Prospective Imaging Objects – October 14 2023

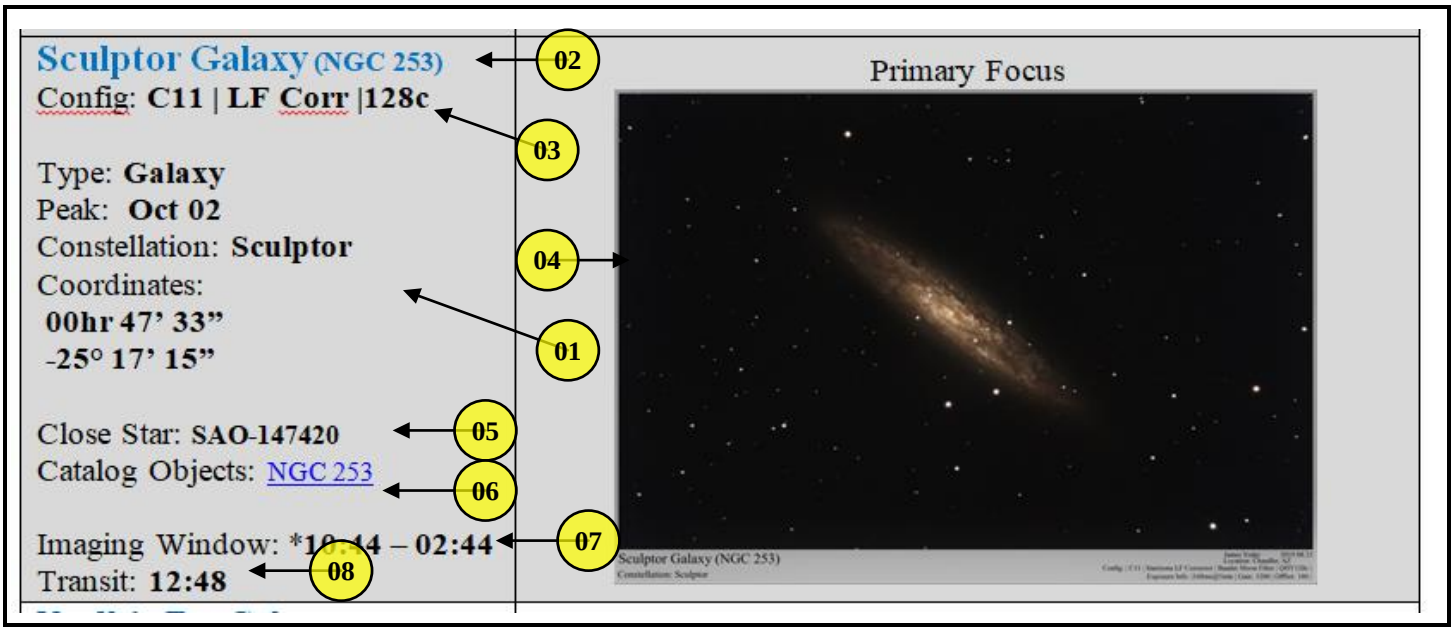
Astronomical Data

Sunrise	Sunset	Astronomical Dusk	Astronomical Dawn	Imaging	New Moon
06:31am	05:55 pm	07:17 pm	05:37 am	10:20	Oct 14

Hardware Info

Configuration	FL	FOV	FOV°	Image Scale (1 – 1.5) ideal
C11HD | ZWO ASI-6200 mono Pro	2800mm	45'x 30'	0.75° x 0.5°	0.280"/pix (Oversampled)
C11HD | 0.7xReducer | ZWO6200MCc	1960mm	60' x 45'	1.0° x 0.75°	0.393"/pix (Oversampled)
|C11HD|HS-v4|ZWO6200MCc|	540mm	228' x 150'	3.8° x 2.5°	1.4"/pix (Undersampled)

How to use this document



01: Background Fill Color - Items that I have previously images will have a fill color of grey, Images not yet imaged will have a white background color.

02: Object Name and catalog number – Common name long with one of the reference catalog numbers associated with this object.

03: Config – The optimal configuration to image this object, and the configuration the provided image is based on based on what hardware I own. Configuration will either be the Celestron C-11 Primary focus (with focal reducer) or C-11 with HyperStar.

04: Object Image – If this is an object I have already imaged, the thumbnail is my photo. It is hyperlinked to my website, so selecting the image should open a larger image in your browser. If the object has not yet been imaged by me the image displayed is for the identified configuration as obtained from http://www.telescopious.com.

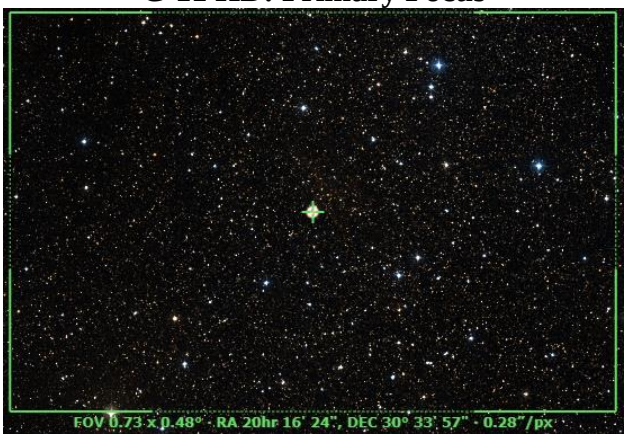
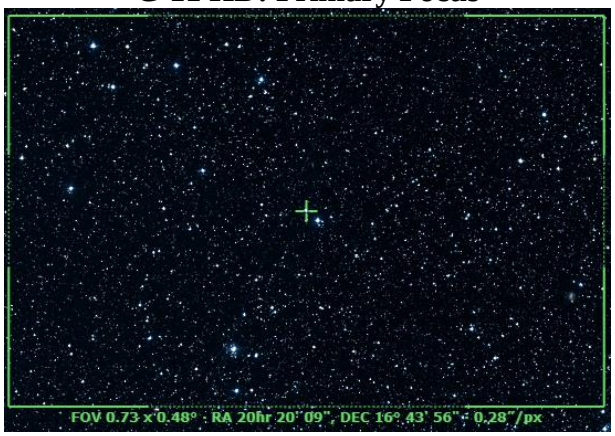
05: Close Star – A fairly bright star close to the target that can be used to check focus and sync the telescope before the imaging session begins.

06: Catalog Objects – List of objects that should appear in the field of view. When possible they are hyperlinked to http://www.telescopious.com where more information can be obtained.

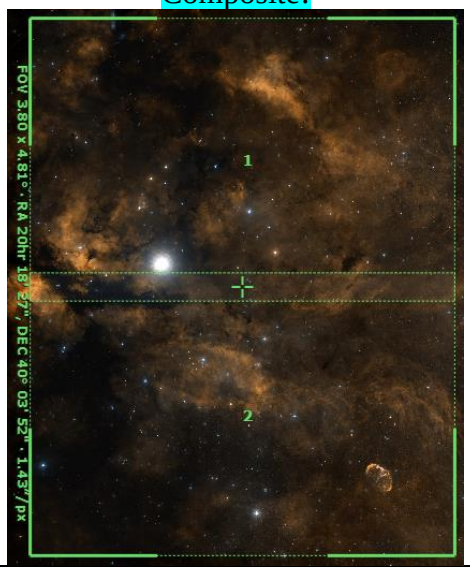
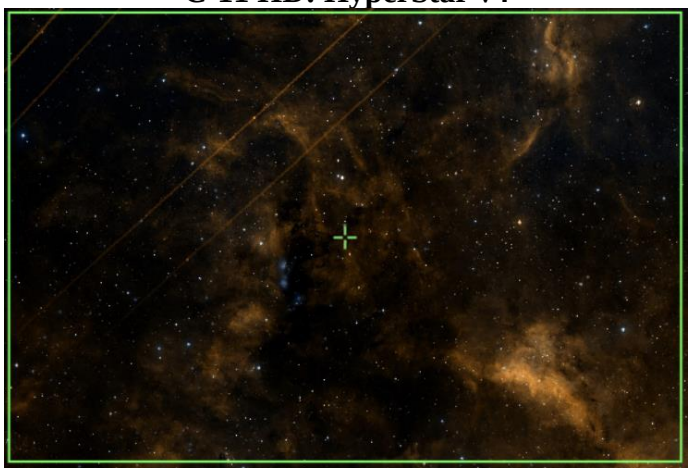
07: Imaging Window – Ideally the time the object is 45° above the horizon. Southern objects with negative DEC that do not peak above 45° are indicated with a *. Imaging window for these objects may be based on 30° or even 25° above horizon for the imaging window.

08: Transit – When the object is at the highest point in the sky for the night. For equatorial mounts this is when the meridian flip will occur.

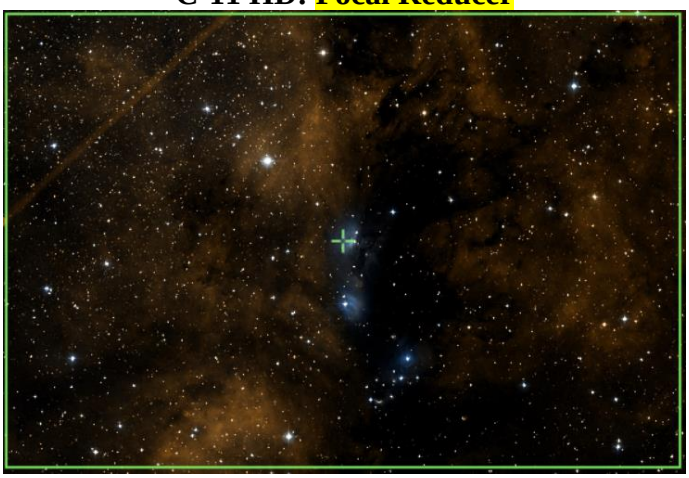
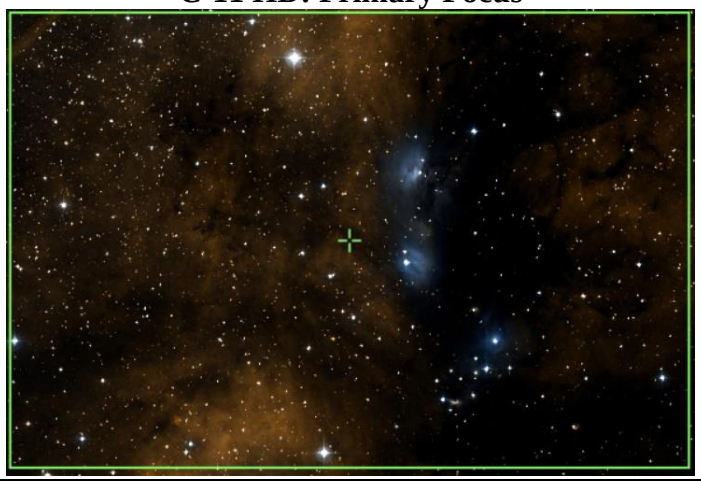
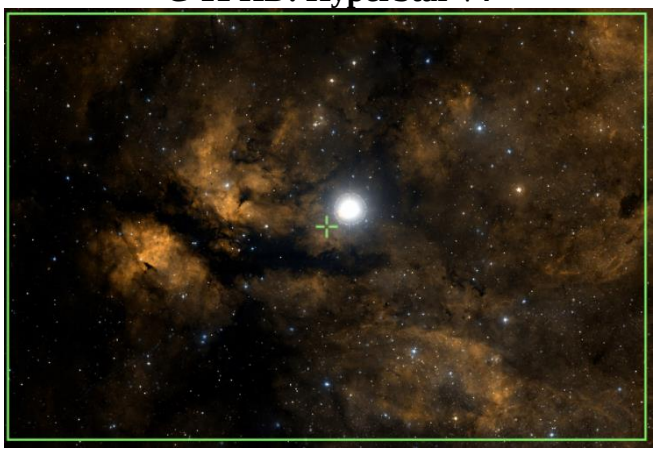
Prospective Imaging Objects – October 14 2023

NGC-6894 (PK 69-2.1) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Cygnus** Coordinates: **20h 16' 24"** **30° 33' 57"** Close Star: **SAO-71070** (64 Cyg) Catalog Objects: NGC-6994 Imaging Window: **07:17 – 10:45** Transit: **07:12 | 87°**	**C-11 HD: Primary Focus** 
IC-4997 (PK 58-10.1) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Sagitta** Coordinates: **20h 20' 09"** **16° 43' 56"** Close Star: **SAO-106316** (Rotanev) Catalog Objects: IC-4997 Imaging Window: **07:17 – 10:22** Transit: **07:16 | 87°**	**C-11 HD: Primary Focus** 
Blue Flash Nebula (NGC-6905) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Constellation: **Delphinus** Coordinates: **20h 22' 24"** **20° 06' 18"** Close Star: **SAO-108378** (Markab) Catalog Objects: NGC-6905 Imaging Window: **07:17 – 10:32** Transit: **07:18 | 77°**	**C-11 HD: Primary Focus** 

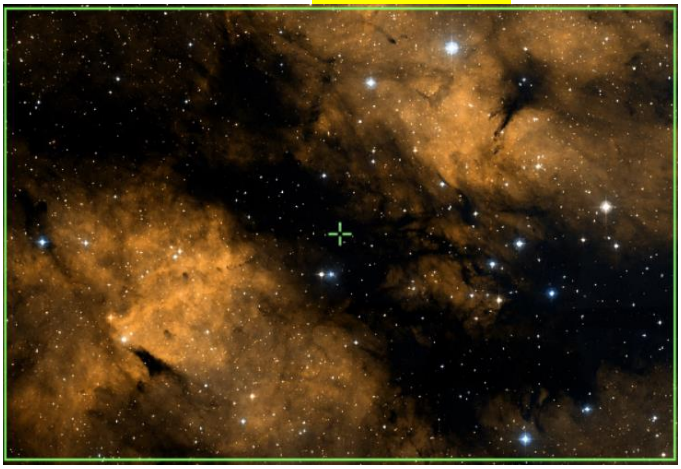
Prospective Imaging Objects – October 14 2023

Cooling Tower (M-29 (NGC-6913) Config: |C11HD|ZWO6200MC| Type: **Open Cluster** Constellation: **Cygnus** Coordinates: **20h 24' 06"** **38° 29' 36"** Close Star: **SAO-90981** (Scheat) Catalog Objects: M-29/NGC-6913 Imaging Window: **07:17 – 11:03** Transit: **07:20 | 85°**	**C-11 HD: Primary Focus** 
NGC-6914 Region Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: Frame 1: RA=20hr 18' 27" DEC=41°12'10" Frame 2: RA=20hr 18' 38" DEC=38°55'33" Close Star: **SAO-49941** (Deneb) Catalog Objects: NGC-6914 Imaging Window: **07:17 – 11:07** Transit: **07:20 | 81°**	**C-11 HD: HyperStar v4** Composite! 
NGC-6914 Region Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **20h 22' 52"** **42° 38' 53"** Close Star: **SAO-49941** (Deneb) Catalog Objects: NGC-6914 Imaging Window: **07:17 – 11:07** Transit: **07:20 | 81°**	**C-11 HD: HyperStar v4** 

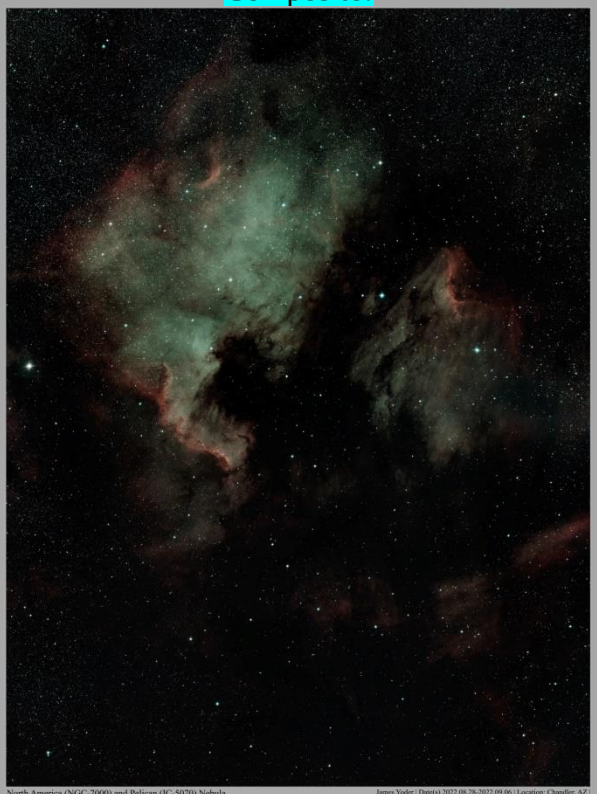
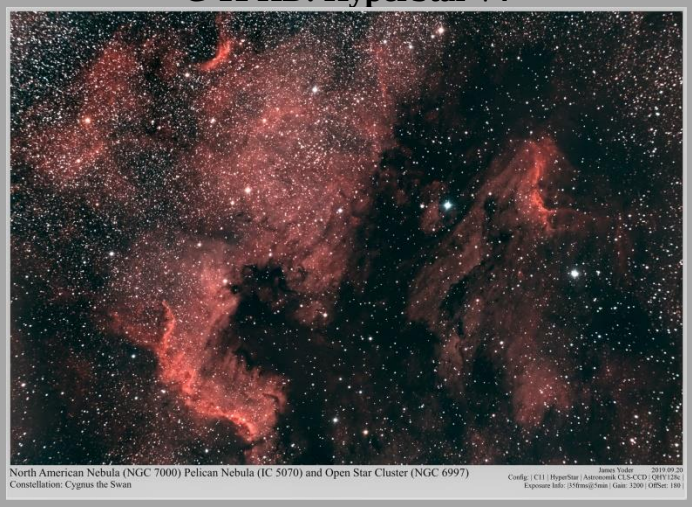
Prospective Imaging Objects – October 14 2023

NGC-6914 Region Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **20h 24' 48"** **42° 29' 00"** Close Star: **SAO-49941** (Deneb) Catalog Objects: NGC-6914 Imaging Window: **07:17 – 11:07** Transit: **07:20 | 81°**	**C-11 HD: Focal Reducer** 
NGC-6914 Region Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **20h 25' 07"** **42° 24' 34"** Close Star: **SAO-49941** (Deneb) Catalog Objects: NGC-6914 Imaging Window: **07:17 – 11:07** Transit: **07:20 | 81°**	**C-11 HD: Primary Focus** 
Butterfly Nebula (IC-1318) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **20h 22' 57"** **40° 09' 33"** Close Star: **SAO-67174** (Vega) Catalog Objects: IC-1318 Imaging Window: **07:17 – 11:07** Transit: **07:21 | 80°**	**C-11 HD: HyperStar v4** 

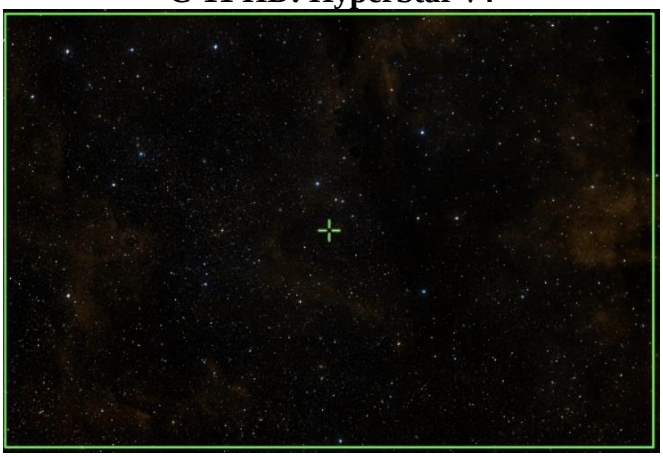
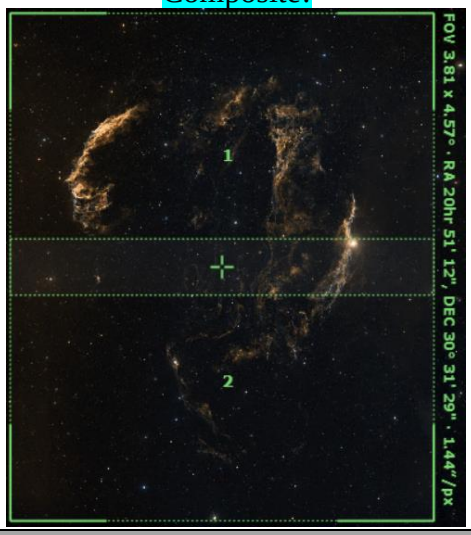
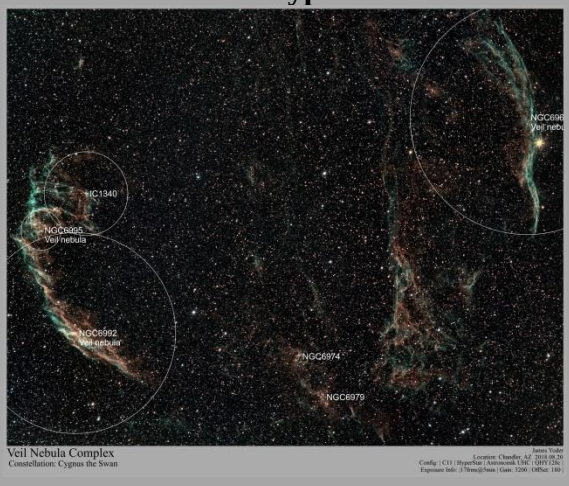
Prospective Imaging Objects – October 14 2023

Butterfly Nebula (IC-1318) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **20h 26' 59"** **40° 06' 52"** Close Star: **SAO-67174** (Vega) Catalog Objects: IC-1318 Imaging Window: **07:17 – 11:07** Transit: **07:21 | 80°**	**C-11 HD: Focal Reducer** 
Butterfly Nebula (IC-1318) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **20h 25' 40"** **40° 17' 34"** Close Star: **SAO-67174** (Vega) Catalog Objects: IC-1318 Imaging Window: **07:17 – 11:07** Transit: **07:21 | 80°**	**C-11 HD: Primary Focus** 
Fireworks Galaxy (NGC-6946) Config: |C11HD|ZWO6200MC| Type: **Galaxy** Constellation: **Cepheus** Coordinates: **20° 34' 54"** **60° 08' 60"** Close Star: **SAO-19302** (Alderamin) Catalog Objects: NGC-6946 Imaging Window: **07:17 – 11:15** Transit: **07:30 | 63°**	**C-11 HD: Primary Focus** 

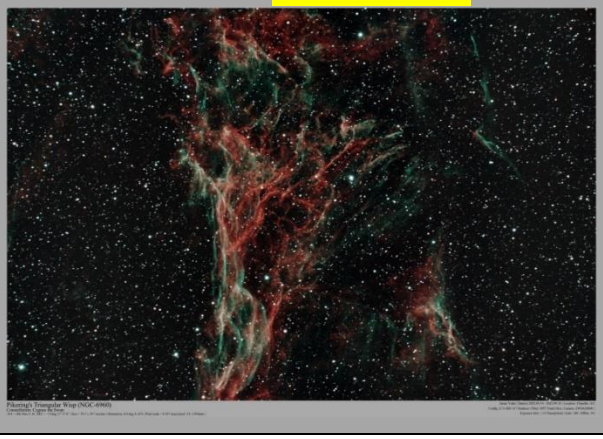
Prospective Imaging Objects – October 14 2023

Pelican & N. America Nebula (IC-5070) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: Frame 1: RA=20hr56'10" DEC=44°55'07" Frame 2: RA=20hr56'10" DEC=42°37'57" Close Star: **SAO-50180** (57 Cygni) Catalog Objects: IC5070 Imaging Window: **07:17 – 11:35** Transit: **07:46 | 79°**	**C-11 HD: HyperStar v4** Composite! 
Pelican & N. America Nebula (IC-5070) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **20h 57' 29"** **44° 10' 10"** Close Star: **SAO-50180** (57 Cygni) Catalog Objects: IC5070 Imaging Window: **07:17 – 11:35** Transit: **07:46 | 79°**	**C-11 HD: HyperStar v4** 

Prospective Imaging Objects – October 14 2023

Northern Coal Sack (LDN-904) Config: **C11-HD	HS	ZWO6200MC** Type: **Dark Nebula** Constellation: **Cygnus** Coordinates: **20h 51' 52"** **39° 13' 34"** Close Star: **SAO-49941** (Deneb) Catalog Objects: LDN-904 Imaging Window: **07:17 – 11:33** Transit: **07:48	84°**	**C-11 HD: HyperStar v4** 
Veil Nebula (NGC-6960) Config: **C11-HD	HS	ZWO6200MC** Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **P1:** RA: 20h51'12" DEC: 31°32'26" **P2:** RA: 20h51'12" DEC: 29°30'31" Close Star: **SAO-70467** (52 Cygni) Catalog Objects: NGC-6960, 6992, 6995 Imaging Window: **07:17 – 11:23** Transit: **07:48	80°**	**C-11 HD: HyperStar v4** Composite! 
Veil Nebula (NGC-6960) Config: **C11-HD	HS	ZWO6200MC** Type: **Supernova Remnant** Constellation: **Cygnus** Coordinates: **20h 51' 15"** **31° 03' 60"** Close Star: **SAO-70467** (52 Cygni) Catalog Objects: NGC-6960, 6992, 6995 Imaging Window: **07:17 – 11:23** Transit: **07:48	80°**	**C-11 HD: HyperStar v4** 

Prospective Imaging Objects – October 14 2023

Witch's Broom (NGC-6960) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **P1**: RA=20hr 46' 20" DEC=30° 54' 54" **P2**: RA=20hr 46' 20" DEC=30° 17' 06" Close Star: **SAO-70467** (52 Cygni) Catalog Objects: NGC-6960 Imaging Window: **07:17 – 11:23** Transit: **07:48 | 80°**	**C-11 HD: Focal Reducer** Composite! 
Pickering's Triangular Wisp Config: |C11-HD|FR|ZWO6200MC| Type: **Supernova Remnant** Constellation: **Cygnus** Coordinates: **20h 48' 16"** **31° 37' 17"** Close Star: **SAO-70467** (52 Cygni) Catalog Objects: NGC-6960 Imaging Window: **07:17 – 11:23** Transit: **07:48 | 80°**	**C-11 HD: Focal Reducer** 
M-72 (NGC-6981) Config: |C11HD|ZWO6200MC| Type: **Globular Cluster** Constellation: **Aquarius** Coordinates: **20h 53' 28"** **-12° 32' 11"** Close Star: **SAO-108378** (Markab) Catalog Objects: M-72/NGC-6981 Imaging Window: ***07:17 – 10:31** Transit: **07:49 | 44°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

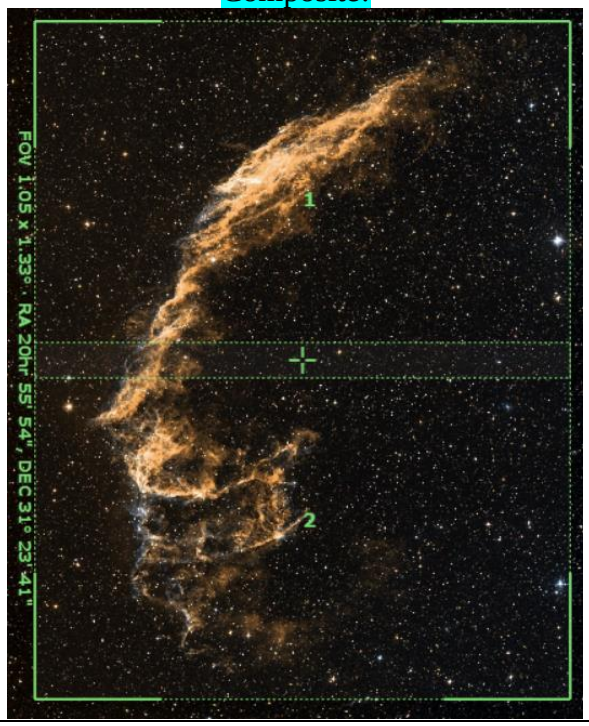
Network Nebula (NGC-6992)
Config: |C11-HD|FR|ZWO6200MC|

Type: **Supernova Remnant**

Constellation: **Cygnus**
Coordinates:
P1: RA= 20hr 55’ 54” DEC= 31° 42’ 35”
P2: RA= 20hr 55’ 54” DEC= 31° 04’ 47”

Close Star: **SAO-70474** (Gienah)
Catalog Objects: NGC-6992
Imaging Window: **07:17 – 01:27**
Transit: **07:52 | 88°**

C-11 HD: Focal Reducer
Composite!



M-73 (NGC-6994)
Config: |C11HD|ZWO6200MC|

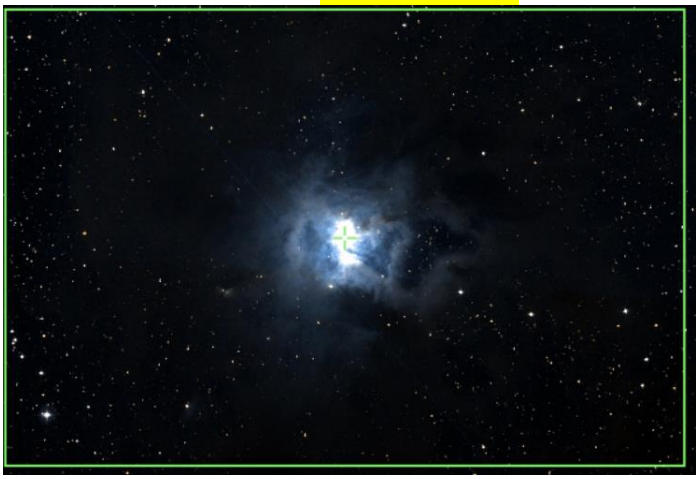
Type: **Open Cluster**

Constellation: **Aquarius**
Coordinates:
20h 59’ 00”
-12° 37’ 60”

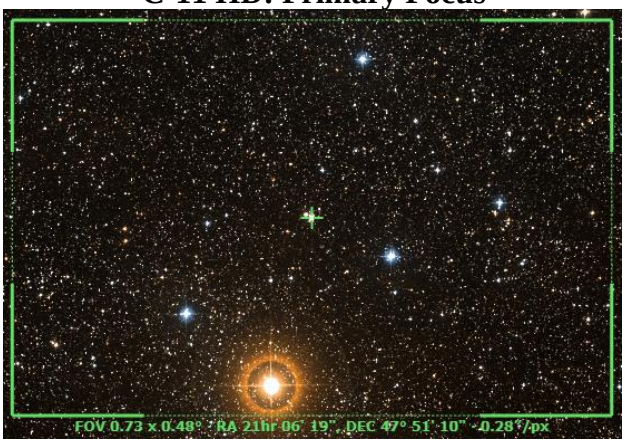
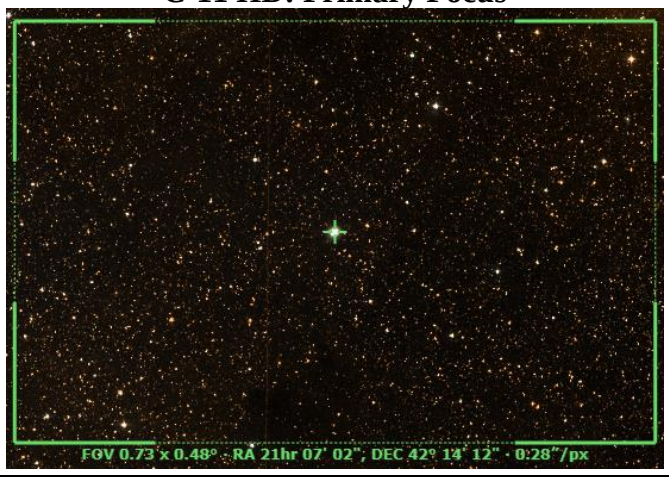
Close Star: **SAO-108378** (Markab)
Catalog Objects: M-73/NGC-6994
Imaging Window: ***07:17 – 10:31**
Transit: **07:54 | 44°**

C-11 HD: Primary Focus

Prospective Imaging Objects – October 14 2023

Fetus Nebula (NGC-7008) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Cygnus** Coordinates: **21h 00' 33"** **54° 32' 38"** Close Star: **SAO-49941** (Deneb) Catalog Objects: NGC-7008 Imaging Window: **07:17 – 11:46** Transit: **07:56 | 69°**	**C-11 HD: Primary Focus** 
Iris Nebula (NGC 7023) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cepheus** Coordinates: **21h 01' 36"** **68° 10' 00"** Close Star: **SAO-19302** (Alderamin) Catalog Objects: NGC-7023 Imaging Window: **07:17 – 11:19** Transit: **07:57 | 55°**	**C-11 HD: Focal Reducer** 
Iris Nebula (NGC 7023) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cepheus** Coordinates: **21h 01' 36"** **68° 10' 00"** Close Star: **SAO-19302** (Alderamin) Catalog Objects: NGC-7023 Imaging Window: **07:17 – 11:19** Transit: **07:57 | 55°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

Saturn Nebula (NGC-7009) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Aquarius** Coordinates: **21h 04' 11"** **-11° 21' 47"** Close Star: **SAO-191524** (Fomalhaut) Catalog Objects: NGC-7009 Imaging Window: ***07:17 – 10:48** Transit: **08:00 | 45°**	**C-11 HD: Primary Focus** 
NGC-7026 Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Cygnus** Coordinates: **21h 06' 19"** **47° 51' 10"** Close Star: **SAO-50456** Catalog Objects: NGC-7026 Imaging Window: **07:17 – 11:52** Transit: **08:02 | 45°**	**C-11 HD: Primary Focus** 
NGC-7027 Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Cygnus** Coordinates: **21h 07' 02"** **42° 14' 12"** Close Star: **SAO-50456** Catalog Objects: NGC-7027 Imaging Window: **07:17 – 11:49** Transit: **08:02 | 45°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

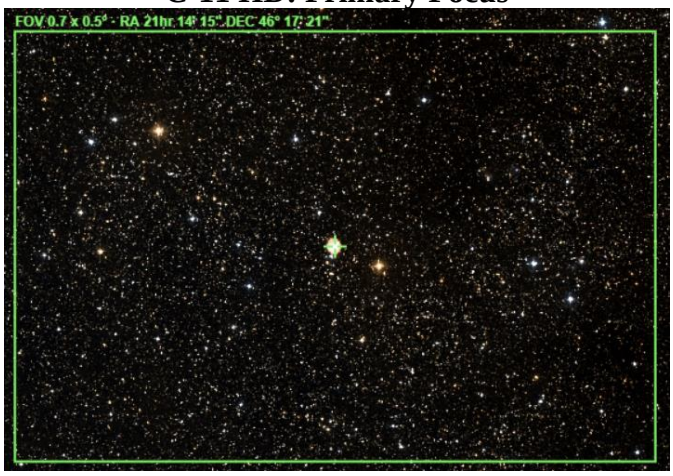
NGC-7048 (PK 88-1.1)
Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**

Constellation: **Cygnus**
Coordinates:
21h 14’ 15”
46° 17’ 21”

Close Star: **SAO-49941** (Deneb)
Catalog Objects: NGC-7048
Imaging Window: **07:17 – 11:59**
Transit: **08:10 | 77°**

C-11 HD: Primary Focus



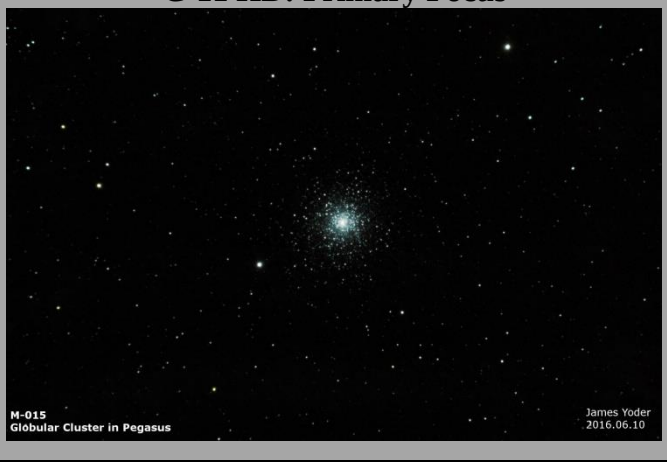
Pegasus Cluster (M-15)
Config: |C11HD|ZWO6200MC|

Type: **Globular Cluster**

Constellation: **Cepheus**
Coordinates:
21h 29’ 58”
12° 10’ 03”

Close Star: **SAO-127029** (Enif)
Catalog Objects: M-15/NGC-7078
Imaging Window: **07:17 – 11:19**
Transit: **08:25 | 69°**

C-11 HD: Primary Focus



M-39 (NGC-7092)
Config: |C11-HD|FR|ZWO6200MC|

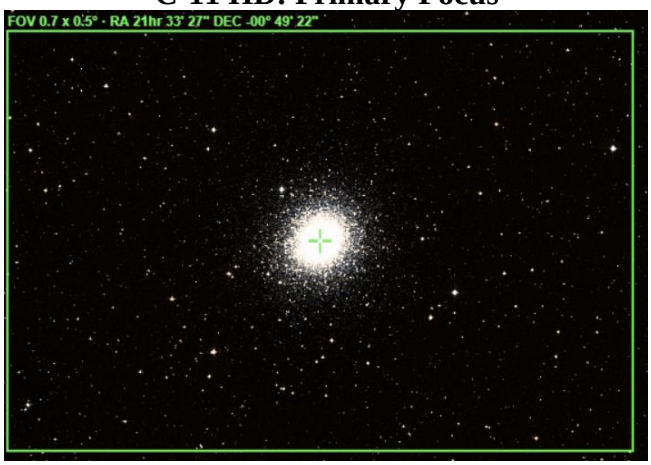
Type: **Open Cluster**

Constellation: **Cygnus**
Coordinates:
21h 31’ 56”
48° 26’ 46”

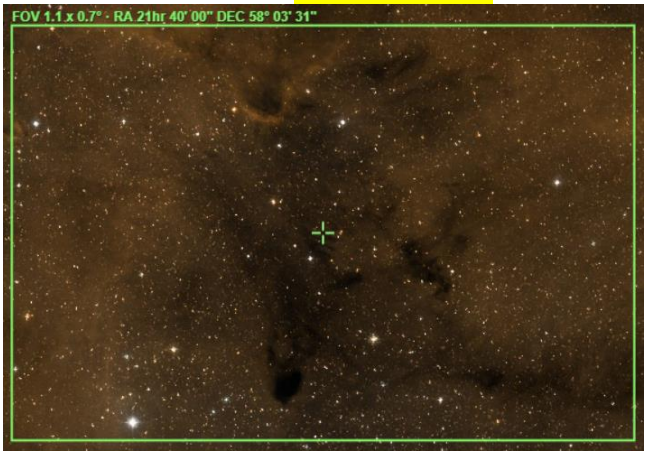
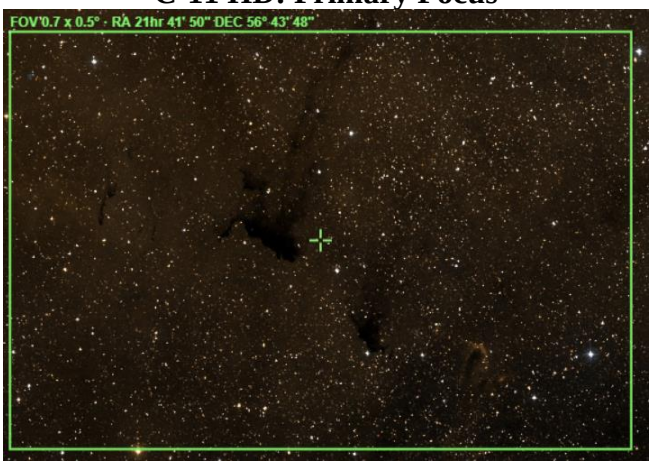
Close Star: **SAO-49941** (Deneb)
Catalog Objects: M-39/NGC-7092
Imaging Window: **07:17 – 12:17**
Transit: **08:27 | 75°**

C-11 HD: Focal Reducer

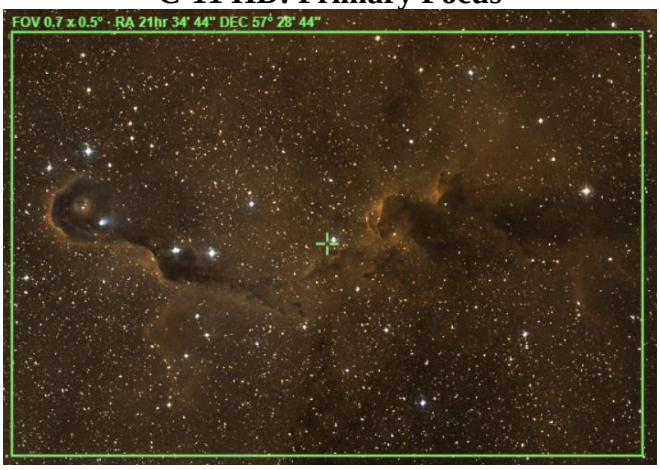
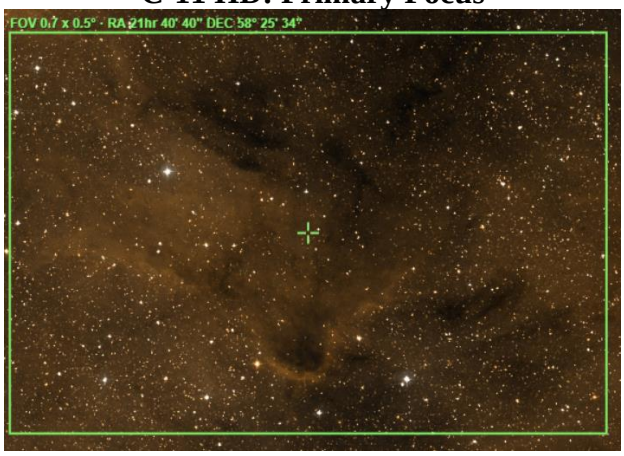
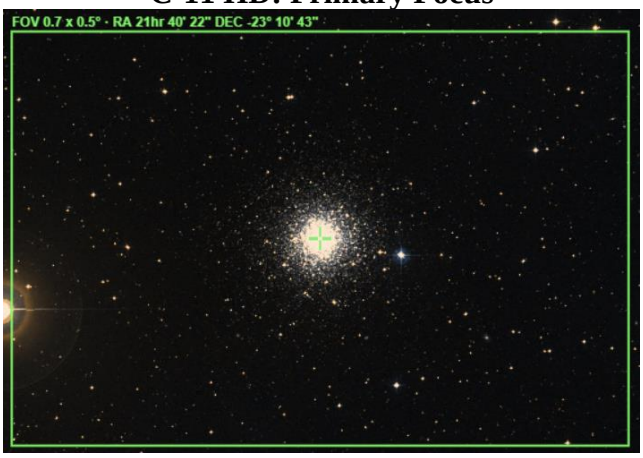
Prospective Imaging Objects – October 14 2023

M-2 (NGC-7089) Config: |C11HD|ZWO6200MC| Type: **Globular Cluster** Constellation: **Aquarius** Coordinates: **21h 33' 27"** **00° 49' 22"** Close Star: **SAO-127029** (Enif) Catalog Objects: M-2/NGC-7089 Imaging Window: **07:17 – 10:33** Transit: **08:29| 56°**	**C-11 HD: Primary Focus** 
NGC-7094 Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Pegasus** Coordinates: **21h 36' 53"** **12° 47' 22"** Close Star: **SAO-127029** (Enif) Catalog Objects: NGC-7094 Imaging Window: **07:17 – 11:28** Transit: **08:32 | 69°**	**C-11 HD: Primary Focus** 
Elephant Trunk (IC-1396) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Constellation: **Cepheus** Coordinates: **21h 39' 58"** **57° 33' 34"** Close Star: **SAO-19302** (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: **07:17 – 12:22** Transit: **08:34 | 66°**	**C-11 HD: HyperStar v4** 

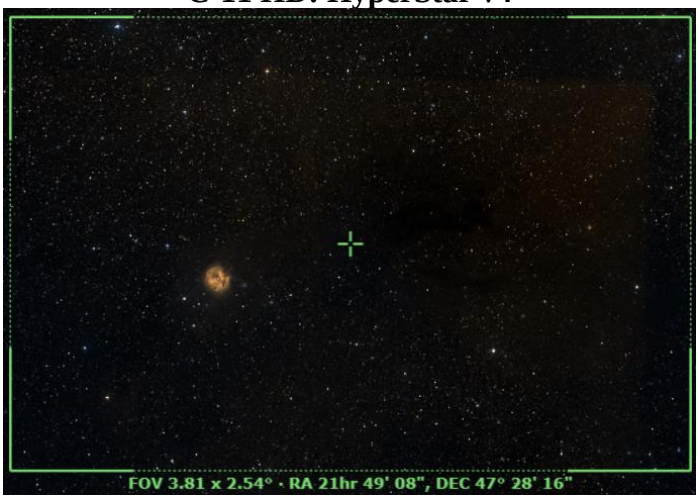
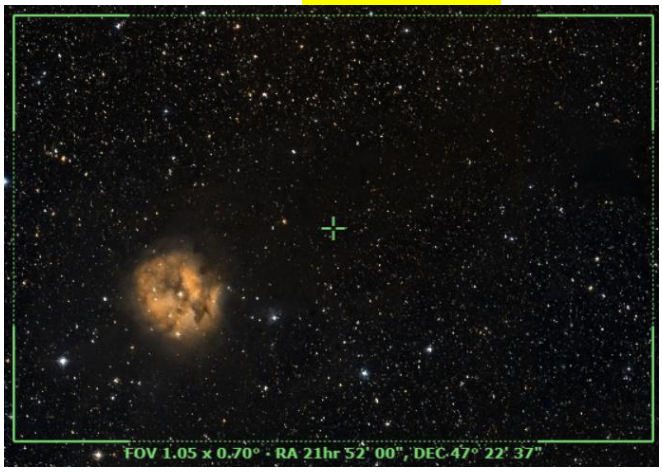
Prospective Imaging Objects – October 14 2023

Elephant Trunk (IC-1396) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright & Dark Nebula** Constellation: **Cepheus** Coordinates: **21h 40' 00"** **58° 03' 31"** Close Star: **SAO-19302** (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: **07:17 – 12:22** Transit: **08:34 | 66°**	**C-11 HD: Focal Reducer** 
Elephant Trunk (IC-1396) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cepheus** Coordinates: **21h 34' 39"** **57° 29' 02"** Close Star: **SAO-19302** (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: **07:17 – 12:22** Transit: **08:34 | 66°**	**C-11 HD: Focal Reducer** 
Elephant Trunk (IC-1396) Config: |C11HD|ZWO6200MC| Type: **Bright & Dark Nebula** Constellation: **Cepheus** Coordinates: **21h 41' 50"** **56° 43' 48"** Close Star: **SAO-19302** (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: **07:17 – 12:22** Transit: **08:34 | 66°**	**C-11 HD: Primary Focus** 

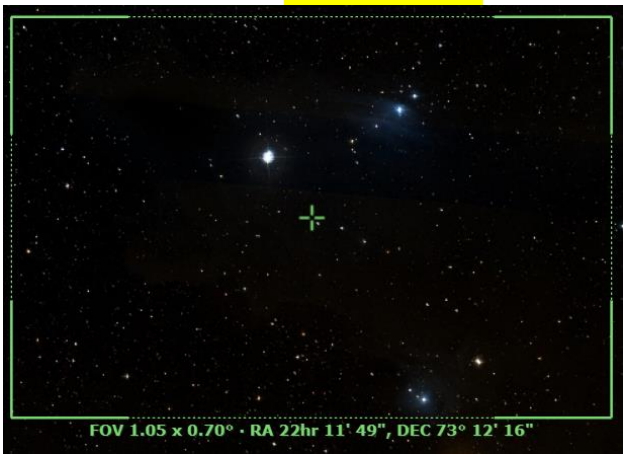
Prospective Imaging Objects – October 14 2023

Elephant Trunk (IC-1396) Config: |C11HD|ZWO6200MC| Type: **Bright & Dark Nebula** Constellation: **Cepheus** Coordinates: **21h 34’ 44”** **57° 28’ 44”** Close Star: **SAO-19302** (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: **07:17 – 12:22** Transit: **08:34 | 66°**	**C-11 HD: Primary Focus** 
Elephant Trunk (IC-1396) Config: |C11HD|ZWO6200MC| Type: **Bright & Dark Nebula** Constellation: **Cepheus** Coordinates: **21h 40’ 40”** **58° 25’ 34”** Close Star: **SAO-19302** (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: **07:17 – 12:22** Transit: **08:34 | 66°**	**C-11 HD: Primary Focus** 
M-30 (NGC-7099) Config: |C11HD|ZWO6200MC| Type: **Globular Cluster** Constellation: **Capricornus** Coordinates: **21h 40’ 22”** **-23° 10’ 43”** Close Star: **SAO-164644** (Scheddi) Catalog Objects: M-30/NGC-7099 Imaging Window: ***07:17 – 09:58** Transit: **08:36 | 34°**	**C-11 HD: Primary Focus** 

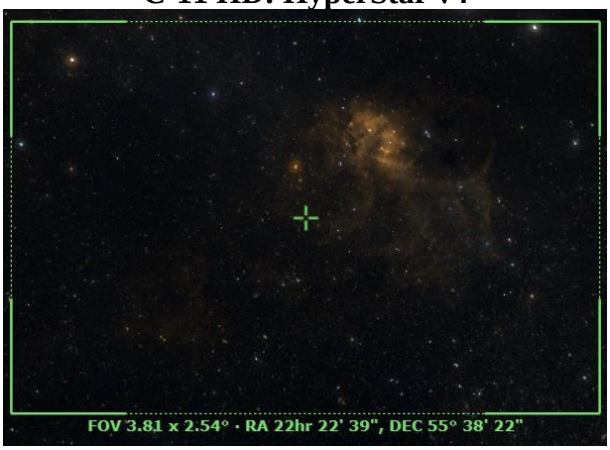
Prospective Imaging Objects – October 14 2023

NGC 7139 Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Cepheus** Coordinates: **21h 46' 07"** **+63° 47' 54"** Close Star: **SAO-019302** (Alderamin) Catalog Objects: NGC-7139 Imaging Window: **07:17 – 12:19** Transit: **08:41 | 60°**	**C-11 HD: Primary Focus** 
Dark Cocoon (B-168, IC 5146) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright & Dark Nebula** Constellation: **Cygnus** Coordinates: **21h 49' 08"** **47° 28' 16"** Close Star: **SAO-5105** (Rho Cygni) Catalog Objects: B-168, IC-5146 Imaging Window: **07:17 – 12:34** Transit: **08:44 | 76°**	**C-11 HD: HyperStar v4** 
Cocoon Nebula (IC-5146) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **21h 52' 00"** **47° 22' 37"** Close Star: **SAO-5105** (Rho Cygni) Catalog Objects: IC-5146 Imaging Window: **07:17 – 12:39** Transit: **08:49 | 76°**	**C-11 HD: Focal Reducer** 

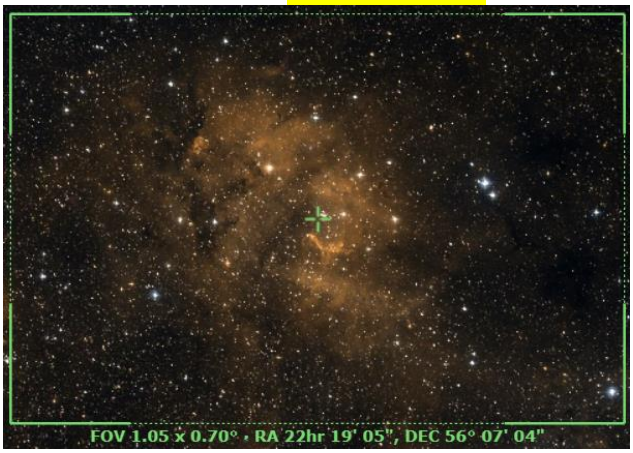
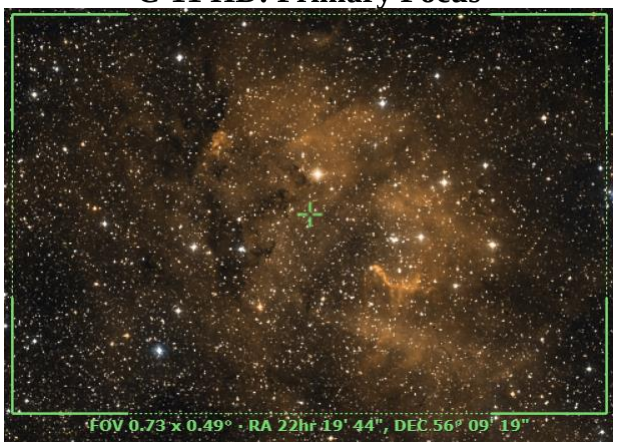
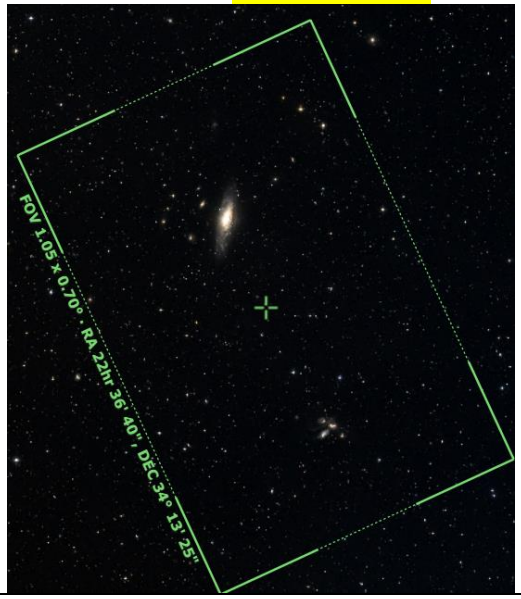
Prospective Imaging Objects – October 14 2023

Cocoon Nebula (IC-5146) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cygnus** Coordinates: **21h 53' 24"** **47° 16' 00"** Close Star: **SAO-5105** (Rho Cygni) Catalog Objects: IC-5146 Imaging Window: **07:17 – 12:39** Transit: **08:49 | 76°**	**C-11 HD: Primary Focus** 
Dark Shark (LDN-1235) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright & Dark Nebula** Constellation: **Cepheus** Coordinates: **22h 11' 49"** **73° 12' 16"** Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: LDN-1235 Imaging Window: **08:21 – 01:47** Transit: **11:04 | 50°**	**C-11 HD: Focal Reducer** 
Helix Nebula (NGC-7293) Config: |C11HD|ZWO6200MC| Type: **Planetary nebula** Constellation: **Aquarius** Coordinates: **22h 29' 39"** **-20° 48' 36"** Close Star: **SAO-164644** (Delta Cap) Catalog Objects: NGC-7293 Imaging Window: ***07:39 – 11:15** Transit: **09:25 | 36°**	**C-11 HD: Primary Focus** 

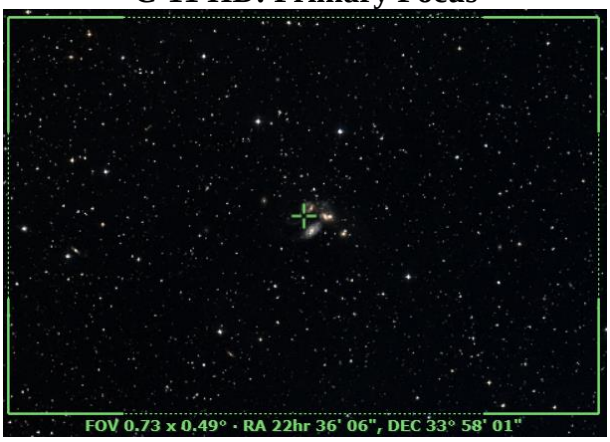
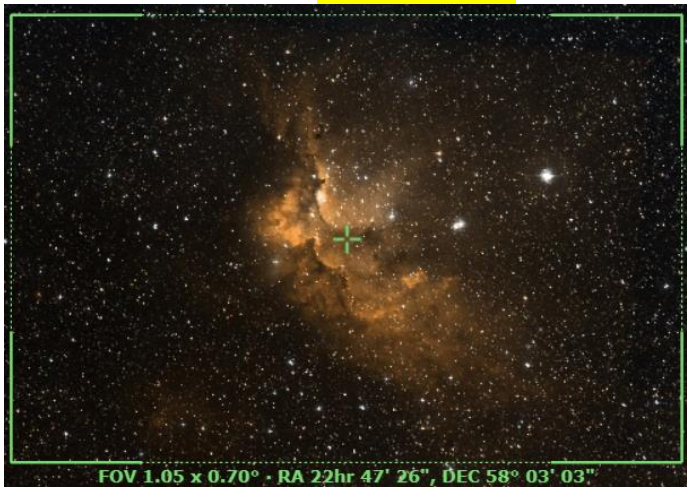
Prospective Imaging Objects – October 14 2023

Wolf's Cave (VdB-152) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright & Dark Nebula** Constellation: **Cepheus** Coordinates: **22h 17' 03"** **70° 21' 54"** Close Object: Cave Nebula (SH2-155) Close Star: **SAO-20268** (Iota Cephei) Imaging Window: **07:17 – 01:32** Transit: **09:52 | 50°**	**C-11 HD: HyperStar v4** 
Wolf's Cave (VdB-152) Config: |C11-HD|FR|ZWO6200MC| Constellation: **Cepheus** Coordinates: **22h 13' 42"** **70° 30' 32"** 90° Rotation Close Object: Cave Nebula (SH2-155) -44min differential Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: B-168, IC-5146 Imaging Window: **07:17 – 01:32** Transit: **09:52 | 50°**	**C-11 HD: Focal Reducer** 
SH2-132 Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Constellation: **Cepheus** Coordinates: **22h 22' 39"** **55° 38' 22"** Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: SH2-132 Imaging Window: **07:17 – 01:03** Transit: **09:14 | 67°**	**C-11 HD: HyperStar v4** 

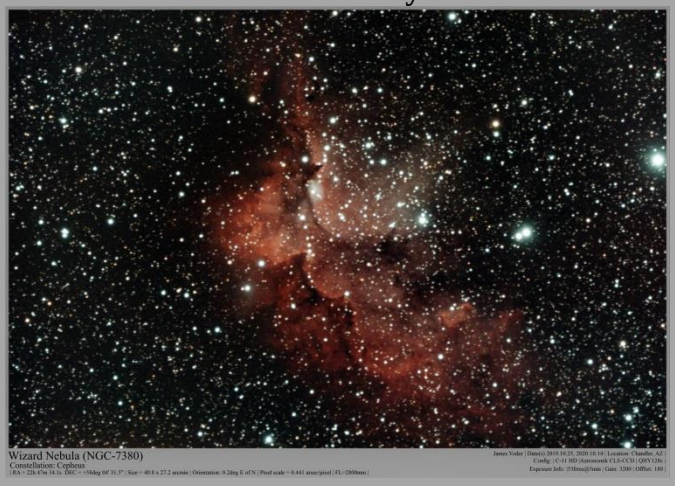
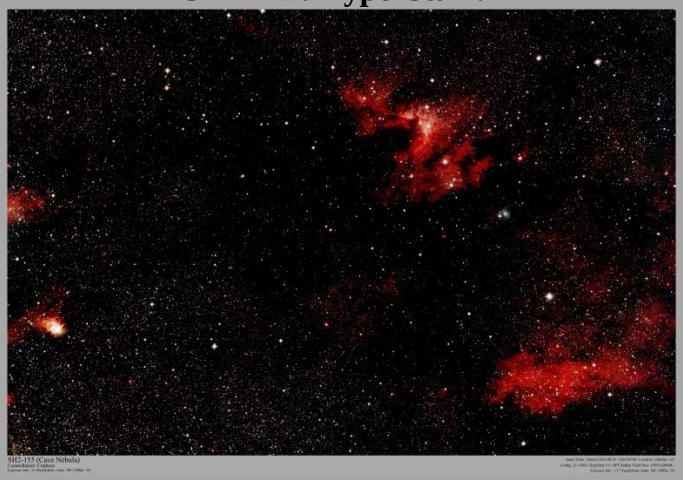
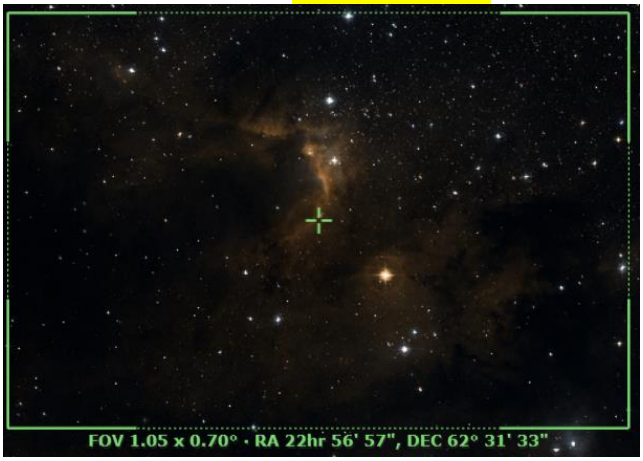
Prospective Imaging Objects – October 14 2023

SH2-132 Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cepheus** Coordinates: **22h 19' 05"** **56° 07' 04"** Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: SH2-132 Imaging Window: **07:17 – 01:03** Transit: **09:14 | 67°**	**C-11 HD: Focal Reducer** 
SH2-132 Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Constellation: **Cepheus** Coordinates: **22h 19' 44"** **56° 09' 19"** Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: SH2-132 Imaging Window: **07:17 – 01:03** Transit: **09:14 | 67°**	**C-11 HD: Primary Focus** 
Stephan's Quintet & NGC 7331 (NGC 7317, 7331) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Constellation: **Pegasus** Coordinates: **22h 36' 40"** **34° 13' 25"** Camera Rotation = 115° East (-245) Close Star: **SAO-72191** (1 Lacertae) Catalog Objects: NGC7317, NGC7331 Imaging Window: **07:17 – 01:09** Transit: **09:31 | 89°**	**C-11 HD: Focal Reducer** 

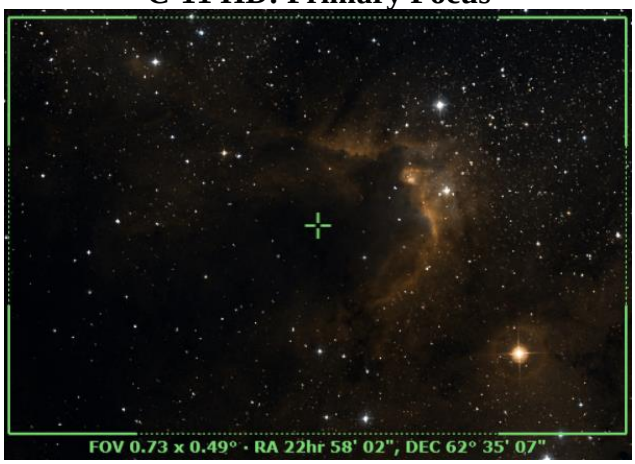
Prospective Imaging Objects – October 14 2023

Stephan's Quintet Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Constellation: **Pegasus** Coordinates: **22h 36' 06"** **33° 58' 01"** Close Star: **SAO-72191** (1 Lacertae) Catalog Objects: NGC7317 Imaging Window: **07:17 – 01:09** Transit: **09:31 | 89°**	**C-11 HD: Primary Focus** 
NGC-7331 Group (NGC-7331) Config: |C11HD|ZWO6200MC| Type: **Galaxy Cluster** Constellation: **Pegasus** Coordinates: **22h 37' 15"** **34° 24' 51"** Close Star: **SAO-72191** (1 Lacertae) Catalog Objects: NGC-7331 Imaging Window: **07:17 – 01:11** Transit: **09:32 | 89°**	**C-11 HD: Primary Focus** 
Wizard Nebula (SH 2-142) Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Constellation: **Cepheus** Coordinates: **22h 47' 26"** **58° 03' 03"** Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: SH2-142 Imaging Window: **07:17 – 01:28** Transit: **09:40 | 89°**	**C-11 HD: Focal Reducer** 

Prospective Imaging Objects – October 14 2023

Wizard Nebula (SH 2-142) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Constellation: **Cepheus** Coordinates: **22h 47' 26"** **58° 03' 03"** Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: SH2-142 Imaging Window: **07:17 – 01:28** Transit: **09:40 | 89°**	**C-11 HD: Primary Focus** 
Cave Nebula (SH2-155) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright & Dark Nebula** Constellation: **Cepheus** Coordinates: **23h 00' 57"** **62° 04' 09"** Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: SH2-155 Imaging Window: **07:17 – 01:32** Transit: **09:52 | 61°**	**C-11 HD: HyperStar v4** 
Cave Nebula (SH2-155) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright & Dark Nebula** Constellation: **Cepheus** Coordinates: **22h 56' 57"** **62° 31' 33"** Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: SH2-155 Imaging Window: **07:17 – 01:32** Transit: **09:52 | 61°**	**C-11 HD: Focal Reducer** 

Prospective Imaging Objects – October 14 2023

Cave Nebula (SH2-155) Config: |C11HD|ZWO6200MC| Type: **Bright & Dark Nebula** Constellation: **Cepheus** Coordinates: **22h 56’ 57”** **62° 31’ 33”** Close Star: **SAO-20268** (Iota Cephei) Catalog Objects: SH2-155 Imaging Window: **07:17 – 01:32** Transit: **09:52 | 61°**	**C-11 HD: Primary Focus** 
NGC-7479 (PGC-70419) Config: |C11HD|ZWO6200MC| Type: **Barred Spiral Galaxy** Constellation: **Pegasus** Coordinates: **23h 04’ 58”** **12° 18’ 37”** Close Star: **SAO-127340** (Baham) Catalog Objects: NGC-7479 Imaging Window: **07:17 – 12:54** Transit: **10:00 | 62°**	**C-11 HD: Primary Focus** 
Lobster Claw and Bubble Nebula (SH2-157) Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse Nebula** Constellation: **Cassiopeia** Coordinates: **23h 18’ 25.8”** **60° 31’ 17.8”** Close Star: **SAO-21133** (Caph) Catalog Objects: SH2-157, NGC-7635 Imaging Window: **07:17 – 01:56** Transit: **10:11 | 63°**	**C-11 HD: HyperStar v4** 

Prospective Imaging Objects – October 14 2023

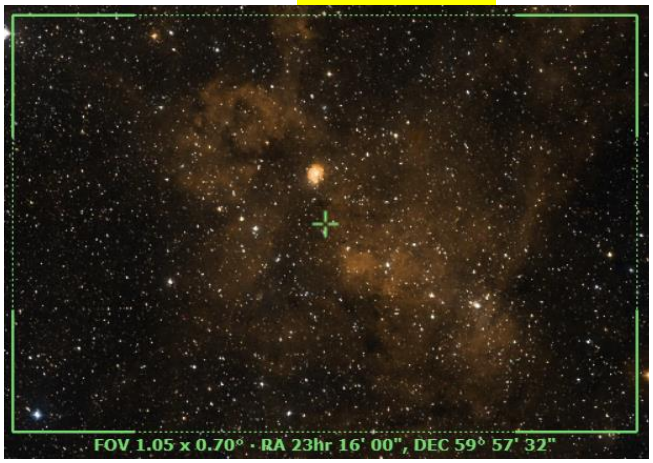
Lobster Claw (SH2-157)
Config: |C11-HD|FR|ZWO6200MC|

Type: **Diffuse Nebula**

Constellation: **Cassiopeia**
Coordinates:
23h 16’ 00”
59° 57’ 32”

Close Star: **SAO-21133** (Caph)
Catalog Objects: SH2-157
Imaging Window: **07:17 – 01:56**
Transit: **10:11 | 63°**

C-11 HD: Focal Reducer



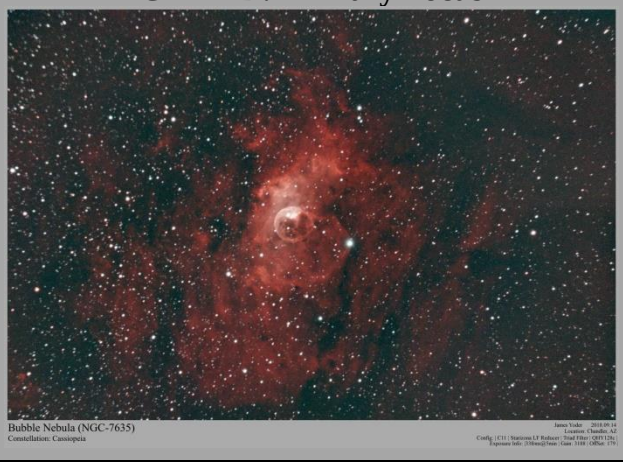
Bubble Nebula (NGC-7635)
Config: |C11HD|ZWO6200MC|

Type: **Bright & Dark Nebula**

Constellation: **Cepheus**
Coordinates:
23h 20’ 12”
61° 11’ 00”

Close Star: **SAO-21133** (Caph)
Catalog Objects: NGC-7635, SH2-162
Imaging Window: **07:17 – 01:58**
Transit: **10:15 | 62°**

C-11 HD: Primary Focus



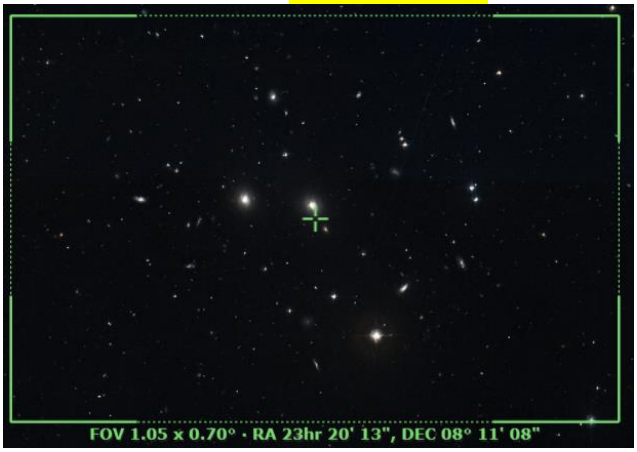
Pegasus Cluster (NGC-7619)
Config: |C11-HD|FR|ZWO6200MC|

Type: **Cluster of Galaxies**

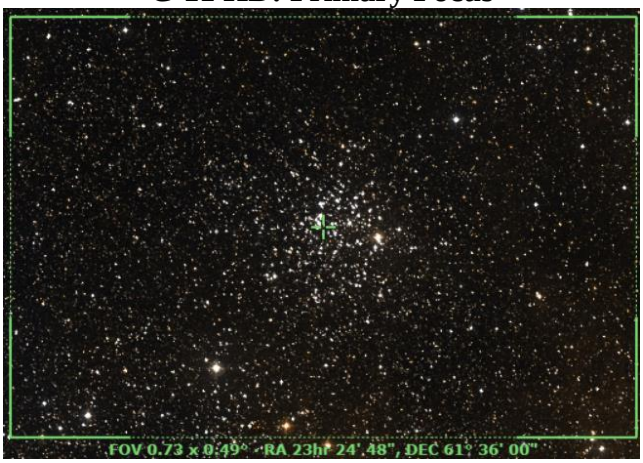
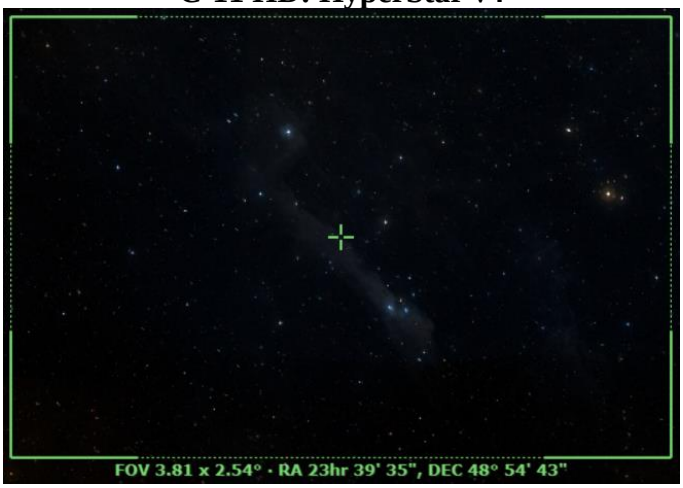
Constellation: **Pegasus**
Coordinates:
23h 20’ 13”
08° 11’ 08”

Close Star: **SAO-128085** (g Piscium)
Catalog Objects: NGC-7619
Imaging Window: **07:34 – 12:57**
Transit: **10:15 | 65°**

C-11 HD: Focal Reducer



Prospective Imaging Objects – October 14 2023

Pegasus Cluster (NGC-7619) Config: |C11HD|ZWO6200MC| Type: **Cluster of Galaxies** Constellation: **Pegasus** Coordinates: **23h 20' 13"** **08° 10' 57"** Close Star: **SAO-128085** (g Piscium) Catalog Objects: NGC-7619 Imaging Window: **07:34 – 12:57** Transit: **10:15 | 65°**	**C-11 HD: Primary Focus** 
M-52 (NGC-7654) Config: |C11HD|ZWO6200MC| Type: **Open Cluster** Constellation: **Cassiopeia** Coordinates: **23h 24' 48"** **61° 36' 00"** Close Star: **SAO-21133** (Caph) Catalog Objects: M-52 Imaging Window: **07:17 – 02:02** Transit: **10:20 | 62°**	**C-11 HD: Primary Focus** 
Blue Match Nebula (SH2-155) Config: **C11-HD | HS | ZWO6200MC** Type: **Reflection Nebula** Constellation: **Andromeda** Coordinates: **23h 39' 24"** **48° 51' 37"** Nearby: NGC-7686 Close Star: **SAO-73765** (Alpheratz) Catalog Objects: VdB 158/ LBN 534 Imaging Window: **07:17 – 02:15** Transit: **10:25 | 81°**	**C-11 HD: HyperStar v4** 

Prospective Imaging Objects – October 14 2023

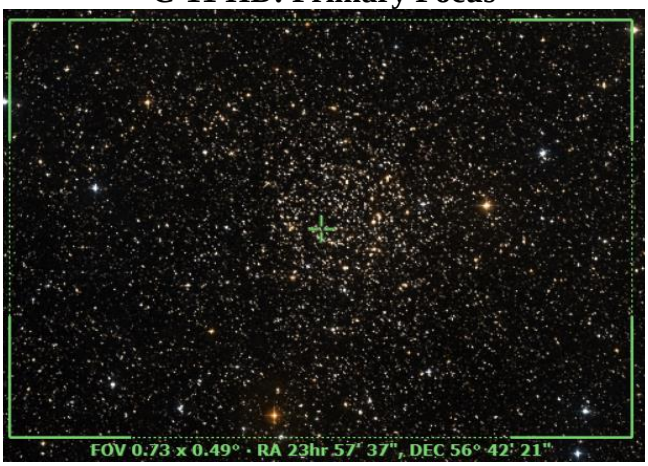
Caroline's Rose (NGC-7789)
Config: |C11HD|ZWO6200MC|

Type: **Open Cluster**

Constellation: **Cassiopeia**
Coordinates:
23h 57' 37"
56° 42' 21"

Close Star: **SAO-21607** (Shedar)
Catalog Objects: NGC-7789
Imaging Window: **07:17 – 02:41**
Transit: **10:52 | 65°**

C-11 HD: Primary Focus



NGC-7822 (Ced-214)
Config: **C11-HD | HS | ZWO6200MC**

Type: **Emission Nebula**
Constellation: **Cepheus**

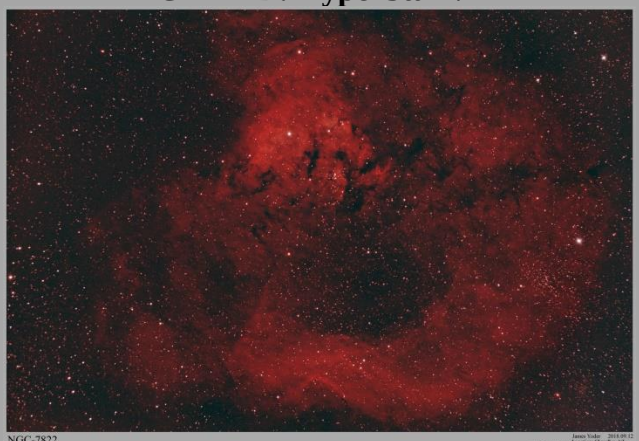
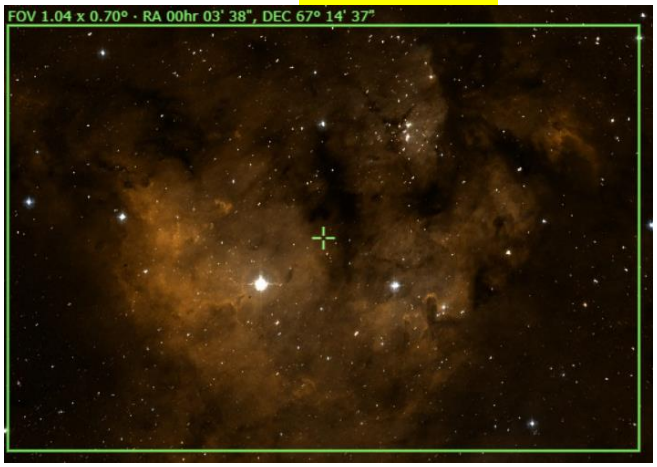
Coordinates:
Frame 01
RA: **00hr 03' 42"** DEC: **67° 41' 45"**
Frame 02
RA: **00hr 03' 42"** DEC: **65° 35' 15"**

Close Star: **SAO-10818**
Catalog Objects: Ced 214, NGC 7822, SH2-171

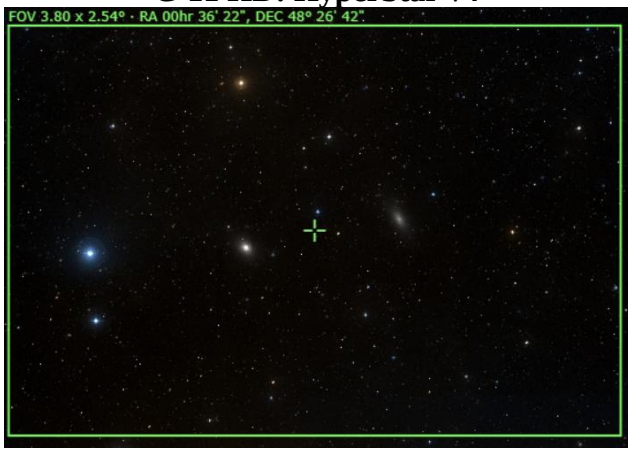
Imaging Window: **07:32 – 02:22**
Transit: **10:57 | 56°**

C-11 HD: HyperStar v4
Composite!

Prospective Imaging Objects – October 14 2023

NGC-7822 (CED-214) Config: **C11-HD	HS	ZWO6200MC** Type: **Diffuse Nebula** Constellation: **Cepheus** Coordinates: **00h 01' 27"** **67° 28' 37"** Close Star: **SAO-20268** Catalog Objects: NGC-7822/CED-214 Imaging Window: **07:32 – 02:22** Transit: **10:57	56°**	**C-11 HD: HyperStar v4** 
NGC-7822 (CED-214) Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Constellation: **Cepheus** Coordinates: **00h 03' 38"** **67° 14' 37"** Close Star: **SAO-20268** Catalog Objects: NGC-7822/CED-214 Imaging Window: **07:32 – 02:22** Transit: **10:57	56°**	**C-11 HD: Focal Reducer** 
NGC-7822 (CED-214) Config: |C11HD|ZWO6200MC| Type: **Emission Nebula** Constellation: **Cepheus** Coordinates: **00h 01' 56"** **67° 23' 05"** Close Star: **SAO-10818** Catalog Objects: Ced 214, NGC 7822, SH2-171 Imaging Window: **07:32 – 02:22** Transit: **10:57	56°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

Bow-Tie Nebula (NGC-40) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Cepheus** Coordinates: **00h 13' 01"** **72° 31' 21"** Close Star: **SAO-20268** Catalog Objects: NGC-40 Imaging Window: **08:16 – 02:00** Transit: **11:08 | 51°**	**C-11 HD: Primary Focus** 
Andromeda Galaxy Group Config: |C11HD|ZWO6200MC| Type: **Cluster of dim galaxies** Peak: Constellation: **Andromeda** Coordinates: **00h 17' 58"** **30° 03' 03"** Close Star: **SAO-73765** (Alpheratz) Catalog Objects: NGC 67-72 et. El. Imaging Window: **07:40 – 02:46** Transit: **11:13 | 87°**	**C-11 HD: Primary Focus** 
NGC-147 & NGC-185 Config: **C11-HD | HS | ZWO6200MC** Type: **Galaxy Pair** Constellation: **Cassiopeia** Coordinates: **00h 36' 22"** **48° 26' 42"** Close Star: **SAO-21609 (Shedar)** Catalog Objects: NGC-147, NGC-185 Imaging Window: **07:38 – 03:18** Transit: **11:28 | 75°**	**C-11 HD: HyperStar v4** 

Prospective Imaging Objects – October 14 2023

NGC-147 & NGC-185

Config: **C11-HD | FR | ZWO6200MC**

Type: **Galaxy Pair**

Constellation: **Cassiopeia**
Coordinates:
Frame 01
RA: **00hr 38' 33"** DEC: **48° 25' 44"**
Frame 02
RA: **00hr 33' 21"** DEC: **48° 25' 44"**

Close Star: **SAO-21609 (Shedar)**
Catalog Objects: NGC-147, NGC-185
Imaging Window: **07:38 – 03:18**
Transit: **11:28 | 75°**

C-11 HD: Focal Reducer
Composite!

NGC-147

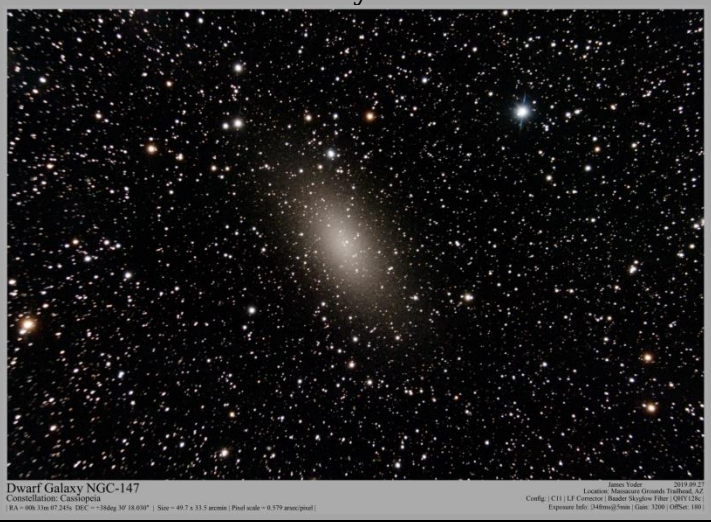
Config: |ZWO6200MC|

Type: **Galaxy**
Peak:
Constellation: **Cassiopeia**
Coordinates:
00h 33' 07.245"
48° 30' 18.030"

Close Star: **SAO-37375**
Catalog Objects: NGC-147

Imaging Window: **07:38 – 03:18**
Transit: **11:28 | 75°**

Primary Focus



NGC-185

Config: **C11-HD | ZWO6200MC**

Type: **Dwarf Spheroidal Galaxy**

Constellation: **Cassiopeia**
Coordinates:
00h 38' 58"
48° 20' 14"

Close Star: **SAO-21609 (Shedar)**
Catalog Objects: NGC-147
Imaging Window: **09:32 – 04:48**
Transit: **01:22 | 75°**

C-11 HD: Primary Focus

Prospective Imaging Objects – October 14 2023

M-110

Config: **C11-HD | ZWO6200MC**

Type: **Elliptical Galaxy**

Constellation: **Andromeda**
Coordinates:
00h 40’ 22”
41° 41’ 07”

Close Star: **SAO-73765 (Sirrah)**
Catalog Objects: M-110
Imaging Window: **07:49 – 03:22**
Transit: **11:35 | 82°**

C-11 HD: Primary Focus

M-32

Config: **C11-HD | ZWO6200MC**

Type: **Elliptical Galaxy**

Constellation: **Andromeda**
Coordinates:
00h 42’ 42”
40° 51’ 57”

Close Star: **SAO-73765 (Sirrah)**
Catalog Objects: M-32
Imaging Window: **07:52 – 03:22**
Transit: **11:37 | 83°**

C-11 HD: Primary Focus

Andromeda Galaxy (M 31)

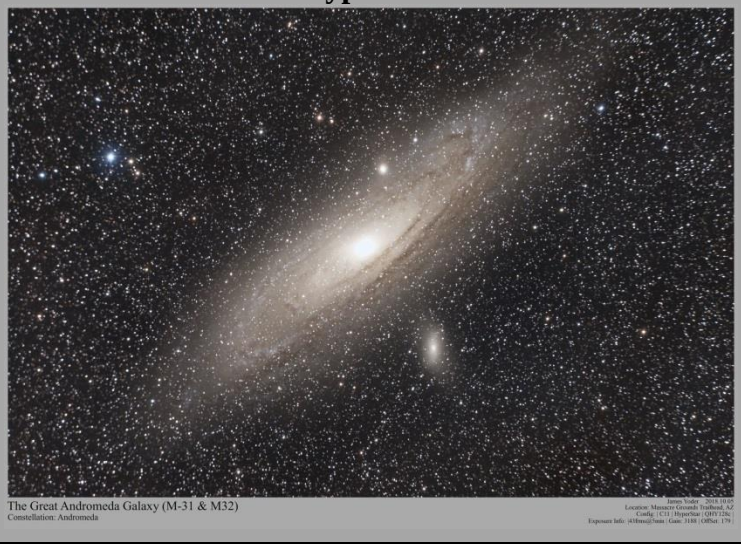
Config: |C11|HS|ZWO6200MCc|

Type: **Galaxy**
Peak: **Oct 1**
Constellation: **Andromeda**
Coordinates:
00h 43’ 03.089”
41° 18’ 37.05”

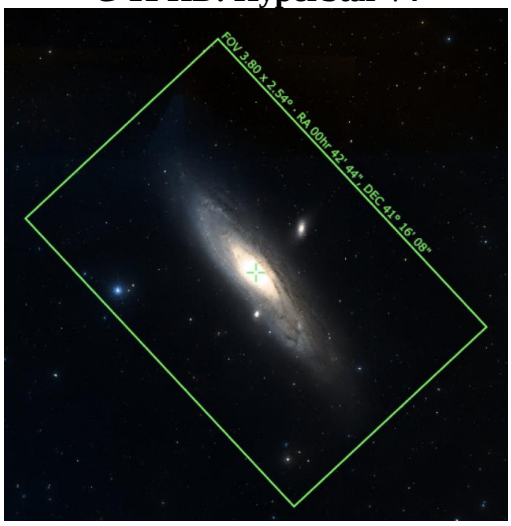
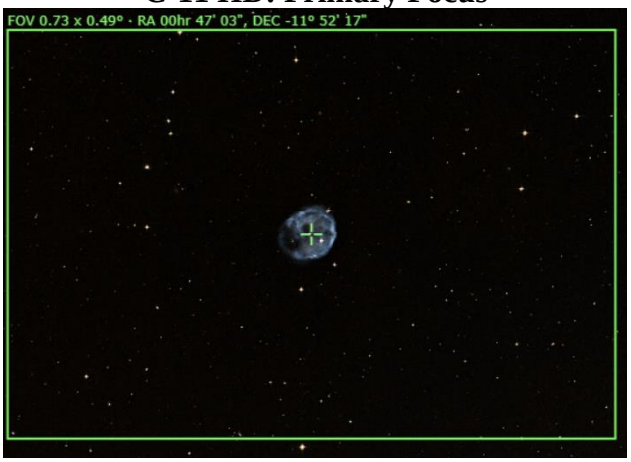
Close Star: **SAO-54281**
Catalog Objects: M-31, M-32, M-110, NGC-224, NGC-206

Imaging Window: **07:51 – 03:24**
Transit: **11:37 | 82°**

Hyperstar



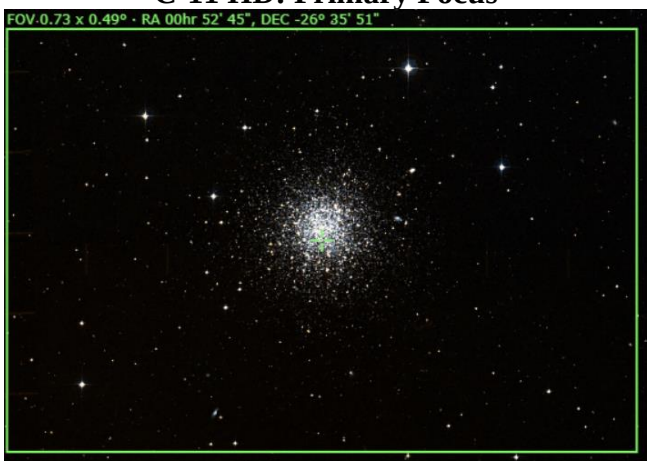
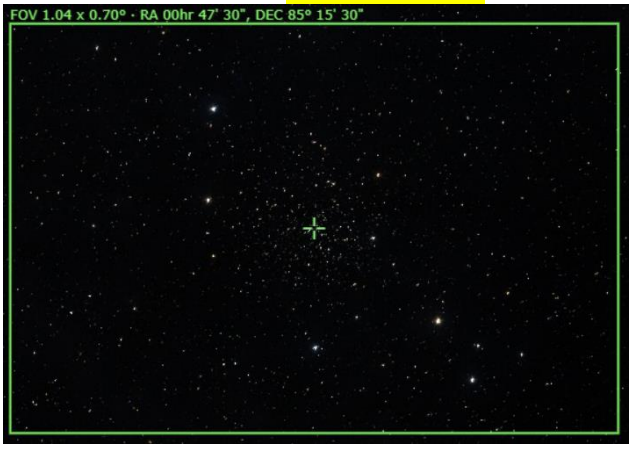
Prospective Imaging Objects – October 14 2023

M-31, M-32 Config: **C11-HD | HS | ZWO6200MC** Type: **Andromeda Galaxy** Constellation: **Andromeda** Coordinates: **00h 42’ 44”** **41° 16’ 08”** Angle: **133° East** Close Star: **SAO-73765 (Sirrah)** Catalog Objects: M-31, M-32 Imaging Window: **07:51 – 03:24** Transit: **11:37 | 82°**	**C-11 HD: HyperStar v4** 
NGC246, NGC255, PGC 2689 Config: **C11-HD | HS | ZWO6200MC** Type: **Planetary Nebula, 2 Galaies** Constellation: **Cetus** Coordinates: **00h 47’ 00”** **-11° 40’ 40”** Close Star: **SAO-147420 (Diphda)** Catalog Objects: NGC-246 Imaging Window: ***08:57 – 02:23** Transit: **11:42 | 45°**	**C-11 HD: Focal Reducer** 
Skull Nebula (NGC-246) Config: **C11-HD | ZWO6200MC** Type: **Planetary Nebula** Constellation: **Cetus** Coordinates: **00h 47’ 03”** **-11° 52’ 17”** Close Star: **SAO-147420 (Diphda)** Catalog Objects: NGC-246 Imaging Window: ***08:57 – 02:23** Transit: **11:42 | 45°**	**C-11 HD: Primary Focus** 

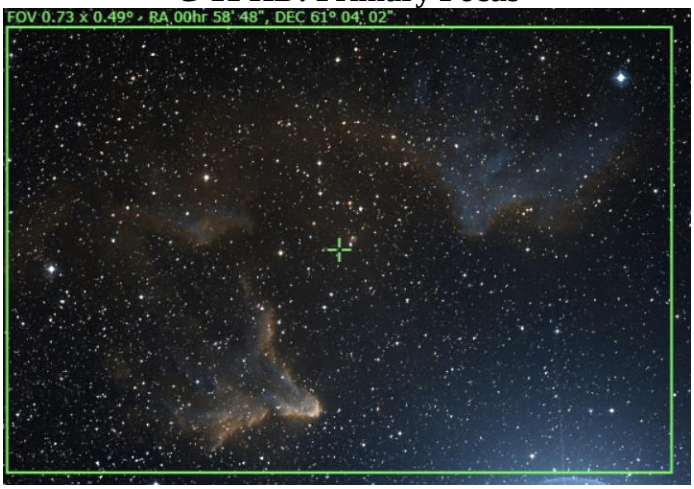
Prospective Imaging Objects – October 14 2023

Needle's Eye Galaxy (NGC 247) Config: |C11HD|ZWO6200MC| Type: **Galaxy** Peak: Constellation: **Cetus** Coordinates: **00hr 47' 12"** **-20° 44' 38"** Close Star: **SAO-147420** Catalog Objects: NGC 247 Imaging Window: ***09:08 – 02:12** Transit: **11:42 | 36°**	**C-11 HD: Primary Focus**  Needle's Eye Galaxy (NGC-247) Constellation: Cetus
NGC-288, NGC-253 Config: **C11-HD | HS | ZWO6200MC** Type: **Globular and Galaxy** Constellation: **Sculptor** Coordinates: **00h 50' 03"** **-25° 54' 37"** Close Star: **SAO-147420 (Diphda)** Catalog Objects: NGC-288, NGC-253 Imaging Window: ***10:03 – 01:28** Transit: **11:48 | 31°**	**C-11 HD: HyperStar v4**  Sculptor galaxy (NGC-253) and Globular Cluster (NGC-288) Constellation: Sculptor
Sculptor Galaxy (NGC-253) Config: **C11-HD | ZWO6200MC** Type: **Spiral Galaxy** Constellation: **Sculptor** Coordinates: **00h 47' 33"** **-25° 17' 15"** Close Star: **SAO-147420 (Diphda)** Catalog Objects: NGC-253 Imaging Window: ***09:41 – 01:39** Transit: **11:42 | 30°**	**C-11 HD: Primary Focus**  Sculptor Galaxy (NGC 253) Constellation: Sculptor

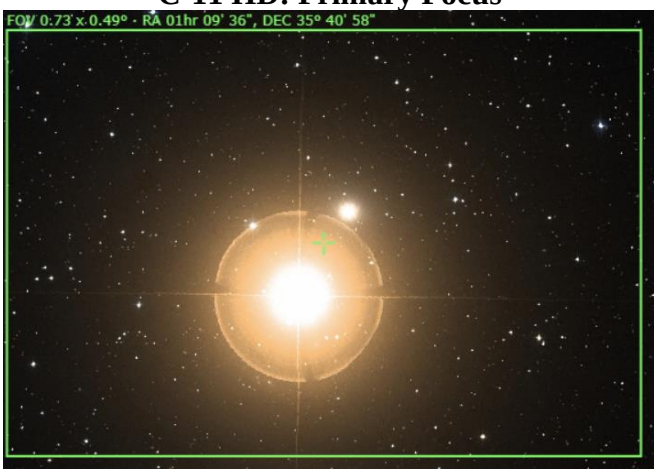
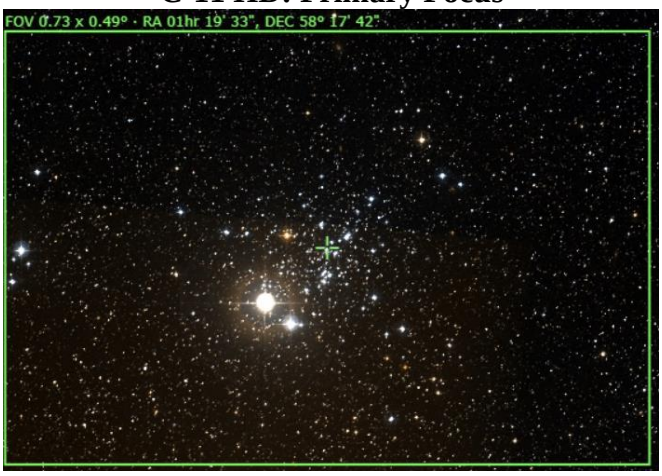
Prospective Imaging Objects – October 14 2023

NGC-288 Config: **C11-HD | ZWO6200MC** Type: **Globular Cluster** Constellation: **Sculptor** Coordinates: **00h 52' 45"** **-26° 35' 51"** Close Star: **SAO-147420 (Diphda)** Catalog Objects: NGC-288 Imaging Window: ***10:03 – 01:28** Transit: **11:48 | 31°**	**C-11 HD: Primary Focus** 
NGC-188 Config: **C11-HD | FR | ZWO6200MC** Type: **Open Cluster** Constellation: **Cepheus** Coordinates: **00h 47' 30"** **85° 15' 30"** Close Star: **SAO-308 (Polaris)** Catalog Objects: NGC-188 Imaging Window: ***07:28 – 03:52** Transit: **11:42 | 38°**	**C-11 HD: Focal Reducer** 
NGC-281 Config: **C11-HD | FR | ZWO6200MC** Type: **Diffuse Nebula** Constellation: **Cassiopeia** Coordinates: **00h 53' 00"** **56° 37' 00"** Close Star: **SAO-11482 (Navi)** Catalog Objects: NGC-281 Imaging Window: **08:09 – 03:35** Transit: **11:52 | 67°**	**C-11 HD: Focal Reducer** 

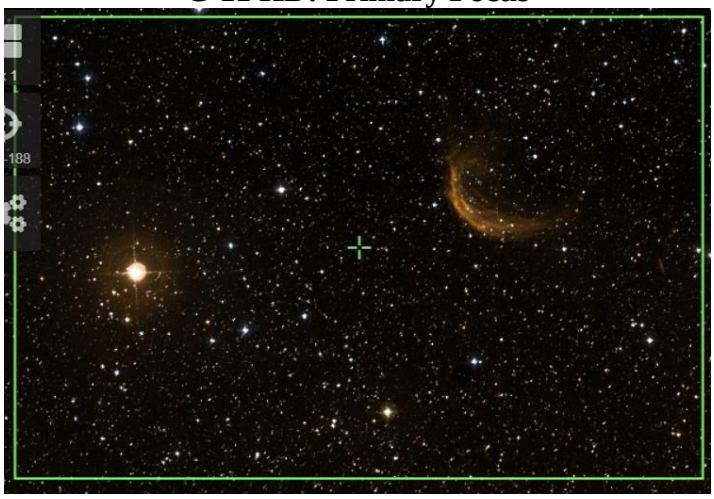
Prospective Imaging Objects – October 14 2023

IC-59, IC-63 Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Constellation: **Cassiopeia** Coordinates: **01h 03' 11"** **60° 42' 24"** Close Star: **SAO-11482 (Navi)** Catalog Objects: IC-59, IC-63 Imaging Window: **08:09 – 03:35** Transit: **11:52 | 62°**	**C-11 HD: HyperStar v4** 
IC-59, IC-63 Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Constellation: **Cassiopeia** Coordinates: **00h 58' 48"** **61° 04' 02"** Close Star: **SAO-11482 (Navi)** Catalog Objects: IC-59, IC-63 Imaging Window: **08:09 – 03:35** Transit: **11:52 | 62°**	**C-11 HD: Primary Focus** 
IC-1613 Config: **C11-HD | ZWO6200MC** Type: **Irregular Dwarf Galaxy** Constellation: **Cetus** Coordinates: **01h 04' 48"** **02° 07' 07"** Close Star: **SAO-75151 (Hamal)** Catalog Objects: IC-1613 Imaging Window: **09:45 – 02:18** Transit: **12:00 | 59°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

Mirachs Ghost (NGC-404) Config: **C11-HD | ZWO6200MC** Type: **Elliptical Galaxy** Constellation: **Andromeda** Coordinates: **01h 09’ 36”** **35° 40’ 58”** Close Star: **SAO-544471 (Mirach)** Catalog Objects: NGC-404 Imaging Window: **08:24 – 03:45** Transit: **12:04 | 88°**	**C-11 HD: Primary Focus** 
NGC-457 & Dolphin Nebula Config: **C11-HD | HS | ZWO6200MC** Type: **Open Cluster & Nebula** Constellation: **Cassiopeia** Coordinates: **01° 23’ 38”** **58° 12’ 54”** Close Star: **SAO-22268 (Ruchbah)** Catalog Objects: NGC-457 Imaging Window: **08:27 – 04:01** Transit: **12:14 | 65°**	**C-11 HD: HyperStar v4** 
Owl Cluster (NGC-457) Config: **C11-HD | ZWO6200MC** Type: **Open Cluster & Nebula** Constellation: **Cassiopeia** Coordinates: **01h 23’ 38”** **58° 12’ 54”** Close Star: **SAO-22268 (Ruchbah)** Catalog Objects: NGC-457 Imaging Window: **08:27 – 04:01** Transit: **12:14 | 65°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

Minkowski's Object (Arp-133) Config: **C11-HD | HS | ZWO6200MC** Type: **Galaxy Cluster** Constellation: **Cetus** Coordinates: **01h 25' 27"** **-01° 29' 03"** Close Star: **SAO-75151 (Hamal)** Catalog Objects: ARP-133 Imaging Window: **10:19 – 02:22** Transit: **12:20 | 55°**	**C-11 HD: Primary Focus** 
Firefox Nebula (Sh 2-188) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Cassiopeia** Coordinates: **01h 31' 37"** **58° 21' 22"** Close Star: **SAO-22268 (Ruchbah)** Catalog Objects: Sh 2-188 Imaging Window: **08:38 – 04:12** Transit: **12:25 | 65°**	**C-11 HD: Primary Focus** 
M-103 (NGC-581) Config: |C11HD|ZWO6200MC| Type: **Open Cluster** Constellation: **Cassiopeia** Coordinates: **01h 33' 31"** **60° 39' 44"** Close Star: ISO-22268 (Ruchbah) Catalog Objects: M-103/NGC-581 Imaging Window: **08:44 – 04:12** Transit: 1**2:28 | 63°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

Triangulum Galaxy (M-33)

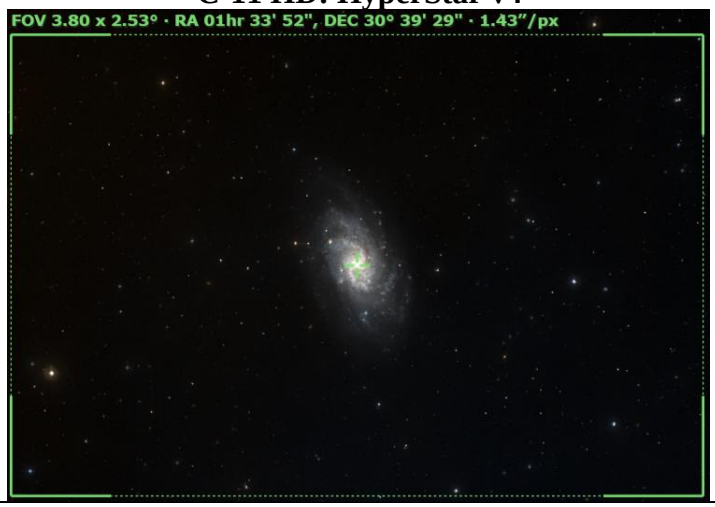
Config: **C11 | HS | ZWO6200MC**

Type: **Galaxy**
Constellation: **Triangulum**
Coordinates:
01h 33’ 52”
30° 39’ 29”

Close Star: **SAO-74996**
Catalog Objects: M33, NGC598

Imaging Window: **08:55 – 04:02**
Transit: **12:28 | 87°**

C-11 HD: HyperStar v4



Triangulum Galaxy (M-33)

Config: |C11-HD|FR|ZWO6200MC|

Type: **Galaxy**
Peak: **Oct 14**
Constellation: **Triangulum**

Camera Rotation - 90°
Coordinates:
01h 33’ 52”
30° 39’ 29”

Close Star: **SAO-74996**
Catalog Objects: M33, NGC598

Imaging Window: **08:55 – 04:02**
Transit: **12:28 | 87°**

CH11-HD Focal Reducer **90° Rotation**

Triangulum Galaxy (M-33)

Config: |ZWO6200MC|

Type: **Galaxy**
Peak: **Oct 14**
Constellation: **Triangulum**
Coordinates:
01° 34’ 53.37”
30° 45’ 11.2”

Close Star: **SAO-74996**
Catalog Objects: M33, NGC598

Imaging Window: **08:55 – 04:02**
Transit: **12:28 | 87°**

Primary Focus

Prospective Imaging Objects – October 14 2023

M-74

Config: |C11HD|ZWO6200MC|

Type: **Spiral Galaxy**
Peak:
Constellation: **Pisces**
Coordinates:
01h 36’ 42”
15° 46’ 60”

Close Star: ISO-91781 (Algenib)
Catalog Objects: M-74

Imaging Window: **09:27 – 03:35**
Transit: **12:31 | 72°**

C-11 HD: Primary Focus

Little Dumbbell Nebula (M-76)

Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Peak:
Constellation: **Perseus**
Coordinates:
01h 42’ 18”
51° 34’ 17”

Close Star: ISO-37375
Catalog Objects: M-76

Imaging Window: **08:46 – 04:27**
Transit: **12:37 | 72°**

C-11 HD: Primary Focus

Nautilus Galaxy (NGC-772)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**
Peak:
Constellation: **Aries**
Coordinates:
01h 59’ 19”
19° 00’ 27”

Close Star: ISO-75012 (Sheratan)
Catalog Objects: NGC-772

Imaging Window: **09:42 – 04:05**
Transit: **12:54 | 76°**

C-11 HD: Primary Focus

Prospective Imaging Objects – October 14 2023

Hand chi Persei (NGC 869, 884)

Config: **C11-HD | HS | ZWO6200MC**

Type: **Double Open Cluster**
Peak: **October 28**
Constellation: **Perseus**
Coordinates:
02hr 20’ 31”
56° 54’ 05”

Close Star: SAO-22258 (Ruchbah)
Catalog Objects: NGC 869, 884

Imaging Window: **09:29 – 05:04**
Transit: **01:17 | 66°**

C-11 HD: HyperStar v4

Edge On Galaxy (NGC 891)

Config: |C1|LF|ZWO6200MC|

Type: **Galaxy**
Peak: **Oct 27**
Constellation: **Andromeda**
Coordinates:
02h 23’ 43.29”
42° 25’ 46.4”

Close Star: **SAO-37734**
Catalog Objects: NGC891

Imaging Window: **09:30 – 05:04**
Transit: **01:17 | 81°**

Primary Focus

NGC-925 (PGC 9332)

Config: |C11-HD|ZWO6200MC|

Type: **Galaxy**
Constellation: **Triangulum**
Coordinates:
02h 27’ 17”
33° 34’ 44”

Close Star: **SAO-55306** (Beta Trianguli)
Catalog Objects: NGC925/PGC9332

Imaging Window: **09:44 – 05:00**
Transit: **01:22 | 90°**

Primary Focus

Prospective Imaging Objects – October 14 2023

Fish Head Nebula (IC-1795)

Config: |C11-HD|FR|ZWO6200MC|

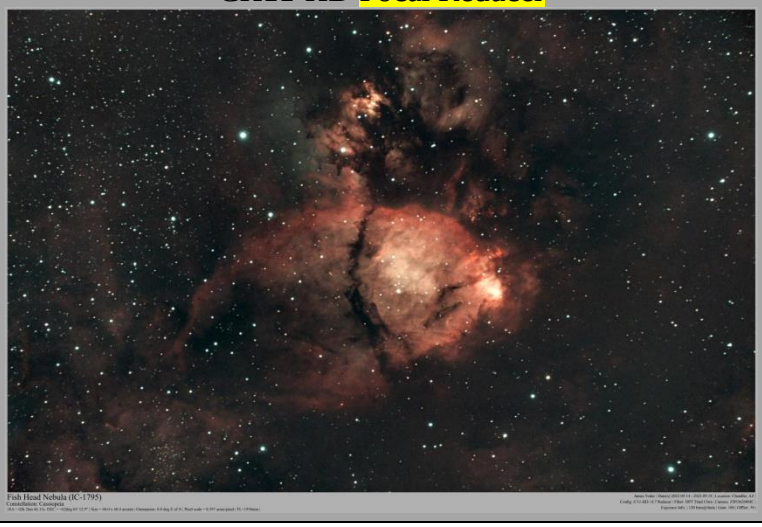
Type: **Bright Nebula**
Constellation: **Cassiopeia**

Coordinates:
02h 27’ 03”
62° 02’ 31”

Close Star: **SAO-38787** (Mirfak)
Catalog Objects: IC-1795

Imaging Window: **09:39 – 05:02**
Transit: **01:20 | 87°**

CH11-HD Focal Reducer



Heart and Soul Nebulas

Config: **C11 | HS | ZWO6200MC**

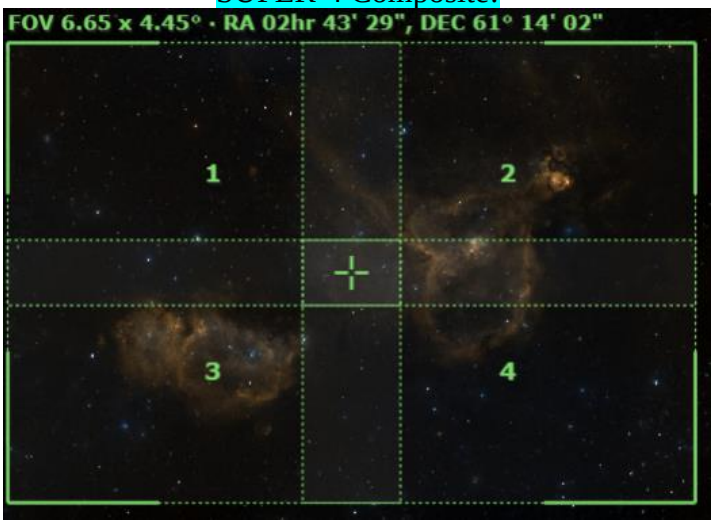
Type: **Diffuse Nebula**

Constellation: **Cassiopeia**
Coordinates (RA, DEC):
Pane 1: **02hr 55' 41", 62º 09' 11"**
Pane 2, **02hr 31' 16", 62º 09' 11**
Pane 3, **02hr 54' 58", 60º 15' 00"**
Pane 4, **02hr 31' 59", 60º 15' 00"**

Close Star: **SAO-38787 (Mirfak)**
Catalog Objects: IC-1848

Imaging Window: **10:02 – 05:30**
Transit: **01:46 | 63°**

C-11 HD: HyperStar v4
SUPER-4 Composite!



Heart Nebula (IC 1805)

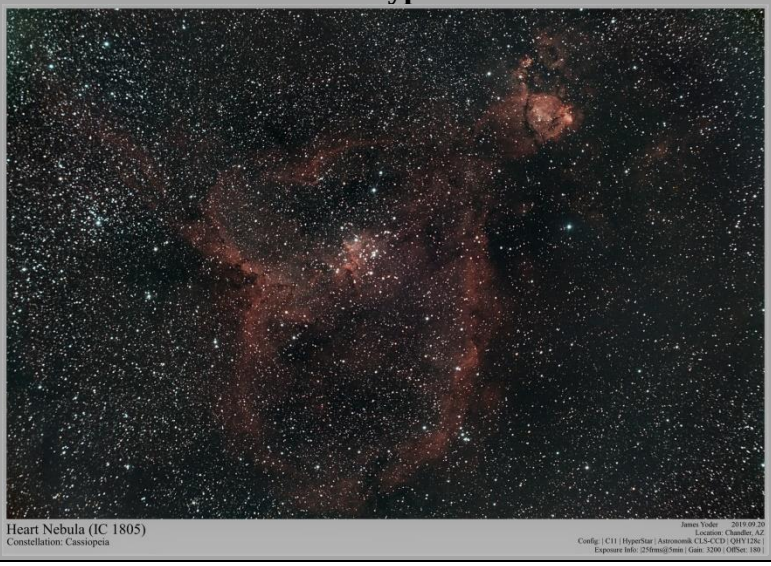
Config: **C11-HD | HS | ZWO6200MC**

Type: **Diffuse Nebula**
Peak: **October 31**
Constellation: **Cassiopeia**
Coordinates:
02hr 31’ 16”
61° 21’ 36”

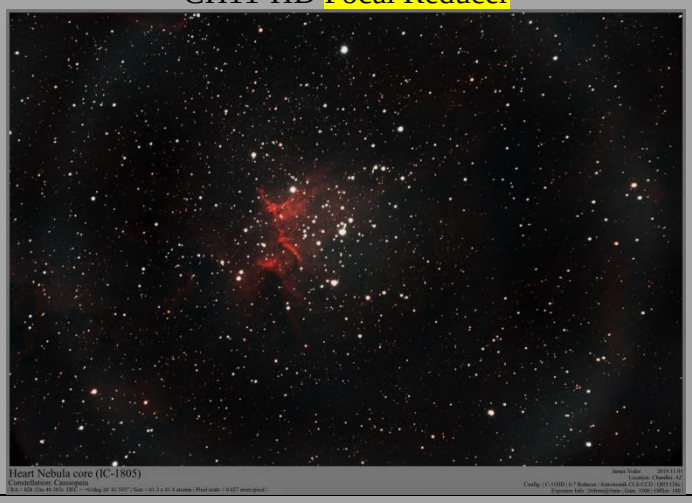
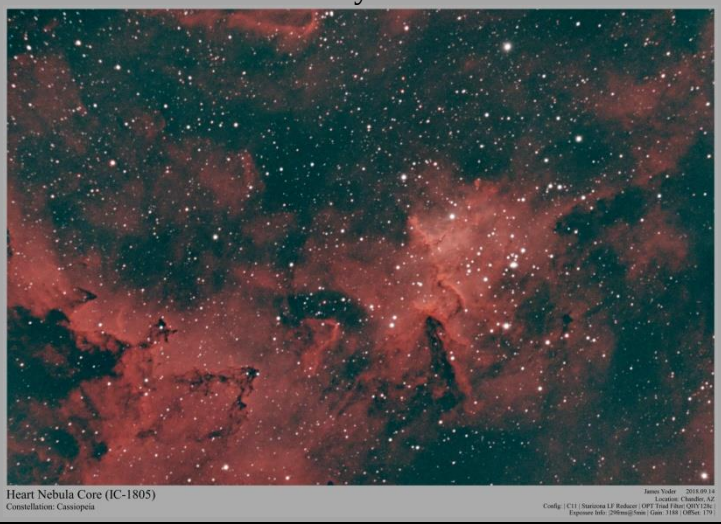
Close Star: SAO-12031
Catalog Objects: IC 1805

Imaging Window: **09:45 – 05:10**
Transit: **01:27 | 63°**

C-11 HD: HyperStar v4



Prospective Imaging Objects – October 14 2023

Heart Nebula (IC 1805) Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Constellation: **Cassiopeia** Coordinates: **02hr 26' 36"** **62° 06' 53"** Close Star: SAO-12031 Catalog Objects: IC 1805 Imaging Window: **09:45 – 05:10** Transit: **01:27 | 63°**	CH11-HD Focal Reducer 
Heart Nebula (IC-1805) Config: |C1|LF|ZWO6200MC| Type: **Diffuse Nebula** Peak: **October 31** Constellation: **Cassiopeia** Coordinates: **02hr 32' 42"** **61° 27' 00"** Close Star: SAO-12031 Catalog Objects: IC 1805 Imaging Window: **09:45 – 05:10** Transit: **01:27 | 63°**	Primary Focus 
M-77, NGC 1055 Config: |C11-HD|FR|ZWO6200MC| Type: **Galaxy** Peak: Constellation: **Cetus** Coordinates: **02hr 42' 14"** **00° 14' 28"** **Angle: 90°** Close Star: **SAO-110665** Catalog Objects: M-77, NGC-1055, NGC-1068 Imaging Window: **11:26 – 03:47** Transit: **01:36 | 57°**	CH11-HD Focal Reducer 

Prospective Imaging Objects – October 14 2023

NGC-1055

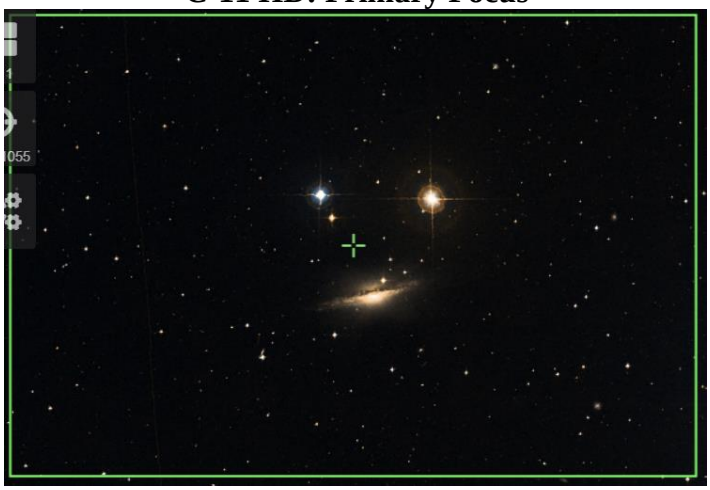
Config: |C11HD|ZWO6200MC|

Type: **Galaxy**
Peak:
Constellation: **Cetus**
Coordinates:
02hr 41’ 50”
00° 29’ 48”

Close Star: **SAO-110665**
Catalog Objects: NGC-1055

Imaging Window: **11:26 – 03:47**
Transit: **01:36 | 57°**

C-11 HD: Primary Focus



M 77 (NGC 1068)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**
Peak:
Constellation: **Cetus**
Coordinates:
02hr 42’ 34”
00° 02’ 07”

Close Star: **SAO-110665**
Catalog Objects: M 77, NGC-1068

Imaging Window: **11:39 – 03:45**
Transit: **01:37 | 57°**

C-11 HD: Primary Focus

M-34 (NGC-1039)

Config: |C11-HD|ZWO6200MC|

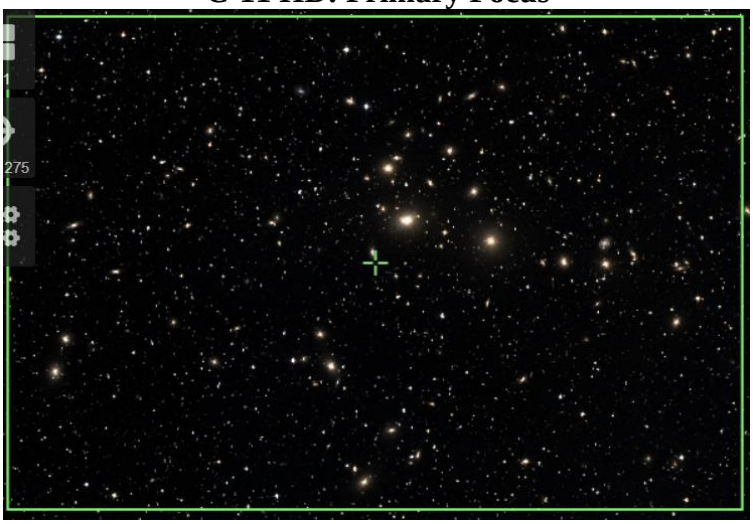
Type: **Open Cluster**
Constellation: **Perseus**
Coordinates:
02h 42’ 05”
42° 45’ 42”

Close Star: **SAO-38592** (Algol)
Catalog Objects: M-34/NGC-1039

Imaging Window: **09:49 – 05:24**
Transit: **01:37 | 81°**

Primary Focus

Prospective Imaging Objects – October 14 2023

Soul Nebula (IC-1848) Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse Nebula** Peak: Constellation: **Cassiopeia** Coordinates: **02hr 57' 16"** **60° 37' 37"** Close Star: **SAO-38787 (Mirfak)** Catalog Objects: IC 1848 Imaging Window: **10:02 – 05:30** Transit: **01:46 | 63°**	**C-11 HD: HyperStar v4** 
Soul Nebula (IC-1848) Config: |C1|LF|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Cassiopeia** Coordinates: **02hr 57' 16"** **60° 37' 37"** Close Star: **SAO-38787 (Mirfak)** Catalog Objects: IC 1848 Imaging Window: **10:02 – 05:30** Transit: **01:46 | 63°**	Primary Focus 
Perseus Galaxy Cluster Config: |C11HD|ZWO6200MC| Type: **Galaxy Cluster** Peak: Constellation: **Perseus** Coordinates: **03hr 19' 58"** **41° 29' 13"** Close Star: **SAO-38592** (Algol) Catalog Objects: Abell-426, NGC1275, 1278, 1272, Et. El. Imaging Window: **10:28 – 05:37** Transit: **02:14 | 82°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

NGC-1333

Config: |C11HD|ZWO6200MC|

Type: **Bright Nebula**
Peak: **November 13**
Constellation: **Perseus**
Coordinates:
03hr 29’ 15”
31° 20’ 12”

Close Star: **SAO-56799**
Catalog Objects: NGC 1333

Imaging Window: **10:49 – 05:37**
Transit: **02:23 | 88°**

C-11 HD: Primary Focus

Robins Egg Nebula (NGC-1360)

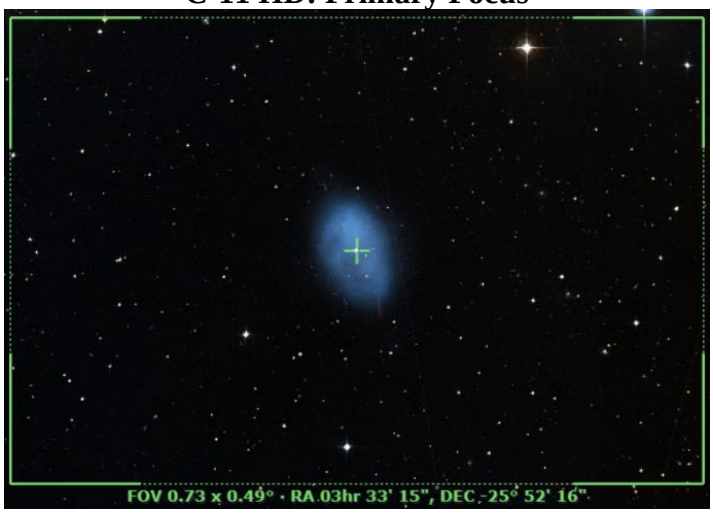
Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Peak:
Constellation: **Fornax**
Coordinates:
03hr 33’ 15”
-25° 52’ 16”

Close Star: **SAO-168460**
Catalog Objects: NCC-1360

Imaging Window: ***02:33 – 04:14**
Transit: **02:28 | 31°**

C-11 HD: Primary Focus



IC-348

Config: |C11HD|ZWO6200MC|

Type: **Bright Nebula**
Peak:
Constellation: **Perseus**
Coordinates:
03hr 44’ 26”
32° 10’ 54”

Close Star: **SAO-147420**
Catalog Objects: IC-348

Imaging Window: **11:03 – 05:37**
Transit: **02:39 | 89°**

C-11 HD: Primary Focus

Prospective Imaging Objects – October 14 2023

IC-342

Config: |C11HD|ZWO6200MC|

Type: **Barred Spiral Galaxy**
Peak:
Constellation: **Camelopardalis**
Coordinates:
03hr 46’ 48”
68° 05’ 44”

Close Star: **SAO-12031 (Segin)**
Catalog Objects: IC-342

Imaging Window: **11:19 – 05:37**
Transit: **02:41 | 55°**

C-11 HD: Primary Focus

Pleiades (M 45)

Config: **C11-HD | HS | ZWO6200MC**

Type: **Bright Nebula**
Peak: **November 16**
Constellation: **Taurus**
Coordinates:
03hr 46’ 07”
24° 11’ 18”

Close Star: **SAO-56799**
Catalog Objects: M45

Imaging Window: **11:19 – 05:37**
Transit: **02:41 | 81°**

C-11 HD: HyperStar v4

Pleiades (M-45)

Config: |C1|LF|ZWO6200MC|

Type: **Bright Nebula**
Peak: **November 16**
Constellation: **Taurus**
Coordinates:
03hr 46’ 15.932”
24° 12’ 07.154”

Close Star: **SAO-56799**
Catalog Objects: M45

Imaging Window: **11:19 – 05:37**
Transit: **02:41 | 81°**

Primary Focus

Prospective Imaging Objects – October 14 2023

California Nebula (NGC 1499) Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse Nebula** Peak: **November 22** Constellation: **Perseus** Coordinates: **04hr 01' 22"** **36° 21' 19"** Close Star: SAO-56840 Catalog Objects: NGC 1499 Imaging Window: **11:16 – 05:37** Transit: **02:57 | 87°**	**C-11 HD: HyperStar v4**  California Nebula (NGC-1499) Constellation: Perseus
Oyster Nebula (NGC 1501) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Camelopardalis** Coordinates: **04hr 06' 58"** **60° 55' 3.5"** Close Star: **SAO-038787 (Mirfak)** Catalog Objects: NGC-1501 Imaging Window: **11:18 – 05:37** Transit: **03:01 | 62°**	**C-11 HD: Primary Focus**  NGC-1501 (Oyster Nebula) Constellation: Camelopardalis
Crystal Ball Nebula (NGC 1514) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Taurus** Coordinates: **04hr 09' 17"** **30° 46' 35"** Close Star: **SAO-56799** Catalog Objects: NGC-1514 Imaging Window: **11:30 – 05:37** Transit: **03:03 | 87°**	**C-11 HD: Primary Focus**  NGC-1514 (Crystal Ball Nebula) Constellation: Taurus

Prospective Imaging Objects – October 14 2023

Cleopatra's Eye (NGC 1535)
Config: |C11HD |ZWO6200MC|

Type: **Planetary Nebula**
Constellation: **Eridanus**
Coordinates:
04hr 14' 16"
-12° 44' 20"

Close Star: **SAO-131907** (Rigel)
Catalog Objects: NGC-1535

Imaging Window: ***12:27 – 05:37**
Transit: **03:08 | 44°**

C-11 HD: Primary Focus

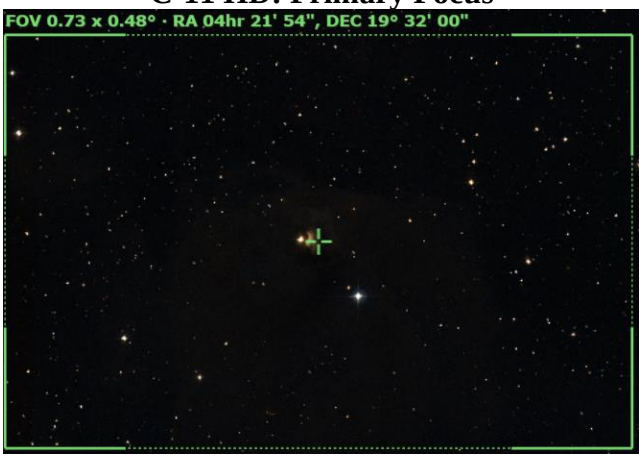
Hind's Variable Nebula (NGC 1555)
Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Constellation: **Taurus**
Coordinates:
04hr 21' 54"
19° 32' 00"

Close Star: **SAO-94027** (Aldebaran)
Catalog Objects: NGC-1555

Imaging Window: **12:03 – 05:37**
Transit: **03:16 | 76°**

C-11 HD: Primary Focus



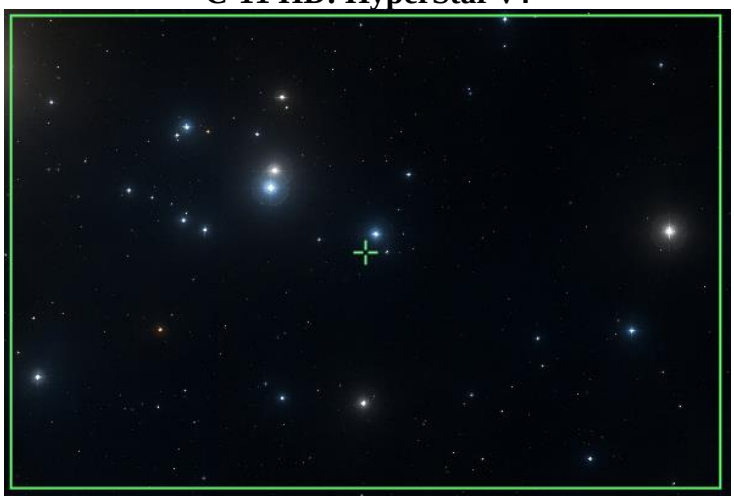
Hyades (C 41,Mel 25)
Config: **C11-HD | HS | ZWO6200MC**

Type: **Open Cluster**
Constellation: **Taurus**
Coordinates:
04hr 26' 34"
15° 31' 39"

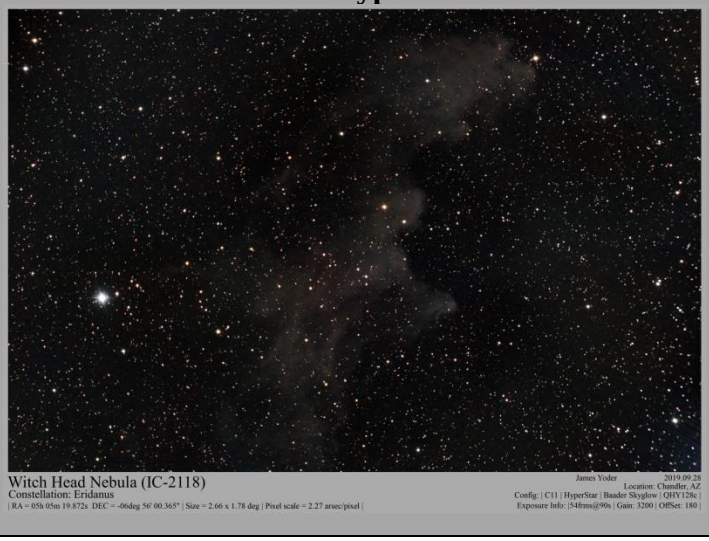
Close Star: SAO-56840
Catalog Objects: Mel 25

Imaging Window: **12:17 – 05:37**
Transit: **03:21 | 73°**

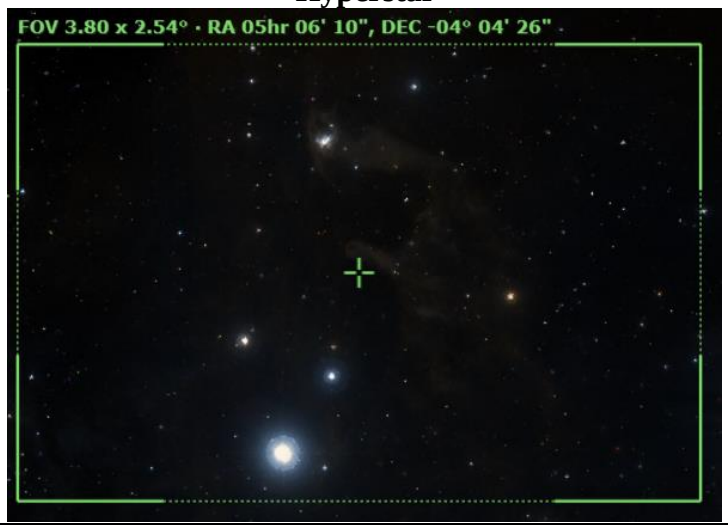
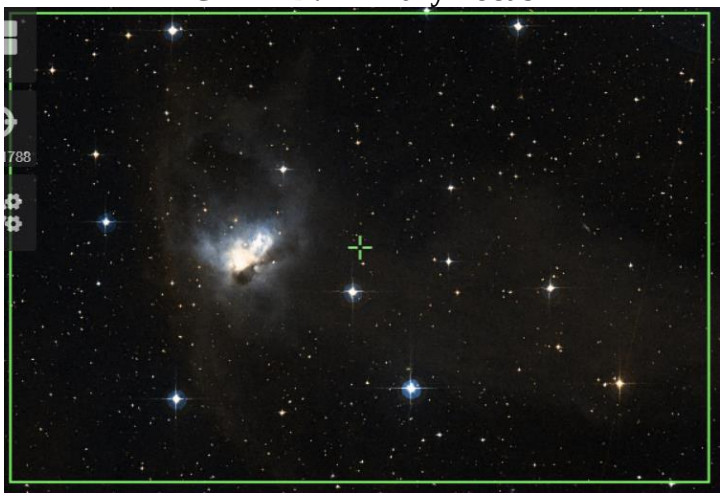
C-11 HD: HyperStar v4



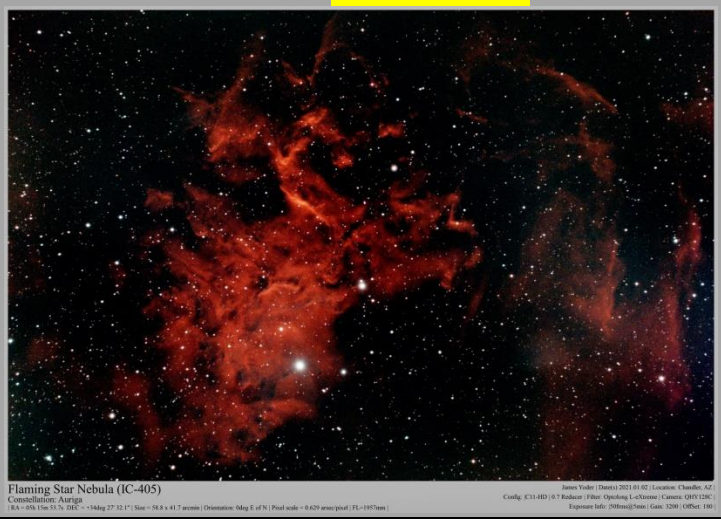
Prospective Imaging Objects – October 14 2023

Trifid of the North (NGC 1579) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Perseus** Coordinates: **04hr 30' 12"** **35° 16' 60"** Close Star: **SAO-56799** Catalog Objects: NGC-1579 Imaging Window: **11:44 – 05:37** Transit: **03:24 | 88°**	**C-11 HD: Primary Focus** 
Witch Head Nebula (IC 2118) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Peak: Constellation: **Eridanus** Coordinates: **05hr 05' 19.872"** **-06° 56' 00.365"** Close Star: SAO-131794 Catalog Objects: IC 2118 Imaging Window: ***12:49 – 05:37** Transit: **03:59 | 49°**	**C-11 HD: HyperStar v4** 
Witch Head Nebula (IC 2118) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Eridanus** Coordinates: **05hr 07' 07"** **-06° 20' 07"** Close Star: SAO-131794 Catalog Objects: IC 2118 Imaging Window: ***12:49 – 05:37** Transit: **03:59 | 49°**	**C-11 HD: Primary Focus** 

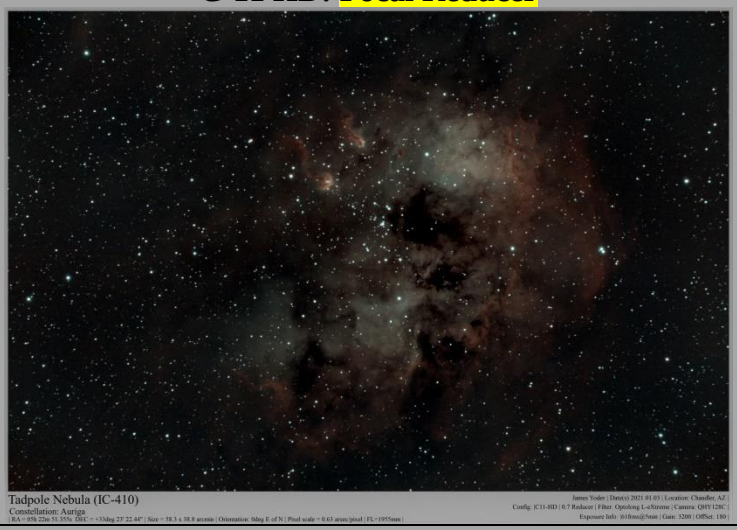
Prospective Imaging Objects – October 14 2023

Foxface Nebula (NGC 1788) Config: |C11|HS|ZWO6200MCc| Type: **Bright Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 06’ 10”** **-04° 04’ 26”** Close Star: SAO-131794 Catalog Objects: NGC 1788 Imaging Window: **02:11 – 05:37** Transit: **04:01**	**Hyperstar** 
Foxface Nebula (NGC 1788) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 05’ 52”** **-03° 22’ 22”** Close Star: SAO-131794 Catalog Objects: NGC 1788 Imaging Window: **02:11 – 05:37** Transit: **04:01**	**C-11 HD: Focal Reducer** 
Foxface Nebula (NGC 1788) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 06’ 26”** **-03° 20’ 13”** Close Star: SAO-131794 Catalog Objects: NGC 1788 Imaging Window: **02:11 – 05:37** Transit: **04:01**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

Flaming Star Nebula (IC-405) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Peak: Constellation: **Auriga** Coordinates: **05hr 19’ 38”** **33° 49’ 10”** Close Star: SAO-77168 (Elnath) Catalog Objects: IC 405, IC 410 Imaging Window: **12:32 – 05:37** Transit: **04:10 | 89°**	**C-11 HD: HyperStar v4** 
Flaming Star Nebula (IC 405) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Auriga** Coordinates: **05hr 15’ 55”** **34° 29’ 08”** Close Star: SAO-77168 (Elnath) Catalog Objects: IC 405 Imaging Window: **12:32 – 05:37** Transit: **04:10 | 89°**	**C-11 HD: Focal Reducer** 
Flaming Star Nebula (IC 405) Config: |C11-HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Auriga** Coordinates: **05hr 16’ 37”** **34° 23’ 47”** Close Star: SAO-77168 (Elnath) Catalog Objects: IC 405 Imaging Window: **12:32 – 05:37** Transit: **04:10 | 89°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

Tadpoles (IC 410) Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Auriga** Coordinates: **05hr 22' 54"** **33° 23' 31"** Close Star: SAO-77168 (Elnath) Catalog Objects: IC 410 Imaging Window: **12:39 – 05:37** Transit: **04:17 | 90°**	**C-11 HD: Focal Reducer** 
Tadpoles (IC 410) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Auriga** Coordinates: **05hr 22' 37"** **33° 23' 03"** Close Star: SAO-77168 (Elnath) Catalog Objects: IC 410 Imaging Window: **12:39 – 05:37** Transit: **04:17 | 90°**	**C-11 HD: Primary Focus** 
M-79 (NGC-1904) Config: |C11HD|Barlow x2|ZWO6200MC| Type: **Globular Cluster** Peak: Constellation: **Lepus** Coordinates: **05hr 24' 11"** **-24° 31' 25"** Close Star: SAO-170457 Catalog Objects: M 79 Imaging Window: ***03:02 – 05:26** Transit: **04:18 | 32°**	**C-11 HD: Primary Focus *x2** 

Prospective Imaging Objects – October 14 2023

Spirograph Nebula (IC 418)

Config: |C11HD|Barlow x2|ZWO6200MC|

Type: **Planetary Nebula**
Constellation: **Lepus**
Coordinates:
05hr 27’ 28”
-12° 41’ 48”

Close Star: SAO-132542 (Saiph)
Catalog Objects: IC 418

Imaging Window: ***01:39 – 05:37**
Transit: **04:21 | 44°**

C-11 HD: Primary Focus *x2

The Spider and the Fly

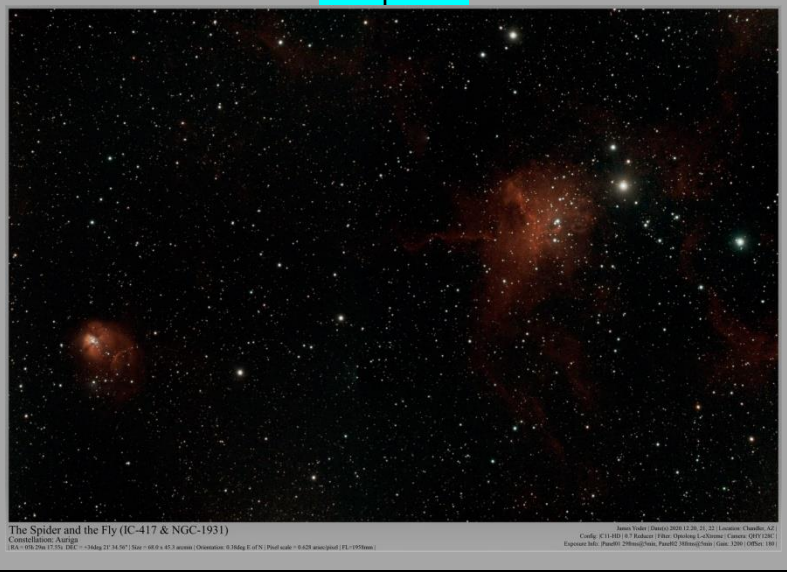
(M-77, NGC-1055, NGC-1931)
Config: |C11-HD|FR|ZWO6200MC|
Type: **Diffuse Nebula**
Peak:
Constellation: **Auriga**

Camera Rotation - 90°
Frame 01
RA: **05hr 30’ 44”**DEC: **34° 20’ 41”**
Frame 02
RA: **05hr 27’ 55”**DEC: **34° 20’ 41”**

Close Star: SAO-77168 (Elnath)
Catalog Objects: IC-417, NGC-1931

Imaging Window: **12:43 – 05:37**
Transit: **04:22 | 89°**

C-11 HD: Focal Reducer
Composite!



The Spider (IC 417)

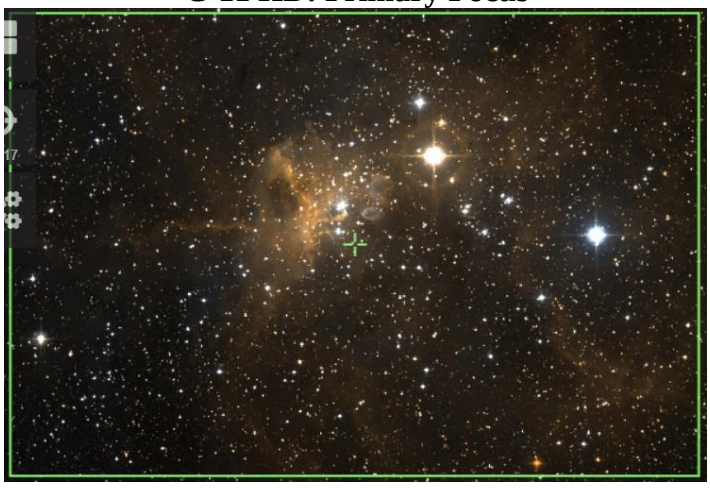
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Auriga**
Coordinates:
05hr 28’ 03”
34° 22’ 58”

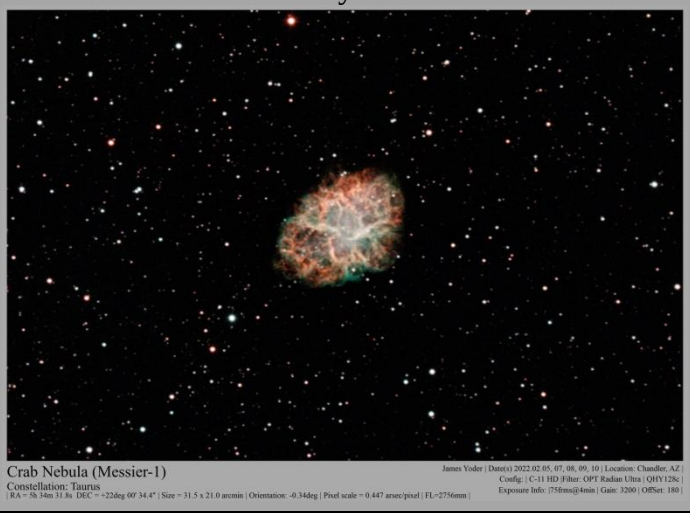
Close Star: SAO-77168 (Elnath)
Catalog Objects: IC 417

Imaging Window: **12:43 – 05:37**
Transit: **04:22 | 89°**

C-11 HD: Primary Focus



Prospective Imaging Objects – October 14 2023

Starfish Cluster (M-38) Config: |C11HD|ZWO6200MC| Type: **Open Cluster** Constellation: **Auriga** Coordinates: **05hr 28’ 43”** **35° 51’ 18”** Close Star: **SAO-77168** (Elnath) Catalog Objects: M-38 Imaging Window: **12:42 – 08:03** Transit: **04:23 | 88°**	**C-11 HD: Primary Focus** 
The Fly (NGC 1931) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Auriga** Coordinates: **05hr 31’ 24”** **34° 15’ 00”** Close Star: SAO-77168 (Elnath) Catalog Objects: NGC 1931 Imaging Window: **12:47 – 05:37** Transit: **04:25 | 89°**	**C-11 HD: Primary Focus** 
Crab Nebula (M 1) Config: |C1|LF|ZWO6200MC| Type: **Planetary Nebula** Peak: Constellation: **Taurus** Coordinates: **05hr 34’ 30”** **22° 00’ 59.9”** Close Star: SAO-77336 Catalog Objects: M 1 Imaging Window: **01:10 – 05:37** Transit: **04:28 | 79°**	Primary Focus 

Prospective Imaging Objects – October 14 2023

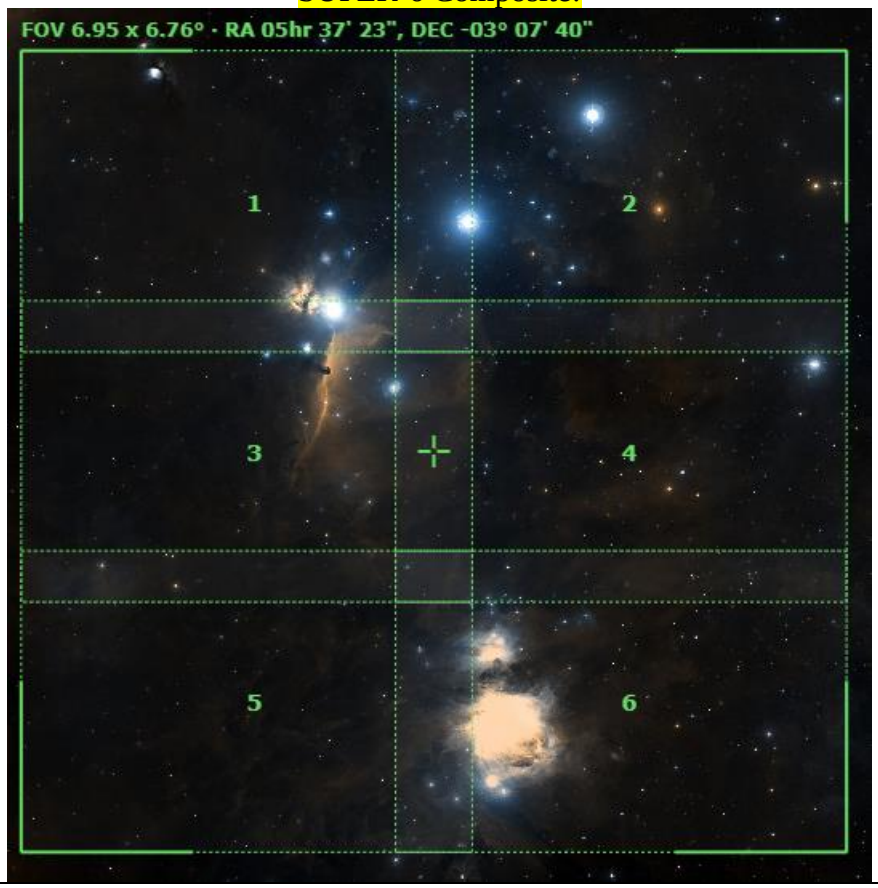
The Orion Complex
Config: **C11 | HS | ZWO6200MC**

Type: **Diffuse Nebula**
Peak:
Constellation: **Orion**
Coordinates:
Frame 01
RA: **05hr 43' 42"** DEC: **-01° 01' 06"**
Frame 02
RA: **05hr 31' 05"** DEC: **-01° 01' 06"**
Frame 03
RA: **05hr 43' 42"** DEC: **-03° 07' 35"**
Frame 04
RA: **05hr 31' 04"** DEC: **-03° 07' 35"**
Frame 05
RA: **05hr 43' 43"** DEC: **-05° 14' 05"**
Frame 06
RA: **05hr 31' 04"** DEC: **-05° 14' 05"**

Close Star: SAO-132542 (Saiph)
Catalog Objects: M-42

Imaging Window: **02:53 – 05:37**
Transit: **04:29**

C-11 HD: HyperStar v4
SUPER-6 Composite!



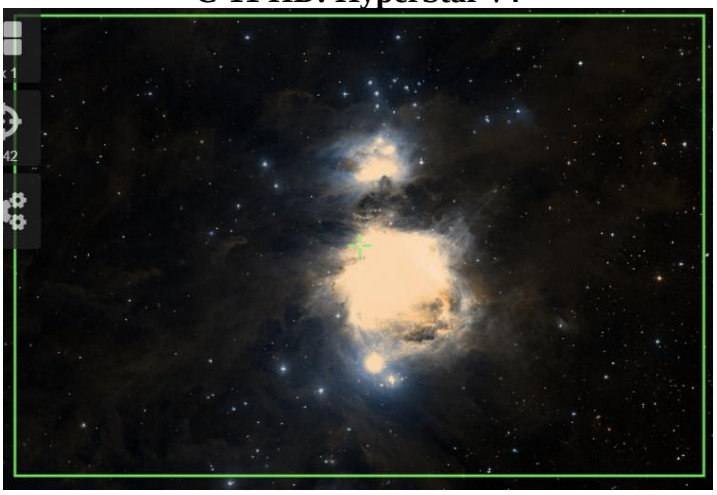
The Orion Nebula (M 42)
Config: **C11-HD | HS | ZWO6200MC**

Type: **Diffuse Nebula**
Peak:
Constellation: **Orion**
Coordinates:
05hr 35' 46"
-05° 15' 34"

Close Star: SAO-132542 (Saiph)
Catalog Objects: M 42

Imaging Window: **02:53 – 05:37**
Transit: **04:29**

C-11 HD: HyperStar v4



Prospective Imaging Objects – October 14 2023

The Orion Nebula (M 42)
Config: |C1|LF|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Orion**
Coordinates:
05hr 35’ 09”
-05° 24’ 32”

Close Star: SAO-132542 (Saiph)
Catalog Objects: M 42

Imaging Window: **02:53 – 05:37**
Transit: **04:29**

Primary Focus

Running Man Nebula (NGC 1977)
Config: |C11-HD|FR|ZWO6200MC|

Type: **Bright Nebula**
Peak:
Constellation: **Orion**
Coordinates:
05hr 35’ 16”
-04° 41’ 47”

Close Star: SAO-132542 (Saiph)
Catalog Objects: NGC 1977

Imaging Window: **02:49 – 05:37**
Transit: **04:29 | 52°**

C-11 HD: Focal Reducer

Pinwheel Cluster (M-36)
Config: |C11HD|ZWO6200MC|

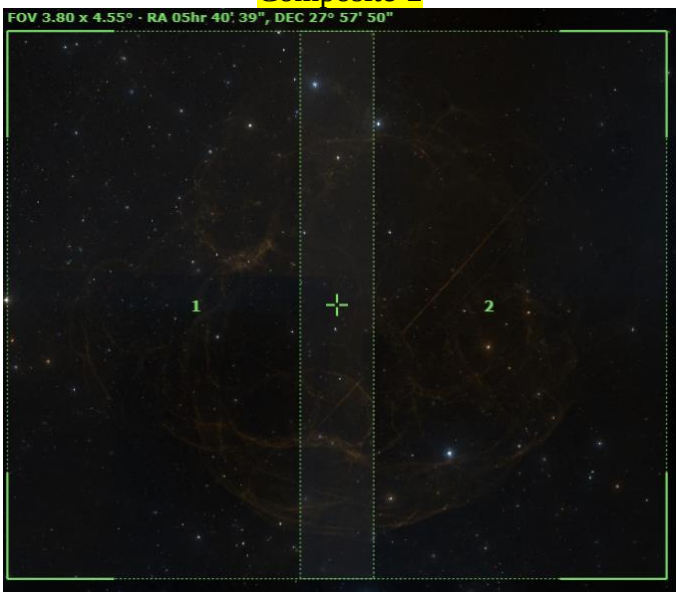
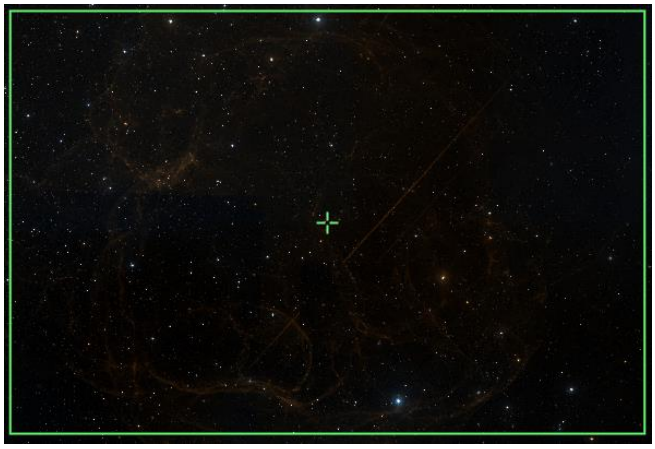
Type: **Open Cluster**
Constellation: **Auriga**
Coordinates:
05hr 36’ 18”
34° 08’ 27”

Close Star: **SAO-77168** (Elnath)
Catalog Objects: M-36/NGC-1960

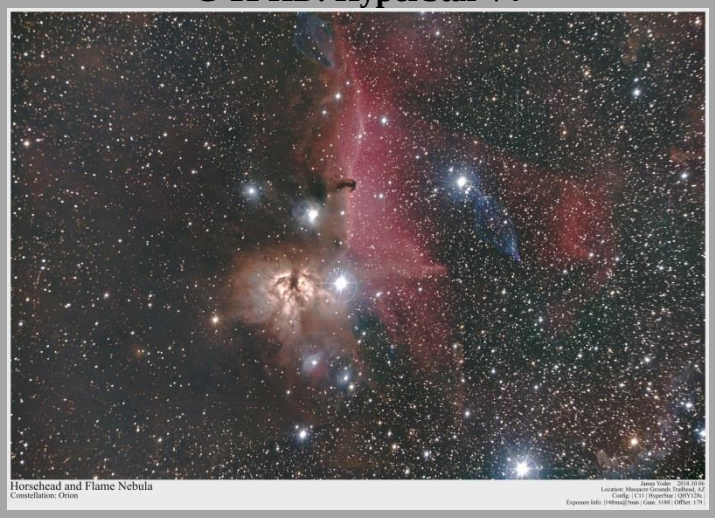
Imaging Window: **12:52 – 05:37**
Transit: **04:30 | 89°**

C-11 HD: Primary Focus

Prospective Imaging Objects – October 14 2023

Simeis 147 (SH2-240) Config: **C11-HD	HS	ZWO6200MC** Type: **Diffuse Nebula** Constellation: **Taurus** Camera Rotation - 90° Coordinates: Frame 01 RA: **05hr 45' 38"** DEC: **27º 56' 31"** Frame 02 RA: **05hr 36' 28"** DEC: **27º 56' 31"** Close Star: **SAO-77168** (Elnath) Catalog Objects:SH2-240 Imaging Window: **01:04 – 05:37** Transit: **04:33	85°**	**C-11 HD: HyperStar v4** Composite-2 
Simeis 147 (SH2-240) Config: **C11-HD	HS	ZWO6200MC** Type: **Diffuse Nebula** Constellation: **Taurus** Coordinates: **05hr 39' 04"** **28° 00' 00"** Close Star: **SAO-77168** (Elnath) Catalog Objects:SH2-240 Imaging Window: **01:04 – 05:37** Transit: **04:33	85°**	**C-11 HD: HyperStar v4** 

Prospective Imaging Objects – October 14 2023

Flame and Horsehead Nebula **(NGC 2024, B 33)** Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse/Dark Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 40’ 04”** **-02° 28’ 13”** Close Star: SAO-132542 (Saiph) Catalog Objects: NGC 2024, B 33 Imaging Window: **02:37 – 05:37** Transit: **02:37 | 54°**	**C-11 HD: HyperStar v4** 
Flame Nebula (NGC 2024) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 41’ 45.843”** **-01° 49’ 31.401”** Close Star: SAO-132542 (Saiph) Catalog Objects: NGC 2024 Imaging Window: **02:37 – 05:37** Transit: **02:37 | 54°**	**C-11 HD: Primary Focus** 
Horsehead Nebula (B 33) Config: |C1|LF|ZWO6200MC| Type: **Dark Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 40’ 59”** **-02° 31’ 47”** Close Star: SAO-132542 (Saiph) Catalog Objects: B 33 Imaging Window: **02:39 – 05:37** Transit: **04:35 | 54°**	Primary Focus 

Prospective Imaging Objects – October 14 2023

NGC 2022
Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Peak:
Constellation: **Orion**
Coordinates:
05hr 42’ 07”
09° 04’ 55”

Close Star: SAO-112740 (Bellatrix)
Catalog Objects: NGC 2022

Imaging Window: **01:51 – 05:37**
Transit: **04:36 | 66°**

C-11 HD: Primary Focus

NGC 1961
Config: |C11HD|ZWO6200MC|

Type: **Spiral Galaxy**
Peak:
Constellation: **Camelopardalis**
Coordinates:
05hr 43’ 27”
69° 20’ 48”

Close Star: SAO-40750 (Menkalinan)
Catalog Objects: NGC 1961

Imaging Window: **01:20 – 05:37**
Transit: **04:36 | 54°**

C-11 HD: Primary Focus

M-78
Config: |C11-HD|FR|ZWO6200MC|

Type: **Dark Nebula**
Peak:
Constellation: **Orion**

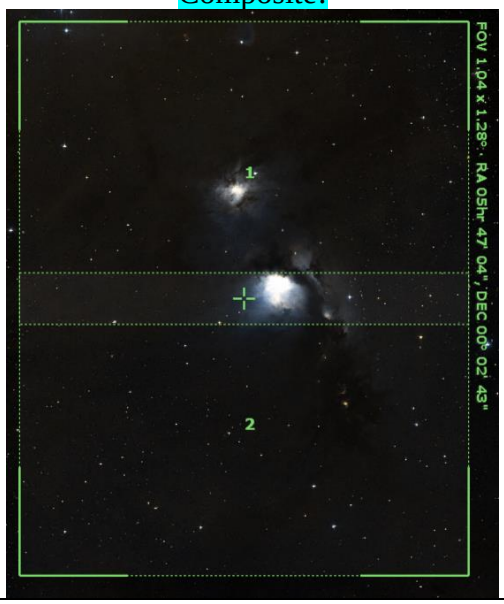
Frame 01
RA: **05hr 47’ 05”**DEC: **00° 20’ 09”**

Frame 02
RA: **05hr 47’ 05”**DEC: **-00° 14’ 43”**

Close Star: SAO-132346 (Alnilam)
Catalog Objects: M 78

Imaging Window: **02:32 – 05:37**
Transit: **04:41**

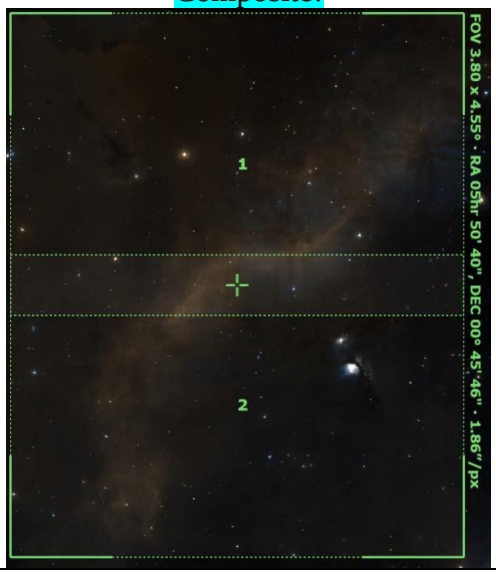
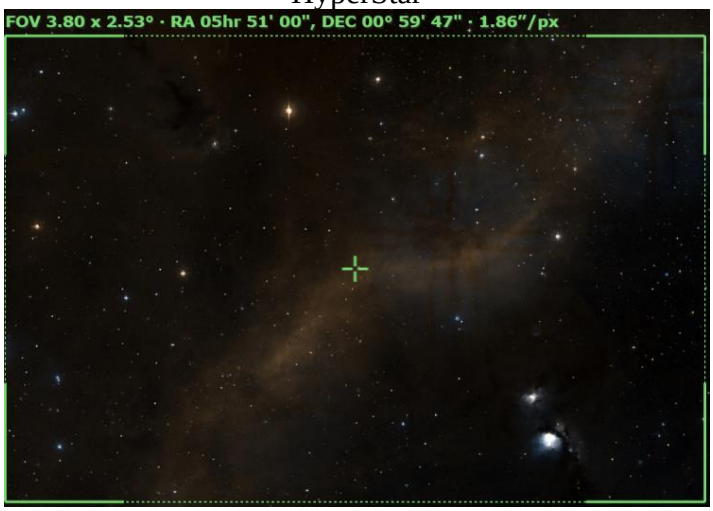
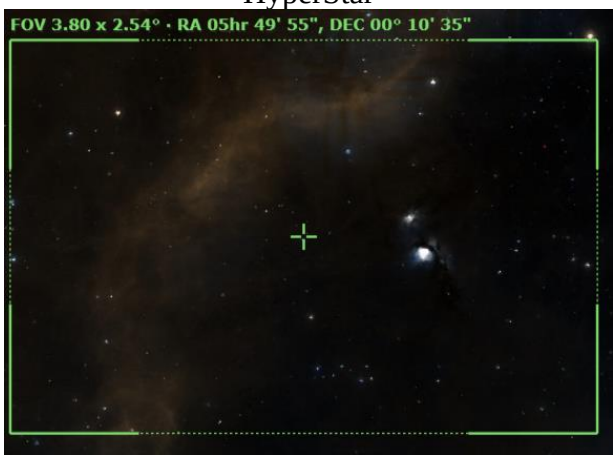
C-11 HD: Focal Reducer
Composite!



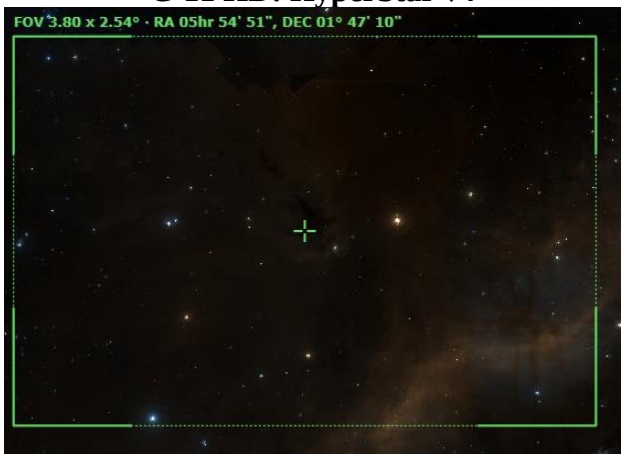
Prospective Imaging Objects – October 14 2023

M-78 Config: |C11-HD|FR|ZWO6200MC| Type: **Bright and Dark Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 46' 59"** **00° 08' 59"** Close Star: SAO-132346 (Alnilam) Catalog Objects: M 78 Imaging Window: **02:32 – 05:37** Transit: **04:41**	**C-11 HD: Focal Reducer** 
M-78 Config: |C11HD|ZWO6200MC| Type: **Bright and Dark Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 47' 03"** **00° 09' 46"** Close Star: SAO-132346 (Alnilam) Catalog Objects: M 78 Imaging Window: **02:32 – 05:37** Transit: **04:41**	**C-11 HD: Primary Focus** 
Salt and Pepper Cluster(M-37) Config: |C11HD|ZWO6200MC| Type: **Open Cluster** Constellation: **Auriga** Coordinates: **05hr 52' 18"** **32° 33' 11"** Close Star: **SAO-77168** (Elnath) Catalog Objects: M-37/NGC-2099 Imaging Window: **01:10 – 05:37** Transit: **04:46 | 89°**	**C-11 HD: Primary Focus** 

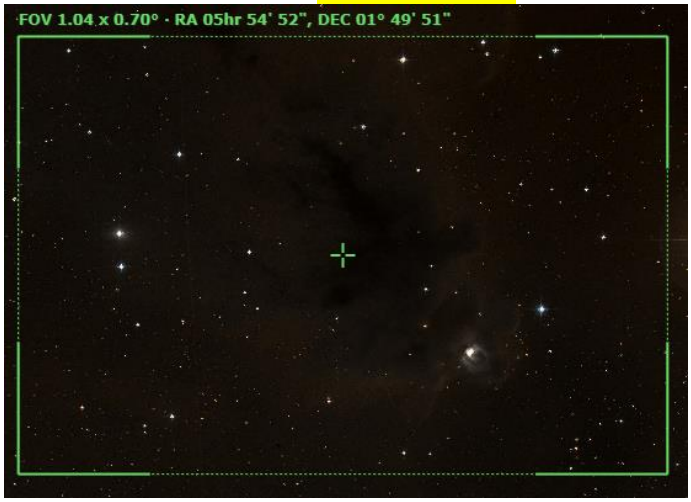
Prospective Imaging Objects – October 14 2023

LDN-1622 Complex Config: |C11HD|ZWO6200MC| Type: **Dark Nebula & Nebula** Peak: Constellation: **Orion** Coordinates: Pane 1: **05hr 50' 40"**, **01º 46' 30"** Pane 2, **05hr 50' 40"**, **00º 14' 57** Close Star: SAO-132346 (Alnilam) Catalog Objects: LDN 1622 Imaging Window: **02:31 – 05:37** Transit: **04:49 | 59°**	**C-11 HD: HyperStar v4** Composite! 
LDN-1622 (Region 01) Config: |C11HD|ZWO6200MC| Type: **Dark Nebula & Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 51' 00"** **00° 59' 47"** Close Star: SAO-132346 (Alnilam) Catalog Objects: LDN 1622 Imaging Window: **02:31 – 05:37** Transit: **04:49 | 59°**	HyperStar 
LDN-1622 (Region 02) Config: |C11HD|ZWO6200MC| Type: **Dark Nebula & Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 49' 55"** **00° 10' 35"** Close Star: SAO-132346 (Alnilam) Catalog Objects: LDN 1622 Imaging Window: **02:31 – 05:37** Transit: **04:49 | 59°**	HyperStar 

Prospective Imaging Objects – October 14 2023

LDN-1622 (Region 03) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright and Dark Nebula** Peak: Coordinates: **05hr 54’ 51”** **01° 47’ 10”** Close Star: SAO-112740(Bellatrix) Catalog Objects: LDN-1622 Imaging Window: **02:31 – 05:37** Transit: **04:49 | 59°**	**C-11 HD: HyperStar v4** 
LDN 1622 Config: |C11HD|ZWO6200MC| Type: **Dark Nebula** Peak: Constellation: **Orion** Camera Rotation - 90° Frame 01 RA: **05hr 56’ 28”**DEC: **01° 58’ 32”** Frame 02 RA: **05hr 54’ 08”**DEC: **01° 58’ 35”** Close Star: SAO-132346 (Alnilam) Catalog Objects: LDN 1622 Imaging Window: **02:31 – 05:37** Transit: **04:49**	**C-11 HD: Focal Reducer** Composite! 

Prospective Imaging Objects – October 14 2023

LDN-1622 Config: |C11HD|FR|ZWO6200MC| Type: **Bright and Dark Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 54' 52"** **01° 49' 51"** Close Star: SAO-112740(Bellatrix) Catalog Objects: LDN-1622 Imaging Window: **02:31 – 05:37** Transit: **04:49**	**C-11 HD: Focal Reducer** 
LDN 1622 Config: |C11HD|ZWO6200MC| Type: **Dark Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 54' 55"** **01° 49' 49"** Close Star: SAO-132346 (Alnilam) Catalog Objects: LDN 1622 Imaging Window: **02:31 – 05:37** Transit: **04:49**	**C-11 HD: Primary Focus** 
Angel Nebula (NGC 2170) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright and Dark Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 08' 26"** **-06° 25' 24"** Close Star: SAO-132542 (Saiph) Catalog Objects: NGC 2170 Imaging Window: **03:32 – 05:37** Transit: **05:01**	**C-11 HD: Focal Reducer** 

Prospective Imaging Objects – October 14 2023

Angel Nebula (NGC 2170)
Config: |C11HD|ZWO6200MC|

Type: **Bright and Dark Nebula**
Peak:
Constellation: **Monoceros**
Coordinates:
06hr 08’ 23”
-06° 19’ 23”

Close Star: SAO-132542 (Saiph)
Catalog Objects: NGC 2170

Imaging Window: **03:32 – 05:37**
Transit: **05:01**

C-11 HD: Primary Focus

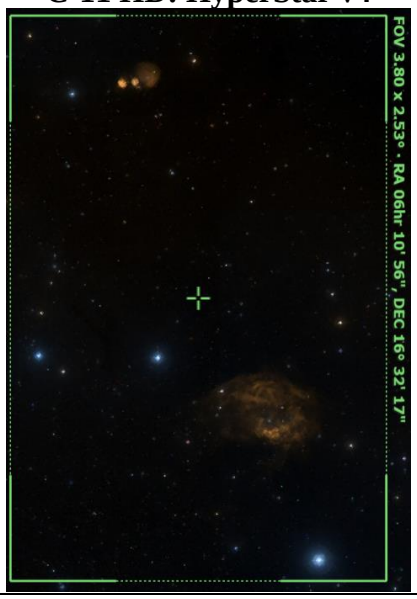
IC-2162 & SH 2-261
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Orion**
Coordinates:
06hr 10’ 56”
16° 32’ 17”
Angle: **90° East**

Close Star: SAO-78297 (Calix)
Catalog Objects: IC-2162 Sh 2-261

Imaging Window: **01:57 – 05:37**
Transit: **05:07 | 72°**

C-11 HD: HyperStar v4



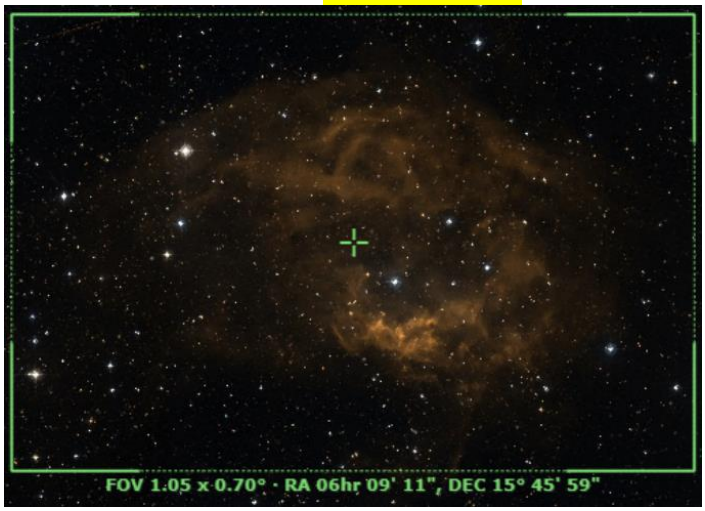
Lower’s Nebula (Sh 2-261)
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Orion**
Coordinates:
06hr 09’ 11”
15° 45’ 59”

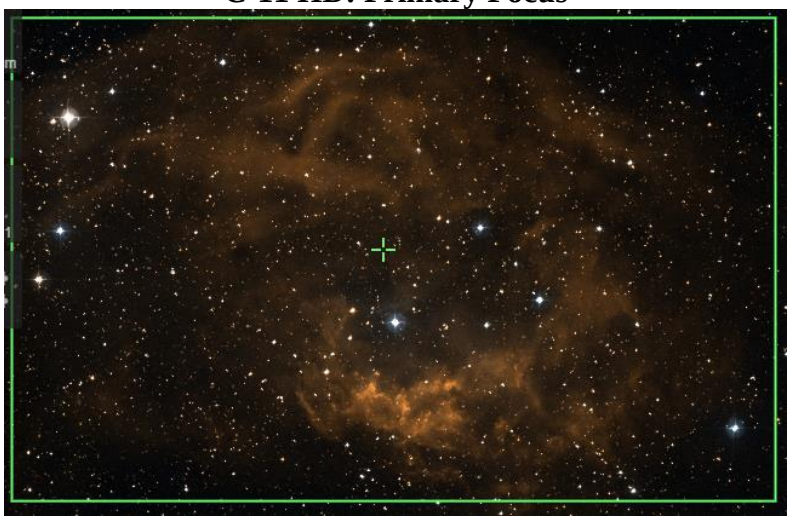
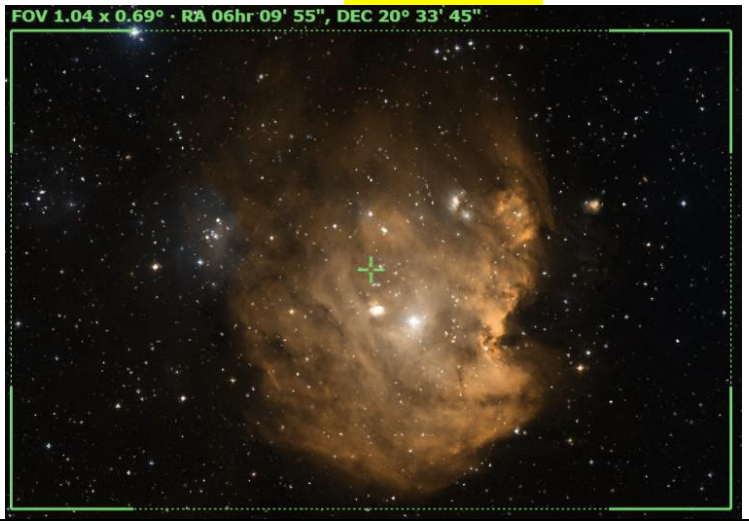
Close Star: **SAO-78297** (Calix)
Catalog Objects: Sh 2-261

Imaging Window: **01:57 – 05:37**
Transit: **05:07 | 72°**

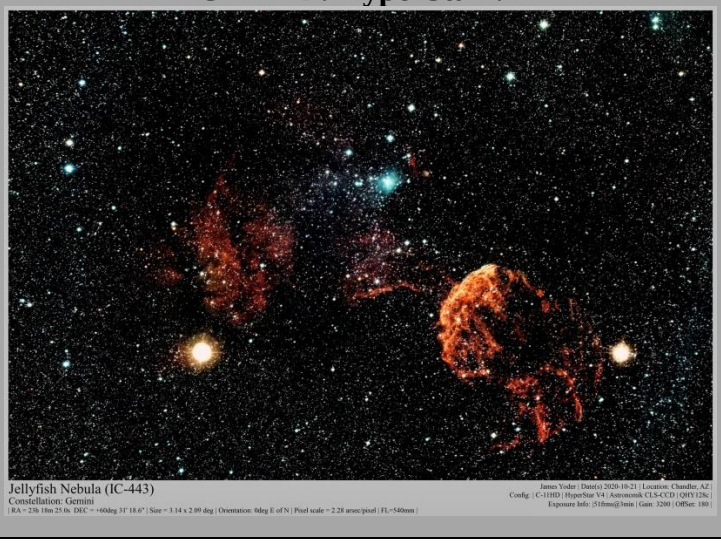
C-11 HD: Focal Reducer



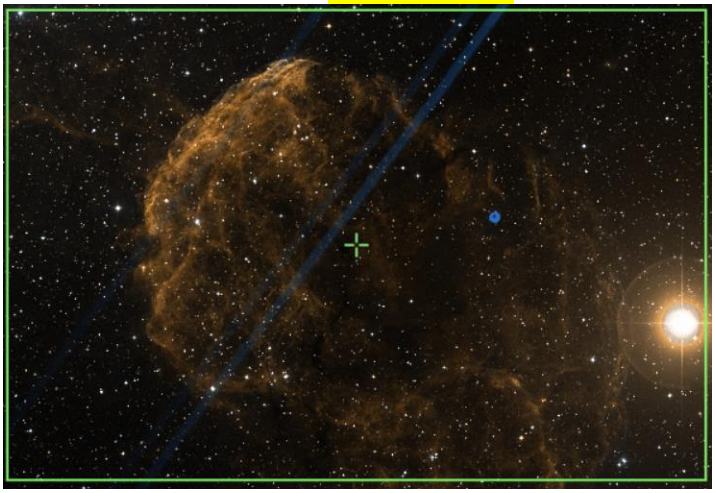
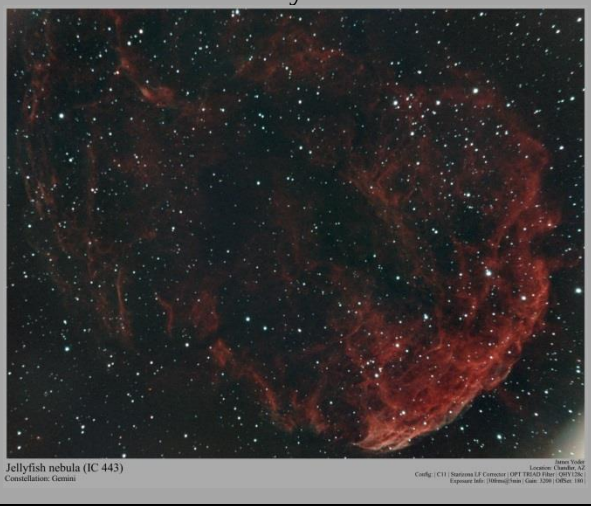
Prospective Imaging Objects – October 14 2023

Lower's Nebula (Sh 2-261) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **06hr 08' 59"** **15° 46' 39"** Close Star: **SAO-78297** (Calix) Catalog Objects: Sh 2-261 Imaging Window: **01:57 – 05:37** Transit: **05:07 | 72°**	**C-11 HD: Primary Focus** 
M-35, NGC-2158 Config: |C11-HD|FR|ZWO6200MC| Type: **Open Cluster Pair** Constellation: **Gemini** Coordinates: **06hr 08' 39"** **24° 14' 48"** Close Star: **SAO-95912** (Alhena) Catalog Objects: M-35/NGC-2168, NGC-2158 Imaging Window: **01:40 – 05:37** Transit: **05:03 | 81°**	**C-11 HD: Focal Reducer** 
Monkey Head (NGC-2174) Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **06hr 09' 50"** **20° 29' 50"** Close Star: SAO-78297 (Calix) Catalog Objects: NGC 2174/Sh 2-252 Imaging Window: **01:48 – 05:37** Transit: **05:03 | 77°**	**C-11 HD: Focal Reducer** 

Prospective Imaging Objects – October 14 2023

Monkey Head (NGC 2174) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **06hr 09' 50"** **20° 29' 50"** Close Star: SAO-78297 (Calix) Catalog Objects: NGC 2174/Sh 2-252 Imaging Window: **01:48 – 05:37** Transit: **05:03 | 77°**	**C-11 HD: Primary Focus** 
IC 2162 Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Orion** Coordinates: **06hr 12' 25"** **17° 59' 26"** Close Star: SAO-78297 (Calix) Catalog Objects: IC 2162 Imaging Window: **01:57 – 05:37** Transit: **05:07 | 75°**	**C-11 HD: Primary Focus** 
Jellyfish Nebula (IC 443) Config: **C11-HD | HS | ZWO6200MC** Type: **Supernova Remnant** Peak: Constellation: **Gemini** Coordinates: **06hr 19' 56"** **23° 06' 17"** Close Star: SAO-78297 (Calix) Catalog Objects: IC 443 Imaging Window: **01:51 – 05:37** Transit: **05:10 | 79°**	**C-11 HD: HyperStar v4** 

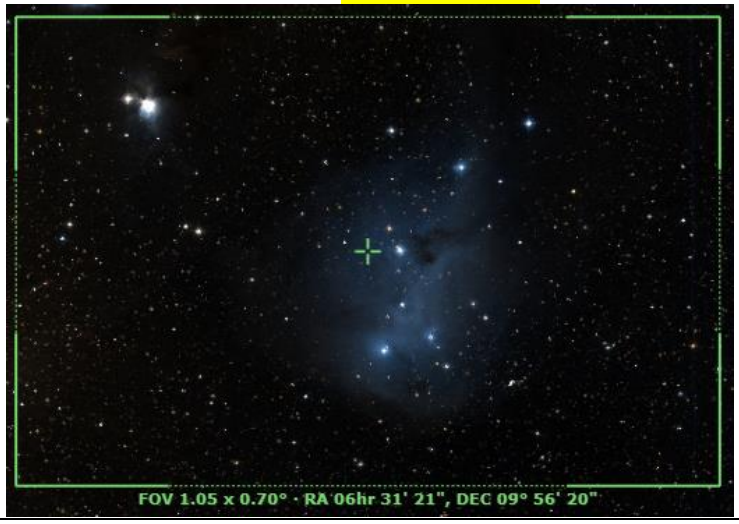
Prospective Imaging Objects – October 14 2023

Jellyfish Nebula (IC 443) Config: |C11-HD|FR|ZWO6200MC| Type: **Supernova Remnant** Peak: Constellation: **Gemini** Coordinates: **06hr 16' 59"** **22° 37' 29"** Close Star: SAO-78297 (Calix) Catalog Objects: IC 443 Imaging Window: **01:51 – 05:37** Transit: **05:10 | 79°**	C11-HD: Focal Reducer 
Jellyfish Nebula (IC 443) Config: |C11|LF|ZWO6200MC| Type: **Supernova Remnant** Peak: Constellation: **Gemini** Coordinates: **06hr 16' 51"** **22° 36' 34"** Close Star: SAO-78297 (Calix) Catalog Objects: IC 443 Imaging Window: **01:51 – 05:37** Transit: **05:10 | 79°**	Primary Focus 
Sh 2-249 Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Gemini** Coordinates: **06hr 19' 15"** **23° 24' 58"** Close Star: SAO-78297 (Calix) Catalog Objects: Sh 2-249 Imaging Window: **01:52 – 05:37** Transit: **05:13 | 80°**	**C-11 HD: Primary Focus** 

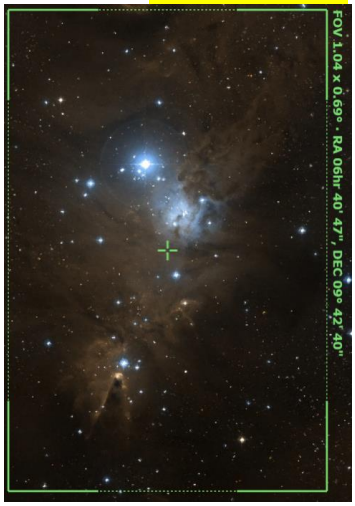
Prospective Imaging Objects – October 14 2023

Rosette Nebula (NGC 2237) Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse Nebula** Constellation: **Monoceros** Coordinates: **06hr 31' 53.37"** **04° 50' 45.29"** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC 2237 ,NGC-2244 Imaging Window: **02:54 – 05:37** Transit: **05:25 | 62°**	**C-11 HD: HyperStar v4** 
Rosette Nebula (NGC 2237) Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 32' 01"** **04° 59' 28"** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC 2237 Imaging Window: **02:54 – 05:37** Transit: **05:25 | 62°**	**C-11 HD: Focal Reducer** 
Rosette Nebula (NGC 2237) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 32' 02"** **04° 58' 14"** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC 2237 Imaging Window: **02:54 – 05:37** Transit: **05:25 | 62°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

IC-2169 Config: **C11 | HS | ZWO6200MC** Type: **Bright Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 36’ 00”** **10° 16’ 17”** Close Star: SAO-95912 (Alhena) Catalog Objects: IC 2169 Imaging Window: **02:38 – 05:37** Transit: **05:25 | 80°**	**C-11 HD: HyperStar v4** 
IC 2169 Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 31’ 21”** **09° 56’ 20”** Close Star: SAO-95912 (Alhena) Catalog Objects: IC 2169 Imaging Window: **02:38 – 05:37** Transit: **05:25 | 80°**	**C-11 HD: Focal Reducer** 
IC 2169 Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 31’ 36”** **09° 58’ 16”** Close Star: SAO-95912 (Alhena) Catalog Objects: IC 2169 Imaging Window: **02:38 – 05:37** Transit: **05:25 | 80°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – October 14 2023

Hubble's Variable Nebula (NGC 2261) Config: |C11HD| ZWO6200MC| Type: **Reflection Nebula** Constellation: **Monoceros** Coordinates: **06hr 39' 12"** **08° 45' 00"** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC 2261 Imaging Window: **02:50 – 05:37** Transit: **05:33 | 65°**	**C-11 HD: Primary Focus** 
Christmas Tree & Cone Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Coordinates: Pane 1: **06hr 40' 53"**, **10° 07' 47"** Pane 2, **06hr 40' 53"**, **09° 34' 40** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC 2264/Sh 2-273 Imaging Window: **02:48 – 05:37** Transit: **05:35 | 67°**	**C-11 HD: Focal Reducer** Composite! 
Christmas Tree & Cone Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 40' 47"** **09° 42' 40"** Angle: **90° East** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC 2264/Sh 2-273 Imaging Window: **02:48 – 05:37** Transit: **05:35 | 67°**	**C-11 HD: Focal Reducer** 

Prospective Imaging Objects – October 14 2023

Christmas Tree Cluster (NGC 2264) Config: |C1|LF|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 40' 58.74"** **09° 53' 32.69"** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC 2264/Sh 2-273 Imaging Window: **02:48 – 05:37** Transit: **05:35 | 67°**	Primary Focus 
Cone Nebula-1 (NGC 2264) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 41' 07"** **09° 27' 52"** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC 2264 Imaging Window: **02:48 – 05:37** Transit: **05:35 | 67°**	**C-11 HD: Primary Focus** 

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Prospective Imaging Objects – October 14 2023

Imaging Summary October 14, 2023

Astronomical Dusk = 07:17 Astronomical Dawn = 05:37

HyperStar: Nebula

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
HyperStar	Nebula	Nebula	NGC-6914	07:17 – 11:07	07:20	03	Composite2! Cygnus: Bright Nebula
HyperStar	Nebula	Nebula	NGC-6914	07:17 – 11:07	07:20	03	Cygnus: Bright Nebula
HyperStar	Nebula	Nebula	IC-1318	07:17 – 11:07	07:21	04	Cygnus: Butterfly Nebula
HyperStar	Nebula	Nebula	IC-5070	07:17 – 11:35	07:46	06	Composite2! Cygnus: Pelican & N America Nebula
HyperStar	Nebula	Nebula	IC-5070	07:17 – 11:35	07:46	06	Cygnus: Pelican & N America Nebula
HyperStar	Nebula	Nebula	NGC-6960	07:17 – 11:23	07:48	07	Composite2! Cygnus: Veil Nebula
HyperStar	Nebula	Nebula	NGC-6960	07:17 – 11:23	07:48	07	Cygnus: Veil Nebula
HyperStar	Nebula	Nebula	IC-1396	07:17 – 12:22	08:334	13	Cepheus: Elephant Trunk
HyperStar	DN, Nebula	Nebula	B-168	07:17 – 12:34	08:44	16	Cygnus: Dark Cocoon
HyperStar	Nebula	Nebula	SH2-132	07:17 – 01:03	09:14	18	Cepheus: Bright Nebula
HyperStar	Nebula	Nebula	SH2-155	07:17 – 01:32	09:52	21	Cepheus: Cave Nebula
HyperStar	Nebula	Nebula	SH2-157	07:17 – 01:56	10:11	22	Cassiopeia: Lobster Claw and Bubble Nebula
HyperStar	Nebula	Nebula	NGC-7822	07:32 – 02:22	10:57	25	Composite2! Cepheus: Nebula
HyperStar	Nebula	Nebula	NGC-7822	07:32 – 02:22	10:57	26	Cepheus: Nebula
HyperStar	Nebula	Neb, OC	NGC-457	08:27 – 04:01	12:14	34	Cassiopeia: Open Cluster NGC-457 & Dolphin Neb
HyperStar	Nebula	Nebula	IC-1848, 1805	10:02 – 05:30	01:46	39	Composite4! Cassiopeia: Heart and Soul Nebulas
HyperStar	Nebula	Nebula	IC-1805	09:45 – 05:10	01:27	39	Cassiopeia: Heart Nebula
HyperStar	Nebula	Nebula	IC-1848	10:02 – 05:30	01:46	42	Cassiopeia: Soul Nebula
HyperStar	Nebula	Nebula	NGC-1499	11:16 – 05:37	02:57	45	Perseus: California Nebula
HyperStar	Nebula	Nebula	IC-405	12:32 – 05:37	04:10	49	Auriga: Flaming Star Nebula
HyperStar	Nebula	Nebula	M-42	02:52 – 05:37	04:29	53	Composite6! Orion: Orion Complex
HyperStar	Nebula	Nebula	M-42	02:52 – 05:37	04:29	53	Orion: Orion Nebula
HyperStar	Nebula	Nebula	SH2-240	01:04 – 05:37	04:33	55	Composite2! Taurus: Simeis 147 Bubble
HyperStar	Nebula	Nebula	SH2-240	01:04 – 05:37	04:33	55	Taurus: Simeis 147 Bubble

Prospective Imaging Objects – October 14 2023

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
HyperStar	Nebula	Nebula	NGC-2024, B33	02:37 – 05:37	02:37	56	Orion: Flame and Horsehead Nebula
HyperStar	Nebula	Nebula	LDN-1622	02:31 – 05:37	04:49	59	Composite2! Orion: Band Complex
HyperStar	Nebula	Nebula	LDN-1622	02:31 – 05:37	04:49	59	Orion: Band Complex
HyperStar	Nebula	Nebula	LDN-1622 R1	02:31 – 05:37	04:49	59	Orion: Band Region 1
HyperStar	Nebula	Nebula	LDN-1622 R2	02:31 – 05:37	04:49	59	Orion: Band Region 2
HyperStar	Nebula	Nebula	LDN-1622 R3	02:31 – 05:37	04:49	59	Orion: Band Region 3
HyperStar	Nebula	Nebula	IC-2162, SH2-261	01:57 – 05:37	05:07	62	Rotation Orion: Interesting Composition
HyperStar	Nebula	Nebula	IC-443	01:51 – 05:37	05:10	64	Gemini: Jellyfish Nebula
HyperStar	Nebula	Nebula	NGC-2237	02:54 – 05:37	05:25	66	Monoceros: Rosette Nebula
HyperStar	Nebula	Nebula	IC-2169	02:38 – 05:37	05:25	67	Monoceros: Bright Nebula, & Dark Nebula Region

Prospective Imaging Objects – October 14 2023

Imaging Summary October 14, 2023

Astronomical Dusk = 07:17 Astronomical Dawn = 05:37

HyperStar: Broad Spectrum

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
HyperStar	Broad Spectrum	Dark Neb	LDN-904	07:17 – 11:33	07:48	07	Cygnus: Northern Coal Sack (LDN-904)
HyperStar	Broad Spectrum	Dark Neb	B-168	07:17 – 01:32	09:52	18	Cepheus: Wolf's Cave
HyperStar	Broad Spectrum	Ref Neb	NGC-7686	07:17 – 02:15	10:25	24	Andromeda: Blue Match Nebula
HyperStar	Broad Spectrum	Galaxies	NGC-147	07:38 – 03:18	11:28	27	Cassiopeia: Galaxy Pair NGC-147 & NGC-185
HyperStar	Broad Spectrum	Galaxy	M-31	07:51 – 03:24	11:37	29	Andromeda: The Great Andromeda Galaxy
HyperStar	Broad Spectrum	Galaxy	M-31	07:51 – 03:24	11:37	29	Rotation! Andromeda: Andromeda Galaxy
HyperStar	Broad Spectrum	Gal & GC	NGC-288, 253	*10:03-01:28	11:48	31	Sculptor: Galaxy and Globular pair
HyperStar	Broad Spectrum	Ref Neb	IC-59	08:09 – 03:35	11:52	33	Cassiopeia: Bright Nebula
HyperStar	Broad Spectrum	Galaxy	M-33	08:55 – 04:02	12:28	36	Triangulum: Triangulum Galaxy
HyperStar	Broad Spectrum	OC	NGC-869, 884	09:29 – 05:04	01:17	38	Perseus: Hand chi Persei
HyperStar	Broad Spectrum	Refl Neb	M-45	11:19 – 05:37	02:41	44	Taurus: Pleiades Open Cluster
HyperStar	Broad Spectrum	OC	C-41	12:17 – 05:37	03:21	46	Taurus: Hyades Star Cluster
HyperStar	Broad Spectrum	DN	IC-2118	*12:49-05:37	03:59	47	Eridanus: Witch Head Nebula
HyperStar	Broad Spectrum	BN	NGC-1788	02:11 – 05:37	04:01	48	Orion: Foxface Nebula

Prospective Imaging Objects – October 14 2023

Imaging Summary October 14, 2023

Astronomical Dusk = 07:17 Astronomical Dawn = 05:37

Focal Reducer: Nebula

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Focal Reducer	Nebula	Nebula	NGC-6914 Reg	07:17 – 11:07	07:20	04	Cygnus: NGC-6914 Region
Focal Reducer	Nebula	Nebula	IC-1318	07:17 – 11:07	07:21	05	Cygnus: Butterfly Nebula
Focal Reducer	Nebula	Nebula	NGC-6960	07:17 – 11:23	07:48	08	Composite 2! Cygnus: Witch's Broom
Focal Reducer	Nebula	Nebula	NGC-6960	07:17 – 11:23	07:48	08	Cygnus: Pickering's Triangular Wisp
Focal Reducer	Nebula	Nebula	NGC-6992	07:17 – 01:27	07:52	09	Composite 2! Cygnus: Network Nebula
Focal Reducer	Nebula	Nebula	NGC-7023	07:17 – 11:19	07:57	10	Cepheus: Iris Nebula
Focal Reducer	Nebula	Nebula	IC-1396-1	07:17 – 12:22	08:34	14	Cepheus: Bright & Dark Nebula Region-1
Focal Reducer	Nebula	Nebula	IC-1396-2	07:17 – 12:22	08:34	14	Cepheus: Bright & Dark Nebula Region-2
Focal Reducer	Nebula	Nebula	IC-5146	07:17 – 12:39	08:49	16	Cygnus: Cocoon Nebula
Focal Reducer	Nebula	Nebula	SH2-132	07:17 – 01:03	09:14	19	Cepheus: Bright Nebula
Focal Reducer	Nebula	Nebula	SH2-142	07:17 – 01:29	09:40	20	Cepheus: Wizard Nebula
Focal Reducer	Nebula	Nebula	SH2-155	07:17 – 01:32	09:52	21	Cepheus: Cave Nebula
Focal Reducer	Nebula	Nebula	SH2-157	07:17 – 01:56	10:11	23	Cassiopeia: Lobster Claw
Focal Reducer	Nebula	Nebula	NGC-7822	07:32 – 02:22	10:57	26	Cepheus: Diffuse Nebula
Focal Reducer	Nebula	Nebula	NGC-246, 255	*08:57-02:23	11:42	30	Cetus: Planetary Nebula & 2 Galaxies
Focal Reducer	Nebula	Nebula	NGC-281	08:09 – 03:35	11:52	32	Cassiopeia: Pack Man Nebula
Focal Reducer	Nebula	Nebula	IC-1795	09:39 – 05:02	01:20	39	Cassiopeia: Fish Head Nebula
Focal Reducer	Nebula	Nebula	IC-1805	09:45 – 05:10	01:27	40	Cassiopeia: Heart Nebula
Focal Reducer	Nebula	Nebula	IC-405	12:32 – 05:37	04:10	49	Auriga: Flaming Star Nebula
Focal Reducer	Nebula	Nebula	IC-410	12:39 – 05:37	04:17	50	Auriga: Tadpoles
Focal Reducer	Nebula	Nebula	NGC1055,1931	12:43 – 05:37	04:22	51	Composit2! Rotation! Auriga: Spider & Fly
Focal Reducer	Nebula	Nebula	NGC-1977	02:49 – 05:37	04:29	54	Orion: Running Man Nebula
Focal Reducer	Nebula	Nebula	M-78	02:38 – 05:37	04:41	57	Composit2! Orion: Dark Nebula Region
Focal Reducer	Nebula	Nebula	M-78	02:38 – 05:37	04:41	58	Orion: Dark Nebula Region

Prospective Imaging Objects – October 14 2023

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Focal Reducer	Nebula	Nebula	NGC-2170	03:32 – 05:37	05:01	61	Monoceros: Angel Nebula
Focal Reducer	Nebula	Nebula	SH 2-261	01:57 – 05:37	05:07	62	Orion: Lower's Nebula
Focal Reducer	Nebula	Nebula	NGC-2174	01:48 – 05:37	05:03	63	Orion: Monkey Head Nebula
Focal Reducer	Nebula	Nebula	IC-443	01:51 – 05:37	05:10	65	Gemini: Jellyfish Nebula
Focal Reducer	Nebula	Nebula	NGC-2237	02:54 - 05:37	05:25	66	Monoceros: Roset Nebula Core
Focal Reducer	Nebula	Nebula	IC-2169	02:38 – 05:37	05:25	67	Monoceros: Blue Nebula
Focal Reducer	Nebula	Nebula	NGC-2264	02:48 – 05:37	05:35	68	Composite2! Monoceros: Xmas Tree & Cone
Focal Reducer	Nebula	Nebula	NGC-2264	02:48 – 05:37	05:35	68	Rotation! Monoceros: Xmas Tree & Cone

Prospective Imaging Objects – October 14 2023

Imaging Summary October 14, 2023

Astronomical Dusk = 07:17 Astronomical Dawn = 05:37

Focal Reducer: Broad Spectrum

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Focal Reducer	Broad Spectrum	Open Cl	M-39	07:17 – 12:17	08:27	12	Cygnus: Open Cluster M-39
Focal Reducer	Broad Spectrum	Dark Neb	LDN-1235	08:21 – 01:47	11:04	17	Cepheus: Dark Shark
Focal Reducer	Broad Spectrum	Ref Neb	VdB-152	07:17 – 01:32	09:52	18	Rotation! Cepheus: Wolf's Cave
Focal Reducer	Broad Spectrum	Galaxies	NGC-7331 et. El.	07:17 – 01:09	09:31	19	Rotation! Pegasus: Stephan's Quintet & NGC 7331
Focal Reducer	Broad Spectrum	Galaxies	NGC-7619 et. El.	07:34 – 12:57	10:15	23	Pegasus: Pegasus Cluster of Galaxies
Focal Reducer	Broad Spectrum	Galaxies	NGC-147, 185	07:38 – 03:18	11:28	28	Composite 2! Cassiopeia: Galaxy Pair
Focal Reducer	Broad Spectrum	Open Cl	NGC-188	*07:28-03:52	11:42	32	Cepheus: Open Star Cluster NGC-188
Focal Reducer	Broad Spectrum	Galaxy	M-33	08:55 – 04:02	12:28	36	Rotation! Triangulum: Triangulum Galaxy
Focal Reducer	Broad Spectrum	Galaxies	M-77, NGC-1055	11:26 – 03:47	01:36	40	Cetus: Galaxy Pair
Focal Reducer	Broad Spectrum	DN/RN	NGC-1788	02:11 – 05:37	04:01	48	Orion: Foxface Nebula
Focal Reducer	Broad Spectrum	DN	LDN-1622	02:31 – 05:37	04:49	60	Composite2! Rotation Orion: Dark Nebula Region
Focal Reducer	Broad Spectrum	DN	LDN-1622	02:31 – 05:37	04:49	60	Orion: Dark Nebula Region
Focal Reducer	Broad Spectrum	OC	M-35, NGC-2158	01:40 – 05:37	05:03	63	Gemini: Open Cluster Pair

Prospective Imaging Objects – October 14 2023

Imaging Summary October 14, 2023

Astronomical Dusk = 07:17 Astronomical Dawn = 05:37

Primary Focus: Nebula

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Nebula	PN	NGC-6894	07:17 – 10:45	07:12	02	Cygnus: PK 69-2.1 Small PN
Primary Focus	Nebula	PN	IC-4997	07:17 – 10:22	07:16	02	Saitta: PK 58-10.1 Small PN
Primary Focus	Nebula	PN	NGC-6905	07:17 – 10:32	07:18	02	Delphinus: Blue Flash Nebula Small PN
Primary Focus	Nebula	Nebula	NGC-6914 Reg	07:17 – 11:07	07:20	04	Cygnus: NGC-6914 Region
Primary Focus	Nebula	Nebula	IC-1318	07:17 – 11:07	07:21	05	Cygnus: Butterfly Nebula
Primary Focus	Nebula	PN	NGC-7008	07:17 – 11:46	07:56	10	Cygnus: Fetus Nebula Med PN
Primary Focus	Nebula	Nebula	NGC-7023	07:17 – 11:19	07:57	10	Cepheus: Iris Nebula
Primary Focus	Nebula	PN	NGC-7009	*07:17-10:48	08:00	11	Aquarius: Saturn Nebula
Primary Focus	Nebula	PN	NGC-7026	07:17 – 11:52	08:02	11	Cygnus: Small Planetary Nebula
Primary Focus	Nebula	PN	NGC-7027	07:17 – 11:49	08:02	11	Cygnus: Small Planetary Nebula
Primary Focus	Nebula	PN	NGC-7048	07:17 – 11:59	08:10	12	Cygnus: Small PN PK 88-1.1
Primary Focus	Nebula	PN	NGC-7094	07:17 – 11:28	08:32	13	Pegasus: Small/Med Planetary
Primary Focus	Nebula	DN & BN	IC-1396-1	07:17 – 12:28	08:34	14	Cepheus: Elephant Trunk Region of Interest
Primary Focus	Nebula	Nebula	IC-1396-2	07:17 – 12:22	08:34	15	Cepheus: Elephant Trunk Region of Interest
Primary Focus	Nebula	Nebula	IC-1396-3	07:17 – 12:22	08:34	15	Cepheus: Elephant Trunk Region of Interest
Primary Focus	Nebula	PN	NGC-7139	07:17 – 12:19	08:41	16	Cepheus: Med Planetary Nebula
Primary Focus	Nebula	Nebula	IC-5146	07:17 – 12:39	08:49	17	Cygnus: Cocoon Nebula (IC-5146)
Primary Focus	Nebula	PN	NGC-7293	*07:39-11:15	09:25	17	Aquarius: Helix Nebula
Primary Focus	Nebula	Nebula	SH2-132	07:17 – 01:03	09:14	19	Cepheus: Bright Nebula
Primary Focus	Nebula	Nebula	SH2-142	07:17 – 01:28	09:40	21	Cepheus: Wizard Nebula
Primary Focus	Nebula	Nebula	SH2-155	07:17 – 01:32	09:52	22	Cepheus: Cave Nebula
Primary Focus	Nebula	Nebula	NGC-7635	07:17 – 01:58	10:15	23	Cepheus: Bubble Nebula
Primary Focus	Nebula	Nebula	NGC-7822	07:32 – 02:22	10:57	26	Cepheus: Emission Nebula
Primary Focus	Nebula	PN	NGC-40	08:16 – 02:00	11:08	27	Cepheus: Bow-Tie Nebula

Prospective Imaging Objects – October 14 2023

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Nebula	PN	NGC-246	*08:57-02:23	11:42	30	Cetus: Skull Nebula
Primary Focus	Nebula	Nebula	IC-59	08:09 – 03:35	11:52	33	Cassiopeia: Reflection Nebula
Primary Focus	Nebula	Nebula	SH2-188	08:38 – 04:12	12:25	35	Cassiopeia: Firefox Nebula
Primary Focus	Nebula	PN	M-76	08:46 – 04:27	12:37	37	Perseus: Little Dumbbell Nebula
Primary Focus	Nebula	Nebula	IC-1805	09:45 – 05:10	01:27	40	Cassiopeia: Heart Nebula
Primary Focus	Nebula	Nebula	IC-1848	10:02 – 05:30	01:46	42	Cassiopeia: Soul Nebula
Primary Focus	Nebula	Nebula	NGC-1333	10:49 – 05:37	02:23	43	Perseus: Reflection Nebula
Primary Focus	Nebula	Nebula	NGC-1360	*02:33-04:14	02:28	43	Fornax: Robins Egg Nebula
Primary Focus	Nebula	Nebula	IC-348	11:03 – 05:37	02:39	43	Perseus: Reflection Nebula
Primary Focus	Nebula	Nebula	NGC-1501	11:18 – 05:37	03:01	45	Camelopardalis: Oyster Nebula
Primary Focus	Nebula	Nebula	NGC-1514	11:30 – 05:37	03:03	45	Taurus: Crystal Ball Nebula
Primary Focus	Nebula	Nebula	NGC-1535	*12:27-05:37	03:08	46	Eridanus: Cleopatra's Eye
Primary Focus	Nebula	Nebula	NGC-1555	12:03 – 05:37	03:16	46	Taurus: Hind's Variable Nebula
Primary Focus	Nebula	Nebula	NGC-1579	11:44 – 05:37	03:24	47	Perseus: Trifid of the North
Primary Focus	Nebula	Nebula	IC-405	12:32 – 05:37	04:10	49	Auriga: Flaming Star Nebula
Primary Focus	Nebula	Nebula	IC-410	12:39 – 05:37	04:17	50	Auriga: Tadpoles
Primary Focus	Nebula	Nebula	IC-417	12:43 – 05:37	04:22	51	Auriga: The Spider
Primary Focus	Nebula	Nebula	NGC-1931	12:47 – 05:37	04:25	52	Auriga: The Fly
Primary Focus	Nebula	Nebula	M-1	01:10 – 05:37	04:28	52	Taurus: Crab Nebula
Primary Focus	Nebula	Nebula	M-42	02:53 – 05:37	04:29	54	Orion: The Orion Nebula
Primary Focus	Nebula	Nebula	NGC-2024	02:37 – 05:37	02:37	56	Orion: Flame Nebula
Primary Focus	Nebula	Nebula	B-33	02:39 – 05:37	04:35	56	Orion: Horsehead Nebula
Primary Focus	Nebula	Nebula	NGC-2022	01:51 – 05:37	04:36	57	Orion: Planetary Nebula
Primary Focus	Nebula	Nebula	M-78	02:32 – 05:37	04:41	58	Orion: Bright and Dark Nebula
Primary Focus	Nebula	Nebula	NGC-2170	03:32 – 05:37	05:01	62	Monoceros: Angel Nebula
Primary Focus	Nebula	Nebula	SH 2-261	01:57 – 05:37	05:07	63	Orion: Lower's Nebula
Primary Focus	Nebula	Nebula	NGC-2174	01:48 – 05:37	05:03	64	Orion: Monkey Head Nebula
Primary Focus	Nebula	Nebula	IC-2162	01:57 – 05:37	05:07	64	Orion: Bright Nebula
Primary Focus	Nebula	Nebula	IC-443	01:51 – 05:37	05:10	65	Gemini: Jellyfish Nebula

Prospective Imaging Objects – October 14 2023

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Nebula	DN/BN	LDN-1622	02:31 – 05:37	04:49	61	Orion: Dark and Bright Nebula
Primary Focus	Nebula	DN	SH2-249	01:52 – 05:37	05:13	65	Gemini: Diffuse Nebula
Primary Focus	Nebula	DN	NGC-2237	02:54 - 05:37	05:25	66	Monoceros: Rosette Nebula Core
Primary Focus	Nebula	BN	IC-2169	02:38 – 05:37	05:25	67	Monoceros: Bright Blue Nebula
Primary Focus	Nebula	RN	NGC-2261	02:50 – 05:37	05:33	68	Monoceros: Hubble's Variable Nebula
Primary Focus	Nebula						

Prospective Imaging Objects – October 14 2023

Imaging Summary October 14, 2023

Astronomical Dusk = 07:17 Astronomical Dawn = 05:37

Primary Focus: Broad Spectrum

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Broad Spectrum	OC	M-29	07:17 – 11:03	07:20	03	Cygnus: Cooling Tower, Open Cluster NGC-6913
Primary Focus	Broad Spectrum	Galaxy	NGC-6946	07:17 – 11:15	07:30	05	Cepheus: Fireworks Galaxy
Primary Focus	Broad Spectrum	GC	M-72	*07:17–10:31	07:49	08	Aquarius: NGC-6981 Small Globular
Primary Focus	Broad Spectrum	OC	M-73	*07:17-10:31	07:54	09	Aquarius: NGC-6994 Small Open Cluster
Primary Focus	Broad Spectrum	GC	M-15	07:17 – 11:19	08:25	12	Cepheus: Pegasus Cluster Small Globular Cluster
Primary Focus	Broad Spectrum	GC	M-2	07:17 – 10:33	08:29	13	Aquarius: Med-Large Globular NGC-7089
Primary Focus	Broad Spectrum	GC	M-30	*07:17-09:58	08:36	15	Capricornus: Small-Med Globular NGC-7099
Primary Focus	Broad Spectrum	Galaxies	NGC-7317	07:17 – 01:09	09:31	20	Pegasus: Stephan's Quintet
Primary Focus	Broad Spectrum	Galaxies	NGC-7331	07:17 – 01:11	09:32	20	Pegasus: Galaxy Group NGC-7331
Primary Focus	Broad Spectrum	Galaxy	NGC-7479	07:17 – 12:54	10:00	22	Pegasus: Galaxy PGC-70419
Primary Focus	Broad Spectrum	Galaxies	NGC-7619 Et. El.	07:34 – 12:57	10:15	24	Pegasus: Pegasus Cluster of galaxies
Primary Focus	Broad Spectrum	OC	M-52	07:17 – 02:02	10:20	24	Cassiopeia: Open Cluster NGC-7654
Primary Focus	Broad Spectrum	OC	NGC-7789	07:17 – 02:41	10:52	25	Cassiopeia: Caroline's Rose
Primary Focus	Broad Spectrum	Galaxies	NGC 67-72 et. El.	07:40 – 02:46	11:13	27	Andromeda: Andromeda Galaxy Group
Primary Focus	Broad Spectrum	Galaxy	NGC-147	07:38 – 03:18	11:28	28	Cassiopeia: Med Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-185	09:32 – 04:48	01:22	28	Cassiopeia: Sm Elipical Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-110	07:49 – 03:22	11:35	29	Andromeda: Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-32	07:52 – 03:22	11:37	29	Andromeda: Companion to M-31
Primary Focus	Broad Spectrum	Galaxy	NGC-247	*09:08-02:12	11:42	31	Cetus: Needle's Eye Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-253	*09:41-01:39	11:42	31	Sculptor: Sculptor Galaxy
Primary Focus	Broad Spectrum	Globular	NGC-288	*10:03-01:28	11:48	32	Sculptor: Med-Large Globular
Primary Focus	Broad Spectrum	Galaxy	IC-1613	09:45 – 02:18	12:00	33	Cetus: Irregular Dwarf Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-404	08:24 – 03:45	12:04	34	Andromeda: Mirachs Ghost
Primary Focus	Broad Spectrum	OC	NGC-457	08:27 – 04:01	12:14	34	Cassiopeia: Owl Cluster

Prospective Imaging Objects – October 14 2023

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Broad Spectrum	Galaxies	Arp-133	10:19 – 02:22	12:20	35	Cetus: Minkowski's Object
Primary Focus	Broad Spectrum	OC	M-103	08:44 – 04:12	12:28	35	Cassiopeia: Open Cluster
Primary Focus	Broad Spectrum	Galaxy	M-33	08:55 – 04:02	12:28	36	Triangulum: Triangulum Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-74	09:27 – 03:35	12:31	37	Pisces: Med Face on Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-772	09:42 – 04:05	12:54	37	Aries: Nautilus Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-891	09:30 – 05:04	01:17	38	Andromeda: Edge on Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-925	09:44 – 05:00	01:22	38	Triangulum: Small Galaxy PGC-9332
Primary Focus	Broad Spectrum	Galaxy	NGC-1055	11:26 – 03:47	01:36	41	Cetus: Edge on Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-77	11:39 – 03:45	01:37	41	Cetus: Galaxy NGC-1068
Primary Focus	Broad Spectrum	OC	M-34	09:49 – 05:24	01:37	41	Perseus: Open Cluster NGC-1039
Primary Focus	Broad Spectrum	Galaxies	Abell-426	10:28 – 05:37	02:14	42	Perseus: Perseus Galaxy Cluster
Primary Focus	Broad Spectrum	Galaxy	IC-342	11:19 – 05:37	02:41	44	Camelopardalis: Large Face-On Galaxy
Primary Focus	Broad Spectrum	OC	M-45	11:19 – 05:37	02:41	44	Taurus: Pleiades
Primary Focus	Broad Spectrum	DN	IC-2118	*12:49-05:37	03:59	47	Eridanus: Witch Head Nebula
Primary Focus	Broad Spectrum	DN	NGC-1788	02:11 – 05:37	04:01	48	Orion: Foxface Nebula
Primary Focus	Broad Spectrum	GC	M-79	*03:02-05:26	04:18	50	Lepus: Med Globular
Primary Focus	Broad Spectrum	Galaxy	IC-418	*01:39-05:37	04:21	51	Lepus: Spirograph Nebula
Primary Focus	Broad Spectrum	OC	M-38	12:42 – 08:03	04:23	52	Auriga: Starfish Cluster
Primary Focus	Broad Spectrum	OC	M-36	12:52 – 05:37	04:30	54	Auriga: Pinwheel Cluster
Primary Focus	Broad Spectrum	Galaxy	NGC-1961	01:20 – 05:37	04:36	57	Camelopardalis: Galaxy Group
Primary Focus	Broad Spectrum	OC	M-37	01:10 – 05:37	04:46	58	Auriga: Salt and Pepper Cluster

Prospective Imaging Objects – October 14 2023

Imaging Summary October 14, 2023

Astronomical Dusk = 07:17 Astronomical Dawn = 05:37

Primary Prospects

Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
HS1a	HyperStar	Nebula	Nebula	NGC-6914 Region	07:17 – 11:07	07:20	03	Composit2! Butterfly Nebula Region
	HyperStar	Nebula	Nebula	IC-1318	07:17 – 11:07	07:21	04	Cygnus: NGC-6914 Region
	HyperStar	Nebula	Nebula	NGC-6960	07:17 – 11:23	07:48	07	Composite2 Cygnus: Veil Nebula
HS2a	HyperStar	Nebula	Nebula, DN	B-168, IC-5146	07:17 – 12:34	08:44	16	Cygnus: Dark Cocoon
	HyperStar	Nebula	Nebula	SH2-132	07:17 – 01:03	09:14	18	Cepheus: Bright Nebula
	HyperStar	Nebula	Nebula	IC-59,63	08:09 – 03:35	11:52	33	Cassiopeia: Bright Nebula
HS2b	HyperStar	Broad Spectrum	Galaxy	M-33	08:55 – 04:02	12:28	36	Triangulum: Triangulum Galaxy
	HyperStar	Nebula	Nebula	M-42	02:53 – 05:37	04:29	53	Orion: Orion Nebula
HS1b	HyperStar	Nebula	Nebula	SH2-240	01:04 – 05:37	04:33	55	Composite2! Rotation Taurus: Nebula
	HyperStar	Nebula	Nebula	LDN-1622 R1	02:31 – 05:37	04:49	59	Orion: Wave Nebula
	HyperStar	Nebula	Nebula	IC-2162, SH2-261	01:57 – 05:37	05:07	62	Rotation Orion: Multiple Nebulas
HS2c	HyperStar	Nebula	Nebula	IC-2169	02:38 – 05:37	05:25	67	Monoceros: Nebula Region
	Focal Reducer	Nebula	Nebula	NGC-6914 Region	07:17 – 11:07	07:20	04	Cygnus: NGC-6914 Region
	Focal Reducer	Nebula	Nebula	IC-1318	07:17 – 11:07	07:21	05	Cygnus: Butterfly Nebula region
FR1a	Focal Reducer	Nebula	Nebula	NGC-6992	07:17 – 01:27	07:52	09	Composite2 Cygnus: Network Nebula
	Focal Reducer	Nebula	R Nebula	NGC-7023	07:17 – 11:19	07:57	10	Cepheus: Iris Nebula
	Focal Reducer	Nebula	Nebula	IC-1396	07:17 – 12:22	08:34	14	Cepheus: Elephant Trunk ROI (2)
	Focal Reducer	Nebula	Nebula, DN	IC-5146	07:17 – 12:34	08:49	16	Cygnus: Dark Cocoon
	Focal Reducer	Nebula	Nebula	SH2-132	07:17 – 01:03	09:14	19	Cepheus: Bright Nebula
FR2a	Focal Reducer	Broad Spectrum	Galaxies	NGC-7331 et. El.	07:17 – 01:09	09:31	19	Rotation Pegasus: Stephan's Quintet & NGC-7331
FR3a	Focal Reducer	Nebula	Nebula	SH2-142	07:17 – 01:28	09:40	20	Cepheus: Wizard Nebula
	Focal Reducer	Nebula	Nebula	Sh2-155	07:17 – 01:32	09:52	21	Cepheus: Cave Nebula

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Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
	Focal Reducer	Broad Spectrum	Galaxies	NGC-7619	07:34 – 12:57	10:15	23	Pegasus: Pegasus Cluster of Galaxies
	Focal Reducer	Nebula	Nebula	NGC-7822	07:32 – 02:22	10:57	26	Cepheus: Diffuse Nebula
FR2b	Focal Reducer	Broad Spectrum	Galaxy	M-33	08:55 – 04:02	12:28	36	Rotation Triangulum: Triangulum Galaxy
FR1b	Focal Reducer	Broad Spectrum	DN,BN	NGC-1788	02:11 – 05:37	04:01	48	Orion: Foxface Nebula
	Focal Reducer	Nebula	Nebula	NGC-1977	02:49 – 05:37	04:39	54	Orion: Running Man Nebula
	Focal Reducer	Nebula	Nebula	M-78	02:32 – 05:37	04:41	55	Orion: Bright and Dark Nebula
	Focal Reducer	Nebula	Nebula	SH 2-621	01:57 – 05:37	05:07	62	Orion: Lower's Nebula
	Focal Reducer	Broad Spectrum	OC	M-35, NGC-2158	01:40 – 05:37	05:03	63	Gemini: Open Cluster Pair
	Focal Reducer	Nebula	Nebula	NGC-2174	01:48 – 05:37	05:03	63	Orion: Monkey Head Nebula
FR3b	Focal Reducer	Nebula	Nebula	IC-443	01:51 – 05:37	05:10	65	Gemini: Jellyfish Nebula
	Focal Reducer	Nebula	Nebula	NGC-2237	02:54 – 05:37	05:25	66	Monoceros: Rosette Nebula Core
	Focal Reducer	Nebula	Nebula	IC-2169	02:38 – 05:37	05:25	67	Monoceros: Blue Nebula
	Focal Reducer	Nebula	Nebula	NGC-2264	02:48 – 05:37	05:35	68	Comp2! Monoceros: Xmas Tree & Cone
	Primary Focus	Broad Spectrum	GC	M-72	*07:17-10:31	07:49	08	Aquarius: Sm Globular NGC-6981
GC1a	Primary Focus	Broad Spectrum	GC	M-2	07:17 – 10:33	08:29	13	Aquarius: Large Globular
	Primary Focus	Broad Spectrum	GC	M-30	*07:17-09:58	08:36	15	Capricornus: Med Globular
GC1b	Primary Focus	Broad Spectrum	GC	NGC-288	*10:03-01:28	11:48	32	Sculptor: Med/Large Globular
GC1c	Primary Focus	Broad Spectrum	GC	M-79	*03:02-05:26	04:18	50	Lepus: Sm/Med Globular
	Primary Focus	Nebula	PN	NGC-6894	07:17 – 10:45	07:12	02	Cygnus: Sm/Med Planetary
	Primary Focus	Nebula	PN	NGC-7009	*07:17-10:48	08:00	11	Aquarius: Saturn Nebula, Small PN
	Primary Focus	Nebula	PN	NGC-7027	07:17 – 11:49	08:02	11	Cygnus: Small Planetary
PN1a	Primary Focus	Nebula	PN	**NGC-7048**	07:17 – 11:59	08:10	12	Cygnus: Sm-med PN
	Primary Focus	Nebula	PN	NGC-7094	07:17 – 11:28	08:32	13	Pegasus: Sm/Med Planetary
	Primary Focus	Nebula	PN	NGC-40	08:16 – 02:00	11:08	27	Cepheus: Bow-Tie Nebula
PN1b	Primary Focus	Nebula	PN	**NGC-246**	*08:57 – 02:23	11:42	30	Cetus: Skull Nebula

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Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
PN1c	Primary Focus	Nebula	PN	**NGC-1360**	*02:33-04:14	02:28	43	Fornax: Robins Egg Nebula
	Primary Focus	Nebula	PN	IC-418	*01:39-05:37	04:21	51	Lepus: Spirograph Nebula
PF1a	Primary Focus	Broad Spectrum	Galaxy	NGC-6946	07:17 – 11:15	07:30	05	Cepheus: Fireworks Galaxy
	Primary Focus	Nebula	DN	IC-1396	07:17 – 12:22	08:34	15	Cepheus: Elephant Trunk ROI (3)
	Primary Focus	Nebula	Nebula	SH2-132	07:17 – 01:03	09:14	19	Cepheus: Bright Nebula
	Primary Focus	Broad Spectrum	Galaxy	NGC 7331 Etl El.	07:17 – 01:09	09:31	20	Pegasus: Stephan's Quintet
PF2a	Primary Focus	Nebula	Nebula	SH2-155	07:17 – 01:32	09:52	22	Cepheus: Cave Nebula
	Primary Focus	Broad Spectrum	Galaxies	NGC-7619 Et. El.	07:334 – 12:57	10:15	24	Pegasus: Pegasus Cluster of Galaxies
	Primary Focus	Broad Spectrum	Galaxies	NGC 67-72	07:40 – 02:46	11:13	27	Andromeda: Andromeda Galaxy Group
	Primary Focus	Nebula	Nebula	IC-59, 63	08:09 – 03:35	11:52	33	Cassiopeia: Bright Nebula
PF3a	Primary Focus	Broad Spectrum	Galaxy	IC-1613	09:45 – 02:18	12:00	33	Cetus: Irregular Dwarf Galaxy
	Primary Focus	Broad Spectrum	Galaxies	Arp-133	10:19 – 02:22	12:00	35	Cetus: Minkowski's Object
	Primary Focus	Nebula	Nebula	SH2-188	08:38 – 04:12	12:25	35	Cassiopeia: Firefox Nebula
	Primary Focus	Broad Spectrum	Galaxy	NGC-772	09:42 – 04:05	12:54	37	Aries: Nautilus Galaxy
	Primary Focus	Broad Spectrum	Galaxy	NGC-1055	11:26 – 03:47	01:36	41	Cetus: Edge on Galaxy
	Primary Focus	Broad Spectrum	Galaxy	M-77	11:39 – 03:45	01:37	41	Cetus: Galaxy
	Primary Focus	Broad Spectrum	Galaxies	Abell-426	10:28 – 05:37	02:14	42	Perseus: Perseus Galaxy Cluster
	Primary Focus	Nebula	Nebula	NGC-1333	10:49 – 05:37	02:23	43	Perseus: Bright Nebula
	Primary Focus	Nebula	Nebula	IC-348	11:03 – 05:37	02:39	43	Perseus: Bright Nebula
PF1b	Primary Focus	Broad Spectrum	Galaxy	IC-342	11:19 – 05:37	02:41	44	Camelopardalis: Face On Galaxy
PF2b	Primary Focus	Nebula	Nebula	NGC-1579	11:44 – 05:37	03:24	47	Perseus: Trifid of the North
	Primary Focus	Nebula	Nebula	NGC-1788	02:11 – 05:37	04:01	48	Orion: Foxface Nebula
	Primary Focus	Nebula	Nebula	IC-405	12:32 – 05:37	04:10	49	Auriga: Flaming Star Nebula
	Primary Focus	Nebula	Nebula	**SH 2-261**	01:57 – 05:37	05:07	63	Orion: Lower's Nebula
	Primary Focus	Nebula	Nebula	NGC-2237	02:54 – 05:37	05:25	66	Monoceros: Rosette Nebula Core
PF3b	Primary Focus	Nebula	Nebula	IC-2169	02:38 – 05:37	05:25	67	Monoceros: Blue Nebula

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Imaging Summary October 14, 2023

Astronomical Dusk = 07:17 Astronomical Dawn = 05:37

Imaging Plans

Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Imaging Schedule
HS1a	HyperStar	Nebula	Nebula	NGC-6914 Region	07:17 – 11:07	07:20	03	7:15 – 11:30
HS1b	HyperStar	Nebula	Nebula	SH2-240	01:01 – 05:37	04:33	55	12:30 – 05:37
HS2a	HyperStar	Nebula	Nebula, DN	B-168, IC-5146	07:17 – 12:34	08:44	16	07:17 – 11:30
HS2b	HyperStar	Broad Spectrum	Galaxy	M-33	08:55 – 04:02	12:28	36	11:30 – 02:30
HS2c	HyperStar	Nebula	Nebula	IC-2169	02:38 – 05:37	05:25	67	02:30 – 05:30
FR1a	Focal Reducer	Nebula	Nebula	NGC-6992	07:17 – 01:27	07:52	09	C1 | 07:15 – 11:15 C2 | 11:30 – 01:30
FR1b	Focal Reducer	Broad Spectrum	DN, BN	NGC-1788	02:11 – 05:37	04:01	48	02:00 – 05:37
FR2a	Focal Reducer	Broad Spectrum	Galaxies	NGC-7331 et. El.	07:17 – 01:09	09:31	19	R 07:17 – 01:00
FR2b	Focal Reducer	Broad Spectrum	Galaxy	M-33	08:55 – 04:02	12:27	36	R 01:00 – 04:30
FR3a	Focal Reducer	Nebula	Nebula	SH2-142	07:17 – 01:28	09:40	20	07:15 – 01:30
FR3b	Focal Reducer	Nebula	Nebula	IC-443	01:51 – 05:37	05:10	65	01:30 – 05:30
GC1a	Primary Focus	Broad Spectrum	GC	M-2	07:17 – 10:33	08:29	13	07:15 – 10:30
GC1b	Primary Focus	Broad Spectrum	GC	NGC-288	*10:03-01:28	11:48	32	10:30 – 01:30
GC1c	Primary Focus	Broad Spectrum	GC	M-79	*03:02-05:26	04:18	50	03:00 – 05:26
PN1a	Primary Focus	Nebula	PN	NGC-7048	07:17 – 11:59	08:10	12	07:15 – 12:00
PN1b	Primary Focus	Nebula	PN	NGC-246	*08:57-02:23	11:42	30	12:00 – 02:30
PN1c	Primary Focus	Nebula	PN	NGC-1360	*02:33-04:14	02:28	43	02:30 – 04:30
PF1a	Primary Focus	Broad Spectrum	Galaxy	NGC-6946	07:17 – 11:15	07:30	05	07:15 – 11:30
PF1b	Primary Focus	Broad Spectrum	Galaxy	IC-342	11:19 – 05:37	02:41	44	11:30 – 05:30
PF2a	Primary Focus	Nebula	Nebula	SH2-155	07:17 – 01:32	09:52	22	07:15 – 12:30

Prospective Imaging Objects – October 14 2023

Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Imaging Schedule
PF2b	Primary Focus	Nebula	Nebula	NGC-1579	11:44 – 05:37	03:24	47	12:30 – 05:30
PF3a	Primary Focus	Broad Spectrum	Galaxy	IDC-1613	09:45 – 02:18	12:00	33	09:30 – 02:30
PF3b	Primary Focus	Nebula	Nebula	IC-2169	02:38 – 05:37	05:25	67	02:30 – 05:30
	Primary Focus							