Constellation: Sagitta (Sge)

Evening Visibility: **June – August**
Opposition: July
Latitude Visibility: **+90° to -70°**
Online Information: | In-The-Sky.org | Constellation Guide.com |

Constellation Targets

V338 Sge, HD-180054, HD-181752, HD-186586, Zeta Sge, Harvard 20, M-71, Arrowchain, Leiter4, BF Sge, X Sge, HD-191499, Theta Sge, NGC-6886, IC-4997

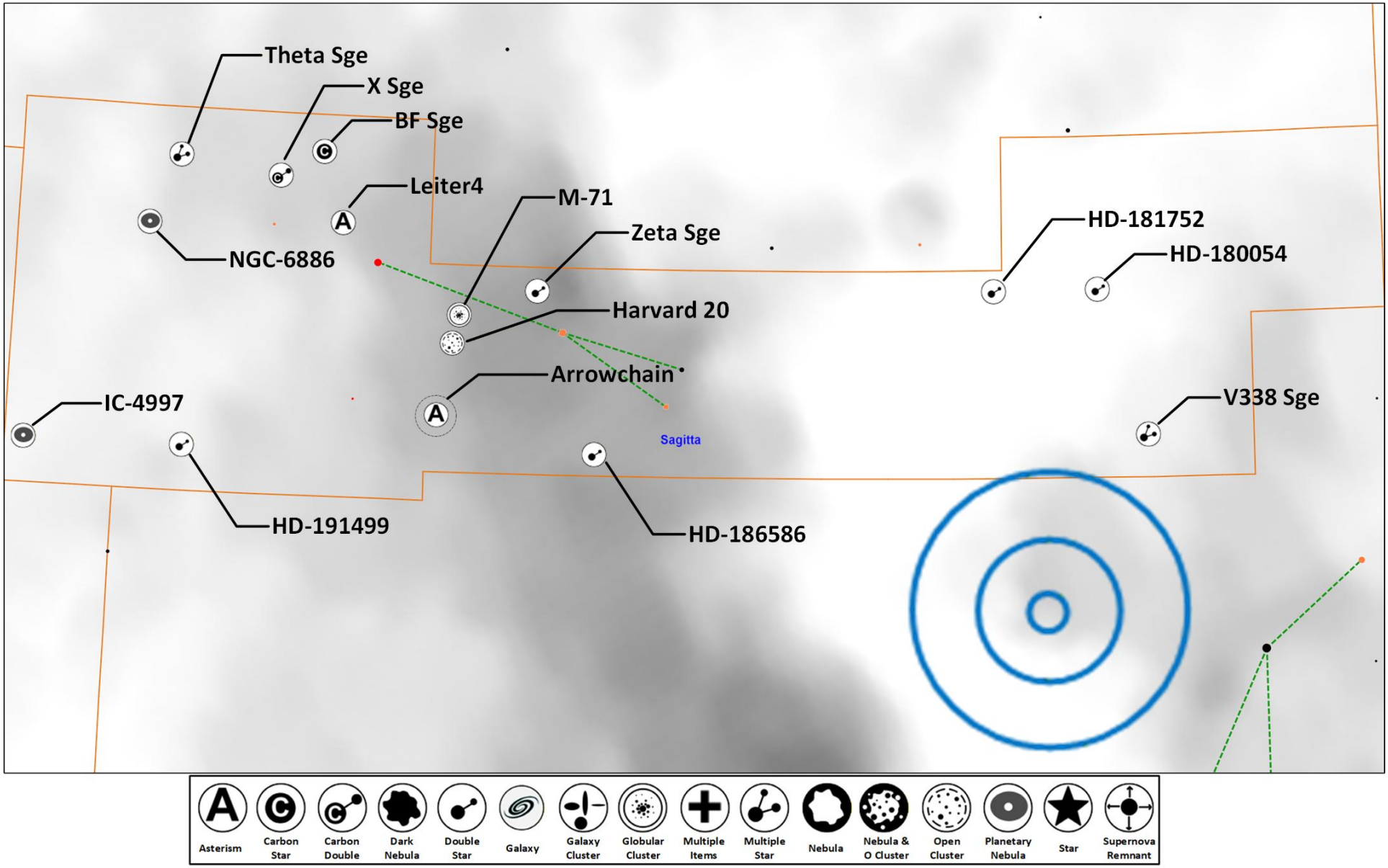
Mythology/Back Story

An ancient constellation known as the Arrow, this is the third smallest constellation in the sky. Located in the Summer Triangle, this constellation has no stars brighter than magnitude 3.5. There is no sign of the archer who shot this arrow, and accounts vary as to which episode of Greek mythology it might represent. According to Eratosthenes, it perhaps represents the arrow which Apollo used to kill the Cyclopes.

Constellation Highlights

This list of objects may be some of the more interesting targets for this constellation.

- **Zeta Sge** (DS) – Blue and green components?
- **Arrowchain** (AS) – Wedge shaped star configuration
- **Theta Sagittae** (MS-3) – Triple star system
- **Messier 71** (GC) – A loose globular cluster
- **X Sagittae** (CS, MS-3) – Carbon star in multiple star system



Sagitta Constellation Map

Constellation Guide

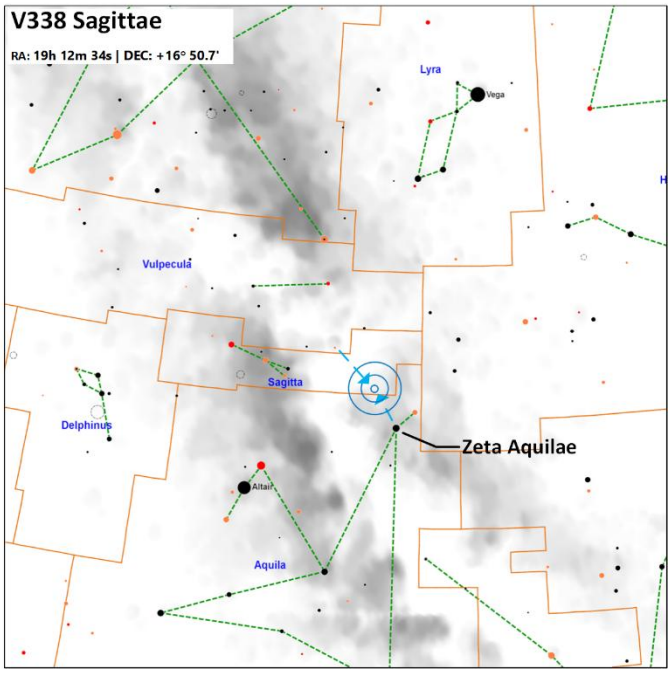
Sagitta Constellation Objects

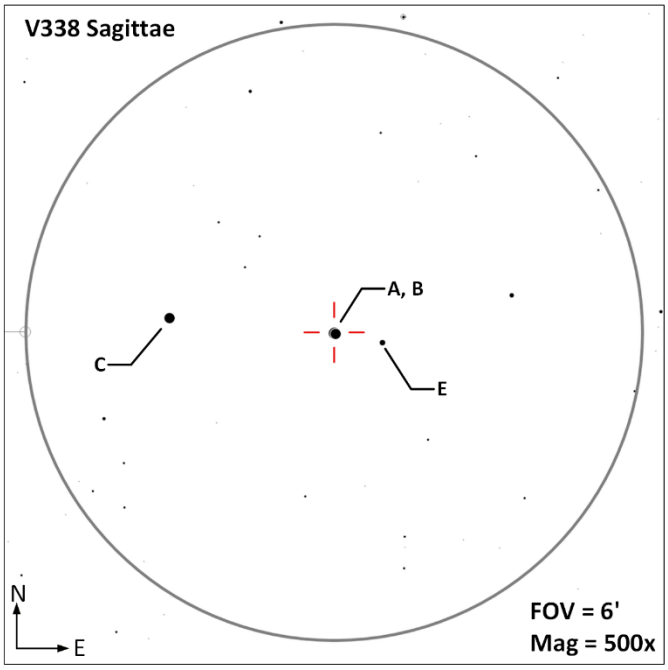
Object (Type)	Links	Gear	Aliases	Stats
V338 Sge (MS-3)	1	B, T	SAO-104602; HIP 94377; HD 179588; HR 7285; ADS 12160; BD+16 3775; WDS19126+1651; β139; BU139	**AB** | Mag=7.1,8 | Sep=0.7" | PA=135° | Period=587y | mApt=200mm | **AC** | Mag=7.1,8 | Sep=98" | PA=277° | mBortle=9 | mApt=50mm | **AE** | Mag=7.1, 11.9 | Sep=28.8" | PA=101° |
HD-180054 (DS)	1	T	SAO-104635; HIP 94520; HD 180054; WDS19143+1904; Σ2484; STF2484	**AB** | Mag=7.9,9.5 | Sep=2.1" | PA=240° | Period=1,500y | mBortle=9 | mApt=70mm | Color=yellow, ? |
HD-181752 (DS)	1	T	SAO-104753; HIP 95116; HD 181752; WDS19210+1909; Σ2504; STF2504	**AB** | Mag=7,9 | Sep=8.6" | PA=282° | mBortle=9 | mApt=50mm |
HD-186586 (DS)	1	T	HIP 97149; HD 186586; WDS19448+1649; Σ2569; STF2569	**AB** | Mag=8.4,9.1 | Sep=2.1" | PA=355° | mBortle=9 | mApt=70mm |
Zeta Sge (DS)	1	T	SAO-105298; HIP 97496; 8 Sge; HD 187362; HR 7546; ADS 12973; BD+18 4254; GC 27431; PPM 137034; STF2585; WDS19490+1909; Σ2585; Zeta Sge	**AB, C** | Mag=5,9 | Sep=8" | PA=311° | mBortle=9 | mApt=50mm | Spec=A3 Vnn, ? | Color=white, ? |
Harvard 20 (OC)		T	Cr 408; C1950+182; Har 20; Lund 910; OCl 116; OCl 116.0	| Mag=7.7 | Size=7' | SB=20.6 | mBortle=9 | mApt=102mm | MC=III2p |
Messier 71 (GC)	1	T	NGC-6838; C 1951+186; GCl 115; NGC6838	| Mag=8.2 | Size=7.2' | SB=21.1 | mBortle=9 | mApt=50mm | MC=X-XI |
Arrowchain (AS)		B, T	Centering Star: HD-188464; SAO-105408; HIP 97982	| Size=36' | RA: 19h 55m DEC: 17d 18m |
Leiter4 (AS)		T	Centering Star: HD-189754; SAO-105545;	| Size=7'x5' | RA: 20h 01m DEC: 20d 03m |
BF Sge (CS)		T	HIP 98552; HD 190048; BD +20 4390; TYC 1629-0945-1	| Magnitude Range=10.3 to 12.1 | BV=+2.65 | Spec=C5 II | Color=deep red |
X Sge (CS, MS-3)	1	T	HIP 98909; HD 190606; WDS 20051+2039; BD +20 4417; TYC 1629-1033-1; X Sge	**CS** | Magnitude Range=7.9 to 8.4 | Period=0.54y | Spec=C5,4 | BV=+3.83 | Color=deep red | **AB** | Mag=8.75,13.5 | Sep=13.4" | PA=247.2° | mBortle=? | mApt=250mm | Color=red, ? | **AC** | Mag=8.75,12.97 | Sep=59.4" | PA=102° | mBortle=? | mApt=180mm | **AD** | Mag=8.75,12.2 | Sep=75.3" | PA=95° | mBortle=6 | mApt=130mm |
HD-191499 (DS)	1	T	SAO-105766; HIP 99316; HD 191499; WDS20096+1648; Σ2634; STF 2634	**AB** | Mag=7.8,9.9 | Sep=4.1" | PA=14° | mBortle=9 | mApt=50mm |

Constellation Guide

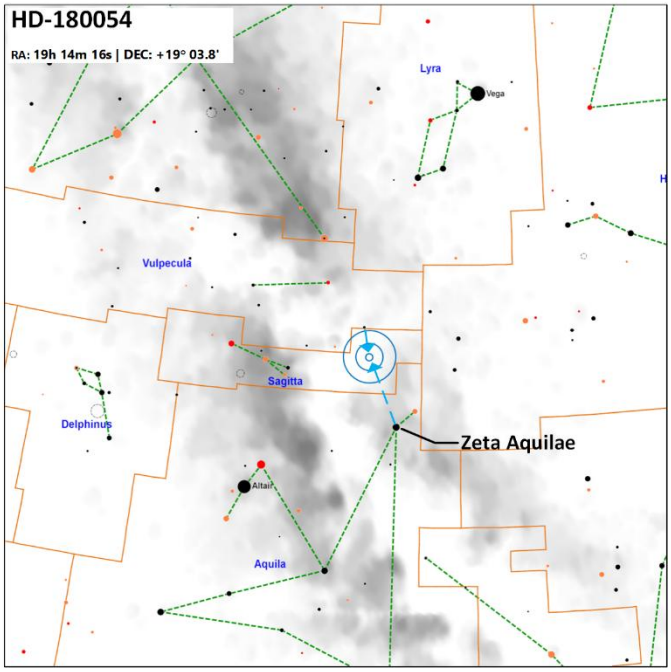
Object (Type)	Links	Gear	Aliases	Stats
Theta Sge (MS-3)	1	B, T	SAO-88276; HIP 99352; 17 Sge; HD 191570; HR 7705; ADS 13442; BD+20 4453; STF2637; WDS20099+2055; Σ2637; Theta Sge	**AB** | Mag=6.6,8.8 | Sep=11.5" | PA=332° | mBortle=9 | mApt=50mm | Spec=F3 V, G5 V | Color=yellow-white, yellow | **AC** | Mag=6.6,7.5 | Sep=90" | PA=222° | mBortle=9 | mApt=50mm | Spec=F3 V, K2 | Color=yellow-white, yellow-orange |
NGC-6886 (PN)	1	T	PK 060-07.1; PK 60-7.2; PN G060.1-07.7; Hen 2-458	| Mag=11.4 | Size=0.1' | SB=15.0 | mBortle=9 | mApt=102mm | MC=Butterfly |
IC-4997 (PN)	1	T	HD 193538; ARO 38; IRAS 20178+1634; PK 058-10.1; PK 58-10.1; PN G058.3-10.9; VV 256; Hen 2-464; QV Sge	| Mag=10.5 | Size=0.1' | SB=14.1 | mBortle=9 | mApt=60mm | MC=Butterfly |

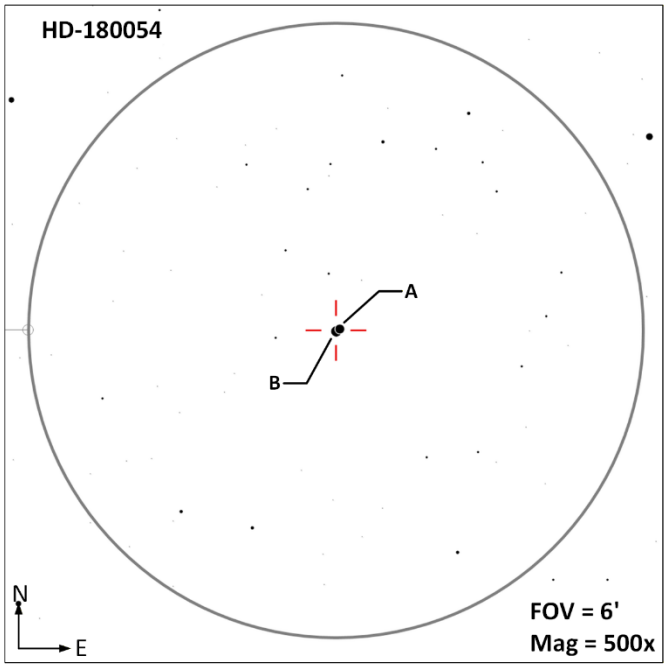
V338 Sge (MS-3 || **AB** | Mag=7.1,8 | Sep=0.7" | PA=135° | Period=587y | mApt=200mm || **AC** | Mag=7.1,8 | Sep=98" | PA=277° | mBortle=9 | mApt=50mm || **AE** | Mag=7.1, 11.9 | Sep=28.8" | PA=101° |) Located 792 light years away, the AB components are physically related and orbit with a period of 587 years. The C component is not physically associated with the AB pair, and the E component relationship is undetermined.



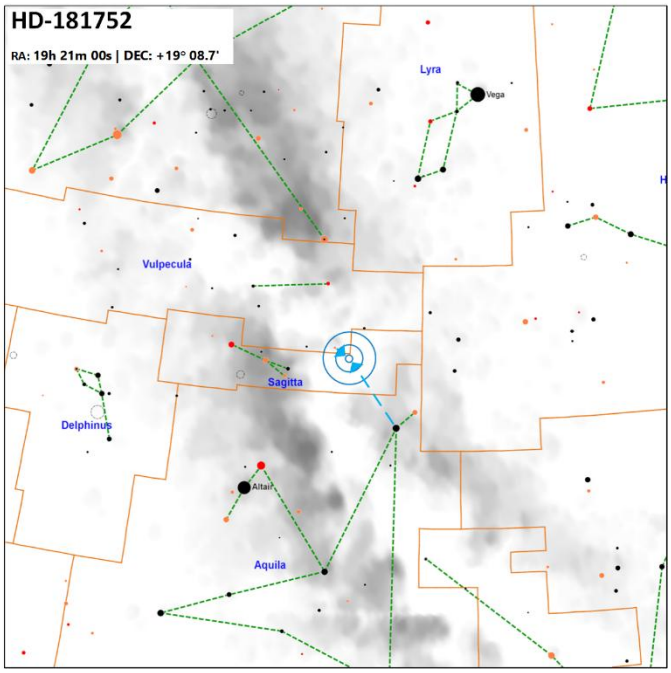


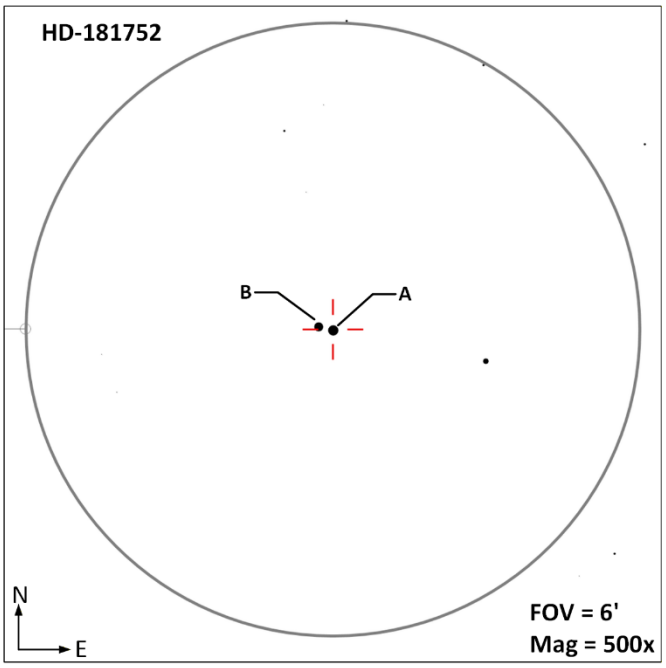
HD-180054 (DS || AB | Mag=7.9,9.5 | Sep=2.1" | PA=240° | Period=1,500y | mBortle=9 | mApt=70mm | Color=yellow, ? |) An attractive tight pair located 219 light years away with an orbital period of 1,500 years. Reported colors of lemony-white and dim green (Haas).



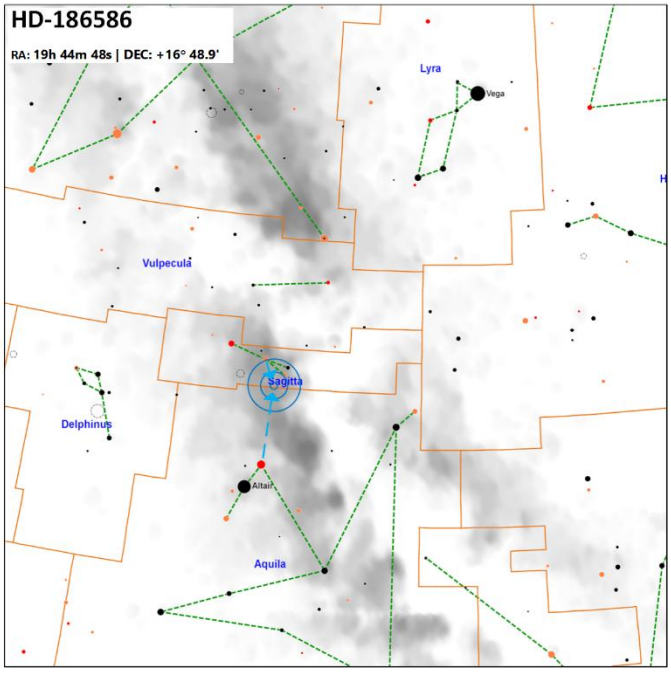


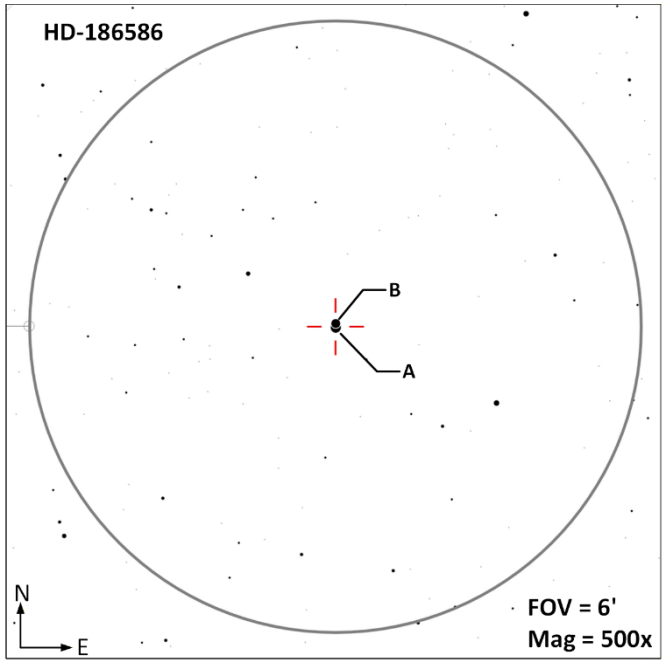
HD-181752 (DS || **AB** | Mag=7,9 | Sep=8.6" | PA=282° | mBortle=9 | mApt=50mm |) Located 204 light years away it has not been determined if these stars are physically bound to each other. Reported colors of lemon-white and blue-green (Haas).



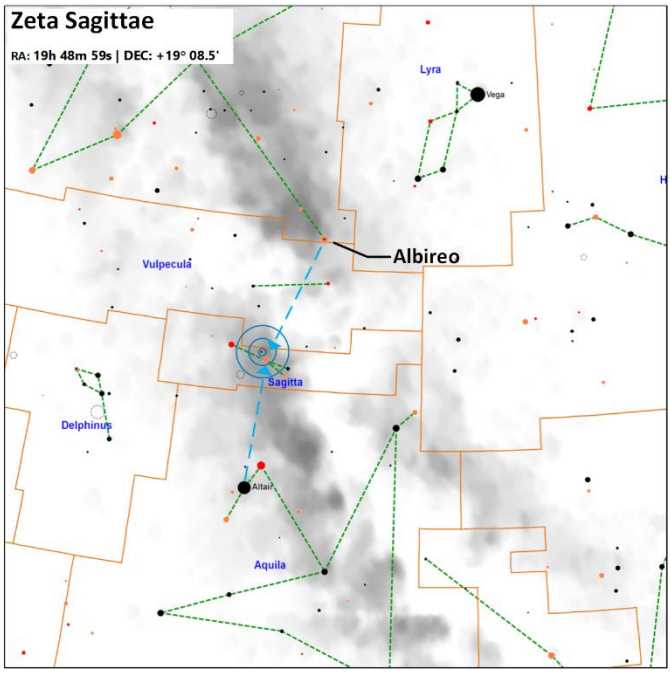


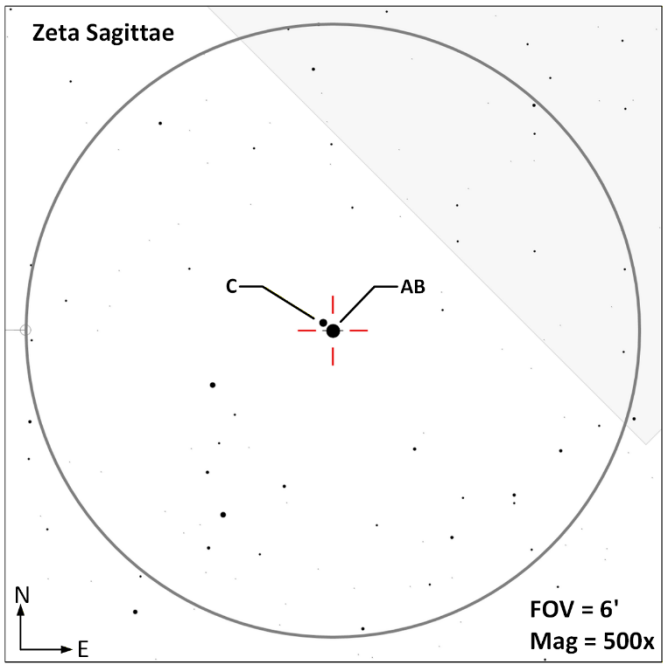
HD-186586 (DS || **AB** | Mag=8.4,9.1 | Sep=2.1" | PA=355° | mBortle=9 | mApt=70mm |) Located 2,452 light years away. The nature of this double is uncertain.



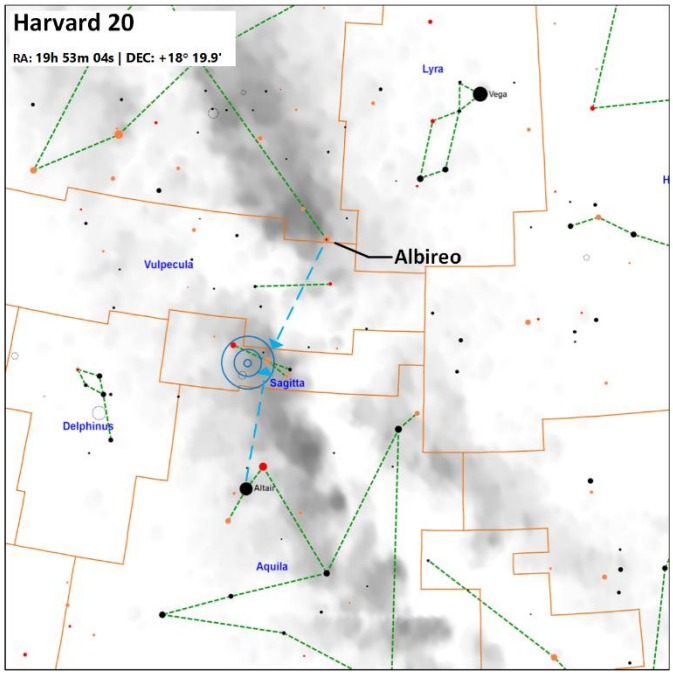


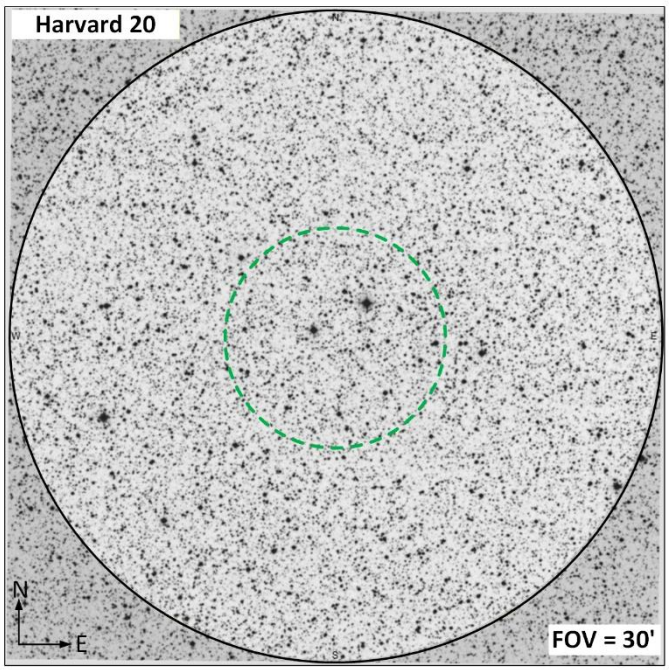
Zeta Sge (DS || **AB, C** | Mag=5,9 | Sep=8" | PA=311° | mBortle=9 | mApt=50mm | Spec=A3 Vnn, ? | Color=white, ? |) Located 255 light years away. This pair is reported to have green and blue components (Birren).



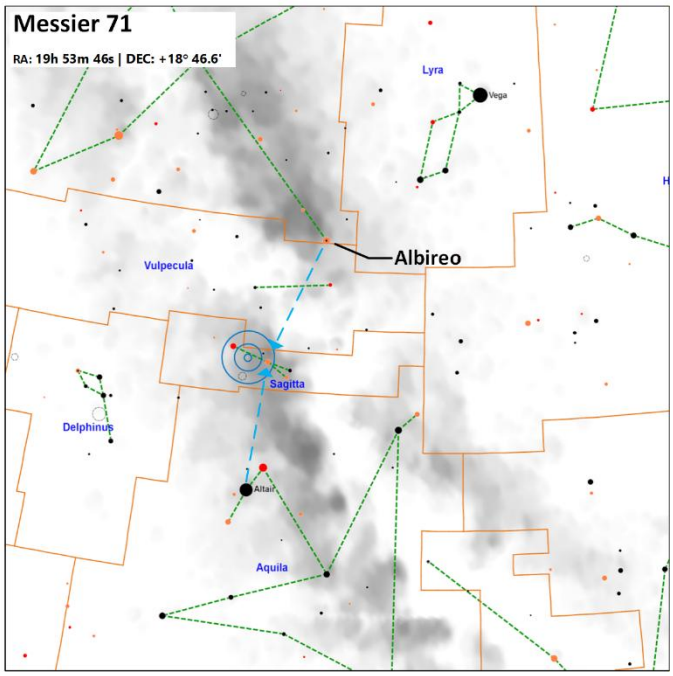


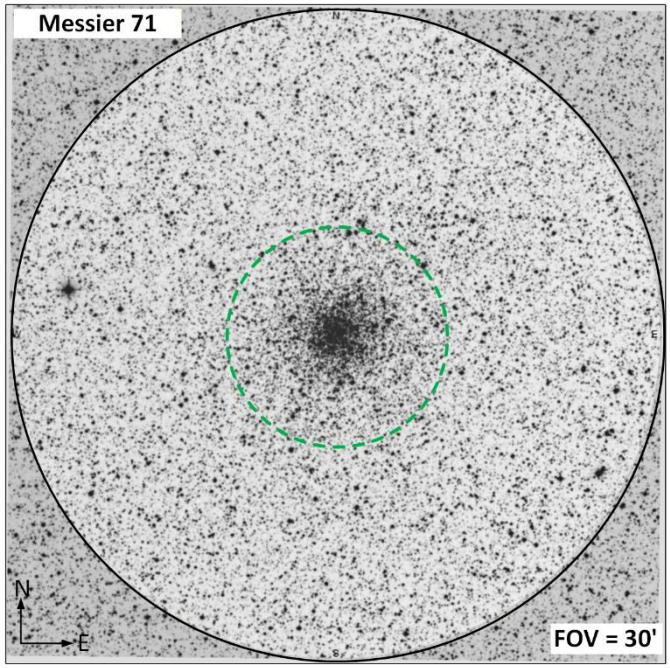
Harvard 20 (OC || Mag=7.7 | Size=7' | SB=20.6 | mBortle=9 | mApt=102mm | MC=III2p |) This cluster is located 5,232 light years away and has a physical diameter of 11 light years. The Trumpler Class is III-Detached with no noticeable concentration, 2-Medium range of brightness between stars in the cluster, p-Poor cluster with fewer than 50 stars. This will be a challenge to make out from background stars.



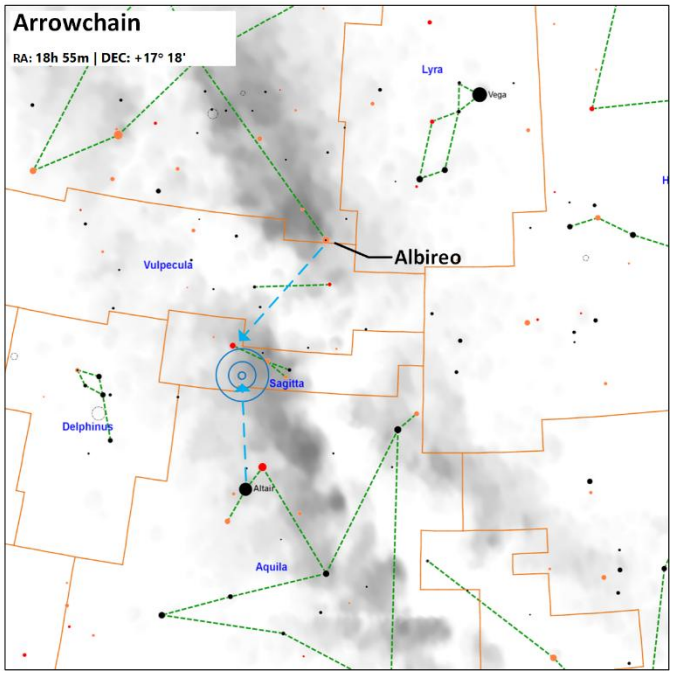


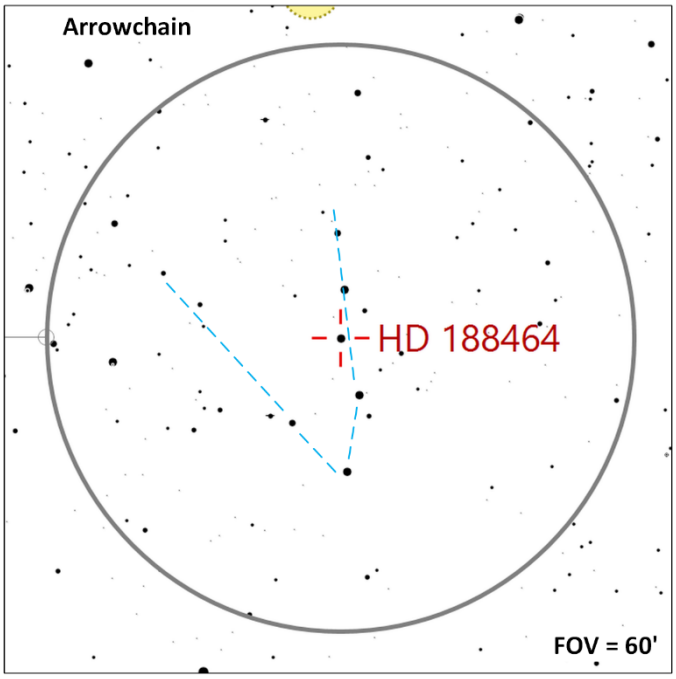
Messier 71 (GC || Mag=8.2 | Size=7.2' | SB=21.1 | mBortle=9 | mApt=50mm | MC=X-XI |) This globular cluster is located 13,000 light years away and spans 27 light years in diameter, with an estimated age of 9 to 10 billion years and a mass of approximately 53,000 solar masses. With a class rating of X to XI, this is a very loose cluster and was initially classified as an open cluster. In the 1970s it was recognized as a young globular cluster.





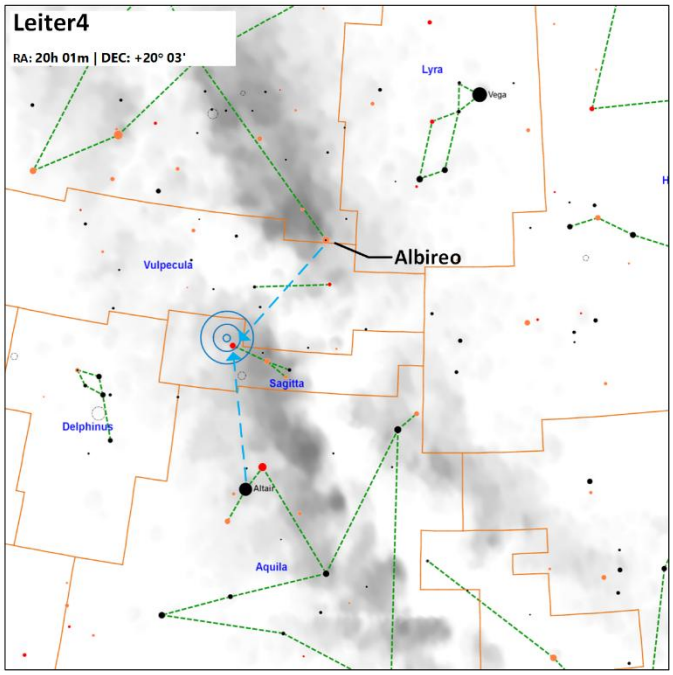
Arrowchain (AS | Size=36' | RA: 19h 55m DEC: 17d 18m | Centering Star: HD-188464; SAO-105408; HIP 97982 |) Described as a chain of stars (north south oriented) with a magnitude of 8 to 10 (Ramakers).

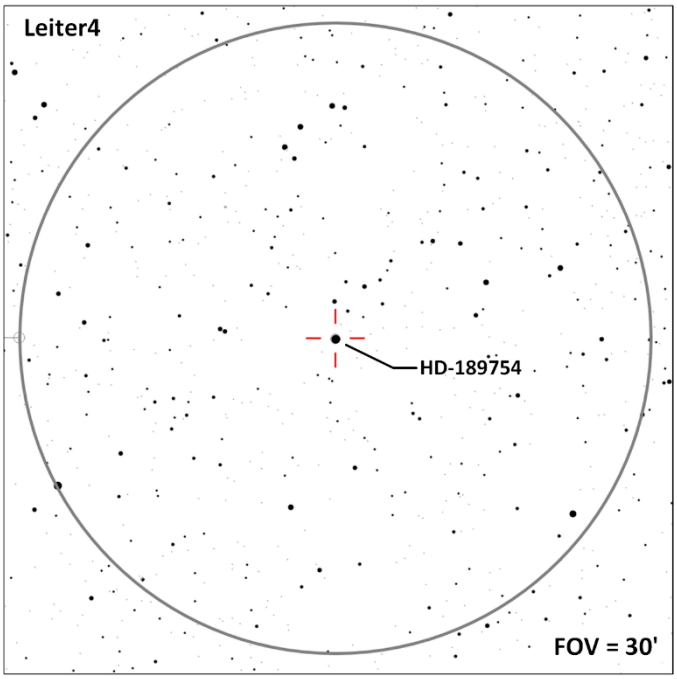




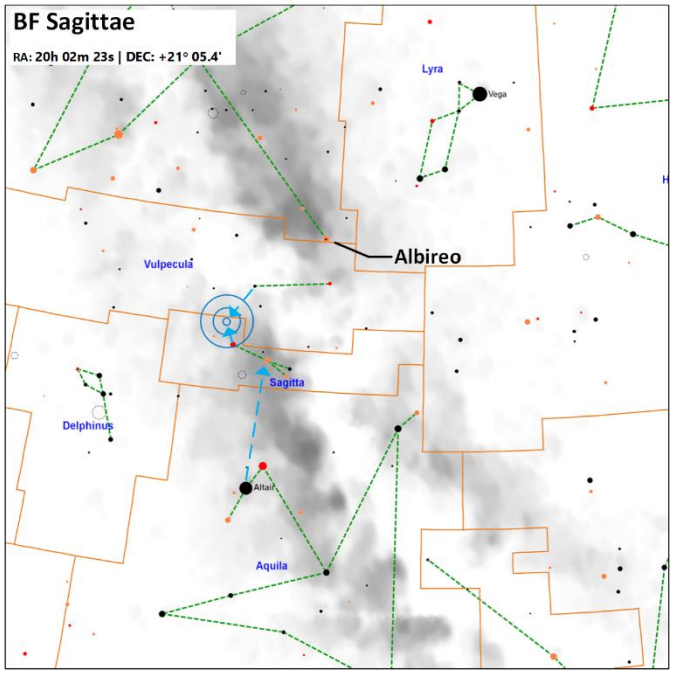
Constellation Guide

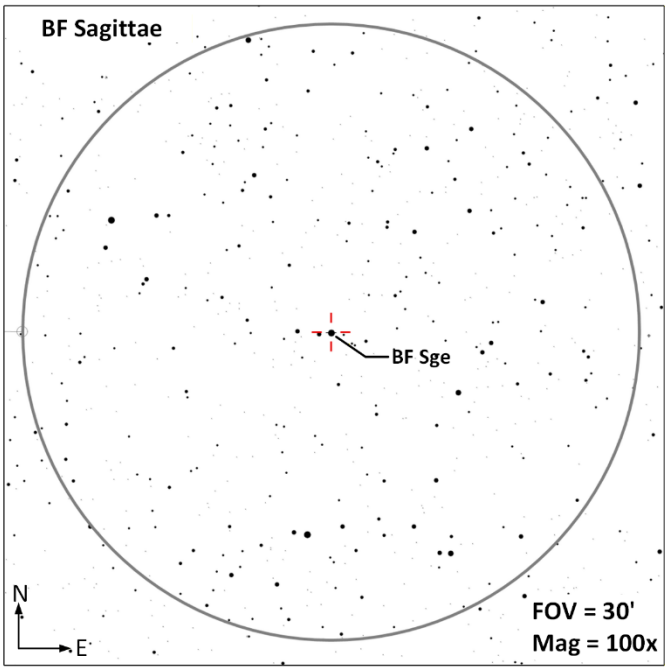
Leiter4 (AS | Size=7'x5' | RA: 20h 01m DEC: 20d 03m | Centering Star: HD-189754; SAO-105545 |) Described as an arrow shaped asterism. The brightest star in the asterism being gold color with 6 other stars making the tip of the arrow and a curved stem shaped by 7 stars (Ramakers).



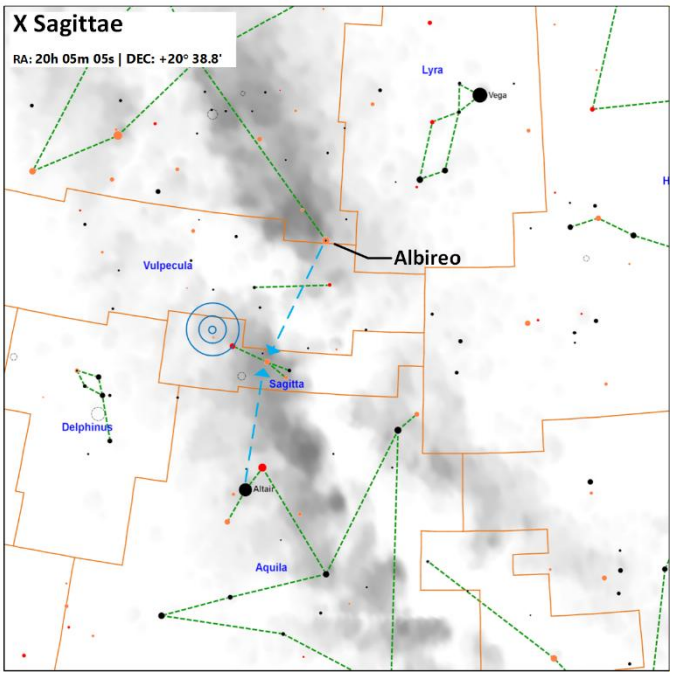


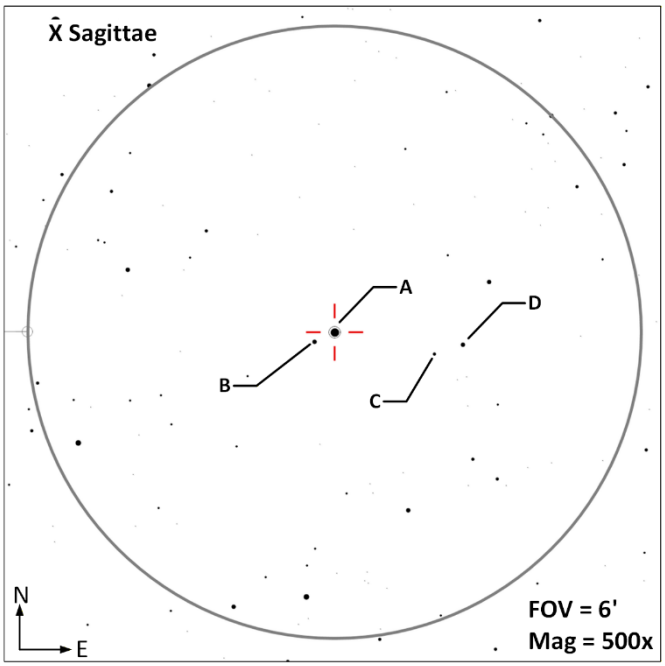
BF Sge (CS || Magnitude Range=10.3 to 12.1 | Spec=C5 II | BV=+2.65 | Color=deep red |) A variable star located 2,470 light years away with a BV color index of +2.65. The period of this variable star is unknown.



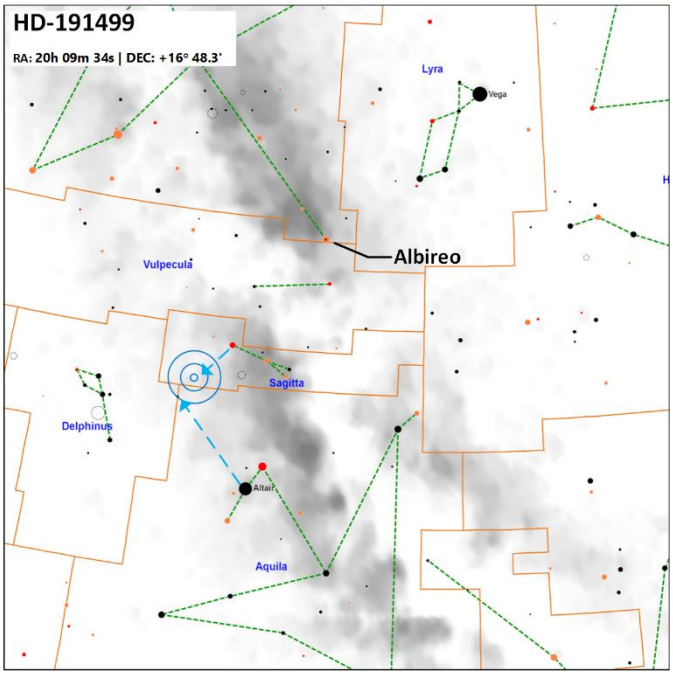


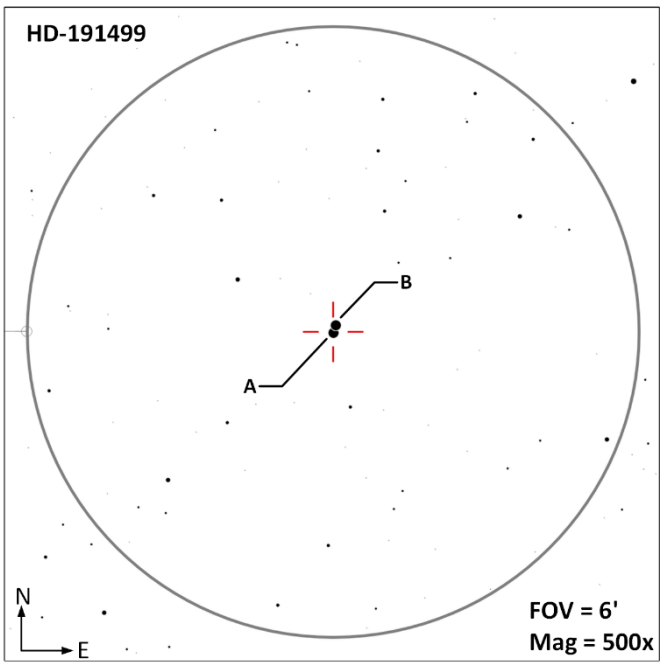
X Sge (CS, MS-3 || **CS** | Magnitude Range=7.9 to 8.4 | Period=0.54y | Spec=C5,4 | BV=+3.83 | Color=deep red || **AB** | Mag=8.75,13.5 | Sep=13.4" | PA=247.2° | mBortle=? | mApt=250mm | Color=red, ? || **AC** | Mag=8.75,12.97 | Sep=59.4" | PA=102° | mBortle=? | mApt=180mm || **AD** | Mag=8.75,12.2 | Sep=75.3" | PA=95° | mBortle=6 | mApt=130mm |) The primary component in this quadruple star system is a carbon star and is reported as medium orange (Birren). However, this is an optical multiple star system, none of the components are physically associated with each other.



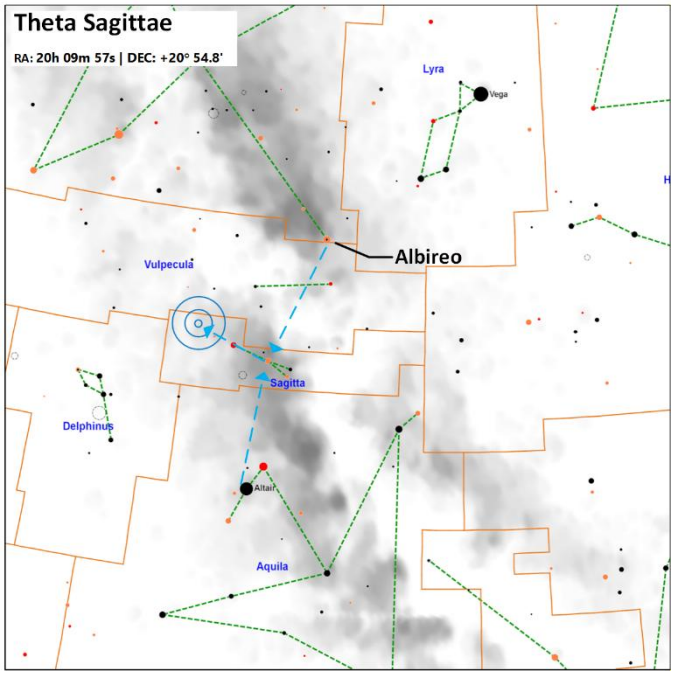


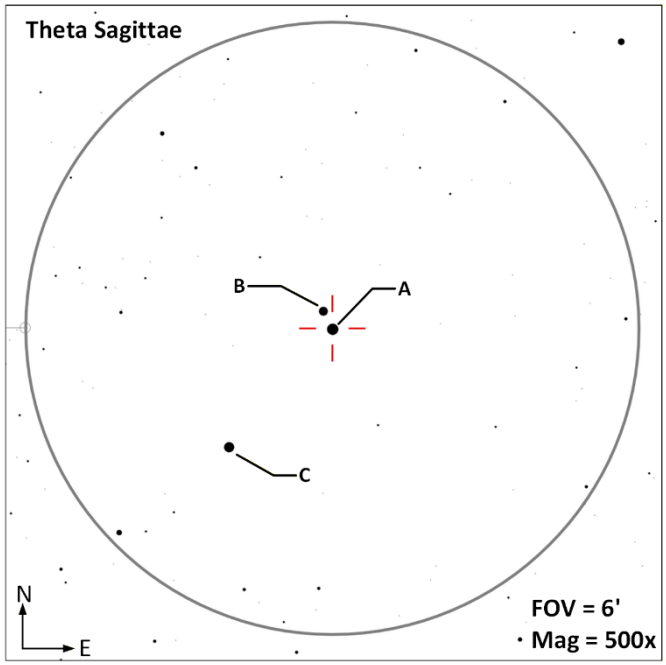
HD-191499 (DS || **AB** | Mag=7.8,9.9 | Sep=4.1" | PA=14° | mBortle=9 | mApt=50mm |) Located 77 light years away. The secondary is at least 97 AU from its primary.



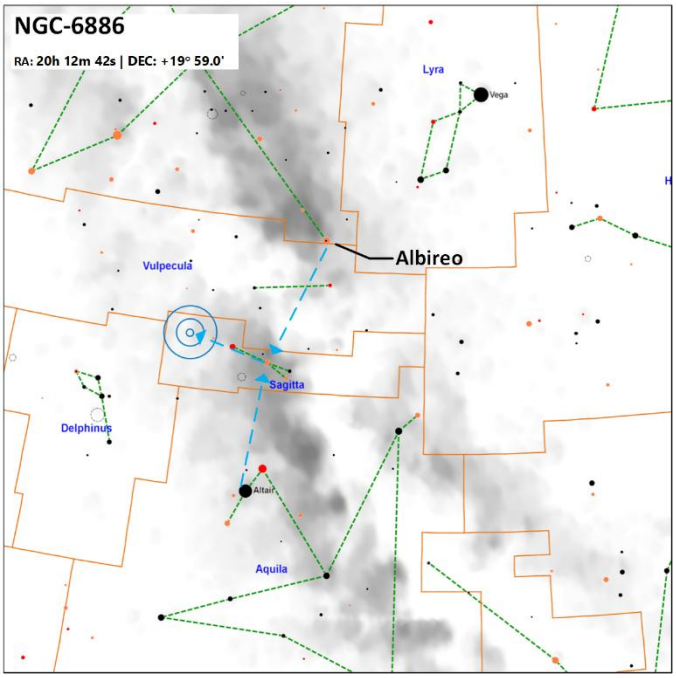


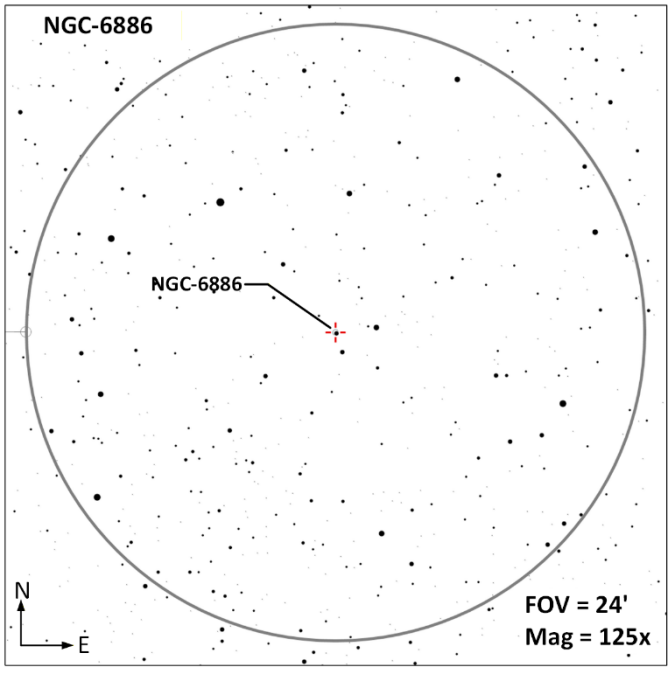
Theta Sge (MS-3 || **AB** | Mag=6.6,8.8 | Sep=11.5" | PA=332° | mBortle=9 | mApt=50mm | Spec=F3 V, G5 V | Color=yellow-white, yellow || **AC** | Mag=6.6,7.5 | Sep=90" | PA=222° | mBortle=9 | mApt=50mm | Spec=F3 V, K2 | Color=yellow-white, yellow-orange |) Located 148 light years away, the AB components are described as green and blue pair (Birren). The C component is not physically associated with the AB pair.





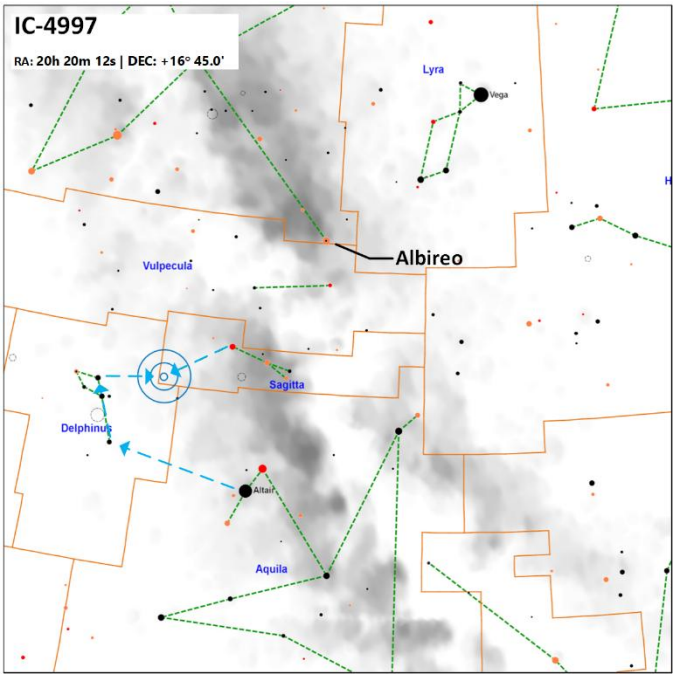
NGC-6886 (PN || | Mag=11.4 | Size=0.1' | SB=15.0 | mBortle=9 | mApt=102mm | MC=Butterfly |) Best identified with an OIII filter, this tiny planetary has been thought to have been expanding between 1,280 and 1,600 years.

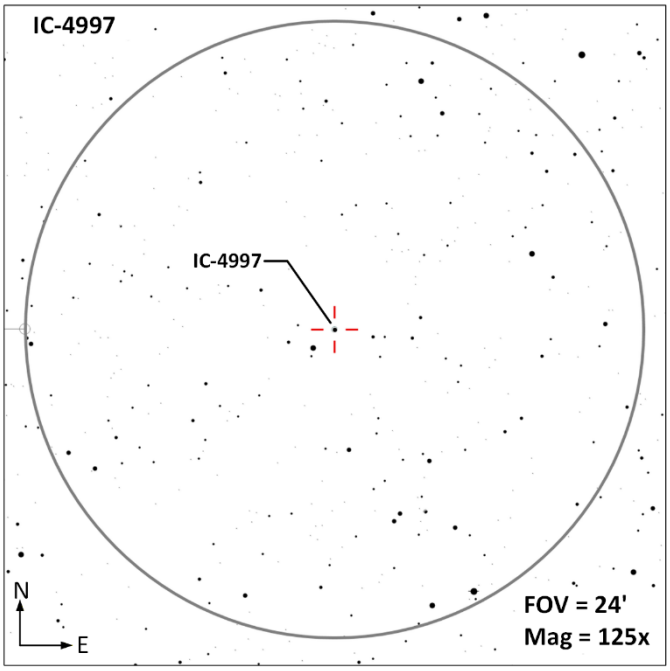




Constellation Guide

IC-4997 (PN || | Mag=10.5 | Size=0.1' | SB=14.1 | mBortle=9 | mApt=60mm | MC=Butterfly |) Located 14,000 light years from Earth this tiny planetary will look like an ordinary star in small telescopes. Use an OIII filter to help identify this object.





Observation Log: Sagitta (Sge)

Equipment Config A: _____ Config B: _____

Notes: _____

Date	Time	Config	Target	Notes

Date	Time	Config	Target	Notes

Constellation Guide

Observation Log: Sagitta (Sge)

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: Brent Archinal, Steve Hynes
  - Double stars for small telescopes: Sissy Haas
  - 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: Demelza Ramakers
  - Pattern Asterisms: John Chiravalle
  - Milwaukee Astronomical Society: Binocular Asterisms
  - Deep-Sky.co.uk: Observing Asterisms (David Ratledge)
- 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