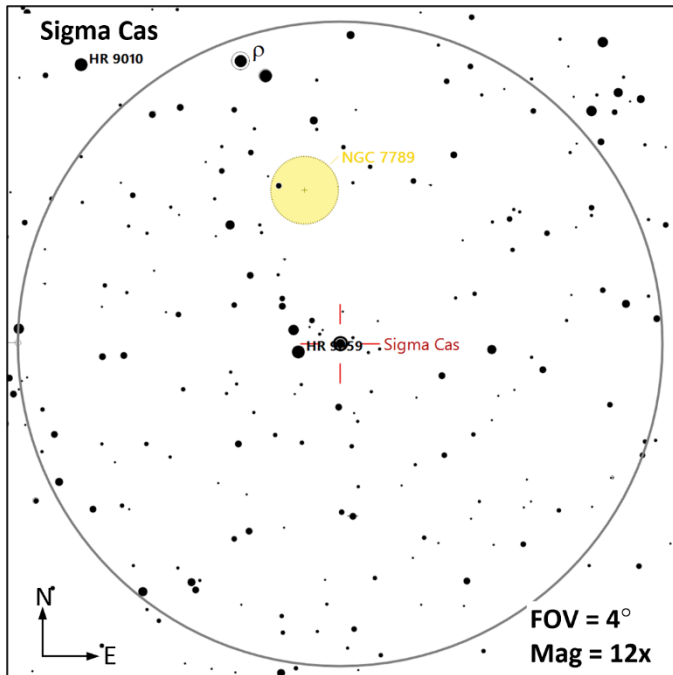


WZ Cas (CS, DS AB | $M=7.4, 8.3$ | Sep 58" PA=89°) – One of my personal favorite double stars. WZ may not initially appear red, but eventually it pops-out and you ask how could I have missed that! It has a delightful blue companion making it a rare red-blue pair in a field of background stars.

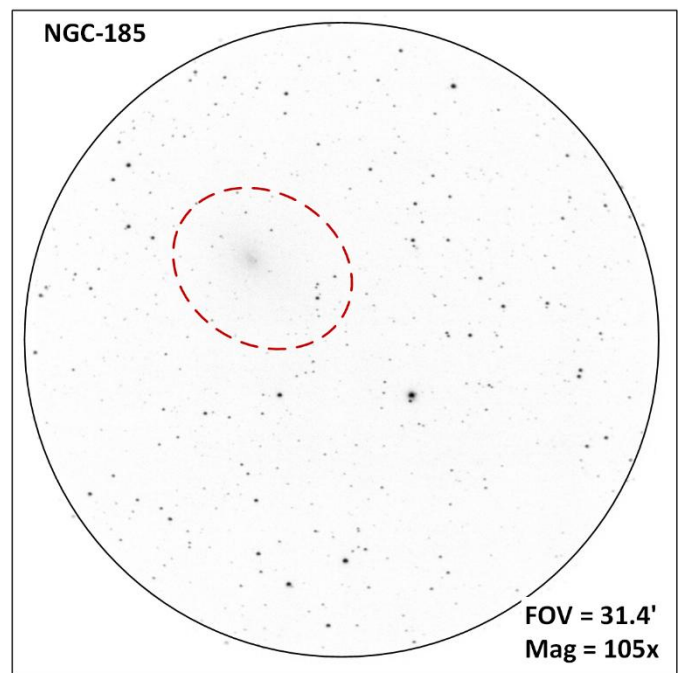
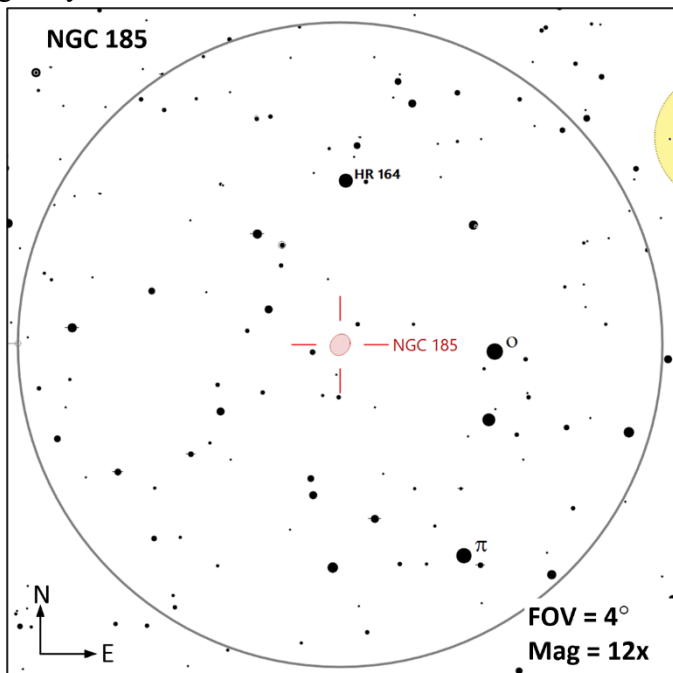


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Sigma Cas (DS AB | M=5.0, 7.2 | Sep=3.1", PA=326°) – A bluish white and yellow pair located 1,500 ly from earth.

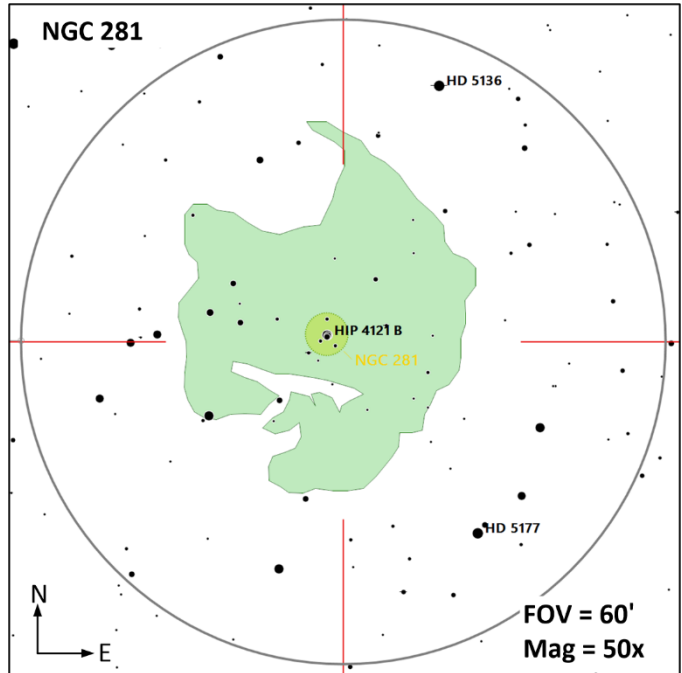
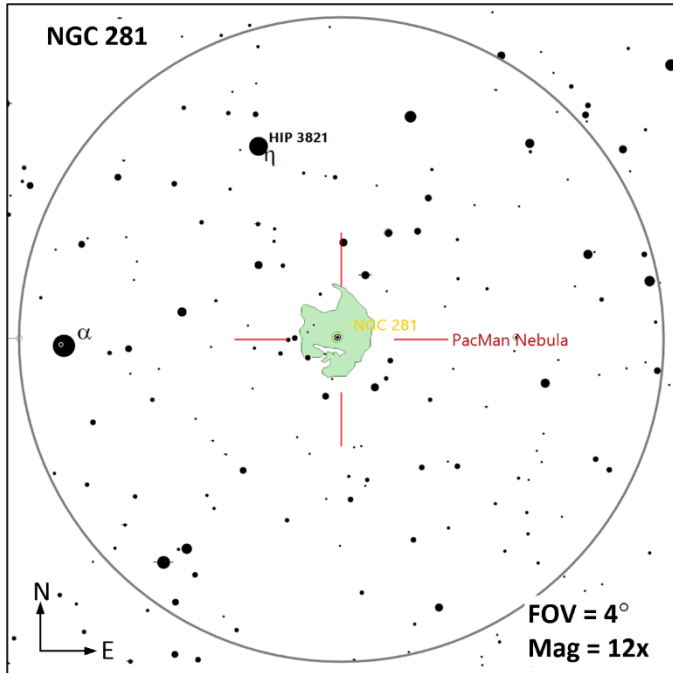


NGC-185 (G | M=10.1 | Size=11.7' x 10.0' | SB=23.9) – Caldwell 18 is a small dwarf spheroidal galaxy located 2.1 million ly from earth and a member of our local group of galaxies and a satellite of the Andromeda galaxy.

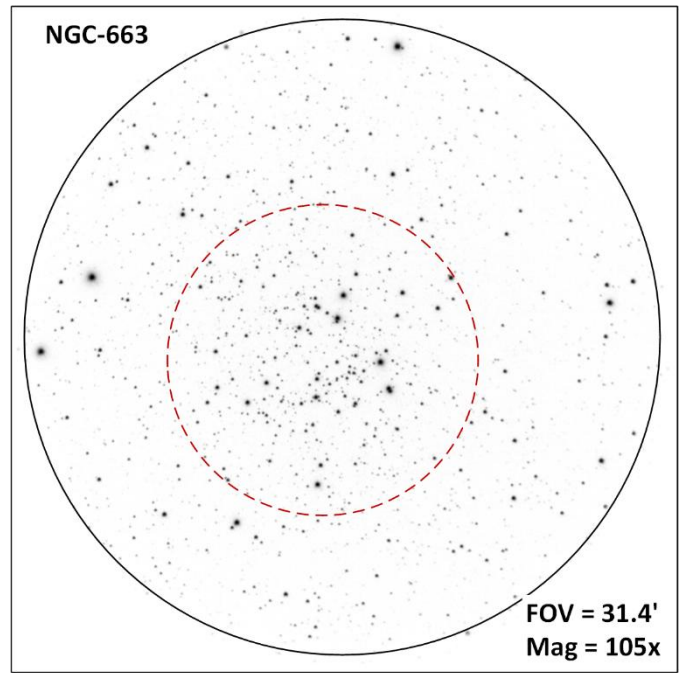
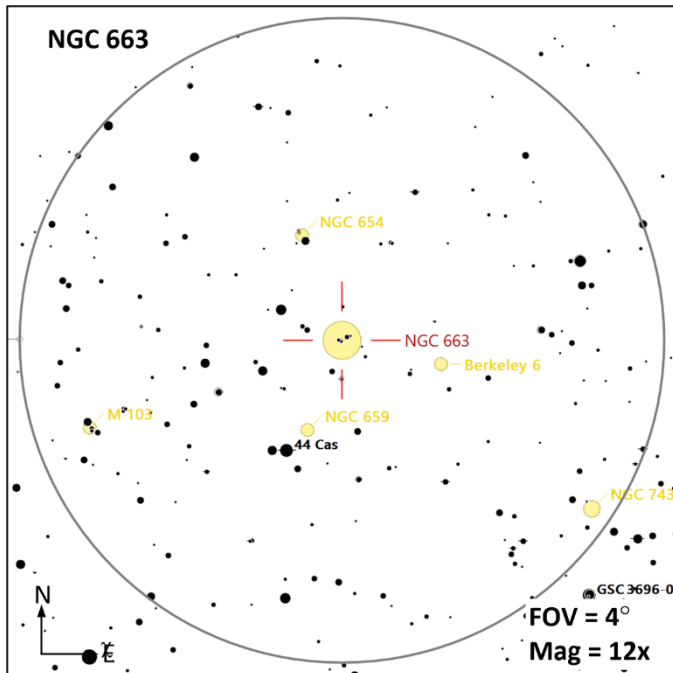


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NGC-281 (EN | M= 7.4 | Size=35' | SB = 23.7 |) – The Pacman Nebula a H II region located about 4,100ly from earth. Utilizing an O III filter or nebula filter may yield best results in locating this object.

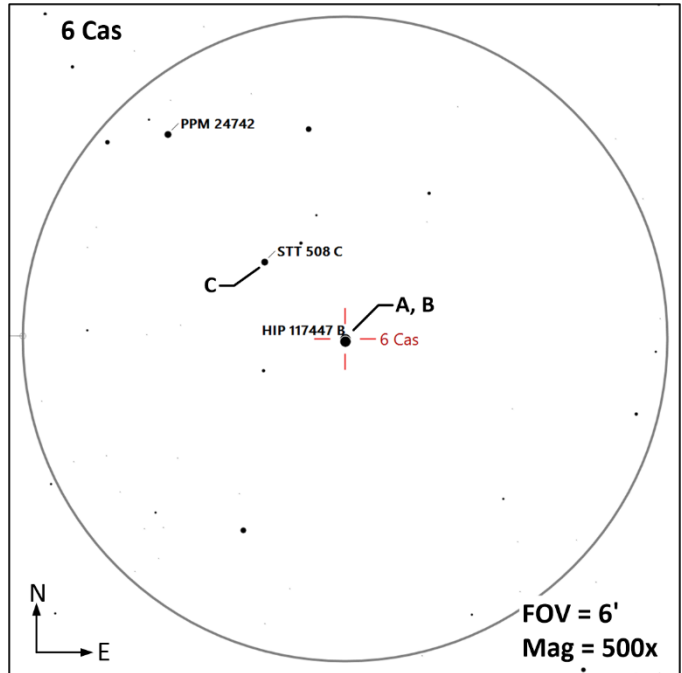
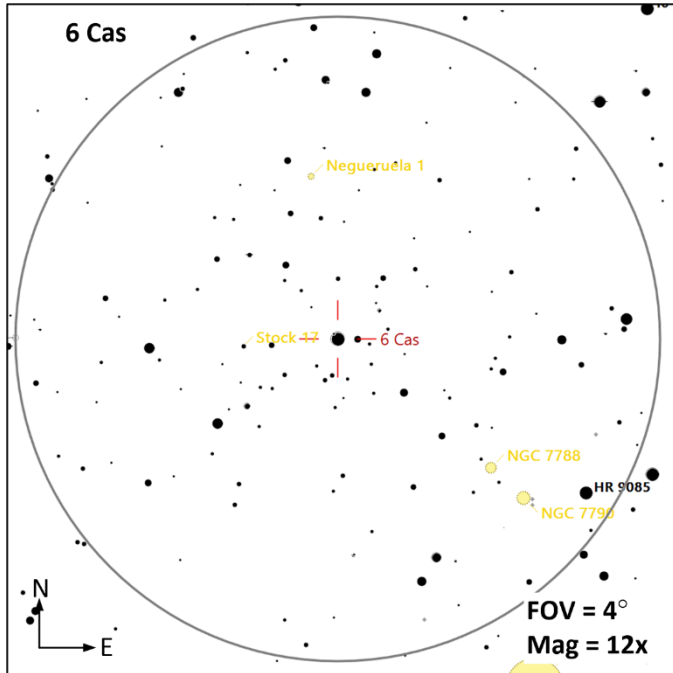


NGC-663 (OC | M=7.1 | Size=16' | SB=21.7 |) – Caldwell 10 is located about 6,800 ly from earth and is a open cluster with about 400 stars and is a great target for binoculars.

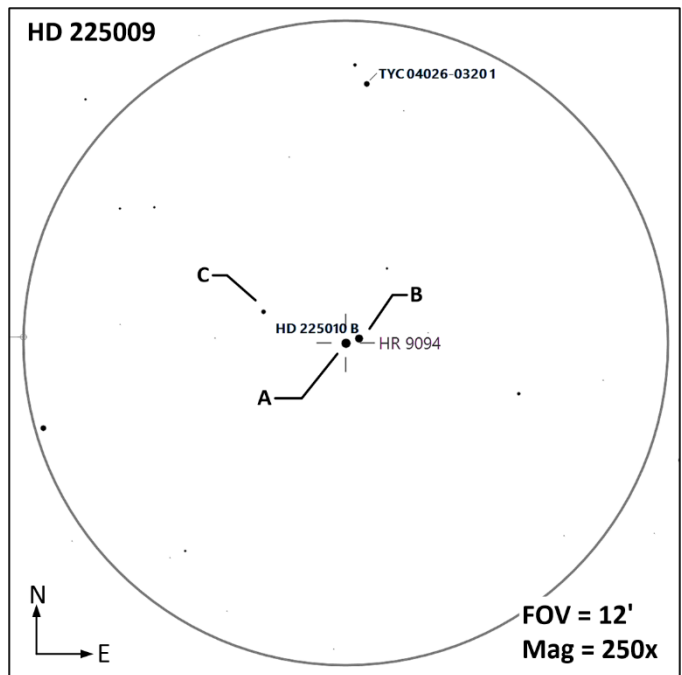
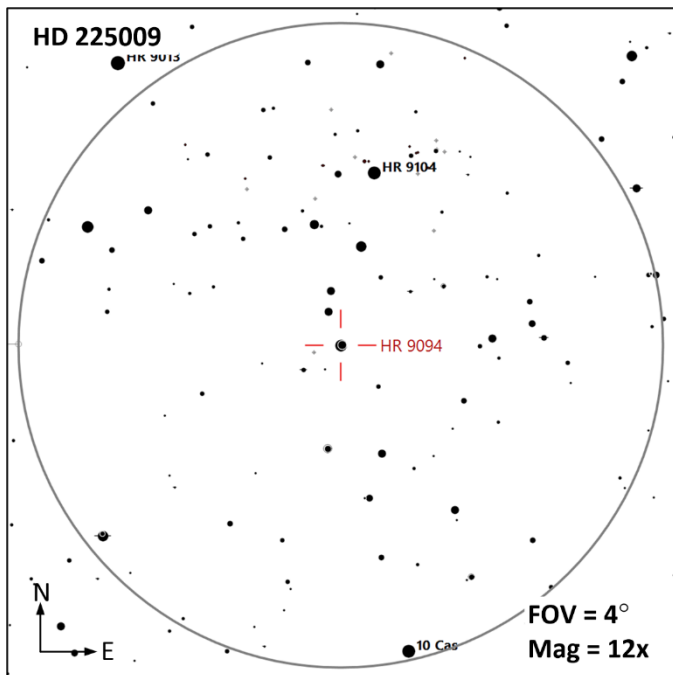


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6 Cas (MS-3 AB | M=5.7, 8.0 | Sep=1.5" | PA=194° || AC | M=5.7, 10.2 | Sep=63" | PA=311°) – This multiple star system is suspected to have up to 7 components Earth bound telescopes may be able to identify three of the components. The system is 5,700 ly from earth.

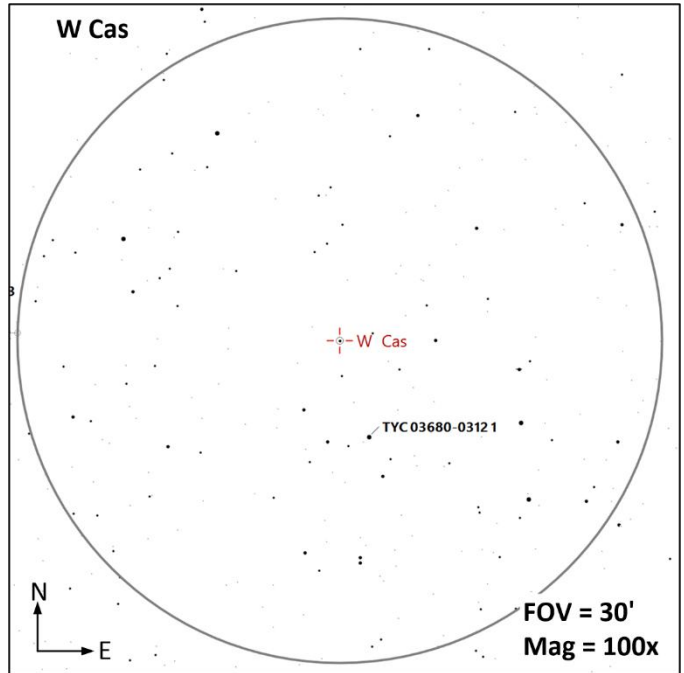
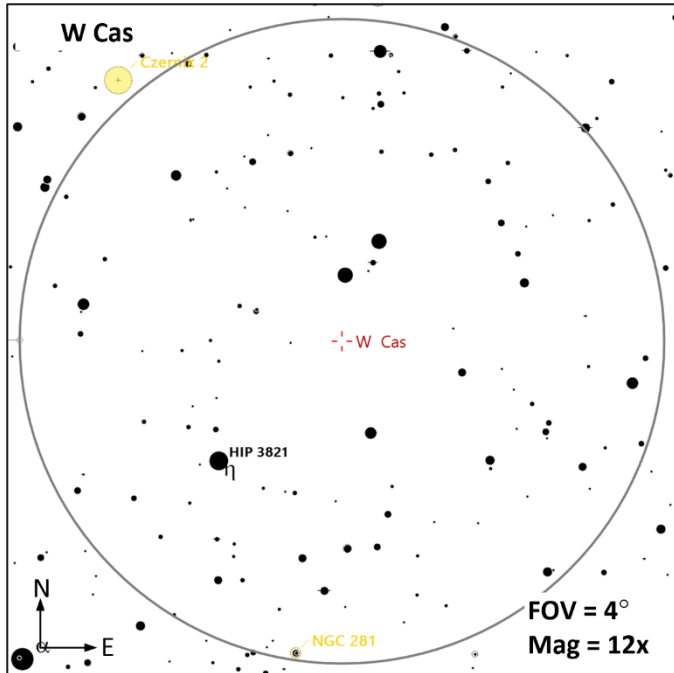


HD 225009 (MS-3 AB | M=6.0, 7.2 | Sep = 15" | PA=70° || AC | M=6.0, 11.0 | Sep=98" | PA = 291°) – All three components of this system should be able to be resolved in small telescopes. The system is 2,100 ly from earth.

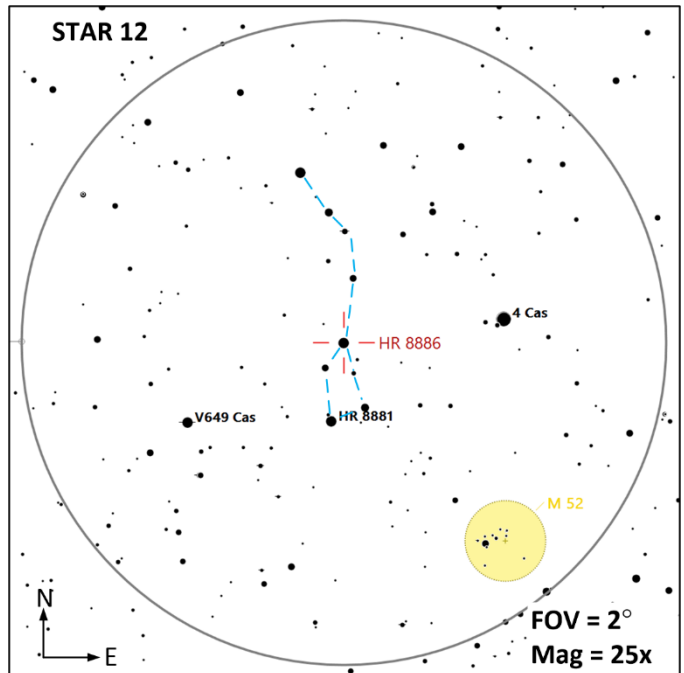
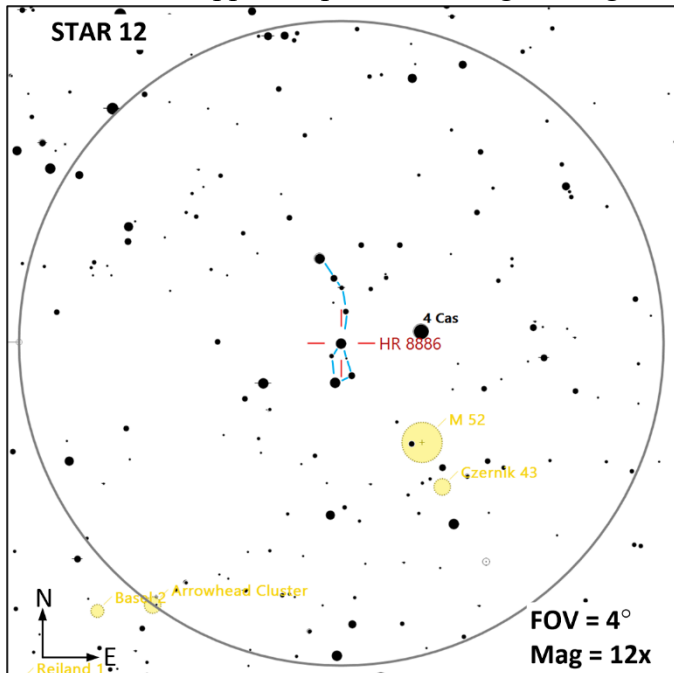


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W Cas (CS | Mag Range=8.2 to 13.0 | Period=408 d) – This carbon star appears in the top 100 carbon stars list so should be quite red.

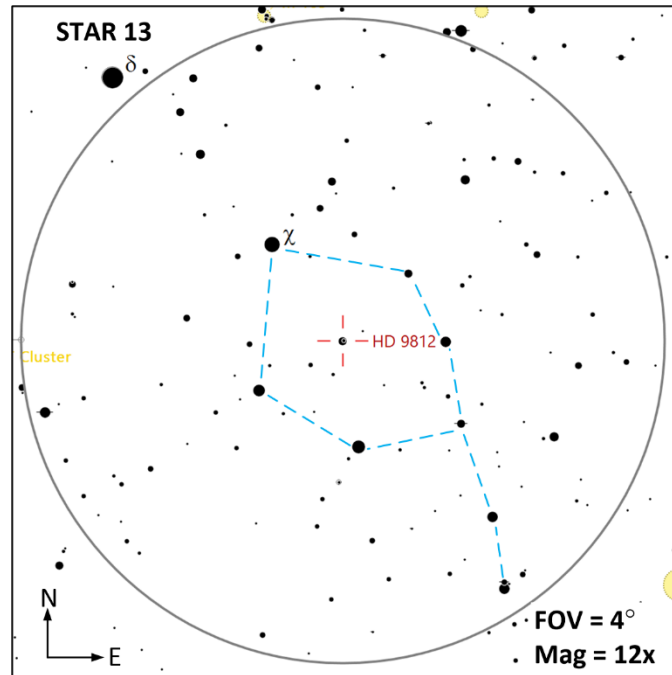


STAR 12 (AS | Size = 60' | Stars = 8) – Known as the Airplane, I don't really see this shape, it appears more like one of the dipper shapes to me. A good target for binoculars

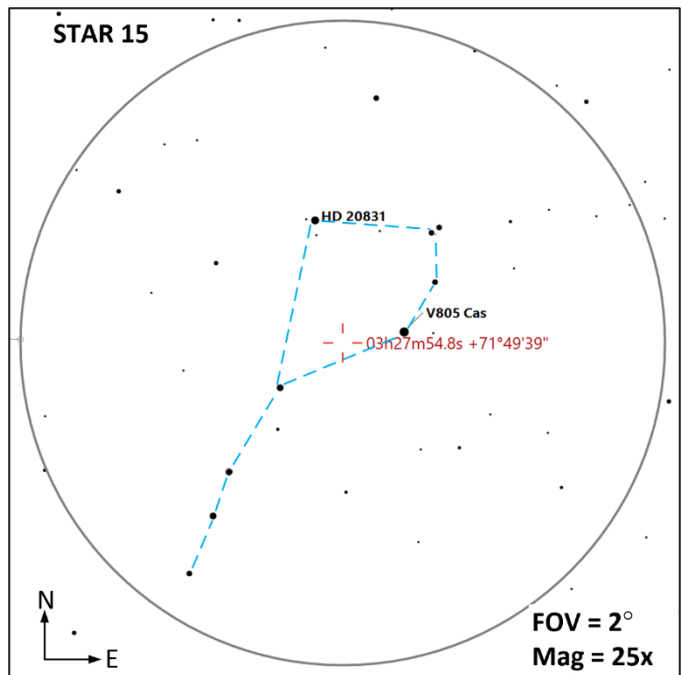
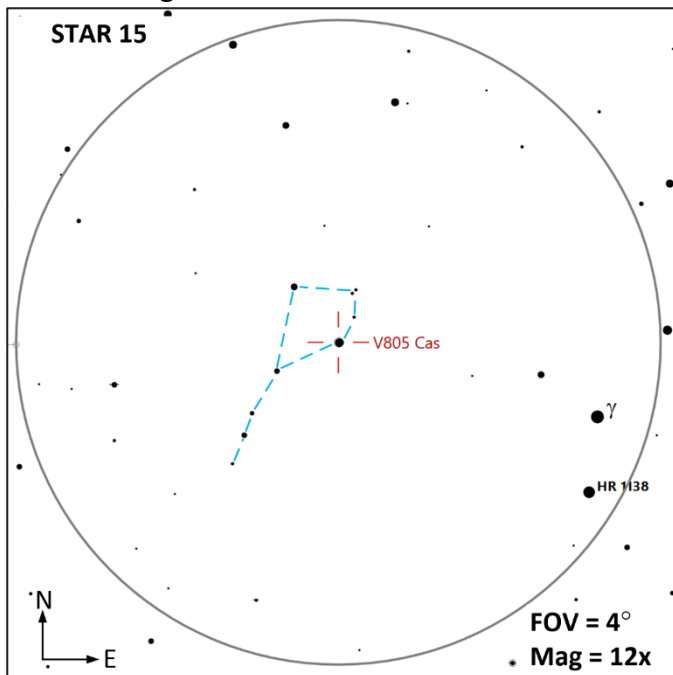


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STAR-13 (AS | Size = $2^\circ \times 1.5^\circ$ | Stars = 8 |) – This asterism is known as Queens Kite. A nice large object, a good binocular target.

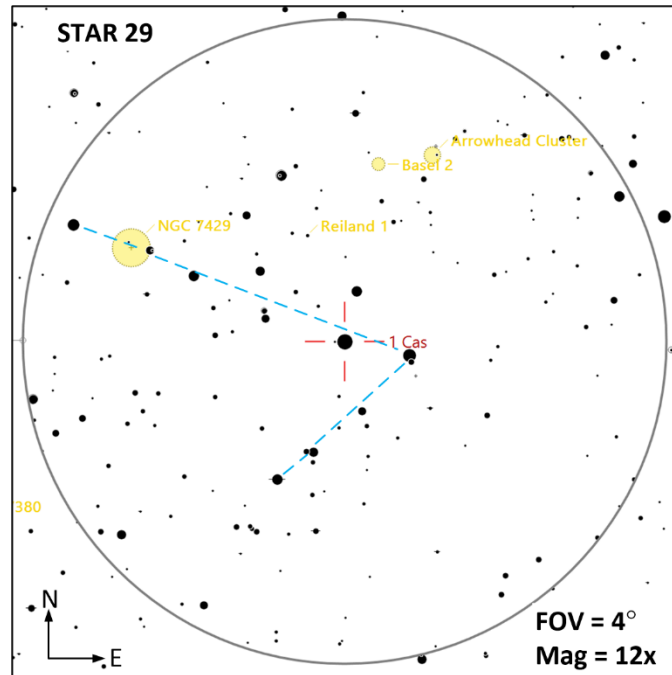


STAR-15 (AS | Size = $1.5^\circ \times 0.5^\circ$ | Stars = 8 |) – This asterism has the form of a diamond shaped kite. Another binocular target.

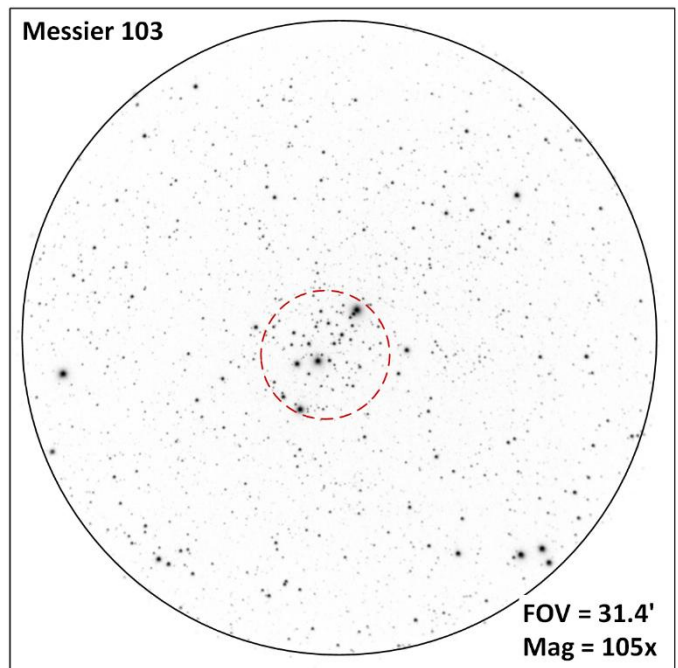
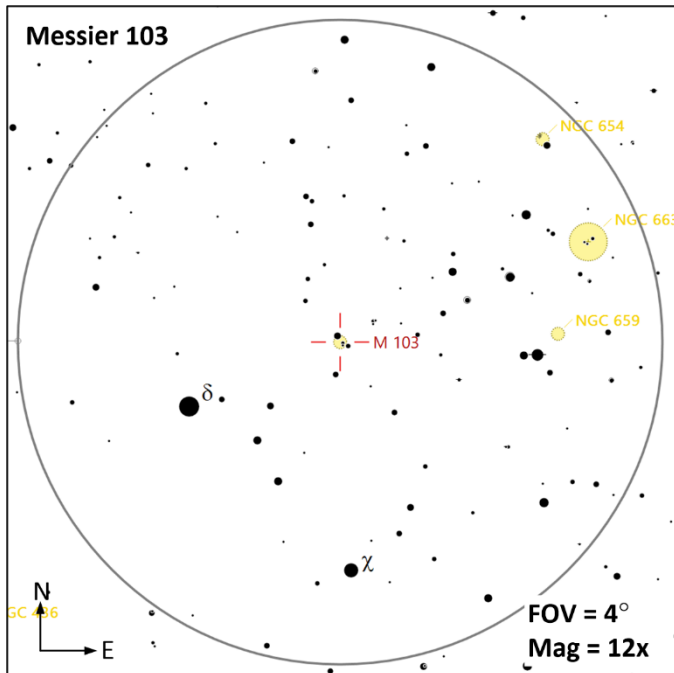


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STAR-29 (AS | Size = $2^\circ \times 1.2^\circ$ | Stars = 13 |) – Also known as Lucky 7, not really sure it looks too much like the number 7.

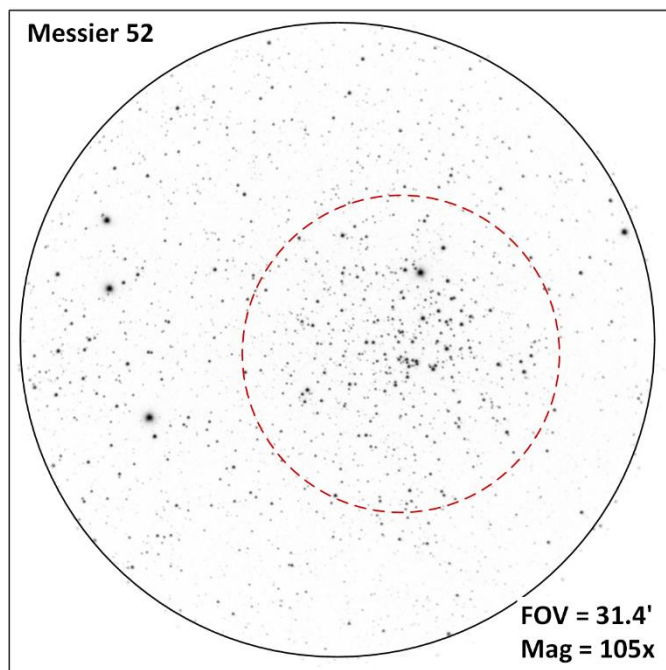
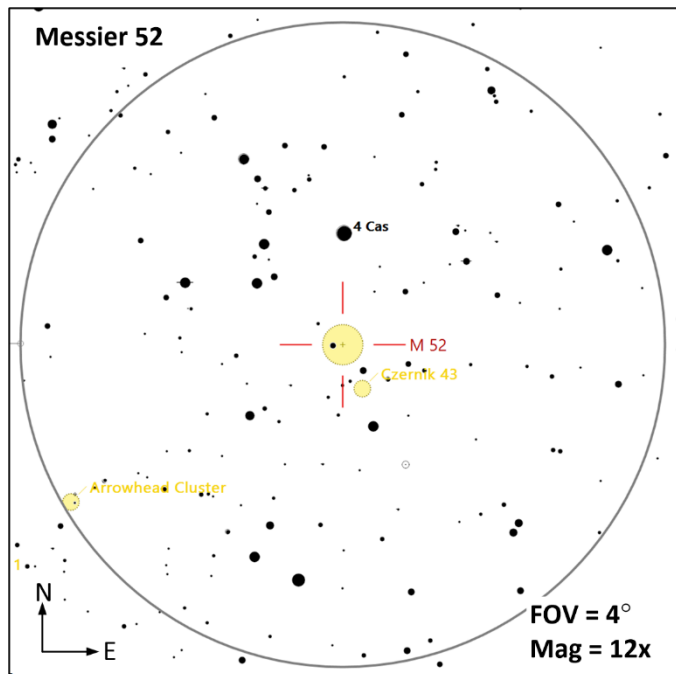


Messier 103 (OC | M=7.4 | Size=6.0' | SB=19.9 |) – A small, fairly dense open cluster containing about 170 stars. This cluster is located about 7,200 ly from earth, spans 15 ly and is estimated to be 25 million years old. Prominently appearing about in the center of the cluster is a 10.8 mag red giant.



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Messier 52 (OC | M=7.3 | Size=13.0' | SB=21.5 ||) – The Scorpion Cluster is a rich condensed cluster with about 200 stars. The distance to this cluster is 4,600 ly. Just south of this cluster is a smaller open cluster Czernik 43.



Constellation Guide

References, Resources and Tools used to create this document

The resources listed below were utilized 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