

Constellation Guide

Constellation: Serpens (Ser)

Evening Visibility: **May – July**

Opposition: June

Latitude Visibility: **+80° to -80°**

Online Information: | In-The-Sky.org ([Serpens Caput](#), [Serpens Cauda](#)) | [Constellation Guide.com](#) |

Constellation Targets

We have broken up the guide into two sections, Serpens Caput (Head) and Serpens Cauda (Tail).

Serpens Caput: [Palomar 5](#), [Messier 5](#), [Delta Serpentis](#), [NGC-5962](#), [Beta Serpentis](#), [R Serpentis](#), [Seyfert's Sextet](#), [NGC-6118](#)

Serpens Cauda: [NGC-6535](#), [NGC-6539](#), IC-1276, [NGC-6605](#), TR-32, [NGC-6604](#), [M-16](#), FO Ser, HR-6898, d Ser, [IC-4756](#), HR-7048, DR Ser, [Alya](#)

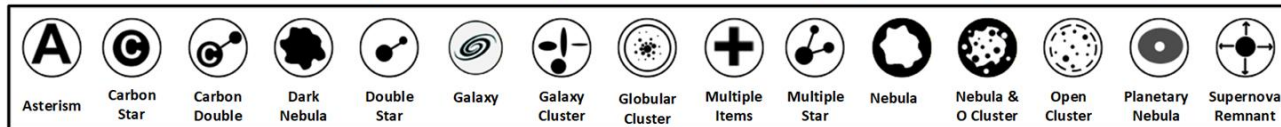
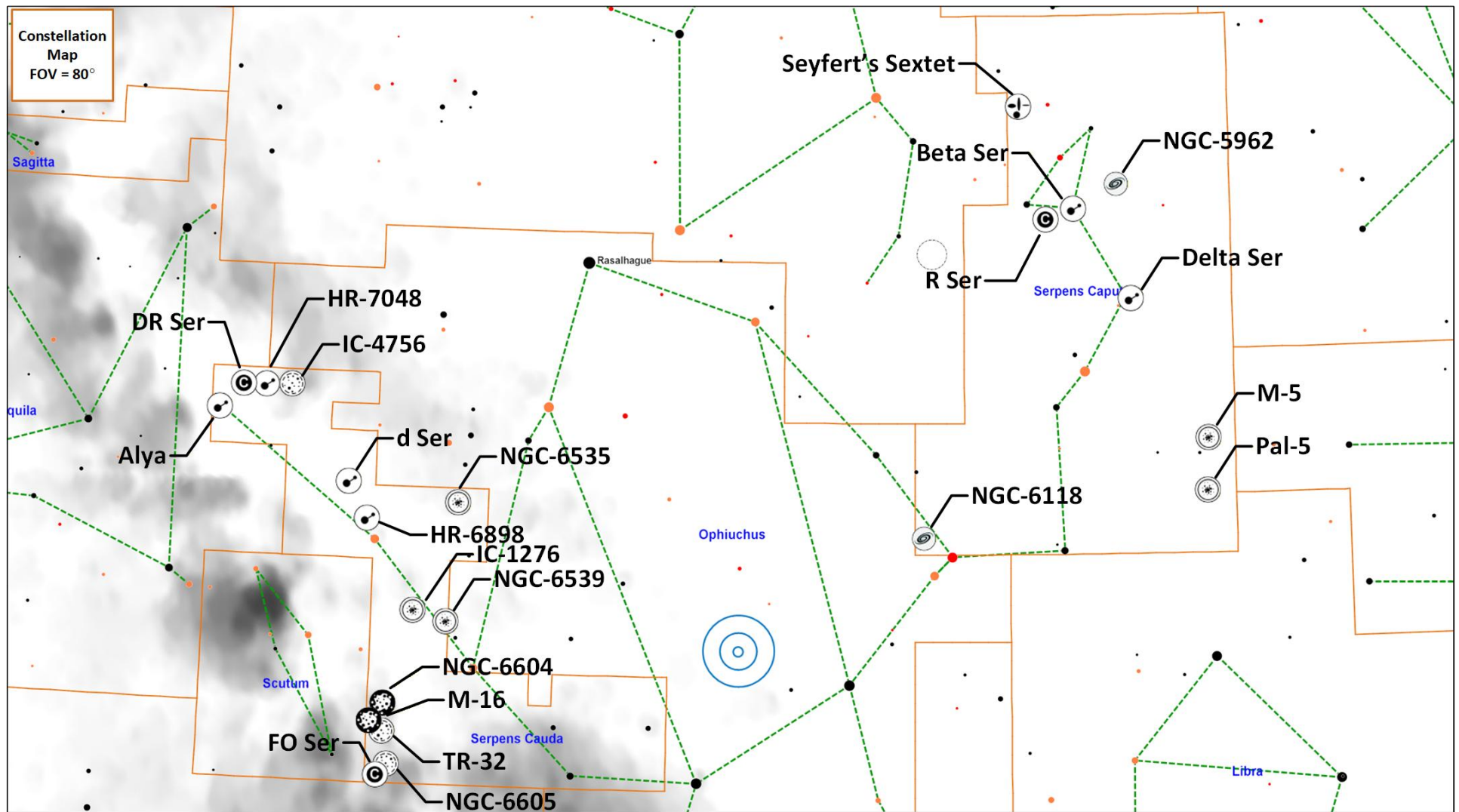
Mythology/Back Story

This constellation is unique among the modern constellations in being split into two non-contiguous parts, Serpens Caput (Serpent Head) to the west and Serpens Cauda (Serpent Tail) to the east. Between these two halves lies the constellation of Ophiuchus, the "Serpent-Bearer". In Greek mythology, Serpens represents a snake held by the healer Asclepius. Serpens constellation dates back to Babylonian times, it was called Bašmu and was depicted as a horned serpent, and loosely corresponded to the constellation Ὠφίτης, created by the Greek astronomer Eudoxus of Cnidus in the 4th century BC, on which Ptolemy's Serpens constellation was based.

Constellation Highlights

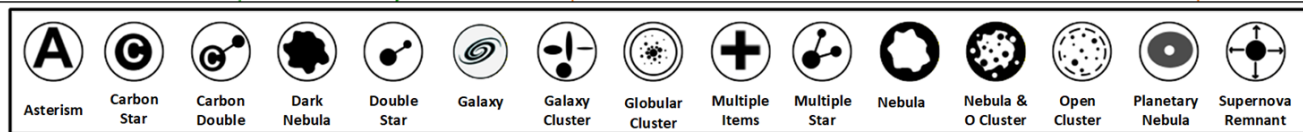
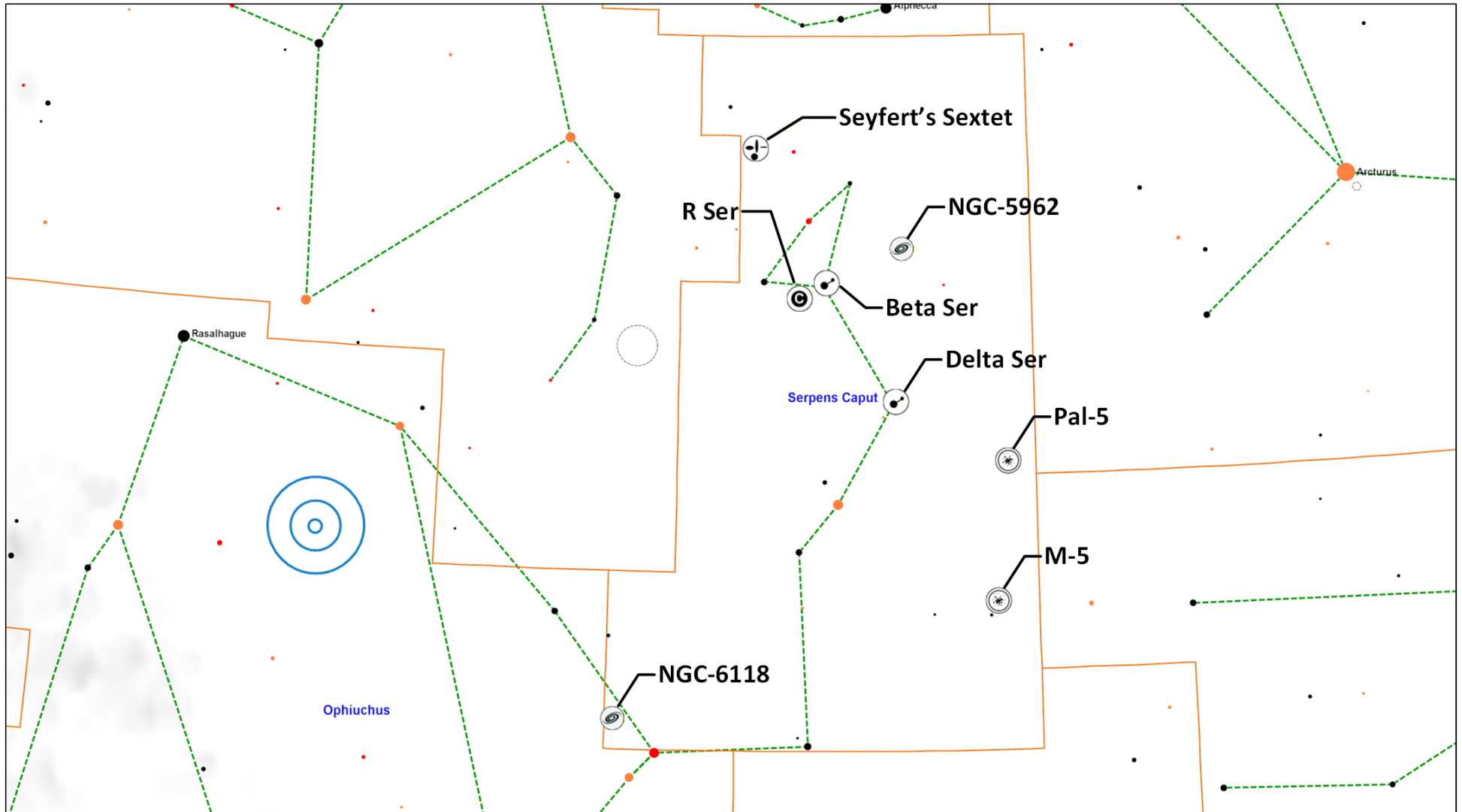
- **Messier 5** (GC) – One of the best GC in the north sky
- **DR Serpentis** (CS) – Carbon Star
- **Eagle Nebula** (EN, OC) – Open Cluster and faint Nebula
- **Alya** (DS) – Nice double star

Constellation Guide



Constellation Guide

Serpens Caput Constellation Objects

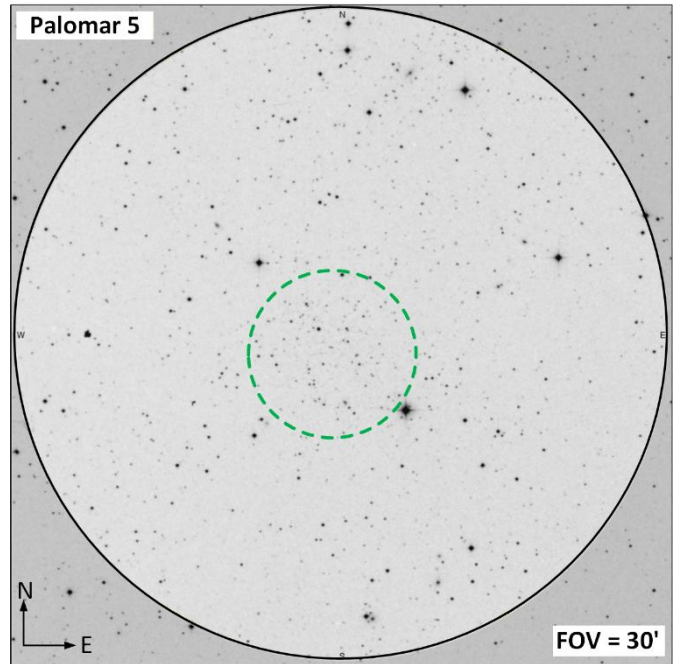
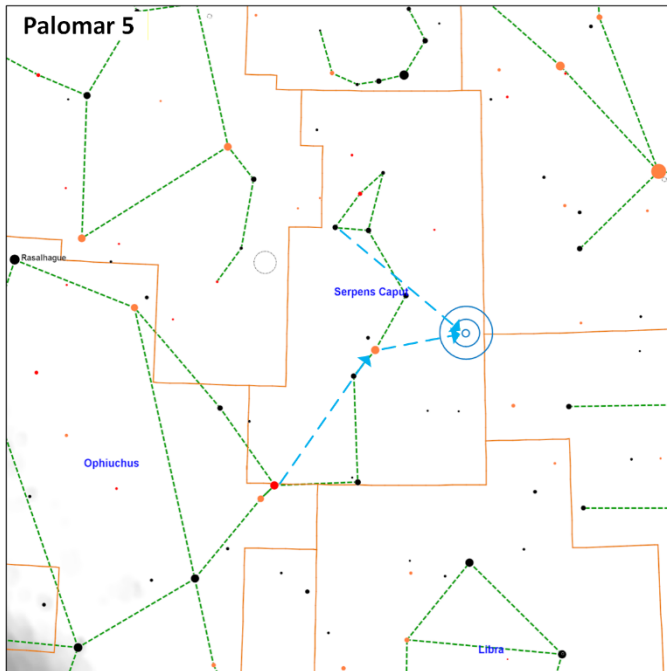


Constellation Guide

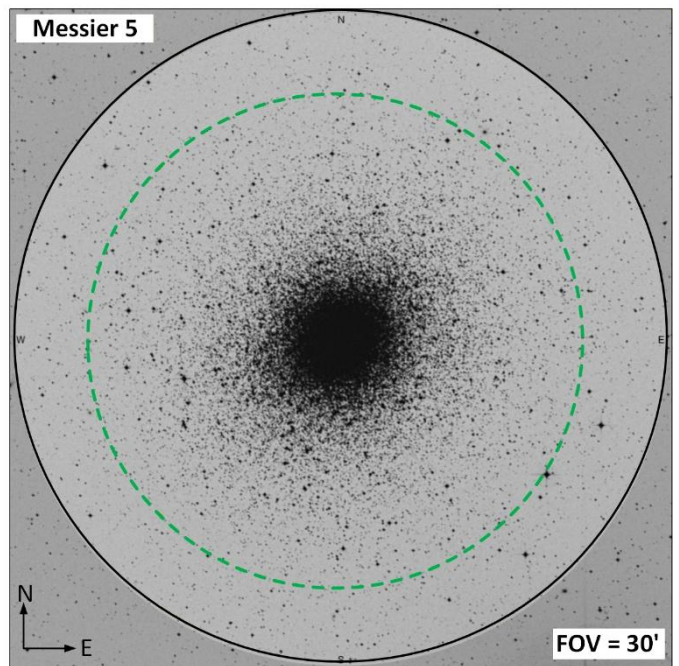
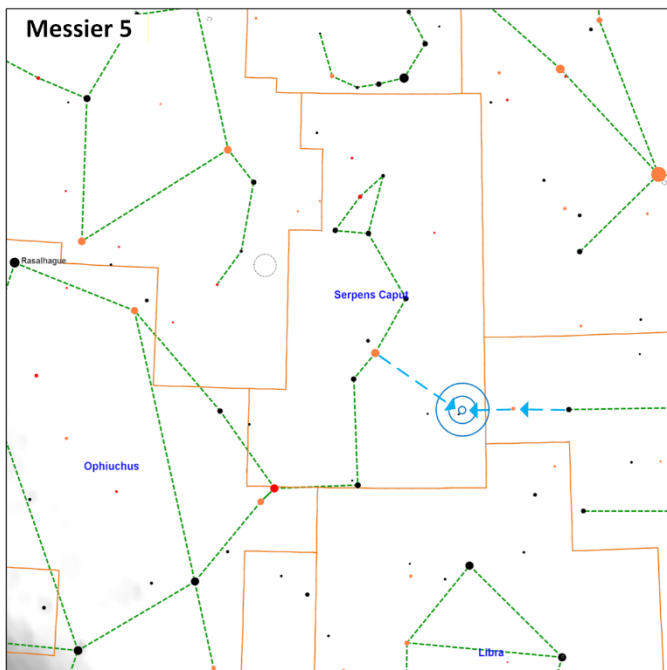
Object (Type)	Links	Gear	Aliases	Stats
Palomar 5 (GC)	1	T	Pal 5; UGC 9792; MCG +00-39-016; CGCG 21-61; EQ 153+000; C1513+000; Serpens Globular Cluster; Serpens Dwarf	Mag=11.7 Size=6.0' SB=24.5 mBortle=3 mApt=150mm MC=XII
Messier 5 (GC)	1	B, T	M-5; NGC-5904; Mel 133, EQ 1516+022, C1516+022	Mag=5.8 Size=20' SB=20.9 mBortle=6 mApt=50mm MC=V
Delta Serpentis (DS)	1 , 2	T	SAO-101624; SAO-101623; HIP-76276; HD-138918; HD-138917; HR 5789; HR 5788; ADS 9701; WDS 15348+1032; BD+11-2821; 13 Serpentis; δ Serpentis; Del Ser	AB Mag=4.2, 5.2 Sep=4.0" PA=170.5° Period=1,150y mBotle=7 mApt=80mm Color=yellow-white Spec=A9IV, F0IV
NGC-5962 (G)	1	T	PGC-55859; UGC-9926; PGC 55588; CGCG 107-12	Mag=11.0 Size=2.5'x1.6' SB=21.1 mBortle=4 mApt=150mm MC=SAc
Beta Serpentis (DS)	1 , 2	B, T	SAO-101725; HIP 77233; ADS 9778, STF 1970; Beta Ser, β Ser, 28 Ser, Chow, Zhou	AB Mag=3.7, 10.0 Sep=30.3" PA=264° mBotle=7 mApt=50mm Color=White/Orange Spec=A2V, K3V
R Serpentis (CS)	1	B, T	SAO-101771; HIP 77615; HR 5894; HD 141850; WDS 15508+1508	Mag Range=5.2 – 14.4 Period=356 d mBortle=7 mApt=50mm BV=+1.5 Spec=M5-8e
Seyfert's Sextet (GCI)	1	T	NGC-6027(A-E); UGC 10116; VV 115 PGC 56579; MCG 4-38-10; CGCG 137-10; HCG 79	Mag=14.7 Size=1.3'x1.3' SB=23.9 mBortle=3 mApt=250mm
NGC-6118 (G)	1	T	PGC-57924; UGC-10350; CGCG-394-012; MCG-01-41-002; h-I.403; IRAS-16192-0209; Blinking Galaxy	Mag=11.7 Size=4.5'x1.8' SB=22.6 mBortle=3 mApt=200mm MC=SAc

Constellation Guide

Palomar 5 (GC | Mag=11.7 | Size=6.0' | SB=24.5 | mBortle=3 | mApt=150mm | MC=XII |) A dim globular cluster located 74 thousand light years away with a physical diameter of 127 light years. This is a member of the [Palomar globular clusters](#) group, a collection of some of the faintest of all globular clusters in the Milky Way.

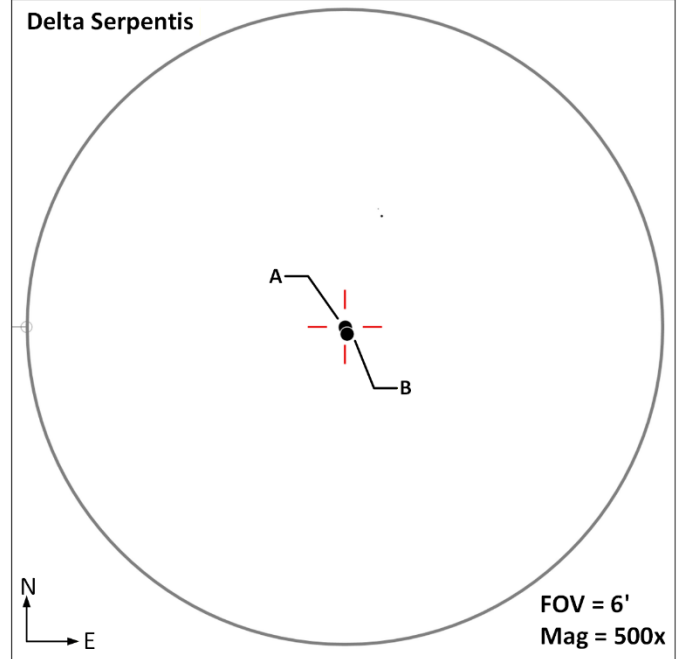
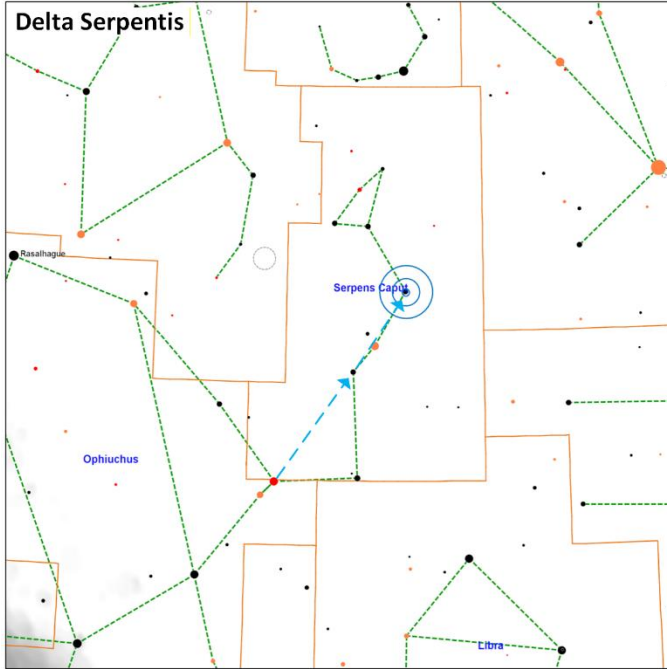


Messier 5 (GC | Mag=5.8 | Size=20' | SB=20.9 | mBortle=6 | mApt=50mm | MC=V |) One of the best globular clusters in the northern sky and almost as impressive as M-13. M-5 is 24,000 light years away, contains 100,000 – 500,000 stars, spans an area of 165 light years and is one of the larger globular clusters known in our galaxy.

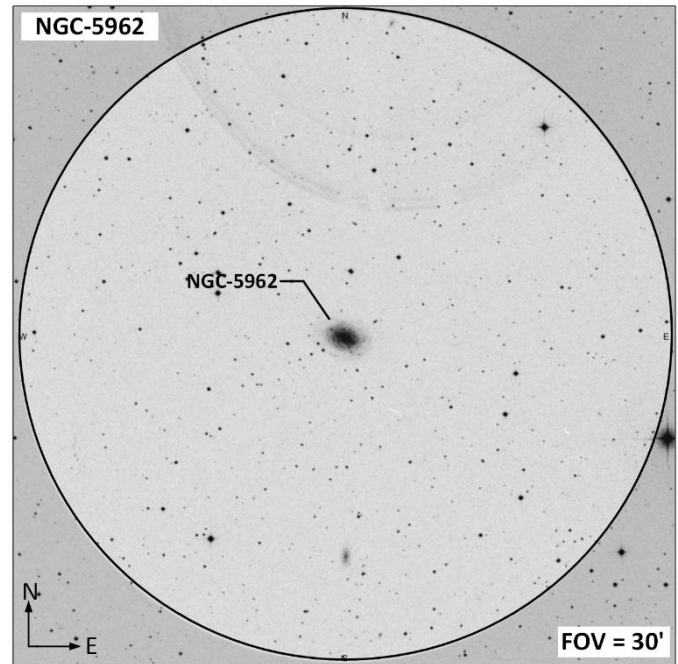
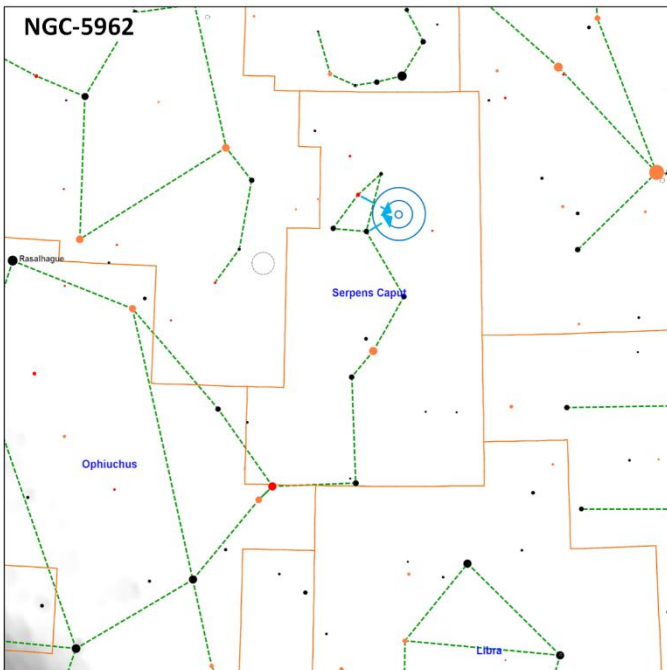


Constellation Guide

Delta Serpentis (DS AB | Mag=4.2, 5.2 | Sep=4.0" | PA=170.5° | Period=1,150y | mBotle=7 | mApt=80mm | Color=yellow-white | Spec=A9IV, F0IV) Many descriptions describe this system as a multiple star system with 4 components, however the AB | CD components are not physically associated with each other. The AB system is located about 228 light years away with an orbital period of 1,150 years.

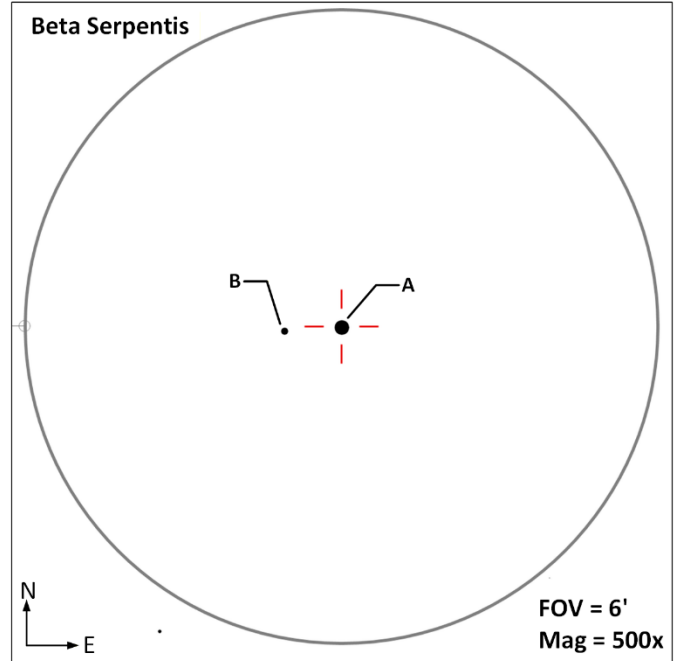
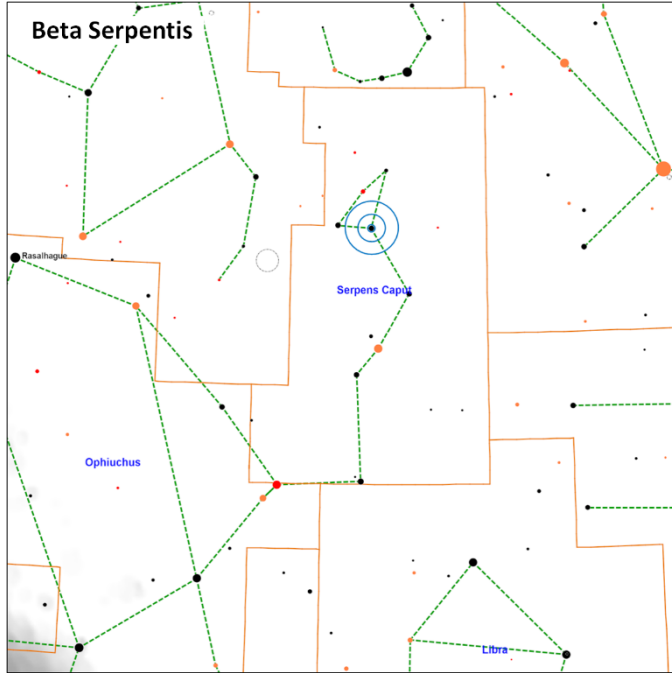


NGC-5962 (G | Mag=11.0 | Size=2.5'x1.6' | SB=21.1 | mBortle=4 | mApt=150mm | MC=SAC) Located 120 million light years away this spiral galaxy has a physical diameter of 101,810 light years.

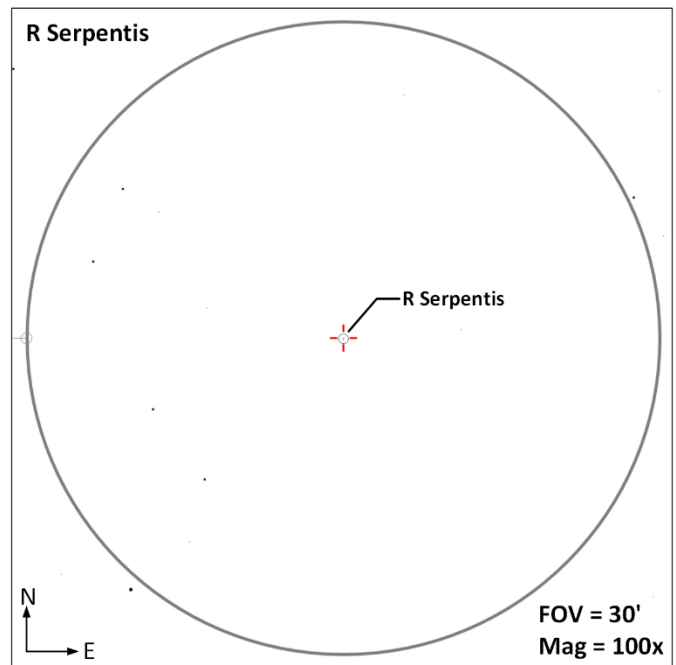
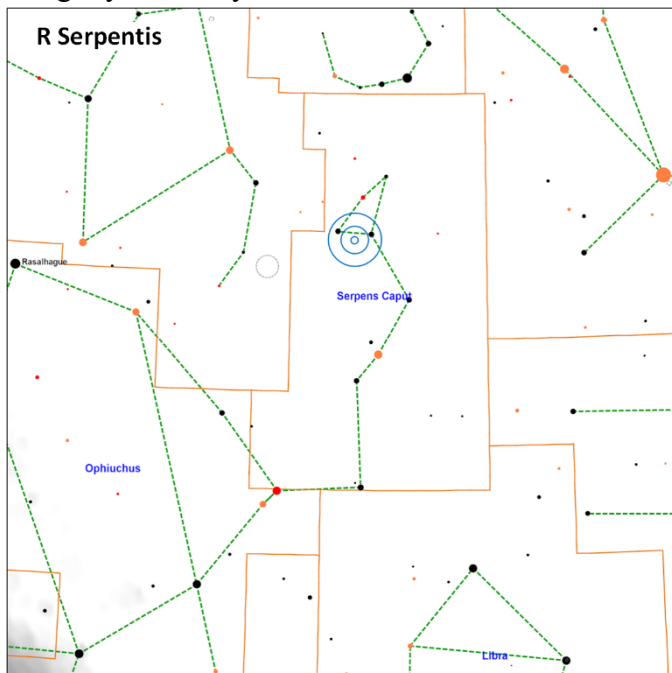


Constellation Guide

Beta Serpentis (DS AB | Mag=3.7, 10.0 | Sep=30.3" | PA=264° | mBottle=7 | mApt=50mm | Color=White/Orange | Spec=A2V, K3V |) This double star is located about 155 light years away and is a member of the [Ursa Major Moving Group](#) also known as Collinder 285, the closest [stellar moving group](#) to us, a group of star with a common origin. These stars were formed about 400 million years ago and is roughly 80 light years away.

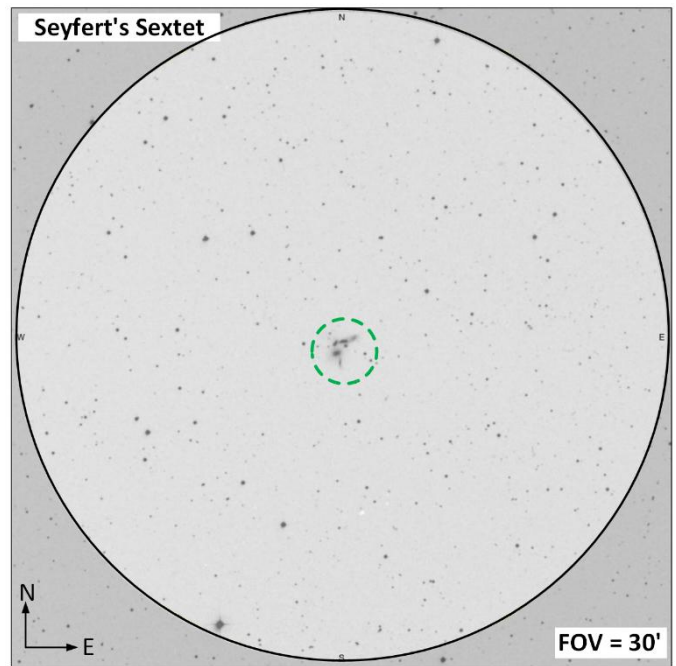
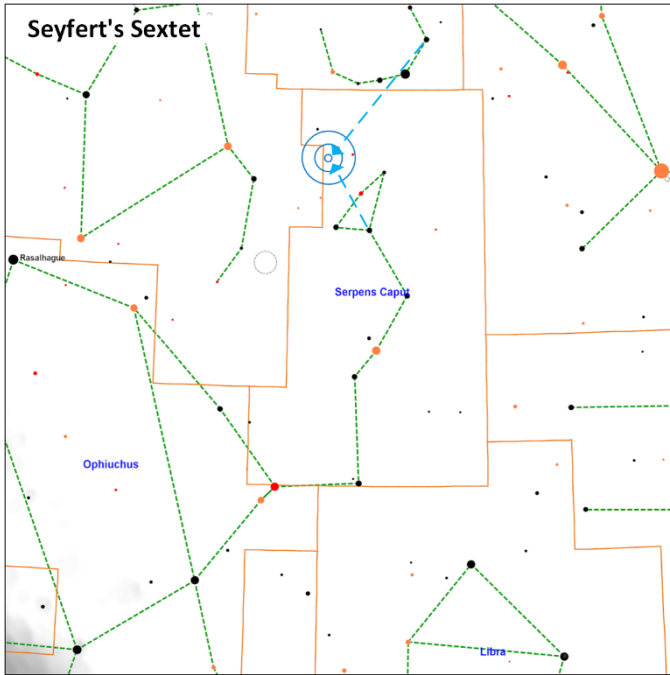


R Serpentis (CS | Mag Range=5.2 – 14.4 | Period=356 d | mBottle=7 | mApt=50mm | BV=+1.5 | Spec=M5-8e |) A Mira variable star with a wide range in magnitude over the period of roughly one year. The star is located 680 light years away.

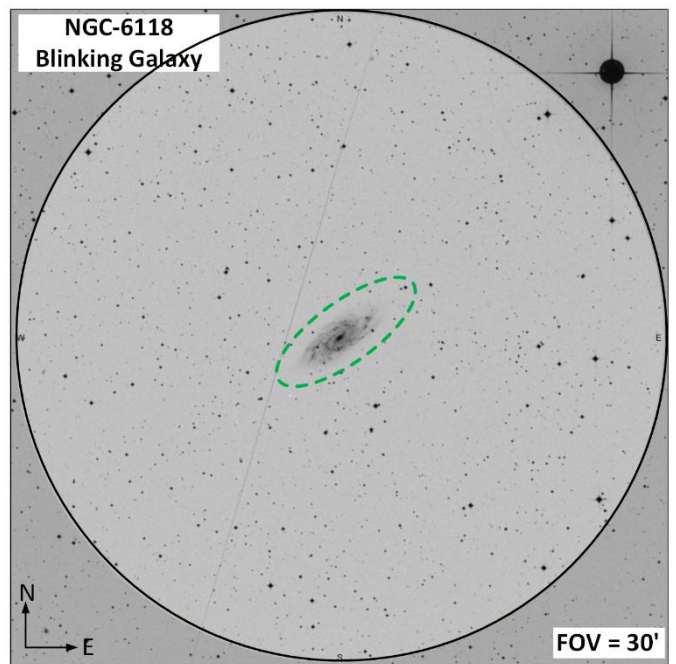
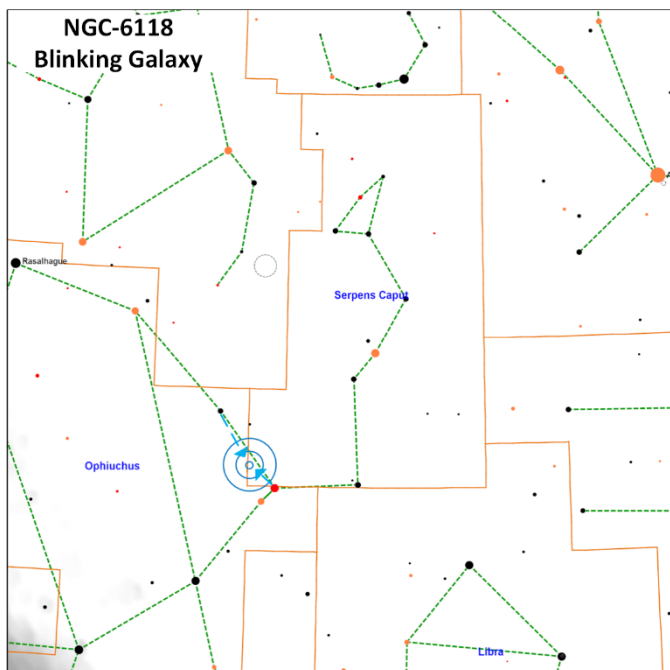


Constellation Guide

Seyfert's Sextet (GCl | Mag=14.7 | Size=1.3'x1.3' | SB=23.9 | mBortle=3 | mApt=250mm |) Located about 190 million light years away this group of six galaxies. Five of the galaxies are interacting with each other and one (NGC-6027d) is a background galaxy.

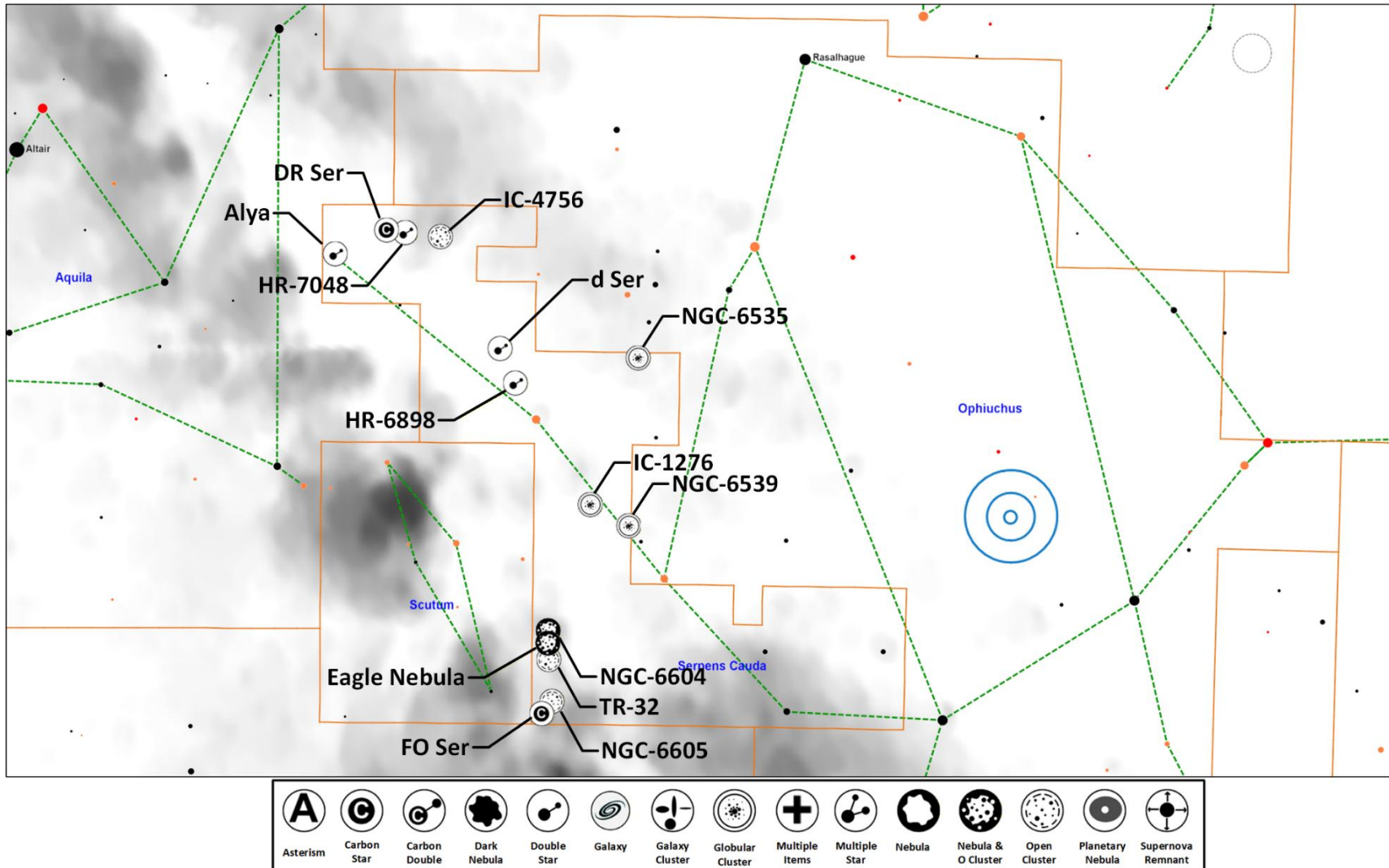


NGC-6118 (G | Mag=11.7 | Size=4.5'x1.8' | SB=21.1 | mBortle=4 | mApt=200mm | MC=SAC |) A grand design spiral galaxy located 83 million light years away, this galaxy is roughly the same size as our galaxy, the Milky Way measuring 110,000 light year across.



Constellation Guide

Serpens Cauda Constellation Objects



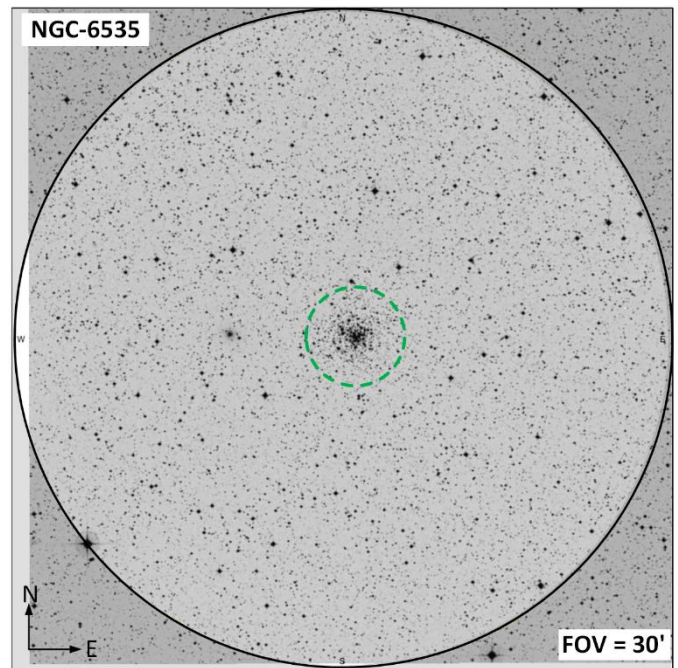
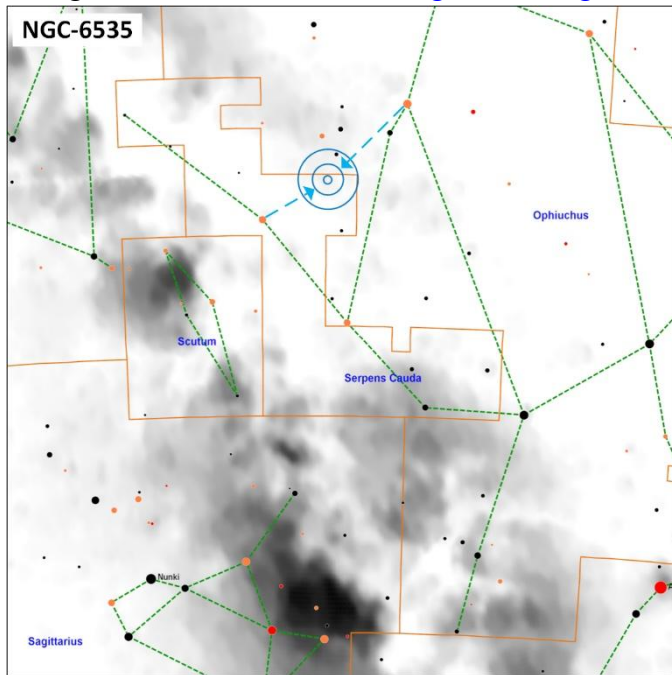
Object (Type)	Links	Gear	Aliases	Stats
NGC-6535 (GC)	1	T	NGC-6535; GCl 83; Mel 189; EQ 1801-003; C 1801-003; MWSC-2795	Mag=10.5 Size=3.6' SB=21.9 mBortle=5 mApt=100mm MC=XI

Constellation Guide

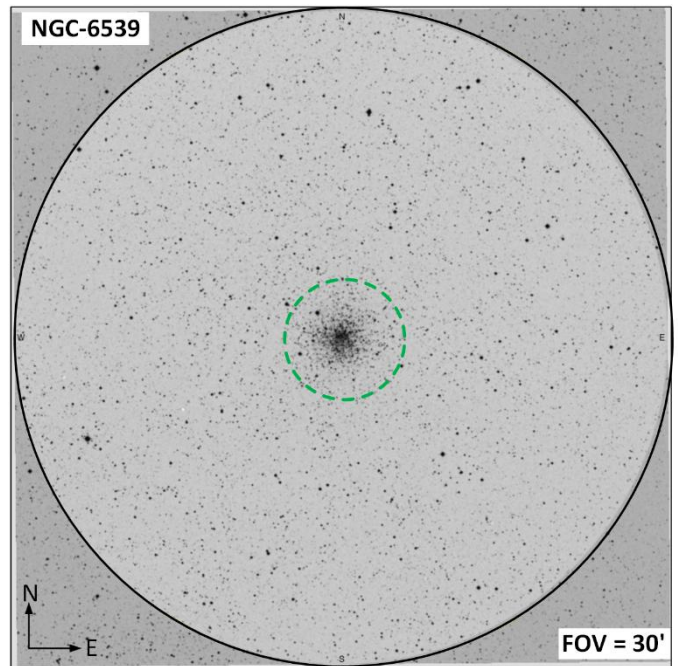
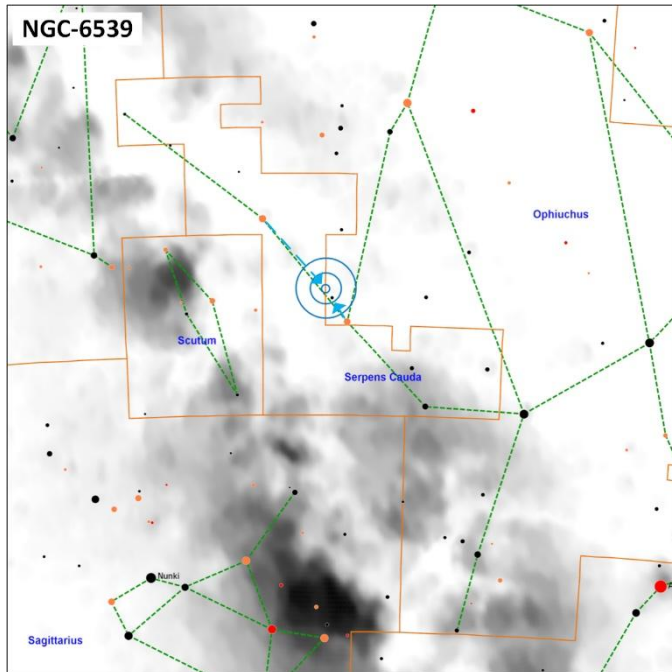
Object (Type)	Links	Gear	Aliases	Stats
NGC-6539 (GC)	1	T	Mel 190; EQ 1802-075; GCL 85; C 1802-075	Mag=9.3 Size=6.9' SB=22.1 mBortle=5 mApt=100mm MC=X
IC-1276 (GC)		T	IC-1276; Palomar 7; Pal 7; EQ 1808-072; GCL 90; C 1808-072; MWSC-2835	Mag=10.3 Size=8.2' SB=23.5 mBortle=5 mApt=100mm MC= XII
NGC-6605 (OC)	1	B, T	NGC-6605; Collinder 379; Cr-379; OCL 47; Lund 820; C1814-149	Mag=6.0 Size=15' SB=18.6 mBortle=5 mApt=80mm MC= I2m
Trumpler 32 (OC)		T	Tr-32; OCL 55; Collinder 372; Cr-372; Ha 19; Lund 822; C1814-133	Mag=12.1 Size=4.0' SB=23.7 mBortle=4 mApt=150mm MC=I2m
NGC-6604 (OC, EN)	1	T	NGC-6604; GC-4396; Collinder 387; Cr-387; OCL 55; MWSC-2777; Sh2-54; Lund 823; OCL 56; Mrk 39; CTB 50; C1815-122	Mag=6.5 Size=9.6' SB=20.0 mBortle=5 mApt=80mm MC=I3pn
Eagle Nebula (EN, OC)	1	B, T	M-16; NGC-6611; IC-4703; Collinder 375; Cr-375; Mel 198; OCL 54; Mrk 40; C-1816-138; GC-4400; Lund-825; h-2006; Sh2-49; Gum-83; RCW-165; LBN-67; Eagle Nebula; Star Queen Nebula	Mag=6.0 Size= 30x30 SB=22.0 mBortle=4 mApt=80mm MC=II3mn
FO Serpentis (CS)		B, T	SAO-121771; HIP-77615; HD 141850; HR 5894; BD-15 4923, TYC 6265-1657-1	Mag Range= 8.4 to 8.7 Period=Unknown mBortle= 7 mApt= 50mm BV=+1.90 Spec=C4 (R6)
HR 6898 (DS)	1	T	SAO-142294; HIP 90253; HD-169493; HR-6898; WDS 18250-0135; IDS 18198-0138; AC 11; ADS 11324; WDS 18250-1035; TYC 5099-0358-1	AB Mag=6.7, 7.2 Sep=0.89" PA=354° Period=440y mBortle=7 mApt=175mm Color=Yellow/White Spec=F0
d Serpentis (DS)	1	T	SAO-123497; HIP 90441; d Ser; 59 Ser; HR 6918; HD 169985; STF 2316; ADS 11353; WDS 18272_0012; TYC 0433-0595-1	AB Mag=5.4, 7.6 Sep=3.9" PA=322° mBortle=7 mApt=60mm Color=Yellow/White Spec= G0III/A6V
IC-4756 (OC)	1	B, T	IC-4756; OCL 77; Collinder 386; Cr-386; Mel 210; Lund 851; Raab 135; C1836+051; C1832_051; Graff's Cluster; Graff 1; Tweedledee Cluster; Secret Garden Cluster; Poor man's Pleiades	Mag= 4.6 Size=42' SB=21.3 mBortle=6 mApt=50mm MC=II1r
HR 7048 (DS)	1	T	SAO-123886; HIP 92027; HD 173495; STF 2375; ADS 11650; BD +05 3941; WDS 18455+0530; TYC 0456-1022-1	AB Mag=5.4, 7.6 Sep=3.9" PA=322° mBortle=7 mApt=50mm Color= Yellow/Whitie Spec=G0III/A6V
DR Serpentis (CS)		B, T	SAO-123209; HIP 90441; HD 170820; CGCS-5235, BD +05 03960, TYC 0456-0004-1	Mag Range= 10.4 to 13.4 Period= Unknown BV=+2.45 Spec=C6II mBortle=7 mApt=50mm
Alya (DS)	1 , 2	B, T	SAO-124070; SAO-124068; HIP-92946; HIP-92947; HD-175638; HD-175639; HR-7141; HR-7142; ADS-11853; WDS 18562+0412; 63 Serpentis; θ Serpentis	AB Mag=4.6, 4.9 Sep=22.4" PA=106° Period >14,000y mBortle=7 mApt=50mm Color=White/White Spec=A5V, A5Vn

Constellation Guide

NGC-6535 (GC, | Mag=10.5 | Size=3.6' | SB=21.9 | mBortle=5 | mApt=100mm | MC=XI |) Located 22,200 light years away with a physical diameter of 22 light years with an estimated age of 12.75 billion years. This is a [halo](#) globular cluster close to the [galactic bulge](#).

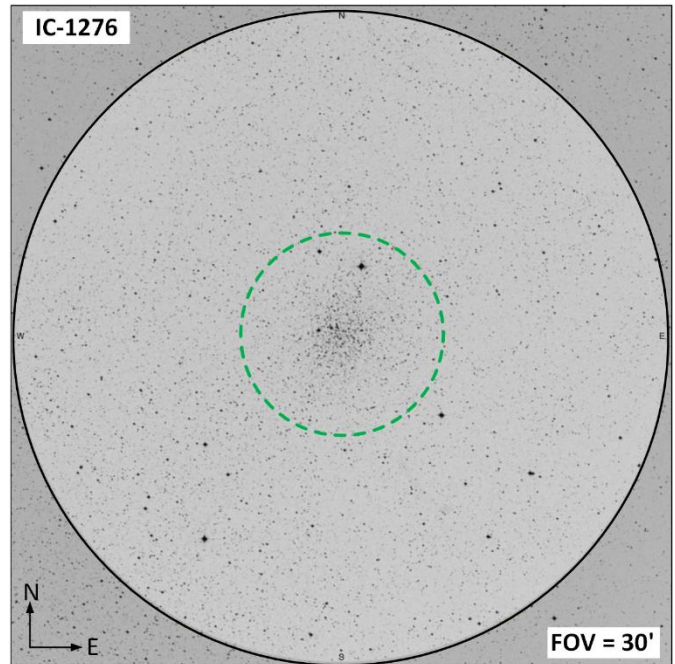
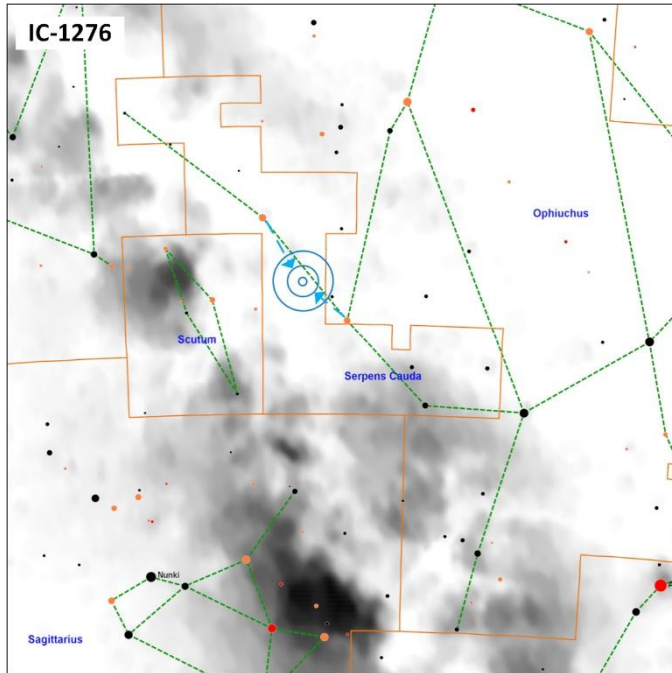


NGC-6539 (GC | Mag=9.3 | Size=6.9' | SB=22.1 | mBortle=5 | mApt=100mm | MC=X |) Located 26,000 light years away with a physical diameter of 58 light years. There is a large dark cloud complex located in the foreground of this cluster causing reddening from [extinction](#) (the scattering of light by the cloud).

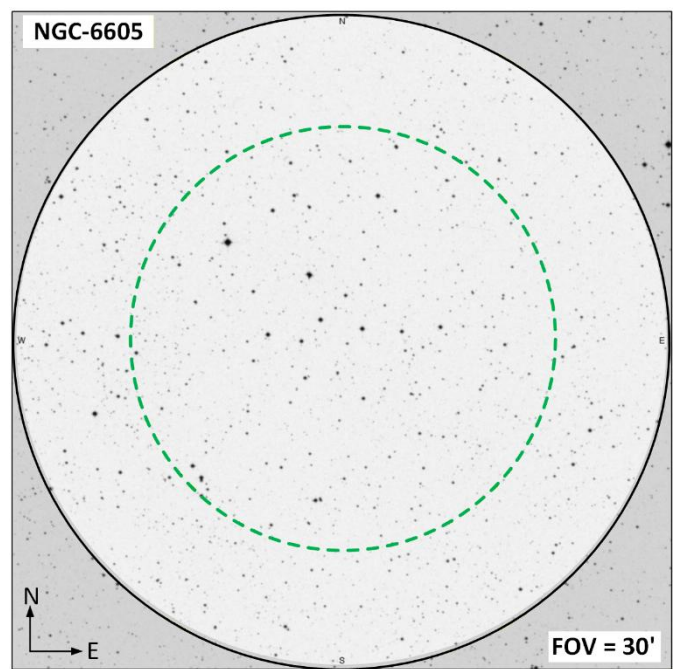
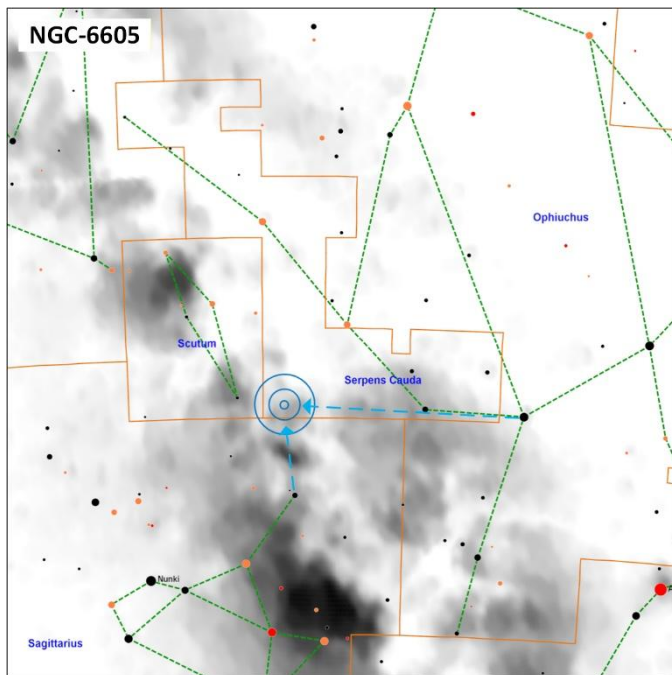


Constellation Guide

IC-1276 (GC | Mag=10.3 | Size=8.2' | SB=23.5 | mBortle=5 | mApt=100mm | MC= XII |) This is a diffused globular cluster located 18,000 light years away with a physical diameter of 41 light years.

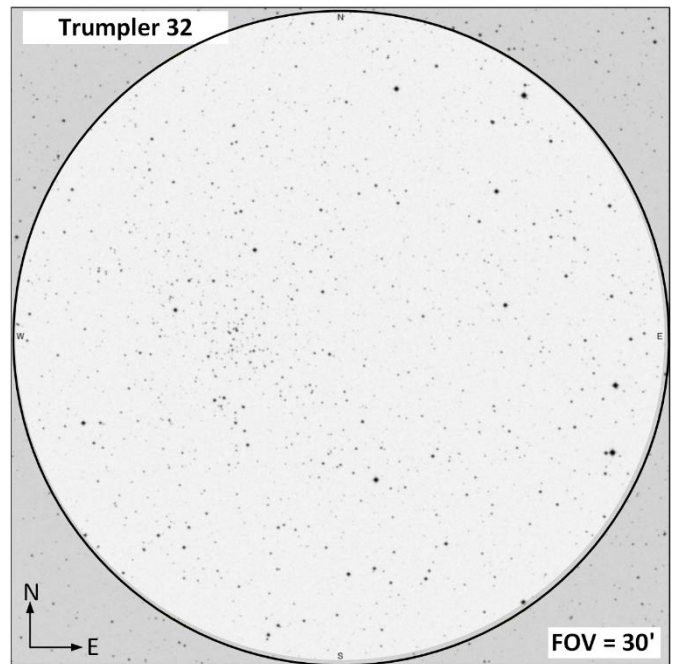
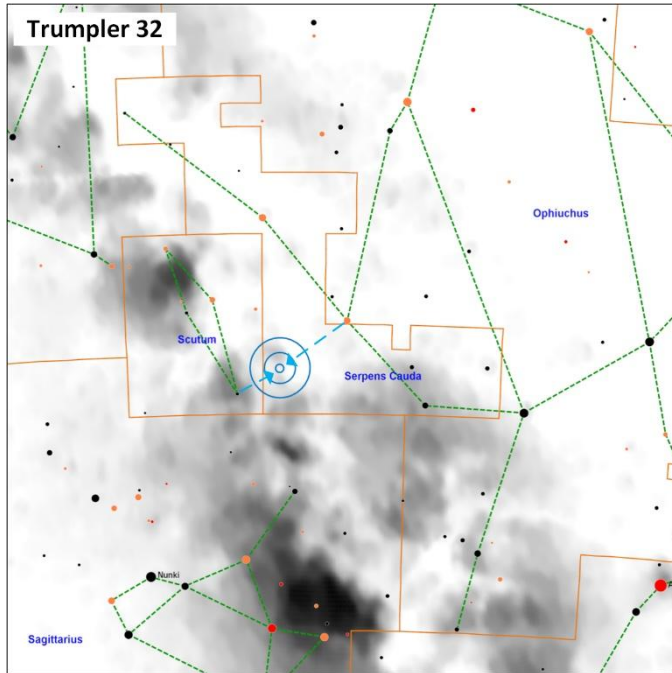


NGC-6605 (OC | Mag=6.0 | Size=6.3' | SB=18.6 | mBortle=5 | mApt=80mm | MC= I2m |) This open cluster is located 3,730 light years away and has a physical diameter of 31 light years. This open cluster is classified as: I-Detached with strong central concentration, 2-Medium range of brightness between stars in the cluster, m-Medium rich cluster with 50-100 stars.

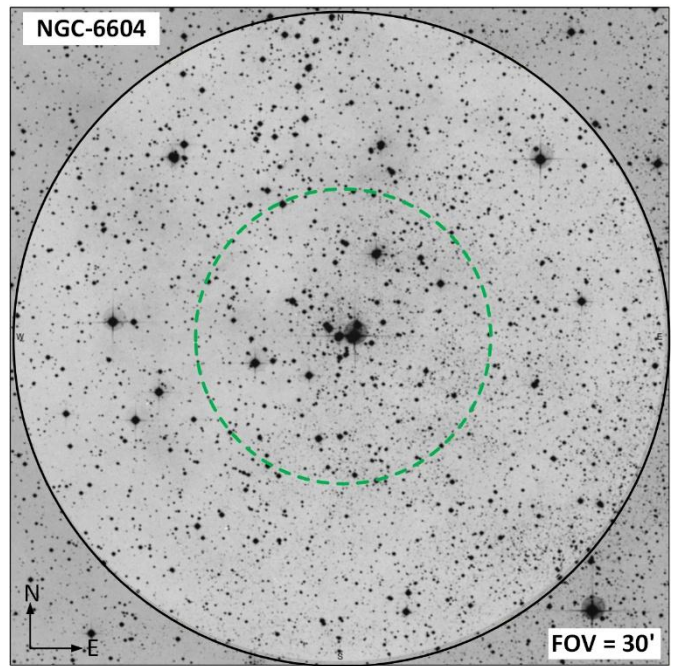
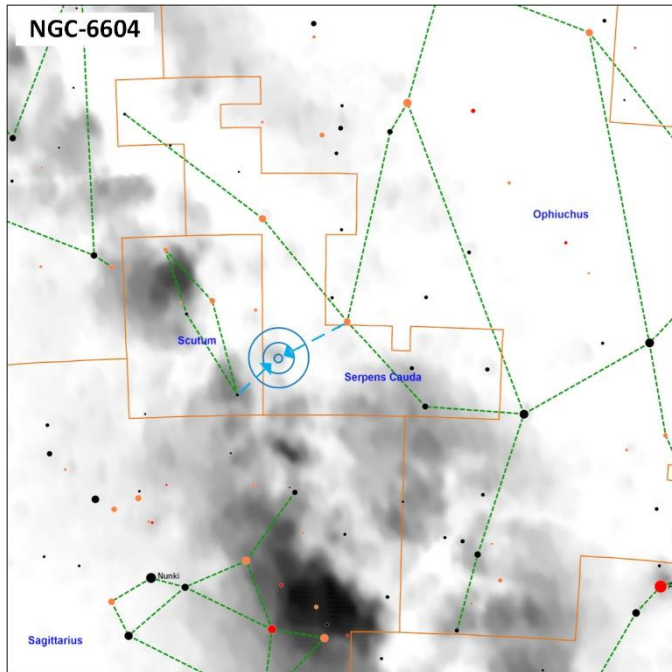


Constellation Guide

Trumpler 32 (OC | Mag=12.1 | Size=4.0' | SB=23.7 | mBortle=4 | mApt=150mm | MC=I2m |) Located 5,610 light years away with a physical diameter of 8 light years this open cluster is classified as: I-Detached with strong central concentration, 2-Medium range of brightness between stars in the cluster, m- Medium rich cluster with 50-100 stars.

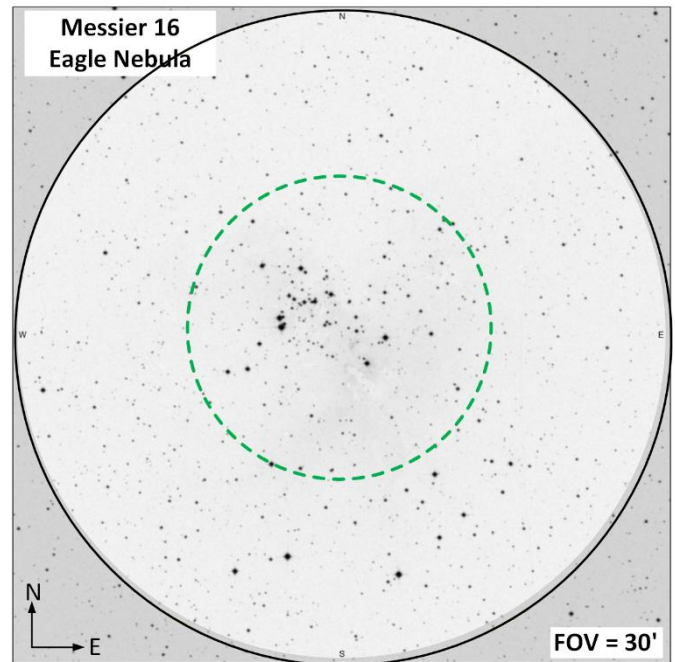
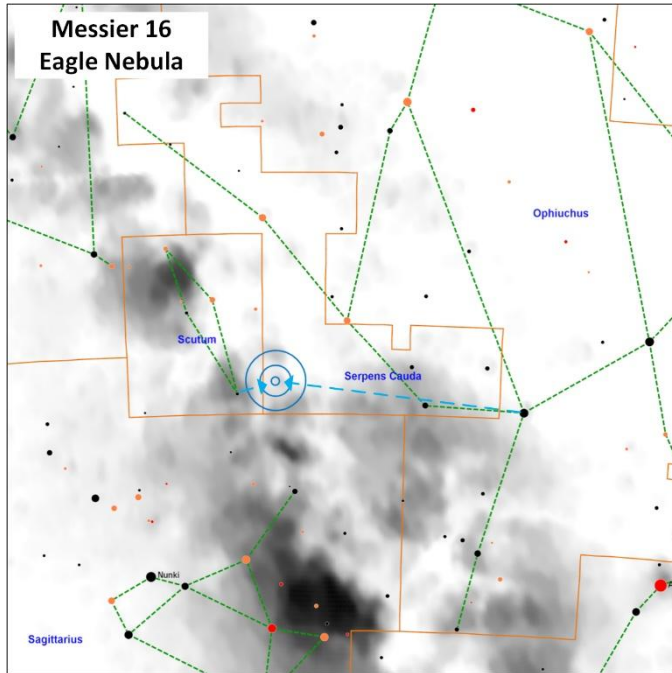


NGC-6604 (OC, EN | Mag=6.5 | Size=9.6' | SB=20.0 | mBortle=5 | mApt=80mm | MC=I3pn |) A young open cluster with faint nebulosity (Bortle 4 sky may be required to detect nebulosity). Use an OII or H-alpha filter to help see nebulosity. The cluster has an estimated age of 6.5 million years and is still undergoing star formation.

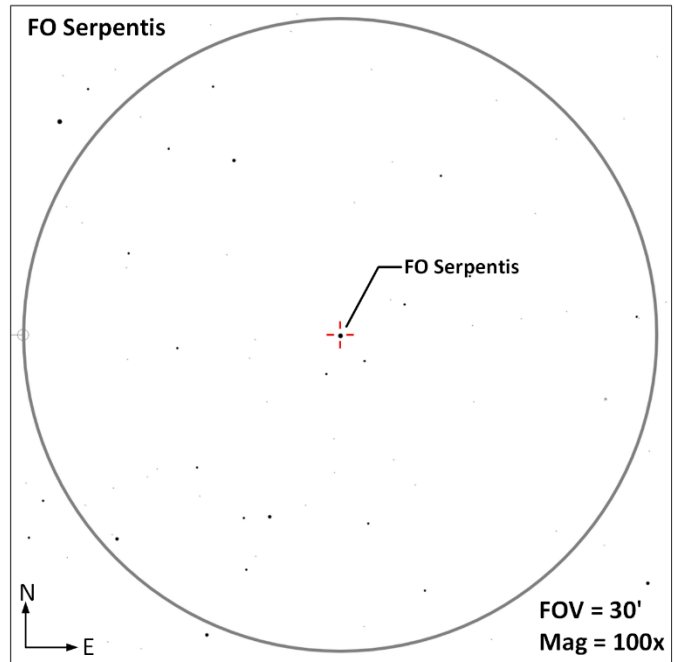
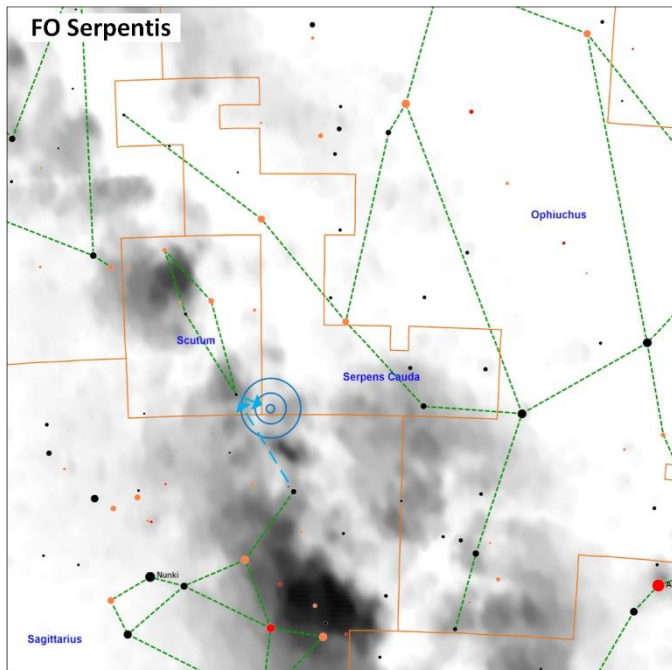


Constellation Guide

Eagle Nebula (EN, OC | Mag=6.0 | Size= 30x30 | SB=22.0 | mBortle=4 | mApt=80mm | MC=II3mn |) Visible in binoculars and telescopes. The open cluster will be visible in lighter skies while the nebulosity that the open cluster is in will require darker skies to see. Use an OIII or H-alpha filter to bring out more nebulosity details.

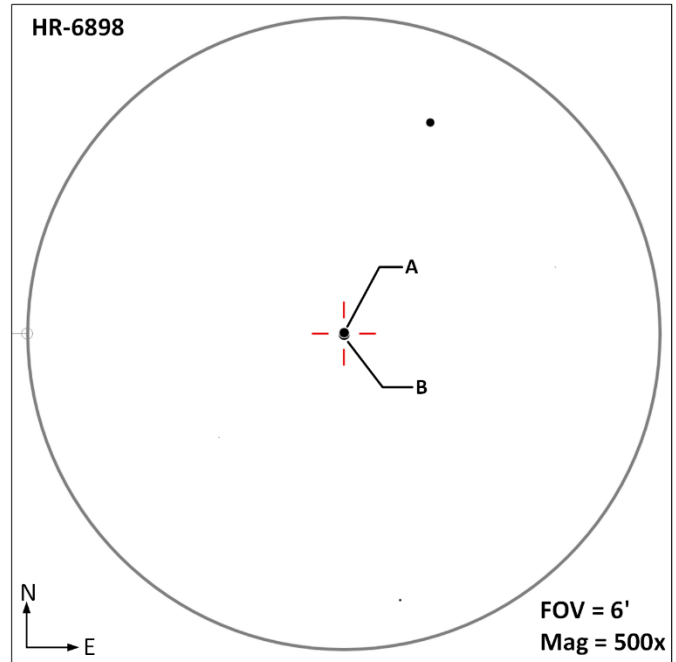
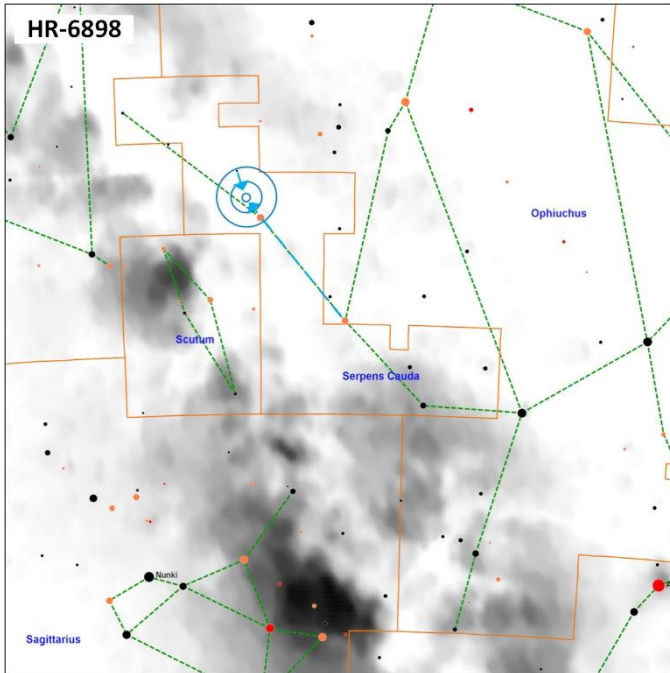


FO Serpentis (CS | Mag Range= 8.4 to 8.7 | Period=Unknown | mBortle= 7 | mApt= 50mm | BV=+1.90 | Spec=C4 (R6) |) Located 2,265 light years away, this star is a pulsating long-term period variable star.

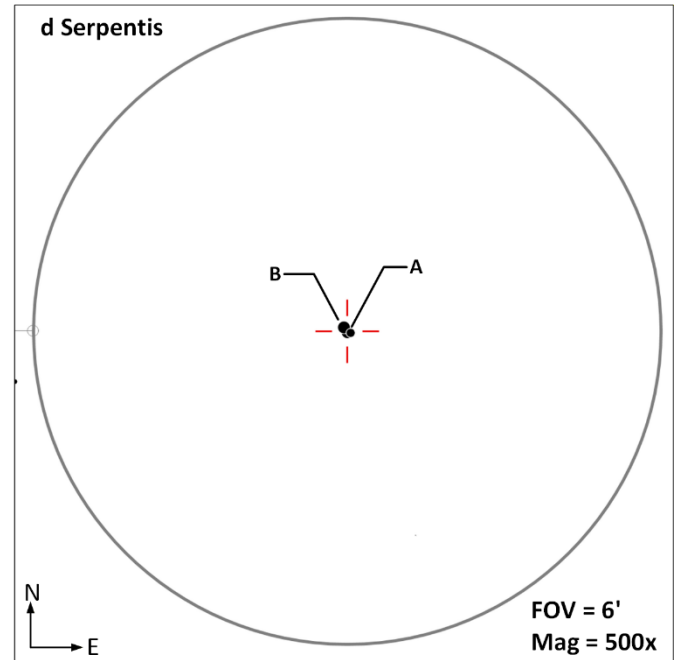
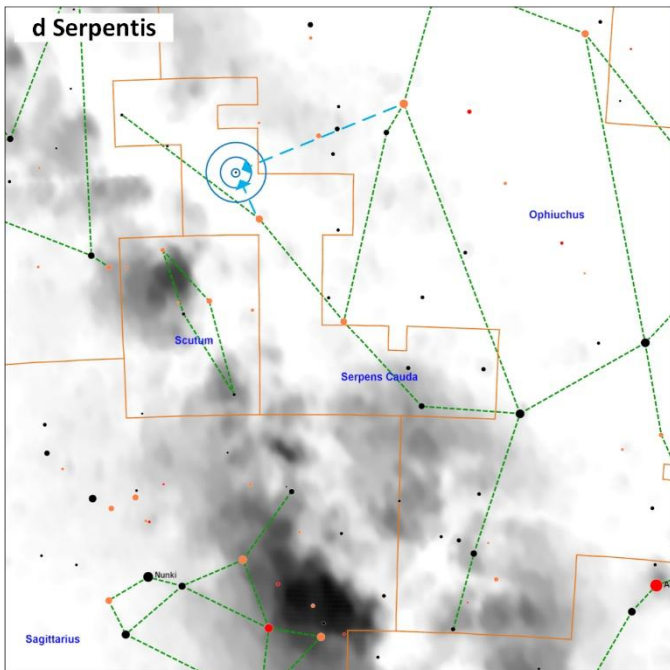


Constellation Guide

HR 6898 (DS AB | Mag=6.7, 7.2 | Sep=0.89" | PA=354° | Period=440y | mBortle=7 | mApt=175mm | Color=Yellow/White | Spec=F0) Located 435 light years away this tight double has an orbital period of 440 years, orbiting at an average distance of 125 Astronomical Units from each other.

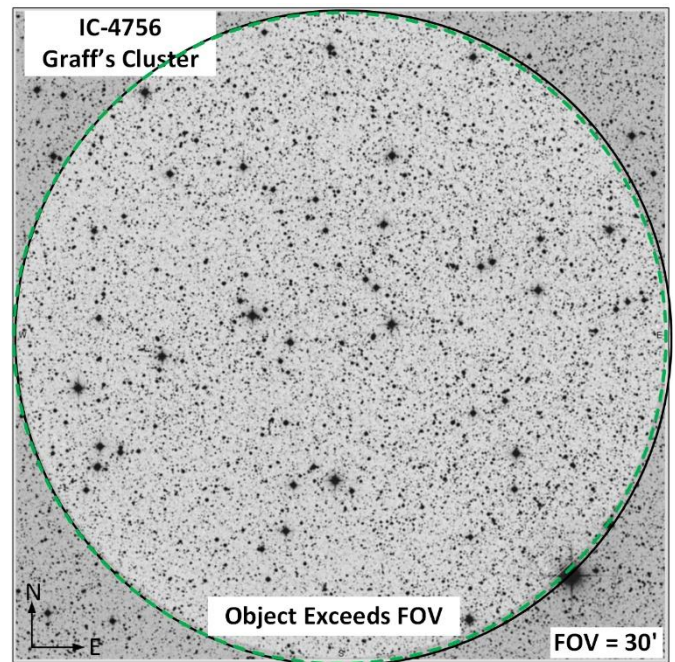
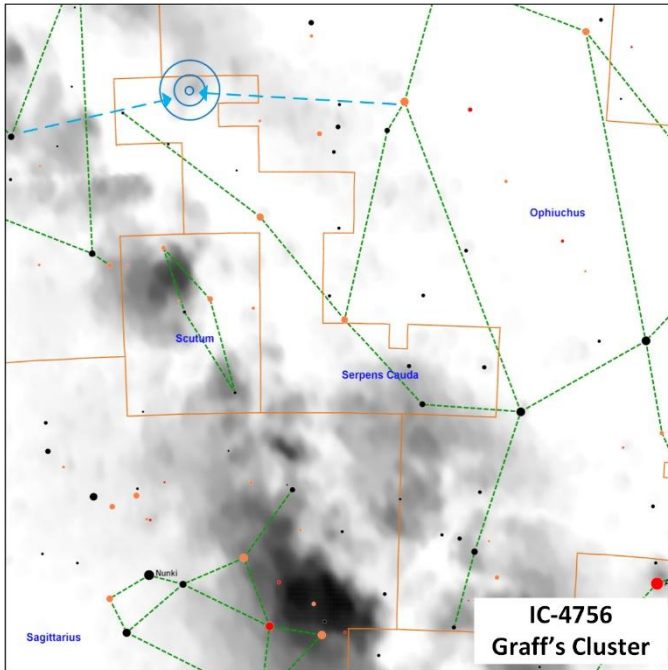


d Serpentis (DS AB | Mag=5.4, 7.6 | Sep=3.9" | PA=322° | mBortle=7 | mApt=60mm | Color=Yellow/White | Spec= G0III/A6V) Located 470 light years away, this pair orbit each other at a distance of 547 AU, it's orbital period is not known.

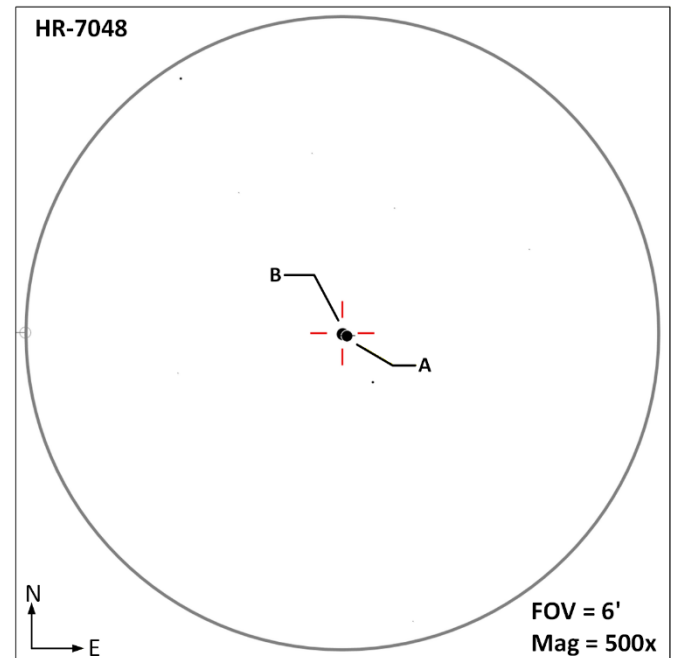
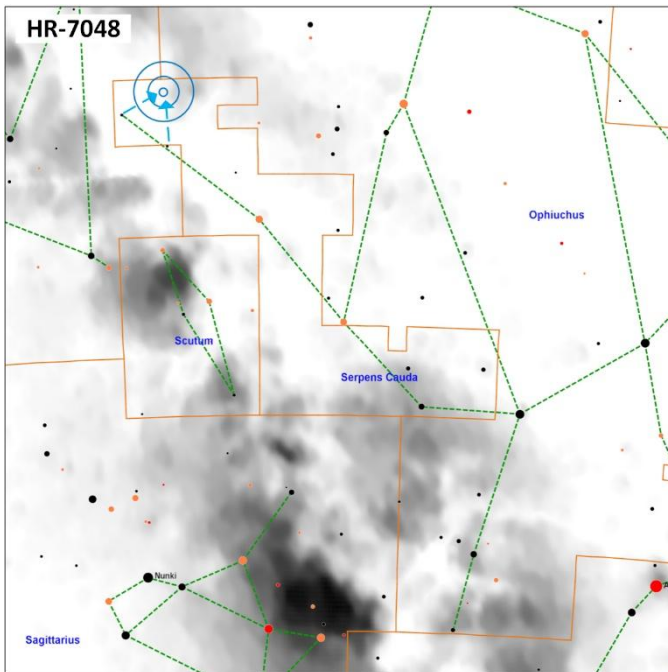


Constellation Guide

IC-4756 (OC | Mag= 4.6 | Size=42' | SB=21.3 | mBortle=6 | mApt=50mm | MC=II1r | Located 1,600 light years away with a physical diameter of 10 light years and an estimated age of 700 million years. This is an excellent binocular target and is sometimes called “The poor man’s Pleiades”. Classified as III-detached with no noticeable concentration, 1-Most of the stars are nearly the same brightness, r-Rich cluster with over 100 stars.

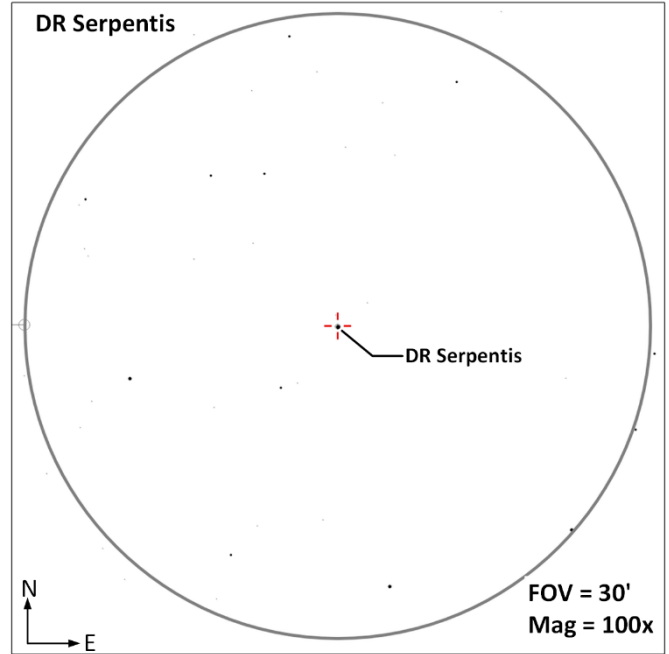
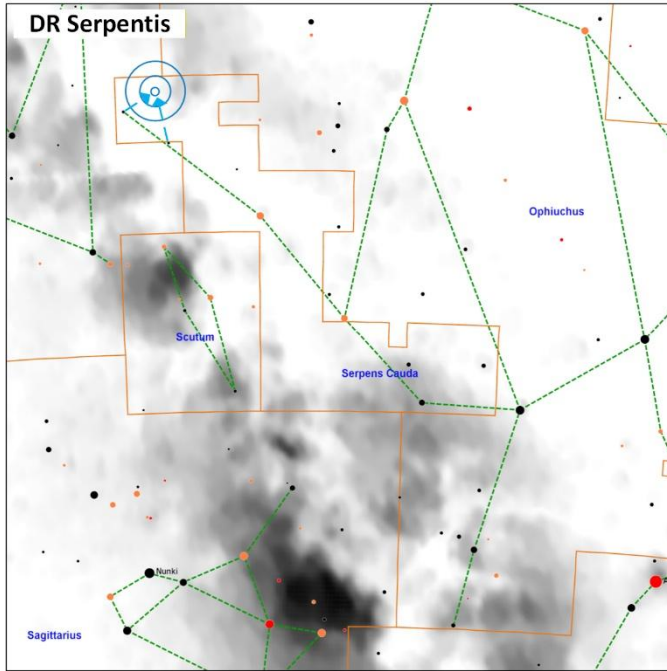


HR 7048 (DS AB| Mag=5.4, 7.6 | Sep=3.9" | PA=322° | mBortle=7 | mApt=50mm | Color= Yellow/Whitie | Spec=G0III/A6V |) Located 620 light years away these components orbit at a distance of 472 AU from each other.

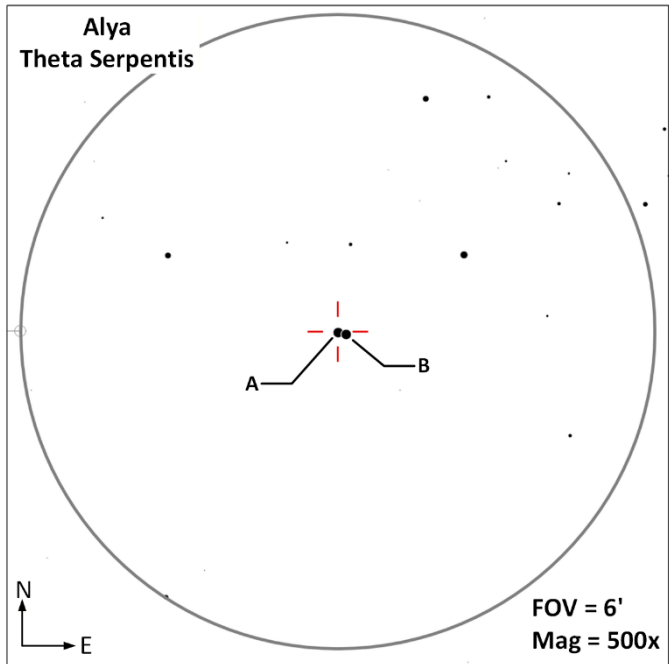
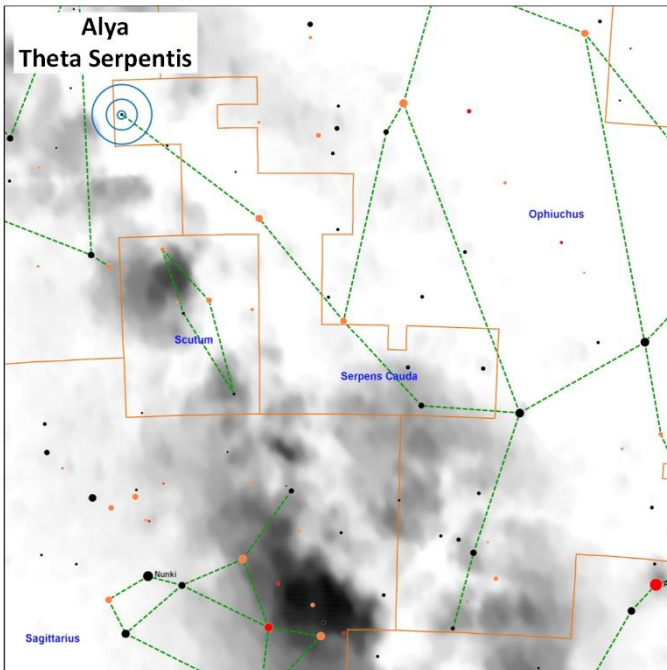


Constellation Guide

DR Serpentis (CS | Mag Range= 10.4 to 13.4 | Period= Unknown | BV=+2.45 | Spec=C6II | mBortle=7 | mApt=50mm |) Located 2,189 light years away this variable star ranges in magnitude from 10.4 to 13.4 and is a long period star with and unknown period.



Alya (DS AB| Mag=4.6, 4.9 | Sep=22.4" | PA=106° | Period >14,000y | mBortle=7 | mApt=50mm | Color=White/White | Spec=A5V, A5Vn |) A nice double star with almost identical components that are easily resolved in small telescopes and binoculars. The two stars are separated by at least 900 AU with an orbital period of at least 14,00 years.



Blank

Constellation Guide
Observation Log: Serpens (Ser)

Equipment Config A: _____ Config B: _____

Notes: _____

Date	Time	Config	Target	Notes

Date	Time	Config	Target	Notes

Constellation Guide
Observation Log: Serpens (Ser)

Equipment Config A: _____ Config B: _____

Notes: _____

Date	Time	Config	Target	Notes

Date	Time	Config	Target	Notes

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
 - Celestial Portraits: [Tom Polakis](#)
 - Star Clusters: Bret Archinal, Steve Hynes
 - [Sky Spot](#) Books
 - Bright Telescopic Objects: Brent Watson
 - Select Double Stars: Brent Watson
 - Overlooked Objects: Brent 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](#)
 - [Claude AI](#) – Some Stats for targets

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