

Constellation Guide

Constellation: Cygnus (Cyg)

Evening Visibility: **July – Sep**

Opposition: July

Latitude Visibility: **+90° to -40°**

Online Information: | In-The-Sky.org | Constellation Guide.com |

Constellation Targets

ObjectListHere

Mythology/Back Story

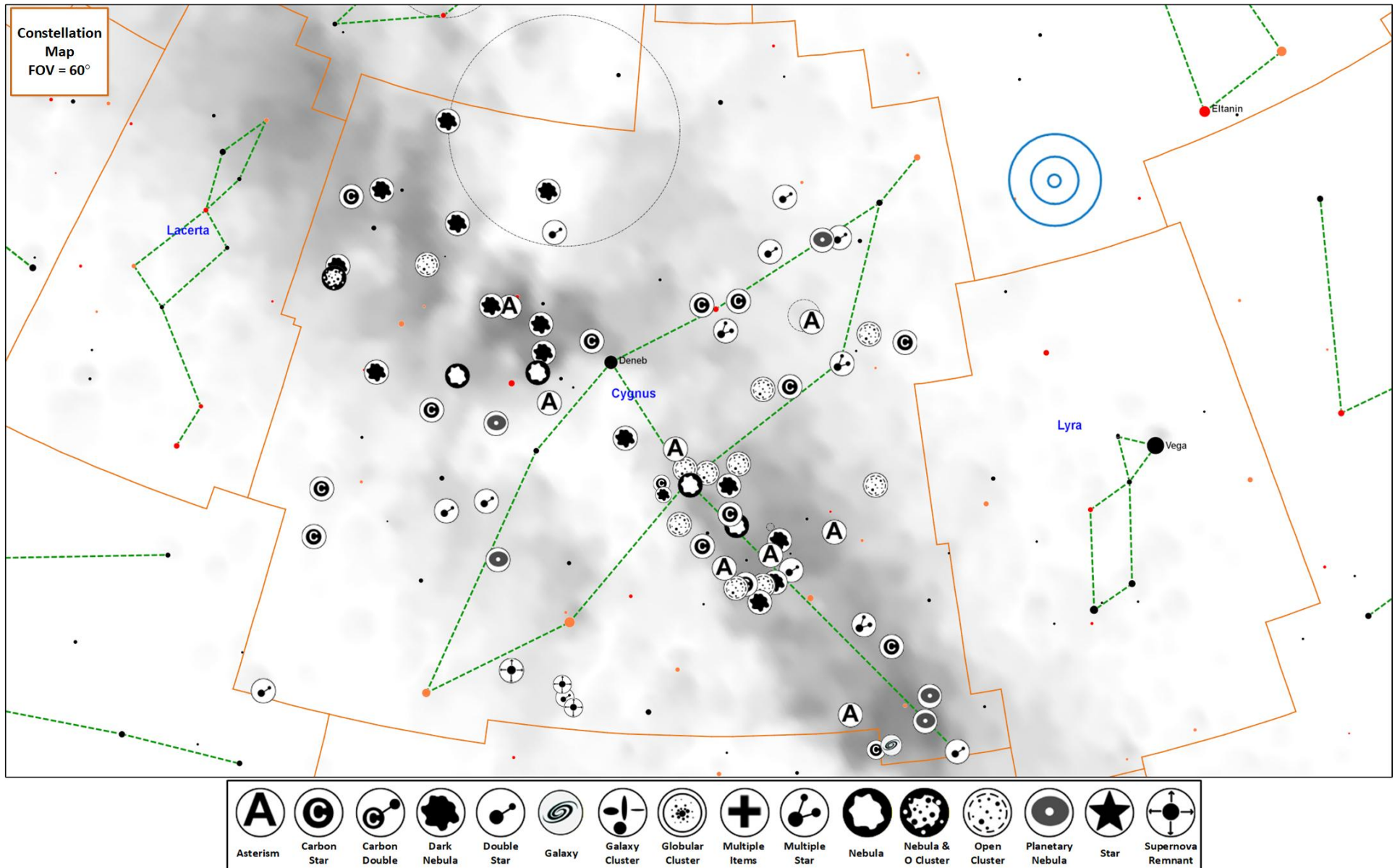
Cygnus represents a swan and is associated with a number of myths, most frequently it is associated with the story of how Zeus transformed himself into a swan and seduced the Spartan Queen Leda. The star Deneb represents the swan's tail and the famous double star Albireo its head. The constellation is often referred to as the Northern Cross because of its cruciform shape. Deneb is one of the three stars of the Summer Triangle consisting of Deneb, Vega (Lyra constellation) and Altair (Aquila constellation).

Constellation Highlights

Cygnus lies in a particularly rich area of the Milky Way and in dark skies can be seen to be split by a dark lane of dust known as the Cygnus Rift. Interestingly this rich deep sky area, containing a slew of deep-sky objects only contains two Messier objects (M-29 and M-39), and no globular clusters.

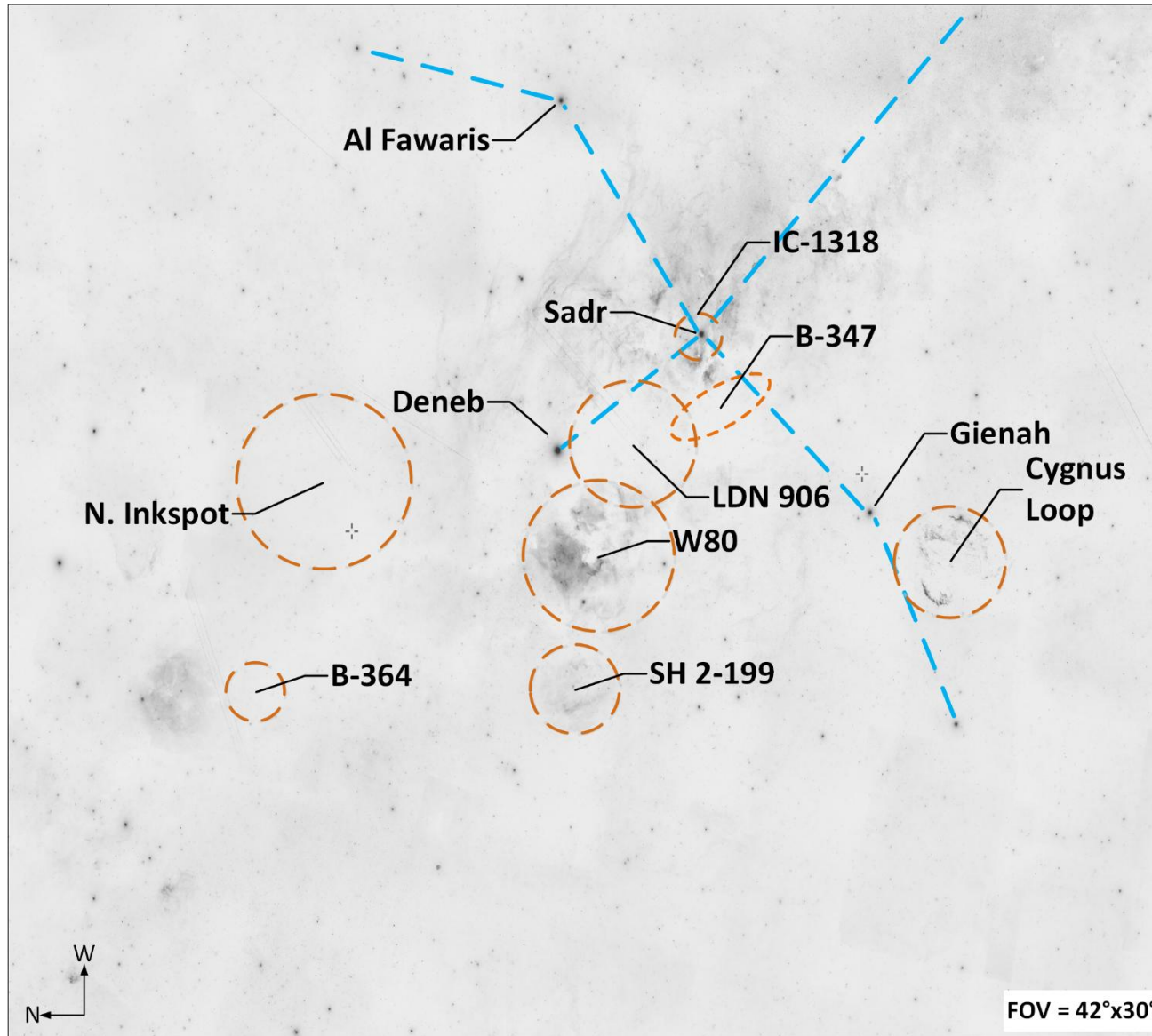
- **Albireo (DS)** – Most celebrated double star in northern sky
- **Vultur Irrisorie (AS)** – Smiley face asterism
- **Fairy Ring (AS)** – Ring of double stars
- **31 Cygni (MS-3)** – Noted for its colorful components
- **NGC-6946(G) & V778 Cygni(CS)** – Galaxy and Carbon star.
- **W80 Complex (EN, DN)** – Binocular target UHC filter may help
- **M-39 (OC)** – The Pyramid Cluster
- **LW Cygni (CS)** – BV color index = +4.42
- **NGC 6819 (OC)** – Well defined bright cluster
- **AX Cygni (CS)** – BV color index = +4.4
- **NGC 6888 (EN)** – Crescent Nebula
- **M-29 (OC)** – The Cooling Tower Cluster
- **Cygnus Loop (SNR)** – OIII filter to view it or components.
- **61 Cygni (DS)** – A nice amber yellow pair of stars
- **RV Cygni (CS)** – BV color index = +4.1
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Constellation Binocular/Large Objects



This map highlights some of the larger objects that reside in the Cygnus constellation.

These objects are ideal for viewing with binoculars and some are even large enough for naked eye viewing.

- **IC-1318** (EN) – Gamma Cygni Nebula
- **B-347** (DN)
- **LDN-906** (DN) – Northern Coalsack
- **W80** (EN, DN) – N America, Pelican and dark nebulae
- **Sh 2-119** (EN)
- **B-364** (DN)
- **N. Inkspot** (DN) – Funnel Cloud Nebula
- **Cygnus Loop** (SNR) – Veil Nebula, Pickering's Wedge

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Object (Type)	Links	Gear	Aliases	Stats
AW Cygni (CS, VS)		B, T	HIP 95777; AW Cyg; BD+45°2906	Magnitude Range= 8.2 to 9.2 Period=0.9y Spec=C4,5 BV=+3.87 Color=deep red
Albireo (DS)	1 , 2	B, T	SAO-087301; HIP-95947; Beta Cygni; ALDS85; β Cyg; Beta Cyg; 6 Cyg; HR-7417; HD 183912; STFA-43; WDS19307+2758	AB Mag=3.1,5.1 Sep=34.4" PA=54° mBortle=9 mApt=50mm Spec=K3II, B9.5V Color=yellow-orange, blue-white
ARO 11 (PN)		T	Campbell's Hydrogen Star; BD +30 3639; PK 064+05.1; PN G064.7+05.0, VV 235	Mag=9.6 Size=0.1' SB=13.2 mBortle=9 mApt=50mm MC=Elliptical
Footprint Nebula (PN)	1	T	Minkowski 1-92; M1-92; IRAS 19343+2926	Mag=11 Size=0.2'x0.1' SB=15.4 mApt=250mm
NGC 6811 (OC)	1	B, T	Hole in a Cluster, Cr-402; Collinder 402; Lund 897; Mel 222; OCl 185; Raab 138; C1936+464	Mag=6.8 Size=13' SB=21.0 mBortle=9 mApt=70mm MC=III1r
TT Cygni (CS)		B, T	SAO-068688; HIP 96836; HD 186047; BD+32 3522; BLL 41; WDS 19410+3237	Magnitude Range(p)= 10.2 to 11.9 Period=0.3y Spec=C5,4e BV=+2.6 Color=deep red
NGC 6819 (OC)		T	Collinder 403; Cr 403; Raab 139; OCL 155; Lund 900; Mel 223; C1939+400	Mag=7.3 Size=5' SB=19.4 mBortle=9 mApt=80mm MC=I1r
16 Cygni (MS-3)	1 , 2	B, T	SAO-031898; HIP 96895; HD 186408; HR 7503; ADS 12815; BD+50 2847; STFA46; Σ I46; WDS19418+5032;	AB Mag=6.0, 6.2 Sep=39.8" PA=133° mBortle=9 mApt=50mm Period=13513y Spec=G1.5V, G3V Color=yellow, yellow BC Mag=6.2, 11.9 Sep=18.2" PA=70° Spec=G3V, ? Color=yellow, ?
NGC 6826 (PN)	1	T	Blinking Planetary; Caldwell 15; C-15; ARO 13; PK 083+12.1; PN G083.5+12.7; VV242	Mag=8.8 Size=0.4' SB=15.4 mBortle=9 mApt=50mm MC=Elliptical
Delta Cygni (MS-3)	1 , 2	B	SAO-048796; HIP-97165; Al Fawaris; 18 Cyg; HR-7528; HD-186882; δ Cyg; STF 2579; SACDBL9296; Fawaris; WDS19450+4508; PPM58782	AB Mag=2.9,6.3 Sep=2.8" PA=214° mBortle=9 mApt=70mm Period=657y Spec=B9.5IV, F1V Color=blue-white, yellow-white AC Mag=2.9,12 Sep=62.5" PA=67° mBortle=8 mApt=114mm Spec=B9.5IV, ? Color=blue-white, ?
17 Cygni (MS-3)	1 , 2	B, T	SAO-068827; HIP 97295; HD 187013; HR 7534; ADS 12913; BD+33 3587; STF2580; Σ 2580; WDS19464+3344;	AB Mag=5.1,9.3 Sep=26" PA=68° mBortle=9 mApt=50mm Period=7905y Spec=F5V, ? Color=red, blue AC Mag=5.1, 9.4 Sep=106" PA=122° Spec=F5V, K0 Color= yellow-white, yellow-orange
Levy 157 (AS)		B, T	Cane	Size=10'x20' Stars=7 Ref Star: HD 225967
Meerschaum Pipe (AS)		B, T	ALAst68	Size=22' Stars=8 Ref Star: SAO 087794

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Object (Type)	Links	Gear	Aliases	Stats
Vultus Irrisorie (AS)		B	ALAst69	Size=84' Stars=5 Ref Star: SAO 048917
Psi Cygni (DS)	1 , 2	T	SAO-032114; HIP 98055; HD 189037; HR 7619; Psi Cyg; ψ Cyg; 24 Cyg; ADS 13148; BD+52 2572; STF2605; Σ2605; WDS19556+5226	AB Mag=5,7.5 Sep=2.8" PA=175° mBortle=9 mApt=60mm Spec=A4Vn, ? Color=white, ?
AX Cygni (CS)		B, T	HIP 98190; HD 189256; BD +43 3425, BLL 43; WDS 19572+4416, TYC 3149-0942-1	Magnitude Range= 7.7 to 8.9 Spec=C4,5 BV=+4.4 Color=deep red
HD 189751 (DS)	1	T	SAO-069238 HD189751; PPM84000; OΣ394 Cyg; STT394; J200011.44+362450.; Sky20000040;	AB Mag=7.1,10.3 Sep=11" PA=294° mBortle=9 mApt=50mm Spec=K1III, ? Color=orange, blue
e Cygni (DS)	1	B, T	SAO-049098; HIP 98571; HD 190147; HR 7660; e Cyg; ADS 13278; BD+49 3158; H547; WDS20014+5006; 26 Cygni	AB Mag=5.2,8.9 Sep=41.8" PA=150° mBortle=9 mApt=50mm Spec=K1II-III, ? Color=yellow-orange, blue
Barnard 145 (DN)		B, T	LDN 865; B-145	Size=6'x35' mBortle=4 mApt=200mm Opacity=4
Barnard 146 (DN)		T	B-146; P89; LDN 860	Size=1'x1' mApt=250mm Opacity=6
NGC 6866 (OC)	1	B, T	Collinder 412; CR 412; Lund 917; Mel 229; OC1 183; Raab 143; C2002+438	Mag=7.6 Size=14' SB=22.0 mBortle=9 mApt=102mm MC=II2m
Fairy Ring (AS)		B, T	Ref Star: SAO-069355	Size=20' Stars=7 Ref Star: SAO-069355
NGC 6871 (OC)	1	B, T	Collinder 413; CR 413; Lund 921; OC1 148; Mrk 43; OC1 148.0; C2004+356	Mag=5.2 Size=20' SB=20.3 mBortle=9 mApt=50mm MC=II2p n
Barnard 147 (DN)	1	T	B147; LDN 853; IRAS 20050+3503	Size=11' mBortle=4 mApt=50mm Opacity=5
SV Cygni (CS)		B, T	HIP 99310; HD 191738; BD +47 3031; WDS 20095+4752; TYC 3563-0462-1	Magnitude Range(p)= 11.7 to 13.2 Spec=C7,4 BV=+3.15 Color=deep red
RY Cygni (CS)		B, T	HD 191783; 2MASS J20102344+3556493; UCAC2 44370391; TYC 2683-3082-1; AAVSO 2006+35; AG+35 1971; BD+35 4002;	Magnitude Range= 8.5 to 10.3 Spec=C5,5 BV=+2.82 Color=deep red
Trumpler 36 (OC)		T	Collinder 414; CR-414; Lund 928; OC1 173; TR 36; OC1 173.0; C2008+410; IC 1311	Mag=13.1 Size=9' SB=26.5 MC=IIr n
NGC 6883 (OC)		B, T	Collinder 415; CR 415; Lund 929; OC1 152; OC1 152.0; C2009+357	Mag=7 Size=30' SB=23.0 mBortle=9 mApt=70mm MC=IV2m n
NGC 6888 (EN)	1	B, T	Caldwell 27; C27; Crescent Nebula; LBN 203; Sh 2-105	Mag=7.4 Size=18'x13' SB=22.0 mApt=200mm
RS Cygni (CS, MS-3)	1	B, T	SAO-069636; HIP 99653; HD192443; BD+38°3957; BLL 47; WDS 20134+3844	Magnitude Range= 6.5 to 9.5 Spec=C8,2e BV=+2.8 Color=deep red AB Mag=8.0, 7.1 Sep=132" PA=354° AC Mag=8.0, 7.2 Sep=154" PA=106°

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Object (Type)	Links	Gear	Aliases	Stats
Barnard 343 (DN)		T	P 90; B-343; LM 331; LDN 880	Size=13' mBortle=4 mApt=50mm Opacity=5
31 Cygni (MS-3)	1 , 2	B, T	SAO-049337; HIP 99675; Omicron1 Cyg; Omicron2 Cyg; V695; HR 7735; HD 192577; ADS 13554	AC Mag=3.9, 7.0 Sep=107" PA=173° mBortle=9 mApt=50mm Spec=K2II, ? Color=orange, ? AD Mag=3.9,4.8 Sep=336.7" PA=322° mBortle=9 mApt=50mm Spec=K2II, A5IIIIn Color=orange, white
STAR 26 (AS)		B, T	Red-Necked Emu, Bent Fan	Size=45' Stars=12 Ref Star: SAO-069653; HIP 99719
Collinder 419 (OC)		T	Lund940, OCL177; Cr-419; Lund 940; OCL177; C2016+405	Mag=5.4 Size=4.5' SB=17.3 mBortle=9 mApt=50mm MC=IV2p
WX Cygni (CS)		B, T	HIP 100113; HD 193368; BD +37 3876; TYC 2684-0689-1	Magnitude Range= 8.8 to 13.2 Period=1.1y Spec=C8,2JLi BV=+2.59 Color=deep red
U Cygni (CS)		B, T	SAO-049477; HIP 100219; HD 193680; BD +47 0377; WDS 20196+4754; TYC 3576-1359-1	Magnitude Range= 7 to 12.1 Period=1.27y Spec=C8,2e BV=+2.81 Color=deep red
NGC 6910 (OC)	1	T	Inchworm Cluster; Collinder 420; CR 420; Lund 950; OCL 181; Mrk 45; C2021+406	Mag=7.4 Size=7' SB=20.3 mBortle=9 mApt=102mm MC=I3m n
Messier 29 (OC)	1	T	M-29; Cooling Tower; NGC-6913; Collinder 422; Cr-422; Lund 952; OCL 168; Mrk 46; C2022 383	Mag=9 Size=7' SB=21.9 mApt=180mm MC=III3p
Barnard 347 (DN)		T	B 347; LDN 889	Size=100'x20' mBortle=4 mApt=50mm Opacity=4
Patchik 56 (AS)		T		Size=3.3'x2.2' Stars=6 Ref Star:SAO 49586; HIP 100660
IC 1318 (EN)	1	B, T	Gamma Cygni Nebula; LBN 249; Sh 2-108	Mag=10.0 Size=40'x20' SB=25.9 mApt=80mm
RW Cygni (CS)	1	B, T	HIP-101023; BD +39 4208; IRAS 2027+3948;	Magnitude Range= 8.3 to 9.7 Period=1.5y Spec=M3-4Ia-Iab BV=+2.9 Color=orange-red
NGC 6946 (G)	1	T	Fireworks Galaxy; Caldwell 12; C-12; PGC65001; MCG10-29-6, CGCG304-006, UGC11597, ARP29, IRAS20338+5958	Mag=9.7 Size=11.2'x9.8' SB=23.4 mBortle=1 MC=SAB(rs)cd
V778 Cygni (CS)		T	TYC 4246-1005-1	Vis Mag = 10.0 Magnitude Range(p) = 11.6 to 13.5 Spec=C4,5J BV=+4.4 Color=deep red
Cygnus Loop				
52 Cygni (DS)	1 , 2	T	SAO-070467; HIP 102453; HD 198511; HR 7942; 52 Cyg; ADS 14259; BD+30 4167; STF2726; Σ2726; WDS20456+3043	AB Mag=4,9 Sep=5.8" PA=74° mBortle=9 mApt=50mm Spec=K0III, ? Color=yellow-orange, blue
NGC 6960 (SNR)	1	B, T	Caldwell 34; C-34; West Veil Nebula; LBN 191; Witch's Broom; Lacework Nebula	Mag=5 Size=70'x6' SB=20.2
Pickering's Triangle (SNR)		B, T	Pickering's Wedge, Fleming's Triangular Wisp, Simeis 3-188	Size=45'x30' SB=23.5 Ref Star: TYC 2687-1442-1

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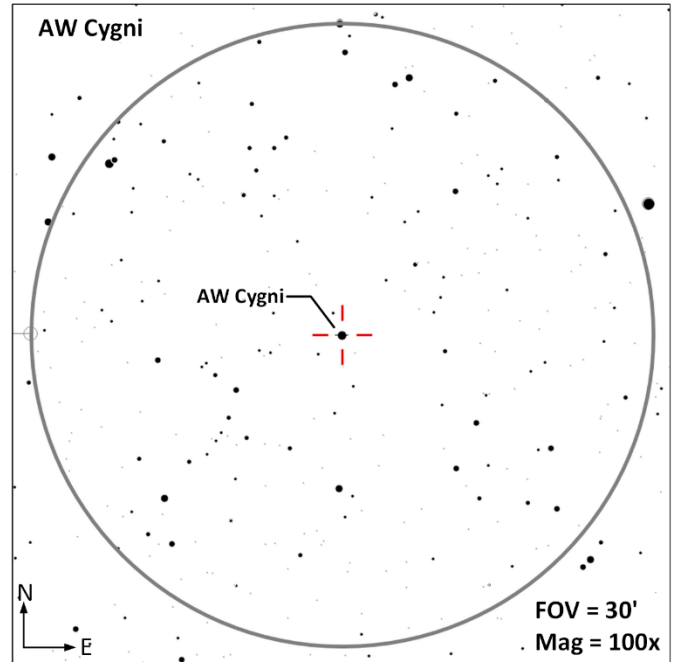
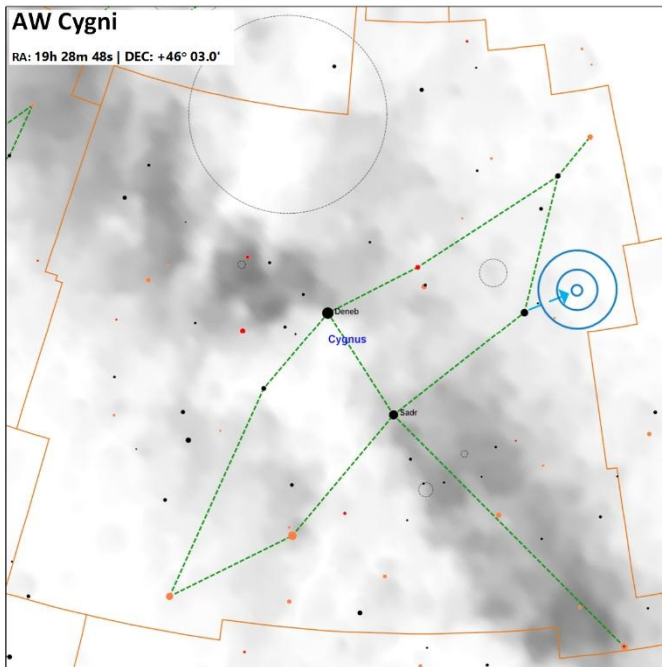
Object (Type)	Links	Gear	Aliases	Stats
NGC 6992 (SNR)	1	B, T	Cirrus Nebula; Caldwell 33; C-33; Eastern Veil Nebula; Network Nebula	Mag=7.5 Size=60'x8' SB=22.8
LDN 906 (DN)		B	Northern Coalsack; [B-346; B-348; B-349]	Size=238' Opacity=3
CY Cygni (CS)		T	SAO-050053; HD 198164; BD +45 3271; TYC 3574-0872-1;	Vis Mag=8.3 Magnitude Range(p)= 11.0 to 11.7 BV=+2.75 Spec=SC Color=red
W80 Complex				
Pelican Nebula (EN)	1	B	IC 5070; LBN 350	Size=80'x70' Mag=8.0 SB=26.0
LDN 935 (DN)		B	Gulf of Mexico cloud	Size=90'x90' Opacity=4
Barnard 352 (DN)		B, T	LDN 941	Size=19'x19' Opacity=5
Barnard 353 (DN)		T	B-353	Size=12'x8' Opacity=5
NGC 7000 (EN)	1	B	Caldwell 20; C-20; Gulf of Mexico; North America Nebula; LBN 373	Mag=4.5 Size=120'x90' SB=23.2
Little Orion (AS)		B, T	Leiter 9	Size=45' Stars=7 Ref Star: SAO-050246; HIP 103312
HR 8040 (DS)	1	T	SAO-033034; HIP 103530; HD 199955; ADS 14504; BD+49 3426;	AB Mag=5.9,6.8 Sep=2.1" PA=25° mBortle=9 mApt=70mm Spec=B5Vn, ? Color=blue-white, ?
Barnard 356 (DN)		B, T	B-356; LDN 950	Size=24' mBortle=4 mApt=50mm Opacity=5
Northern Inkspot	1	B	Funnel Cloud Nebula, Le Gentil 3, LG3; Northern Inkspot; Globular Filament 7; GF7; [Multiple LDN objects including: LDN 1003, LDN 1029], STAR 10; Dark Lane; Dark Rift; Cygnus Rift	Size=300' This object as such is not included in Sky Safari, using LDN 1003 as a proxy
Egg Nebula (PN)	1	T	CRL 2688; Cygnus Egg; UGC 11668; PGC 3097220; PK 80-6.1; RAFGL 2688; V1610 Cyg	Mag=13.5 Size=0.3' SB=19.5 mApt=180mm MC=Butterfly
61 Cygni (DS)	1 , 2	B, T	SAO-70919; HIP 104214; HD 201091; HR 8085; ADS 14636; BD+38 4343; FK5 793; STF2758; Σ2758; WDS21069+3845	AB Mag=5.3, 6.1 Sep=32" PA=153° mBortle=9 mApt=50mm Period=664y Spec=K5V, K7V Color=yellow-orange, orange
NGC 7027 (PN)	1	T	ARO 40, Sh 2-113; PK 084-03.1; PN G084.9-03.4; VV261; Jewel Bug Nebula; Gummy Bear Nebula	Mag=8.5 Size=0.3' SB=14.5 mBortle=9 mApt=50mm MC=Butterfly
Daffy Duck Nebula (EN)		T		Mag=5.9 Size=7' SB=18.8 Ref Star: SAO 50470
STAR 28 (AS)		B, T	Horseshoe	Size=25' Stars=12 to 14 Ref Star: SAO-050476; HIP 104268

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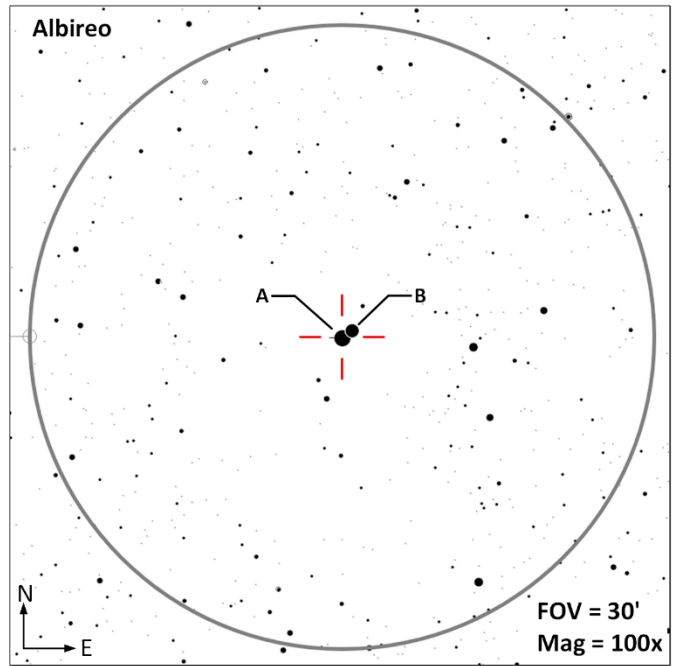
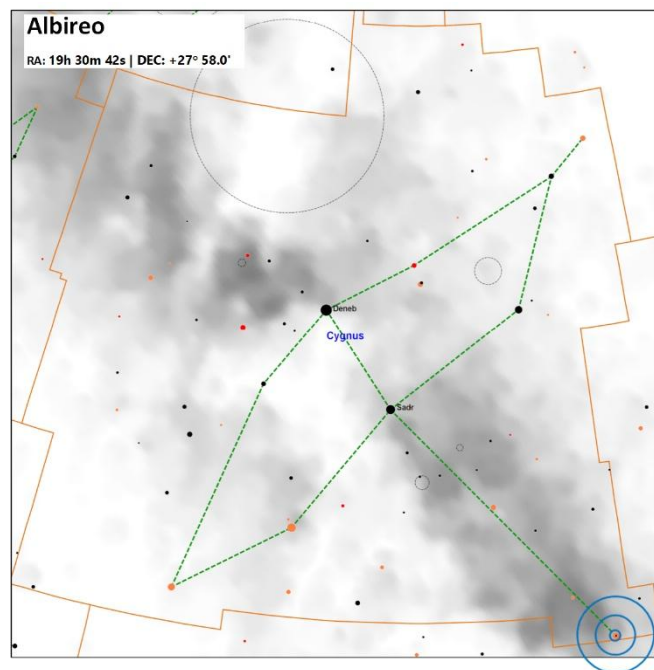
Object (Type)	Links	Gear	Aliases	Stats
Barnard 361 (DN)		B, T	LDN 970; B-361; MLB 88; LM 363;	Size=20' mBortle=4 mApt=100mm Opacity=4
Tau Cygni (DS)	1 , 2	T	SAO-071121; HIP 104887; HR 8130; HD 202444; Tau Cyg; τ Cyg; WDS21148+3803; Enduri Senggu; ADS 14787	AB Mag=3.8,6.6 Sep=1" PA=160° mApt=180mm Period=50y Spec=F3V, F7V Color=yellow-white, yellow-white
SH2-119 (EN)		B	Sharpless 2-119; LBN 391	Mag=Unknown Size=150'x120'
YY Cygni (CS)		B, T	HIP 105539; BD +41 4114; CCCS 3025	Vis Mag = 9.3 Magnitude Range(p)= 12.1 to 13.2 Period=1.1y Spec=C (N) BV=+2.6 Color=deep red
Barnard 362 (DN)		T	B-362; LM 374; LDN 1017; LDN 1014	Size=11'x5' mBortle=4 mApt=50mm Opacity=5
Messier 39 (OC)	1	B, T	NGC-7092; Pyramid Cluster; Collinder 438; Cr-438; Lund 994; Mel 236; OCl 211; OCl 211.0; C2130+482	Mag=5.5 Size=32' SB=21.7 mBortle=9 mApt=50mm MC=III2m
Barnard 364 (DN)		B, T	B-364	Size=75' mBortle=4 mApt=50mm Opacity=5
Barnard 159 (DN)		B, T	LDN 973; B159	Size=25' mBortle=4 mApt=50mm Opacity=5
HD 206570 (CS)		B, T	SAO-071613; HIP 107129; HD 206570; HR 8297; BD+34 4500; DS Peg; V460 Cygni	Magnitude Range= 6 to 7 Period=0.5y Spec=C6,3 BV=+2.65 Color=deep red
RV Cygni (CS)		B, T	HD 206750; CCCS 3063	Vis Mag=8.0 Magnitude Range(p)= 10.8 to 12.4 Period=0.7y Spec=C6,4 BV=+4.1 Color=deep red
Mu Cygni (DS)	1 , 2	T	SAO-089940; SAO-033695; HIP 107310; μ Cyg; 78 Cyg; HD 206826; ADS15270; BDS11214; STF2822; WDS21441+2845; Mu Cyg; μ^1 Cyg	AB Mag=4.8,6.2 Sep=1.4" PA=328° mBortle=9 mApt=102mm Period=692y Spec=F6V, G2V Color=yellow-white, yellow
Barnard 164 (DN)		B, T	LDN 1070; B164	Size=20' mBortle=4 mApt=50mm Opacity=5
Barnard 168 (DN)		B, T	B 168; LDN 1055	Size=22'x18' mBortle=4 mApt=50mm Opacity=3
IC 5146 (OC, EN)	1	T	Caldwell 19; Cr 470; Sh 2-125; C2151+470; LBN 424; OCISM 43; C19; Cocoon Nebula; Lund 1001; OCl 213	Mag=7.2 Size=12' SB=21.2 mBortle=9 mApt=80mm
LW Cygni (CS)		B, T	HD208512; BD +49 3673; CCCS 3080; GCVS310271; J215513.76+502949.	Magnitude Range= 8.8 to 10.8 Spec=C (N late) BV=+4.42 Color=deep red

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AW Cygni (CS, VS || Magnitude Range= 8.2 to 9.2 | Period=0.9y | Spec=C4,5 | BV=+3.87 | Color=deep red |)
This is a pulsating semi-regular variable star with a period of 340 days. with a BV color index of +3.87 this should appear quite red and is on a number of red carbon star lists.

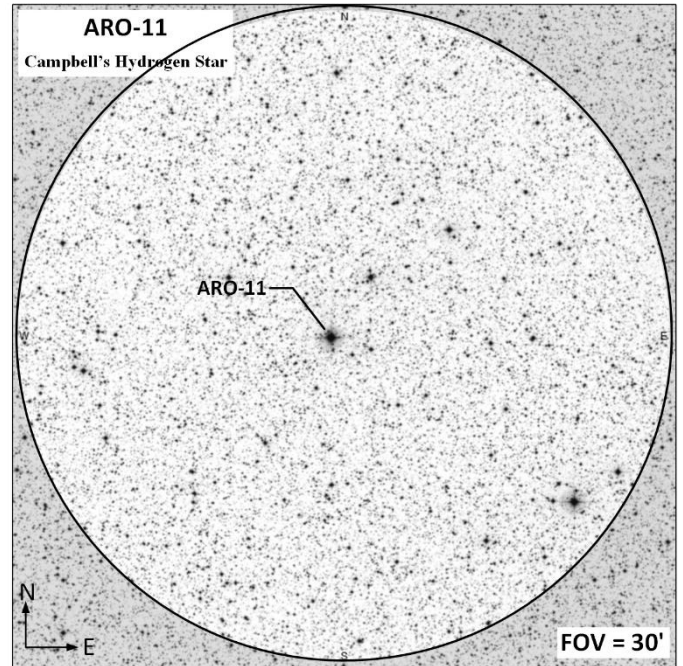
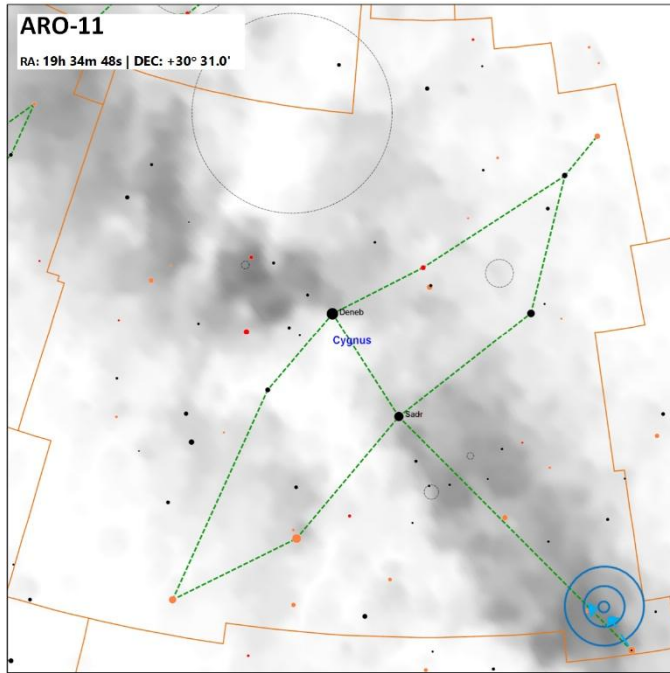


Albireo (DS || **AB** | Mag=3.1,5.1 | Sep=34.4" | PA=54° | mBortle=9 | mApt=50mm | Spec=K3II, B9.5V | Color=yellow-orange, blue-white |) Perhaps the most celebrated double star in the northern sky. A beautiful Gold/Blue pair of stars easily located and viewed. A delight for binoculars and telescopes. This is an optical star system, meaning these stars are not physically associated with each other.

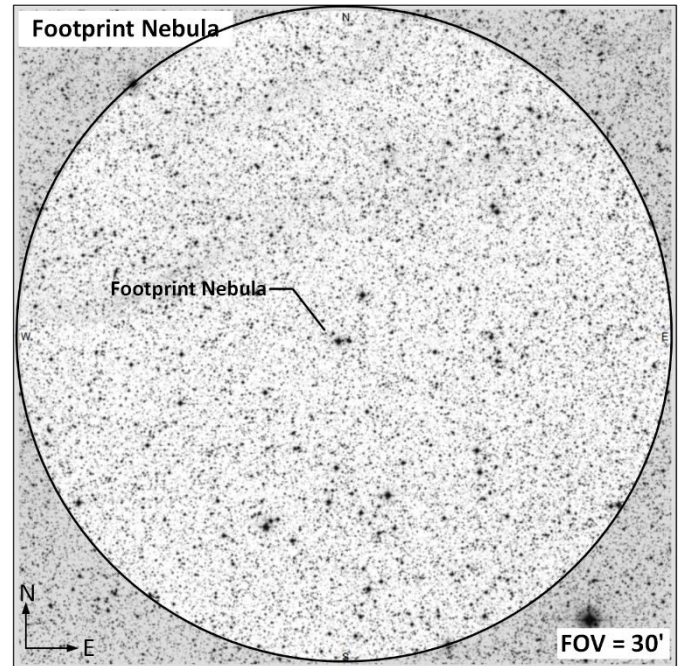
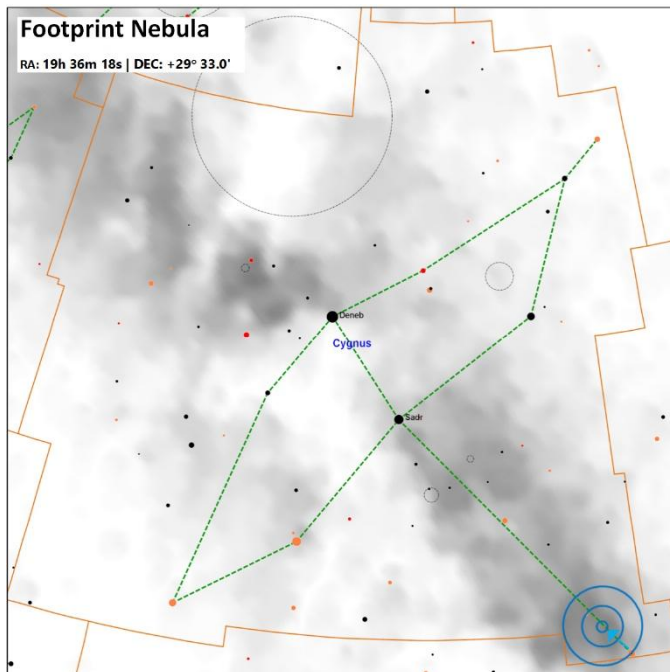


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ARO 11 (PN || Mag=9.6 | Size=0.1' | SB=13.2 | mBortle=9 | mApt=50mm | MC=Elliptical |) A bright planetary nebula, but very small requiring high magnification to be able to distinguish it from a star. Located 7,789 light years away.

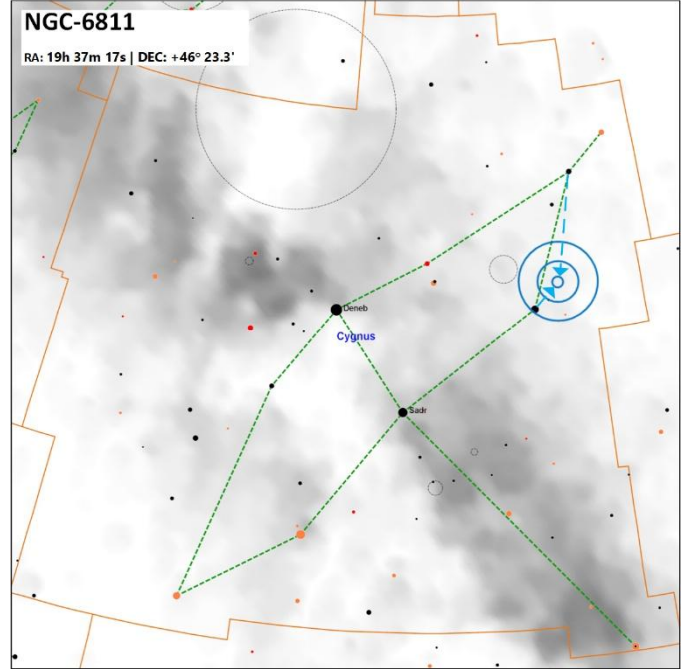
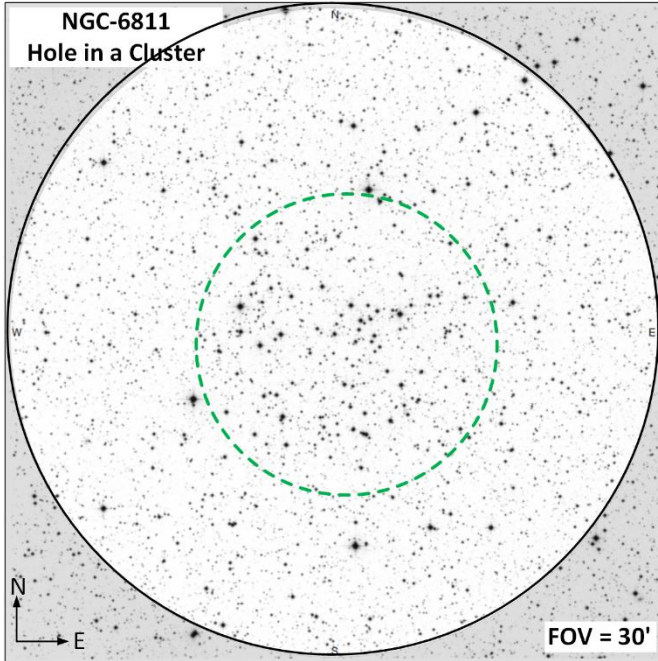


Footprint Nebula (PN || | Mag=11 | Size=0.2'x0.1' | SB=15.4 | mApt=250mm |) Another bright small planetary nebula. From the Royal Astronomical Society of Canada (RASC) Deep-Sky Challenge Objects list and described as *bright, starlike reflection nebula*.

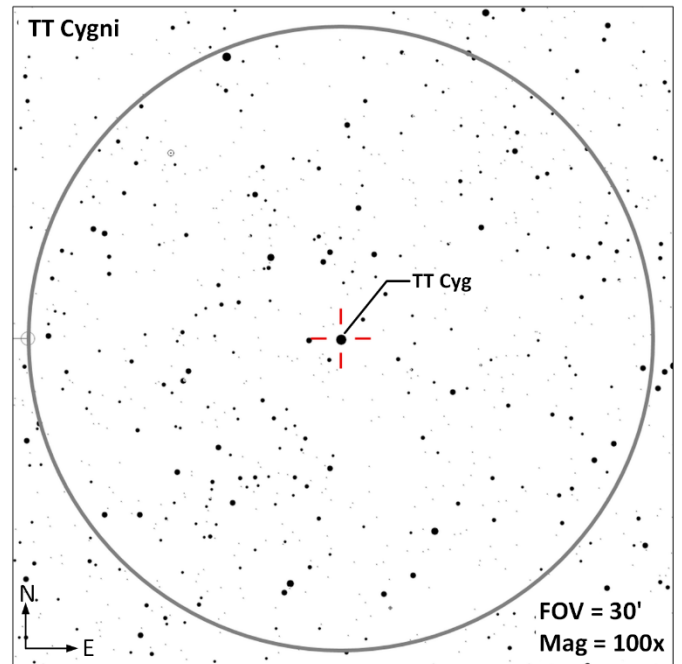
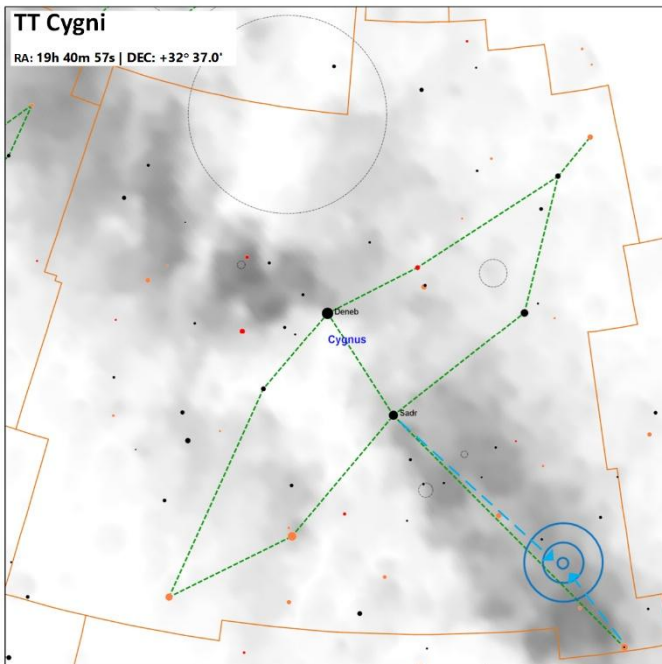


Constellation Guide

NGC 6811 (OC || Mag=6.8 | Size=13' | SB=21.0 | mBortle=9 | mApt=70mm | MC=III1r |) The Hole in the Cluster is an open cluster located 3,963 light years away, has a physical diameter of 16 light years and is estimated to contain about 1,000 stars and be about 1 billion years old. Trumpler class is III-Detached with no noticeable concentration, 1-Most stars in the cluster are nearly the same apparent brightness, r-Rich cluster with over 100 stars.

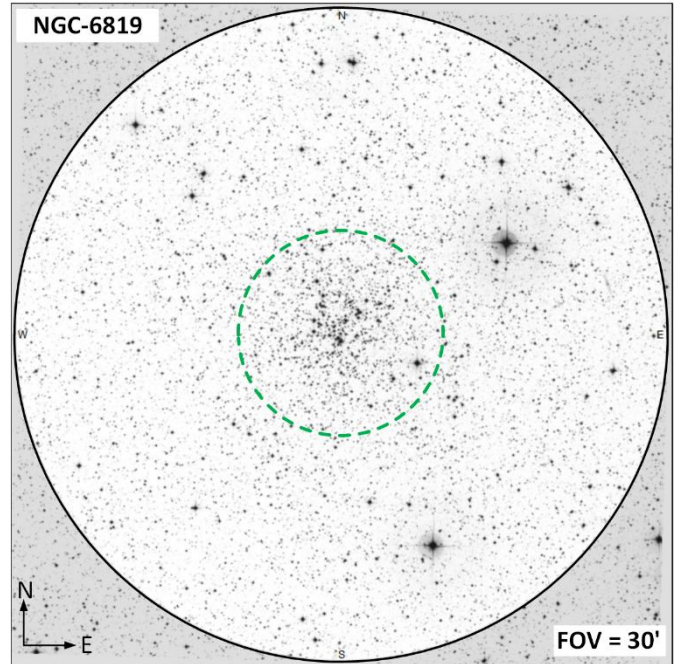
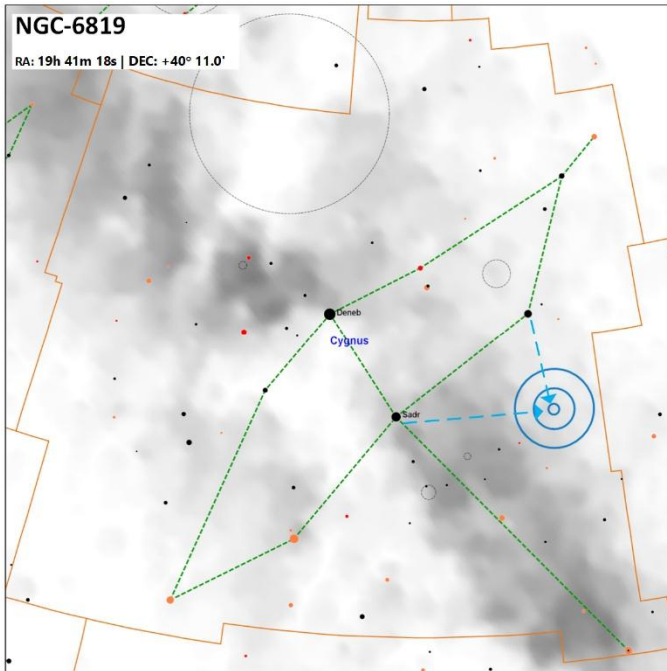


TT Cygni (CS || Magnitude Range(p)= 10.2 to 11.9 | Period=0.3y | Spec=C5,4e | BV=+2.6 | Color=deep red |) Located 1,832 light years away, this is a pulsating semi-regular variable star with a period of 118 days. This star may be a double or multiple star system but possible companions are quite dim.

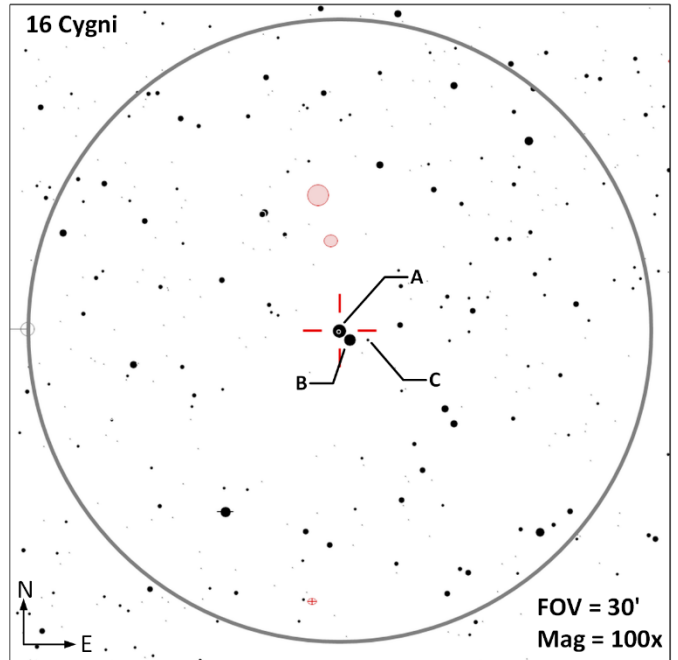
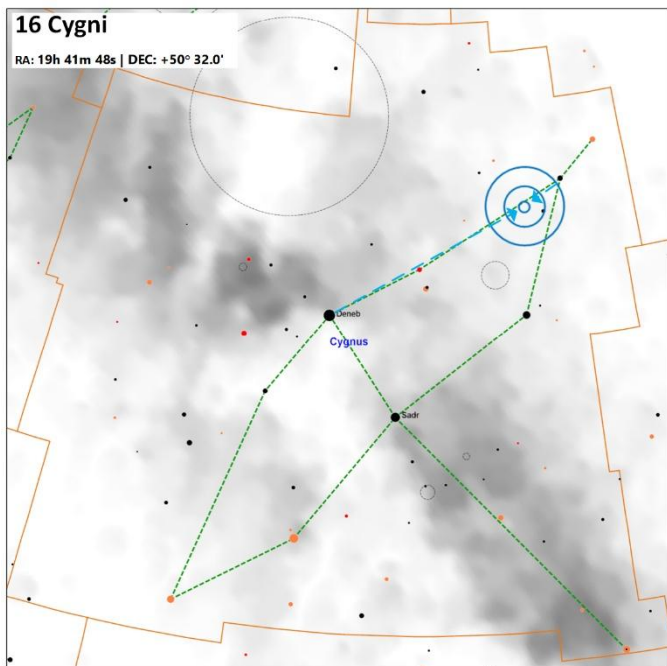


Constellation Guide

NGC 6819 (OC || Mag=7.3 | Size=5' | SB=19.4 | mBortle=9 | mApt=80mm | MC=11r |) Located 7,840 light years away with a physical diameter of 30 light years. Trumpler classification is I-Detached with strong central concentration, 1-Most of the cluster stars are nearly the same apparent brightness, r-Rich cluster with over 100 stars.

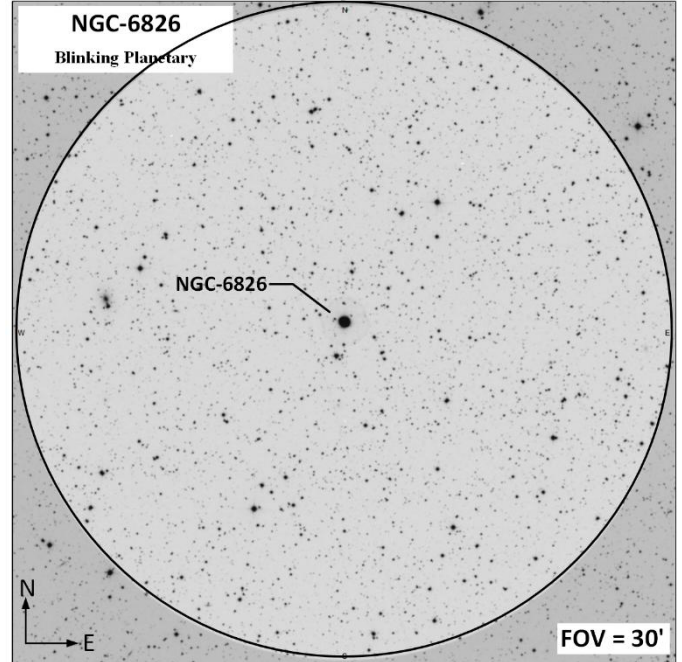
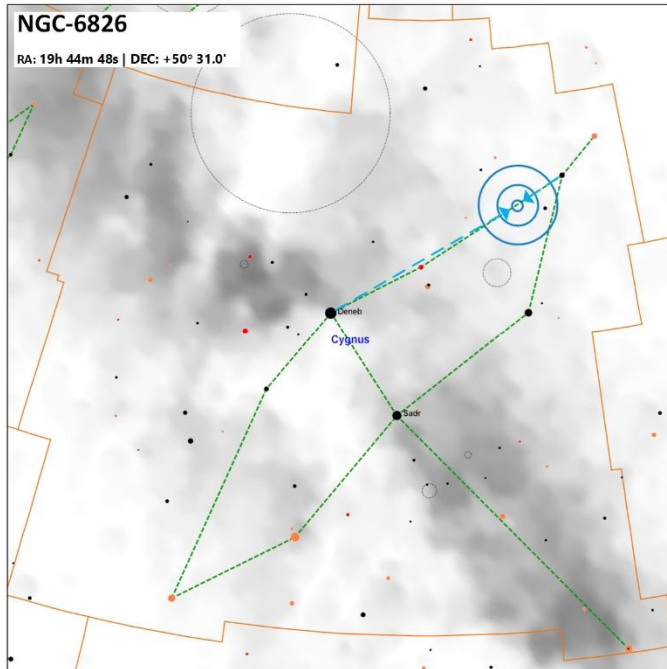


16 Cygni (MS-3 || AB | Mag=6.0, 6.2 | Sep=39.8" | PA=133° | mBortle=9 | mApt=50mm | Period=13,513y | Spec=G1.5V, G3V | Color=yellow, yellow || BC | Mag=6.2, 11.9 | Sep=18.2" | PA=70° | Spec=G3V, ? | Color=yellow, ? |) Located 69 light years away, the nature of the BC component is undetermined. Both A & B components are similar to our sun.

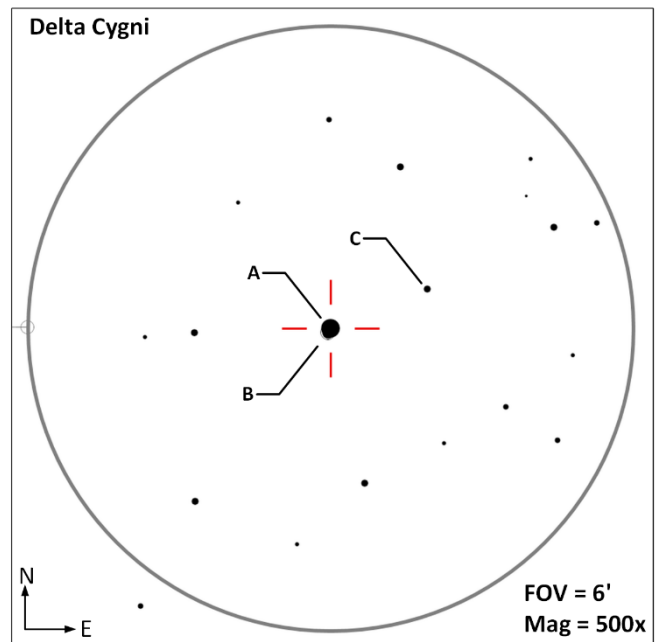
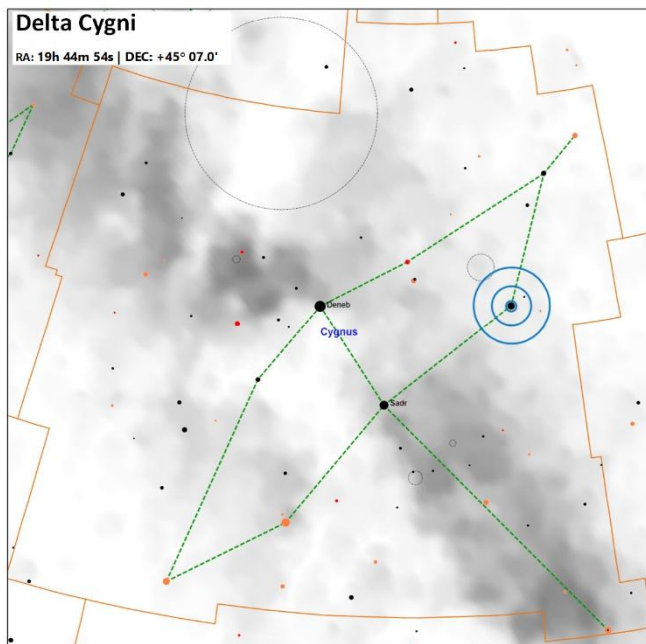


Constellation Guide

NGC 6826 (PN || Mag=8.8 | Size=0.4' | SB=15.4 | mBortle=9 | mApt=50mm | MC=Elliptical |) The Blinking Planetary is given this name since the central star can overwhelm the eye when looking at it directly so that the nebula is not apparent, however using averted vision will reveal the nebula, thus causing the nebula to "blink" as it is observed. Use a higher magnification when viewing this object to see the nebula since it is 25" in size.

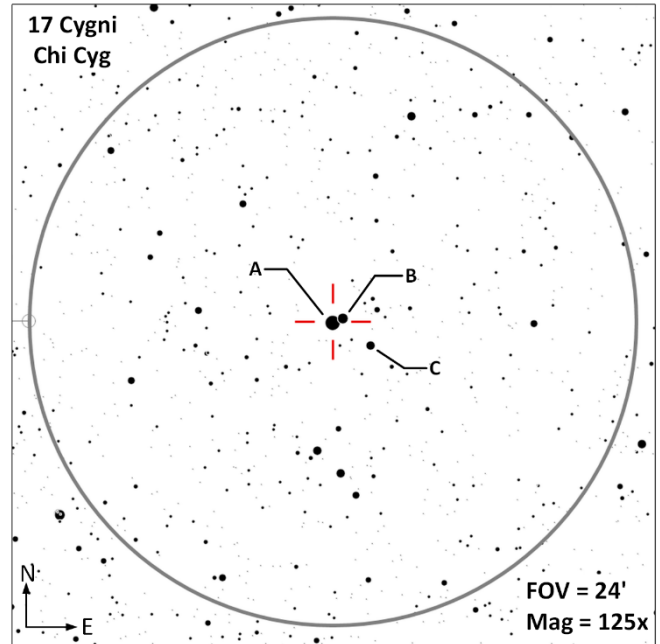
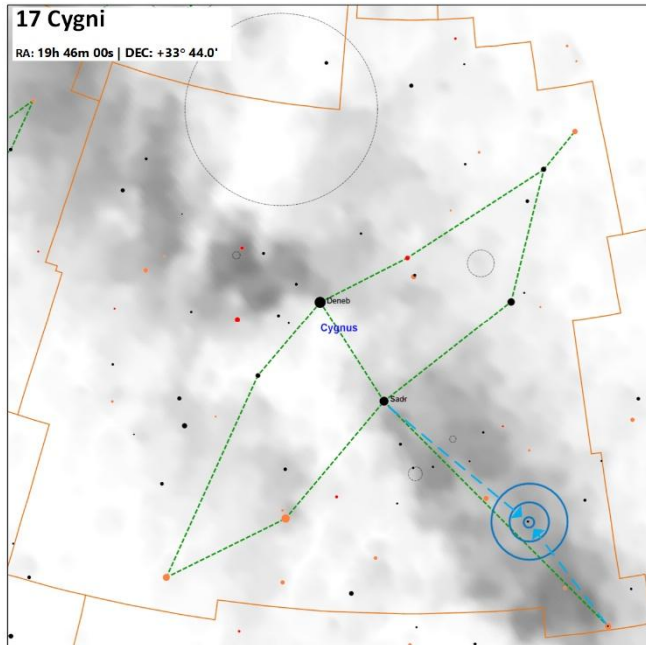


Delta Cygni (MS-3 || AB | Mag=2.9,6.3 | Sep=2.8" | PA=214° | mBortle=9 | mApt=70mm | Period=657y | Spec=B9.5IV, F1V | Color=blue-white, yellow-white || AC | Mag=2.9,12 | Sep=62.5" | PA=67° | mBortle=8 | mApt=114mm | Spec=B9.5IV, ? | Color=blue-white, ? |) Fawaris is located 165 light years away, the AB components have an orbital period of 657 years. It is unknown if the C component is physically associated with this system.

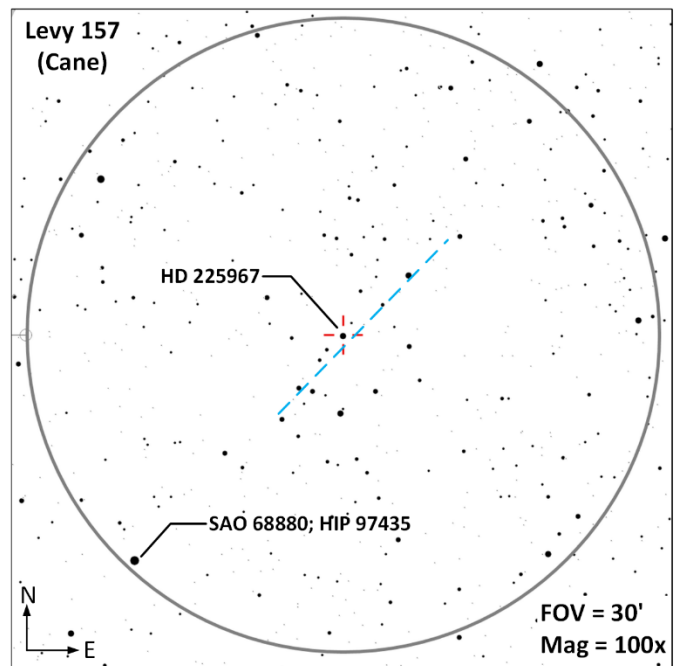
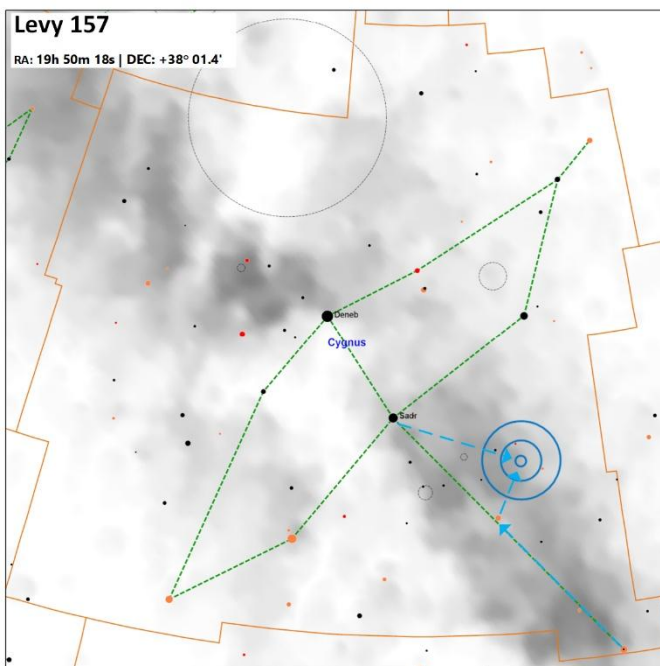


Constellation Guide

17 Cygni (MS-3 || **AB** | Mag=5.1,9.3 | Sep=26" | PA=68° | mBortle=9 | mApt=50mm | Period=7,905y | Spec=F5V, ? | Color=red, blue || **AC** | Mag=5.1, 9.4 | Sep=106" | PA=122° | Spec=F5V, K0 | Color= yellow-white, yellow-orange |) The A & B component are physically associated with each other and are listed as having a red & blue component and appears on colorful stars lists. The C component is an optical component.

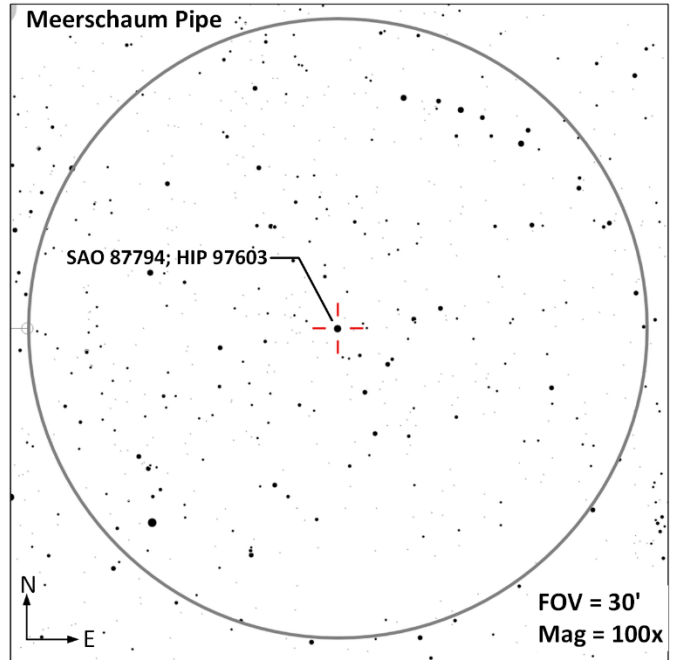
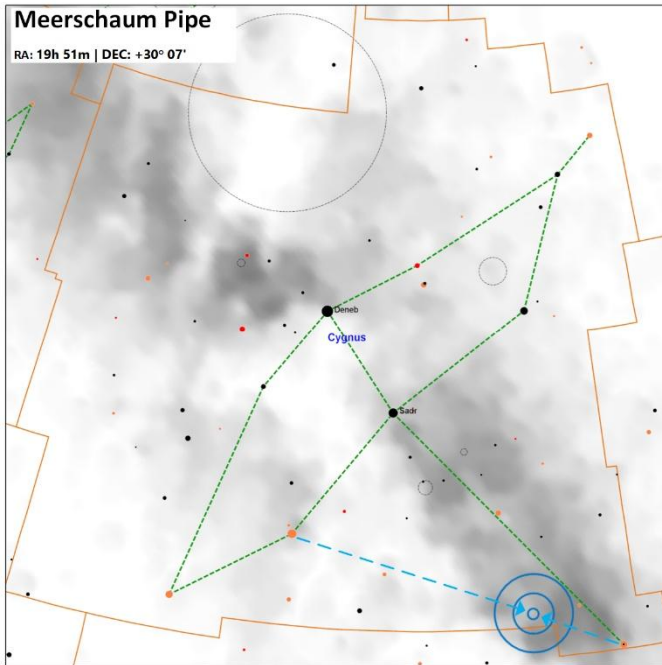


Levy 157 (AS || Size=10'x20' | Stars=7 | Ref Star: HD 225967 |) Also known as Cane for the shape of the seven stars that make up this asterism. The head of the cane points southwest toward 7.6-magnitude SAO 68880; HIP 97435; HD 187374.

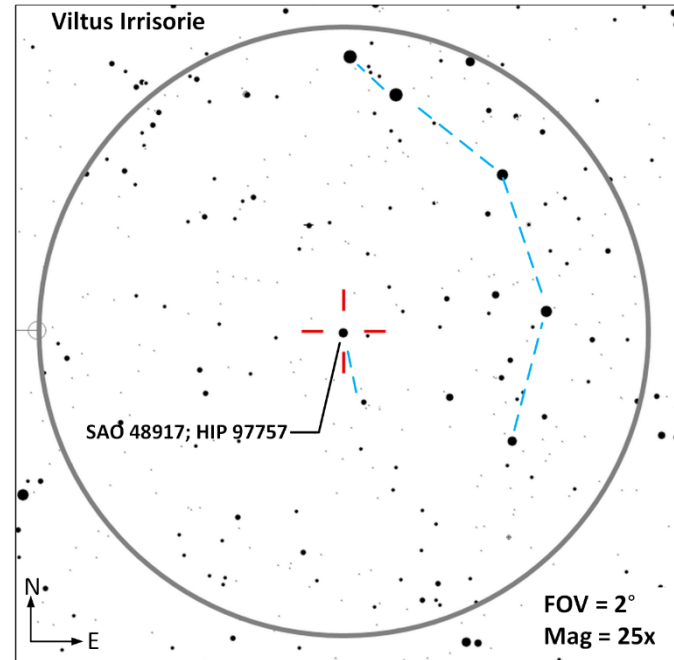
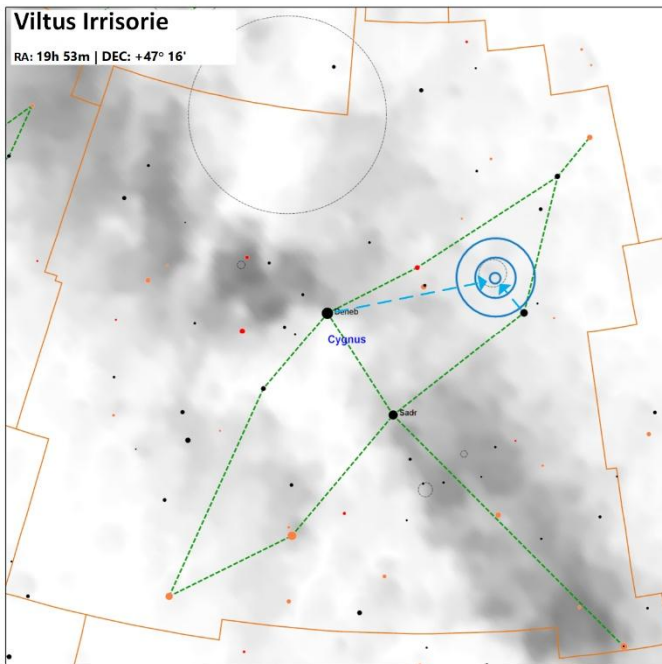


Constellation Guide

Meerschaum Pipe (AS || Size=22' | Stars=8 | Ref Star: SAO 87794; HIP 97603 |) Reportedly the shape of a pipe, this asterism contains a number of fainter stars that may require a larger telescope to observe.

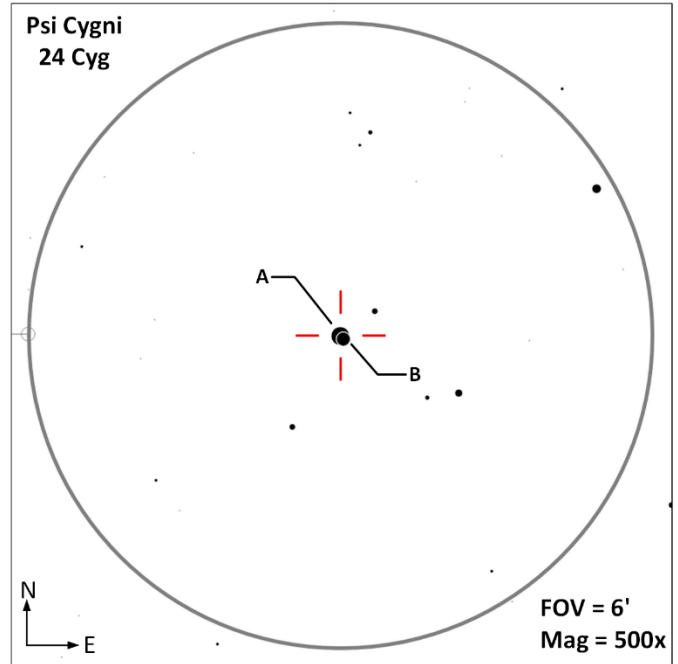
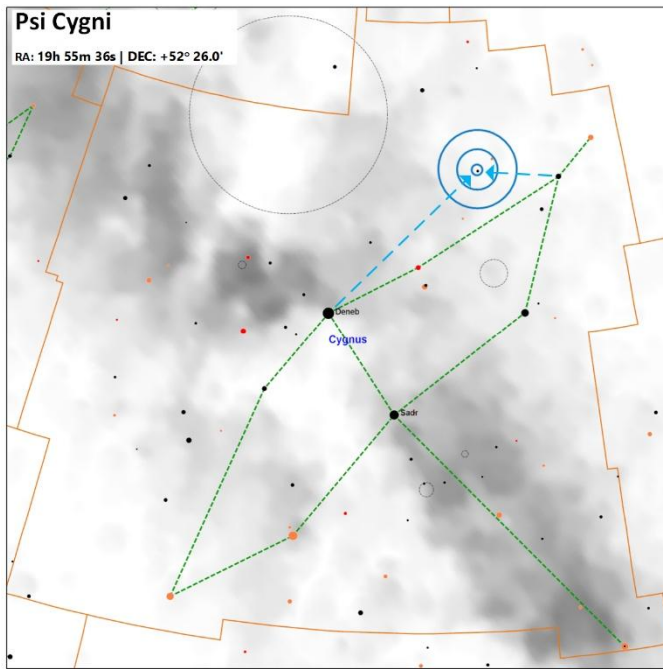


Vultus Irrisorie (AS || Size=84' | Stars=5 | Ref Star: SAO 048917; HIP 97757 |) This asterism has a shape of a smiley face and consists of 5 stars.

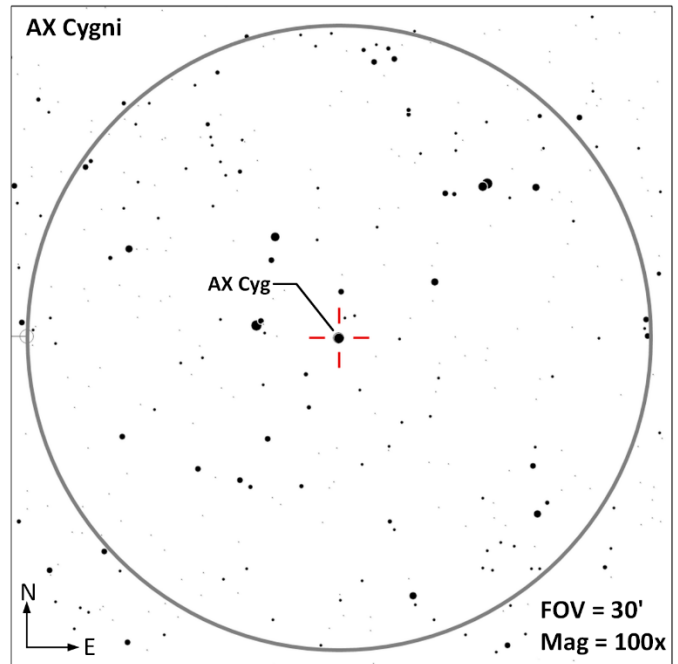
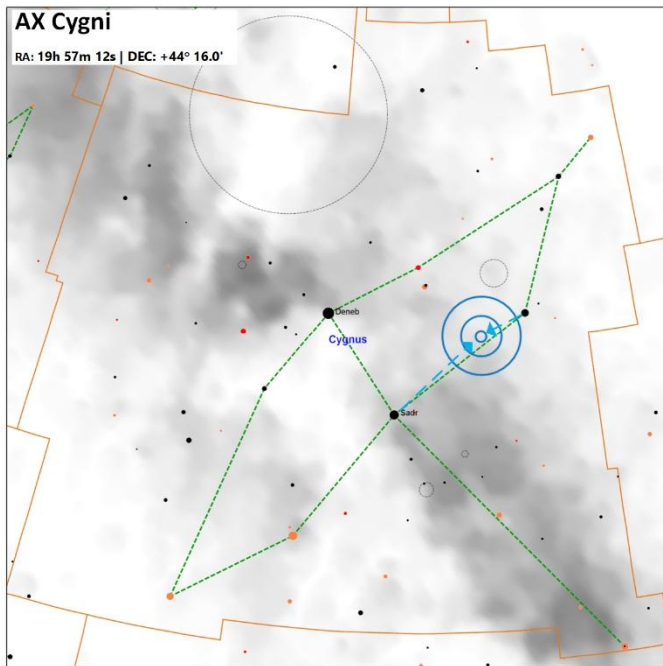


Constellation Guide

Psi Cygni (DS || AB | Mag=5,7.5 | Sep=2.8" | PA=175° | mBortle=9 | mApt=60mm | Spec=A4Vn, ? | Color=white, ? |) Located 281 light years away, it has not been determined if these two stars are physically associated with each other.

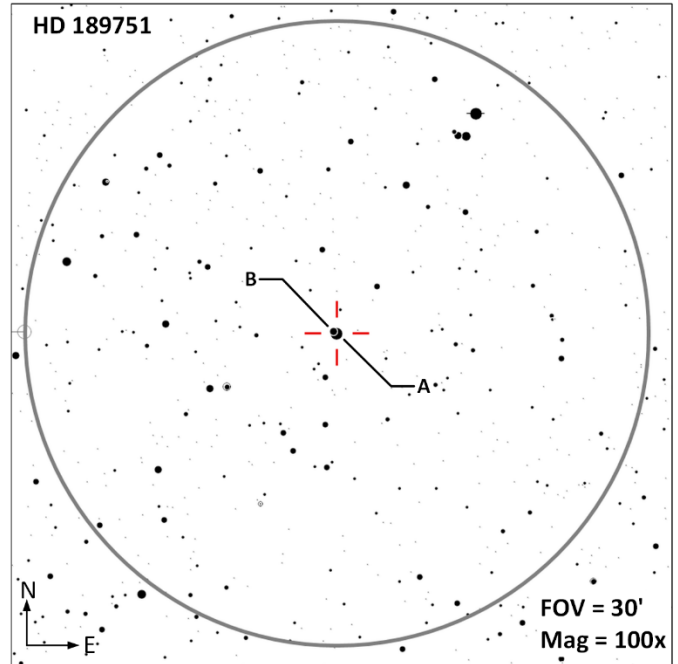
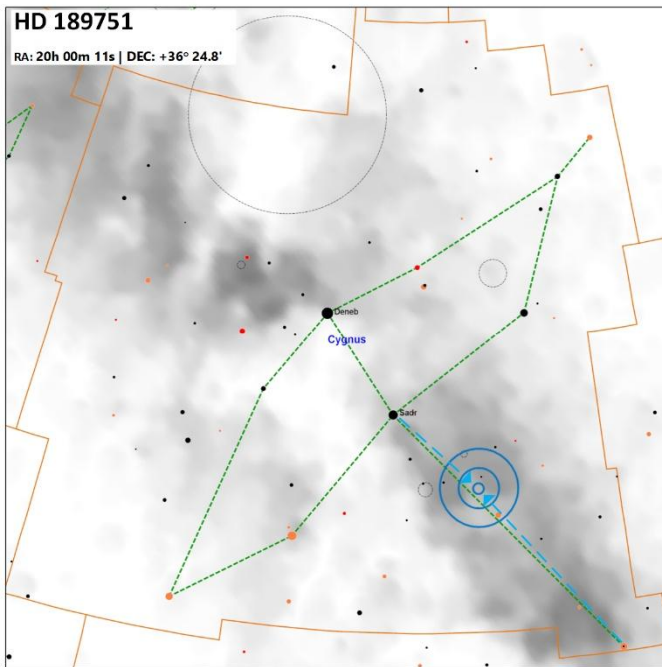


AX Cygni (CS || AB | Magnitude Range= 7.7 to 8.9 | Spec=C4,5 | BV=+4.4 | Color=deep red |) Located 1,212 light years away. This is a pulsating long-period variable star appears on a number of carbon stars list and with a BV color index of +4.4 this star should be quite red.

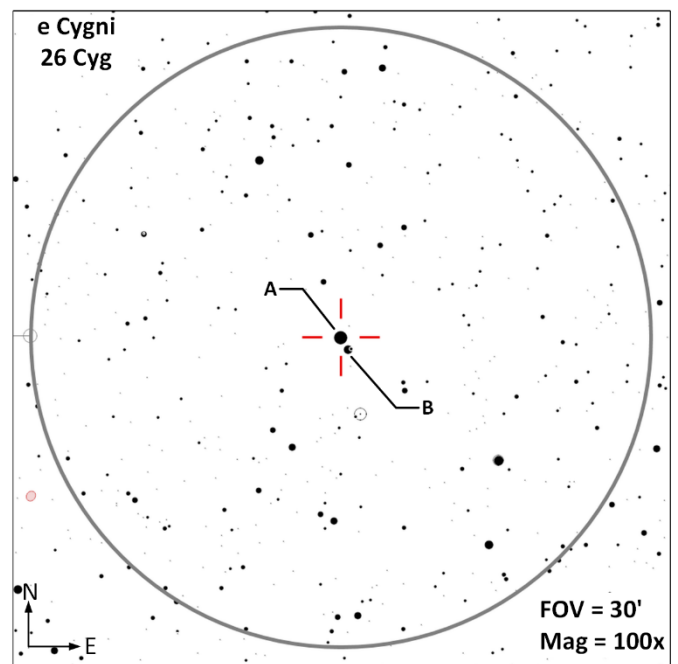
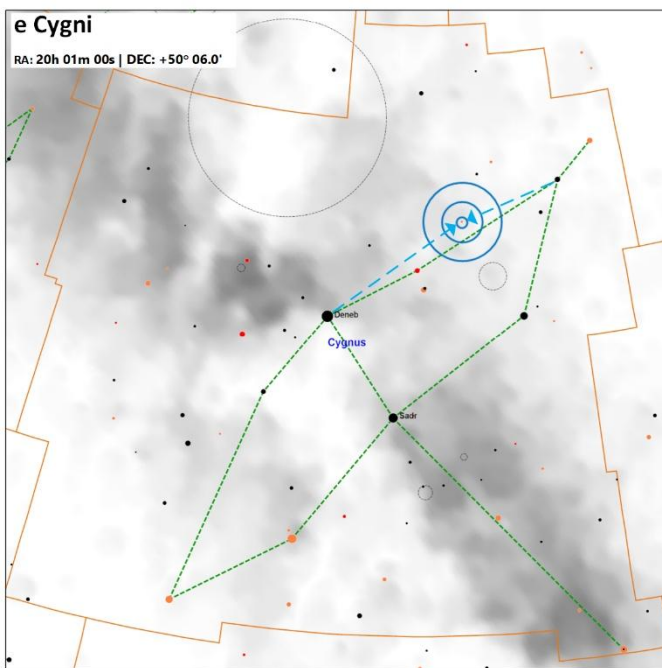


Constellation Guide

HD 189751 (DS || AB | Mag=7.1,10.3 | Sep=11" | PA=294° | mBortle=9 || mApt=50mm | Spec=K1III, ? | Color=orange, blue) Located 497 light years away this star system is a physical double and appears on a number of colorful double stars lists.

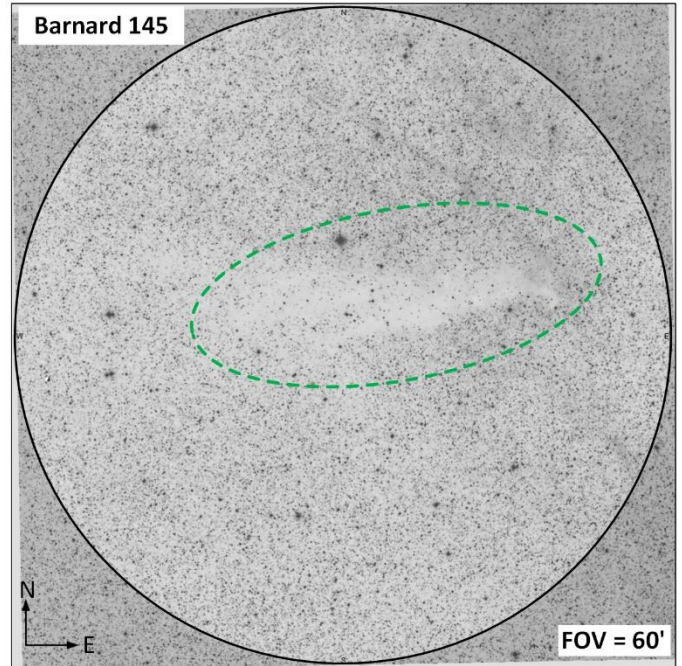
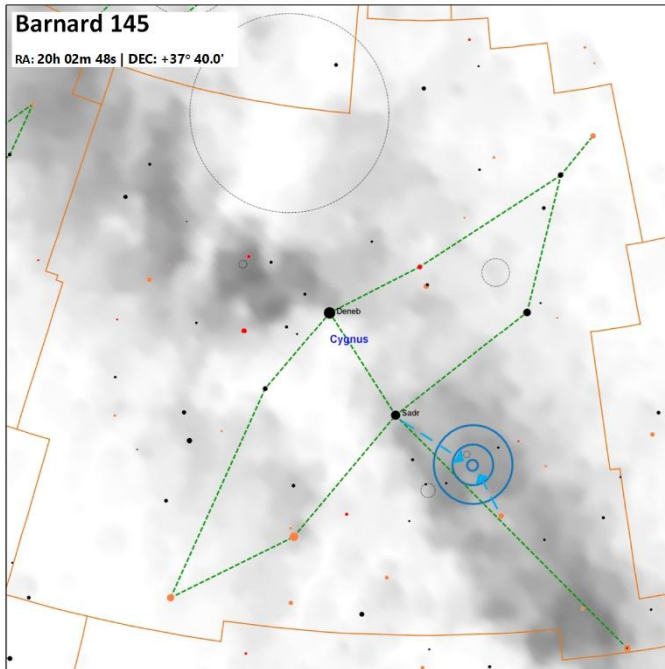


e Cygni (DS || AB | Mag=5.2,8.9 | Sep=41.8" | PA=150° | mBortle=9 | mApt=50mm | Spec=K1II-III, ? | Color=yellow-orange, blue) Located 434 light years away, this is an optical double star (A&B components are not physically associated with each other). This double appears on the RASC colored double stars and should appear to have yellow and blue components.

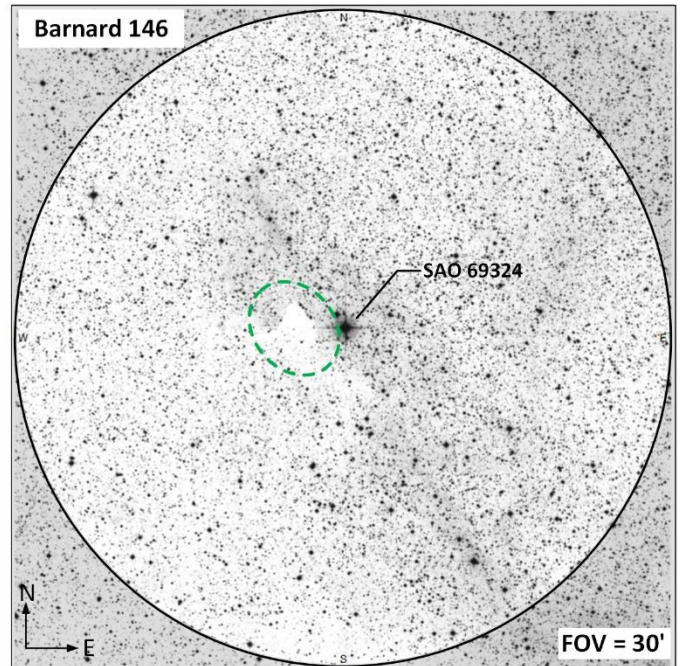
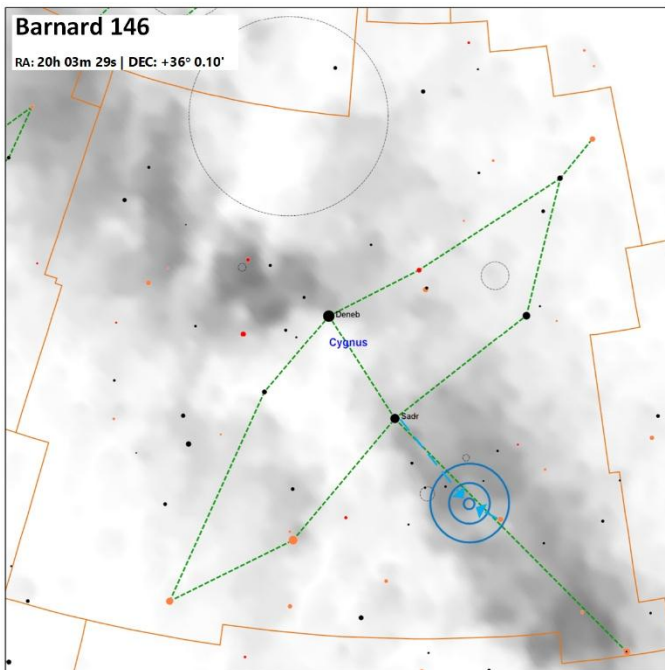


Constellation Guide

Barnard 145 (DN || | Size=6'x35' | mBortle=4 | mApt=200mm | Opacity=4 |) This dark nebula appears as a thin, long dark region in a field of stars. With an opacity of 4 a medium to large telescope may be needed to spot this dark nebula.

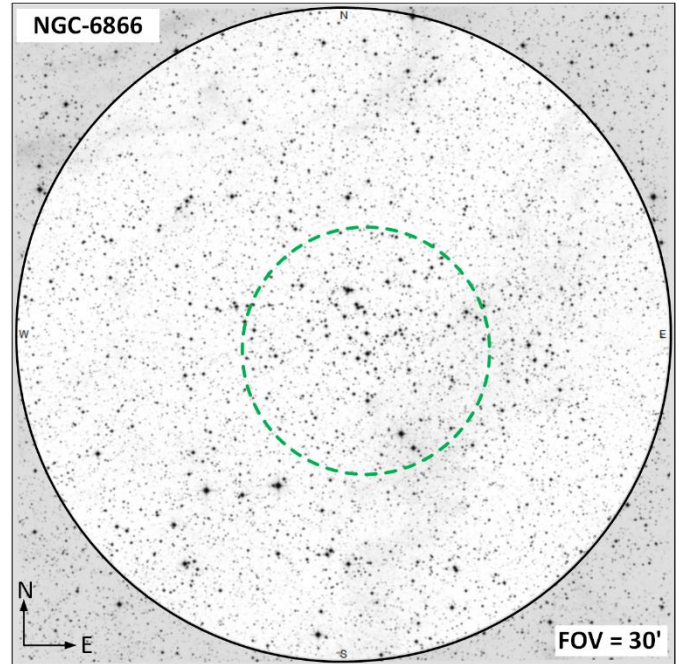
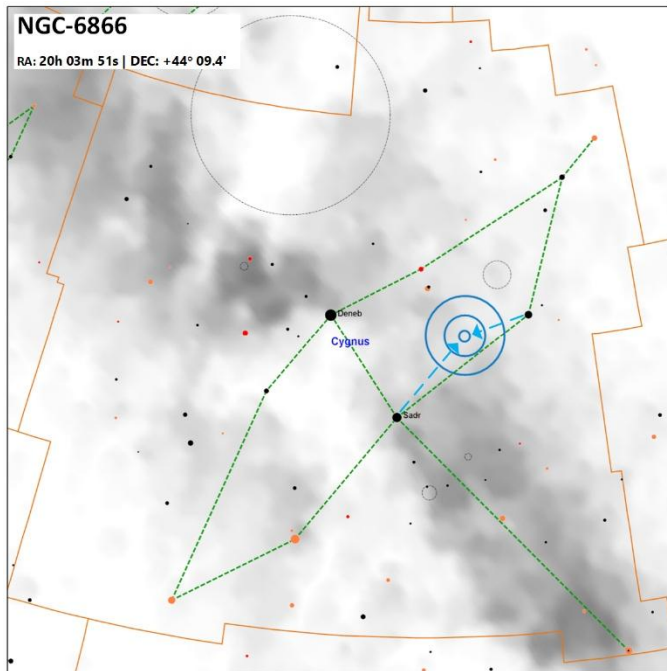


Barnard 146 (DN || | Size=1'x1' | mApt=250mm | Opacity=6 |) One of the smaller dark nebulae, higher magnification may be required to view this. With an opacity of 6 (6 being the most opaque possible value) this should be fairly easy to identify unless the glare from SAO-69324; HIP-78753 masks this object.

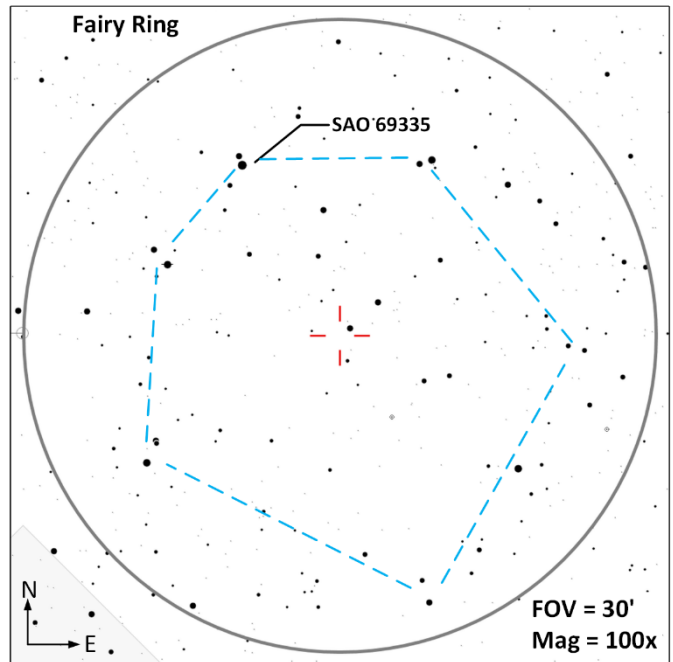
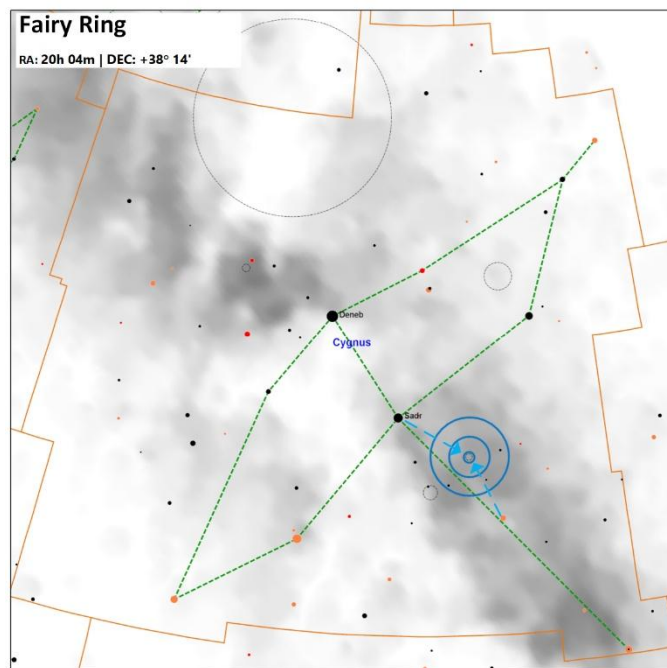


Constellation Guide

NGC 6866 (OC || Mag=7.6 | Size=14' | SB=22.0 | mBortle=9 | mApt=102mm | MC=II2m) Located 4,350 light years away and is estimated to contain over 1,300 members. Trumpler classification is II-Detached with little central concentration, 2-Medium range of brightness between stars in the cluster, m-Medium rich cluster with 50-100 stars.

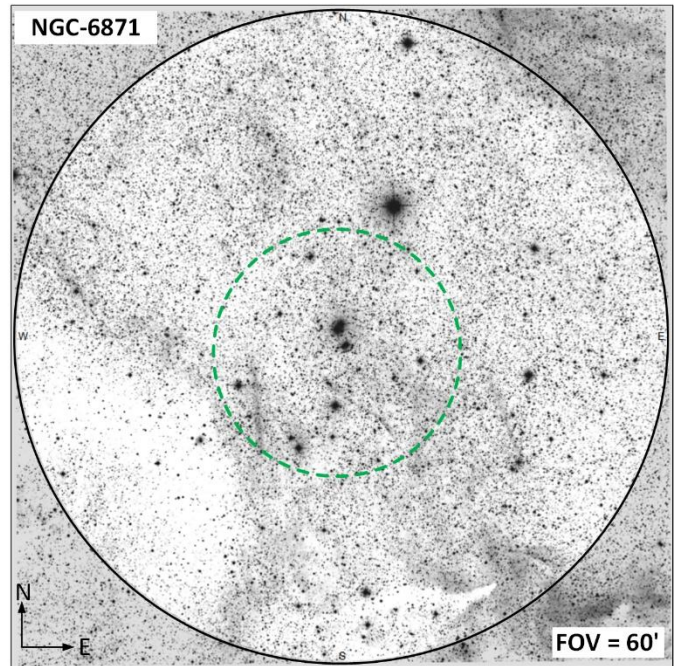
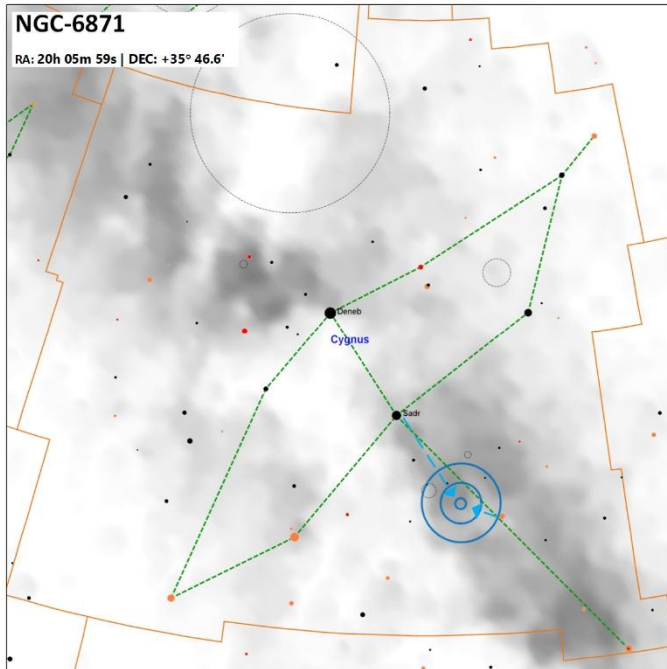


Fairy Ring (AS || Size=20' | Stars=7 | Ref Star: SAO-069355) Also known as Chaple's Arch this asterism contains a ring of double stars. Four bright pairs for the northwest arc and a few dimmer doubles complete the ring.

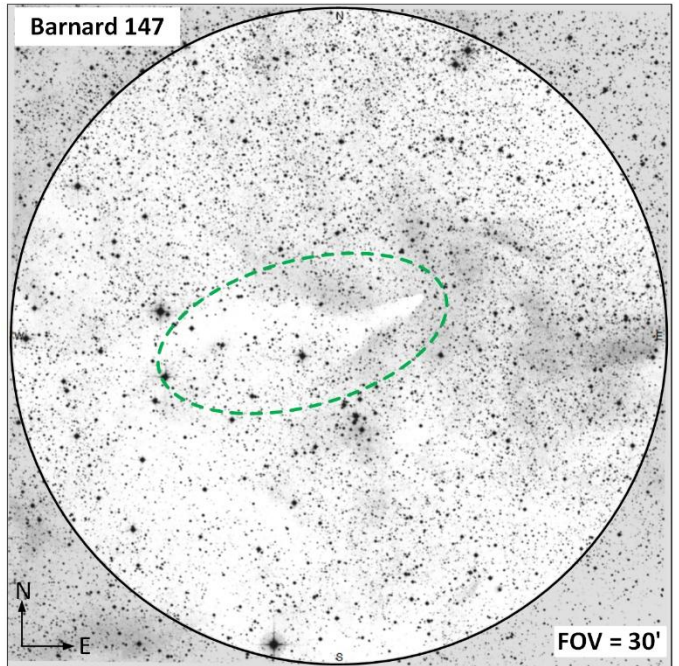
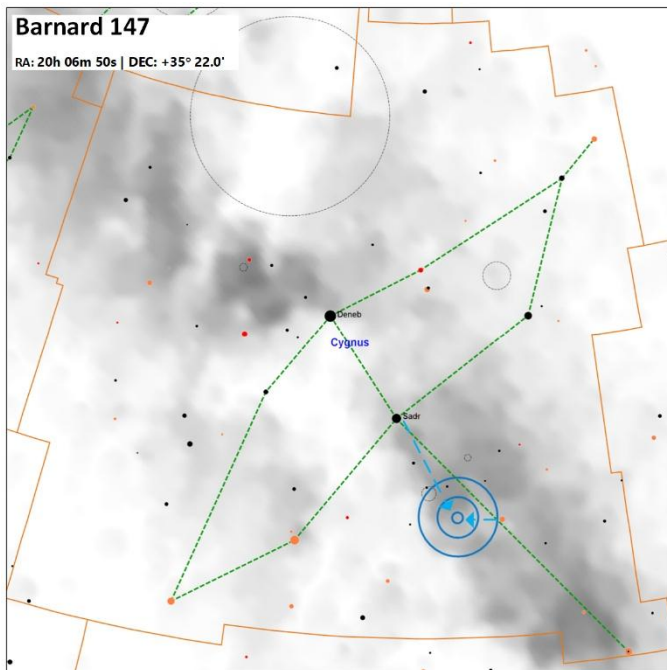


Constellation Guide

NGC 6871 (OC || Mag=5.2 | Size=20' | SB=20.3 | mBortle=9 | mApt=50mm | MC=II2p n) Located 5,135 light years away with fewer than 50 members this cluster appears to be disintegrating. Trumpler class is II-Detached with little central concentration, 2-Medium range of brightness between members, p-Poor clusters with less than 50 stars, n-Nebulosity associated with cluster.

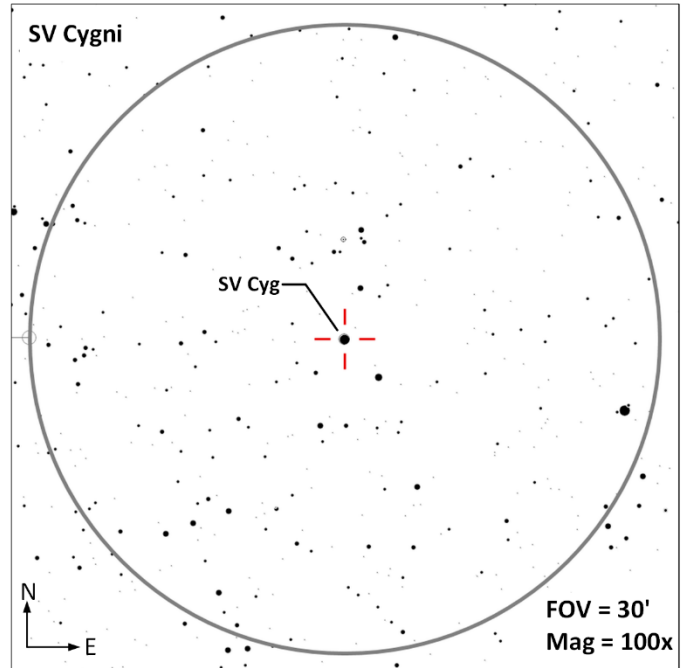
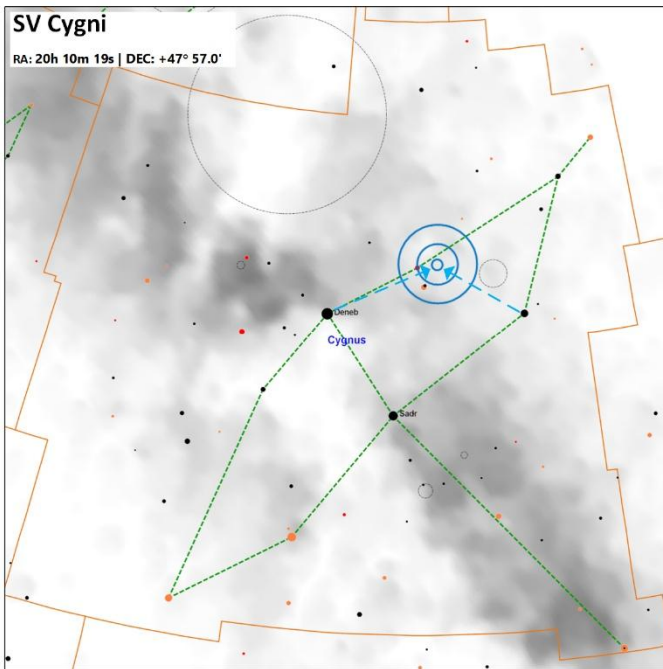


Barnard 147 (DN || Size=11' | mBortle=4 | mApt=50mm | Opacity=5) This dark nebula is relatively small and has an opacity rating of 5. This may require more aperture than the calculated 50mm.

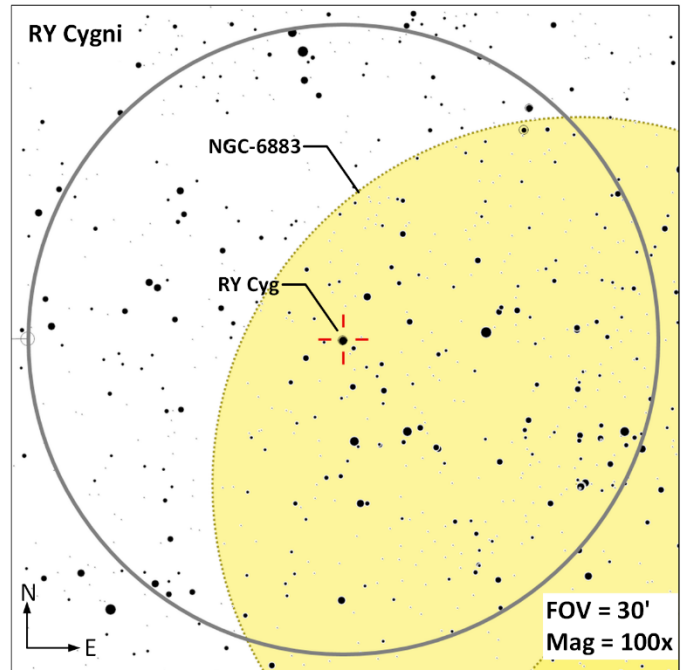
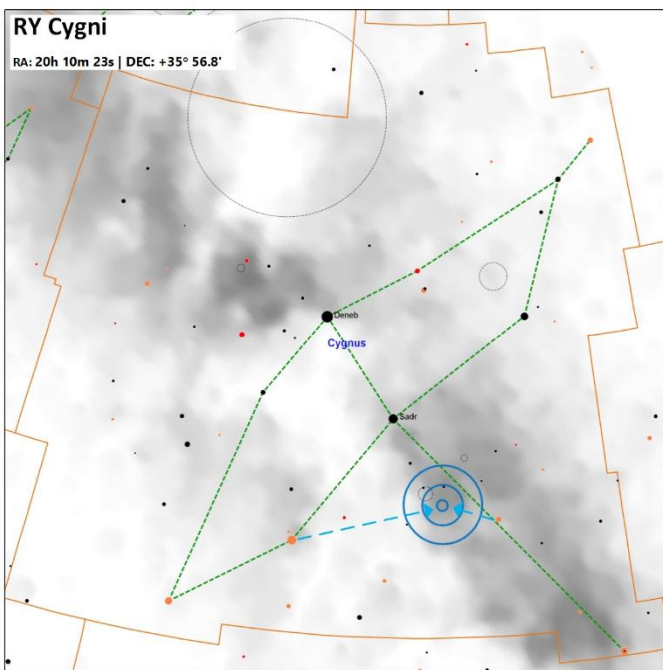


Constellation Guide

SV Cygni (CS || Magnitude Range(p)= 11.7 to 13.2 | Spec=C7,4 | BV=+3.15 | Color=deep red |) Located 3,200 light years away, this is a pulsating long-period variable star with an unknown period. Magnitude range is based on measurements utilizing a photographic blue filter and are thus quite different from the visual magnitude of this star.

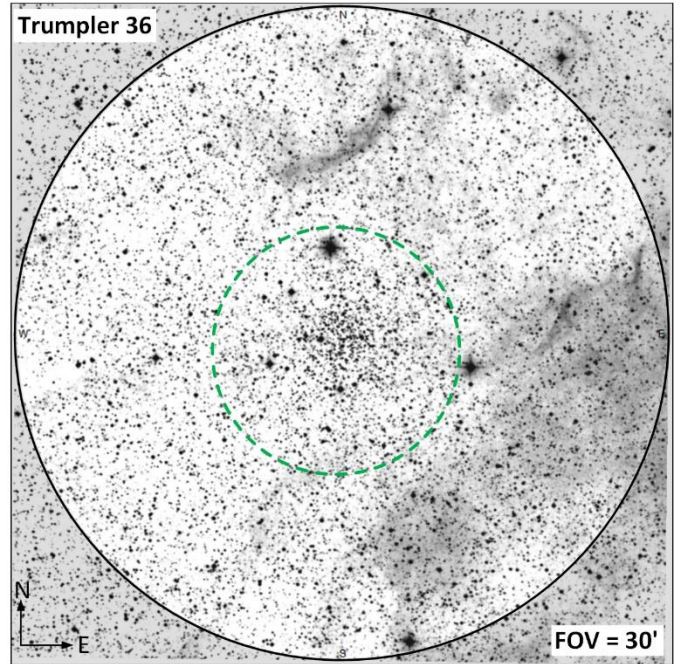
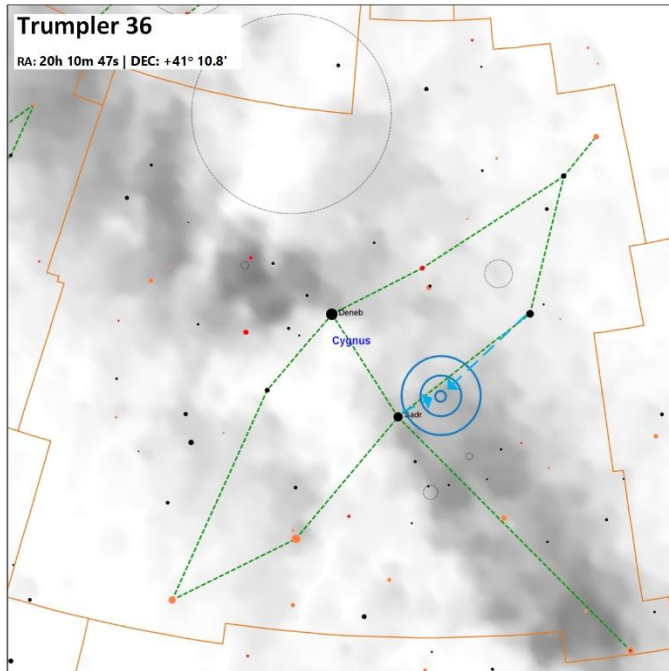


RY Cygni (CS || Magnitude Range= 8.5 to 10.3 | Spec=C5,5 | BV=+2.82 | Color=deep red |) A carbon star located at the edge of the open cluster NGC-6883, this is not a member of the open cluster but just appears in the same line-of-sight.

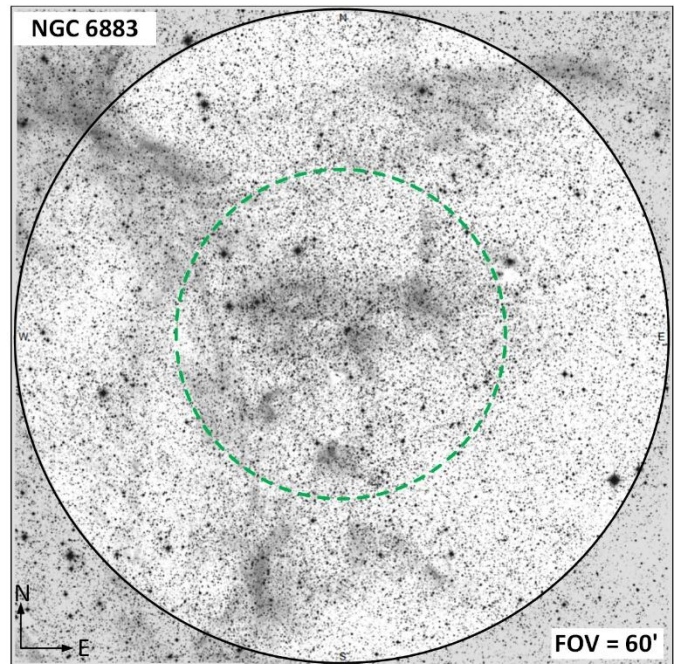
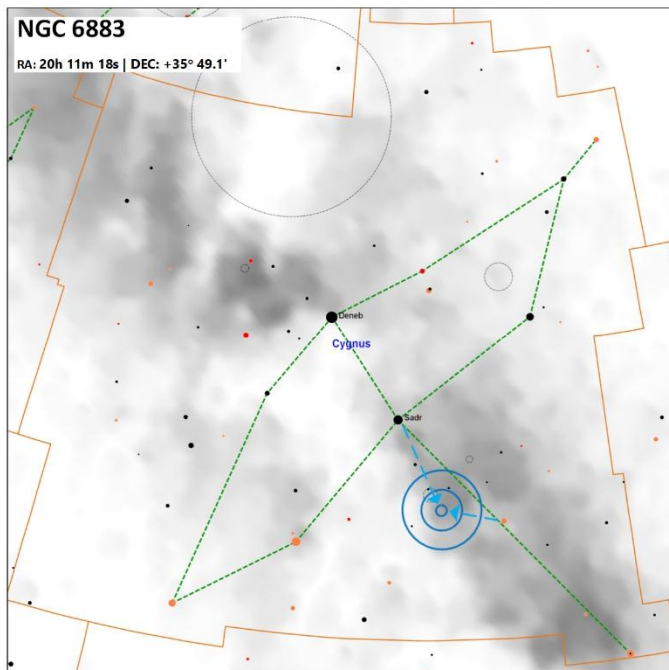


Constellation Guide

Trumpler 36 (OC || Mag=13.1 | Size=9' | SB=26.5 | MC=I1r n |) Located 20,000 light years away this open cluster is associated with a bright nebula. Trumpler classification is I-Detached with strong central concentration, 1-Most of the cluster stars are nearly the same brightness, r-Rich cluster with over 100 stars, n-Nebulosity associated with cluster.

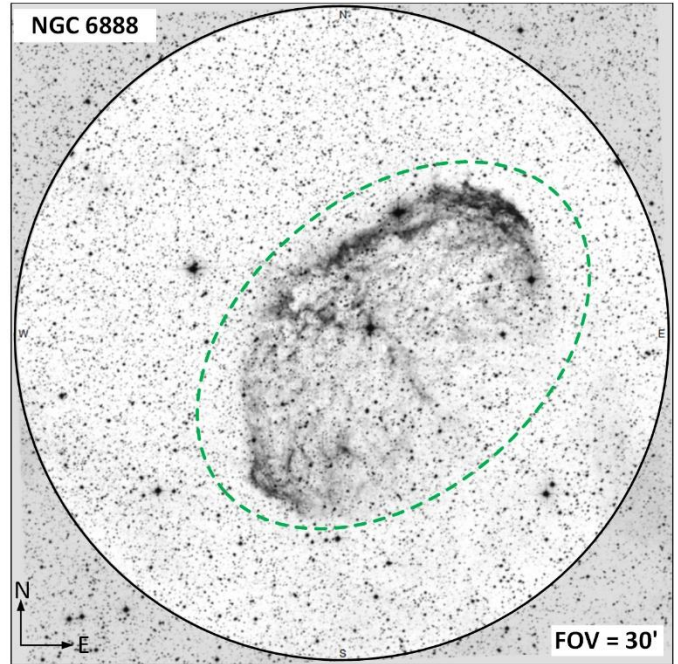
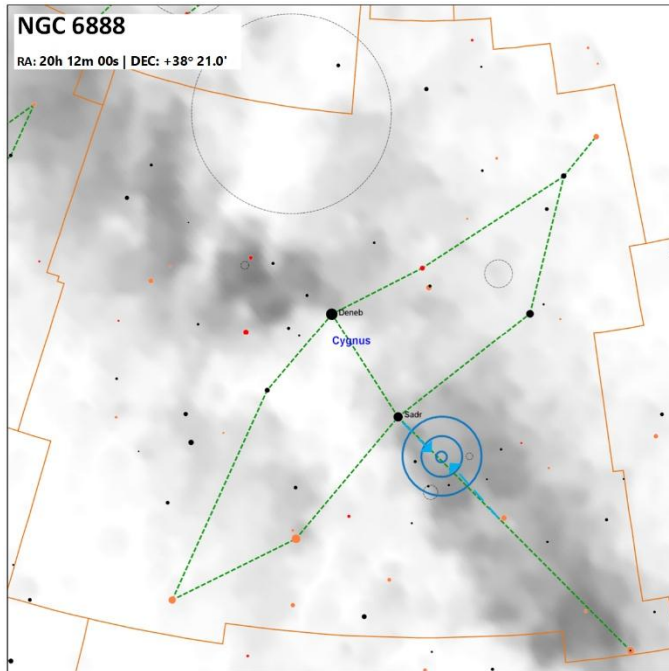


NGC 6883 (OC || Mag=7 | Size=30' | SB=23.0 | mBortle=9 | mApt=70mm | MC=IV2m n |) Located 4,500 light years away, this open cluster happens to have the carbon star RY Cygni superimposed on the corner of the open cluster (see above for details on RY Cyg). Trumpler classification is IV-Not well detached, 2-Medium range of brightness between stars, m-Medium rich cluster with 50-100 stars, n-Nebulosity associated with cluster.

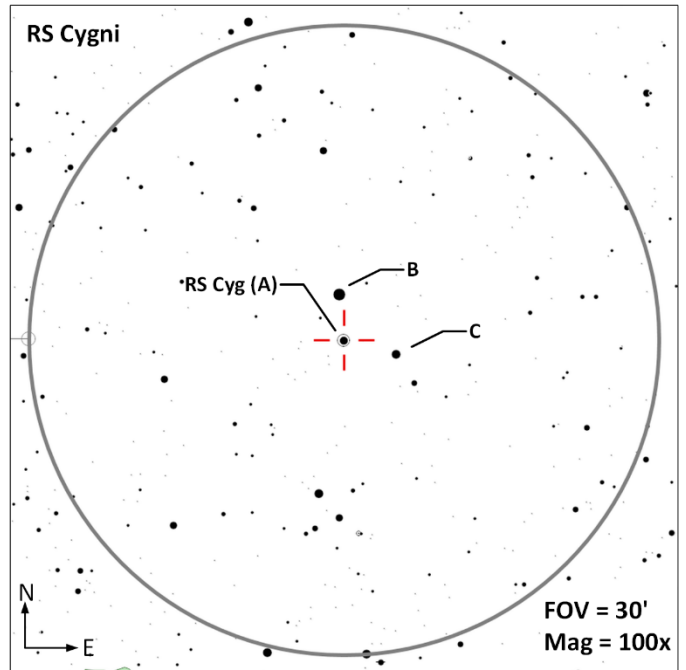
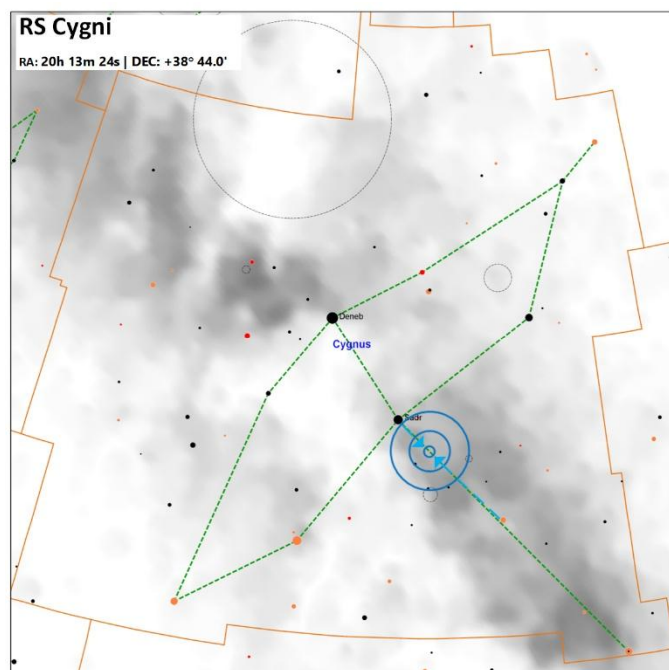


Constellation Guide

NGC 6888 (EN || Mag=7.4 | Size=18'x13' | SB=22.0 | mApt=200mm) The Crescent Nebula (Caldwell 27) is located 5,000 light years away and was formed by a fast stellar wind from a star colliding with and energizing the slower moving wind ejected by the star when it became a red giant. A telescope with 8" or more aperture along with the use of an O III or UHC filter is recommended for viewing this object.

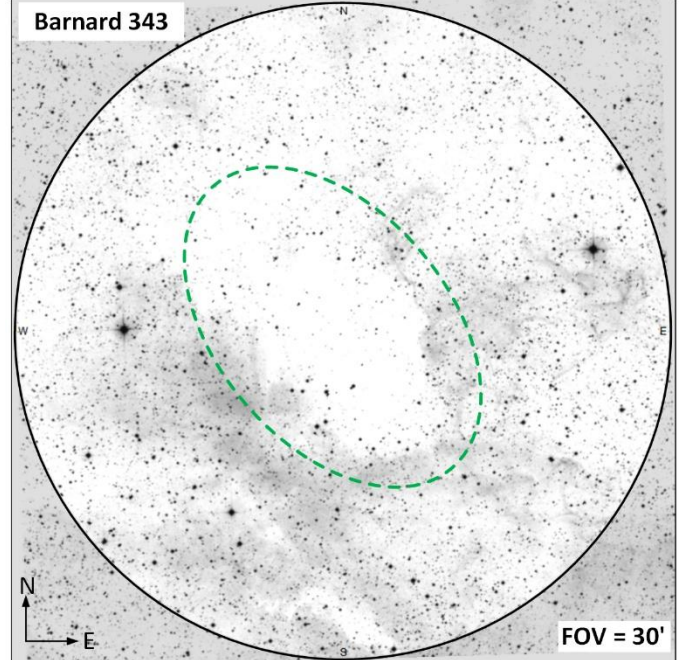
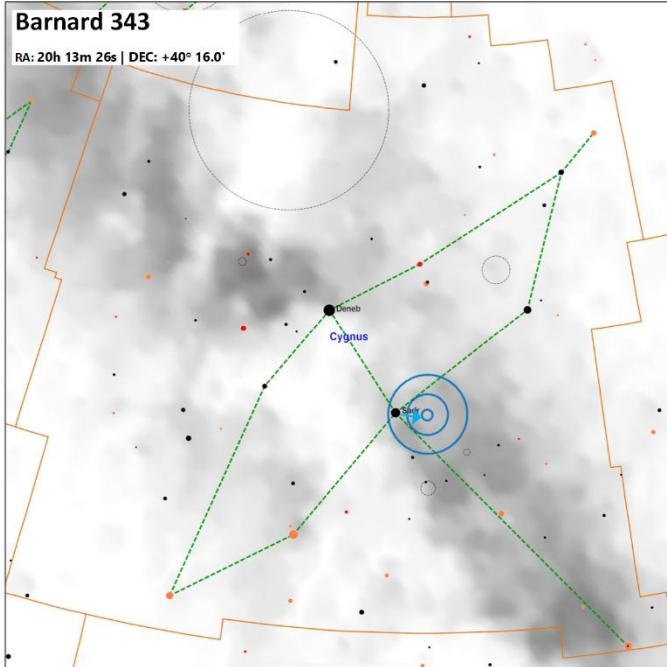


RS Cygni (CS || Magnitude Range= 6.5 to 9.5 | Spec=C8,2e | BV=+2.8 | Color=deep red || **AB** | Mag=8.0, 7.1 | Sep=132" | PA=354° || **AC** | Mag=8.0, 7.2 | Sep=154" | PA=106°) Located 1,546 light years away. This carbon star is part of a triple optical star system, none of the components are physically associated.

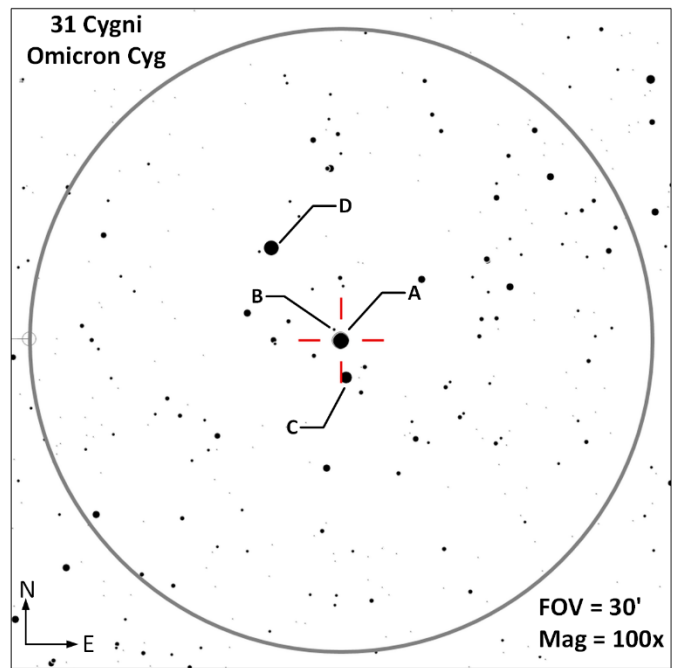
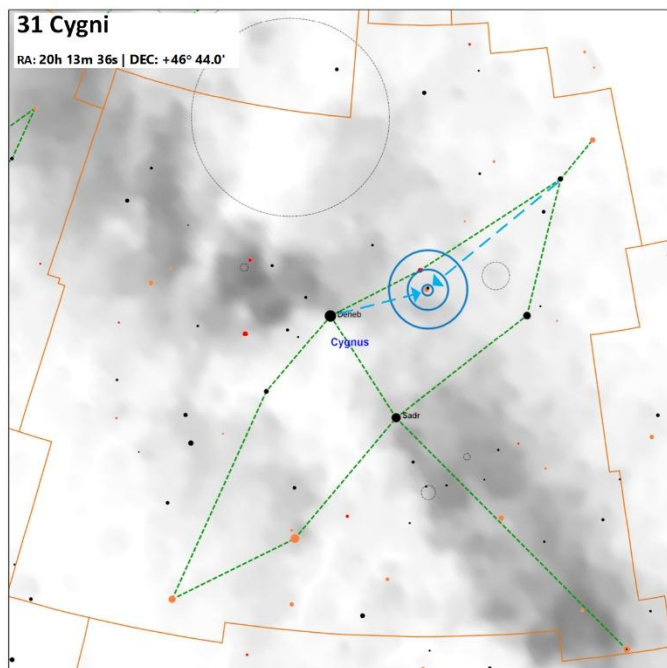


Constellation Guide

Barnard 343 (DN || Size=13' | mBortle=4 | mApt=50mm | Opacity=5 |) Located 2,283 light years away with a physical diameter of 7 light years this dark nebula has an opacity rating of 5.

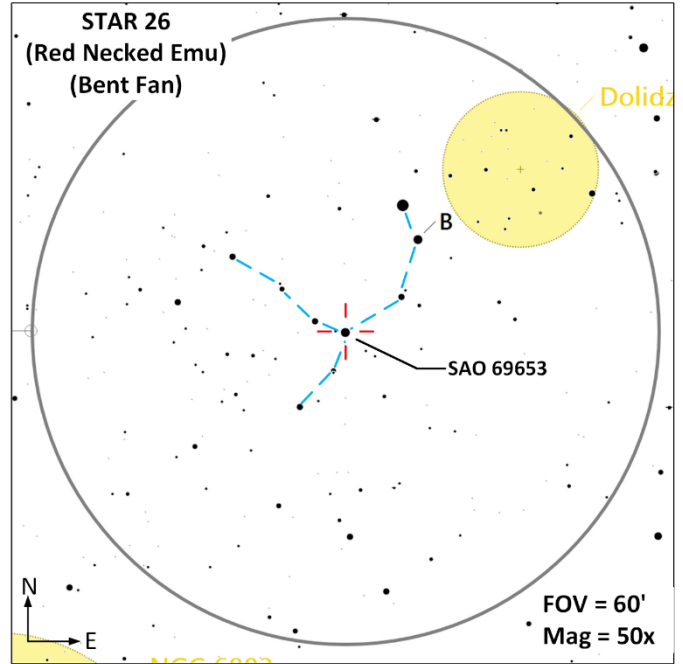
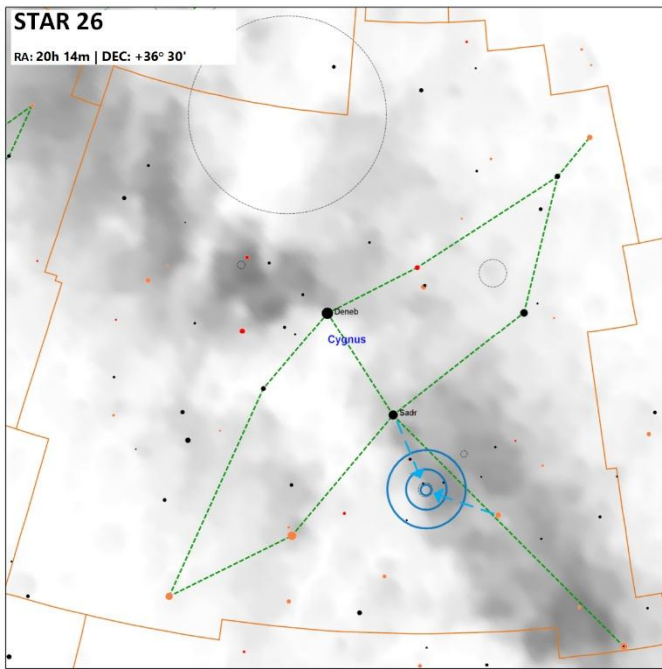


31 Cygni (MS-3 || AC | Mag=3.9, 7.0 | Sep=107" | PA=173° | mBortle=9 | mApt=50mm | Spec=K2II, ? | Color=orange, blue || AD | Mag=3.9,4.8 | Sep=336.7" | PA=322° | mBortle=9 | mApt=50mm | Spec=K2II, A5IIIIn | Color=orange, white |) The AC component in this system is reported to qualify this multiple star system on the RASC colored star list. Omicron Cyg is a wide multiple star system and a great target for both binoculars and telescopes.

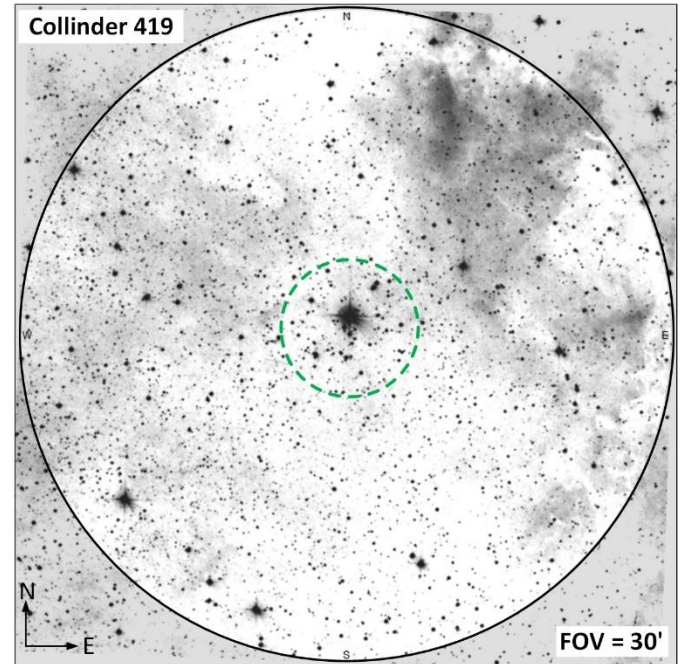
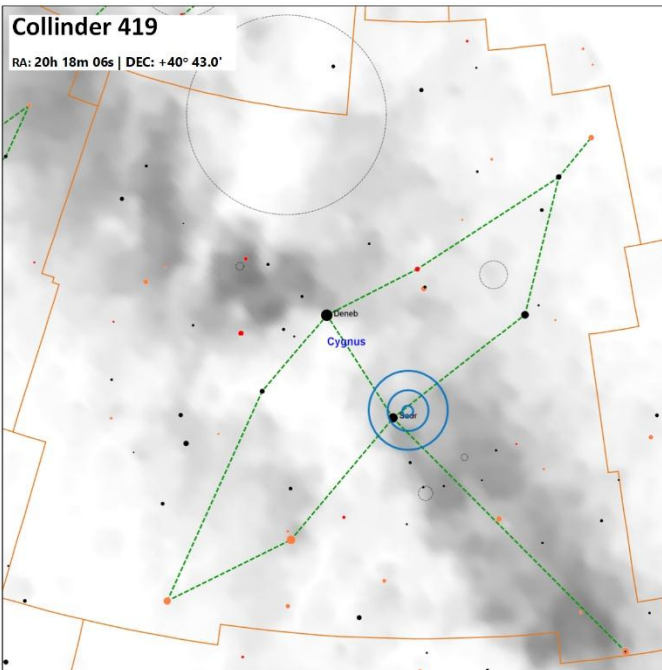


Constellation Guide

STAR 26 (AS || Size=45' | Stars=12 | Ref Star: SAO-069653; HIP 99719 |) The Red Necked Emu consists of mostly 9th magnitude blue/white stars except for one orange star that is in the neck. Another name of this asterism is Bent Fan, maybe more representative of its shape.

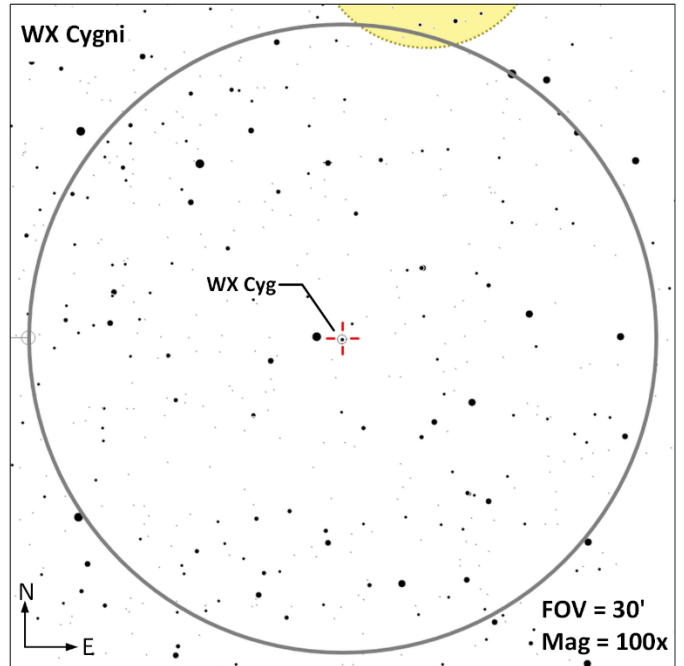
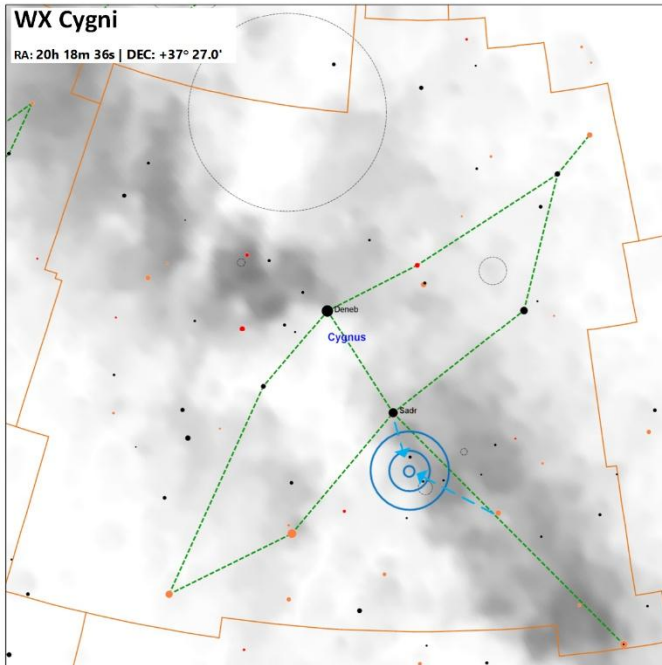


Collinder 419 (OC || Mag=5.4 | Size=4.5' | SB=17.3 | mBortle=9 | mApt=50mm | MC=IV2p |) Located 2,414 light years away with a physical diameter of three light years. This small open cluster has a Trumpler classification of: IV-Not well detached, but strong field concentration, 2-Medium range of brightness between stars, p-Poor cluster with less than 50 stars.

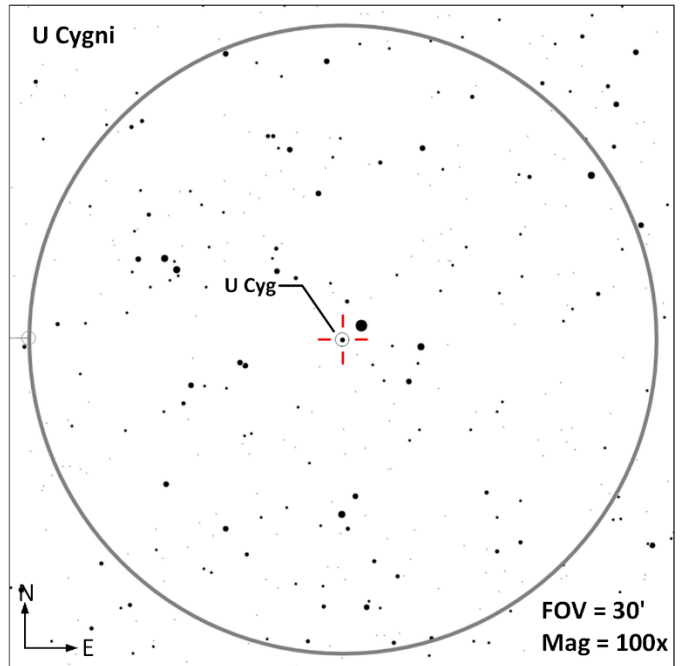
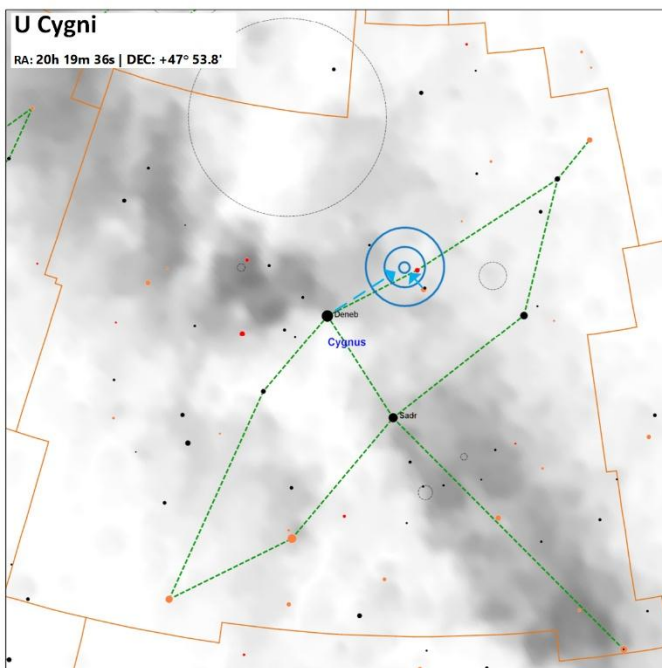


Constellation Guide

WX Cygni (CS || Magnitude Range= 8.8 to 13.2 | Period=1.1y | Spec=C8,2JLi | BV=+2.59 | Color=deep red |)
Carbon star with a BV color index of 2.59.

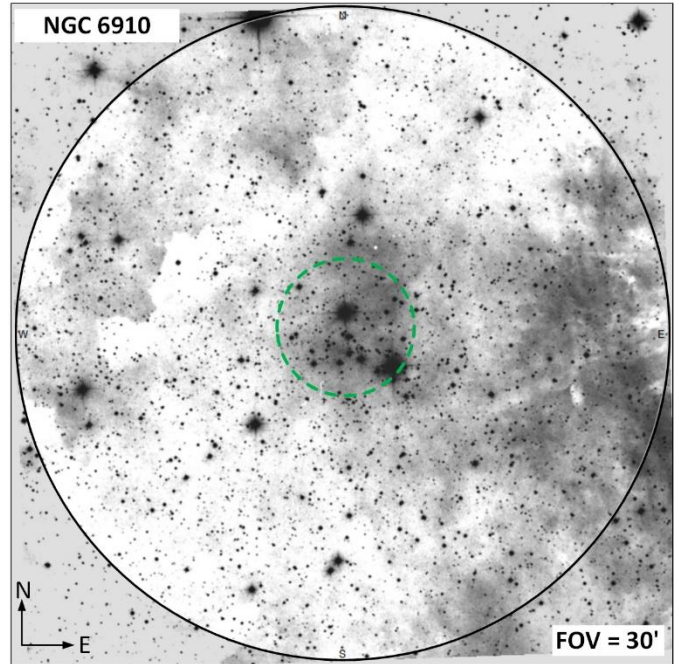
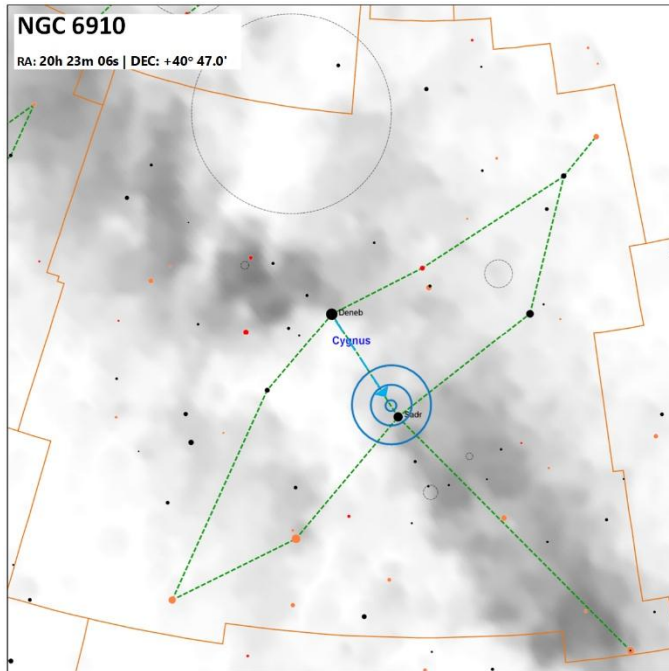


U Cygni (CS || Magnitude Range= 7 to 12.1 | Period=1.27y | Spec=C8,2e | BV=+2.81 | Color=deep red |)
Located 1,690 light years away this is a pulsating Mira-type variable star with a period of 463 days.

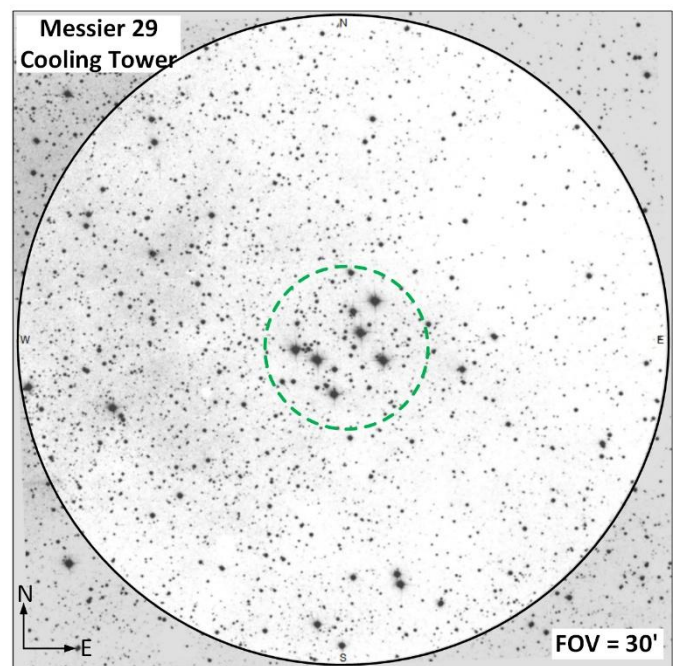
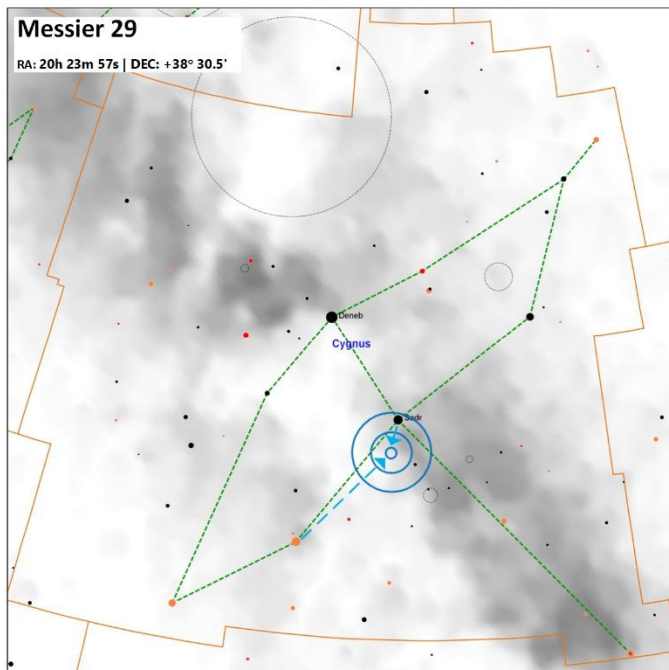


Constellation Guide

NGC 6910 (OC || Mag=7.4 | Size=7' | SB=20.3 | mBortle=9 | mApt=102mm | MC=I3m n |) The Inchworm Cluster is an open cluster and may be physically related to the nebula IC-1318 (Gamma Cygni Nebula). The cluster has a physical radius of 13.7 light years with an estimated 280 member stars. This cluster appears on the RASC Deep Sky Gems list.

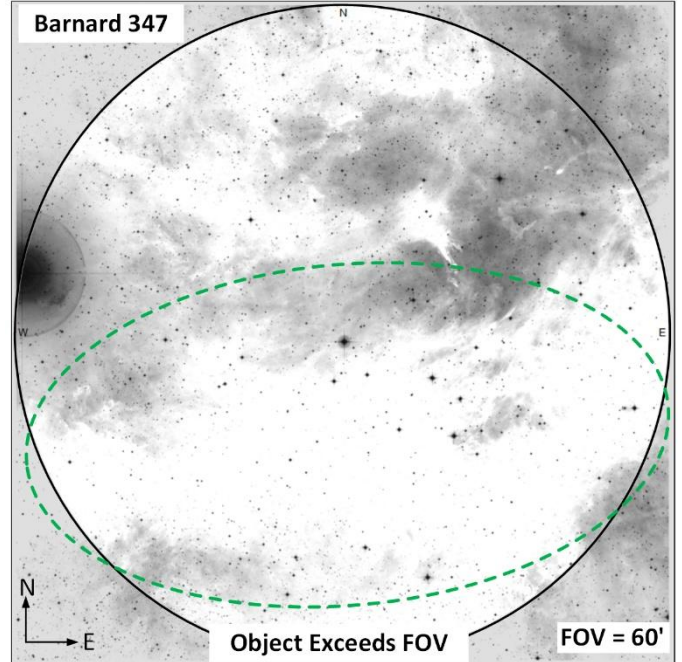
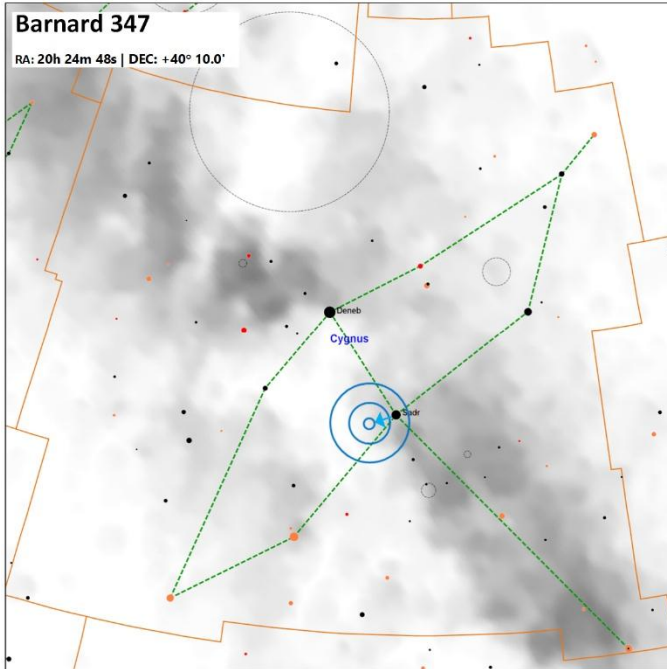


Messier 29 (OC || Mag=9 | Size=7' | SB=21.9 | mApt=180mm | MC=III3p |) The Cooling Tower Cluster is a small bright cluster and located between 4,000 and 7,000 light years away and part of the Cygnus OB1 association. Trumpler class III-Detached with no noticeable concentration, 3-Composed of bright and faint stars, p-Poor cluster with less than 50 stars.

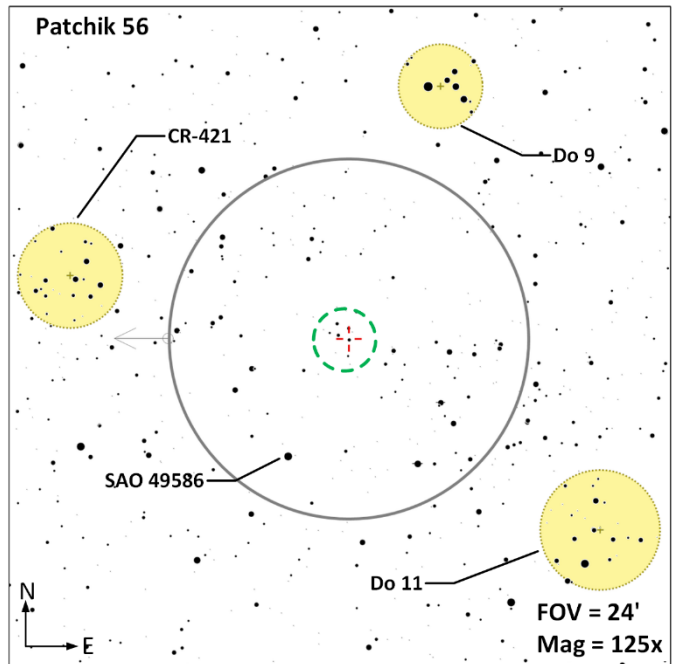
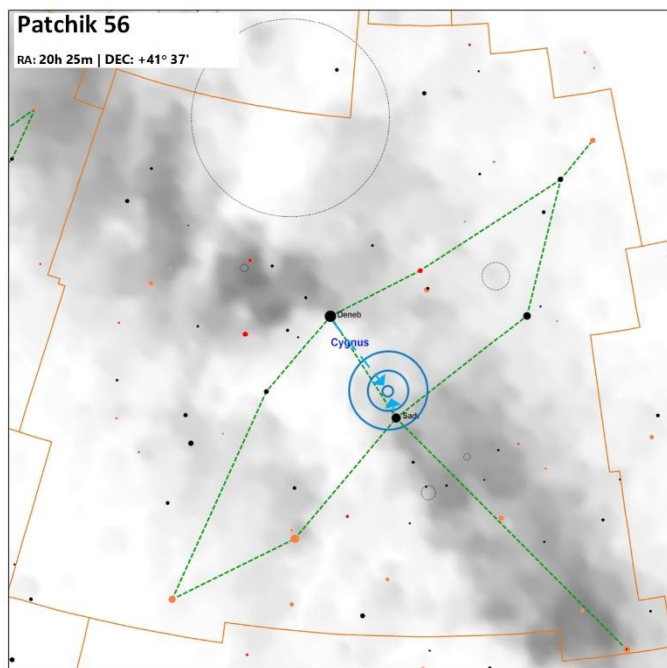


Constellation Guide

Barnard 347 (DN || Size=100'x20' | mBortle=4 | mApt=50mm | Opacity=4 |) A large dark nebula best viewed with binoculars.

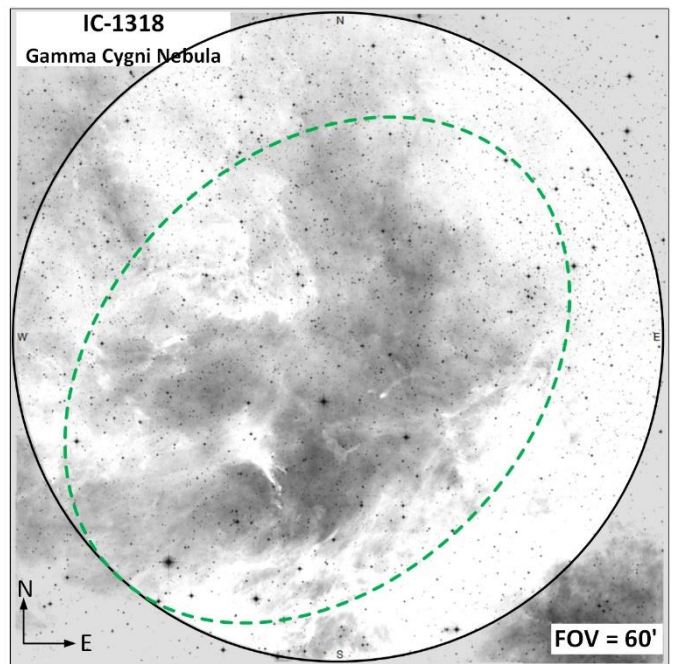
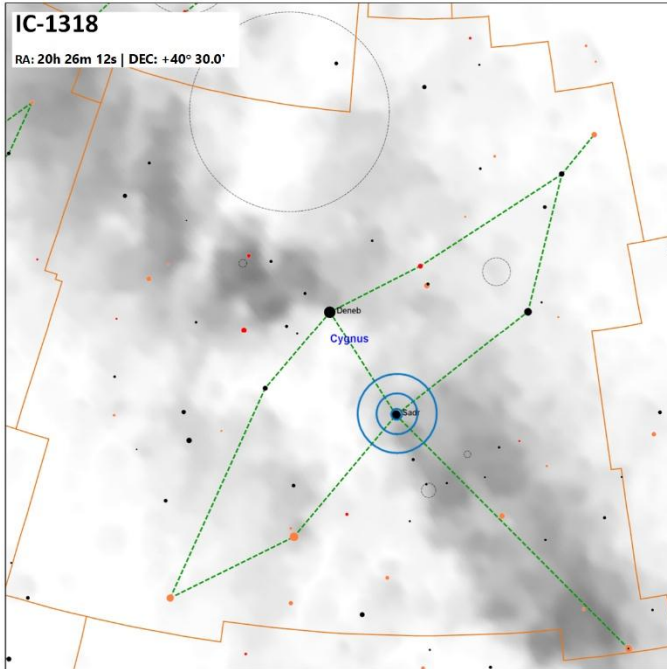


Patchik 56 (AS || Size=3.3'x2.2' | Stars=6 | Ref Star: SAO 49586; HIP 100660 |) Small grouping, 2 stars above 4 stars forms a trapezoid. Sue French, S&T 09/12, p. 60: "while observing this area with my 10-inch scope at 68x, I noticed a distinctive little asterism halfway between and a little north of an imaginary line connecting DoDz 11 and Col 421...Six faint stars form a 2.4'-long group like a leaping dolphin." At 213x four more stars are visible.

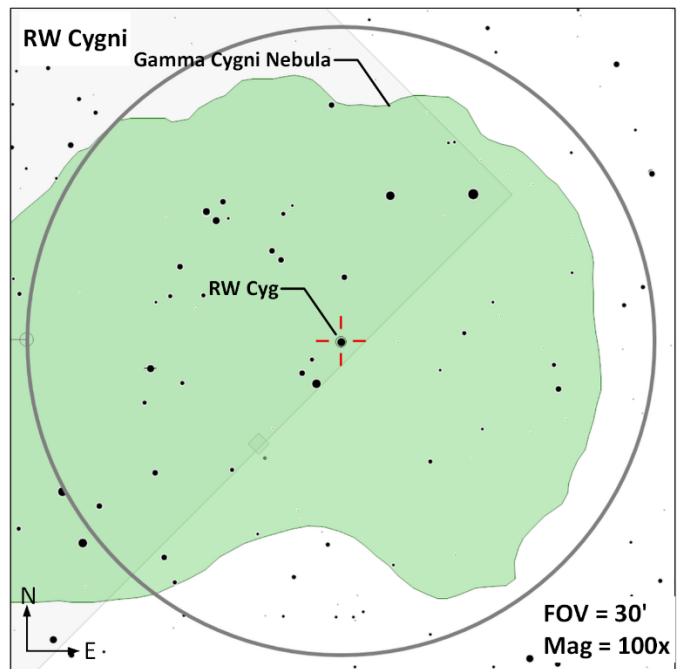
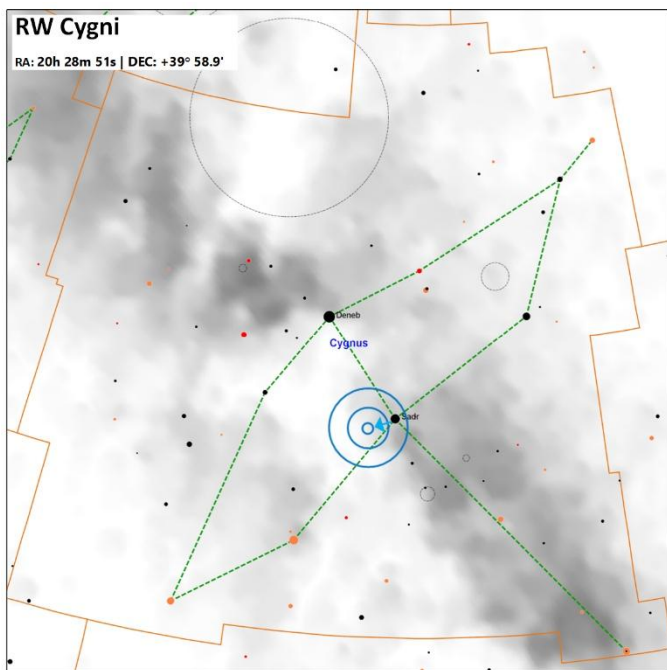


Constellation Guide

IC 1318 (EN || Mag=10.0 | Size=40'x20' | SB=25.9 | mApt=80mm |) The Gamma Cygni Nebula derives its name from surrounding the star Gamma Cygni (Sadr). Sadr is actually not part of the nebula but a foreground star. Estimated distance to IC 1318 is 2,000 to 5,000 light years. Utilization of a UHC filter may help when viewing this object. Low power and a wide field is best for viewing this, large binoculars may be ideal.

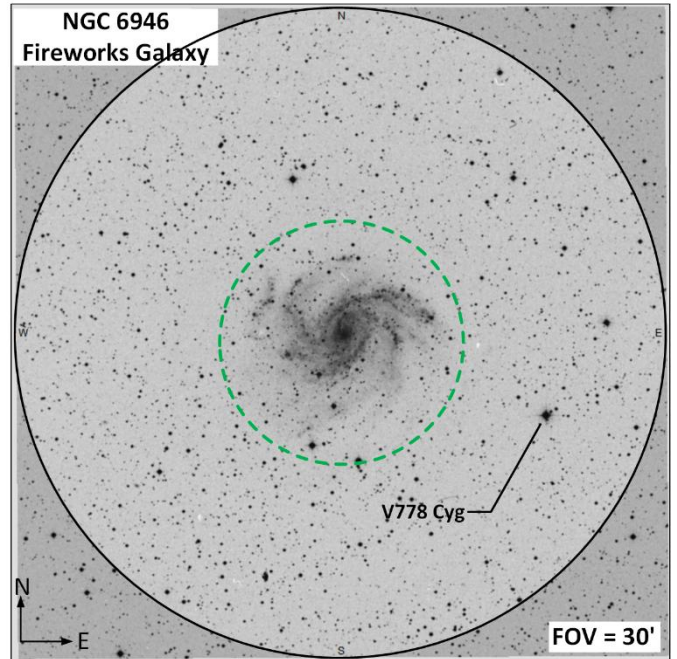
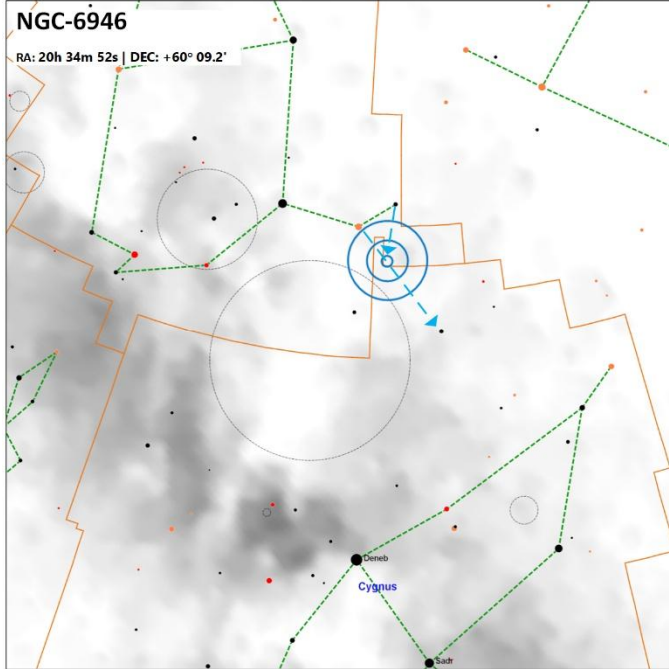


RW Cygni (CS || Magnitude Range= 8.3 to 9.7 | Period=1.5y | Spec=M3-4Ia-Iab | BV=+2.9 | Color=orange-red |) A semiregular variable red supergiant star with a period of 550 days or more. This star is located 2,548 light years away.

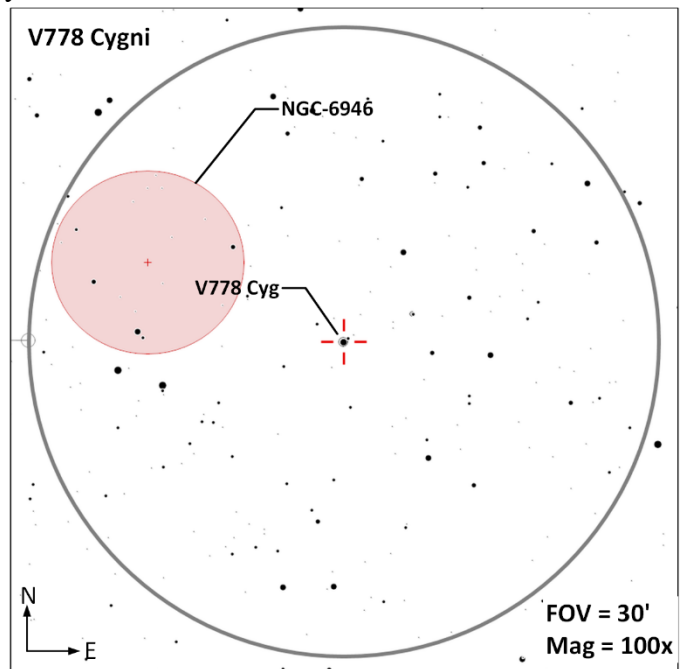
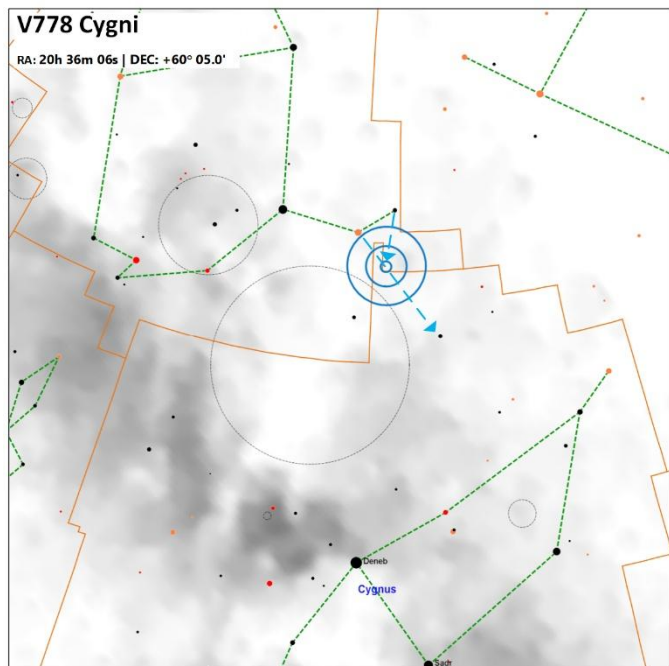


Constellation Guide

NGC 6946 (G || Mag=9.7 | Size=11.2'x9.8' | SB=23.4 | mBortle=1 | MC=SAB(rs)cd ||) The Fireworks Galaxy is a face-on spiral galaxy 25.2 million light years away and a member of the [Virgo Supercluster](#). Due to its prodigious star formation NGC 6946 is classified as a [starburst galaxy](#). NGC 6946 is also classified as a double-barred spiral galaxy with the inner, smaller bar suspected of funneling gas into its center. The carbon star V778 Cygni is located right next to this galaxy (in the line of sight).

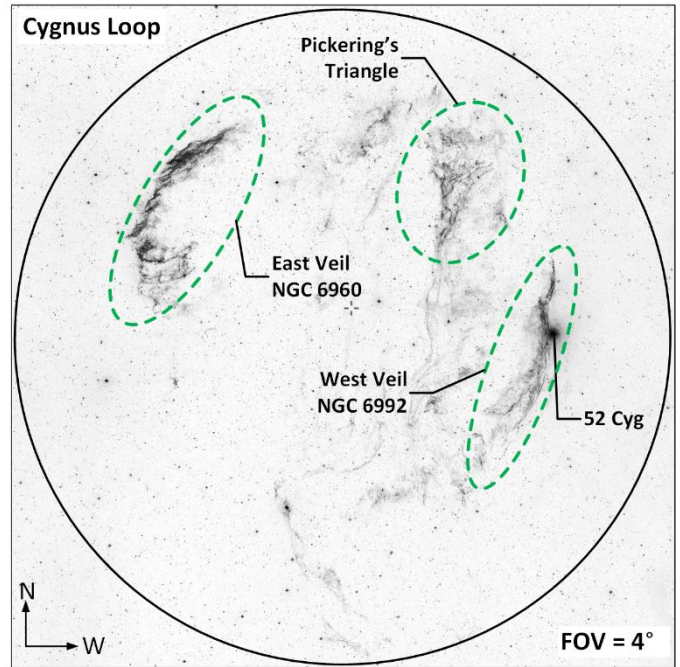
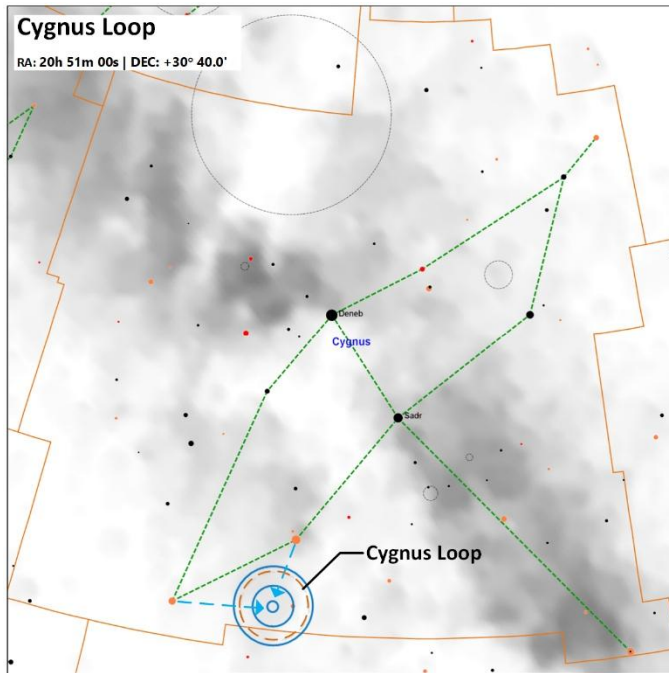


V778 Cygni (CS || | Vis Mag = 10.0 | Magnitude Range(p) = 11.6 to 13.5 | Spec=C4,5J | BV=+4.4 | Color=deep red ||) A pulsating long-period variable star with an unknown period. Located right next to the galaxy NGC-6946. With a BV color index of +4.4 this should be a very red star.



Constellation Guide

The Cygnus Loop



The Cygnus Loop is a supernova remnant, the expanding debris shell and shock front from a single supernova that is estimated to have occurred somewhere between 10,000 and 20,000 years ago. It consists of the Western Veil (NGC 6960), Eastern Veil (NGC 6992) and Pickering's Triangle (Simeis 3-188), linked by fainter connecting nebulosity.

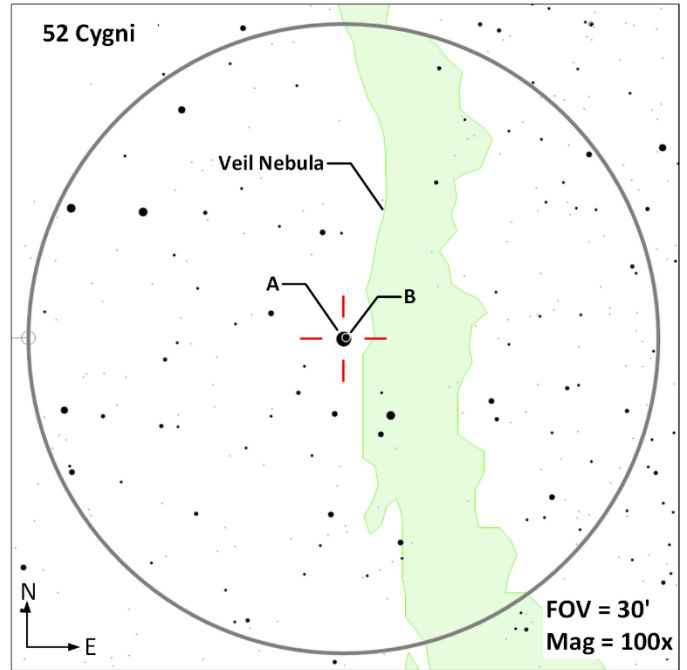
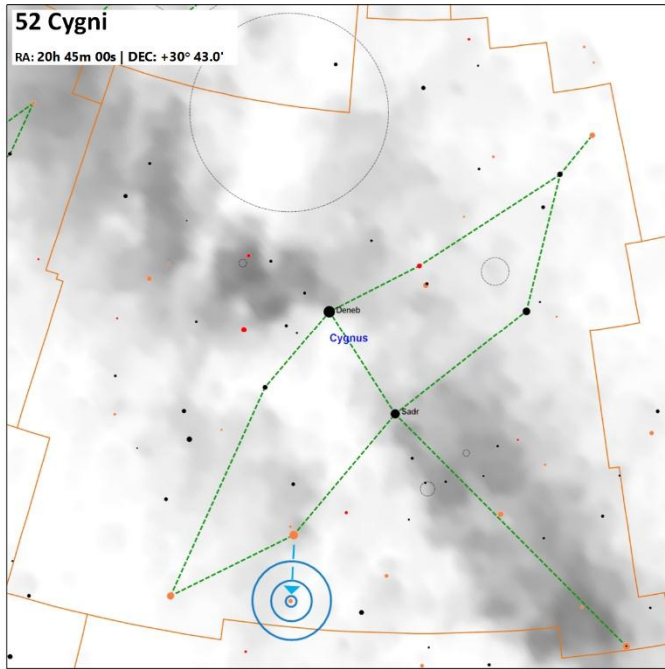
The progenitor was a massive star, roughly 12–20 solar masses, that ended its life as a core-collapse supernova. The remnant is currently more than 120 light-years across and still expanding at hundreds of kilometers per second. In another few tens of thousands of years, it will have dissipated into the general interstellar medium.

Observing the Loop: Critical to observations of the Loop and objects within the Loop is an Oxygen III filter that isolates the doubly-ionized oxygen emission abundant in this object. Dark skies, a wide field of view and optimally an optical system with an eyepiece yielding a 3 to 6mm exit pupil will show the most detail in the Loop's filaments.

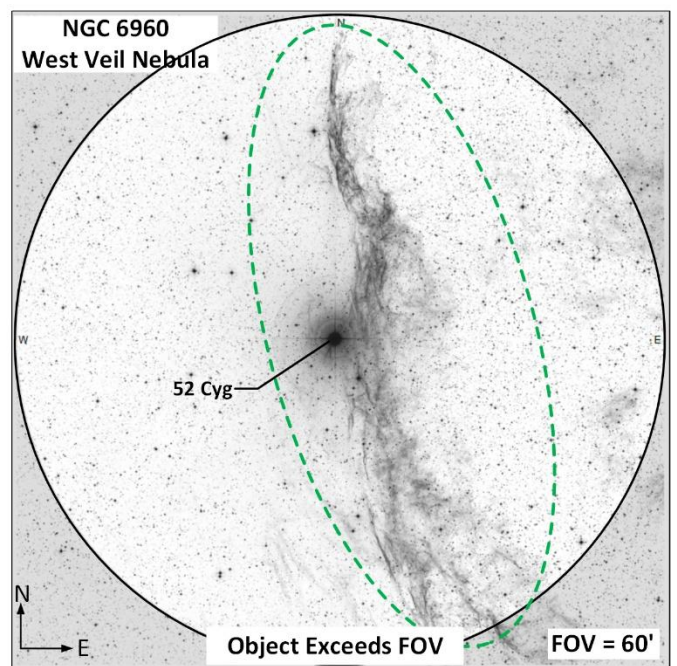
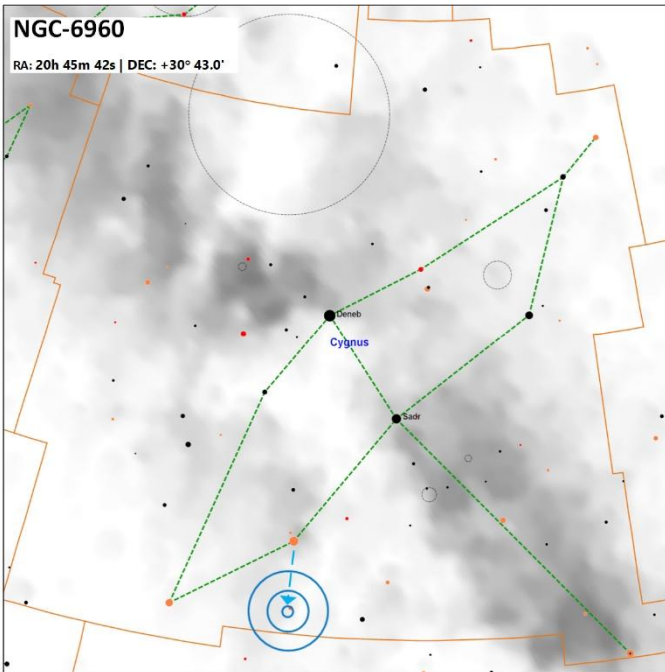
Note: 52 Cygni is included in this group; however it is not part of the Loop, but a star that happens to be superimposed on the West Veil nebula.

Constellation Guide

52 Cygni (DS || **AB** | Mag=4,9 | Sep=5.8" | PA=74° | mBortle=9 | mApt=50mm | Spec=K0III, ? | Color=yellow-orange, blue |) Listed in the RASC colored double stars list. Located 201 light years away and is located next to the Veil Nebula (See below).

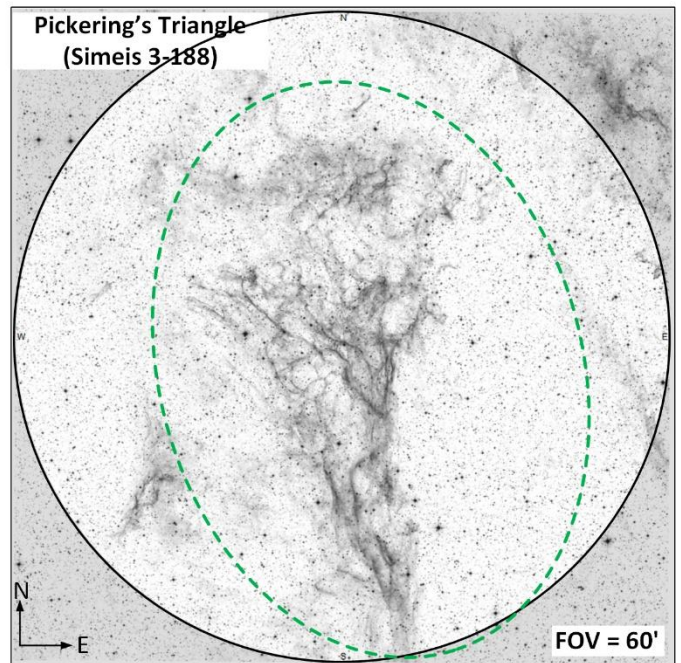
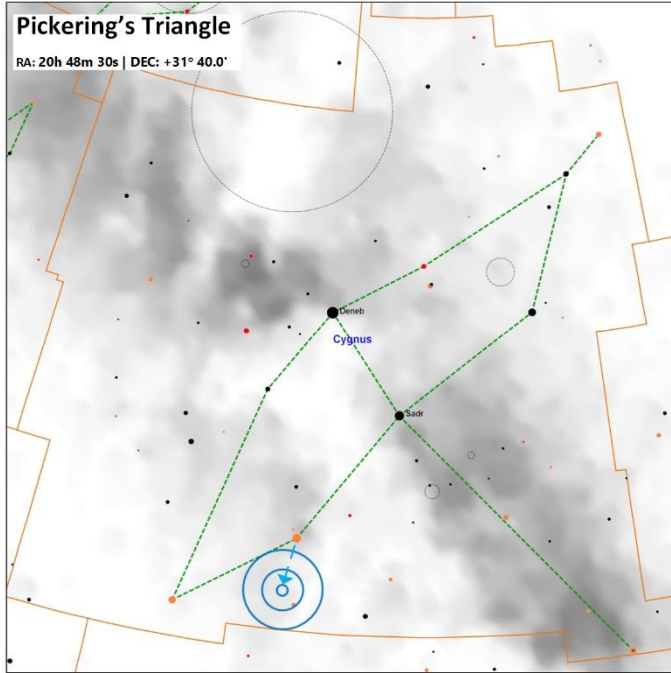


NGC 6960 (SNR || Mag=5 | Size=70'x6' | SB=20.2 |) The West Veil Nebula, also called the Witch's Broom is part of the Cygnus Loop, a supernova remnant best viewed with an O III filter that can be remarkably effective in dark skies on the various objects that make up the Cygnus Loop.

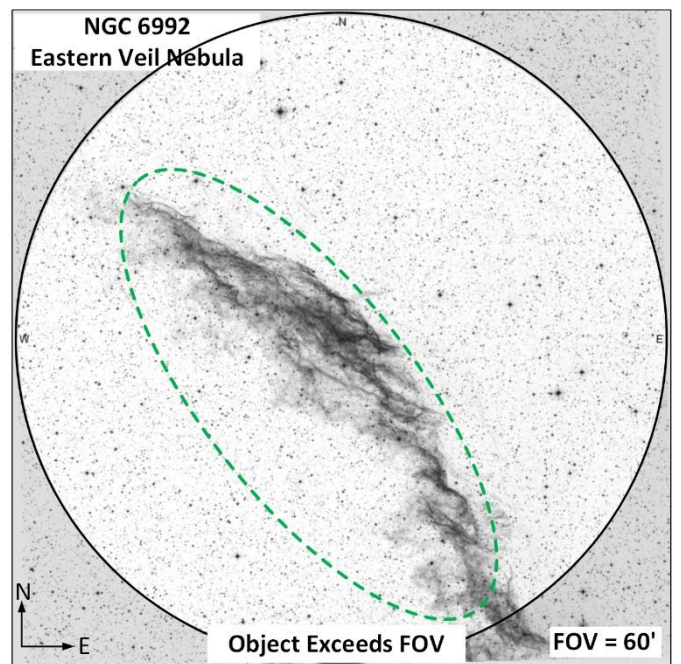
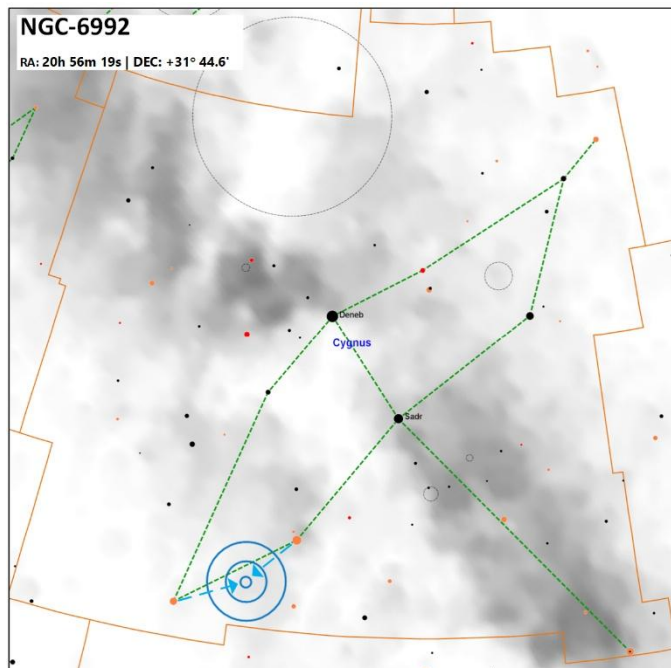


Constellation Guide

Pickering's Triangle (SNR || Size=45'x30' | SB=23.5 | Ref Star: TYC 2687-1442-1 |) While Simeis 3-188 is quite popular for astrophotographers, there are not many references to this object in visual astronomical references. It is commonly referred to as NGC-6979 or NGC-6974. Both of these references are incorrect since this was not discovered until after the NGC catalog was compiled. Observations have been recorded in dark skies with telescopes as small as 80mm aperture utilizing an O III filter.

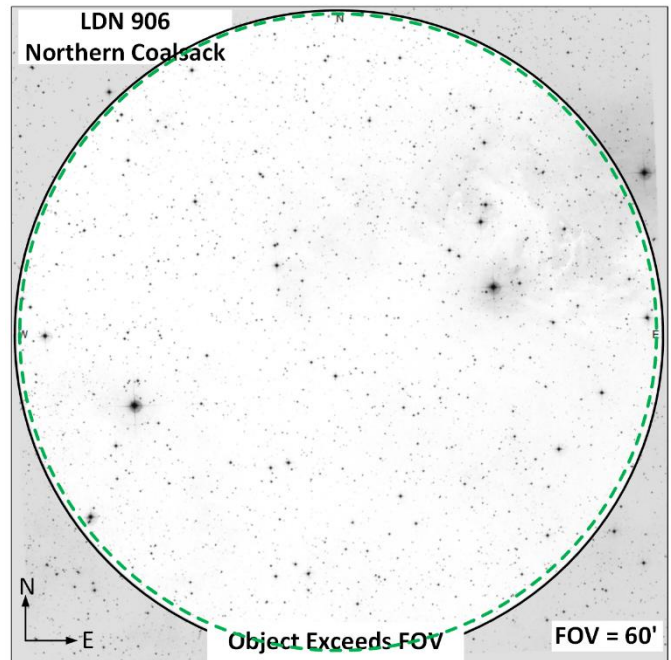
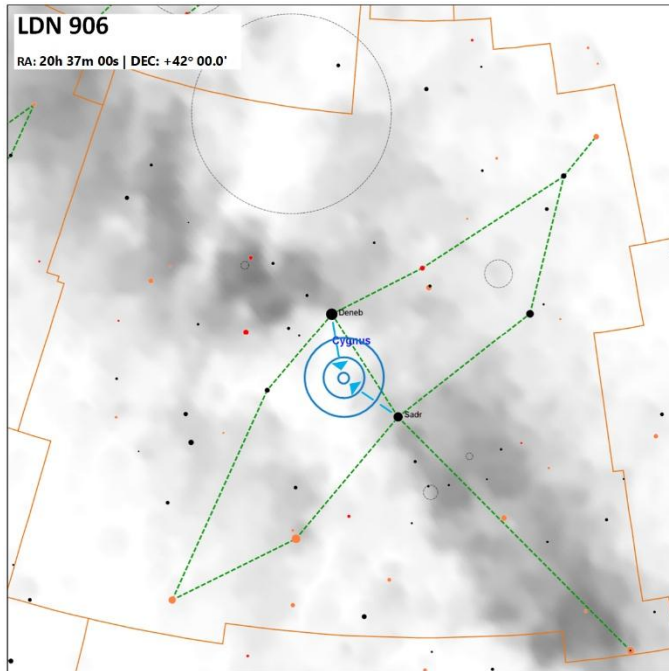


NGC 6992 (SNR || Mag=7.5 | Size=60'x8' | SB=22.8 |) The Eastern Veil Nebula is also known as the Cirrus Nebula and is part of the Cygnus Loop, a supernova remnant best viewed with an O III filter that can be remarkably effective in dark skies on the various objects that make up the Cygnus Loop.

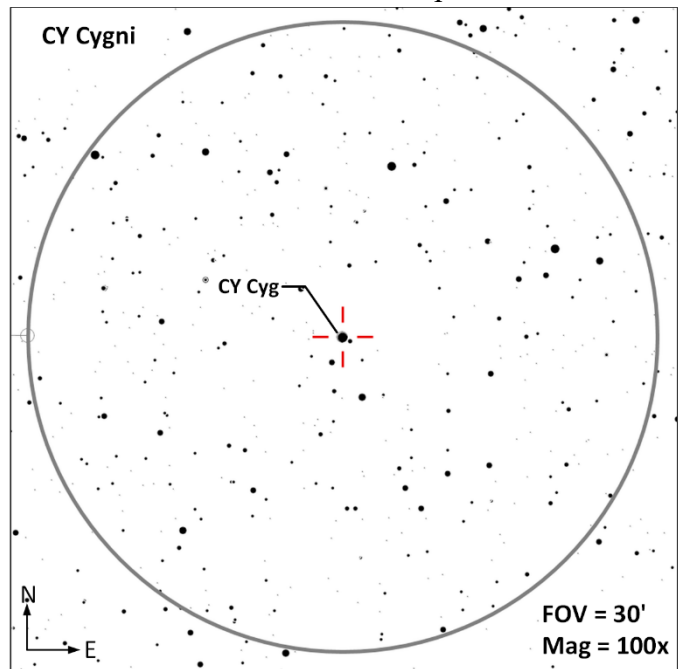
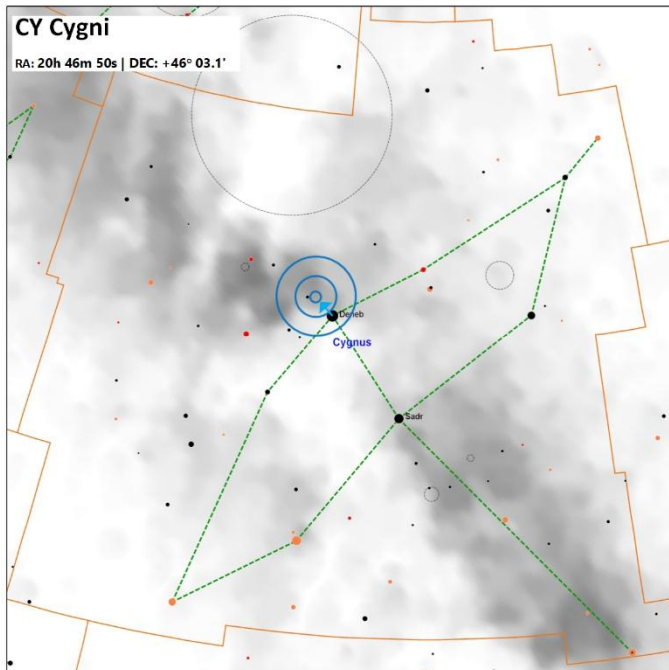


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LDN 906 (DN || Size=238' | Opacity=3 |) The Northern Coalsack may be more appreciated with some wide field binoculars or even as a naked eye object since it spans an area of almost 4° and marks the beginning of the Great Rift, a chain of overlapping molecular clouds that splits the Milky Way from Cygnus all the way down through Aquila, Serpens, and Ophiuchus toward Sagittarius.

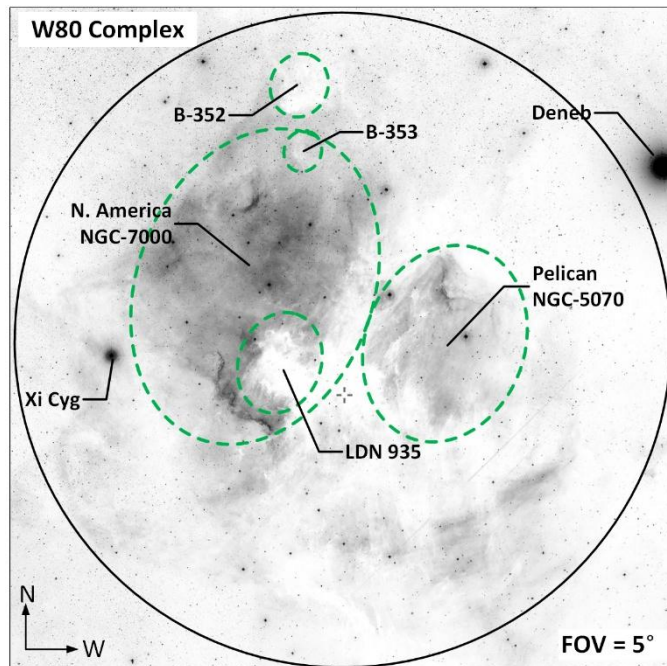
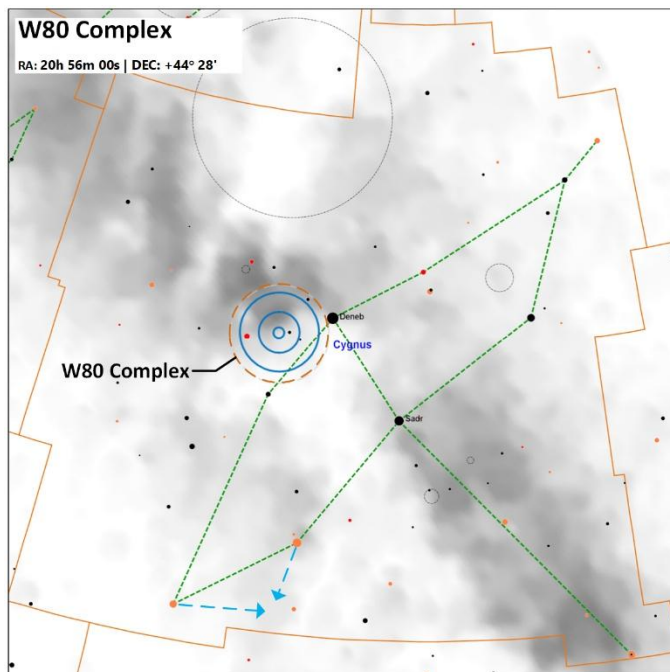


CY Cygni (CS || Vis Mag=8.3 | Magnitude Range(p)= 11.0 to 11.7 | BV=+2.75 | Spec=SC | Color=red |) Located 398 light years away and is a pulsating long-period variable star with an unknown period.



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The W80 Complex



The W80 complex was first cataloged by the Dutch radio astronomer Gart Westerhout, who in 1958 detected it as a strong radio source covering 3° of sky. The area encompasses the North America Nebula (NGC 7000) and the Pelican Nebula (IC 5070) — the east and west components of a single H II region — along with dark nebulae including LDN 935, Barnard 352, and Barnard 353. The bright nebulae are bisected in projection by the dark lane L933/935, which is what creates their characteristic optical shapes. Stewart Sharpless reached the same conclusion from the Palomar plates in 1959, cataloging both nebulae together as a single object, Sh2-117: visually distinct 'objects' that are really one ionized bubble plus one foreground molecular cloud. The continent and the pelican are an illusion of shadow; the dark lane is the physically coherent thing.

For decades nobody could find the ionizing star responsible for illuminating the nebula. Herbig suggested in 1958 that the true ionizing star must be hiding behind the L935 dust cloud itself. He was right, but it took nearly half a century to prove: the source was finally identified in 2005 by Comerón and Pasquali — a highly reddened O5 star, buried behind roughly 9.6 magnitudes of visual extinction in LDN 935, and remarkably isolated, with no other massive stars near it. Think about that extinction figure: a star intrinsically among the most luminous in the local Milky Way, dimmed ten thousand-fold by the very cloud complex it was born from. Follow-up spectroscopy in 2016 revealed the star is actually a binary — an O3.5 giant paired with an O8 companion — and christened it the Bajamar Star, after the original Spanish name for the Bahamas, in keeping with the nebula's geography.

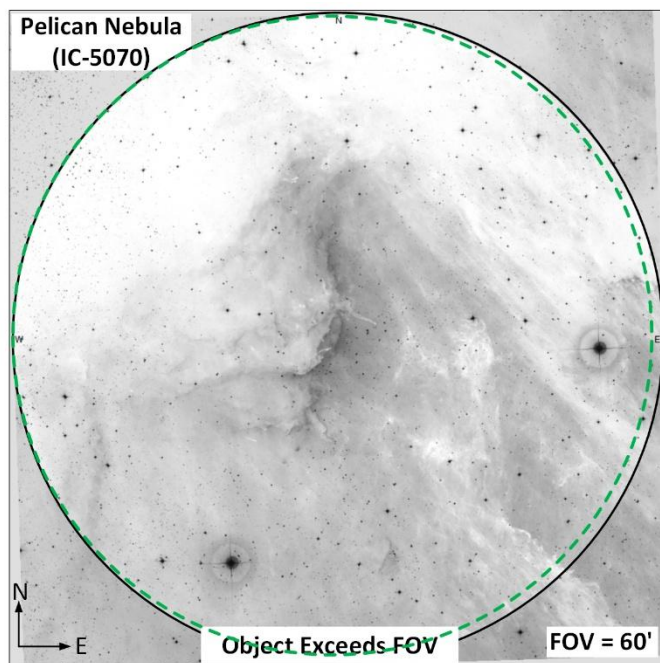
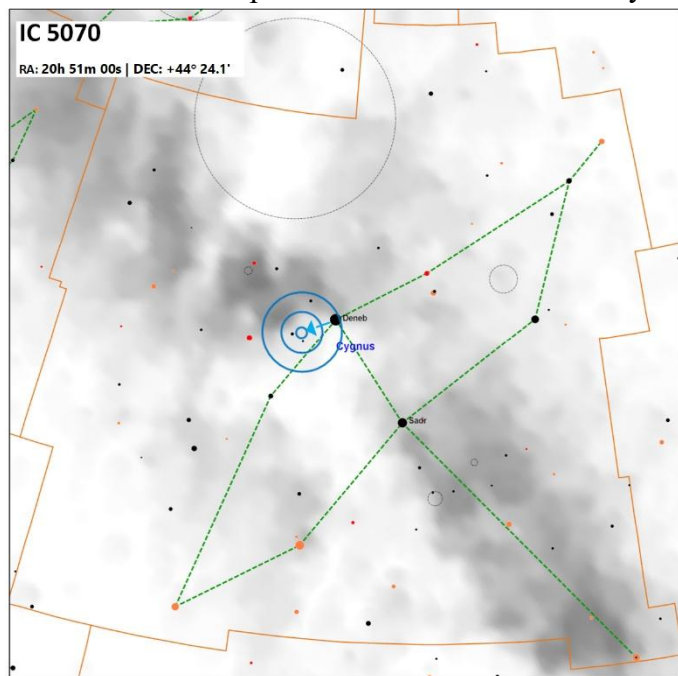
The complex is the nearest major massive-star-forming region after Orion. Spitzer surveys discovered more than 2,000 young stellar object candidates, with the majority concentrated inside LDN 935 rather than in the bright nebular regions — the dark lane is where the action is. The molecular gas totals tens of thousands of solar

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masses, with cold ~ 10 K gas throughout and warmer >20 K gas outlining the cloud edges where the H II region is heating them, and the whole cloud shows an expanding-shell structure around the ionized gas. Recent high-resolution CO mapping shows the Bajamar Star actively dispersing the molecular clouds with bright-rimmed edges pointing back toward the star like weathervanes. Barnard 352 and Barnard 353 sit on the northern edge of all this, pieces of the same cloud system being dispersed by the Bajamar Star.

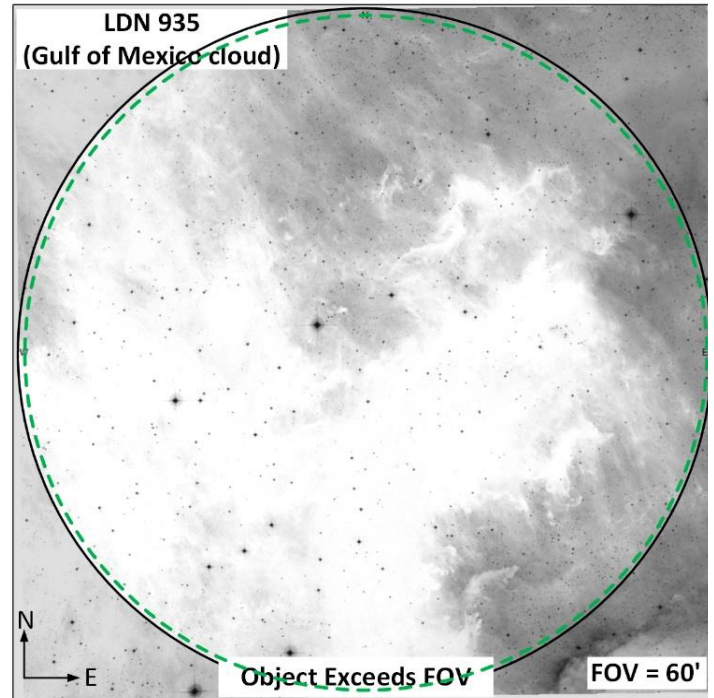
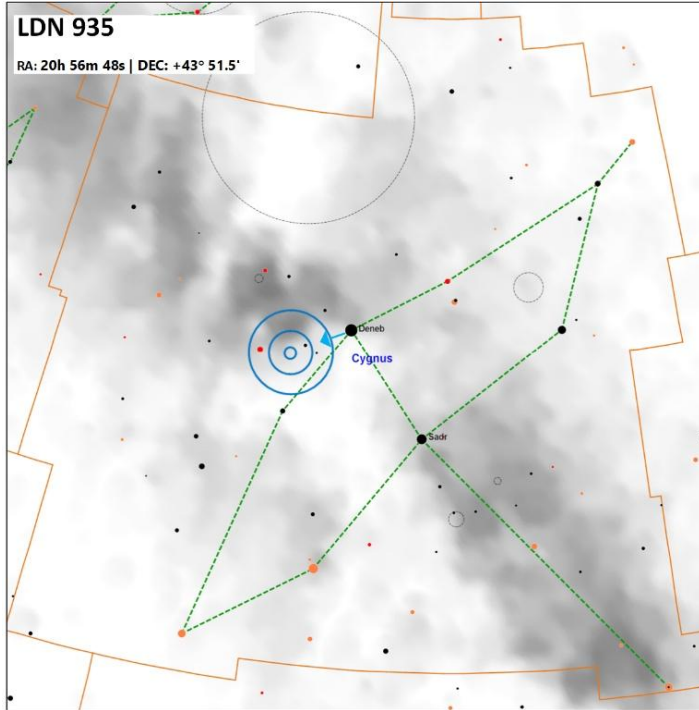
Observations: A dark sky and a UHC filter are recommended. Binoculars are the ideal instrument for taking in the entire 3° complex, while a rich-field telescope at low power provides a pleasing view of the individual components.

Pelican Nebula (EN || Size=80'x70' | Mag=8.0 | SB=26.0 |) A large emission nebula with the shape of a pelican. Part of the W80 complex. Use of a UHC filter may help bring out details of this nebula.

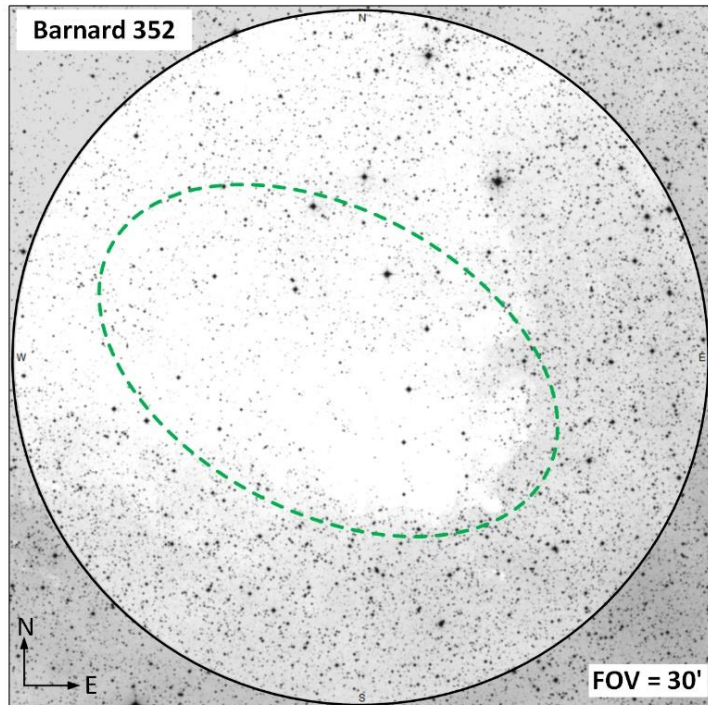
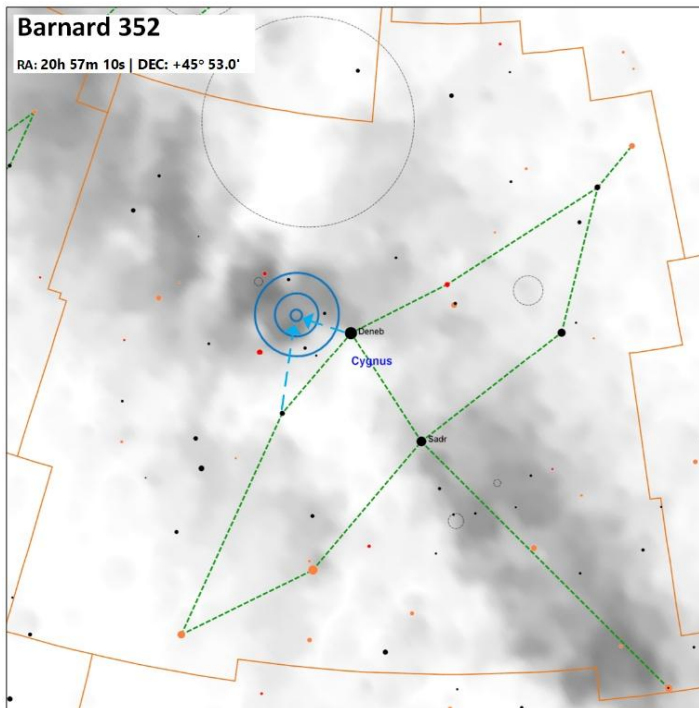


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LDN 935 (DN || Size=90'x90' | Opacity=4 |) Part of the W80 complex. The Gulf of Mexico cloud is the dark nebula that sculpts out the Gulf shape of the North America Nebula.

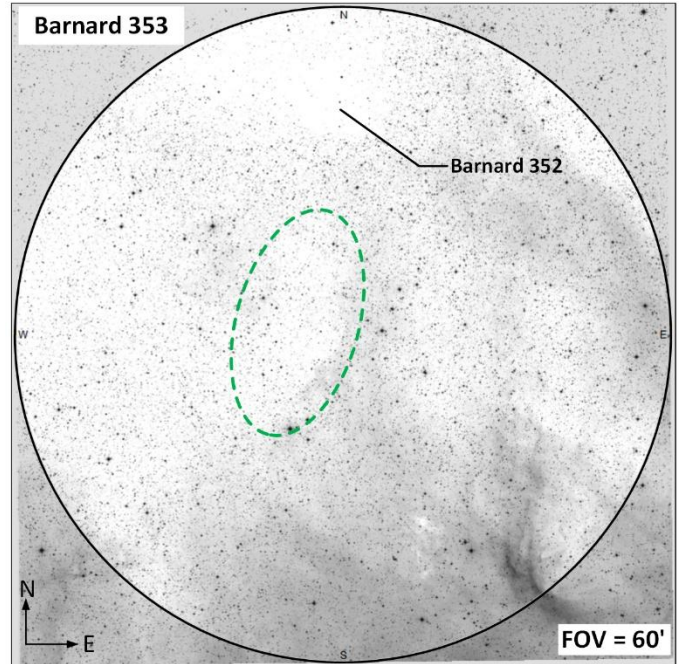
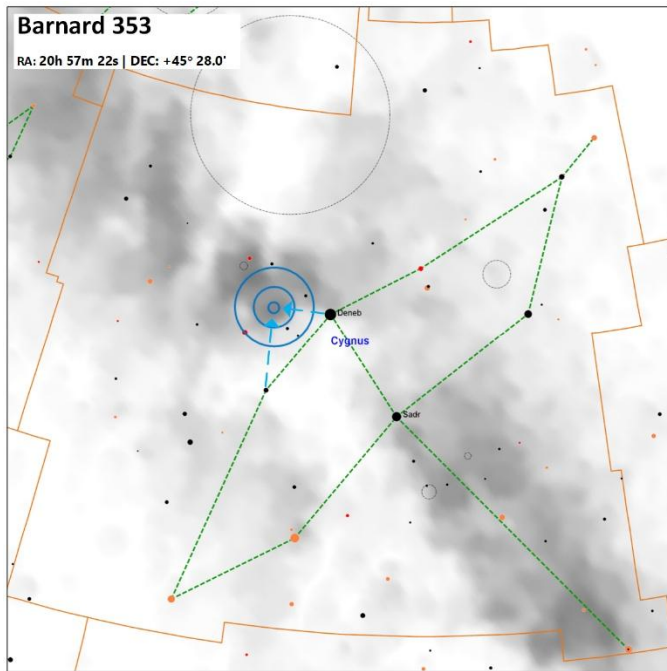


Barnard 352 (DN || Size=19'x19' | Opacity=5 |) This dark nebula is part of the W80 complex just north of Barnard 353.

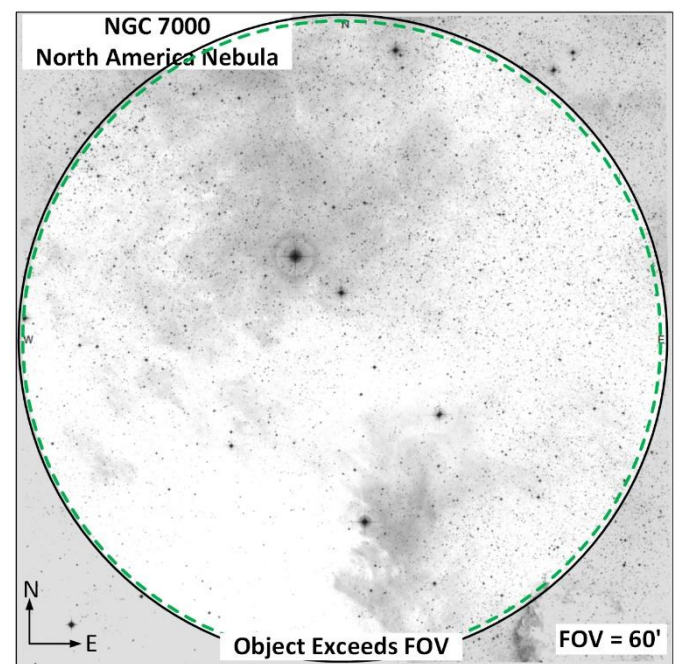
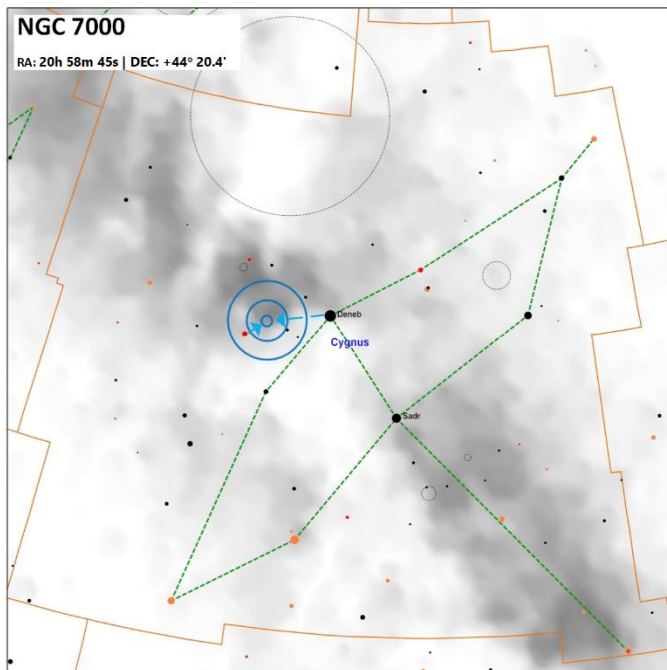


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Barnard 353 (DN || Size=12'x8' | Opacity=5 |) Dark nebula part of the W80 complex just south of Barnard 352.

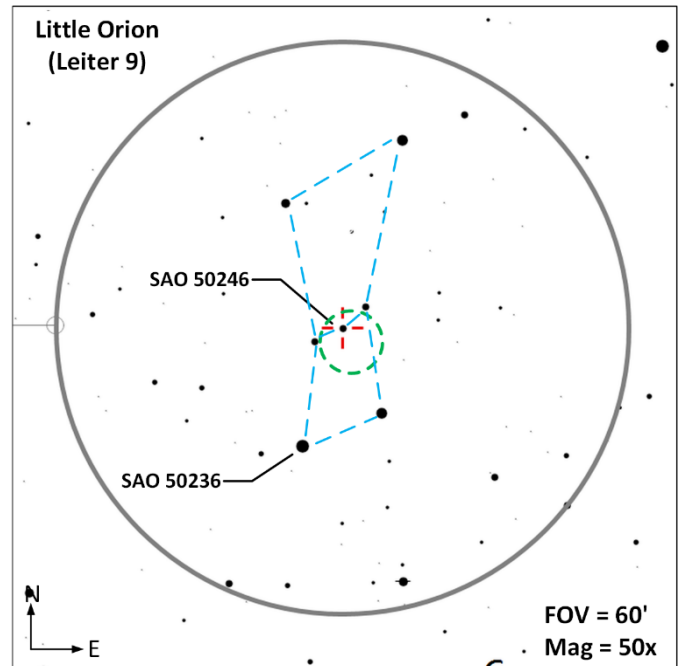
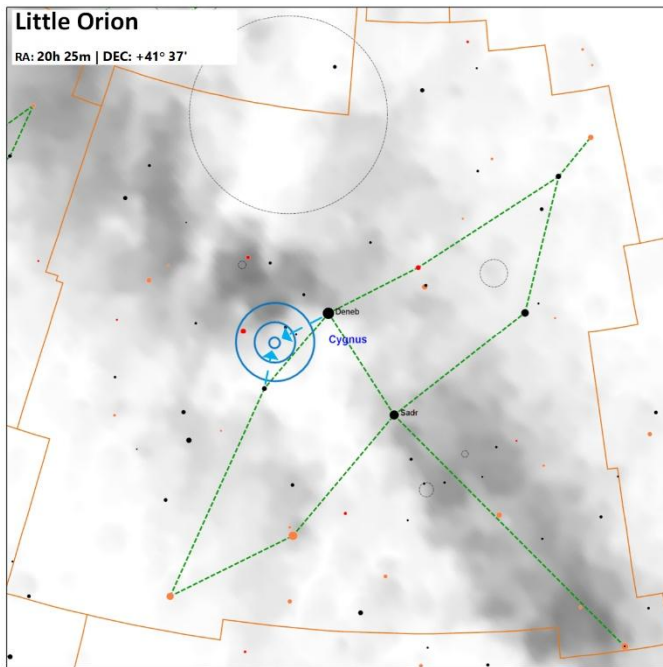


NGC 7000 (EN || Mag=4.5 | Size=120'x90' | SB=23.2 |) Part of the W80 complex. The North America Nebula covers an area of 2° x 1.5° and is best viewed with binoculars or a telescope with a wide field of view. Utilizing a UHC filter will help filter out unwanted stray light and help identify this target. Its estimated distance is 2,590 light years away. The area resembling Mexico and Central Mexico is known as the Cygnus Wall and exhibits the most concentrated star formation of the nebula.

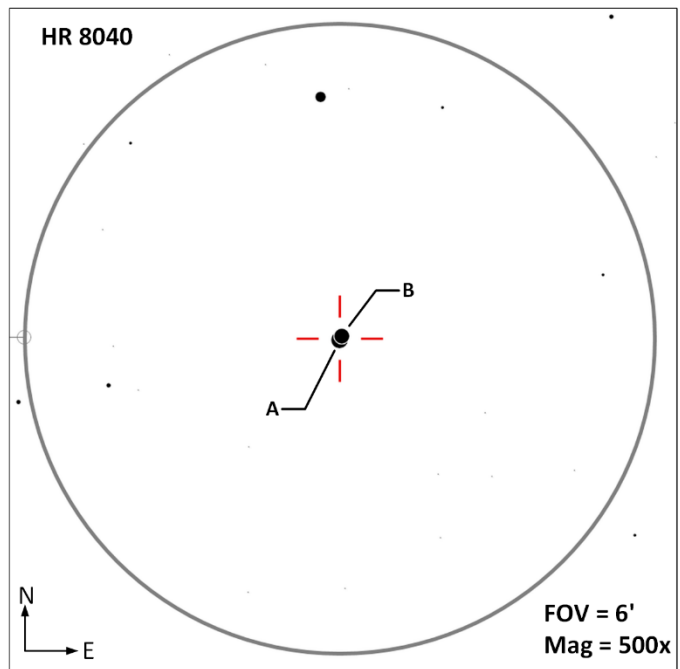
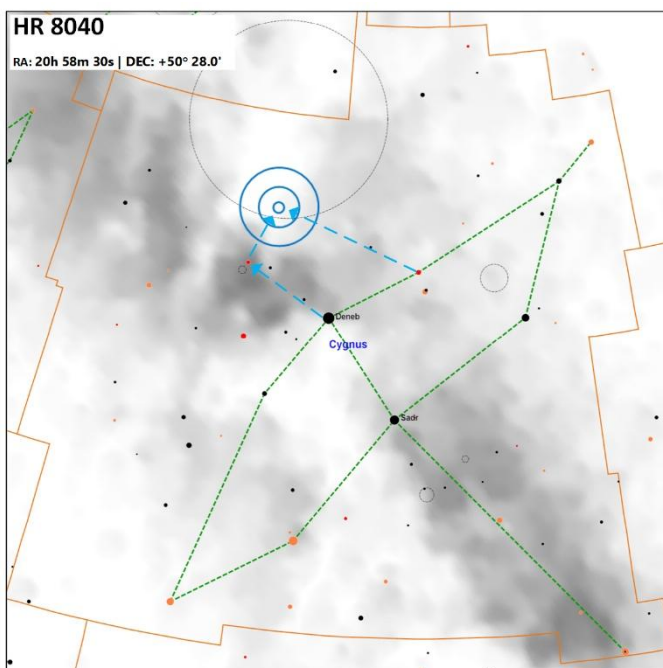


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Little Orion (AS || Size=45' | Stars=7 | Ref Star: SAO-050246; HIP 103312 |) This asterism has a similar shape to the Orion constellation and may be best appreciated with binoculars.

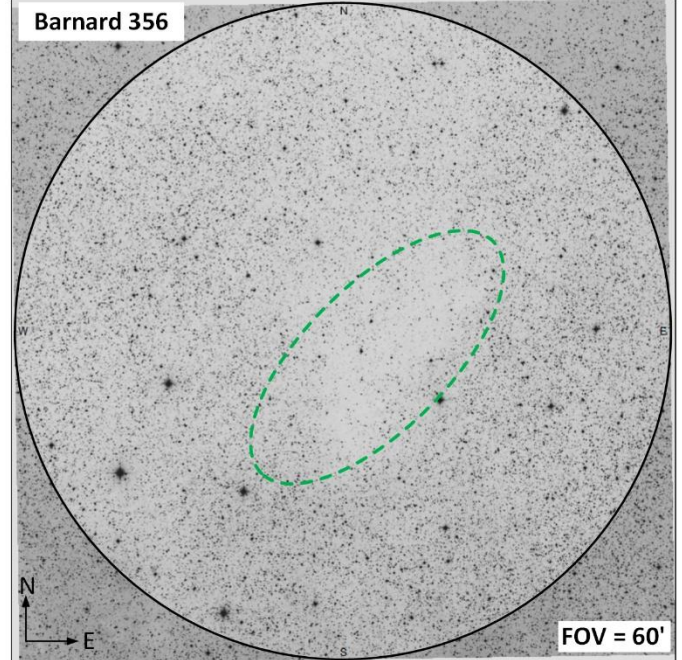
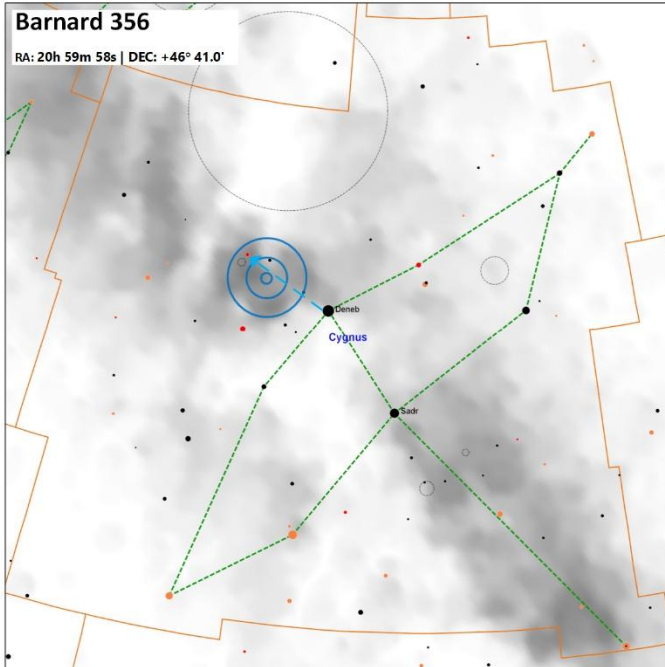


HR 8040 (DS || AB| Mag=5.9, 6.8 | Sep=2.1" | PA=25° | mBortle=9 | mApt=70mm | Spec=B5Vn, ? | Color=blue-white, ? |) Located 1,080 light years away, these stars are physically associated with each other. While the orbital period of this system is not known, the current separation between these two stars puts them at 662 Astronomical units apart.

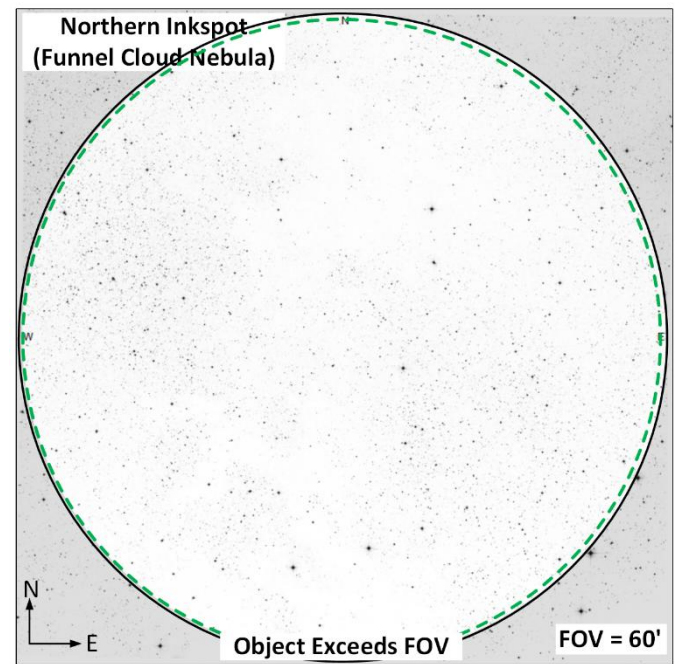
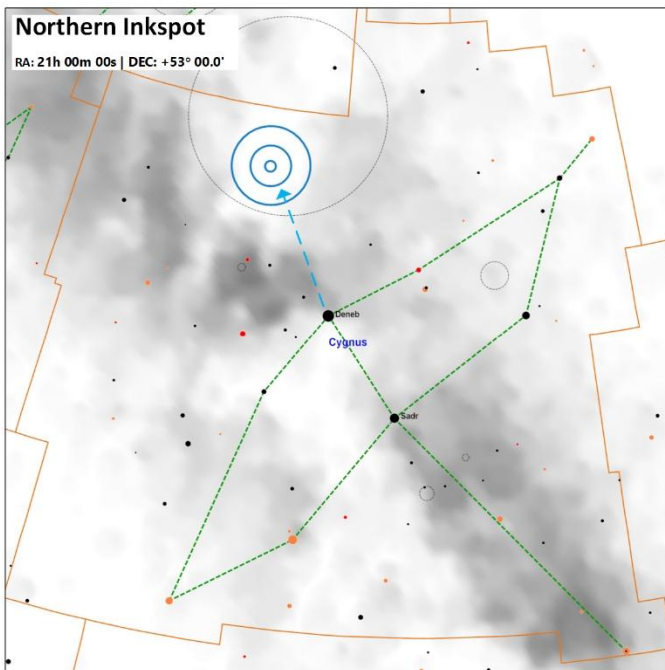


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Barnard 356 (DN || Size=24' | mBortle=4 | mApt=50mm | Opacity=5 |) With an opacity rating of 5 this should be a pretty dark object. A good target for binoculars and telescopes.

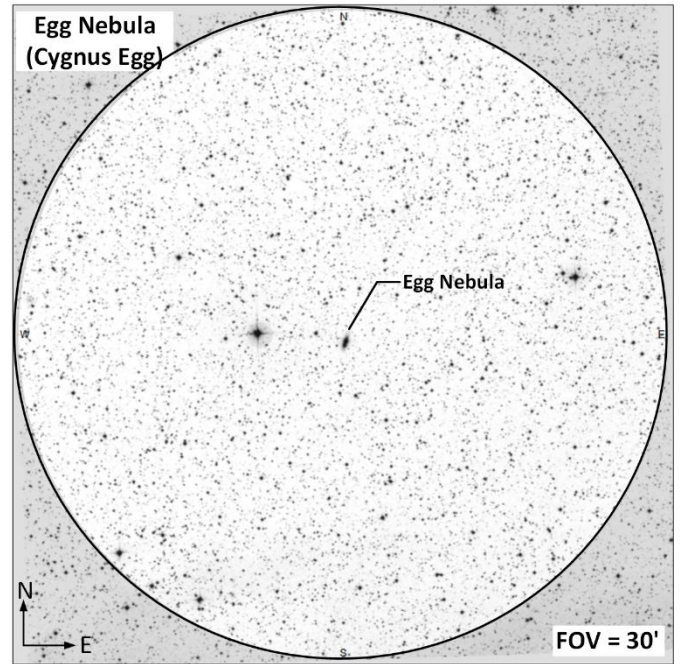
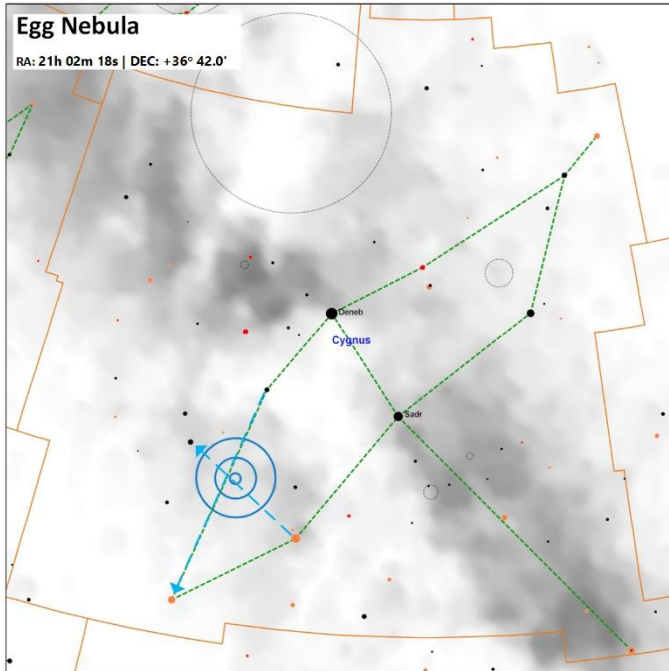


Northern Inkspot (DN || Size=300' |) The Funnel Cloud Nebula as such is not in Sky Safari, using LDN 1003 as a proxy should get you to the center of this object. With a size over 5° , this is best observed with the naked eye or with some super wide field binoculars. Interestingly, it is also #10 on the Small Telescope Asterisms Roster (STAR 10), one of the few STAR entries that is not actually an asterism. Noted in RASC as best DN after the Coalsack nebula.

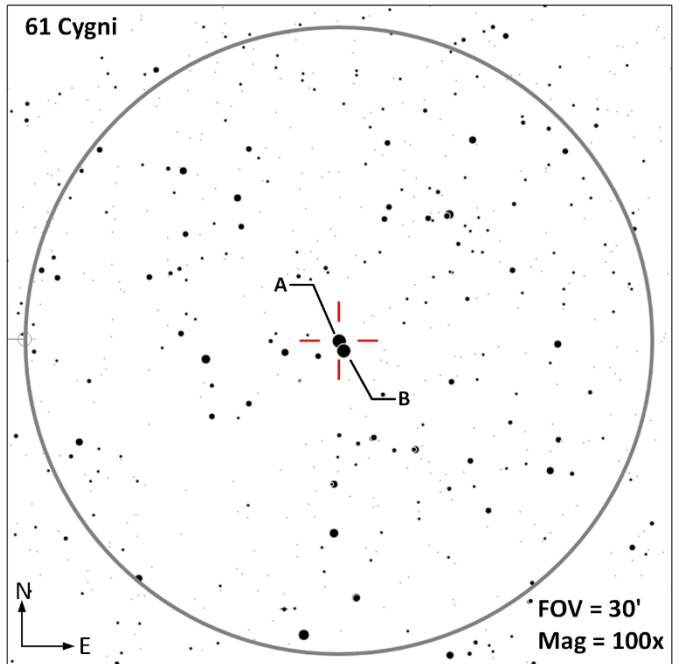
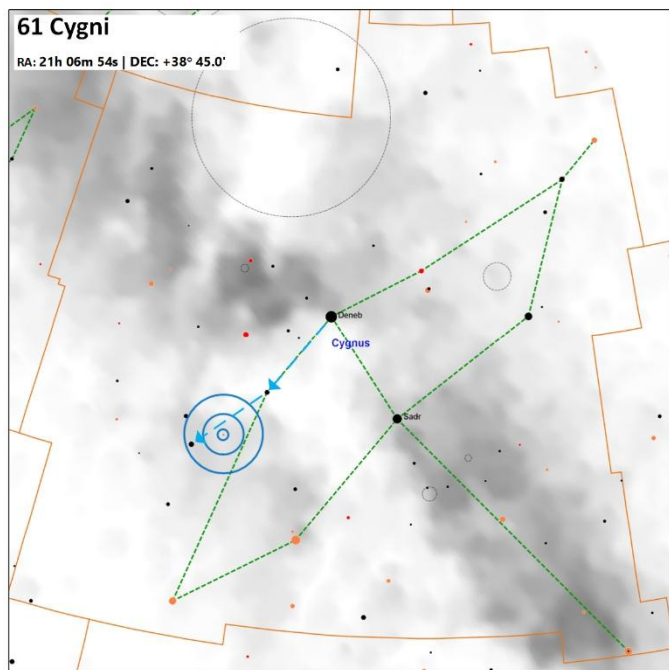


Constellation Guide

Egg Nebula (PN || Mag=13.5 | Size=0.3' | SB=19.5 | mApt=180mm | MC=Butterfly |) A [bipolar protoplanetary nebula](#) approximately 3,000 light years from earth. A protoplanetary nebula is an astronomical object which is at the short-lived episode during a star's rapid evolution between the late asymptotic giant branch (LAGB) phase and the subsequent planetary nebula (PN) phase.

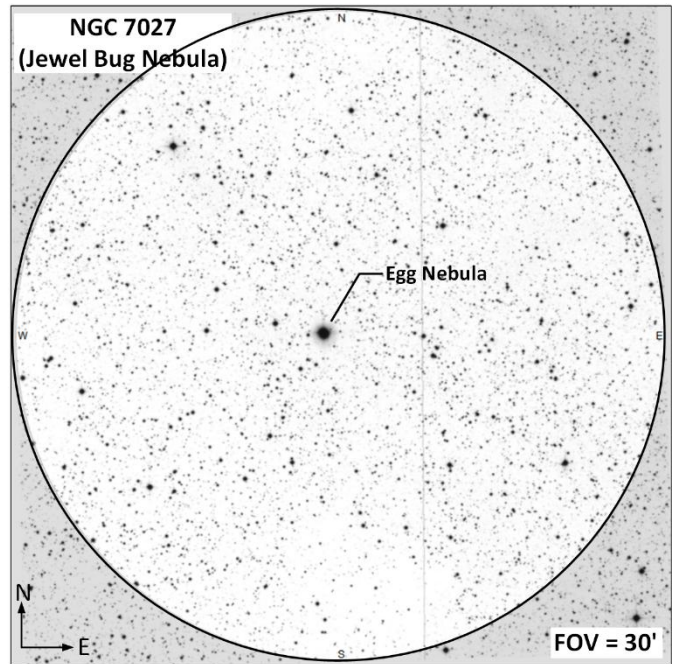
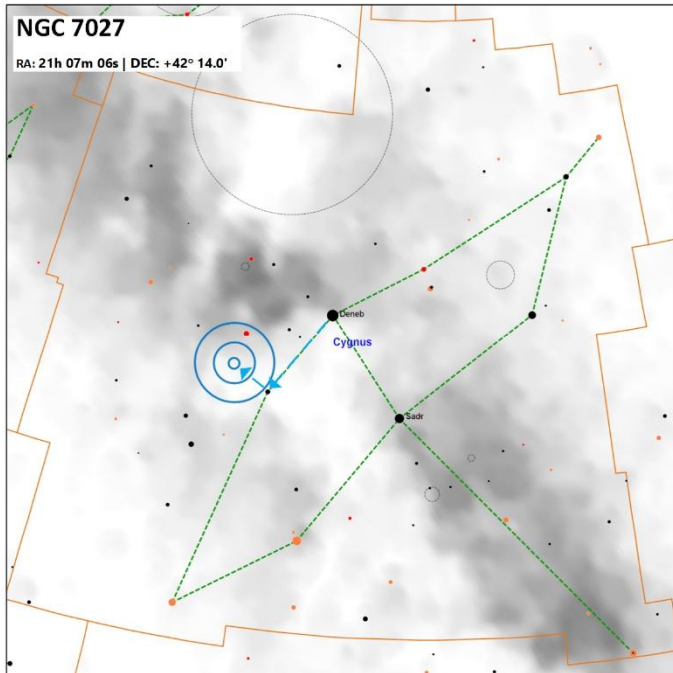


61 Cygni (DS || AB | Mag=5.3,6.1 | Sep=32" | PA=153° | mBortle=9 | mApt=50mm | Period=664y | Spec=K5V, K7V | Color=yellow-orange, orange |) This double star system is located 11 light years from earth and has an orbital period of 664 years. Haas describes this as a showcase pair with two amber yellow stars.

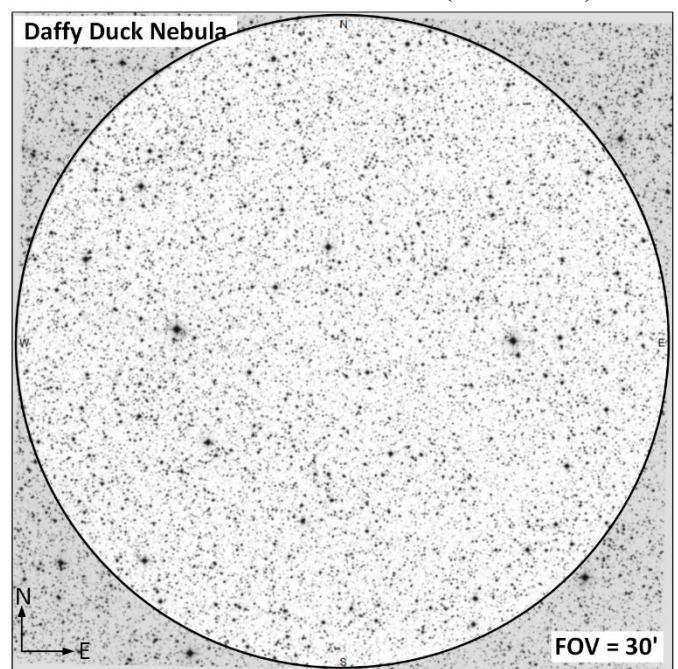
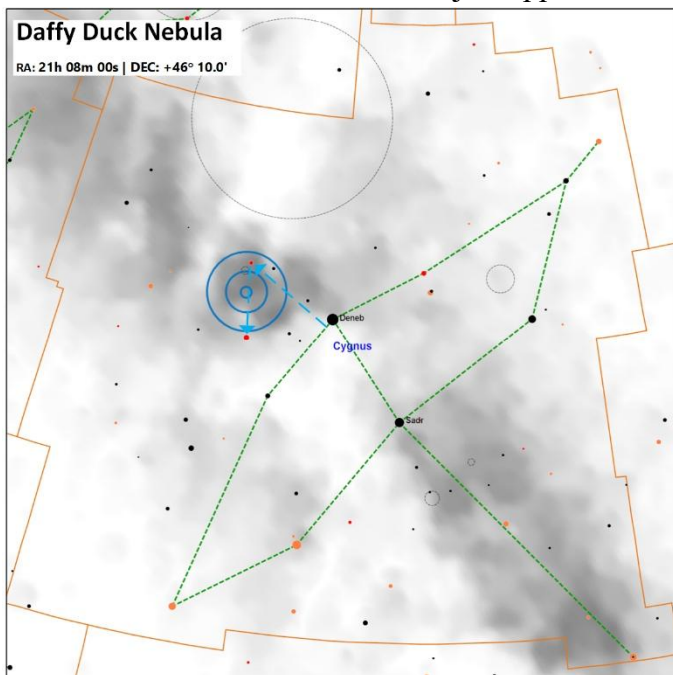


Constellation Guide

NGC 7027 (PN || Mag=8.5 | Size=0.3' | SB=14.5 | mBortle=9 | mApt=50mm | MC=Butterfly |) The Jewel Bug Nebula is a young dense planetary nebula located 3,000 light years away. NGC 7027 is one of the visually brightest planetary nebulae that appears as a relatively bright bluish star at 50x in a telescope. It is best viewed with the highest magnification that seeing conditions permit.

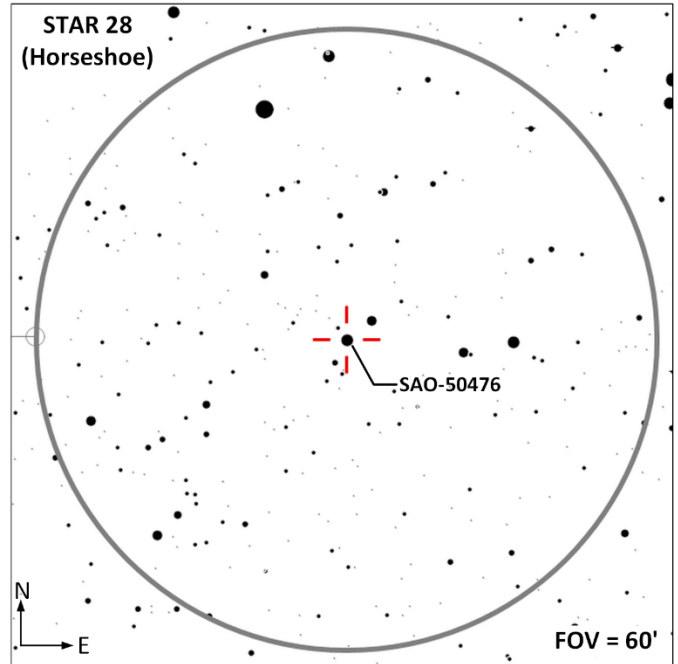
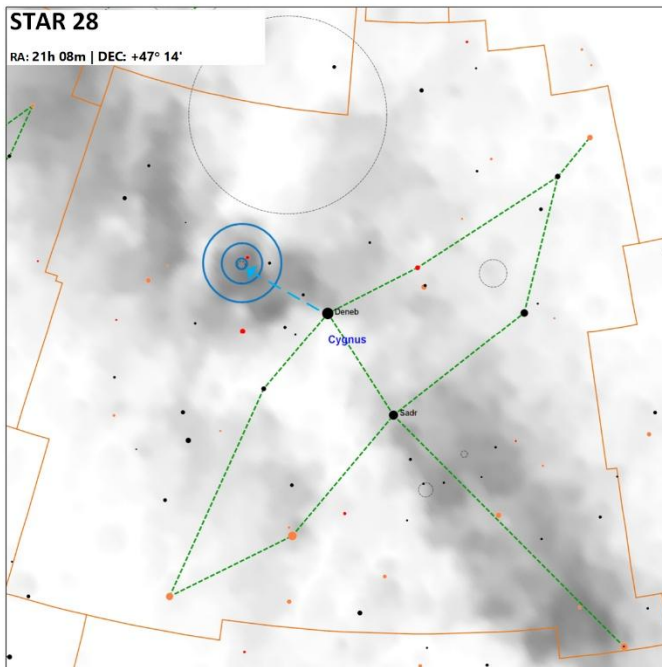


Daffy Duck Nebula (EN || Mag=5.9 | Size=7' | SB=18.8 | Ref Star: SAO 50470) This object is not well documented, but appears in the RASC list of Deep Sky Gems and is described as "Forms the northern limit of the North America Nebula". This object appears to be between 60' – 90' South of STAR 28 (See below).

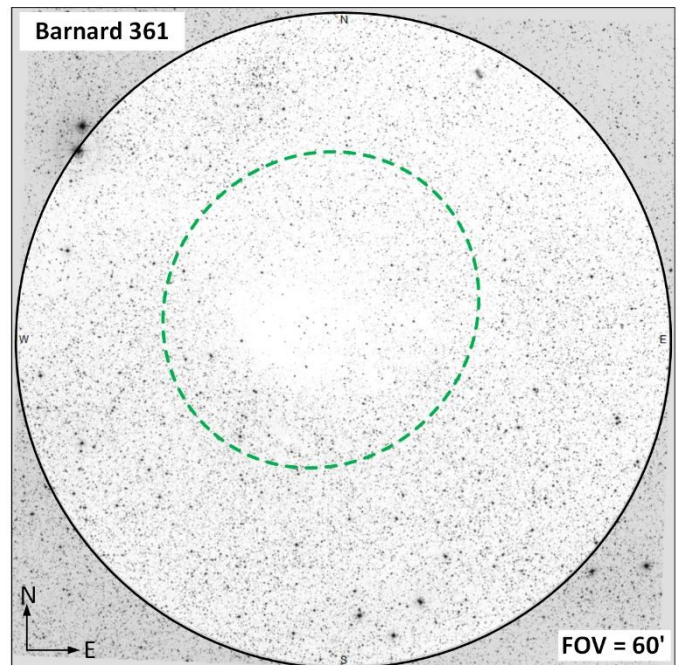
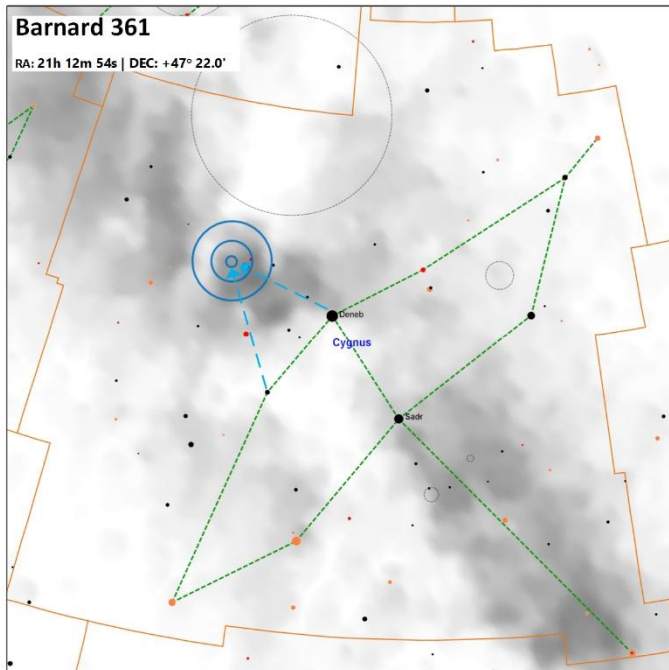


Constellation Guide

STAR 28 (AS || Size=25' | Stars=12 to 14 | Ref Star: SAO-050476; HIP 104268 |) Conflicting reports on the size of this asterism, some references indicate 25' while others indicate 50'. Description is 14 stars in a "U" shape. This object appears to be between 60' – 90' north of the Daffy Duck Nebula.

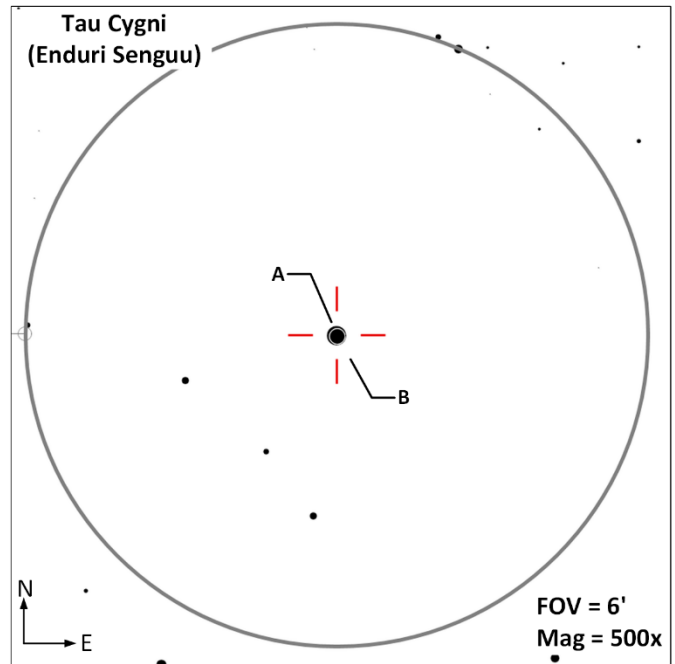
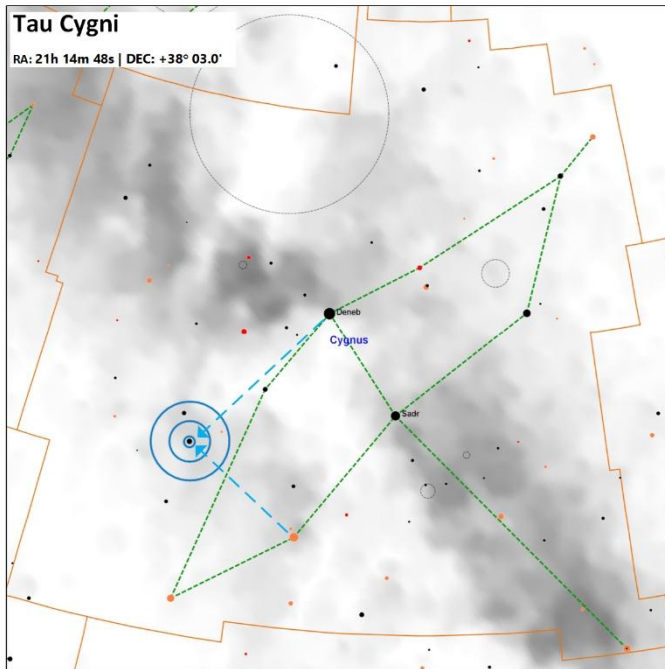


Barnard 361 (DN || Size=20' | mBortle=4 | mApt=100mm | Opacity=4 |) Estimated to be 1,142 light years away with a physical diameter of 3 light years.

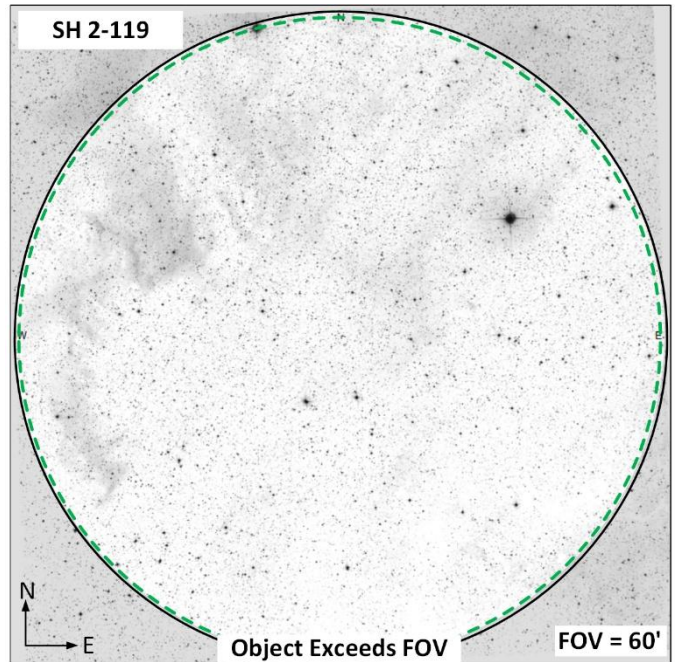
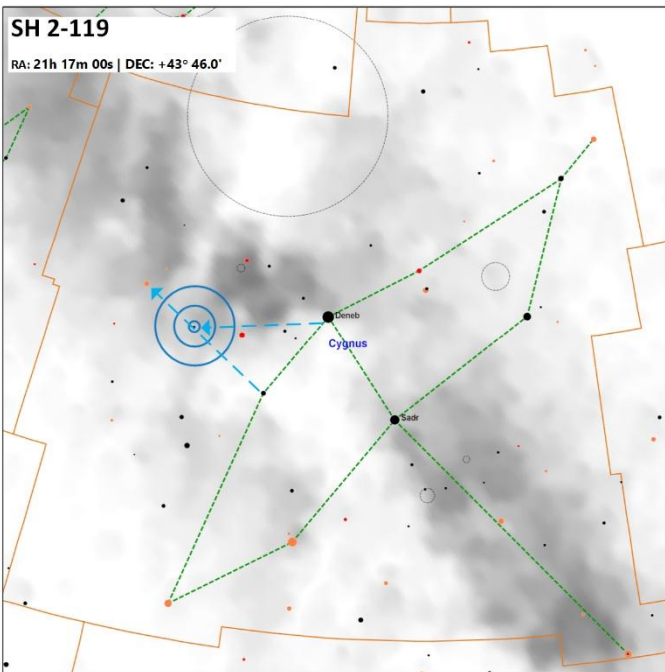


Constellation Guide

Tau Cygni (DS || AB | Mag=3.8,6.6 | Sep=1" | PA=160° | mApt=180mm | Period=50y | Spec=F3V, F7V | Color=yellow-white, yellow-white |) Enduri Senggu is located 69 light years away and has a period of 50 years. The primary component is a variable star and ranges in magnitude from 3.65 to 3.75.

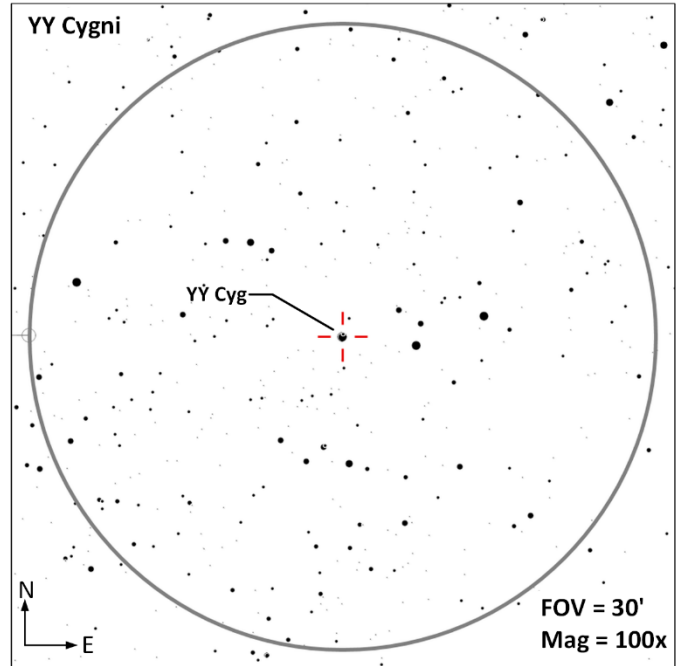
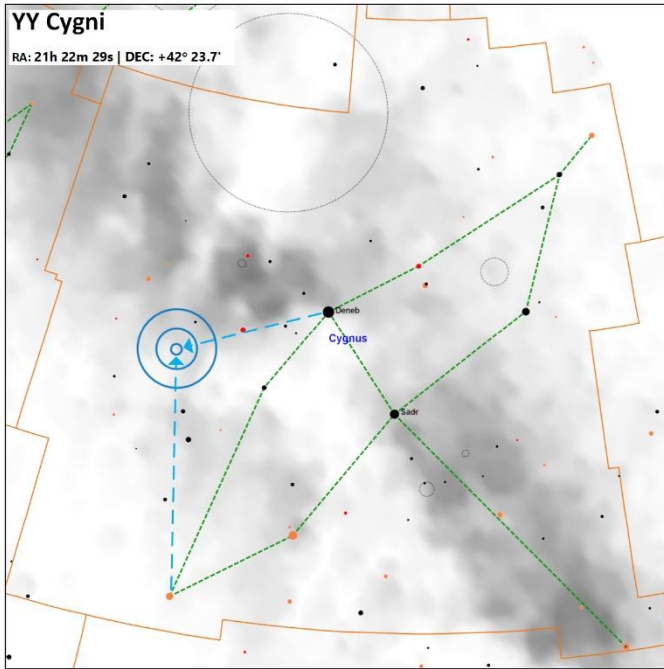


SH2-119 (EN || Mag=Unknown | Size=150'x120' |) From RASC Wide-Field Wonders, described, "NE of North America Nebula complex use large binoculars or rich field telescope with nebular filter; sweep past 68 Cyg; visible if Pelican can be seen".

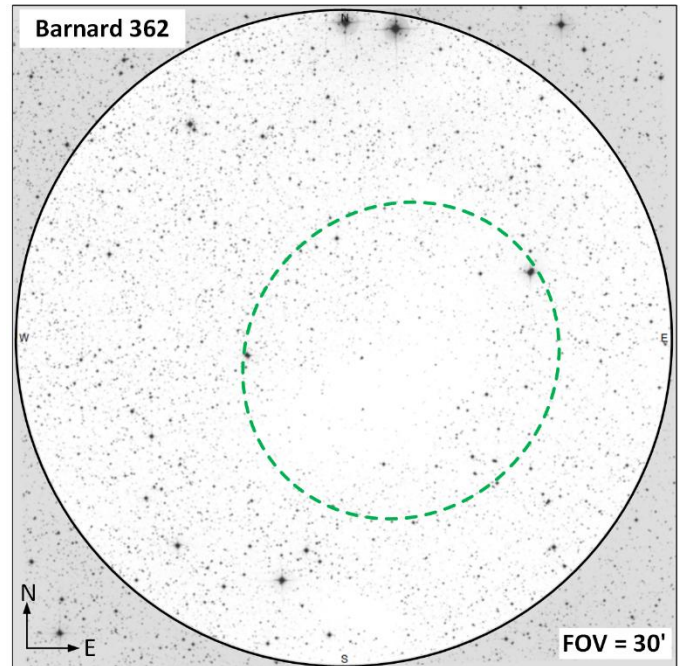
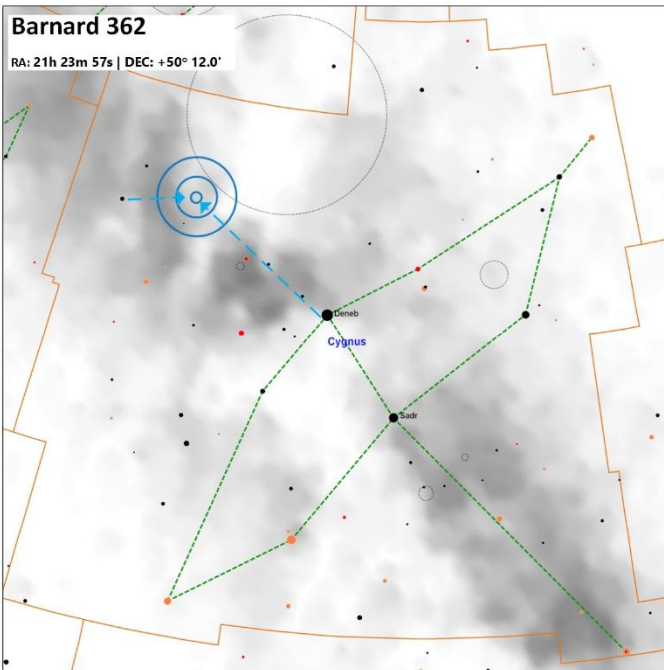


Constellation Guide

YY Cygni (CS || Vis Mag = 9.3 | Magnitude Range(p)= 12.1 to 13.2 | Period=1.1y | Spec=C (N) | BV=+2.6 | Color=deep red |) Located 1,315 light years away with an energy output of 27 times our Sun's luminosity, this is a pulsating semi-regular variable star ranging with a photographic magnitude of 12.1 to 13.2 over a period of 388 days.

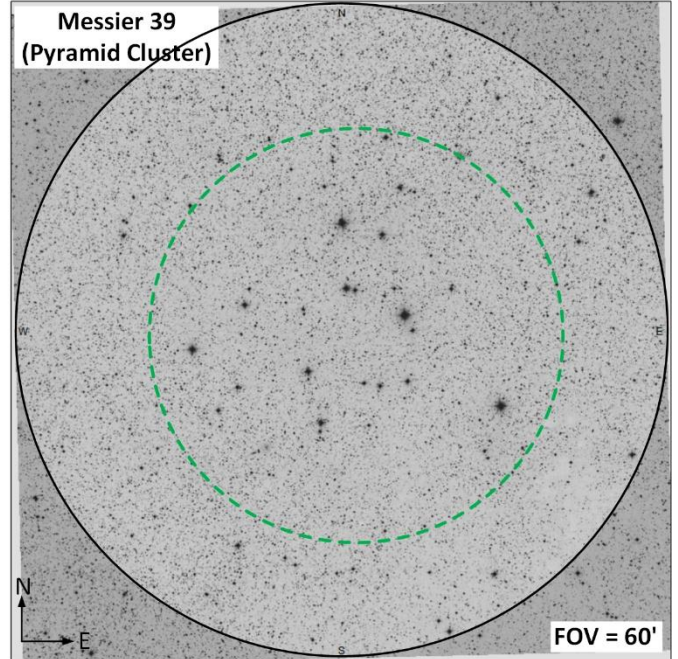
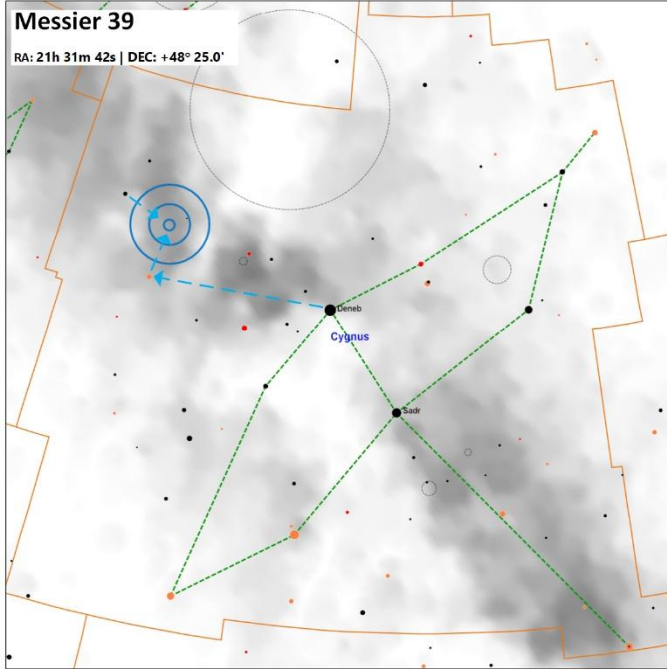


Barnard 362 (DN || Size=11' x 5' | mBortle=4 | mApt=50mm | Opacity=5 |) Located 652 light years away with a physical diameter of 2 light years. Opacity of 5 indicates this should be relatively easy to identify in a rich field of stars.

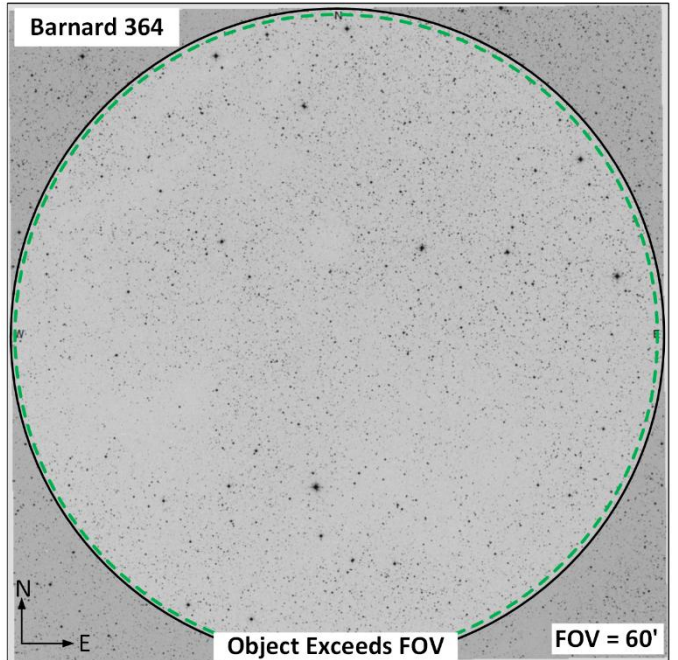
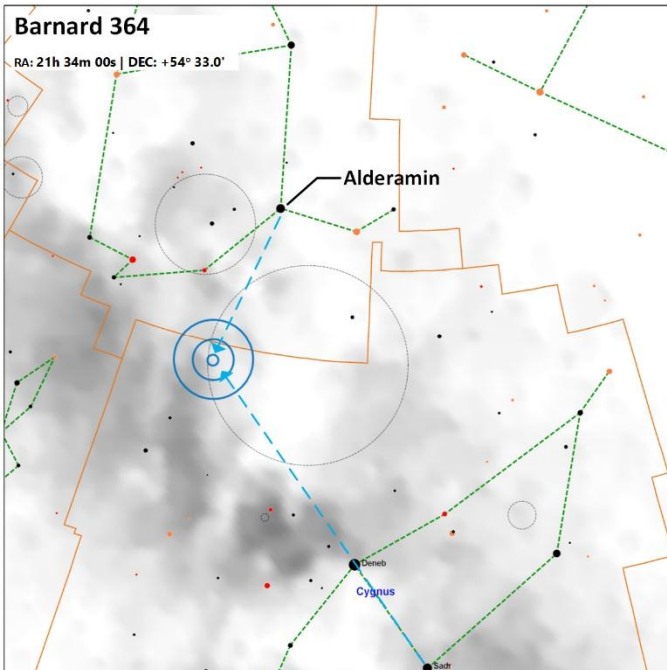


Constellation Guide

Messier 39 (OC || Mag=5.5 | Size=32' | SB=21.7 | mBortle=9 | mApt=50mm | MC=III2m |) The Pyramid Cluster located 800 light years away with an estimated age of 270 million years. This is a large open cluster best viewed with binoculars or a wide-field telescope. Trumpler Classification is III-Detached with no noticeable concentration, 2-Medium range of brightness between stars in the cluster, m-Medium rich cluster with 50-100 stars.

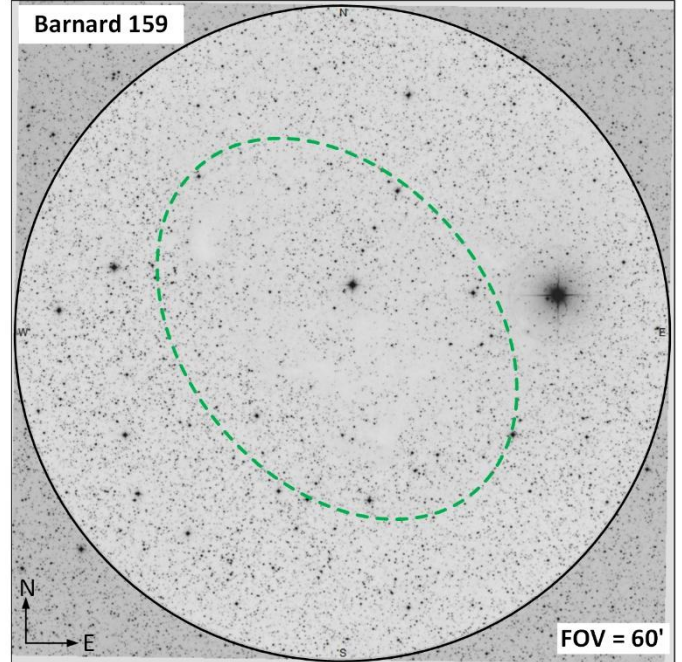
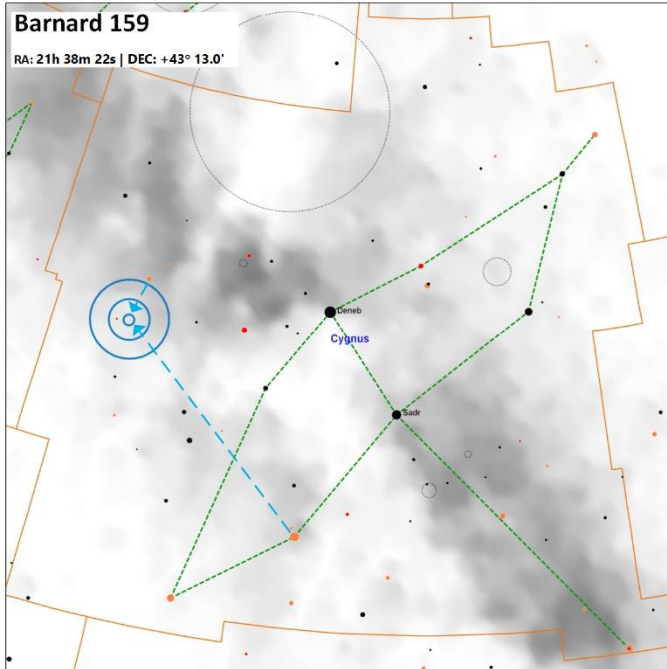


Barnard 364 (DN || Size=75' | mBortle=4 | mApt=50mm | Opacity=5 |) Located at the boundary between Cygnus and Cepheus constellations this large dark nebula has an opacity rating of 5. A good binocular target.

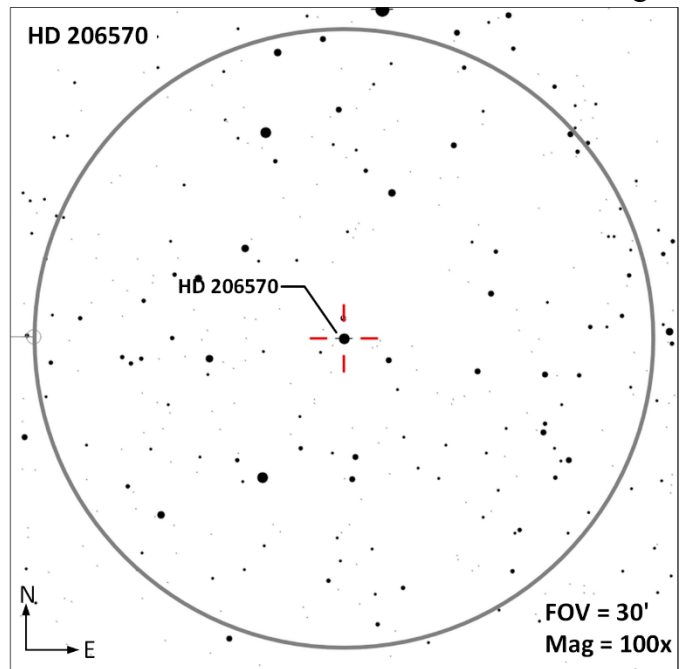
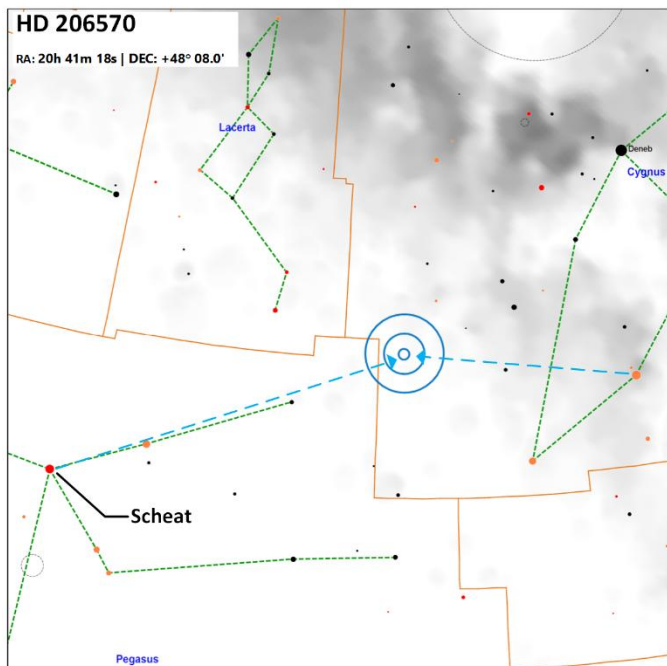


Constellation Guide

Barnard 159 (DN || Size=25' | mBortle=4 | mApt=50mm | Opacity=5 |) Opacity of 5 and size of 25' x 25', this should be a good target for both binoculars and wide field telescopes.

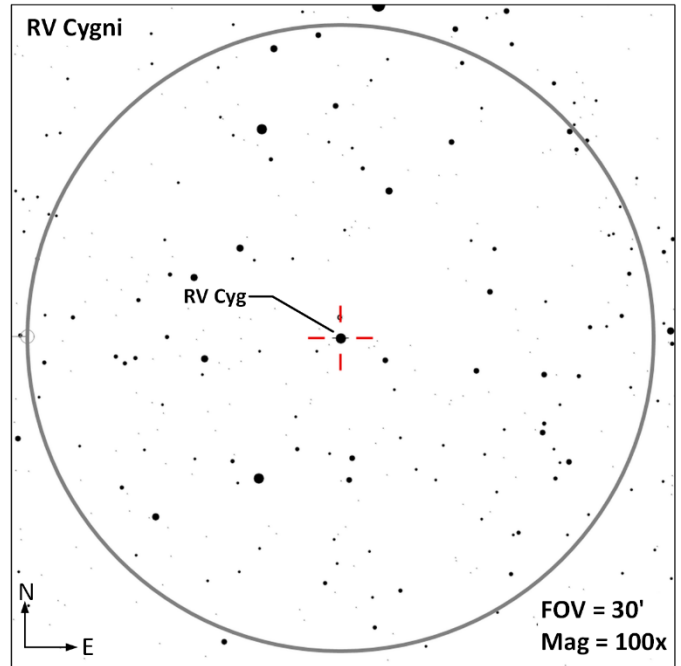
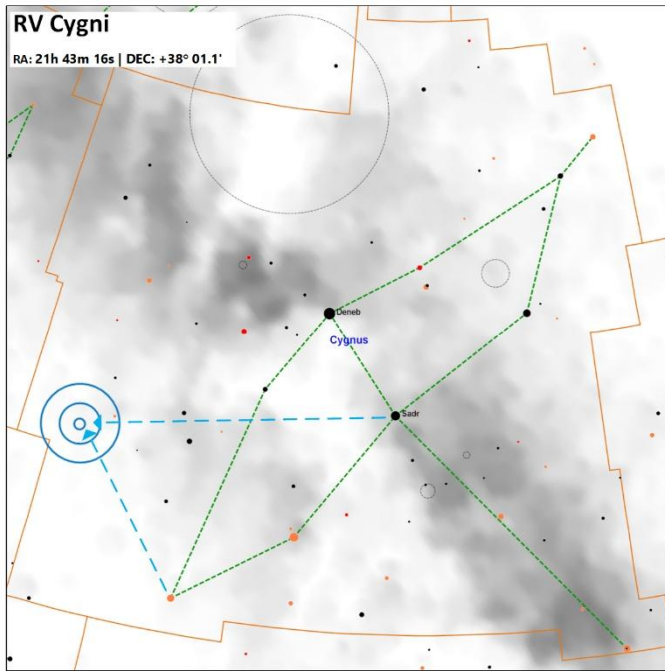


HD 206570 (CS || Magnitude Range= 6 to 7 | Period=0.5y | Spec=C6,3 | BV=+2.65 | Color=deep red |) A variable star located 2,038 light years away. Sky Safari seems to have this star also mislabeled as DS Pegasi.

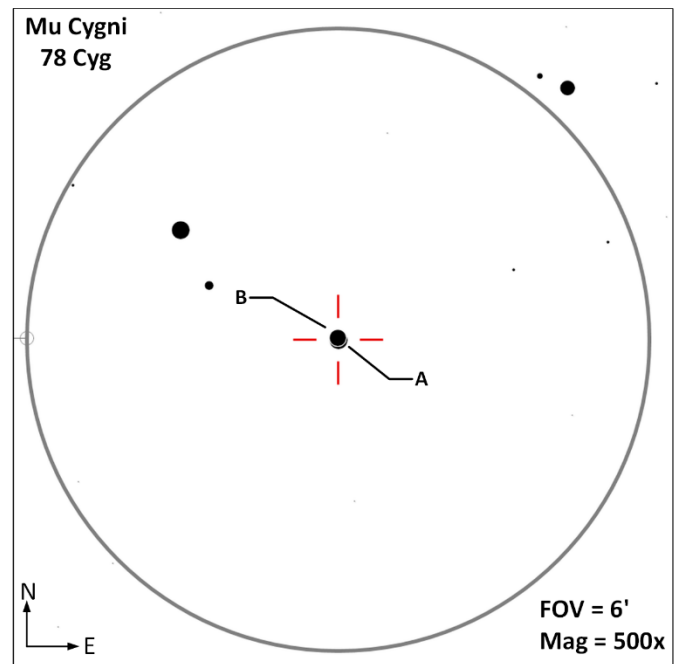
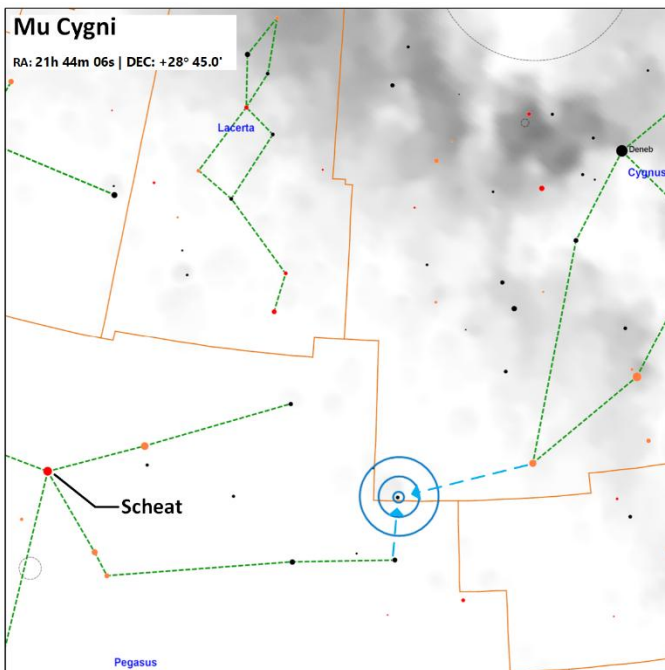


Constellation Guide

RV Cygni (CS || Vis Mag=8.0 || Magnitude Range(p)= 10.8 to 12.4 | Period=0.7y | Spec=C6,4 | BV=+4.1 | Color=deep red) This is a pulsating semi-regular variable star that has a photographic magnitude range of 10.8 to 12.4 over a period of 263 days.

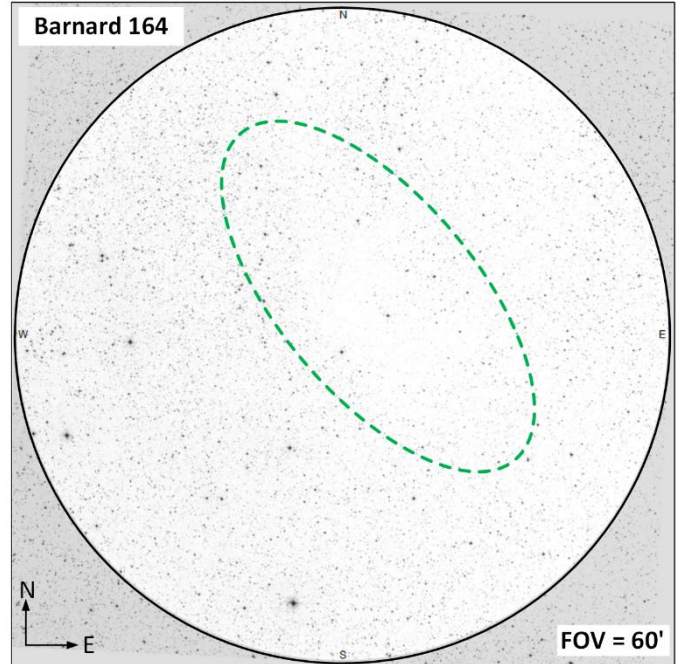
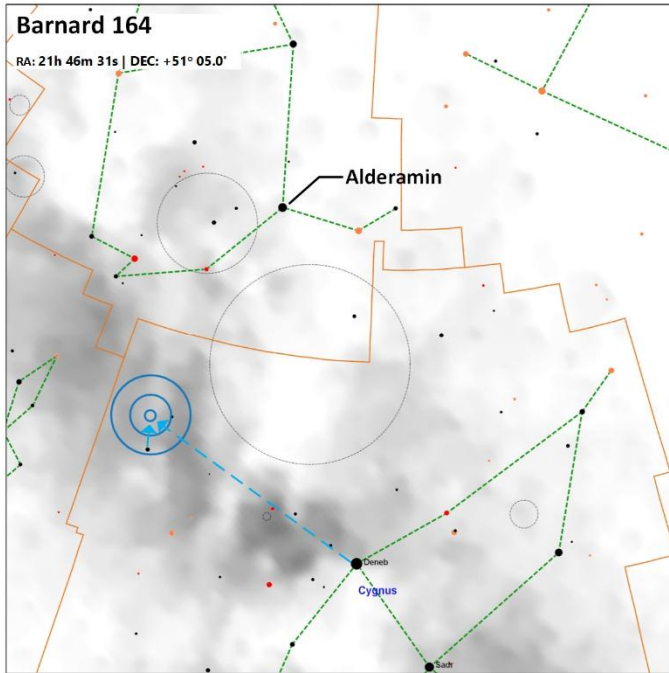


Mu Cygni (DS || AB| Mag=4.8,6.2 | Sep=1.4" | PA=328° | mBortle=9 | mApt=102mm | Period=692y | Spec=F6V, G2V | Color=yellow-white, yellow) Mu Cyg is a binary star system with a tight pair of stars that may be challenging for most to separate not only due to the close proximity of each component, but also the 1.4 magnitude difference between each component. This pair has an orbital period of 692 years.

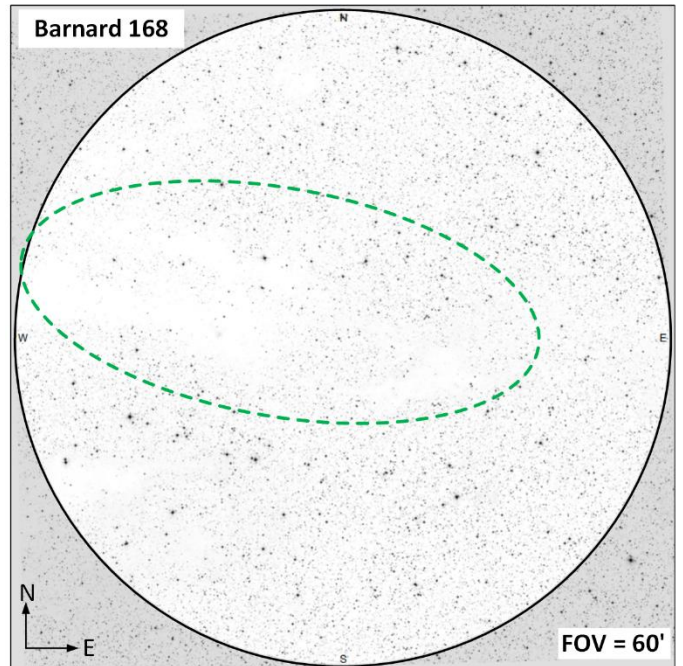
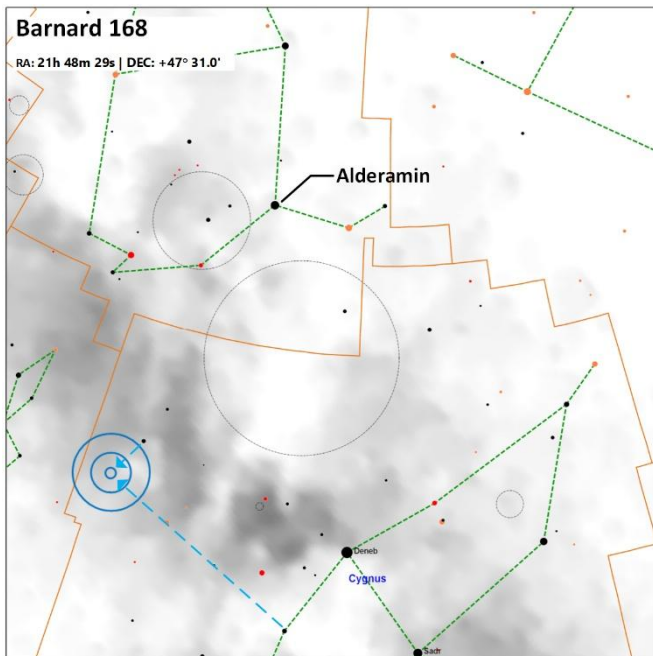


Constellation Guide

Barnard 164 (DN || Size=20' | mBortle=4 | mApt=50mm | Opacity=5 |) Dark nebula at the edge of the constellation boundary with an opacity of 5 and size of 20' this should be a good target for binoculars and telescopes.

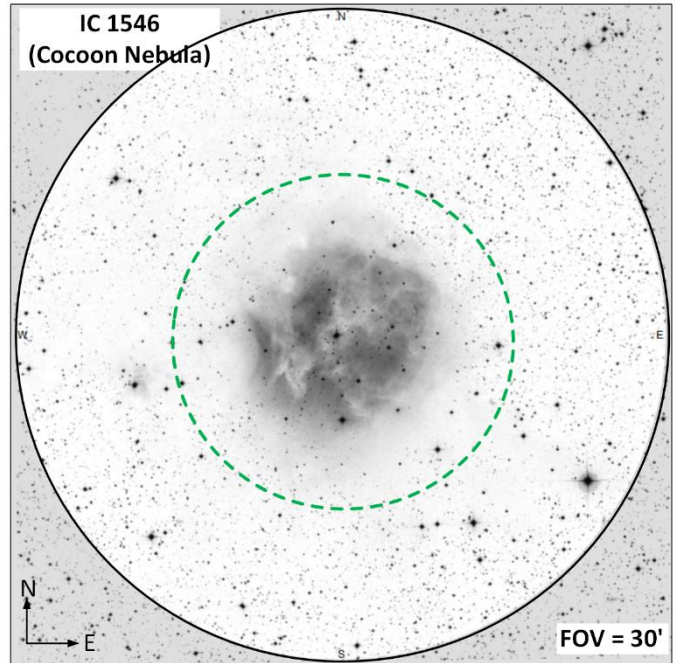
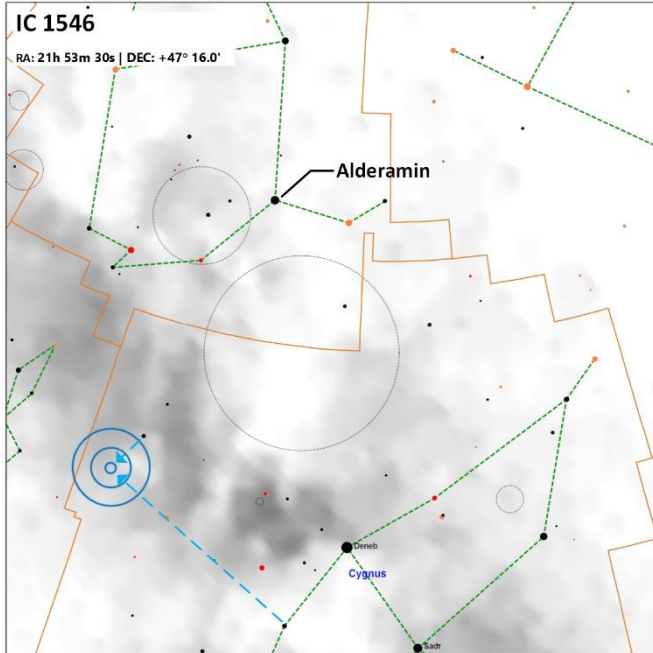


Barnard 168 (DN || Size=22'x18' | mBortle=4 | mApt=50mm | Opacity=3 |) With an opacity rating of 3 this may be a challenge to identify. Interestingly, this object appears in the RASC Dark Nebulae list. It is noted as a large E-W lane at the end of IC-5146, the Cocoon Nebula (See below).

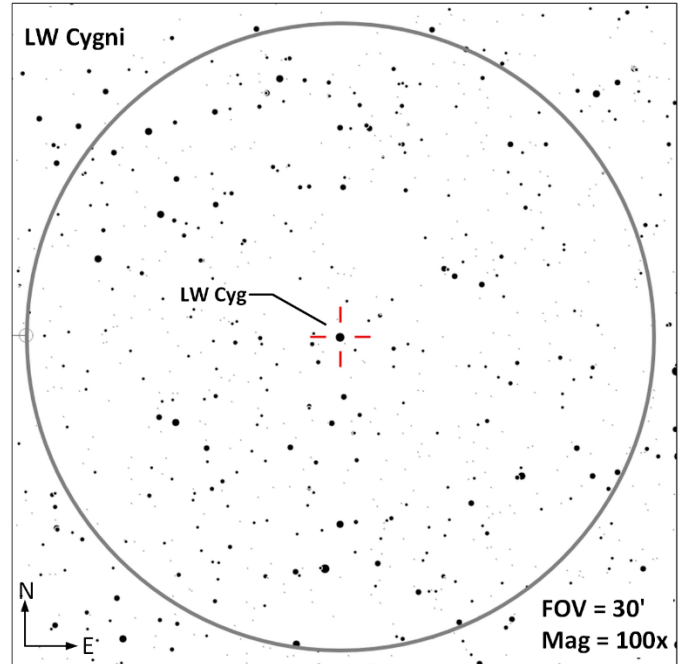
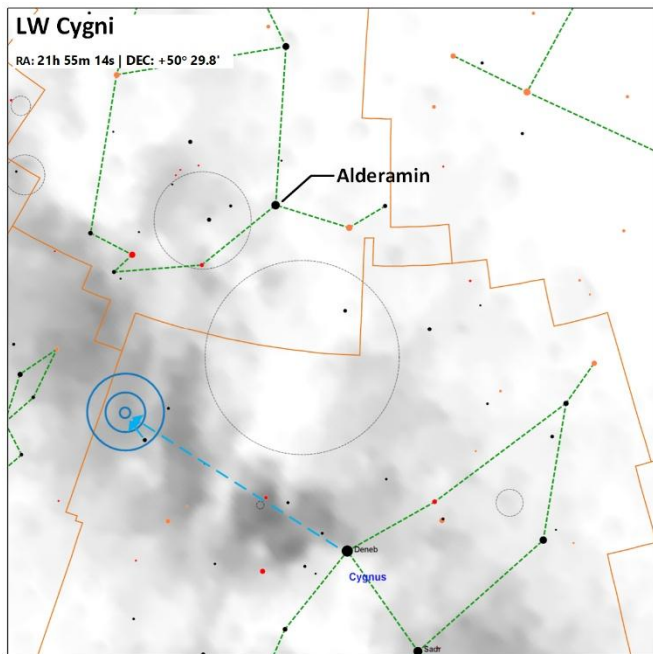


Constellation Guide

IC 5146 (OC, EN || Mag=7.2 | Size=12' | SB=21.2 | mBortle=9 | mApt=80mm |) The Cocoon Nebula also known as Caldwell 19 is located 4,000 light years away centered around a star that formed 100,000 years ago and is energizing the nebula. This object consists of both light and dark nebula along with an associated open cluster, with Barnard 168 forming a dark lane that surrounds the cluster and projects westward forming the appearance of a trail behind the Cocoon.



LW Cygni (CS || Magnitude Range= 8.8 to 10.8 | Spec=C (N late) | BV=+4.42 | Color=deep red |) A pulsating long-period variable star of type LB with an unknown period.



Constellation Guide

Observation Log: Cygnus (Cyg)

Equipment Config A: _____ **Config B:** _____

Notes: _____

Date	Time	Config	Target	Notes

Date	Time	Config	Target	Notes

Constellation Guide

Observation Log: Cygnus (Cyg)

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

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
 - [Aladin Lite](#) – Source for a number deep sky images

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