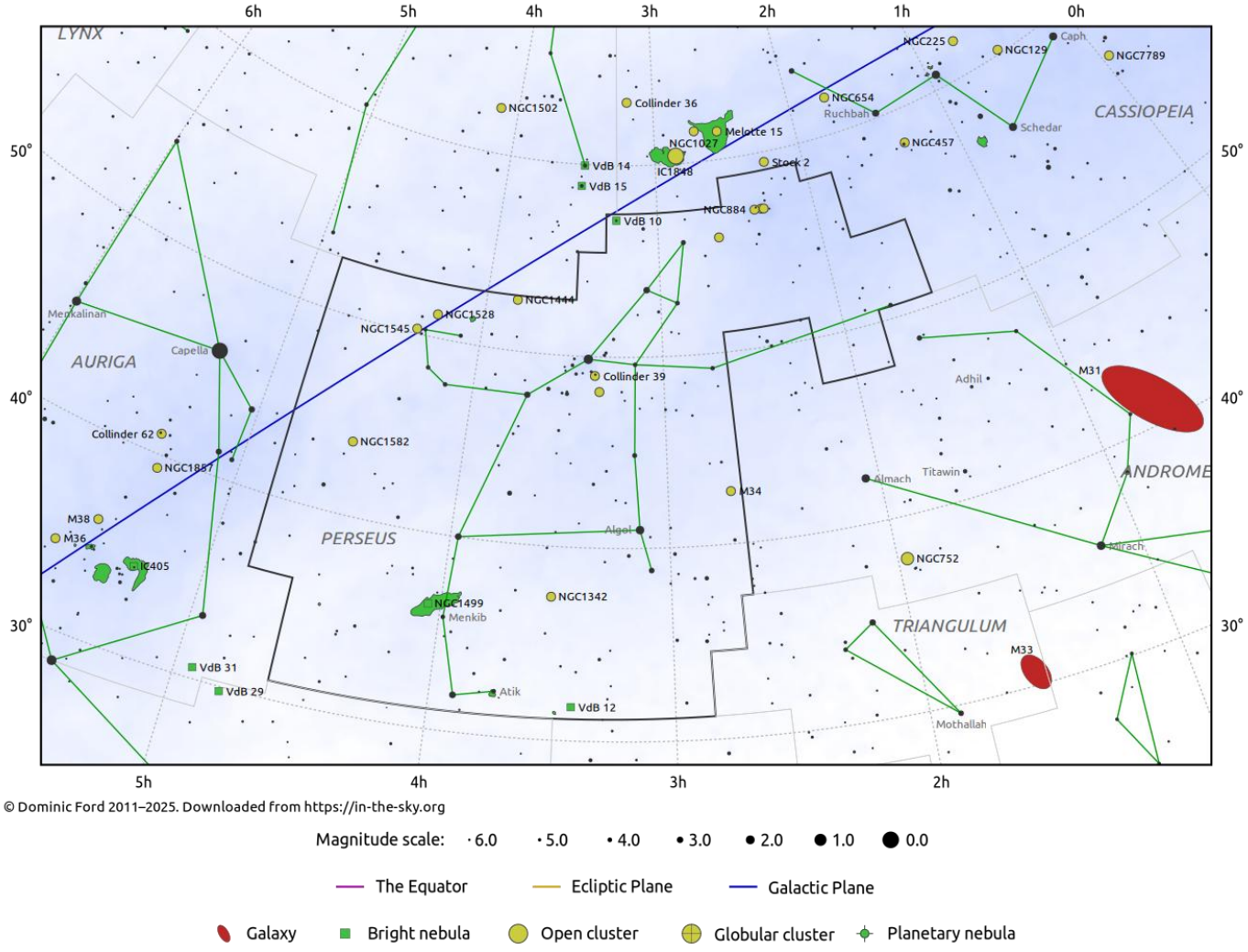
Constellation Guide

Perseus (Per)

Evening Visibility: **October - December**
Online Information: **Perseus**
More Online Information: Zeta Persei, NGC-1499, Adid Australis, NGC-1528, Melotte 20, HR 890, Miram, Messier 34, NGC 869 & NGC 884, Messier 76

In-The-Sky.org Constellation Map



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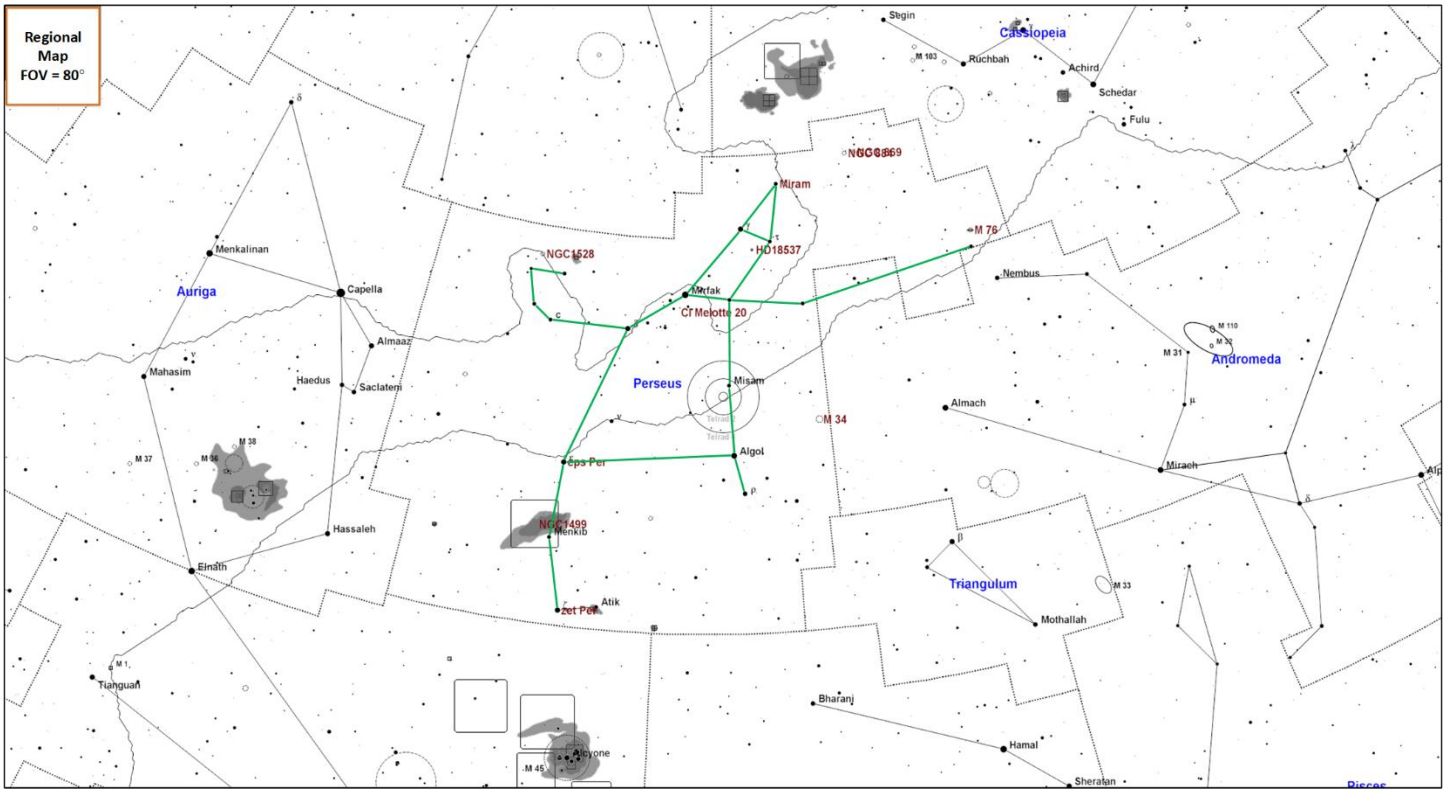
Cetus is the fourth largest constellation in the sky. However, it does not have many bright stars or deep sky objects considering its size. This constellation is named after the sea monster in Greek mythology that Andromeda was to be sacrificed to. The constellation is also known as the whale.

Constellation Highlights

- **Zeta Persei** (MS-5): A quintuple (5) star multiple star system.
- **Miram** (CS, DS): A nice color contrasting double.
- **Perseus Double Cluster** (OC): Great binocular double open cluster (NGC-869 & NGC 884).

Constellation Targets Map

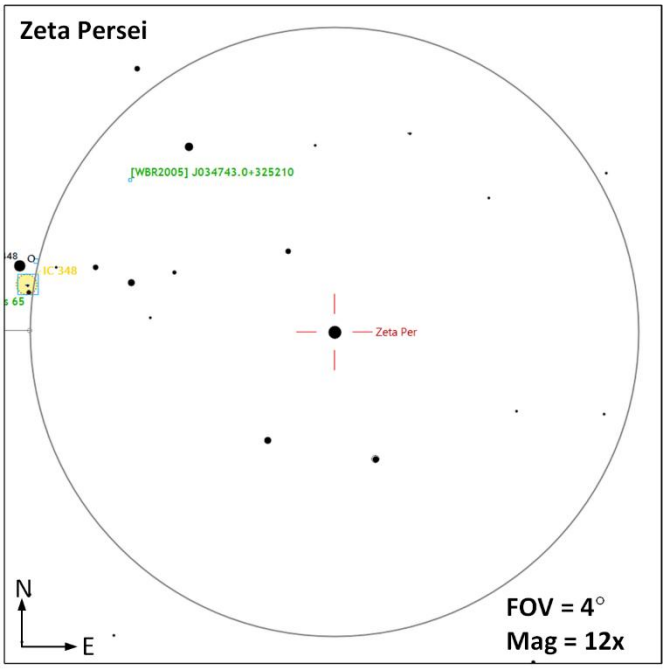


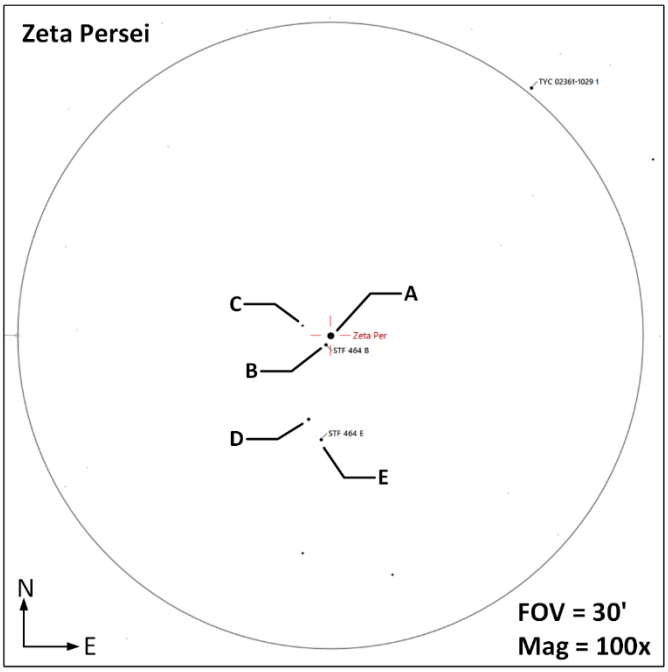
Objects Summary

Object (Type)	Ref	Aliases	Stats
Zeta Persei (MS-5)	1, 2	SAO-056799, HIP 18246, HR 1203, HD 24398, 44 Per, ζ Per, Zeta Per	AB | M=2.9, 9.2 | Sep=12.8" | PA=208 º | AC | M=2.9, 11.2 | Sep=33" | PA=286 º | AD | M=2.9, 10.4 | Sep=99" | PA=195 º | AE | M=2.9, 9.9 | Sep=120" | PA=186 º |
NGC 1499 (EN)	1	California Nebula, SH2-220, LBN 756	| M=6.0 | Size=144' x 40' | SB = 24.0 |
Adid Australis (MS-4)	1, 2	SAO-056840, HIP 18532, HR 1220, HD 24760, ADS 2888, GC 4759, Eps Per, 45 Persei, ε Per, Epsilion Per	AB | 2.8, 8.9 | Sep=8.8" | PA=12 º | AC | 2.8, 13.9 | Sep=80" | PA=10 º | AD | 2.8, 9.3 | Sep=163" | PA=146 º |

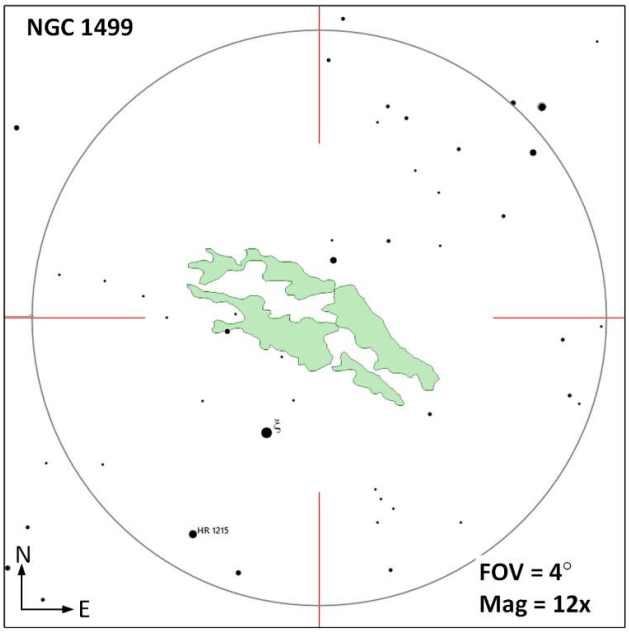
Object (Type)	Ref	Aliases	Stats
NGC 1528 (OC)	1	Cr 47	| M=6.4 | Size=23' | SB =21.8 |
Melotte 20	1	Collinder 39, Alpha Persei Cluster, Alpha Persei Moving Group, Mel20, OCL392, Cr 39, Lund106	| M=1.2 | Size=300' | SB= 22.2 |
HR 890 (DS)	1	SAO-023763, HIP 14043, HD 18537, ADS 2270	AB | M=5.2, 6.2 | Sep=12.0" | PA=85º |
Miram (CS, DS)	1, 2	SAO-023655, HIP 13268, HR 834, HD 17506, ADS 2157, GC 3390, Eta Per, 15 Per, η Per	AB | M=3.8, 8.5 | Sep=29" | PA=301 º | Colorful Double list
Messier 34 (OC)	1	Spiral Cluster, NGC 1039, Cr 31, OCl 382	| M=5.5 | Size=35' | SB= 21.8 |
NGC 869 (OC)	1	C 14, Perseus Double Cluster, Cr 24, Mel 13, h Per, OCl 382	| M=3.7 | Size=30' | SB=19.8 |
NGC 884 (OC)	1	C 14, Perseus Double Cluster, Cr 25, Mel 14, Xi Per, Chi Persei	| M=3.8 | Size=30' | SB= 19.8 |
Messier 76 (PN)	1	Little Dumbbell Nebula, NGC 650/651, Barbell Nebuls, Cork Nebula, Apple Core Nebula	| M=10.1 | Size=2.7 x 1.8' | SB=20.4 |

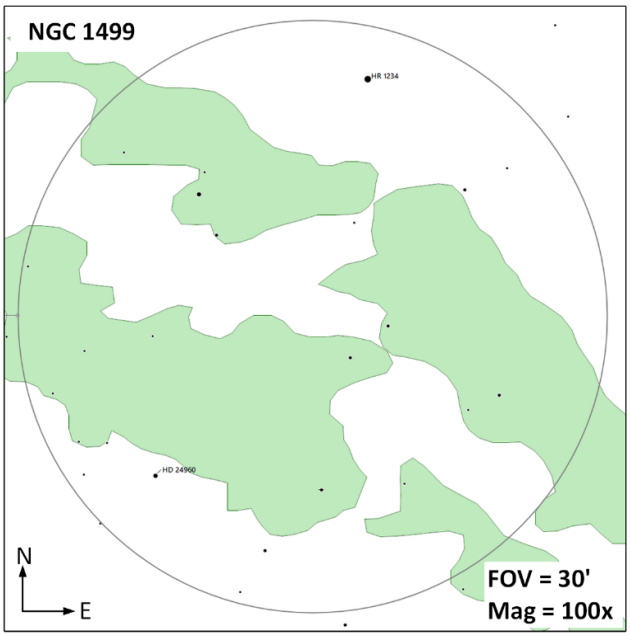
Zeta Persei (MS-5 | **AB** | M=2.9, 9.2 | Sep=12.8" | PA=208 º || **AC** | M=2.9, 11.2 | Sep=33" | PA=286 º || **AD** | M=2.9, 10.4 | Sep=99" | PA=195 º || **AE** | M=2.9, 9.9 | Sep=120" | PA=186 º |) – This looks to be an incredible system to observe even in small telescopes. This system is about 850ly from earth. The primary is estimated to be 26 time the radius of earth with 15 times the mas of our sun. Systems such as this are sometimes classified as small open clusters since they all appear to have originated from the same molecular cloud.



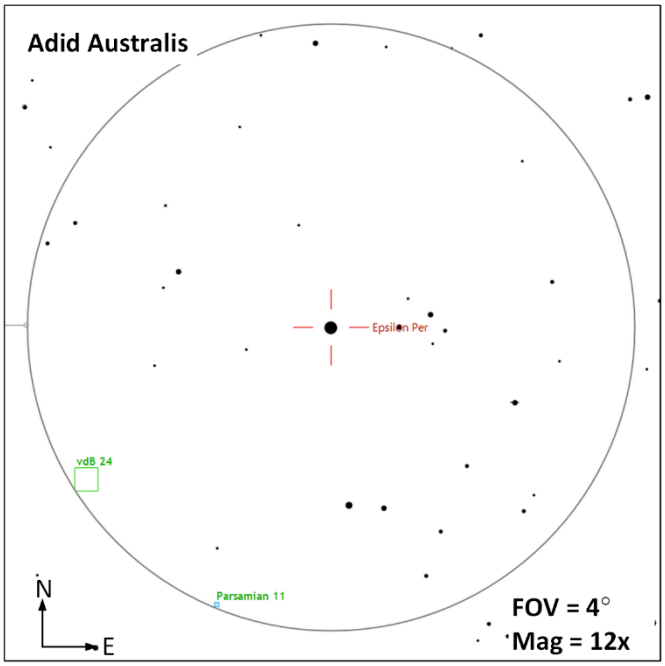


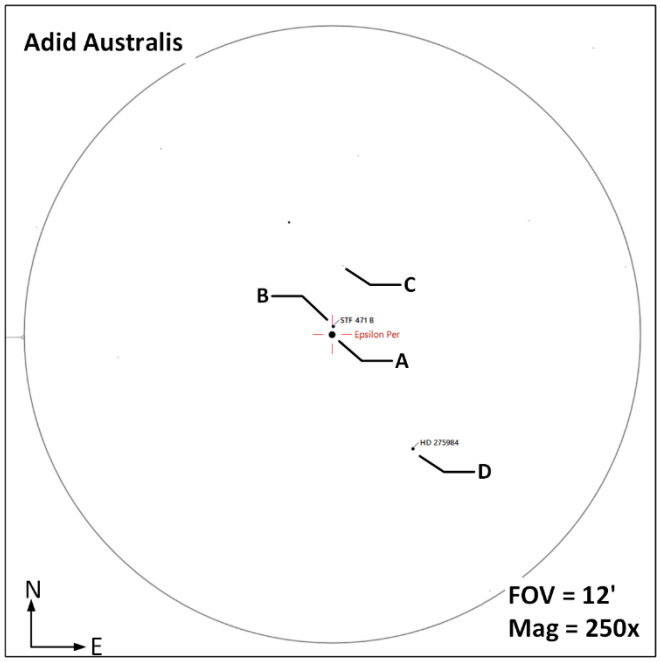
NGC 1499 (EN | M=6.0 | Size=144’ x 40’ | SB = 24.0 |)– The California Nebula is quite difficult to observe due to its large size and low surface brightness. Utilizing an Hα filter may help make seeing this object easier, but a large aperture will probably be necessary.





Adid Australis (MS-4 **AB** | 2.8, 8.9 | Sep=8.8” | PA=12 º || **AC** | 2.8, 13.9 | Sep=80” | PA=10 º || **AD** | 2.8, 9.3 | Sep=163” | PA=146 º |) – The Epsilon Persei system is located about 640 ly from earth. The primary component (A) has a mas of 12-16 time that of our sun. The secondary component B is quite dim at 8.9 magnitude compared to the primary component, so may be difficult to identify in smaller telescopes. The C component is very dim, near 14th magnitude, so may not be visible in small telescopes.





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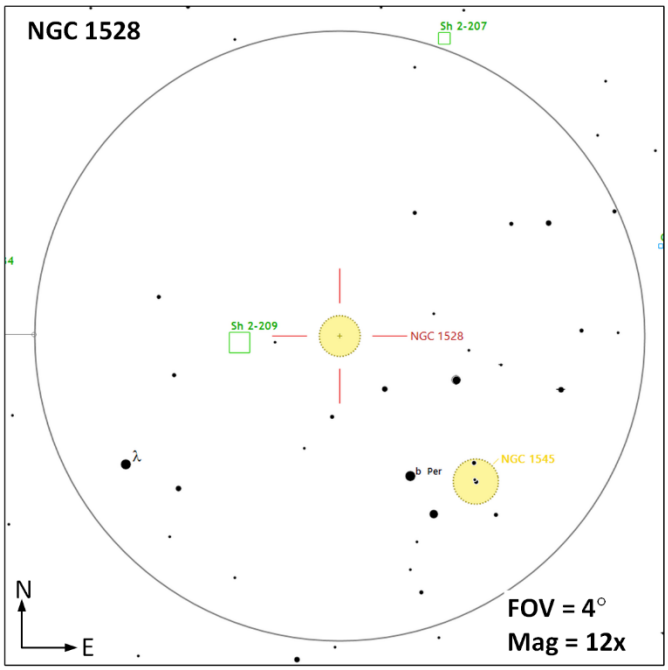
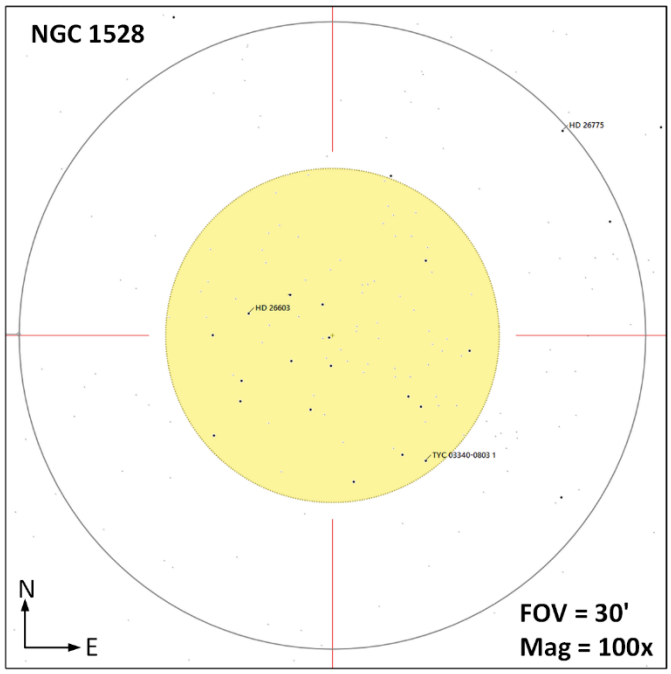
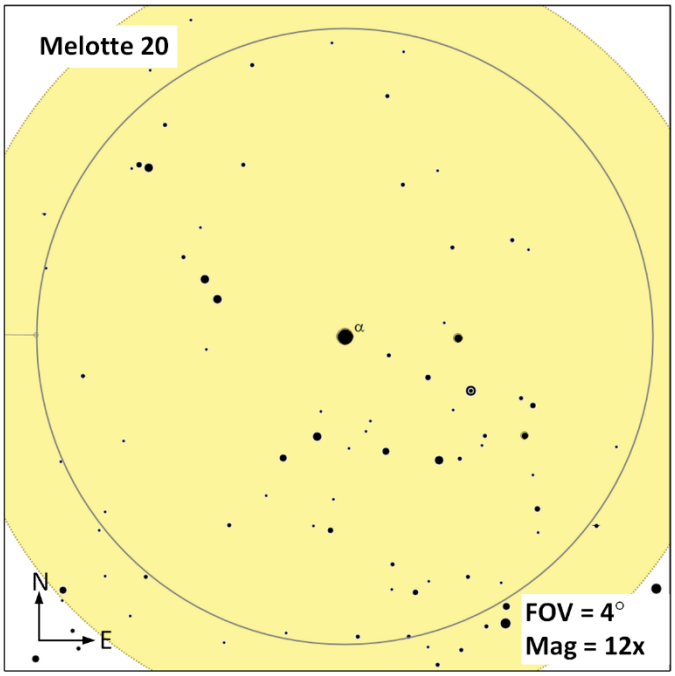
NGC 1528 (OC| M=6.4 | Size=23' | SB =21.8 |) – An open cluster clearly visible in 10x50 binoculars with an estimated population of 165 stars. NGC-1528 is estimated to be 3,100 ly from earth.

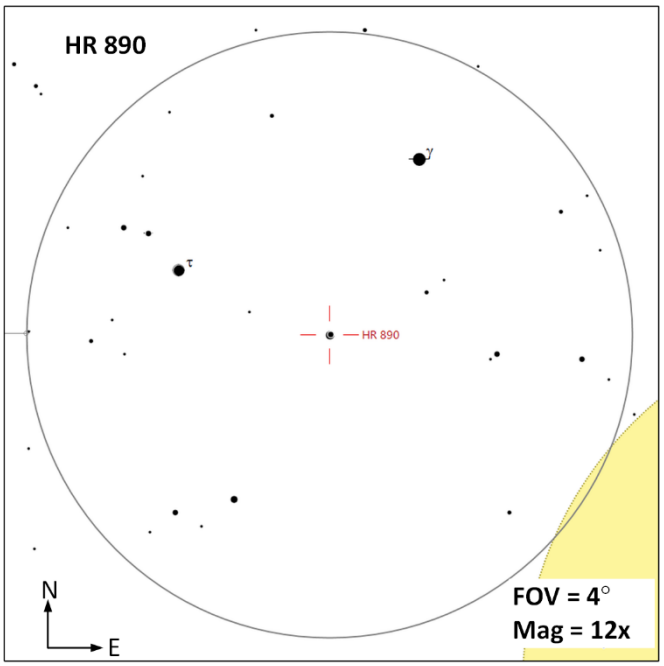


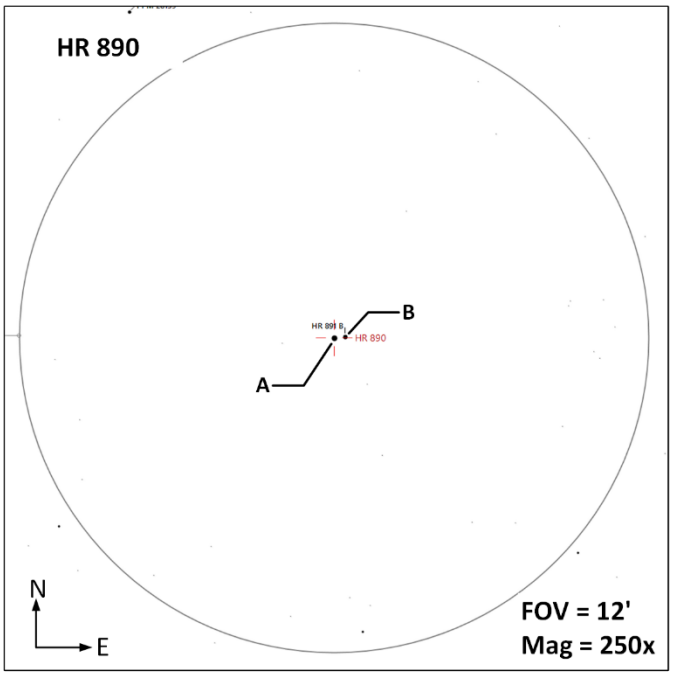


Melotte 20 (OC | M=1.2 | Size=300' | SB= 22.2 |)– The Alph Persei Cluster is also known as Collinder 39 and visually is a very large cluster indeed. This target is strictly a binocular target, is about 560 ly from earth has a radius of about 11.4 ly and contains 517 members. It is estimated to be about 60 million years old.

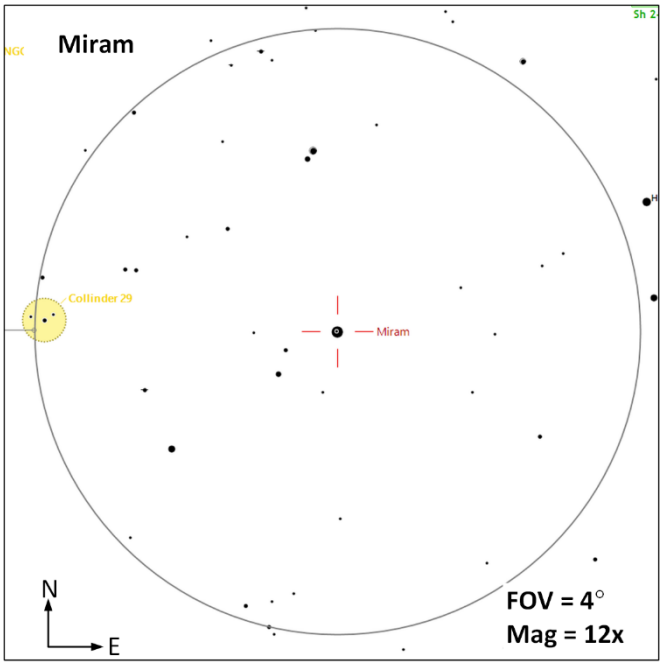


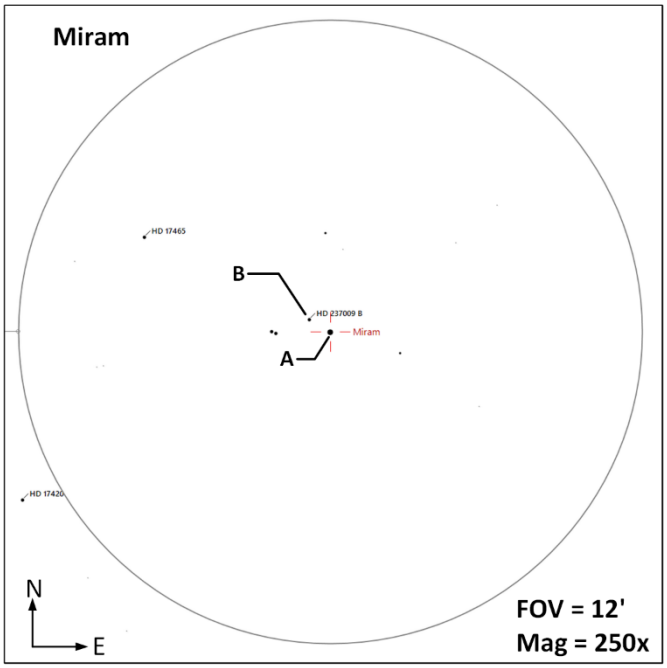
HR 890 (DS **AB** | M=5.2, 6.2 | Sep=12.0” | PA=85º |) – This system has two components with only a 1 magnitud differnce and well separated so small telescopes should be able to easily resolve this system. HR 890 is 459 ly from earth. The two components are separated by 1,700 AU.



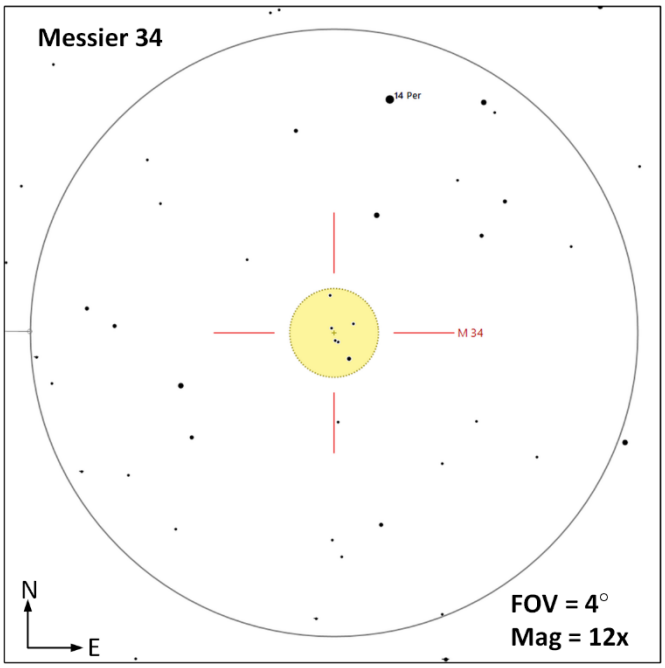


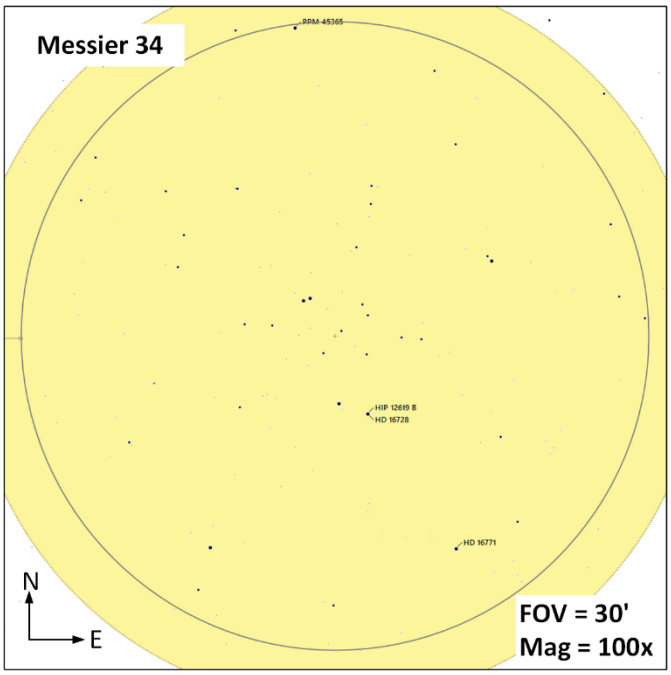
Miram (CS, DS **AB** | M=3.8, 8.5 | Sep=29” | PA=301 º |) – Eta Persei is a red supergiant about 1,000ly from earth with a dimmer blue companion that make a nice target for small telescopes. The field of view contains a sprinkling of background stars.



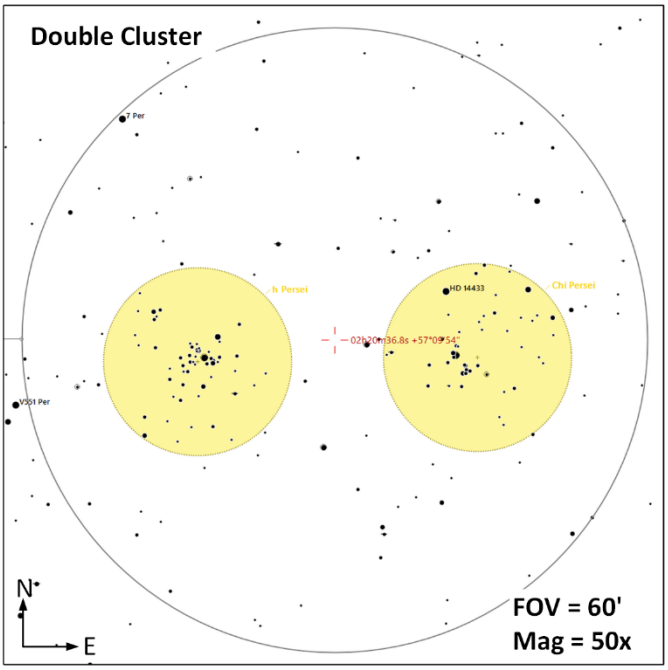


Messier 34 (OC | M=5.5 | Size=35' | SB= 21.8 |) – The Spiral Cluster is a large open cluster 1,500ly from earth containing about 400 stars with a radius of 7.5ly. The age of this cluster is estimated to be 225 million years old.

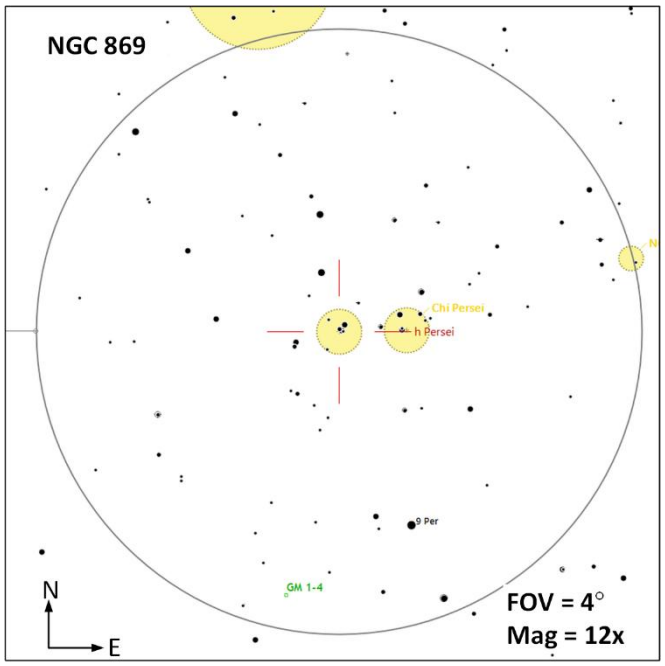


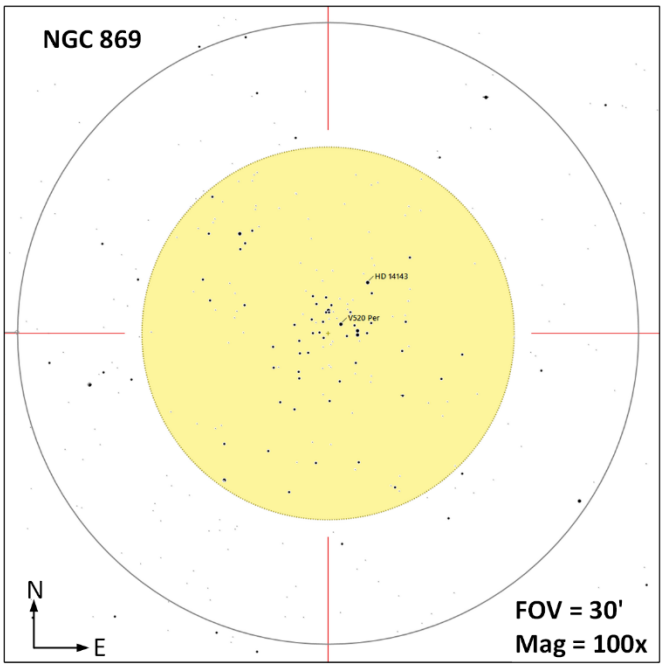


Pereus Doubl Cluster – Also known as Caldwell 14, NGC-869 and NGC-884 what make up this object. This is an excellent target for binoculars. This cluster was first cataloged by the Greek astronomer Hipparcos in 130 B.C. This should be visible to the naked eye in a dark skies. These clusters have only a few hundred light years separating them, so they are close companions. More details on NGC-869 and NGC-884 is provided below.

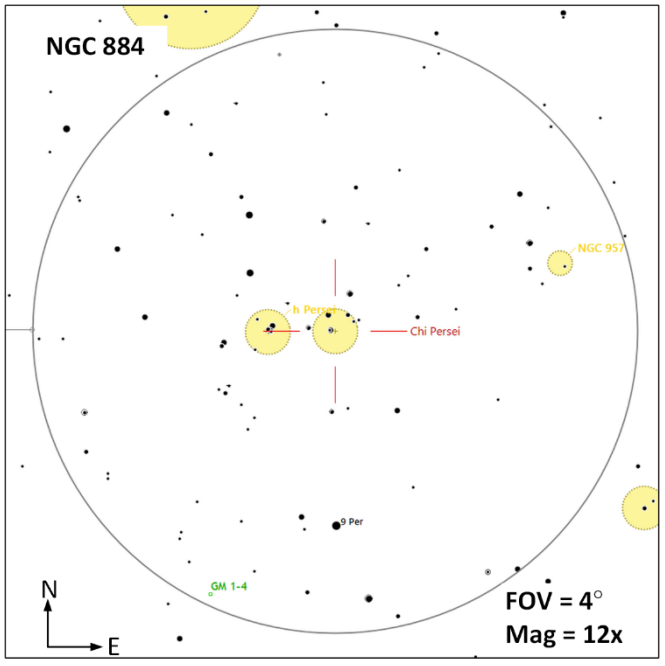


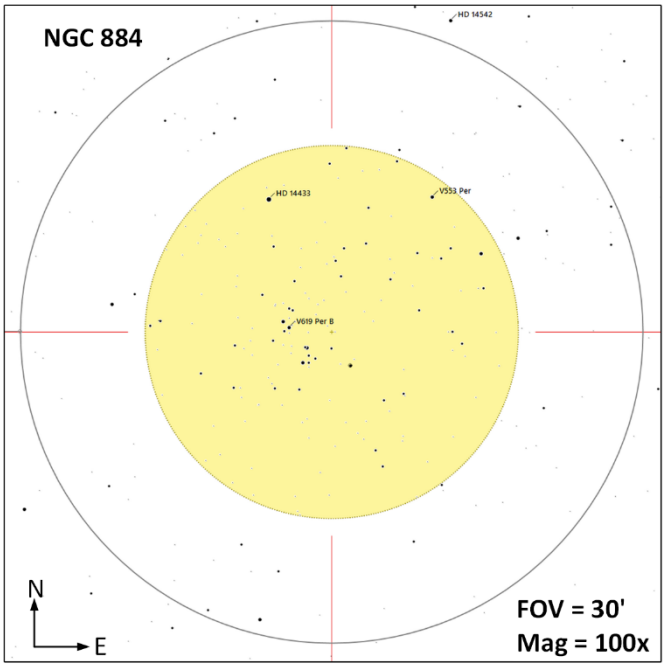
NGC 869 (OC| M=3.7 | Size=30’ | SB=19.8 |)– h Persei is about 7,460ly from earth and makes up one of the two clusters known as the “Perseus Double Cluster”. This cluster is estimated to be 14 million years old and is the more compressed of the two clusters and contains over 200 stars.



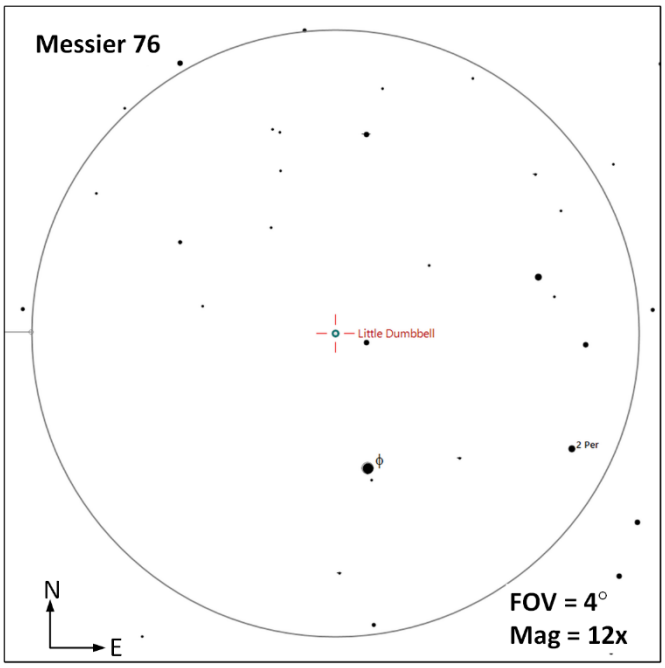


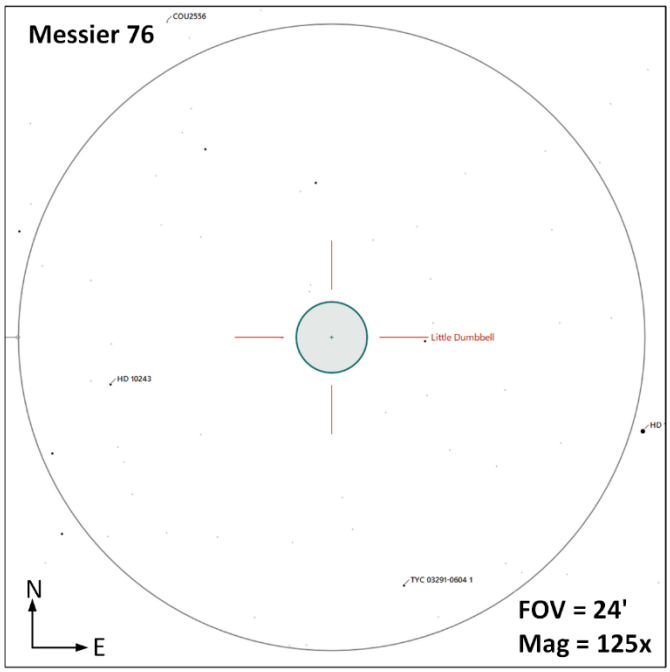
NGC 884 (OC | M=3.8 | Size=30’ | SB= 19.8 |) – Also known as Xi Persei, this is the second open cluster in the Perseus Double Cluster. This cluster is estimated to contain about 150 stars. There is conflicting information as to the age of this cluster, some documentation indicates it is about the same age as NGC-869 while other documentation stats it is significantly older.





Messier 76 (PN | M=10.1 | Size=2.7 x 1.8’ | SB=20.4 |) – Known as the Little Dumbbell Nebula this planetary nebula is 2,500 ly from earth with an estimated size of 1.2ly across.





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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 2021
- IrfanView Version 4.72