

Constellation Guide

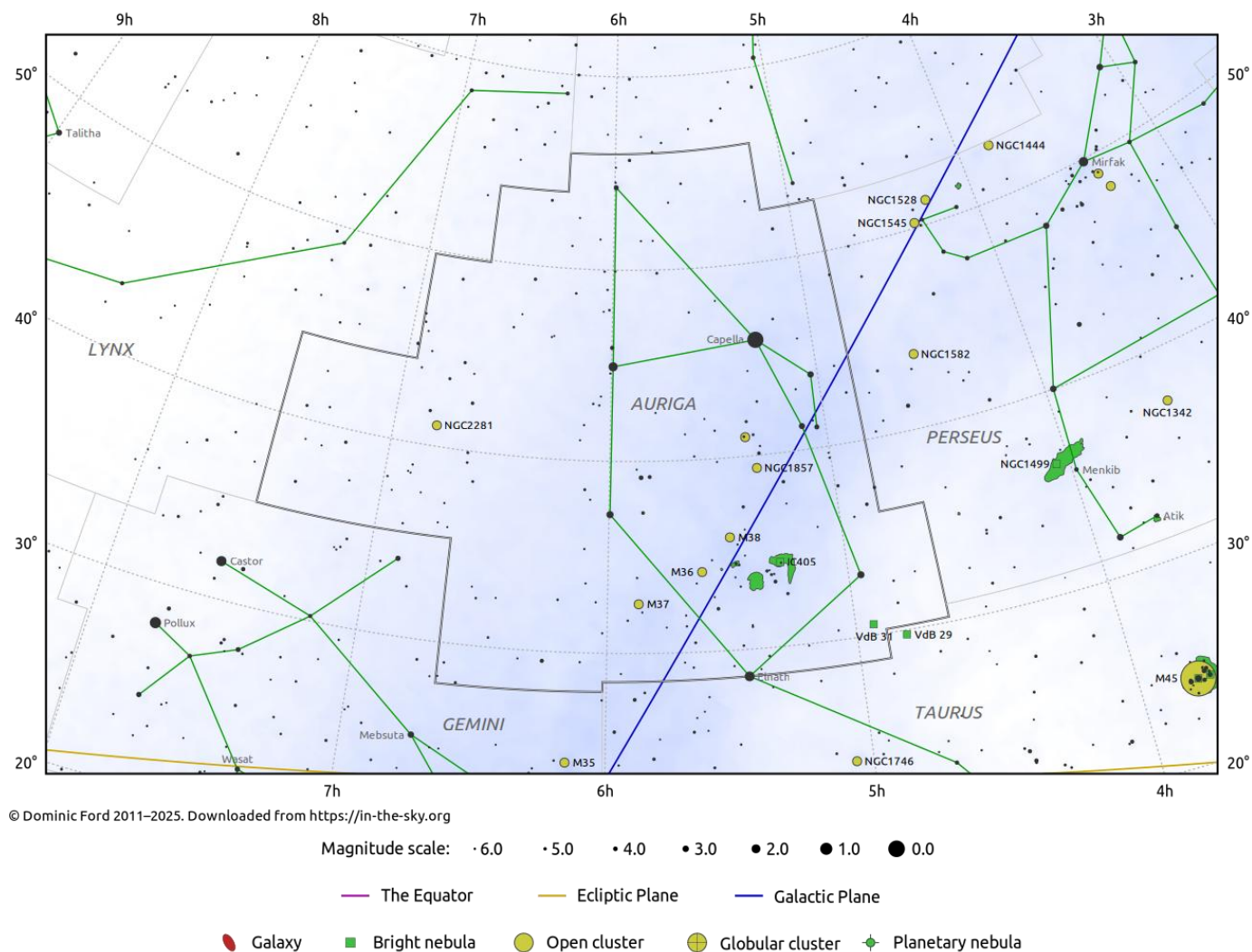
Auriga (Aur)

Evening Visibility: **November - January**

Online Information: [Auriga](#)

More Online Information: [Theta Aurigae](#), [Messier 37](#), FU Aurigae, [Messier 36](#), [Messier 38](#), Smiley Face, HD 35295, STAR-04, [14 Aurigae](#), [Omega Aurigae](#), Collinder 62, [41 Aurigae](#), [Psi⁵ Aurigae](#), [NGC-2281](#)

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



Auriga is Latin for “the charioteer” and is similar in shape to that of the pointed helmets of past charioteers. This constellation was first recorded by the Greek astronomer Ptolemy. The constellation is in close proximity to the Milky Way and is chuck full of open clusters including M-36, M-37, and M-38; These open clusters are part of a group of young stars formed in the [Taurus-Auriga molecular cloud](#) a stellar nursery only 430 ly from

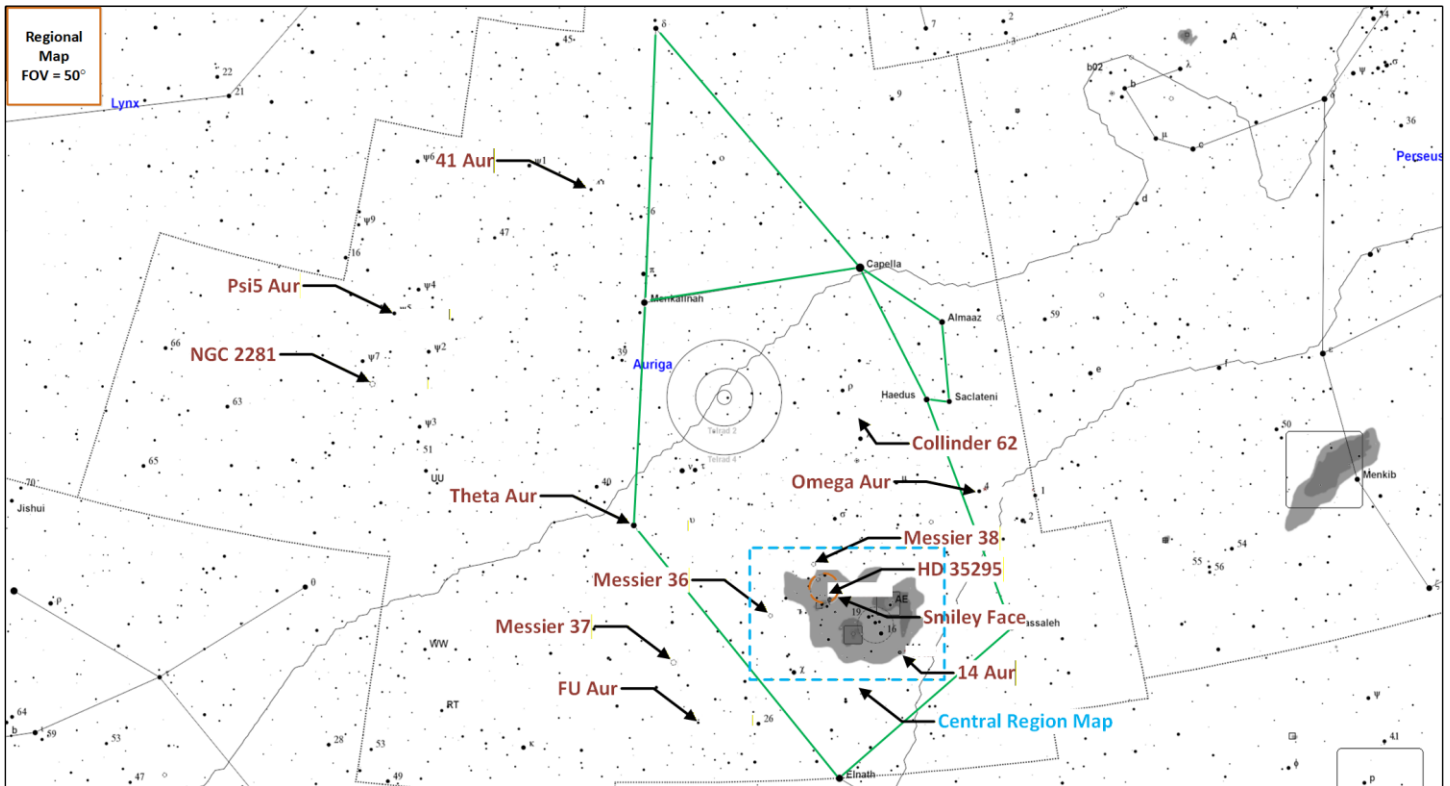
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earth and containing hundreds of newly formed stars. Stars formed in this association are generally in the age range of 1 to 2 million years old. Recently this molecular cloud has been identified as part of the much larger [Radcliffe wave](#), a wave shaped structure in the local arm of the Milky Way.

Constellation Highlights

- Messier 36 (OC): The Pinwheel Cluster.
- Messier 37 (OC) The Salt and Pepper Cluster.
- Messier 38 (OC): The Starfish Cluster.
- NGC-2281 (OC): The Broken Heart Cluster, Interesting Dimond shape in center of cluster with colorful double star at one point.
- 14 Aurigae (MS-4): Colorful optical star system.

Constellation Targets Map

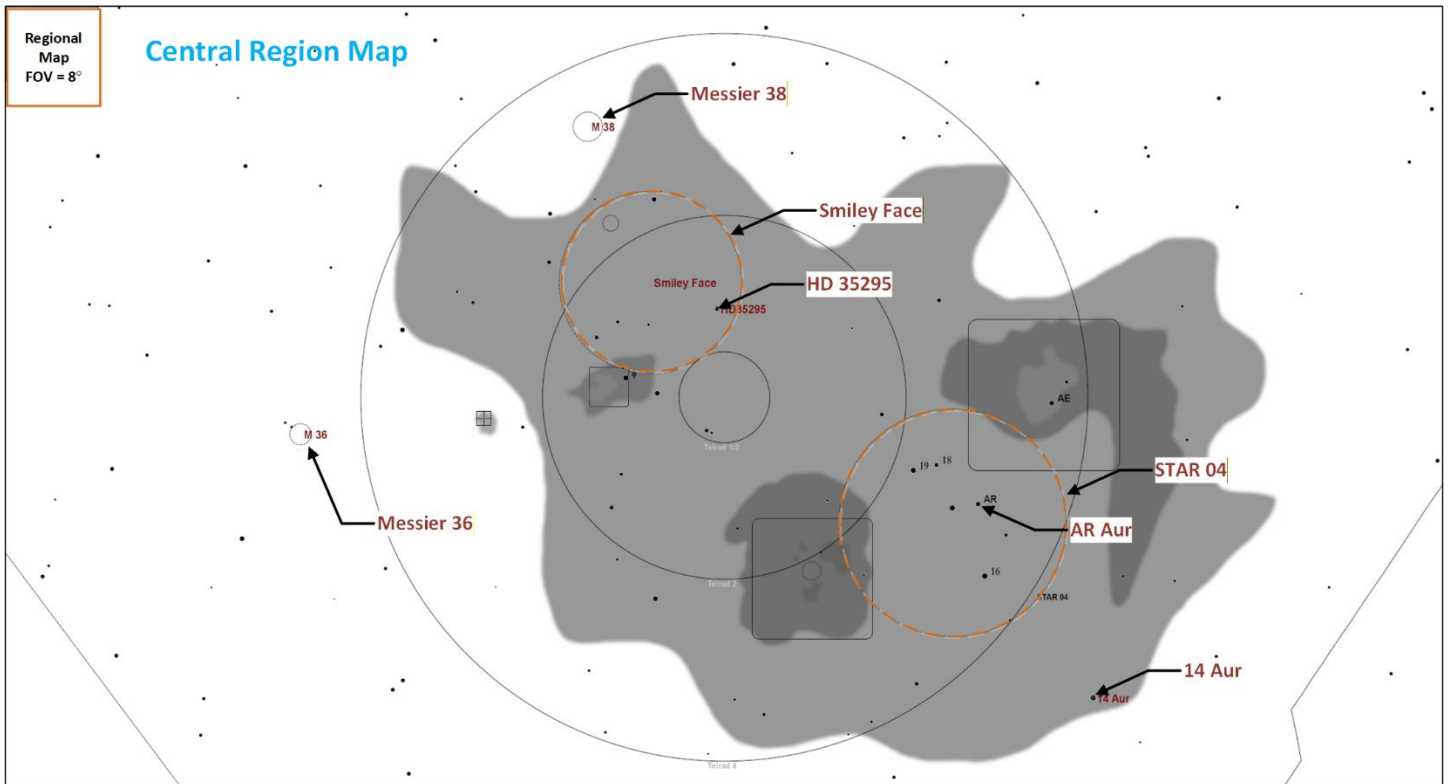


Region Objects Summary

Object (Type)	Ref	Aliases	Stats
Theta Aurigae (MS-4)	1 , 2	SAO-058636, HIP 28380, 37 Aur, HR 2095, HD 40312, STF 545, ADS 4566, Mahasim, θ Aurigae	M=2.6, 7.2, 11.1, 10.1 Sep AB=3.7", AC=56", AD=139 PA AB=302°, AC=300°, AD=349°
Messier 37 (OC)	1	Auriga Salt-and-pepper Cluster, January Salt-and-pepper Cluster, NGC2099, Auriga Salt-and-Pepper, January Salt-and-Pepper	M=6.2 Size=24' SB=21.7

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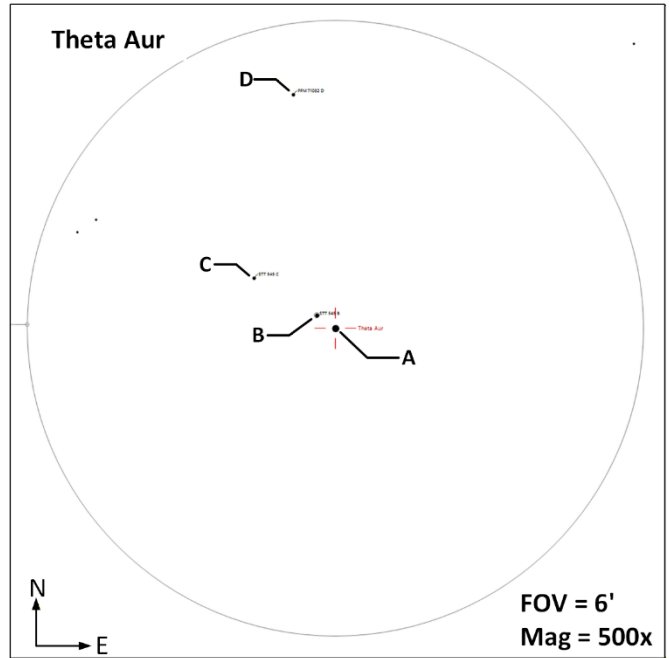
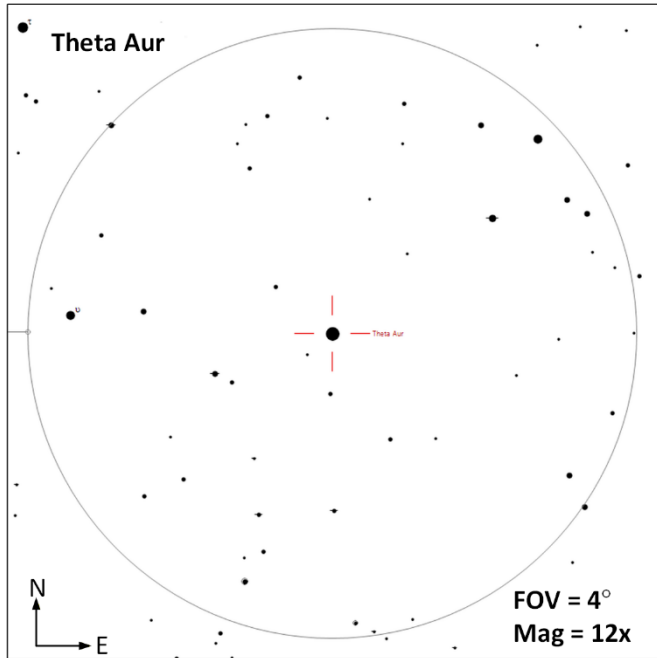
Object (Type)	Ref	Aliases	Stats
FU Aurigae (CS)		SAO-058449, HIP 27398, HD 38572	Mag Range = 10.6 to 12.5 Period = unknown
Omega Aurigae (DS)	1 , 2	SAO-057548, HIP 23179, 4 Aur, HR 1592, HD 31647, STF 616, ADS 3572, ω Aurigae	M=5.0, 8.2 Sep=4.7" PA=5°
CR 62 (OC)		Collinder 62, Lund161, OCL423	M=4.2 Size=35' SB=20.5
41 Aur (DS)	1 , 2	SAO-040924, HIP 29388, HR 2175, HD 42126, STF 845, ADS 4773	M=6.2, 6.7 Sep=7.5" PA=358°
Psi ⁵ Aurigae (MS-3)	1 , 2	SAO-041330, HIP 32480, 56 Aur, HR 2483, HD 48682, ADS 5425	M=5.3, 8.6, 11.7 Sep AB=28", AC=49" PA AB=44°, AC=336°
NCG-2281 (OC)	1	Broken Heart Cluster	M=5.4 Size=25' SB=21.0



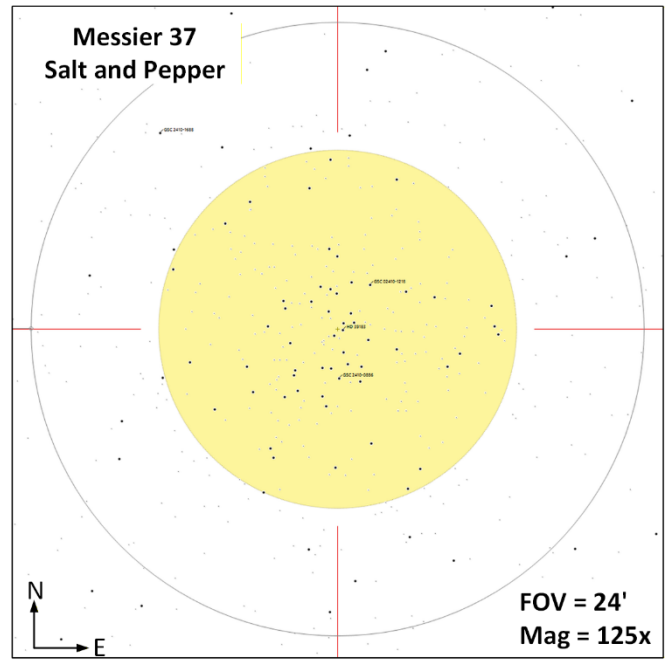
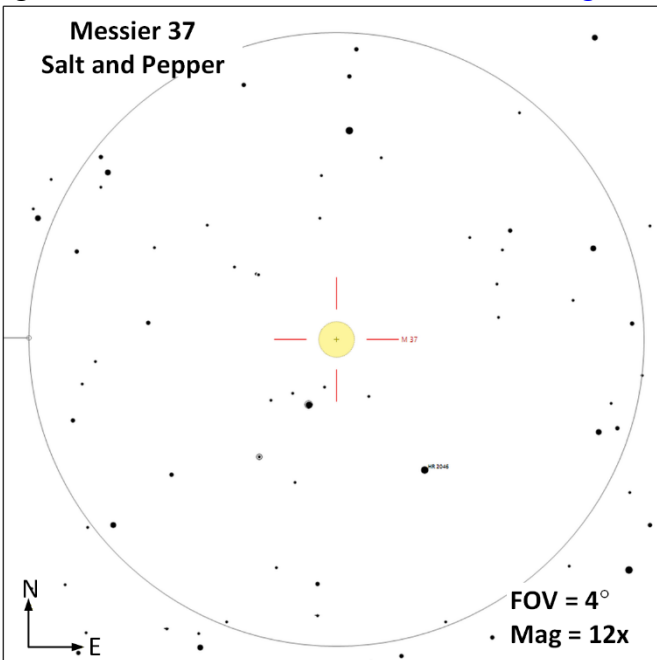
Object (Type)	Ref	Aliases	Stats
Messier 36 (OC)	1	Pinwheel Cluster, NGC-1960	M=6.3 Size=12' SB=20.3
Messier 38 (OC)	1	Starfish Cluster, NGC-1912	M=7.4 Size=21' SB=22.6
Smiley Face (AS)		6 stars make the smile with two stars for eyes	Size = 2° Stars = 8 Ref Star = 24 Aur
HD 35295 (DS)	1	SAO-057999, HIP 25343, HR 1779, STF 698, ADS 4000	M=6.6, 8.3 Sep=31.4" PA=348°
STAR 04 (AS)		The Flying Minnow	Stars = 5 Size=1.2° Ref Star=AR/17 Aur
14 Aur (MS-4)	1 , 2	SAO-057799, HIP 24504, KW Aur, HR 1706, HD 33959, STF 653, ADS 3824	M=5.0, 10.9, 7.3, 10.7 Sep AB=8.9", AC=14.3", AD=180", BC=23.3" PA AB=11°, AC=225°, AD=322°, BC=211°

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Theta Aurigae (MS-4 | M=2.6, 7.2, 11.1, 10.1 | Sep AB=3.7", AC=56", AD=139 | PA AB=302°, AC=300°, AD=349°) – This star system is 155 ly from earth and has one physically associated star (The B component) and two optical companions (C & D components). The Primary component (A) is more than 3 times the mass of our sun.

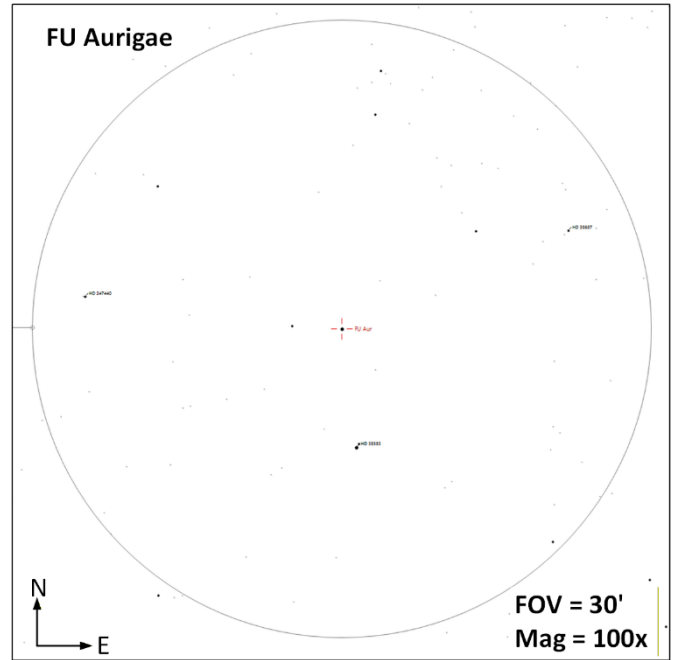
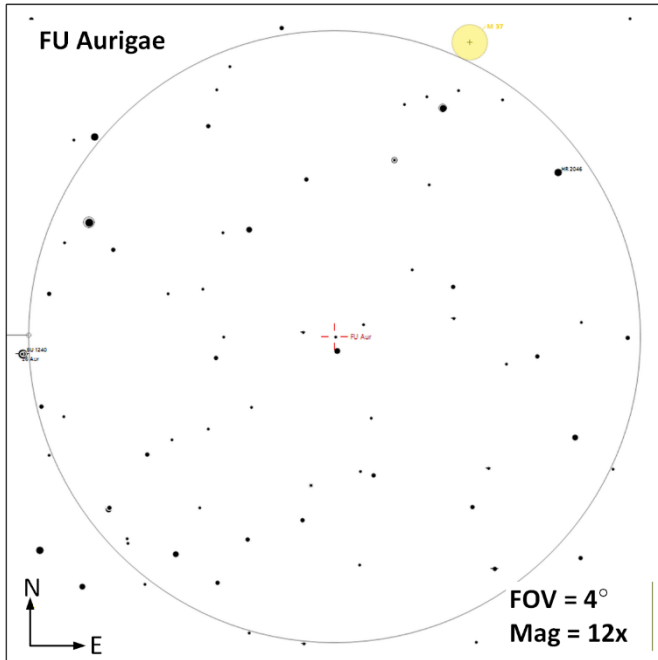


Messier 37 (OC | M=6.2 | Size=24' | SB=21.7) – The Salt and Pepper Cluster is located 4,500 ly from earth and is estimated to be about 475 million years old. The cluster contains over 500 stars with 150 brighter than magnitude 12.5. M-37 has at least a dozen [red giants](#).

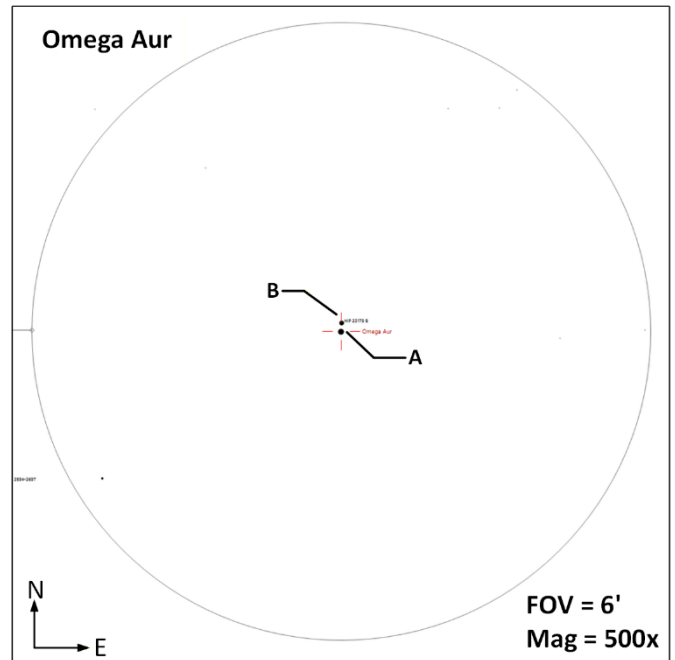
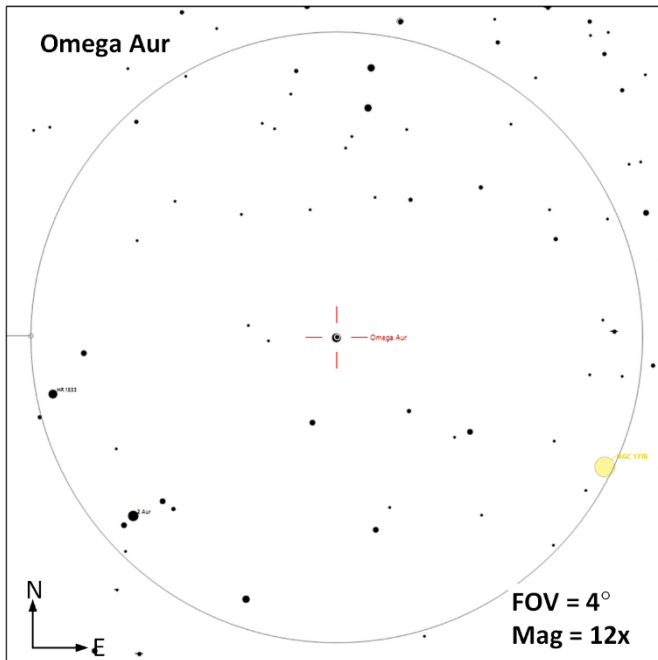


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FU Aurigae (CS | Mag Range = 10.6 to 12.5 | Period = unknown |) – FU Aurigae is a red giant carbon star that varies in brightness between 10.6 to 12.5 It's period of variation is unknown and described as long term.

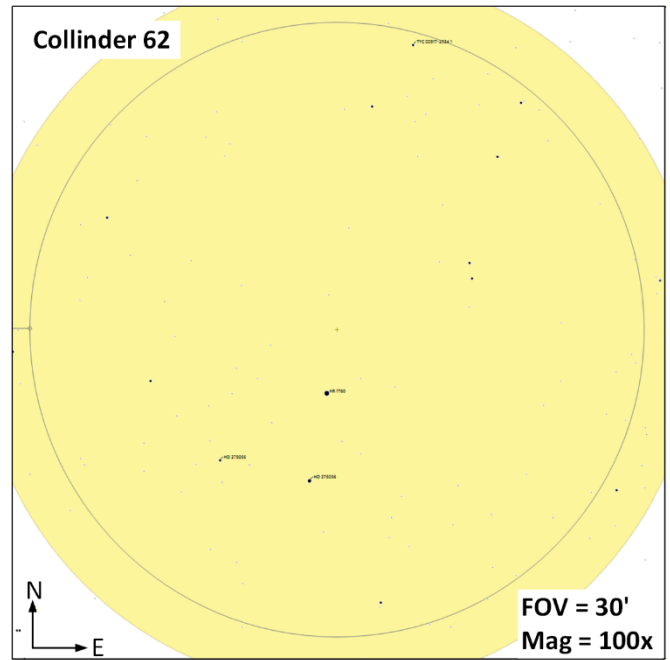
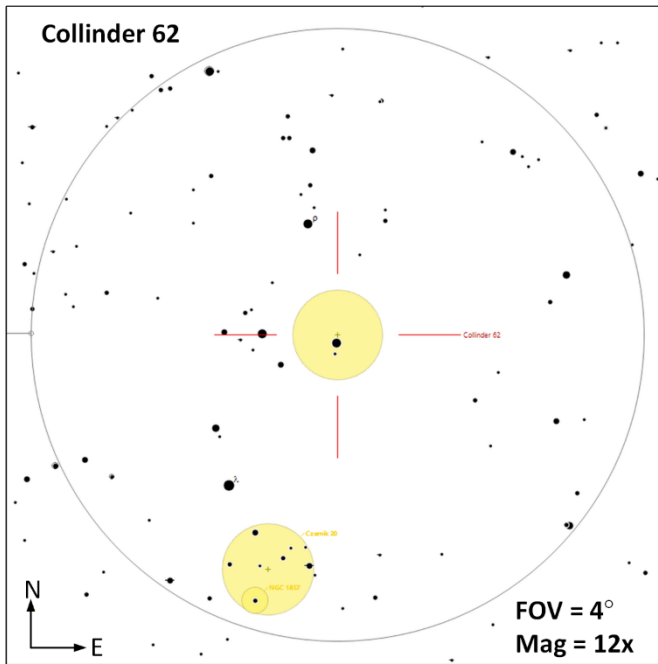


Omega Aurigae (DS | M=5.0, 8.2 | Sep=4.7'' | PA=5° |) – Estimated to be 162 ly from earth and has a mass of 2.3 time that of our sun radiating 27 times our suns luminosity. It's companion orbits at 234 au.

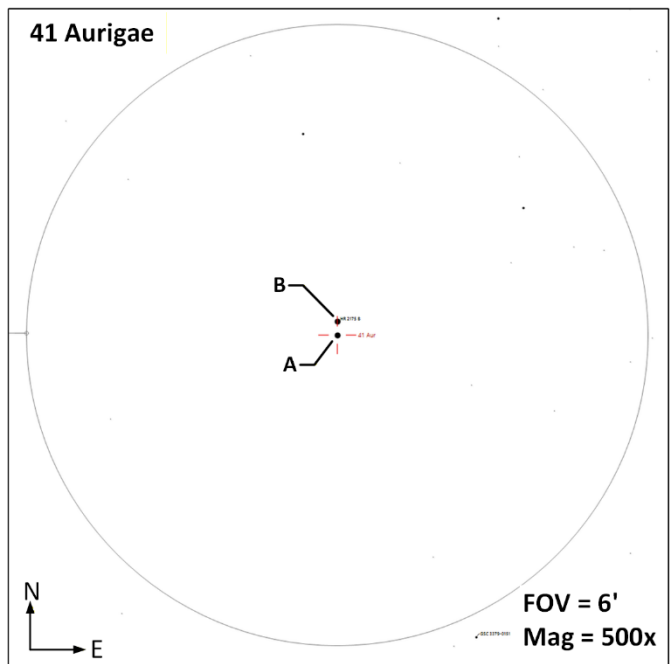
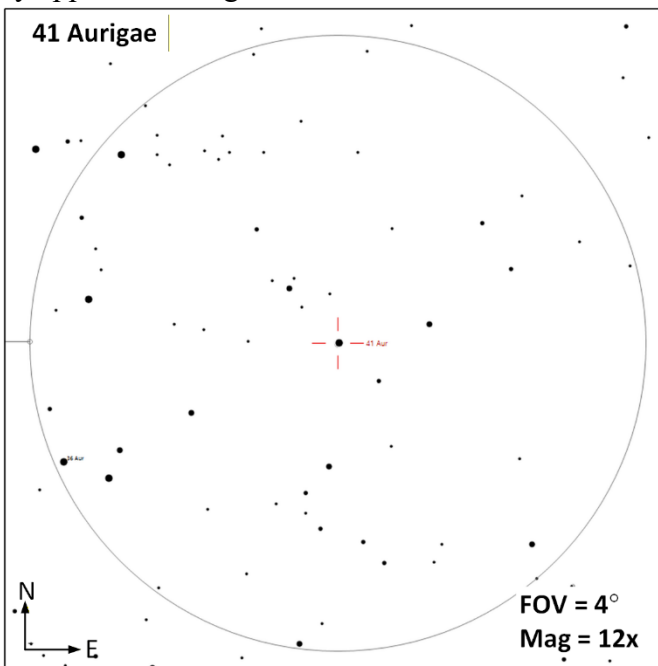


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Collinder 62 (OC | M=4.2 | Size=35' | SB =20.5 |) – An open cluster 4,800 ly from earth with a diameter of 49 light years.

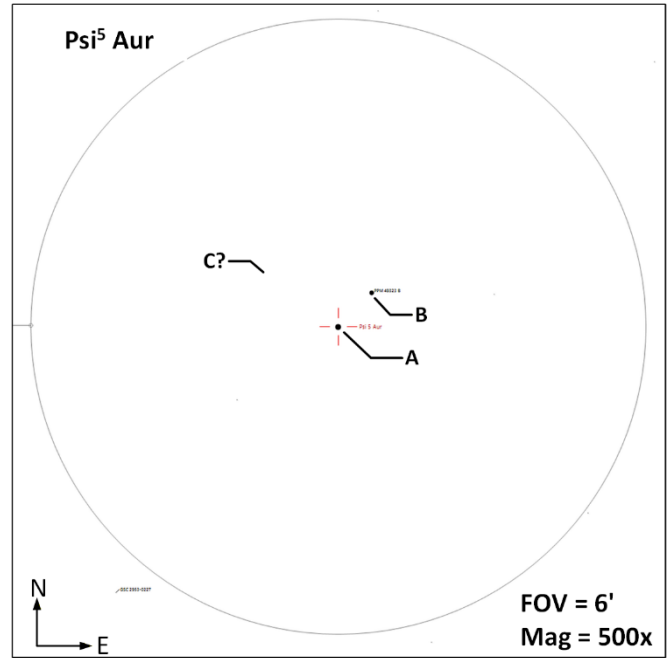
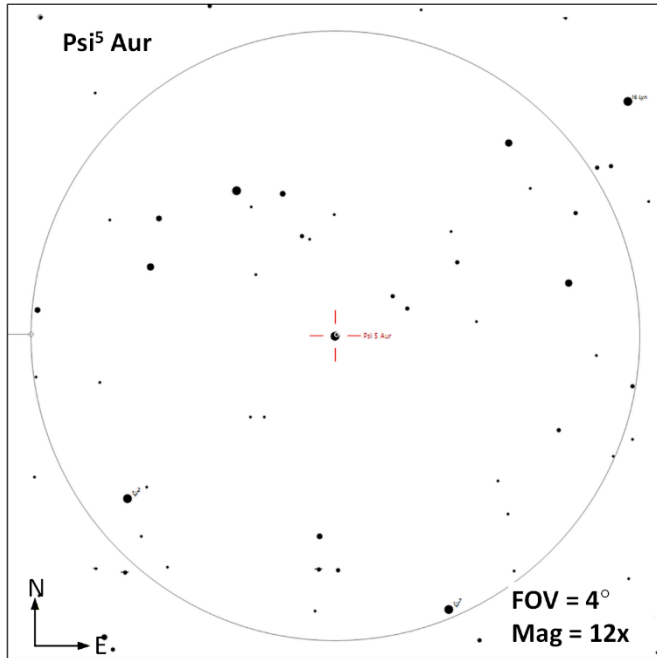


41 Aurigae (DS | M=6.2, 6.7 | Sep=7.5'' | PA=358° |) – A binary system located 310 ly from earth. The pair may appear as orange & lilac in color.

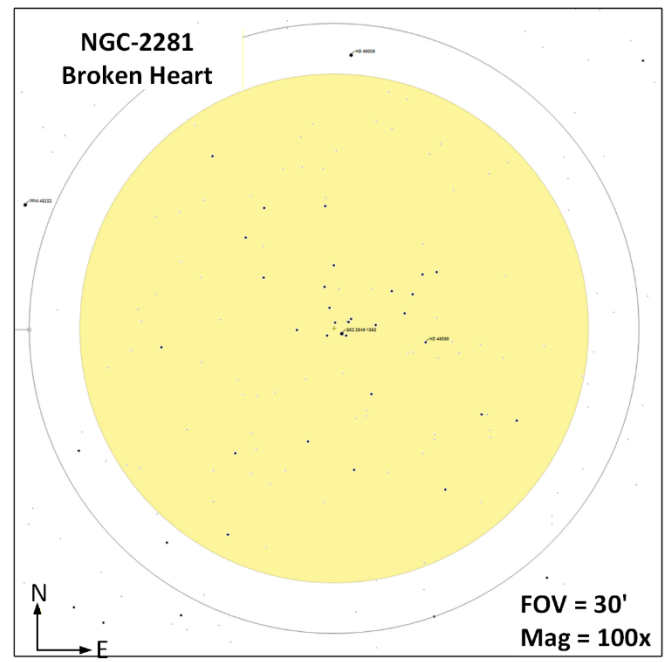
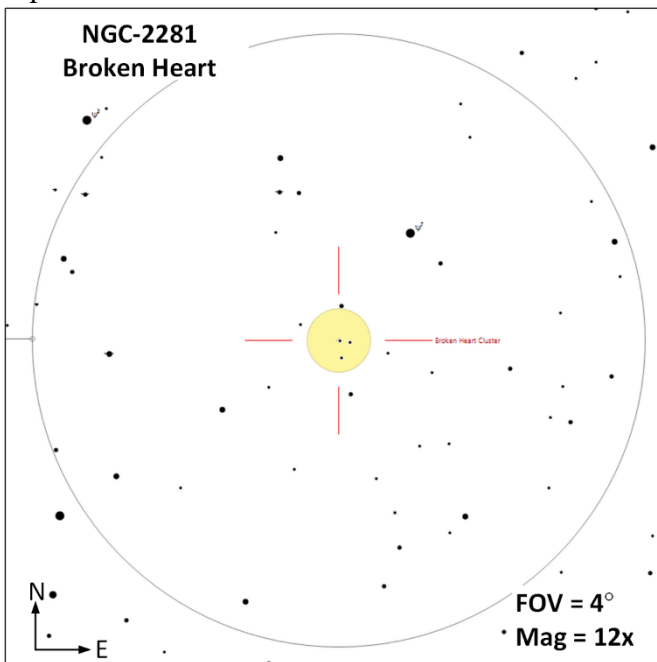


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Psi⁵ Aurigae (MS-3 | M=5.3, 8.6, 11.7 | Sep AB=28", AC=49" | PA AB=44°, AC=336° |) – This is reported as an optical triple star system. (not sure why the C component is not appearing in the diagram).

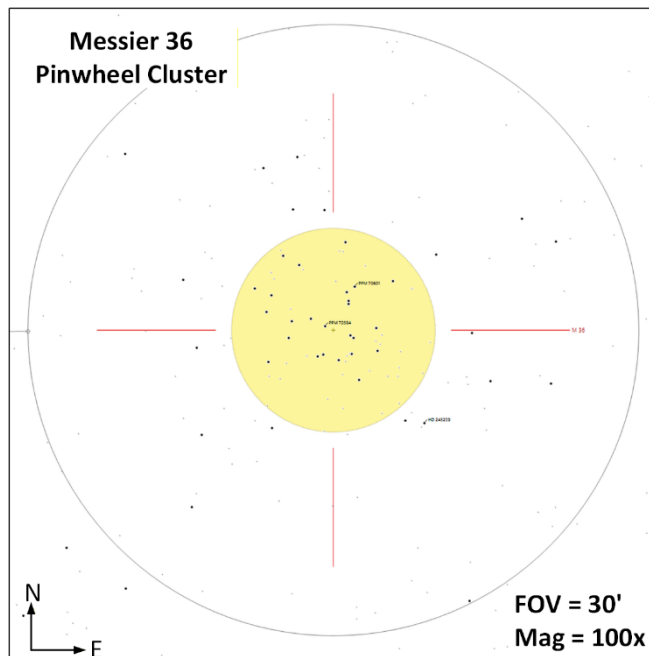
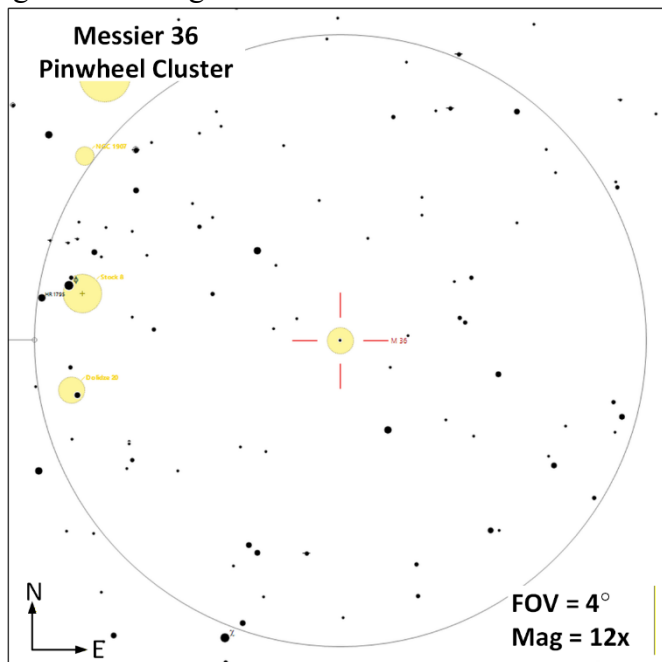


NGC-2281 (OC | M=5.4 | Size=25' | SB=21.0 |) – The Broken Heart Cluster is an open cluster located 1,720 ly from our sun and is estimated to be about 650 million years old. This cluster is reported to have a poor but compact grouping with a wide range of brightness. Four stars at the center of the Open cluster form a diamond shape with each having a companion star. One pair (northernmost) is reported to have a red and blue color components.

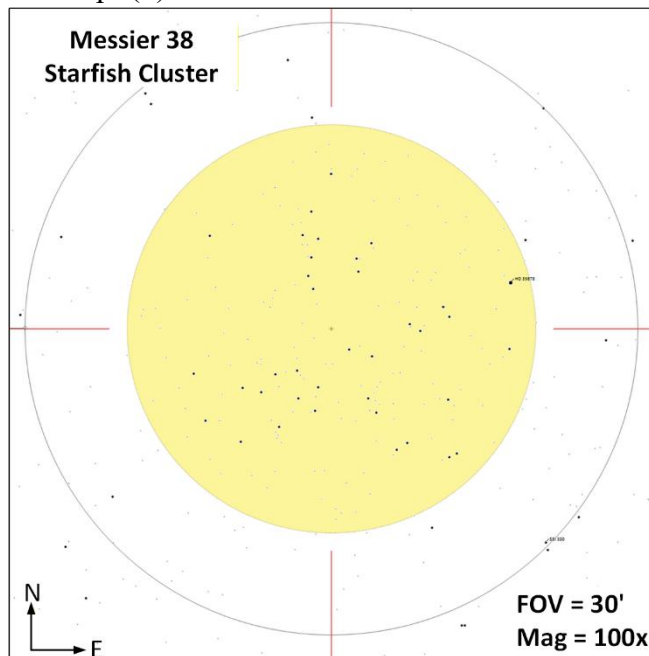
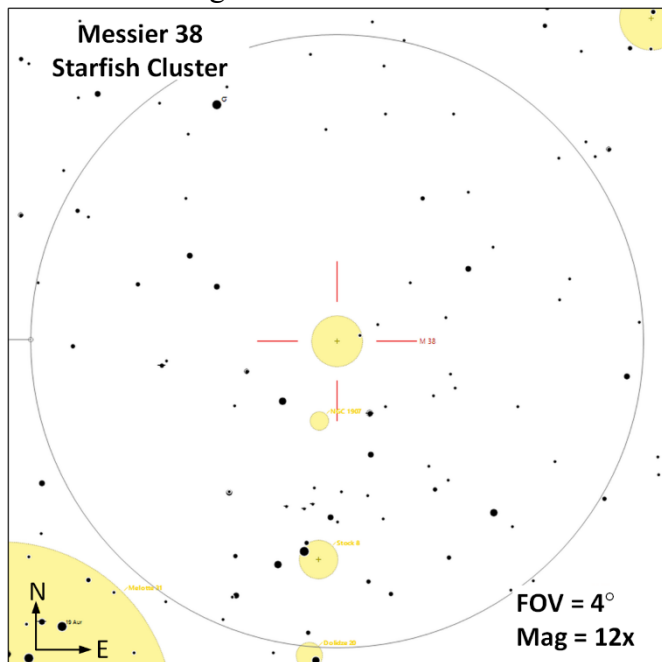


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Messier 36 (OC | M=6.3 | Size=12' | SB=20.3) – The Pinwheel Cluster is 4,300 ly from earth and is estimated to be 25 million years old with a diameter of 14 ly. The cluster contains about 60 members with 30 member brighter than magnitude 12.

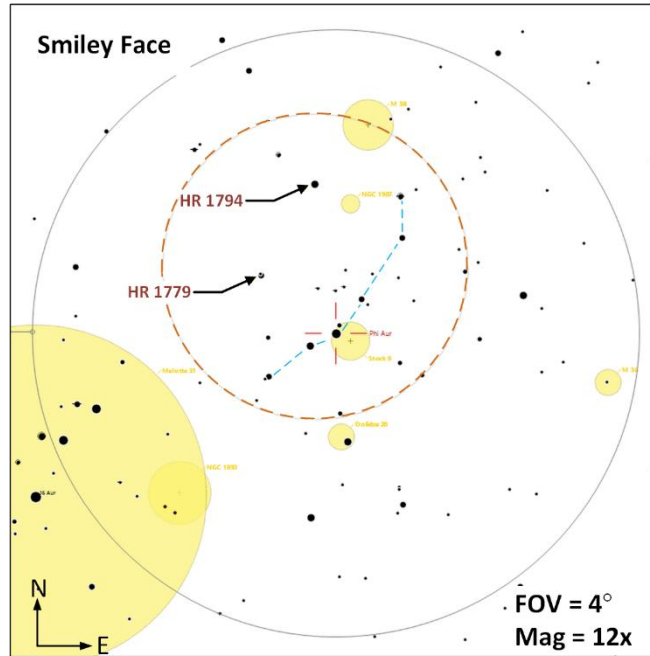


Messier 38 (OC | M=7.4 | Size=21' | SB=22.6 |) – The Starfish Cluster is an open cluster 3,500 ly from earth and is estimated to be 220 million year old and has a diameter of 25 ly. This is a rich cluster that contains over 100 stars. The brightest stars in this cluster form the Greek letter pi (π).

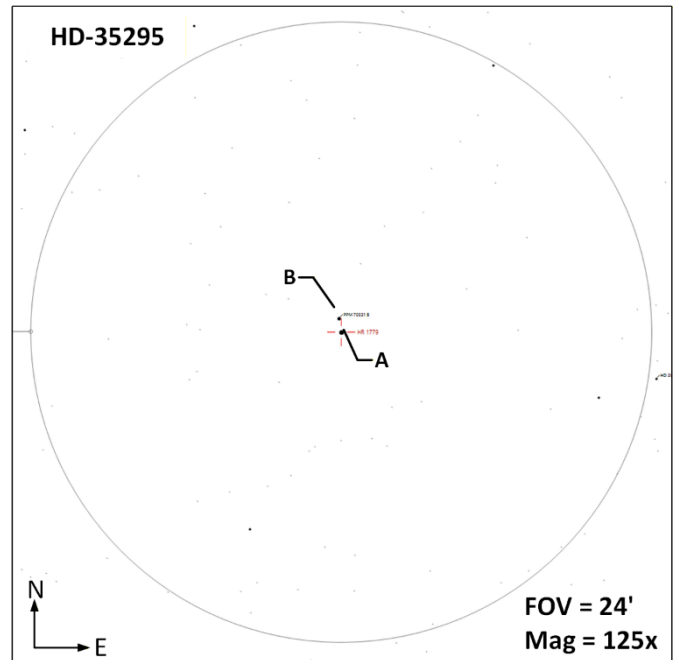
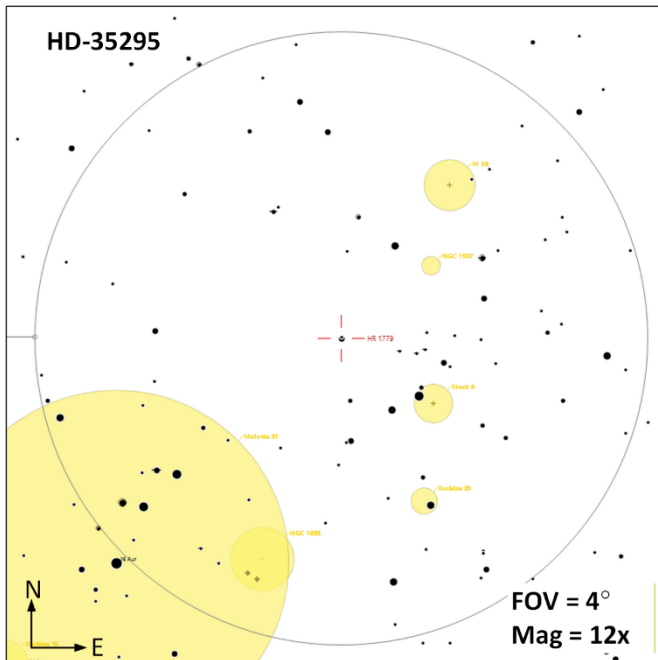


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Smiley Face (AS | Size = 2° | Stars = 8 | Ref Star = 24 Aur |) – A row of 6 stars forming a smile with two bright stars (HR 1794 & HR 1779) for eyes.

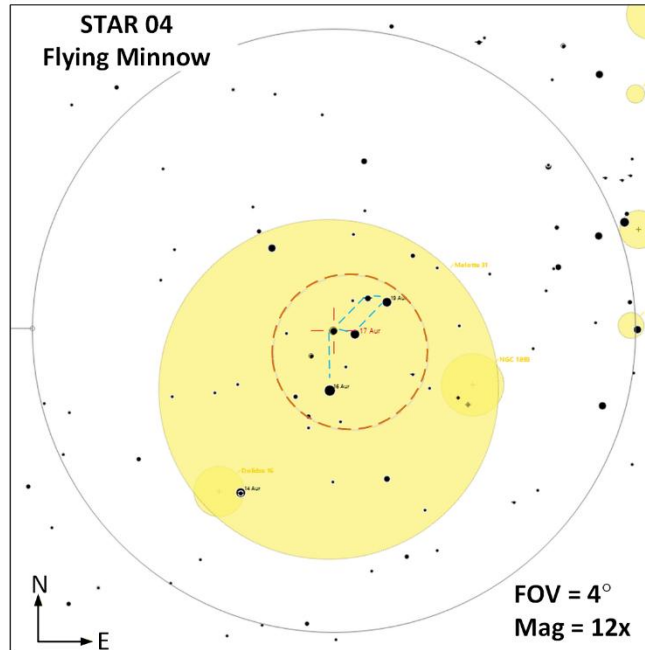


HD 35295 (DS | M=6.6, 8.3 | Sep=31.4" | PA=348° |) – A double star system located 410 ly from earth. The primary component is an orange giant. The companion (B) component is estimated to orbit at a distance of about 4,000 AU from the primary component.

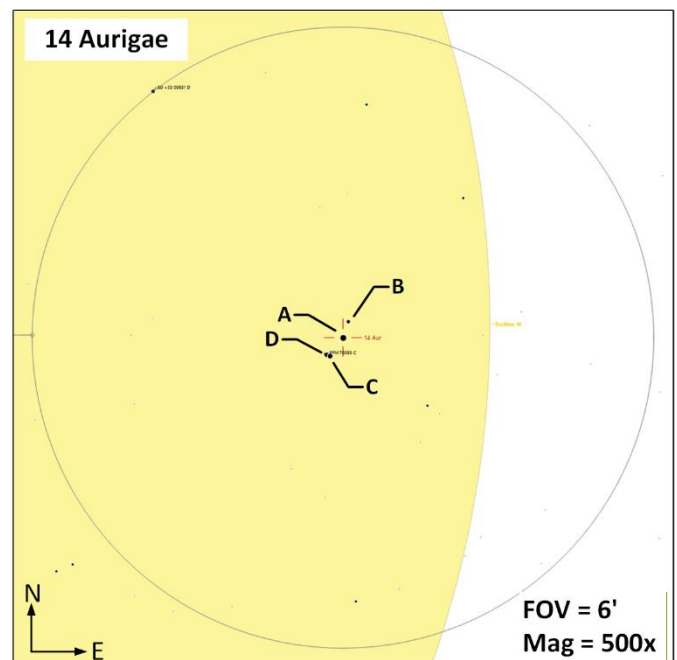
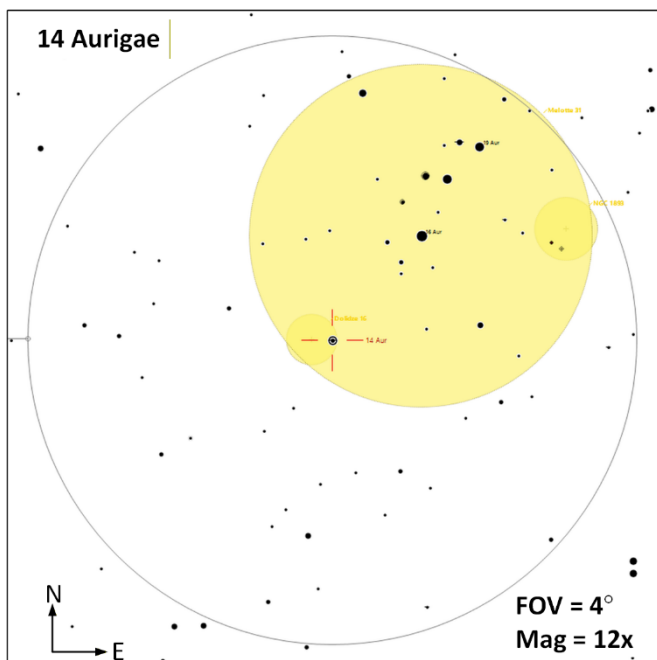


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STAR 04 (AS | Stars = 5 | Size=1.2° | Ref Star=AR/17 Aur |) – This asterism has the shape of a torch or mini Delphinus shape. There are a lot of fainter stars in the field of view.



14 Aur (MS-4 | M=5.0, 10.9, 7.3, 10.7 | Sep AB=8.9", AC=14.3", AD=180", BC=23.3" | PA AB=11°, AC=225°, AD=322°, BC=211° |) – This Quintuple system is composed of all optical companions (just happen to be in the line of sight). This system is listed in the “22 contrasting color double stars” list, so should be a nice view.



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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
 - Milwaukee Astronomical Society: [Binocular Asterisms](#)
 - Deep-Sky.co.uk: [Observing Asterisms](#) (David Ratlege)
 -
- [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 2021
- [IrfanView](#) Version 4.72